

## Company

# United Airlines

UAL

13 December 2021

## Recommendation

# SELL

Current px: \$44.05  
Target px: \$41.4  
Downside: -6%

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United Airlines is the fourth largest US airlines based on its historical domestic market share, while 40% of its revenue was generated from the international markets across 6 continents.

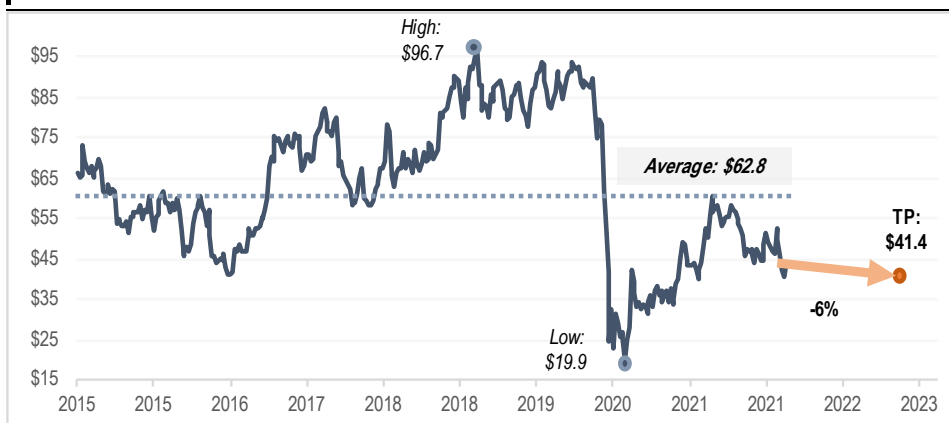
The company is trying to capture both domestic and international revenue growth opportunities and presents a positive outlook in the short run, while in the long run the growth opportunities would be limited due to fierce competitions from both domestic and foreign carriers.

However, there are significant concerns about cost headwinds, with ramp-up costs driven by rising fuel and labour costs, as well as uncertainties about the rising cases of the COVID-19 variant, Omicron.

We recommend a sell with a target price of \$41.4, 6% below the current market price of \$44.05.

Market	United States
Industry	Airlines
Ticker	UAL
Rating	SELL
Current px (26/11)	\$44.05
Target px	\$41.4
Upside	-6%
Market Cap (m)	14,264
Shrs Out/Float (m)	324
52-week range	\$38.9 - \$63.7
YTD%	1.85%
Beta	1.00
Credit Rating	B+

## Price Performance



Source: Refinitiv, Own estimate

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## COMPANY OVERVIEW

United airlines is a major American airline operating both domestic and international routes across the United states and 6 continents. The company operates a hub and spoke system (Earning call Q3, 2021). It is also one of the funders of the Star Alliance, the world largest global airline alliance. Figure 1 shows the current ratings of United Airlines, indicating that the company has a high default risk because of the covid-19 pandemic.

<b>Figure 1: Credit Rating</b>	
<b>Rating Agency</b>	<b>Current Rating</b>
Fitch	B+
Moody's	Ba2
Standard & poor's	B+

*Source: Quarterly Report*

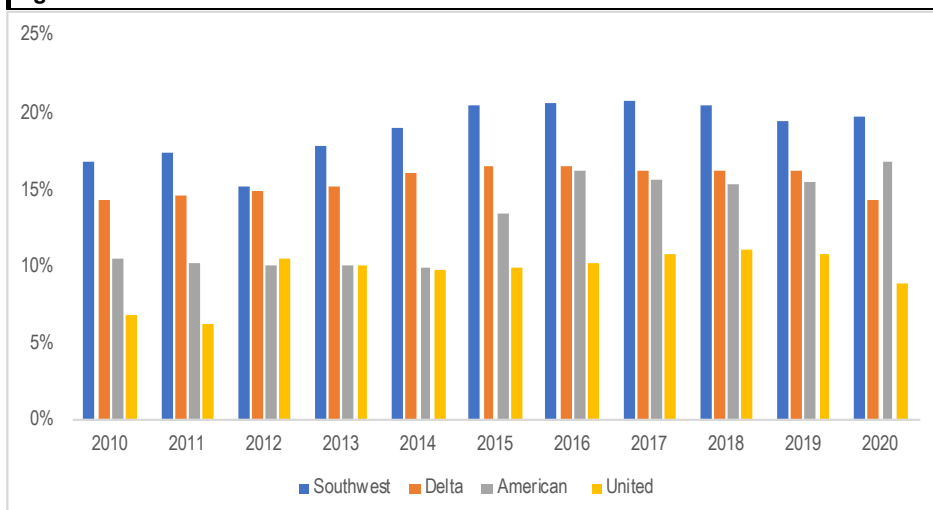
## EFFECT OF COVID-19 PANDEMIC

Affected by the Covid-19 pandemic, the company cut its capacity significantly because of the depressed demand of air travel. In the third quarter of 2021, the scheduled capacity was still 28% down relative to the third quarter capacity in 2019 (Q3 report, 2021). To survive the pandemic, the company made great efforts in improving its liquidity and received billions of funding directly granted from the government, as well as millions of low-interest 10-year senior unsecured debts, through the Payroll Support Program PSP2 and PSP3 (Q3 report, 2021). Since the onset of the Covid-19 pandemic in 2020, the company has suffered a huge number of losses and its net income just turned positive in Q3 2021. The Q3 earning call showed that the company had a positive outlook towards its future performance due to the increasing number of bookings from the corporate travellers flying the transatlantic routes as well as premium leisure travellers. However, the company warns that the new variant Omicron is a threat to transatlantic flights (Reuters, 2021).

## COMPETITION

According to Figure 2, United airline is the fourth largest airline in the US and its historical domestic market share was quite stable at around 10% from 2012 to 2019. The primary competitors of United airlines are Southwest, Delta Airlines and American Airlines, which have higher domestic market shares in history. In the US, the company also faces competitions from other low-cost airlines and ultra-low-cost airlines, such as JetBlue, Alaska, and Spirit airlines, which offer low fares with lower unit costs than United airlines. To compete with these airlines domestically, the company need to match their discounted fares due to the pricing pressures (Annual report, 2020).

**Figure 2: Domestic Market Shares**



Source: Statista

Internationally, United airlines also faces competitions from foreign airlines, and some of these carriers are subsidized by their governments, such as airlines from the Middle East countries. To be more competitive in the international market, the company enters Star Alliance with other 27 airlines, offering network routes with destinations in nearly 200 countries.

## Revenue Forecasts

As United Airlines operates a large route network across the US and 6 continents, we separate our revenue forecasts into two parts, the domestic market and the international market. Figure 3 shows the historical domestic and international revenues. Calculated as the averages from 2010 to 2020, around 60% of the company’s total revenue were generated from domestic market, while the percentage for international (Atlantic, Pacific and Latin America) is around 40%. Our revenue forecast period is from 2021 Q4 to 2026.

