

**MARICOPA COUNTY TRANSPORTATION EXCISE TAX**  
**Forecasting Process & Results**  
**FY 2016-2026**



**Financial Management Services**  
**September 2015**

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# **MARICOPA COUNTY TRANSPORTATION EXCISE TAX OFFICIAL FORECAST UPDATE RISK ANALYSIS OF EXPECTED VALUES**

## **Introduction**

In 1985, the voters of Maricopa County approved Proposition 300 to establish a ½ cent transportation excise (sales) tax for construction of a regional freeway system within the county. The ½ cent sales tax was approved for a period of 20 years and ended on December 31, 2005.

On November 2, 2004, Maricopa County’s voters approved Proposition 400 which extended the ½ cent sales tax for another 20 years through December 31, 2025. The sales tax extension is used for construction of new freeways, widening of existing freeways and highways, improvements to the arterial street system, regional bus service and other special transportation services, and high capacity transit services such as light rail, bus rapid transit and express buses.

This document contains the official forecast of expected values for the Maricopa County Transportation Excise Tax for the period FY 2016–2026 as developed by the Arizona Department of Transportation (the Department) in cooperation with the Maricopa Association of Governments and Valley Metro.

## **Background**

Since 1986, the Arizona Department of Transportation (the Department) has used a comprehensive regression-based econometric model to estimate Transportation Excise Tax revenues for Maricopa County. These revenues, which flow into the Regional Area Road Fund (RARF), are the major funding source for the Maricopa County Freeway Program.

The revenue forecast is highly dependent on estimates of independent variables. In order to deal with variability between estimated and actual values, the Department introduced the Risk Analysis Process (RAP) in 1992. The RAP relies on probability analysis and the independent evaluation of the model’s variables by an expert panel of economists. The process results in a series of forecasts, with specified probabilities of occurrence, rather than a single or “best guess” estimate.

Enhanced forecasting accuracy was achieved in July 1996, when Hickling Lewis Brod Inc. (HLB) working in conjunction with Dr. Dennis Hoffman of Arizona State University, incorporated economic data and independent variables which were not included in the 1986 model.

In September 2005, the Department had HDR Decision Economics re-examine the structure of the RARF model and re-evaluate the set of explanatory variables used in the production of the RARF revenue forecasts. Three new variables (U. S. Housing Starts, Sky Harbor Passenger Traffic and Maricopa County Total Non-Farm Employment Growth) were added to the existing list of variables used in the RARF regression equations. The September 2010 panel members requested the Maricopa County per capita personal income variable to be in nominal dollars instead of real dollars. In September 2011, the prime interest rate variable was replaced by the 30 year mortgage rate variable and the U.S. housing starts variable was removed from the model. In September 2014, Phoenix-Mesa Gateway Passenger Traffic was combined with Phoenix Sky Harbor Passenger Traffic to form a Phoenix Sky Harbor/Gateway airports passenger traffic variable.

The independent variables contained in the current model are:

1. Maricopa County nominal personal income growth
2. Maricopa County population growth
3. Maricopa County construction employment growth
4. Phoenix consumer price index (CPI)
5. Phoenix Sky Harbor/Gateway airports passenger traffic growth
6. Maricopa County total non-farm employment growth
7. 30 year mortgage rate

**Risk Analysis Panel**

The Risk Analysis Process (RAP) relies heavily on the judgments of an expert panel of economists to provide information critical to the forecasting process. In August 2015, a panel of ten economic and financial experts representing public, private, and academic sectors submitted their individual estimates of the model’s independent variables and comments on the future economic outlook. The information gathered from the panelists was input into the forecasting model to produce a series of forecasts with associated probabilities of occurrence. The panelists’ inputs are reflected in the attached tables in this report.

**Model Results**

This year’s panel inputs produced a mean forecast of \$5,833.9 million for the period FY 2016-2026 with a compound growth rate (CGR) of 5.7 percent. The Department’s Official Forecast for FY 2016-2026 totals \$5,525.8 million with a compound growth rate of 5.0 percent. This year’s official forecast is \$257.8 million higher than last year’s official forecast.

The Official Forecast result incorporates the 50 percent confidence interval growth rate amount for each year of the forecast except for FY 2016. The FY 2016 forecast of \$401.0 million was developed by ADOT staff independently of the econometric model using time series techniques and historical and projected growth rates from the model.

<b>FY 2016 Official Forecast Results (Dollars in Millions)</b>			
<b><u>Fiscal Year</u></b>	<b><u>Mean Forecast</u></b>	<b><u>Official Forecast</u></b>	<b><u>Confidence Level</u></b>
<b>2016</b>	\$405.5	\$401.0	50%
<b>2017</b>	437.8	426.6	50%
<b>2018</b>	469.2	451.6	50%
<b>2019</b>	499.6	476.8	50%
<b>2020</b>	529.0	501.5	50%
<b>2021</b>	557.9	526.7	50%
<b>2022</b>	586.7	551.6	50%
<b>2023</b>	615.5	576.0	50%
<b>2024</b>	645.1	602.3	50%
<b>2025</b>	675.4	629.0	50%
<b>2026/1</b>	<u>412.2</u>	382.7	50%
<b>Total</b>	<b>\$5,833.9</b>	<b>\$5,525.8</b>	
<b>Average CGR</b>	<b>5.7%</b>	<b>5.0%</b>	

Note: /1. Reflects the end of the one-half cent transportation excise tax extension on December 31, 2025

For comparison purposes, the September 2014 and September 2015 Official Forecasts are shown below:

<b>FY 2016-2026 Comparative Forecast</b>			
<b>(Dollars in Millions)</b>			
	<b>Sep. 14</b>	<b>Sep. 15</b>	
<b>Fiscal</b>	<b>Official</b>	<b>Official</b>	
<b><u>Year</u></b>	<b><u>Forecast</u></b>	<b><u>Forecast</u></b>	<b><u>Difference</u></b>
<b>2016</b>	\$402.0	\$401.0	(\$1.0)
<b>2017</b>	421.0	426.6	5.6
<b>2018</b>	441.8	451.6	9.8
<b>2019</b>	460.1	476.8	16.7
<b>2020</b>	479.1	501.5	22.4
<b>2021</b>	498.3	526.7	28.4
<b>2022</b>	519.2	551.6	32.4
<b>2023</b>	540.4	576.0	35.6
<b>2024</b>	563.0	602.3	39.3
<b>2025</b>	586.6	629.0	42.4
<b>2026/1</b>	<u>356.5</u>	<u>382.7</u>	<u>26.2</u>
<b>Total</b>	<b>\$5,268.0</b>	<b>\$5,525.8</b>	<b>\$257.8</b>
<b>Average CGR</b>	<b>4.3%</b>	<b>5.0%</b>	

Note: /1 Reflects the end of the one-half cent transportation excise tax extension on December 31, 2025

### **Summary**

The Department’s Official Forecast for FY 2016-2026 totals \$5,525.8 million, which is \$257.8 million higher than the September 2014 Official Forecast. The RAP panel continued to voice pessimism regarding Maricopa County’s personal income, population and employment growth rates with only moderate growth expected. Compared to last year, the panel inputs for Construction Employment, Non-Farm Employment and Personal Income were modestly higher in the near term but then turned lower in the long term. On a positive note, the panel expects lower 30-year mortgage rates and Phoenix CPI growth through the forecast period.

### **Supplementary Information**

The remainder of this report presents supplementary information on the detailed results of the RAP model and Risk Analysis Process. While the Official Forecast period is FY 2016-2026, panel inputs were requested for FY 2016-2020, 2023 and 2026. Data displayed for other than the requested years has been extrapolated.

**RARF Official Revenue Forecast**  
**With Category Detail and Confidence Interval by Fiscal Year**  
**(Current Dollars in Millions)**

<b>Fiscal Year Percentile</b>	<b>2015 Actual</b>	<b>2016 50%</b>	<b>2017 50%</b>	<b>2018 50%</b>	<b>2019 50%</b>	<b>2020 50%</b>	<b>2021 50%</b>	<b>2022 50%</b>	<b>2023 50%</b>	<b>2024 50%</b>	<b>2025 50%</b>	<b>2026 50%</b>
<b>Retail Sales</b>	\$201.8	\$218.4	\$228.5	\$242.3	\$256.1	\$269.5	\$283.0	\$296.5	\$309.6	\$324.0	\$338.6	\$206.0
<b>Contracting</b>	36.6	35.8	41.3	45.2	49.1	53.1	57.0	60.7	64.0	67.9	71.6	44.0
<b>Utilities</b>	31.1	31.3	32.4	33.3	34.3	35.3	36.3	37.3	38.3	39.4	40.5	24.2
<b>Restaurant and Bar</b>	41.9	44.2	47.0	49.6	52.3	54.8	57.6	60.4	63.2	66.1	69.2	42.2
<b>Rental of Real Property</b>	40.2	40.7	44.5	46.9	49.3	51.7	54.3	56.8	59.2	61.7	64.5	39.3
<b>Rental of Personal Property</b>	12.9	13.1	13.9	14.5	15.1	15.7	16.4	17.0	17.7	18.4	19.1	11.6
<b>Other</b>	17.7	17.5	19.0	19.8	20.6	21.4	22.2	23.0	23.9	24.7	25.6	15.4
<b>Total</b>	\$382.2	\$401.0	\$426.6	\$451.6	\$476.8	\$501.5	\$526.7	\$551.6	\$576.0	\$602.3	\$629.0	\$382.7

Note: /1 FY 2026 totals reflect the transportation excise tax extension expires on December 31, 2025

## RARF TOTAL TAX REVENUE RISK ANALYSIS RESULTS

(Current Dollars in Millions)

Fiscal Year	Mean	10%	20%	30%	40%	50%	60%	70%	80%	90%
2016	\$405.5	\$454.5	\$433.9	\$420.3	\$409.9	\$401.0	\$392.5	\$384.1	\$374.7	\$362.6
2017	437.8	532.1	489.8	463.0	443.1	426.6	411.1	395.7	378.9	357.5
2018	469.2	601.5	540.0	502.5	474.6	451.6	430.4	409.4	386.9	357.9
2019	499.6	664.1	586.4	539.3	505.4	476.8	450.5	424.9	396.8	362.0
2020	529.0	719.1	629.3	574.3	534.6	501.5	471.5	441.8	409.4	370.0
2021	557.9	770.0	668.9	608.1	563.6	526.7	493.5	459.7	423.7	380.7
2022	586.7	819.2	707.9	640.4	591.4	551.6	515.2	479.4	440.7	393.2
2023	615.5	867.3	746.3	672.5	619.2	576.0	537.3	499.1	457.3	407.5
2024	645.1	915.0	785.2	705.3	648.1	602.3	560.2	519.9	475.6	422.2
2025	675.4	965.0	823.2	739.3	677.4	629.0	584.7	540.5	494.1	438.3
2026/1	412.2	592.6	503.6	451.6	413.5	382.7	355.2	328.3	299.6	264.8
<b>Total</b>	<b>\$5,833.9</b>	<b>\$7,900.5</b>	<b>\$6,914.4</b>	<b>\$6,316.7</b>	<b>\$5,880.8</b>	<b>\$5,525.8</b>	<b>\$5,202.1</b>	<b>\$4,882.8</b>	<b>\$4,537.6</b>	<b>\$4,116.5</b>

/1 Totals reflect the fiscal year ending June 30, 2026, but the transportation excise tax expires December 31, 2025.

