The Impact of COVID-19 on Chinese Film industry

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Keywords: COVID-19, Chines film industry, Case analysis.

Abstract: Through the case study of typical film corporations in China including Wanda Cinemas, China Film Group, and Shanghai Film Group, this paper investigates the impact of the outbreak of COVID-19 on the Chinese film industry, incorporating the analysis of fluctuations in the film industry' financial situations, regulations and schemes taken by the Chinese government in response to COVID-19, and the exploration of macro-economic situations for the past four years. After that, this paper reveals the correlation between COVID-19 and the functioning of Chinese film industry, and proposes suggestions that can help overcome the impact of coronavirus on the industry.

1. Introduction

Starting from January 2020, COVID-19 has been spreading throughout China, while later invading more countries, causing significantly negative impacts on the world. To reduce further damage, the Chinese government took strong measures to prevent and control COVID-19, including restricting transportation, closing public places, and prompting people to stay at home. Meanwhile, most industries had to be shut down few months after the outbreak in order to constrain the distribution of the virus. On the one hand, COVID-19 did become under-controlled, but on the other hand, not only did China has to undertake the expenditure used to fight against the virus during economic downturn, but companies and individuals also had to bear the loss of not functioning or working. Without doubt, the outburst of COVID-19 caused a strong damage on the film industry in China.

An investment is made when a person invests his/her money on an asset and expects profit in the future. While speculative investors pay close attention to the fluctuation in the price of stocks and make transactions frequently, value investors often hold stock for a long term and make long-range profit. Value investing is an investment strategy that involves picking stocks that appear to be trading for less than their intrinsic or book value. Individual investors could actively ferret out stocks they think the stock market is underestimating and make profit from investing them in a long term.

1.1 Neoclassical value investing theory

The idea of value investing first emerged before the WWI, but the stock market was neither developed nor well managed yet [1-5]. At that time, people tended to be speculative and irrational about investing, until the establishment of value investing theory that was marked by the publishment of "Security analysis" in 1934 [6]. B. Graham views investors as a significant factor in the stock market and applies logical analysis to stock investing. His book changed the way people invest and made profound influence in the investing market.

1.2 The theory of investment value

As the founder of the value investing theory, John. B. Williams has made his contribution by publishing "The theory of investment value" [7], in which he notes that the enterprise value of a corporation depends on the stock holder's future interest and discount value. In his opinion, the price of the stock and the enterprise value of a corporation are completely different concepts [8]. Moreover, the collective intelligence of speculative investors is not able to predict the economic fluctuations, while the orders received by companies is the reason behind the variations in stock market [9-12].

1.3 Growth value investing theory

Philip A. Fisher is one of the pioneers of the growth value investing theory, who believes that the value of a corporation is in close relation with the corporation’s growth [13]. In his theory, he states the traits of a growing company and the result of its development. He also emphasis the credit of handlers, the innovation of managing approach, the development of new products, the research of new technology, the competence, and other qualitative factors are critical for a company’s growth value [13].

Being a faithful believer of the growth value investing theory, William Olney combined concepts of psychological theories and technical analysis to further refine the growth value investing theory. He built the renowned “ANSLIM” [14-17] model of stock selection, in which he integrated and summarized the general characteristics of five hundred stocks which have doubled or multiplied over the past forty years.

1.4 Modern value investing theory

In the 1990s, the theory of value investing started to become widely used and thus boosted the theoretical frames and ideas of the modern value investing theory [18]. Martin. J. Whiteman, a professor in Yale university, published his book “Value investing: a balanced approach” in 1999 and systematically elaborated his ideas of value investing [19]. He believes that the market lacks necessary constraints and is not efficient. Different investors’ views of a company correlate with the market and the benefits of the company, and the value of a stock can be priced separately in each divided market. About investors, Martin. J. Whiteman proposed the concept of OPMI (outside passive minority investor) and claimed that investors should be proactive in the stock market [20-24].

In the following passage, the Chinese film industry will be analyzed through case analysis of three representative film corporations. The financial data of the corporations’ past four years will also be investigated and the social influences will be examined as a part of exploring the impact of COVID-19 on the film industry.

