

The Impact of the Covid-19 Pandemic on Investor Sentiments: Evidence from 12 Selected Major Tourism-Related Companies

Helena Nemec Rudež
University of Primorska, Slovenia
helena.nemec@fts.upr.si

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To understand investor confidence and its change in tourism, which was one of the industries most affected by the pandemic, the paper presents the stock price movements of twelve major listed companies in the tourism industry in the first year after the Covid-19 pandemic outbreak. The 1-month interval of closing prices from January 1, 2020, before the pandemic was announced, to April 1, 2021, is observed to assess investor confidence. Investor confidence is compared between companies in different sectors of the tourism industry. The pandemic itself has not had a clear impact on stock prices as it has developed, showing that some of them recovered within a few months, while others have not, even a year after the outbreak of the pandemic. Based on the one-year stock price movements after the outbreak, three groups of tourism-related companies are identified.

Key Words: Covid-19 pandemic, tourism-related companies, stock price, investor confidence

JEL Classification: D53, L83, D25

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Introduction

The tourism industry is one of the largest industries in the world. Before the Covid pandemic, it generated (including its direct, indirect and induced impacts) 10.6% of global jobs, 10.4% of global GDP, 6.8% of total exports and 27.4% of global services exports (see <https://wtcc.org/Research/Economic-Impact>). Crises affecting tourism have been studied in the past (e.g. Novelli et al. 2018; Aliperti et al. 2019; Jiang, Ritchie, and Benckendorff 2019). Tourism has faced terrorism (first intensified in Egypt in 1997, in the United States in 2001, later in Madrid in 2004 and London in 2005), natural disasters (tsunami in Asia in 2004, wildfires in Greece in 2018 and California in 2017, typhoon in Japan in 2018), global economic crises in 2008/2009 and 2011, and health crises (foot-and-mouth disease in the United Kingdom in 2001, SARS in 2002). Some crises were

global, others regional or local. They also differ in the likelihood of their occurrence and recurrence, in their permanence and in their impact on the tourism industry. While tourism is sensitive to crises, shocks related to tourist arrivals have been shown to be temporary. However, it takes time to recover from crises and tourism policy makers need to respond to crises in a timely manner (Yucel 2021).

In relation to pandemic shocks, Sigala (2020) highlights the importance of researching pandemic crises in tourism to better understand the impact of the pandemic on different stakeholders. The impact of the Ebola outbreak between 2014 and 2016 negatively affected stock prices in tourism sectors in the geographical vicinity of the outbreak (Ichev and Marinč 2018). However, 'the coronavirus pandemic is unquestionably unique and relevant to research' (Zenker and Kock 2020, 1) and has shaken investor confidence in the tourism industry worldwide due to its magnitude and the travel restrictions imposed by governments at a global level. Investor confidence is the result of the environment in which the industry operates. When investors have high confidence in the company and its future earnings, the demand for the company's stocks increases and drives the stock price up. Conversely, when investors lose confidence in the company and its future earnings, demand for the stock decreases and a large amount of stock is sold in the market, driving the price down. Baker and Wurgler (2007, 129) define consumer sentiment as 'a belief about future cash flows and investment risks that is not justified by the facts at hand' and that (p. 149) 'waves of sentiment have clearly discernible, important, and regular effects on individual companies and on the stock market as a whole.'

According to Bodie et al. (1996), there are several factors that determine a company's stock price and expected earnings, including the global economy, domestic macroeconomics, demand and supply shocks, government policies, business cycles, and industry analysis. Fears of a pandemic in early 2020 had a major impact on these factors, causing major stock market indices to fall sharply in the first half of March due to extensive selling of stocks. The Covid-19 pandemic was a shock to the global economy, and the tourism and transportation industries were hit particularly hard. Stock prices in 2020 followed a similar pattern with a sharp decline in March 2020, with the entertainment and hospitality industry performing the worst (losing more than 70% of market capitalization), along with some other industries (petroleum and petroleum services and real estate), and also with high volatility (20% on average) (Mazur, Dang,

and Vega 2021). Actual and potential losses in tourism have affected the stock prices of tourism-related companies. To find out how much individual parts of the tourism industry were affected by the pandemic, the study uses the stock prices of selected companies in tourism-related industries.

