MODELLING AVIATION INDUSTRY'S RECOVERY FROM COVID-19 BASED ON PAST CRISES EXPERIENCE

Jorgen von der Brelie
HSB City University of Applied Sciences Germany

Axel Lemke
Iberia Airlines, Madrid, Spain

ABSTRACT

The aviation industry has experienced many crises, out of which it usually departed with a strong rebound. Looking at the timescale, it is justified to argue that about every 10 years, a major crisis occurs. While this frequency appears to be rather stable, the severity of the downturn differs in magnitude. Thereby, general economic development and air traffic development are connected, with the later one being more volatile. This volatility, however, is not just true for the downturn, but also for the rebound following the crisis.

Taking a close look at the temporal sequence of past crises like e.g. 9/11 or the Global Financial Crisis a clear pattern can be identified. The recovery of the aviation industry lags behind the recovery of the general economy, but rebounds stronger. To determine a quantitative relation of how much stronger the aviation industry recovers compared to the general economy, a model was developed based on the data of past crises. With a detailed focus on the recovery phase, this paper gives a forecast on how the rebound following the COVID-19 pandemic is likely to develop.

KEYWORDS: aviation crises, recovery, COVID-19, air traffic volume, economic development, air traffic and economic correlation

1. INTRODUCTION

In the first step, this paper describes the general correlation between air traffic and economic growth, which are usually measured in RPK (Revenue Passenger Kilometres) and GDP (Gross Domestic Product). The correlation of RPK and GDP over time is analysed, and also geographical variations are considered. Especially interesting, however, are times of crises, where the volatility of the two main indicators further increases. Consequently, the second step is to "zoom in" on the crises and to identify typical patterns. Resulting from that very detailed analysis, a model for crises will be developed. This model helps to understand the temporal sequence of crises. By using this model and further focusing on the rebound after a crisis, it is finally attempted to give an outlook on how the current situation of the aviation industry is likely to develop in 2022 and onward.

2. LITERATURE REVIEW

Over the past decades, global RPK growth has been strongly driven by GDP, establishing a close relationship between the two indicators. According to the International Air Transport Association (IATA, 2008), growth in GDP was consistently replicated by RPK, with a growth rate double as high. Likewise, Rigas Doganis (2010) observes a strong correlation, in which RPK grows by a factor of 2 compared to GDP. This relevant figure has been used by airlines in 2009 as a tool for predicting the drop in demand following the outbreak of the Financial Crisis. Publications by Belobaba, Odoni, Barnhardt (2009) closely relate economic growth to a rise in air travel demand, too. Macroeconomic fluctuations are perceived to be the main threat to air traffic growth (Snyder, KPMG, 2019). Following that a reference factor of 2 and the relationship between RPK and GDP growth is widely recognised for characterising RPK growth progressions as data from a number of reports, for example from the European Commission (2016), IATA (2008) and Zock (2008) demonstrate. The close relationship between the indicators in the past give reason to use GDP as a tool for a quantitative data analysis to forecast developments in aviation (Yao et.al., 2014).

However, it is precisely in crisis years when IATA questions the applicability of this factor (IATA, 2008), without establishing a different, specific factor for these particular years. Instead, IATA's release briefly comments that RPK declines at a faster rate than GDP in specific crisis years, without showing deeper quantitative analysis on that observation.

The general study of online literature available delivers a number of papers, mainly from IATA, in which predictions are made for the time necessary for RPK to recover to levels of demand prior to a crisis. IATA's 2015 study on crisis times in aviation substantiates, that generally,

even after up to five years following a shock, 20% of the impact of a crisis is still noticeable. Nevertheless, IATA notes that every crisis is different, and that recoveries of some shock periods occurred in shorter periods of time, too. Therefore, the often so called "resilient" industry of aviation (Adepalli, S., Pagalday, G., Salonitis, K. & Roy, R., 2017), (IATA 2015), (Airbus, 2019), (PWC, 2014) is characterised by literature to have a consistent capacity to bounce back to an underlying growth path after disturbances in growth. However, IATA suggests that this resilience does not come automatically, and that a major influence of the outcome after a crisis is the regulatory environment. In light of the current pandemic, this point seems to have explicit relevance, as the international patchwork of regulations and restrictions imposed to tackle COVID-19 is limiting the industry's capacity to regain momentum. Yet, restrictions to air travel should be temporary and therefore, assuming aviation to have regained a reasonable level of freedom by the end of 2022, this paper studies how the initial stages of recovery could look like under the major influence of economic growth. As some literature points out, using a ratio between GDP and RPK might give the impression that the economy is the only driver of aviation (Bourguignon, F., Darpeix, P., 2016). Clearly, this is not true, as there are many factors, external and internal, affecting growth, such as resources available, infrastructure capacity and taxes. However, as mentioned above, the progression of the general economy is the most influential, as it bears a deeper insight into the spending potential of people and therefore demand for travel. There is little literature analysing the RPK data of recovery periods, as most studies have a holistic approach to a crisis, focusing on the new state of the industry after the recovery, rather than on the developments observed during the recovery. In the current situation, where managers have to focus much more on short term than usual, the result of this particular paper might turn useful to navigate through the next two years.

3. CORRELATION OF AIR TRAFFIC AND ECONOMIC DEVELOPMENT

3.1 Correlation Ratio

There has been a clear correlation between air traffic volume measured in RPK and GDP in the years between 1990 and 2019. In Figure 2 it can be seen that RPK and GDP growth followed a similar course, sharing a cyclical growth development, in which RPK appears to follow the trends of GDP growth. However, RPK has had higher levels of volatility, most notable in downturn periods, as can be seen after the 9/11 attacks or the Global Financial Crisis (GFC) of 2008 (Figure 2). It is evident that RPK is more prone to suffer higher levels of fluctuation and to slide into recession, as seen in Figure 2, where RPK adopted negative growth during all

major periods of crises, which are the 1991 Oil Shock, 9/11 and the GFC. For GDP, this only occurred in 2008. However, the RPK growth recovery of a crisis period is characterised by a strong rebound outpacing GDP, visible in Fig for the years 2004 and 2010, where RPK reached factors of growth well above 2.

