A Work Project presented as part of the requirements for the Award of the Master's Degree in Finance from the Nova School of Business and Economics.

EQUITY RESEARCH – LATAM AIRLINES

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ABSTRACT

This report contains the description of a valuation performed on LATAM Airlines, the largest airline in South America. This study was conducted by analysing the factors that may affect the company's value (both macroeconomic, industry, and company-specific factors), whilst also performing a series of scenario analyses, given the uncertain times which characterize the present. An estimated share price (the target value for the 31st of December of 2020) was then computed, which prompts us to recommend investors to sell their positions on LATAM Airlines.

Keywords: LATAM Airlines, Valuation, Share Price, COVID-19, LCCs

LATAM AIRLINES GROUP

COMPANY REPORT

AIRLINES

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COVID-19 and aviation in Latin America

A change of scenario in South American aviation

- We recommend investor to **SELL** their position on LATAM Airlines Group, given our **2020** target price of **$2,35**.
- The COVID-19 crisis and the resulting travel restrictions are heavily impacting LATAM's results in **2020**. The current **uncertainty** in the general market & aviation industry has increased the **systematic risk** and **probability of default**, which is **reflected** in our estimated bankruptcy probability of **20%**.
- However, after a revenue decrease of **55%** in **2020**, the company is expected to bounce back in the subsequent years, with a revenue growth of **53%** in **2021** and **35%** in **2022**. Domestic passenger levels are expected to be back at pre-pandemic levels in **2022**, with international passengers fully recovering in **2023**.
- Parallelly, the mid- to long-term outlook is **mildly pessimistic** for the company in terms of its **market share**. Following the trend of the rise of Low-Cost Carriers in South America, we expect LATAM to lose, on average, **3%** market share in Brazil and **6%** in each of its remaining domestic markets until **2030**, compared to **2019**.
- We estimate our target share price based on an **APV** approach, with a terminal growth rate of **3,13%** and an unlevered cost of capital of **7,02%**. Furthermore, it takes into account a **20%** probability of default for LATAM within the next year, due to the COVID-19 pandemic.

Company description

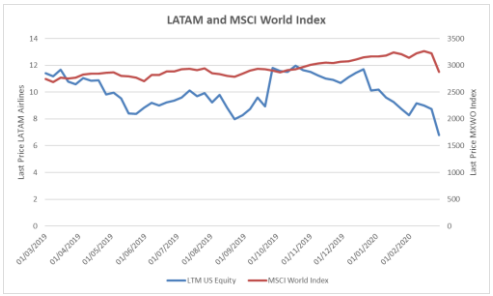
LATAM Airlines Group S.A. is a Chilean airline conglomerate, which operates in passenger and cargo transportation. It operates in Chile, Peru, Argentina, Colombia, Ecuador and Brazil either directly or through subsidiaries. It can be classified as a classic carrier which operates regionally and on longer international routes. Its currently operating fleet amounts to 331 aircrafts.

Recommendation:	**SELL**
Price Target FY20:	**2,35 $**
Price (as of 22-05-2020)	**2,58 $**

Reuters: LTM, Bloomberg: LTM:US

52-week range ($)	1.75-12.16
Market Cap ($bn)	1.643
Outstanding Shares (m)	606.4

Source: Bloomberg



Source: Bloomberg Terminal

(Values in $ millions)	2018	2019	2020F
Revenues	10,368	10,431	4,692
EBITDA	2,259	2,212	427
EBIT	887	741	-946
Net Profit	310	190	-963
EBITDA Margin (%)	21,8	21,2	9,1
EPS	0,51	0,31	-1,58
Dividends per Share ($)	0,09	0,09	0

Source: LATAM financial statements & own estimations

THIS REPORT WAS PREPARED EXCLUSIVELY FOR ACADEMIC PURPOSES BY DIOGO FIRME, MASTER IN FINANCE STUDENT OF THE NOVA SCHOOL OF BUSINESS AND ECONOMICS. THE REPORT WAS SUPERVISED BY A NOVA SBE FACULTY MEMBER, ACTING IN A MERE ACADEMIC CAPACITY, WHO REVIEWED THE VALUATION METHODOLOGY AND THE FINANCIAL MODEL.

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Company description

Headquartered in Santiago, Chile, LATAM Airlines Group S.A. is the largest Latin American airline conglomerate. LATAM Airlines Group was formed after the merger of LAN (Chile) and TAM (Brazil) on the 22nd of June of 2012. As of today, both companies continue to work as separate companies, under the lead of LATAM Airlines Group, which also provides the executive management.

A fleet of 331 operating planes with more than 1300 daily flights and 74,2 million transported Passengers in 2019 (68,8 in 2018) makes the LATAM Group come close to being one of the 10 largest Airlines in the world. The company can be classified as a **traditional carrier** (opposed to Low-Cost Carrier (LCC)), as its focus is more directed towards a higher flight experience, intended to attract executive flying, especially on its international long-haul segment.

LATAM has developed a wide route network, flying to **145** destinations, divided through **26** countries, in all **6** permanently inhabited continents. The group also has subsidiaries directly present, Peru, Colombia, Ecuador and Argentina, serving these **domestic** markets.

As well as passenger operations, the company also operates cargo, which, in **2019**, accounted for roughly **10%** of its operating revenues.

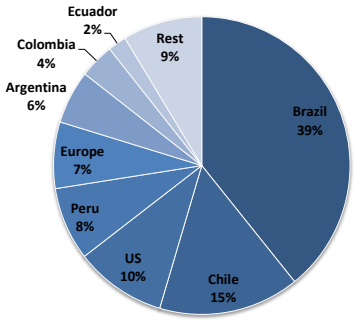

Exhibit 1: Revenue per region (2019), Source: Company Data

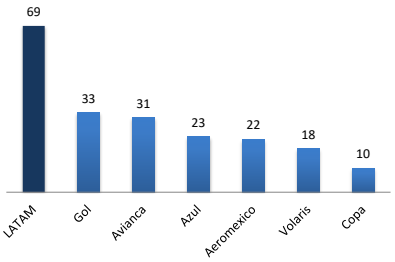

Exhibit 2: Transported Passengers in mln (2019), Source: Company Data

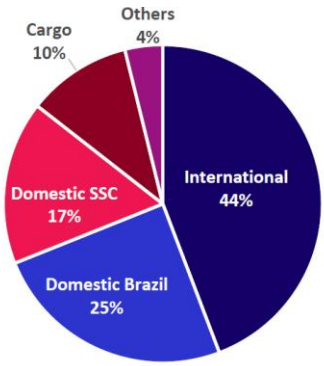

Exhibit 4: Revenue by segment (2019), Source: Company Data

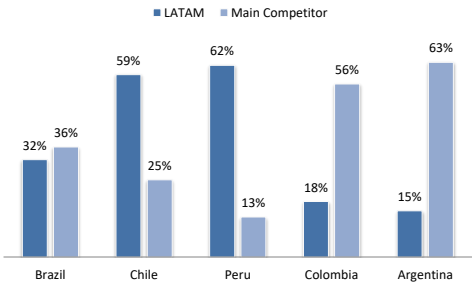

Exhibit 3: Domestic Market Share, first half of 2019, Source: CAPA

LATAM currently employs almost **42 thousand** workers, divided by the aforementioned countries.

The Group reported total revenues of **$10,43 billion** in 2019, with around **86%** steaming from passenger transportation.

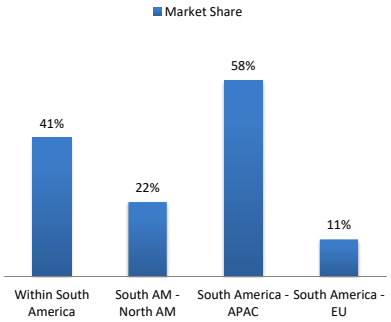

Exhibit 5: International market share (2019), Source: Company Data

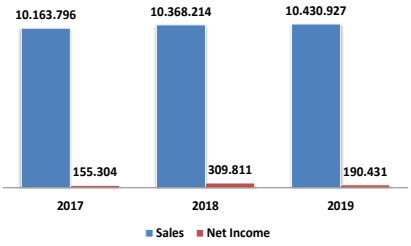

Exhibit 6: Sales vs. Net Income, Source: Company Data

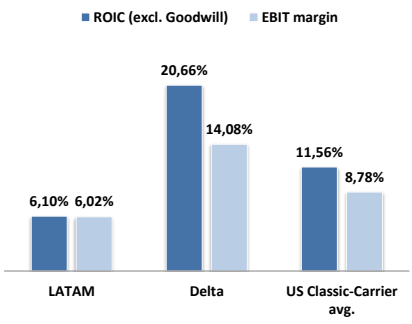

Exhibit 7: Efficiency Comparison, Source: own estimates

Breaking down the passenger revenues into segmentations, it is observable that, in **2019**, LATAM received **49,4%** of its passenger revenues from domestic passengers (**45%** in 2018) and **50,6%** from international passengers (**55%** in **2018**). The increase in domestic revenue in 2019 is mostly due to the resurgence of the Brazilian economy. International passenger revenue includes both regional international travelling (within South America) and Long-haul flights between South America and other continents. LATAM is the largest carrier of international flights within South America with a **41%** market share and also between South America and Asia-Pacific with a market share of **58%**.

The EBIT in 2019 equalled 741,6 million, using the new IFRS16 accounting standard in which all operating leases are now activated in the Balance Sheet. This resulted in an EBIT margin of 7,1%. Net Income attributable to Shareholders reached 190.4 million and ROIC (including Goodwill) equalled 5,1% in 2019.

Delta's acquisition of LATAM

On the 26th of September of 2019, **Delta Airlines** announced the purchase of a 20% stake of LATAM's equity to form a **strategic alliance** between the two airlines, with the goal of strengthening both companies' international route network by connecting North and South America. The acquisition was completed on the 1st January of 2020.

LATAM then swiftly announced their exit *Oneworld* Alliance on the 1st of May 2020, an alliance of which it had been a member since 2000 (through LAN Chile). Additionally, the deal previews a 350 million USD investment by Delta in LATAM's CAPEX. Furthermore, Delta will also purchase 4 of the operating Airbus 350-900 in LATAM's fleet and will assume the outstanding order of 10 additional Airbus 350s until 2025. In exchange Delta will get representation on LATAM's board.

Besides the expected value creation due to the strengthening in the international route network, the Delta representation on LATAM's board might have positive future effects for investors, as Delta is the most profitable full-service carrier in the US and with their knowledge, LATAM might be able to enhance its operational **efficiency** soon.

Nevertheless, there is still uncertainty regarding whether LATAM will join Delta's *Sky* Alliance or just partner with Delta. Should the second be the case, leaving Oneworld Alliance can hamper LATAM's business in Europe, where LATAM currently has **67** of its **155** code-sharing destinations. Europe accounts for roughly **7%** of LATAM's revenues and if these code-sharing agreements are not

held or properly renegotiated/replaced after the exit, LATAM could be facing an important loss in this market.

Shareholder structure

LATAM Airlines Group is listed on the Santiago Stock Exchange (SSE) under the Ticker LTM.SE and furthermore on the New York Stock Exchange (NYSE) under the ticker LTM.

The Ownership Structure as of 31st March 2020 is as follows: The highest participation amount of **21,5%** is held by the **Cueto Group** (Chile), the Investment Group of the Cueto family (of which LATAM's current CEO Enrique Cueto also is a member). As part of the aforementioned deal, **Delta** holds a 20% share. **Qatar Airways** has a share of **10%**, the **Chilean pension funds** (AFPs) **16%**, **American depositary receipts** (ADRs) **3,9%**, the **Amaro Group** holds **2.0%**, foreign investors account for **8,9%** of outstanding shares and other investors for 17.7%. In total, there are **606,407,693 shares outstanding**. Amongst other investors, Axxion should be highlighted, as even though it only holds, as of the date of this report, **3,0%** of the company's shares, it has connections to Chile's president, Mr. Sebastian Piñeda. Mr. Piñeda formerly held 27% of LAN Chile's shares and sold the vast majority of them to the Cueto Group after his election. In this time of uncertainty, there is the possibility (albeit thoroughly low) that LATAM gets nationalized by the Chilean government. This would likely force Axxion to sell its shares due to an impending **conflict of interests**. All shareholders have **similar** voting power, according to their ownership of the company.

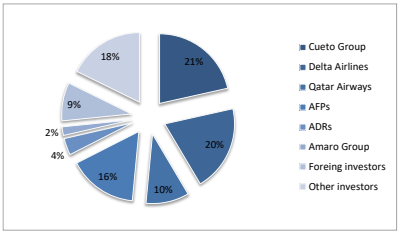

Exhibit 8: Shareholder Structure, Source: Company Data

Regarding **dividends**, LATAM paid, in **2019**, a dividend of **$0,09** per share, an increase from the previous two years, in which it had paid **$0,03** and **$0,08**, respectively. In **2020**, due to the COVID-19 pandemic, the company will not distribute dividends to any shareholder. Under Chilean law, companies are obliged to distribute **30%** of their net profits to shareholders. This value can, however, be deferred to a later date if approved at the Annual Shareholders' Meeting.

Additionally, LATAM is due to receive a loan of **$341** million from the Brazilian Development Bank. **25%** of this loan will be issued through convertible bonds, which bring an option to convert into newly issued LATAM shares in **5** years, causing existing shareholders to lose value. Estimates of the dilution this would represent to pre-existing shareholders were computed for different share prices and can be observed below, on Exhibit 9.

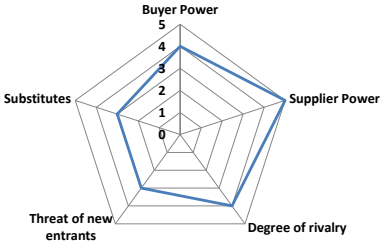

Exhibit 10: 5 Forces Analysis, Source: Own estimations

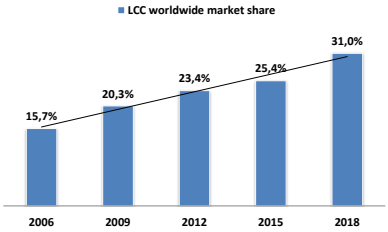

Exhibit 11: Low Cost worldwide market share (2006-2018), Source: ICAO

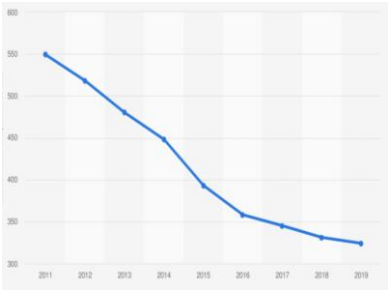

Exhibit 12: Average flight prices, global (2011-2019), Source: Statista

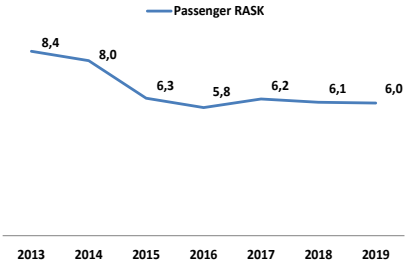

Exhibit 13: Passenger Revenue per ASK – LATAM Airlines, own estimations

Exhibit 14: Tourism growth Latin America (2010-2018), Source: UNWTO

Share Price	2	2,35	2,5	2,88	3	5
Warrant Value ($ million)	85,25	85,25	85,25	85,25	85,25	85,25
Shares Issued (million)	43	36	34	30	28	17
Current Shareholder Dilution	6,57%	5,64%	5,32%	4,65%	4,48%	2,73%

Exhibit 9: Shareholder Dilution
Source: Own estimates

The Sector

Passenger Transportation

- Industry Characteristics & Recent Performance

Performing a **Porter 5 forces analysis**, we conclude that the airline industry characterizes itself as a **highly competitive** and **capital-intensive** industry. We observe a high degree of rivalry and a medium threat of new entrants. The high amount of capital required, along with strong regulatory requirements, are the only aspects hindering new entrants. Buyer power is also evaluated as strong, which is reflected in the high price sensitivity of customers and tendency to switch between airlines. Frequent flyer programs and recently increasing efforts in creating a brand (for example, Delta's loyalty programs) are factors that lower the buyer power, but only succeed in the business travelling segment.

