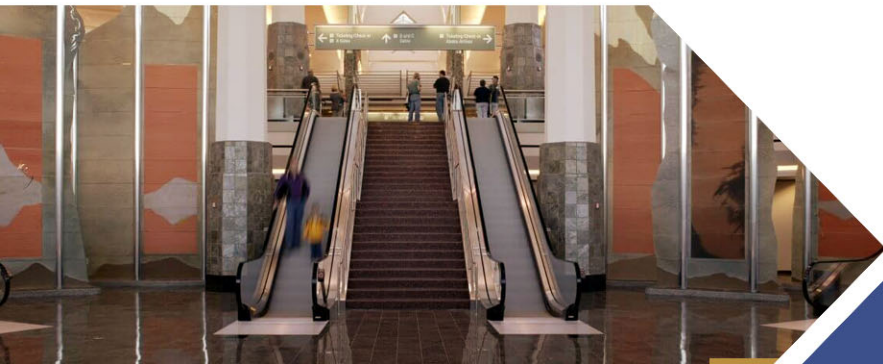




**ANNUAL RATE REPORT**  
**For Bond Year 2024 (March 2, 2023 – March 1, 2024)**

**Ted Stevens Anchorage International Airport  
Consolidated Rental Car Facility**

**January 13, 2023**



## Table of Contents

1	Executive Summary .....	1
2	Introduction.....	1
3	The COVID-19 Pandemic .....	4
4	The Economic Environment .....	7
4.1	Gross Domestic Product .....	8
4.2	Labor Market .....	11
	Business Establishments.....	11
	Nonfarm Employment.....	12
	Unemployment.....	14
4.3	Tourism.....	16
4.4	Oil Industry .....	17
4.5	Economic Outlook .....	21
	Short-Term Outlook.....	21
	Long-Term Outlook.....	22
4.6	Summary.....	23
5	Historical Air Traffic Analysis .....	24
5.1	Operating Airline History.....	24
5.2	Major Developments Affecting U.S. Airport Traffic .....	25
5.3	ANC Historical Enplanement Trends .....	27
5.4	Airport Comparison with National Trends .....	28
5.5	Seasonality in Enplanements.....	31
5.6	Monthly Enplanement Recovery.....	33
6	Air Traffic Forecasts .....	34
6.1	Forecast Methodology .....	35
6.2	Recovery Phase 1.....	36
6.3	Recovery Phase 2.....	37
6.4	Post-Recovery Growth Phase .....	39
	Anchorage MSA’s Real per Capita Personal Income .....	40
	Real Passenger Yield at ANC.....	41
	U.S. Unemployment Rate .....	42

Other Explanatory Variables.....	43
6.5 Forecast Enplanements .....	44
7 Historical Trends in the Airport Rental Car Market.....	45
7.1 Annual Trends.....	46
7.2 Monthly Patterns.....	52
7.3 Market Shares .....	55
8 Transaction Day Forecasts.....	57
8.1 Multivariate Time Series Regression Analysis .....	58
Airport Passenger Traffic .....	58
Economic Trends .....	58
Price of Renting a Car .....	59
Impact of Transportation Network Companies (TNCs) .....	62
8.2 Transaction Day Forecast Results.....	62
9 Financial Projections and Recommendations .....	65
9.1 Debt Service.....	65
9.2 Operations and Maintenance (O&M) Expenses.....	66
9.4 Recommended CFC and FMC Rates for BY2024.....	68
9.5 Application of CFC Revenues and Calculation of Debt Service Coverage .....	72
9.6 Recommendations.....	74

## List of Tables

Table 1   Impact of the COVID-19 Pandemic on Alaska’s Visitor Industry.....	17
Table 2   Scheduled Passenger Airlines at ANC, by Calendar Year .....	25
Table 3   Annual Enplanements at ANC and the U.S. System.....	31
Table 4   Monthly Enplanement Shares.....	33
Table 5   Projected Schedule Completion Rates and Seats .....	36
Table 6   Projected Boarding Load Factors (BLF) .....	37
Table 7   Annual Rental Car Activity, 2000-2021 .....	47
Table 8   Series 2005 Debt Service Schedule .....	66
Table 9   BY2024 Budgeted O&M Expenses .....	67
Table 10   Estimated Deficiency in BY2023 CFC Collections and Withdrawal from Coverage Fund ...	68
Table 11   Calculation of Recommended BY2024 CFC and FMC Levels.....	69
Table 12  BY2024 Monthly Transaction Days, CFCs, and FMCs – Low Forecast.....	70
Table 13   BY2024 Monthly Transaction Days, CFCs, and FMCs – Base Forecast.....	71

Table 14 | BY2024 Monthly Transaction Days, CFCs, and FMCs – High Forecast ..... 71  
 Table 15 | Funds Established Pursuant to the Trust Indenture ..... 72  
 Table 16 | Application of CFC Revenues and Debt Service Coverage ..... 73

**List of Figures**

Figure 1 | COVID-19: United States Weekly Total New Cases, March 2020-December 2022 ..... 5  
 Figure 2 | COVID-19: Alaska Weekly Total New Cases, March 2020-December 2022 ..... 6  
 Figure 3 | COVID-19: United States 7-Day Case Rate Per 100,000 by State, December 2022..... 7  
 Figure 4 | COVID-19: Full Vaccination Rate by State, December 2022 ..... 7  
 Figure 5 | U.S. Real GDP, Quarterly, Annualized % Change from Previous Period, Q1 2007-Q3 2022.. 9  
 Figure 6 | Gross Domestic Product Index (2001=100), 2001-2020 ..... 10  
 Figure 7 | Real GDP Index (Q1 2019=100) , Q1 2019-Q2 2022 ..... 11  
 Figure 8 | Business Establishments Index (2001=100), 2001-2020 ..... 12  
 Figure 9 | Nonfarm Employment Index (2000=100), 2000-2021..... 13  
 Figure 10 | Nonfarm Employment Index (January 2020=100), Monthly, Seasonally Adjusted, January 2020- October 2022 ..... 14  
 Figure 11 | Annual Average Unemployment Rate, 2000-2021 ..... 15  
 Figure 12 | Monthly Unemployment Rate, January 2020-October 2022 ..... 16  
 Figure 13 | Alaska North Slope Daily Oil Price and Estimated Daily Production, 2001-2022 ..... 19  
 Figure 14 | Alaska Oil Industry Employment, 2001-2022 ..... 20  
 Figure 15 | Recent and Forecast Monthly Crude Oil Prices, West Texas Intermediate, 2019-2023 ... 20  
 Figure 16 | Historical and Forecast Percent Change in U.S. Real GDP ..... 22  
 Figure 17 | U.S. Real Gross Domestic Product (Billions, 2012 Dollars), 2019-2032 ..... 22  
 Figure 18 | U.S. Total Nonfarm Employment (Millions), 2019-2032 ..... 23  
 Figure 19 | Historical Enplanement Trends at ANC by Calendar Year ..... 28  
 Figure 20 | ANC and U.S. Total Enplanement Growth by Calendar Year ..... 29  
 Figure 21 | ANC Share of Total U.S. Enplanements by Calendar Year ..... 30  
 Figure 22 | Monthly Enplanements ..... 32  
 Figure 23 | Monthly Recovery Comparison, ANC vs. U.S. System ..... 34  
 Figure 24 | Forecast Development by Phase ..... 35  
 Figure 25 | Monthly Enplanements: Forecast Recovery to Pre-COVID Level ..... 38  
 Figure 26 | Long-Term Passenger Air Travel Demand Drivers ..... 39  
 Figure 27 | Anchorage MSA Real Per Capita Personal Income ..... 41  
 Figure 28 | ANC Real Passenger Yield (2012\$) ..... 42  
 Figure 29 | Annual Average U.S. Monthly Unemployment Rates (Seasonally Adjusted) ..... 43  
 Figure 30 | Historical and Forecast Enplanements ..... 45  
 Figure 31 | Trends in Transaction Days, Rental Contracts, and Contract Duration (2000=100)..... 48  
 Figure 32 | Trends in Transaction Days, Gross Revenue, and Rental Rate (2000=100)..... 48  
 Figure 33 | Annual Trend of Demand Indicators..... 50  
 Figure 34 | Annual Trend of Revenue Indicators in Nominal Terms..... 51

Figure 35   Annual Trend of Revenue Indicators in Real Terms .....	52
Figure 36   Monthly Pattern of Demand Indicators.....	54
Figure 37   Monthly Pattern of Nominal Revenue Indicators.....	55
Figure 38   Gross Revenue Shares by Brand .....	57
Figure 39   U.S. Real Per Capita GDP (2012\$) .....	59
Figure 40   Average Real Daily Rental Rate (2012\$) .....	60
Figure 41   Producer Price Index for Passenger Car Rental for Leisure Travel, January 2000 to October 2022, Not Seasonally Adjusted (December 1998=100) .....	61
Figure 42   Forecasts of Transaction Days .....	63
Figure 43   Forecasts of Transaction Days per Enplanement .....	64

## 1 Executive Summary

This Report of the Independent Rate Consultant recommends the Customer Facility Charge (CFC) and Facility Maintenance Charge (FMC) levels for Bond Year (BY) 2024 (March 2, 2023 through March 1, 2024). The recommendations were developed by analyzing historical passenger enplanement and rental car demand trends at Ted Stevens Anchorage International Airport (ANC or the Airport), forecasting rental car transaction days, and projecting the CFC and the FMC levels needed to cover the obligations under the Indenture during BY2024.

In BY2023, the CFC was increased to \$5.15 per transaction day, based on the analysis and recommendations presented in the Annual Rate Report for BY2023<sup>1</sup> (the BY2023 Rate Report). The BY2023 Rate Report reflected an assumed increase in the relationship between enplanements and rental car transaction days, to begin a recovery to pre-pandemic levels. However, although the actual BY2023 enplanements have tracked very closely to the enplanements projected in the BY2023 Rate Report, particular factors in the Anchorage rental car market have caused the relationship between rental car transactions and enplanements to remain depressed during BY2023. Even with the longer contract duration since the start of the pandemic, transaction days have not rebounded in proportion to the recovery of air traffic at the Airport. These trends are discussed in the remainder of this Report, and the key effects on the CFC and FMC levels are summarized in Section 9.4.

Based on the updated rental car demand forecast presented in this Report, we recommend that the CFC rate be increased from the current level of \$5.15 to \$6.60 per transaction day, and that the FMC rate be decreased from the current level of \$2.40 to \$2.00 per transaction day, effective March 1, 2023.<sup>2</sup> The combined charge per transaction day would increase from the current level of \$7.55 to \$8.60. This report describes the analysis supporting these recommendations.

## 2 Introduction

The Anchorage RAC Center, LLC (the Company) commissioned this report to comply with the provisions of the Land/Building Lease between the State of Alaska, Department of Transportation and Public Facilities, Ted Stevens Anchorage International Airport and the Company, dated September 1, 2005 (the Lease). Under the terms of the Lease, the Company assumed certain obligations with respect to the design and construction of a consolidated facility (the Consolidated Facility) to house all Rental Car Concessionaires (RACs) at the Airport. The Consolidated Facility was

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<sup>1</sup> Unison Consulting, Inc., *Ted Stevens Anchorage International Airport Consolidated Rental Car Facility Annual Rate Report*, January 10, 2022.

<sup>2</sup> Although BY2024 will begin on March 2, 2023, the recommended changes to the CFC and FMC ratios are proposed for March 1, 2023, to accommodate the accounting and billing systems of the rental car companies.

financed with the proceeds of the Taxable Revenue Bonds (Rental Car Facility Project at Ted Stevens Anchorage International Airport), Series 2005A in the amount of \$49,530,000, and Series 2005B in the amount of \$13,294,573 (the Series 2005 Bonds). The Series 2005 Bonds were issued pursuant to the Trust Indenture between the Alaska Industrial and Export Authority (AIDEA) and the Bank of New York Trust Company, N.A., as Trustee, dated September 1, 2005 (the Indenture). The Consolidated Facility includes approximately 1,100 parking and storage spaces, car washing and fueling facilities, a rental customer sales lobby, and associated space. Appendix A of the Official Statement for the Series 2005 Bonds contains a description of the financing plan and a detailed financial feasibility study for the Series 2005 Bonds (the 2005 Feasibility Report).

Pursuant to the Indenture, the Series 2005 Bonds are special and limited obligations of AIDEA, payable solely from CFC proceeds. A State of Alaska statute (the CFC Statute) authorized the Commissioner of the Alaska Department of Transportation and Public Facilities (the Commissioner) to impose a CFC of \$4.00 per transaction day, effective June 24, 2005, to be adjusted periodically to the level that is expected to generate proceeds at least sufficient to pay the debt service requirements of the Series 2005 Bonds, and to meet the other funding requirements of the Indenture. A transaction day means a 24-hour period (plus a grace period of up to 59 minutes) during which a car is rented.

The CFC was raised to \$4.50 for the Bond Year ended March 1, 2011 (BY 2011) and to \$5.50 for BY 2016. Effective with BY 2017, the CFC decreased to \$5.25 per transaction day and it remained at that level in BY 2018 and BY 2019 before decreasing to \$4.50 in BY 2020. The CFC was increased to \$4.75 in BY 2021.

Due to extenuating circumstances related to the Coronavirus Diseases 2019 (COVID-19) pandemic in calendar year 2020 (during BY 2021), the Company commissioned Unison Consulting, Inc. (Unison) to prepare an Interim Rate Report<sup>3</sup> pursuant to the provisions of the Lease. The Interim Rate Report projected that there would not be sufficient CFC collections during BY 2021 to pay all of the requirements under the Indenture in BY 2021. Pursuant to the requirements of the Indenture, amounts on deposit in the Coverage Fund would be applied to cover the deficiency in BY 2021 CFC collections. The Interim Rate Report recommended that the CFC rate be increased from \$4.75 to \$9.80, effective January 1, 2021, to restore the balance in the Coverage Fund and to meet the other requirements of the Indenture in BY 2022. In response to the recommendations in the Interim Rate Report, the CFC rate was increased to \$9.80 effective January 1, 2021.

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<sup>3</sup> Unison Consulting, Inc., *Interim Rate Report for the Assessment of the Customer Facility Charge and Facility Maintenance Charge at Ted Stevens Anchorage International Airport Consolidated Rental Car Facility*, November 5, 2020.

Subsequent to the increase in the CFC rate effective January 1, 2021, the Company commissioned Unison to prepare a Special Rate Report, which was issued in March 2021.<sup>4</sup> At the direction of the Company and the Airport, the purpose of the Special Rate Report was to estimate the amount of Coronavirus Aid, Relief, and Economic Security Act (CARES Act) funds that would be needed to supplement BY 2022 CFC collections in order to reduce the CFC rate to \$4.75 effective April 1, 2022. The CARES Act relief awarded airports \$10 billion in grant funds to help offset the negative impacts of the COVID-19 Pandemic. The Airport was awarded approximately \$26.4 million in CARES Act funds. The Special Rate Report concluded that, assuming a reduction in the CFC rate to \$4.75 effective April 1, 2021, approximately \$3.1 million in CARES Act funds would be needed to supplement BY 2022 CFC collections in order to meet the BY 2022 CFC financial requirements specified in the Indenture, including the restoration of the balance in the Coverage Fund. In response to the Special Rate Report, the Airport did deposit \$3.1 million in CARES Act funds with the Bond Trustee, upon confirmation of which the CFC rate was reduced to \$4.75 effective April 1, 2021.

In BY2023, the CFC was increased in to \$5.15, based on the analysis and recommendations contained in the BY 2023 Rate Report.

The CFC Statute also authorized the Commissioner to impose a uniform FMC to pay for costs, fees and expenses, including insurance costs and maintenance reserves, required to maintain and operate the Consolidated Facility. The FMC collections cannot be used to pay the debt service requirements of the Series 2005 Bonds. The initial FMC of \$0.26 per transaction day was imposed effective March 2, 2006, for BY2007. Since then, the FMC level has been adjusted periodically to ensure that FMC collections would be sufficient to cover the expenses to be paid with FMC collections. The FMC level is currently \$2.40 per transaction day.

The combined CFC and FMC level is currently \$7.55 per transaction day (CFC of \$5.15 and FMC of \$2.40).

On May 24, 2005, the Commissioner issued an order (the Order) to impose the CFC, requiring the RACs to collect the CFC from their customers and remit the CFC collections to the Trustee in accordance with the rental car Concession Agreements. In the Order, the Commissioner committed to continue imposing the CFC while the Series 2005 Bonds and any other obligations under the Indenture are outstanding, and to adjust the CFC not less than annually to generate sufficient proceeds to provide for payment of the Series 2005 Bonds and any other obligations under the Indenture. The Lease requires the Company to appoint a qualified Independent Rate Consultant to prepare a Rate Report each year. The Company selected Unison to prepare this report to assess the adequacy of the CFC level and recommend an adjustment, if necessary, to the CFC and FMC levels for the Bond Year ending March 1, 2024 (BY2024).

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<sup>4</sup> Unison Consulting, *Rental Car Customer Facility Charge Special Rate Report for Ted Stevens Anchorage International Airport Consolidated Rental Car Facility*, March 19, 2021.

This report presents the following:

- (1) The impacts of the COVID-19 pandemic.
- (2) An overview of relevant economic trends to provide context for Airport passenger traffic and rental car market trends.
- (3) An assessment of the historical passenger traffic trends at ANC.
- (4) An update of the passenger traffic forecast.
- (5) An assessment of the historical trends in rental car demand at ANC.
- (6) An update of the forecast of transaction days.
- (7) A financial analysis to determine the level of CFC required to cover the debt service requirements of the Series 2005 Bonds and other obligations under the Indenture, and to determine the level of FMC required to pay for costs, fees and expenses to maintain and operate the Consolidated Facility during BY2024.

In preparing this report, we relied on information provided by the RACs, the Company, the Airport, and the Trustee. We also used data from various government sources such as the Federal Aviation Administration (FAA), the U.S. Bureau of Transportation Statistics (BTS), the U.S. Bureau of Economic Analysis (BEA), the U.S. Bureau of Labor Statistics (BLS), and the Office of Management and Budget (OMB), as well as Moody's Analytics, Inc., an independent economic forecasting firm. In addition, we made several assumptions in developing the forecast of transaction days and the financial projections. Some or all of these assumptions may not materialize; unexpected events may occur; and actual results could deviate significantly from forecast.

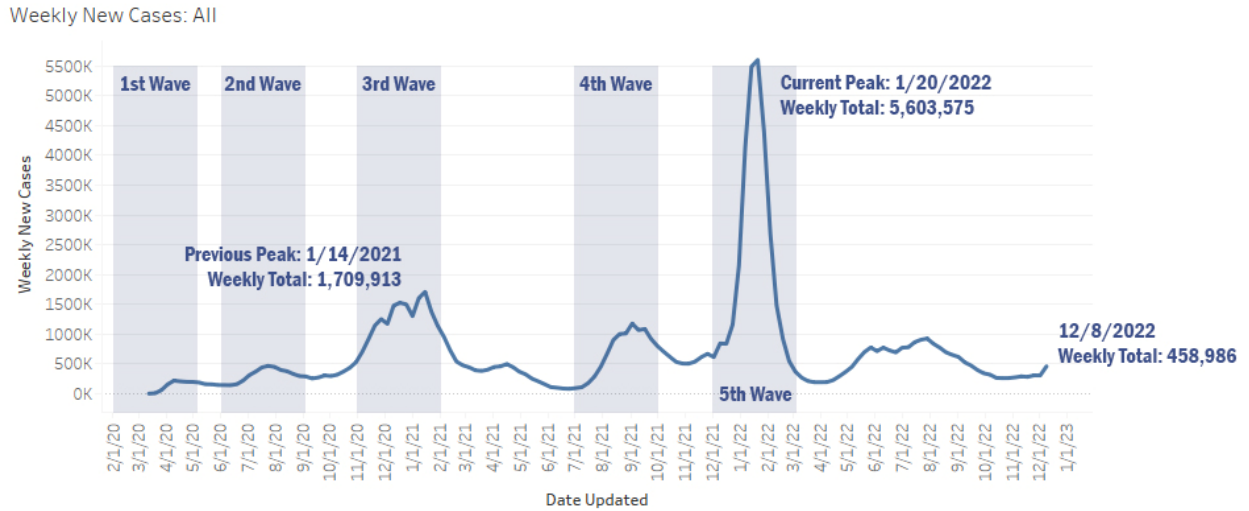
### **3 The COVID-19 Pandemic**

The COVID-19 virus was first identified in China in December 2019. With holiday travel that winter, the virus diffused quickly around the world, including the United States—the first case in the United States was identified in mid-January 2020. In March 2020, the COVID-19 outbreak was declared a global pandemic, leading to a declaration of national emergency in the United States. Like many countries, the United States sought to curtail the spread of the virus with domestic and international travel restrictions, statewide stay-at-home orders, and national social distancing measures. Despite these efforts, several waves of infection hit the United States as new variants emerged (Figure 1). In the United States, COVID-19 has infected 99.7 million people and caused more than 1 million deaths, as of December 16, 2022.

By far, the fifth wave, which began in November 2021, holds the record for the highest numbers of reported cases—over three times higher than the previous peak during the third wave in early 2021. The fifth wave subsided almost as fast as it spiked. By March and April 2022, new cases had fallen to levels among the lowest seen over the course of the COVID-19 pandemic. Cases increased over the course of Summer 2022, but not to the level of the previous three waves, and they have since been

on a gradual downward trend. As of December 8, 2022, the weekly total of new reported cases were less than 10 percent of the fifth wave peak.

**Figure 1 | COVID-19: United States Weekly Total New Cases, March 2020-December 2022**



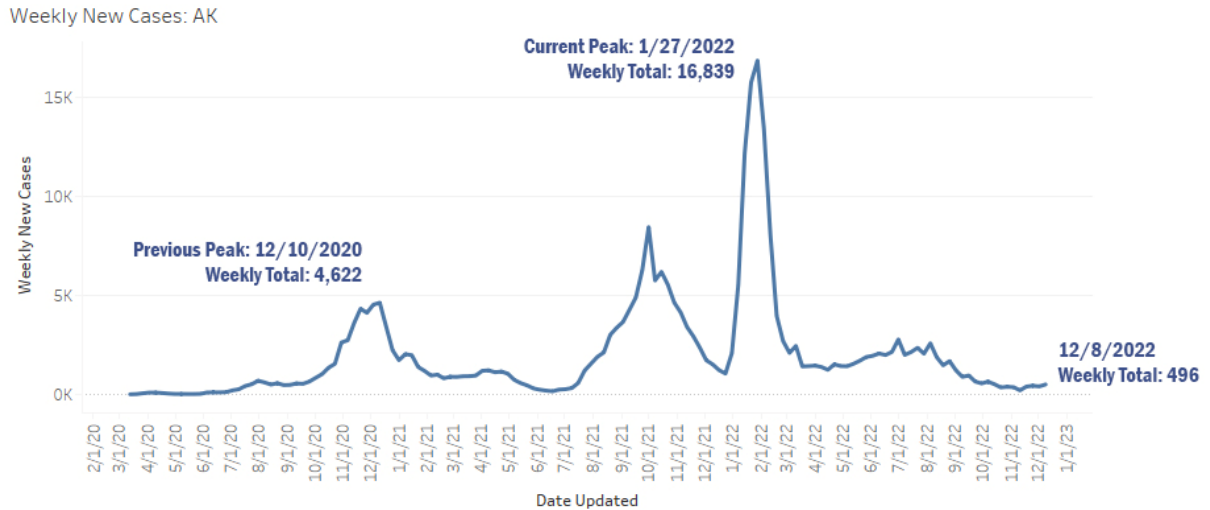
Source: Centers for Disease Control and Prevention.

Alaska’s COVID-19 trends generally follow the national pattern’s major peaks, but with a much sharper spike than the national trend during the fourth wave (Figure 2). Similar to national patterns, Alaska’s weekly infection totals decreased through the fall after an erratic but relatively minor summer increase in infections.

Transmission has been slowed by immunity from vaccination, booster shots, and prior infection but, with the emergence of new variants, COVID-19 remains a threat. Recently, a subvariant of Omicron referred to as XBB has shown to be driving Singapore’s second worst surge of infections in its pandemic history, despite having a very high vaccination rate of 90 percent. The XBB variant has been detected in New York as of September 15, 2022, but so far has not become widespread. However, its increased transmissibility and immune and antibody evasion presents higher risk of reinfection even for those with older vaccines or past experience with COVID-19.<sup>5</sup>

<sup>5</sup> Source: Marc Fortier, *NBC Boston*, available at <https://www.nbcboston.com/news/local/we-need-to-be-prepared-for-this-covid-nightmare-variant-spreading-already-in-us/2868326/>

**Figure 2 | COVID-19: Alaska Weekly Total New Cases, March 2020-December 2022**



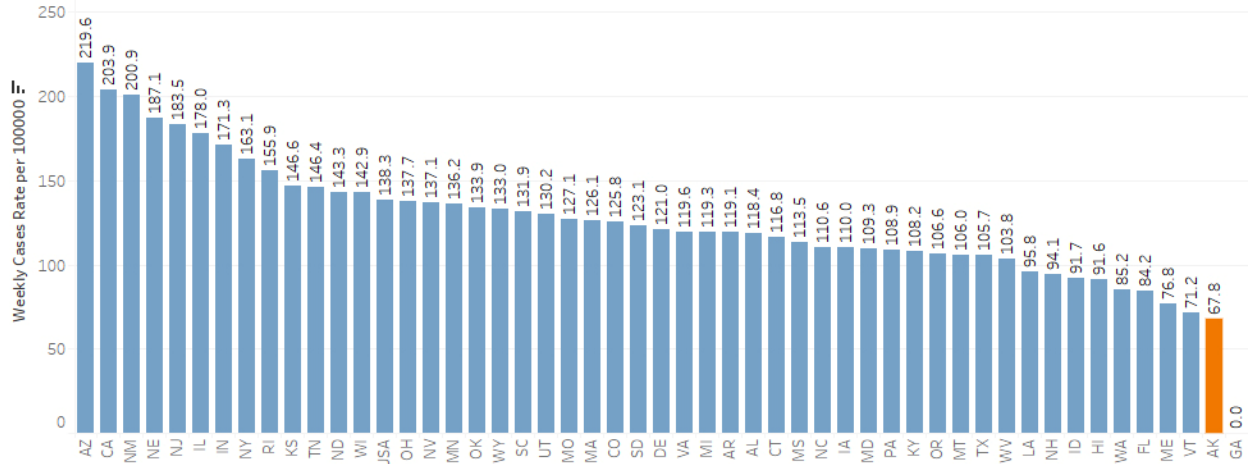
Source: Centers for Disease Control and Prevention.

Figure 3 shows the latest reported seven-day COVID-19 case rate (per 100,000 state residents) by state as of December 7, 2022, with Alaska highlighted. The current national rate is 138.3—by comparison, Alaska is the lowest in the country with a rate of 67.8 (aside from Georgia, which did not have a reported case rate during the week of this report).

The administration of both initial COVID-19 vaccines and subsequent booster shots helped slow virus transmission and alleviate symptoms. Figure 4 shows the current COVID-19 vaccination rates by state as of December 7, 2022—like the previous figure, Alaska is highlighted. Currently, a total of 228.6 million people in the United States—68.9 percent of the population—are fully vaccinated, and of them, 42.0 million have at an updated bivalent booster dose (18.4 percent of the population). Alaska has a slightly lower vaccination rate, with just over 474,000 people vaccinated, or about 65.6 percent of its residents; about 79,000 of those vaccinated have at an updated bivalent booster dose (16.6 percent of the population). As both initial vaccinations and boosters have been widely available and free of charge to United States residents for some time, it is highly likely that most residents who want/are able to be vaccinated already are.

**Figure 3 | COVID-19: United States 7-Day Case Rate Per 100,000 by State, December 2022**

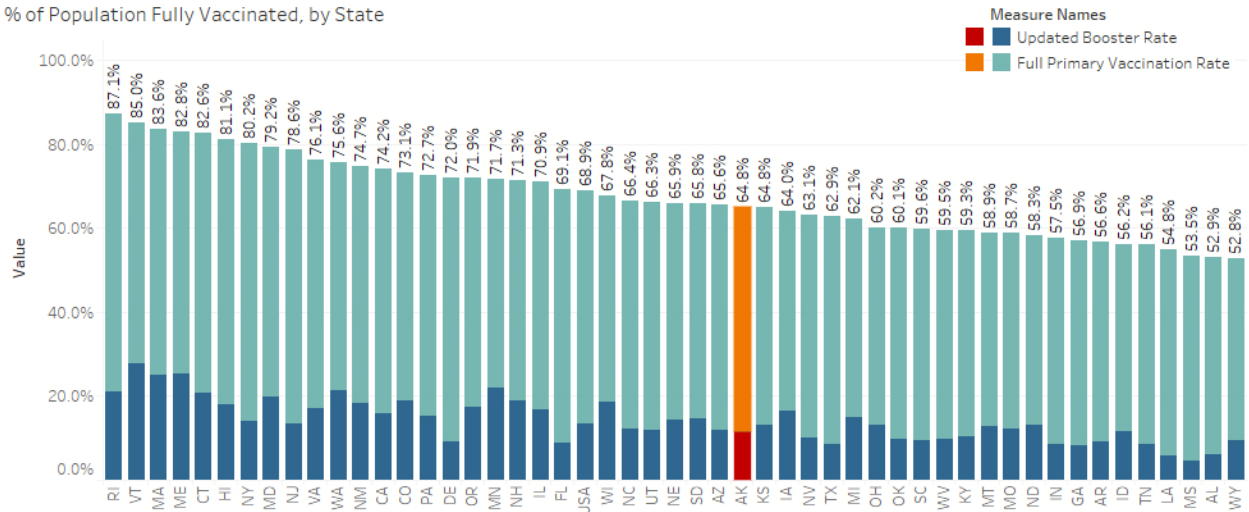
7-Day Rate of New Cases per 100,000, by State



Source: Centers for Disease Control and Prevention.