**RARF OFFICIAL REVENUE FORECAST DISTRIBUTION**  
(Current Dollars in Millions)

Fiscal Year	Regional Area Road Fund (RARF) /1		Public Transportation Fund (33.3%)	Total
	Freeways (56.2%)	Arterial Streets (10.5 %)		
2016	\$225.4	\$42.1	\$133.5	\$401.0
2017	239.7	44.8	142.1	426.6
2018	253.8	47.4	150.4	451.6
2019	268.0	50.0	158.8	476.8
2020	281.8	52.7	167.0	501.5
2021	296.0	55.3	175.4	526.7
2022	310.0	57.9	183.7	551.6
2023	323.7	60.5	191.8	576.0
2024	338.5	63.2	200.6	602.3
2025	353.5	66.0	209.5	629.0
2026 /2	215.1	40.2	127.4	382.7
<b>TOTALS</b>	<b>\$3,105.5</b>	<b>\$580.1</b>	<b>\$1,840.2</b>	<b>\$5,525.8</b>

Note: 1/ The Regional Public Transportation Authority received a portion of the excise tax funds for transit cost which is adjusted annually by the GDP price deflator. Beginning July 1, 2005, this transfer from RARF is divided equally between MAG and the Public Transportation Fund for planning and administering the regional transportation plan.

2/ Reflects the end of the one-half cent transportation excise tax extension on December 31, 2025.

Totals may not add due to rounding.

**Distribution**

Per Laws 2004, Chapter 2 (HB 2456), the sales tax extension will be distributed as follows:

1. 56.2 percent to the Regional Area Road (RARF) fund for freeways and other routes in the state highway systems, including capital expenses.
2. 10.5 percent to the RARF fund for major arterial streets and intersection improvements, including capital expenses and implementation studies.
3. 33.3 percent to the Public Transportation Fund for:
  - (a) Capital costs, maintenance and operation of public transportation classifications.
  - (b) Capital costs and utility relocation costs associated with a light rail public transit system.



## PANELIST DATA VALUES

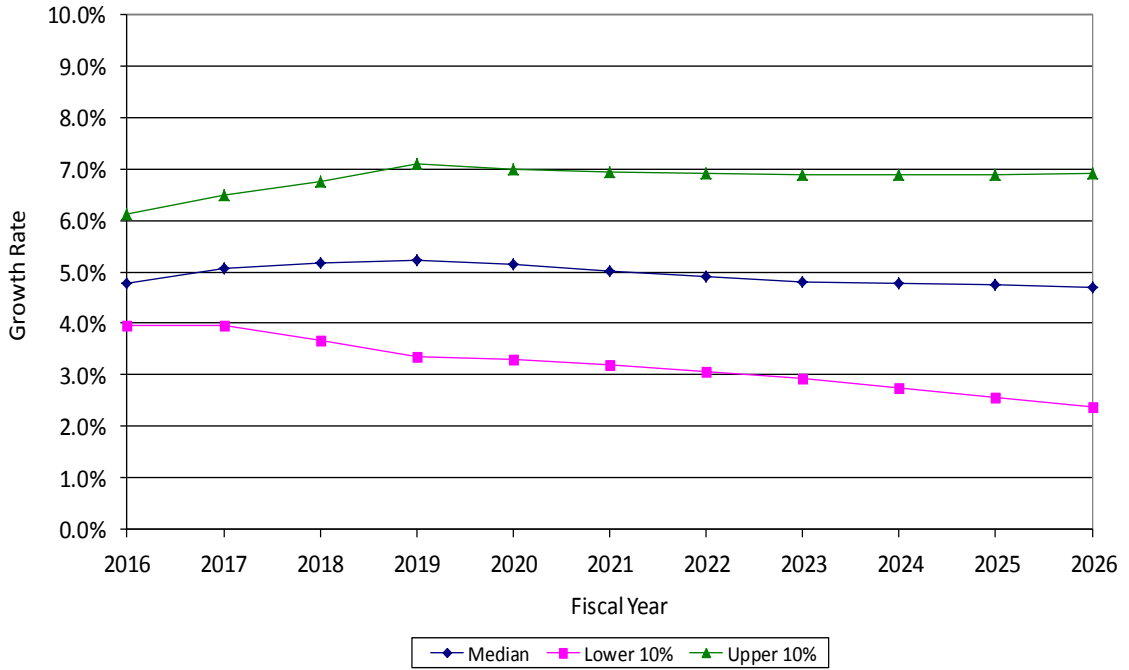
	Nominal Pers. Inc. Growth /1	Population Growth /1	Construction Employment Growth /1	30 Year Mortgage Rate	Phoenix CPI Growth/1	Sky Harbor/Gateway Passenger Traffic Growth	Total Non-Farm Employment Growth /1
<b>FY 2016</b>							
Median	4.77%	1.85%	7.03%	4.32%	1.84%	2.12%	2.51%
Lower 10%	3.97%	1.40%	3.74%	3.84%	1.15%	1.13%	1.18%
Upper 10%	6.12%	2.37%	10.43%	5.35%	2.46%	3.09%	3.67%
<b>FY 2017</b>							
Median	5.07%	2.03%	8.02%	4.90%	2.02%	1.94%	2.67%
Lower 10%	3.97%	1.50%	3.36%	4.16%	1.26%	1.01%	0.96%
Upper 10%	6.49%	2.58%	12.15%	5.82%	2.66%	2.87%	4.23%
<b>FY 2018</b>							
Median	5.18%	2.05%	6.80%	5.06%	2.16%	1.98%	2.81%
Lower 10%	3.67%	1.41%	2.35%	4.32%	1.35%	0.89%	0.75%
Upper 10%	6.76%	2.58%	11.21%	6.06%	2.85%	3.03%	4.77%
<b>FY 2019</b>							
Median	5.22%	2.00%	5.75%	5.10%	2.17%	1.89%	2.87%
Lower 10%	3.34%	1.37%	-0.34%	4.20%	1.32%	0.73%	0.67%
Upper 10%	7.09%	2.52%	11.00%	6.18%	2.99%	2.93%	4.90%
<b>FY 2020</b>							
Median	5.14%	1.92%	4.30%	5.09%	2.16%	1.91%	2.79%
Lower 10%	3.31%	1.33%	-0.94%	4.18%	1.20%	0.69%	0.53%
Upper 10%	6.99%	2.55%	9.60%	6.20%	2.95%	3.12%	4.90%
<b>FY 2023</b>							
Median	4.80%	1.78%	2.77%	5.10%	2.16%	1.87%	2.49%
Lower 10%	2.94%	1.05%	-4.46%	4.04%	1.18%	0.27%	-0.23%
Upper 10%	6.89%	2.47%	9.99%	6.40%	3.20%	3.36%	4.98%
<b>FY 2026</b>							
Median	4.71%	1.66%	2.58%	5.07%	1.98%	1.87%	2.44%
Lower 10%	2.36%	0.82%	-6.08%	3.90%	0.93%	-0.09%	-0.76%
Upper 10%	6.91%	2.51%	11.04%	6.60%	3.18%	3.62%	5.13%

All data in the above table are percentage growth rates except 30 year mortgage rate.

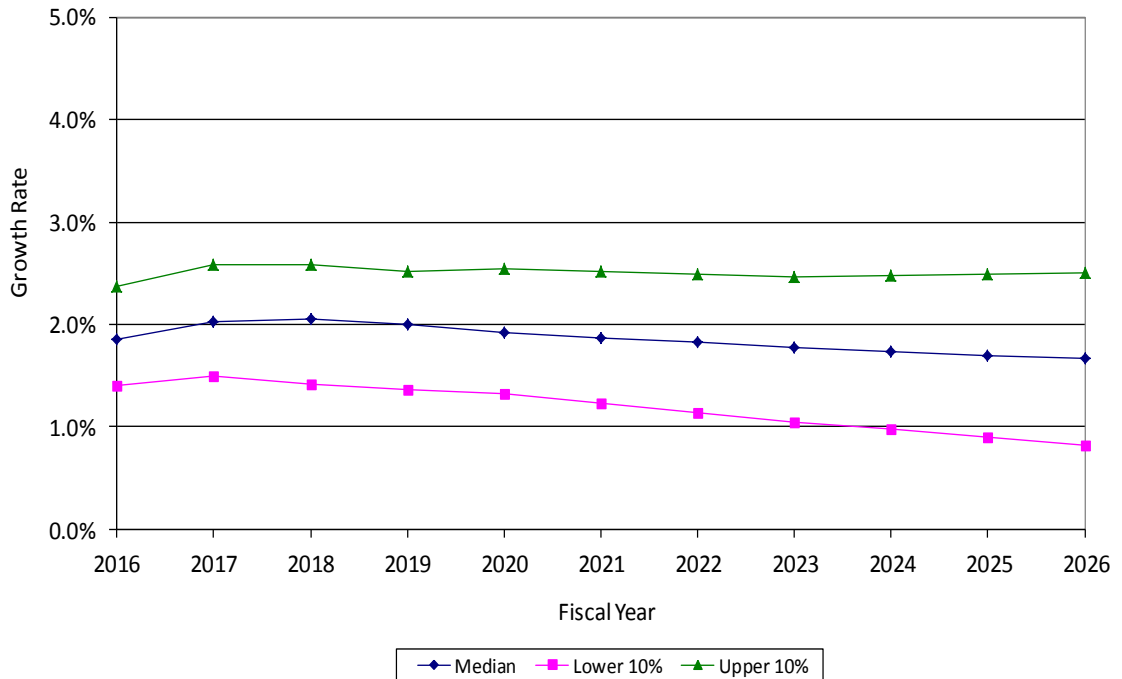
Personal income and 30 year mortgage rate are nominal rates.