Supplier power is high due to the oligopoly of Airbus & Boeing and the limited amount of airports in larger cities, which are run by local governments or large enterprises. All in all, this leads to **high competition** in the sector, especially observable in the pricing of airfares.

Since the beginning of the 21st century we have seen the rise of the LCC's in Europe and the US with Ryanair and JetBlue being the most famous examples. LCC's have driven the growth in passenger volume and, as a result of their business model of cutting costs whilst charging for any extra services. Due to the increased competition in the industry, there is a decrease in average passenger fares by more than **50%** observable within the last **20 years**. This disruptive change in the industry led many traditional carriers to either create Low-Cost subsidiaries or start to operate with the Low-Cost business model on domestic short-haul flights. In recent years LATAM did the latter and started to change their business model on short-haul regional flights, while maintaining their previous business model in international flights. This resulted, in LATAM's specific case, to less loss in market share in the domestic segment. On the other hand it caused a drop in flight prices and hence lower generated revenue per available seat kilometre from 8,4 in 2013 to 6,0 in 2019 (Exhibit 13).

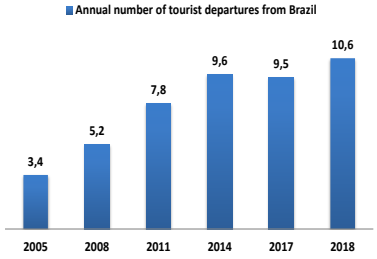

Exhibit 15: Tourism growth Brazil

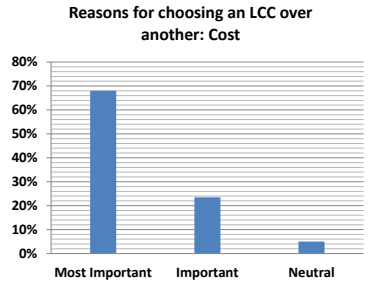

Exhibit 16: Reasons for choosing an LCC over another, Source: Sustainability and Growth of Low-Cost Airlines (2012)

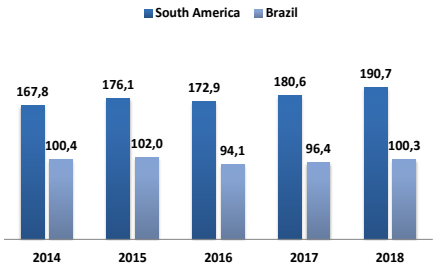

Exhibit 17: Passenger numbers (2014-2018), Source: MarketLine

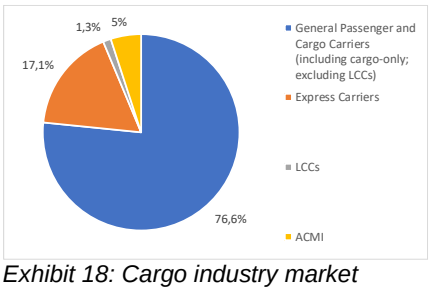

Exhibit 18: Cargo industry market shares by company type, as of 2018. Source: Boeing

In general, the passenger transportation can be divided into **executive** flights and **leisure** flights or **tourism**. Tourism is currently trending in South America and has showed strong growth over the last decade, with an average CAGR of **7,5%** in international tourists.

This segment is highly intertwined with low-cost flights, as **non-business customers** tend to be **very price sensitive** (as seen on Exhibit 16). On the other hand, **executives** tend to prefer **higher quality** flight experiences, with loyalty programs being the closest to what can be considered a competitive advantage in the industry. Executives travelling can be considered a B2B service and businessmen typically are registered in those programs.[1]

LATAM airlines currently has the **fourth largest** loyalty program in the **world** and later in this report this will be discussed in detail, evaluating if this can be considered a relevant competitive advantage and how big of a role it plays in the valuation. As a guideline, executive class seats of a 300 person aircraft account for 40% of revenues.[2]

South American Passengers increased in **2018** by **5,6%** and in the period between **2014** and **2018** at an average **CAGR** of **3,3%**, which is below the worldwide average of **6,2%** in that time period. This is due to the recession which hit Brazil in 2015 and 2016, and decreased the Brazilian passenger volume by 7,7% in 2016. Therefore, the total South American passenger volume decreased by 1,7%. It is important to note that the Brazilian market is the biggest market in the South American aviation sector representing **53%** of the continents passenger volume in **2018**.

Cargo

- ### Industry Characteristics & Recent Performance

The Air Cargo Industry is deeply connected to world trade and industrial production and, consequently, global economic activity. In 2019[3], even though it represented **less than 1%** of world trade **in volume**, it accounted for **35%** of its **total value**.

This industry has a similar fragmentation to that of the air passenger transport one, with the addition of **cargo-only carriers**, **express carriers** (which have a network of transportation methods that allows for faster delivery times, focusing mostly on small shipments), and **ACMI** – Aircraft, Crew, Maintenance, and Insurance providers. However, passenger carriers dominate this industry, as

[1] PMJ consulting
[2] Information from an Interview with Magdalena Espinoza (El Diario Financiero)
[3] IATA – "The Value of Air Cargo"

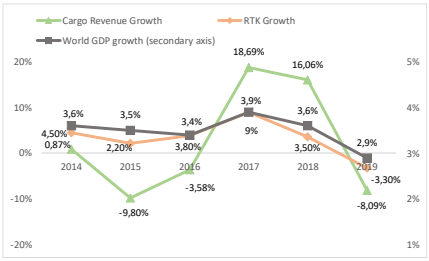

Exhibit 19: Evolution of Cargo Revenue

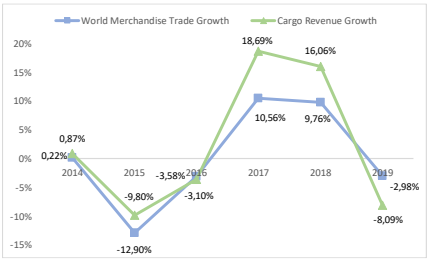

Exhibit 20: Cargo and World Trade's very similar growth patterns. Sources: Statista and WTO

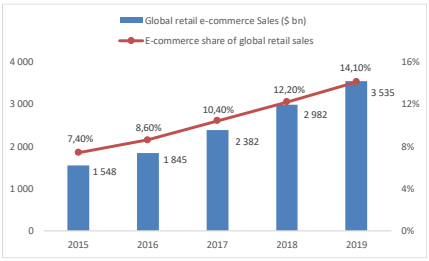

Exhibit 21: E-commerce growth as a share of retail sales. Source: Statista

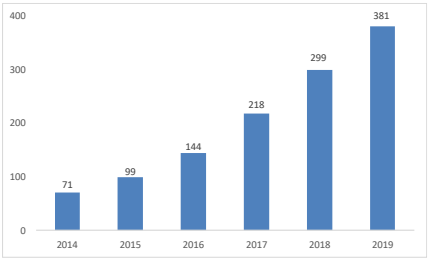

Exhibit 22: Cross-Border E-commerce market in Asia-Pacific ($ bn). Source: Statista

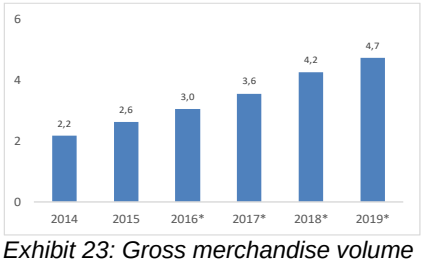

*Exhibit 23: Gross merchandise volume of china's e-commerce market ($ trn) (*estimated). Source: Statista*

around **50%** of air cargo[4] is transported using the belly capacity in **passenger planes**, with most airlines additionally having their own fleet of freighters. The industry market shares by the end of **2018**[5] are present on Exhibit 18.

From **2014 to 2018**, the cargo industry averaged a **CAGR** of **4,62%**, reaching a value of **$111,3 bn** in **2018**. **RTKs** (**Revenue Tonne-Kilometres**) averaged a **CAGR** of **4.59%** during the same period, exceeding **$260 bn** in **2018**.

However, **2019** was a down year, with a negative growth of **3.3%**, measured by **RTKs**, and a contraction of cargo revenues of **8,09%**.

The growth in the first period is explained by three main factors: increased **global trade**, the growth in **e-commerce** (especially in China and Asia-Pacific), and increased **air-connectivity**, both in terms of increased routes and increased traffic (not only in cargo, but also in passengers). It should be noted, however, that all these factors are affected by **economic growth**. Hence, it is also important to account for GDP growth when assessing the cargo industry, especially in how it mirrors the growth of RTKs, as seen on Exhibit 18.

During **2014-2018**, world GDP grew by an average of **3,60% annually**, with global trade increasing **0,60% annually**. The intrinsic relationship between global trade and cargo revenues can be observed on Exhibit 20.

E-commerce is a key driver for the growth of global trade, as the digitalisation and globalisation of the world's most developed economies have allowed customers to access virtual marketplaces nearly anywhere in the world. Exhibit 18 shows how e-commerce has been a growing share of global retail commerce, standing at **14,1%** of global retail sales in **2019**. Asian countries, particularly China and the developed East-Asian nations have been the main contributors to this growth, with China's e-commerce market growing at an annual **CAGR** of **18,37%** during **2014-2018**, and a further **11,33%** in 2019. Exhibits 22 and 23 show the growth of e-commerce in the Asia-Pacific region and China.

Air-connectivity, measured by the evolution of traffic (both passenger and cargo flights) has also been increasing steadily during the aforementioned period. Exhibit 21 shows the evolution of worldwide flights, which have increased **3,66% annually**, on average, during **2014-2018** and a further **2,36%** in **2019**.

The main justifications for the negative outcome in **2019** were the **trade tensions** between the **United States** and **China,** and a **slower economic growth of 2,90%**. These two aspects led to a decrease of **2,98%** in global trade. Exhibit 24 shows how the lower international trade led to lower cargo revenues and RTKs.

[4] IATA – "Air Cargo Vital in the fight against COVID-19"
[5] Boeing – "Commercial Market Outlook 2019-2038"

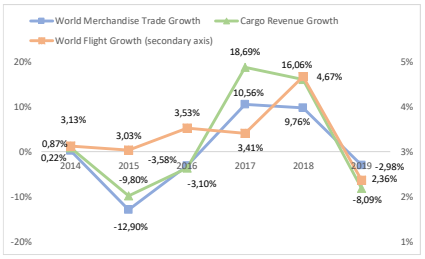

Exhibit 24: Comparison of Cargo, World Trade, and Flight Growth Rates. Sources: Statista, WTO

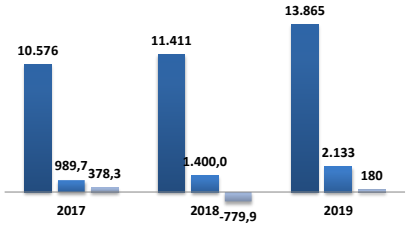

Exhibit 25: Gol Data in mln Reais, Source: Company Data

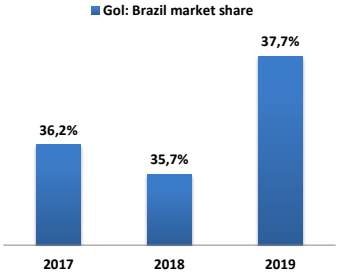

Exhibit 26: Gol - Brazil market share, Source: ANAC

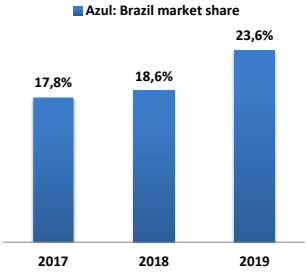

Exhibit 27: Azul – Brazil market share, Source: ANAC

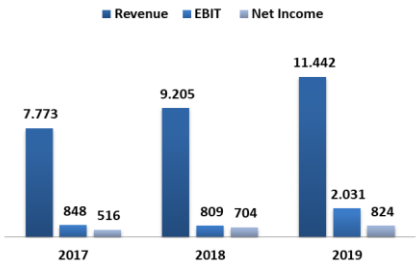

Exhibit 28: Azul Data in mln Reais, Source: Company Data

Competition

Although not as high as in the US and Europe, LATAM faces high competition in every country in which it operates. The competitiveness of these markets has increased over the past **10** years.

As follows is an individual description of the most important South American competitors (SKY and JetSmart are excluded as there is no publicly available information):

31.12.2019	LATAM (USD)	Gol (BRL)	Azul (BRL)	Delta (USD)	Peers avg.
Market Cap	6.161	12.970	19.063	37.822	
Net Debt	9.815	12.557	14.487	16.723	
D/E-ratio	1,59	0,97	0,76	0,4	1,27
2y Sales CAGR	2,21%	14,70%	21,36%	6,90%	6,53%
ROIC	6,10%	23,36%	19,66%	20,66%	12,40%
EBIT margin	6,02%	15,38%	17,75%	14,08%	8,86%
EV/EBIT	25,73	11,97	16,52	8,24	19,60
P/E	32,35	72,06	23,14	7,93	14,90

Gol (Brazil, LCC): Gol is the largest airline in Brazil, measured by passengers transported per year. It has a fleet of 122 planes (all Boeing 737s) and a market share of around **40%**, slightly above LATAM. Gol's strategy is to maintain its low operating costs, whilst maintaining its leadership position in the Brazilian market, and further aims to expand its domestic and international routes, particularly to the United States. The company typically focusses on the busiest airports and will directly put pressure on LATAM. Even though it is actually considered an LCC, Gol has a high proportion of business travellers (38% of the total Brazilian market in 2018) and is also directly competing with LATAM in this segment.

In **2019**, it reported operating revenues of 13,87 billion Brazilian Reais (**$ 3,5 billion**). This represents a growth of **21,5%** from the previous year, in which it had already grown **7,9%**. According to its financial statements we estimated an EBIT margin of **15,4%** in **2019** and a **ROIC** of **23%**. At the end of **2019** they traded at an **EV/EBIT** multiple of **12** and, at the date of this report, **7,6**.

Azul (Brazil, LCC): Founded in 2008 by David Neeleman (founder of JetBlue), Azul is an emerging Brazilian airline, which has been experiencing a strong increase in market share in Brazil over the past few years. The Brazilian passenger volume increased between 2008 and 2019 by **90%**, and Azul alone captured **60%** of that growth. Its strategy is based on growth and cost efficiency, and expansion of both their domestic and international networks. The company usually intends to maintain a viable competitive position and avoids crowded markets (Azul network overlaps 28% with LATAMs, whereas Gol and LATAMs

network overlap 88%). By the end of 2019, it had an operating fleet of 142 aircrafts. Over the next years, they receive further A320neos to make their fleet one of the most efficient on the planet in terms of fuel efficiency. Their expansion will increase competition, although it is less likely to hamper LATAM as much as Gol, SKY and JetSmart are expected to.

Azul reported Revenues of 11,4 billion Reais (**$ 2,85 billion**) in **2019**. Revenue growth was **24,3%** in **2019** and **18,4%** in 2018. We estimate an EBIT margin of **17,7%** in 2019 and a ROIC of **19,6%**. At the end of 2019 it traded at a **16,5 EV/EBIT multiple** and, at the date of this report, **9,5**.

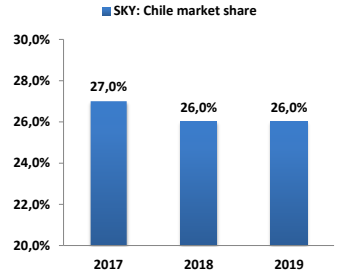

Exhibit 29: SKY – Chile market share, Source: Chile JAC

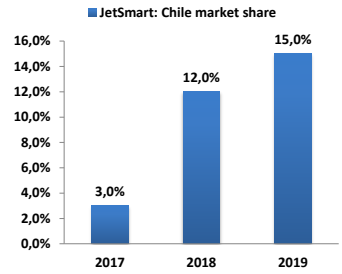

Exhibit 30: JetSmart – Chile market share, Source: Chile JAC

SKY (Chile, LCC): A privately held Chilean low-cost Airline, founded in 2001, and currently Chile's second largest airline. It mostly operates in Chile and Peru, but also offer regional international flights to Brazil and Argentina. Its current fleet amounts to 24 airplanes, with 27 orders outstanding. SKY's goal is becoming the low-cost leader in South America within the next 10 years and expand its hubs to 5 South American countries.[6] Due to their expansion, they will increase the competition and further challenge LATAM in more countries other than Chile.