Since the pandemic is likely to continue for several years due to its magnitude, and its effects are present in daily life, this paper examines whether the industry can recover from the initial shock within one year. The heterogeneity of the tourism product across the tourism industry and the different dependence on domestic tourism, and domestic and long-distance travel in different types of the tourism industry mean that recovery takes different lengths of time in different types of the tourism industry. For example, the restaurant industry relies more heavily on locals than other sectors of the tourism industry; online travel companies where people can book their holidays and other tourism products, and the accommodation industry, rely more heavily on short-haul and long-haul travel; while cruise ships and airlines rely more heavily on long-haul travel. The hypothesis is:

Investor sentiment, measured by stock prices, varies across tourism sectors in the first year after the Covid pandemic outbreak.

The stock price performance of twelve major companies will be used to determine how investors reacted to such an unprecedented shock in the tourism industry and whether the tourism industry can recover within one year from such an initial shock, which was later followed by several setbacks in the national and international economy and tourism.

The paper is organized as follows. In the next section a review of the literature on stock prices of tourism/related companies during the Covid-19 pandemic is presented. Then, the methods and data used are described. In the fourth section the research findings are explained. The fifth section is a discussion. In the last section, conclusions are drawn.

Pertinent Literature

Due to the uniqueness of Covid-19 crises in tourism, experience from previous crises cannot be used, including the 2008/2009 financial crisis, where a demand shock occurred, while Covid-19 pandemic crises affected both demand and supply (Plzakova and Smeral 2022). Research on tourism in Covid-19 pandemic times developed very quickly. The first research papers on Covid-19 and tourism were published after the first

months of the pandemic outbreak, followed by extensive research in the field. Due to the large scale of the pandemic, it is critical to understand investor confidence in the tourism industry and its components, which is driven by both irrational (based on emotion) and rational (based on information and facts) behaviour. Tourism investors in the US were more driven by irrational behaviour and anticipation of bad scenarios, while European investors were more influenced by rational behaviour (Reis and Pinho 2020). Separately, the tourism stock market has proven to be highly volatile due to the uncertainty surrounding the Covid-19 pandemic.

The initial research on investor sentiment towards future stock returns focused on China, where the pandemic first spread. The decline in the prices of 18 of the 21 tourism stocks traded on Chinese stock exchanges was first noted in China after the announcement of the Wuhan lockdown in January (Liew 2020b). Subsequently, a rapid decline in the stock prices of three leading online travel companies (Booking Holdings Inc., Expedia Group, Trip.com Group Ltd.) was observed from January to March 2020 (Liew 2020a). Following up on the returns in the early phase of the pandemic (through April 2020), Sharma and Nicolau (2020) found that four tourism sectors (i.e. hotels, airlines, cruise lines, and car rentals) experienced a significant decline in valuations, with the impact of the pandemic being greatest in the cruise industry, likely because business tourism, which can recover earlier, is less present in the cruise industry. Looking at the different sectors of the tourism industry separately in February and March 2020, consumer confidence was low regardless of sector (Nhamo, Dube, and Chikodzi 2020). Using more than 1,200 different tourism companies in 52 countries, Kaczmarek et al. (2021) show that the stock prices of companies with low corporate valuation ratios, limited debt and intensive investment policies, low levels of individualism in the national culture, and strong government policies and quick policy responses were more immune to the pandemic shock between January and March 2020. Similarly, Carter et al. (2022) find that cash reserves and corporate debt played an important role for investors in US travel companies in the second half of February and March 2020. Lin and Falk (2021) analyse the travel and leisure industry in three Nordic countries from June 2018 to June 2020 and find that the timing, probability, and duration of the crisis regime depend on the composition of travel and leisure companies.

