Stanislaus State

SAN JOAQUIN VALLEY

BUSINESS FORECAST REPORT

2016 | Volume VI • Issue 1

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**SAN JOAQUIN VALLEY
BUSINESS FORECAST REPORT 2016**

Stanislaus State
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Volume VI, Issue 1

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We wish to thank Foster Farms for generously providing the endowment for this project.

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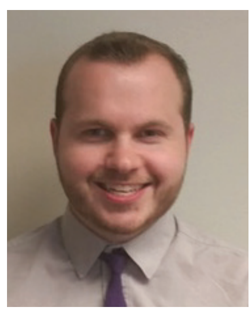

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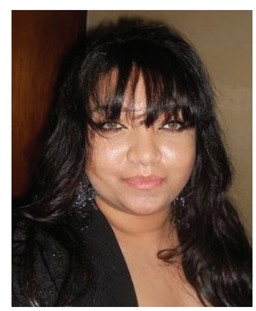

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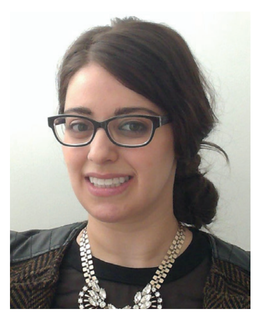

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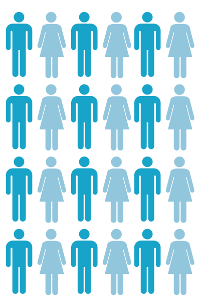
Executive Summary

Facing several headwinds, the Valley economy – as measured by total employment growth - will be advancing at a more cautious pace in the coming years. The factors likely to slow growth include the new farm bill requiring farmers to pay overtime, new state-mandated water measures proposed for the Valley, regulations on greenhouse gas emissions tied to dairy cows and landfills and the ensuing impact on the regional economy from the upcoming Federal Reserve rate hikes.

The Valley's employment growth rate of 1.56 percent in 2016 came quite close to the historical average of 1.72 percent (excluding the recessionary years) but grew more slowly in 2016 compared to 2015 as a continued effect of the drought. Farm employment made up the bulk of the slow-down, but some of that deficit was absorbed by non-farm employment, which grew 3.12 percent in 2016 against 2.51 percent in 2015.



The 2016 Valley employment growth rate

1.56%

Employment grew in all counties but only Madera and Kern counties exceeded their 2015 growth rates. Madera, San Joaquin, and Fresno counties registered the fastest rate of growth in 2016 total employment at 3.18, 2.15, and 1.91 percent, respectively. Kern and Kings counties posted the slowest growth, while total employment grew about the same pace as the Valley average in Stanislaus, Merced, and Tulare counties.

Retail trade employment, which showed annual growth of 4.75 percent, was the fastest-growing sector for the first time since the end of the recession, taking advantage of 2015's relatively faster wage growth and low inflation. Trade, transportation, and utilities employment showed the second-fastest growth at 4.47 percent, followed by education and health services employment at 3.80 percent. Government employment growth, which had lagged in recent years, was the fourth fastest growing category of employment in 2016 at 3.71 percent. Information employment posted the most striking growth relative to previous years, advancing 3.37 percent. Leisure and hospitality services employment growth, at 3.15 percent, came in sixth after being a top-two category in 2015. Manufacturing employment growth jumped from 1.88 percent in 2015 to 2.77 percent in 2016.

Construction employment did not perform well in 2016, falling to 2.65 percent growth. Wholesale trade employment growth posted better growth than previous years at 2.47 percent. Financial activities employment grew 2.17 percent in 2016, as refinancing activity gained speed due to 30-year mortgage rates falling to 3.44 percent in the absence of rate hikes.

The slowing increases in home values, combined with historically low interest rates, suggests another bubble in the housing market, but not to the extent observed during the crisis years. Growth in home values in 2017 should decrease slightly, a projection based on the Federal Reserve's pending rate hike. Total number of housing permits issued in the Valley grew less in 2016. The slower growth of new homes being built contributed to supply shortage, further increasing the value of existing homes.

As one of the spillovers from Brexit, the U.S. dollar continued to gain value, further worsening the trade deficit. Consumers enjoyed cheaper imported goods but Valley farmers were hurt by the appreciating dollar - another factor that negatively affected farm income. The stronger dollar, however, combined with the absence of cost-push factors to keep inflation at very low rates, allowed weekly wages to keep pace with inflation in the first half of 2016.

For the first time since 2010, labor force growth caught up with employment growth, pointing to an influx of population to the Valley and a saturated labor market.

Foreclosure filings continued to fall and refinancing activity increased due to falling long-term interest rates, making now a good time for consumers to switch from adjustable to fixed-rate mortgages. Such a strategy would be timely, since 30-year rates are projected to rise with the pending Fed rate hikes. Despite the very low interest rates, banks had plenty of cash in 2016. Valley net loans and leases continued to grow together with bank deposits, although the growth was slightly slower compared to previous years.

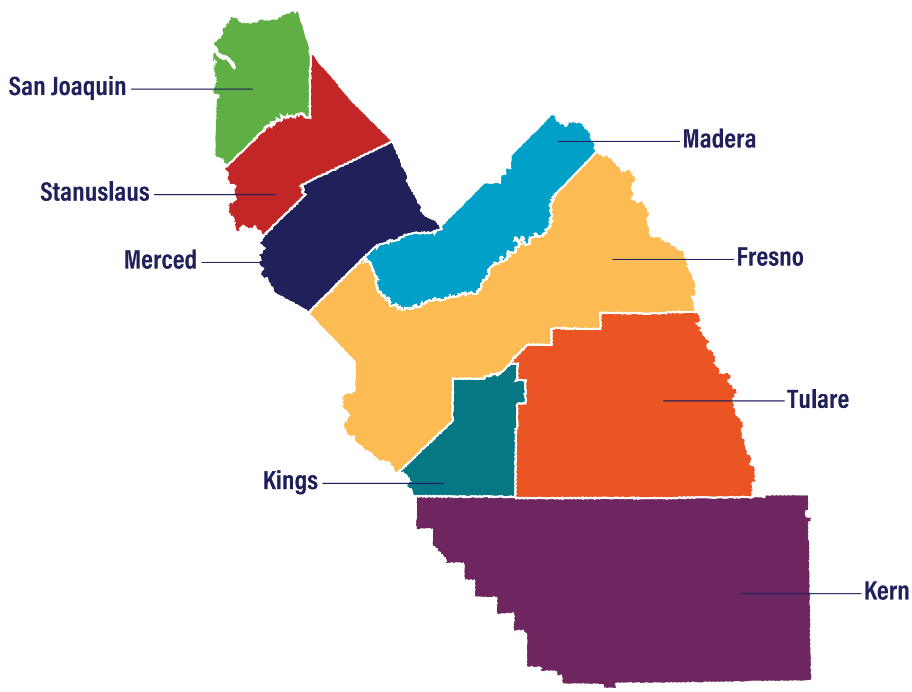
After a series of recent high growth years following the Great Recession, total employment growth, consistent with normally occurring business cycles, is expected to revert back to the mean historical growth of 1.23 percent through 2018.

Introduction

This report, now in its sixth year, has benefited largely from focusing on the greater San Joaquin Valley. With each edition, it has attracted increasing attention from private and government constituencies throughout the Valley – attention that would not have occurred had the report maintained a single-county focus.

Long-term data in this report spans January 2001 through August 2016. Medium-term forecasts span September 2016 through December 2018. The yearly averages reported in this year's edition are from the first nine months of 2016, whereas 2015 and 2014 are from the entire twelve months. Forecasts may be deemed to be optimistic at times. Statistically speaking however, actual values mostly came in above the mean forecasts, in contradiction with this general view.

The remainder of this report is organized as follows: Section B provides a discussion of San Joaquin Valley labor market conditions; the Valley's real estate market is covered in Section C; prices and inflation are reported in Section D; and banking and capital market indicators are discussed in Section E.



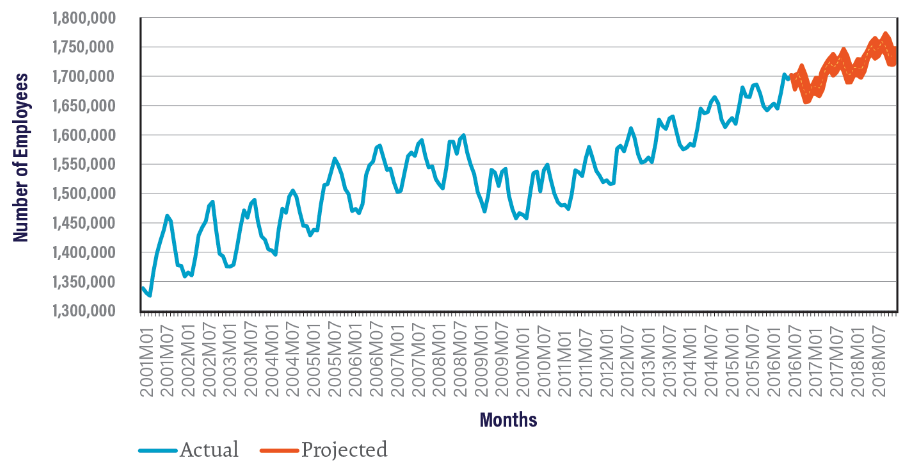
Greater San Joaquin Valley

Employment Indicators

Relative to the previous two years, the Valley's total employment grew at a slower pace in 2016. The lingering effect of drought and other developments, such as overtime pay for farm workers and new regulations on cow emissions, as well as new water measures proposed by the state to let more water flow from Valley's rivers to the Delta Region are not likely to improve the picture during the coming years. The oncoming regional impact from a widely anticipated series of Federal Reserve interest rate hikes is likely to contribute to these conditions. By design, a contradictory monetary policy aims to slow aggregate demand expansion. The sluggish agricultural segment of total employment was the main reason for below-average growth. Total non-farm employment, on the other hand, did better than the previous year, growing at 3.12 percent in 2016, up from 2.51 percent in 2015, thus picking up the slack from farm employment.

Madera County posted the fastest employment growth in 2016, ending the employment growth pattern displayed by typical growth leaders San Joaquin and Fresno, which were second- and third-fastest. Total employment grew in all counties. Kern and Kings counties posted the slowest growth in 2016, while in Stanislaus, Merced, and Tulare counties total employment grew at about the same pace as the Valley average.

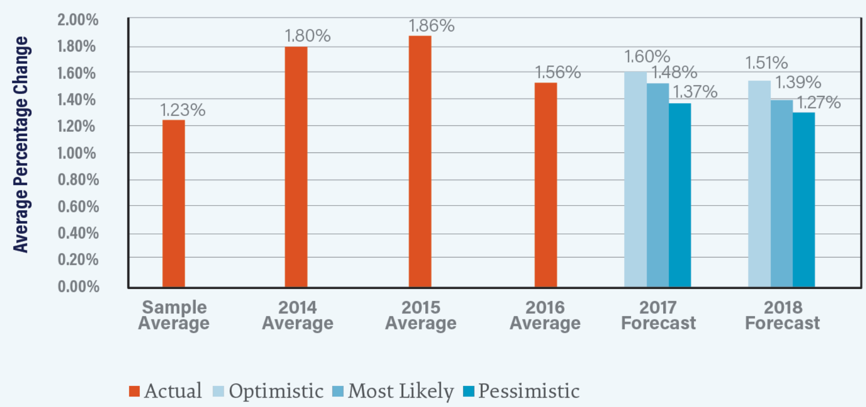
Total Employment



Retail trade employment surpassed trade, transportation, and utilities as the leading growth employment category in 2016, followed by education and health services. The Valley's vibrant activity in retail can be seen along the Highway 99 corridor and near cities such as Turlock and Riverbank. Government employment posted the fourth-fastest growth. Information employment growth kept climbing upwards, registering the fifth-fastest growth in 2016. Leisure and hospitality services employment fell from the top three category of employment growth to sixth place. Even though manufacturing employment placed after leisure and hospitality services employment (due to accelerated hiring at fulfillment centers in Tracy and Patterson,) growth in manufacturing employment was faster than that of the previous year. Construction employment did not perform well in 2016 as a consequence of the lack of new homes being built, thus performing worse than in 2015. Wholesale trade employment picked up some speed compared to the previous year, but due to the continued effect of drought, it grew slower than the other categories. Financial activities employment picked up some speed due to vibrant refinancing activity triggered by low interest rates.