JetSmart (Chile, LCC): A private Chilean Ultra Low-Cost carrier, created by the US Private Equity fund Indigo Partners in 2017. It quickly established presence in Chile and, in 2019, expanded to Colombia, Peru and Brazil. It currently has an operating fleet of 17 planes. Their strategy is similar to that of SKY, with an expansion in the domestic presence in Peru and Colombia and international network, which is also reflected in their outstanding orders of 75 aircraft of the Airbus A320 family.

Avianca (Colombia, Full-Service): The second largest Latin American airline, after LATAM. At the end of 2019, it had an operating fleet of 171 aircrafts (including 58 operating leases). It is the most direct competitor of LATAM in terms of regional international flights, especially on executive travelling.

In 2019, Avianca reported revenues of **$ 4,6 billion** (a **decrease** from $ 4,9 billion in 2018). Its operations resulted in an EBIT of **$ 45 million** (a **decrease** from $ 232 million in 2018). We estimate a ROIC of **1%** in **2019** and an average of **5,2%** between **2015** and **2018**.

It is also important to refer that Avianca has been under **financial distress** since 2019, with the company undergoing a turnaround process which included dropping more than 20 unprofitable routes. The company filed for **Chapter 11 bankruptcy** in **May 2020** due to the **COVID-19** impact.[7]

[6] Aerotelegraph: Interview mit Holger Paulmann, Sky Airline
[7] CNN: Avianca, one of Latin America's largest airlines, files for bankruptcy

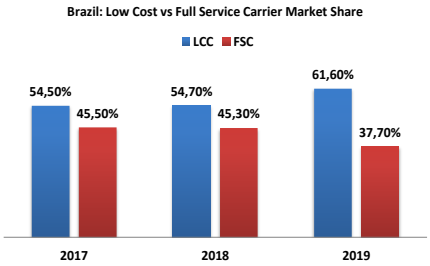

Exhibit 31: Brazil LCC market shares. Source: CAPA

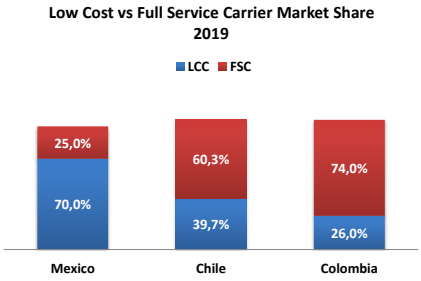

Exhibit 32: MX,CL & COL: LCC market shares, Source: CAPA

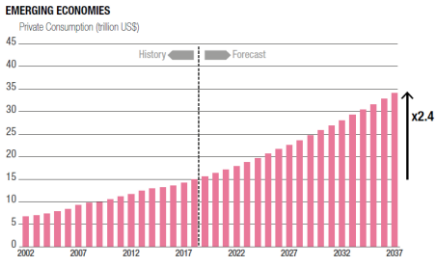

Exhibit 33: Private consumption forecast, emerging economies, Source: Airbus GMF 2018

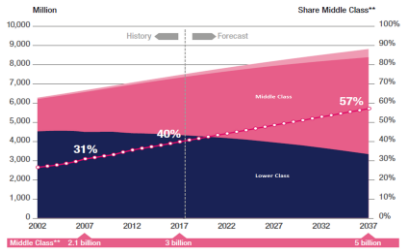

Exhibit 34: Middle Class global, Source: Oxford Economics

Future Outlook

Prior to the COVID-19 pandemic, it seemed the shift in the Latin American aviation industry towards LCC was not entirely completed. In Mexico and Brazil, however, LCC's already have the highest market share, as it can be seen on Exhibits 31 and 32. Thus, the same evolutionary process that happened in the US and EU is expected to affect the rest of South American countries. Peru, for instance, is being targeted by SKY and JetSmart.

It is expected that LCCs will first establish themselves on a domestic basis and, once they establish a strong route network, they will expand internationally. Following the trend in Mexico and Brazil, it is estimated that in the mid-to long-term future **Low-Cost market share** will represent **50%** to **70%** of the **South American** market.

This increasing competition will take market share from LATAM, either resulting in fewer passengers transported, or lower its fares (or eventually both), thus resulting in lower revenue per passenger. We estimate that this will ultimately hinder revenue growth by **1,6%** per year[8]. This is expected to happen primarily on domestic and short-haul international flights.

Prior to the COVID-19 pandemic, the general outlook was **favourable**, with global passenger growth to be between around **5%** per year with South America being the **growth driver** after Asia Pacific and the Middle East. This was justified by the increase in private consumption in emerging economies (Exhibit 33), GDP growth, population growth (around 1% per year in most South American countries) and the increased size of the Middle class worldwide (as seen on Exhibit 34).

However, and as predicted, this expected growth in the South American passenger demand will be captured mostly to Low Cost Carriers. The lower offered fares by LCCs attract the middle class and are ultimately driving the industry's strong growth prospects. As LATAM is focusing more on executive travelling, a better indicator for LATAM's growth is the respective GDP growth, which is included in Exhibit 35. Due to the increasing competitive situation, LATAM airlines is not expected to maintain its market share and current position. Hence the company will not grow as much as its LCC competitors (estimated at around 5% per year), but rather closer to the regional GDP and population growth forecasts.

[8] Own estimations, based on market share forecasts

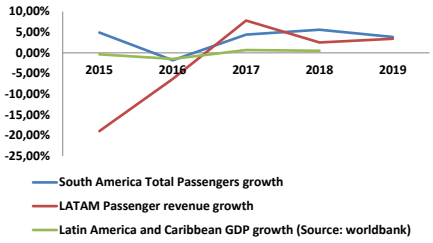

Exhibit 35: Growth: Latam Passenger revenue vs. Latin GDP vs. South America Total Passenger, Source: Worldbank, Company

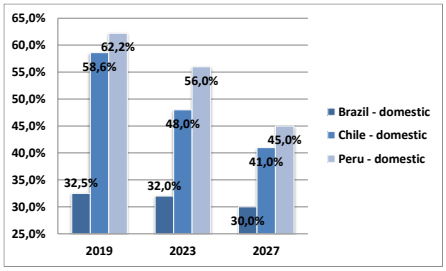

Exhibit 36: LATAM Market Share Forecast – domestic, Source Own estimations

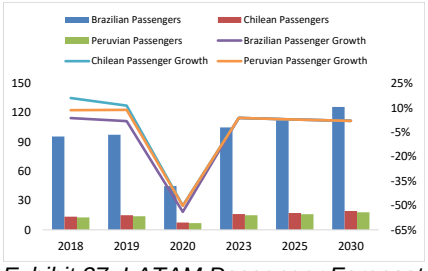

Exhibit 37: LATAM Passenger Forecast – domestic, Source Own estimations

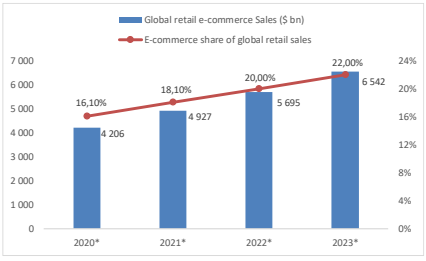

Exhibit 38: LATAM Market Share Forecast – domestic, Source Own estimations

A key **obstacle** of this industry is its **dependence** on **fuel costs**. Rising fuel costs, a key value driver of airlines, would decrease margins if not rolled over to customers and Cash Flows, which would ultimately result in less value creation. Furthermore, the threat of a trade war created uncertainty in the industry, which led to lower revenues.[9] Financing costs were expected to increase due to perceived increasing interest rates. Oil Prices hit a historical low of -37$/bbl on 20th of April and are trading currently at around 25$/bbl.

With respect to the COVID-19 pandemic, this becomes increasingly irrelevant, as most of the previous assumptions for the industry's outlook are counteracted. Instead of rising passenger demand, an incomparable **decrease** in flight volume of **90%** is observed due to the worldwide travel restrictions and quarantine measurements.

Given the COVID-19 pandemic is much likely changing the horizon of this industry, at least in the short-term, the future is thoroughly unpredictable. However, and even though some airlines might default due to this situation, which would theoretically result in less competition, we believe that the **rise** of the LCC's in the long term in South America is **inevitable**.

Regarding the **future** of the **cargo** industry, the **e-commerce** growth trend is expected to continue in the future. Before lockdown measures were enforced on virtually every major city in the world, e-commerce was expected to continue to grow steadily for the period **2019-2023** (as depicted on Exhibit 38) Given the lockdown forces people to do most of their shopping from home, e-commerce can actually be expected to increase even further than expected. During the same period, **global GDP** and **international trade** are also expected to increase, especially on the rebound of the COVID-19 pandemic. It should also be noted that, even though we are surrounded by a through uncertainty regarding the present pandemic (making general forecasts for the **short-term** future almost obsolete, as these keep changing on a weekly-to-monthly basis), the **long-term** forecasts for the cargo industry remain unchanged for now, as a **2-to-3** year recovery period is widely assumed[10], with the indicators converging to pre-pandemic growth levels after recovery.

The formerly mentioned drivers, mainly in the **Asia-Pacific** and **Middle East** regions, are expected to generate a **CAGR** of around **4,2%** over the next **20 years**. **East Asia-North America** and **East-Asia Europe** are the trade relations expected to be the largest in **20** years, with both expected to grow **4,7% annually**. **Intra-China** air cargo is expected to be the **fastest growing segment**

[9] Bank of Finland: The trade war has significantly weakened the global economy
[10] WTO

over the next **20** years, at **6,3%** per year. Regarding the segments in which LATAM Airlines operates, Latin America is expected to have a real GDP growth of **3%** annually over the next **20** years. This economic growth is likely to foster increases in the air cargo industry in the region. The **North America – Latin America** connection is expected to grow **4,1% annually**, as Chile and Colombia are expected to increase their exports to North America (mainly comprised of perishable goods). **Europe – Latin America** is expected to grow **4%** annually, as the European Union is Latin America's second largest air trade partner (after the United States).

Model – Forecast & Assumptions

In order to value LATAM Airlines Group, we chose an APV approach, as the COVID-19 pandemic brought question marks regarding the Financial Debt of LATAM and its impending need on financial aid which would de-stabilize a possible constant Debt ratio. Hence, it is more appropriate to calculate the Debt Tax Shield benefits separately from the discount rate. Our forecast period ends in 2030, but yet in 2027 we start to use terminal value assumptions in our forecasting, which ultimately result in a growth rate of **3,12%**. This growth is a function of the **revenue-weighted average real GDP growth** of the relevant countries in perpetuity and the **US Dollar inflation**[11], which is our relevant and LATAM's functioning currency.

Revenue

LATAM's has three streams of revenues: Passenger Revenue (**87%**), Cargo (**10%**) and other revenue (**3%**).

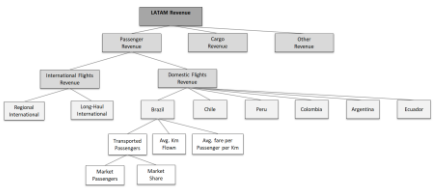

Exhibit 39: Revenue Breakdown

Passenger revenue: The Passenger revenue streams were divided into segments and further into regional components to isolate and assess the effects of the individual competition. The Passenger revenue was therefore divided into two categories: revenue from **domestic** flights and revenue from **international** flights. Domestic revenue was further broken down into each country's domestic revenue. On the other side, international revenue was further broken down into **regional international** revenue (within South America) and **long-haul international** revenue (South America to US, EMEA & APAC). The key underlying value drivers are the predicted market **passenger volume**, LATAM's **market share** in every segment, and the **average charged fare** per customer.[12] For the terminal value period, we assumed the **weighted real GDP growth** of

[11] Estimated at 1,12% for the next 10 years; using the difference between the US 10-y T-Bill and the US 10-y TIPS
[12] The concrete forecast formula in each segment was Revenue per segment = LATAM tranported passengers * average distance flown per passenger (assumed constant) * average fare per passenger per kilometer

2% in each segment. Furthermore, the market share is constant in perpetuity, as the market is assumed to be mature. Together with the respective U.S. Dollar inflation this results in revenue growth of 3,13%.

Brazil: Brazil is the most important country for LATAM, as it accounts for **39%** of its overall revenue. Over the past 5 years, a **1%** annual decrease in market share was observed (with exception of 2019, mainly due to their retreat of Avianca Brazil). Considering the competitive situation, LATAM's competitors Gol and Azul are expected to be better structured and further steal market share from LATAM. Furthermore, in 2019 Brazilian president Jair Bolsonaro opened the air market and changed regulatory laws to allow for foreign ownership of Brazilian airlines. Consequently, SKY and JetSmart received operating approvals. This further supports the market share decrease, which amounts to **0,6%** per year on average until **2027**, after which it remains constant.

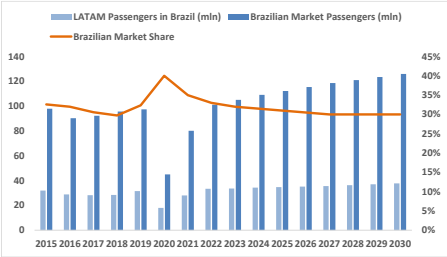

Exhibit 40: Brazil – Passenger Volume and Market Share - Forecast

In general, the Brazilian market is expected to be more mature than other South American countries, considering that LCCs have already been present for **10** years and the LCC's market share already accounts to more than **60%**. For the overall market growth of passenger demand, we relied on third party forecasts. Passenger demand is expected to outperform GDP growth in the short to medium term and grow at **4,2%** per year (after COVID-19). This is due to population growth of 0,8% per year, increasing middle class (40% growth from 2003 to 2017), and increasing tourism. Furthermore, the LCCs also contribute to a higher passenger demand by themselves, as their lower fares encourage more people to travel via air transport. The average fare per passenger, an equivalent to revenue per customer or price, is predicted to grow at the expected **local inflation of 3,5%** per year. This results in an average revenue growth of **2,61%** per year from **2023** until **2027,** and a revenue of **$ 2,3 billion** in **2027**. Overall, LATAM is able to maintain its competitive advantage in the executive travelling segment, but as this segment is only expected to experience a long-term GDP growth of **2%**, it will not result in stronger revenue growth.

Brazil - domestic	2016	2019	2022	2025	2030
Market Passengers (mln)	90,3	97,4	101,2	112,2	125,9
Market Share	32,0%	32,4%	33,0%	31,0%	30,0%
LATAM Passengers (mln)	28,9	31,5	33,4	34,8	37,8
Average Fare (R-cents)	23,1	33,4	34,6	38,4	45,5
Revenue in Reais (bln)	7,1	11,2	12,2	14,1	18,2
Revenue in USD (bln)	2,5	2,8	2,1	2,2	2,6
Exchange Rate (BRL/USD)	3,25	4,02	5,90	6,32	7,10

Exhibit 41: Brazil – domestic - Forecast

Chile: In Chile, the expected drop in market share is even stronger than in Brazil, which is in line with recent historical losses between **2% and 7%** per year in this country. The strong competition brought by SKY & JetSmart will result in an estimated annual decrease of Chilean market share of **4%,** and **2%** in the longer-term. Regarding the current LCC market share of **40%**, this development is expected to continue until LCCs reach a market share of **59%**[13]. The average fare per passenger is assumed to grow at the US Dollar inflation, **1,12%**. The total demand is forecasted to grow at **4,2%** until 2025 and **3%** until **2027**, the

Chile - domestic	2016	2019	2022	2025	2030
Market Passengers (mln)	10,8	15,0	15,6	17,3	19,4
Market Share	73,6%	58,6%	52,0%	44,0%	41,0%
LATAM Passengers (mln)	8,0	8,8	8,1	7,6	8,0
Average Fare (US-cents)	8,6	8,1	8,2	8,4	8,9
Revenue in USD (bln)	0,62	0,58	0,54	0,52	0,58

Exhibit 42: Chile – domestic - Forecast

[13] Own estimations

beginning of our terminal period. This results in revenues of **$ 527 million in 2027** and an average **CAGR** of **0,1%** in the period between **2023** and **2027**. Terminal value assumptions consider a constant market share of **41%**.