/1 Data for Maricopa County

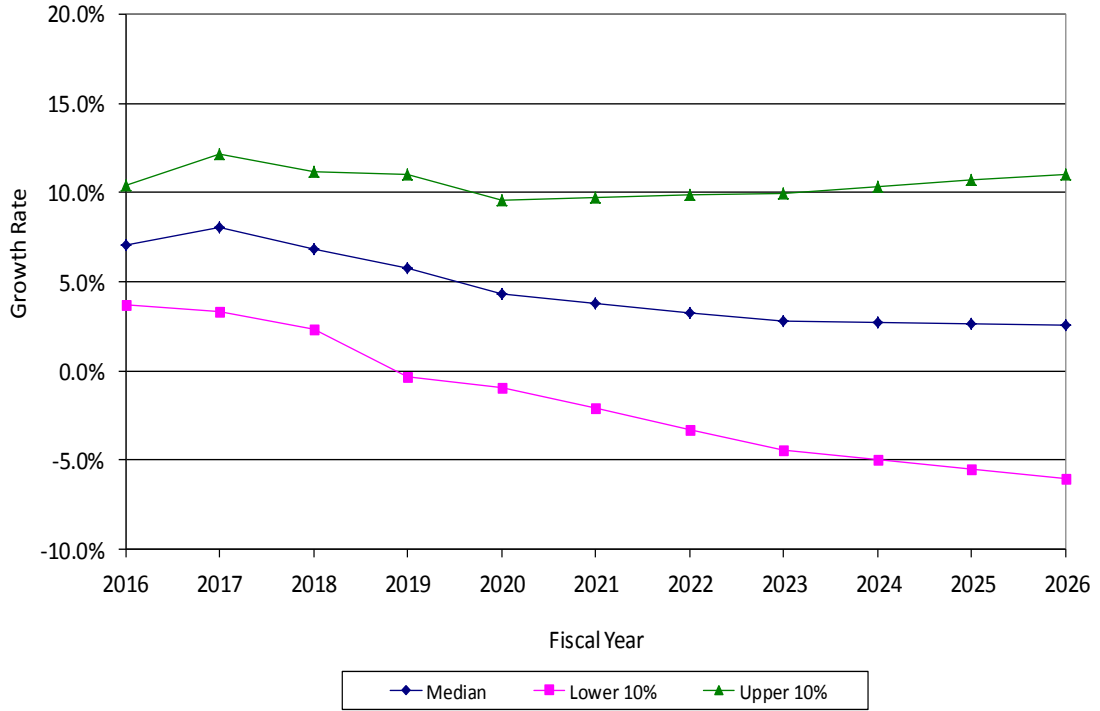
Maricopa County Nominal Personal Income Growth



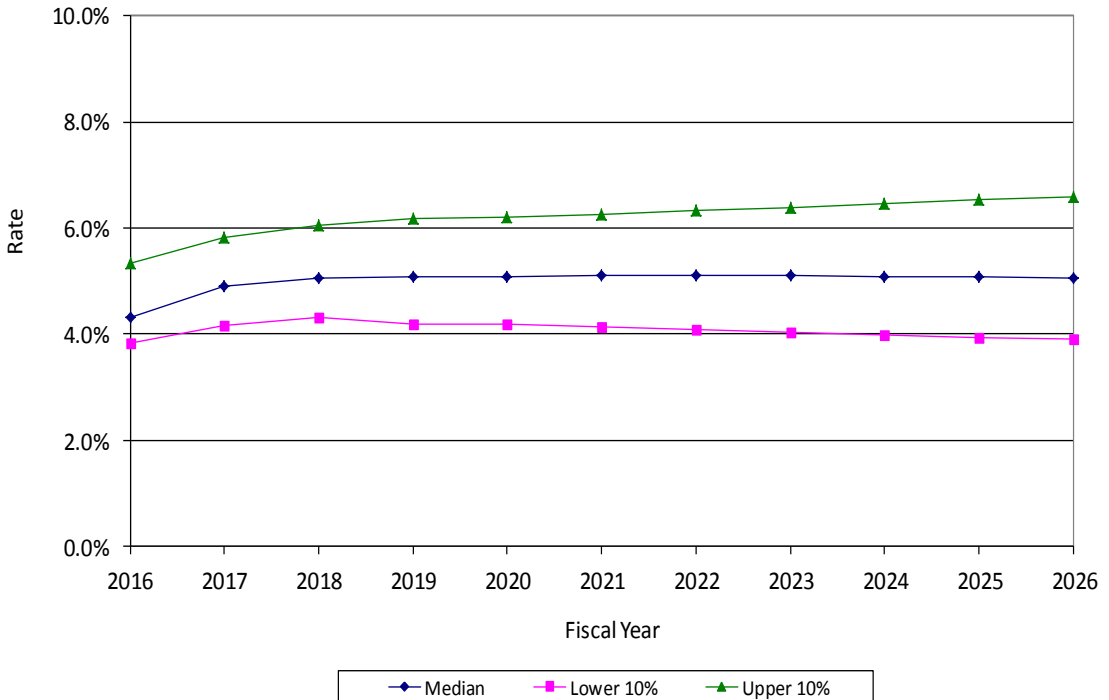
Maricopa County Population Growth



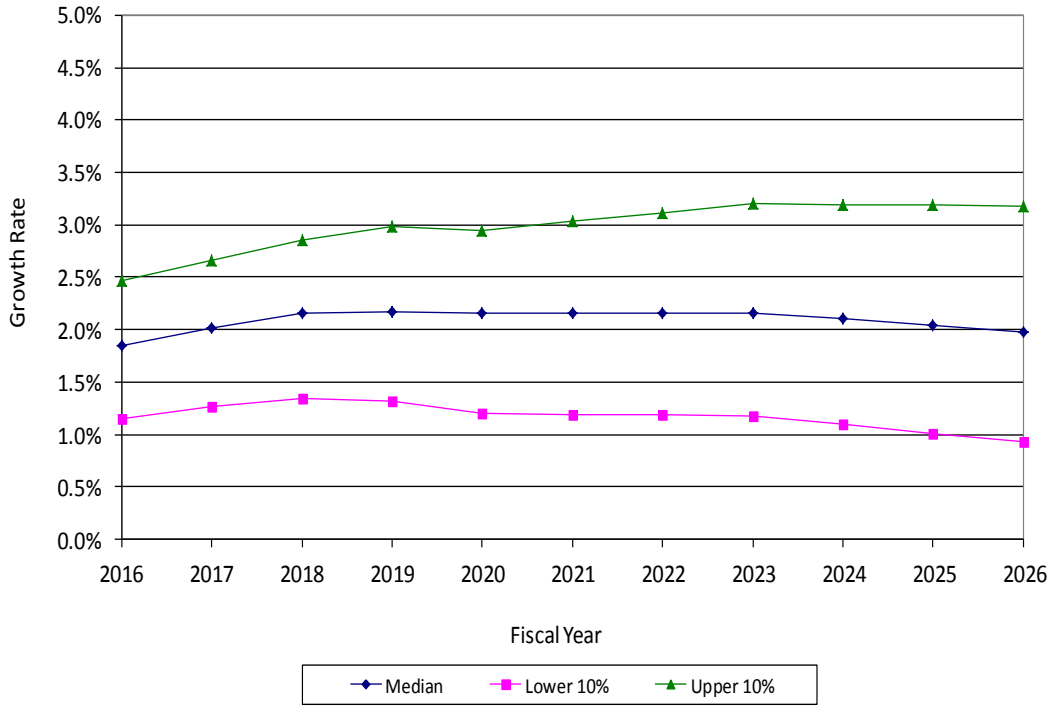
### Maricopa County Construction Employment Growth