Later in August 2020, investors re-entered the stock market in anticipation of a recovery after the pandemic collapse in March 2020, and as a

result, the stock prices of many companies rose to pre-pandemic levels. Herrenbrueck (2021) pointed out that the pandemic generally increased demand for savings instruments, which led to higher stock prices by August 2020, assuming that the pandemic will be short, and no deeper crisis will lead to corporate bankruptcies. Of course, stock prices are especially difficult to forecast in times as unpredictable as the pandemic. Vaccination, which began in late 2020 and 2021, has changed investor sentiment in general.

The contribution of the paper is to enhance the knowledge about the diversity of tourism sectors as an investment opportunity. The paper complements previous academic work by confirming that investor confidence in different sectors of the tourism industry varies when a crisis of unprecedented magnitude occurs, as is the case with the Covid-19 pandemic. The heterogeneity of the tourism sectors is not only a matter of consumer perspective, but also of investor perspective.

Data and Method

This paper examines the stock prices of twelve tourism-related companies for the period from January 1, 2020 to April 1, 2021 using data from the website Yahoo Finance (<https://finance.yahoo.com>) to determine investor sentiment changes. The companies included in the sample are the largest listed companies by market capitalization in various tourism sectors. The stock price data of the sampled companies consist of closing prices at one-month intervals. Some stocks are quoted in USD, others in EUR and GBP. The start date chosen is January 1, 2020, a date when stock prices worldwide were not yet affected by the pandemic threat.

The study focuses on the stock price performance of twelve selected major companies in the tourism industry that cover a significant market stock in the world. Although the number of companies included in the study is limited in order to provide a clear representation of each stock, the companies included in the sample cover various sectors of tourism, including the accommodation sector (Hilton Worldwide Holdings Inc., Accor SA), restaurants and cafes (McDonald's Corporation, Starbucks, Domino's Pizza), the travel sector (Booking Holdings Inc., Expedia Group, TUI AG), the airline sector (EasyJet, Wizzair), and the cruise market (Carnival, Royal Caribbean). The leading sharing economy company (Airbnb) is not included in the analysis as it did not go public until December 2020. For the stocks included in the sample, the minimum and maximum stock price is searched for the given time pe-

riod and the standard deviation, skewness, kurtosis and Jarque-Bera test are calculated. The stock price during the selected period is presented in charts rather than tables for simplicity, to illustrate the price movements that express investor sentiment towards the companies in the sample.

Findings

The stock prices of the tourism-related companies in the sample show an obvious pattern in stock price changes that reflects a negative impact on stock prices. The 15-month period shows how investors react after the initial price decline. The most obvious is a huge decline in stock prices in March 2020, which has already been confirmed in several recent studies. Stock prices have been very volatile, showing the great uncertainty in tourism and the unpredictable environment and future returns. Fears of a pandemic were already present in February and early March before WHO made the assessment that Covid-19 could be characterized as a pandemic on March 11, 2020. The drop in stock prices at that time could be also a result of other events, such as the 2020 U.S. election year or the oil price war that began on March 8, 2020, and not the emerging fear of a pandemic. Later, the outbreak of the pandemic had an important impact on investor sentiment in the tourism-related industry.

The lowest stock prices were recorded in March 2020 immediately after the pandemic outbreak was announced, or in early April (see table 1). The cruise market was the hardest hit. Most companies did not recover by early April 2021 and some of them reached the lowest investor confidence later in May 2020 (TUI AG, Accor) or October 2020 (EasyJet). The standard deviation is very high for some stocks, which is due to the high volatility during the Covid pandemic, already confirmed by Acharya, Liu, and Zhao (2021). Thus, investor sentiment varied widely across tourism sectors, suggesting that the perception of pandemic risk varies across tourism stocks.

Skewness and kurtosis are used to perform the Jarque-Bera test, which tests whether stock prices are normally distributed or not (table 1). The Jarque-Bera test shows that the stock prices in the sample are not normally distributed, with the exception of TUI AG, Domino's Pizza and Royal Caribbean Group. This is consistent with the study of Chaudhary, Bakhshi, and Gupta (2020) that stock price returns are not normally distributed after the Covid pandemic.

