

**TABLE A: COVID-19 FORECAST SCENARIO ASSUMPTION MATRICES**

**Table A-1: Passenger Assumption Matrix**

Commercial Passenger Market							
Scenario/Assumption	Vaccine	Global Economic Activity	Regional Variation	Route Variation -- Domestic/International	Business Travel Demand	Return to 2019 RPKs	Return to pre-crisis Trend (levels)
<b>Optimistic (High)</b>	Announced early 2021 Available/wide spread use mid/late 2021	V-shaped recovery -- back to 2019 levels in early 2021	--Solid and sustained global recovery --Asia (China) pick-up quickly in 2021 --Recovery in traffic tracks economic growth (NA/EUR follow Asia)	--Domestic traffic responds quickly particularly in U.S./Europe/Asia (China) --International lags somewhat (2022) --solid income growth drives leisure travel	-- Business Travel growth resumes late 2021 --Returns to normal levels in 2022 -- Drives solid recovery in both markets (B2B and conferences)	2023	Yes -- around 2030
<b>Central (Mid)</b>	Announced mid-2021 Available/wide spread use early/mid 2022	Return to 2019 levels in late 2021/2022 (running behind the optimistic outlook)	-- Recovery lags economic growth (some behavioral changes/lower incomes) -- Resumption in domestic traffic first -- International lags --China/Asia leads the recovery, followed by NA and EUR	--Domestic traffic growth resumes in 2022 U.S./Europe/Asia (China) --International lags (2023) -- Lower incomes reduce leisure travel	--Business Travel growth resumes in late 2022/2023, but never fully returns to normal levels (i.e., some permanent reduction due to substitutes -- Zoom, etc.)	2024	No -- permanent shift due to substitution of online technologies for business and changes in household vacation/travel patterns
<b>Pessimistic (Low)</b>	Announced early 2022 Available/wide spread use late 2022/early 2023	Return to 2019 levels by 2023/2024	--Recovery lags economic growth -- resumption in domestic traffic slow to gain traction --International lags further behind --China/Asia and developing nations lead recovery. NA and EUR lag.	--Domestic traffic resumes growth in 2024 Asia (China) --International lags (2025) -- Lower incomes reduce leisure travel	--Business travel does not fully recover --Permanent and sustained loss in domestic/international travel as a result.	2027	No -- permanent shift due to substitution of online technologies for business and changes in household vacation/travel patterns

**Table A-2: Freighter Assumption Matrix**

<b>Freighter Market</b>					
<b>Scenario/Assumption</b>	<b>Vaccine</b>	<b>Economic Activity</b>	<b>Regional Variation</b>	<b>Return to 2019 RTKs</b>	<b>Return to pre-crisis Trend (levels)</b>
<b>Optimistic (High)</b>	Announced early 2021 Available/wide spread use mid/late 2021	V-shaped recovery -- back to 2019 levels in early 2021	Regional variation will depend upon differences in regional economic activity -- Pacific/Asia & Asia/Middle East will lead, followed by North America/Europe	2021	Yes
<b>Central (Mid)</b>	Announced mid-2021 Available/wide spread use early/mid 2022	Return to 2019 levels in late 2021/2022 (running behind the optimistic outlook)	Regional variation will depend upon differences in regional economic activity -- Pacific/Asia & Asia/Middle East will lead, followed by North America/Europe	2022	Yes
<b>Pessimistic (Low)</b>	Announced early 2022 Available/wide spread use late 2022/early 2023	Return to 2019 levels by 2023/2024	Regional variation will depend upon differences in regional economic activity -- Pacific/Asia & Asia/Middle East will lead, followed by North America/Europe	2023	Dependent upon economic forecast

**TABLE B: GLOBAL CAGR RPK COMPARISON**

	10 Year (2018-2028)	20 Year (2018-2038)	30 Year (2018-2048)	32 Year (2018-2050)
COVID-19 : Low	1.2%	2.4%	2.8%	2.9%
COVID-19 : Mid	2.6%	3.3%	3.5%	3.6%
COVID-19 : High	3.6%	4.1%	4.2%	4.2%
2018 LTF	4.2%	4.2%	4.2%	4.2%