**Figure 4 | COVID-19: Full Vaccination Rate by State, December 2022**

% of Population Fully Vaccinated, by State



Source: Centers for Disease Control and Prevention.

## 4 The Economic Environment

Demand for air transport services is a function of the economic vitality of a region, which can be gleaned from trends in gross domestic product (GDP), the labor market, key industries, and tourism. Regional, national—even global—economic conditions influence residents' and visitors' demand for transportation services at a particular airport. A healthy regional economy attracts both business and leisure visitors, which in turn generate rental car demand.

The Airport is in the Municipality of Anchorage, about 4 miles from the city’s downtown. Anchorage, along with Matanuska-Susitna (Mat-Su) Borough, makes up the Anchorage, AK, metropolitan statistical area (Anchorage MSA), the largest metropolitan area in Alaska and the primary service area for the Airport. ANC is an important passenger, cargo, and logistics node owing to its advantageous location near the great circle route<sup>6</sup> between many major cities in the contiguous United States and Asia. ANC is also a major employer—about 10 percent of employment in Anchorage is linked to the Airport.<sup>7</sup>

In 2020, the U.S. economy plunged into a deep recession due to the COVID-19 pandemic and containment measures. The Alaskan economy, which was still reeling from the impacts of low oil prices induced by the 2014 oil industry downturn, fell into recession along with the U.S. economy. By mid-2021, the U.S. economy had rebounded to pre-pandemic peak output level and entered the expansion phase of a new business cycle. Alaska’s state output continues to lag national trends and remains near pandemic lows. Trends in the oil industry will be influential in Alaska’s short- and long-term economic prospects.

#### **4.1 Gross Domestic Product**

The most comprehensive measure of economic output is GDP—the dollar value of all goods and services produced in a geographic region. Sustained growth in inflation-adjusted real GDP underpins economic expansions, while decreases in real GDP over two or more consecutive quarters often signal a recession. Generally, during an economic expansion, employment grows, incomes rise, and the demand for travel services (e.g., air travel, rental cars, hotels) also rises. Conversely, during an economic recession, employment decreases, incomes fall, and the travel demand also falls.

When the COVID-19 pandemic struck the United States in the first quarter of 2020, widespread lockdowns, stay-at-home orders, and voluntary social distancing depressed consumer spending, causing the economy to fall into a deep recession. In 2020 U.S. real GDP decreased 4.6 percent (annual rate) in the first quarter, and another 29.9 percent in the second quarter (Figure 5).

The COVID-induced recession was different from previous U.S. economic recessions. The typical causes of recessions are market-related and economic in nature—for example, asset market crashes, oversupply, loss of consumer and business confidence, or tight monetary and fiscal policy. The 2020 recession resulted from shocks to both supply and demand induced by the pandemic and deliberate measures to contain COVID-19. These measures permeated nearly all industries and all regions, including Alaska. When states and counties began to reopen in the second half of 2020 and social distancing began to ease, the U.S. real GDP rebounded quickly, increasing 35.3 percent in the third quarter and 3.9 percent in the fourth quarter. Vaccination helped restore consumer and

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<sup>6</sup> The great circle route is the shortest path between two points on the surface of a sphere.

<sup>7</sup> Ted Stevens Anchorage International Airport, “Stats,” <https://ancairport.com/about/statistics/>.

business confidence, accelerate business re-openings, and sustain the economic recovery in 2021. For the year, U.S. real GDP grew 5.9 percent, the highest annual increase since 1978.

Trends have changed in 2022. The U.S. real GDP declined during the first two quarters—by 1.6 percent (annualized) during the first quarter and 0.6 percent during the second quarter. The decreases in GDP during the first half of the year were attributed to supply constraints due to (1) the fifth and highest wave of COVID-19 infections from the Omicron variant; (2) supply-chain bottlenecks and inventory pressures; and (3) tightness in the labor market due to demand far exceeding labor supply. On the demand side, the output decreases have also been attributed to (1) the disappearing stimulus from household income transfers, (2) reduced government spending, (3) rising interest rates due to monetary tightening to contain inflation, and (4) the decrease in exports due to the appreciation of the U.S. dollar.

GDP decline in two consecutive quarters typically signals a recession. However, The National Bureau of Economic Research (NBER), the official arbiter of U.S. business cycles, also looks beyond GDP trends to other key economic indicators such as nonfarm employment, real consumer spending, industrial production, and real personal income. These trends, which were generally increasing, did not indicate a recession, which the NBER defines as a "significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in production, employment, real income and other indicators." Instead, during the third quarter of 2022, GDP grew by 3.2 percent (annualized rate).

**Figure 5 | U.S. Real GDP, Quarterly, Annualized % Change from Previous Period, Q1 2007-Q3 2022**



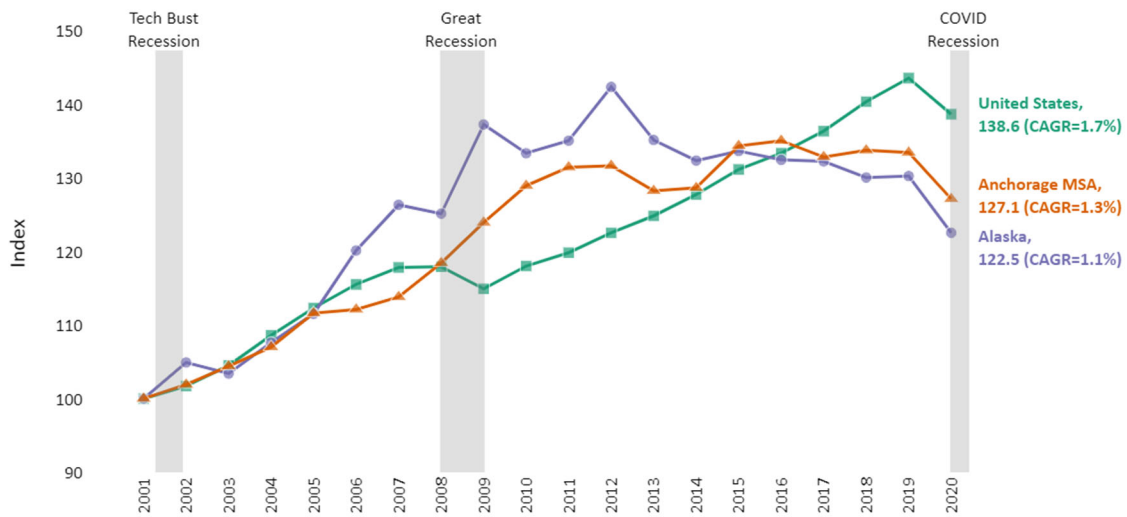
Gray areas indicate economic recession periods.  
 Sources: U.S. Bureau of Economic Analysis and Unison Consulting, Inc.

From 2001 through 2020, real GDP grew 39 percent (1.7 percent CAGR) nationally, 23 percent (1.1 percent CAGR) in Alaska, and 27 percent (1.3 percent CAGR) in the Anchorage MSA (Figure 6). The

pattern of real GDP growth in Alaska and the Anchorage MSA has generally followed national trends but has also deviated in significant ways.

Alaska’s economy has depended heavily on the oil industry for more than forty years. From 2005 to 2012 (including through the 2008-2009 Great Recession), the state of Alaska and the Anchorage MSA outpaced national economic growth due largely to increases in the price of oil. Between late June and the end of 2014, the price for Alaska North Slope oil declined by about 51 percent—from a high of over \$113 per barrel (BBL) to less than \$56 per barrel. As a result, the state economy began to lag. While real GDP increased by 9.4 percent nationally between 2015 and 2019, it fell by 2.6 percent statewide and by 0.6 percent in the Anchorage MSA.

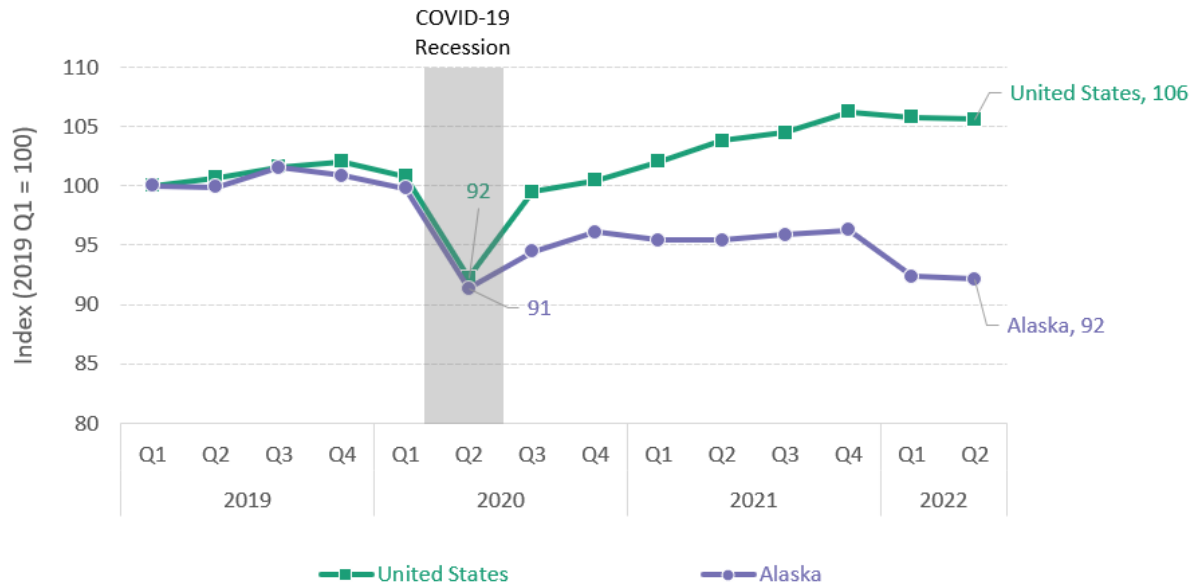
**Figure 6 | Gross Domestic Product Index (2001=100), 2001-2020**



Gray areas indicate economic recession periods.  
 Sources: U.S. Bureau of Economic Analysis and Unison Consulting, Inc.

The COVID-19 pandemic and resulting recession had a disproportionate effect on the economy of Alaska and the Anchorage MSA. While real GDP fell by 3.4 percent nationally between 2019 and 2020, it fell by 6 percent across the state and by 4.7 percent in the MSA. More recent MSA-level data on recovery from the COVID-19 recession is not yet available, but state-level data shows that after a slight recovery in the third and fourth quarters of 2020, change in real GDP has been negative (Figure 7). While national real GDP rebounded to pre-pandemic levels by the first quarter of 2021, real GDP in the state remained flat through 2021 and declined by 4.2 percent in 2022.

**Figure 7 | Real GDP Index (Q1 2019=100) , Q1 2019-Q2 2022**



Gray areas indicate economic recession periods.  
 Sources: U.S. Bureau of Economic Analysis and Unison Consulting, Inc.

## 4.2 Labor Market

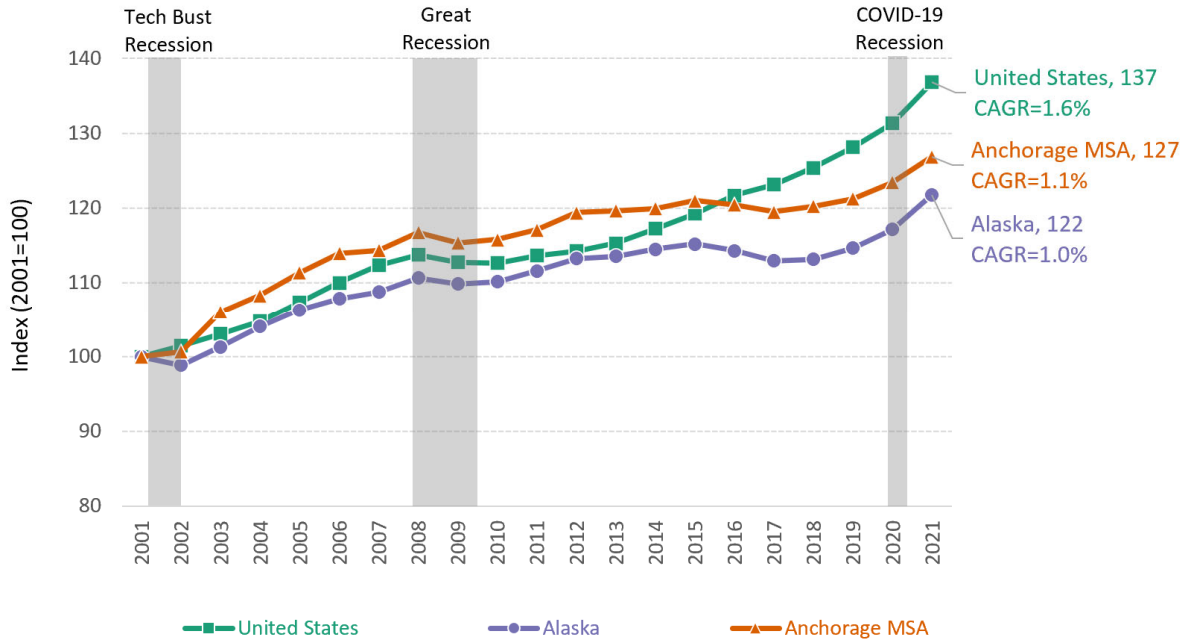
Labor market trends evolve with business cycles and reflect the state of the economy. They are positively correlated with trends in income and travel. Strong business and employment growth, along with low unemployment, stimulate demand for leisure and business travel.

### Business Establishments

New business formation and job creation are reflected in changes in the number of business establishments. Increases in the number of business establishments indicate a healthy business climate, a high level of entrepreneurship, and a favorable environment for start-ups. New business formation creates jobs and promotes overall economic growth. The number of business establishments (Figure 8) indicates business creation and the number of jobs (Figure 9) indicates job creation. Both measures are pro-cyclical—they tend to increase during economic expansions and decrease during recessions (often with a lag).

From 2001 to 2021, the number of business establishments increased by 22 percent (1.0 percent CAGR) in the state of Alaska and by 27 percent in the Anchorage MSA (1.1 percent CAGR), compared with 37 percent nationally (1.6 percent CAGR, Figure 8). Business creation in the state and the MSA tracked closely with national trends until 2015, when the growth rate fell coincidentally with the oil price decline. However, between 2019 and 2021, through the COVID-19 recession, the number of establishments increased sharply in the state and the MSA, in line with the national trend.

**Figure 8 | Business Establishments Index (2001=100), 2001-2020**



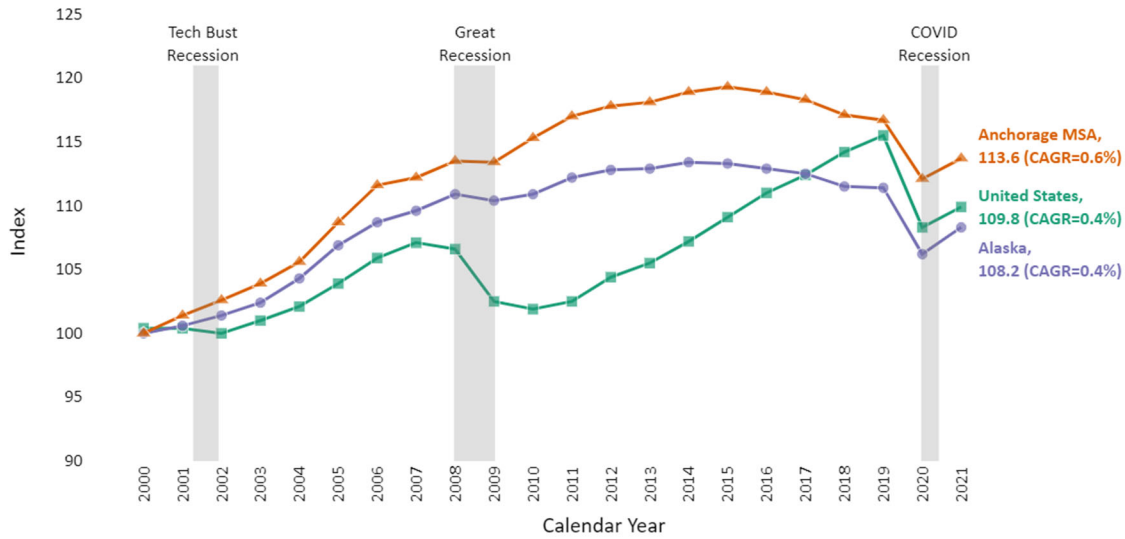
Gray areas indicate economic recession periods.  
 Sources: U.S. Bureau of Labor Statistics and Unison Consulting, Inc.

### Nonfarm Employment

Alaska and the Anchorage MSA outpaced the nation in nonfarm employment growth between 2001 and 2015 (Figure 9), largely due to high oil prices, stimulating economic growth. The sharp decrease in oil prices in 2014, and sustained lower prices through 2021, contributed to significant slowing and then decline in job formation from 2015 to 2019. Between 2015 and 2019, nonfarm employment rose by 5.5 percent nationally, but fell by 1.8 percent in the state of Alaska and 2.2 percent in the Anchorage MSA. As the COVID-19 pandemic hit and recession fell upon the nation, there was a further 4.6 percent decline in nonfarm employment across the state and a 4 percent reduction in jobs in the MSA. Nationally, employment fell by more than 6 percent.

In 2021, nonfarm employment rebounded with increased economic activity, as the rate of vaccination rose and measures to contain the virus eased. Nonfarm employment increased by 1.5 percent nationally, by 1.4 percent in the MSA, and by 2 percent in Alaska. While still below pre-pandemic levels in 2021, trends in nonfarm employment are positive.

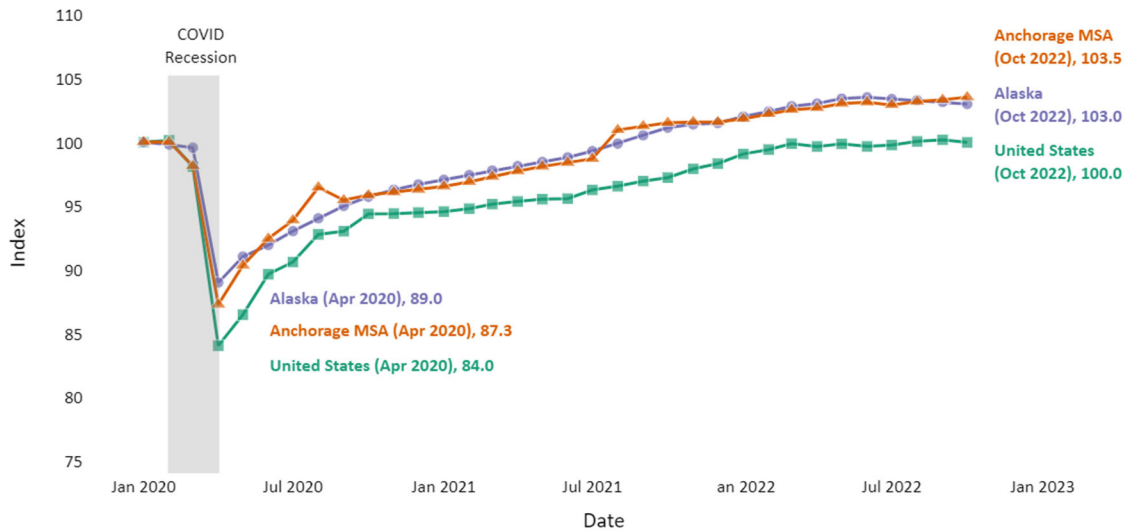
**Figure 9 | Nonfarm Employment Index (2000=100), 2000-2021**



Gray areas indicate economic recession periods.  
 Sources: U.S. Bureau of Labor Statistics and Unison Consulting, Inc.

Recessions typically result in decreases in employment, and the sharp declines in employment felt in all geographic levels during the recession in 2020 were unprecedented (Figure 10). The nation, the state of Alaska, and the Anchorage MSA experienced job losses of 16 percent, 11 percent, and 13 percent, respectively, between January and April 2020. However, the rebound in employment from the pandemic-induced recession has followed a faster path for Alaska and the MSA compared to the aftermath of the Great Recession of 2008-2009. By October 2022, significant employment recovery had occurred—nonfarm employment in the Anchorage MSA, the State of Alaska and the United States had all recovered to January 2020 levels or above. Both the state and the MSA had at least 3 percent more jobs in October 2022 than in January 2020.

**Figure 10 | Nonfarm Employment Index (January 2020=100), Monthly, Seasonally Adjusted, January 2020-October 2022**



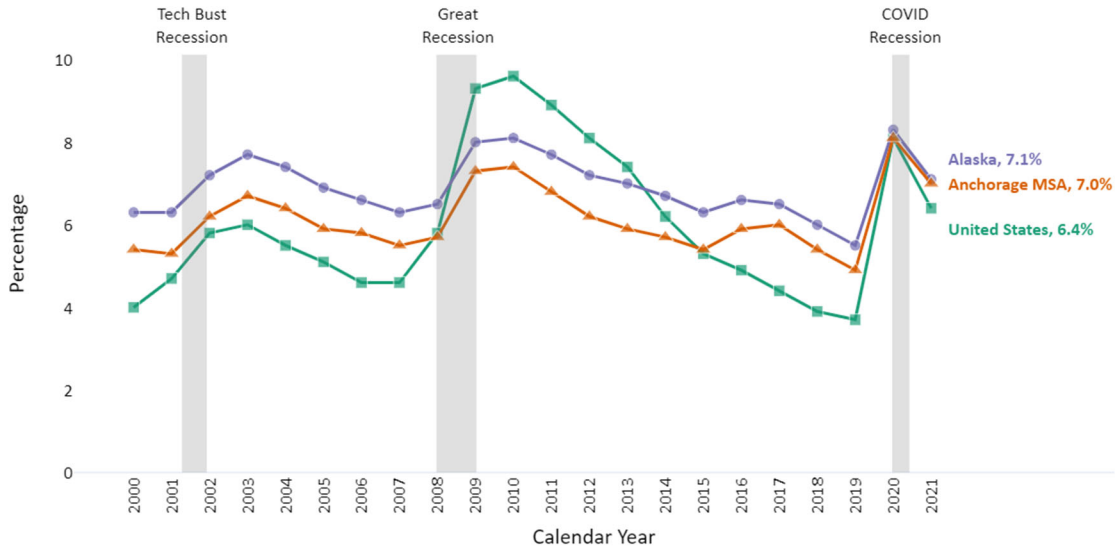
Gray areas indicate economic recession periods.  
 Sources: U.S. Bureau of Labor Statistics and Unison Consulting, Inc.

## Unemployment

The unemployment rate represents the share of unemployed members of the labor force (those 16 years and older who are either employed, or, unemployed and actively looking for work). It provides a measure of unmet demand for jobs. High levels of unemployment imply lower incomes and less discretionary income for travel. As with employment, the unemployment rate follows business cycles (Figure 11).

Prior to the Great Recession (2000-2007), annual unemployment rates in the state of Alaska and the Anchorage MSA were higher than the national average—by an average 1.8 percentage points and 0.9 percentage points, respectively. After converging during the Great Recession, unemployment in the state and MSA fell below national rates until 2014/2015, when oil prices dropped sharply. In 2019, prior to the COVID-19 recession, the unemployment rate stood at 5.5 percent in Alaska, 4.9 percent in the Anchorage MSA, and 3.7 percent in the nation. The 2020 recession exacted a heavy toll on unemployment rates, which soared to 8.1 percent in the nation and the MSA and 8.3 percent in the state of Alaska; although recovery was fast. In 2021, the annual average unemployment rate decreased to 6.4 percent nationally, 7.1 percent in Alaska, and 7 percent in the MSA.

**Figure 11 | Annual Average Unemployment Rate, 2000-2021**



Gray areas indicate economic recession periods.  
 Sources: U.S. Bureau of Labor Statistics and Unison Consulting, Inc.

Figure 12 provides more resolution, showing monthly unemployment rates between January 2020 and October 2022. In January 2020, before the pandemic, unemployment rates were 3.5 percent nationally, 5.2 percent in Alaska, and 4.3 percent in the Anchorage MSA. During the early months of the pandemic, following shelter-at-home orders, unemployment rose sharply—up to 14.7 percent nationally, 11.9 percent in Alaska and to 12.3 percent in Anchorage. These rates reflected the depression in consumer spending and business activity due to social distancing, travel restrictions, and business shutdowns. As shelter-at-home orders were lifted and businesses reopened, unemployment rates also descended quickly. By October 2022, unemployment rates were below pre-pandemic levels in Alaska and the MSA and only slightly above at a national scale—all levels typically prevailing in a full-employment economy.<sup>8</sup>

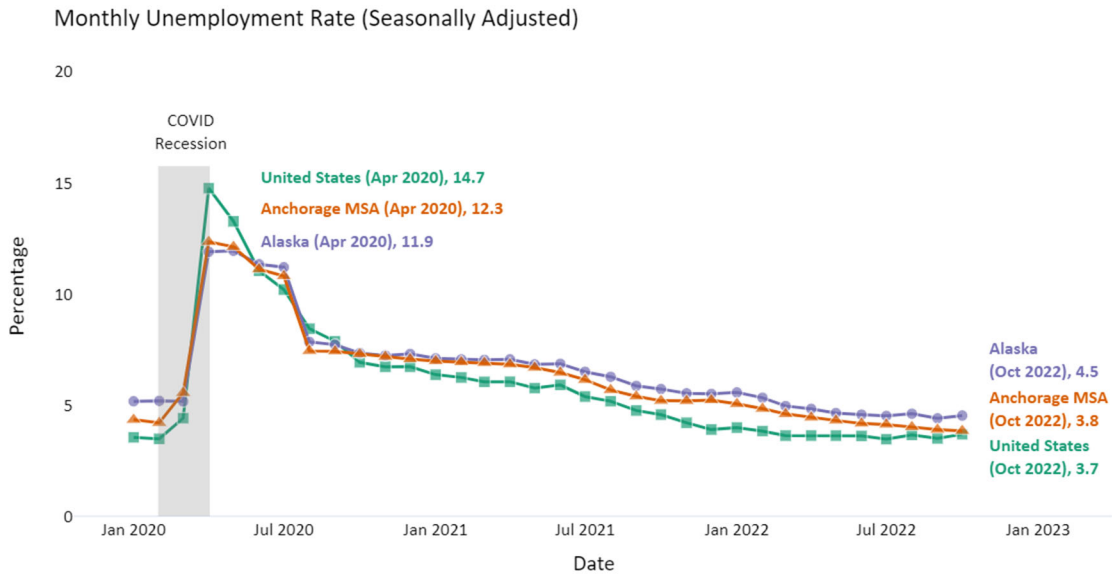
Nationally, the fast economic recovery has created a labor shortage—in October 2022 there were 1.7 job openings for each unemployed person. In Alaska there were 2.5 job openings for each unemployed person in September 2022 (the most recent state data).<sup>9</sup> Curbs on immigration,

<sup>8</sup> Full employment generally is implied when unemployment rates are between 4.1 and 4.7 percent. Full employment is conceptual and refers to a state where “...the unemployment rate equals the nonaccelerating inflation rate of unemployment, no cyclical unemployment exists, and GDP is at its potential.” Sources: (1) C. Cook, “Full Employment,” Bloomberg, 2016. (2) Bureau of Labor Statistics, “Full Employment: an assumption within BLS projections,” 2017.

<sup>9</sup> S. Ember and B. Casselman, “Less Turnover, Smaller Raises: Hot Job Market May Be Losing Its Sizzle,” *The New York Times*, October 3, 2022.

retirements, family care, and health issues have contributed to an estimated 2.5 million worker shortfall in the labor force (below levels projected prior to the pandemic).<sup>10</sup> Airlines and airports are facing the impacts of this shortage—for flight crew, airport facility staff, and others. In the near-term this has resulted in a significant cut in airline schedules, impacting both travelers and airports.<sup>11</sup>

**Figure 12 | Monthly Unemployment Rate, January 2020-October 2022**



Gray areas indicate economic recession periods.  
 Sources: U.S. Bureau of Labor Statistics and Unison Consulting, Inc.

### 4.3 Tourism

Alaska is a world-famous tourist destination. Prior to the pandemic, tourism brought about \$4.5 billion in economic impact for the state, including millions of dollars in taxes and fees.<sup>12</sup> Tourism supports thousands of jobs, particularly in the leisure and hospitality industries, which employ an above-U.S. average share of nonfarm workers in Alaska (around 11 percent before COVID-19).

During peak summer months, approximately 90 percent of visitors to Anchorage are leisure travelers. The split between leisure and business evens out during off peak times when conventions

<sup>10</sup> A. Bhattarai, “Worker Shortages are Fueling America’s Biggest Labor Crises,” *The Washington Post*, September 16, 2022.

<sup>11</sup> J. Puckett, “U.S. Airlines Are Cutting Thousands of Fall Flights—Here’s What to Know,” *Conde Nast Traveler*, August 19, 2022.