Table 3.1: Worldwide average RPK and GDP growth rates with calculated factors of growth, decades between 1990 and 2019

Decade	Ø GDP growth	Ø RPK growth	Factor
1990-1999	2.65	4.64	1.75
2000-2009	2.87	4.65	1.62
2010-2019	3.03	7.35	2.47
Overall growth factor			**1.95**

Source: World Bank, ICAO (own elaboration)

Following the development observed in Figure 2 a widely accepted hypothesis suggests a growth-ratio of 2:1 between RPK and GDP at a worldwide level (Doganis, 2010; Belobaba, et al., 2009, p. 2.; IATA Economic Briefing, 2008). Table *3.1* illustrates the evidence found to support this hypothesis by illustrating the factors of growth in each decade to calculate an average factor of growth between GDP and RPK from 1990 to 2019. The result demonstrates some variation in the factors of growth. The period between 2000 and 2009 was particularly marked by years of strong downturns closely following each other (9/11 and GFC 2008) leading to a lower factor than the preceding decade, while the most recent decade developed more stably, resulting in a higher factor compared to the previous decades. However, overall a factor of 1.95 is delivered for the long term, which is very close to the factor of 2 assumed by industry organisations and specialists (Doganis, 2010; Belobaba, et al., 2009, p. 2.; IATA Economic Briefing, 2008).

It was also analysed if the 2:1 relation exists during periods of downturn. However, there have been few years in which both indicators slid into recession at the same time, leading to an inconclusive analysis for years of recession. Nevertheless, for the year of 2009, a negative growth factor of 2.25 can be calculated after both indicators slid into recession, providing some evidence that the factor of 2 between RPK and GDP growth also exists during years of negative growth (Fig).

A good example to visualise the relationship between RPK and GDP is delivered by Fig, in which the worldwide cyclical development of RPK and GDP can be seen in detail. The start of

the decade saw a booming GDP and an RPK growth double as strong. However, the burst of the Dotcom bubble paired with the tragic events of 9/11 in 2001 caused a considerable slowdown in GDP and particularly strained the air transport industry, which slid into unprecedented recessive growth.

In 2004, after SARS and the Iraq war, along with a booming Chinese economy and increased momentum of developing countries a strong upturn of the global GDP (UN, 2004) developed, boosting the recovery of RPK after 9/11, which had a remarkable impact on global traffic numbers and in particular on the North American air travel. Following two years of weak growth in 2002 and 2003, RPK growth peaked in 2004 at +14%, initiating a streak of outstanding growth lasting until 2007. RPK generally grew visibly above the factor of 2 compared to GDP, which showed an average annual growth of about 4%. This was a relatively high rate of growth at worldwide level resulting from higher productivity levels in Europe, whilst RPK mostly scored growth rates above 10% over the same period. Therefore, the rebound after the early shocks was of considerable vigour. The main factors driving RPK growth were market liberalisation and globalisation, most notably in China, India and Europe, along with the mentioned strong growth in GDP (IATA, 2008; IATA, 2007; UN, 2005; ICAO, 2003).

The IATA Annual Report of 2008 predicted a looming economic downturn in the USA between 2007 and 2008, with the potential to spread to other parts of the world. As the GFC broke out in the second half of 2008, the air traffic industry faced a new significant downturn, with the strongest impact felt in 2009, when the RPK were reduced by -3.77%. The fall in global trade also caused GDP to decline -1.67%, roughly half as much as RPK. However, following the crash of 2009, 2010 showed a significant rebound of +10.53% in RPK growth. GDP reacted similarly, but to a lesser degree, showing an increment of +4.3%. Both indicators reverted from negative to positive growth from 2009 to 2010 strongly.

For the decade between 2000 and 2009 RPK grew at a factor of 1.62 compared to GDP, while being heavily affected by two major crisis periods following each other. It is clear that in both occasions the impact was much stronger on RPK, which slid into recession twice. The strong rebound following the crisis periods and the solid growth recorded in the middle years of the decade, with growth factors above 2, led to a higher level of volatility.

RPK growth is driven by a number of economic, social and demographic factors such as increasing levels of urbanisation, a growing middle class worldwide, globalisation and the irruption of the Internet, increasing the propensity of people to travel by air (Adepalli, et al., 2017), (Airbus, 2016). Aviation has shown a high degree of resilience to external shocks and

changes in geo-economics, leading to exceptional development in the past decades despite the shocks of 1991, 2001 and 2008. This resilience was in most occasions a reflection of the economic rebound after a shock period and the improvement of quality of life, especially in emerging countries (Oxley & Jain, 2015). Global aviation organisations such as IATA acknowledge the relevance of economic cycles to the development of air traffic and also identify a correlation factor of 2 between these indicators throughout their growth cycles (IATA, 2008).

The global economic improvement and its effect on RPK in the past three decades is best illustrated by the fact that the global amount of RPK flown has quadrupled since 1990, reaching 8.7 trillion RPKs worldwide in 2019 (Figure 1).