**Figure 3: Revenue by Geography (in millions)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Domestic</b>	14,382	21,922	21,276	22,092	22,320	21,931	22,202	23,131	25,552	26,960	9,911
% change	-	52%	-3%	4%	1%	-2%	1%	4%	10%	6%	-63%
<b>International</b>	8,943	15,188	15,876	16,187	16,581	15,933	14,354	14,605	15,751	16,299	5,444
% change	-	70%	5%	2%	2%	-4%	-10%	2%	8%	3%	-67%
<b>Total</b>	23,325	37,110	37,152	38,279	38,901	37,864	36,556	37,736	41,303	43,259	15,355
% change	-	59%	0%	3%	2%	-3%	-3%	3%	9%	5%	-65%

Source: United Airlines Annual reports

Figure 4 exhibits the network routes of United airlines, showing that the company operates a hub and spoke system and incorporates both long haul and short haul flights into its business. Internationally, the company mainly targets at areas in Atlantic, Pacific and Latin America.

**Figure 4: Routes and Destinations**

Source: Google Image

## Effects of the Omicron Variant (2021-2022)

Airlines were seeing a travel rebound before Omicron arrived, however, the discovery of Omicron may affect the recovery of the airline industry. As Pfizer says booster shot promises against Omicron (BBC, 2021), we expect that the affects will only exist in the short run from Q4 2021 to Q2 2022. This is also in line with the management expectation that omicron would affect the company's near-term bookings, but the impact should be smaller than delta (CNBC, 2021).

Omicron was firstly reported to World Health Organization (WHO) on 24<sup>th</sup> November 2021 (CNBC, 2021). We assume that the revenue in Q4 2021 will be the average of the results in Q4 2020 and Q3 2021. This is because we expect that the revenue performance in the first half of Q4 2021 was at least as good as that in Q3 2021 because of the rapid rebound of both business and leisure travel markets. However, after the Omicron was identified, we expect that the company's revenue will be affected in the short run in the same way as when the Delta variant was firstly identified.

To forecast the revenue in 2022, we anticipate that Covid-19 will not completely disappear in the short run across the world and government responses would directly affect the company's revenue. Therefore, we regressed the quarterly growth rates of revenues on quarterly percentage changes of Covid-19 Government Stringency Index (Our World in Data, 2021) to calculate the beta both domestically and internationally. The resulting quarterly growth rate of domestic revenue is 14.92%, while the resulting quarterly growth rate of international revenue is 11.54%. The recovery speed of the international market is lower than that of the domestic market, which is also in line with the management expectation in Q3 earning call.

Figure 5 presents our revenue forecast results for Year 2021 and 2022. The predicted results in Q1 and Q2 in 2022 are lower than the results in Q3 2021 before the Omicron was identified, which is in line with management expectation that this new variant will affect the company's revenue performance in the short run but not for long-term period.

Figure 5: Revenue Forecasts for 2021 and 2022

	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2020	2021 Q1	2021 Q2	2021 Q3	2021 Q4E	2021E	2022 Q1	2022 Q2	2022 Q3	2022 Q4E	2022E
<b>Domestic</b>	5,078	925	1,672	2,236	<b>9,911</b>	2,111	3,767	5,412	3,824	<b>15,114</b>	4,395	5,051	5,804	6,670	<b>21,920</b>
<b>International</b>	2,901	550	817	1,176	<b>5,444</b>	1,110	1,704	2,338	1,757	<b>6,909</b>	1,960	2,186	2,438	2,720	<b>9,303</b>
<b>Total</b>	<b>7,979</b>	<b>1,475</b>	<b>2,489</b>	<b>3,412</b>	<b>15,355</b>	<b>3,221</b>	<b>5,471</b>	<b>7,750</b>	<b>5,581</b>	<b>22,023</b>	<b>6,354</b>	<b>7,236</b>	<b>8,242</b>	<b>9,390</b>	<b>31,223</b>

Source: United Airlines quarterly reports

## 2023-2026 Forecast

Then we made both domestic and international revenue forecasts for the period 2023-2026 based on our estimation of the business and leisure revenue split, assuming that there will be no other variants that affect the global airline industry significantly.

## Business and Leisure Market Split

We estimated the company's business and leisure revenue split by counting the seats offered in business class and economy class separately. For companies operating hub and spoke system, widebody jets normally fly long haul international routes and narrowbody airplanes fly short haul domestic routes. Here we simply assume that all the widebody aircrafts are for international routes and all the narrowbody aircrafts are for domestic routes. We also assume that the Business class on these flights are mainly for business travellers and the economy class on these flights are mainly for more price-sensitive leisure travellers. Figure 6 shows the number of aircrafts in different types, as well as the ratio of Business class seats to total seats on each type of aircraft. The results show that the percentages of business class seats to total seats on widebody aircrafts are higher than those on narrowbody aircrafts on average. The figures for Year 2021 and 2022 are estimated based on the reported aircraft delivery schedules.

Figure 6: Fleet

Widebody Jet														
Aircraft Type	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E	%Business
B767-300	35	35	35	35	35	35	35	35	38	38	38	38	38	18.53%
B767-400	16	16	16	16	16	16	16	16	16	16	16	16	16	16.12%
B777-200	74	74	74	74	74	74	74	78	74	74	74	74	74	14.04%
B777-300	0	0	0	0	0	0	2	14	18	20	22	22	22	17.14%
B787-10	0	0	0	0	0	0	0	0	3	11	13	13	13	13.84%
B787-8	0	0	5	8	12	12	12	12	12	12	12	12	12	21.15%
B787-9	0	0	0	0	2	13	18	21	25	25	35	38	38	18.87%
Total	125	125	130	133	139	150	157	176	186	196	210	213	213	
Total Widebody	160	156	158	156	162	172	177	153	186	196	210	213	213	
Narrowbody Jet														
Aircraft Type	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E	%Business
A319	55	55	55	55	55	55	61	67	70	80	85	98	98	7.89%
A320	97	97	97	97	97	97	97	99	99	97	96	96	96	8.00%
B737 Max 9	0	0	0	0	0	0	0	0	9	0	22	30	70	11.17%
B737-700	36	36	36	36	36	40	40	40	40	41	49	53	53	9.79%
B737-800	126	130	130	130	130	130	137	141	141	141	141	141	141	13.10%
B737-900	44	45	64	88	117	140	148	148	148	148	148	148	148	11.44%
B757-200	137	134	133	110	73	60	56	56	56	53	40	40	40	12.76%
B757-300	21	21	21	21	21	21	21	21	21	21	21	21	21	10.34%
Total	516	518	536	537	529	543	560	572	584	581	602	627	667	
Total Narrowbody	550	545	544	537	529	543	560	591	584	581	602	643	667	

Source: Annual report and calculations

We used the following formulae to calculate the seating divisions for international (Widebody aircrafts) and domestic (Narrowbody aircrafts) markets respectively:

$$\begin{aligned} & \% \text{Business to Total on Narrowbody jets} \\ & = \frac{\sum_n^1 \text{Number of aircraft}_i \times \% \text{Business to Total}_i}{\text{Total Narrowbody Aircraft}} \end{aligned}$$

$$\begin{aligned} & \% \text{Business to Total on Widebody jets} \\ & = \frac{\sum_m^1 \text{Number of aircraft}_j \times \% \text{Business to Total}_j}{\text{Total Widebody Aircraft}} \end{aligned}$$

Where i and j denote different aircraft types, n denotes the total number of types of narrowbody aircrafts and m denotes the total number of types of widebody aircrafts. Figure 7 shows our estimation of how seats were divided for business and economy class on all the widebody jets and all the narrowbody jets respectively.