2. Data and method

2.1 Data

In order to analyze the financial circumstances of the whole film industry for the past few years, representative corporations are chosen for financial analysis. The three corporations are Wanda Cinemas Corporation, China Film Group Corporation (CFGC), and Shanghai Film Group Corporation (SFC), which are the biggest corporations in Chinese’ film industry, without any significant incidents or changes happened in the past four years. Since they operate in a wide scale that covers the whole country and conduct all parts of the business in film industry, they inevitably follow the general tendencies of the Chinese film industry, especially during the outbreak of deadly coronavirus. We aim to use the case study of chosen corporations to reveal the general financial situation in the Chinese film industry, and therefore investigate the impact of COVID-19 on the industry. Noting that in the following charts and tables, the unit is in Million CNY, while “TTM” refers to “trailing twelve months” and “MRQ” refers to “most recent quarter”.

2.1.1 Wanda Cinemas Co.

Wanda films is the biggest film industry corporation in China. The company conducts business in the establishment and the operation of cinemas, as well as the production, investing and publication of films [25]. Not only does the company covers a complete business cycle of films, from the production to the marketing, Wanda films also makes profit from the spin-off product of films, such as advertising and the sale of merchandise and catering. Additionally, Wanda films was rated as one of the most viable film companies in the Chinese film industry.

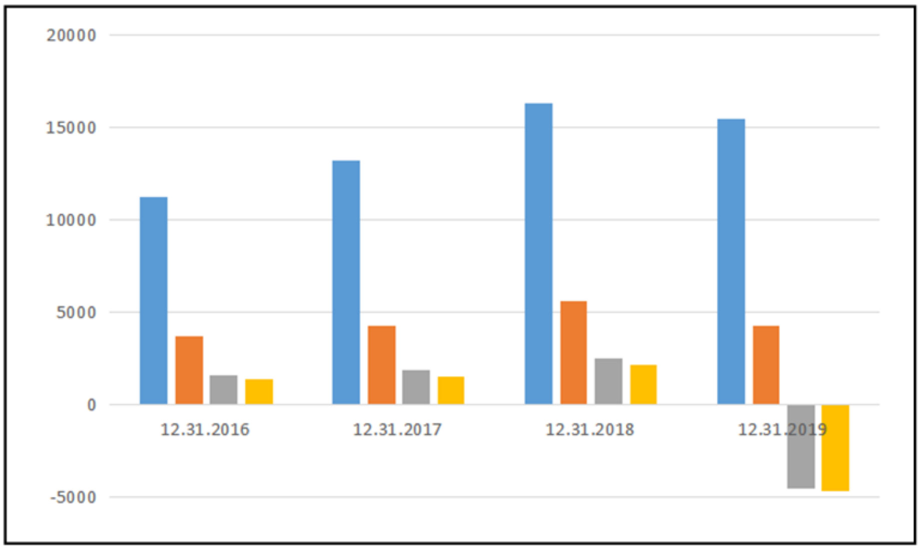

Fig 1. Financial condition of Wanda Cinemas Co. in the past four years.