After the shock in March, the stock prices of some companies (McDonald's, Domino's Pizza, Starbucks, Hilton, Booking, Expedia) recovered in

TABLE 1 Minimum and Maximum Closing Price of Tourism-Related Companies in the Sample between 1 January 2020 and 1 April 2021

Company	(1)	(2)	(3)	(4)	(5)	(6)
Booking Holdings Inc.	1,152.24 USD (23/3/2020)	2,461.78 USD (17/3/2021)	324.98	0.389	-0.955	10.830 (0.004)
Expedia Group Inc.	45.65 USD (18/3/2020)	185.27 USD (17/3/2021)	35.57	0.625	-0.556	9.25 (0.009)
TUI AG	1.81 EUR (14/5/2020)	11.62 EUR (2/1/2020)	0.999	0.399	-1.298	1.195 (0.550)
McDonald's Corporation	137.1 USD (23/3/2020)	229.64 USD (15/10/2020)	17.510	-0.670	-0.014	7.227 (0.027)
Starbucks	56.55 USD (23/3/2020)	111.34 USD (16/3/2021)	15.209	0.302	-1.219	12.114 (0.002)
Domino's Pizza Inc.	270.08 USD (3/2/2020)	431.05 USD (7/10/2020)	36.528	-0.822	1.265	3.809 (0.149)
Wizz Air Holdings plc.	2,206.00 GBP (19/3/2020)	5,565.00 GBP (11/3/2021)	852.54	0.084	-0.978	10.569 (0.005)
EasyJet plc.	470.7 GBP (16/10/2020)	1,552.0 GBP (11/2/2020)	252.475	0.966	0.685	6.061 (0.048)
Accor SA	20.72 EUR (14/5/2020)	41.76 EUR (2/1/2020)	4.707	0.412	-0.865	10.447 (0.005)
Hilton Worldwide Holdings Inc.	55.94 USD (3/4/2020)	127.26 USD (24/2/2021)	18.8	0.232	-1.223	12.035 (0.002)
Carnival Corporation plc.	7.97 USD (2/4/2020)	51.31 USD (2/1/2020)	8.434	1.472	2.018	6.426 (0.040)
Royal Caribbean Group	22.33 USD (22/3/2020)	135.05 USD (17/1/2020)	21.248	0.472	0.400	5.099 (0.078)

NOTES Column headings are as follows: (1) minimum stock price, (2) maximum stock price, (3) standard deviation, (4) skewness, (5) kurtosis, (6) Jarque-Bera test (*p*-value). Based on data from Yahoo Finance (<https://finance.yahoo.com>).

the coming months. On the other hand, investor confidence remained low in Accor, TUI, EasyJet and the cruise companies until November 2020. After the effective Covid-19 vaccine was announced on November 9, 2020, and hopes of an end to the pandemic increased, investor confidence in these stocks also increased slightly.

In 2021, tourism stock prices continued to be hurt by the sluggish vaccination programme in the first quarter. Some stock prices were also affected by the suspension of dividends due to government financial support conditions or corporate decisions. Although the changes in stock

