

MARICOPA COUNTY TRANSPORTATION EXCISE TAX
Forecasting Process & Results
FY 2014-2026



Financial Management Services
November 2013

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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 2014–2026 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 modal 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.

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. Sky Harbor 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 2013, a panel of fourteen 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 \$6,130.6 million for the period FY 2014-2026 with a compound growth rate (CGR) of 4.7 percent. The Department’s Official Forecast for FY 2014-2026 totals \$6,128.6 million with a compound growth rate of 4.7 percent. This year’s official forecast is \$22.4 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 2014. The FY 2014 forecast of \$362.0 million was developed by ADOT staff independently of the econometric model using time series techniques, and historical and projected growth rates from the model.

FY 2014 Official Forecast Results (Dollars in Millions)			
Fiscal Year	Mean Forecast	Official Forecast	Confidence Level
2014	\$365.9	\$362.0	50%
2015	371.9	383.4	50%
2016	397.1	405.1	50%
2017	421.9	426.7	50%
2018	444.7	448.2	50%
2019	468.5	469.3	50%
2020	489.9	488.8	50%
2021	511.2	510.7	50%
2022	535.5	533.5	50%
2023	557.9	555.0	50%
2024	584.3	578.0	50%
2025	610.1	602.2	50%
2026/1	<u>371.8</u>	<u>365.8</u>	50%
Total	\$6,130.6	\$6,128.6	
Average CGR	4.7%	4.7%	

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

For comparison purposes, the October 2012 and November 2013 Official Forecasts are shown below:

FY 2014-2026 Comparative Forecast			
(Dollars in Millions)			
Fiscal	Oct. 12	Nov. 13	
Year	Official	Official	
	Forecast	Forecast	Difference
2014	\$361.1	\$362.0	\$0.9
2015	381.4	383.4	2.0
2016	401.8	405.1	3.3
2017	422.9	426.7	3.8
2018	443.0	448.2	5.2
2019	464.3	469.3	4.9
2020	487.9	488.8	0.9
2021	509.3	510.7	1.4
2022	532.4	533.5	1.1
2023	554.0	555.0	1.0
2024	578.0	578.0	(0.0)
2025	602.3	602.2	(0.0)
2026/1	<u>367.9</u>	<u>365.8</u>	<u>(2.1)</u>
Total	\$6,106.3	\$6,128.6	\$22.4
Average CGR	4.8%	4.7%	

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 2014-2026 totals \$6,128.6 million, an increase of \$22.4 million above the October 2012 Official Forecast. The RAP results reflect the panel members’ continued concern with Maricopa County’s slower population and job growth and that the growth rates may not return to the levels experienced before the Great Recession. Compared to last year, the panel inputs for personal income, population and employment were lower in the first few years and then came in higher in FY 2017 through FY 2022 before ending below for the last few years. The 30 Year Mortgage Rate, Phoenix CPI and Sky Harbor Traffic Growth all saw lower expected growth rates through the forecast period compared to last year’s panel inputs.

Supplementary Information

The remainder of this report presents supplementary information on the detail results of the RAP model and Risk Analysis Process. While the Official Forecast period is FY 2014-2026, panel inputs were requested for FY 2014-2018, 2022 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)

Fiscal Year Percentile	2013 Actual	2014 50%	2015 50%	2016 50%	2017 50%	2018 50%	2019 50%	2020 50%	2021 50%	2022 50%	2023 50%	2024 50%	2025 50%	2026 50%
Retail Sales	\$172.9	\$183.8	\$193.5	\$203.0	\$213.3	\$223.9	\$234.3	\$243.5	\$255.6	\$267.3	\$279.0	\$290.6	\$302.2	\$184.0
Contracting	32.7	36.6	42.0	47.1	50.9	54.3	56.7	59.7	62.5	64.7	66.6	69.2	72.0	43.5
Utilities	31.0	32.0	32.9	34.0	35.1	36.3	37.5	38.5	39.5	40.7	41.9	43.4	44.7	26.9
Restaurant and Bar	36.4	38.6	40.8	43.0	45.5	47.8	50.4	53.0	55.3	58.3	60.4	63.4	66.6	40.4
Rental of Real Property	38.1	39.7	41.3	43.3	45.5	47.8	50.0	52.0	53.8	56.5	59.1	61.2	64.0	38.8
Rental of Personal Property	12.1	12.6	13.5	14.3	15.0	15.7	16.8	17.7	18.6	19.3	20.2	21.0	22.0	13.4
Other	18.3	18.7	19.4	20.4	21.4	22.4	23.6	24.4	25.4	26.7	27.8	29.2	30.7	18.8
Total	\$341.6	\$362.0	\$383.4	\$405.1	\$426.7	\$448.2	\$469.3	\$488.8	\$510.7	\$533.5	\$555.0	\$578.0	\$602.2	\$365.8

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%
2014	\$365.9	\$415.8	\$395.1	\$381.5	\$371.1	\$362.0	\$352.4	\$343.2	\$333.7	\$320.8
2015	371.9	458.2	422.0	404.7	393.2	383.4	346.1	331.7	315.2	294.0
2016	397.1	515.0	462.7	432.4	418.3	405.1	361.4	340.6	318.9	291.0
2017	421.9	567.8	500.9	462.7	442.4	426.7	376.5	353.0	326.3	293.8
2018	444.7	612.5	534.4	492.7	466.2	448.2	392.7	364.0	333.6	298.1
2019	468.5	657.6	569.2	519.8	492.7	469.3	409.4	378.7	344.2	303.9
2020	489.9	696.1	598.8	544.3	514.8	488.8	424.9	392.4	355.8	311.2
2021	511.2	731.6	628.2	568.1	537.4	510.7	441.8	405.8	367.9	317.7
2022	535.5	771.0	662.9	597.5	562.1	533.5	462.4	423.5	382.2	329.6
2023	557.9	805.7	692.2	624.2	588.3	555.0	479.6	438.5	396.4	340.8
2024	584.3	854.3	725.9	655.8	605.2	578.0	497.6	458.8	409.0	351.2
2025	610.1	896.1	759.9	684.2	632.6	602.2	520.1	475.7	425.1	365.2
2026/1	371.8	549.5	465.6	416.8	383.1	365.8	315.3	288.0	258.0	221.1
Total	\$6,130.6	\$8,531.3	\$7,417.9	\$6,784.6	\$6,407.4	\$6,128.6	\$5,380.1	\$4,993.9	\$4,566.3	\$4,038.4

/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	Total
	Freeways (56.2%)	Arterial Streets (10.5 %)	(33.3%)	
2014	\$203.4	\$38.0	\$120.6	\$362.0
2015	215.5	40.2	127.7	383.4
2016	227.7	42.5	134.9	405.1
2017	239.8	44.8	142.1	426.7
2018	251.9	47.1	149.2	448.2
2019	263.7	49.3	156.3	469.3
2020	274.7	51.3	162.8	488.8
2021	287.0	53.6	170.1	510.7
2022	299.8	56.0	177.7	533.5
2023	311.9	58.3	184.8	555.0
2024	324.8	60.7	192.5	578.0
2025	338.5	63.2	200.5	602.2
2026 /2	205.6	38.4	121.8	365.8
TOTALS	\$3,444.3	\$643.3	\$2,041.0	\$6,128.6

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 expense and maintenance.
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