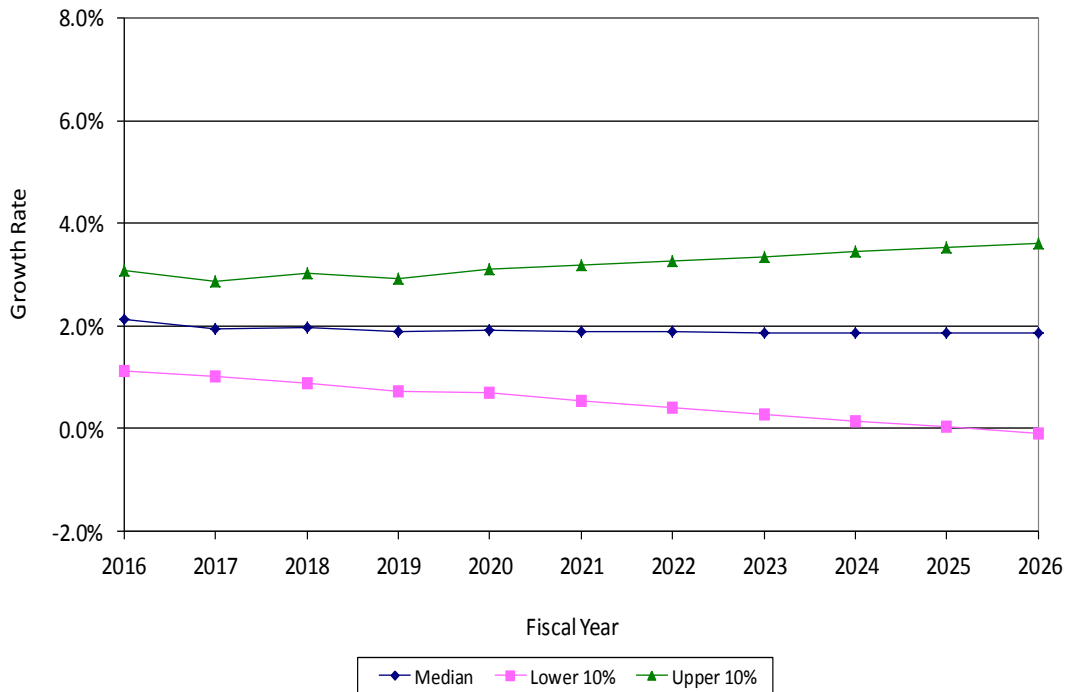
### 30 Year Mortgage Rate



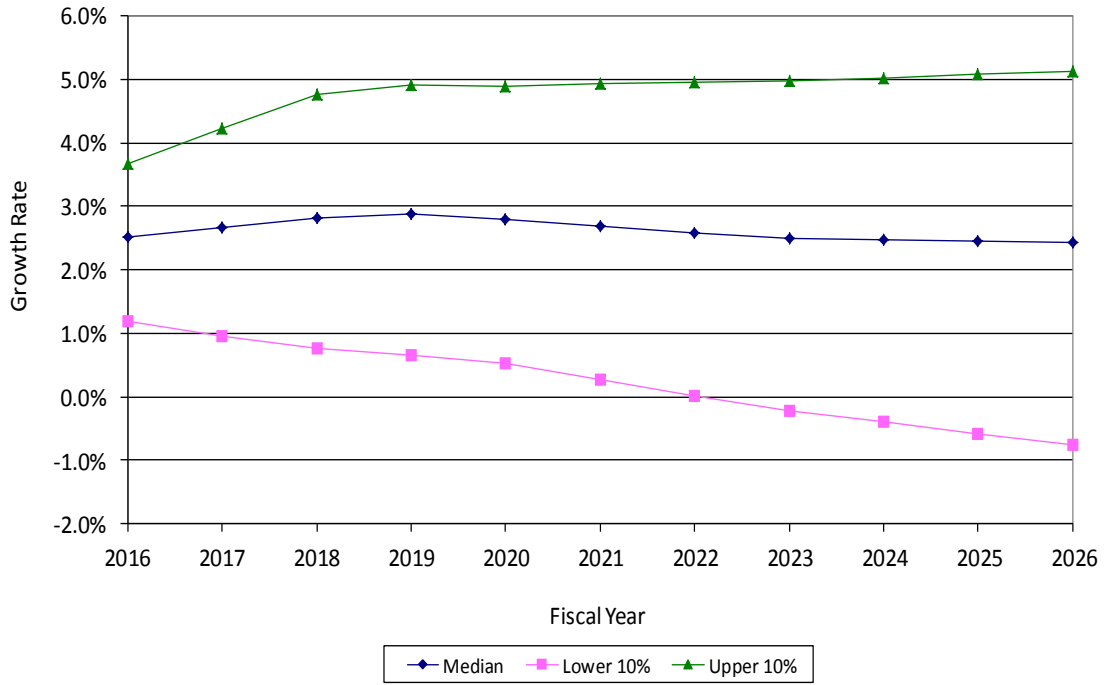
Phoenix CPI Growth



Phoenix Sky Harbor/Gateway Airports Passenger Traffic Growth



### Maricopa County Total Non-Farm Employment Growth



## Maricopa County Nominal Personal Income Growth

	2016	2017	2018	2019	2020	2023	2026
<b>Panelist 1</b>							
<b>Median</b>	5.0%	5.2%	5.9%	6.4%	6.0%	5.2%	5.2%
<b>Lower 10%</b>	4.5%	4.6%	4.5%	4.3%	3.2%	2.9%	2.7%
<b>Upper 10%</b>	7.5%	7.4%	7.8%	8.6%	8.0%	7.5%	7.7%
<b>Panelist 2</b>							
<b>Median</b>	4.9%	5.2%	5.3%	5.3%	5.0%	4.9%	4.6%
<b>Lower 10%</b>	4.2%	4.4%	4.5%	4.5%	4.0%	3.8%	3.8%
<b>Upper 10%</b>	5.8%	6.0%	5.8%	5.8%	5.8%	5.4%	5.2%
<b>Panelist 3</b>							
<b>Median</b>	5.2%	6.0%	6.0%	5.8%	5.6%	5.3%	5.3%
<b>Lower 10%</b>	3.7%	4.4%	4.0%	2.3%	2.3%	1.8%	1.8%
<b>Upper 10%</b>	7.7%	8.4%	8.0%	9.7%	9.7%	8.8%	8.8%
<b>Panelist 4</b>							
<b>Median</b>	5.6%	6.9%	7.2%	7.1%	7.0%	6.5%	6.3%
<b>Lower 10%</b>	4.7%	6.0%	6.0%	5.8%	5.5%	4.3%	3.3%
<b>Upper 10%</b>	6.4%	7.7%	8.3%	8.3%	8.4%	8.6%	9.2%
<b>Panelist 5</b>							
<b>Median</b>	3.8%	3.9%	3.6%	3.5%	3.8%	3.8%	3.7%
<b>Lower 10%</b>	3.2%	1.0%	-1.0%	-2.0%	2.0%	3.3%	2.5%
<b>Upper 10%</b>	5.2%	5.5%	6.5%	7.0%	6.5%	6.3%	5.5%
<b>Panelist 6</b>							
<b>Median</b>	5.2%	5.7%	6.1%	6.1%	5.8%	5.0%	5.0%
<b>Lower 10%</b>	4.2%	4.5%	4.2%	4.1%	4.0%	3.0%	0.5%
<b>Upper 10%</b>	6.0%	6.6%	7.2%	7.3%	7.4%	7.7%	8.2%
<b>Panelist 7</b>							
<b>Median</b>	6.0%	6.0%	5.5%	5.5%	5.0%	5.0%	5.0%
<b>Lower 10%</b>	5.0%	5.0%	4.5%	4.5%	4.0%	4.0%	4.0%
<b>Upper 10%</b>	6.5%	7.0%	7.0%	7.0%	6.0%	6.0%	6.0%
<b>Panelist 8</b>							
<b>Median</b>	5.1%	5.6%	6.0%	6.2%	6.0%	5.2%	4.8%
<b>Lower 10%</b>	4.5%	4.8%	5.0%	5.0%	4.5%	3.0%	2.0%
<b>Upper 10%</b>	5.9%	6.5%	7.0%	7.0%	7.0%	7.0%	6.5%
<b>Panelist 9</b>							
<b>Median</b>	2.7%	2.1%	2.2%	2.2%	3.0%	3.0%	3.0%
<b>Lower 10%</b>	1.7%	1.1%	1.2%	1.2%	0.0%	0.0%	0.0%
<b>Upper 10%</b>	5.7%	5.1%	5.2%	5.2%	6.0%	6.0%	6.0%
<b>Panelist 10</b>							
<b>Median</b>	4.2%	4.1%	4.0%	4.1%	4.2%	4.1%	4.2%
<b>Lower 10%</b>	4.0%	3.9%	3.8%	3.7%	3.6%	3.3%	3.0%
<b>Upper 10%</b>	4.5%	4.7%	4.8%	5.0%	5.1%	5.6%	6.0%

All data in the above table are in nominal growth rates.

## Maricopa County Population Growth

	2016	2017	2018	2019	2020	2023	2026
<b>Panelist 1</b>							
<b>Median</b>	1.6%	1.7%	1.8%	2.0%	1.9%	1.8%	1.7%
<b>Lower 10%</b>	1.2%	1.3%	1.2%	1.3%	1.4%	0.8%	0.6%
<b>Upper 10%</b>	2.1%	2.6%	2.9%	3.0%	3.1%	2.6%	2.8%
<b>Panelist 2</b>							
<b>Median</b>	2.2%	2.3%	2.4%	2.3%	2.2%	2.0%	2.0%
<b>Lower 10%</b>	1.7%	1.8%	1.9%	1.9%	1.8%	1.6%	1.5%
<b>Upper 10%</b>	2.6%	2.8%	2.6%	2.6%	2.6%	2.5%	2.5%
<b>Panelist 3</b>							
<b>Median</b>	2.0%	2.2%	2.2%	2.1%	1.9%	1.9%	1.7%
<b>Lower 10%</b>	0.8%	0.9%	0.9%	0.8%	0.8%	0.3%	0.1%
<b>Upper 10%</b>	3.2%	3.5%	3.5%	3.4%	3.4%	3.6%	3.4%
<b>Panelist 4</b>							
<b>Median</b>	1.9%	2.0%	2.0%	1.9%	1.9%	1.8%	1.7%
<b>Lower 10%</b>	1.7%	1.7%	1.7%	1.6%	1.5%	1.2%	0.7%
<b>Upper 10%</b>	2.2%	2.3%	2.2%	2.3%	2.3%	2.5%	2.7%
<b>Panelist 5</b>							
<b>Median</b>	1.6%	1.8%	2.0%	2.0%	1.7%	1.6%	1.5%
<b>Lower 10%</b>	1.1%	1.0%	0.3%	0.4%	0.4%	0.9%	0.7%
<b>Upper 10%</b>	2.4%	2.5%	2.5%	2.4%	2.4%	2.5%	2.7%
<b>Panelist 6</b>							
<b>Median</b>	2.0%	2.2%	2.2%	2.2%	2.2%	1.9%	1.7%
<b>Lower 10%</b>	1.7%	1.8%	1.8%	1.7%	1.6%	1.0%	0.3%
<b>Upper 10%</b>	2.5%	2.6%	2.7%	2.8%	2.9%	2.7%	3.0%
<b>Panelist 7</b>							
<b>Median</b>	2.0%	2.1%	2.0%	1.8%	1.8%	1.8%	1.8%
<b>Lower 10%</b>	1.8%	1.8%	1.7%	1.6%	1.6%	1.6%	1.6%
<b>Upper 10%</b>	2.2%	2.4%	2.3%	2.0%	2.0%	2.0%	2.0%
<b>Panelist 8</b>							
<b>Median</b>	2.0%	2.2%	2.2%	2.1%	2.0%	1.8%	1.7%
<b>Lower 10%</b>	1.8%	1.9%	1.9%	1.8%	1.6%	1.0%	0.8%
<b>Upper 10%</b>	2.4%	2.4%	2.4%	2.3%	2.3%	2.3%	2.3%
<b>Panelist 9</b>							
<b>Median</b>	1.1%	1.6%	1.6%	1.5%	1.6%	1.3%	1.1%
<b>Lower 10%</b>	0.6%	1.1%	1.1%	1.0%	1.1%	0.8%	0.6%
<b>Upper 10%</b>	1.6%	2.1%	2.1%	2.0%	2.1%	1.8%	1.6%
<b>Panelist 10</b>							
<b>Median</b>	2.1%	2.2%	2.2%	2.1%	2.0%	1.8%	1.7%
<b>Lower 10%</b>	1.6%	1.7%	1.6%	1.6%	1.5%	1.4%	1.3%
<b>Upper 10%</b>	2.5%	2.6%	2.6%	2.5%	2.3%	2.2%	2.1%

All data in the above table are in percentage growth rates.