Valley total employment grew 1.56 percent in 2016. The series' sample benchmark now stands at a slightly higher rate of 1.23 percent. When the recessionary years are excluded, this benchmark rate increases to 1.72 percent. Yearly growth in 2016 moved further away from this rate downward and approached this sample benchmark rate of 1.23 percent, displaying some tendency to converge. Projections point to a yearly average growth of 1.43 percent in 2017 and 2018.

Total Employment: Historical vs. Projected Average Yearly Growth

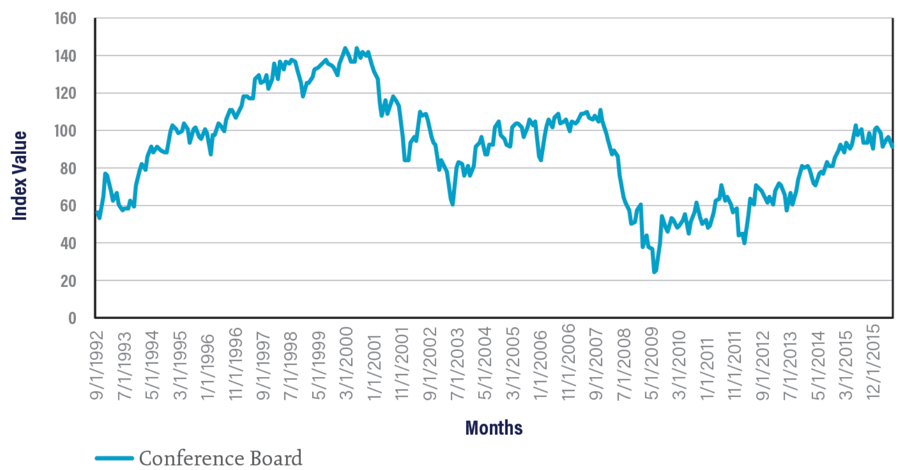


The consumer confidence index remained flat at around 100 points during the first half of 2016, but remains at levels that existed before the recessionary years. The uncertainty surrounding Brexit and the future level of interest rates at home combined to prevent consumers from committing to expanded consumption patterns in the near term. However, following the first half of 2016, consumer confidence began to suggest an increasing pattern, particularly when it became clear that interest rates would not change until the end of the year. As an important leading indicator, consumer confidence signaled that consumption expenditures would stay robust in the coming months.

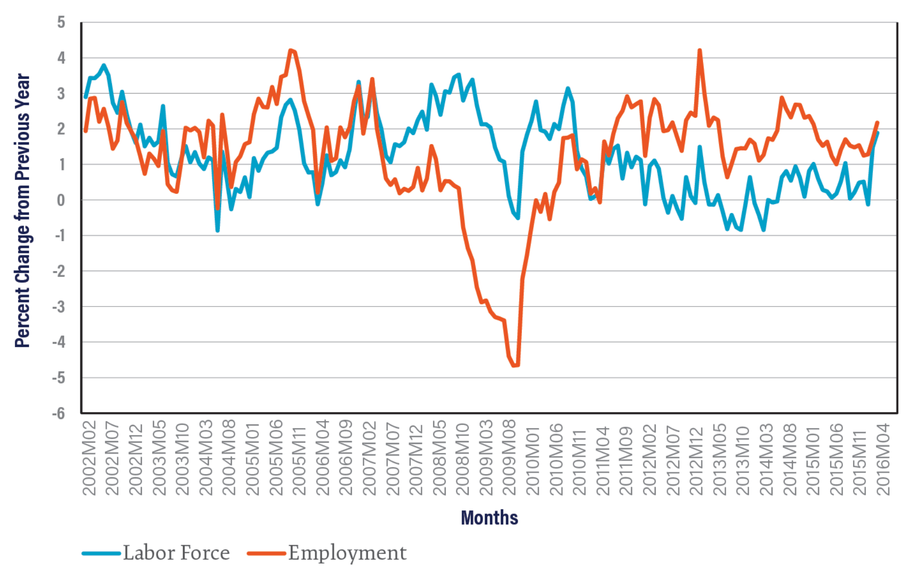
For the first time since 2011, labor force growth caught up with employment growth in the Valley. Such a pattern is consistent with the structural characteristics of a growing regional economy, and is also indicative of a population influx to the region. In the coming months, the Valley's labor force growth should exceed employment growth. It is important to have an infrastructure that would sustain such growth in the Valley, which means finding ways to increase water storage, extending the passenger railway system inland and establishing new east-to-west highway corridors.

The Valley's total employment growth caught up with the state's employment growth in 2016 and is projected to surpass the state in the coming years. As the Valley's population influx continues from other regions of California, total employment growth in the Valley will be higher than the state, as the latter will cool off. As a growing region, Valley employment growth should be greater than the state. A reversal of this structural pattern was observed from the second half of 2016, when the state's employment growth exceeded that of the Valley. Jobs in coastal regions were filled first following the recovery. Once those jobs were filled, the supply of labor began shifting sequentially inland, creating the lagged structural pattern.

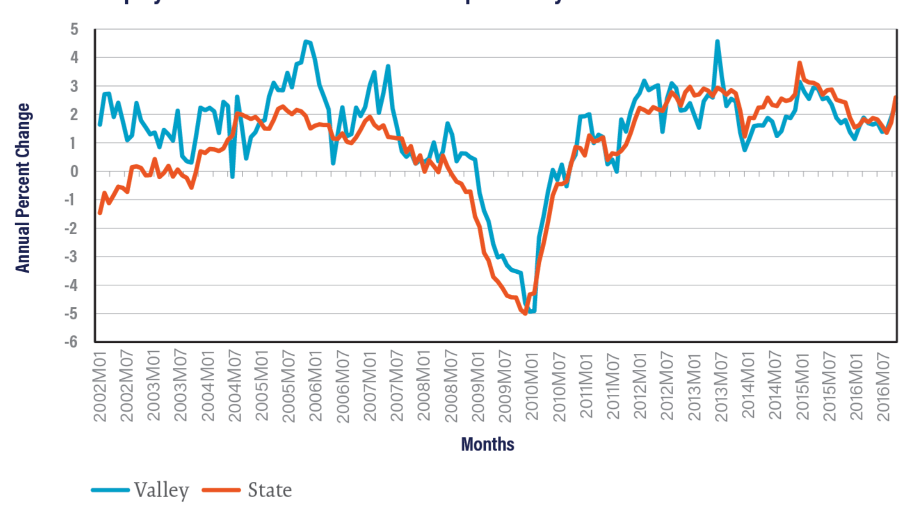
Consumer Confidence Index



Labor Force vs. Employment Growth



Employment Growth: State vs. San Joaquin Valley



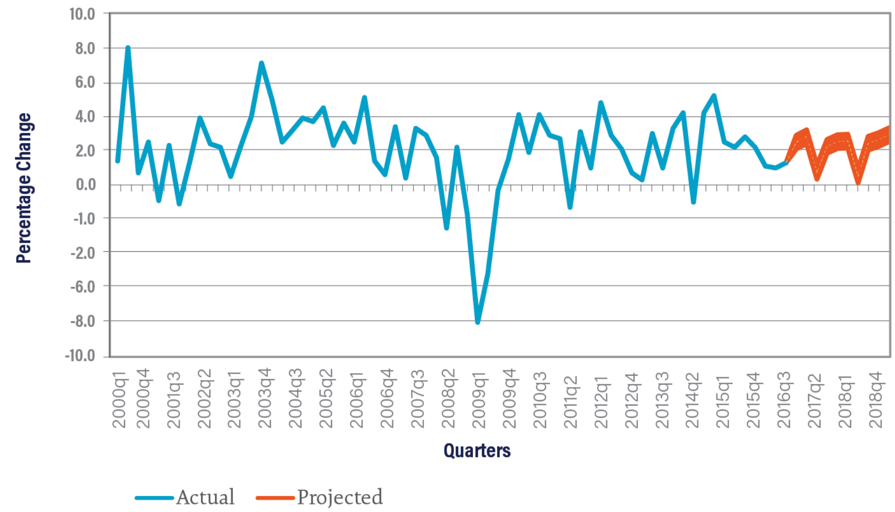
Employment Indicators

Because of spillovers from Brexit, the U.S. dollar continued to appreciate against other major currencies. Negative interest rates abroad did not help the situation, as foreign capital began to flow into the United States to take advantage of relatively better yields and the real estate market. The dollar's appreciation further worsened the U.S. trade deficit and contributed in lowering the real GDP growth. New consensus projections point to an average yearly real economic growth slightly greater than 2 percent in 2017 and 2018.

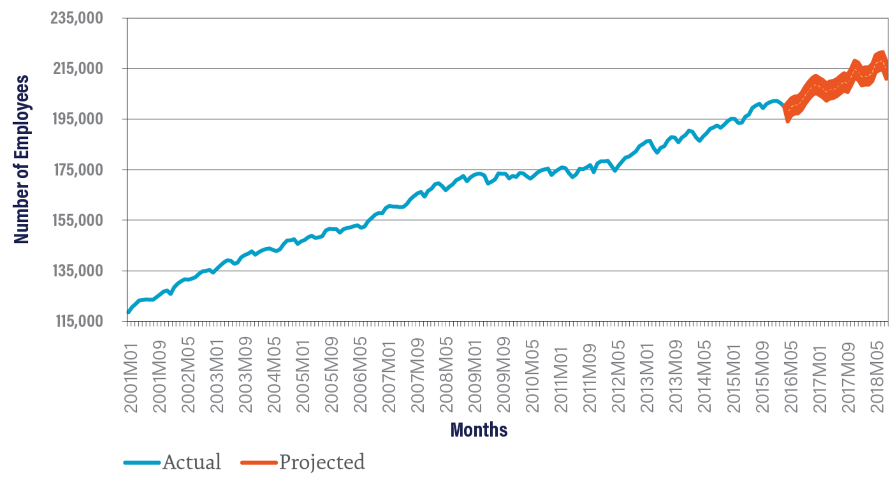
Education and health services employment in the Valley was the third-fastest growing category of employment in 2016. Employment in this category now exceeds 205,000, growing very significantly over just a couple of months. The breakdown of education and health was not reported for each county in the Valley. However, from the ones that were reported by the Bureau of Labor Statistics, education employment constituted 6.40 percent of the total in this category of employment. Education employment grew 2.60 percent in 2016, whereas health and social services employment grew 3.86 percent. New hiring made by growing educational institutions such as the University of California, Merced, as well as the positive impact on employment from the growing healthcare industry, will continue to add more jobs to this category of employment.

The sample benchmark employment growth rate of the Valley's education and health care services now stands at 3.36 percent. Employment growth in 2016 exceeded the benchmark rate, posting an average yearly growth rate of 3.80 percent. The series will continue to sustain strong growth, but some mean reversion is projected toward the long-run benchmark rate in the coming months. Projections point to an average yearly growth of 3.21 percent in this category of employment in 2017 and 2018.