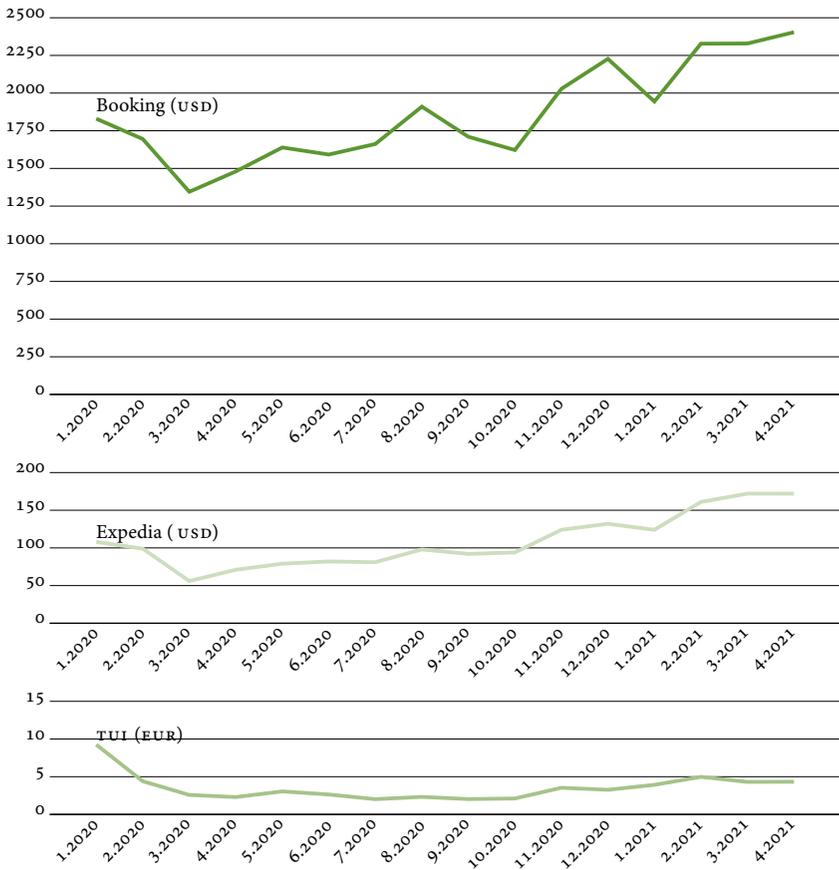


FIGURE 1 Stock Price Movement of Travel Companies (Booking Holdings Inc., Expedia Group Inc., and TUI AG) between 1 January 2020 and 1 April 2021 in 1-Month Interval (based on data from Yahoo Finance, <https://finance.yahoo.com>)

prices in March 2020 showed a similar pattern of stock price decline, 7 of the 12 companies in the sample reached a higher stock price level in early April 2021 than in January 2020, showing investor confidence in tourism. All stocks recovered significantly from the March 2020 shock, with the second wave of the pandemic in the second half of 2020, with new travel restrictions, delaying the recovery of stock prices in general. In November 2020, the stock market recovered after news of the Covid-19 vaccine approval on November 9, 2020.

Figure 1 shows the stock price fluctuations of travel-related companies. Close competitors Expedia and Booking both saw positive investor senti-

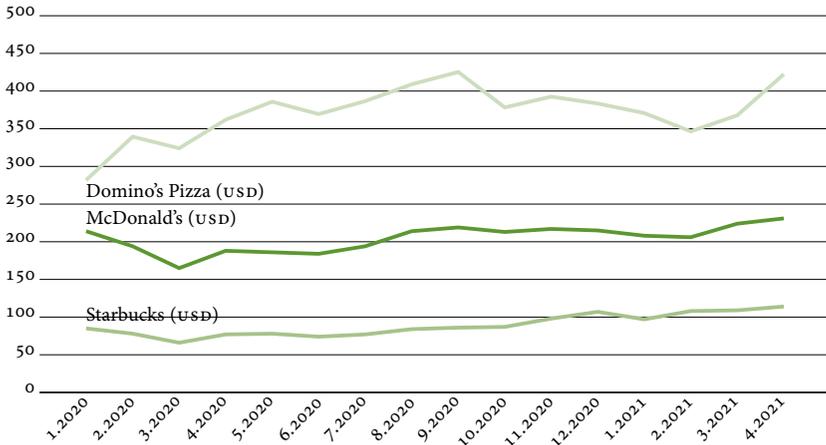


FIGURE 2 Stock Price Movement of Restaurant Sector (McDonald's Corporation, Starbucks Corporation, and Domino's Pizza Inc.) between 1 January 2020 and 1 April 2021 in 1-Month Interval (based on data from Yahoo Finance, <https://finance.yahoo.com>)

ment in the first quarter of 2021, even though it was not yet clear when the pandemic would end. The reason is likely the fact that consumers can buy tourism products in faraway destinations and accommodations in destinations closer to home. Although travel companies are doing well one year after the start of the pandemic, TUI's stock price is still low due to the large losses from the pandemic and probably due to the large amount of debt. Thus, the stock price of TUI AG also reflects other financial issues of the company, which do not allow the stock price to recover. The least affected by the pandemic is the restaurant industry. In fact, the stock prices of fast food restaurants, cafes and pizza chains recovered immediately after the pandemic shock in March 2020 (see figure 2), which proves that the restaurant and café industry is generally dependent on the local population, including takeaways, and is independent of the tourism industry in many cities.