## Maricopa County Construction Employment Growth

	2016	2017	2018	2019	2020	2023	2026
<b>Panelist 1</b>							
Median	9.0%	10.5%	7.9%	7.3%	6.5%	2.8%	2.7%
Lower 10%	4.5%	4.5%	3.9%	3.5%	1.0%	-5.5%	-6.5%
Upper 10%	12.9%	13.4%	10.5%	12.3%	12.0%	11.0%	12.0%
<b>Panelist 2</b>							
Median	8.0%	8.5%	8.0%	7.0%	5.0%	5.0%	5.0%
Lower 10%	7.0%	7.5%	7.0%	4.0%	2.0%	2.0%	2.0%
Upper 10%	9.5%	10.0%	9.5%	9.0%	7.0%	7.0%	7.0%
<b>Panelist 3</b>							
Median	8.0%	9.0%	8.0%	6.0%	5.0%	3.0%	3.0%
Lower 10%	3.0%	4.0%	3.0%	-5.0%	-5.0%	-12.0%	-12.0%
Upper 10%	13.0%	14.0%	13.0%	12.5%	12.5%	18.0%	18.0%
<b>Panelist 4</b>							
Median	3.8%	4.8%	8.8%	9.5%	3.2%	-0.6%	0.6%
Lower 10%	0.7%	1.7%	5.7%	4.3%	-2.0%	-8.4%	-9.8%
Upper 10%	6.9%	7.9%	11.9%	14.7%	8.4%	7.2%	11.0%
<b>Panelist 5</b>							
Median	8.3%	9.1%	6.0%	5.0%	4.0%	2.5%	2.7%
Lower 10%	5.2%	-5.0%	-5.0%	-10.0%	-1.2%	-5.3%	-7.7%
Upper 10%	11.4%	18.0%	15.0%	15.0%	12.0%	10.3%	13.1%
<b>Panelist 6</b>							
Median	7.0%	8.0%	8.0%	7.0%	6.0%	4.0%	3.5%
Lower 10%	3.0%	3.5%	3.0%	0.5%	-0.8%	-8.0%	-12.0%
Upper 10%	12.0%	13.0%	15.0%	16.0%	16.0%	17.0%	18.0%
<b>Panelist 7</b>							
Median	8.0%	12.0%	6.0%	2.0%	2.0%	2.0%	2.0%
Lower 10%	6.0%	10.0%	2.0%	0.0%	0.0%	0.0%	0.0%
Upper 10%	10.0%	15.0%	10.0%	4.0%	4.0%	4.0%	4.0%
<b>Panelist 8</b>							
Median	6.5%	7.5%	7.5%	6.5%	4.0%	2.5%	2.5%
Lower 10%	5.2%	6.0%	5.5%	1.5%	-1.5%	-5.0%	-10.0%
Upper 10%	8.0%	10.0%	10.0%	10.0%	7.5%	10.0%	15.0%
<b>Panelist 9</b>							
Median	3.8%	2.6%	2.0%	2.2%	2.8%	2.0%	2.0%
Lower 10%	-1.6%	-2.8%	-3.4%	-3.2%	-2.6%	-3.4%	-3.4%
Upper 10%	9.2%	8.0%	7.4%	7.6%	8.2%	7.4%	7.4%
<b>Panelist 10</b>							
Median	7.9%	8.2%	5.8%	5.0%	4.5%	4.5%	1.8%
Lower 10%	4.4%	4.2%	1.8%	1.0%	0.7%	1.0%	-1.4%
Upper 10%	11.4%	12.2%	9.8%	8.9%	8.4%	8.0%	4.9%

All data in the above table are in percentage growth rates.



## 30 Year Mortgage

	2016	2017	2018	2019	2020	2023	2026
<b>Panelist 1</b>							
<b>Median</b>	4.8%	5.1%	5.1%	5.3%	5.3%	5.4%	5.3%
<b>Lower 10%</b>	4.2%	4.3%	4.4%	4.2%	4.2%	4.2%	3.9%
<b>Upper 10%</b>	5.8%	6.4%	6.6%	6.8%	6.8%	6.8%	7.3%
<b>Panelist 2</b>							
<b>Median</b>	4.2%	4.5%	5.0%	5.0%	5.0%	5.0%	5.0%
<b>Lower 10%</b>	3.5%	3.8%	4.0%	4.3%	4.3%	4.3%	4.3%
<b>Upper 10%</b>	0.0%	5.3%	5.5%	5.5%	5.5%	5.5%	5.5%
<b>Panelist 3</b>							
<b>Median</b>	4.3%	6.5%	6.6%	6.6%	6.7%	6.7%	6.5%
<b>Lower 10%</b>	3.8%	5.0%	5.6%	5.1%	5.1%	4.7%	4.5%
<b>Upper 10%</b>	6.8%	8.0%	8.1%	8.1%	8.1%	8.7%	8.5%
<b>Panelist 4</b>							
<b>Median</b>	4.6%	5.0%	5.2%	5.3%	5.3%	5.2%	5.2%
<b>Lower 10%</b>	4.3%	4.7%	4.8%	4.8%	4.6%	4.4%	4.1%
<b>Upper 10%</b>	4.9%	5.3%	5.6%	5.7%	5.9%	6.1%	6.3%
<b>Panelist 5</b>							
<b>Median</b>	4.1%	4.3%	4.5%	5.0%	5.5%	5.5%	5.5%
<b>Lower 10%</b>	3.7%	3.7%	4.0%	4.1%	4.5%	4.5%	4.0%
<b>Upper 10%</b>	4.9%	5.0%	5.2%	5.6%	6.2%	6.2%	7.0%
<b>Panelist 6</b>							
<b>Median</b>	4.5%	4.8%	5.0%	5.2%	5.3%	5.3%	5.3%
<b>Lower 10%</b>	4.0%	4.1%	3.9%	3.8%	3.7%	3.6%	3.5%
<b>Upper 10%</b>	4.8%	5.5%	6.3%	6.9%	7.0%	8.0%	8.5%
<b>Panelist 7</b>							
<b>Median</b>	4.0%	5.0%	5.0%	4.5%	4.0%	4.0%	4.0%
<b>Lower 10%</b>	3.5%	4.0%	4.0%	3.5%	3.5%	3.5%	3.5%
<b>Upper 10%</b>	4.5%	5.5%	5.5%	5.5%	5.0%	5.0%	5.0%
<b>Panelist 8</b>							
<b>Median</b>	4.3%	5.0%	5.5%	5.5%	5.5%	5.5%	5.5%
<b>Lower 10%</b>	4.0%	4.5%	5.0%	5.0%	5.0%	4.5%	4.5%
<b>Upper 10%</b>	5.0%	5.5%	6.0%	6.0%	6.0%	6.0%	6.0%
<b>Panelist 9</b>							
<b>Median</b>	4.1%	3.9%	3.7%	3.5%	3.3%	3.3%	3.3%
<b>Lower 10%</b>	3.6%	3.4%	3.2%	3.0%	2.8%	2.8%	2.8%
<b>Upper 10%</b>	6.1%	5.9%	5.7%	5.5%	5.3%	5.3%	5.3%
<b>Panelist 10</b>							
<b>Median</b>	-	-	-	-	-	-	-
<b>Lower 10%</b>	-	-	-	-	-	-	-
<b>Upper 10%</b>	-	-	-	-	-	-	-

All data in the above table are in nominal rates.

