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CAREC Aviation: Recent Developments and Future Investment Opportunities

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Outline

- Update on market conditions, post-pandemic growth and the outlook for CAREC's aviation sector
- Update on airport infrastructure projects and potential opportunities to support the rapid growth
- The role of DFIs and CAREC Development Partners in supporting CAREC aviation
- Special Guest Speaker: Adrian Hamilton-Manns, CEO of FlyArystan

RECENT DEVELOPMENTS: GROWTH

- CAREC airports recorded in 2023 some of the highest passenger traffic growth rates among all airports globally
- Globally passenger traffic was 5% below 2019 levels in 2023 with APAC down 12% (based on Airports Council International data)
- While most Asian airports were still below 2019 levels in 2023, CAREC was an exception with most airports above 2019 levels

Annual passenger traffic for select CAREC airports: 2023 vs 2019

Airport	Passenger Traffic, 2023	Growth vs 2019	Growth vs 2022
Uzbekistan Airports (all)	10 million*	54%	27%
Almaty (ALA)	9.55 million	49%	32%
Islamabad (ISB)	6 million*	25%	18%
Baku (GYD)	5.85 million	24%	33%
Bishkek (FRU)	3 million*	35%	10%
Dushanbe (DYU)	2.23 million	57%	27%
Ulaanbaatar (UBN/ULN)	1.73 million	9%	82%
Kutaisi (KUT)	1.67 million	91%	103%
Samarkand (SKD)	1.01 million	110%	104%

Source: Sobie Aviation and airport reports

Note: *Bishkek and Uzbekistan Airport figures are approximate

RECENT DEVELOPMENTS: GROWTH

- Central Asia had the fastest growth among all regions (both globally and in Asia Pacific) in 2023 with international seat capacity up 36% compared to 2019 levels
- Eight CAREC countries were fully recovered in 2023 with Tajikistan, Kyrgyz Republic and Uzbekistan (three of the five Central Asia countries) posting the highest international growth rates in all of Asia Pacific
- Northeast Asia had the lowest recovery rate due to China, which only reopened early last year
- In the domestic market, Kazakhstan had the highest growth rate in Asia Pacific with domestic seat capacity up 65% compared to 2019 levels, driven by FlyArystan (which launched in May 2019)

International seat capacity growth in APAC by sub-region: 2023 vs 2019

Region	Growth
Central Asia	+36%
South Asia	+1%
South Pacific	-16%
Southeast Asia	-24%
Northeast Asia	-40%
Asia Pacific	-28%

Source: Sobie Aviation and OAG

RECENT DEVELOPMENTS: GROWTH

International seat capacity growth ranked by ADB regional members: 2023 vs 2019

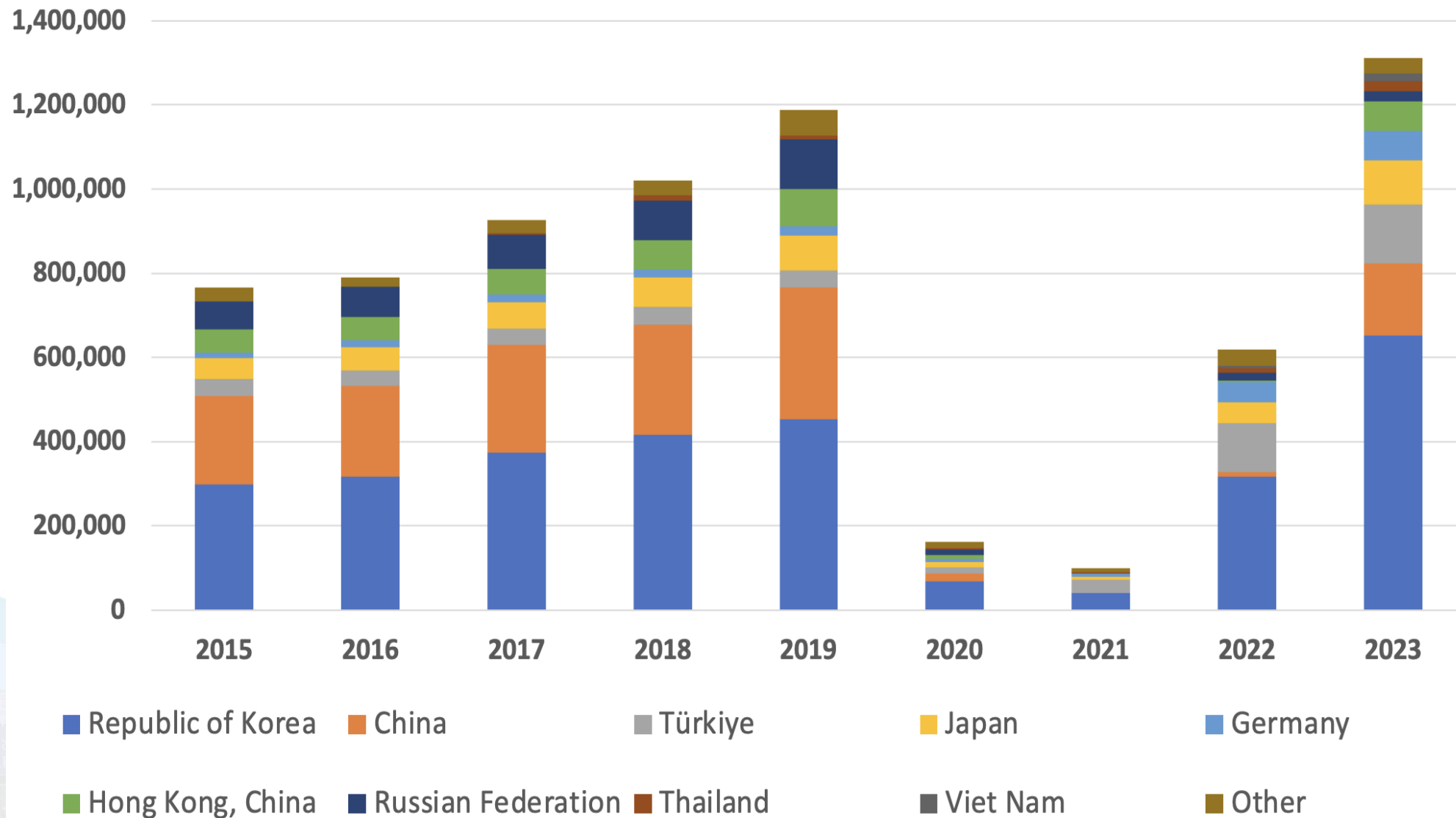
with CAREC member countries highlighted in green