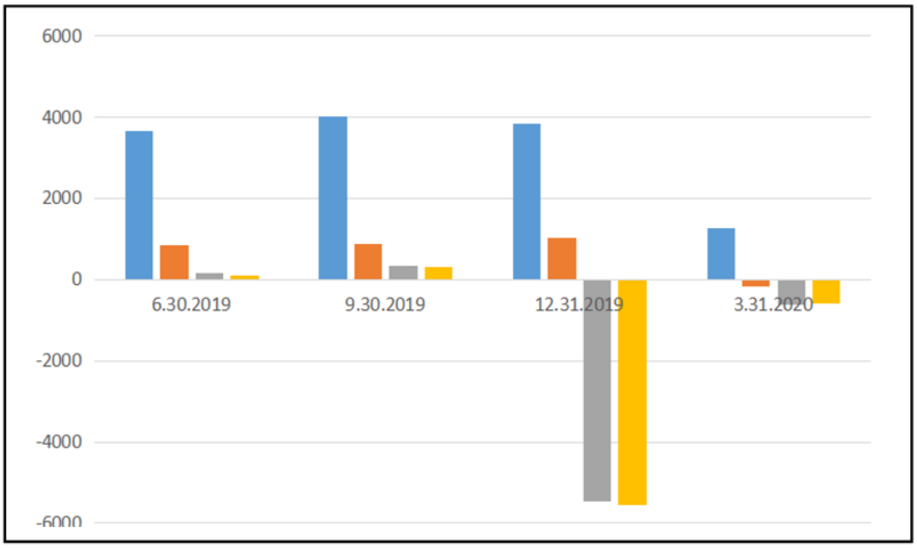

Fig 2. Financial condition of Wanda Cinemas Co. in the past four quarters.

Note: blue refers to total revenue, red refers to gross margin, gray refers to operating revenue, and yellow refers to net income.

Table 1. Wanda Cinemas Co. financial indexes.

PE RATIO (TTM)	PS RATIO (TTM)	PB RATIO (TTM)	PCF RATIO (MTQ)	ROE (TTM)
-	2.84	2.81	-	-44.51%

As shown in Figure 1, the yearly total revenue of Wanda films increased from 11209.32 million CNY in 2016 to 16287.42 million CNY in 2018, and then slightly fell to 15435.36 million CNY in the next 2019. Similarly, the gross margin of the firm was also increasing over the period from 2016 to 2018, and then decreased to the roughly the same level as that of the firm in 2017. Overall, the change of total revenue and the Gross margin of the firm appear to be smooth.

However, both the operating revenue and the net income that were increasing from 2016 to 2018 experienced a plunge in 2019, from 2493.04 M CNY and 2102.77 M CNY in 2018 to -4560.3 M CNY and 4728.59 M CNY in 2019, respectively. In 2019, all changes seem to be normal and steady until a sudden and drastic fall of operating revenue and net income during the last quarter of the year. This can be explained by the setback of the firm's film investing. In the end of 2019, many films invested by Wanda films didn't reach their expectancy of return, which caused great loss. Nevertheless, this business failure is caused by the firm's own mistakes, which is an individual case. Thus, this is not able to represent the situation of the whole film industry.

What is significant is that the total revenue and the gross margin, which were originally stable with a gradual growth, experienced a significant fall in the first quarter of 2020. The quarterly total revenue decreased for 67.34% compared with the last quarter, and the gross margin turned negative. The decrease in total revenue also leaded to negative values of both the operating revenue and the net income.

2.1.2 China Film Group Corporation (CFGC)

CFGC is another leading enterprise in the Chinese film industry, and it possesses business of the production, publishment and investing of films, while conducting the operation of offline cinemas and the sale of film and television services [26]. The firm also sells professional film equipment and engages in brokerage business. The China Film Group Corporation is comprised by eight main units, which have control over thirteen joint stock companies and ninety-nine cinema firms.

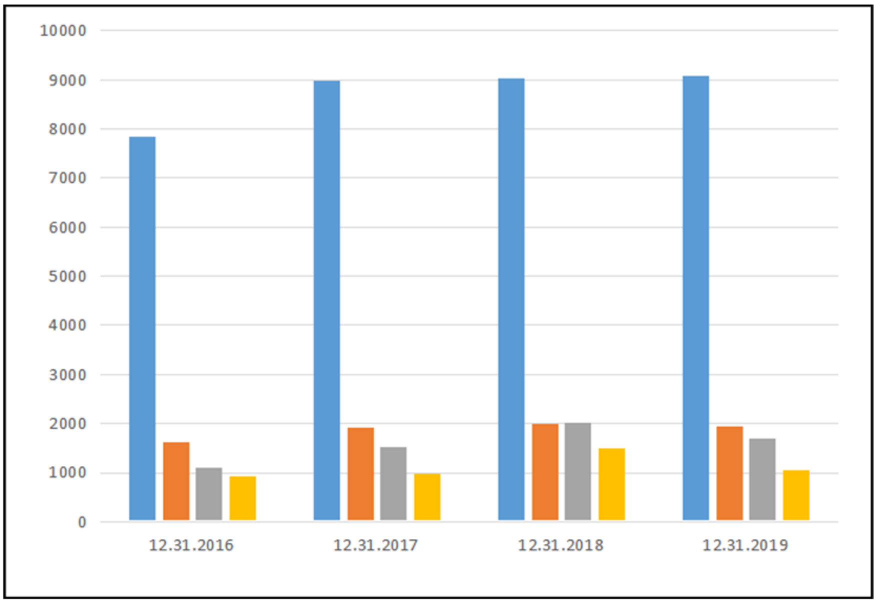

Fig 3. Financial condition of CFGC in the past four years.