## Phoenix CPI Growth

	2016	2017	2018	2019	2020	2023	2026
<b>Panelist 1</b>							
Median	2.0%	2.0%	2.1%	2.2%	2.5%	2.5%	2.3%
Lower 10%	0.8%	1.1%	1.2%	1.8%	1.5%	1.3%	1.0%
Upper 10%	3.4%	3.4%	3.2%	3.8%	3.8%	3.7%	3.7%
<b>Panelist 2</b>							
Median	1.8%	1.9%	2.0%	2.0%	2.2%	2.0%	1.8%
Lower 10%	1.5%	1.5%	1.8%	1.8%	1.8%	1.6%	1.6%
Upper 10%	2.2%	2.3%	2.4%	2.4%	2.5%	2.4%	2.3%
<b>Panelist 3</b>							
Median	1.8%	1.9%	2.1%	2.5%	2.6%	2.6%	2.2%
Lower 10%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	0.5%
Upper 10%	2.6%	2.8%	3.2%	4.0%	4.0%	4.2%	3.9%
<b>Panelist 4</b>							
Median	2.0%	2.2%	2.5%	2.4%	1.9%	2.7%	2.2%
Lower 10%	1.6%	1.8%	2.1%	1.7%	1.2%	1.7%	0.9%
Upper 10%	2.4%	2.6%	2.9%	3.1%	2.6%	3.7%	3.3%
<b>Panelist 5</b>							
Median	1.8%	1.6%	1.7%	2.0%	2.2%	2.0%	1.8%
Lower 10%	1.0%	1.0%	1.0%	1.2%	1.3%	0.7%	0.5%
Upper 10%	2.4%	2.4%	2.6%	3.0%	2.9%	3.0%	2.9%
<b>Panelist 6</b>							
Median	1.8%	1.9%	2.0%	2.1%	2.2%	2.0%	2.0%
Lower 10%	1.0%	0.9%	0.8%	0.8%	0.7%	0.6%	0.3%
Upper 10%	2.6%	2.8%	2.9%	3.0%	3.2%	4.0%	5.0%
<b>Panelist 7</b>							
Median	2.0%	2.5%	2.5%	2.0%	2.0%	2.0%	2.0%
Lower 10%	1.5%	1.5%	1.5%	1.0%	1.0%	1.0%	1.0%
Upper 10%	2.5%	3.0%	3.5%	3.0%	3.0%	3.0%	3.0%
<b>Panelist 8</b>							
Median	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Lower 10%	1.6%	1.6%	1.6%	1.6%	1.5%	1.4%	1.4%
Upper 10%	2.4%	2.4%	2.5%	2.5%	2.7%	2.8%	2.9%
<b>Panelist 9</b>							
Median	1.3%	1.4%	1.5%	1.4%	1.7%	1.5%	1.5%
Lower 10%	0.8%	0.9%	1.0%	0.9%	1.2%	1.0%	1.0%
Upper 10%	1.8%	1.9%	2.0%	1.9%	2.2%	2.0%	2.0%
<b>Panelist 10</b>							
Median	1.9%	2.8%	3.2%	3.1%	2.3%	2.3%	2.0%
Lower 10%	0.7%	1.3%	1.5%	1.4%	0.8%	1.5%	1.1%
Upper 10%	2.3%	3.0%	3.3%	3.2%	2.6%	3.2%	2.8%

All data in the above table are in percentage growth rates.

## Sky Harbor/Gateway Airports Passenger Traffic Growth

	2016	2017	2018	2019	2020	2023	2026
<b>Panelist 1</b>							
<b>Median</b>	1.5%	2.0%	2.1%	1.8%	1.9%	2.0%	2.0%
<b>Lower 10%</b>	0.3%	0.8%	0.8%	0.2%	0.1%	0.0%	-0.6%
<b>Upper 10%</b>	3.2%	3.6%	3.9%	3.3%	3.7%	4.1%	4.6%
<b>Panelist 2</b>							
<b>Median</b>	2.5%	2.5%	2.5%	2.3%	2.1%	2.0%	2.0%
<b>Lower 10%</b>	1.8%	1.6%	1.5%	1.4%	1.2%	1.0%	1.0%
<b>Upper 10%</b>	3.0%	2.8%	2.8%	2.6%	2.4%	2.4%	2.4%
<b>Panelist 3</b>							
<b>Median</b>	4.0%	2.4%	2.6%	1.8%	1.7%	1.7%	1.7%
<b>Lower 10%</b>	2.0%	0.9%	1.1%	0.3%	0.3%	0.3%	0.3%
<b>Upper 10%</b>	6.0%	3.9%	4.1%	3.3%	3.3%	3.7%	3.7%
<b>Panelist 4</b>							
<b>Median</b>	2.4%	2.1%	2.1%	2.2%	2.2%	1.8%	1.8%
<b>Lower 10%</b>	1.8%	1.6%	1.1%	1.2%	1.1%	0.2%	-0.4%
<b>Upper 10%</b>	2.9%	2.7%	3.1%	3.1%	3.4%	3.4%	3.9%
<b>Panelist 5</b>							
<b>Median</b>	1.6%	1.7%	1.6%	1.7%	1.9%	2.0%	2.1%
<b>Lower 10%</b>	1.0%	1.1%	0.6%	0.7%	0.7%	0.4%	-0.1%
<b>Upper 10%</b>	2.2%	2.3%	2.6%	2.7%	3.1%	3.6%	4.3%
<b>Panelist 6</b>							
<b>Median</b>	2.2%	2.1%	2.2%	2.2%	2.0%	2.0%	2.0%
<b>Lower 10%</b>	1.0%	0.9%	0.8%	0.7%	0.6%	-1.0%	-2.0%
<b>Upper 10%</b>	3.0%	3.2%	3.3%	3.4%	3.8%	4.5%	5.2%
<b>Panelist 7</b>							
<b>Median</b>	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
<b>Lower 10%</b>	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
<b>Upper 10%</b>	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
<b>Panelist 8</b>							
<b>Median</b>	1.6%	1.6%	1.6%	1.7%	1.8%	1.8%	1.8%
<b>Lower 10%</b>	1.0%	1.2%	1.0%	0.7%	0.7%	0.0%	-0.5%
<b>Upper 10%</b>	2.2%	2.3%	2.4%	2.5%	2.8%	3.0%	3.0%
<b>Panelist 9</b>							
<b>Median</b>	1.3%	1.0%	1.1%	1.4%	1.6%	1.5%	1.5%
<b>Lower 10%</b>	-0.2%	-0.5%	-0.4%	-0.1%	0.1%	0.0%	0.0%
<b>Upper 10%</b>	2.8%	2.5%	2.6%	2.9%	3.1%	3.0%	3.0%
<b>Panelist 10</b>							
<b>Median</b>	-	-	-	-	-	-	-
<b>Lower 10%</b>	-	-	-	-	-	-	-
<b>Upper 10%</b>	-	-	-	-	-	-	-

All data in the above table are in percentage growth rates.

## Maricopa County Total Non-Farm Employment Growth

	2016	2017	2018	2019	2020	2023	2026
<b>Panelist 1</b>							
<b>Median</b>	2.5%	2.5%	3.1%	3.2%	3.1%	2.8%	2.7%
<b>Lower 10%</b>	1.5%	1.7%	1.7%	1.5%	1.1%	0.3%	-0.1%
<b>Upper 10%</b>	4.2%	5.3%	5.9%	5.7%	5.6%	5.3%	5.5%
<b>Panelist 2</b>							
<b>Median</b>	2.6%	2.8%	3.0%	2.8%	2.5%	2.5%	2.5%
<b>Lower 10%</b>	2.0%	1.8%	2.2%	2.1%	2.0%	2.0%	2.0%
<b>Upper 10%</b>	3.2%	3.8%	4.0%	4.0%	3.2%	3.1%	3.0%
<b>Panelist 3</b>							
<b>Median</b>	2.5%	2.8%	2.6%	3.1%	3.0%	2.8%	2.7%
<b>Lower 10%</b>	1.0%	1.3%	1.1%	1.6%	1.6%	0.3%	0.2%
<b>Upper 10%</b>	4.0%	4.3%	4.1%	4.6%	4.6%	5.3%	4.2%
<b>Panelist 4</b>							
<b>Median</b>	2.9%	2.9%	3.1%	3.2%	3.0%	2.2%	2.0%
<b>Lower 10%</b>	2.2%	2.2%	1.6%	1.7%	1.2%	0.2%	-0.7%
<b>Upper 10%</b>	3.6%	3.6%	4.6%	4.7%	4.7%	4.3%	4.7%
<b>Panelist 5</b>							
<b>Median</b>	2.6%	2.9%	2.7%	2.8%	3.1%	2.8%	2.7%
<b>Lower 10%</b>	1.9%	0.5%	0.5%	0.5%	1.4%	0.7%	0.0%
<b>Upper 10%</b>	3.3%	3.8%	5.2%	5.1%	5.0%	4.9%	5.4%
<b>Panelist 6</b>							
<b>Median</b>	2.6%	2.8%	3.3%	3.5%	3.2%	2.8%	2.8%
<b>Lower 10%</b>	1.5%	1.8%	1.7%	1.6%	1.3%	0.0%	-1.5%
<b>Upper 10%</b>	3.4%	3.6%	4.6%	5.0%	5.2%	5.5%	6.0%
<b>Panelist 7</b>							
<b>Median</b>	3.0%	3.5%	3.0%	2.5%	2.5%	2.5%	2.5%
<b>Lower 10%</b>	2.8%	3.0%	2.5%	2.0%	2.0%	2.0%	2.0%
<b>Upper 10%</b>	3.3%	4.0%	3.5%	3.0%	3.0%	3.0%	3.0%
<b>Panelist 8</b>							
<b>Median</b>	2.6%	3.0%	3.5%	3.5%	3.2%	2.5%	2.5%
<b>Lower 10%</b>	2.0%	2.4%	2.2%	2.1%	1.5%	0.5%	0.0%
<b>Upper 10%</b>	3.0%	3.3%	3.5%	3.5%	3.5%	3.0%	3.0%
<b>Panelist 9</b>							
<b>Median</b>	1.3%	1.2%	1.5%	1.8%	2.0%	2.0%	2.0%
<b>Lower 10%</b>	0.0%	-0.1%	0.2%	0.5%	0.7%	0.7%	0.7%
<b>Upper 10%</b>	2.6%	2.5%	2.8%	3.1%	3.3%	3.3%	3.3%
<b>Panelist 10</b>							
<b>Median</b>	2.5%	2.3%	2.3%	2.3%	2.3%	2.0%	2.0%
<b>Lower 10%</b>	-3.1%	-5.0%	-6.2%	-7.0%	-7.5%	-9.0%	-10.2%
<b>Upper 10%</b>	6.1%	8.1%	9.5%	10.3%	10.9%	12.1%	13.2%

All data in the above table are in percentage growth rates.