	Regional member	%									
1.	Tajikistan	+84%	13.	India	+1%	25.	New Zealand	-16%	37.	Bhutan	-31%
2.	Armenia	+67%	14.	Nauru	0%	26.	Indonesia	-19%	38.	Japan	-31%
3.	Kyrgyz Republic	+63%	15.	Marshall Islands	-1%	27.	Cook Islands	-21%	39.	Solomon Islands	-32%
4.	Uzbekistan	+49%	16.	Samoa	-8%	28.	Philippines	-22%	40.	Thailand	-33%
5.	Bangladesh	+25%	17.	Tonga	-8%	29.	Papua New Guinea	-23%	41.	Niue	-34%
6.	Azerbaijan	+21%	18.	Nepal	-10%	30.	Kiribati	-23%	42.	Lao PDR	-37%
7.	Maldives	+20%	19.	Timor-Leste	-10%	31.	Sri Lanka	-24%	43.	Hong Kong, China	-45%
8.	Fiji	+13%	20.	Micronesia	-13%	32.	Palau	-24%	44.	Brunei Darussalam	-45%
9.	Kazakhstan	+12%	21.	Viet Nam	-13%	33.	Republic of Korea	-25%	45.	Turkmenistan	-49%
10.	Georgia	+11%	22.	Singapore	-15%	34.	Malaysia	-26%	46.	Cambodia	-51%
11.	Mongolia	+11%	23.	Tuvalu	-15%	35.	Vanuatu	-29%	47.	PRC	-58%
12.	Pakistan	+6%	24.	Australia	-16%	36.	Taipei, China	-29%	48.	Myanmar	-62%

RECENT CAREC AVIATION DEVELOPMENTS: GROWTH

Mongolia annual international passenger traffic: 2015 to 2023

Mongolia's transformation: international passenger traffic was up 10% in 2023 to 1.3 million, relatively modest by CAREC standards. But this was quite an achievement given the decline in the Russian Federation and PRC markets



Source: Sobie Aviation and National Statistics Office of Mongolia

RECENT CAREC AVIATION DEVELOPMENTS: GROWTH

Mongolia annual international passenger traffic by market: 2023 and first two months of 2024 vs 2019

Market	2023 passengers	2019 passengers	Growth vs 2019	2M2024 passengers	2M2019 passengers	Growth vs 2019
Mongolia-Republic of Korea	652,857	452,413	+44%	73,106	51,849	+41%
Mongolia-PRC	171,260	312,903	-45%	45,798	34,393	+33%
Mongolia-Türkiye	140,076	41,380	+238%	19,943	6,825	+192%
Mongolia-Japan	103,770	82,726	+25%	14,710	9,479	+55%
Mongolia-Germany	71,117	22,424	+217%	9,040	2,191	+312%
Mongolia-Hong Kong	69,207	88,846	-22%	13,137	11,993	+10%
Mongolia-Thailand	24,804	10,547	+135%	16,975	5,567	+205%
Mongolia-Russian Federation	23,295	116,745	-80%	2,583	10,333	-75%
Mongolia-Viet Nam	18,565	0	N/A	18,553	0	N/A
Mongolia-Others	37,126	60,220	-62%	5,548	2,020	+175%
Total for Mongolia	1,312,167	1,118,204	+10%	219,393	134,650	+63%

Source: Sobie Aviation and National Statistics Office of Mongolia

63% growth in the first two months of this year as Mongolia-PRC market is now fully recovered while several other markets are expanding rapidly

RECENT DEVELOPMENTS: GROWTH

CAREC international seat capacity growth by country (excluding PRC): 2024 vs 2019