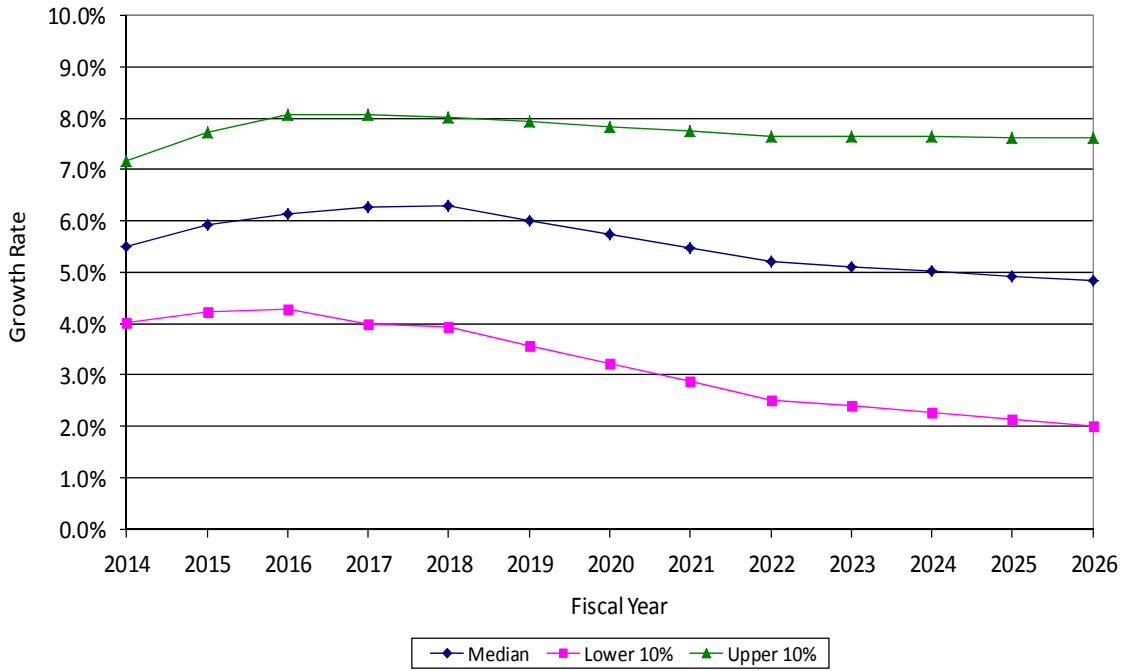
	Nominal Pers. Inc. Growth /1	Population Growth /1	Construction Employment Growth /1	30 Year Mortgage Rate	Phoenix CPI Growth/1	Sky Harbor Passenger Traffic Growth	Total Non-Farm Employment Growth /1
FY 2014							
Upper 10%	7.17%	2.01%	13.79%	4.95%	2.80%	3.64%	3.47%
Lower 10%	4.03%	0.91%	4.52%	3.61%	1.16%	1.01%	1.24%
Median	5.50%	1.57%	8.98%	4.22%	1.95%	2.18%	2.48%
FY 2015							
Upper 10%	7.72%	2.41%	14.50%	5.62%	2.91%	3.82%	3.88%
Lower 10%	4.24%	1.13%	4.54%	3.89%	1.09%	0.57%	1.54%
Median	5.94%	1.90%	9.30%	4.70%	1.89%	2.18%	2.83%
FY 2016							
Upper 10%	8.08%	2.70%	14.81%	6.39%	3.10%	3.92%	4.73%
Lower 10%	4.28%	1.21%	4.12%	4.16%	1.10%	0.50%	1.56%
Median	6.13%	2.15%	9.34%	5.25%	1.95%	2.15%	3.23%
FY 2017							
Upper 10%	8.07%	2.86%	13.92%	7.09%	3.23%	4.06%	4.98%
Lower 10%	3.99%	1.31%	2.17%	4.44%	1.15%	0.17%	1.67%
Median	6.27%	2.29%	8.11%	5.63%	2.03%	2.11%	3.39%
FY 2018							
Upper 10%	8.02%	2.94%	12.35%	7.41%	3.36%	4.24%	4.82%
Lower 10%	3.93%	1.31%	0.62%	4.59%	1.16%	-0.25%	1.24%
Median	6.29%	2.33%	6.12%	5.89%	2.12%	2.09%	3.14%
FY 2022							
Upper 10%	7.66%	3.02%	11.36%	7.60%	3.66%	4.53%	4.74%
Lower 10%	2.52%	0.89%	-4.35%	4.49%	1.02%	-1.01%	0.34%
Median	5.20%	2.05%	3.26%	5.98%	2.11%	1.92%	2.57%
FY 2026							
Upper 10%	7.62%	2.89%	11.63%	7.75%	3.96%	4.78%	4.79%
Lower 10%	2.01%	0.64%	-5.51%	4.40%	0.88%	-1.53%	-0.14%
Median	4.83%	1.81%	2.95%	5.96%	2.01%	1.88%	2.37%

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

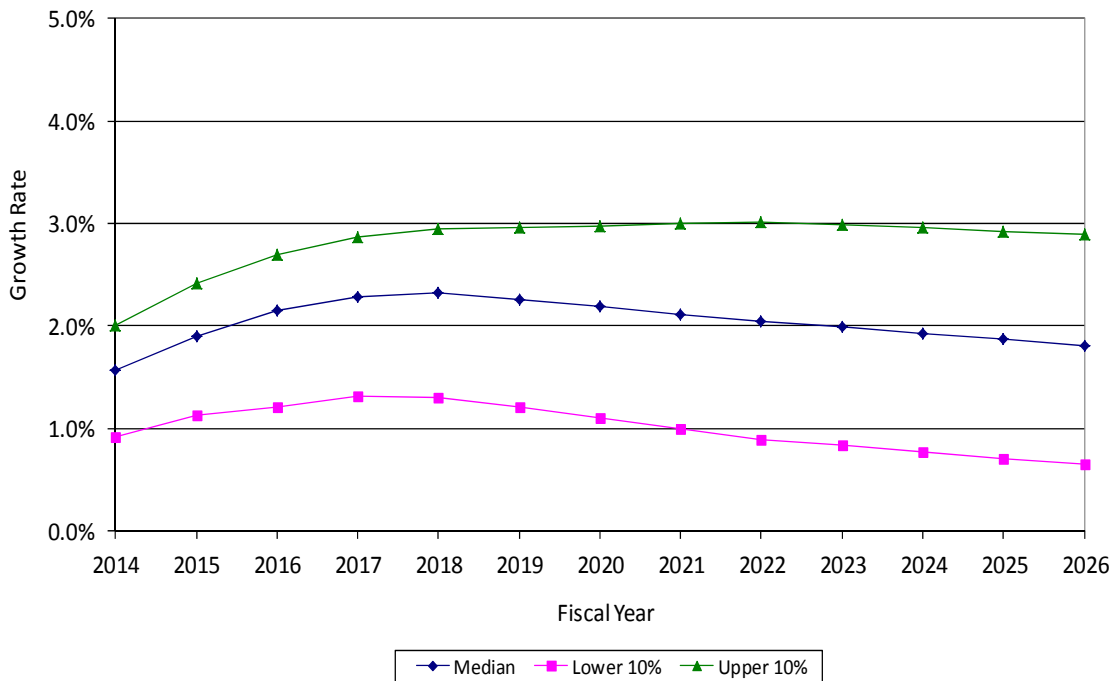
Personal income and 30 year mortgage rate are nominal rates.

/1 Data for Maricopa County

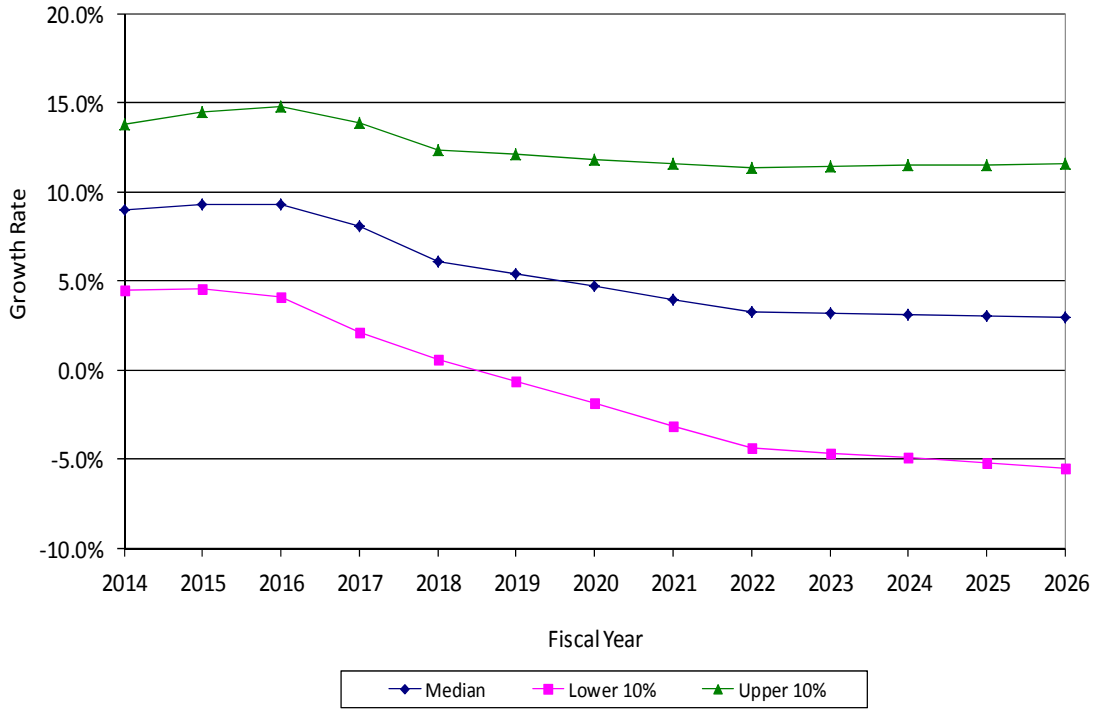
Maricopa County Nominal Personal Income Growth



