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San Joaquin Valley

BUSINESS FORECAST

EMERGING TRENDS IN THE VALLEY'S ECONOMY

Stanislaus State

Table of Contents

SAN JOAQUIN VALLEY BUSINESS FORECAST 2020

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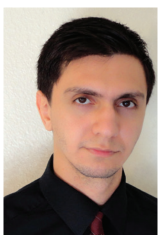

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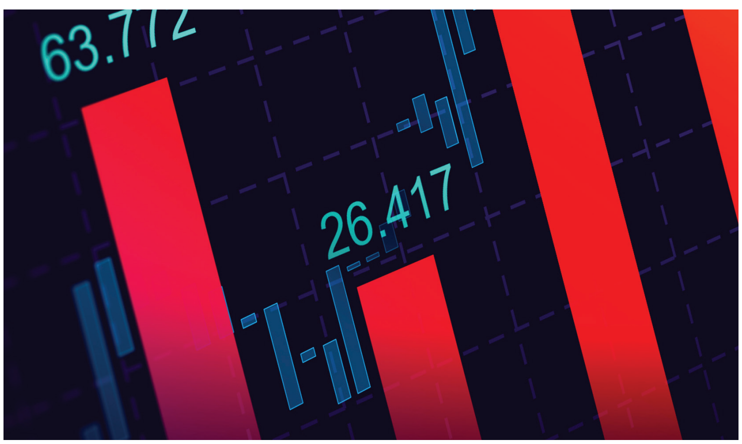

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Executive Summary

The San Joaquin Valley is going through a very extreme economic hardship as a result of the COVID-19 outbreak. An event such as this is called "Black Swan" in finance literature because of its extremely rare devastating nature. On the positive side, social distancing measures are working more effectively in California than in other states. Further, multiple vaccines are in the works, and some have begun human trials. Because of the positive impact of social distancing and the data that will emerge from increased testing and tracking, Valley residents most likely can expect economic recovery to begin in the second half of 2020, with the level and speed of the recovery closely tied to our nation's success in battling the virus.

The forecasts in this report inevitably rely on the available information at the time of writing, including reports that portions of the economy will begin to reopen in May and June of 2020. Any delay in the opening will alter the timing of the recovery.

For the first time since the recessionary years – also a first in the nine-year history of this report – our previous forecast had predicted a decline in economic activity poised to occur in the second quarter of 2020. The virus-related impact on the nation's economy began in March 2020, so our prediction regarding the economic turning point was not entirely off the mark. However, the combination of the virus with the factors poised to cause a decline caused the predicted magnitude to be significantly exceeded. The national unemployment rate is expected to grow to between 15-30 percent in the second quarter, and the Valley's unemployment rate generally runs twice the rate of the nation.

Because of the less-developed structure of the labor markets in the Valley, this region's recovery is expected to be a bit slower than the nationwide rebound.

Most of us probably never have seen a pandemic-related environment such as the one we are experiencing. But for some time before the virus arrived, the economy had been slowing at a gradually increasing rate, showing strong signs that the longest expansionary phase of the economy was nearing an end. These signs prompted the warnings in our earlier reports to take precautionary positions, such as downsizing and lowering debt exposure. Because COVID-19 overwhelmed and interrupted this cycle, the aftermath is likely to trace a different trajectory than it would have without the arrival of the virus.

The effect of the pandemic is being felt across all categories of employment. Leisure and hospitality services employment likely will be affected the most, while education and health services employment will be impacted the least. Because we are mostly a farm-related economy, the effect on trade and transportation employment as well as wholesale trade will be a bit less than other categories of employment. Retail employment, which already was declining before COVID-19, appears to be another category feeling the impact quite heavily. Construction employment was the fastest-growing category in 2019. With relief packages having an effect, the decline in construction employment likely will be lighter than on other categories of employment.

The projections point to a recovery, with an annualized growth of 1.05 percent in total employment from the second half of 2020 to the first half of 2021, falling behind the Valley's typical growth of 1.19 percent. In the following interval, from the second half of 2021 to the second half of 2022, Valley total employment will exceed typical growth, expanding at an average annual rate of 1.26 percent.