**32-Year CAGR RPK Comparison by Route Group**

Route Group	2018 LTF	COVID-19: High	COVID-19: Mid	COVID-19: Low
Africa	5.3%	5.0%	4.5%	4.0%
Africa - Asia/Pacific	5.1%	4.9%	4.3%	3.5%
Africa - Middle East	5.6%	5.2%	4.6%	3.8%
Africa - North America	2.7%	3.1%	2.5%	1.7%
Africa & Middle East - Central America/Caribbean	5.5%	4.8%	4.3%	3.6%
Africa & Middle East - South America	5.0%	4.7%	4.1%	3.3%
Central America/Caribbean	4.1%	3.9%	3.2%	2.8%
Central America/Caribbean – Europe	3.7%	3.8%	3.2%	2.6%
Central America/Caribbean - North America	3.3%	3.7%	3.0%	2.1%
Central America/Caribbean - South America	4.2%	3.9%	3.3%	2.6%
China – Europe	4.2%	4.0%	3.4%	2.7%
China - Middle East	4.7%	4.5%	3.8%	3.0%
China - North America	4.3%	4.2%	3.5%	2.7%
China & South West Asia - North Asia	6.7%	6.3%	5.5%	4.4%
China & South West Asia - Pacific South East Asia	6.1%	5.9%	5.2%	4.4%
China/Mongolia	4.7%	5.0%	4.3%	3.4%
Europe	3.0%	3.1%	2.7%	2.3%
Europe - Middle East	3.3%	3.3%	2.7%	2.2%
Europe - North Africa	4.3%	4.4%	3.8%	3.1%
Europe - North America	2.9%	3.2%	2.6%	2.1%
Europe - North Asia	2.9%	3.0%	2.5%	2.2%
Europe - Pacific South East Asia	4.0%	4.1%	3.5%	2.8%
Europe - South America	3.3%	3.3%	2.7%	2.2%
Europe - South West Asia	5.0%	5.0%	4.4%	3.7%
Europe - Sub Saharan Africa	2.6%	2.8%	2.3%	1.9%
Intra Africa	5.3%	5.0%	4.5%	4.0%

<b>Intra Central America/Caribbean</b>	4.1%	3.9%	3.2%	2.8%
<b>Intra China &amp; South West Asia</b>	5.0%	4.8%	4.2%	3.4%
<b>Intra Europe</b>	3.0%	3.1%	2.7%	2.3%
<b>Intra Middle East</b>	4.0%	3.6%	3.0%	2.5%
<b>Intra North America</b>	2.7%	3.1%	2.5%	1.8%
<b>Intra North Asia</b>	2.5%	2.6%	2.2%	1.8%
<b>Intra Pacific South East Asia</b>	5.2%	4.9%	4.3%	3.6%
<b>Intra South America</b>	3.4%	3.2%	2.7%	2.2%
<b>Latin America/Caribbean – China</b>	4.7%	4.5%	3.9%	3.1%
<b>Latin America/Caribbean - North Asia &amp; Pacific South East Asia</b>	4.2%	3.9%	3.3%	2.7%
<b>Middle East</b>	4.0%	3.6%	3.0%	2.5%
<b>Middle East - North America</b>	3.0%	3.3%	2.6%	1.8%
<b>Middle East - North Asia &amp; Pacific South East Asia</b>	4.0%	3.8%	3.2%	2.5%
<b>Middle East - South West Asia</b>	8.7%	8.1%	7.3%	6.2%
<b>North America</b>	2.7%	3.1%	2.5%	1.8%
<b>North America - North Asia</b>	2.7%	3.0%	2.4%	1.8%
<b>North America - Pacific South East Asia</b>	3.9%	4.2%	3.5%	2.5%
<b>North America - South America</b>	3.1%	3.3%	2.6%	1.9%
<b>North America - South West Asia</b>	5.2%	5.3%	4.6%	3.5%
<b>North Asia</b>	2.5%	2.6%	2.2%	1.8%
<b>North Asia - Pacific South East Asia</b>	4.3%	4.2%	3.6%	2.9%
<b>Pacific South East Asia</b>	5.2%	4.9%	4.3%	3.6%
<b>South America</b>	3.4%	3.2%	2.7%	2.2%
<b>South West Asia</b>	6.8%	6.4%	5.8%	4.9%
<b>World</b>	4.2%	4.2%	3.6%	2.9%

**TABLE C: GLOBAL CAGR FTK COMPARISON**

	<b>10 Year (2018-2028)</b>	<b>20 Year (2018-2038)</b>	<b>30 Year (2018-2048)</b>	<b>32 Year (2018-2050)</b>
<b>COVID-19 : Low</b>	2.3%	2.5%	2.6%	2.6%
<b>COVID-19 : Mid</b>	3.5%	3.4%	3.5%	3.5%
<b>COVID-19 : High</b>	4.1%	4.1%	4.2%	4.2%
<b>2018 LTF</b>	3.5%	3.5%	3.5%	3.5%

**32-Year CAGR FTK Comparison by region**

<b>Region</b>	<b>2018 LTF</b>	<b>COVID-19: High</b>	<b>COVID-19: Mid</b>	<b>COVID-19: Low</b>
<b>Middle East</b>	6.1%	7.2%	6.0%	4.4%
<b>Asia and Pacific</b>	3.0%	3.5%	3.1%	2.6%
<b>Africa</b>	4.1%	4.6%	3.8%	3.0%
<b>North America</b>	3.2%	3.9%	3.2%	2.1%
<b>Europe</b>	1.9%	2.4%	1.9%	1.5%
<b>Latin America/Caribbean</b>	1.2%	1.5%	1.2%	0.8%
<b>World Total</b>	<b>3.5%</b>	<b>4.2%</b>	<b>3.5%</b>	<b>2.6%</b>