Peru - domestic	2016	2019	2022	2025	2030
Market Passengers (mln)	10,8	13,8	14,4	15,9	17,9
Market Share	61,4%	62,2%	60,0%	49,0%	45,0%
LATAM Passengers (mln)	6,6	8,6	8,6	7,8	8,1
Average Fare (US-cents)	8,6	8,1	8,2	8,4	8,9
Revenue in USD (bln)	0,52	0,57	0,57	0,54	0,59

Exhibit 43: Peru – domestic - Forecast

Peru: Although the market share of LATAM has increased in Peru in 2019 by 4%, Peru is estimated to be the next country in which LATAM's market share cut will occur. Currently, Peru is being targeted by SKY (which has already created a subsidiary – SKY Peru – that fully operates in Peru) and JetSmart. Their expansion will lead to the same developments as in the Chilean market from 2015 onwards. LATAM's market share is perceived to plummet by 4% each year until 2024 and then **2%** until **2027**, in which LATAM will have its constant market share of **45%**. Once again, the average fare per passenger is expected to increase at **1,12%** per year. Ultimately this sets to a revenue decrease of **-1,3%** per year from **2023** until **2027** and an increase of **3,14%** from **2027** to **2030**.

Colombia - domestic	2016	2019	2022	2025	2030
Market Passengers (mln)	26,5	29,5	30,7	34,0	38,1
Market Share	18,4%	20,1%	23,0%	20,0%	20,0%
LATAM Passengers (mln)	4,9	5,9	7,1	6,8	7,6
Average Fare (US-cents)	8,6	8,1	8,2	8,4	8,9
Revenue in USD (bln)	0,39	0,39	0,47	0,47	0,55

Exhibit 44: Colombia – domestic - Forecast

Colombia: Colombia is a minor domestic market for LATAM, which only amounted to a market share of **22%** in **2019**. Similarly to Chile, in recent years LCCs have been on the rise in Colombia, with **Viva Air Colombia** being the most prominent example. Furthermore, LATAM has a major competitor in the Full-Service segment with Avianca in Colombia. However, it is now unclear what the future of Avianca is, after filing for bankruptcy.

In the short-term future, LATAM is estimated to maintain its competitive position, but in the mid-term future the company is expected to lose 1% market share per year. The underlying economic performance looks positive for Colombia with an estimated GDP growth of **3%** per year. Hence, passenger demand is expected to be strong with a **CAGR** of **4%**. Average fares are expected to increase with inflation of **1,12%**, which ultimately contributes to an expected **4% CAGR** revenues on this market, from **2023** until **2027**.

Regional International	2018	2019	2022	2025	2030
Market Passengers (mln)	23,3	22,5	22,6	25,2	28,6
Market Share	42,0%	41,0%	40,0%	37,0%	35,0%
LATAM Passengers (mln)	9,8	9,2	9,1	9,3	10,0
Average Fare (US-cents)	9,0	8,5	8,7	8,9	9,5
Revenue in USD (bln)	2,47	2,34	2,35	2,50	2,84

Exhibit 45: Regional International - Forecast

Regional International: The regional international segment is closely tied to domestic developments. Just like Ryanair in Europe, it is expected that in the medium term Low-Cost Carriers in South America will expand, offering short-haul regional international flights at a lower price than Classic Carriers, such as LATAM. This is supported by the quick expansion of SKY and JetSmart. In **2018** and **2019**, the regional international market share of LATAM decreased by **1%**. This is perceived to continue in the future, and LATAM will lose **1%** per year in market share. The overall market is expected to grow at the same rate as the individual countries, **4%** per year. Average fares are expected to grow at the expected inflation of **1,12%**. This results in an average annual revenue growth of around **2%** until **2027**.

Long-Haul International	2016	2019	2022	2025	2030
LATAM Passengers (mln)	6,1	6,3	6,1	7,0	7,9
Average Fare (US-cents)	5,6	5,6	5,8	6,0	6,3
Revenue in USD (bln)	2,13	2,34	2,33	2,74	3,26

Exhibit 46: Long-Haul International Forecast

Long-Haul International: This segment is substantially different than the previous. Most Low-Cost airlines only operate one short-haul narrow-body plane type (either Airbus A320s or Boeing 737s), meaning LCCs are typically unable to directly fly "point-to-point" long-haul distances between continents. Hence, only Classic Carriers with wide-body aircrafts have typically been able to serve such routes. However, some Low Cost Carriers are studying the possibility of using the most recent version of the Boeing 737 Max to perform long-haul flights. A direct example of this is Gol planning to launch flights to the U.S. from Brazil, using this type of aircraft. In general, LATAM is perceived to still be facing in this segment mostly foreign competition in the future. In this segment, LATAM is expected to maintain its position and market share. This is also supported by the strategic partnership between Delta and LATAM. Therefore, the company will effectively grow along the passenger demand, which is expected to grow at a **CAGR** of **4%**. Given the average fare increase, assumed to be at inflation (**1,12%**), this is the only segment in which LATAM is expected to grow significantly. Revenues are estimated to grow nominally at **4,26%** until **2027** and then at **3,14%** in infinity.

One should take into account, though, that all those market share assumptions are starting in **2022**, as we believe that LATAM's competition is hindered in their expansion due to the COVID-19 pandemic. The concrete impacts of the COVID-19 crisis on the company's figures in **2020** and **2021** are described in the dedicated chapter.

As LATAM sells its tickets in all of their operating regions, except for Brazil, as dollar denominated or directly linked to the **US Dollar**, we did not convert the revenues into the country's underlying currency and furthermore used the US inflation estimate in the price assumptions. However, its Brazilian domestic segment inherits a **foreign exchange risk**, which is accounted for. In order to be aligned with the macroeconomic assumptions, the Brazilian revenue was forecasted in Reais with Brazilian inflation estimates and then converted back into USD dollar amounts, using estimated future exchange rates.

Cargo	2016	2019	2022	2025	2030
ATKs (millions)	6 704	6 357	6 433	6 959	7 776
RTKs (millions)	3 466	3 526	3 568	3 860	4 313
Tons Transported (thousands)	944	904	915	989	1 106
Average Fare per ton per km	0,32	0,30	0,30	0,31	0,33
Revenues ($ billion)	1,11	1,06	1,08	1,20	1,42

Exhibit 47: Cargo Revenue Forecast

Cargo: Considering the current situation, it is uncertain how the short- to medium-term of this industry will be affected and thus, even though the trade relationships between **Latin America** and **North America**[14] (as Chile and Colombia are expected to increase their exports to the **U.S.A.**, with perishables good, such as salmon and flower) and **Europe**[15] (the **European Union** is Latin America's second largest air trade partner[16]) are expected to continue to

[14] Boeing estimates an annual growth of 4,1% of RTKs in cargo operations between North America and Latin America until 2038
[15] Boeing estimates an annual growth of 4% of RTKs in cargo operations between Europe and Latin America until 2038
[16] After the United States of America

improve. LATAM's cargo-only flights are in these regions, along with two South American destinations. The main driver behind such improvements will be the economic development of the Latin American countries. Consequentially, we feel **GDP** is the strongest driver for LATAM's results in this industry, also considering the previously depicted relationship between trade, real GDP growth, and RTK growth (Exhibits 19 and 20).

Hence, cargo **tons transported** and **RTK**s grow every year at the **average real GDP growth rate** of Brazil, Peru, Ecuador, Argentina, Colombia, and Chile, weighted according to each country's contribution to the total. The average fare grows annually by **1,12%**, which is the expected dollar inflation. Additionally, cargo accounts for around **10,3%** of LATAM's revenues in **2019**, and this number is not expected to become more significant to the company, as in **2030** cargo revenues are expected to account for **11,6%** of the company's total revenues. Once again, all these assumptions only take place from 2022 until perpetuity, as 2020 and 2021 were calculated separately, in our COVID-19 scenario analysis.

Other revenue: Other revenue was computed as a percentage of passenger revenues, as it typically considers additional services, such as loyalty program fees or baggage fees. In **2019**, this amounted to **2,67%** of passenger revenue. The general target of airlines is to reach **10%** in ancillary revenue. We believe that this amount will gradually increase up to **3,8%** in **2027** due to the strategic partnership with Delta Airlines, which achieved around 9% in the last 3 years. From **2027** onwards, it is assumed to remain constant.

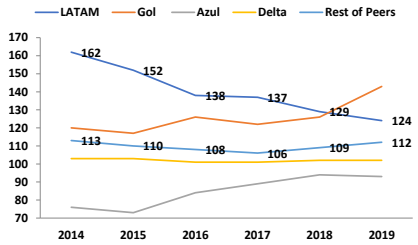

Exhibit 48: Employees per plane, Source: Own calculations; Peer Companies' annual reports

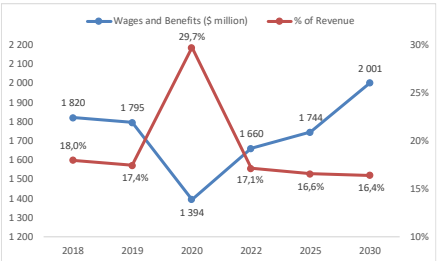

Exhibit 49: Employee Cost Forecasts, Source: Own calculations

Costs

Wages & Benefits: Firstly, wages were divided into Brazilian wages and rest of the company. Then, expected wage costs were calculated using the **Employee per Plane** metric. LATAM has been decreasing the number of employees per plane over the last few years (it currently has **124** employees per plane, a number that has decreased, on average, **5,27%** per year since **2014,** but it is still higher than the average of its peers, which sits at **114**). Historically, LATAM has not been as efficient on its employee expenses as its competitors and the overall industry. In **2015,** wage expenses accounted to **20,8%** of Revenues (competitors **16,0%**)[17] and employees per plane equalled **152** (competitors **101**), whereas in **2019**, wage expenses reflected **17,4%** of revenues (competitors **16,2%**).

Given its new partnership with Delta (currently at **102** employees per plane), and LATAM's increasing efficiency and digitalisation of processes (such as the increased self-check-in offering at airports, which requires less employees), it is

[17] Competitors include Azul, Gol and Avianca.

Wages & Benefits Costs	2016	2019	2022	2025	2030
Wages & Benefits (bln)	1,95	1,79	1,66	1,74	2,00
% of Revenue	21,1%	17,4%	17,1%	16,6%	16,4%
Employees	45.916	41.729	41.219	41.876	45.457
Cost per Employee	42.494	43.010	43.976	45.465	48.061
Employees per Plane	138	124	116	112	112

Exhibit 50: Employee costs forecast

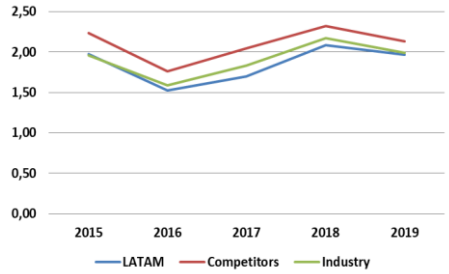

Exhibit 51: Fuel costs measured as Costs per ASK in US-cents, Source: Own calculations

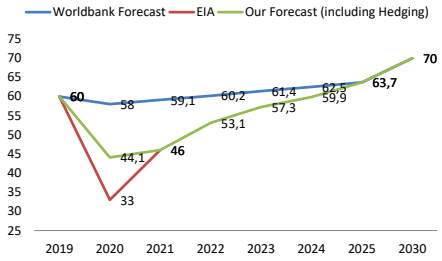

Exhibit 52: Oil Price Forecast, Source: EIA, Worldbank, own estimations

Fuel Costs	2016	2019	2022	2025	2030
Fuel Costs (bln)	2,06	2,93	2,61	3,16	3,70
% of Revenue	22,3%	28,4%	26,9%	30,0%	30,3%
Oil Price (USD/gallon)	1,02	1,43	1,26	1,52	1,65
Gallons per 1000km	2,767	2,623	2,576	2,504	2,458

Exhibit 53: Oil Price Forecast, Source: EIA, Worldbank, own estimations

Maintenance Expenses	2016	2019	2022	2025	2030
Maintenance Costs (bln)	-0,37	-0,44	-0,46	-0,46	-0,50
% of Revenue	4,0%	4,3%	4,8%	4,3%	4,1%
Flown hours per plane	2.550	2.748	2.836	2.868	2.983
Maintenance Cost per Hour Flown	-144	-162	-163	-160	-154

Exhibit 54: Maintenance costs - forecast

expected that LATAM will look to further decrease the number of employees per plane, and a reduction of **2** per year is assumed until **2026**, after which the number (**112** employees per plane, the peer average) is held constant.

Wage per employee equalled $43,010 in 2019 (with competitors sitting at $37,062) and the value is assumed to grow at the **respective inflation** (BRL and USD, depending on the region), with BRL-denominated wages converted to USD, using the respective end-of-year exchange rate. This cost is expected to grow as a decreasing percentage of revenues, and, in **2030**, it is expected to be **16,4%** of the total revenues.

Fuel: Comparing fuel costs to its industry peers, it is observable that LATAM pays almost identical fuel costs per ASK[18] (in US-cents) to that of its peers. In **2019**, LATAM paid **1,96** US-cents per ASK, whilst the industry average was **1,99**. Fuel expenses were forecasted by multiplying fuel costs per RSK[19], with total RSK being taken directly from our revenue forecast. Fuel costs per RSK were calculated using the **average oil price** (which is assumed as a substitute of jet fuel price) times **Gallon per RSK**. The amount of current oil price forecasts is limited. We based our assumption on a mixture between the Worldbank Oil price forecast (October 2019) and the EIA (U.S. Energy Information Administration) forecast (April 2020). Unfortunately, the EIA only predicts for the next **2 years** and therefore we performed a linear interpolation after **2021,** using the Worldbank estimates. Furthermore, we did not use the estimated oil price of 33 $/bbl by the EIA in 2020, as LATAM already had hedged **41%** of their 2020 fuel consumption and is therefore now facing estimated hedging losses of **$ 306 million**. We incorporated those hedging losses directly in the fuel costs, as we estimated a higher average oil price for LATAM based on their hedging ratio, which amounts ultimately to **$ 44/bbl**. In the Gallon per RSK metric we applied a proportional reduction of **21%** per every new A320neo family aircraft, as these are significantly more **fuel efficient** than its predecessors. This translates to a cumulative efficiency gain of **9%** in **2030**, which saves **$ 242 million** in that year. Ultimately, this leads to Fuel expenses of **2,15 US-cents** per ASK in **2030**.

For a further assessment of the impact of the variation of oil prices on the value of LATAM Airlines, a sensitivity analysis was performed, and will be addressed later on this report.

Maintenance: Maintenance costs are assumed to depend on three factors: **hours flown per plane**, the **average age** of the fleet, and **inflation[20]**. As LATAM

[18] Available Seat-Kilometres
[19] Revenue Seat-Kilometres
[20] IATA – "Maintenance Costs for Ageing Aircraft"

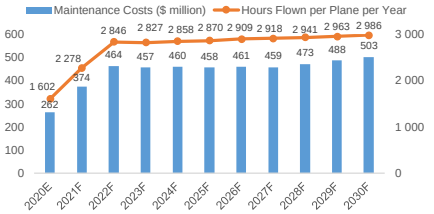

Exhibit 55: Maintenance Costs and hours flown per plane (secondary axis). Source: Own estimations

Airlines intends to have a relatively young fleet (currently at **9 years**), and it has been able to keep it constant during several periods in the past, we assumed the average fleet of the planes to be constant at **10 years** during the forecasted periods, since no planes will be acquired nor retired in 2020 due to the COVID-19 pandemic. Thus, the **real costs per hour flown** will initially be held constant and the only determinants of this cost are the **hours flown per plane** (as seen on Exhibit 55) and the **US Dollar Inflation**, assumed to be constant at **1,12%**. Nevertheless, starting in **2021**, a proportional reduction of **9,4%**[21] was included for every new aircraft from the Airbus A320neo family that replaces one from the Airbus A320ceo family. Exhibit 54 presents the evolution of the Maintenance Costs until 2030. Furthermore, LATAM Airlines has just initiated (end of 2019) a new drone-based maintenance process Donecle UAV solution for automatic aircraft inspection of larger maintenance checks of the A320 fleet, which severely cuts the time needed to assess an aircraft (estimated to be translated into a **95%** time saving[22]) and the amount of labour needed. However, it is still early to assess the true cost-cutting potential of this measure.