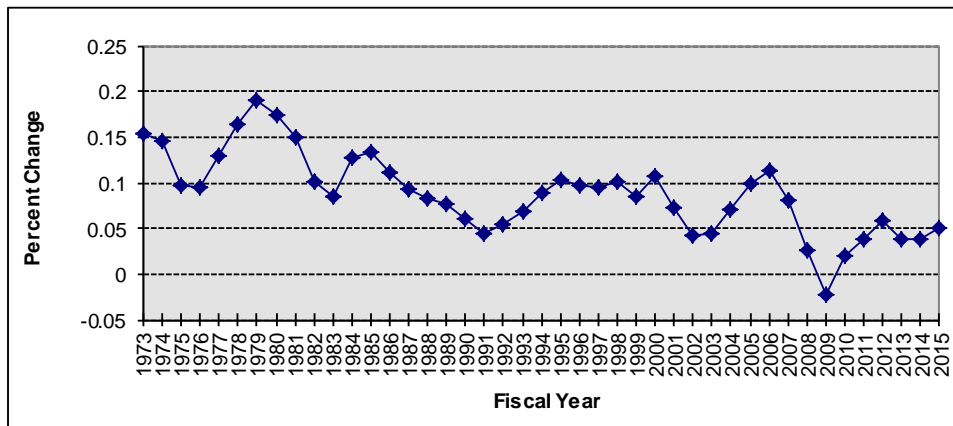
**HISTORICAL DATA  
MARICOPA COUNTY NOMINAL PERSONAL INCOME GROWTH  
(Annual Percent Change)**

**HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)**

1971		1981	15.1%	1991	4.5%	2001	7.3%	2011	3.7%
1972		1982	10.1%	1992	5.4%	2002	4.2%	2012	5.8%
1973	15.4%	1983	8.5%	1993	6.9%	2003	4.4%	2013	3.8%
1974	14.6%	1984	12.7%	1994	8.9%	2004	7.0%	2014*	3.8%
1975	9.7%	1985	13.3%	1995	10.2%	2005	10.0%	2015*	5.1%
1976	9.5%	1986	11.1%	1996	9.7%	2006	11.3%	2016	
1977	12.9%	1987	9.3%	1997	9.5%	2007	8.1%	2017	
1978	16.4%	1988	8.2%	1998	10.0%	2008	2.6%	2018	
1979	19.1%	1989	7.7%	1999	8.5%	2009	-2.2%	2019	
1980	17.3%	1990	6.0%	2000	10.8%	2010	2.0%	2020	

FY 1973-2013 data from BEA; FY 2014\*-2016 data from Phoenix Blue Chip. FY 2017-2026, ADOT staff estimates.

**HISTORICAL DATA - GRAPHED**



**HISTORICAL DATA - ANALYSIS**

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	3.7%	5.8%	4.4%	0.9%	3.7%	5.5%
10 Years	-2.2%	11.3%	4.4%	3.6%	1.6%	8.4%
Full Period	-2.2%	19.1%	8.8%	4.4%	3.8%	15.0%

**HISTORICAL DATA  
MARICOPA COUNTY POPULATION GROWTH  
(Annual Percent Change)**

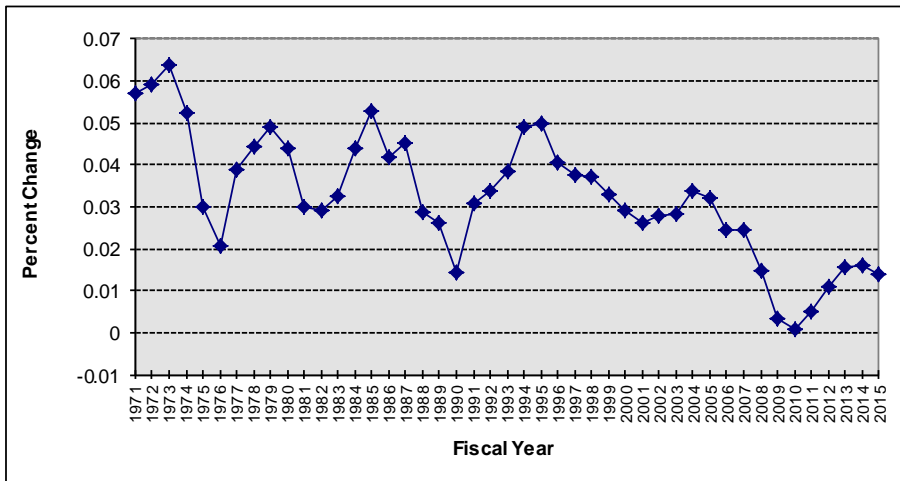
**HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)**

1971	5.7%	1981	3.0%	1991	3.1%	2001	2.6%	2011	0.5%
1972	5.9%	1982	2.9%	1992	3.4%	2002	2.8%	2012	1.1%
1973	6.4%	1983	3.2%	1993	3.8%	2003	2.8%	2013	1.5%
1974	5.2%	1984	4.4%	1994	4.9%	2004	3.4%	2014	1.6%
1975	3.0%	1985	5.3%	1995	5.0%	2005	3.2%	2015*	1.4%
1976	2.1%	1986	4.2%	1996	4.0%	2006	2.4%	2016	
1977	3.9%	1987	4.5%	1997	3.8%	2007	2.4%	2017	
1978	4.4%	1988	2.9%	1998	3.7%	2008	1.5%	2018	
1979	4.9%	1989	2.6%	1999	3.3%	2009	0.3%	2019	
1980	4.4%	1990	1.4%	2000	2.9%	2010	0.1%	2020	

FY 1999 and prior: from U. S. Census Bureau. FY 2000-2014 ADOA Office of Employment and Population Statistics (EPS) estimates.

\*FY 2015 and after ADOA EPS projections Medium Series.

**HISTORICAL DATA - GRAPHED**



**HISTORICAL DATA - ANALYSIS**

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	0.5%	1.6%	1.2%	0.5%	0.7%	1.6%
10 Years	0.1%	2.4%	1.3%	0.8%	0.3%	2.4%
Full Period	0.1%	6.4%	3.2%	1.5%	1.4%	5.1%

**HISTORICAL DATA  
MARICOPA COUNTY CONSTRUCTION EMPLOYMENT GROWTH  
(Annual Percent Change)**

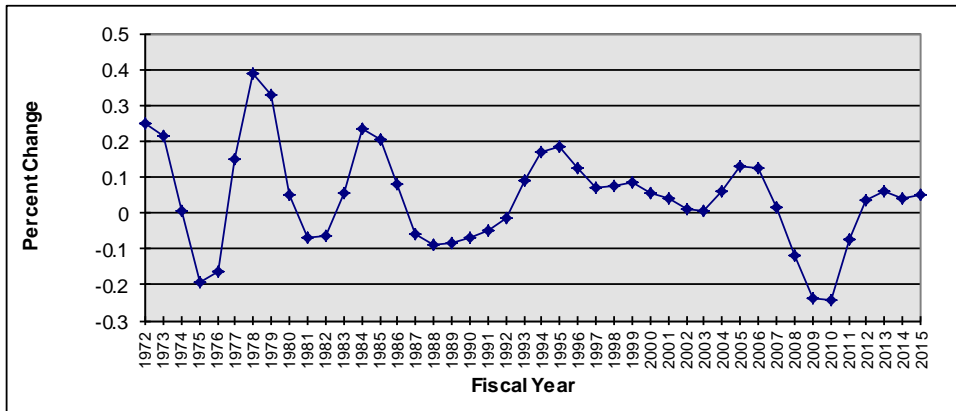
**HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)**

1971		1981	-6.7%	1991	-4.8%	2001	4.1%	2011	-7.2%
1972	24.9%	1982	-6.5%	1992	-1.5%	2002	1.1%	2012	3.4%
1973	21.3%	1983	5.4%	1993	9.0%	2003	0.4%	2013	6.1%
1974	0.4%	1984	23.4%	1994	16.8%	2004	6.1%	2014	4.2%
1975	-19.3%	1985	20.3%	1995	18.2%	2005	12.7%	2015*	4.9%
1976	-16.5%	1986	7.9%	1996	12.2%	2006	12.6%	2016	
1977	14.8%	1987	-5.8%	1997	6.9%	2007	1.6%	2017	
1978	38.9%	1988	-9.0%	1998	7.5%	2008	-11.6%	2018	
1979	32.7%	1989	-8.4%	1999	8.4%	2009	-23.8%	2019	
1980	5.2%	1990	-6.7%	2000	5.7%	2010	-24.2%	2020	

FY 1989 and prior BLS SIC not seas adj, 1990-2014 BLS NAICS not seas adj.

FY 2015-2016 from Phoenix Blue Chip. FY 2017 and beyond based on ADOT staff estimates.

**HISTORICAL DATA - GRAPHED**



**HISTORICAL DATA - ANALYSIS**

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	-7.2%	6.1%	2.3%	5.4%	-3.0%	5.6%
10 Years	-24.2%	12.6%	-3.4%	12.8%	-23.8%	6.7%
Full Period	-24.2%	38.9%	4.2%	13.7%	-10.8%	21.0%

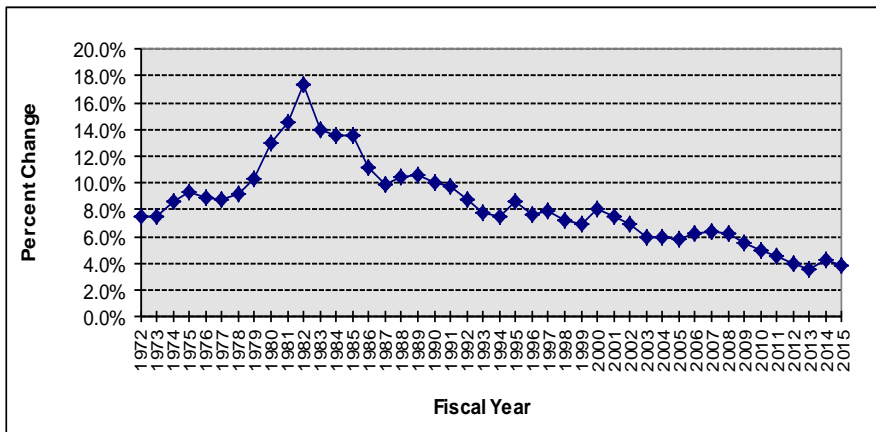
## HISTORICAL DATA 30 YEAR MORTGAGE RATE

### HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1971		1981	12.9%	1991	10.1%	2001	8.1%	2011	4.9%
1972	0.0%	1982	14.6%	1992	9.8%	2002	7.5%	2012	4.0%
1973	7.5%	1983	17.3%	1993	8.8%	2003	6.9%	2013	3.5%
1974	7.5%	1984	14.0%	1994	7.9%	2004	5.9%	2014	4.3%
1975	8.6%	1985	13.6%	1995	7.5%	2005	5.9%	2015	3.9%
1976	9.4%	1986	13.5%	1996	8.6%	2006	5.8%	2016	
1977	8.9%	1987	11.2%	1997	7.6%	2007	6.2%	2017	
1978	8.8%	1988	9.8%	1998	7.9%	2008	6.3%	2018	
1979	9.1%	1989	10.5%	1999	7.2%	2009	6.2%	2019	
1980	12.9%	1990	10.6%	2000	6.9%	2010	5.6%	2020	

FY 1972-2015 data from Federal Reserve. FY 2016-2026 based on Global Insight, 1st Quarter 2015, Trend Forecast.