CAREC Country	April 2024	Summer 2024
Tajikistan	+83%	+102%
Uzbekistan	+90%	+98%
Kyrgyz Republic	+66%	+62%
Azerbaijan	+58%	+50%
Mongolia	+29%	+42%
Kazakhstan	+21%	+21%
Pakistan	+14%	+16%
Georgia	+13%	+15%
Turkmenistan	+10%	-16%
CAREC total	+36%	+36%
<i>Central Asia total</i>	<i>+57%</i>	<i>+57%</i>
Global total	+1%	+2%

- All CAREC countries are growing again with four tracking more than 50% above 2019 levels
- Overall international seat capacity from CAREC this summer (end March to end October based on the IATA summer schedule season) is currently projected at 36% above 2019 levels; it could end up slightly higher as more flights for the next few months are added
- Globally capacity is only up 2% this summer while Central Asia is up by 57%
- All the recent growth is putting pressure on infrastructure ... CAREC airport terminals will be congested this summer!

Source: Sobie Aviation and OAG Note: Summer = 31 March to 26 October for both 2024 and 2019

RECENT DEVELOPMENTS: GROWTH

CAREC (excluding PRC) international seat capacity growth by market: 2024 vs 2019

Main markets	April 2024	Summer 2024
CAREC-Türkiye	+85%	+71%
CAREC-CAREC	+41%	+59%
CAREC-Russian Federation	+32%	+39%
CAREC-GCC*	+35%	+35%
CAREC-PRC	+34%	+26%
CAREC-Europe (excluding Türkiye)	+19%	+22%

Smaller markets	April 2024	Summer 2024
CAREC-India	+206%	+169%
CAREC-Southeast Asia	+102%	+89%
CAREC-Republic of Korea	+8%	+43%
CAREC-Africa	+140%	+30%

- The growth is well rounded ... it is not driven entirely by an increase in flights to the Russian Federation
- There has been a major increase in flights to Türkiye and a big increase to the Middle East (namely the six GCC countries).
- Regional growth (between CAREC countries) is impressive with 2024 summer capacity up 59% vs 2019 between the nine countries. From the nine countries to PRC the growth is 26%, which is also impressive given PRC's international market overall is far from fully recovered.
- India and Southeast Asia have also grown significantly but on very small bases

RECENT DEVELOPMENTS: GROWTH

- This summer there are 35 regional international routes within CAREC (excluding PRC) compared to 27 in 2019
- But only 9 of these routes are served with at least one daily flight and only 12 have at least 4 weekly frequencies
- The intra-CAREC market is still quite small, accounting for only about 4% of total international seat capacity excluding PRC (or 6% when including CAREC-PRC)
- There are massive opportunities for low-cost carriers including FlyArystan to stimulate growth in this market, as highlighted by the study published last year, but there are also numerous obstacles

Top Intra-CAREC routes: 2024 vs 2019

Route	Summer 2024 Frequency	Summer 2019 Frequency
Baku-Tbilisi	37 per week	16 per week
Almaty-Tashkent	27 per week	20 per week
Astana-Tashkent	11 per week	12 per week
Aktau-Baku	9 per week	7 per week
Almaty-Bishkek	8 per week	10 per week
Baku-Tashkent	8 per week	5 per week
Almaty-Dushanbe	7 per week	8 per week
Bishkek-Tashkent	7 per week	4 per week
Dushanbe-Tashkent	7 per week	3 per week
Almaty-Baku	6 per week	5 per week
Almaty-Tbilisi	6 per week	7 per week
Tashkent-Tbilisi	5 per week	1 per week

INFRASTRUCTURE PROJECTS AND OPPORTUNITIES

Overview

- There has been a recent surge in airport expansion projects and new airport projects throughout CAREC
- Investment in airport infrastructure is critical as several of the region's major airports are now operating above or close to their designed capacity
- The current constraints are likely to get worse as the market continues to grow fast and it takes time for airports to be expanded ... and even longer for new airports to be constructed
- Several airports are now working on or are about to start work on new master plans to assess expansion requirements and outline potential solutions
- There is now private sector participation (PSP) in several CAREC airports and PSP activity in the region will continue to increase as governments evaluate options for funding airport expansion, increasing efficiency and improving service levels