<sup>12</sup> Alaska Travel Industry Association, <https://www.alaskatia.org/research>

and meetings are more common. About 40 percent of hotel stays are related to cruise industry visitors and the rest are independent travelers. About 33 percent of visitors to the region rent cars.<sup>13</sup>

The COVID-19 pandemic disrupted travel and tourism. Alaska’s visitor volume during the peak travel season from April to December decreased approximately 82 percent from 2.4 million in 2019 to 427,000 in 2020 (Table 1). Associated visitor spending in Alaska is estimated to have decreased 78 percent from 2.79 billion in 2019 to \$619 million in 2020, resulting in a 79 percent decrease in supported jobs.

**Table 1 | Impact of the COVID-19 Pandemic on Alaska’s Visitor Industry**

	April - December		
	2019	2020	Change
Number of visitors by travel mode:			
Cruise	1,330,000	0	-100%
Air	1,000,000	420,000	-58%
Highway/Ferry	99,000	7,000	-93%
Total visitors	2,429,000	427,000	-82%
Visitor spending	\$2,790,000,000	\$619,000,000	-78%
Visitor industry jobs	35,000	7,200	-79%

Source: McKinley Research Group, LLC, The Economic Impacts of COVID-19 on Alaska’s Visitor Industry, May 2021, in [https://www.alaskatia.org/wp-content/uploads/ATIA-COVID-Impacts-on-Visitor-Industry-6\\_3\\_21.pdf](https://www.alaskatia.org/wp-content/uploads/ATIA-COVID-Impacts-on-Visitor-Industry-6_3_21.pdf).

Recovery is underway. Demand for hotel rooms in Anchorage during 2021 began to approach pre-pandemic levels, and early evidence suggests that rental car activity is also returning to pre-COVID-19 levels. Recovery patterns indicate that resurgence is due to longer stays in the region rather than increases in the number of visitors. The cruise-ship sector of the tourism economy remains weak.<sup>14</sup>

#### 4.4 Oil Industry

The oil and gas industry is critical to Alaska, and the state’s economy is correlated with trends in oil markets. Alaska has no state-level income or sales tax, so the state relies heavily on revenue raised from oil production. The state taxes oil at a rate of 35 percent of annual production tax value.<sup>15</sup> The

<sup>13</sup> Personal communication with staff at Anchorage Convention & Visitors Bureau, November 2022.

<sup>14</sup> Anchorage Convention & Visitors Bureau, “Report to the Community,” February 4, 2023. Personal communication with staff at Anchorage Convention & Visitors Bureau, November 2022.

<sup>15</sup> The annual production tax value is the gross value at the point of production less lease expenses. Source: Alaska Department of Natural Resources, “Alaska’s Oil Production Tax,” January 1, 2022, [https://dog.dnr.alaska.gov/Documents/Programs/Summary\\_of\\_Oil\\_and\\_Gas\\_Fiscal\\_System\\_2022.pdf](https://dog.dnr.alaska.gov/Documents/Programs/Summary_of_Oil_and_Gas_Fiscal_System_2022.pdf).

volatile nature of the oil market introduces substantial variability to tax receipts and has far reaching impacts on the labor market.

More than 95 percent of the oil produced in Alaska is sourced from the North Slope.<sup>16</sup> Figure 13 shows trends in the daily price of Alaska North Slope Oil (ANS) and estimated average annual daily production between 2001 and 2022. Between 2000 and 2009, oil prices rose sharply—from just over \$30 per BBL<sup>17</sup> to more than \$140. During the Great Recession, prices sank below \$40 per BBL, but rebounded by 2011 to more than \$100. Prices remained stable—largely between \$100 and \$120—until August 2014 when they began to drop sharply due to overproduction and oversupply.<sup>18</sup> Within just a few months, the price of ANS fell to less than \$50, and the average daily price was just \$57 between 2015 and 2019, well below levels before the Great Recession. As a result of the global economic slowdown during the COVID-19 pandemic and recession, oil prices fell further, even turning negative for a short time in April 2020. Prices rose quickly through mid-2022 (to above \$120) but have since eased to about \$81 per barrel in early December 2022.

Figure 14 shows Alaska’s employment in the oil and gas industry between 2001 and 2022. The trends largely mirror the patterns in oil prices. Between 2004 and 2008, employment in the sector rose by more than 57 percent. After remaining flat during the Great Recession, employment increased further between 2011 and 2014, a period of sustained high ANS prices. However, the softening of the oil market since that time has led to a 52 percent decrease in the sector’s employment by 2022. Currently, the oil and gas industry employs just over 7,000 workers.

The oil and gas industry accounts for just over 2 percent of non-farm employment. However, as a major export industry,<sup>19</sup> it supports thousands of jobs in other sectors. In the long run, the future of the oil industry’s ability to support the economy is uncertain. In addition to price volatility, ANS production has been falling (Figure 13). The North Slope fields reached peak production of more than 2 million barrels per day in 1988.<sup>20</sup> In 2022, average production is only about 480,000 barrels per day. However, new drilling technologies and oil plays may support increased output in the future.

Figure 15 shows recent monthly and forecast prices for West Texas Intermediate (WTI), a benchmark measure for U.S. oil prices and a proxy for ANS.<sup>21</sup> The price rebound after the COVID-19

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<sup>16</sup> S. Teel. “The Oil Industry’s Recent Wild Ride,” *Alaska Economic Trends*, June 2022.

<sup>17</sup> A barrel is 42 U.S. gallons. Prices in this section are listed per barrel.

<sup>18</sup> U.S. Bureau of Labor Statistics, “The 2014 Plunge in Import Petroleum Prices: What Happened? *Behind the Numbers*, May 2015.

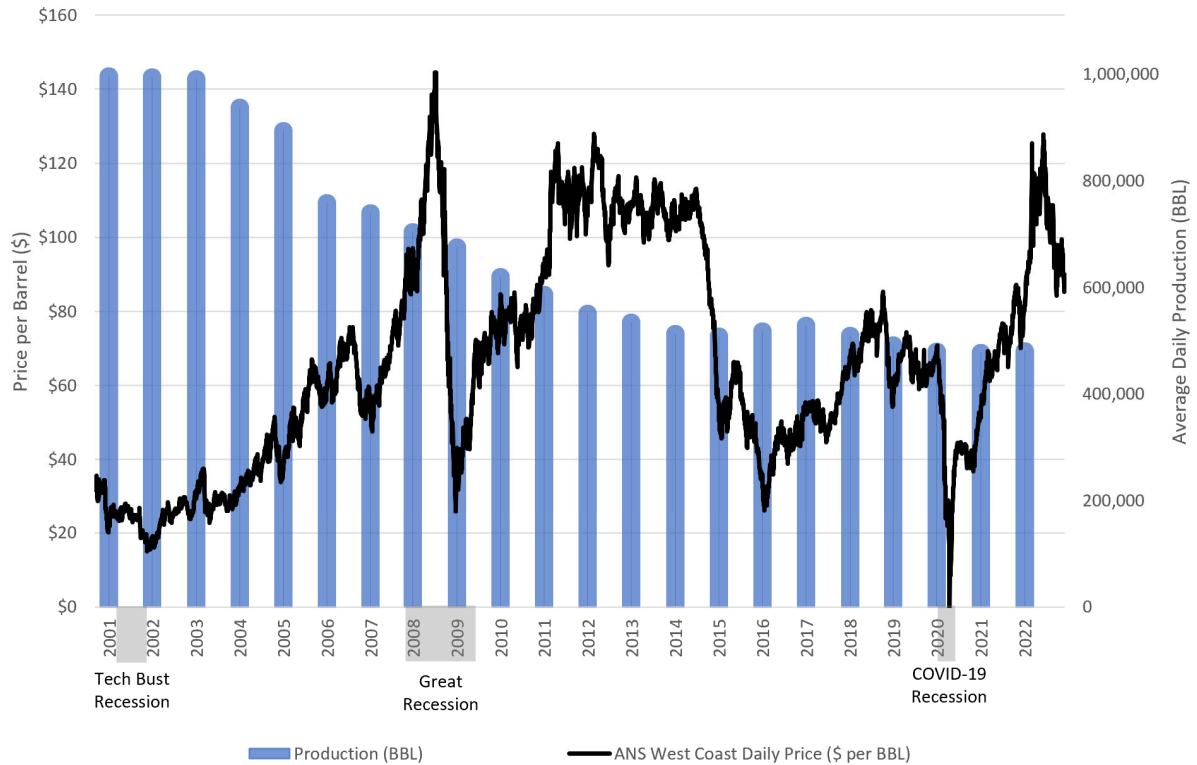
<sup>19</sup> In this context, export refers to trade outside of Alaska and the region—not necessarily international trade.

<sup>20</sup> Resource Development Council for Alaska, “Alaska’s Oil & Gas Industry,” <https://www.akrdc.org/oil-and-gas>.

<sup>21</sup> The correlation in daily prices between ANS and WTI is approximately 0.98.

recession is evident, as is the more recent decline. The U.S. Energy Information Administration forecasts oil prices to be stable near \$92 per barrel through the end of 2023; however, the market remains unsteady. OPEC and other global oil producers recently decreased production by about 2 million barrels per day, a policy set to remain in place through 2023.<sup>22, 23</sup> Price increases that might normally result from such production cuts are now predicted to be substantially offset by reduced economic activity in China and larger than expected oil output by Russia in the near-term.<sup>24</sup>

**Figure 13 | Alaska North Slope Daily Oil Price and Estimated Daily Production, 2001-2022**



Gray areas indicate economic recession periods.

Production is the annual average of daily production. Production for 2001 and 2022 is the average of available months.

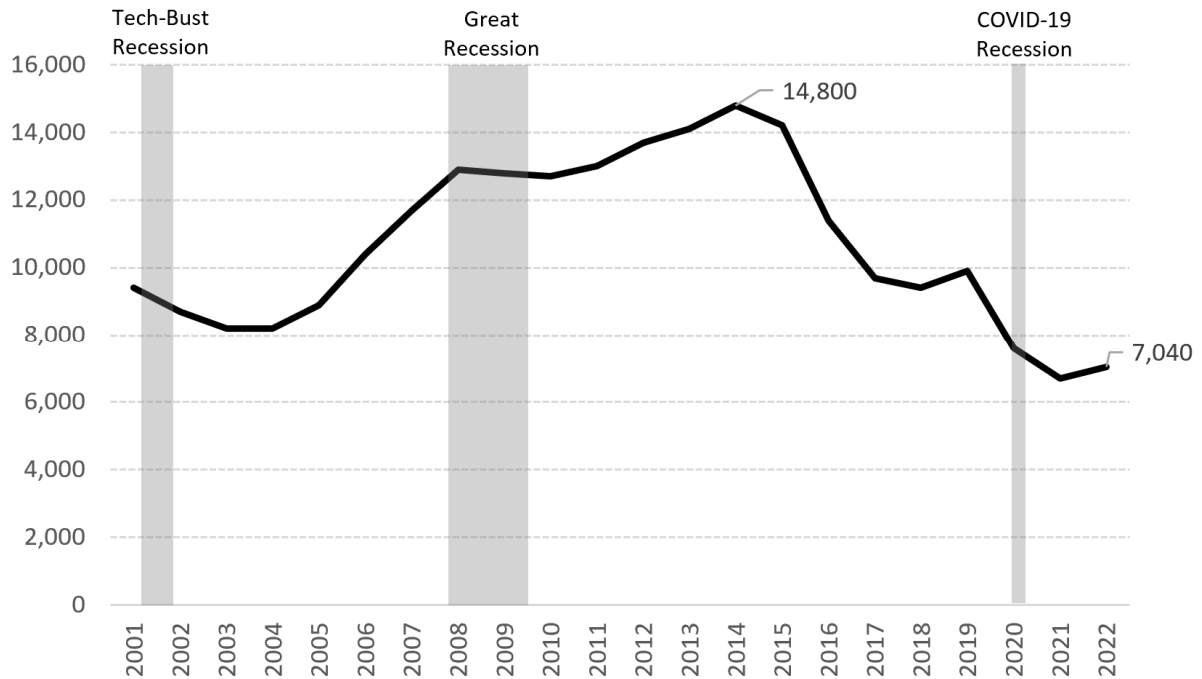
Sources: Alaska Department of Revenue—Tax Division and Unison Consulting, Inc.

<sup>22</sup> CNBC, “OPEC+ to Cut Oil Production BY2 Million Barrels per Day to Shore Up Prices, Defying U.S. Pressure,” 2022, <https://www.cnbc.com/2022/10/05/oil-opec-imposes-deep-production-cuts-in-a-bid-to-shore-up-prices.html>.

<sup>23</sup> CNN, “OPEC sticks with supply cuts as West tightens sanctions on Russian oil,” December 4, 2022, <https://www.cnn.com/2022/12/04/energy/opec-production-oil-prices/index.html>.

<sup>24</sup> CNBC, “Goldman cuts oil forecast on ‘lack of clarity’ over G-7 Russia oil price cap, China Covid outbreaks,” 2022, <https://www.cnbc.com/2022/11/21/goldman-sachs-cuts-oil-forecast-to-100-per-barrel.html>.

**Figure 14 | Alaska Oil Industry Employment, 2001-2022**

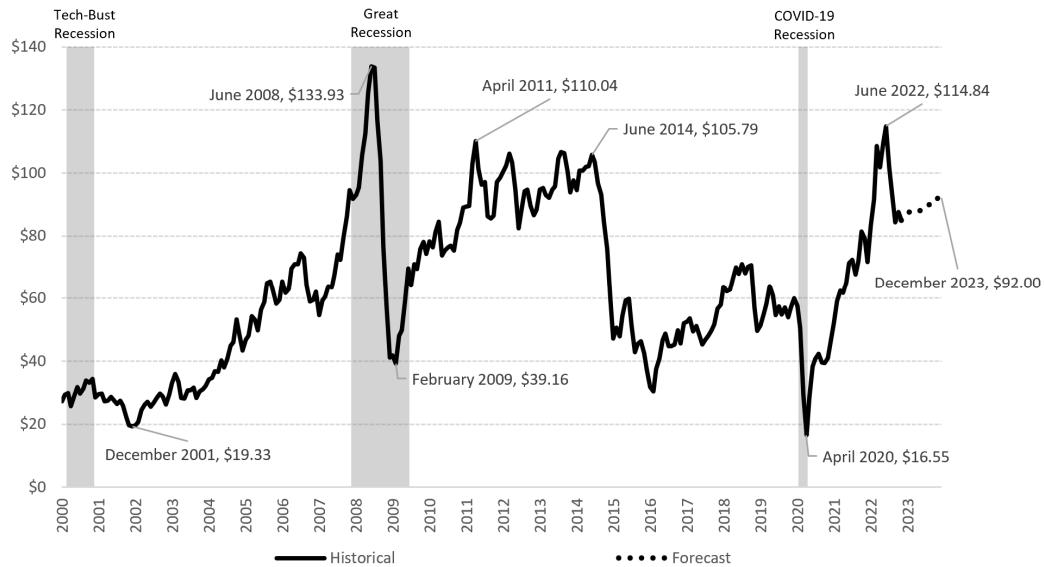


Data for 2022 is the monthly average of employment, year-to-date.

Gray areas indicate economic recession periods.

Sources: Alaska Department of Labor and Workforce Development, and Unison Consulting, Inc.

**Figure 15 | Recent and Forecast Monthly Crude Oil Prices, West Texas Intermediate, 2019-2023**



Gray areas indicate economic recession periods.

Sources: U.S. Energy Information Administration, and Unison Consulting, Inc.

## 4.5 Economic Outlook

The COVID-19 pandemic has ebbed, but the U.S. economy is showing signs of slowing amid inflationary pressures, weakening consumer confidence, and tightening monetary policy. The Federal Open Market Committee (FOMC) has been actively raising interest rates in 2022 to slow inflation. Through November 2022, the FOMC had increased the Fed Funds rate six times—by a total of 375 basis points, increasing the cost of capital for individuals and corporations. A strong dollar, which fundamentally signifies a strong economy, is dampening demand for U.S. exports. The global economy is also slowing—the International Monetary Fund (IMF) cut 2023 global growth forecasts, citing the effects of inflation, Russia’s invasion of Ukraine, and China’s economic slowdown.

Many aspects of the U.S. economy continue to show strength: the labor market, consumer spending, industrial production, and corporate profits, among others. Moreover, the pressures on the global supply chain have also eased, reducing supply constraints. Over the long-term, history has proven the resilience of the U.S. economy—its ability to bounce from shocks and return to a growth trajectory.

### Short-Term Outlook

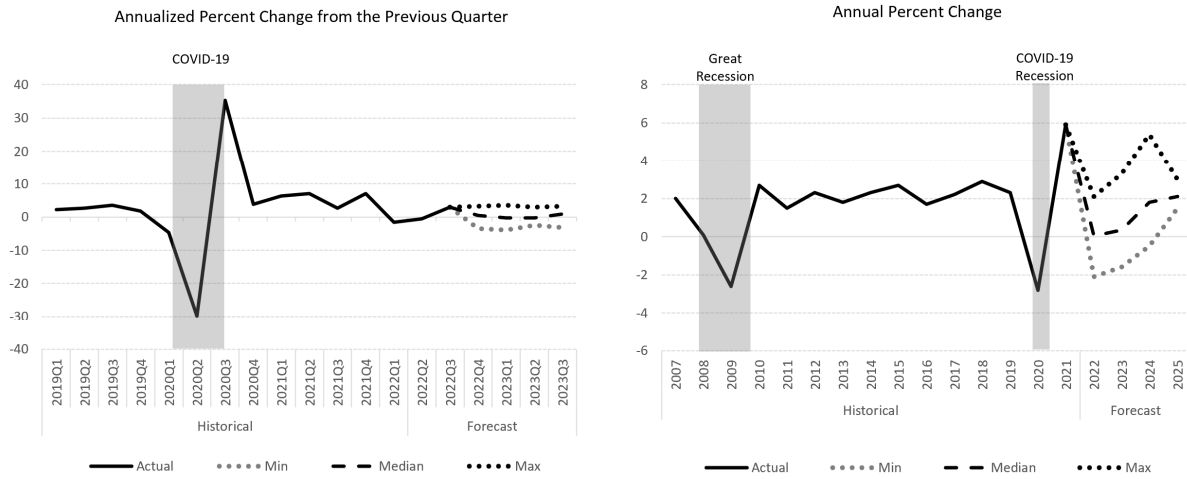
Predictions are cautious about the short-term economic outlook. According to the median estimates from *The Wall Street Journal* (WSJ) October 2022 Economic Forecasting Survey, U.S. real GDP is forecast to grow 0.5 percent in the fourth quarter of 2022, -0.3 percent in the first quarter of 2023, -0.2 percent in the second quarter of 2023, and 0.9 percent in the second quarter of 2023 (Figure 16). On an annual basis, the median estimate for GDP growth is 0.05 percent for 2022, 0.35 percent in 2023, 1.8 percent in 2024, and 2.1 percent in 2025. The range of predictions varies widely, including predictions of negative growth. The October 2022 WSJ median estimate for the probability that the U.S. economy slides into another recession within 12 months was 65 percent. Other estimates are also pessimistic.<sup>25, 26</sup>

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<sup>25</sup> The Conference Board, “US Recession Probability Reaches 96 Percent Heading into Q4,” *Navigating the Economic Storm*, September 29, 2022.

<sup>26</sup> Wells Fargo Economics, “Gonna Change My Way of Thinking: Is a Recession Coming? Part I: A New Toolkit to Predict Recessions,” *Special Commentary*, September 23, 2022.

**Figure 16 | Historical and Forecast Percent Change in U.S. Real GDP**



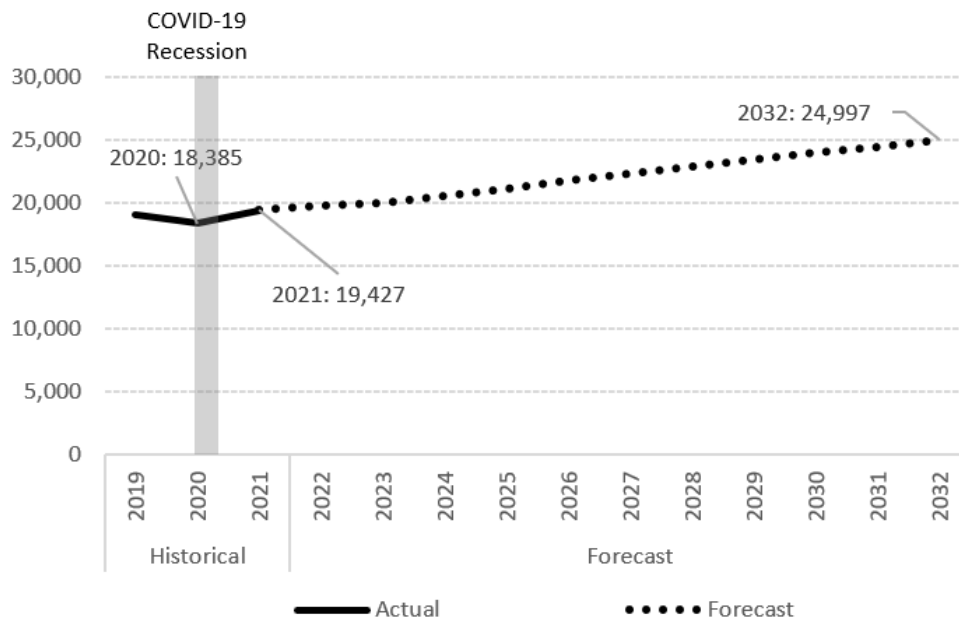
Gray areas indicate economic recession periods.

Sources: U.S. Bureau of Economic Analysis, Wall Street Journal Economic Forecasting Survey (October 2022), and Unison Consulting, Inc.

### Long-Term Outlook

In the long run, the U.S. economy is projected to return to a steady growth path (Figure 17). Moody’s Analytics forecasts the U.S. real GDP to grow at a compound annual rate of 2.3 percent from 2021 to 3032.

**Figure 17 | U.S. Real Gross Domestic Product (Billions, 2012 Dollars), 2019-2032**

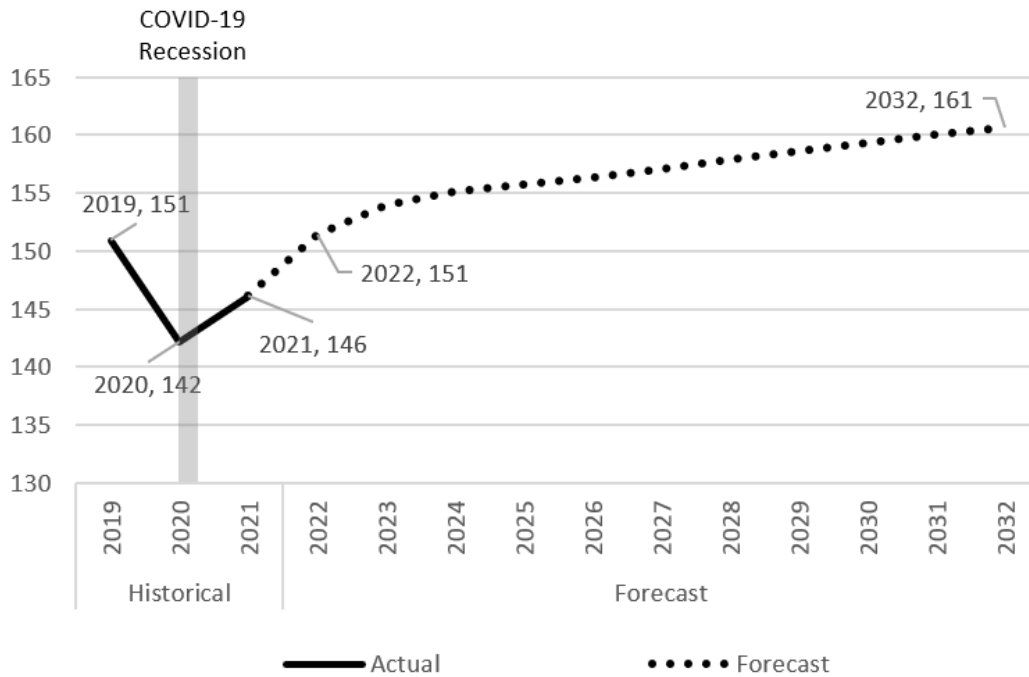


Gray areas indicate economic recession periods.

Sources: U.S. Bureau of Economic Analysis, Moody’s Analytics, and Unison Consulting, Inc.

Following the trend in economic output, U.S. employment is also expected to demonstrate robust growth throughout the next decade (Figure 18). After falling by almost 6 percent between 2019 and 2020, non-farm employment is forecast to reach pre-pandemic levels by the end of 2022. According to Moody’s Analytics, U.S. employment is projected to gain over 9 million jobs between 2022 and 2032, increasing at a compound annual rate of about 0.6 percent.

**Figure 18 | U.S. Total Nonfarm Employment (Millions), 2019-2032**



Gray areas indicate economic recession periods.  
 Sources: U.S. Bureau of Economic Analysis, Moody’s Analytics, and Unison Consulting, Inc.

## 4.6 Summary

Alaska’s economy has struggled since oil prices fell dramatically in 2014. Trends in GDP, establishments, employment, and unemployment have been weak. The state’s strong ties to oil markets leave it vulnerable to the movements in national and global prices, and declining oil production will continue to dampen tax revenues. On the other hand, recovery from the COVID-19 recession has been encouraging in terms of both employment levels and unemployment rates. Alaska’s strong tourism sector is also a bright point, stimulating air travel to Alaska and rental car demand at the Airport. Overall, as with the nation, economic signals in Alaska and in the Anchorage MSA are mixed.

Macroeconomic trends also show mixed signals, particularly in the short run. GDP growth has slowed. Consumer spending remains strong, although consumer confidence has begun to wane over inflation and recession worries. Rising interest rates—a consequence of Fed funds rate hikes to slow inflation—are dampening housing demand and threaten to slow capital investment. Labor demand,

industrial production, and corporate profits remain strong, and supply-chain bottlenecks have eased. Beyond 2023, the outlook remains positive, with GDP, employment, and corporate profits returning to their long-term growth trajectories. However, potential new variants of COVID-19 continue to present worries.

## 5 Historical Air Traffic Analysis

At airports, the demand for rental cars is a *derived demand*—derived from the demand for air travel to a particular destination. Airport rental car customers first make the choice to travel by air and then decide on renting a car because they need ground transportation once they get off their flights at the Airport. Arriving passengers (deplanements), particularly visitors ending their flights at ANC, constitute the market for airport rental cars. The Airport, however, tracks passenger traffic in terms of enplanements. Enplanements serve as a good proxy for deplanements, since the two measures track each other almost perfectly.

Historical monthly data on enplanements are available through October 2022. Projections are generated from a hybrid modeling framework that combines different forecasting methods, including a multivariate regression model of enplanements with the following explanatory variables: real per capita personal income of the Anchorage MSA and passenger yield at ANC.

### 5.1 Operating Airline History

According to data accessed on November 30, 2021, 12 different airlines had scheduled flights at ANC through 2021, with 15 airlines currently scheduled to operate flights in 2022. Table 2 shows all the airlines that have or have had scheduled flights at ANC from 2016 onward.

From 2016 to 2022, the airlines that have operated at ANC for the entire period include Alaska Airlines, American Airlines, Corvus Airlines, Delta Air Lines, Grant Aviation Inc., Sun Country Airlines, and United Airlines. Many of ANC's international carriers ceased operations at the Airport when the COVID-19 pandemic began in 2020, such as Air Canada, Condor Flugdienst, and Icelandair—of them, Air Canada and Condor Flugdienst resumed service in 2022. Other longstanding airlines that halted operations at ANC include JetBlue and Penair, though Penair is still contracted as a regional carrier for Alaska Airlines and Corvus Airlines. 2022 also introduced three other airlines to ANC: Aleutian Airlines, EW Discover, and Northern Pacific Airway.

All but two of ANC's 2022 airlines are scheduled to continue providing service in 2023. So far, Corvus and Iliamna do not have any scheduled 2023 flights at ANC as of the time of this report.

**Table 2 | Scheduled Passenger Airlines at ANC, by Calendar Year**

<b>Annual Scheduled Flights by Carrier</b>		2016	2017	2018	2019	2020	2021	2022	2023
<b>Code</b>	<b>Carrier Name</b>								
AS	Alaska Airlines <sup>1</sup>	•	•	•	•	•	•	•	•
AA	American Airlines	•	•	•	•	•	•	•	•
DL	Delta Air Lines	•	•	•	•	•	•	•	•
GV	Grant Aviation, Inc.	•	•	•	•	•	•	•	•
SY	Sun Country Airlines	•	•	•	•	•	•	•	•
UA	United Airlines	•	•	•	•	•	•	•	•
AC	Air Canada	•	•	•	•			•	•
DE	Condor Flugdienst	•	•	•	•			•	•
CON	ConocoPhillips Aviation Alaska				•	•	•	•	•
7S	Ryan Air					•	•	•	•
VC	Aleutian Airways							•	•
4Y	EW Discover							•	•
7H	Northern Pacific Airway							•	•
<b>Airports that have previously served ANC</b>									
7H	Corvus Airlines <sup>2</sup>	•	•	•	•	•	•	•	
IAR	Iliamna Air Taxi		•	•	•	•	•	•	
F9	Frontier Airlines Inc.						•		
H6	Hageland Aviation Services Inc						•		
VN	Vietnam Airlines					•			
FI	Icelandair	•	•	•	•				
B6	JetBlue Airways Corporation	•	•	•	•				
KS	Penair	•	•	•	•				
G4	Allegiant Air LLC				•				
8D	Servant Air, Inc.	•							

Note: Airlines and/or years with less than 10 scheduled flights are not included.

1 Contracts Penair and Horizon Air.

2 Contracts Penair.

Source: OAG Schedules Analyzer.