Other costs (bln)	2016	2018	2019	2022	2025	2030
Comissions to agents	-0,27	-0,22	-0,22	-0,21	-0,23	-0,26
Other rental & landing fees	-1,08	-1,21	-1,28	-1,16	-1,27	-1,47
Passenger Services	-0,29	-0,28	-0,26	-0,25	-0,27	-0,31
Other administrative costs	-1,06	-0,85	-0,83	-0,77	-0,84	-0,98
Other operating costs	-0,36	-0,38	-0,46	-0,42	-0,45	-0,52
Total Other Expenses	-3,06	-2,94	-3,05	-2,81	-3,06	-3,54
% of Revenue	33,1%	29,0%	29,6%	29,0%	29,0%	29,0%

Exhibit 56: Other costs - forecast

Other expenses: A comparison with other airlines in the other expenses section needs to be done with caution. Firstly, a cross-continent FSC[23] comparison may be misleading, as the United States and the EU have higher pricing levels than South America. Values are therefore higher for foreign airlines (LATAM'S CASK[24]: 6,5 vs. US FSC's CASK: 9,2; LATAM's RASK: 6,0 vs. US FSC's: 10,3). A comparison with the regional competitors also has its shortfalls, due to the different business model as a LCC's key objective is to cut costs (South American LCC CASK: 6,2; RASK: 7,5). Avianca is the only carrier that operates in Latin America, and has a comparable size and business model to LATAM (Avianca CASK: 8,4; RASK: 7,2). However, Avianca is under **financial distress** and has been unprofitable for a long time. Hence, other expenses were forecasted based on historical developments and statements of the management. Over the past 4 years, other expenses were decreasing measured as a percentage of revenues and per ASK (other expenses in 2016 were 33,1% of revenues, and in 2019, 29,6%; other expenses per ASK were 2,26 in 2016: and 2,05 in 2019). Furthermore, the management states to continue to reduce costs. We believe this is realistic and there is potential left when comparing to Azul & Gol (Other expenses as a % of Revenue 2019: 22%, per ASK: 1.6).

[21] Flight Global – "A320 NEO to have $7-8 million price premium"; Pratt & Whitney – "The Pure Power PW1000G Engine"; the new A320 NEOs have a lower 20% engine maintenance cost; engine maintenance cost accounts for, on average, 47% of the total maintenance costs of an aircraft, per IATA – "Airline Maintenance Cost Executive Commentary, Edition 2019"

[22] EBV – "Donecle revolutionizes aircraft inspection and it's awesome"

[23] Full Service Carrier

[24] Cost per ASK

However, as LATAM still operates in its International segment a different business model than Azul & Gol, LATAM is unlikely to achieve their figures. Therefore we incorporated only a slight efficiency increase in other expenses, which account for 29% of revenues in perpetuity. We feel comfortable with using only a slight increase here as we are already including a stronger efficiency increase in the Wages & Benefits expenses.

	2018	2019	2020	2022	2025	2030
EBITDA ($ million)	2 020	2 091	427	2 157	2 110	2 465
EBITDA Margin	19,9%	20,3%	9,1%	22,2%	20,0%	20,2%
NOPLAT ($ million)	558	545	-612	530	438	561
NOPLAT Margin	5,5%	5,3%	-13,1%	5,5%	4,2%	4,6%

Exhibit 57: Projected EBITDA & margin, and NOPLAT & margin
Source: Own estimations

NWC

	2016	2019	2022	2025	2030
NWC ($ bn)	-2,48	-3,44	-3,14	-3,12	-3,12
DSO	44	44	40	37	35
DIO	11	16	11	10	10
DPO	73	99	76	70	70

Exhibit 58: NWC assumptions

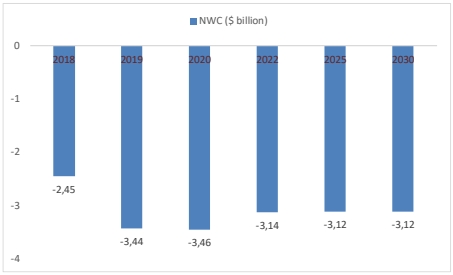

Exhibit 59: NWC forecast

Operating Cash was assumed to be 5,18% of revenues as this was the estimated minimum of our peer group in recent years. Regarding the Cash Conversion Cycle, and namely the DPO, DIO and DSO[25] we assumed that LATAM will get closer to the values of its peer group. LATAM has higher DIO, but especially significantly higher DSO and DPO than the global aviation industry average, which can be explained by their location, as developing countries in South America tend to function less efficiently. Therefore, we strongly overweight the other Latin American airlines in our peer group. However, we assumed that LATAM will tend more to its competitors in **DPO** (currently 98; peer group 65), which goes down to **70** until **2027**. **DIO** (LATAM: 15.7, peer group: 9.9) will decrease to **10** until **2027** and **DSO** (LATAM: 44, peer group: 29) will shrink to **35**. These values will then be constant until **perpetuity**.

Invested Capital

Plane type	Average bought amount per year	List Prices	Average Discount	Market Price 2019
Airbus A320-NEO	6	110.600	45,00%	60.830
Airbus A321-NEO	4	129.500	44,00%	72.520
Airbus A350-900	2	317.400	41,00%	187.266

Exhibit 60: Plane assumptions

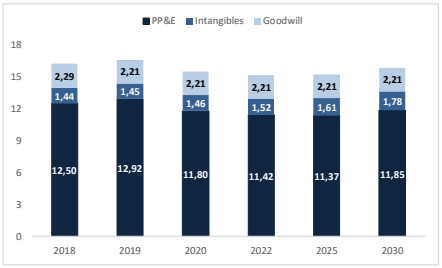

Exhibit 61: Invested Capital forecast, values in $ billion

CAPEX: PP&E was split into own airplanes, leased airplanes, buildings, land and equipment. Own aircrafts PP&E were forecasted by the outstanding orders and future commitments until 2025 by using market prices, which effectively vary to list prices. On average, Airbus and Boeing sell their planes to commercial airlines with a discount of roughly **50%**. We used the individual average discounts per plane on the list prices, albeit with a **10%** reduction, to highlight LATAM's relatively low bargaining power, when compared to other major airlines. Furthermore, its orders are usually in less quantities than its major peers', and usually the higher the order, the higher the discount. Market prices were assumed to grow each year from 2019 with inflation, **1,12%**.

After **2025**, we estimated their fleet additions to be the sum of necessary replacements per year, which amounts to **8**, and the necessary increase regarding the additional RSK due to more passengers transported, which we estimate to be on average around **3** per year. The **depreciation** is manually calculated by the depreciation in 2019 plus the variation steaming from purchases and retirements of airplanes. PP&E is on average decreasing during

[25] Days Payables Outstanding; Days Inventory Outstanding; Days Sales Outstanding

the first 5 years, to equal a total amount of **$11,7 billion**. In the terminal value period, the amount of own aircrafts are increasing at the underlying real GDP rate of 2%, which also reflects the increase in transported passengers and ASK. Simplifying other items in the PP&E, including leasing, were assumed to grow at a rate that the combination between depreciation and increase in Net PP&E, meaning the CAPEX increases 3% annually, which is the combination of capacity and inflation growth. This makes LATAM come closer to its peers with a **Fixed Asset Turnover ratio** of **1,02** in **2030** (**0,8** in **2019**) compared to **1,3** of its peers.

Intangibles & Goodwill: Intangible Assets were assumed to grow at **2%**, the underlying long-term real GDP growth rate. Goodwill was assumed to remain constant, which is in line with the development in the last **5** years.

Unlevered Cost of Capital

With the APV method, LATAM's unlevered cash flows and tax shields are evaluated separately. To properly reflect the risk in LATAM's unlevered cash flows, an unlevered cost of capital was computed to discounted them, using as inputs: an unlevered beta, calculated through unlevering both the company's and the peers' raw betas; and a beta of debt, calculated through the cost of debt, and used on the previous calculation.

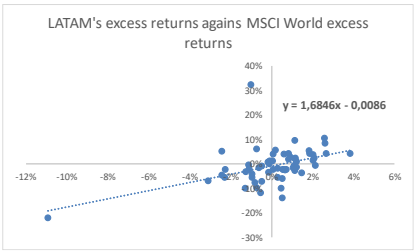

Exhibit 62: LATAM's excess returns regressed against the MSCI World Index

The raw beta was obtained by regressing LATAM's excess returns on the US Dollar risk free rate against the MSCI World's excess returns on the same rate. The chosen period comprised the weeks starting in **11/01/2019** until **28/02/2020**. This specific data set was chosen based on **two** major rationales: on one hand, airline shares are usually **very illiquid**, meaning the majority of airlines' shares are not traded actively, meaning its returns may not be as sensitive to the market[26], as one would expect and thus get betas which underestimate the true systematic risk of this industry (furthermore, the same author suggests there is empirical evidence of a positive relation between β values and trading activity). On the other hand, this period is the one that better represents the forward-looking risk of the industry, which will be severely changed with the COVID-19 pandemic. By having a larger estimation period the beta would smooth the effect of this pandemic and underestimate the "new" real systematic risk affecting LATAM, but capturing further observations after the aforementioned period would overestimate such risk, after the drastic movements in the share prices of most of the companies within our peer group (including LATAM) in March, which was also not representative of the future of the industry. Having weekly observations allowed us to have enough observations (**60**) for a relevant regression, which

[26] Sheelah Turner, "An Evaluation of Airline β Values and Their Application in Calculating the Cost of Capital", *Journal of Air Transport Management* 9 (July 2003)

resulted in a confidence interval of **[0,85; 2,53].** Such width of the confidence interval led us to choose to rely on the industry peers for the beta. The betas were then unlevered according to each company's market D/E ratio and beta of debt.

The beta of debt was obtained using each company's cost of debt (we assumed the values from Bloomberg for each peer, and then transformed it into dollars) and the CAPM model, with a USD-denominated risk free rate (**0,70 %**[27]), as this is the functional currency of LATAM's cash flows, and a Market Risk Premium of **5,50%**[28]**,** using the MSCI World as our market index, denominated in USD .

LATAM's Credit Rating was downgraded in March, following a statement of the Chilean government denying any financial aid to the company

LATAM's cost of debt was computed using its most recent debt issuance (a 7 year bond with a 7,049% yield to maturity) and a discount representing LATAM's relatively high credit risk (B1). Hence, a seven-year average cumulative probability of default of 17,89%[29]. Using a recovery rate of 53,9%[30], we get a cost of debt of 5,952%.

The resulting industry unlevered beta was **1,15**, leading us to an unlevered cost of capital of **7,02%**, using the same CAPM model**.**

The **tax shields** were also discounted at the **unlevered cost of capital**, as the Debt level is not constant throughout the analysed period.

COVID-19

With the outbreak of the **COVID-19 pandemic** in late 2019, which started in Wuhan, China, uncertain times loom over the airline industry horizon. 2020 is poised to be a catastrophic year for the industry, with 2021 likely to be a recovery year. The question is, which airlines will be able to recover from this slump, and in which moulds.

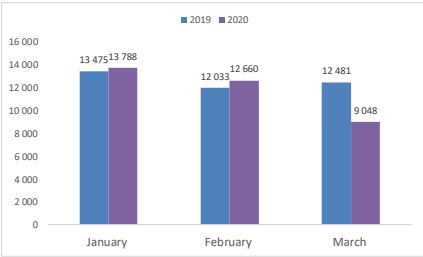

Exhibit 63: ASK Comparison (thousands)
Source: Company data

The airline industry is expected to lose **$314 bn** in passenger revenue in **2020**[31], with a **48% decrease** in **RPKs** on a **year-on-year basis**. The Americas are expected to be the "least" affected regions in the world, with North America decreasing **36% y-o-y**, implying a loss of **$64 bn** in passenger revenue and Latin America decreasing **49% y-o-y**, losing **$18 bn** in passenger revenue.

Given South America and, consequently, LATAM Airlines were barely affected by this pandemic in the first two months of the year, only in **March** did the real effects start to be felt, as seen on Exhibits 63 through 65. This can be explained

[27] Source: CNBC
[28] McKinsey Valuation Book
[29] Source: Moody's
[30] Source: Moody's
[31] IATA – "Updated Impact Assessment" (14/04/2020)

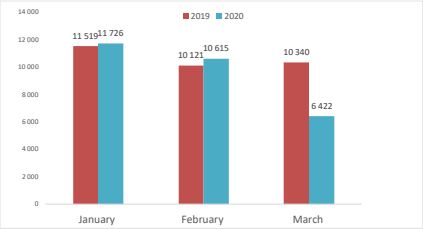

Exhibit 64: RPK comparison (thousands)
Source: Company data

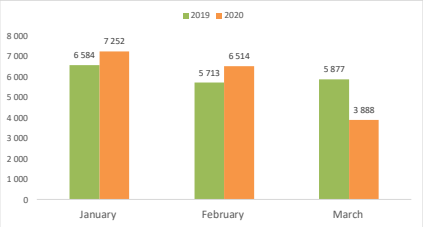

Exhibit 65: Passenger comparison (thousands)
Source: Company data

	2020	2021	2022	2023	2024	2025
Argentina	-5,7%	4,4%	2,28%	3,10%	3,20%	3,20%
Brazil	-5,3%	2,9%	2,36%	2,41%	2,26%	2,26%
Chile	-2,4%	3,7%	3,27%	3,26%	3,19%	3,19%
Colombia	-4,5%	5,3%	3,75%	3,75%	3,75%	3,75%
Ecuador	-6,3%	3,9%	2,72%	2,51%	2,51%	2,51%
Peru	-4,5%	5,2%	3,99%	3,90%	3,76%	3,76%
Weighted Average	**-4,69%**	**3,38%**	**2,70%**	**2,75%**	**2,62%**	**2,61%**

Exhibit 66: GDP growth average, weighted according to revenues

by the fact that LATAM Airlines **doesn't have** any air connections to **East Asia** (the most affected region of the world during the first two months of the year). Due to the COVID-19 outbreak in Europe, North America, and South America, countries in these continents started to impose international and domestic travel restrictions, reducing it to the **strictly necessary**. This prompted LATAM to cancel **95%** of its passenger operations in late **March**, a measure which is expected to be maintained, at the very least, until the end of **May 2020**.

In order to assess what the impact of such situation will be on LATAM's revenues and cash flows, a scenario analysis was conducted, with 4 scenarios[32] considered: **Scenario 1** assumes a **U-shaped recovery** which would see a gradual reduction of the lockdown and re-opening of the international borders over the next **6 to 9** months. **Scenario 2** assumes a **slower U-shaped recovery** extending to **2021**, in which the consumer confidence in traveling and the consequent demand would take longer to recover, meaning international leisure travel would be the hardest hit. **Scenario 3** assumes an **L-shaped recovery** which would see a decrease in the future growth rate of the industry, comparing to the effects before the crisis, as there is no guarantee that demand will ever return to pre-COVID-19 levels; and **Scenario 4** assumes a **W-shaped recovery** which would assume some recovery in **2020** before the outbreak resurges towards the end of the year and causes a **2nd wave of lockdown**, extending to **2021**.