Building permits likely will decline, reflecting an economy in recession, but recovery will be fastest in the construction sector due to several factors: the Federal Reserve's action to pull the federal funds rate to zero; the relief package already in place and the low housing inventory in the Valley. The demand for Valley housing will receive an additional boost from an increasing number of Bay Area residents seeking the less-hectic and safer lifestyle offered by the Valley. The numbers of foreclosures started will climb slightly, as they do during recessionary periods, but will revert to all-time lows following the recovery. The recession will suppress home values for about six months. The rate of appreciation will remain positive, but will trail the long-term benchmark rate, growing at rates less than those observed in 2018 and 2019.

Following the break-up of the oil cartel in March, the price of oil fell to 18-year lows. This, along with recession, will mean lower inflation rates in the nation and the Valley for the next couple of months. The yearly inflation rate will land well below the typical rate of 2.32 percent. As it does during recessions, wage growth will drastically fall below the long-term benchmark rate. Falling wages and rising unemployment will contribute to a significant decrease in purchasing power during the recessionary months, then start to climb back in the fourth quarter of 2020 with the bounce-back of the economy and rebounding oil prices, as influenced by the newly signed deal among oil-exporting countries.

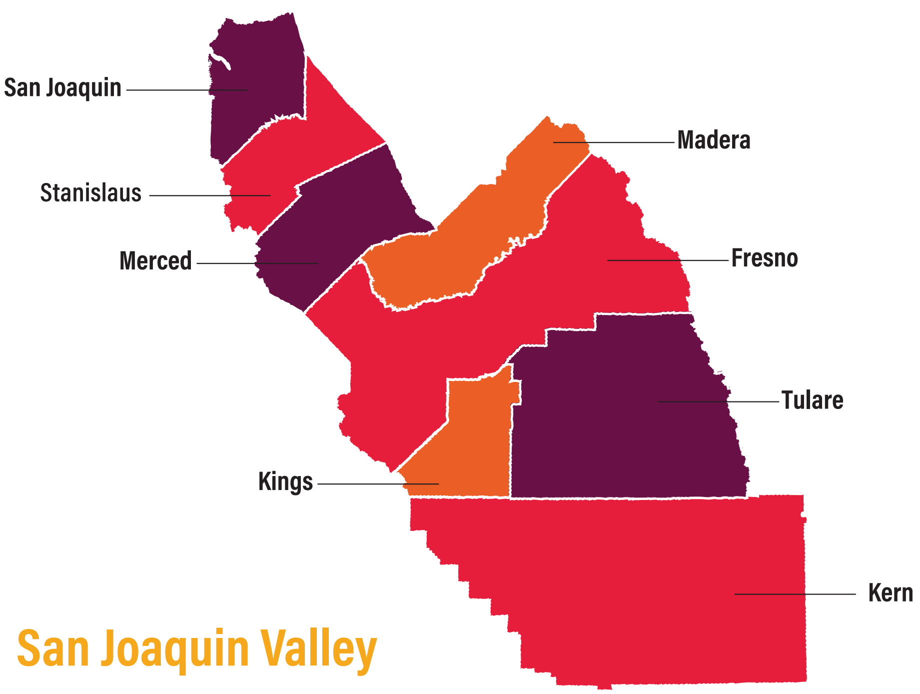
During these recessionary months, the Valley's banks will see stagnant growth in total deposits while growth in net loans and leases fall below their long-term benchmark rates. The expectation is that Valley banks will keep extending loans during the recessionary times to alleviate the negative effect of the recession – it is notable that Valley banks deferred extending loans for a long time during the Great Recession. Valley bank non-accruals likely will trend sharply upward during the recessionary months and through the recovery period, along with accruals 30-to-89 days and accruals 90-plus days. This trend should continue until the Valley economy is fully back to normal and has erased the increased unemployment resulting from the pandemic.