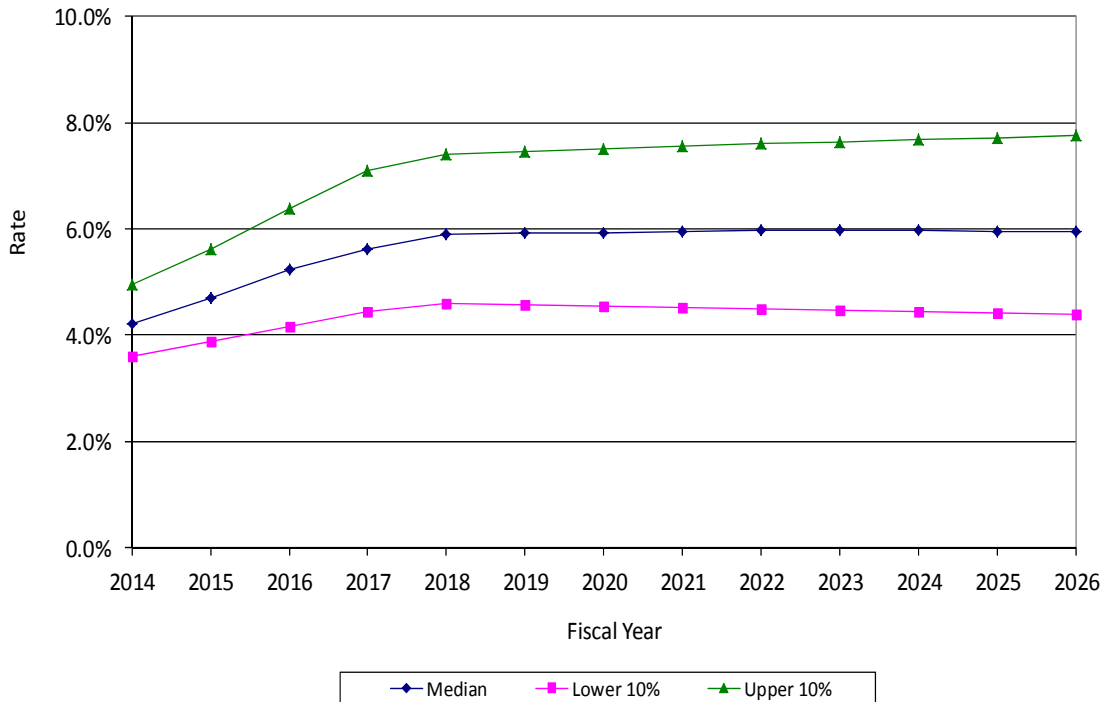
Maricopa County Population Growth



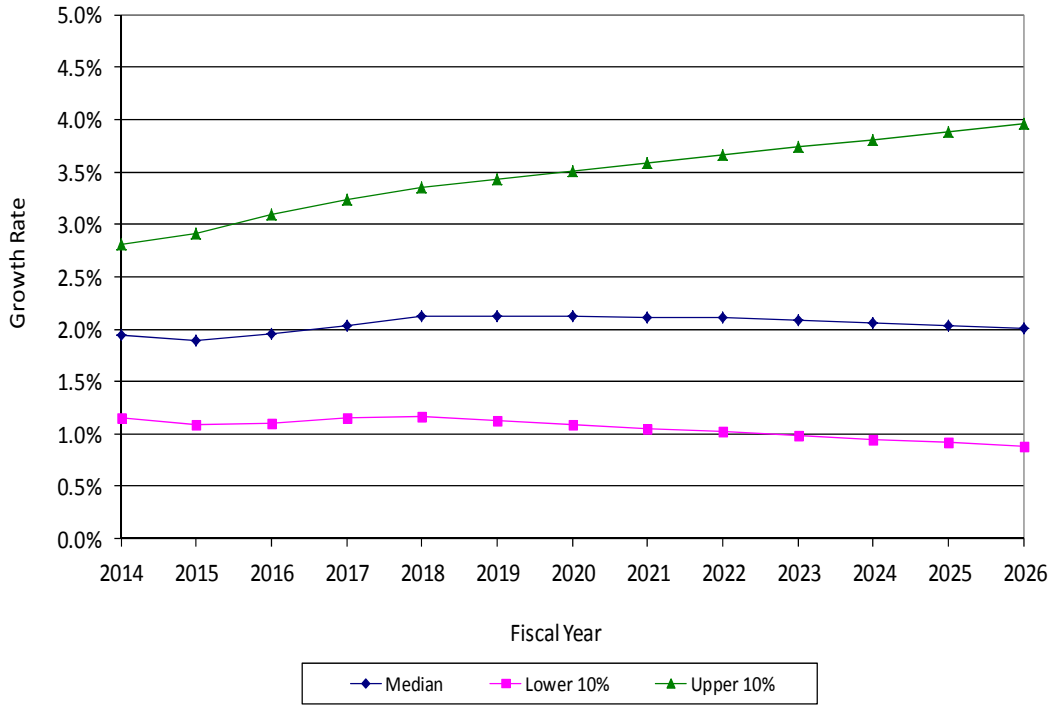
Maricopa County Construction Employment Growth