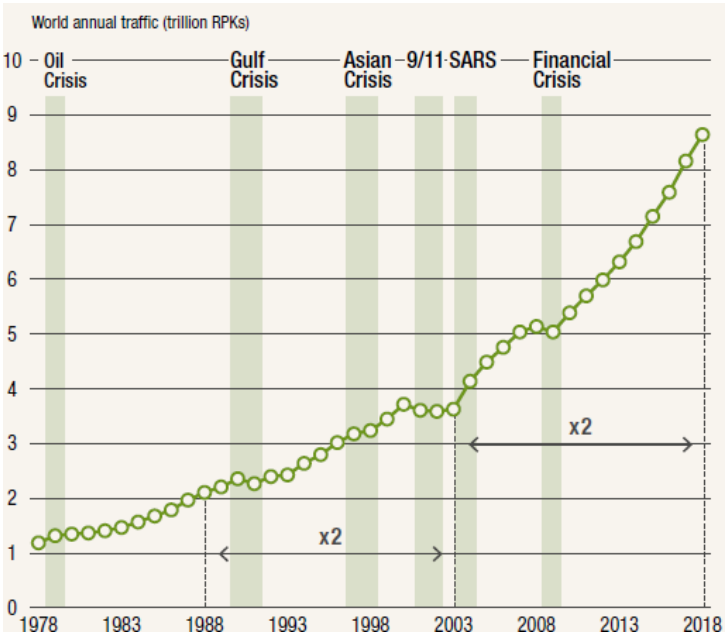

Figure 1: Absolute RPK (trillions) worldwide, major crises periods highlighted, doubling of worldwide RPK every 15 years, (Airbus, 2019).

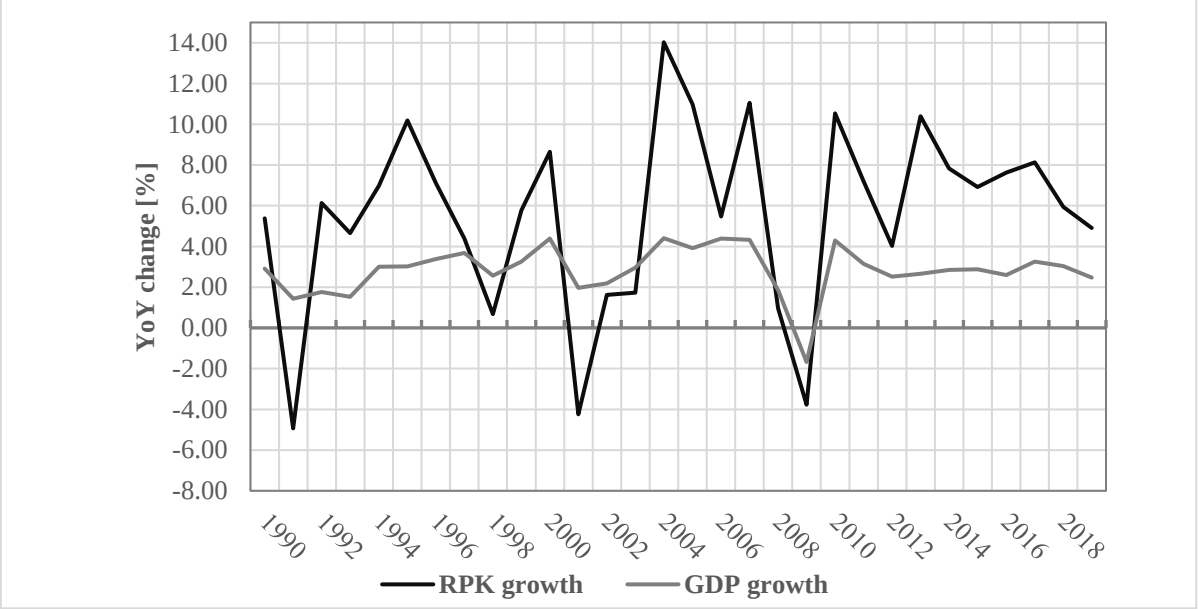

Figure 2: Correlation of RPK and GDP, 1990-2019 (ICAO Data+, World Bank)

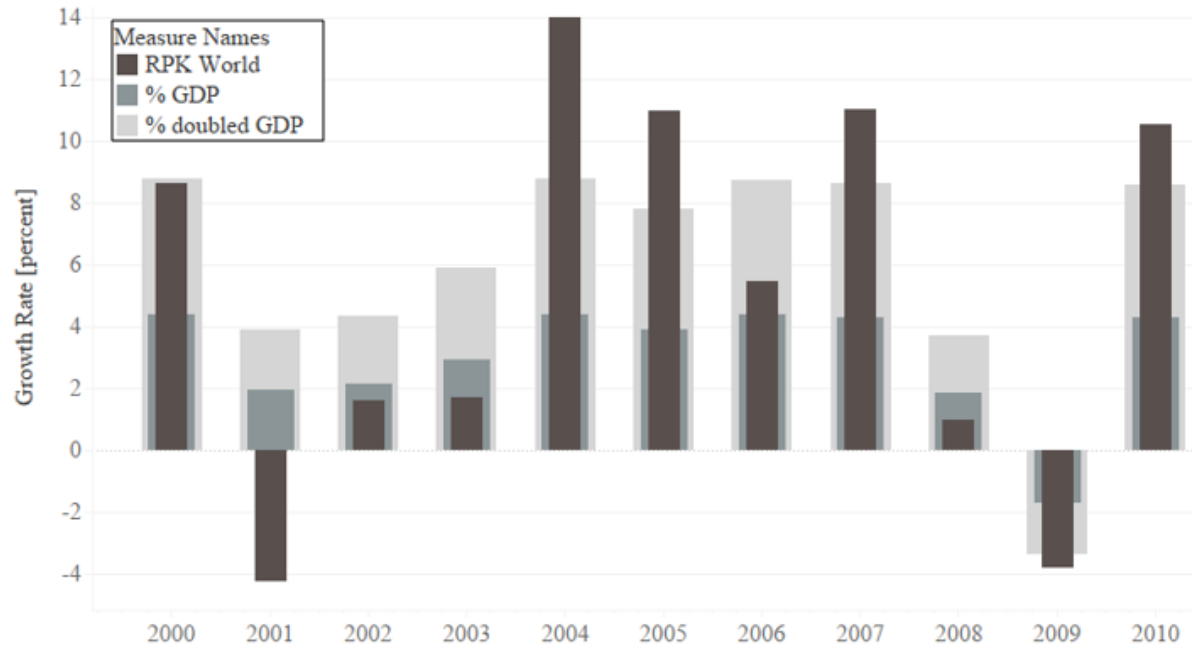

Figure 3: Worldwide RPK annual growth against single and doubled GDP growth (const. 2010$), 2000-2009 (ICAO, World Bank)

3.2 Geographical Variations

The relation between RPK and GDP has also been analysed for other relevant regions, namely the USA and the EU27 (comprising the member countries as of 1st of February 2020) in order to discern if the factor of 2 can be assumed for them, too.