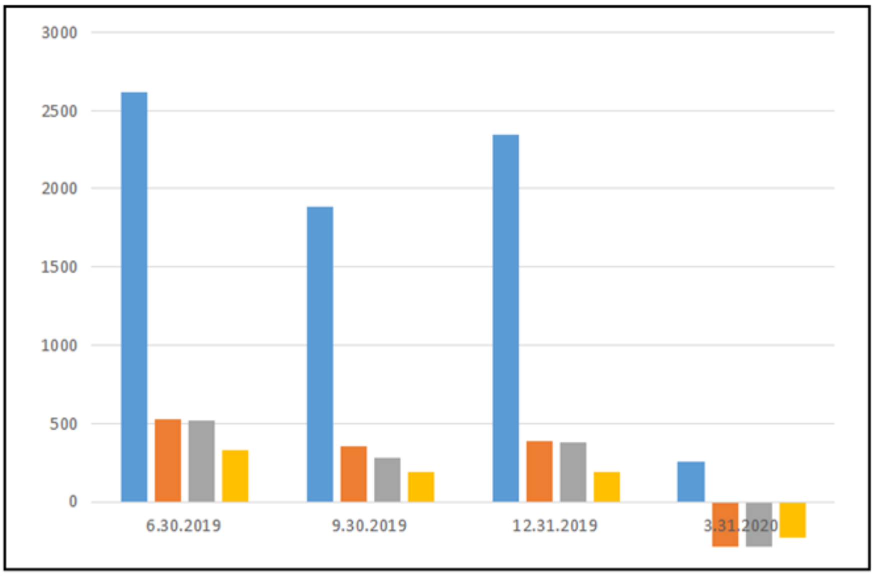

Fig 4. Financial condition of CFGC in the past four quarters.

Note: blue refers to total revenue, red refers to gross margin, gray refers to operating revenue, and yellow refers to net income.

Table 2. CFGC financial indexes.

PE ratio (TTM)	PS ratio (TTM)	PB ratio (TTM)	PCF ratio (MTQ)	ROE (TTM)
57.33	3.86	2.33	24.63	4.08%

As shown from Figure 3, after an increased from 7840.71 M CNY in 2016 to 8988.02 M CNY in 2017, the total revenue of CFGC almost remained the same in the following years until the end of 2019. Meanwhile, the gross margin, the operating revenue, and the net income enlarged in general. However, according to Figure 4, starting in the beginning of 2020, the quarterly total revenue decreased dramatically, declined by 88.96% compared with the previous quarter. This large decrease resulted in negative values of the gross margin, the operating revenue, and the net income.

2.1.3 Shanghai Film Group Co. (SFC)

SFC is a state-owned group of companies that is one of the most powerful enterprise in Chinese film industry. Its business covers the publication of films, the sale of copyrights, and the production of documentaries. SFC also conduct the investment, the development, and the operation of off-line cinemas [27]. As a state-owned enterprise, CFGC is the only company that has the right to import oversea movies. Being owned by the country also ensures the enterprise's stable functioning and its steady operation in the market. That is to say, the case study of CFGC is able to properly reveal the fluctuation in the whole Chinese film industry.