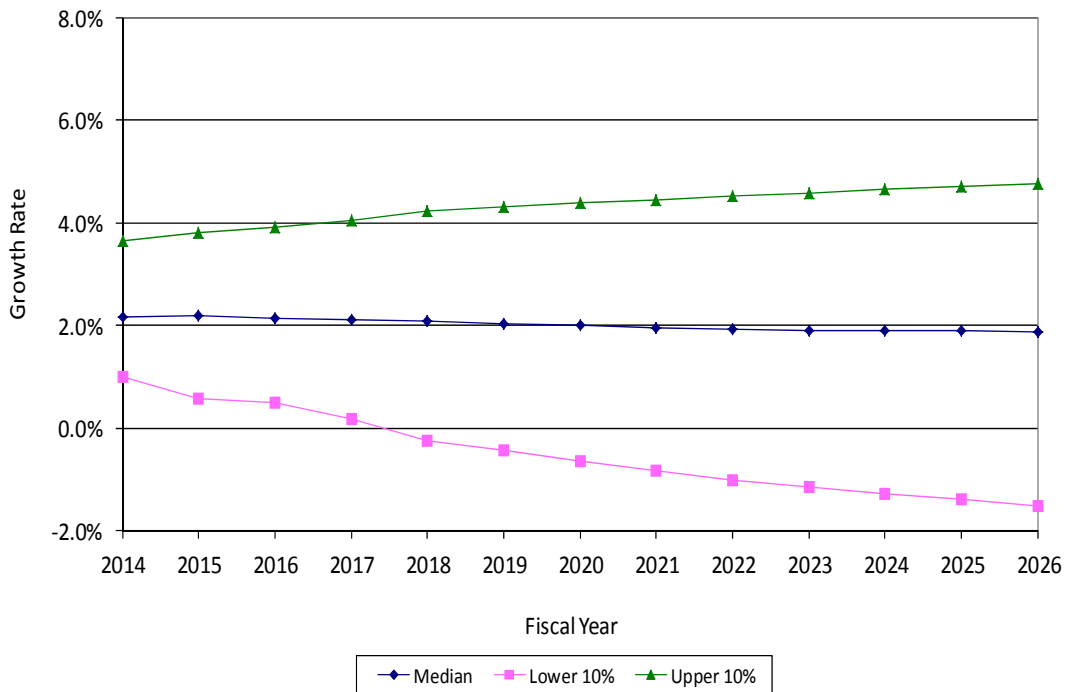
30 Year Mortgage Rate



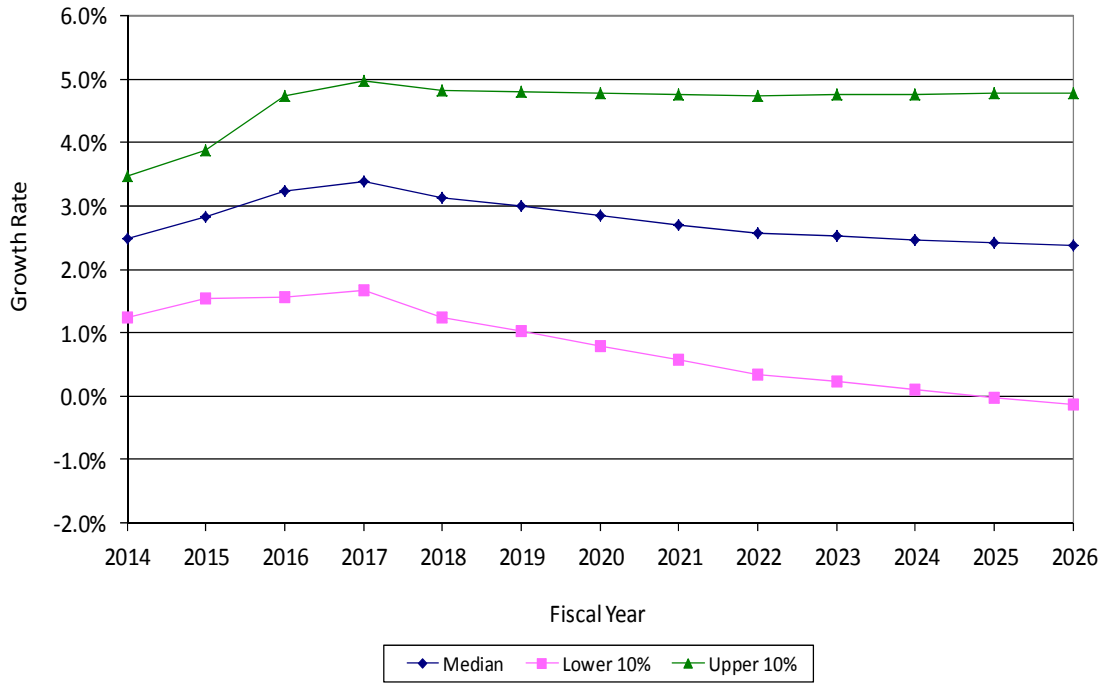
Phoenix CPI Growth



Sky Harbor Passenger Traffic Growth



Maricopa County Total Non-Farm Employment Growth



Maricopa County Nominal Personal Income Growth

	2014	2015	2016	2017	2018	2022	2026
Panelist 1							
Upper 10%	7.40%	8.60%	8.50%	8.40%	8.80%	8.50%	8.80%
Lower 10%	5.20%	5.30%	5.50%	5.60%	5.50%	5.00%	4.40%
Median	6.50%	7.20%	7.10%	7.20%	7.50%	6.90%	6.70%
Panelist 2							
Upper 10%	7.50%	7.70%	8.00%	8.10%	7.50%	7.00%	6.50%
Lower 10%	4.00%	4.50%	5.10%	5.30%	5.30%	5.20%	4.50%
Median	6.00%	6.50%	6.80%	7.00%	6.80%	6.00%	5.50%
Panelist 3							
Upper 10%	8.40%	9.00%	9.80%	9.00%	9.00%	9.00%	9.00%
Lower 10%	4.00%	4.00%	4.00%	2.00%	2.00%	2.00%	2.00%
Median	6.20%	6.50%	6.90%	7.30%	6.90%	5.40%	5.20%
Panelist 4							
Upper 10%	7.00%	7.20%	8.00%	8.50%	8.40%	7.40%	7.20%
Lower 10%	3.70%	4.20%	4.20%	4.00%	3.80%	2.60%	2.30%
Median	5.60%	6.20%	6.60%	6.90%	6.80%	5.60%	5.00%
Panelist 5							
Upper 10%	6.86%	7.34%	7.59%	8.08%	8.33%	8.42%	8.88%
Lower 10%	3.84%	4.34%	4.63%	4.97%	5.00%	2.25%	1.72%
Median	5.35%	5.84%	6.11%	6.53%	6.67%	5.34%	5.30%
Panelist 6							
Upper 10%	7.70%	8.30%	8.70%	8.80%	8.50%	8.52%	8.71%
Lower 10%	4.30%	3.50%	2.00%	0.00%	0.00%	0.00%	0.00%
Median	5.70%	6.00%	5.50%	5.50%	5.50%	4.50%	4.00%
Panelist 7							
Upper 10%	7.30%	8.10%	8.40%	8.70%	8.90%	8.70%	8.80%
Lower 10%	2.50%	2.80%	3.50%	3.50%	4.00%	1.40%	0.50%
Median	5.50%	6.20%	6.70%	6.70%	6.90%	5.30%	5.30%
Panelist 8							
Upper 10%	7.00%	7.50%	8.00%	8.50%	8.50%	8.00%	8.00%
Lower 10%	5.00%	5.00%	5.00%	5.00%	5.00%	4.50%	4.00%
Median	5.50%	5.70%	6.00%	6.50%	7.00%	6.00%	5.00%
Panelist 9							
Upper 10%	7.00%	8.30%	8.70%	8.80%	8.50%	8.50%	8.70%
Lower 10%	4.30%	4.90%	5.30%	5.40%	5.10%	2.30%	1.70%
Median	5.00%	5.70%	6.20%	6.70%	6.70%	5.00%	4.70%
Panelist 10							
Upper 10%	7.50%	8.00%	8.50%	8.50%	8.50%	8.50%	8.00%
Lower 10%	4.50%	5.20%	5.50%	5.50%	5.00%	2.50%	1.00%
Median	6.20%	6.40%	6.60%	6.50%	6.50%	5.50%	5.00%
Panelist 11							
Upper 10%	6.10%	5.87%	4.86%	3.60%	3.37%	3.00%	3.00%
Lower 10%	2.60%	2.37%	1.36%	0.60%	0.37%	0.00%	0.00%
Median	4.60%	4.37%	3.36%	2.10%	1.87%	1.50%	1.50%
Panelist 12							
Upper 10%	6.50%	7.00%	8.03%	8.00%	8.01%	7.00%	6.50%
Lower 10%	3.97%	4.00%	4.00%	4.00%	4.00%	3.00%	2.00%
Median	5.00%	5.00%	6.00%	6.50%	6.50%	5.00%	4.80%
Panelist 13							
Upper 10%	7.00%	7.50%	8.00%	8.00%	8.00%	7.00%	7.00%
Lower 10%	4.50%	5.00%	5.50%	6.00%	6.00%	2.00%	2.00%
Median	5.50%	6.50%	6.80%	7.00%	7.00%	6.00%	5.00%
Panelist 14							
Upper 10%							
Lower 10%							
Median	4.30%	5.00%	5.20%	5.30%	5.40%	4.80%	4.60%

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

Maricopa County Population Growth

	2014	2015	2016	2017	2018	2022	2026
Panelist 1							
Upper 10%	2.10%	2.30%	2.80%	3.15%	3.35%	3.00%	3.00%
Lower 10%	0.85%	1.04%	1.20%	1.34%	1.50%	1.00%	1.00%
Median	1.60%	1.90%	2.20%	2.45%	2.60%	2.20%	1.95%
Panelist 2							
Upper 10%	1.80%	2.20%	2.30%	2.30%	2.40%	2.30%	2.10%
Lower 10%	1.30%	1.30%	1.40%	1.50%	1.40%	1.30%	1.20%
Median	1.60%	1.80%	2.00%	2.00%	2.10%	2.00%	1.80%
Panelist 3							
Upper 10%	2.00%	2.60%	3.40%	3.60%	3.60%	3.80%	3.40%
Lower 10%	1.00%	1.00%	1.00%	1.00%	1.00%	0.50%	0.50%
Median	1.50%	1.80%	2.20%	2.30%	2.30%	1.90%	1.70%
Panelist 4							
Upper 10%	1.70%	2.40%	2.60%	2.80%	2.80%	2.70%	2.60%
Lower 10%	0.90%	1.10%	1.30%	1.50%	1.50%	0.60%	0.50%
Median	1.50%	2.00%	2.30%	2.50%	2.50%	2.20%	1.60%
Panelist 5							
Upper 10%	1.42%	1.60%	1.76%	2.35%	2.64%	2.95%	2.93%
Lower 10%	0.70%	0.93%	1.10%	1.35%	1.51%	0.97%	0.66%
Median	1.06%	1.26%	1.43%	1.85%	2.08%	1.96%	1.79%
Panelist 6							
Upper 10%	1.88%	2.28%	2.58%	2.80%	2.80%	2.86%	2.78%
Lower 10%	0.92%	1.50%	1.00%	1.00%	1.00%	0.94%	0.62%
Median	1.40%	1.80%	2.10%	2.20%	2.00%	1.90%	1.70%
Panelist 7							
Upper 10%	2.20%	2.70%	2.90%	3.10%	3.20%	3.80%	3.90%
Lower 10%	0.90%	1.00%	1.50%	1.50%	1.60%	1.00%	0.50%
Median	1.60%	1.90%	2.30%	2.30%	2.40%	2.20%	1.90%
Panelist 8							
Upper 10%	2.20%	2.40%	2.60%	2.60%	2.60%	3.00%	3.00%
Lower 10%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Median	1.80%	2.00%	2.20%	2.20%	2.20%	2.00%	2.00%
Panelist 9							
Upper 10%	2.10%	2.50%	2.80%	3.00%	3.10%	3.50%	3.50%
Lower 10%	0.90%	1.30%	1.60%	1.60%	1.60%	0.90%	0.40%
Median	1.50%	2.00%	2.30%	2.50%	2.60%	2.40%	2.00%
Panelist 10							
Upper 10%	1.80%	2.30%	2.60%	2.60%	2.60%	2.60%	2.20%
Lower 10%	1.00%	1.30%	1.50%	1.50%	1.50%	1.30%	0.50%
Median	1.50%	1.80%	2.20%	2.20%	2.20%	2.00%	1.50%
Panelist 11							
Upper 10%	2.93%	3.28%	3.15%	3.13%	3.16%	2.70%	2.70%
Lower 10%	0.63%	0.98%	0.85%	0.83%	0.86%	0.40%	0.40%
Median	2.43%	2.78%	2.65%	2.63%	2.66%	2.20%	2.20%
Panelist 12							
Upper 10%	2.00%	2.50%	3.00%	3.00%	3.00%	3.00%	2.70%
Lower 10%	0.73%	1.00%	1.00%	1.53%	1.00%	0.67%	0.29%
Median	1.50%	2.00%	2.30%	2.50%	2.50%	1.80%	1.60%
Panelist 13							
Upper 10%	2.00%	2.30%	2.60%	2.80%	3.00%	3.00%	2.80%
Lower 10%	1.00%	1.20%	1.30%	1.40%	1.50%	1.00%	0.80%
Median	1.50%	1.70%	1.90%	2.20%	2.30%	2.00%	1.80%
Panelist 14							
Upper 10%							
Lower 10%							
Median	1.43%	1.85%	2.08%	2.21%	2.16%	1.87%	1.73%