Observations of RPK and GDP growth developments of these regions reflect specific characteristics and events of their local markets. For example, in the USA, the air travel industry witnessed high levels of airline consolidation following the liberalisation process in the early 90s, reducing over-competition between airlines (Koenig & Mayerowitz, 2014). This, combined with steady levels of demand, resulted in fairly moderate RPK growth rates in a country with historically solid GDP growth, leading to comparatively lower growth factors (Table *3.2*).

In contrast, the liberalisation of air travel within the EU27 enabled the development of LCCs across Europe, creating a boom in the industry within this region (Burghouwt et al., 2015). Dozens of airlines competing within a small geographic area, combined with high levels of demand for short haul transport, resulted in particularly high RPK growth rates in this region. The disparity of GDP growth rates among EU countries and its political complexity leading to lower GDP growth rates than seen in other regions led to fairly higher growth factors between the indicators, even when compared to worldwide figures (UN, 2012) (Table 3.3).

Table 3.2: USA average RPK and GDP growth rates with calculated factors of growth, decades between 1990 and 2019

Decade	Ø GDP growth	Ø RPK growth	Factor
1990-1999	3.22	4.56	1.41
2000-2009	1.91	1.71	0.89
2010-2019	2.23	3.23	1.43
Overall growth factor			**1.24**

Source: World Bank, ICAO (own elaboration)

Table 3.3: EU27 average RPK and GDP growth rates with calculated factors of growth, decades between 1990 and 2019

Decade	Ø GDP growth	Ø RPK growth	Factor
1990-1999	2.16	8.56	3.96
2000-2009	1.56	4.68	2.99
2010-2019	1.56	6.18	3.96
Overall growth factor			**3.64**

Source: World Bank, ICAO (own elaboration)

Table *3.2* and Table 3.3 illustrate the relationship between RPK and GDP in these two regions more detailed. The USA saw an overall factor of 1.24, well below the worldwide level. In contrast to that stands the EU27, displaying very strong growth factors consistently above 2, even in the weaker decade between 2000 and 2009. Overall, a factor of 3.64 resulted for the last three decades.

It is clear in all cases, both worldwide and at a more regionalised level, that RPK generally follows the trend of GDP but is more volatile (same tendency, larger amplitude). In sum, the average relation of RPK and GDP growth is close to a factor of two on a worldwide level, while in the EU the factor is higher and in the USA the factor is lower.

4. CHRONOLOGICAL SEQUENCE OF EVENTS DURING CRISES

After analysing the relationship between RPK and GDP in magnitude, it shall now be focused on the temporal sequence of changes of RPK and GDP, especially in crisis periods. Coming from the general perspective, it is now zoomed in on three crises: 9/11, the GFC of 2008 and the COVID-19 Pandemic.

This is relevant to discern the level of sensitivity of the air transport industry compared to the wider economy, across three different crises events: terrorism, financial and health. In order to have an illustration as detailed as possible, quarterly data were used for the G20, representing around 85% of the global economy. Several common developments across all the regions can be seen between the selected events.

4.1 Initial Slowdown

Prior to the occurrence of each downturn event, a 'pre-crisis' slowdown in GDP was generally recorded in all three cases, as a result of a cyclical economic slowdown. In the case of 9/11 this was due to the bursting of the Dotcom Bubble in the USA, which also caused a general reduction of GDP growth in the EU and G20. GDP begun to record reducing quarterly growth in Q4 2000, one quarter ahead of RPK. The 2008 GFC was preceded by a general cyclical slowdown which was then accelerated by events such as the crash of Lehman Brothers, while COVID-19 also saw signs of economic decline across all three regions from the start of 2019. In the case of 9/11 and COVID-19, these economic slowdowns were unrelated to the shock events, however, they were still relevant in terms of how they exacerbated the cyclical downturns. Nevertheless, in the case of the 2008 GFC, this pre-crisis slowdown was the start of a sequence of spiralling events that eventually resulted in a deep economic recession. The shock events mentioned above (9/11, bankruptcy of Lehman Brothers as well as the imposition of the US travel ban) marked the tipping point in the growth development and led to a dramatic exacerbation of the impact caused by the economic cycles.

4.2 Recession

After the slowdown, RPK slid into recession earlier than GDP. This sequence was seen consistently in all regions and all crises selected. The rapid slump into negative growth was caused primarily by the specific shock event: the 9/11 attacks (Q3 2001, Figure 4), the bankruptcy of Lehman Brothers (Q3 2008, Figure 5) and the imposition of hard international travel restrictions (Q1 2020, Figure 6).

It can be seen that RPK consistently fell into negative growth in the quarters listed above as a direct consequence of the impact caused by these events. In contrast to that, GDP continued to show a deceleration process for a few quarters before reaching the point of the lowest growth. During the 9/11 crisis, GDP did not record any negative growth, while it certainly did in the GFC, reaching the highest negative growth in the first quarter of 2009.

A further commonality between RPK and GDP can be seen by observing the low points, which occur in the same quarter (Q4 2001, Q1 2009 and Q2 2020 in Figs. 4, 5 and 6).