Figure 7: Seating Division													
Widebody Jet													
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E
Business class to total	15.6%	15.6%	15.8%	15.9%	16.1%	16.3%	16.4%	16.4%	16.5%	16.4%	16.5%	16.6%	16.6%
Narrowbody Jet													
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E
Business class to total	11.0%	11.0%	11.0%	11.0%	10.9%	10.8%	10.8%	10.8%	10.8%	10.7%	10.7%	10.6%	10.7%

Source: By Calculations

We checked the fares of popular routes offered by United airlines in both domestic and international markets. We found that the fares of the business class were around 4.55 times of the fares of the economy class for international destinations, while this number for the domestic market is around 4.03. Then we estimated the business and leisure revenue split using the following formulae:

$$\begin{aligned} & \% \text{ Revenue from Business Travellers in International Markets} = \\ & \frac{\% \text{Seats to Business Travellers} * 4.55}{\% \text{Seats to Business Traveller} * 4.55 + \% \text{Seats to Leisure} * 1} \end{aligned}$$

$$\begin{aligned} & \% \text{ Revenue from Business Travellers in Domestic Markets} \\ & = \frac{\% \text{Seats to Business Travellers} * 4.03}{\% \text{Seats to Business Traveller} * 4.03 + \% \text{Seats to Leisure} * 1} \end{aligned}$$

Figure 8 shows our estimation results of the business and leisure revenue split for both the international market and the domestic market. It shows that revenues generated from business travellers account for a higher percentage in the international market than in the domestic market. And these percentages are quite stable over time. However, it is generally said that business travellers make up 12% of airlines total passengers, while 75% of revenues come from the business travellers (Time, 2021). The percentages that we estimated in Figure 8 are lower than the industry averages. The possible reasons are that United airlines currently charge lower fares on certain routes to attract more customers during the pandemic and there are business travellers who travel in Economy Class which were not captured by our model. Figure 9 shows the revenue split in USD amount.

**Figure 8: Business and Leisure Revenue Split (Percentage)**

International													
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E
Business	45.6%	45.6%	46.0%	46.2%	46.6%	47.0%	47.1%	47.2%	47.4%	47.2%	47.4%	47.5%	47.5%
Leisure	54.4%	54.4%	54.0%	53.8%	53.4%	53.0%	52.9%	52.8%	52.6%	52.8%	52.6%	52.5%	52.5%
Domestic													
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E
Business	32.0%	32.0%	32.1%	32.0%	31.7%	31.7%	31.7%	31.6%	31.6%	31.5%	31.3%	31.2%	31.3%
Leisure	68.0%	68.0%	67.9%	68.0%	68.3%	68.3%	68.3%	68.4%	68.4%	68.5%	68.7%	68.8%	68.7%

Source: By Calculations

**Figure 9: Business and Leisure Revenue Split (USD million)**

International													
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E
Business	4,079	6,928	7,306	7,485	7,727	7,484	6,767	6,896	7,469	7,698	2,581	3,279	4,416
Leisure	4,864	8,260	8,570	8,702	8,854	8,449	7,587	7,709	8,282	8,601	2,863	3,630	4,887
Total	8,943	15,188	15,876	16,187	16,581	15,933	14,354	14,605	15,751	16,299	5,444	6,909	9,303
Domestic													
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E
Business	4,607	7,025	6,823	7,059	7,085	6,948	7,030	7,312	8,072	8,483	3,106	4,718	6,858
Leisure	9,775	14,897	14,453	15,033	15,235	14,983	15,172	15,819	17,480	18,477	6,805	10,396	15,062
Total	14,382	21,922	21,276	22,092	22,320	21,931	22,202	23,131	25,552	26,960	9,911	15,114	21,920

Source: By Calculations

## Revenue Forecasts (2023 - 2026)

With the good news that the current vaccines can defend people from the omicron variant, we expect the rebound of both business and leisure travel markets will continue, resulting in a high growth rate of the company's revenue in the short run driven by the recovery of air travel demand. However, we expect that this high-speed growth will not last for long, because historically the company's revenue was quite stable and did not present a trend of dramatic expansion. Therefore, we expect that the high growth rate of revenue will gradually decline and return to the historical average level. Here we simply assume that the growth rates of revenues from different segments will be constant from 2024 to 2026 calculated as the 10-year historical averages excluding the outliers in 2011 and 2018. In 2011, United airlines merged with Continental airlines, resulting in a significant increase in revenue. The high growth rate in 2018 is due to a 4.9% growth in ASMs and a PRASM increase of 4.3% primarily driven by an increase in traffic and corporate demand (Annual report, 2018). The growth rates of revenues in 2023 were calculated as the averages of the growth rates in 2022 and 2024, in order to simulate a diminishing trend of revenue growth in the short run. The forecasted results are presented in Figure 10.



**Figure 10: Total Revenue Forecast**

	Domestic				International				Total	
	Revenue From Business market	% Revenue From Business market	Revenue From Leisure market	% Revenue From Leisure market	Revenue From Business market	% Revenue From Business market	Revenue From Leisure market	% Revenue From Leisure market	Total Revenue	% Growth Rate
2010	4,607	-	9,775	-	4,079	-	4,864	-	23,325	
2011	7,025	52.5%	14,897	52.4%	6,928	69.8%	8,260	69.8%	37,110	59.1%
2012	6,823	-2.9%	14,453	-3.0%	7,306	5.5%	8,570	3.8%	37,152	0.1%
2013	7,059	3.5%	15,033	4.0%	7,485	2.5%	8,702	1.5%	38,279	3.0%
2014	7,085	0.4%	15,235	1.3%	7,727	3.2%	8,854	1.8%	38,901	1.6%
2015	6,948	-1.9%	14,983	-1.7%	7,484	-3.1%	8,449	-4.6%	37,864	-2.7%
2016	7,030	1.2%	15,172	1.3%	6,767	-9.6%	7,587	-10.2%	36,556	-3.5%
2017	7,312	4.0%	15,819	4.3%	6,896	1.9%	7,709	1.6%	37,736	3.2%
2018	8,072	10.4%	17,480	10.5%	7,469	8.3%	8,282	7.4%	41,303	9.5%
2019	8,483	5.1%	18,477	5.7%	7,698	3.1%	8,601	3.9%	43,259	4.7%
2020	3,106	-63.4%	6,805	-63.2%	2,581	-66.5%	2,863	-66.7%	15,355	-64.5%
2021E	4,718	51.9%	10,396	52.8%	3,279	27.1%	3,630	26.8%	22,023	43.4%
2022E	6,858	45.4%	15,062	44.9%	4,416	34.7%	4,887	34.7%	31,223	41.8%
2023E	8,497	23.9%	18,654	23.8%	5,248	18.8%	5,788	18.4%	38,187	22.3%
2024E	8,706	2.5%	19,177	2.8%	5,408	3.0%	5,915	2.2%	39,206	2.7%
2025E	8,921	2.5%	19,715	2.8%	5,572	3.0%	6,045	2.2%	40,253	2.7%
2026E	9,141	2.5%	20,269	2.8%	5,742	3.0%	6,177	2.2%	<b>41,328</b>	2.7%