## 5.2 Major Developments Affecting U.S. Airport Traffic

A number of developments during the decade of 2001 to 2010 created a difficult operating environment for the entire U.S. aviation industry. The long-running U.S. economic expansion from the early 1990s ended with the brief recession from March to November 2001. The recession weakened air travel demand. While the U.S. economy was in recession, terrorists attacked U.S. aviation on September 11, 2001, causing a three-day shutdown of the U.S. aviation system. Air travel demand plummeted in the months following the terrorist attacks.

Weak economic growth after the 2001 recession slowed air traffic recovery. The stringent security measures implemented at airports after the terrorist attacks discouraged air travel especially to

short-haul destinations that can be reached by ground transportation. Airlines competed for passengers by lowering airfares. Meanwhile, both leisure and business travelers became increasingly price conscious, as the internet made it easy to search and compare airfares.

Airlines faced rising fuel costs. Fuel prices more than quadrupled from 2002 to 2008. Since reaching a historic peak in 2008, fuel prices have decreased but remained at record high levels until they began falling sharply in June 2014. During this peak in fuel prices was also PHL's peak in enplanements, which reached 15.7 million in FY 2008. Amid record fuel prices, the U.S. economy peaked in December 2007 and entered the Great Recession lasting through June 2009—the longest U.S. economic recession since the Great Depression. The recovery from this recession has also been the slowest of all recoveries from previous recessions since the Great Depression. The recession spread globally and weakened demand for passenger and air cargo services globally.

The series of major shocks to the U.S. aviation industry set in motion significant structural changes. Mounting financial difficulties led to airline bankruptcies and mergers that left the U.S. airline industry with four major airlines—American, Delta, Southwest, and United—controlling 80 percent of the U.S. domestic passenger traffic. Surviving airlines responded to weak demand and high fuel prices with cuts in domestic seat capacity, retirement of old aircraft, fleet reconfiguration, route transfers between mainline and regional service, route network changes, pricing changes, and various other cost-cutting measures.

In 2010 the U.S. airline industry as a whole began earning profits. In late 2014, jet fuel prices began falling along with world oil prices, returning to mid-2000s' levels. The sharp decrease in fuel costs brought airlines more profits, allowing them to renew their fleets and increase flight schedules while maintaining capacity discipline.

Most recently, in 2020, COVID-19 infections broke out, being declared a global pandemic by the World Health Organization (WHO) on March 11, 2020. On April 14, 2020, air traffic across the United States dropped almost 97 percent. Since then, the aviation industry has been in the process of recovering, but has yet to return to its pre-pandemic levels. The pandemic has had a significant impact on air travel. Even though recovery has ensued, the pandemic has set in motion structural changes in both the demand for air travel and the supply of airline passenger service that may have long-lasting effects on the airline industry.

Unlike the experience following previous shocks, the recovery of business travel from the pandemic has been slower than the recovery of leisure travel for holidays, vacations, and visiting friends and relatives. Factors delaying business travel recovery include the widespread adoption of virtual conferencing, the delay in the full return of workers to offices, and the possible permanent transition to remote work and hybrid work practices. International travel was suspended for an extended period; it continues to be depressed by travel restrictions that remain in place in varying degrees in certain countries. Slow recovery in business and international travel continues to slow passenger traffic recovery at most airports.

In response to the pandemic-induced decrease in air travel demand, airlines reduced capacity by retiring older aircraft models and postponing the delivery of new ones. Airlines also shrank their workforce by creating incentives for voluntary retirement and extended leave. As air travel demand rebounds, airlines are restoring flights. However, the constraint has shifted to the supply side: their ability to provide capacity to meet returning demand is being hampered by fleet constraints, delays in new aircraft deliveries, labor shortages, and resurgences in COVID-19 infections that have increased employee sick calls.

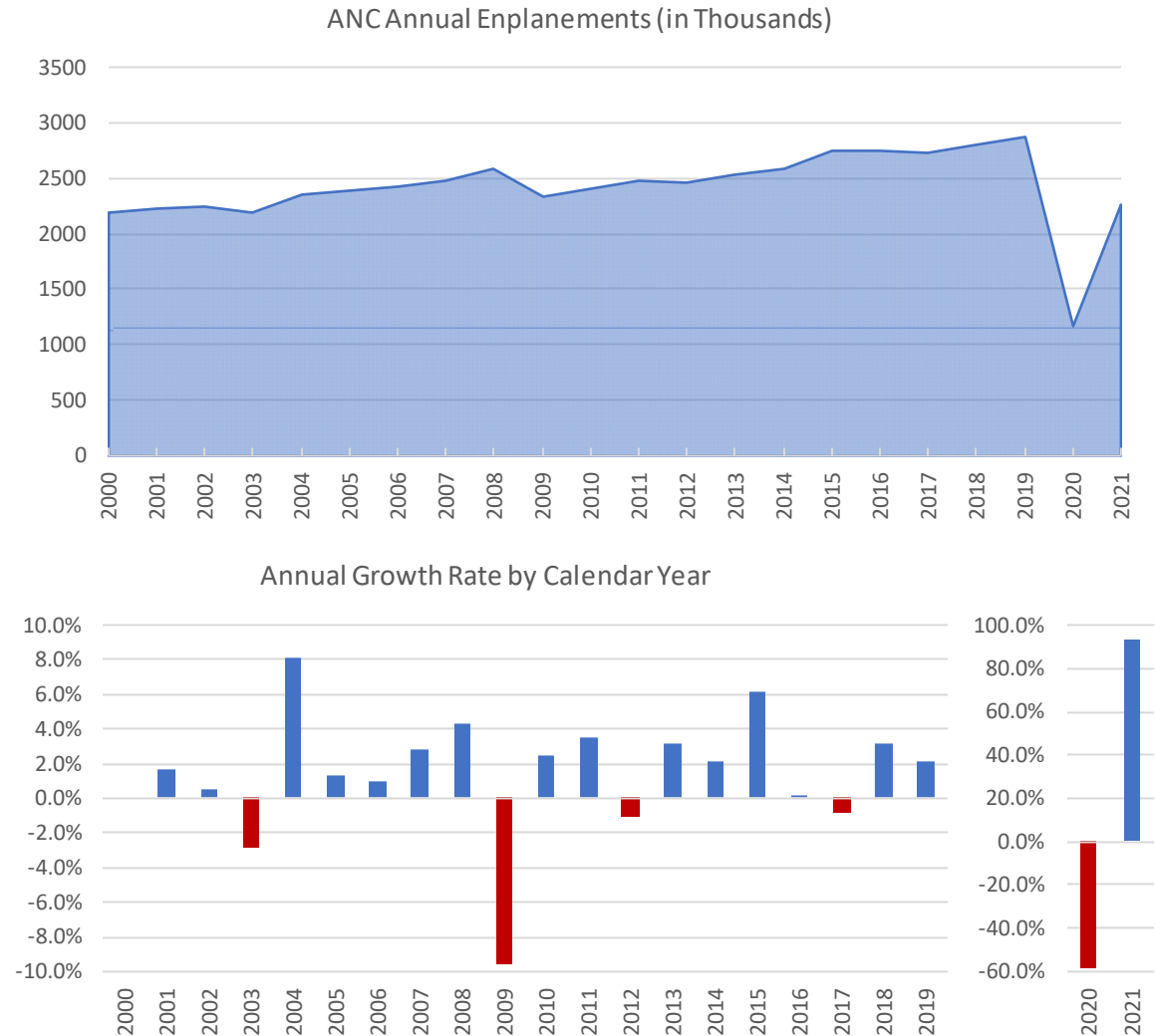
Unlike the situation in the aftermath of the Great Recession, consumers are recovering strongly from the deep but brief recession caused by the COVID-induced economic lockdowns and stay-at-home orders. The job market rebounded strongly: today unemployment is at historically low levels and job openings outnumber those looking for jobs. Households emerged, on average, with relatively healthy finances and the ability to spend on the pent-up demand for travel.

### **5.3 ANC Historical Enplanement Trends**

ANC followed a slow but gradual upward trend since 2000, only experiencing four past declines prior to the COVID-19 pandemic: in 2003, 2009, 2012, and 2017. Enplanements faced a 9.6 percent decrease in 2009 due to the Great Recession, but the other three declines were all much smaller—under 3 percent. After the Great Recession, however, ANC’s relatively slow growth would not reach its previous 2008 peak until 2014. From there, enplanements would steadily grow to a 2019 peak of 2.9 million. In 2020, the COVID-19 pandemic caused a sharp drop in air traffic activity around the globe, and ANC experienced a large decline of 59.2 percent in enplanements (down to 1.2 million).

Despite not yet reaching pre-pandemic levels, recovery has been progressing quickly, with a substantial 92.8 percent increase in enplanements from 2020 to 2021, up to 2.3 million enplanements.

**Figure 19 | Historical Enplanement Trends at ANC by Calendar Year**



Source: Airport records.

## 5.4 Airport Comparison with National Trends

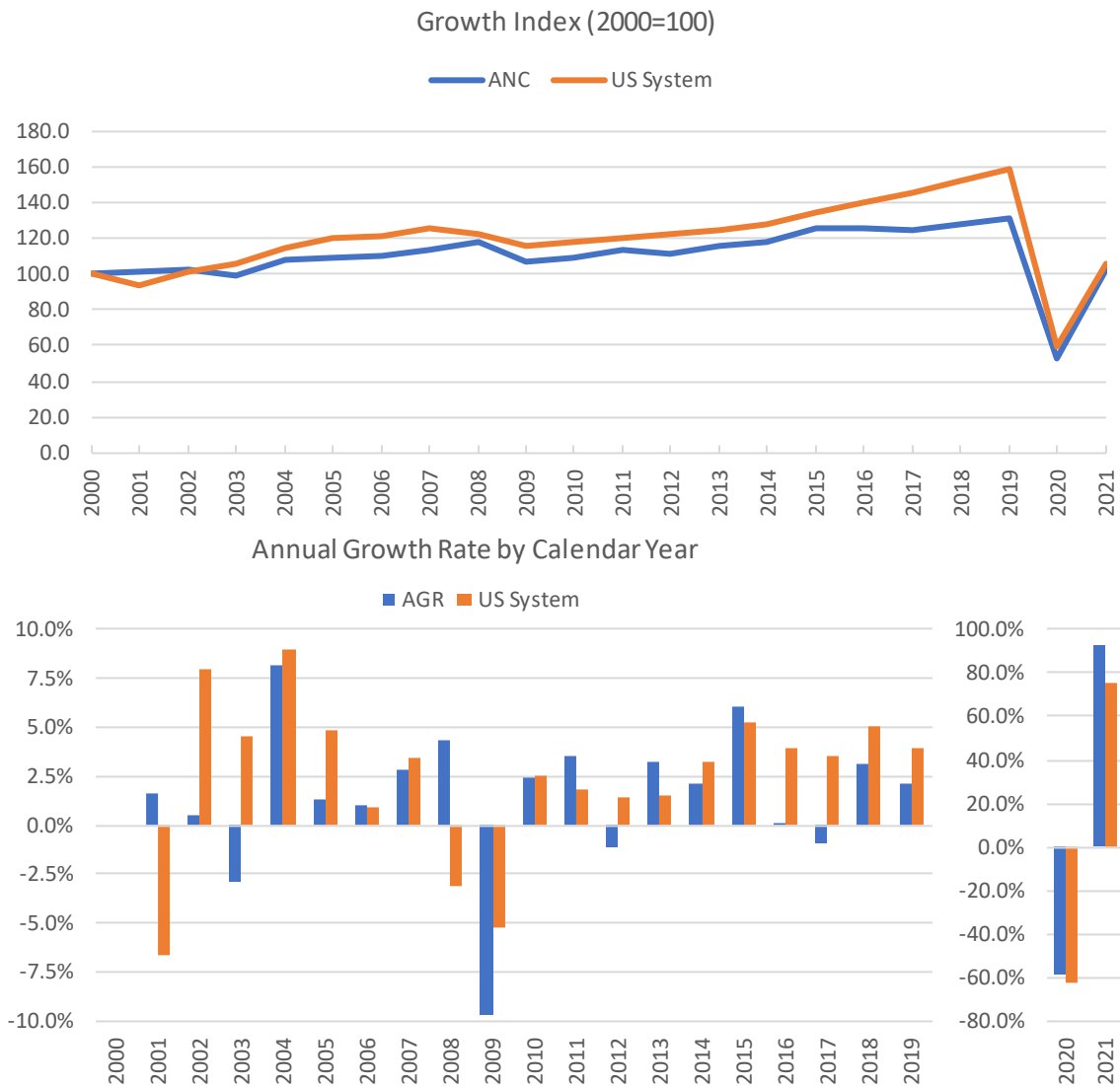
Figure 20 compares enplanement growth trends between ANC and the U.S. total from 2000 to 2020, and Figure 21 records the Airport’s annual share of the national total of enplanements.

Unlike the U.S. total, ANC did not suffer a decline in 2001 after the September 11 terrorist attacks. However, ANC faced a decrease later on in 2003, which was also the year that the U.S. total growth rate exceeded that of the Airport. Since then, ANC’s growth rate remained behind the U.S. system. The national decline in enplanements due to the Great Recession began in 2007 and continued through 2009—ANC’s decline was later, starting in 2008, but had a sharper decrease in that shorter time. After the Great Recession, enplanement growth for the U.S. system was more consistent than that of ANC, eventually building a gap in growth rate and reducing ANC’s share of total enplanements. Upon the COVID-19 pandemic in 2020, travel restrictions across the country caused

the national total of enplanements to fall deeper than that of the Airport—down 62.2 percent for the U.S. system, and down 59.2 percent for ANC. Both drops caused the 2020 enplanement levels for ANC and across the nation to fall well below their 2000 levels.

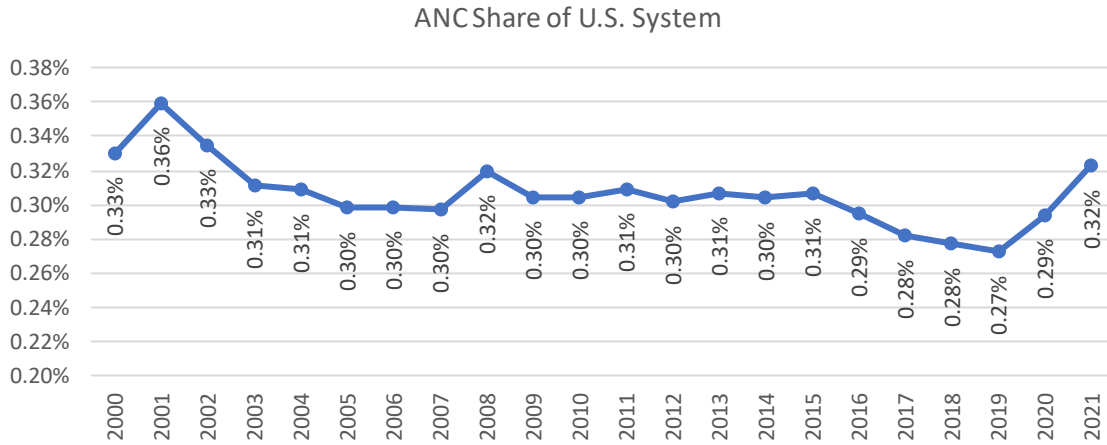
ANC is classified as a medium hub commercial service airport by the FAA. A medium hub is defined as an airport enplaning at least 0.25 percent but less than 1 percent of total U.S. enplanements. Over the course of the past two decades, ANC’s share of total U.S. enplanements has been gradually shrinking from its 2000 share of 0.33 percent. Aside from two notable increases, one in 2001 and another in 2008, ANC largely maintained a share of 0.30 to 0.31 percent until 2015. After 2015, ANC’s growth lagged behind the U.S. system, and its share shrunk down to 0.27 percent in 2019. Due to ANC experiencing an overall smaller decline than the U.S. System during the start of the COVID-19 pandemic in 2020, the Airport’s share saw a recent increase to 0.29 percent.

**Figure 20 | ANC and U.S. Total Enplanement Growth by Calendar Year**



Source: Airport records and Bureau of Transportation Statistics.

**Figure 21 | ANC Share of Total U.S. Enplanements by Calendar Year**



Source: Airport records and Bureau of Transportation Statistics.

Table 3 shows the underlying data for enplanement trends between ANC and the national total, including the year-to-date count for 2021.

**Table 3 | Annual Enplanements at ANC and the U.S. System**

<b>Annual Enplanements</b>					
<b>CY</b>	<b>ANC</b>		<b>US System</b>		<b>ANC Share of US System</b>
	<b>EP (1000s)</b>	<b>AGR</b>	<b>EP (1000s)</b>	<b>AGR</b>	
2000	2198		665,487		0.33%
2001	2233	1.6%	621,369	-6.6%	0.36%
2002	2246	0.6%	670,604	7.9%	0.33%
2003	2181	-2.9%	700,864	4.5%	0.31%
2004	2359	8.2%	763,710	9.0%	0.31%
2005	2391	1.3%	800,850	4.9%	0.30%
2006	2414	1.0%	808,103	0.9%	0.30%
2007	2482	2.8%	835,510	3.4%	0.30%
2008	2590	4.4%	809,822	-3.1%	0.32%
2009	2341	-9.6%	767,817	-5.2%	0.30%
2010	2398	2.5%	787,478	2.6%	0.30%
2011	2483	3.5%	802,135	1.9%	0.31%
2012	2455	-1.1%	813,123	1.4%	0.30%
2013	2534	3.2%	825,322	1.5%	0.31%
2014	2589	2.2%	851,850	3.2%	0.30%
2015	2747	6.1%	896,632	5.3%	0.31%
2016	2748	0.0%	931,989	3.9%	0.29%
2017	2723	-0.9%	964,765	3.5%	0.28%
2018	2808	3.1%	1,013,213	5.0%	0.28%
2019	2869	2.2%	1,052,981	3.9%	0.27%
2020	1172	-59.2%	398,655	-62.1%	0.29%
2021	2260	92.8%	700,556	75.7%	0.32%
YTD 2021	1007		279,647		0.36%
YTD 2022	1918	90.5%	62,151	-77.8%	3.09%
<b>Compound Annual Growth Rate</b>					
2000-2010	0.9%		1.7%		
2007-2009	-2.9%		-4.1%		
2000-2019	1.4%		2.4%		
2019-2021	-11.2%		-18.4%		
2000-2021	0.1%		0.2%		

YTD = January through October.

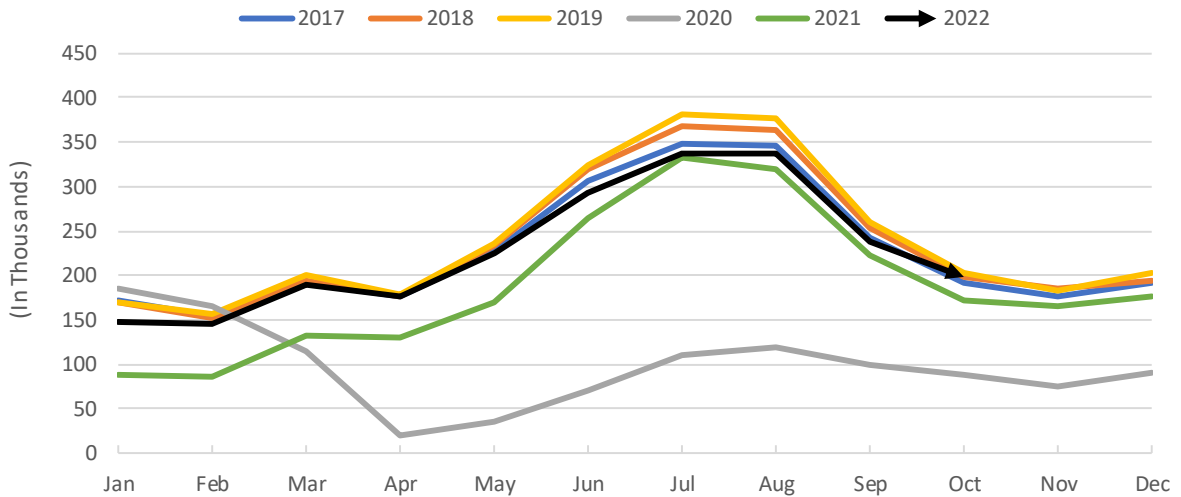
Source: Airport records and Bureau of Transportation Statistics.

## 5.5 Seasonality in Enplanements

Figure 22 shows the monthly enplanement levels at ANC for the past six calendar years up to October 2022. Each year, ANC's enplanements consistently peak in the summer and dip in the

winter. 2020 broke this pattern due to air traffic dropping almost 97 percent across the United States in April. Since then, ANC’s 2020 enplanements remained well below previous years. Enplanements in 2021 eventually returned to the usual trend of peaking in the summer, but still at a noticeably lower level than pre-pandemic years. Through 2022 so far, ANC’s enplanement trends appear to have almost fully returned to normal patterns, albeit at levels still slightly lower than pre-pandemic years. The difference from pre-pandemic years is most noticeable during the summer rise in activity.

**Figure 22 | Monthly Enplanements**



Source: Airport records.

Table 4 shows the monthly enplanements shares of each annual total from 2010 forward (aside from 2022, due to not having the full year’s total yet), and highlights the largest and smallest monthly shares each year. July is most often the peak month each year, with February consistently having the least enplanements. 2020 disrupted this pattern due to the COVID-19 pandemic and the suspension of air traffic in April, but monthly enplanement shares returned to usual trends in the next year.

**Table 4 | Monthly Enplanement Shares**

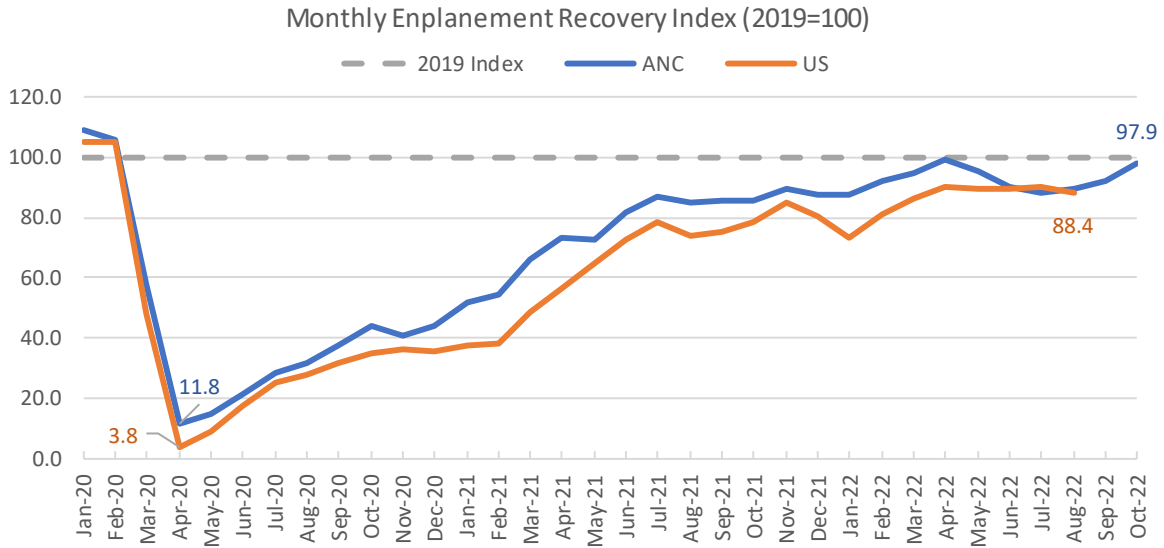
Enplanement Shares												
Month	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Jan	6.4%	6.3%	6.4%	6.3%	6.4%	6.3%	6.4%	6.3%	6.0%	5.9%	15.7%	3.9%
Feb	5.4%	5.6%	5.9%	5.6%	5.6%	5.5%	5.8%	5.7%	5.4%	5.5%	14.1%	3.8%
Mar	6.6%	7.3%	7.2%	7.0%	7.2%	7.2%	7.3%	7.1%	6.9%	7.0%	9.8%	5.8%
Apr	6.3%	6.3%	6.5%	6.3%	6.1%	6.3%	6.4%	6.4%	6.3%	6.2%	1.8%	5.8%
May	8.0%	8.0%	8.3%	8.4%	8.4%	8.3%	8.4%	8.3%	8.3%	8.2%	3.0%	7.6%
Jun	11.0%	11.0%	11.0%	11.0%	10.4%	10.8%	11.2%	11.2%	11.3%	11.3%	6.0%	11.7%
Jul	13.1%	12.9%	12.6%	12.9%	12.7%	13.0%	12.7%	12.8%	13.1%	13.3%	9.3%	14.7%
Aug	12.9%	12.5%	12.5%	12.8%	12.5%	12.5%	12.7%	12.7%	13.0%	13.1%	10.2%	14.2%
Sep	8.9%	9.1%	8.8%	9.1%	9.1%	8.9%	8.9%	8.9%	9.1%	9.1%	8.4%	9.9%
Oct	7.4%	7.3%	7.0%	7.2%	7.4%	7.2%	6.8%	7.0%	7.0%	7.0%	7.6%	7.6%
Nov	6.7%	6.6%	6.7%	6.3%	6.6%	6.6%	6.4%	6.5%	6.6%	6.4%	6.4%	7.3%
Dec	7.3%	7.0%	7.0%	7.1%	7.5%	7.2%	7.1%	7.0%	6.9%	7.1%	7.7%	7.8%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
	Third largest share percentage of CY total.					Third smallest share percentage of CY total.						
	Second largest share percentage of CY total.					Second smallest share percentage of CY total.						
	Largest share percentage of CY total.					Smallest share percentage of CY total.						

Source: Airport records.

## 5.6 Monthly Enplanement Recovery

In April 2020, the COVID-19 pandemic caused all air traffic across the United States to drop dramatically, and has since been working to recover—the U.S. system fell to 3.8 percent of its 2019 level, and ANC fell to 11.8 percent. The Airport did not suffer as big a decline as the national total, and has maintained an overall faster recovery in the following months. Due to the delta variant of COVID-19 and its associated fourth wave of infections that started in the mid-summer of 2021, recovery for both ANC and the U.S. system began to plateau in July. Recovery was disrupted again through the holidays of 2021, leading up to the omicron variant and its record-breaking fifth wave of infections in January 2022. After the fifth wave, however, infections declined swiftly and recovery continued. ANC’s recovery faced another downswing through the late spring into summer of 2022, but has since returned to an upward direction. As of August 2022, the U.S. system’s recovery has reached 88.4 percent of its 2019 level. Available enplanement data for ANC goes two months further, and as of October 2022, the Airport has reached 97.9 percent of its 2019 level.

**Figure 23 | Monthly Recovery Comparison, ANC vs. U.S. System**



Source: Airport records and Bureau of Transportation Statistics.

## 6 Air Traffic Forecasts

Forecast development considers the recent pandemic impacts, demand and supply changes in the aviation industry, and changes in the business environment, as well as the fundamental drivers of growth in passenger traffic. We combine multiple forecasting methods and data sources in a hybrid modeling framework to project air traffic during different phases of recovery and growth.

Forecast development acknowledges high uncertainty in the development of the pandemic and the outlook for the aviation industry and the overall economy. We present three forecast scenarios—labeled “Base,” “High,” and “Low”—differentiated by the pace of air traffic growth in the short- and long-term. The Base scenario assumes a continuation of recent growth trends in the economy and air traffic. The High scenario provides an optimistic outlook for the economic and air traffic growth trends, assuming an easing of airline capacity constraint, downward pressure on inflation, and a boost in the labor market and national production. The Low scenario provides a conservative outlook for the economic and air traffic growth trends, accounting for the several adverse short-term factors, which include persistent labor and fleet constraints on airline capacity, upward inflationary pressures, and the slowing of the global economy, including the increased risk of a global economic recession.

The three scenarios provide a reasonable range for planning and sensitivity analysis. However, forecasts are inherently uncertain, and many factors can cause actual performance to fall outside the forecast range. At the time of forecast development, the airline industry and the broad economy are undergoing significant structural changes, elevating the various sources of risks and uncertainty, which will be discussed in detail at the end of the forecasting section.

## 6.1 Forecast Methodology

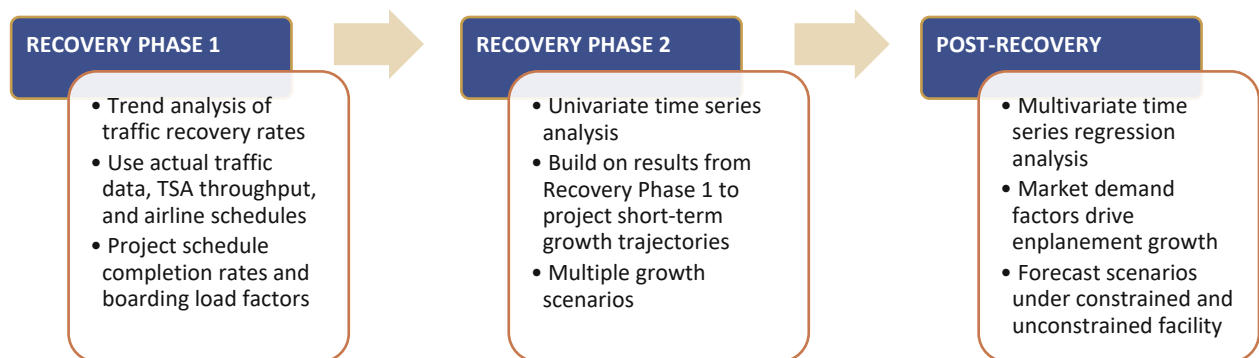
A hybrid modeling framework leverages the strengths of different forecasting methods and data sources in projecting air traffic during different phases of growth (Figure 24). The forecast period is divided into two phases: a recovery phase and a post-recovery growth phase. The recovery phase is subdivided into two phases, distinguished by the type of data sources and analysis employed to project different traffic measures.