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

Maricopa County Construction Employment Growth

	2014	2015	2016	2017	2018	2022	2026
Panelist 1							
Upper 10%	11.80%	12.90%	13.40%	10.50%	12.30%	15.30%	15.40%
Lower 10%	4.10%	4.50%	4.50%	3.90%	3.50%	-1.00%	-1.80%
Median	8.20%	9.70%	10.80%	7.90%	7.30%	6.30%	6.10%
Panelist 2							
Upper 10%	15.00%	12.50%	12.00%	11.00%	10.00%	4.00%	3.00%
Lower 10%	8.00%	8.00%	8.00%	5.00%	4.00%	1.00%	1.00%
Median	12.50%	10.00%	10.00%	9.00%	8.00%	3.00%	2.50%
Panelist 3							
Upper 10%	22.00%	15.80%	18.00%	20.00%	16.60%	18.60%	18.60%
Lower 10%	4.00%	5.00%	4.00%	3.00%	-2.00%	-12.00%	-12.00%
Median	13.00%	10.40%	11.00%	11.50%	7.30%	3.30%	3.30%
Panelist 4							
Upper 10%	12.00%	15.00%	15.00%	18.00%	20.00%	20.00%	20.00%
Lower 10%	4.00%	0.00%	0.00%	-5.00%	-5.00%	-5.00%	-5.00%
Median	8.00%	8.00%	8.00%	8.00%	7.50%	2.00%	2.00%
Panelist 5							
Upper 10%	14.79%	17.68%	17.16%	12.71%	7.18%	5.74%	10.28%
Lower 10%	4.34%	5.86%	4.88%	3.31%	1.28%	-3.40%	-6.27%
Median	9.56%	11.77%	11.02%	8.01%	4.23%	1.17%	2.00%
Panelist 6							
Upper 10%	15.77%	16.67%	15.57%	15.07%	13.57%	12.26%	13.85%
Lower 10%	4.63%	5.53%	4.43%	-3.00%	-2.50%	-7.26%	-8.45%
Median	10.20%	8.00%	7.00%	7.00%	2.00%	1.50%	1.00%
Panelist 7							
Upper 10%	16.00%	18.00%	19.00%	16.00%	15.00%	17.00%	18.00%
Lower 10%	4.00%	3.00%	2.50%	2.00%	0.00%	-10.00%	-18.00%
Median	9.00%	10.00%	10.00%	9.00%	7.00%	4.00%	3.50%
Panelist 8							
Upper 10%	12.00%	15.00%	15.00%	15.00%	10.00%	8.00%	6.00%
Lower 10%	4.00%	4.50%	5.00%	4.50%	0.00%	1.00%	1.00%
Median	8.00%	9.00%	10.00%	9.00%	5.00%	4.00%	3.00%
Panelist 9							
Upper 10%	15.80%	16.70%	15.60%	15.10%	13.60%	12.30%	13.80%
Lower 10%	4.60%	5.50%	4.40%	3.90%	2.40%	-7.30%	-8.40%
Median	10.20%	11.10%	10.00%	9.50%	8.00%	2.50%	2.70%
Panelist 10							
Upper 10%	16.00%	17.00%	18.00%	16.00%	15.00%	12.00%	12.00%
Lower 10%	8.00%	8.00%	6.00%	4.00%	2.00%	-10.00%	-10.00%
Median	12.00%	15.00%	15.00%	12.00%	10.00%	2.50%	2.50%
Panelist 11							
Upper 10%	9.56%	9.18%	9.84%	8.59%	8.32%	7.43%	6.25%
Lower 10%	-0.44%	-0.82%	-0.16%	-1.41%	-1.68%	-2.57%	-3.75%
Median	4.56%	4.18%	4.84%	3.59%	3.32%	2.43%	1.25%
Panelist 12							
Upper 10%	10.00%	12.00%	13.00%	13.00%	10.00%	5.00%	4.00%
Lower 10%	5.00%	5.00%	5.00%	4.00%	3.00%	2.00%	2.00%
Median	8.00%	10.00%	10.00%	7.50%	6.50%	3.00%	3.00%
Panelist 13							
Upper 10%	8.50%	10.00%	11.00%	10.00%	9.00%	10.00%	10.00%
Lower 10%	4.50%	5.00%	5.00%	4.00%	3.00%	-2.00%	-2.00%
Median	7.50%	8.00%	8.50%	7.00%	5.00%	6.00%	5.00%
Panelist 14							
Upper 10%							
Lower 10%							
Median	5.00%	5.00%	4.54%	4.54%	4.54%	4.00%	3.50%

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

30 Year Mortgage

	2014	2015	2016	2017	2018	2022	2026
Panelist 1							
Upper 10%	4.30%	4.70%	5.80%	6.40%	6.60%	6.80%	7.30%
Lower 10%	3.30%	3.70%	4.20%	4.30%	4.40%	4.20%	3.90%
Median	3.80%	4.10%	4.80%	5.10%	5.10%	5.40%	5.30%
Panelist 2							
Upper 10%	4.50%	5.00%	6.00%	6.00%	6.50%	6.50%	6.50%
Lower 10%	3.75%	4.00%	4.00%	4.50%	4.50%	4.50%	4.50%
Median	4.00%	4.30%	5.00%	5.25%	5.50%	5.50%	5.50%
Panelist 3							
Upper 10%	6.00%	8.00%	8.00%	8.00%	7.30%	7.60%	9.00%
Lower 10%	4.00%	4.00%	4.00%	4.00%	5.90%	5.80%	5.00%
Median	5.00%	6.00%	6.50%	6.50%	6.60%	6.70%	6.50%
Panelist 4							
Upper 10%	5.00%	6.00%	6.00%	6.50%	7.00%	7.50%	7.00%
Lower 10%	3.50%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Median	4.00%	4.50%	5.00%	5.50%	5.50%	5.50%	5.50%
Panelist 5							
Upper 10%	4.25%	4.97%	5.93%	6.82%	7.01%	7.19%	7.29%
Lower 10%	3.41%	4.11%	5.07%	5.59%	5.65%	5.47%	5.38%
Median	3.83%	4.54%	5.50%	6.21%	6.33%	6.33%	6.33%
Panelist 6							
Upper 10%	5.50%	6.00%	7.00%	8.00%	9.00%	9.00%	9.00%
Lower 10%	3.75%	3.90%	4.00%	4.50%	4.00%	3.50%	3.50%
Median	4.50%	4.75%	5.00%	5.50%	6.50%	6.50%	6.50%
Panelist 7							
Upper 10%	5.00%	5.90%	6.80%	7.50%	8.00%	8.50%	9.00%
Lower 10%	3.50%	3.40%	3.30%	3.30%	3.40%	3.30%	3.20%
Median	4.50%	4.70%	5.00%	5.00%	5.10%	5.30%	5.30%
Panelist 8							
Upper 10%	5.00%	5.00%	6.00%	6.50%	7.00%	8.00%	8.00%
Lower 10%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	4.00%
Median	4.00%	4.20%	4.60%	4.60%	4.60%	5.50%	6.00%
Panelist 9							
Upper 10%	4.50%	5.00%	5.60%	6.50%	7.00%	7.50%	8.00%
Lower 10%	3.30%	3.90%	4.00%	4.50%	4.50%	4.50%	4.50%
Median	4.00%	4.50%	5.00%	5.50%	6.00%	6.00%	6.00%
Panelist 10							
Upper 10%	4.20%	4.70%	5.60%	6.50%	7.00%	7.20%	7.20%
Lower 10%	3.50%	3.90%	4.70%	5.50%	5.60%	5.60%	5.70%
Median	3.70%	4.20%	5.00%	6.00%	6.50%	6.50%	6.50%
Panelist 11							
Upper 10%	6.01%	6.41%	6.90%	7.48%	8.08%	7.20%	7.20%
Lower 10%	3.61%	4.01%	4.50%	5.08%	5.68%	4.80%	4.80%
Median	4.81%	5.21%	5.70%	6.28%	6.88%	6.00%	6.00%
Panelist 12							
Upper 10%	5.00%	6.00%	7.50%	10.00%	10.00%	10.00%	10.00%
Lower 10%	3.50%	3.50%	4.00%	4.00%	4.00%	5.00%	5.00%
Median	4.00%	5.00%	5.50%	6.00%	6.50%	7.50%	7.50%
Panelist 13							
Upper 10%	5.10%	5.40%	5.90%	6.00%	5.90%	5.80%	5.30%
Lower 10%	4.30%	4.70%	4.80%	4.90%	4.50%	4.20%	3.70%
Median	4.70%	5.10%	5.60%	5.70%	5.50%	5.00%	4.50%
Panelist 14							
Upper 10%							
Lower 10%	Not Provided						
Median							

All data in the above table are in nominal rates.

Phoenix CPI Growth

	2014	2015	2016	2017	2018	2022	2026
Panelist 1							
Upper 10%	2.90%	3.20%	3.40%	3.40%	3.20%	3.50%	3.70%
Lower 10%	0.40%	0.90%	0.80%	1.10%	1.20%	1.10%	1.00%
Median	1.90%	2.00%	2.10%	2.30%	2.60%	2.40%	2.30%
Panelist 2							
Upper 10%	2.60%	2.60%	2.60%	2.80%	3.00%	3.20%	3.20%
Lower 10%	1.20%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Median	2.00%	2.00%	2.00%	2.10%	2.20%	2.30%	2.30%
Panelist 3							
Upper 10%	2.60%	2.20%	2.60%	2.80%	3.20%	4.20%	3.40%
Lower 10%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Median	1.80%	1.60%	1.80%	1.90%	2.10%	2.60%	2.20%
Panelist 4							
Upper 10%	3.00%	3.00%	3.00%	3.00%	3.20%	3.50%	4.00%
Lower 10%	1.50%	1.40%	1.40%	1.50%	1.50%	1.20%	1.20%
Median	2.20%	1.80%	1.90%	2.20%	2.50%	2.50%	2.20%
Panelist 5							
Upper 10%	1.67%	2.28%	2.85%	2.82%	2.85%	3.10%	3.63%
Lower 10%	0.70%	0.75%	1.01%	1.19%	1.31%	1.13%	0.55%
Median	1.19%	1.52%	1.93%	2.01%	2.08%	2.11%	2.09%
Panelist 6							
Upper 10%	2.81%	3.00%	3.00%	3.50%	3.50%	4.00%	4.50%
Lower 10%	1.19%	0.79%	0.89%	1.19%	1.39%	1.38%	0.58%
Median	2.00%	1.60%	1.70%	2.00%	2.20%	2.60%	2.20%
Panelist 7							
Upper 10%	2.90%	2.70%	3.00%	3.40%	3.80%	4.40%	6.50%
Lower 10%	1.40%	0.80%	0.90%	0.80%	0.60%	0.40%	0.20%
Median	2.00%	1.80%	1.80%	1.90%	2.00%	1.60%	1.60%
Panelist 8							
Upper 10%	3.00%	4.00%	5.00%	5.00%	5.00%	6.00%	6.00%
Lower 10%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Median	2.00%	2.00%	2.00%	2.20%	2.20%	2.50%	2.50%
Panelist 9							
Upper 10%	3.00%	3.00%	3.00%	3.50%	3.50%	4.00%	4.00%
Lower 10%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Median	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Panelist 10							
Upper 10%	2.50%	2.50%	2.51%	2.70%	2.90%	3.20%	3.50%
Lower 10%	1.00%	1.00%	1.00%	1.20%	1.20%	1.00%	1.00%
Median	1.70%	1.70%	1.70%	1.80%	1.90%	2.00%	2.00%
Panelist 11							
Upper 10%	3.96%	3.81%	3.59%	3.30%	3.20%	2.30%	2.30%
Lower 10%	1.66%	1.51%	1.29%	1.00%	0.90%	0.00%	0.00%
Median	2.66%	2.51%	2.29%	2.00%	1.90%	1.00%	1.00%
Panelist 12							
Upper 10%	3.00%	3.00%	3.00%	3.00%	3.50%	3.50%	4.00%
Lower 10%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Median	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Panelist 13							
Upper 10%	2.50%	2.60%	2.70%	2.80%	2.80%	2.70%	2.70%
Lower 10%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.40%
Median	2.00%	1.90%	2.00%	2.10%	2.20%	2.10%	1.80%
Panelist 14							
Upper 10%							
Lower 10%							
Median	1.80%	2.05%	2.12%	1.92%	1.85%	1.89%	1.89%