4.3 Recovery

After several quarters of deep decline, the recovery to a positive growth trend by RPK was remarkably more vigorous compared to the GDP trend after 9/11 and in the GFC. In Figure 4

and Figure 5 it can be seen that the first quarter of positive RPK growth displayed much higher growth values than GDP in each region. The factors calculated for the quarters of peak RPK growth after each crisis are for example about 4 at G20 level (Figure 4) and up to 14 at EU27 level in Q1 2010 (Figure 5). Nevertheless, it is also true that GDP was consistently developing positively earlier than RPK. Thereby, the recovery was initiated first by GDP, then followed by RPK. In the case of the GFC, where both indicators recovered from recession, RPK regained positive growth delayed by one quarter. A similar sequence was seen for the EU27 and the USA, which support the hypothesis of a strong recovery of RPK.

Therefore, it can be said that RPK generally follows the 'First In Last Out' logic. RPK usually experiences decline first, and its recovery lags behind the GDP.

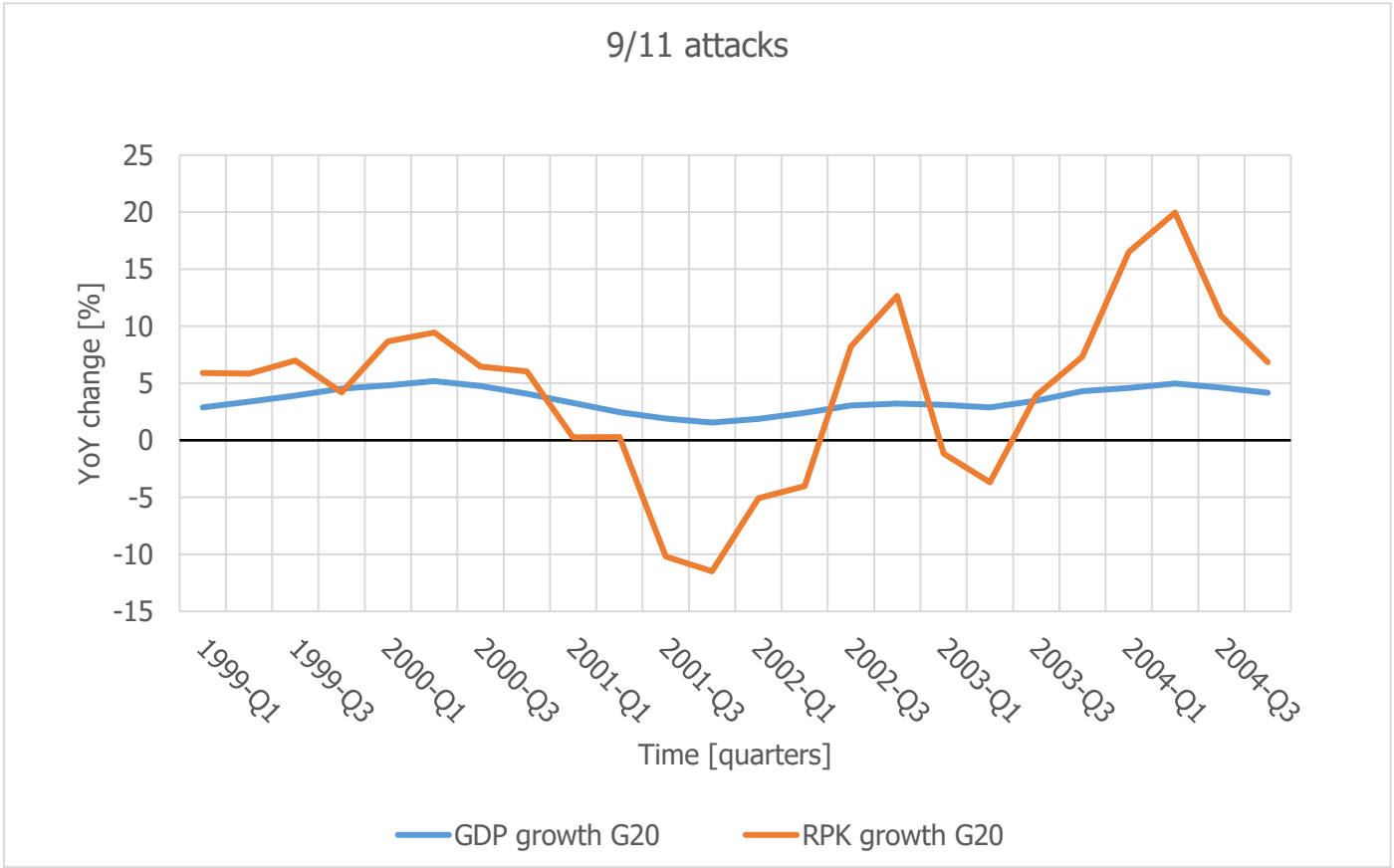

Figure 3: Detailed development of the GDP and RPK quarter growth rate on the G20 level before, during and after the 9/11 crisis, 1999-Q1 – 2004-Q4 (ICAO Data+, OECD)