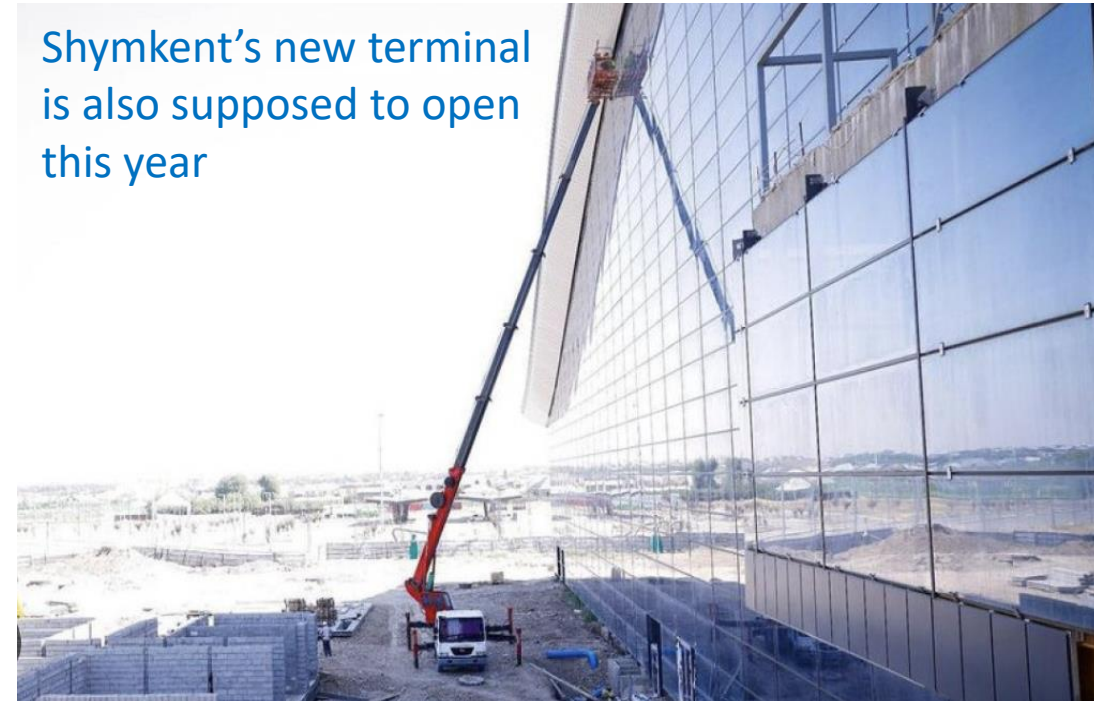
INFRASTRUCTURE PROJECTS AND OPPORTUNITIES

Kazakhstan: some recent progress but a lot more is needed

Almaty Airport's new terminal is slated to open in June



Shymkent's new terminal is also supposed to open this year



- Almaty's new terminal will boost capacity to 14 million, but passenger traffic will exceed 10 million this year and could exceed 14 million within a few years. Almaty could require a second airport given the constraints at the existing airport
- Shymkent's new terminal, which has been set back by numerous delays, will boost capacity to 6 million passengers per annum

INFRASTRUCTURE PROJECTS AND OPPORTUNITIES

Kazakhstan: some recent progress but a lot more is needed

- A new domestic terminal is planned for Astana as the current terminal is operating above capacity, but construction has not yet started
- All seven of Kazakhstan's main airports are now fully or partially in the private sector but the operating model varies significantly by airport. Kazakhstan would benefit from a new airport strategy and policy/regulatory adjustments
- A new terminal in Kyzylorda, one of about a dozen smaller airports, is slated to open later this year, but most of the other smaller airports are in dire need of modernization



- Turkistan is exceptional as it opened in 2020, providing passengers the first modern post-Soviet terminal in Kazakhstan. It has grown quickly and is now the seventh largest airport in Kazakhstan behind Almaty, Astana, Shymkent, Aktau, Atyrau and Aktobe