For the recovery phase, we analyze short-term air traffic growth trends and produce projections of enplanements using a combination of published airline schedules, schedule completion rates, and boarding load factors. During this phase, the ramp-up of passenger traffic is projected on a monthly frequency. Once the growth of projected monthly enplanements achieves 2019 pre-covid levels and stabilizes, which reflects a return to historical growth patterns, the forecast period enters a post-recovery growth phase. In this phase, we use multivariate regression analysis to quantify the relationship between passenger demand for air travel and key market drivers and to project annual enplanement growth rates based on projected trends in the key market drivers.

Forecast development by phase considers the different factors that are expected to drive traffic trends across the phases. It tailors different methods, data, and assumptions to better model the effects of those factors on air traffic. For instance, in the recovery phase, we consider the interplay between recent developments in the COVID-19 pandemic, the economy, and the capacity constraint of airlines in setting assumptions for forecast inputs, which include the projected schedule completion rates and boarding load factors. We apply these forecast inputs to advance airline schedules to project monthly enplanement levels and select a functional representation for the recovery trajectory of passenger traffic.

In the post-recovery growth phase, the short-run factors, although still an important concern, will likely play less role in driving passenger traffic trends. Instead, market demand factors, such as income and price, will again become the primary drivers of growth in passenger traffic.

**Figure 24 | Forecast Development by Phase**



## 6.2 Recovery Phase 1

In this phase, forecast development considers the recent progress in traffic recovery and growth. At the time of forecast development, data on actual enplanement was available through October 2022. The TSA screening throughput data was available through November 2022, reflecting ANC’s near real-time passenger traffic patterns. Advance airline schedules (accessed in December 2022), supplemented with TSA screening throughput data, provide the starting point for projecting monthly enplanements for the remainder of 2022 and through May 2023. To project available seats, the published schedules are adjusted to anticipate cuts by applying schedule completion rates. Projections of boarding load factors (BLF) are then applied to available seats to project enplanements. The calculations are done on a monthly frequency.

Airlines adjust their published schedules periodically depending on flight bookings and projected availability of aircraft and crew. Schedules for months farther into the future are often subject to greater adjustments until the date of operation. Changes to the schedules, mostly downward, were amplified during the COVID-19 pandemic, as airlines could no longer rely on advance bookings and predictable demand patterns in setting flight schedules. Because of these characteristics of published schedules, only schedules for the six month-period, November 2022 to May 2023, are used in forecast development.

In projecting seat capacity, we apply a completion factor to scheduled seats to anticipate such cuts in the advance schedules. These completion factors account for the countervailing effects of the strengthening in bookings in 2022 and the staffing and fleet constraints that have forced airlines to cut schedules. Table 5 shows the schedule completion rate assumptions, which begin to fall in 2023 and drop to as low as 88 percent in May 2023 in the Low scenario.

**Table 5 | Projected Schedule Completion Rates and Seats**

Month	Seat Completion Rate			Projected Seats		
	Scenario 1	Scenario 2	Scenario 3	Scenario 1	Scenario 2	Scenario 3
	Base	High	Low	Base	High	Low
Nov-22	100.0%	100.0%	100.0%	237,529	237,529	237,529
Dec-22	100.0%	100.0%	100.0%	255,307	255,307	255,307
Jan-23	98.8%	100.0%	95.8%	248,551	251,642	241,002
Feb-23	97.7%	100.0%	94.7%	224,816	230,042	217,915
Mar-23	95.9%	98.9%	92.9%	245,968	253,660	238,276
Apr-23	94.7%	97.7%	91.7%	230,232	237,524	222,940
May-23	91.0%	94.0%	88.0%	272,714	281,702	263,726

Source: OAG advance airline schedules and forecasts by Unison Consulting, Inc.

The BLF assumptions in Table 6 reflect seasonal patterns and current trends in ANC’s monthly average BLFs. Between January and October 2022, ANC’s monthly average BLFs remained around 94 percent of 2019 levels. Since July 2022, when monthly average BLFs dipped below 90 percent of the

2019 level, monthly average BLFs have steadily improved and exceeded the 2019 level in October 2022.

In the forecast scenarios, monthly average BLFs are assumed to be near or above their 2019 levels, a continuation of current improving trends. Specifically, relative to the 2019 levels, the November 2022-May 2023 monthly BLFs are assumed to be 1.1 percentage points higher on average in the Base scenario, 4.1 percentage points higher in the High scenario, and 1.9 percentage points lower in the Low scenario.

**Table 6 | Projected Boarding Load Factors (BLF)**

2019 and 2022 Boarding Load Factors				2022-2023 Boarding Load Factors <sup>3</sup>			
Month	2019 BLF <sup>1</sup>	2022 BLF	Difference (pp) <sup>2</sup>	Month-Year	Scenario 1 Base	Scenario 2 High	Scenario 3 Low
Jan	69.6%	66.2%	-3.4	Jan-23	70.7%	73.7%	67.7%
Feb	73.2%	67.8%	-5.4	Feb-23	74.3%	77.3%	71.3%
Mar	79.9%	75.6%	-4.3	Mar-23	81.0%	84.0%	78.0%
Apr	71.6%	67.2%	-4.4	Apr-23	72.7%	75.7%	69.7%
May	78.0%	73.1%	-4.8	May-23	79.1%	82.1%	76.1%
Jun	78.7%	72.7%	-6.0				
Jul	84.4%	74.5%	-9.9				
Aug	85.4%	77.2%	-8.2				
Sep	81.5%	77.1%	-4.4				
Oct	76.7%	78.3%	1.6				
Nov	75.2%			Nov-22	76.3%	79.3%	73.3%
Dec	78.2%			Dec-22	79.3%	82.3%	76.3%

<sup>1</sup> BLF = enplanements/seats.

<sup>2</sup> Percentage-point (pp) difference between the 2022 and 2019 monthly BLF. Negative values indicate lower 2022 BLF, compared to the 2019 levels.

<sup>3</sup> BLF forecasts begin in November 2022.

Source: Unison Consulting, Inc.

### 6.3 Recovery Phase 2

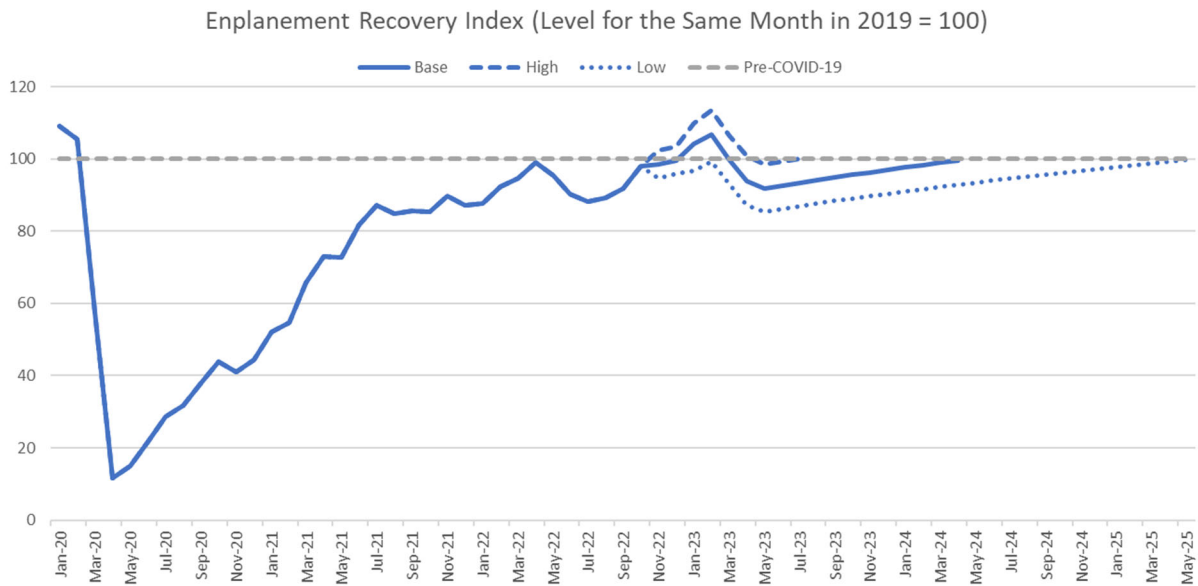
In this phase, we continue to analyze the pace at which enplanements recover to the pre-COVID level using univariate time series analysis. We evaluate both linear and logarithmic functional forms to fit recovery trendlines from April 2020, when passenger traffic reached its lowest level during the pandemic, to May 2023, the end of Recovery Phase 1. The linear function projects a straight-line trajectory and a faster recovery compared with the logarithmic function. The logarithmic trendline projects an initial acceleration of recovery and eventual tapering, resulting in a longer recovery period than that projected by a linear trendline.

The logarithmic function produces a trendline that reflects the shape of recovery so far. ANC's recovery initially followed a steep trajectory and a slowdown in recovery rates after June 2021

(Figure 25). Our projections show ANC beginning to achieve and sustain monthly enplanements above pre-COVID levels in 2023 in the High scenario, in 2024 in the Base scenario, and in 2025 in the Low scenario:

- Scenario 1 (Base) – Monthly enplanements return to pre-COVID levels by April 2024, with total annual enplanements exceeding the 2019 level in 2025. The projected recovery timeline is similar to A4A’s optimistic forecast for the U.S. airline industry as of November 14, 2022, which projects a return to 2019 passenger volume after 2024.<sup>27</sup>
- Scenario 2 (High) – Monthly enplanements return to pre-COVID levels by July 2023, and total annual enplanements begin to exceed the 2019 level by the end of the year. The projected recovery period is similar to A4A’s optimistic forecast for the U.S. airline industry, which projects a return to 2019 passenger volumes by the end of 2023.
- Scenario 3 (Low) – Monthly enplanements return to pre-COVID levels by May 2025. Annual enplanements begin to exceed the 2019 level by the end of the year.

**Figure 25 | Monthly Enplanements: Forecast Recovery to Pre-COVID Level**



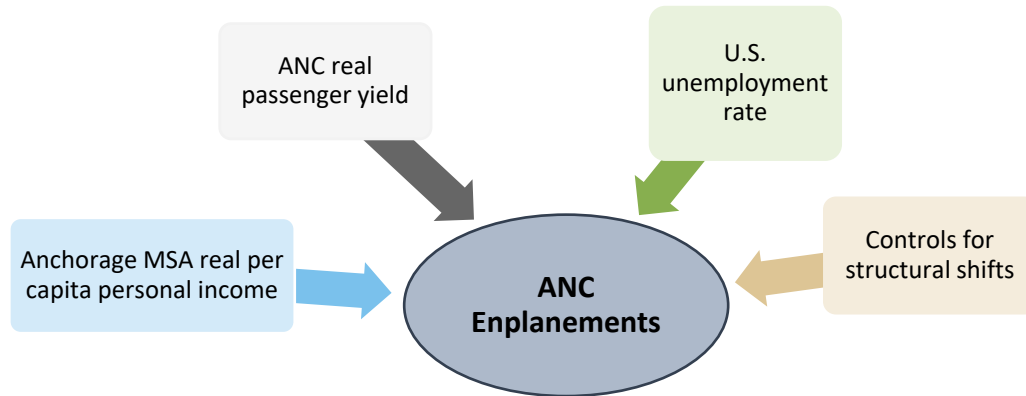
Forecasts begin in October 2022.  
 Source: Unison Consulting, Inc.

<sup>27</sup> Airlines for America, *COVID Impact Updates*, November 14, 2022.

## 6.4 Post-Recovery Growth Phase

Full recovery to pre-COVID levels marks the end of the recovery phase and the start of the post-recovery phase. Under the current assumptions, this phase begins after 2023 in the High scenario, in 2024 under the Base scenario, and in 2025 under the Low scenario. In the post-recovery phase, we assume that traffic growth will return to long-term patterns. The growth in passenger traffic will again be “demand-driven”—determined by economic drivers underlying the demand for air travel (Figure 26). We assume that airlines will be providing seat capacity based on demand.

**Figure 26 | Long-Term Passenger Air Travel Demand Drivers**



Source: Unison Consulting, Inc.

Multivariate time series regression analysis provides the quantitative framework for measuring the contributions of demand drivers to enplanement growth, while controlling for the effects of structural changes. Forecasting using regression analysis is executed in two steps. In the first step, a regression equation is estimated using historical data—in this case, quarterly data from 2000 to 2019. The regression equation includes “coefficients” that measure the contributions of each driver (explanatory variable) to annual enplanements. The statistical method for estimating the regression equation minimizes prediction errors—the difference between the actual and predicted enplanement levels. In the second step, forecasts are generated using the regression coefficient estimates and the projected values for the regression model’s explanatory variables.

The specification of the regression model follows economic theory, representing the demand of air travel as a function of income and price. The dependent variable is quarterly enplanement, and the key explanatory variables include two economic and income indicators (the Anchorage MSA’s real per capita personal income and U.S. unemployment rate) and a price indicator (ANC’s real passenger yield).

In the Base scenario, the forecasts of economic and income indicators and real passenger yield come from Moody’s Analytics (forecast update as of November 2022) and FY2022-2042 FAA Aerospace Forecasts, respectively. Alternative growth rates are used in the High and Low scenarios. These

alternative growth rates, which are discussed below, are produced by adjusting the Base scenario's growth rates using the forecasts in the Wall Street Journal's October 2022 Economic Survey.<sup>28</sup>

To control for the effects of seasonality and structural changes, the regression model includes two additional explanatory variables: control variables that capture the quarterly differences in average enplanement levels and a control variable that captures the permanent changes in the aviation industry after the 9/11 terrorist attack in 2001. Additional variables are included to adjust for serial correlation that are common in time series data.

Together these explanatory variables prove to be strong predictors of ANC's historical enplanement levels. Adjusted R-squared is used as one of measures of the model's predictive power, with a measure of one indicating a perfect fit. The adjusted R-squared of the model is nearly 0.99.

### **Anchorage MSA's Real per Capita Personal Income**

The Anchorage MSA's real per capita personal income indicates consumer income and overall economic trends for the region. Holding all other factors constant, growth in real per capita personal income promotes growth in enplanements. Conversely, decreases in real per capita personal income decreases enplanements. The positive regression coefficient estimate for real per capita personal income confirms the direct relationship between income and air travel demand.

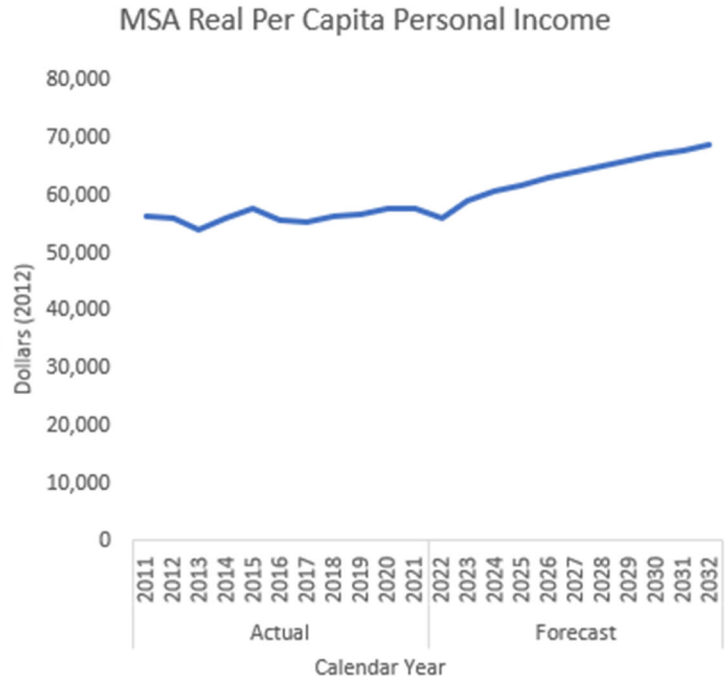
According to the forecasts of Moody's Analytics, the MSA's real per capita personal income in the Base scenario is expected to fall in 2022 before recovering in 2023 and continuing on its long-term growth trajectory. The 2022-2032 compound annual growth rate is 2.0, compared to 0.3 percent in the previous decade. Relative to the Base scenario, the 2022-2032 compound annual growth rate is assumed to be 0.4 percentage points higher in the High scenario (2.4 percent) and 0.3 percentage points lower and lower the Low scenario (1.7 percent).

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<sup>28</sup> As the WSJ Economic Survey does not provide forecasts for the MSA per capita personal income, we adjust the MSA's per capita personal income in the High and Low scenarios using the Survey's forecasts of real GDP growth rates.

**Figure 27 | Anchorage MSA Real Per Capita Personal Income**

	Calendar Year	Real Per Capita Personal Income, Anchorage MSA	
		2012\$	AGR (%)
Actual	2011	56,414	1.2%
	2012	56,090	-0.6%
	2013	53,910	-3.9%
	2014	55,934	3.8%
	2015	57,881	3.5%
	2016	55,720	-3.7%
	2017	55,308	-0.7%
	2018	56,325	1.8%
	2019	56,706	0.7%
	2020	57,575	1.5%
	2021	57,861	0.5%
Forecast	2022	56,073	-3.1%
	2023	58,902	5.0%
	2024	60,603	2.9%
	2025	61,883	2.1%
	2026	63,129	2.0%
	2027	64,156	1.6%
	2028	65,185	1.6%
	2029	66,166	1.5%
	2030	67,045	1.3%
	2031	67,853	1.2%
	2032	68,631	1.1%
	<b>Compound Annual Growth Rate</b>		
	2011-2021		0.3%
	2022-2032		2.0%



Notes: Annual growth rate (AGR)

Source: historical data come from the Bureau of Economic Analysis and forecasts by Moody's Analytics.

### Real Passenger Yield at ANC

Real passenger yield is total airline passenger revenues divided by revenue passenger miles, adjusted for inflation. Real passenger yield indicates the price of air travel.<sup>29</sup> The law of demand applies to demand for air travel: the quantity purchased varies inversely with price, holding other factors constant. The negative regression coefficient estimate for real passenger yield confirms this inverse relationship.

Between 2019 and 2021, RNO's real passenger yield decreased by an annual rate of 13.2 percent as airlines reduced air fares to raise passenger traffic (Figure 28). Compared to this steep decline, the

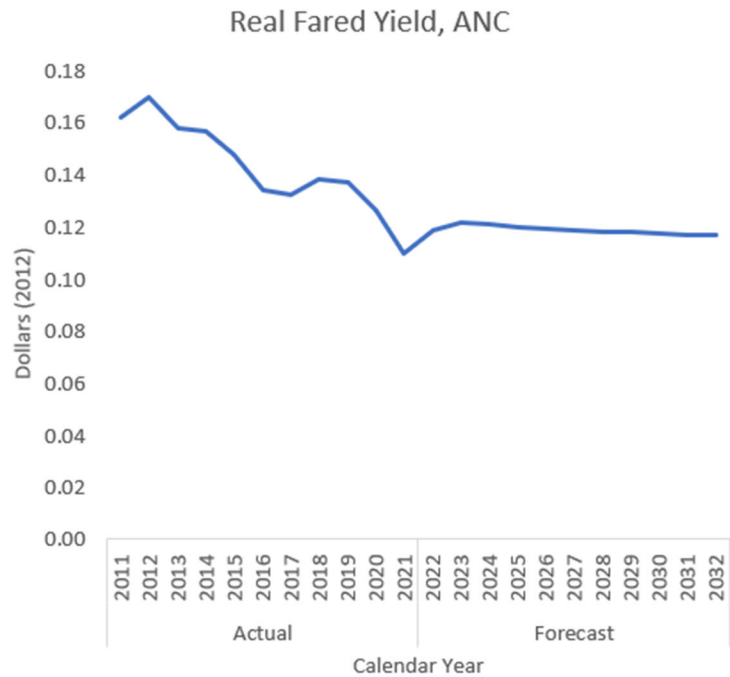
<sup>29</sup> Real passenger yield is a better indicator of the price of air travel than average fare because it controls for trip distance.

real passenger yield only fell by an average annual rate of around 2 percent between 2011 and 2019.

Over the forecast horizon, real passenger yield at ANC is expected to increase to and hold steady at \$0.12, yielding a 2022-2032 compound annual growth rate of -0.2 percent.

**Figure 28 | ANC Real Passenger Yield (2012\$)**

	Calendar Year	Real Fared Yield, ANC	
		2012\$	AGR (%)
Actual	2011	0.16	-2.7%
	2012	0.17	4.5%
	2013	0.16	-6.9%
	2014	0.16	-0.6%
	2015	0.15	-5.7%
	2016	0.13	-9.1%
	2017	0.13	-1.5%
	2018	0.14	4.5%
	2019	0.14	-0.8%
	2020	0.13	-7.7%
	2021	0.11	-13.2%
Forecast	2022	0.12	8.3%
	2023	0.12	2.1%
	2024	0.12	-0.3%
	2025	0.12	-0.9%
	2026	0.12	-0.6%
	2027	0.12	-0.4%
	2028	0.12	-0.4%
	2029	0.12	-0.3%
	2030	0.12	-0.3%
	2031	0.12	-0.4%
	2032	0.12	-0.4%
	<b>Compound Annual Growth Rate</b>		
2011-2021			-3.8%
2022-2032			-0.2%



Notes: Annual growth rate (AGR)

Sources: historical data come from the U.S. Bureau of Transportation Statistics and forecasts by Unison Consulting, Inc.

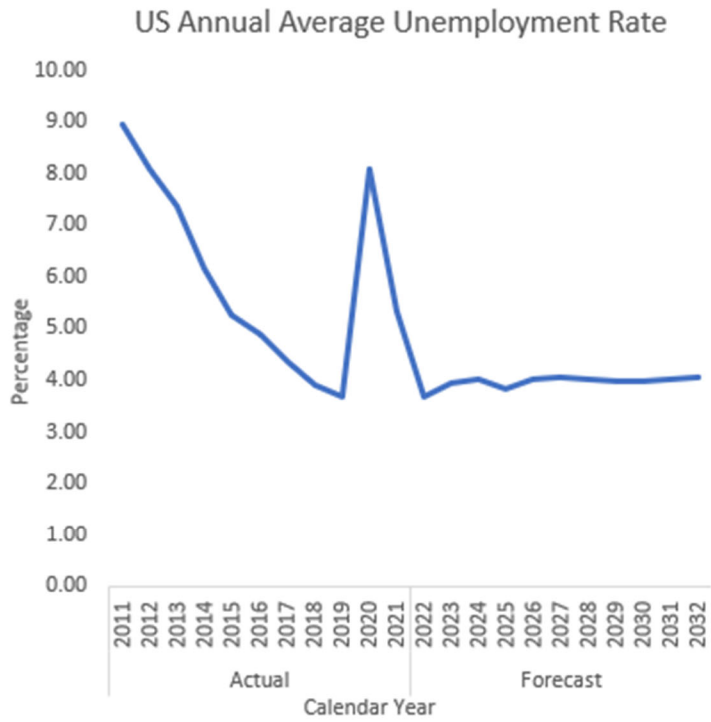
### U.S. Unemployment Rate

The U.S. unemployment rate provides a key indicator for national economic conditions, which affect aggregate demand for business and leisure travel. Falling unemployment rates indicate an expanding national economy, while rising unemployment rates indicate a slowing and contracting national economy. Passenger traffic trends track business cycles in the U.S. economy. The regression coefficient from the model confirms the negative association between the U.S. unemployment rates and ANC passenger traffic, showing a negative and statistically significant negative sign.

Over the next decade, the U.S. unemployment rate in the Base scenario is expected to rise gradually from the current historic lows. According to the forecast by Moody’s Analytics, the U.S. unemployment rate in the Base scenario is projected to rise from 3.7 percent in 2022 to 4.1 percent in 2032 (Figure 29). To produce alternative unemployment trajectories, we assume that the U.S. unemployment rate will rise slower in the High scenario and faster in the Low scenario. Relative to the Base scenario, the U.S. unemployment rate between 2022 and 2032 is expected to be around 0.5 percentage points lower and higher in High scenario and the Low scenario, respectively.

**Figure 29 | Annual Average U.S. Monthly Unemployment Rates (Seasonally Adjusted)**

	Calendar Year	Annual Average Unemployment Rate, US	
		Percentage	AGR (%)
Actual	2011	8.93	-7.0%
	2012	8.07	-9.6%
	2013	7.36	-8.9%
	2014	6.16	-16.3%
	2015	5.27	-14.3%
	2016	4.87	-7.6%
	2017	4.36	-10.6%
	2018	3.89	-10.7%
	2019	3.68	-5.5%
	2020	8.08	119.7%
	2021	5.36	-33.7%
Forecast	2022	3.66	-31.6%
	2023	3.96	8.0%
	2024	4.03	1.8%
	2025	3.82	-5.2%
	2026	4.01	5.0%
	2027	4.08	1.6%
	2028	4.02	-1.3%
	2029	3.97	-1.2%
	2030	3.99	0.4%
	2031	4.03	1.1%
	2032	4.06	0.6%
	<b>Compound Annual Growth Rate</b>		
2011-2021			-5.0%
2022-2032			1.0%



Notes: Annual growth rate (AGR)

Source: Historical data from the Bureau of Labor Statistics and forecasts by Moody’s Analytics.

**Other Explanatory Variables**

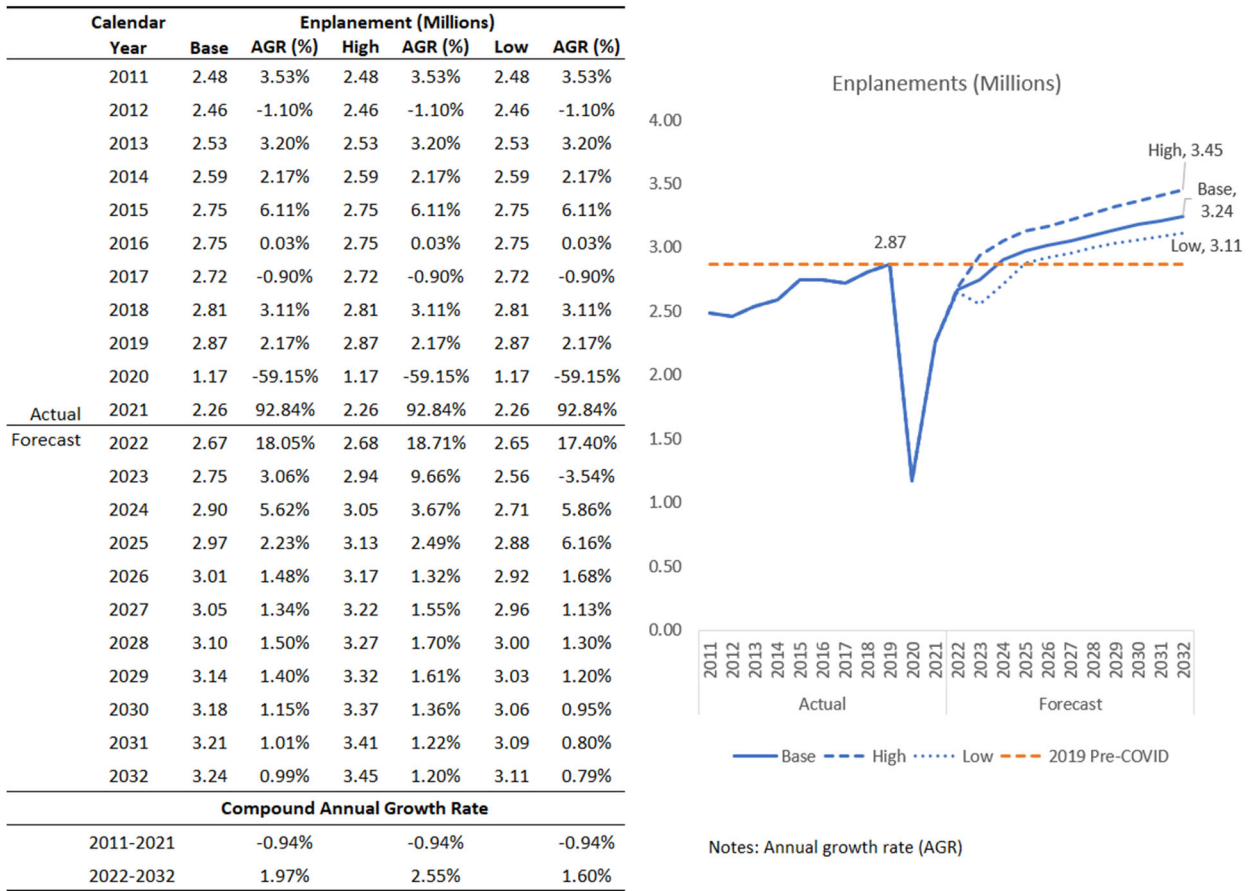
The regression model also controls for structural shifts in the aviation industry following the terrorist attacks in 2001, seasonality in enplanement trends, and serial correlation inherent in the time series data used for estimating the model.