Source: Annual report and own estimates

## Justification of Revenue Forecasts

From Year 2021 to 2023, our forecasted growth rates for the domestic market are higher than the predicted growth rates of revenue generated from the international market, as the domestic market is expected to recover faster than the international market due to the lifts of domestic travel restrictions and the implementation of vaccine programmes (Q3 Earning Call, 2021). The rebound of international revenue in 2021 was mainly driven by the strong recovery of the demand of travelling to the nearby countries. The higher growth rate predicted for the international market in 2022 is also in line with the company's expectation. Based on the current booking information, the company expected that their transatlantic market will have a strong performance in 2022 driven by both business travellers and premium leisure travellers (Q3 Earning Call, 2021). The effect of Omicron has been incorporated into the revenue forecasts in 2022.

However, in the long run, we anticipate that the high-speed growth will not continue because of the fierce competition from both domestic and foreign airlines. Domestically, United airlines may find it hard to compete with low-cost and ultra-low-cost carriers, such as Southwest, JetBlue, Alaska and Spirit, as the company has a higher unit cost (The Airline Analyst, 2021) but cannot raise its fares to a higher level due to aggressive pricing competition. The company also confronts competitions from other types of transportation (Annual report, 2021). Internationally, the company faces competitions from other domestic airlines, such as American Airlines and Delta Airlines, and foreign carriers supported by foreign governments. Therefore, we expect that the long-term growth rate will be much lower compared to the short run.

Besides, we expect that the revenue from the domestic market will return to pre-Covid level in 2023 corresponding to the expectations of both the company and the industry practice. However, we anticipate that the company will find it difficult to restore its international revenue to pre-Covid level during our forecasting period due to heavy cross-border travel restrictions and new variants. Meanwhile, the slower recovery of demand across Pacific may also slow down the pace of restoring the international revenue to the pre-Covid level.

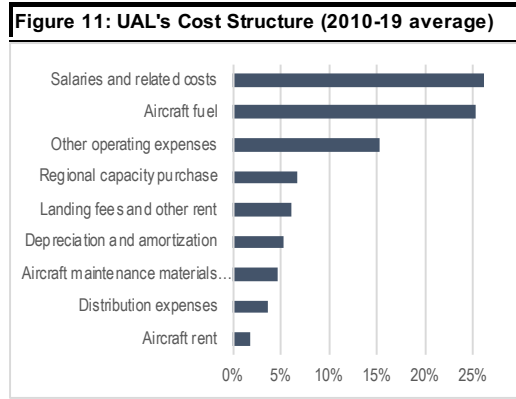
## Considerations on the international Markets

Considering the international markets, we regressed the quarterly revenue growth rates of some regional airlines on the quarterly percentage changes in Covid-19 regional Government Stringency Indices (Our world in data, 2021) to get the betas, and then multiply the betas with averaged quarterly growth rates, in order to have some ideas on the international markets. Using this methodology, we can see the recovery of the Pacific market is very slow and the Latin American market has a fast recovery, while the EU market is still suffering because of Governments' responses to Covid.

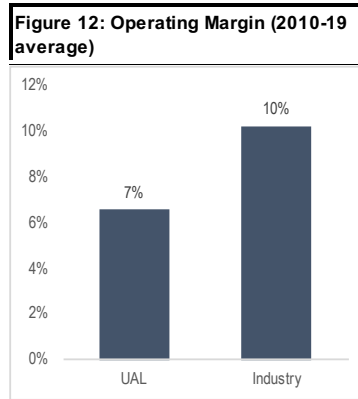
<b>Countries</b>	<b>Airline</b>	<b>Quarterly Growth Rate</b>
Singapore	SIA	0.0001511
China	Air China	0.014539
EU	Ryanair	-0.6582278
Mexico	Volaris	0.4832885

# OPERATING EXPENSES

United Airlines' operating margin averaged 7% over the 2010-2019 period (Figure 12), 3% below the industry average. The two main drivers of United Airlines' operating expenses are labour costs and fuel costs, which averaged 26.4% and 25.3% respectively over the 2010-2019 period (Figure 11).



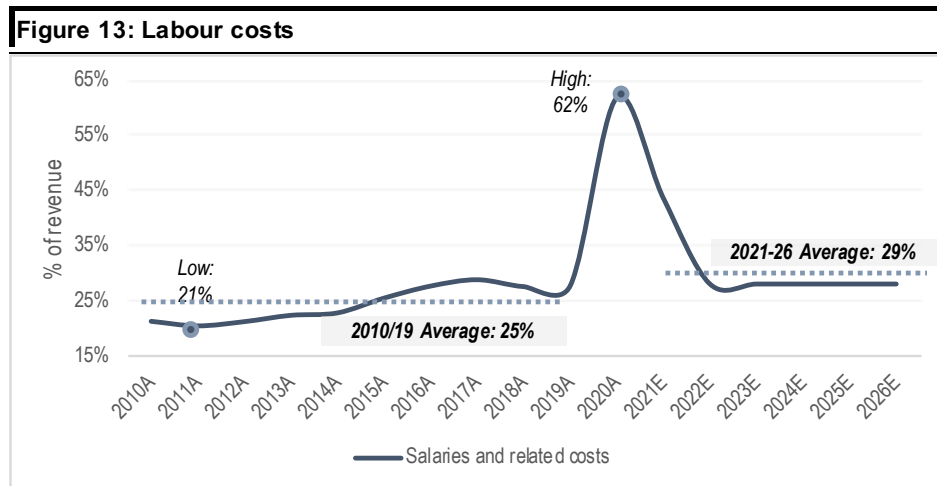
Source: Refinitiv



Source: Refinitiv

## Salaries, wage and benefits

Labour costs have gradually increased in the past (Figure 13). In the fourth quarter of 2021, we assume that labour costs will be in line with the first three quarters. The company plans to hire 10,000 pilots over the next decade, the vast majority of whom will replace retirements, and given the tight labour market, we expect labour costs to remain quite high over the next five years. We assume the three-year average for 2017-2019 at 28% of revenues.