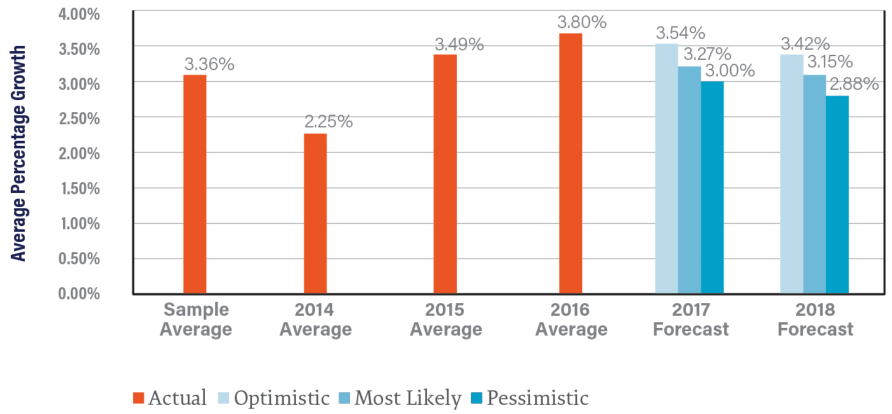
U.S. Real GDP Annual Growth



Education and Health Services Employment



Education and Health Services Employment: Historical vs. Projected Average Yearly Growth

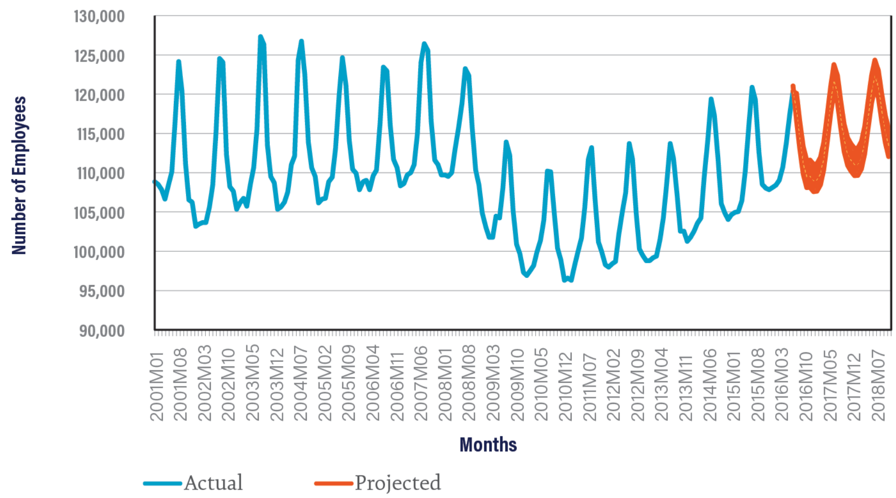


Manufacturing employment picked up some speed in 2016, as displayed by the steepening trend line. Employment levels in this category are now back to levels that existed before the Great Recession. Most notably, hiring activity in relatively new distribution centers in Patterson and Tracy made a significant contribution to faster growth in manufacturing employment. The Valley's manufacturing employment continued to grow above the nation and state in 2016. ▶

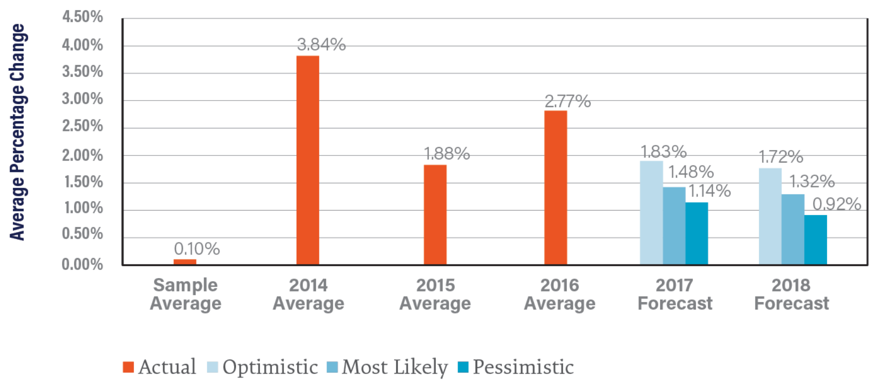
In line with our projections, the 10-year benchmark growth in manufacturing employment switched from negative to positive territory in 2016. Smart relocation decisions by several firms to choose the I-5 corridor as a distribution network, and the apparent success in operations of these companies in the years following the relocation, have attracted the attention of other potential entrants, who are becoming increasingly aware of the low-cost resources offered in the Valley. Consistent with a labor market that is beginning to get saturated, projections point to 1.40 percent average yearly growth in 2017 and 2018. ▶

The Institute of Supply Management's Purchasing Managers Index continued to oscillate around a value of 50 points in 2016. A value above 50 corresponds to an expansion in national economic activity. Such an oscillating pattern is indicative of weakness in manufacturing activity at the national level. Nationwide, manufacturing employment shrank by 0.19 percent. ▶ Statewide, manufacturing employment also decreased at a yearly average rate of 0.42 percent, mirroring the national trend. At a time when manufacturing employment declined in the nation and the state, Valley manufacturing employment posted growth of 2.77 percent. This relative employment dynamic is therefore indicative of the Valley's strong potential in manufacturing activity, particularly for packaging and distribution centers considering relocation to this region.

Manufacturing Employment



Manufacturing Employment: Historical vs. Projected Average Yearly Growth



Purchasing Managers Index

Employment Indicators

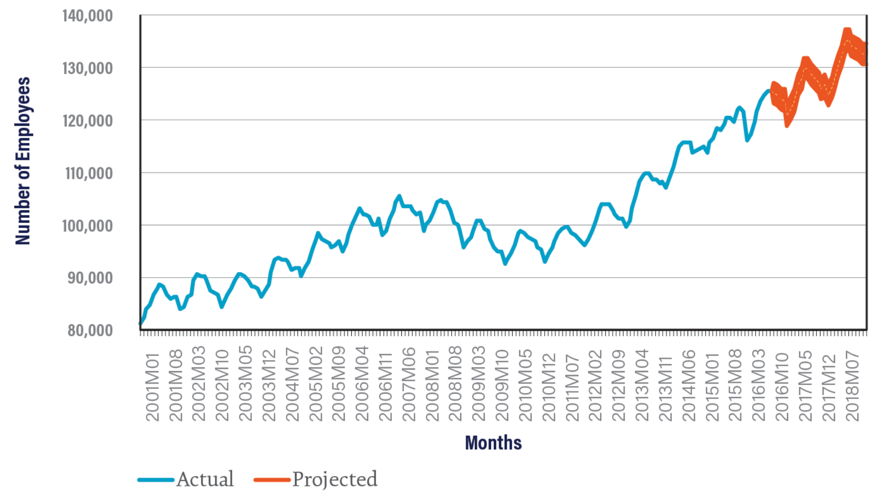
Leisure and hospitality services employment reached 120,000 in 2015 and is projected to reach 130,000 by the second half of 2017. The trend that formed post-recession is now the steepest since 2001. Leisure and hospitality services employment was the second-fastest growing category of employment in 2015, ▶ surpassing construction employment, which had led all categories of employment since the end of recession. Leisure and hospitality services employment's 4.75 percent growth in 2015, although slower than 2014, still was high enough to exceed all other categories of employment except trade, transportation, and utilities employment.

Leisure and hospitality services employment was one of the top growing categories of employment in the past several years. This dynamic changed in 2016 when growth fell to the sixth-fastest growing category of employment. After significantly above average growth, the series is showing signs of mean reversion. The sample average benchmark rate of growth stands at 2.32 percent. The 3.15 percent growth in 2016 is down from 2014 and 2015 at 5.94 and 4.75 respectively, displaying dynamics consistent with this pattern. ▶

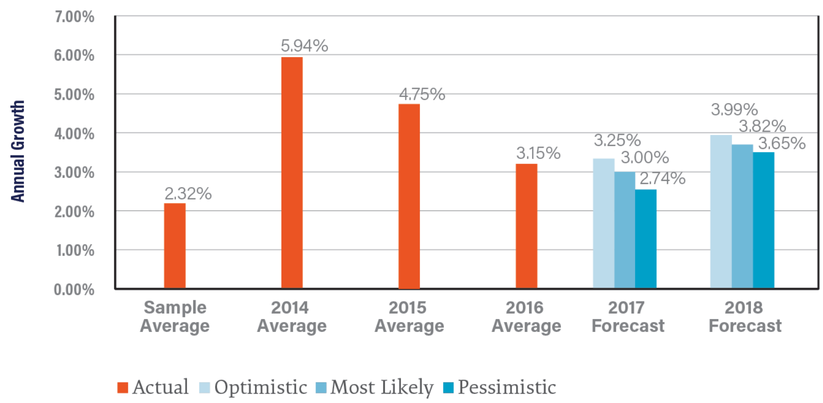
Leisure and hospitality services employment projections point to a continuation of this trend towards the typical historical growth rate. Employment in this category of employment is projected to grow at an annual average growth of 3 percent in 2017 and climbing back up to 3.82 percent in 2018.

Trade, transportation, and utilities ▶ employment has been another category of employment displaying a strong annual performance. Employment in this category grew the second fastest in 2015, and this vibrant activity continued in 2016. At 4.47 percent average annual growth, trade, transportation, and utilities employment in 2016 grew more than twice the rate of the historical growth of 1.72 percent.

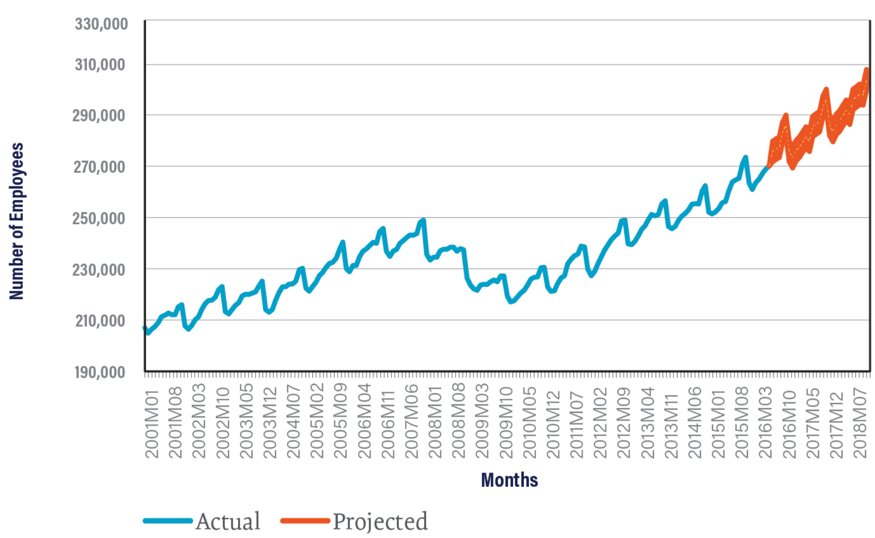
Leisure and Hospitality Services Employment



Leisure and Hospitality Services Employment: Historical vs. Projected Average Yearly Growth



Trade, Transportation and Utilities Employment

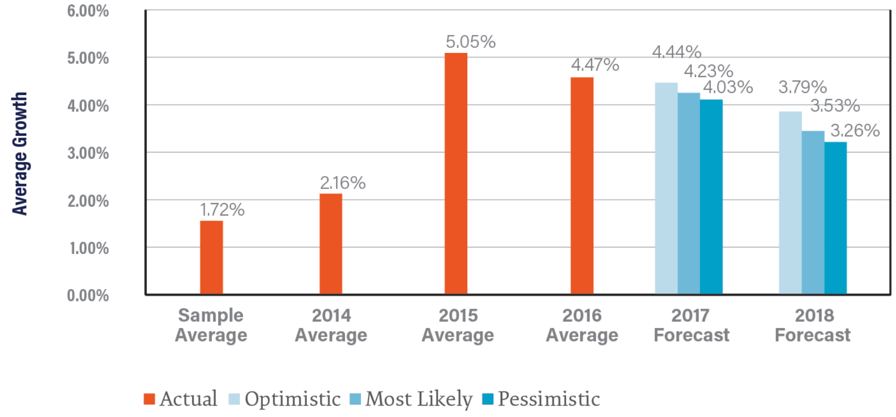


Despite growing strongly in 2016, the rate of employment growth at 4.47 percent in trade, transportation and utilities was still slower than 2015 growth of 5.05 percent. A mean reversion is projected to take place for this employment category in the coming months. Trade, transportation, and utilities employment is projected to post slightly slower growth. However, above historical growth in this category will continue at an average projected rate of 4.23 percent in 2017 and 3.53 percent in 2018. ▶