## 6.5 Forecast Enplanements

Figure 30 shows the historical and forecast annual enplanement levels. The resulting forecasts are summarized below:

- **Scenario 1 (Base):** Annual enplanements return to the pre-COVID-19 level in 2024. Beyond 2024, annual enplanements grow at diminishing rates, averaging 1.4 percent annually. In 2032, annual enplanement reaches 3.2 million, yielding a compound annual growth rate of almost 2 percent.
- **Scenario 2 (High):** Annual enplanements return to pre-COVID-19 level in 2023, reaching 2.94 million. Beyond 2023, annual enplanements grow at average annual rates of around 1.8 percent. In 2032, annual enplanement is expected to reach around 3.45 million, yielding a 2022-2032 compound annual growth rate of around 2.55 percent.
- **Scenario 3 (Low):** Annual enplanements return to pre-COVID-19 level in 2025, reaching 2.88 million. Beyond 2025, annual enplanements grow at average annual rates of 1.1 percent. In 2032, annual enplanement is projected to reach 3.1 million, yielding a 2022-2032 compound annual growth rate of 1.6 percent.

**Figure 30 | Historical and Forecast Enplanements**



The 2022 forecast is based on Airport records from January to October and enplanement projections from Unison Consulting, Inc. from October to December.  
Source: Unison Consulting, Inc.

## 7 Historical Trends in the Airport Rental Car Market

Data reported by the rental car companies at ANC are aggregated to reveal the historical trends in the Airport rental car market, using the following key indicators:

- **Transaction days** – the total number of days for which vehicles were rented.
- **Rental contracts** – the count of rental transactions completed, or number of customers accommodated as contract holders.
- **Gross revenue** – the total revenue received by RACs from rental contracts.
- **Average contract duration** – the mean number of days for which a car is rented per rental contract, calculated by dividing transaction days by rental contracts.

- **Average rental rate** – the mean price of renting a car per day, calculated by dividing gross rental revenues by transaction days. RACs adjust rental rates in response to market conditions, causing the average daily rental rate to fluctuate from year to year.

Gross revenue and rental rate are expressed in both nominal terms (current dollars) and the real terms (constant 2012 dollars), with the latter using the urban consumer price index (CPI) to adjust for price inflation.

## 7.1 Annual Trends

Table 7 summarizes the demand and revenue indicators of rental car activity for calendar years 2000 through 2021 along with their compound annual growth rates over different periods.

Rental car companies serving airports operate in the same dynamic business environment that airlines operate in. They face changes in air travel demand patterns, economic recessions, and other shocks. The combined effects of these changes in the business environment underlie the trends in the different indicators of rental car activity. Since 2000, the ANC rental car market has been adversely affected in different degrees by the following major events: the 2001 U.S. economic recession, the 9/11 terrorist attacks, the 2008-2009 Great Recession, and the 2020 COVID-19 pandemic and economic recession. The downturns in the ANC rental car demand indicators coincide with these events.

Each downturn prior to 2020 was followed by recovery and expansion, as shown in Figure 31 and Figure 32. Over the long term, aggregate demand measures such as transaction days, rental contracts, and gross revenues exhibit increasing trends. From 2000 through 2019, transaction days at ANC increased 34.9 percent (1.6 percent per year, on average)—the result of an increase in rental contracts of 22.7 percent (1.1 percent per year, on average) and an increase in the average contract duration of 11.6 percent (0.6 percent per year, on average). Rental gross revenue, in nominal terms, increased 65.5 percent (2.7 percent per year, on average) from an increase in transaction days of 34.9 percent (1.6 percent per year, on average) and an increase in nominal rental rate of 22.7 percent (1.1 percent per year, on average). In real terms, rental gross revenue increased 11.4 percent (0.6 percent per year, on average), while the average rental rate decreased 17.5 percent (1 percent per year, on average). Much of the growth in transaction days, rental contracts, and gross revenue took place in the second half of the last decade, during the expansion phase of the previous business cycle.

The COVID-19 pandemic and subsequent restrictions on travel had a large impact on travel and, by extension, the rental car market in ANC. From 2019 to 2020, transaction days fell 52.7 percent, and rental contracts fell 57.9 percent—both below 2000 levels. While this led to the average contract duration increasing by 12.1 percent, rental gross revenue at ANC dropped 62.1 percent. While the overall U.S. economy has recovered from 2020's recession in the second quarter of 2021 and re-entered a state of growth, the aviation and rental car industries have yet to return to their pre-pandemic levels.

Numbers increased across all of ANC’s rental car demand and revenue indicators through 2021. Transaction days increased 35.8 percent from 2020, up to a total of about 744 thousand days. Rental contracts increased 31.0 percent to about 134.3 thousand contracts, leading to a slightly higher average contract duration of 5.5 days in 2021. Gross revenue recovered almost as sharply as it had fell, rising 146.0 percent to \$60.9 million, though that number is still below the pre-pandemic 2019 gross revenue (which was \$65.2 million). The average rental rate also spiked as a result of 2021’s recovery process, rising 81.1 percent to an average nominal rate of \$81.85—significantly higher than its entire available history since 2000.

**Table 7 | Annual Rental Car Activity, 2000-2021**

CY	Demand Indicators			Revenue Indicators		
	Transaction Days	Rental Contracts	Avg. Contract	Gross Revenue	Avg. Nominal	Avg. Real
	(in 1000s) <sup>1</sup>	(in 1000s) <sup>1</sup>	Duration (Days) <sup>2</sup>	(in \$1000s) <sup>1</sup>	Rental Rate <sup>3</sup>	Rental Rate <sup>4</sup>
2000	858.5	198.5	4.33	\$39,128.6	\$45.58	\$60.77
2001	847.9	191.9	4.42	\$38,844.6	\$45.81	\$59.39
2002	835.5	186.7	4.47	\$40,280.5	\$48.21	\$61.53
2003	840.7	184.6	4.56	\$41,755.5	\$49.67	\$61.97
2004	834.6	181.8	4.59	\$44,205.5	\$52.97	\$64.38
2005	814.9	172.2	4.73	\$38,089.5	\$46.74	\$54.95
2006	818.4	170.3	4.81	\$38,512.9	\$47.06	\$53.59
2007	858.2	199.1	4.31	\$43,081.4	\$50.20	\$55.59
2008	891.1	192.7	4.62	\$47,133.0	\$52.89	\$56.40
2009	738.3	168.1	4.39	\$38,434.2	\$52.06	\$55.71
2010	764.1	170.0	4.50	\$40,611.0	\$53.15	\$55.96
2011	803.8	177.1	4.54	\$43,206.2	\$53.75	\$54.87
2012	853.3	185.2	4.61	\$41,354.7	\$48.47	\$48.47
2013	871.4	189.4	4.60	\$44,346.8	\$50.89	\$50.15
2014	910.2	196.7	4.63	\$48,341.9	\$53.11	\$51.51
2015	1,039.5	222.1	4.68	\$51,786.1	\$49.82	\$48.26
2016	979.9	211.5	4.63	\$51,121.9	\$52.17	\$49.91
2017	1,019.7	222.1	4.59	\$53,011.7	\$51.99	\$48.69
2018	1,033.7	228.2	4.53	\$59,636.0	\$57.69	\$52.75
2019	1,158.9	243.3	4.76	\$65,237.6	\$56.29	\$50.57
2020	547.7	102.5	5.34	\$24,753.6	\$45.20	\$40.12
2021	744.0	134.3	5.54	\$60,900.1	\$81.85	\$69.35
2021 YTD	604.7	102.7	5.89	\$53,139.2	\$87.88	\$74.46
2022 YTD	704.5	136.1	5.18	\$78,369.4	\$111.24	\$86.23
<b>Compound Annual Growth Rate</b>						
2000-2010	-1.2%	-1.5%	0.4%	0.4%	1.5%	-0.8%
2007-2009	-7.2%	-8.1%	0.9%	-5.5%	1.8%	0.1%
2009-2019	4.6%	3.8%	0.8%	5.4%	0.8%	-1.0%
2000-2019	1.6%	1.1%	0.5%	2.7%	1.1%	-1.0%
2019-2021	-19.9%	-25.7%	7.8%	-3.4%	20.6%	17.1%
2000-2021	-0.7%	-1.8%	1.2%	2.1%	2.8%	0.6%

YTD = January through October.

<sup>1</sup> Data received from rental car companies.

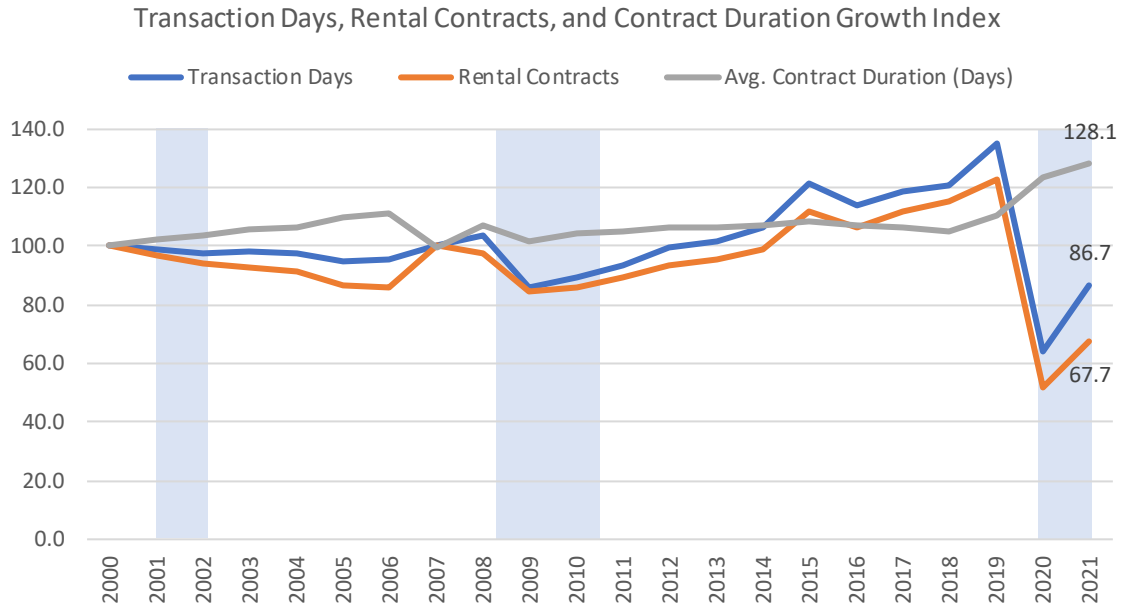
<sup>2</sup> The average contract duration is calculated by dividing transaction days by rental contracts.

<sup>3</sup> The average nominal rental rate is calculated by dividing gross rental revenues by transaction days.

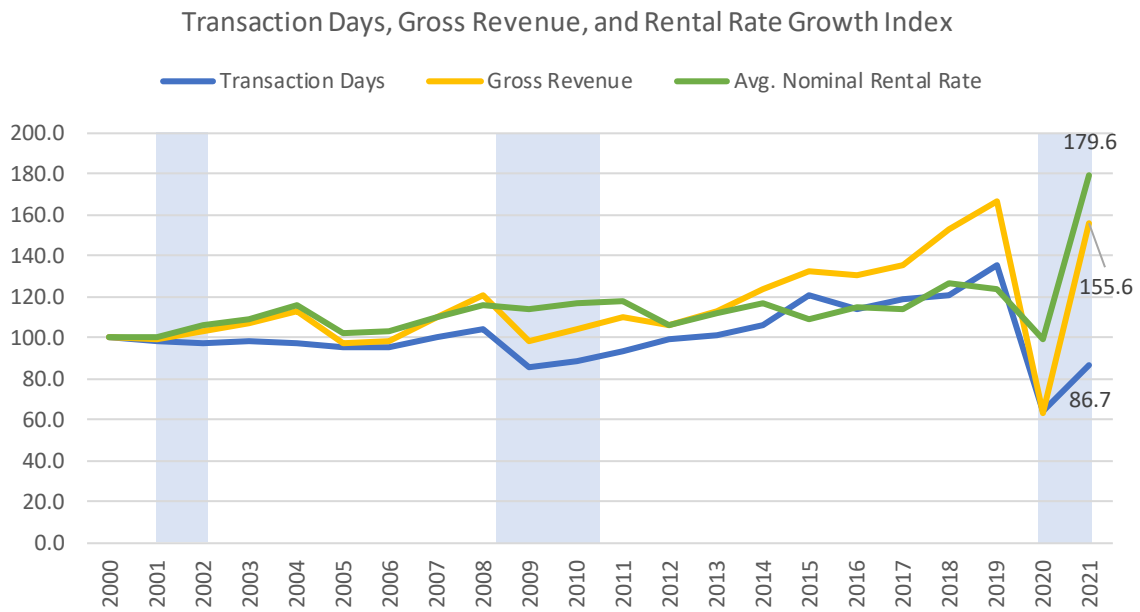
<sup>4</sup> The average real rental rate is expressed in constant 2012 dollars.

Sources: ANC rental car companies for data on transaction days, rental contracts, and gross revenue; and U.S. Bureau of Labor Statistics for Consumer Price Index, used in deriving gross revenue and rental rate in 2012 dollars.

**Figure 31 | Trends in Transaction Days, Rental Contracts, and Contract Duration (2000=100)**



**Figure 32 | Trends in Transaction Days, Gross Revenue, and Rental Rate (2000=100)**



Following the 9/11 terrorist attacks in 2001, the rental car market at ANC suffered relatively small declines in transaction days and rental contracts initially. The declines, however, persisted for a number of years. Transaction days and rental contracts returned to their 2000 levels only in 2007, the year the Consolidated Facility opened. Gross revenue fared better—surpassing 2000 level in all but one year through 2008—with increases in nominal rental rates.

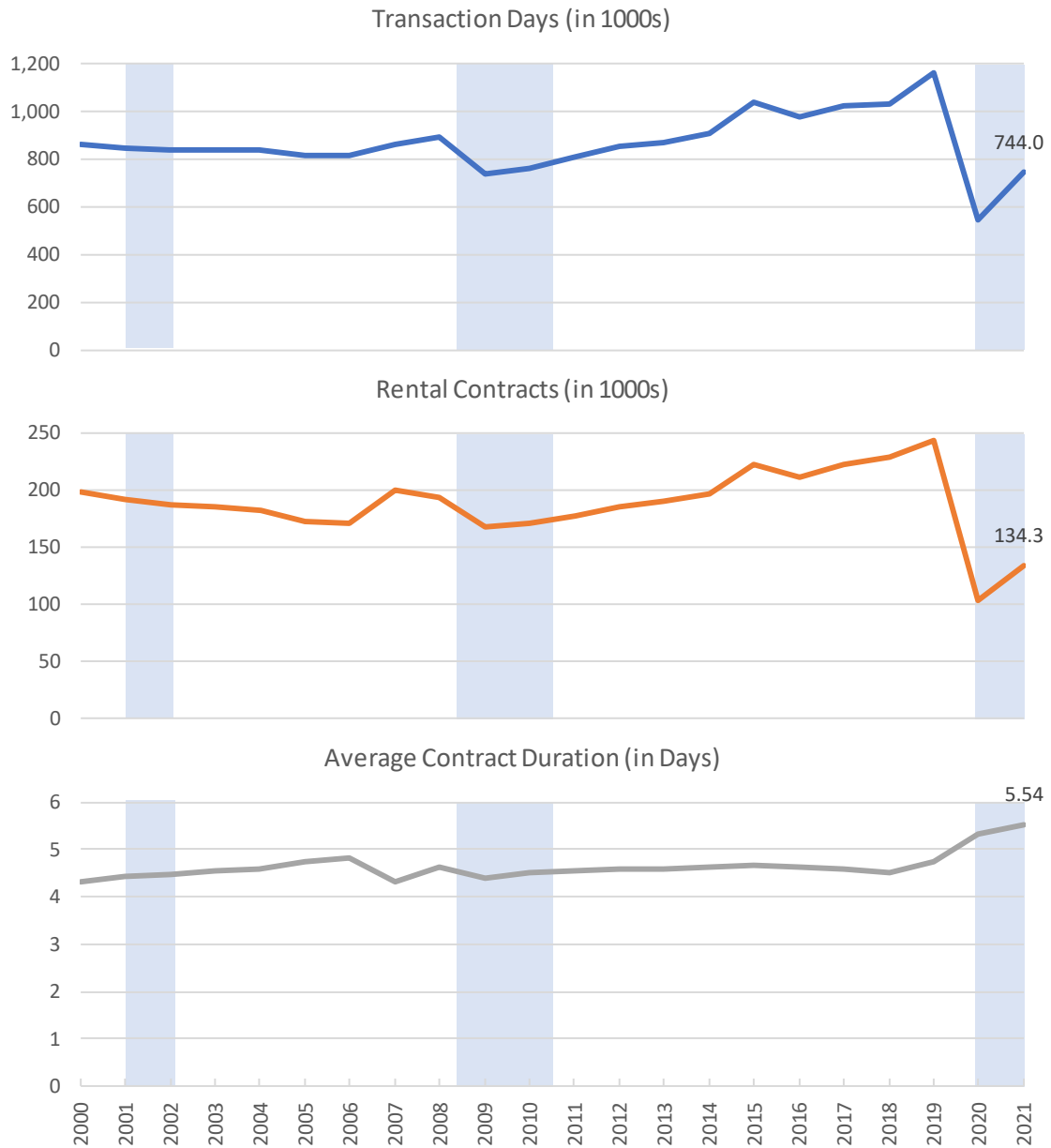
In 2008, the financial market crashed, setting off the Great Recession of 2008-2009. The RACs experienced substantial declines in transaction days, rental contracts, and nominal gross revenue, by 7.2, 8.1, and 6.5 percent per year, respectively, during the recession. After the Great Recession ended in 2009, the rental car companies enjoyed fairly steady growth at ANC. Transaction days, rental contracts, and nominal gross revenue increased by a compound growth rate of 4.6, 3.8, and 5.4 percent per year, respectively, between 2009 and 2019.

Figure 33 illustrates the annual levels and rates of change in transaction days, rental contracts, and the average contract duration separately. The trends in transaction days reflect combined influence of the underlying rental contracts and contract duration. Transaction days exceeded 900,000 beginning in 2014, rising to an all-time high of 1.16 million in 2019. Rental contracts exceeded 200,000 for the first time in 2015 and continued rising to an all-time high of 243,000 in 2019. Record performance in the ANC rental car market in 2019 resulted from an acceleration of ANC passenger traffic growth and the use of the Consolidated Facility by non-airport visitors and cruise ship passengers.

In 2020, the COVID-19 pandemic abruptly ended the long-running economic expansion, resulting in deep declines in economic activities nationwide, including rental car activity at ANC. Through 2020, transaction days decreased from its record high to about 548,000 (down 52.7 percent), resulting from a decrease in rental contracts from its own peak down to about 102,000 (down 57.9 percent), though the drops were tempered by an increase in contract duration to an average of 5.34 days (up 12.1 percent). The resulting 19.7 percent decrease in average nominal rental rate (from \$56.29 to \$45.20) reflects rental car companies' response to stimulate demand.

2021 shows partial recovery in transaction days and rental contracts (up to about 744,000 and 134,000, respectively), but nowhere near back to their 2019 levels. Average contract durations, however, continued to lengthen in 2021, up to an average of 5.5 days.

**Figure 33 | Annual Trend of Demand Indicators**

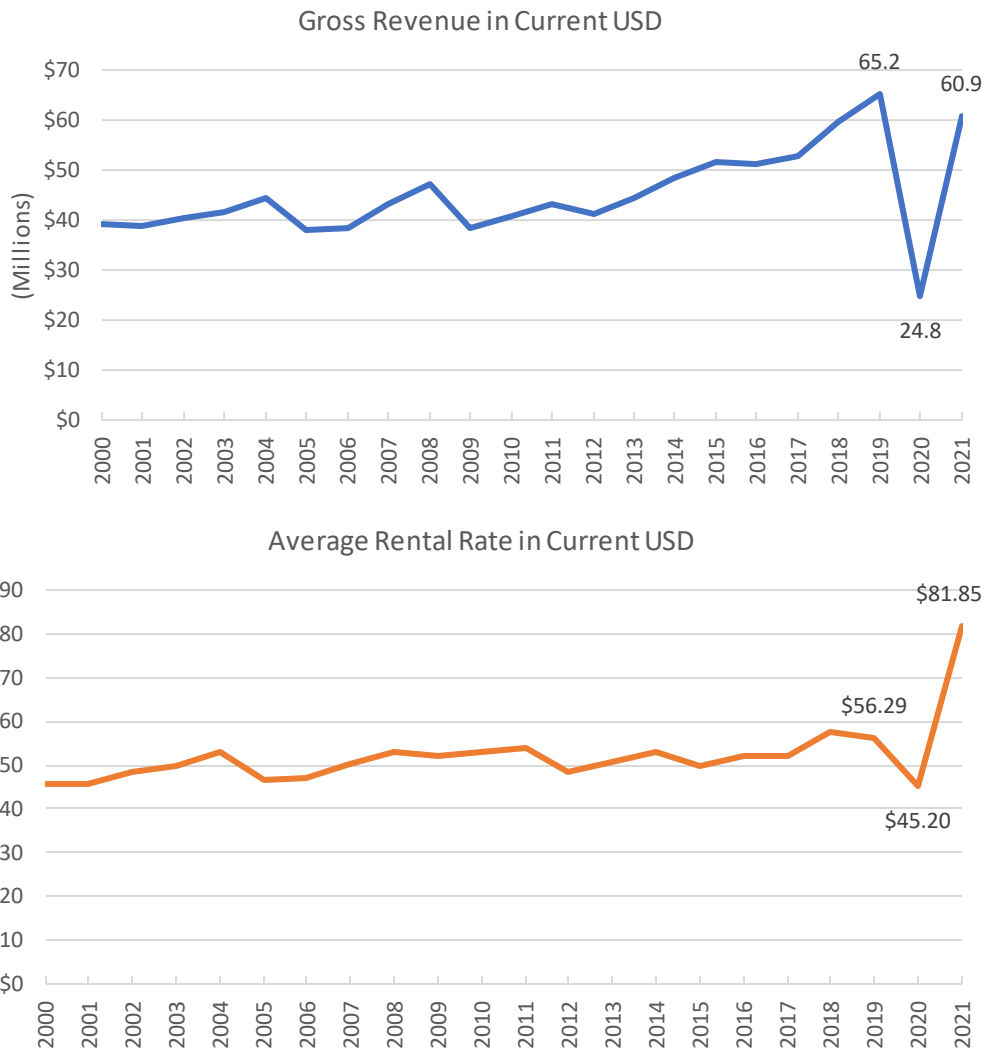


Source: ANC rental car companies.

Figure 34 illustrates the annual levels and rates of change in gross revenue and average rental rate in nominal terms. Gross revenue, in nominal terms, surpassed \$50 million beginning in 2015 and continued rising to an all-time peak level of \$65.2 million in 2019, before falling significantly to \$24.8 million in 2020. The average rental rate, in nominal terms, rose to new record high levels of \$57.69 in 2018 and \$56.29 in 2019, from values between \$45 and \$55 in previous years. In 2020, however, the average rental rate decreased to \$45.20 in response to economic decline.

Both revenue indicators returned to an upward direction in 2021. Gross revenue recovered up to \$60.9 million, close to its 2019 level. Meanwhile, the average rental rate spiked to a height of \$81.85—far above ANC’s prior rental car history.

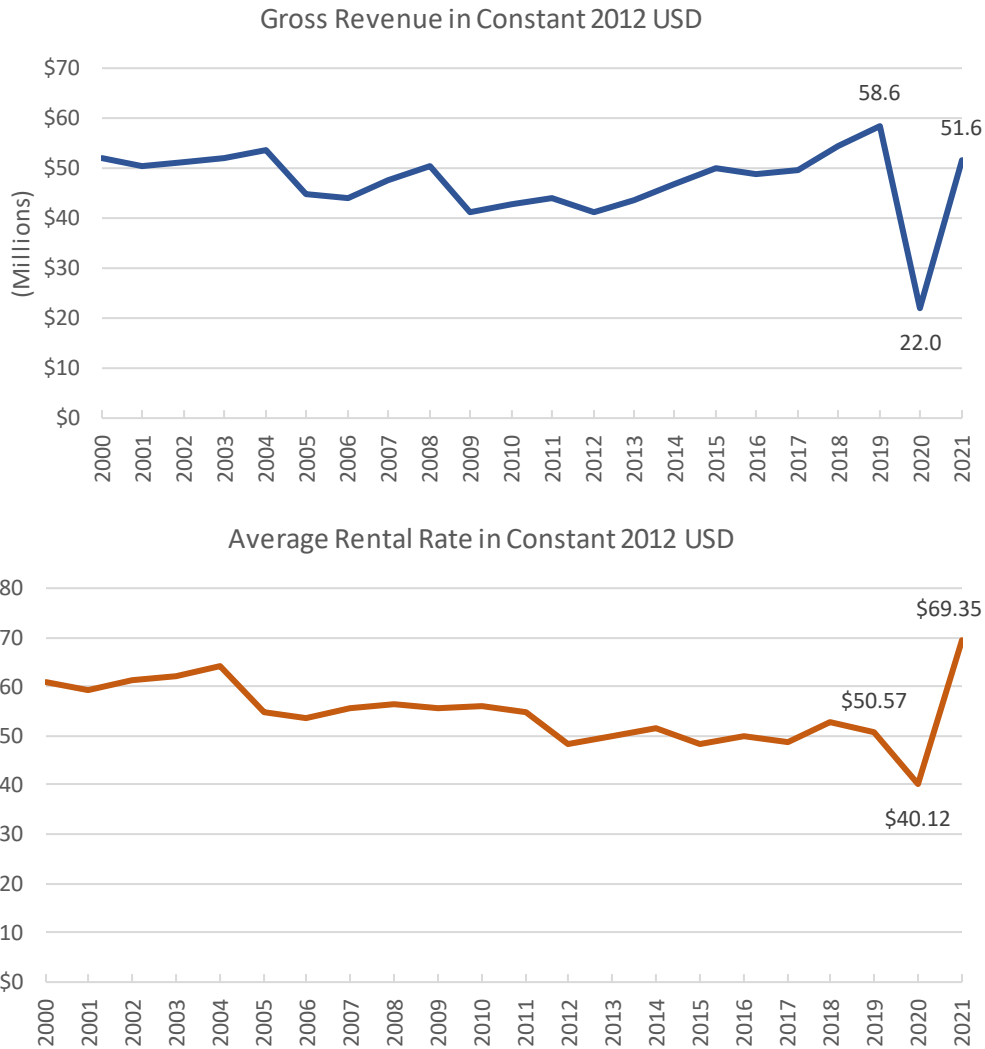
**Figure 34 | Annual Trend of Revenue Indicators in Nominal Terms**



Source: ANC rental car companies.

Figure 35 shows the trends in revenue indicators in real terms, expressed in constant 2012 dollars. After removing inflation effects, gross revenue and the average rental rate show decreasing trends through 2012. After 2012, gross revenue increased steadily through 2019, while the average rental rate remained fairly constant, with both facing sharp declines in 2020 before rising again in 2021.

**Figure 35 | Annual Trend of Revenue Indicators in Real Terms**



Sources: ANC rental car companies and U.S. Bureau of Labor Statistics.

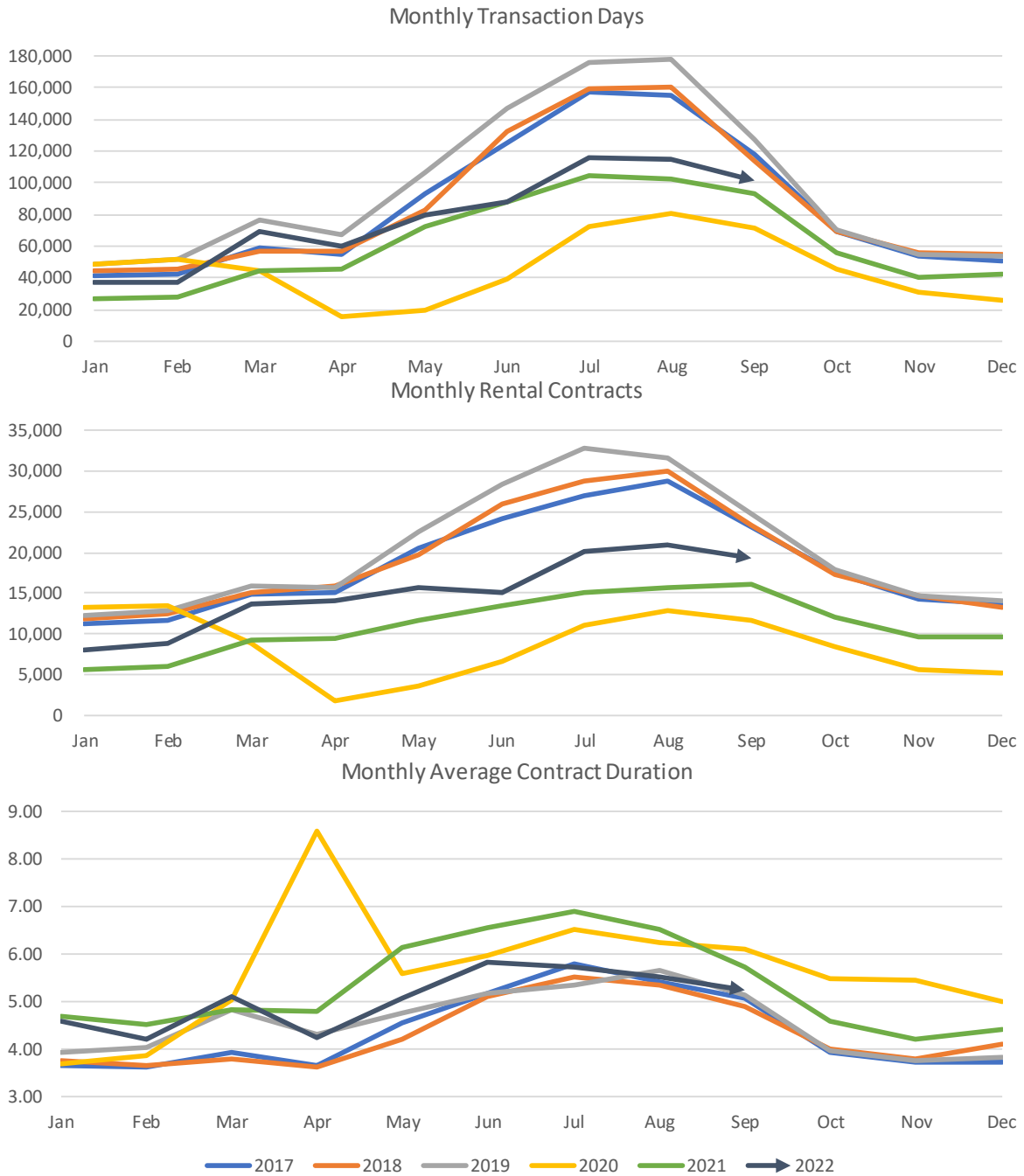
## 7.2 Monthly Patterns

ANC rental car activity shows wide seasonal variation. In previous years before 2020, activity was distinctly high during the summer months and low during the winter months—a reflection of the seasonal patterns in passenger traffic at the Airport and tourism in Alaska. In 2020, COVID-19 impacts altered the monthly patterns substantially. Figure 36 and Figure 37 show the monthly patterns in the rental car demand and revenue indicators in the past six years, from 2017 to September 2022.