Source: Refinitiv, Own estimates

## Aircraft Fuel Cost

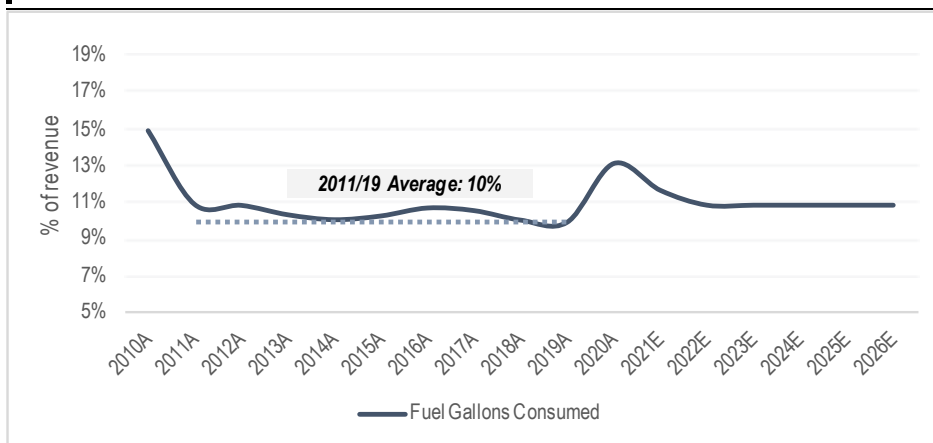
Oil prices are surging to pre-pandemic level as the global demand is recovering.

The cost of fuel for aircraft is a function of the cost of fuel per gallon and the gallons of fuel consumed, as shown below:

$$\text{Aircraft Fuel Cost} = \text{Fuel Cost per Gallon} \times \text{Fuel Gallons Consumed}$$

Excluding 2020-21, the fuel gallons consumed as a percentage of revenue has remained virtually stable in the past at 10% (Figure 14). We assume that it will remain the same over the next five years.

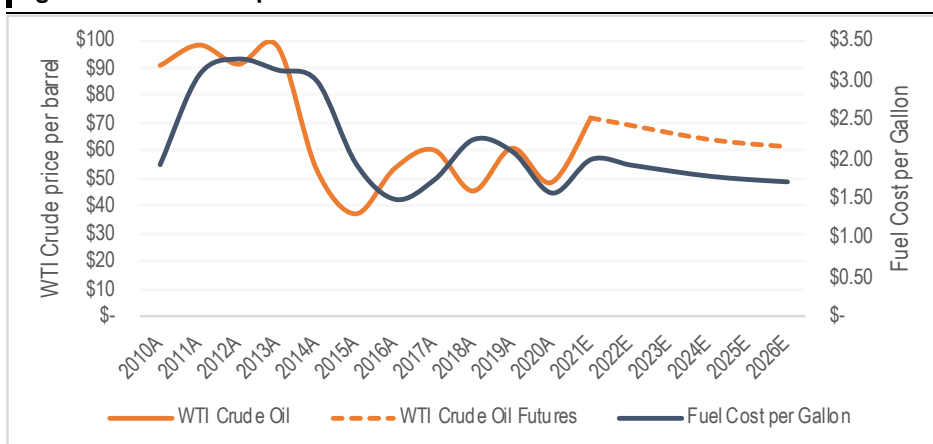
**Figure 14: Fuel Gallons Consumed**



Source: Refinitiv, Own estimates

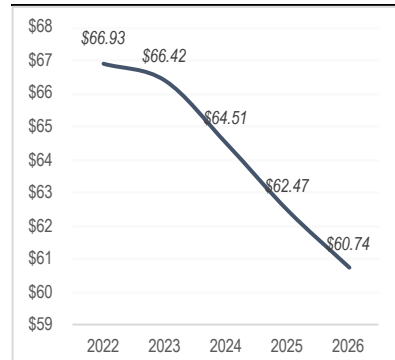
As for the cost of fuel per gallon, it has fluctuated with the price of crude oil and the company's hedging strategy. Going forward, we assume the year-on-year change in WTI Crude Futures contracts as a proxy for the year-on-year change in fuel cost per gallon (Figure 15).

**Figure 15: Fuel Cost per Gallon**



Source: Refinitiv, Own estimates

**WTI Crude Futures (as of 10 Dec)**

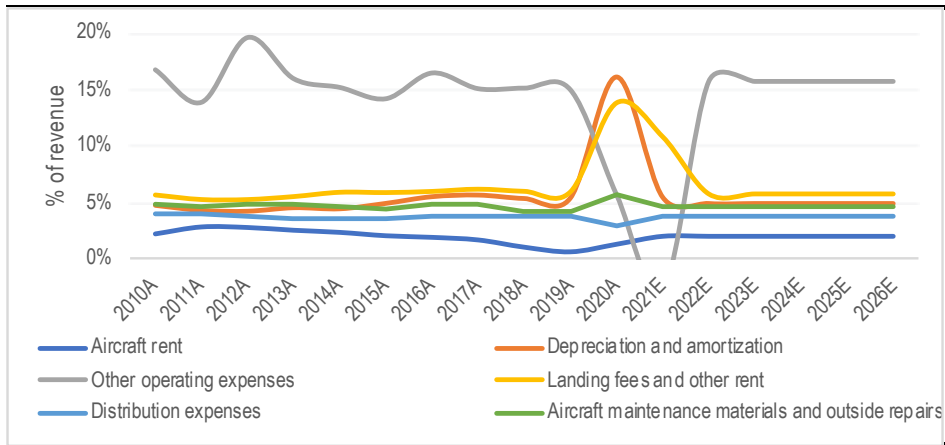


Source: Bloomberg

## D&A, Landing & Other Fees, Maintenance & Repairs, Aircraft Rent, Distribution expenses and Other Operating Expenses

Depreciation and amortisation, landing and other fees, maintenance and repairs, aircraft rental, distribution costs and other operating expenses have been virtually stable in the past (Figure 16) and we expect them to remain within the historical average 2010-2019.

**Figure 16: Operating Expenses**



Source: Refinitiv, Own estimates

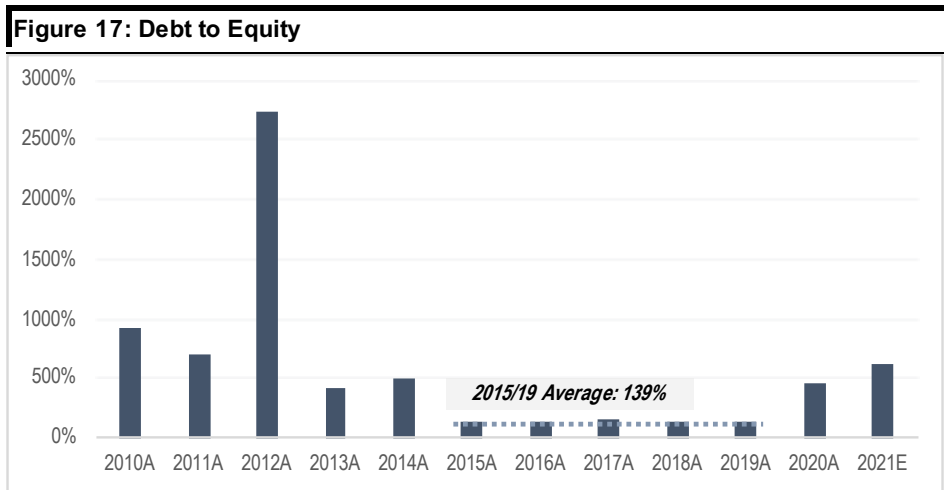
# VALUATION

## Methodology

We valued United Airlines using a DCF analysis. On the basis of the projection of financials previously discussed, we estimated free cash flows until 2026.