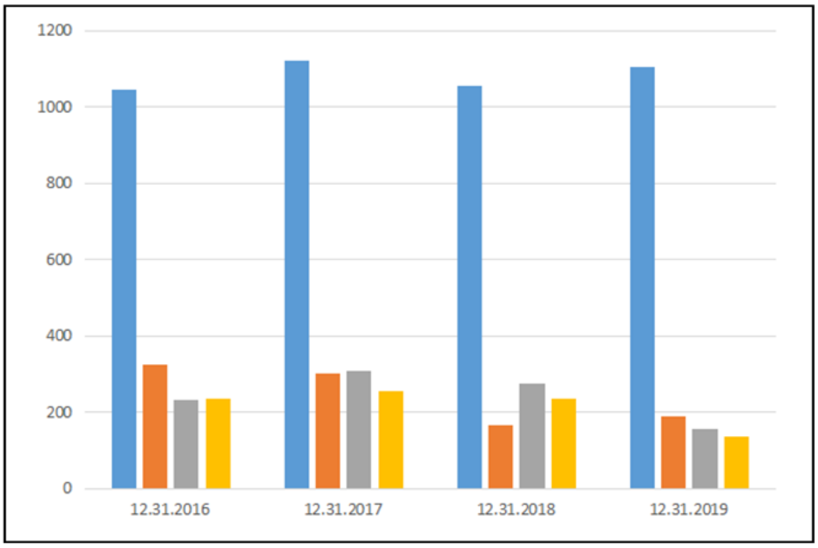

Fig 5. Financial condition of SFC in the past four years.

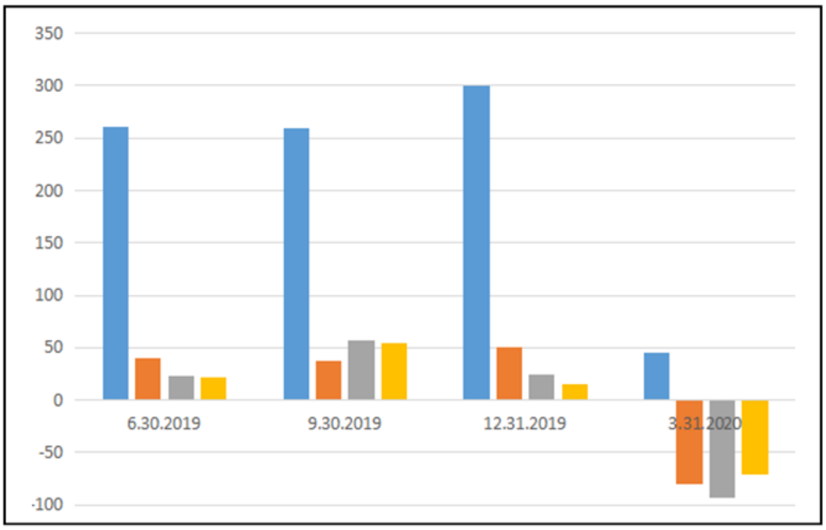

Fig 6. Financial condition of SFC in the past four quarters.

Note: blue refers to total revenue, red refers to gross margin, gray refers to operating revenue, and yellow refers to net income.

Table 3. SFC financial indexes.

PE ratio (TTM)	PS ratio (TTM)	PB ratio (TTM)	PCF ratio (MTQ)	ROE (TTM)
276.87	7.69	2.3	25.18	0.84%

As can be observed from Figure 5, over the past four years, the total revenue of the group remained stable and experienced little variation year by year. At the same time, the cost imposed on SFC slightly rose, which is responsible for the overall decline in the group's gross margin, operating revenue and the net income. But in general, the operating condition for SFC remained stable and profitable before entering the year of 2020.

According to Table 3, in 2019, the quarterly total revenue remained nearly constant in the second and the third quarter at around 260 M CNY. After that, the firm's quarterly total revenue rose for about 40 M CNY. That was followed by the sharp decrease in the total revenue in the next quarter, from 300.27 to 45.77 M CNY. Facing the unexpected incident, the company endured a negative net income in the beginning of the year.

2.2 Method

The Relative valuation method is applied in the analysis of the chosen companies, and "Terms and methods of financial analysis" [28-29] are used in the corporations' financial statements. As for the listed indexes in the analysis, the precondition is different enterprises be in the same industry and the same period.

Equity value. Value only to the shareholders, its multiples include P/E, P/S, P/B etc. The formulas of the related indexes are listed in the following:

P/E: P/E ratio= Market value per share/Earning per share. Only when the P / E ratio is greater than 0 can it be meaningful.