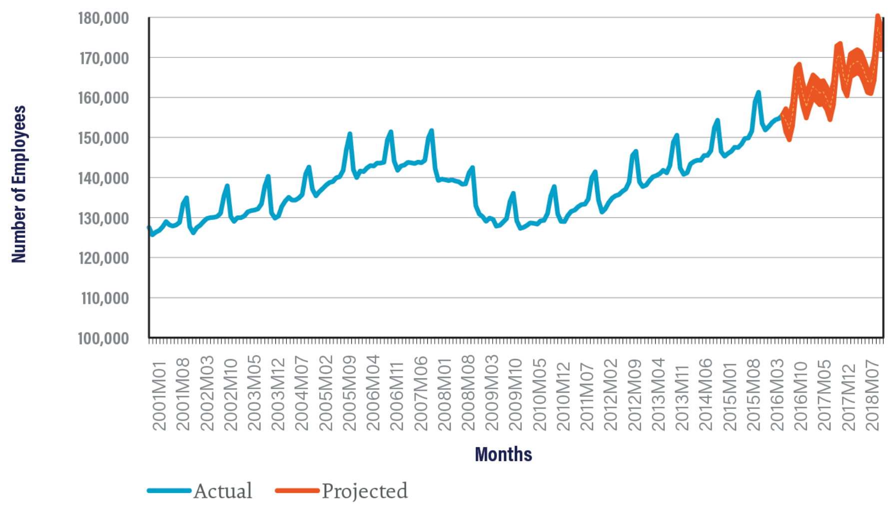
Retail trade was the fastest growing category of employment in 2016. Employment in this category should reach 170,000 by the first half of 2018. The pace of growth in retail trade continues to increase year after year and in 2016 reached 4.75 percent, a rate three times the historical growth of 1.28 percent. Vibrant retail trade growth is visibly evident in cities such as Turlock and in other cities along the Highway 99 corridor. The region's population influx is likely to generate strong growth in this category of employment for several years to come. ▶

Despite remaining strong, some mean reversion in the growth of retail trade employment is expected in 2017 and 2018. Increase in average weekly wages in the past year, low inflation, lower gasoline prices and an appreciating dollar all contributed to strong retail trade activity in the Valley. Categories of employment such as retail trade are a good match for the Valley's relatively unskilled labor force. Structurally, the unemployment rate in the Valley is about twice the rate of the national rate. Strong growth observed in these categories of employment helps bring structural unemployment rates in line with those existing at the national level. Projections point to a growth of 4.07 percent in 2017 and 3.68 percent in 2018. ▶

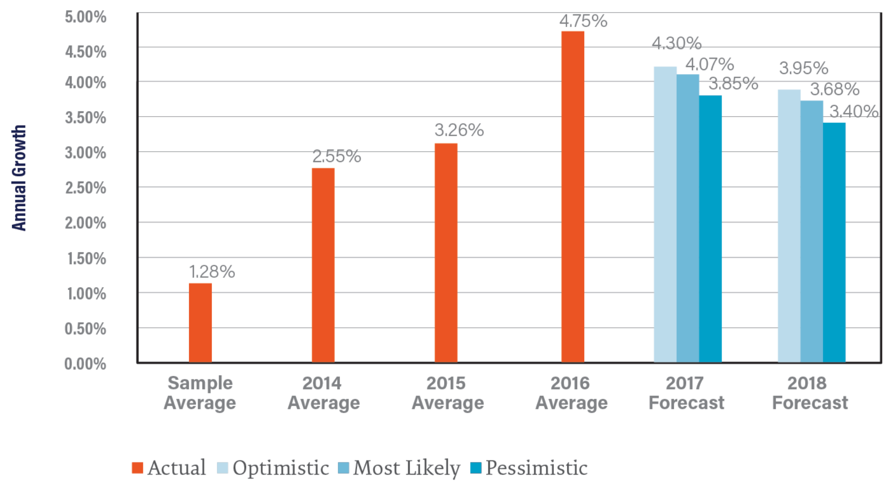
Trade, Transportation and Utilities Employment: Historical vs. Projected Average Yearly Growth



Retail Trade Employment



Retail Trade Employment: Historical vs. Projected Average Yearly Growth



Employment Indicators

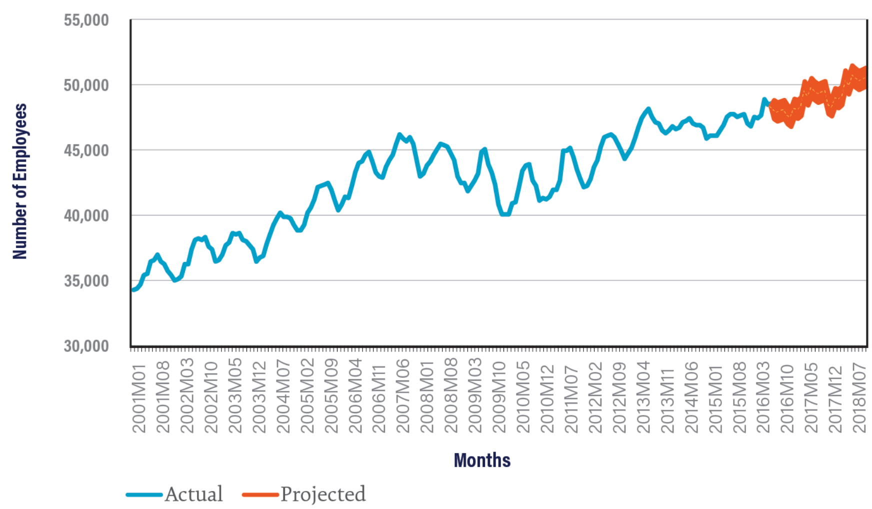
Starting with the second half of 2014, the governing dynamics of wholesale trade employment changed quite significantly. The seasonal variations observed in previous years are not so readily noticeable. The lingering effect of drought caused wholesale trade employment to abandon the strong growth exhibited in previous years. Structurally, wholesale trade employment grows faster than the retail trade employment, but 2016 was another year during which wholesale trade employment grew slower than retail trade employment.

When compared to 0.38 percent growth in 2015, wholesale trade employment in 2016 posted quite a significant growth of 2.49 percent, which was also greater than the series' sample benchmark growth of 1.99 percent. The growth in 2016 was low relative to other categories of employment, growing only marginally faster than financial activities employment. Wholesale trade employment is projected to grow at a yearly average rate of 2.26 percent in 2017 and 2018.

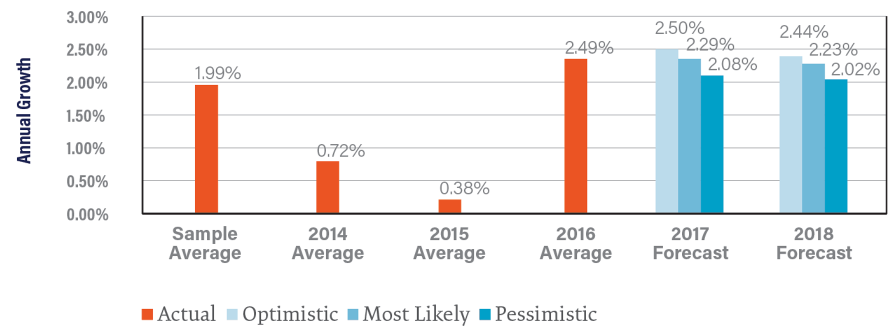
> **WHOLESALE TRADE EMPLOYMENT IS PROJECTED TO GROW AT A YEARLY AVERAGE RATE OF 2.26 PERCENT IN 2017 AND 2018.**

In stark contrast to the speedy recovery within other categories of employment, information employment was the only category of employment that had not rebounded since the end of the recession. That stagnation ended in the first quarter of 2015, and since then employment in this category has been displaying quite significant growth. At this pace, information employment will most likely exceed 12,000 by the third quarter of 2017.

Wholesale Trade Employment



Wholesale Trade Employment: Historical vs. Projected Average Yearly Growth



Information Employment

The sample benchmark growth in the Valley's information employment now stands at -1.48 percent. Growth at 2.60 percent in 2015 and 3.37 percent in 2016 is indicative of accelerated hiring in this category. Perhaps such year-after-year growth is finally reflecting positive spillovers from the coastal regions known for hosting tech giants. In light of significant positive change in the series' dynamics, ▶ projections point to a yearly average growth of 1.93 percent in 2017 and 1.07 percent in 2018.

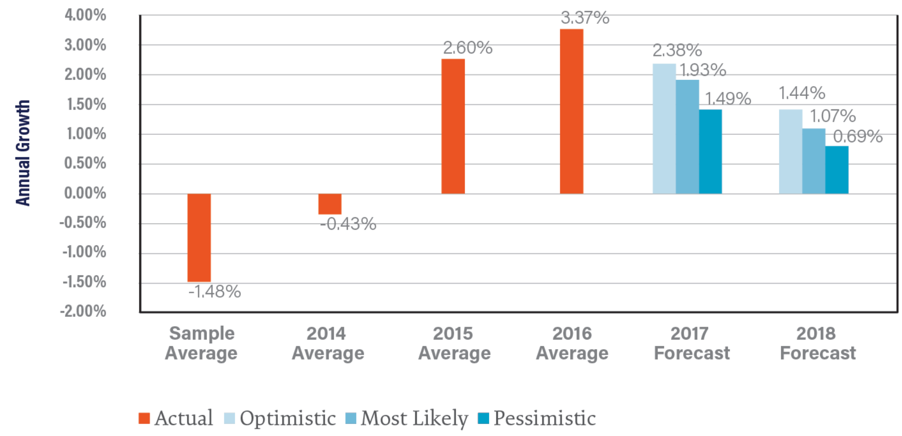
Average yearly growth in construction employment enjoyed its strongest year on record in 2014 and since has slowly retreated. No longer being the fastest growing sector, construction employment growth fell to 4.50 in 2015 and 2.65 in 2016, a slowing performance also indicated by the trend flattening since 2015. Dispersion in growth rates by metropolitan statistical areas continued in 2016. Visalia-Porterville reported a decline of 3.26 percent in construction employment, while Stockton-Lodi and Hanford-Corcoran reported 9.13 and 7.42 percent average yearly ▶ growth, respectively. Statewide growth in construction employment was 5.74 percent in 2016, which was also down from the previous year.

CONSTRUCTION EMPLOYMENT GROWTH FELL TO

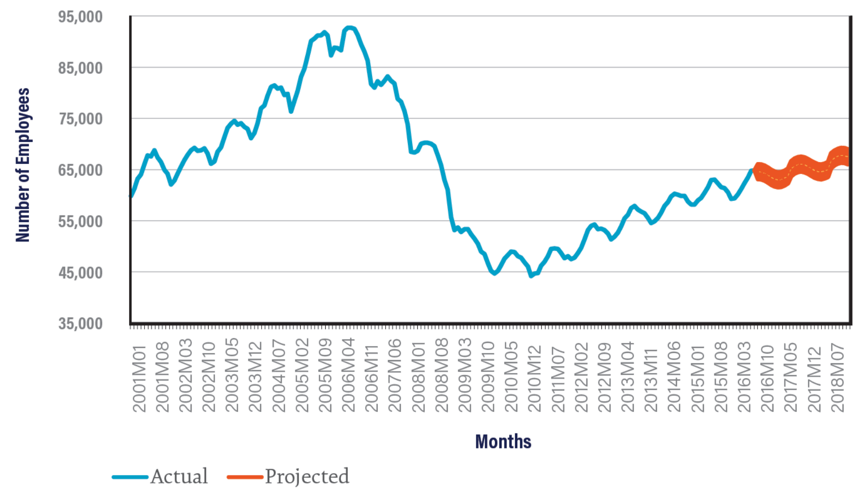
2.65% ↓

Despite the housing bubble and low interest rates, construction employment growth fell in 2016. The slower growth in 2016 took place therefore at a time when housing ▶ values increased and demand for rentals was very high. The possibility of interest rates rising in the future is likely to prevent faster growth rates in this category. Projections point to 2.96 percent average yearly increase in 2017 and 2.55 percent growth in 2018.