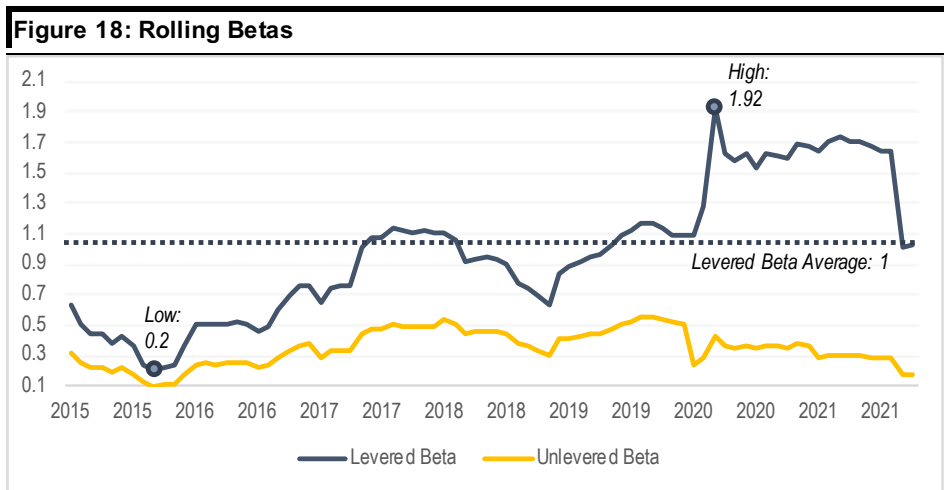
## Cost of capital

Excluding the early 2010s, the debt/equity ratio has remained fairly stable in the past (Figure 17), at around 139%, and we have therefore chosen the WACC approach.



Source: Refinitiv

Industry Beta of 1.5. We regressed UAL's monthly excess returns on the market's excess returns (Wilshire 5000), which gave us beta estimates for the past 60 periods (Figure 18). Given the volatility of the beta (with a minimum of 0.2 and a maximum of 1.92), we decided to use the industry beta of 1.5.



Source: Bloomberg

Equity Risk Premium of 4.93% as per Damodaran estimate.

Risk-free rate of 1.48%, corresponding to the last 10-year US Treasury rate.

Altogether, our estimate of the cost of equity is 8.88% using the CAPM.

Cost of debt of 4.37%, calculated as a the weighted average of the yields on all of UAL's outstanding notes.

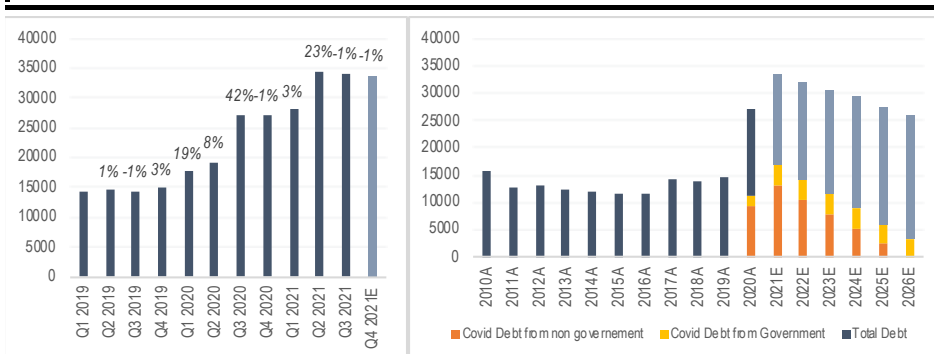
Corporate tax rate of 23%, which is the company's effective tax rate for the nine months ending 30 September 2021.

## Debt

We divided our forecasts of total debt into three parts, which are Covid debt from Government, Covid Debt from Non-Government and Non Covid debt. The historical D/E ratio from 2015 to 2019 is quite stable, so we expect that the Non Covid Debt will be adjusted each year to achieve a constant D/E ratio equal to pre-Covid level in the long run. The company obtained 10-year low-interest-rate (at around 1-2%) debt from government in 2020 and 2021 to pay for employees' salary, wages and benefits. As the company's operation is gradually restoring to a normal level, we assume that the government is not going to offer extra low-interest-rate loans to the company in the following years. Moreover, we expect the Covid Debt from Non-government raised in 2020 and 2021 will be fully paid back through constant periodical payments until the end of 2026. Figure 19 shows the forecasted results. We assume that the total debt level in Q4 2021 will decrease by the same rate at 1.22% in Q3 2021.

Target Debt to Capital	58.10%
Target Equity to Capita	41.90%
Target D/E	138.67%
Beta	1.5
Market Risk Premium	4.93%
Risk Free Rate	1.48%
Cost of Equity	8.88%
Cost of Debt	4.37%
Tax Rate	23%
WACC	5.67%
Terminal growth rate	2.5%
Entreprise Value	47,137
Debt	33,737
Equity Value	13,399
Current Mkt Cap (m)	14,264
Shrs Out/Float (m)	324
Actual Px (10/12/2021)	\$44.05
Target Price	\$41.4
DOWN SIDE	-6%

**Figure 19: Actual and Projected Debt (USD m)**



Source: Refinitiv, Own estimates

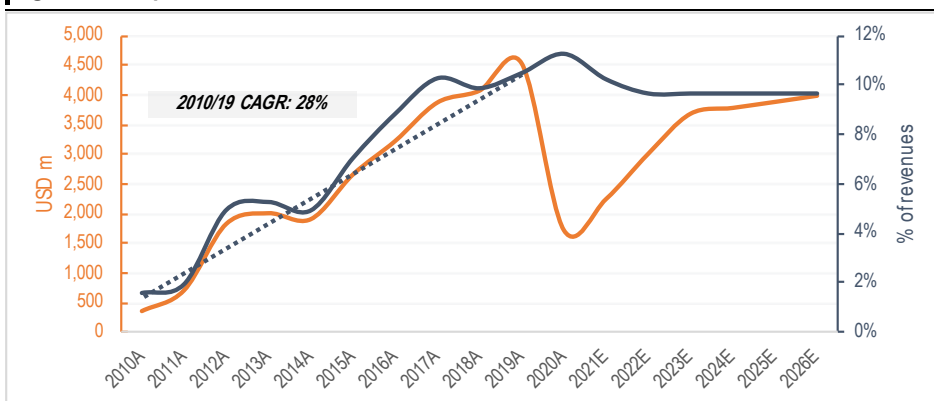
## Free Cash Flow

The free cash flows are calculated by adding back the D&A and subtracting CapEx and Changes in Working Capital from Net Income after Taxes.