Furthermore, in all scenarios it was assumed for every scenario that **domestic** markets would recover **faster** than **international**, due to the fact that consumer confidence in traveling to other countries or planning trips ahead will mean tourism will take longer to recover. Furthermore, and as previously mentioned, cross-country business travel is expected to decrease as working from distance is becoming the new reality. Moreover, and given the thoroughly likely economic recession that will follow the pandemic, it is likely that demand for leisure international travel will decrease, as consumers try to avoid unnecessary expenses.

Moreover, **economic growth** in the region is also expected to recover by **2022**, with most of the recovery happening in **2021**. In **2020**, the revenue-weighted average real GDP growth is expected to decrease by **4,69%**[33], and then increase **3,38%**[34] in **2021**, with a further **2,71%** growth rate in **2022**.

[32] BCG – "The Post-COVID-19 Flight Plan for Airlines"; IATA – "Updated Impact Assessment" (14/04/2020)
[33] IMF – World Economic Outlook – April 2020
[34] IMF – World Economic Outlook – April 2020

We believe **Scenario 2** to be the most likely one, and thus attributed a **50%** probability to it. This is because the lockdown measures are gradually starting to ease, meaning demand for domestic flights is expected to increase as countries re-start their activities. Furthermore, in LATAM's biggest market, Brazil, the president, **Jair Bolsonaro**, firmly **opposes** the present lockdown measures[35], meaning the country could reopen its air space faster than expected. However, international travel is expected to take much longer to recover. This is because not only are people getting more used to work remotely, meaning there will be less need for international business travel after the pandemic is over, but also because customers will feel less safe in the first few months after the pandemic.

Scenario 1 was attributed a **20%** probability of occurrence, as it is looking increasingly less likely, especially in comparison with **Scenario 2**. **Scenarios 3** and **4** were both attributed a probability of **15%**. **Scenario 3** is attributed this probability based on the fact that air demand quickly recovered to pre-crisis growth in previous pandemics[36]. However, the severity and scale of the COVID-19 pandemic appears to be much higher than any past event, especially given its global scale. **Scenario 4** hinges on the possibility that the "return to normal" after lockdown is not done efficiently, especially in less developed and more populous countries, such as Brazil. Furthermore, the virus is still widely unknown, including its most basic characteristics, such as its origin and the environments in which it thrives. Hence, we cannot say that, even if the lockdown measures and the "return to normal" are properly enforced, the virus will not reappear.

Parallelly, another **Scenario Analysis** for the **Load Factors** was built, due to the possibility of airlines having to implement **social distancing measures** inside their aircraft. **3** possibilities were considered here: no social distancing measures, with a probability of **45%**, social distancing measures until the end of Q2 of 2021, with a probability of **40%**, and social distancing measures until mid-2022 (this scenario assumes the same probability as **Scenario 4** – **15%** –, as we only think this would only be reasonable should the pandemic resurge towards the end of **2020** and/or beginning of **2021**).

Applying a probability-weighted average to the Scenarios, it is expected that LATAM's **total revenues** for **2020** will be **54,5%** lower than in **2019**. In **2021**, we expect a **53,8%** increase in overall revenues, fuelled by the recovery in most of the Scenarios in the domestic markets and the continued increased demand, especially in the domestic Brazilian market. Recovery from COVID-19 will continue in **2022**, and it will be total in domestic markets as it is expected that, by

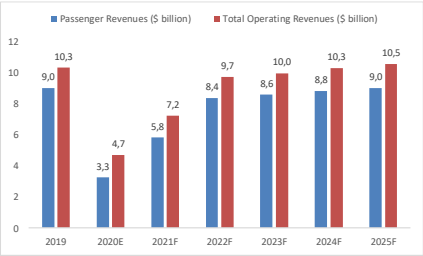

Exhibit 67: Total Revenues and Passenger Revenues during the COVID-19 pandemic.
Source: Own estimations

[35] Aljazeera – "Brazil's president pushes for end to lockdown"
[36] IATA – "What can we learn from past pandemic episodes?"

the end of **2022**, domestic demand will be fully recovered. International demand is assumed to be fully recovered by **2023**.

Regarding **cargo**, **RTKs** are also expected to decrease in **2020**, as **GDP growth** will be negative across all relevant South American countries. However, these lower **RTKs** (**4,69%** decrease **y-o-y**) will likely be compensated by the **higher cargo fares** due to **lack of capacity**, **tariffs** and increased **border controls**, and the necessity for more **safety equipment** to ensure the feasibility of cargo transport in such times (we assumed a fare increase of **33%** in **2020**, and a gradual decrease until pre-crisis levels in **2022**). Hence, cargo revenues are actually expected to increase in **2020**, and then decrease until **2022**.

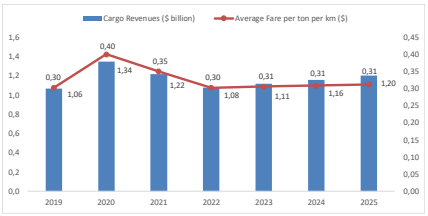

Exhibit 68: Cargo Revenues and average fares during the COVID-19 pandemic.
Source: Own estimations

In our **COVID-19 Scenario Analysis**, we also addressed **employee costs**, as LATAM announced a reduction of **50%** in the wages of its 43,000 employees for **at least 3 months**, starting in mid-March[37], with the duration of the pay-cuts varying according to each Scenario. This means that LATAM is expected to only pay **85%** of wages in **2020**, with the values in **2021** and beyond back to "normal".

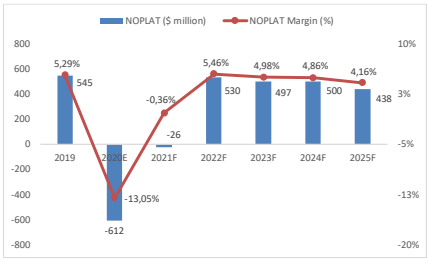

Exhibit 69: NOPLAT and NOPLAT Margin during the COVID-19 pandemic.
Source: Own estimations

FCF decreases by **79%** in **2020**, to **$281 million**. It should be noted, however, that this is due to Invested Capital being exceptionally low in **2020** (a decrease of **33%** from **2019**). This is because LATAM deferred around **90%**[38] of the **investments** it had planned for **2020**, including the purchase of any new aircraft.

FCF in **2021** will increase, but only by **5%** (to **$295 million**), as the increase in investing cash flow for the year somewhat offsets the increase in operating cash flow.

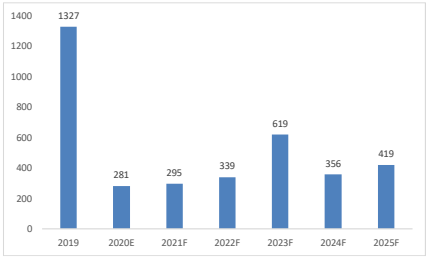

Exhibit 70: FCF during the COVID-19 pandemic (in $ million)
Source: Own estimations

Valuation

In our last forecasted year **2030** our model identifies an EBITDA margin of **20,18%**, an EBIT margin of **6,6%**, and a NOPLAT margin of **4,6%**. We observe a revenue growth of **3,14%**.

Based on the APV approach and the mentioned figures, our model discloses an operational EV of **$ 11,42 billion**, including the Tax Shield benefits. Adding the Non-Core Invested Capital of **$ 265,2 million** and subtracting the Net Financial Assets of **$ 9,94 billion**, we arrive at an Equity Value of **$ 1,75 billion**, which translates into a share price of **$ 2,88** (compared to the current share price of **$ 2,58**). This is our estimated the **going-concern value**. However, we believe that LATAM faces the risk of defaulting. LATAM officials stated the company has

[37] Reuters – "LATAM Airlines to cut pay by 50% to its 43,000 employees"
[38] Reuters – "LATAM Airlines sees long, slow recovery from coronavirus, defers 90% of investments"

Scenario Analysis	
Probability of formal default	Share Price
0%	2,88
10%	2,62
20%	2,35
30%	2,09
40%	1,82
50%	1,56
60%	1,29
70%	1,03
80%	0,76
90%	0,50
100%	0,23

Exhibit 71: Scenario Analysis – Bankruptcy risk

liquidity for 3-4 months.[39] With respect to this, a scenario analysis was created with the scenario of a Liquidation and Chapter 11 restructuring. Overall, we assign a probability of **20%** that LATAM has to declare bankruptcy within the next year. With the aid package of the Brazilian government it is increasingly likely that the Chilean government will follow. Considering this **20%** probability results in an expected share price of $ **2,35**. **This reflects a potential annualized return of -14,2%** on the stock. As LATAM announced that, due to the COVID-19 crisis, its **dividend** for **2020** has been **cancelled**, this reflects the Total Shareholder Return for the holding period.

Multiples

	Peer Group	
	December 2019	April 2020
EV/EBITDA	6,5	4,5
P/E	11,6	4,7

Exhibit 72: Multiples Peer Group

We performed a multiple analysis to understand the market perception of the industry and cross-check with the results obtained from intrinsic valuation. However, a relative valuation relies on using comparable peers and assumes a correct valuation of the industry by the market, which has, historically, not always been the case[40]. We used **P/E** and **EV/EBITDA** multiples based on our peer group[41]. Using numbers from December 2019 (pre-crisis), results in an average equity value of **$3,5 billion** and a share price of **$5,8**. Relying on current multiples of April leads to an Equity value of $**601 million** and a Share price of $**1,0**.

Key Risks

- Operating in South America

South America has been (and still is) synonym with high inflation countries. Argentina is currently experiencing a hyperinflation crisis and Brazil had inflation over **14%** as recently as **2003**. Even though LATAM Airlines sells most of its services in USD or USD equivalents, it still has a substantial part of its revenues (around **27%** in **2019**) coming from the Brazilian domestic passenger market and denominated in Brazilian Reais. As such, an economic crisis in Brazil could massively devalue more than a quarter of LATAM's revenues and have a thoroughly negative impact on its revenues. A **scenario analysis** to reflect the risk of operating in these countries was built and incorporated directly into the DCF analysis, based on **past** Brazilian recessions, with the revenues presented being the **statistically expected** revenues. A probability of **13,04%** was attributed to this scenario, extrapolated by analysing the number of quarters in

[39] Reuters: Latam Airlines will need government loans to recover after crisis
[40] For instance, the "Dot Com Bubble"
[41] Multiple Peer group: Gol, Azul, Copa, Air Canada, Air France-KLM, United, Delta, Finnair, American and Lufthansa

technical recession since the beginning of 1997, ignoring the **Great Financial Crisis** (as this was a global crisis, and not specific to Brazil).

- Fuel Price Volatility

The air passenger and cargo industry performance is very dependent on fuel, as there are still no feasible substitutes to this material. Given how volatile the price of fuel has been in the past few years, and even though LATAM Airlines has hedging contracts in place, these might not be sufficient to protect the company from massive price hikes, or might hamper the company in cases of massive price plummeting (such as the situation the world was experiencing at the time this report was written). A sensitivity analysis was performed on the possible effects of fuel price change, and how fares would have to change to ensure the company would remain financially healthy.

Sensitivity Analysis

Firstly, a sensitivity analysis of the target price relatively to the unlevered cost of capital and terminal value was performed. The long term growth rate is uncertain. Although the overall market is expected to grow above **3%**, which is mostly due to tourism, LATAM Airlines might not grow as much because of their reliance on business travelling. COVID-19 might have a permanent negative effect on that segment, which reduces the growth rate. A growth rate of **2,4%** would result in a lower going-concern share price of **$1,27**.

Growth Rate \ Unlevered Cost of Capital	6,6%	6,80%	7,02%	7,20%
2,40%	2,63	1,95	1,27	0,77
2,80%	3,32	2,57	1,82	1,27
3,12%	4,00	3,16	2,34	1,74
3,50%	4,97	4,02	3,09	2,40
3,70%	5,59	4,55	3,55	2,81

Exhibit 73: Sensitivity Analysis on rU and g

Moreover, another sensitivity analysis was performed, this time based on a permanent change in fuel costs and average fares (on top of inflation), *ceteris paribus*. In the long-term, rising fuel costs are rolled over to customers. On average, fares have to increase by around **50%** of the fuel cost increase to maintain the same share price, which seems realistic. However, in the short term a price shock could be problematic as airfare pricing is typically based on demand and not costs.

Change in Fuel Price \ Change in Average Fare	-2,00%	-1,00%	0,00%	1,00%	2,00%
-3,00%	1,67	2,98	4,29	5,60	6,91
-2,00%	1,02	2,33	3,64	4,95	6,26
-1,00%	0,38	1,69	3,00	4,31	5,62
0,00%	-0,27	1,04	2,35	3,66	4,97
1,00%	-0,91	0,40	1,71	3,02	4,33
2,00%	-1,56	-0,25	1,06	2,37	3,68
3,00%	-2,20	-0,89	0,42	1,73	3,03
4,00%	-2,85	-1,54	-0,23	1,08	2,39

Exhibit 74: Sensitivity Analysis on the fuel price changes and the subsequent change in average fares

Recommendation

Given all the aspects affecting the valuation of the company described above, our final target share price of **$2,35**, together with the fact that LATAM will not pay a dividend in 2020, our final recommendation to investors is that they **SELL** their positions on LATAM Airlines. The annualized return on the stock, considering the current price of **$2,58**, is **-14,2%,** with a holding period of 223 days, or 0,61 years.

Furthermore, we also decided to not take into consideration the multiples analysis, as in uncertain times like these, it is not entirely accurate with the true valuation of the companies in this industry.