### HISTORICAL DATA - GRAPHED



### HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	3.5%	4.6%	4.1%	0.4%	3.7%	4.5%
10 Years	3.5%	6.3%	5.0%	1.1%	3.9%	6.2%
Full Period	3.5%	17.3%	8.4%	3.1%	4.7%	13.3%



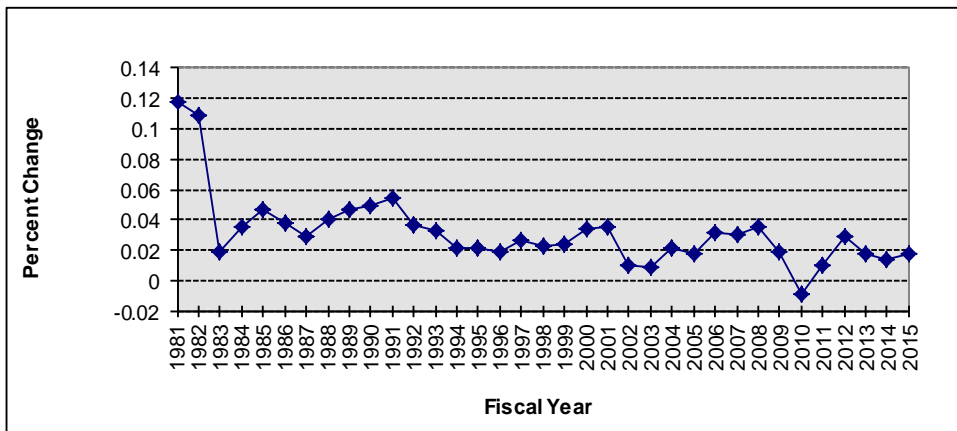
## HISTORICAL DATA PHOENIX CPI GROWTH RATE (Annual Percent Change)

### HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1971	1981	11.8%	1991	5.5%	2001	3.5%	2011	1.0%
1972	1982	10.8%	1992	3.7%	2002	1.0%	2012	2.9%
1973	1983	1.9%	1993	3.3%	2003	0.8%	2013	1.8%
1974	1984	3.5%	1994	2.2%	2004	2.1%	2014	1.3%
1975	1985	4.7%	1995	2.2%	2005	1.8%	2015*	1.8%
1976	1986	3.8%	1996	1.9%	2006	3.2%	2016	
1977	1987	2.9%	1997	2.6%	2007	3.1%	2017	
1978	1988	4.0%	1998	2.3%	2008	3.5%	2018	
1979	1989	4.7%	1999	2.4%	2009	1.9%	2019	
1980	1990	5.0%	2000	3.4%	2010	-0.9%	2020	

FY 1981-2014 from BLS. FY 2015-2026 from Moody's Analytics. \*FY 2015 is an estimate.

### HISTORICAL DATA - GRAPHED



### HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	1.0%	2.9%	1.8%	0.7%	1.1%	2.5%
10 Years	-0.9%	3.5%	2.0%	1.3%	0.8%	3.2%
Full Period	-0.9%	11.8%	3.2%	2.4%	1.2%	4.9%

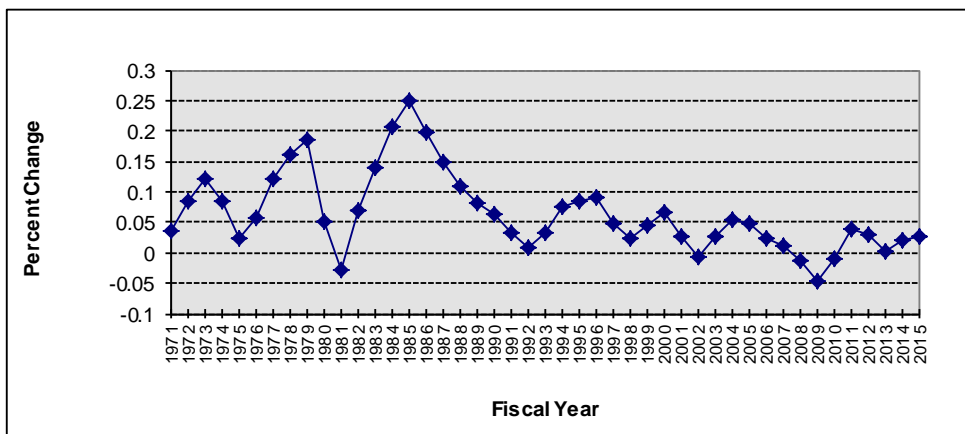
## HISTORICAL DATA PHOENIX SKY HARBOR/GATEWAY AIRPORTS PASSENGER TRAFFIC GROWTH (Annual Percent Change)

### HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1971	3.6%	1981	-2.8%	1991	3.4%	2001	2.7%	2011	4.0%
1972	8.4%	1982	6.8%	1992	0.9%	2002	-0.7%	2012	3.1%
1973	12.2%	1983	13.9%	1993	3.3%	2003	2.8%	2013	0.2%
1974	8.4%	1984	20.6%	1994	7.7%	2004	5.4%	2014	1.9%
1975	2.4%	1985	24.8%	1995	8.6%	2005	4.9%	2015*	2.8%
1976	5.7%	1986	19.6%	1996	8.9%	2006	2.4%	2016	
1977	12.2%	1987	14.8%	1997	4.8%	2007	1.3%	2017	
1978	16.1%	1988	10.9%	1998	2.2%	2008	-1.4%	2018	
1979	18.7%	1989	8.1%	1999	4.6%	2009	-4.7%	2019	
1980	5.0%	1990	6.4%	2000	6.5%	2010	-1.1%	2020	

FY 1971-2014 data obtained from Phoenix Sky Harbor International Airport and combined with data obtained from Gateway Airport (FY 2004-2014). FY 2015\*-2026 estimates are from Phoenix Sky Harbor Airport staff as well as Gateway Airport

### HISTORICAL DATA - GRAPHED



### HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	0.2%	4.0%	2.4%	1.5%	0.9%	3.6%
10 Years	-4.7%	4.0%	0.8%	2.6%	-1.7%	3.2%
Full Period	-4.7%	24.8%	6.5%	6.5%	-0.3%	15.6%

## HISTORICAL DATA MARICOPA COUNTY TOTAL NON-FARM EMPLOYMENT GROWTH (Annual Percent Change)

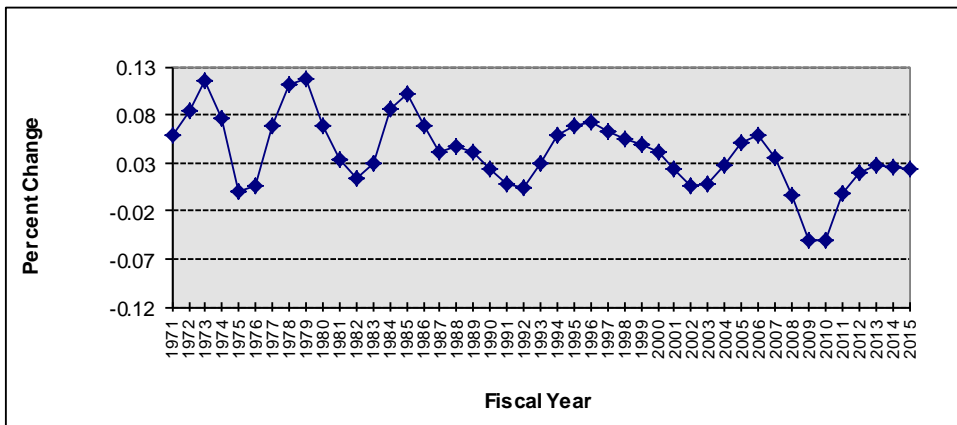
### HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1971	5.8%	1981	3.4%	1991	0.9%	2001	2.4%	2011	-0.2%
1972	8.5%	1982	1.5%	1992	0.4%	2002	0.6%	2012	2.0%
1973	11.6%	1983	2.9%	1993	3.0%	2003	0.8%	2013	2.7%
1974	7.6%	1984	8.6%	1994	5.8%	2004	2.7%	2014	2.6%
1975	0.0%	1985	10.2%	1995	6.9%	2005	5.1%	2015*	2.4%
1976	0.5%	1986	6.9%	1996	7.2%	2006	5.8%	2016	
1977	6.9%	1987	4.1%	1997	6.3%	2007	3.5%	2017	
1978	11.1%	1988	4.7%	1998	5.4%	2008	-0.4%	2018	
1979	11.8%	1989	4.1%	1999	5.0%	2009	-5.1%	2019	
1980	6.9%	1990	2.3%	2000	4.1%	2010	-5.0%	2020	

FY 1971-1989 Bureau of Labor Statistics (BLS) SIC not seas adj , FY 1990-2014 seas adj data from BLS (NAICS).

\*FY 2015-2016 from ADOA EPS forecast February 2015. FY 2017-2026 ADOT staff estimates.

### HISTORICAL DATA - GRAPHED



### HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	-0.2%	2.7%	1.9%	1.2%	0.7%	2.7%
10 Years	-5.1%	5.8%	0.8%	3.6%	-5.0%	3.7%
Full Period	-5.1%	11.8%	4.1%	3.8%	0.1%	8.5%