Excluding 2020, CapEx as a percentage of revenue has increased significantly in the past (Figure 20) with a 2010-2019 CAGR of 28%. The COVID-19 pandemic interrupted this trend as the company delayed the purchase of many aircraft. However, management stressed that it planned to maintain the increase in CapEx as soon as the company returned to comfortable profitability. In the second quarter results, management guided for CapEx of \$4 billion by year-end, and in the third quarter they revised their guidance downwards to \$3 billion of CapEx by year-end. Given Omicron's situation, we expect management to further delay the recovery of CapEx.

We assume that CapEx in 4Q2021 will be in the same range as in the first three quarters, which is 25% lower than the company's guidance of \$3bn for the year 2021. 2022 onward, we assume CapEx as a percentage of revenue will be in line with the 2016-2019 average of 10%.

**Figure 20: CapEx**



Source: Refinitiv, Own estimates

For the change in working capital, we use the 3Q level for 2021. From 2022 onwards, we use the 10-year historical average.

Our terminal value is based on the fcf in 2026 and assumes a terminal growth rate of 2.5%, which is the 20-year average annual growth rate of US real gross domestic product.

Adding up the present value of the fcfs using the cost of equity and adding it to the present value of the debt tax shields, we get a valuation of \$13.4 billion. This represents a 6% decrease over the current market capitalisation of \$14.3 billion (as of 10/12/2021). We therefore recommend a sell on United Airlines.



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# APPENDIX

United Airlines (UAL)  
(USD m)

	2010A	2011A	2012A	2013A	2014A	2015A	2016A	2017A	2018A	2019A	2020A	2021E	2022E	2023E	2024E	2025E	2026E
<b>REVENUE</b>																	
<i>Domestic</i>																	
<i>Leisure and VFR</i>	9,775	14,897	14,453	15,033	15,235	14,983	15,172	15,819	17,480	18,477	6,805	10,396	15,062	18,654	19,177	19,715	20,269
<i>Business</i>	4,607	7,025	6,823	7,059	7,085	6,948	7,030	7,312	8,072	8,483	3,106	4,718	6,858	8,497	8,706	8,921	9,141
<i>International</i>																	
<i>Leisure and VFR</i>	4,864	8,260	8,570	8,702	8,854	8,449	7,587	7,709	8,282	8,601	2,863	3,630	4,887	5,788	5,915	6,045	6,177
<i>Business</i>	4,079	6,928	7,306	7,485	7,727	7,484	6,767	6,896	7,469	7,698	2,581	3,279	4,416	5,248	5,408	5,572	5,742
<b>TOTAL REVENUE</b>	23,325	37,110	37,152	38,279	38,901	37,864	36,556	37,736	41,303	43,259	15,355	22,023	31,223	38,187	39,206	40,253	41,328
<i>yoy%</i>		59%	0%	3%	2%	-3%	-3%	3%	9%	5%	-65%	43%	42%	22%	3%	3%	3%
<i>yo2y%</i>			59%	3%	5%	-1%	-6%	0%	13%	15%	-63%	-49%	103%	73%	26%	5%	5%
<b>OPERATING EXPENSES</b>																	
<i>Salaries and related costs</i>	5,002	7,652	7,945	8,625	8,935	9,713	10,176	10,941	11,458	12,071	9,522	9,642	8,809	10,774	11,061	11,357	11,660
<i>Aircraft fuel</i>	6,687	12,375	13,138	12,345	11,675	7,522	5,813	6,913	9,307	8,953	3,153	5,114	6,507	7,650	7,572	7,590	7,660
<i>Regional capacity purchase</i>	1,812	2,403	2,470	2,419	2,344	2,290	2,197	2,268	2,649	2,849	2,039	2,133	1,779	2,175	2,233	2,293	2,354
<i>Landing fees and other rent</i>	1,307	1,928	1,929	2,090	2,274	2,203	2,165	2,310	2,449	2,543	2,127	2,383	1,496	1,830	1,879	1,929	1,980
<i>Depreciation and amortization</i>	1,079	1,547	1,522	1,689	1,679	1,819	1,977	2,096	2,165	2,288	2,488	2,586	1,166	1,425	1,464	1,503	1,543
<i>Aircraft maintenance materials and outside</i>	1,115	1,744	1,760	1,821	1,779	1,651	1,749	1,856	1,767	1,794	858	1,258	1,437	1,758	1,805	1,853	1,903
<i>Distribution expenses</i>	912	1,435	1,352	1,390	1,373	1,342	1,395	1,435	1,558	1,651	459	615	1,166	1,425	1,464	1,503	1,543
<i>Aircraft rent</i>	500	1,009	993	936	883	754	680	621	433	288	198	231	608	743	763	783	804
<i>Other operating expenses</i>	3,935	5,178	7,343	6,152	5,947	5,404	6,062	5,726	6,288	6,521	870	-659	4,942	6,044	6,205	6,371	6,541
<b>TOTAL OPERATING EXPENSES</b>	22,349	35,271	38,452	37,467	36,889	32,698	32,214	34,166	38,074	38,958	21,714	23,305	27,909	33,825	34,446	35,181	35,987
<b>OPERATING INCOME</b>	976	1,839	-1,300	812	2,012	5,166	4,342	3,570	3,229	4,301	-6,359	-1,282	3,314	4,362	4,761	5,072	5,341
<b>Operating margin</b>	4%	5%	-3%	2%	5%	14%	12%	9%	8%	10%	-41%	-6%	11%	11%	12%	13%	13%
<i>Interest Income</i>	723	994	-576	273	884	947	569	547	581	387	2463	1,388	1,158	1,103	1,392	1,484	1,490
<b>PRETAX INCOME</b>	253	845	-724	539	1,128	4,219	3,773	3,023	2,648	3,914	-8,822	-2,669	2,157	3,260	3,369	3,588	3,851
<i>Tax</i>	0	-5	1	32	4	3,121	-1,539	-880	-526	-905	1,753	-614	496	750	775	825	886
<b>NET INCOME</b>	253	840	-723	571	1,132	7,340	2,234	2,143	2,122	3,009	-7,069	-2,055	1,661	2,510	2,594	2,763	2,965
<i>Tax rate</i>												23.0%	23.0%	23.0%	23.0%	23.0%	23.0%



JetBlue Airways Corp (JBLU US)  
(USD m)