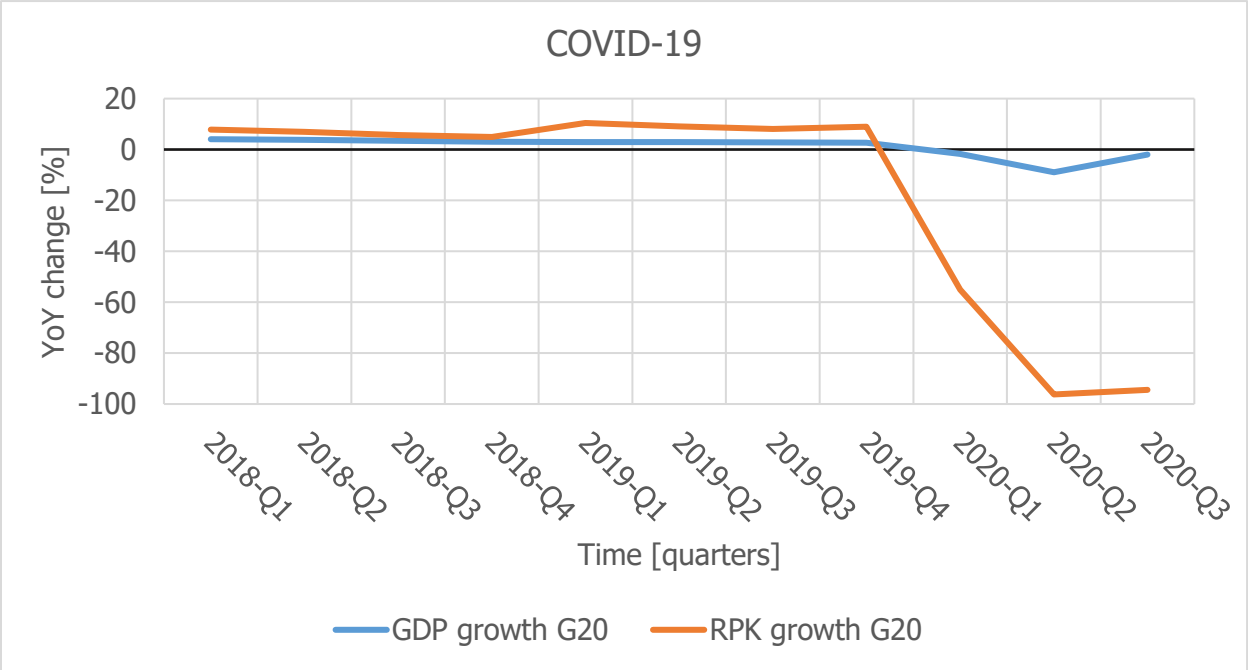

Figure 4: Detailed development of the GDP and RPK quarter growth rate on the EU27 level before, during and after the Global Financial Crisis, 2006-Q1 – 2011-Q4 (ICAO Data+, OECD)

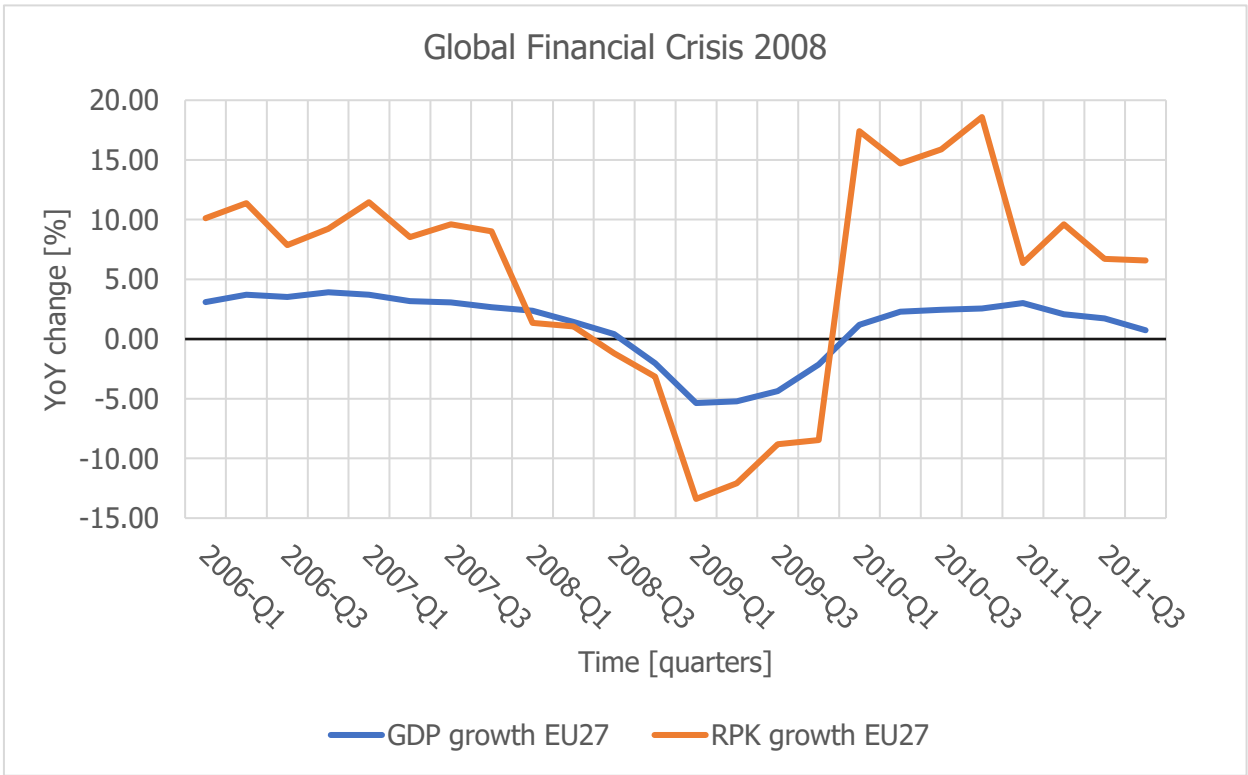

Figure 5: Detailed development of the GDP and RPK quarter growth rate on the G20 level before and during the COVID pandemic, 2018-Q1 – 2020-Q3 (ICAO Data+, OECD)

DISCUSSION

5.1 Development of A Model Derived from the Analyzed Data

The previous Figure 4, Figure 5 and Figure 6 are exemplary for the recurring phases of an aviation crisis. Although the crises occurred due to different reasons (economical, terror attack etc.) it is clear that a certain pattern reoccurs. This finding lead to further research, validation and finally to the development of the A-CRM – the Aviation-Crises Recurring Model.

The A-CRM consists of three main phases, all of which can be identified in all crises and in all regions (

Figure 6). However, the phases do vary in magnitude.

The first phase of the A-CRM begins with the steady state condition and a factor between GDP and RPK as described in chapter 3.