INFRASTRUCTURE PROJECTS AND OPPORTUNITIES

Georgia: fastest growth in CAREC prior to the pandemic

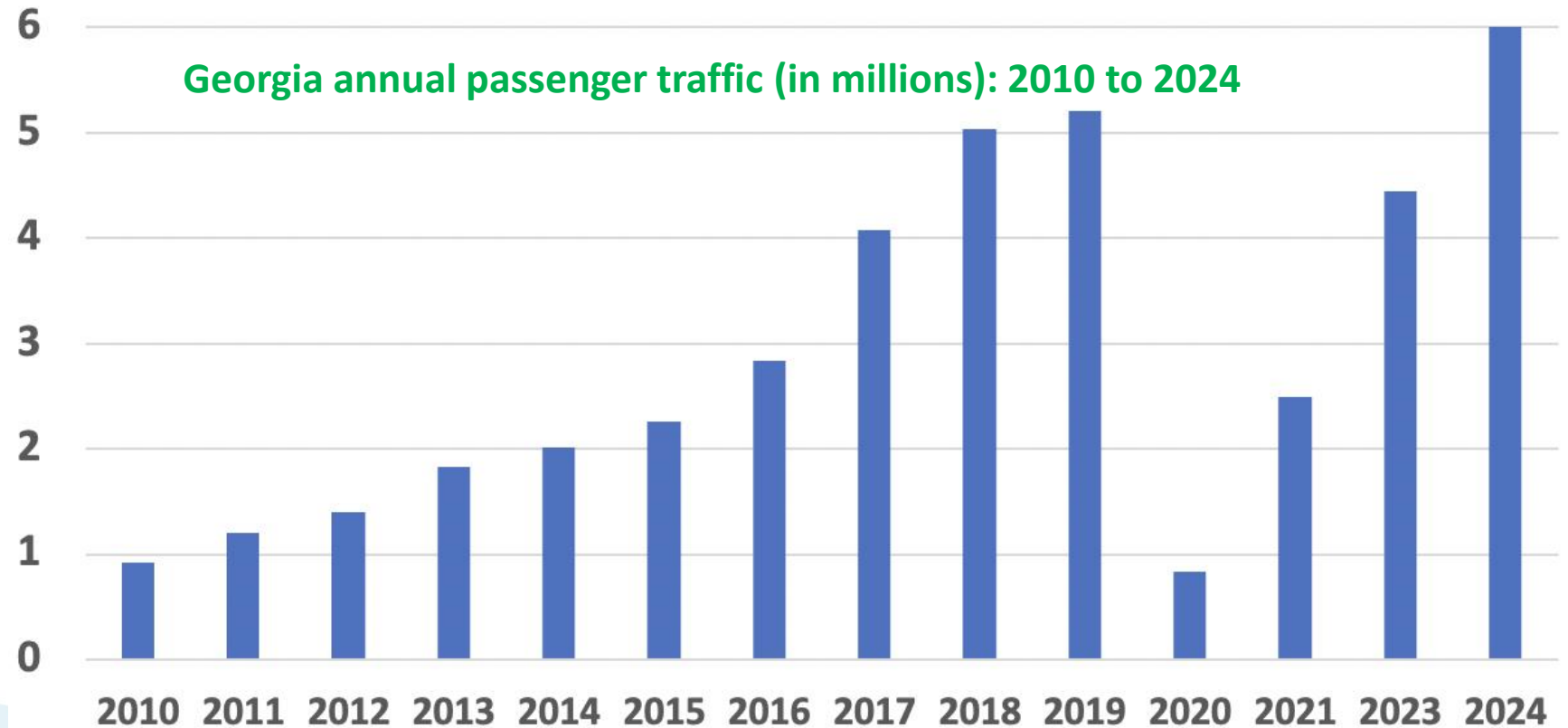


- ADB held a pre-bid conference last month with consulting firms to discuss developing a master plan for the new Tbilisi International Airport
- The new airport is slated to open in 2028 with initial capacity for 10 million passengers per annum and eventually capacity for 20 million passengers. It will replace the existing airport, which is operating at capacity and has limitations
- Kutaisi International Airport is in the process of being upgraded, including a new longer runway, and a new domestic airport at Telavi is also under construction

INFRASTRUCTURE PROJECTS AND OPPORTUNITIES

Georgia: fastest growth in CAREC prior to the pandemic

- Traffic at the existing Tbilisi airport increased five-fold in the decade prior to the pandemic, reaching nearly 4 million passengers
- Smaller Batumi and Kutaisi grew even faster prior to the pandemic
- Kutaisi, which has more capacity, has driven post-pandemic growth, doubling from 2019 to 2023 (to 1.7 million)



- ADB last year funded an airport sector development strategy for Georgia, providing capacity and business plan assessments for the 3 international airports and the 2 existing domestic airports

INFRASTRUCTURE PROJECTS AND OPPORTUNITIES

Azerbaijan: the region's most acclaimed airport requires expansion



- A new master plan for Baku Airport is underway, providing a roadmap for passenger terminal expansion and other upgrades
- Expansion of the existing main passenger terminal (Terminal 2), which opened in 2014 with an internationally acclaimed design, as well as construction of a new third terminal is expected
- Baku is the only five-star airport in CAREC (based on the Skytrax rating) but will soon be operating at capacity due to recent rapid growth
- Azerbaijan wants to stay ahead of the curve with a leading airport from a design perspective

INFRASTRUCTURE PROJECTS AND OPPORTUNITIES

Uzbekistan: an ambitious plan for expanding and privatizing airports is underway



- In 2022, Samarkand Airport opened Uzbekistan's first modern terminal in the post-Soviet era and became the first airport in Uzbekistan with private sector participation (PSP)
- Several airports are expected to follow with PSP and related terminal modernization and expansion projects, starting with Bukhara, Urgench, Andijan and Namangan
- Major new airports are also planned for Tashkent and the Fergana Valley under PSP models
- Uzbekistan is also opening or reopening smaller domestic airports. Flights to Kokand and Muynak began earlier this month (Apr-2024) while flights to Zaman began in Sep-2023

INFRASTRUCTURE PROJECTS AND OPPORTUNITIES

Kyrgyz Republic: a drive to expand and open/reopen secondary airports



- The main airports at Bishkek and Osh are operating well above capacity following rapid growth and need to be expanded but recently the focus has been on secondary airports
- A new terminal at Issyk-Kul/Tamchy, a small international airport, is under construction
- Upgrades are planned for the 3 existing domestic airports at Batken, Isfana and Jalal-Abad
- A new airport at Talas opened last month (but is not yet served) and the old airport at Naryn is currently under reconstruction
- Karakol Airport, popular in the Soviet era, is slated to reopen later this year following a rehabilitation and modernization project

INFRASTRUCTURE PROJECTS AND OPPORTUNITIES

Mongolia: CAREC's newest international airport already requires expansion



- The New Ulaanbaatar Airport opened in 2021 under a 15-year concession with a consortium of Japanese companies
- In the initial phase the passenger terminal has capacity for 2 million passengers per annum. It is already operating at capacity this summer as the market has grown rapidly
- Expansion of the terminal and apron is under consideration. Expansion should be accelerated given the recent rapid growth in traffic, but needs to be agreed
- In the near term the airport can work with airlines to improve the distribution of movements to reduce the congestion at peak times