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

Sky Harbor Passenger Traffic Growth

	2014	2015	2016	2017	2018	2022	2026
Panelist 1							
Upper 10%	2.80%	3.00%	3.20%	3.60%	3.90%	3.90%	4.20%
Lower 10%	0.40%	0.00%	0.30%	0.80%	0.80%	0.20%	-0.40%
Median	1.70%	2.00%	2.10%	2.40%	2.70%	2.80%	3.00%
Panelist 2							
Upper 10%	3.26%	3.47%	3.37%	3.94%	3.94%	4.96%	5.53%
Lower 10%	1.34%	0.53%	0.43%	-0.14%	-0.14%	-1.16%	-1.61%
Median	2.30%	2.00%	1.90%	1.90%	1.90%	1.90%	1.96%
Panelist 3							
Upper 10%	2.70%	3.50%	2.40%	2.40%	2.40%	3.40%	3.50%
Lower 10%	1.30%	0.50%	0.00%	0.00%	0.00%	-1.00%	-1.60%
Median	2.00%	2.00%	1.20%	1.20%	1.20%	1.20%	1.50%
Panelist 4							
Upper 10%	3.00%	3.00%	3.00%	3.00%	4.00%	4.00%	4.00%
Lower 10%	0.00%	0.00%	0.00%	-1.00%	-5.00%	-5.00%	-5.00%
Median	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Panelist 5							
Upper 10%	3.26%	3.81%	3.72%	4.15%	3.94%	5.48%	6.49%
Lower 10%	1.34%	0.59%	0.48%	-0.15%	0.14%	-1.28%	-1.89%
Median	2.30%	2.20%	2.10%	2.00%	1.90%	2.10%	2.30%
Panelist 6							
Upper 10%	3.26%	3.47%	3.37%	3.94%	3.94%	4.96%	5.53%
Lower 10%	1.34%	0.53%	0.43%	-0.14%	-0.14%	-1.16%	-3.00%
Median	2.50%	2.50%	2.00%	1.90%	1.90%	1.90%	1.96%
Panelist 7							
Upper 10%	4.00%	4.20%	4.50%	4.60%	4.70%	5.00%	5.70%
Lower 10%	0.80%	0.60%	0.00%	-0.50%	-1.00%	-1.50%	-2.00%
Median	2.50%	2.50%	2.20%	2.00%	2.00%	2.00%	2.00%
Panelist 8							
Upper 10%	3.00%	3.00%	3.00%	3.50%	4.00%	4.00%	4.00%
Lower 10%	1.50%	1.30%	1.00%	1.00%	1.00%	1.00%	1.00%
Median	2.00%	2.10%	2.20%	2.00%	1.80%	1.80%	1.80%
Panelist 9							
Upper 10%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Lower 10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Median	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Panelist 10							
Upper 10%	3.50%	3.50%	4.00%	4.00%	4.50%	5.00%	5.50%
Lower 10%	1.50%	0.53%	0.00%	-0.50%	-0.50%	-1.50%	-2.00%
Median	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	1.96%
Panelist 11							
Upper 10%	9.56%	9.18%	9.84%	8.59%	8.32%	6.21%	5.63%
Lower 10%	1.56%	1.18%	1.84%	0.59%	0.32%	-1.79%	-2.37%
Median	4.56%	4.18%	4.84%	3.59%	3.32%	1.21%	0.63%
Panelist 12							
Upper 10%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Lower 10%	1.50%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Median	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Panelist 13							
Upper 10%	2.00%	2.50%	3.50%	4.00%	4.50%	5.00%	5.00%
Lower 10%	0.50%	0.70%	1.00%	1.20%	0.50%	-1.00%	-2.00%
Median	1.50%	2.00%	2.50%	3.00%	2.50%	2.00%	1.50%
Panelist 14							
Upper 10%							
Lower 10%							
Median	1.10%	1.07%	1.09%	1.50%	2.02%	1.90%	1.77%

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

Maricopa County Total Non-Farm Employment Growth

	2014	2015	2016	2017	2018	2022	2026
Panelist 1							
Upper 10%	3.10%	3.70%	4.20%	5.30%	5.85%	6.00%	6.40%
Lower 10%	1.00%	1.30%	1.50%	1.70%	1.70%	0.90%	0.80%
Median	2.40%	3.10%	3.20%	3.30%	3.60%	3.40%	3.50%
Panelist 2							
Upper 10%	3.50%	4.00%	4.50%	4.00%	4.00%	3.70%	3.50%
Lower 10%	1.40%	1.80%	2.00%	2.00%	2.00%	1.80%	1.50%
Median	2.40%	2.80%	3.50%	3.80%	3.00%	2.70%	2.50%
Panelist 3							
Upper 10%	4.80%	4.40%	4.50%	4.50%	4.50%	4.50%	4.50%
Lower 10%	1.00%	1.00%	1.00%	1.00%	1.00%	0.50%	0.50%
Median	2.90%	3.00%	3.00%	3.20%	3.20%	2.80%	2.70%
Panelist 4							
Upper 10%	3.40%	4.00%	4.70%	5.00%	4.30%	4.00%	4.00%
Lower 10%	1.50%	1.90%	2.10%	2.00%	1.50%	1.00%	0.20%
Median	2.60%	3.20%	3.70%	4.00%	3.80%	2.90%	2.60%
Panelist 5							
Upper 10%	3.91%	4.45%	5.53%	4.89%	4.30%	4.06%	4.49%
Lower 10%	1.65%	2.26%	1.77%	1.73%	1.42%	-0.10%	-0.53%
Median	2.78%	3.35%	3.65%	3.31%	2.86%	1.98%	1.98%
Panelist 6							
Upper 10%	3.38%	3.98%	5.50%	6.00%	6.00%	6.00%	6.00%
Lower 10%	1.42%	2.02%	1.84%	2.14%	1.94%	-0.14%	-0.73%
Median	2.40%	3.00%	3.50%	4.00%	3.50%	2.50%	2.20%
Panelist 7							
Upper 10%	3.00%	4.20%	5.10%	5.30%	5.60%	5.80%	5.90%
Lower 10%	1.20%	1.60%	1.40%	1.80%	1.60%	1.00%	-0.40%
Median	2.40%	2.80%	3.50%	3.80%	3.50%	3.10%	2.80%
Panelist 8							
Upper 10%	3.00%	3.20%	3.00%	4.00%	4.00%	4.00%	4.00%
Lower 10%	2.00%	2.00%	2.00%	2.00%	2.00%	1.50%	1.50%
Median	2.40%	2.60%	2.80%	3.00%	2.80%	2.50%	2.50%
Panelist 9							
Upper 10%	3.40%	4.00%	5.80%	6.10%	5.90%	5.70%	6.10%
Lower 10%	1.40%	2.00%	1.80%	2.10%	1.90%	-0.10%	-0.70%
Median	2.40%	3.00%	3.50%	3.60%	3.70%	3.00%	3.00%
Panelist 10							
Upper 10%	3.50%	4.00%	5.50%	6.00%	5.50%	5.50%	5.00%
Lower 10%	1.50%	2.00%	2.00%	2.00%	-1.50%	-0.50%	-1.00%
Median	2.50%	3.00%	3.50%	4.00%	4.00%	3.00%	2.50%
Panelist 11							
Upper 10%	4.18%	3.59%	3.92%	3.29%	3.16%	2.71%	2.13%
Lower 10%	-0.62%	-1.21%	-0.88%	-0.71%	-0.84%	-0.79%	-0.77%
Median	2.68%	2.09%	2.42%	1.79%	1.66%	1.21%	0.63%
Panelist 12							
Upper 10%	2.95%	3.55%	4.70%	5.00%	4.60%	4.60%	4.75%
Lower 10%	1.05%	1.65%	1.90%	2.20%	1.80%	0.40%	-0.15%
Median	2.00%	2.60%	3.30%	3.60%	3.20%	2.50%	2.30%
Panelist 13							
Upper 10%	3.00%	3.40%	4.50%	5.30%	5.00%	5.00%	5.50%
Lower 10%	1.60%	1.70%	1.80%	1.80%	1.60%	-1.00%	-2.00%
Median	2.40%	2.60%	3.00%	3.50%	3.00%	2.40%	2.20%
Panelist 14							
Upper 10%							
Lower 10%							
Median	2.40%	2.50%	2.60%	2.50%	2.08%	1.92%	1.80%