Usually, a rather unapparent slight decrease in GDP comes first, when suddenly the "shock event" kicks off the real crisis. The shock event can therefore be seen as the trigger. It usually can be associated with a specific date, and it originates from various areas (9/11, Lehman Brothers, closing of the US for foreigners).

This shows how vulnerable especially aviation in a globalized world is. Aviation is influenced by all kinds of crises and as it is so far globalized and interconnected it is also prone to rather regional events like the SARS outbreak or the Eyjafjallajokull volcanic eruption.

After the shock event the GDP and RPK indicator decrease with RPK taking a sharp downward tendency and reaching the negative growth first. This marks the end of the first phase and the beginning of the second phase.

In the second phase, the RPK value shows its volatility and reaches multiples of the negative value of GDP. The factor between GDP and RPK is at least as large as in the steady state condition, but this time in negative direction.

Sometimes the GDP only reaches very small negative numbers or no negative numbers at all, while RPK shows large negative growth rates (e.g. 9/11 in Figure 4). In these special quarters, the factor might reach very high values, which are due to the low denominator GDP.

Interestingly, both indicators reach the turning point at the same time. The trend reversal always occurred in the same quarter, but positive growth rates were reached by GDP first. The recovery of RPK lags behind the GDP recovery.

This recovery marks the beginning of the third phase – the rebound.

Once the RPK value turns positive again, it outperforms the GDP by multiples larger than the average factor. These rebounds can again be identified in all crises and in all regions, but with varying magnitude.

To get a better understanding of the rebound, it was defined as the time period after a negative RPK growth during which the factor between RPK and GDP exceeds the long-time average and/or the RPK growth exceeds the long-time average RPK growth. This last aspect is important, because, there have been regions with particular high GDP rebounds and although there was a clear RPK rebound the high GDP growth rate lead to a smaller RPK/GDP factor.

Sometimes even two rebounds can be observed (Figure 4) before the system again reaches a steady state condition. A mass-spring system seems an appropriate analogy. Out of a steady state condition, an exogenous shock displaces the mass (RPK), which is thereafter pulled back by the spring (rising demand) and oscillates around the steady state condition. With a strong damping of the system, it finally reaches the steady state condition again. This concludes the phases of the A-CRM model.

As for the current situation the forecast of the rebound phase is particularly interesting, it shall be further described in the following. In Figure 4 and Figure 5, the rebound phases can be clearly identified in Q3/Q4-2002, Q1/Q2-2004 and from Q1-2010 until Q4-2010.

5.2 Can the A-CRM be used to Forecast Future Demand?

In the current situation, airline managers are faced with the challenge of allocating resources and setting up budgets for the near future. Due to the dynamic development of the pandemic, a reliable forecast – for the next flight plan period or even just the next months – seems more unpredictable than ever before. However, the decisions to be taken have a huge economic impact. Allocating too many resources (e.g. taking aircraft out of the deep storage, re-certifying crews etc.) will cost a lot of money, while allocating too few resources will cost the airlines a lot of business and puts them in a poor position compared to the competitors.

Using the A-CRM model (

Figure 6) helps to provide an educated estimate. Using the definition of a rebound from above, the quarters belonging to phase 3 of the A-CRM model are identified. In order to get more specific results, this has to be calculated for each region separately. In a first step, this leads to an average length of the rebound phases. Thereafter, the relation of GDP and RPK (rebound factor) only during the phase 3 (the recovery) of the A-CRM model is calculated.

These resulting factors of phase 3 are shown in Table 5.2.1 and compared to the steady state condition factors. As expected, the factors for phase 3 exceed the steady state condition factors in all regions. This was expected as all regions experience a rebound. The EU has the highest rebound factor of 7.5 (more than double), while the world rebound factor increases by 50% to 3.0 and the US rebound factor reaches 2.8. It has to be mentioned that the high EU rebound factor is based not only on a strong air traffic recovery, which certainly exists, but also based on the comparatively lower GDP. Therefore, even average rebounds of air traffic lead to higher factors.

Table 5.2.1: Calculated factors between GDP and RPK growth in various phases of the A-CRM Model

Region	Steady State Condition	Phase 3
World	2.0	3.0
USA	1.2	2.8
EU	3.6	7.5

Once the rebound factors for each region are determined, it is then possible to use forecasts of the GDP from large organizations (like OECD, IMF, WTO) to estimate the development of the RPK value. The result of cause depends on the correctness of the GDP forecast and additionally assumes that RPK and GDP during the recovery of these crises are likewise interdependent compared to previous crises. This is not certain so far, however, this methodology at least provides results that promise to be more accurate than just taking the long-term average.

Table 5.2.2: Forecast GDP growth values from various international organisation, October 2021 (WTO, 2021; OECD, 2021; IMF, 2021)

Organisation	2022
WTO	4.1
OECD	4.5
IMF	4.9

Table 5.2.2 shows recent worldwide GDP forecasts from the mentioned organizations. According to the A-CRM air traffic grows globally with a factor of three during a rebound. An average GDP growth of ~4.5% in 2022 would therefore lead to a growth of air traffic of

approximately 13% in the same year on a global scale. For the EU, the air traffic rebound will be even higher, but again uncertainty is larger on a regional level and the rebound phase is not synchronized between all regions. Large domestic markets, for example, experience a much earlier recovery than international regions. This is why no specific forecast will be given for the EU, USA or even smaller regions. But the rebound factors at least will provide a qualitative estimate.

In summary, 13% worldwide air traffic growth for 2022 is the forecast according to the A-CRM. Obviously, there remains a large amount of uncertainty, which cannot be eliminated.

When markets open up again and travel restrictions fall, an immediate surge in demand is expected (IATA, 2021). This indicates a certain pressure on the demand side and a willingness to travel again. Once travel restrictions are abandoned on a large scale, there will be a rebound – the question is for how long and with which magnitude. The methodology described before and the A-CRM model provides an educated estimate for this question and provides airline managers, industry professionals and researchers with a helpful tool.