Appendix

Core Assets	2012	2013	2014	2015	2016	2017	2018	018 IFRS 16	019 IFRS 16	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Operating Cash	595	663	624	506	476	508	518	518	522	237	365	491	504	520	533	548	563	581	599	618
Trade and other accounts receivable	1.418	1.633	1.379	797	1.108	1.214	1.163	1.163	1.244	540	811	1.064	1.064	1.069	1.068	1.069	1.067	1.101	1.136	1.171
Accounts receivable from related entit	15	1	0	0	1	3	3	3	20	20	20	20	20	20	20	20	20	20	20	20
Inventories	177	231	266	225	241	237	279	279	354	140	186	228	225	222	231	237	244	251	259	267
Tax Assets	96	82	101	64	65	78	69	69	29	13	21	28	28	29	30	31	32	33	34	35
Other non-financial current assets	284	336	248	330	212	221	321	290	313	142	213	287	294	303	311	320	329	339	350	361
Operating Current Assets	**2.585**	**2.946**	**2.617**	**1.922**	**2.104**	**2.261**	**2.353**	**2.323**	**2.483**	**1.092**	**1.615**	**2.116**	**2.136**	**2.163**	**2.192**	**2.224**	**2.254**	**2.325**	**2.397**	**2.472**
Trade and other accounts payables	1.690	1.558	1.489	1.484	1.593	1.695	1.674	1.674	2.223	935	1.263	1.572	1.587	1.598	1.616	1.657	1.706	1.759	1.814	1.870
Accounts Payable to related entities	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tax Liabilities	15	12	18	19	14	4	4	4	12	3	5	6	6	6	7	7	7	7	7	8
Deferred Revenues	2.459	2.817	2.921	2.696	2.869	2.849	2.975	2.975	3.540	3.540	3.540	3.540	3.540	3.540	3.540	3.540	3.540	3.540	3.540	3.540
Other non-financial current liabilities	126	133	120	66	107	133	125	125	146	76	105	134	139	144	150	154	158	163	168	173
Operating Current Liabilities	**4.290**	**4.519**	**4.548**	**4.266**	**4.584**	**4.682**	**4.778**	**4.778**	**5.921**	**4.554**	**4.913**	**5.253**	**5.273**	**5.289**	**5.312**	**5.358**	**5.412**	**5.470**	**5.530**	**5.592**
Net Operating Current Assets (Opera	**-1.705**	**-1.573**	**-1.931**	**-2.344**	**-2.480**	**-2.421**	**-2.424**	**-2.455**	**-3.439**	**-3.462**	**-3.298**	**-3.137**	**-3.137**	**-3.126**	**-3.120**	**-3.134**	**-3.158**	**-3.145**	**-3.133**	**-3.120**
Property and Equipment	11.807	10.983	10.773	10.939	10.498	10.065	9.953	12.502	12.920	11.802	11.359	11.424	11.278	11.384	11.374	11.306	11.419	11.548	11.692	11.852
Intangible assets other than goodwill	2.382	2.093	1.880	1.321	1.610	1.617	1.441	1.441	1.448	1.463	1.492	1.522	1.552	1.583	1.615	1.647	1.680	1.714	1.748	1.783
Total Fixed Assets	**14.189**	**13.076**	**12.653**	**12.260**	**12.108**	**11.683**	**11.394**	**13.943**	**14.368**	**13.264**	**12.851**	**12.946**	**12.831**	**12.967**	**12.989**	**12.954**	**13.099**	**13.262**	**13.440**	**13.635**
Goodwill	**4.213**	**3.728**	**3.313**	**2.281**	**2.710**	**2.673**	**2.294**	**2.294**	**2.210**	**2.210**	**2.210**	**2.210**	**2.210**	**2.210**	**2.210**	**2.210**	**2.210**	**2.210**	**2.210**	**2.210**
Accounts Receivable (non-current)	51	101	30	11	8	7	5	5	5	2	3	4	5	5	5	5	5	5	5	6
Non-current Tax Assets	0	0	18	26	20	18	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Other non-financial non-current assets	308	272	343	235	237	221	234	228	205	93	143	193	198	204	209	215	221	228	235	243
Other Operating Assets	**359**	**373**	**391**	**272**	**266**	**245**	**240**	**234**	**210**	**95**	**147**	**197**	**203**	**209**	**214**	**220**	**226**	**234**	**241**	**248**
Accounts Payable (non-current)	1.086	923	577	417	359	499	484	529	619	299	408	513	525	535	548	562	578	596	615	634
Other non-financial non-current liabili	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Current Hedge Derivatives	66	66	226	134	25	12	26	26	50	24	37	48	49	50	50	52	53	55	56	58
Non-Current Hedge Derivatives	111	55	28	16	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Operating Liabilities	**1.262**	**1.044**	**832**	**567**	**391**	**514**	**510**	**556**	**670**	**322**	**445**	**562**	**573**	**585**	**598**	**613**	**631**	**651**	**671**	**692**
Net Other Operating Assets	**-904**	**-671**	**-441**	**-295**	**-125**	**-268**	**-270**	**-322**	**-460**	**-227**	**-298**	**-364**	**-371**	**-376**	**-384**	**-393**	**-405**	**-417**	**-430**	**-444**
Operating Invested Capital	**15.794**	**14.559**	**13.595**	**11.902**	**12.214**	**11.666**	**10.994**	**13.460**	**12.679**	**11.785**	**11.464**	**11.655**	**11.532**	**11.675**	**11.694**	**11.637**	**11.746**	**11.909**	**12.087**	**12.281**
Non Core Assets																				
Provisions	**1.366**	**1.150**	**716**	**427**	**425**	**377**	**308**	**308**	**292**	**292**	**292**	**292**	**292**	**292**	**292**	**292**	**292**	**292**	**292**	**292**
Other Financial Assets	637	710	650	651	713	560	384	384	500	500	500	500	500	500	500	500	500	500	500	500
Other non-current Financial Assets	78	72	85	89	102	88	59	59	47	47	47	47	47	47	47	47	47	47	47	47
Non-current assets and disposal group	48	2	1	2	337	291	6	6	485	485	485	485	485	485	485	485	485	485	485	485
Non-Operating Assets	**-604**	**-366**	**21**	**315**	**727**	**562**	**140**	**140**	**740**	**740**	**740**	**740**	**740**	**740**	**740**	**740**	**740**	**740**	**740**	**740**
Current Derivatives not recognized as	4	4	1	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0
Non-Current Derivatives not recognize	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liabilities included in disposal groups c	0	0	0	0	10	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Deferred Taxes	416	364	645	435	531	586	599	513	381	381	381	381	381	381	381	381	381	381	381	381
Employee Benefits	38	46	74	65	82	101	82	82	94	94	94	94	94	94	94	94	94	94	94	94
Non-Operating Liabilities	**464**	**415**	**720**	**500**	**624**	**702**	**689**	**603**	**475**	**475**	**475**	**475**	**475**	**475**	**475**	**475**	**475**	**475**	**475**	**475**
Net Non-Operating Invested Capital	**-1.069**	**-781**	**-699**	**-185**	**103**	**-141**	**-549**	**-463**	**265**	**265**	**265**	**265**	**265**	**265**	**265**	**265**	**265**	**265**	**265**	**265**
Total Funds Invested	14.725	13.778	12.896	11.717	12.317	11.525	10.445	12.997	12.944	12.050	11.729	11.920	11.797	11.940	11.959	11.902	12.011	12.174	12.352	12.546
Financing																				
Current Interest Bearing Loans	1.977	1.969	1.397	1.510	1.815	1.289	1.397	1.397	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.466	1.511	1.559
Non-Current Interest Bearing Loans	7.582	7.804	7.361	7.516	6.790	6.603	5.865	5.865	5.772	6.713	6.713	6.413	6.113	5.813	5.513	5.313	5.113	5.273	5.438	5.608
Excess Cash	55	1.322	366	247	473	634	563	563	551	1.377	1.239	846	753	413	153	125	-60	140	345	555
Current Lease Liabilities	0	0	0	0	0	0	0	363	414	416	419	423	429	435	443	451	460	469	478	488
Non-Current Lease Liabilities	0	0	0	0	0	0	0	2.495	2.758	2.769	2.789	2.818	2.855	2.898	2.948	3.003	3.062	3.124	3.187	3.253
Equity attributable to the parent comp	5.112	5.239	4.402	2.857	4.097	4.176	3.667	3.361	3.131	2.110	1.628	1.692	1.734	1.787	1.789	1.840	1.897	1.984	2.083	2.195
Minority Interest	109	88	102	81	89	91	80	80	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
Total Funds Reconciliation	**14.725**	**13.778**	**12.896**	**11.717**	**12.317**	**11.525**	**10.445**	**12.997**	**12.944**	**12.050**	**11.729**	**11.920**	**11.797**	**11.940**	**11.959**	**11.902**	**12.011**	**12.174**	**12.352**	**12.546**

Appendix 1: Balance Sheet

	2012	2013	2014	2015	2016	2017	2018	018 IFRS 16	019 IFRS 16	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
REVENUES	**13.028**	**13.118**	**12.290**	**9.953**	**9.240**	**9.869**	**10.129**	**10.129**	**10.310**	**4.692**	**7.216**	**9.706**	**9.962**	**10.272**	**10.534**	**10.836**	**11.130**	**11.484**	**11.844**	**12.216**
growth										*-54,49%*	*53,80%*	*34,51%*	*2,64%*	*3,12%*	*2,55%*	*2,86%*	*2,72%*	*3,17%*	*3,14%*	*3,140%*
Net Passenger Revenue	11.017	11.062	10.380	8.411	7.878	8.494	8.709	8.709	9.006	3.258	5.831	8.374	8.574	8.821	9.019	9.254	9.479	9.780	10.087	10.403
Net Cargo Revenue	1.940	1.863	1.713	1.329	1.111	1.119	1.186	1.186	1.064	1.344	1.216	1.077	1.114	1.156	1.199	1.244	1.291	1.332	1.374	1.417
Other Operating Revenue	71	193	197	213	251	255	233	233	240	90	169	255	274	295	316	338	360	372	383	395
OPERATING COSTS	**-12.044**	**-11.580**	**-10.967**	**-8.678**	**-7.999**	**-8.448**	**-8.681**	**-8.109**	**-8.219**	**-4.264**	**-5.910**	**-7.549**	**-7.829**	**-8.102**	**-8.424**	**-8.639**	**-8.896**	**-9.173**	**-9.457**	**-9.751**
Wages and Benefits	-2.596	-2.493	-2.350	-2.073	-1.951	-2.024	-1.820	-1.820	-1.795	-1.394	-1.638	-1.660	-1.682	-1.698	-1.744	-1.781	-1.834	-1.888	-1.944	-2.001
Aircraft fuel	-4.780	-4.414	-4.167	-2.651	-2.057	-2.319	-2.983	-2.983	-2.929	-1.242	-1.803	-2.607	-2.798	-2.961	-3.163	-3.251	-3.372	-3.477	-3.587	-3.699
Commissions to agents	-417	-409	-366	-303	-269	-252	-223	-223	-222	-101	-155	-209	-214	-221	-227	-233	-240	-247	-255	-263
Other Rental and Landing Fee	-1.377	-1.373	-1.327	-1.110	-1.077	-1.172	-1.218	-1.207	-1.276	-565	-869	-1.169	-1.200	-1.238	-1.269	-1.305	-1.341	-1.383	-1.427	-1.472
Passenger Services	-315	-331	-300	-295	-287	-289	-280	-280	-261	-119	-183	-246	-253	-260	-267	-275	-282	-291	-300	-310
Aircraft Rentals	-422	-441	-521	-525	-569	-580	-538	0	0	0	0	0	0	0	0	0	0	0	0	0
Aircraft maintenance	-424	-477	-453	-437	-366	-431	-382	-367	-445	-262	-374	-464	-457	-460	-458	-461	-459	-473	-488	-504
Other Costs which relate to D	-1.539	-1.419	-1.266	-1.053	-1.062	-1.097	-838	-849	-832	-375	-577	-776	-797	-822	-843	-867	-890	-919	-948	-977
Other Operating Expenses	-173	-223	-216	-230	-360	-284	-400	-381	-460	-206	-310	-417	-428	-442	-453	-466	-479	-494	-509	-525
EBITDA	**984**	**1.538**	**1.324**	**1.276**	**1.241**	**1.421**	**1.447**	**2.020**	**2.091**	**427**	**1.305**	**2.157**	**2.133**	**2.171**	**2.110**	**2.197**	**2.235**	**2.311**	**2.387**	**2.465**
As a % of Revenues	*7,55%*	*11,72%*	*10,77%*	*12,82%*	*13,43%*	*14,40%*	*14,29%*	*19,94%*	*20,28%*	*9,11%*	*18,09%*	*22,23%*	*21,41%*	*21,13%*	*20,03%*	*20,28%*	*20,08%*	*20,12%*	*20,15%*	*20,18%*
Depreciation	**-1.087**	**-985**	**-944**	**-898**	**-910**	**-943**	**-916**	**-1.307**	**-1.389**	**-1.295**	**-1.302**	**-1.325**	**-1.347**	**-1.377**	**-1.405**	**-1.428**	**-1.461**	**-1.496**	**-1.533**	**-1.570**
Amortization of Intangibles	**0**	**-20**	**-17**	**-13**	**-19**	**-22**	**-25**	**-25**	**-32**	**-32**	**-32**	**-33**	**-34**	**-34**	**-35**	**-36**	**-36**	**-37**	**-38**	**-39**
Amortization of Goodwill	**0**	**-36**	**-30**	**-23**	**-32**	**-36**	**-40**	**-40**	**-49**	**-47**	**-47**	**-47**	**-47**	**-47**	**-47**	**-47**	**-47**	**-47**	**-47**	**-47**
OPERATING PROFIT (EBIT)	**-103**	**496**	**332**	**341**	**281**	**419**	**466**	**648**	**621**	**-946**	**-76**	**752**	**706**	**712**	**623**	**686**	**690**	**730**	**769**	**809**
As a % of Revenues	*-0,79%*	*3,78%*	*2,71%*	*3,43%*	*3,04%*	*4,25%*	*4,60%*	*6,39%*	*6,02%*	*-20,17%*	*-1,06%*	*7,75%*	*7,09%*	*6,93%*	*5,92%*	*6,33%*	*6,20%*	*6,36%*	*6,49%*	*6,62%*
Operating Taxes	23	136	198	-21	165	185	83	90	76	-334	-50	223	209	213	185	207	209	223	235	248
NOPLAT	**-126**	**360**	**134**	**363**	**116**	**234**	**383**	**558**	**545**	**-612**	**-26**	**530**	**497**	**500**	**438**	**479**	**481**	**507**	**534**	**561**
Non Operating Income	**-329**	**-538**	**-109**	**-533**	**47**	**-26**	**-105**	**15**	**-36**	**-16**	**-25**	**-34**	**-35**	**-36**	**-37**	**-38**	**-39**	**-40**	**-41**	**-43**
Others Income/(Expense)	-329	-538	-109	-533	47	-26	-105	15	-36	-16	-25	-34	-35	-36	-37	-38	-39	-40	-41	-43
Others Non-Operating Revenue	195	148	181	172	287	295	239	239	121	121	121	121	121	121	121	121	121	121	121	121
Non-Operating Income Taxes	-27	-78	15	-81	80	69	83	115	23	28	26	23	23	23	23	22	22	22	21	21
OCI	0	-521	-766	-1.361	585	-29	-643	-776	-184	0	0	0	0	0	0	0	0	0	0	0
Non-Operating Result	**-108**	**-833**	**-709**	**-1.640**	**839**	**172**	**-591**	**-637**	**-122**	**76**	**70**	**63**	**63**	**62**	**61**	**61**	**60**	**59**	**58**	**57**
Total Income to Investors	**-233**	**-473**	**-575**	**-1.277**	**955**	**406**	**-208**	**-79**	**423**	**-536**	**44**	**593**	**559**	**562**	**499**	**540**	**541**	**566**	**592**	**618**
Financing																				
Interest Expense	-444	-463	-430	-413	-416	-393	-356	-539	-590	-630	-688	-689	-673	-657	-642	-628	-619	-611	-628	-645
% of previous years' Debt		*4,84%*	*4,40%*	*4,72%*	*4,61%*	*4,57%*	*4,51%*	*6,83%*	*5,83%*	*6,08%*	*6,08%*	*6,08%*	*6,08%*	*6,08%*	*6,08%*	*6,08%*	*6,08%*	*6,08%*	*6,08%*	*6,08%*
Interest Income	117	73	91	75	75	79	53	53	26	45	45	45	45	45	45	45	45	45	45	45
Tax Shield	65	78	71	76	82	80	82	131	152	158	174	174	170	165	161	157	155	153	157	162
Financial Result	**-262**	**-312**	**-268**	**-262**	**-259**	**-234**	**-221**	**-355**	**-411**	**-427**	**-469**	**-470**	**-459**	**-447**	**-436**	**-425**	**-419**	**-413**	**-426**	**-438**
Result (excl. Minority Interest)	**-495**	**-785**	**-843**	**-1.540**	**696**	**172**	**-429**	**-434**	**12**	**-963**	**-425**	**123**	**101**	**114**	**63**	**114**	**121**	**153**	**166**	**180**
Minority Interest	0	-16	-13	12	47	43	18	19	-3	0	0	0	0	0	0	0	0	0	0	0
Result	**-495**	**-768**	**-831**	**-1.551**	**649**	**129**	**-447**	**-453**	**15**	**-963**	**-425**	**123**	**101**	**114**	**63**	**114**	**121**	**153**	**166**	**180**