THE ROLE OF DFIs AND CAREC DEVELOPMENT PARTNERS

Overview

- Several DFIs and CAREC development partners have been active in supporting the aviation sector in the region
- One of the main roles for DFIs in the CAREC aviation sector is supporting airport expansion through loans and PPP transactions advisory services
- There have been several airport related projects the last few years with several more in the pipeline as airports need to accelerate expansion to keep up with rapidly growing passenger traffic
- DFIs also have been helping aviation authorities in some CAREC countries restructure and improve oversight standards, which is critical to meet international requirements and sufficiently manage the recent rapid growth in the number of local airlines and the number of locally registered aircraft
- Sustainable aviation is a new area DFIs have started to support in the region and will become increasingly important over the next several years as the industry decarbonizes

THE ROLE OF DFIs AND CAREC DEVELOPMENT PARTNERS

Kazakhstan: supporting airport/airline expansion and SAF development



- EBRD has acquired a 5% stake in Air Astana as part of the airline group's recent initial public offering (2024, \$42 million investment)
- EBRD provided technical assistance to support sustainable aviation fuel (SAF) development in Kazakhstan (2023 study)
- EBRD and IFC have both provided loans to TAV Airports to support construction of the new terminal in Almaty (2021, \$150 million each)
- EBRD earlier financed Air Astana's new maintenance hangar in Astana (2015, \$14 million loan that was fully repaid in 2020)

THE ROLE OF DFIs AND CAREC DEVELOPMENT PARTNERS

Uzbekistan: supporting liberalization and rapid growth



- The World Bank provided a reimbursable advisory service to support the restructuring and modernization of Uzbekistan's aviation sector (2018 and 2019)
- The World Bank in a subsequent phase provided advisory services to help Uzbekistan prepare a national aviation policy and strategy (2020)
- The World Bank and IFC have provided airport PPP transaction advisory services to support Uzbekistan's plans to secure private sector investment in several airports (ongoing)
- Uzbekistan has emerged as one of the world's fastest growing aviation markets following liberalization and policy adjustments, providing potential lessons for other CAREC countries

THE ROLE OF DFIs AND CAREC DEVELOPMENT PARTNERS

Kyrgyz Republic: supporting reforms, leading to creation of a new civil aviation agency



- IFC supported restructuring and the 2022 creation of the State Civil Aviation Agency, which adopted institutional and regulatory reforms to meet international standards (since 2019)
- IFC also has supported the Kyrgyz Aviation College, the training of safety inspectors and new equipment for certification, investigation and record keeping (since 2019)
- IFC has advised Kyrgyz Republic/Manas Airport Company on a potential airport PPP transaction for Bishkek, which requires modernization and expansion (since 2020)
- More support is required as airports are expanded and opened/reopened

THE ROLE OF DFIs AND CAREC DEVELOPMENT PARTNERS

Tajikistan: supporting reforms and air navigation upgrades



- EBRD provided a loan to support upgrades at Tajikistan's air navigation provider, improving safety standards and airspace management capabilities (2019)
- IFC has been supporting the restructuring of Tajikistan's aviation sector and has provided advisory services to assess the aviation infrastructure in Tajikistan (2023)
- The Eurasian Development Bank (EDB) is providing funding to Somon Air to support the acquisition of two additional Boeing 737s (2024)
- Tajikistan's aviation sector has been in the process of reforming, but more is needed to meet international standards
- Dushanbe airport would benefit from expansion as it is now operating above capacity

THE ROLE OF DFIs AND CAREC DEVELOPMENT PARTNERS

Georgia: supporting airport expansion and development



- EBRD provided a loan to Sakaeronavigatsia, the government owned national provider of air traffic navigation and monitoring services, to bridge a liquidity gap during the pandemic created by a reduction in overflight revenues (EUR10 million, 2020)
- ADB provided technical assistance to support Georgia with an airport sector development strategy (2023) and under the second phase of this TA is now supporting the development of a master plan for a new international airport outside Tbilisi (ongoing)
- In addition to further support for developing and expanding airports Georgia could benefit from support for policy reform, particularly for its domestic aviation sector

THE ROLE OF DFIs AND CAREC DEVELOPMENT PARTNERS

Sustainable Aviation Fuel (SAF)

- DFIs could help support CAREC airports to build up infrastructure for the handling, storing and pumping of SAF
- DFIs could help support CAREC countries develop local production of SAF, following the lead of the recent EBRD-funded study in Kazakhstan
- DFIs could help support CAREC airlines develop plans and strategies for acquiring SAF
- SAF this year will account for only 0.53% of the global aviation sector's fuel needs (based on IATA data) and in emerging markets such as Central Asia/CAREC the portion is virtually zero
- More needs to be done in the region to support SAF, enabling CAREC countries to tap into global supplies as it becomes more available and/or develop their own supplies
- More also needs to be done to educate CAREC countries, the CAREC aviation sector and the public on SAF – and why it is important despite the potential impact on air fares
- While SAF is important it is only a partial solution towards meeting net zero emission goals. There are also opportunities in other areas such as hydrogen