Demand under COVID-19 bottomed in April 2020—transaction days and rental contracts fell to just under 16,000 and 2,000, respectively. Transaction days decreased 76.6 percent and rental contracts decreased 88.2 percent from their corresponding levels in April 2019. Rental car demand has slowly recovered over the summer of 2020, but fell again through winter. With the distribution of COVID-19 vaccinations in 2021, transaction days and rental contracts improved over the next year, even through the additional waves of infection brought about by the Delta and Omicron variants. This improvement continued through 2022 as well, but have still yet to return to pre-pandemic levels, with the gap still especially apparent when comparing each year’s summer peaks.

The average contract duration doubled in April 2020 to 8.6 days from 4.3 days in April 2019, suggesting a significant increase in the share of customers needing longer contracts. This spike in average contract duration could be attributed to visitors who found themselves stuck in the area at the time of travel restrictions coming into effect due to COVID-19. The average contract duration since decreased from that spike, but consistently remained longer than pre-pandemic levels through the rest of 2020 and all of 2021. This elevated average contract duration began to decline in recent months—instead of rising to a peak in July or August like previous years, 2022 reached its peak in June and has steadily declined through September, back to levels similar to pre-pandemic years.

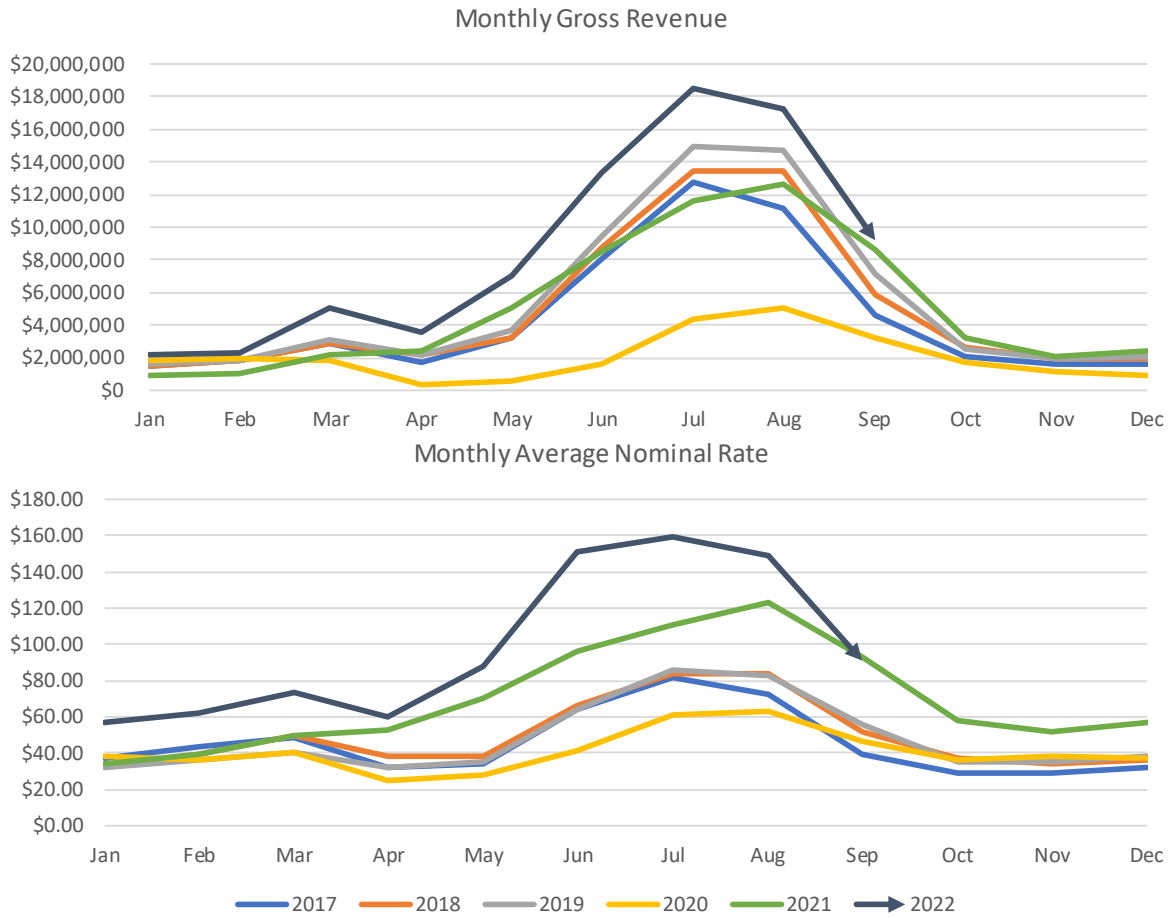
**Figure 36 | Monthly Pattern of Demand Indicators**



Source: ANC rental car companies.

Figure 37 shows the monthly patterns of the nominal revenue indicators. 2022 shows that gross revenue has risen consistently and substantially higher than previous years. Additionally, the monthly average nominal rate spiked from May 2022 to June, with the summer maintaining a significant height over previous years, though as of September, that height appears to also be swiftly declining almost as quick as it had occurred.

**Figure 37 | Monthly Pattern of Nominal Revenue Indicators**



Source: ANC rental car companies.

### 7.3 Market Shares

The following RACs operate at the Consolidated Facility of ANC in 2022:

- Alaska Rent A Car which operates Avis
- Corporate Sales and Leasing which operates Budget
- Enterprise Rent-A-Car Company which operates Enterprise, National and Alamo
- Floyd and Sons which operates Dollar and Thrifty
- Hertz Corporation which operates Hertz.
- Delta Leasing—however, due to starting in April 2022, it will not show up in the annual shares figures due to 2022 not yet having the complete year’s data.

The U.S. rental car industry went through a wave of consolidation during the last decade. Today three companies, each selling multiple brands, control approximately 95 percent of the U.S. rental car market:

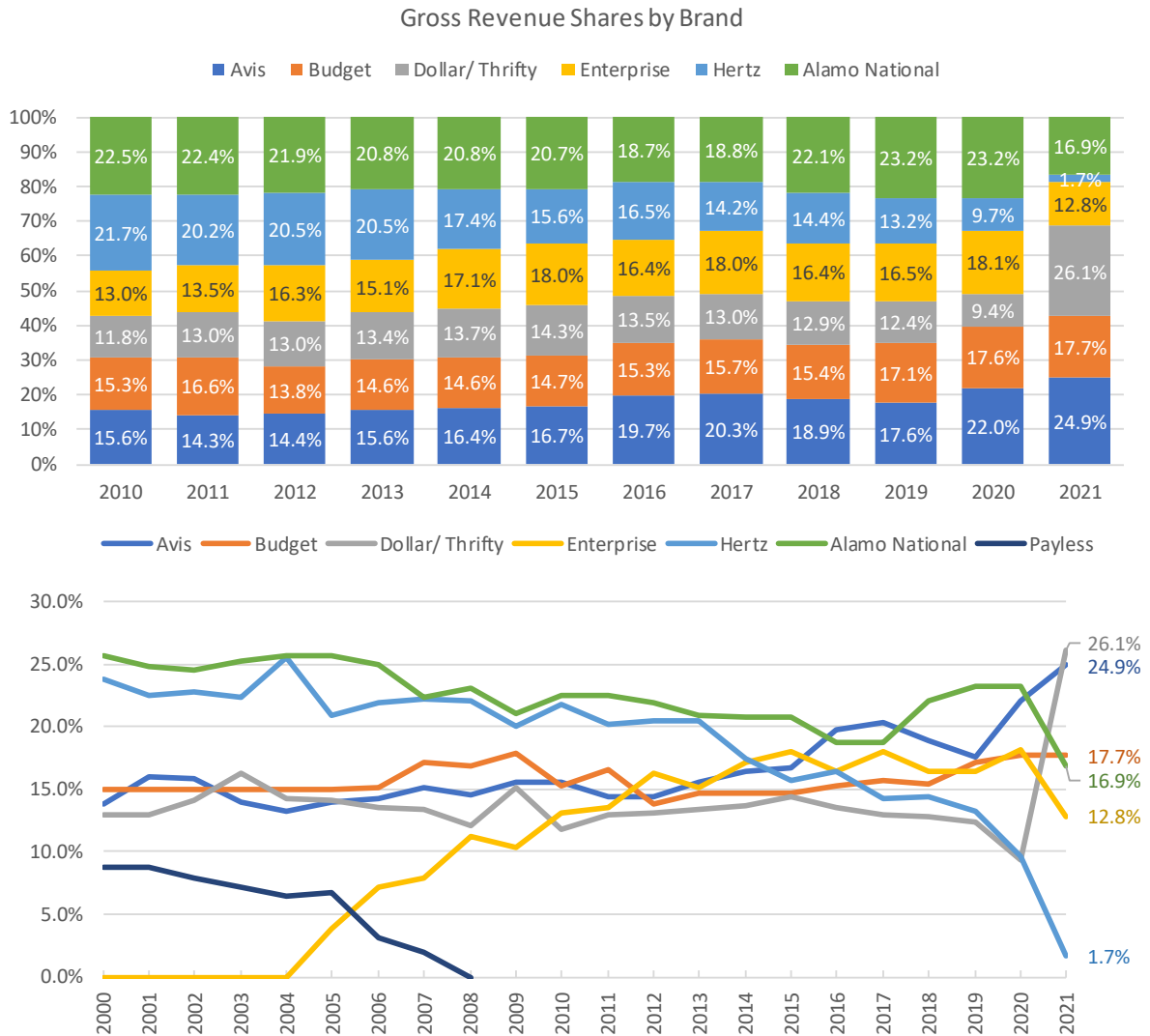
- Avis Budget Group, Inc. which owns the Avis, Budget, Payless, and Zipcar brands
- Enterprise Holdings, Inc. which owns the Enterprise, National and Alamo brands
- Hertz Global Holdings, Inc. which owns the Hertz, Dollar and Thrifty brands

Figure 38 shows the timeline gross revenue shares from 2000 through 2020 at the ANC airport by brand, with a more detailed breakdown of brand shares for the past decade.

In 2019, the Alamo and National brands together accounted for the largest share of 23.2 percent in gross revenue, followed by the Avis (17.6 percent), Budget (17.1 percent), Enterprise (16.5 percent), and Hertz (13.2 percent), while the Dollar and Thrifty brands together accounted for the smallest share of 12.4 percent. In 2020, Alamo and National again accounted for the largest share of 23.2 percent in gross revenue, followed closely by Avis (22 percent), Enterprise (18.1 percent), Budget (17.6 percent), and Hertz (9.7 percent), while Dollar and Thrifty together accounted for the smallest share of 9.4 percent. With the exception of 2016 and 2017, Alamo and National have consistently held the largest rental car market share at ANC for the past two decades.

Alamo and National's lead was recently disrupted in 2021, getting overtaken by the expansion of three other brands. As of 2021, Dollar and Thrifty now hold the lead with a share of 26.1 percent, followed by Avis with 24.9 percent, and Budget with 17.7 percent. Alamo and National fell just under the top three with a share of 16.9 percent, with Enterprise behind them holding 12.8 percent. Hertz has been continuously shrinking in share since 2018, and that shrinkage accelerated in 2021 down to a share size of 1.7 percent. This significant decline in share size is due in part to Hertz slowing service and then completely stopping service from August through October of that year. Hertz has since returned to service with higher levels of activity, and will likely have a larger share size by the end of 2022.

**Figure 38 | Gross Revenue Shares by Brand**



Source: ANC rental car companies.

## 8 Transaction Day Forecasts

Forecasts of transaction days serve as the basis for calculating CFC revenues. Forecast development employed multivariate time series regression analysis to quantify the contributions of key explanatory variables to trends in transaction days. The selection of explanatory variables is based on the underlying economic theory of demand, the concept of airport rental car demand as a derived demand from passenger air travel, and the analysis of historical car rental market trends at the Airport.

## 8.1 Multivariate Time Series Regression Analysis

Multivariate time series regression analysis is used to link transaction days with measurable explanatory variables. Regression analysis quantifies the contributions of rental car demand drivers to transaction days, accounting for seasonality patterns in airport rental car demand and serial correlation in time series data. The regression model utilizes historical monthly data from January 2000, the earliest month for which complete rental revenues, transactions, and transaction days data are available, to October 2022.

The contributions of rental car demand drivers are represented by the “regression coefficients.” The estimated coefficients are used to calibrate the regression model to generate forecasts of transaction days given the projected trends in the explanatory variables. Explanatory variables are retained in the regression model based on their explanatory power and the statistical significance of the coefficients. The key model variables, which are individually discussed below, include RNO’s passenger enplanements, the Reno MSA’s nonfarm employment (an economic indicator), and rental rate (an indicator for price). The Customer Facility Charge (CFC), taxes and other fees are added to the rental rate for a comprehensive price indicator. The model also controls for the introduction of TNCs in the Reno MSA between 2015 and 2016.

### Airport Passenger Traffic

The demand for rental cars at ANC derives from the demand for air travel to Alaska. This relationship is confirmed by the positive coefficient estimated for ANC enplanements. An increase in enplanements increases transaction days, and a decrease in enplanements decreases transaction days. The forecasts account for the sharp declines caused by the COVID-19 pandemic and present three scenarios for recovery: Base, High and Low. The forecasts of ANC enplanements under the different scenarios are shown in Figure 30 in Section 6.5.

### Economic Trends

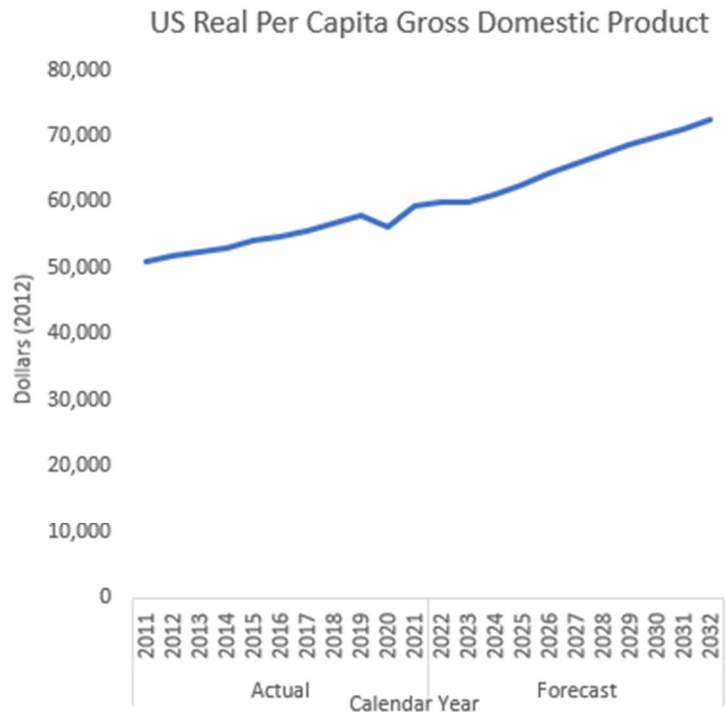
U.S. real per capita GDP, which reflects national economic trends, is an important determinant of consumer demand, including demand for airport rental cars. Instead of a local measure, a national measure was used because airport rental car customers typically come from outside the local area. The positive regression coefficient estimate for this variable confirms its expected impact on the Airport’s transaction days. Holding all other factors constant, increases in real per capita GDP promote growth in transaction days at ANC. Conversely, decreases in GDP dampen growth in rental car demand at the Airport.

According to the forecasts of Moody’s Analytics, U.S. real GDP per capita in the Base scenario is expected to grow at a compound annual growth rate of 1.9 percent from 2022 to 2032. This growth is slightly faster than the 2011-2021 compound annual growth rate of 1.5 percent, which includes the sharp drop in national production in 2020 and the quick rebound in 2021. Relative to the Base scenario, over the forecast horizon, U.S. real per capita GDP is expected to grow 0.3 percentage

points faster in the High scenario (2.2 percent compounded annually) and 4 percentage points slower in the Low scenario (1.5 percent compounded annually).

**Figure 39 | U.S. Real Per Capita GDP (2012\$)**

	Calendar Year	Real Per Capita Gross Domestic Product, US	
		2012\$	AGR (%)
Actual	2011	50,954	0.8%
	2012	51,740	1.5%
	2013	52,326	1.1%
	2014	53,130	1.5%
	2015	54,169	2.0%
	2016	54,681	0.9%
	2017	55,562	1.6%
	2018	56,903	2.4%
	2019	57,951	1.8%
	2020	56,165	-3.1%
	2021	59,282	5.5%
Forecast	2022	60,019	1.2%
	2023	60,119	0.2%
	2024	61,120	1.7%
	2025	62,557	2.4%
	2026	64,207	2.6%
	2027	65,794	2.5%
	2028	67,296	2.3%
	2029	68,662	2.0%
	2030	69,912	1.8%
	2031	71,116	1.7%
	2032	72,358	1.7%
	<b>Compound Annual Growth Rate</b>		
2011-2021			1.5%
2022-2032			1.9%



Notes: Annual growth rate (AGR)

Source: Historical data from Bureau of Economy Analysis and forecasts by Moody’s Analytics.

### Price of Renting a Car

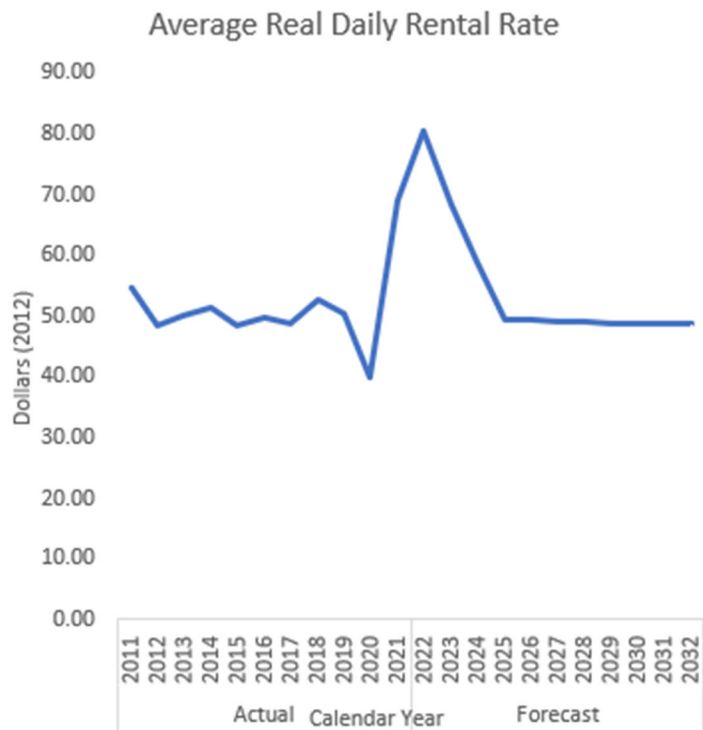
Demand is inversely related to price. Holding all other factors constant, an increase in price decreases demand, and a decrease in price increases demand. In the case of rental cars, an increase in price can decrease transaction days by decreasing rental contracts—fewer customers rent cars—and/or by decreasing contract duration—customers rent cars for shorter periods. Conversely, a decrease in price can increase transaction days by increasing rental contracts and/or by increasing contract duration. The negative coefficient estimated for the rental rate variable confirms this inverse relationship.

Prior to the pandemic, average real daily rental rate had remained relatively stable. During the pandemic, real rental rate spiked as a result of rental car supply shortages and shifts in travelers’

preferences toward rental cars as public health concerns over the COVID-19 virus intensified. Over the forecast period, real rental rate in the Base scenario is expected to remain elevated in the short-term before easing and falling to pre-pandemic 2019 levels in the medium- and long-term (Figure 40). The 2022-2032 compound annual growth rate of the Base scenario’s real rental rate is -4.9 percent. Relative to the Base scenario, real rental rates beyond 2022 are expected to fall 4 percentage points faster in the High scenario and around 3 percentage points slower in the Low scenario.

**Figure 40 | Average Real Daily Rental Rate (2012\$)**

	Calendar Year	Avg. Real Daily Rental	
		2012\$	AGR (%)
Actual	2011	54.75	-2.2%
	2012	48.47	-11.5%
	2013	50.15	3.5%
	2014	51.44	2.6%
	2015	48.60	-5.5%
	2016	49.95	2.8%
	2017	48.72	-2.5%
	2018	52.70	8.2%
	2019	50.50	-4.2%
	2020	40.04	-20.7%
	2021	69.07	72.5%
Forecast	2022	80.57	16.7%
	2023	68.31	-15.2%
	2024	59.07	-13.5%
	2025	49.55	-16.1%
	2026	49.37	-0.4%
	2027	49.20	-0.3%
	2028	49.06	-0.3%
	2029	48.94	-0.2%
	2030	48.84	-0.2%
	2031	48.76	-0.2%
	2032	48.68	-0.2%
	<b>Compound Annual Growth Rate</b>		
	2011-2021		2.3%
	2022-2032		-4.9%



Notes: Annual growth rate (AGR)

The 2022 forecast is based on Airport records from January to October and projections by Unison Consulting, Inc. from November to October.

Sources: Airport records and forecasts by Unison Consulting, Inc.

The assumption of an eventual “normalization” of rental rates is supported by historical patterns—for example, see the historical trends in the Producer Price Index for Passenger Car Rental (Figure 41). For instance, rental car prices spiked during and in the aftermath of the 2008-2009 Great Recession, during which the rental car industry experienced significant disruptions, including mass layoffs, Advantage Rent-A-Car filing for bankruptcy, and the acquisition of Dollar Thrifty by Hertz.

Despite the disruptions to the industry, rental prices began to fall shortly after 2009 and eventually reach 2007 levels by late 2015 or early 2016. Because the Great Recession was a more severe economic downturn compared to the COVID-19 recession, we would expect rental prices normalize faster than they did following the Great Recession.

**Figure 41 | Producer Price Index for Passenger Car Rental for Leisure Travel, January 2000 to October 2022, Not Seasonally Adjusted (December 1998=100)**



Gray areas indicate economic recession periods.  
 Source: U.S. Bureau of Labor Statistics, retrieved from St. Louis FRED.

We evaluate the sensitivity of the forecast results to the rental rate recovery assumption. We estimate a model in which real rental prices remain elevated at 110 percent of the 2019 level. The forecasts from this model are similar to the baseline forecasts, with the differences no larger than one percent of the baseline forecasts.

In the forecast model, we employ a comprehensive measure of the price of renting a car, which includes the real daily rental rate, taxes, CFC, and FMC. The forecasts assume no change in taxes through 2032. The sum of CFC and FMC is projected to rise to \$9.65 in BY2024.<sup>30</sup>

We also analyze the sensitivity of forecast results to alternative CFC and FMC schedules. Specifically, we tested the following two hypothetical CFC and FMC schedules after BY2024: (1) the nominal sum of CFC and FMC rises with inflation and (2) the nominal sum of CFC and FMC reduces to zero. The

<sup>30</sup> There were several adjustments to the CFC and FMC in the past several years. Total combined CFC and FMC rate decreased from \$7.00 to \$6.50 per vehicle rental day in March 2019; increased from \$6.50 to \$12.60 in January 2021; and decreased from \$12.60 to \$7.55 in April 2021.

forecast results are not sensitive to the assumption of these alternative schedules, with the 2032 forecast transaction days under these alternative CFC and FMC schedules being around 1 percent of the baseline forecast.

### **Impact of Transportation Network Companies (TNCs)**

Peer-to-peer ride hailing services like Uber Technologies (Uber) and Lyft are growing their presence at various airport terminals, providing travelers ground transportation to-and-from airports. Uber operated in Anchorage between September 2014 and March 2015 and resumed service in June 2016. Ride hailing services pose competition to rental cars and other ground transportation modes. Therefore, as ride hailing services rise, rental car transaction days are expected to decrease.

In performing the regression analysis of rental car transaction days, a control variable to quantify any impact of competition from these ride hailing services was tested. This TNC control variable yielded a statistically insignificant regression coefficient estimate with a positive (and incorrect) sign and was eventually left out of the regression model in this year's forecast update. The statistically insignificant regression coefficient suggests either of the following: the presence of TNCs had not materially impacted rental car demand at ANC, or the data is insufficient to measure any impact. Future forecast updates will continue to monitor the regression coefficient on the TNC control variable.

During the COVID-19 pandemic, passenger preferences for ground transportation mode appeared to have changed in favor of rental cars. Rental cars were viewed as a safer option from a public health safety perspective. As these public health concerns subside, the demand for TNCs could rise again.

## **8.2 Transaction Day Forecast Results**

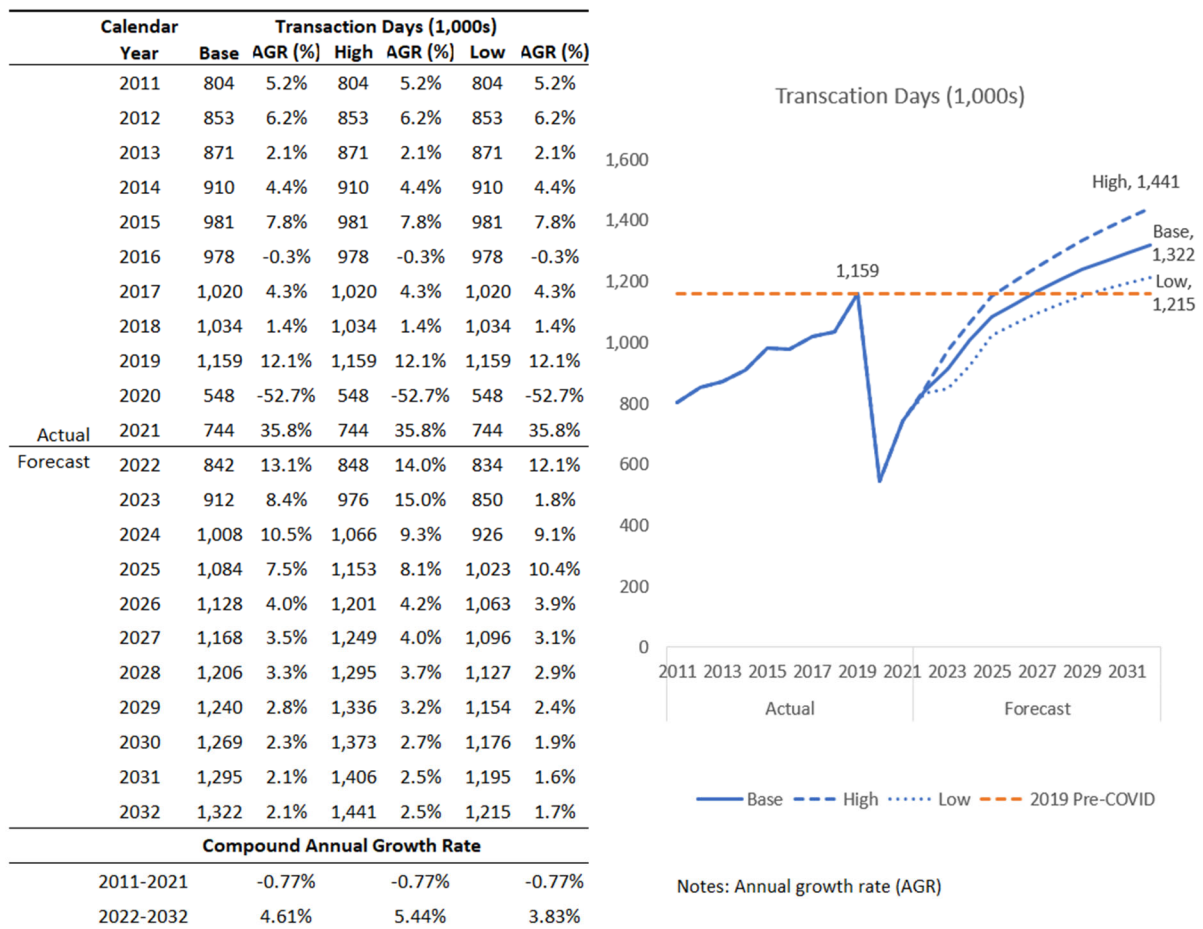
Figure 42 presents the forecast results for transaction days. Three scenarios are presented: a Base scenario, a High scenario, and a Low scenario. The difference in the forecast scenarios is driven by differences in the projected recovery speeds of ANC enplanements, the growth trajectories of the economic and income indicators, and average real daily rental rates (see Section 6.5). The underlying forecast trends for CFC and FMC are assumed to be the same for the three scenarios. Figure 42 presents the forecast results, which are summarized below:

- **Scenario 1 (Low):** Based on year-to-date data through October, transaction days in 2022 are projected to rise by 13.1 percent year over year. Over the next three years, from 2023 to 2025, annual growth in transaction days is expected to exceed 7 percent. After 2025, transaction days are expected to grow at moderate rates and eventually exceed the 2019 pre-pandemic level in 2027. In 2032, annual transaction days are projected to surpass 1.32 million, yielding a 2022-2032 compound annual growth rate of 4.6 percent.
- **Scenario 2 (High)** – Transaction days are expected to rise by 14 percent in 2023, slightly faster than the Base scenario. Transaction days are expected to return to the 2019 pre-pandemic level by 2026. After 2026, transaction days continue to exhibit moderately strong growth, eventually

reaching almost 1.44 million by 2032. The 2022-2032 compound annual growth rate is projected to be 5.4 percent.