The comparison between the hotel companies Accor and Hilton (figure 4) and between the low-cost airlines Wizz Air and EasyJet (figure 3) shows that investor confidence in the same industry differs between companies.

The airline and hotel industries have struggled with a sharp decline in guests or passengers and uncertainty still persists; while Wizz Air and Hilton have regained investor confidence a year after the pandemic began, EasyJet and Accor have not, likely due to different corporate issues. This suggests that the pandemic itself does not have a clear impact on

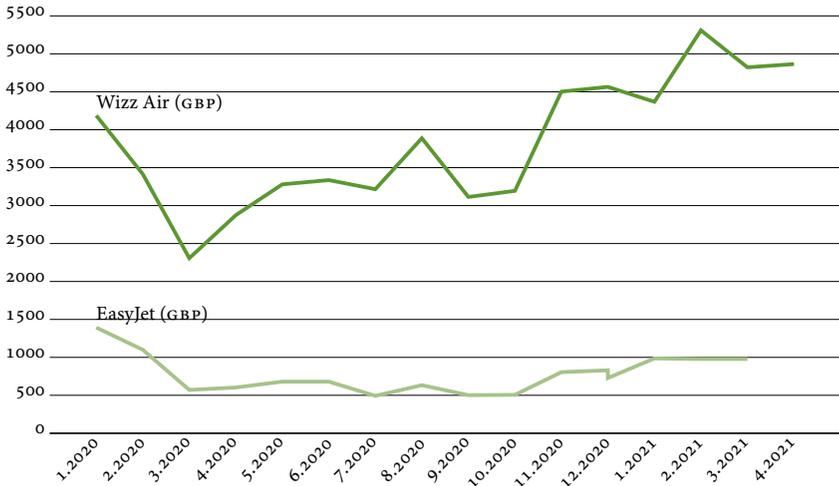


FIGURE 3 Stock Price Movement of Air Transport Industry Companies (Wizz Air plc and EasyJet plc) between 1 January 2020 and 1 April 2021 in 1-Month Interval (based on data from Yahoo Finance, <https://finance.yahoo.com>)

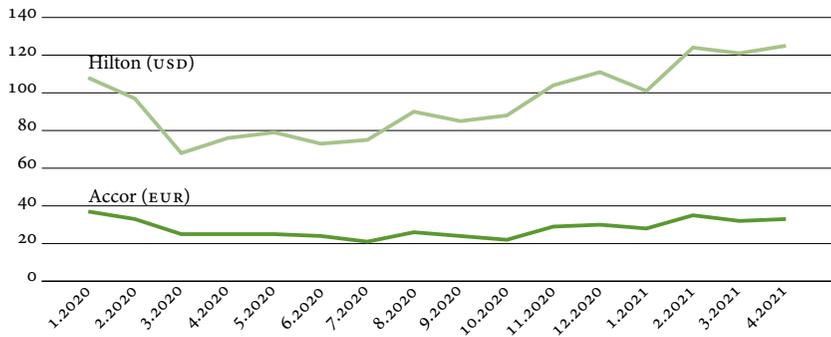


FIGURE 4 Stock Price Movement of Accommodation Sector (Accor SA and Hilton Worldwide Holdings) between 1 January 2020 and 1 April 2021 in 1-Month Interval (based on data from Yahoo Finance, <https://finance.yahoo.com>)

stock price in 2021. Other company-related characteristics probably play an equally important role.