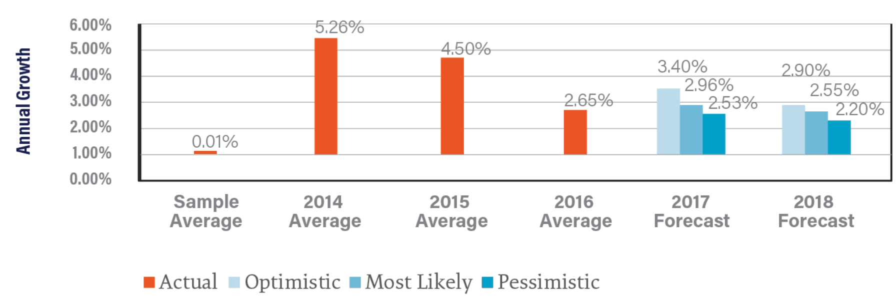
Information Employment:
Historical vs. Projected Average Yearly Growth



Construction Employment



Construction Employment:
Historical vs. Projected Average Yearly Growth

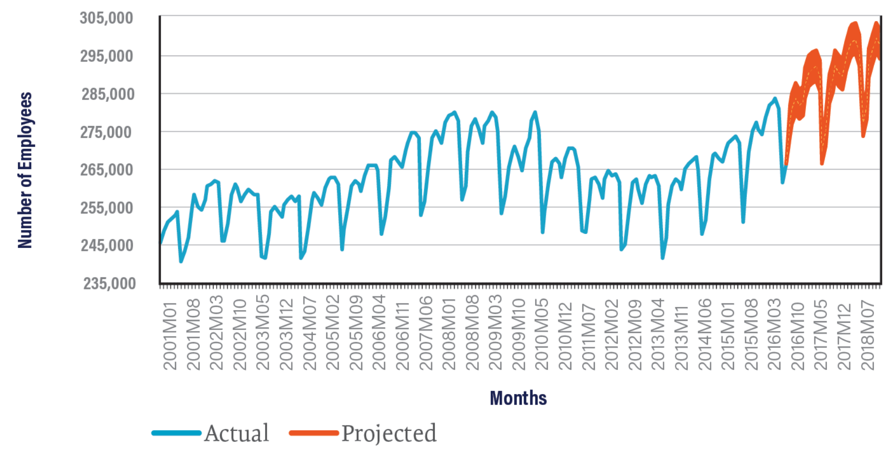


Employment Indicators

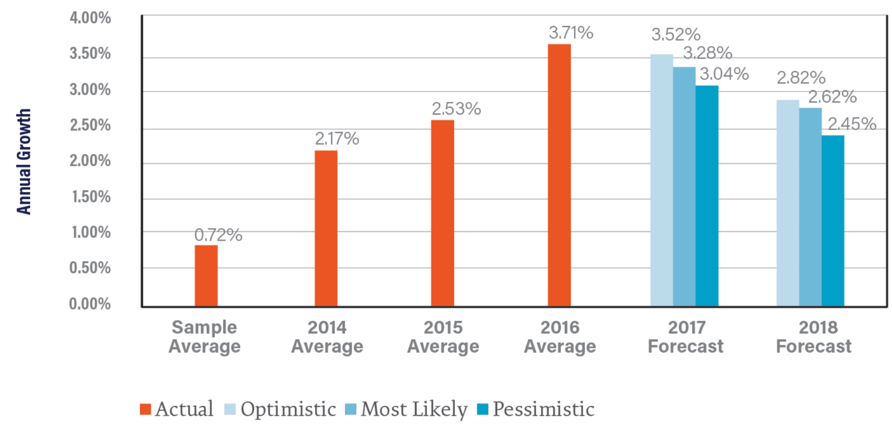
Compared to previous years, government employment grew exceptionally well in 2016. Employment in this category is projected to exceed pre-recession levels by the first half of 2017, surpassing 285,000 for the entire Valley. Government employment constitutes 17.1 percent of the Valley's total employment. As one of the main drivers of any regional economy, it is important to have growth in government employment in line with growth in other categories of employment to maintain an adequate level of public safety, improve educational attainment and provide other important social services.

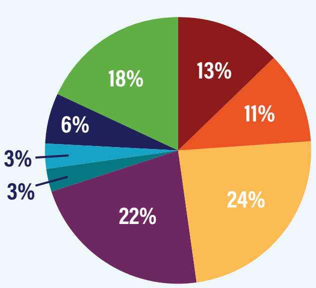
The post-recession trend in government employment is now visibly steeper than the trend observed before the recession, indicative of population influx and economic growth. Recovery in government employment in a regional economy normally occurs with some lag following the general recovery. Therefore, it is not surprising to observe relatively high growth rates in government employment now, even after several years following the end of the Great Recession. Government employment is projected to grow 3.28 percent in 2017 and 2.63 percent in 2018.

Government Employment



Government Employment: Historical vs. Projected Average Yearly Growth





Total Employment Composition by County

Fresno, Merced, Kern, San Joaquin, Kings, Stanislaus, Madera, Tulare

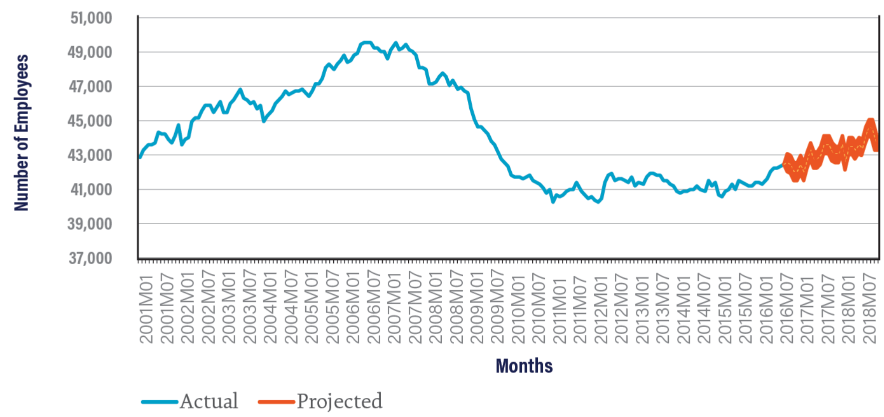
From 2001 to 2016, the structural county-by-county composition of total employment changed in favor of Kern County. The share of Kern County in Valley total employment increased by 2.01 percent (19.43 percent to 21.44 percent,) while Fresno County's share fell by 0.85% (25.04 percent to 24.19 percent.) In the same 16-year period, Stanislaus County's employment share fell by 0.64 percent (13.96 percent to 13.32 percent.) Percentage changes remained trivial, at less than 0.5 percent in other counties. The composition of county total employment numbers is changing mostly to the benefit of Kern County from other counties. The other benefiting county from this structural change was Merced County, whose share of employment increased by 0.18 percent from 2002-16 (6.01 percent to 6.19 percent.) The direction of change appears to persist through the years and does not appear to be the result of yearly fluctuations.

Valley financial activities employment grew at about the same rate as in 2015 at 2.17 percent, and significantly above the series' negative benchmark growth of -0.28 percent. The projections point to a turning point in this long-term benchmark rate, switching from negative to positive territory in 2017. At this pace, financial activities employment is projected to exceed 43,000 by the second half of 2017. ▶

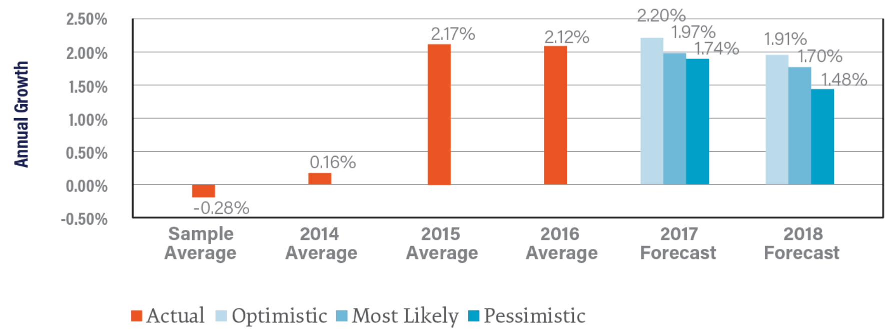
Several factors contributed to the improvement in financial activities employment over the past two years. First and foremost, interest rates remaining low in 2016 fueled a vibrant refinancing activity among Valley home owners that increased demand for financial services. The active housing market and the ensuing housing bubble also contributed to the improvement in this category of employment. Projections point to a slightly slower growth in financial activities employment at an average yearly rate of 1.97 percent in 2017 and 1.70 percent in 2018. ▶

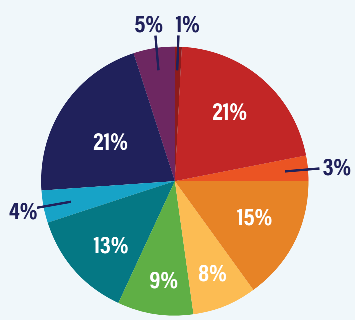
Valley total employment grew at a slower pace in 2016 than in the previous year. Employment indicators by category indicate that non-farm employment picked up the slack from a deficiency in agricultural employment. Indeed, non-farm employment grew at 3.12 percent in 2016, up from 2.51 percent in 2015. Madera, San Joaquin, and Fresno counties registered the fastest growth in total employment. Kern and Kings counties posted the slowest growth in 2016, while in Stanislaus, Merced, and Tulare counties total employment grew about the same pace as the Valley average. For the first time since the end of the recession, retail trade employment took the lead in Valley employment growth. Strong retail activity is indicative of the Valley's slow structural change in employment composition. As a category of employment that is not farm-related, retail trade employment reflects the Valley's diversification and an economic growth pattern in line with an ongoing population influx. Manufacturing employment grew at a faster pace in the Valley than it did statewide and nationally, for which contraction occurred. Trade, transportation and utilities employment was the second fastest growing category, followed by education and health services employment. Information and financial activities employment grew faster than the previous year. Wholesale employment grew at about the same rate as the previous year.

Financial Activities Employment



Financial Activities Employment: Historical vs. Projected Average Yearly Growth





Total Employment Composition by Category

- Government
- Financial Activities
- Education & Health
- Manufacturing
- Leisure & Hospitality
- Retail & Trade
- Wholsale Trade
- Trade, Transportation & Utilities
- Construction
- Information

From 2002 to 2016, the structural composition of Valley total employment by category changed more significantly. The share of education and health services employment increased 3.59 percent (11.80 percent to 15.39 percent.) Manufacturing employment declined in relative share by -1.57 percent, (9.86 percent to 8.29 percent.) Leisure and hospitality services rose 1.24 percent, (8.07 percent to 9.31 percent.) Another relatively significant decline was in government employment. The share of government employment declined 2.25 percent, (23.40 in 2001 to 21.15.) Trade, transportation, and utilities employment increased in share 1.24 percent, (19.82 percent to 21.06 percent.) The share of employment within construction declined 1.08 percent, (5.62 percent to 4.54 percent.) The changes that occurred over the same interval for other categories of employment were less than 0.5 percent.

The Metropolitan Statistical Areas (MSAs) of the San Joaquin Valley are comprised of Bakersfield-Delano, Fresno, Hanford-Corcoran, Madera-Chowchilla, Merced, Modesto, Stockton, and Visalia-Porterville. Housing indicators reflect the aggregated indicators belonging to these MSAs.

Total number of housing permits issued in the Valley grew less in 2016. Despite interest rates falling, and housing prices increasing, the pace of growth in building permits declined in 2016. The slower growth of new homes being built contributed to the supply shortage, further increasing the value of existing homes.