	2010A	2011A	2012A	2013A	2014A	2015A	2016A	2017A	2018A	2019A	2020A	2021E	2022E	2023E	2024E	2025E	2026E	TERMINAL VALUE
<b>OPERATING INCOME</b>	976	1,839	-1,300	812	2,012	5,166	4,342	3,570	3,229	4,301	-6,359	-1,282	3,314	4,362	4,761	5,072	5,341	
Tax	224	423	-299	187	463	1,188	999	821	743	989	0	0	762	1,003	1,095	1,167	1,228	
<b>NOPAT</b>	752	1,416	-1,001	625	1,549	3,978	3,343	2,749	2,486	3,312	-6,359	-1,282	2,552	3,359	3,666	3,905	4,112	
Capital Expenditure	368	717	1,833	2,012	1,911	2,661	3,223	3,870	4,070	4,528	1,727	2,250	3,011	3,682	3,780	3,881	3,985	
Change in Net Working Capital	203	-2,372	-636	-1,556	375	-391	-653	-1,115	1	8,819	912	912	-6,275	-733	-107	-110	-113	
Net Working Capital	-600	-397	-2,769	-3,405	-4,961	-4,586	-4,977	-5,630	-6,745	-6,744	2,075	2,987	-3,288	-4,021	-4,129	-4,239	-4,352	
Depreciation and Amortization	1,079	1,547	1,522	1,689	1,679	1,819	1,977	2,096	2,165	2,288	2,488	2,586	1,496	1,830	1,879	1,929	1,980	
<b>FREE CASH FLOW</b>	1,463	2,449	-3,684	-334	-239	3,511	1,706	322	-534	1,073	3,221	-33	-5,237	773	1,657	1,843	1,994	64,402
Discount rate												0.95	0.90	0.85	0.80	0.76	0.72	0.72
<b>PV</b>												-32	-4,690	655	1,329	1,398	1,432	46,247
<b>TOTAL DEBT</b>	15,858	12,735	13,166	12,409	11,947	11,759	11,705	14,392	13,792	14,818	27,153	33,737	23,404	24,285	23,797	22,806	22,349	
Covid Debt from the government												2,021	3,701	3,701	3,701	3,701	3,181	
Tax shield												12	11	11	11	11	7	89
Discount rate												0.99	0.97	0.96	0.94	0.93	0.92	0.92
Covid Debt excluding government debt												9,354	15,285	12,228	9,171	6,114	3,057	
Tax shield												110	181	144	108	72	36	
Discount rate												0.95	0.90	0.86	0.82	0.78	0.74	
<b>PV</b>												122	192	155	119	83	43	81



<u>WACC</u>	
Target Debt to Capital	58.10%
Target Equity to Capital	41.90%
Target D/E	138.67%
Risk Free Rate	1.48%
Market Risk Premium	4.93%
Industry Levered Beta	1.50
Cost of Equity	8.88%
Cost of Debt	4.37%
Tax Rate	23%
After-Tax Cost of Debt	3.37%
WACC	5.67%
Terminal growth rate	2.50%
<b>Enterprise Value</b>	<u>47,137</u>
Less Total Debt	33,737
<b>Equity Value</b>	<u>13,399</u>
<b>Current Mkt Cap (m)</b>	14,264
<b>Shrs Out/Float (m)</b>	324
<b>Actual Px (10/12/2021)</b>	44.05
<b>Target Price</b>	41.4
<b>UP/DOWN SIDE</b>	-6%



**Covid Cost of Debt**

Aircraft note	0.05265	14538	765.4257	
MileagePlus Senior Secured Notes	6.50%	3800	247	
MileagePlus Term Loan Facility	5.49%	3000	164.7	
Revolving Credit Facility	1.49%	1000	14.9	
Term Loan Facility	2.49%	1444	35.9556	
Notes	4.63%	1050	48.5625	
Other Unsecured debt	4.88%	448	21.84	
		25280	1298.3838	<b>0.0513601</b>

**Pre-Covid Cost of Debt**

Notes payable		3.95%	9615	379.7925
Notes payable		1.65%	1970	32.505
Term loan		3.40%	1459	49.606
5% senior notes		5.00%	300	15
4.875% senior notes		0.04875	350	17.0625
			13694	493.966
			Cost-of debt	<b>0.0360717</b>



	Total Debt	Covid Debt excluding government	Government t low interest rate debt	Debt excluding Covid	Total Reven	Dollar growth of revenue	Forecasted Profits	Profits/ Total revenue	Increase in Equity	Equity	Growth rate of Equity	Growth Rate of deb
2010	15,858	0	0	15,858								
2011	12,735	0	0	12,735								
2012	13,166	0	0	13,166								
2013	12,409	0	0	12,409								
2014	11,947	0	0	11,947								
2015	11,759	0	0	11,759								
2016	11,705	0	0	11,705								
2017	14,392	0	0	14,392								
2018	13,792	0	0	13,792								
2019	14,818	0	0	14,818								
2020	27,153	9,354	2,021	15,778	1535500%				5960			
2021E	33,737	15,285	3,701	14,751	2202300%	6668	-1281.54795	-0.058191343	-388.0198761	5571.980124	-0.065104006	-0.065104006
2022E	23,404	2,961	3,701	16,742	3122324%	9200.241251	2552.050096	0.081735592	751.9871618	6323.967286	0.134958694	0.134958694
2023E	24,285	2,221	3,701	18,363	3818714%	6963.898681	3358.900172	0.087958935	612.5371137	6936.504399	0.096859627	0.096859627
2024E	23,797	1,480	3,701	18,616	3920635%	1019.213519	3665.736118	0.093498522	95.29495807	7031.799357	0.013738182	0.013738182
2025E	22,806	740	3,181	18,884	4025304%	1046.691309	3905.415095	0.097021607	101.551673	7133.35103	0.014441776	0.014441776
2026E	22,349	0	3,181	19,168	4132796%	1074.91678	4112.20133	0.099501673	106.9560183	7240.307049	0.014993797	0.014993797



	Government							Covid Debt excluding government							
	low interest rate debt	Covid Debt Interest rate	Covid Debt Interest payment	Tax rate	Covid Debt tax Shield	Discount Factor	Present value	low interest debt	Covid Debt Interest rate	Covid Debt Interest payment	Tax rate	Covid Debt tax Shield	Discount Factor	Present value	
2020	2,021	2.65%	54	23.00%	-			2020	9,354	5.14%	480	23.00%	0		
2021E	3701	1.31%	49	23.00%	12	98.54%	12	2021E	15,285	5.14%	785	23.00%	110	95.11%	105
2022E	3701	1.31%	49	23.00%	11	97.10%	11	2022E	12,228	5.14%	628	23.00%	181	90.47%	163
2023E	3701	1.31%	49	23.00%	11	95.69%	11	2023E	9,171	5.14%	471	23.00%	144	86.05%	124
2024E	3701	1%	49	23.00%	11	94.29%	11	2024E	6,114	5.14%	314	23.00%	108	81.85%	89
2025E	3181	1%	32	23.00%	11	92.92%	10	2025E	3,057	5.14%	157	23.00%	72	77.85%	56
2026E	3181	1%	32	23.00%	7.00	91.56%	7	2026E	0	0.0513601	0	0.23	36.112268	0.7404419	<b>27</b>
2027E	3181	2%	64	23.00%	7.00	90.23%	7								
2028E	3181	2%	64	23.00%	15.00	88.91%	13								
2029E	3181	2%	64	23.00%	15.00	87.61%	13								
2030E	3181	2%	64	23.00%	15.00	86.34%	13								
2031E	3181	2%	64	23.00%	15	85.08%	<b>12</b>								
2032E	0			23.00%	15	83.84%	12								
						Total tax sh	131								
													Total Value	564.37723	



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