P/S: P/S ratio= Market value per share/Sales per share. Only when P / S ratio is greater than 0 can it be meaningful.

P/B ratio: Also known as M/B ratio, P/B ratio= Market value per share/Book value per share.

P/CF: P/CF ratio=price/CFPS CFPS=cash flow/SHO.

ROE: Return on equity, ROE = Net income / Average Shareholders' Equity.

3. Introduction

COVID-19 first emerged in December 2019, and started to spread widely in Wuhan in the first month of 2020. The outbreak of the coronavirus started to interfere with the normal functionality of the society and economy in China, while its damage keeps expanding with the time passes. The Chinese government took actions that were potent and effective to control the spread of COVID-19 from a variety of aspects. This includes blocking major transportation of Wuhan, tracking the movement of population, extending national holiday, shutting down public entertainment venues and work places. These measures undoubtedly caused major influences on the operation of cinemas and the steady functioning of the film industry.

3.1 Summary of findings

Based on the observation of the financial condition of the three companies for the past four years, which represents the Chinese film industry, it is evident that the film industry experienced a rapid fall in the total revenue in the first quarter of 2020. Obviously, the COVID-19 outbreak is, to some extent, closely related to this unexpected damage on the entire Chinese film industry. Both Direct and indirect impacts may last in different lengths of time. To further investigate the correlation between COVID-19 and the Chinese film industry, the causes of the impact should be thoroughly analyzed.

3.2 Causes of the sudden decline

COVID-19 causes impacts on the society in a wide range of aspects, including but not limited to changes in the people's living habits, fluctuations in the macro climate of economy. Therefore, the impact on the film industry caused by COVID-19 should be examined from different perspectives.

3.2.1 Temporary termination of off-line cinemas

Starting in January 24th, all provinces in China initiated the first-order reaction in response to COVID-19. At the appointed moment, all public places were under strict regulations such as the restriction of public transportation and the shutdown of entertainment areas. After that, nearly all cinemas in China were forced to temporarily close.

Thus, from January 24th to the end of the first quarter in 2020, cinemas stop providing any services for customers. Meanwhile, cinema companies had to bear all the cost of maintenance and rent, resulting in zero revenue and negative net income.

3.2.2 Weakened social economy condition

Due to the rampaging spread of the COVID-19 pandemic, the national holiday for spring festival was prolonged. Additionally, even after people started to work at home, a great proportion of the commercial functions diminished. As a result, the general condition of the macro economy became feeble, and the growth of national GDP becomes retarded, leading to a decrease in people's disposable income and reduced consumptions on amusements, which involves the peripheral products of film industry. That is to say, during the time when the virus spreads, film companies' revenue from advertising, the sale of merchandise, and other businesses that the firms conduct vastly reduced.

3.2.3 Retardation of the production of films

The government's countrywide first-order reaction suspended a great part of the society's operation, making it extremely difficult for film productions and other film-making processes. Therefore, all plans of the production of new movies had to delay or suspend for months. This directly imposed challenge on the film companies' future business, from the supply of firms to the difficulty of generating cash flow.

3.2.4 Stagnated business activities

Film companies not only stopped the production of films, but also postponed their planned activities such as attracting investment, negotiating with film censors, the construction of new cinemas, and other works that are regular but necessary. Such stagnation causes long term difficulties on the entire film industry.

4. Conclusion

Based on the observation of the financial condition of the selected typical film companies, the spread of COVID-19 caused both short-term and long-term damage on the film industry. Due to the Chinese government's obligatory actions in response to the epidemic, film industry faced months of zero revenue, terrible financial condition, and more challenges in the long term, which were caused by the shut-down of cinemas, the fluctuation in the macro economy, the retardation of film production, and the suspension of planned business activities.

During this period, all companies in the film industry received nearly zero total revenue, while undertaking the cost of land and maintenance same as the time when the society was normally functioning. The difficulties encountered by the film industry is disastrous to those companies without enough positive cash flow thus facing the impending bankrupt.

Therefore, it would be reasonable for the government to provide support to companies in the film industry. It could be done through subsidy, tax reduction or social assistance. This can help the firms in the film industry recover from the economy depression after the pandemic becomes under controlled.

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