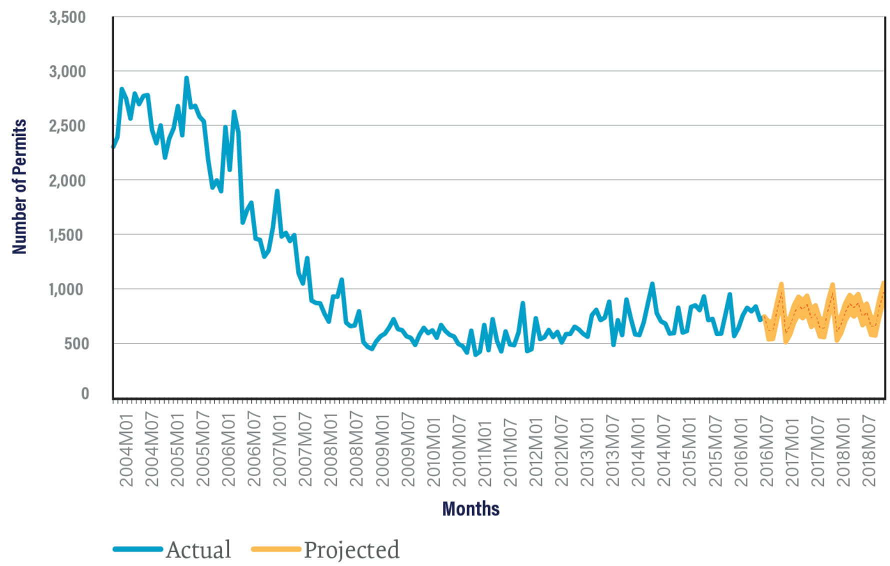
Fresno and Bakersfield-Delano MSAs issued the highest number of building permits in 2016, followed by Stockton and Visalia-Porterville. Hanford-Corcoran and Modesto MSAs had the smallest increase in building permits. Slower growth in housing permits is expected to continue as interest rates are expected to rise in the coming months. Projections point to 9.63 and 7.85 percent average yearly growth in 2016 and 2017, respectively.

Under an environment of falling interest rates, foreclosure starts in the Valley continued to fall reaching those low levels not seen since 2004 As the economy edges closer to Federal Reserve rate hikes, foreclosures are naturally expected to increase from their all-time lows. If a series of interest rate hikes were to occur in a short time frame, however, foreclosures would start increasing at a much faster rate and would pose additional risk to the regional economy.

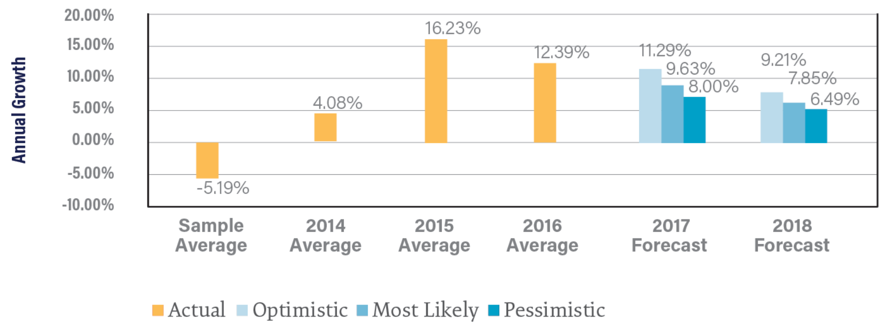
With the exception of the rates that dipped in 2013, the Freddie Mac 30-year fixed rate is at the lowest level since 1993. The Freddie Mac 30-year rate, now at 3.44 percent, has led to the formation of new new housing bubble. The fall in interest rates also spurred vibrant refinancing activity in 2016. With refinance demand high and the cost of borrowing low, Valley housing prices continued to rise.

Several factors keep interest rates from rising, including continued appreciation in the U.S. dollar, weak real economic growth and very low inflation rates. The mandate of the Federal Reserve is to prioritize price stability. Under

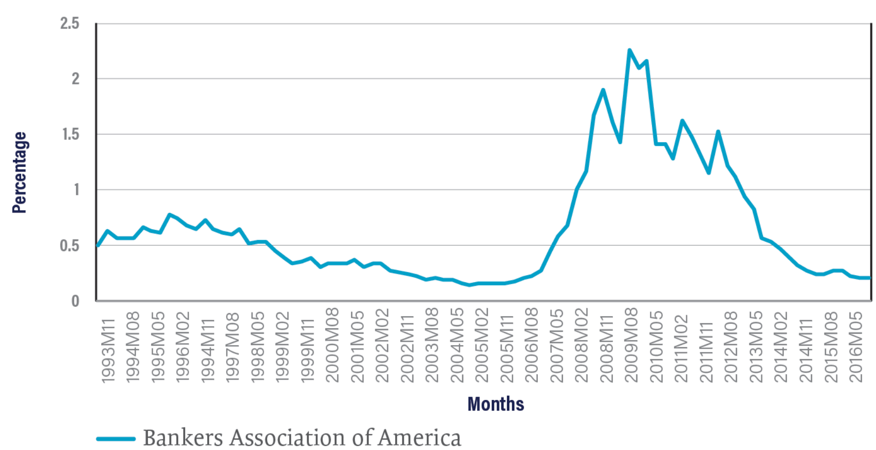
Single Family Building Permits



Single Family-Building Permits: Historical vs. Projected Average Yearly Growth



Foreclosure Starts in California

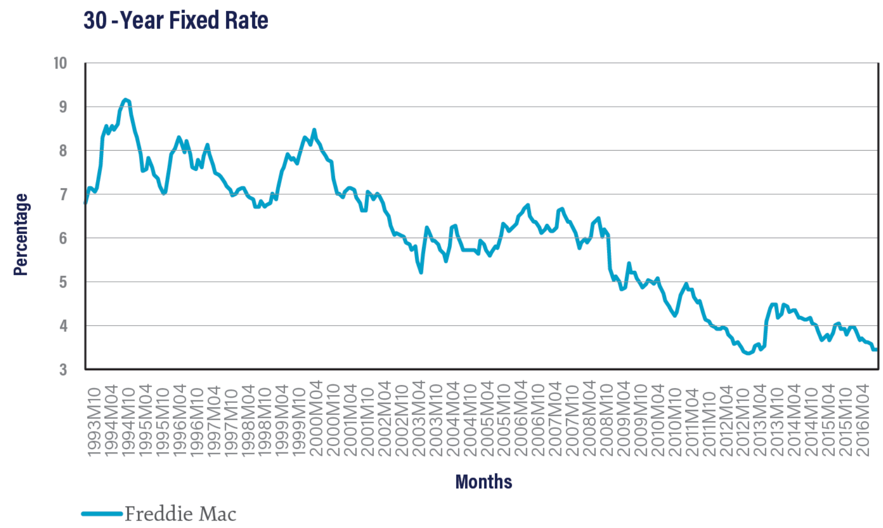


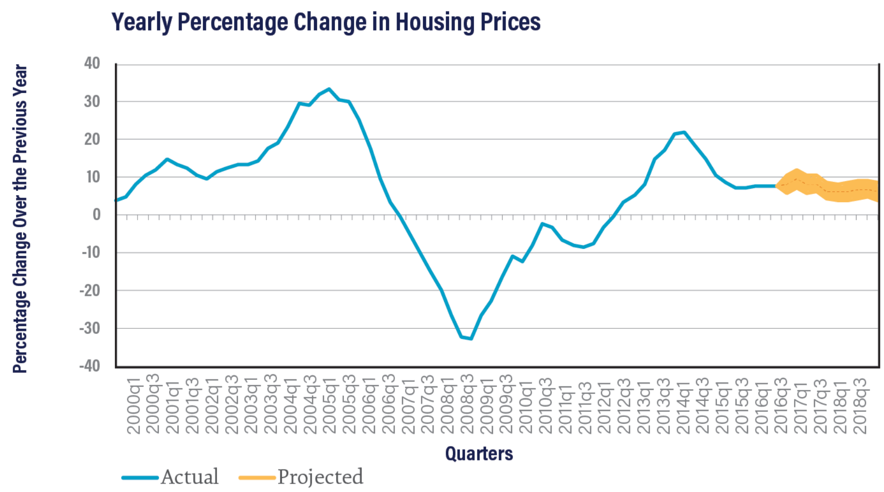
stable prices, a rise in interest rates may cause the economy to spiral into deflation and in turn a contraction in economic activity that is already exhibiting weak growth.

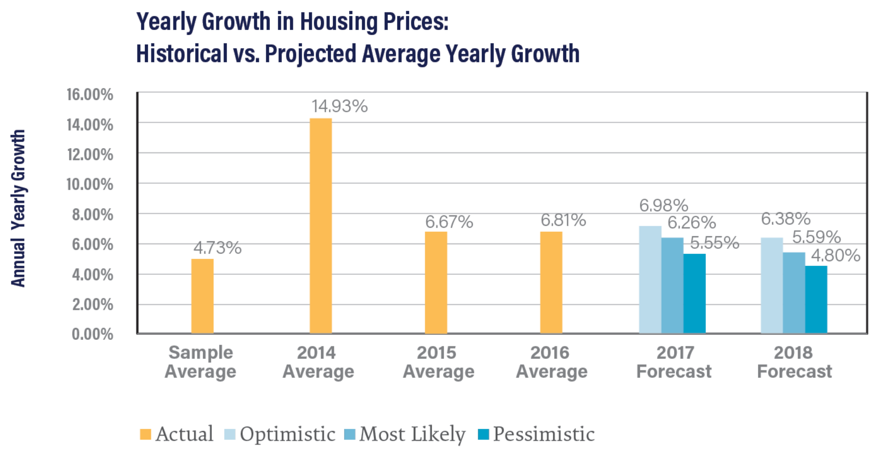
Despite these pressures to keep interest rates low, the Federal Reserve is inching closer to raising interest rates in the coming months. An interest rate hike would increase the Freddie Mac 30-year rate, which in turn would deflate the existing bubble in the housing market by decreasing demand and slowing down the growth home values. However, the correction in the housing market is not expected to hit the levels observed when the housing crisis hit the Valley economy. Many circles believe the correction in the housing market will be a healthy correction, bringing housing market indicators in line with economic fundamentals.

Home prices continued to increase in the Valley in 2016 as interest rates fell. The increase in home values was about the same rate as in 2015. Following the much-anticipated increases in interest rates, home values are projected to increase at a slightly slower pace. The extent of the impact will depend on how many times the Federal Reserve hikes interest rates, and in what time frame. If interest rates rise back-to-back in a very short time period, housing prices might very well exhibit a net decline instead of merely growing at a slower rate.

As a result of year-after-year increases in Valley home values, the series' sample benchmark rate now stands higher, at 4.73 percent. Growth in 2015 and 2016 was above this long-term rate, at 6.67 and 6.81 percent respectively. When interest rates rise, home values will rise at a slower pace due to curtailed demand. However, a lack of new homes being built keeps upward pressure on the price of single family homes and other residential units. Active rental market is another result of rising home values for millennials that cannot afford to purchase new homes. Prior to the Fed raising interest rates, it would be wise for the Valley consumer to switch from adjustable rate mortgages to fixed rate mortgages. Projections point to growth in single-family home prices at a slightly slower average yearly rate of 6.26 and 5.59 percent in 2017 and 2018 respectively.





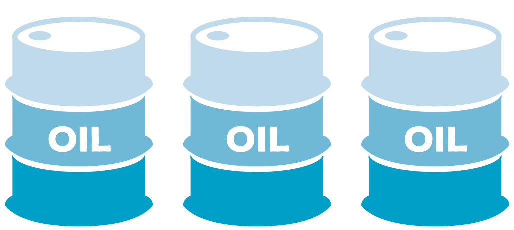


Inflation and Prices

The low price of gasoline continued to keep cost-push factors away from increasing the inflation rate in 2016. Also, the strong value of the dollar kept the price of imported goods low and increased purchasing power, enabling the Valley consumer to afford a slightly larger bundle of goods. Ongoing U.S. Treasury auctions to withdraw liquidity from the economy and weak real economic growth also contributed to very low inflation rates in 2016.