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

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

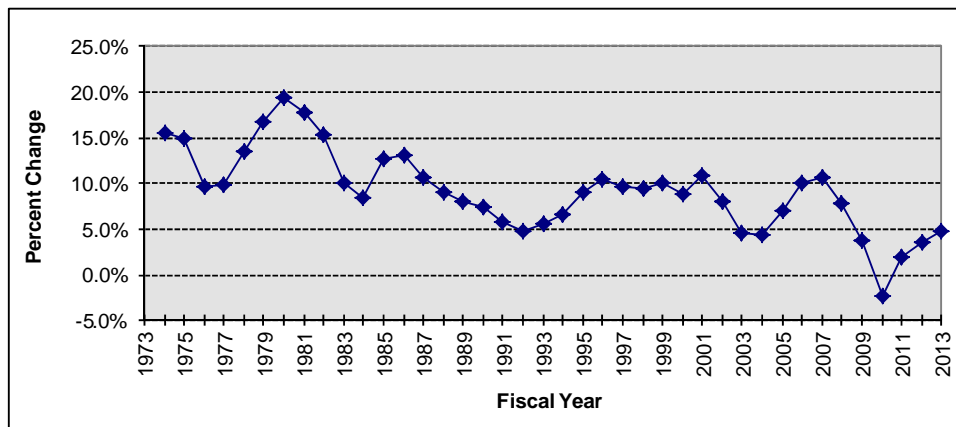
HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1971		1981	15.3%	1991	4.8%	2001	8.0%	2011	3.7%
1972		1982	10.1%	1992	5.6%	2002	4.5%	2012	4.8%
1973	15.6%	1983	8.4%	1993	6.7%	2003	4.4%	2013*	4.9%
1974	14.9%	1984	12.8%	1994	9.1%	2004	7.1%	2014	
1975	9.7%	1985	13.1%	1995	10.4%	2005	10.0%	2015	
1976	9.8%	1986	10.7%	1996	9.7%	2006	10.7%	2016	
1977	13.5%	1987	9.0%	1997	9.5%	2007	7.7%	2017	
1978	16.7%	1988	8.0%	1998	10.1%	2008	3.8%	2018	
1979	19.5%	1989	7.4%	1999	8.8%	2009	-2.2%	2019	
1980	17.7%	1990	5.9%	2000	10.8%	2010	2.0%	2020	

FY 1973-2011 data from BEA; FY 2012-2013 data from Phoenix Blue Chip. FY 2014-2026, ADOT staff estimates.

Data include inflation rate.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	-2.2%	4.9%	2.6%	3.0%	-0.5%	4.9%
10 Years	-2.2%	10.7%	5.3%	3.9%	1.6%	10.1%
Full Period	-2.2%	19.5%	9.2%	4.5%	4.3%	15.4%

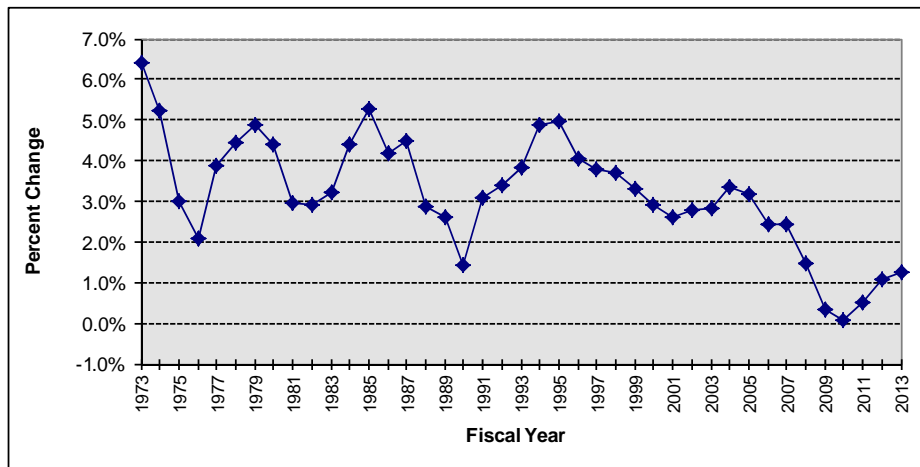
**HISTORICAL DATA
MARICOPA COUNTY POPULATION GROWTH
(Annual Percent Change)**

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

1971		1981	3.0%	1991	3.1%	2001	2.6%	2011	0.5%
1972		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	1.3%
1974	5.2%	1984	4.4%	1994	4.9%	2004	3.4%	2014	
1975	3.0%	1985	5.3%	1995	5.0%	2005	3.2%	2015	
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 1973-2011 from U. S. Census Bureau. FY 2012 and after from ADOA Office of Employment and Population Statistics estimates.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	0.1%	1.3%	0.6%	0.5%	0.2%	1.2%
10 Years	0.1%	3.4%	1.6%	1.2%	0.3%	3.2%
Full Period	0.1%	6.4%	3.2%	1.4%	1.3%	4.9%

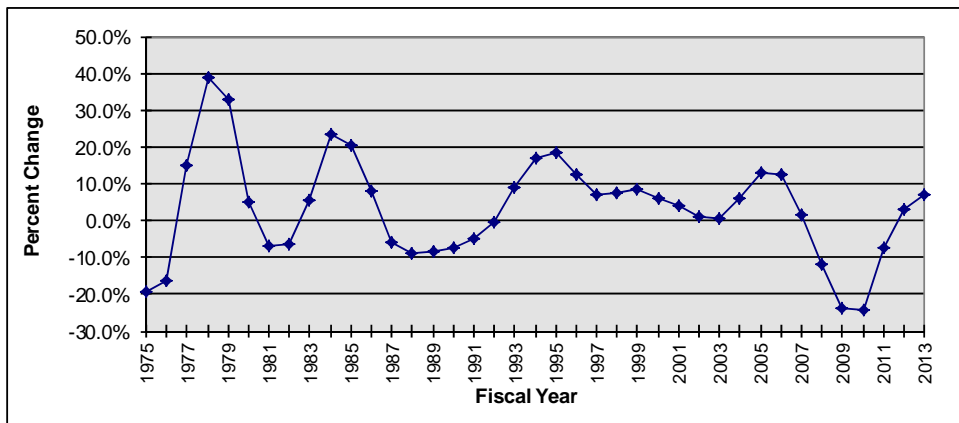
HISTORICAL DATA
MARICOPA COUNTY CONSTRUCTION EMPLOYMENT GROWTH
(Annual Percent Change)

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

1971		1981	-6.7%	1991	-4.9%	2001	4.1%	2011	-7.2%
1972		1982	-6.5%	1992	-0.5%	2002	1.1%	2012	3.3%
1973		1983	5.4%	1993	9.0%	2003	0.4%	2013*	6.9%
1974	0.4%	1984	23.4%	1994	16.8%	2004	6.1%	2014	
1975	-19.3%	1985	20.3%	1995	18.2%	2005	12.8%	2015	
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	-7.5%	2000	5.8%	2010	-24.2%	2020	

FY 2012 and prior from BEA. FY 2013 and 2014 from Phoenix Blue Chip. 2015 and after based on ADOT staff estimates.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	-24.2%	6.9%	-9.0%	14.6%	-24.0%	5.4%
10 Years	-24.2%	12.8%	-2.4%	13.8%	-23.8%	12.6%
Full Period	-24.2%	38.9%	3.3%	13.7%	-12.1%	18.4%

**HISTORICAL DATA
30 YEAR MORTGAGE RATE**

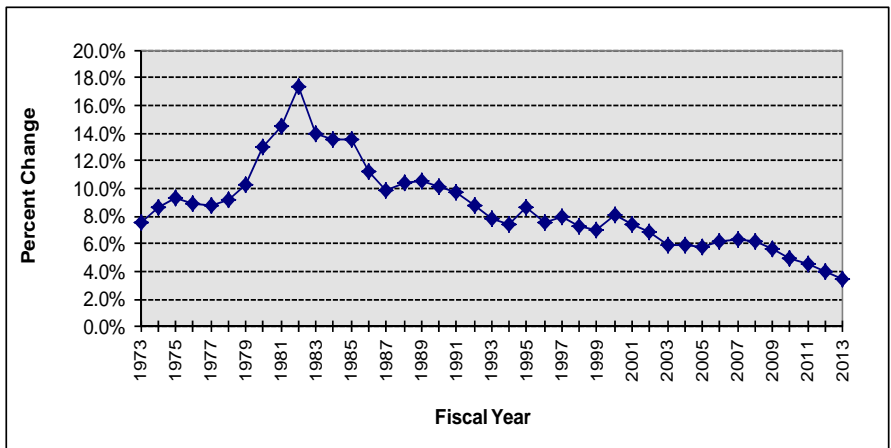
HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1971		1981	14.6%	1991	9.8%	2001	7.5%	2011	4.6%
1972	7.5%	1982	17.3%	1992	8.8%	2002	6.9%	2012	4.0%
1973	7.5%	1983	14.0%	1993	7.9%	2003	5.9%	2013*	3.5%
1974	8.6%	1984	13.6%	1994	7.5%	2004	5.9%	2014	
1975	9.4%	1985	13.5%	1995	8.6%	2005	5.8%	2015	
1976	8.9%	1986	11.2%	1996	7.6%	2006	6.2%	2016	
1977	8.8%	1987	9.8%	1997	7.9%	2007	6.3%	2017	
1978	9.1%	1988	10.5%	1998	7.2%	2008	6.2%	2018	
1979	10.3%	1989	10.6%	1999	6.9%	2009	5.6%	2019	
1980	12.9%	1990	10.1%	2000	8.1%	2010	4.9%	2020	

FY 1973-2012 data from Federal Reserve. FY 2013*-2026 based on Global Insight, 1st Quarter 2013, Trend Forecast.