- Scenario 3 (Low)** – Transaction days are expected to rise by 12.1 percent in 2023, slightly slower than the Base scenario. Economic downturn, among other factors, slow transaction day growth significantly in 2023, yielding a year-over-year growth of 1.8 percent. Beyond 2023, annual growth in transaction days begin to rise sharply before tapering and slow to less than 2 percent by the end of the forecast period. Transaction days are expected to first exceed the 2019 pre-pandemic level in 2030, reaching almost 1.18 million. In 2032, transaction days are expected to be around 1.22 million, yielding a 2022-2032 compound annual growth rate of 3.8 percent.

**Figure 42 | Forecasts of Transaction Days**



The 2022 forecast is based on Airport records from January to October and projections by Unison Consulting, Inc. from November to October.

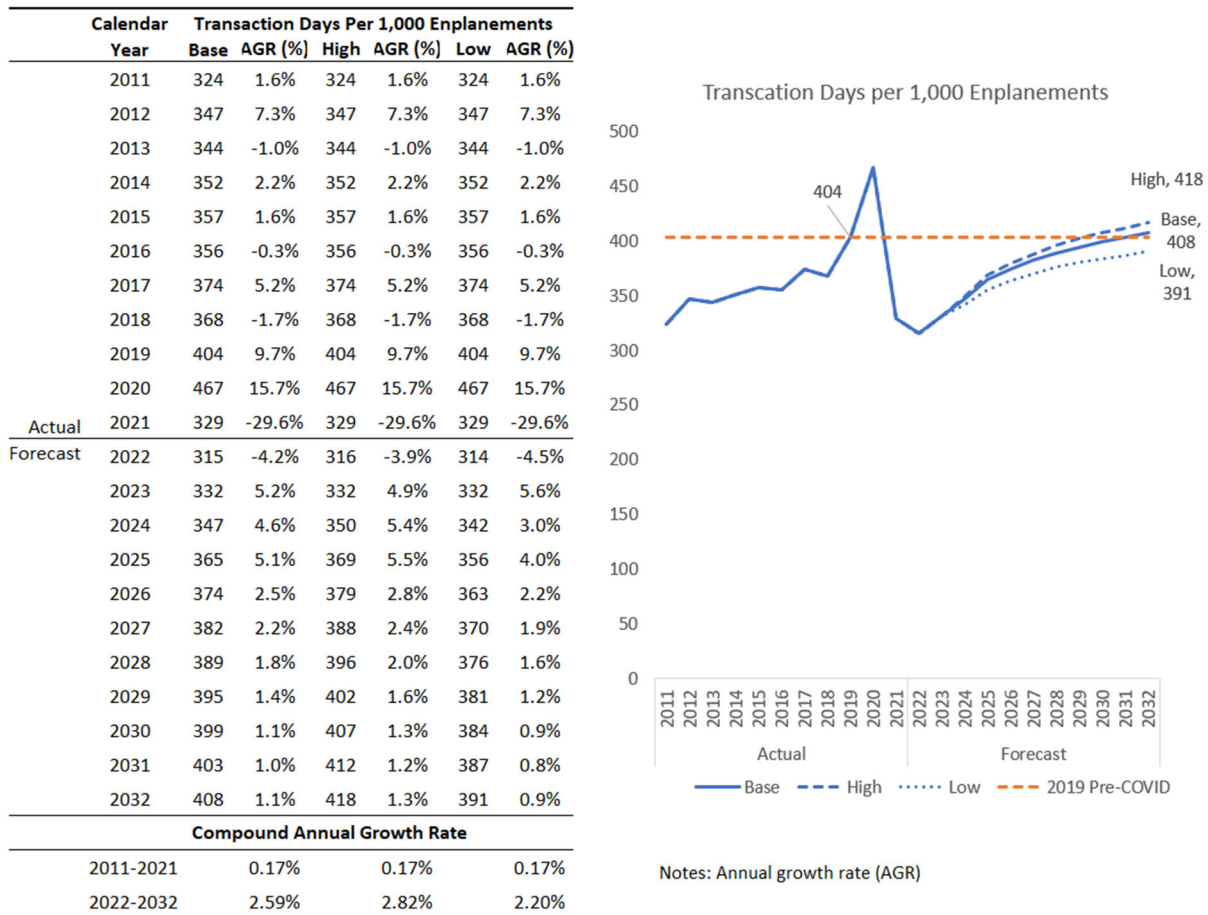
Source: Unison Consulting, Inc.

One reason for the slower recovery in transaction days, relative to enplanements, is due to the changes in the relationship between transaction days and enplanements during the pandemic. Prior to the pandemic, transaction days per enplanement at ANC had been steadily increasing, rising from

324 transaction days per 1,000 enplanements in 2011 to 404 transaction days per 1,000 enplanements in 2019. During the pandemic, the measure first rose sharply due to travel restrictions in 2020, rising to 467 transaction days per 1,000 enplanements, and then fell sharply in 2021, dropping to 329 transaction days per 1,000 enplanements.

The decline in the measure is expected to continue in 2022, with 315 transaction days per 1,000 enplanements in the Base scenario, 316 transaction days per 1,000 enplanements in the High scenario, and 314 transaction days per 1,000 enplanements in the Low scenario. By 2032, in both the Base and High scenarios, transaction days per enplanement are expected to eventually exceed the 2019 pre-pandemic level, with 408 and 4018 transactions per 1,000 enplanements, respectively. By contrast, in the Low scenario, the measure is expected to remain slightly below the 2019 level (391 transactions per 1,000 enplanements).

**Figure 43 | Forecasts of Transaction Days per Enplanement**



The 2022 forecast is based on Airport records from January to October and projections by Unison Consulting, Inc. from November to October.

Source: Unison Consulting, Inc.

## 9 Financial Projections and Recommendations

This section presents the financial projections and recommendations for BY2024. Due to the uncertainties in the current economic and industry environment, three transaction day forecast scenarios were presented in Section 8 above. This section summarizes the financial projections for BY2024, the recommended CFC and FMC rates based on the Base transaction day forecast, the application of Revenues pursuant to the Indenture, and the calculation of Debt Service Coverage.

Under the terms of the CFC Statute and the Commissioner's Order, the State is required to set the CFC at a level sufficient to (1) pay the debt service requirements on the Series 2005 Bonds, (2) maintain reserve requirements, and (3) meet any other obligations with respect to the Series 2005 Bonds. The FMC must be maintained at a level sufficient to generate annual collections to (1) pay the specified portions of the annual Operations and Maintenance (O&M) Expenses of the Consolidated Facility including a portion of the real property tax obligations, and (2) provide ongoing funding for the O&M Fund.

### 9.1 Debt Service

The annual debt service requirements on the Series 2005 Bonds are summarized Table 8. Annual debt service requirements increase periodically throughout the life of the bonds. Annual debt service increased by approximately \$1.0 million to \$5.3 million in BY 2020. Annual debt service will increase two more times prior to bond maturity in 2035: to \$5.8 million in BY2026 and to \$6.7 million in BY2031.

**Table 8 | Series 2005 Debt Service Schedule**

Bond Year	Series A			Series B			Total Debt Service
	Principal	Interest	Total	Principal	Interest	Total	
2006	\$740,000	\$2,433,022	\$3,173,022	\$0	\$0	\$0	\$3,173,022
2007	200,000	2,565,056	2,765,056	0	0	0	2,765,056
2008	210,000	2,556,054	2,766,054	0	0	0	2,766,054
2009	215,000	2,546,565	2,761,565	0	0	0	2,761,565
2010	225,000	2,536,598	2,761,598	0	0	0	2,761,598
2011	0	2,531,468	2,531,468	850,000	0	850,000	3,381,468
2012	0	2,531,468	2,531,468	850,000	0	850,000	3,381,468
2013	0	2,531,468	2,531,468	850,000	0	850,000	3,381,468
2014	0	2,531,468	2,531,468	850,000	0	850,000	3,381,468
2015	0	2,531,468	2,531,468	850,000	0	850,000	3,381,468
2016	0	2,531,468	2,531,468	1,033,799	734,978	1,768,777	4,300,244
2017	0	2,531,468	2,531,468	980,454	785,589	1,766,042	4,297,510
2018	0	2,531,468	2,531,468	932,627	835,926	1,768,553	4,300,020
2019	0	2,531,468	2,531,468	884,800	881,615	1,766,415	4,297,882
2020	0	2,531,468	2,531,468	831,454	916,068	1,747,522	4,278,990
2021	0	2,531,468	2,531,468	1,250,860	1,516,917	2,767,777	5,299,244
2022	0	2,531,468	2,531,468	1,188,317	1,579,845	2,768,162	5,299,629
2023	0	2,531,468	2,531,468	1,127,614	1,637,777	2,765,390	5,296,858
2024	0	2,531,468	2,531,468	1,072,429	1,696,437	2,768,865	5,300,333
2025	0	2,531,468	2,531,468	1,019,083	1,750,917	2,770,000	5,301,468
2026	3,370,000	2,443,005	5,813,005	0	0	0	5,813,005
2027	3,545,000	2,261,486	5,806,486	0	0	0	5,806,486
2028	3,730,000	2,070,518	5,800,518	0	0	0	5,800,518
2029	3,925,000	1,869,574	5,794,574	0	0	0	5,794,574
2030	4,135,000	1,657,999	5,792,999	0	0	0	5,792,999
2031	5,260,000	1,410,065	6,670,065	0	0	0	6,670,065
2032	5,540,000	1,123,865	6,663,865	0	0	0	6,663,865
2033	5,830,000	822,560	6,652,560	0	0	0	6,652,560
2034	6,140,000	505,355	6,645,355	0	0	0	6,645,355
2035	6,465,000	342,645	6,807,645	0	0	0	6,807,645
<b>TOTAL</b>	<b>\$49,530,000</b>	<b>\$65,116,377</b>	<b>\$114,646,377</b>	<b>\$14,571,435</b>	<b>\$12,336,069</b>	<b>\$26,907,503</b>	<b>\$141,553,881</b>

## 9.2 Operations and Maintenance (O&M) Expenses

Pursuant to the Lease, the Company is required to prepare and submit to the Airport a proposed budget for the next Bond Year that indicates the projected expenditures from the O&M Fund (paid for by the FMC) and the Renewal and Replacement (R&R) Fund no later than November 1 of each year. The Company's BY2024 budget of O&M Expenses (totaling approximately \$2.3 million) is displayed on Table 9.

**Table 9 | BY2024 Budgeted O&M Expenses**

HVAC	\$46,440
Elevator/Escalator Maintenance	75,216
Facility Management	369,720
Fuel Maintenance	5,073
Custodial and Pest Control Services	375,593
Concrete Sealing/Crack Repair	142,190
Door/Keys/Locks Hardware, Maintenance and Repair	11,648
Lighting and Signage Supplies and Maintenance	22,950
Electrical Service	2,400
Snow Removal and Grounds Maint.	209,045
Tools and Supplies	24,000
Plumbing Repairs	16,800
Security, Fire and Life Safety	111,196
Painting and Wall Repair	30,000
<b>Total Operating and Maintenance Expenses</b>	<b>\$1,442,271</b>
<b>Utilities</b>	
Electricity	\$155,000
Natural Gas	192,400
Water and Sewer	26,040
Trash/Recycling	58,400
<b>Total Utilities</b>	<b>\$431,840</b>
<b>General Expenses</b>	
Insurance	\$138,600
Asset Management	48,480
Senior Management	24,408
Management Fee	59,928
Professional Services	6,000
Accounting Services	36,612
Network/IT/Telephone/Internet	26,496
Office Expenses	6,000
<b>Total General Expenses</b>	<b>\$346,524</b>
<b>Contingency</b>	<b>\$60,000</b>
<b>Total Expenses</b>	<b>\$2,280,635</b>

## 9.4 Recommended CFC and FMC Rates for BY2024

The CFC was increased to \$9.80 in BY2022 in order to collect a sufficient amount to cover the annual requirements, plus to restore the balance in the Coverage Fund, which had been depleted to meet the financial requirements in BY2021. Airport management decided to apply CARES Act funds to the BY2022 financial requirements. As a result, effective April 1, 2021, the CFC was decreased to \$4.75.

At the beginning of BY2023, the CFC was increased to \$5.15 per transaction day, based on the analysis and recommendations presented in the BY2023 Rate Report. However, BY2023 CFC collections have trended lower than projected. The estimated deficiency in BY2023 CFC collections is presented on Table 10. It is estimated that a withdrawal of approximately \$755,000 from the Coverage Fund will be required to meet the BY2023 financial obligations. Because the anticipated withdrawal from the Coverage Fund in BY2023 will reduce the balance in the Coverage Fund below the minimum required balance, the BY2024 CFC rate will need to include a requirement of approximately \$280,000 to restore the Coverage Fund balance to the minimum required balance.

**Table 10 | Estimated Deficiency in BY2023 CFC Collections and Withdrawal from Coverage Fund**

Funds Available for Debt Service as of 10/31/2022:	
10/31/2022 Balance in Revenue Fund	\$1,013,971
10/31/2022 Balance in Principal Account	1,384,666
10/31/2022 Balance in Interest Account	1,366
Total Funds Available as of 10/31/2022	<u>\$2,400,003</u>
Estimated Monthly CFC Deposits Available as of 2/28/2023	
October 2022 CFCs (deposited in November 2022)	\$340,000
November 2022 CFCs (deposited in October 2022)	\$237,000
December 2022 CFCs (deposited in Januar 2023)	\$250,000
January 2023 CFCs (deposited in February 2023)	<u>\$252,000</u>
Estimated CFC Deposits Prior to 2/28/2023	<u>\$827,000</u>
Total Estimated Funds Available as of 2/28/2023	<u>\$3,227,003</u>
3/1/2023 Debt Service Payment	
Principal	(\$2,765,390)
Interest	<u>(1,265,734)</u>
Total 3/1/2023 Debt Service Payment	<u>(4,031,124)</u>
Estimated Deficiency to meet 3/1/2023 Debt Service Payment	<u>(\$804,121)</u>
Estimated Coverage Fund Withdrawal and Replenishment:	
Coverage Fund Balance as of 10/31/2022	\$2,134,196
Minus Anticipated Withdrawal to cover 3/1/2023 Debt Service Payment	<u>(\$804,121)</u>
Estimated Coverage Fund Balance after Withdrawal	\$1,330,075
Estimated Deposit to replenish Coverage Fund Balance	<u>329,005</u>
Required Coverage Fund Balance	<u>\$1,659,080</u>

The FMC level was \$2.80 in BY2022, and it was lowered to \$2.40 in BY2023. It is estimated that the FMC collections will be sufficient to cover the BY2023 financial requirements.

Table 11 presents the calculations of the recommended CFC and FMC rates for BY2024, using the Low, Base, and High forecasts of transaction days.

**Table 11 | Calculation of Recommended BY2024 CFC and FMC Levels**

	Transaction Day Forecast Scenarios		
	Low	Base	High
<b>Amount to be Recovered by CFC</b>			
Annual Debt Service <sup>1</sup>	\$5,300,333	\$5,300,333	\$5,300,333
Deposits to the Administrative Expense Fund	46,044	46,044	46,044
Deposits to the Renewal & Replacement Fund	284,187	284,187	284,187
Deposit to Coverage Fund <sup>2</sup>	329,005	329,005	329,005
Net Amount to be Recovered	\$5,959,569	\$5,959,569	\$5,959,569
Forecasted Transaction Days	843,101	908,503	985,173
Calculated Minimum Required CFC	\$7.07	\$6.56	\$6.05
<b>Recommended CFC for BY2024</b>	<b>\$7.10</b>	<b>\$6.60</b>	<b>\$6.05</b>
<b>Amount to be Recovered by FMC</b>			
Projected Deposits to Administrative Expense Fund <sup>3</sup>	\$1,679,477	\$1,679,477	\$1,679,477
Calculated Minimum Required FMC	\$1.99	\$1.85	\$1.70
<b>Recommended FMC for BY 2024</b>	<b>\$1.99</b>	<b>\$2.00</b>	<b>\$1.70</b>
<b>Combined Recommended CFC and FMC for BY2024</b>	<b>\$9.09</b>	<b>\$8.60</b>	<b>\$7.75</b>

<sup>1</sup> From Table 8.

<sup>2</sup> Amount required to restore the Coverage Fund to equal the Coverage Fund Requirement (see Table 10).

<sup>3</sup> Total of amounts projected to be required to be deposited into the O&M Fund during BY2024 to cover budgeted O&M Expenses and maintain the O&M Fund Required balance of \$462,000 (see Table 15).

Based on the Base transaction day forecast, we prepared the recommended BY2024 CFC and FMC rates, as follows:

- **We recommend that the CFC level be increased to \$6.60 per transaction day for BY2024.**  
At \$6.60, assuming the Base transaction day forecast, BY2024 CFC collections are projected to total approximately \$6.0 million, which is anticipated to cover the BY2024 requirements pursuant to the Indenture.
- **We recommend that the FMC be decreased to \$2.00 per transaction day, for BY2024.**  
O&M Expenses are budgeted to equal approximately \$2.3 million in BY2024. However, after taking into account the monies currently in the O&M Fund, it is estimated that total FMC collections of approximately \$1.7 million will be sufficient to cover the budgeted BY2024 O&M Expenses while maintaining the O&M Fund Required balance of \$462,000 (see Table 15). At the recommended FMC rate, under the Base transaction day forecast, collections are projected to be sufficient to meet the BY2024 financial requirements.

Although the enplanements projected in the BY2023 Rate Report were very close to the actual enplanements, due factors in the Anchorage rental car market, the relationship between rental car transactions and enplanements continued to remain depressed during BY2023. Even with the longer contract duration since the start of the pandemic, transaction days have not rebounded in proportion to the recovery of air traffic at the Airport.

It appears that the trends in the ratio of transaction days to enplanements (a function of both the number of transactions and contract duration) reflect structural changes in the Airport’s air travel market during the pandemic. It appears that passenger traffic recovery at ANC has been driven largely by the visiting friends and relatives (VFR) segment of leisure travel. The VFR travelers presumably have a lower propensity to rent cars, but when they do rent cars, they are likely to rent for longer durations. However, the longer duration trends have not compensated for the lower trend in the ratio of transactions per enplanement. In addition, the increase in the average daily rental rate at ANC in 2023 (the increase in rates imposed by the RACs), perhaps partially in response to a reported shortage of available rental cars, was more pronounced than we had anticipated, which contributed to the sluggish recovery of rental car transaction days at the Airport.

Tables 12, 13, and 14 present the projected BY2024 monthly transaction days, CFC collections, and FMC collections under the Low, Base, and High transaction day scenarios, respectively.

**Table 12 | BY2024 Monthly Transaction Days, CFCs, and FMCs – Low Forecast**

	Transaction		CFC		FMC
	Days	CFC Rate	Collections	FMC Rate	Collections
March 2023	56,153	\$7.10	\$398,685	\$1.99	\$111,858
April 2023	49,484	\$7.10	\$351,334	\$1.99	\$98,573
May 2023	71,565	\$7.10	\$508,112	\$1.99	\$142,559
June 2023	100,426	\$7.10	\$713,026	\$1.99	\$200,051
July 2023	120,880	\$7.10	\$858,247	\$1.99	\$240,796
August 2023	122,807	\$7.10	\$871,928	\$1.99	\$244,634
September 2023	93,500	\$7.10	\$663,851	\$1.99	\$186,255
October 2023	59,804	\$7.10	\$424,607	\$1.99	\$119,131
November 2023	44,820	\$7.10	\$318,224	\$1.99	\$89,283
December 2023	44,392	\$7.10	\$315,185	\$1.99	\$88,431
January 2024	38,383	\$7.10	\$272,520	\$1.99	\$76,460
February 2024	40,887	\$7.10	\$290,295	\$1.99	\$81,447
<b>Totals</b>	<b>843,101</b>	<b>N/A</b>	<b>\$5,986,015</b>	<b>N/A</b>	<b>\$1,679,477</b>

**Table 13 | BY2024 Monthly Transaction Days, CFCs, and FMCs – Base Forecast**

	Transaction		CFC		FMC
	Days	CFC Rate	Collections	FMC Rate	Collections
March 2023	60,573	\$6.60	\$399,782	\$2.00	\$121,146
April 2023	53,766	\$6.60	\$354,856	\$2.00	\$107,532
May 2023	76,771	\$6.60	\$506,689	\$2.00	\$153,542
June 2023	107,400	\$6.60	\$708,840	\$2.00	\$214,800
July 2023	128,979	\$6.60	\$851,261	\$2.00	\$257,958
August 2023	130,772	\$6.60	\$863,095	\$2.00	\$261,544
September 2023	99,384	\$6.60	\$655,934	\$2.00	\$198,768
October 2023	64,577	\$6.60	\$426,208	\$2.00	\$129,154
November 2023	48,549	\$6.60	\$320,423	\$2.00	\$97,098
December 2023	48,463	\$6.60	\$319,856	\$2.00	\$96,926
January 2024	43,356	\$6.60	\$286,150	\$2.00	\$86,712
February 2024	45,913	\$6.60	\$303,026	\$2.00	\$91,826
<b>Totals</b>	<b>908,503</b>	<b>N/A</b>	<b>\$5,996,120</b>	<b>N/A</b>	<b>\$1,817,006</b>

**Table 14 | BY2024 Monthly Transaction Days, CFCs, and FMCs – High Forecast**

	Transaction		CFC		FMC
	Days	CFC Rate	Collections	FMC Rate	Collections
March 2023	65,149	\$6.05	\$394,105	\$1.70	\$111,063
April 2023	58,199	\$6.05	\$352,060	\$1.70	\$99,215
May 2023	82,146	\$6.05	\$496,925	\$1.70	\$140,039
June 2023	114,592	\$6.05	\$693,197	\$1.70	\$195,351
July 2023	137,335	\$6.05	\$830,774	\$1.70	\$234,122
August 2023	138,990	\$6.05	\$840,788	\$1.70	\$236,944
September 2023	105,452	\$6.05	\$637,908	\$1.70	\$179,770
October 2023	69,496	\$6.05	\$420,397	\$1.70	\$118,473
November 2023	52,404	\$6.05	\$317,006	\$1.70	\$89,336
December 2023	52,674	\$6.05	\$318,639	\$1.70	\$89,796
January 2024	52,540	\$6.05	\$317,830	\$1.70	\$89,568
February 2024	56,195	\$6.05	\$339,940	\$1.70	\$95,799
<b>Totals</b>	<b>985,173</b>	<b>N/A</b>	<b>\$5,959,569</b>	<b>N/A</b>	<b>\$1,679,477</b>

Table 15 shows the actual, projected and estimated deposits, interest earnings, expenditures and balances in the Administrative Expense Fund, the R&R Fund, and the O&M Fund based on the O&M and R&R budgets. Per the Indenture, the R&R Fund is to be used to pay for capital improvements, repairs, and replacements to the Consolidated Facility and must maintain a balance of \$1 million. If the balance falls below \$1 million, the required \$1.0 million balance must be met within 18 months.

**Table 15 | Funds Established Pursuant to the Trust Indenture**

Description	Administrative Expense Fund	Renewal and Replacement Fund	Operation & Maintenance Fund	Coverage Fund
<b>BY2022</b>				
Beginning Balance	\$54,202	\$1,293,503	\$906,639	\$1,781,638
Deposits	14,091	0	2,021,318	3,100,000
Interest Earnings	7	145	87	0
Withdrawals	(15,906)	(600,250)	(2,156,074)	(2,747,443)
Balance as of March 1, 2022	\$52,394	\$693,397	\$771,970	\$2,134,196
<b>BY2023</b>				
Beginning Balance	\$52,394	\$693,397	\$771,970	\$2,134,196
Estimated Deposits	36,390	0	2,410,245	0
Estimated Interest Earnings	222	10,415	7,154	0
Estimated Withdrawals <sup>1</sup>	(46,480)	0	(2,126,211)	(804,121)
Projected Balance as of March 1, 2023	\$42,526	\$703,813	\$1,063,158	\$1,330,075
<b>BY2024</b>				
Beginning Balance	\$42,526	\$703,813	\$1,063,158	\$1,330,075
Projected Deposits	46,044	284,187	1,679,477	329,005
Projected Interest Earnings	200	12,000	0	0
Projected Withdrawals <sup>1</sup>	(48,770)	0	(2,280,635)	0
Projected Balance as of March 1, 2024	\$40,000	\$1,000,000	\$462,000	\$1,659,080

<sup>1</sup> Estimated withdrawals from the O&M Fund for BY2023 and BY2024 assume O&M Expenses will equal the budgeted amounts for each year. The ending BY2024 balance in the O&M Fund is projected to equal the O&M Fund Required balance of \$462,000.

## 9.5 Application of CFC Revenues and Calculation of Debt Service Coverage

The application of revenues and the debt service coverage calculation are presented on Table 16. Revenues consist of (1) CFC collections and (2) the earnings on monies and investments in the Revenue Fund, the Bond Fund, the Issuance Fund, the Administrative Expense Fund and the Coverage Fund. The amounts shown for BY2022 reflect actual amounts, and the amounts shown for BY2023 and BY2024 reflect estimated and projected amounts, respectively.

The Indenture requires that the CFC rate be set each Bond Year at a level estimated to be sufficient to fund the debt service requirements and other funding requirements set forth in the Indenture, for that Bond Year. The debt service coverage ratio was 1.47 in FY2022 and is projected to equal 1.30 in BY2023 and 1.38 in BY2024.

**Table 16 | Application of CFC Revenues and Debt Service Coverage**

	Actual 2022	Estimate 2023 <sup>4</sup>	Projected 2024
<b>Revenues<sup>1</sup></b>			
CFC Collections	\$4,000,137	\$4,428,554	\$5,996,120
CARES Act Funds <sup>2</sup>	1,665,993	0	0
Interest Earnings <sup>3</sup>	239	17,793	12,200
Total Revenues	<u>\$5,666,369</u>	<u>\$4,446,347</u>	<u>\$6,008,320</u>
<b>Application of Revenues</b>			
Deposits to Bond Fund:			
Interest Account	\$3,719,785	\$3,659,081	\$3,603,896
Principal Account	1,579,845	1,637,777	1,696,437
Total Deposits to Bond Fund	<u>\$5,299,629</u>	<u>\$5,296,858</u>	<u>\$5,300,333</u>
Deposits to Administrative Expense Fund	\$14,091	\$36,390	\$46,044
Deposits to Renewal and Replacement Fund	0	0	284,187
Increase (Decrease) in Excess CFCs in Revenue Fund	352,409	(104,693)	26,446
Total Application of Revenues	<u>\$5,666,130</u>	<u>\$5,228,554</u>	<u>\$5,657,010</u>
<b>Debt Service Coverage</b>			
Total Revenues	\$5,666,130	\$5,228,554	\$5,657,010
Balance in Coverage Fund	2,134,196	1,659,079	1,659,079
Total for Calculation	<u>\$7,800,326</u>	<u>\$6,887,633</u>	<u>\$7,316,089</u>
Annual Debt Service Requirement	<u>\$5,299,629</u>	<u>\$5,296,858</u>	<u>\$5,300,333</u>
<b>Debt Service Coverage Ratio</b>	<b>1.47</b>	<b>1.30</b>	<b>1.38</b>

<sup>1</sup> FMC collections are not included in Revenues under the Indenture because they are not pledged for the payment of debt service on the Bonds.

<sup>2</sup> Amount of CARES Act funds applied to BY 2022 debt service, not including the portion of CARES Act funds used to replenish the Coverage Fund balance.

<sup>3</sup> Interest from the Revenue Fund, Bond Fund, Issuance Fund, Administrative Expense Fund, and Coverage Fund is included.

<sup>4</sup> Projected based on nine months of actual fund data and actual CFC collection data.

## **9.6 Recommendations**

We recommend that for BY2024, the CFC rate be increased to \$6.60. We further recommend that the FMC rate be decreased to \$2.00, effective March 1, 2023. This will result in the combined CFC and FMC rate increasing to \$8.60.

The above recommendations are based on the information available as of the date of this Report. We recommend that the CFC and FMC collections be monitored monthly, due to the changing nature of the environment from month to month.



HEADQUARTERS

150 N. Michigan, Suite 2930

Chicago, IL 60601

312.988.3360

[www.unison-ucg.com](http://www.unison-ucg.com)