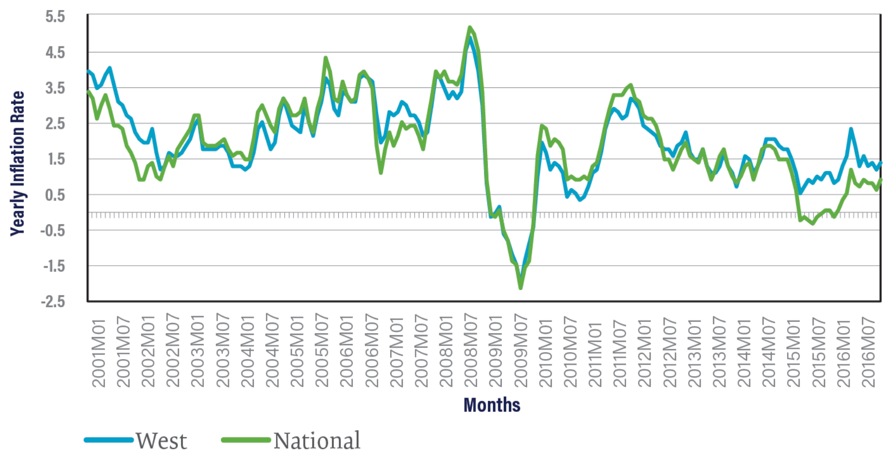
Nevertheless, prices on the West Coast have risen faster since the first quarter of 2015 than the national average by at least half a percentage point, which is indicative of regional aggregate demand continuing to expand faster than at the national level. Due to rise in costs of production from measures such as overtime pay for farm workers, price of agricultural goods will rise faster in the coming years. As long as the price of oil remains low however, inflation overall will stay anchored to the moderate rates observed in the recent past.

The rate of inflation has been oscillating around a value of 1.5 percent since the third quarter of 2013. Recently, however, the price of oil has increased to 50 dollars a barrel, and several oil exporters agreed to curtail output, predicting that the price of oil will increase significantly in the coming months. If such measures by oil producers hold, cost-push factors will be present on the inflation rate raising above 1.5 percent.

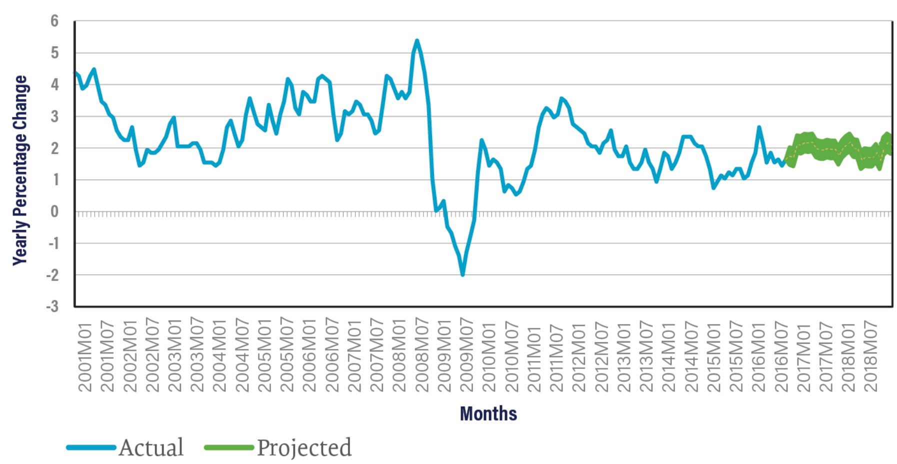


The price of oil may increase in the coming months if OPEC reduces production.

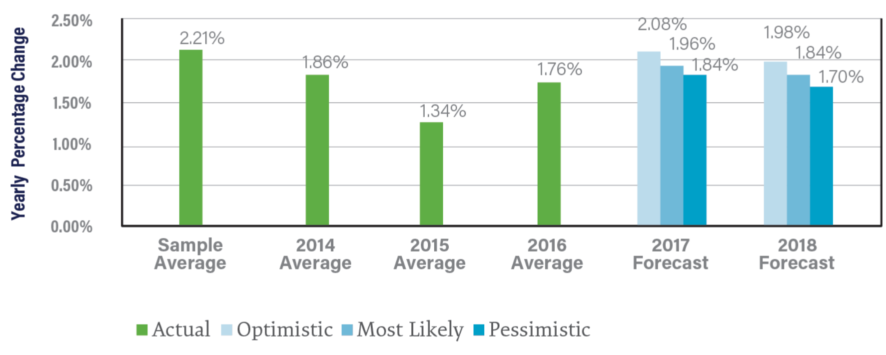
Inflation Rate: Nationwide vs. West



U.S. West Inflation Rate



U.S. West Inflation Rate:
Historical vs. Projected Average Yearly Growth



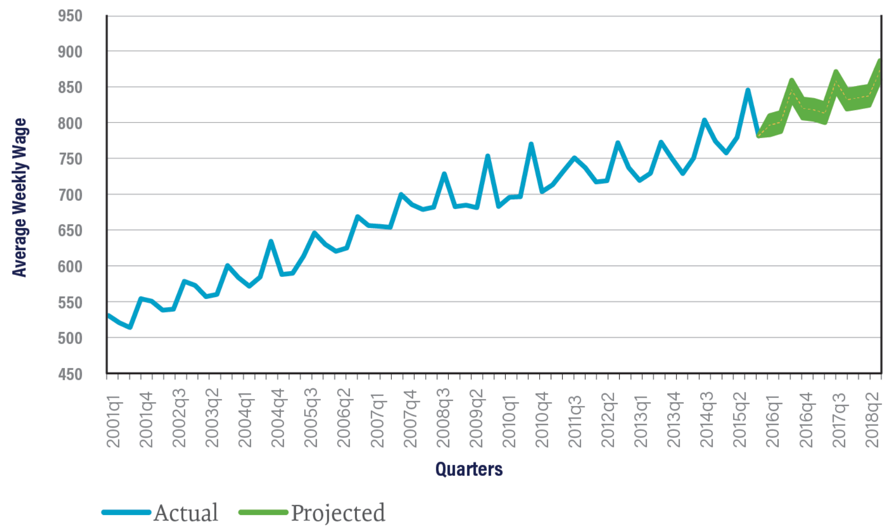
There will most likely be a slight increase in the inflation rate due to recently forming upward pressures on the price of oil. Historically, the average rate of inflation stands at 2.21 percent. Prices rose 1.76 percent in 2016, less than this average benchmark rate. Projections point to 1.96 percent inflation in 2017, and with the much-anticipated interest rate hikes and the impact on aggregate demand expansion, the average price level is projected to rise 1.84 percent in 2018 respectively. ▶

Nominal average weekly wages in the Valley grew at par with the rate of inflation in 2016, following two years in which wage growth outpaced inflation. In 2016, however, real wages stayed constant as the weekly wage growth came down to levels consistent with the inflation rate. Consumers were able to afford the same bundle of goods as they did the prior year, taking into account only inflation and wages. However, factoring in the U.S. dollar's appreciation in 2016, Valley consumers enjoyed some increase in purchasing power relative to 2015. ▶

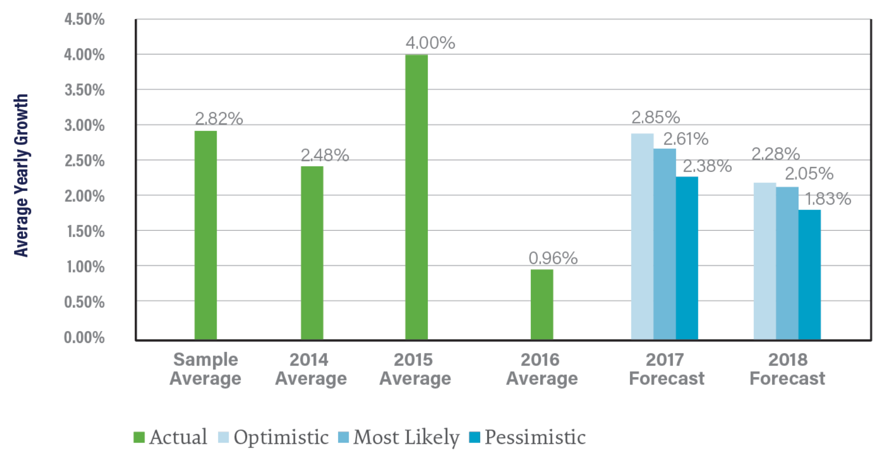
Given the tightening labor markets and the lagged response of the labor market to changes in the financial market, average weekly wages are projected to increase at a yearly average rate of 2.61 percent in 2017. As the labor market begins to cool off, the yearly average rate of increase in weekly wages is projected to grow slightly slower, at 2.05 percent in 2018.

The discrepancy between average weekly wage growth and the inflation rate ▶ disappeared in 2016. This discrepancy in favor of the average weekly wages had reached a maximum in the third quarter of 2015. As the Federal Reserve edges closer to a rate hike, labor markets are expected to adjust to reflect this effect of higher interest rates on the economy. A spike in the rate of inflation due to an increase in the price of oil from cutbacks in output, however, would correspond to a decrease in real wages and a loss of purchasing power relative to previous years.

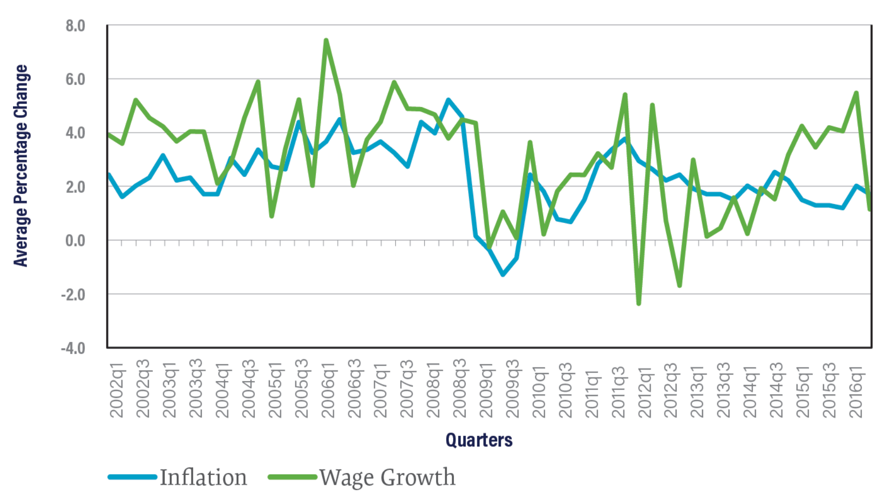
Quarterly Average Weekly Wages



Weekly Wage Growth:
Historical vs. Projected Average Yearly Growth



Yearly Wage Growth vs. Inflation



Banking and Capital Markets

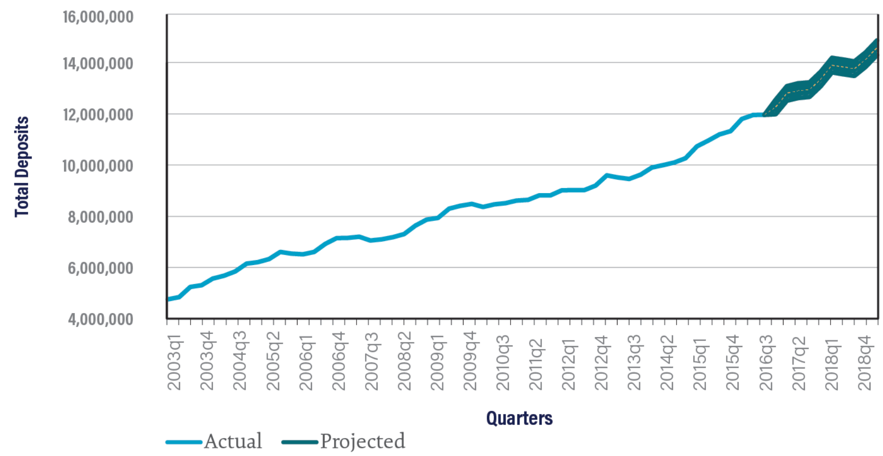
Valley total bank deposits increased in 2016 but at a rate less than that of 2015. The dynamics observed in total bank deposits are consistent with the dynamics in total employment, with both growing at a rate slower than in 2015. As was observed in its effect on total employment, the continued effects of drought became apparent on Valley total bank deposits as well. ▶