* Estimate

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	3.5%	5.6%	4.5%	0.8%	3.7%	5.3%
10 Years	3.5%	6.3%	5.3%	1.0%	4.0%	6.2%
Full Period	3.5%	17.3%	8.6%	3.0%	5.6%	13.4%

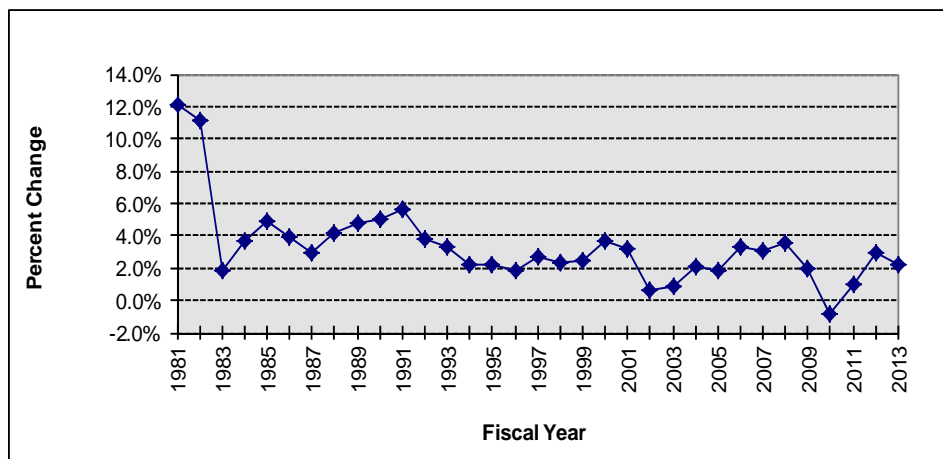
**HISTORICAL DATA
PHOENIX CPI GROWTH RATE
(Annual Percent Change)**

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

1971	1981	12.1%	1991	5.6%	2001	3.2%	2011	1.0%
1972	1982	11.1%	1992	3.8%	2002	0.6%	2012	2.9%
1973	1983	1.9%	1993	3.3%	2003	0.8%	2013*	2.2%
1974	1984	3.7%	1994	2.2%	2004	2.1%	2014	
1975	1985	4.8%	1995	2.2%	2005	1.8%	2015	
1976	1986	3.9%	1996	1.9%	2006	3.3%	2016	
1977	1987	3.0%	1997	2.7%	2007	3.1%	2017	
1978	1988	4.2%	1998	2.3%	2008	3.5%	2018	
1979	1989	4.8%	1999	2.5%	2009	1.9%	2019	
1980	1990	5.0%	2000	3.7%	2010	-0.8%	2020	

FY 1981-2012 from BLS. FY 2013-2026 from Moody's Analytics.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	-0.8%	2.9%	1.4%	1.5%	-0.1%	2.6%
10 Years	-0.8%	3.5%	2.1%	1.3%	0.8%	3.3%
Full Period	-0.8%	12.1%	3.3%	2.5%	1.2%	5.0%

HISTORICAL DATA
SKY HARBOR PASSENGER TRAFFIC GROWTH
(Annual Percent Change)

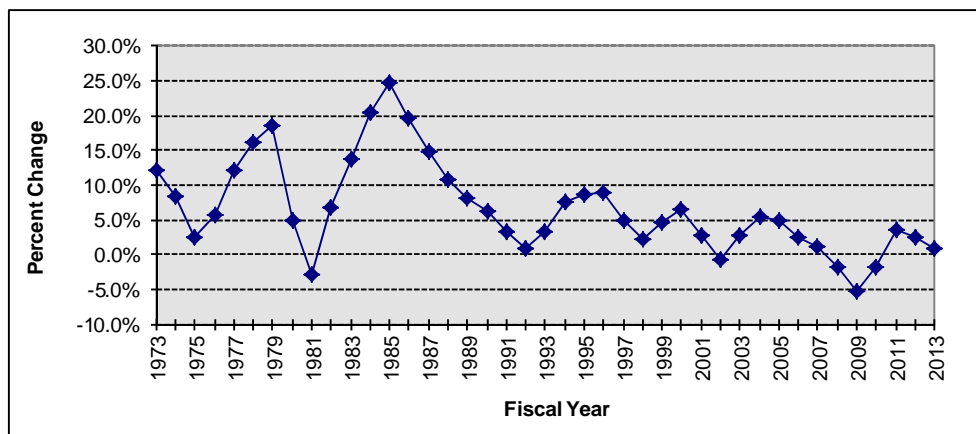
HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1971		1981	-2.8%	1991	3.4%	2001	2.7%	2011	3.6%
1972	8.4%	1982	6.8%	1992	0.9%	2002	-0.7%	2012	2.4%
1973	12.2%	1983	13.9%	1993	3.3%	2003	2.8%	2013*	1.0%
1974	8.4%	1984	20.6%	1994	7.7%	2004	5.4%	2014	
1975	2.4%	1985	24.8%	1995	8.6%	2005	4.9%	2015	
1976	5.7%	1986	19.6%	1996	8.9%	2006	2.4%	2016	
1977	12.2%	1987	14.8%	1997	4.8%	2007	1.2%	2017	
1978	16.1%	1988	10.9%	1998	2.2%	2008	-1.8%	2018	
1979	18.7%	1989	8.1%	1999	4.6%	2009	-5.3%	2019	
1980	5.0%	1990	6.4%	2000	6.5%	2010	-1.7%	2020	

FY 1972-2012 data obtained from Phoenix Sky Harbor International Airport.

FY 2013*-2026 estimates are from Phoenix Sky Harbor International Airport staff.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	-5.3%	3.6%	0.0%	3.6%	-3.9%	3.1%
10 Years	-5.3%	5.4%	1.2%	3.3%	-2.2%	5.0%
Full Period	-5.3%	24.8%	6.7%	6.7%	-0.5%	16.0%

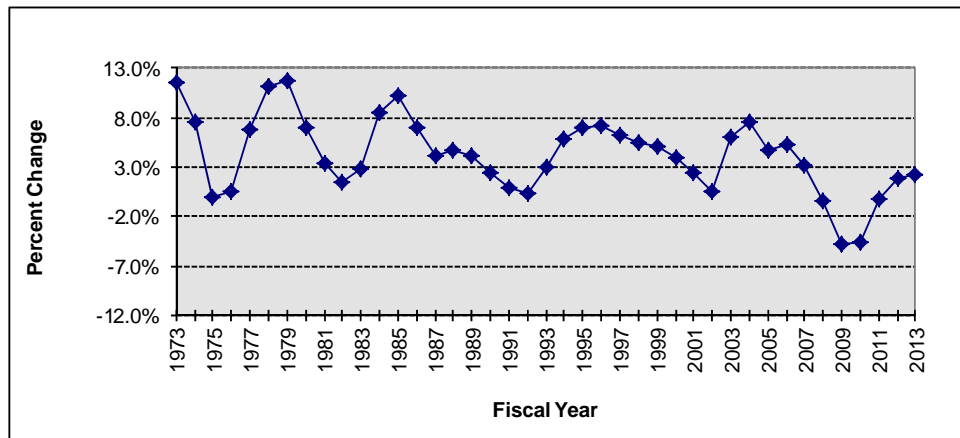
HISTORICAL DATA
MARICOPA COUNTY TOTAL NON-FARM EMPLOYMENT GROWTH
(Annual Percent Change)

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

1971		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	1.8%
1973	11.6%	1983	2.9%	1993	3.0%	2003	6.0%	2013*	2.3%
1974	7.6%	1984	8.6%	1994	5.8%	2004	7.5%	2014	
1975	0.0%	1985	10.2%	1995	6.9%	2005	4.6%	2015	
1976	0.5%	1986	6.9%	1996	7.2%	2006	5.3%	2016	
1977	6.9%	1987	4.1%	1997	6.3%	2007	3.2%	2017	
1978	11.1%	1988	4.7%	1998	5.4%	2008	-0.4%	2018	
1979	11.8%	1989	4.1%	1999	5.0%	2009	-4.8%	2019	
1980	6.9%	1990	2.3%	2000	4.0%	2010	-4.6%	2020	

FY 1972-2012 data from Bureau of Labor Statistics. FY 2013-2014 from ADOA, Arizona Workforce dated May 9, 2013.
 FY 2015-2026 ADOT staff estimates.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	-4.8%	2.3%	-1.1%	3.4%	-4.7%	2.1%
10 Years	-4.8%	7.5%	1.5%	4.0%	-4.6%	5.5%
Full Period	-4.8%	11.8%	4.3%	3.8%	0.0%	8.6%