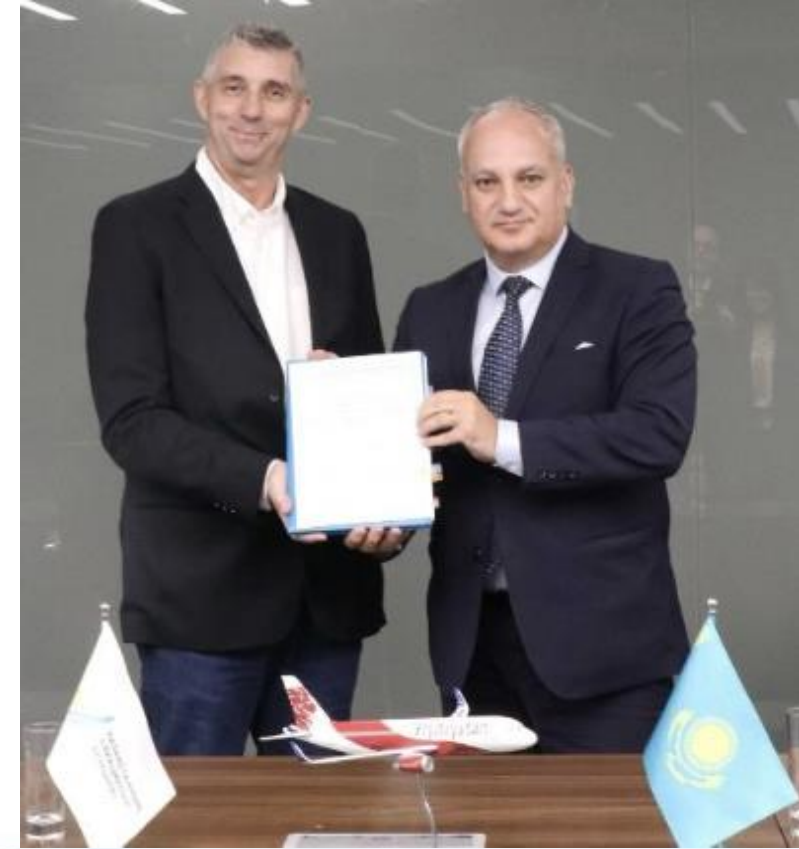
THE ROLE OF DFIs AND CAREC DEVELOPMENT PARTNERS



- There is a potential future role for DFIs in supporting the transformation of domestic aviation in CAREC.
- There is an increased focus on improving domestic connectivity in several countries including Georgia, Kyrgyz Republic, Mongolia and Uzbekistan with recently acquired regional aircraft, new domestic airports and new routes
- However, older generation fuel inefficient aircraft are generally being acquired and the domestic aviation strategies have so far not been aligned with sustainable aviation or eco-tourism strategies
- DFIs could help CAREC countries relook at domestic aviation policies and strategies with an increased focus on sustainability
- DFIs could potentially fund pilot projects to facilitate the deployment of small electric aircraft and to explore new zero emission aircraft propulsion technologies

INTRODUCING FLYARYSTAN AND OUR GUEST SPEAKER

- FlyArystan commenced operations almost exactly five years ago (happy birthday!) and has quickly grown to become the third largest airline in CAREC
- It carried 3.6 million passengers in 2023 and currently operates 19 aircraft with five more to be delivered this year
- FlyArystan was featured as the main case study in the CAREC low-cost carrier and aviation market liberalization study that was published in September 2023
- FlyArystan has so far operated as a division of Air Astana, using the 'KC' code, but this month secured an air operators' certificate (AOC) from the Aviation Administration of Kazakhstan (AAK). This enables it to start operating independent subsidiary of Air Astana with a new IATA code 'FS'
- Adrian Hamilton-Manns has been the CEO of FlyArystan since 2020 and has been working in the airline industry since 1997



Adrian Hamilton-Manns receiving FlyArystan's new AOC from AAK Director General Catilin Radu on 1 April 2024

INTRODUCING FLYARYSTAN AND OUR GUEST SPEAKER

- Most of FlyArystan's capacity is in the domestic Kazakhstan market, where it currently operates 26 routes (11 daily routes) and almost 400 weekly departures
- FlyArystan also operates up to 100 weekly international departures (in peak months) across 23 routes, but none are daily
- FlyArystan has 11 routes within CAREC, but most are seasonal with only 5 currently operating (in April 2024)
- FlyArystan is keen to continue expanding in CAREC with more routes from Kazakhstan as well as from other CAREC countries with potential partners or affiliates