Cruise lines were one of the sectors most affected by the Covid-19 pandemic (see figure 5). The stock price has not yet recovered to pre-Covid-19 epidemic levels as of April 1, 2021. Royal Caribbean and Carnival (which also owns accommodation businesses) posted large net losses in 2020 due to a sharp decline in revenues. This is likely due in part to the fact that one of the first outbreaks of the Covid-19 pandemic was reported on the

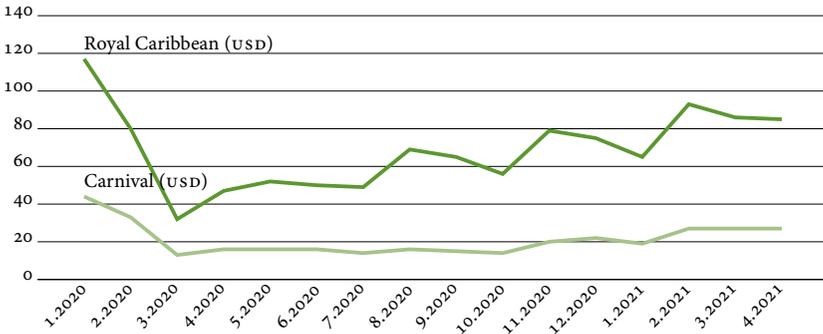


FIGURE 5 Stock Price Movement of Cruise Industry (Royal Caribbean Group, and Carnival Corporation & plc) between 1 January 2020 and 1 April 2021 in 1-Month Interval (based on data from Yahoo Finance, <https://finance.yahoo.com>)

cruise ship Diamond Princess in February 2020, and authorities isolated passengers on board for 14 days, leading to some criticism. Several other cruise ships subsequently reported pandemic outbreaks on board among crew and passengers. Moreover, cruise ships rely on leisure tourism rather than business tourism as already pointed out by Sharma and Nicolau (2020).

Stock price movements in tourism-related companies confirm findings of Reis and Pinto (2020) that the Covid-19 pandemic has caused fear and panic among economies and accumulated losses due to low demand, but also created opportunities for stock price recoveries. One year after the pandemic outbreak the investor fear has still not (completely) disappeared. While half of the companies in the sample have reached the pre-pandemic stock price by April, 2021, the other half of companies is still faced with lower investor confidence.

Discussion

The wide range of businesses involved in tourism were hit hard by the pandemic, as reflected in travel restrictions, border closures, and debt burdens during the first year of the Covid-19 pandemic. Although stock prices are the result of many different factors affecting the market environment, the huge decline in the stock prices of listed companies in the tourism industry immediately after the outbreak of the pandemic confirms that the stock prices were primarily affected by the pandemic. The investor shock and its aftermath in the first year after the pandemic outbreak showed high standard deviation for several tourism-related com-

panies described in the study. However, governments' financial interventions likely mitigated the negative impact on stock prices.

Given that some stock prices were at higher levels on April 1, 2021 than they were at the beginning of 2020, it is reasonable to assume that they have recovered from the news of the pandemic outbreak and the ongoing travel restrictions, and that the pandemic in general has not had a long negative impact on investor sentiment, suggesting that a positive outlook prevails in the industry. The positive outlook for the travel industry can be inferred from investor confidence in travel companies such as Expedia and Booking. In contrast, investor confidence in cruise companies appears to have been low in the first year of the pandemic, likely due to their reliance on leisure tourism. Similar to previous studies on the impact of the Covid pandemic on stock prices (Acharya, Liu, and Zhao 2021; Chaudhary, Bakhshi, and Gupta 2020), high standard deviations of stock prices and non-normally distributed stock returns were found.

Although stock prices were hardly affected by low investor confidence immediately after the outbreak of the pandemic, the prices of different companies moved in different directions after some time, showing that investor confidence in the tourism industry was regained differently across the industry. Based on the sample of twelve companies for which the stock price performance is evaluated in the first year after the Covid-19 pandemic, the companies could be classified into three groups.