Appendix 2: Income Statement

	2013	2014	2015	2016	2017	2018	8 IFRS16	9 IFRS16	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Core																			
NOPLAT	**360**	**134**	**363**	**116**	**234**	**383**	**558**	**545**	**-612**	**-26**	**530**	**497**	**500**	**438**	**479**	**481**	**507**	**534**	**561**
Depreciation	**985**	**944**	**898**	**910**	**943**	**916**	**1.307**	**1.389**	**1.295**	**1.302**	**1.325**	**1.347**	**1.377**	**1.405**	**1.428**	**1.461**	**1.496**	**1.533**	**1.570**
Amortization of Intangibles	**20**	**17**	**13**	**19**	**22**	**25**	**25**	**32**	**32**	**32**	**33**	**34**	**34**	**35**	**36**	**36**	**37**	**38**	**39**
Amortization of Goodwill	**36**	**30**	**23**	**32**	**36**	**40**	**40**	**49**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**
Operating Gross Cash Flow	**1.402**	**1.125**	**1.297**	**1.076**	**1.236**	**1.364**	**1.930**	**2.015**	**761**	**1.356**	**1.934**	**1.924**	**1.958**	**1.925**	**1.990**	**2.025**	**2.088**	**2.151**	**2.217**
Change in NWC	132	-357	-413	-136	59	-3	-34	-984	-23	164	162	-1	12	6	-13	-24	12	12	13
Net CAPEX	161	734	1.063	470	510	804	3.744	1.807	177	860	1.390	1.201	1.483	1.395	1.361	1.574	1.626	1.677	1.730
Change in Acquired Intangibles	-269	-196	-545	308	29	-151	-151	39	47	62	63	64	65	67	68	69	71	72	74
Change in Other Net Operating Assets	232	230	145	170	-143	-2	-53	-138	233	-71	-66	-6	-5	-8	-9	-12	-13	-13	-13
Gross Investment	-256	-411	-251	-811	-455	-648	-3.505	-724	-433	-1.014	-1.548	-1.257	-1.555	-1.459	-1.406	-1.607	-1.696	-1.749	-1.803
Core - Free Cash Flow (before Goodwi	1.145	714	1.046	265	781	716	-1.575	1.291	328	342	386	666	403	466	584	418	391	403	414
Change in Goodwill	-449	-384	-1.010	461	-1	-338	-338	-36	47	47	47	47	47	47	47	47	47	47	47
Core - Free Cash Flow	**1.595**	**1.098**	**2.056**	**-197**	**783**	**1.054**	**-1.237**	**1.327**	**281**	**295**	**339**	**619**	**356**	**419**	**537**	**371**	**344**	**356**	**367**
Non - Core																			
Non Core Result	-833	-709	-1.640	839	172	-591	-637	-122	76	70	63	63	62	61	61	60	59	58	57
Change in Other Non-Operating Asset	287	82	514	288	-244	-408	-322	728	0	0	0	0	0	0	0	0	0	0	0
Non - Core Cash Flow	**-1.121**	**-792**	**-2.154**	**551**	**416**	**-183**	**-315**	**-850**	**76**	**70**	**63**	**63**	**62**	**61**	**61**	**60**	**59**	**58**	**57**
Cash Flow available to investors (Op	**474**	**307**	**-98**	**354**	**1.198**	**872**	**-1.551**	**477**	**357**	**365**	**402**	**682**	**418**	**480**	**597**	**431**	**403**	**414**	**424**
Financing																			
Financing Flows																			
Financing Result	312	268	262	259	234	221	355	411	427	469	470	459	447	436	425	419	413	426	438
Change in Excess Cash	1.266	-956	-119	226	161	-71	-71	-12	826	-138	-393	-93	-339	-260	-28	-185	199	205	210
Change in Debt	213	-1.015	268	-421	-713	-630	-630	-68	941	0	-300	-300	-300	-300	-200	-200	204	211	217
Change in Lease Liabilities	0	0	0	0	0	0	2.858	314	12	23	33	42	50	57	63	68	71	73	75
Flows to Debt Holders	**1.365**	**327**	**-125**	**907**	**1.108**	**781**	**-1.944**	**153**	**300**	**308**	**344**	**623**	**357**	**418**	**534**	**367**	**338**	**347**	**356**
Changes Due to Application of new A	0	0	0	0	0	5	311	0	0	0	0	0	0	0	0	0	0	0	0
Dividends Paid	0	0	0	21	47	55	55	57	57	57	58	59	61	62	63	64	66	67	68
Capital (Increase) / Decrease	-2	136	27	36	43	32	27	266	0	0	0	0	0	0	0	0	0	0	0
Equity Issuance	-889	-156	0	-608	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flow to Equity Holders	**-891**	**-21**	**27**	**-552**	**90**	**91**	**393**	**323**	**57**	**57**	**58**	**59**	**61**	**62**	**63**	**64**	**66**	**67**	**68**
Total Financing	**474**	**307**	**-98**	**354**	**1.198**	**872**	**-1.551**	**477**	**357**	**365**	**402**	**682**	**418**	**480**	**597**	**431**	**403**	**414**	**424**

Appendix 3: Cash-Flow Statement

Report Recommendations

Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
Hold	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
Sell	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

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THE IMPACT OF COVID-19 AND SOCIAL DISTANCING MEASURES ON LATAM AIRLINES' SHARE PRICE

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25903

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ABSTRACT

Focusing on the COVID-19 pandemic and, specifically, on the impact social distancing measures could have on LATAM's share price, using 3 Scenarios, each with distinct probabilities of occurrence. Departing from the weighted average Scenario, the final recommendation (SELL) would only be changed in the Good Scenario, which would imply a HOLD recommendation, with a 22,12% higher share price. In the remaining Scenarios (Base and Bad), the share price would be 7,1% and 61,1% lower, respectively, which would maintain its SELL recommendation. This also allowed to analyse by how much would LATAM have to increase its fares to avoid losing value.

Keywords: Load Factor, Share Price, Average Fare, Social Distancing Measures, COVID-19.

Before I start writing about what I believe to be the most relevant topic in the aviation industry since 9/11, and one which will change the industry forever, I would like to acknowledge my partner Lukas Maasch and state the great experience that was working with him. This was a perfectly coordinated work, fairly divided, and with constant communication, even though we didn't get to meet physically during this semester.

Daron Acemoglu and James Robinson defined[1] as a critical juncture historical events which disturbed the economic and political equilibrium of a society and had a deep effect in changing the course of history. Examples of critical junctures throughout the History are the Black Death, in the mid-14th century, or the Industrial Revolution, which started in England in the second half of the 18th century. When specifically addressing the airline industry, the most recent events that fit this description are the **9/11 terrorist attacks**, and the **2008 Great Financial Crisis**.

Although it is still early to draw any conclusions about the real impact of this pandemic, it is becoming increasingly certain that the 2019-20 COVID-19 outbreak will also be part of such collection of historical events. It is an unprecedented situation to have such outbreak at a global scale, and it has brought virtually all the world into a lockdown in which most borders are closed, and people can only leave their homes to satisfy the most basic needs, whilst keep a minimum social distancing to ensure the safety of everyone.

Perceptibly, the above description outlines the obvious: **almost all flights in the world are currently grounded**, with the air space being reduced to cargo transportation and a small percentage of necessary passenger flights. At the time this report was written, LATAM Airlines only had **5% of its scheduled flights operating**, with just 3 international routes, and only around 40% of its domestic routes, operating with minimum required levels.

To better assess LATAM's future revenue outlook in the midst of the uncertainty, two parallel scenario analysis were constructed: one regarding the **recovery of passenger demand**, which assumed the 4 Scenarios described on the group report (a U-shape recovery, a prolonged U-shaped recovery, an L-shaped recovery which assumed a lower future industry growth, and a W-shaped recovery which assumed a resurgence of the pandemic after relaxing the lockdown measures in late **2020** and early **2021**), and a scenario accounting for **possible social distancing**

[1] Daron Acemoglu, James A. Robinson, "Why Nations Fail", 2013

measures. This second scenario was included directly in the load factor for each year, meaning the target share price reflects the weighted probability of each scenario. However, I will, on this report, further assess what the **impact of such measures** would mean for LATAM Airlines should they be enforced, and for **how long**. Hence, a sensitivity analysis for each individual load factor scenario will be conducted, along with any required fare change that would have to be necessary for LATAM to survive and avoid having a negative market value of its debt (which would mean its assets would not be enough to pay for its debt obligations and the company would default on its debt).

It is still uncertain whether such measures would be enforced. On one hand, it looks increasingly likely, at least in the short-term, as countries are beginning to return to normal daily activities with precaution. Thus, it is hard to imagine governments enforcing social distancing rules in social gathering places such as restaurants, beaches, or even supermarkets and not do the same for airplanes. On the other hand, it is also unclear whether the use of face masks could actually be an effective substitute for social distancing. If so, social distancing measures would not be necessary, as long as all passengers comply with health and sanitation instructions. Lufthansa, for instance, turned to the second option earlier this month, after having very low load factors due to scrapping the middle seat on every plane. It argues that the aircraft cabin design allows for an air quality similar to that of an open space[2].

Obviously, every country is a specific case, and the evolution of the pandemic in Europe could be completely different from that of South America, and as airlines have to follow their own governments directories, this might not be the case for LATAM.

Thus, 3 distinct Scenarios were built:

(i) A **Base Scenario**,

(ii) A **Good Scenario**, and

(iii) A **Bad Scenario**.

The **Base Scenario** is a rather pessimistic one, as it assumes social distancing rules until **mid-2021**. This not only accounts for the speed of return to normal activity, but also for the possibility that airplanes might become a focus of contagion, given the proximity between passengers.

[2] Simple Flying – "Lufhtansa ends social distancing with mandatory face masks"

Hence, this is seen as the most realistic “base” option. The **Good Scenario** assumed there would be **no social distancing measures** and the mandatory use of face masks would be enough for the passengers to avoid the spread of the virus. The **Bad Scenario** assumes social distancing rules until **mid-2022**, as this scenario is directly tied to the resurgence recovery Scenario. If there is a new virus outbreak towards the end of the year, the new measures would likely be more rigid than the current ones to prevent a new wave of a pandemic that, at the time of this report, has already lasted for 6 months and is only now starting to show some signs it may be starting to slow down. In the valuation of the company, the probabilities of **45%**, **40%**, and **15%** were respectively assigned to each Scenario.

To better understand the real impact of such measures on the valuation of LATAM, I will not only assess each individual scenario and **compare** them, both in terms of the revenue decrease, and also, *ceteris paribus*, in terms of the subsequent necessary average fare increase for LATAM to keep the same intrinsic value, should the resultant share price be lower. Note that it is assumed that this is a common problem to all the airlines in South America, meaning no market share is lost with the revenue increase. Moreover, it is assumed that, beginning in **2023**, as the load factors go back to “normal”, so do the average fares.

The first analysis to be done is understanding how sensitive the share price of LATAM is to a decrease in the load factors of the weighted scenario, and how much would the average fares have to increase on these 3 years (**2020** to **2022**) for LATAM’s value to be kept constant. It should be further noticed that all domestic and international regional flights are assumed to be performed by narrow-body aircraft (with a 3-3 configuration, meaning social distancing would mean a maximum load factor of **66%**) and all international long-haul flights are assumed to be performed by wide-body aircraft (LATAM’s wide-body aircrafts have different configurations – 2-4-2, 3-4-3. 3-3-3, and 2-3-2 – and its maximum load factors were weighted accordingly).

The sensitivity analysis is presented below:

		Change in Average Fare									
		0,00%	2,00%	4,00%	6,00%	8,00%	10,00%	12,00%	15,00%	18,00%	20,00%
Decrease in Load Factor	0,00%	2,26	2,50	2,73	2,97	3,21	3,45	3,68	4,04	4,40	4,63
	2,00%	1,97	2,21	2,44	2,67	2,90	3,13	3,37	3,72	4,06	4,30
	4,00%	1,69	1,91	2,14	2,37	2,60	2,82	3,05	3,39	3,73	3,96
	6,00%	1,40	1,62	1,84	2,06	2,29	2,51	2,73	3,06	3,40	3,62
	8,00%	1,11	1,33	1,54	1,76	1,98	2,19	2,41	2,73	3,06	3,28
	10,00%	0,82	1,03	1,24	1,45	1,66	1,88	2,09	2,40	2,72	2,93
	12,00%	0,53	0,73	0,94	1,14	1,35	1,56	1,76	2,07	2,38	2,59
	15,00%	0,08	0,28	0,48	0,68	0,88	1,08	1,27	1,57	1,87	2,07

From these results, it can be understood that any given percentual point decrease in the load factor would always require LATAM Airlines to increase its average fares to maintain its value. This means that any abrupt change in the load factor could severely hamper the company's value, as an even sharper increase in fares would be needed. Abruptly increasing the fares, especially during this crisis, could have catastrophic effects: an already low passenger demand due to uncertainty surrounding the virus would be even lower as potential customers, especially tourists and the remaining non-business travelers, who are cutting on superfluous expenses, would be even less eager to travel. Furthermore, people are getting more used to work remotely, meaning there is also less need for business travel, thus lowering the demand of this group of passengers, which usually is less averse to changes in price.

It is thus important to directly compare the **statistically expected Scenario** to three individual Scenarios, especially the **Base** and **Bad Scenarios**, to assess by how much would LATAM have to increase its fares to maintain its value should it occur; and if the **Bad Scenario** is actually putting the **future of the company at risk**, given the remaining assumptions of the valuation model. Given the difference between these Scenarios hinges solely on the duration of the social distancing measures, it is logical that the load factor is the same in **2020**. Below are the load factors assumed for each of these scenarios:

BAD SCENARIO	2020	2021	2022
Brazil Domestic Load Factor	71,01%	66,67%	74,58%
Rest Domestic Load Factor	71,10%	66,67%	73,74%
International Regional	71,74%	66,67%	75,79%
International Long Haul	69,39%	62,09%	73,53%

BASE SCENARIO	2020	2021	2022
Brazil Domestic Load Factor	71,01%	73,33%	82,50%
Rest Domestic Load Factor	71,10%	71,12%	80,82%
International Regional	71,74%	73,47%	84,92%
International Long Haul	69,39%	71,19%	84,92%

GOOD SCENARIO	2020	2021	2022
Brazil Domestic Load Factor	75,35%	79,98%	82,50%
Rest Domestic Load Factor	75,53%	75,57%	80,82%
International Regional	76,82%	80,28%	84,92%
International Long Haul	76,82%	80,28%	84,92%

EXPECTED SCENARIO	2020	2021	2022
Brazil Domestic Load Factor	72,75%	74,99%	81,31%
Rest Domestic Load Factor	72,87%	72,23%	79,75%
International Regional	73,77%	75,18%	83,55%
International Long Haul	72,36%	73,46%	83,21%

By applying the same sensitivity analysis whilst considering these differences, and complementing it with the goal-seek tool from Excel, it results that, should the **Bad Scenario** occur, LATAM would have to increase its average fares by **7,94%** to obtain the **same result**. Comparing to the **Expected Scenario**, and considering only the load factor change, *ceteris paribus*, revenues are **2,91%** lower in **2020**, **11,37%** lower in **2021**, and **6,22%** lower in **2022**. Given the load factors are back to normal in **2023**, there are no changes in the values starting from this year. FCF is **11,9%** lower in **2020**, **88,1%** lower in **2021**, and **97,7%** lower in **2022**. There

is also a spillover of effects in **2023**, with FCF being **15,6%** lower than in the **Expected Scenario**. From **2024** onwards, it is **equal** to the expected scenario. ROIC also decreases considerably every year. The share price decreases to **$1,38**, representing a **61,1%** decrease. This would keep our recommendation at **SELL**.

If the **Base Scenario** occurs, the results are very similar to those of the expected scenario. Revenues would be, on average, **1,7%** lower each year, with the FCF being, on average, **8%** lower each year (even though the **2023** value would actually be **1,7%** higher). ROIC would be slightly lower in **2020** and **2021**, and slightly higher in **2023,** as the load factor in **2023** is higher than the expected. The share price decreases to **$2,10**, representing a **7,1%** decrease. This would also keep our recommendation at **SELL**. Moreover, in this scenario, fares would have to be increased by **1,34%** for LATAM's share price to be the same.

Conversely, if the **Good Scenario** is to happen (*i.e.*, no social distancing measures), revenues would be higher in each year of the 3 years by an average of **4,53%**. FCF would also be higher every year from 2020 to 2024, by an average of **28,8%**. ROIC, as expected, would also be higher in each of the relevant years. The share price increases to **$2,76**, representing a **22,12%** increase, and our recommendation would swiftly change from **SELL** to **HOLD**.

These results show how **sensitive** the value of LATAM is to small changes in the **load factor**, and how harmful social distancing measures can be for airlines if these do not receive any government compensation. Should the **Bad Scenario** happen, LATAM would have to considerably increase its fares to maintain its value. However, should governments follow IATA's recommendation[3] and allow airlines to fly without any restrictions, LATAM would actually increase its value and would even have room to eventually decrease its fares and steal market share from its LCC competitors, which tend to work on thinner operational margins.

[3] IATA – "Social distancing would make most airlines financially unviable"; Simple Flying – "IATA suggests scrapping social distancing for face masks"