At 8.45 percent average yearly growth, bank deposits in the Valley grew more than the series' benchmark growth of 7.13 percent. Although less than 2015, the growth rates observed in Valley total bank deposits were significant enough to pull the long-term average growth rate even higher. If much-anticipated rate hikes become a reality in the coming months, Valley bank deposits likely will grow slightly faster in 2017. Valley total bank deposits are projected to grow at an average annual rate of 8.45 percent in 2017, and with the economy cooling from the rate hikes, 6.01 percent in 2018. ▶

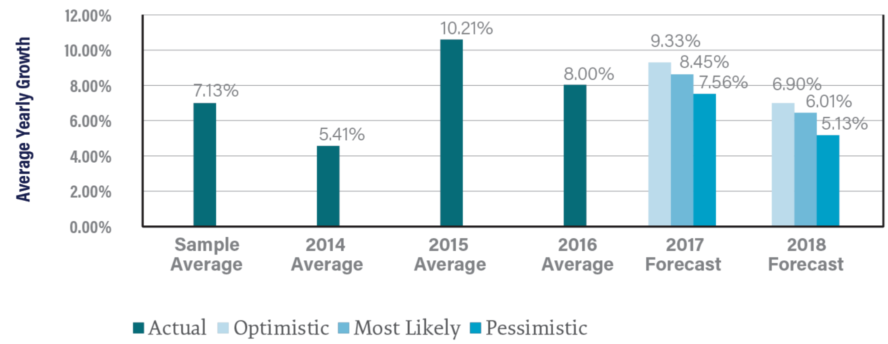
Interest rates fell to all-time lows in 2016

Bank assets in nonaccruals reached their lowest levels since 2006. Interest rates falling to all-time lows in 2016 had a significant role to play in a continued declining pattern in ▶ nonaccruals. As interest rates have nowhere to go but up in the future from these very low rates, nonaccruals are expected to increase in the coming months. The pattern observed in nonaccruals is consistent with the pattern observed in bank assets past due 30 to 89 days and 90 days plus levels.

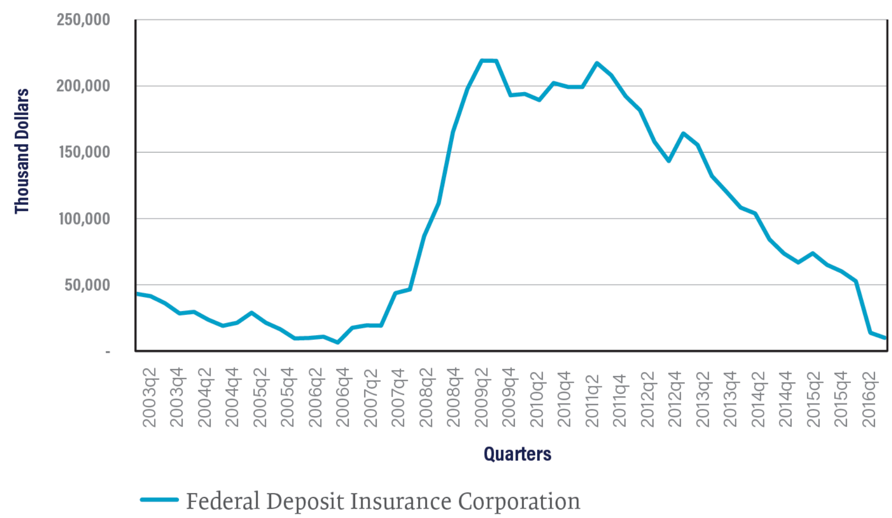
Total Bank Deposits (in $ Thousands)



Total Bank Deposits:
Historical vs. Projected Average Yearly Growth



Assets in Nonaccrual



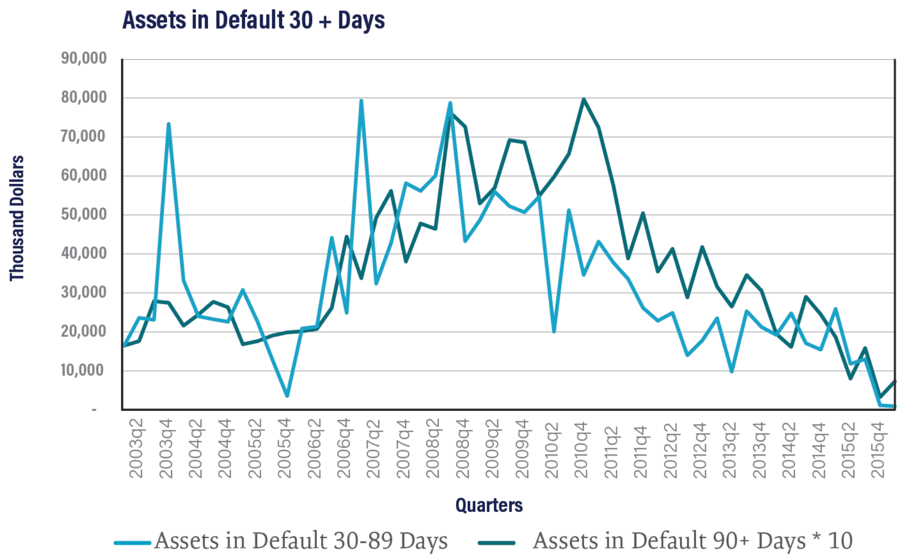
As 30-year interest rates continued to fall in 2016, bank assets past due 30 to 89 days and 90 days plus displayed a falling pattern in 2016. Both indicators are now at their lowest levels since 2006. However, as in nonaccruals, bank assets due 30 to 89 days and 90 plus days are expected to show some tendency to increase in the following months as interest rates begin to move upward. ▶

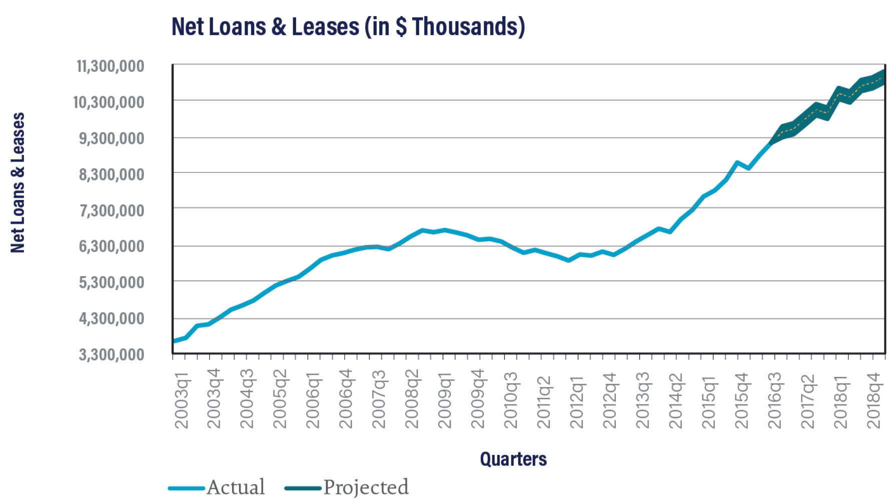
The dynamics observed in Valley net loans and leases is also consistent with movements in total bank deposits. Both indicators grew at a slower speed in 2016 than 2015. As interest rates rise in the coming months, however, a divergence is expected whereby Valley net loans and leases growth will likely slow further, following the higher costs of borrowing. ▶

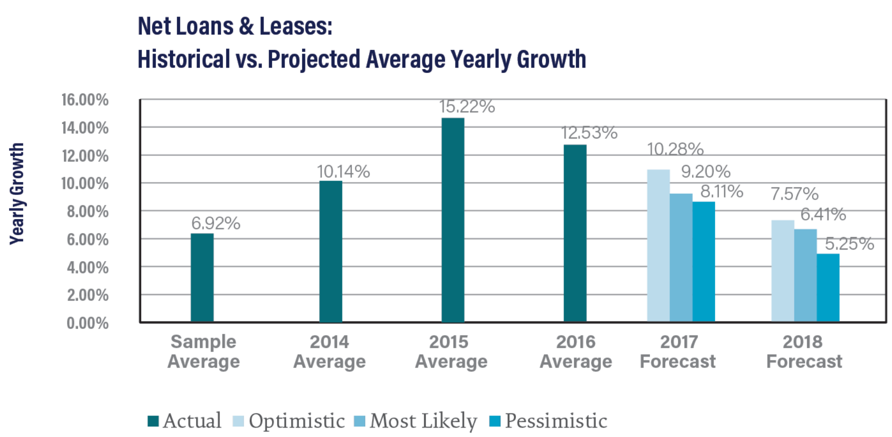
> **"... IN THE COMING MONTHS, INTEREST RATES WILL LIKELY INCREASE."**

Valley net loans and leases increased 12.53 percent in 2016, slower than 2015's 15.22 percent. As was the case in Valley total deposits, net loans and leases in the Valley still grew at a rate higher than the series' benchmark rate of 6.92 percent, pulling the overall average yearly rate upward. With higher borrowing costs, the Valley net loans and leases rate is expected to grow more slowly in the coming months. Projections point to a yearly average growth of 9.20 percent in 2017 and 6.41 percent in 2018. ▶

Thirty-year interest rates continued to fall in 2016, reaching all-time lows and spurring further refinancing activity in the Valley. However, in the coming months, interest rates have nowhere to move but upwards. The rise in interest rates is likely to change the dynamics governing the financial sector. Bank profitability is expected to rise in the Valley, but at the same time the cost of borrowing will be higher, leading to slower growth in sectors such as retail trade and leisure and hospitality services.







Concluding Remarks

The lingering effects of drought greatly impacted total employment numbers in the Valley. Despite non-farm employment categories generally growing faster, total employment grew at a slower speed in 2016 than in 2015. Consequently, non-farm categories picked up the slack resulting from farm-related employment.

Retail trade employment was the fastest-growing sector for the first time since the end of the recession, reflecting the slowly changing structure of the Valley. Trade, transportation and utilities employment grew the second fastest, followed by education and health services employment and retail trade employment. Manufacturing employment continued to grow significantly above national and state rates, which posted declines in 2016. All counties and categories of employment grew in 2016, displaying resilient economic activity even under the lingering effects of drought. With the influx of population increasing in the Valley, it becomes ever important to increase water storage.

The year of 2016 was another year during which housing prices increased but remained in line with the series' overall average growth rate since 2001. All-time low interest rates appear to be creating a bubble in the housing market, which is due for some correction.

Projections point to slow growth in housing prices in the coming months. A decline in the growth of new homes being built will likely keep demand high but at levels lower than when interest rates remained low.

"...DESPITE THESE STRONG HEADWINDS IN THE MONTHS AHEAD, THE VALLEY'S RESILIENT ECONOMY WILL CONTINUE TO GROW."

Inflation rates in the West continued to stay at moderate levels but higher than the national average. Low inflation rates are mainly attributed to the low price of oil. If agreements hold between oil-exporting countries to cut production, the price of oil is likely to rise significantly and start exerting pressure on cost-push inflation. Average weekly wages posted growth rates lower than 2015 and at a rate consistent with the inflation rate in 2015 with the two series converging in 2016. This new pattern in wages is likely to continue in the coming months.

Valley bank deposits and net loans and leases grew more slowly than in 2015, showing consistent dynamics. The continued fall in 30-year rates spurred further refinancing activity in 2016. Now would be a good time for the Valley consumer to switch from adjustable rate mortgages to fixed rate mortgages, as interest rates continue to stay low. Because the Federal Reserve inches closer to rate hikes in the coming months, increases in bank asset nonaccruals and accruals past due are naturally expected. The growth rates in bank deposits and net loans and leases in the Valley were still above their overall averages, posting significant growth, though lower than in 2015. Following the rate hikes, bank profitability is expected to rise in the Valley.

Overall, the Valley economy will grow at more cautious rates, facing several challenges such as new farm worker overtime pays, lingering effects of the drought, new regulations on cow emissions and future rate hikes. However, despite these strong headwinds in the months ahead, the Valley's resilient economy will continue to grow.

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