- Group A includes the restaurant and café sector (McDonalds, Domino's Pizza, Starbucks), whose stock prices recovered within a few months of the outbreak of the pandemic and reached the stock price level of early 2020 in September 2020. This is likely due to restaurants relying less on tourists and more on locals and food deliveries.
- Group B includes four companies whose stock price recovered within a year of the March 2020 decline. Stock prices of Booking, Expedia, and Wizz Air clearly recovered by November, while Hilton's stock price took a year.
- Group C is the largest and includes five out of twelve companies in the sample whose stock price did not recover to pre-pandemic levels by April 2021, likely due to ongoing financial issues and/or continued travel restrictions and travel anxiety. These include companies from various sectors of tourism, TUI AG, EasyJet, Accor, Carnival, and Royal Caribbean.

The hypothesis proposed is confirmed. Investor sentiment varied

across tourism sectors in the first year following the outbreak of the Covid pandemic. Restaurant businesses recovered more quickly from the pandemic shock than other tourism sectors because they had previously relied on locals to deliver takeaway food. Online travel companies (Booking, Expedia) also recovered by the end of 2020, likely due to the variety of products they sell and travel closer to home. In the lodging sector, the stock prices of two major companies are examined. Investor confidence in Hilton has increased to pre-pandemic levels by the end of 2020, but Accor's stock price has not. There is a difference also in the airline sector, showing that Wizz Air was able to regain investor confidence to the pre-pandemic level by the end of 2020 while EasyJet had not. The difference is probably due to the different company characteristics in this sector. While online travel companies (Booking, Expedia) recovered by the end of 2020, the stock price of tourism company TUI AG remained lower as online travel planning obviously gains more confidence in the market. As for the cruise companies, investor confidence in Carnival and Royal Caribbean had not yet returned to pre-pandemic levels a year after the outbreak, likely due to the long-haul travel associated with cruises. Thus, pandemic shocks have different impacts on different parts of the tourism industry.

In terms of practical implications, we should bear in mind that, on the one hand, the tourism industry is very sensitive to the health crisis, but, on the other hand, the tourism industry is expected to recover because people are willing to travel. Therefore, tourism investors can limit their risk by hedging their investments in the tourism industry and diversifying risk by investing in gold, bonds, real estate, and stocks of less crisis-prone industries (basic materials and pharmaceuticals). Indeed, the growth of tourism in the past has shown that investment in tourism can bring competitive returns and therefore needs to be included in investment portfolios.

Conclusion

The recovery in the stock prices of various companies in 2021 shows that investor confidence in the tourism market and tourism-related companies has increased, despite the still-present pandemic. After the initial shock and panic in the stock market, investors reacted more rationally in the following months, leading to a rebound in the stock prices of some tourism-related companies. The stock prices over the period of 15 months show that the decline in stock prices of some tourism-related companies

was temporary and has already returned to the previous level in April 2021, while investors are still cautious about some tourism-related companies and are probably waiting for the travel restrictions to be lifted. As pointed out by Mishra and Mishra (2020), tourism-related activities and profitability opportunities for businesses will improve investor sentiment towards tourism investment and allow for more stable tourism growth. Possible future pandemic outbreaks are likely to cause further price volatility, although the market may have become accustomed to the circumstances, similar to the terrorist attacks of recent decades. Nevertheless, new research examining investor reactions and sentiment to the consequences of a pandemic over an extended period of time would be welcome. In the second and third quarters of 2021, there is still uncertainty about the pandemic, particularly about the spread of the various Covid-19 variants. A possible expansion of the Covid-19 pandemic or a new pandemic in the future should not be such a big shock to the tourism industry, as people usually get used to a changed environment, as has been the case with the terrorism threat in recent decades.

The paper has several limitations. The first limitation is that the stock price movements do not take into account other firm characteristics, but only the pandemic issue, to which everything else was subordinated in the first year after the outbreak of the pandemic. The next limitation of the study is that it is limited to twelve large firms in the tourism industry, even though they have a large market stock in their sector. Less stringent travel restrictions and vaccination procedures should improve investor sentiment towards tourism. Therefore, it is recommended that further research on investor confidence be conducted in the future, including more companies. The stock price movements of large companies in the tourism industry reveal relevant and important information and provide lessons for investors and management to be better prepared for similar future crises. Another limitation of this study is that it focuses on large listed companies and does not reveal the sentiment of owners of smaller companies in the tourism sector.

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