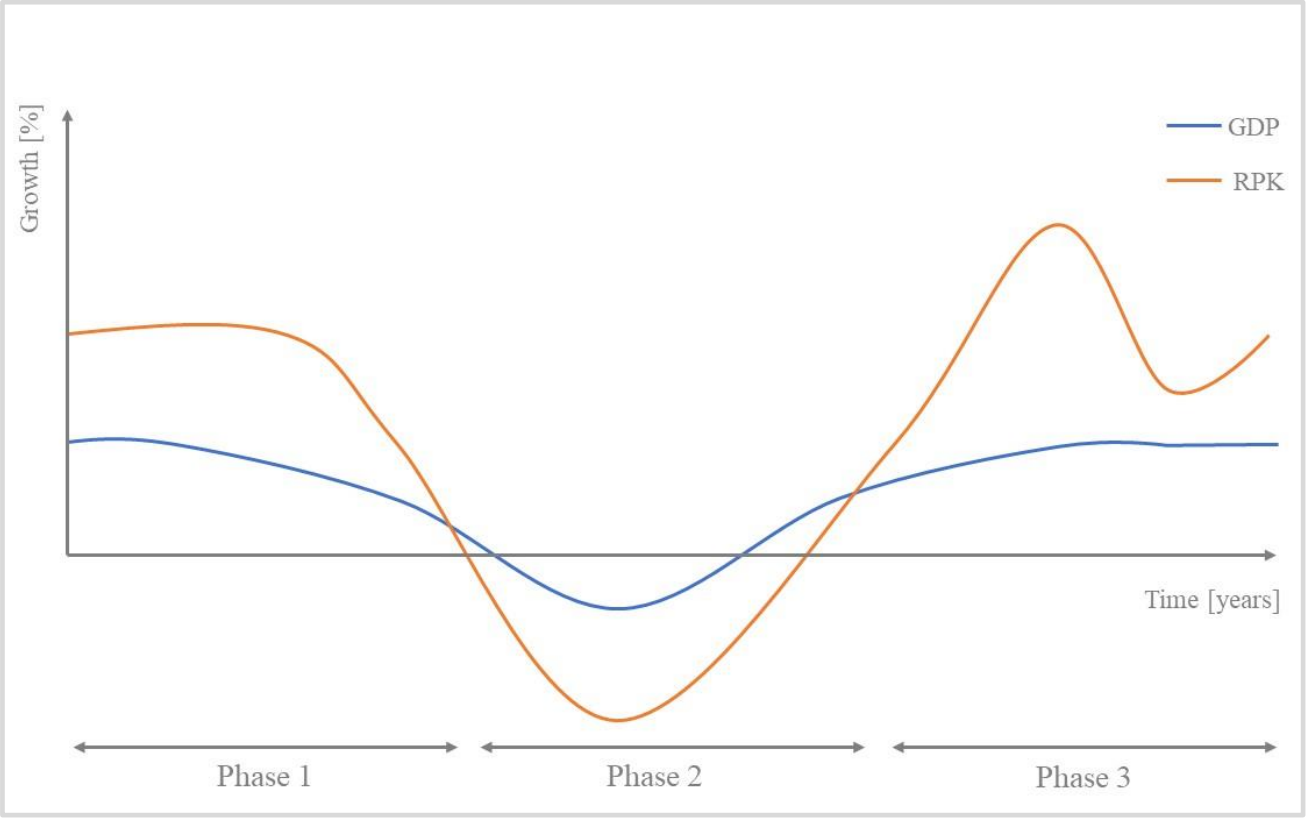

Figure 6: The Aviation - Crises Recurring Model (A-CRM)

6 CONCLUSION

The A-CRM (

Figure 6) describes the relationship between RPK and GDP for steady state conditions as well as for crises. With its focus on crises, however, the A-CRM model provides a conclusive description of the pattern, which GDP and RPK usually take once a shock event deflects these parameters out of their steady state condition. However, it has to be mentioned that, first, every impact of a crisis is different and secondly disruptive developments leading to an infinite change of a system can only be modelled with limited predictive capability. The A-CRM uses the in-depth analysis of patterns of past crises to make a prediction of the most likely development of air traffic in the future. This gives a powerful argumentation for example to the management, especially during crises, when investors, employees or other stakeholders may lose confidence in the future success of the industry. The knowledge of these typical developments may also be an advantage in negotiations with business partners; e.g. airlines may achieve further discounts from their suppliers or manufacturers (like Boeing or Airbus) during Phase 2 of the A-CRM.

Decisions, however, should always be taken in accordance to the specific development of the company's main business region. It is a fact that single events (like the bankruptcy of a competitor) have a stronger effect on regional level than globally. The A-CRM therefore provides the best predictions on a global level, as local events are balanced out on a higher level. Once a solid forecast for the GDP growth is received, a prediction of the RPK development can be deducted using the rebound factors. As a result, the development of air traffic after the crisis (Phase 3) and its rebound can be approximated.

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AUTHORS' BIO

Jorgen von der Brelie holds an International Bachelor in Aviation Systems Engineering and Management at the Hochschule Bremen and became a pilot at Lufthansa beginning on Boeing 737 and meanwhile flying Airbus 350 and 380. His PhD thesis at the Clausthal University of Technology was awarded for outstanding research and helped to optimize flight schedules during capacity restrictions. He is involved in various aviation research and consulting activities and shares his knowledge being a lecturer for at the Air Transport Management in Bremen. Email: vonderbrelie@web.de

Axel Arce Lemke holds an International Bachelor in Aviation Systems Engineering and Management at Hochschule Bremen, combing his studies with the Air Transport Pilot License (ATPL) Training. The results of his Bachelor Thesis were presented and discussed with several stakeholders of the aviation industry in Germany. Currently, he works as a First Officer at Iberia in Spain. Email: axel.arce.lemke@outlook.com