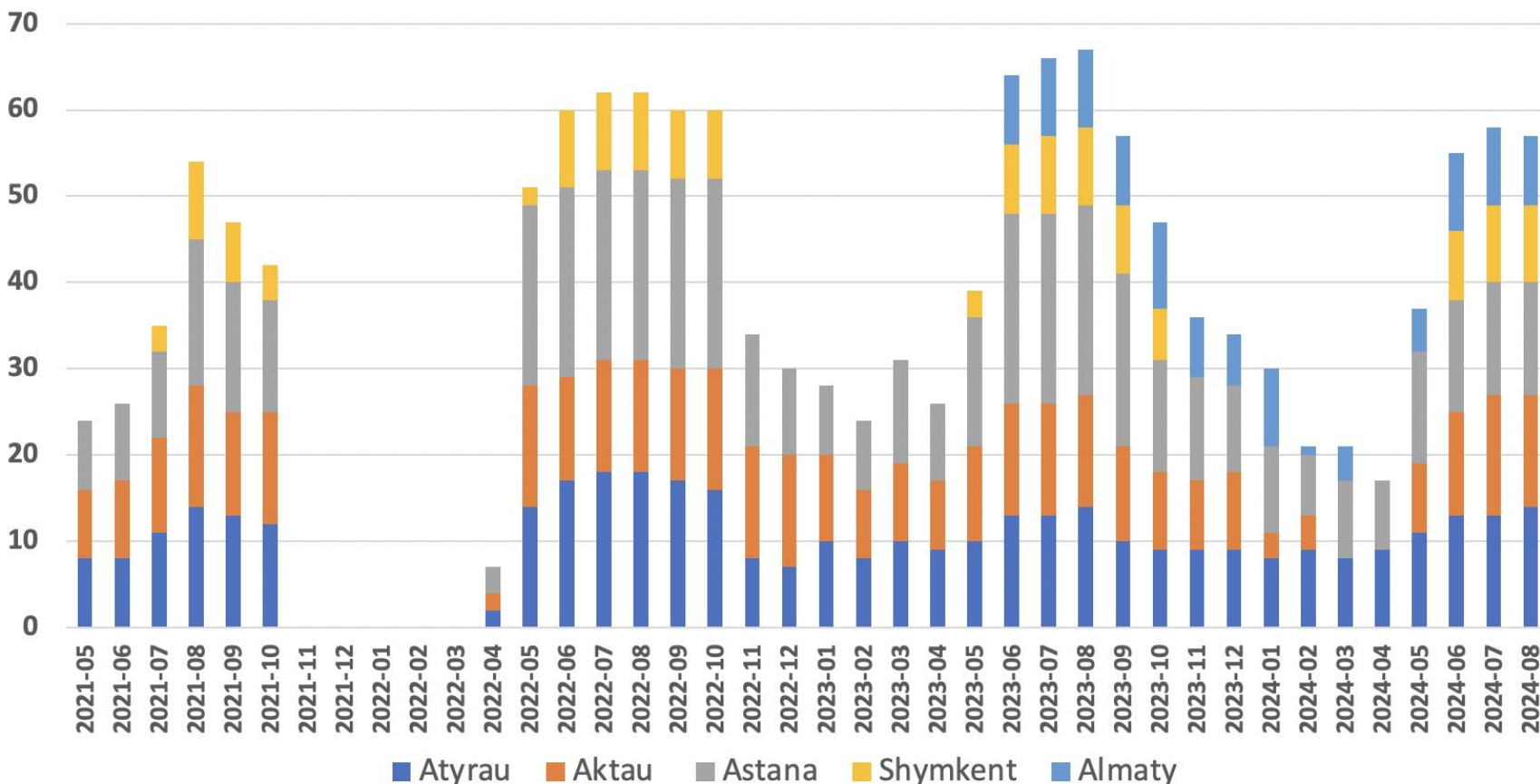
FlyArystan international routes within CAREC

Route	Current Status	Summer 2024
Aktau-Baku	No flights in April	Up to 4 per week
Aktau-Kutaisi	No flights in April	Up to 4 per week
Almaty-Nukus	New from June	Up to 4 per week
Astana-Kutaisi	Operating	Up to 3 per week
Atyrau-Kutaisi	Operating	Up to 3 per week
Almaty-Kutaisi	No flights in April	Up to 2 per week
Almaty-Samarkand	Operating	Up to 2 per week
Astana-Baku	No flights in April	Up to 2 per week
Astana-Tashkent	Operating	Up to 2 per week
Astana-Urumqi	Operating	Up to 2 per week
Shymkent-Kutaisi	No flights in April	Up to 2 per week
Astana-Bishkek	Suspended	N/A
Astana-Dushanbe	Planned	N/A
Almaty-Karachi/Lahore	Planned	N/A

Source: Sobie Aviation and OAG

INTRODUCING FLYARYSTAN AND OUR GUEST SPEAKER

FlyArystan monthly departures from Georgia: May-2021 to Aug-2024



- Kutaisi in Georgia is FlyArystan’s largest international destination with up to 13 weekly departures this summer across 5 routes
- FlyArystan began serving Kutaisi in May 2021 with seasonal flights on 4 routes
- It began year-round services in 2022 and a 5th route, Almaty, in 2023
- FlyArystan is now Kutaisi’s second largest airline with about 150,000 passengers per annum

Source: Sobie Aviation and OAG

Note: Flights to Tbilisi were operated in Oct-2022 during Kutaisi’s temporary closure

Kutaisi is the only low-cost carrier (LCC) airport in CAREC and was also featured as a case study in the study published in Sep-2023

THANK YOU!



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