Introduction

This year's update examines data from January 2001 to April 2020. Two-year medium-term forecasts are from May 2020 to June 2022. Forecasting a range rather than a point provides a more realistic assessment of likely future values. When actual numbers fall within the upper and lower forecast bands, the forecast becomes accurate. It is important to note that these forecasts inevitably rely on the available information at the time of writing, including reports that the economy will begin to reopen during May and June of 2020. Any delay in the opening will alter the timing of the recovery.

The real estate online database we introduced last fall is working well and is available to researchers and practitioners free of charge, thanks to Foster Farms and a grant from the Northern California Chapter of the Appraisal Institute. The database houses the information we've collected in addition to additional data related to the San Joaquin Valley and the Bay Area. The database can be accessed at https://www.csustan.edu/real-estate-data-portal. The aim of the site is to be the primary source for researchers and practitioners who wish to study the Valley in relation to other regions in California and the nation.

The remainder of this report is structured as follows: labor market conditions for the San Joaquin Valley; a look at the real estate market in the eight metropolitan statistical areas of the Valley; a discussion of prices and inflation; an examination at indicators from local banking and capital markets; and a conclusion.



Employment Indicators

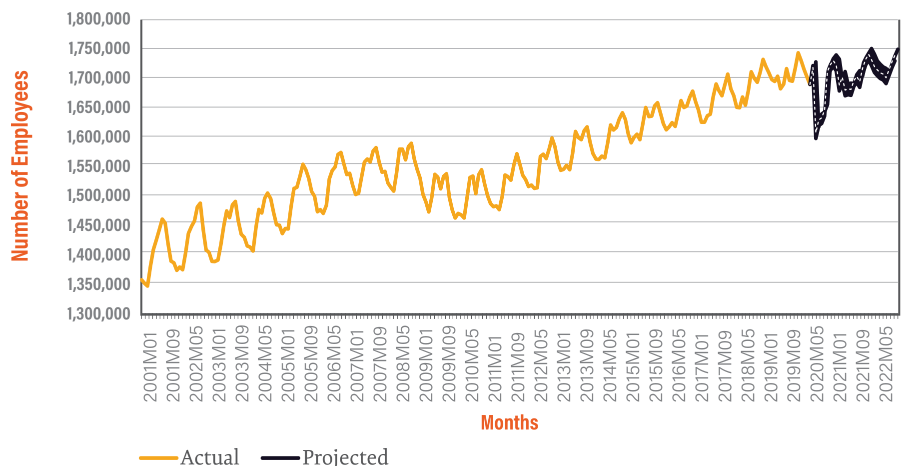
Two very significant developments occurred in the first quarter of 2020. One was the COVID-19 pandemic that caused extremely significant damage to the Valley economy beginning in mid-February. The other was the fall in oil prices to 18-year lows following the break-up of the oil cartel. Both were unprecedented in terms of recent history and the result was an abrupt increase in unemployment rates and rapidly declining economic activity in the Valley and across the nation.

The Valley economy already had begun to slow prior to the COVID-19 pandemic, most visibly in the two quarters preceding the pandemic. The previous year's forecast pointed to a decline in economic activity during the second quarter of 2020. It is the first such decline since the end of the recessionary years and signals an end to the nation's longest period of economic expansion.

The pandemic, an extremely rare occurrence, has Valley residents going through extraordinary times. The recovery likely will occur much quicker than in the years following the Great Recession, but improvement will be a bit slower in the Valley than across the nation. The pandemic's resulting recession changed the trajectory of the projected slowdown and a relatively speedy improvement is expected to begin this year sometime in the third quarter, with activity almost back to normal in the fourth quarter. With this new trajectory, total employment in the Valley is expected to remain below 1,775,000 in the two-years interval.

The least affected category of employment during the Great Recession was education and health services employment, and projections show that this category again will be least affected from pandemic-related recession. Conversely, leisure and hospitality services employment is expected to be the most-affected category of employment, followed by retail trade employment. It is important to note that retail trade employment already was declining before the pandemic. Because Valley employment is farm-related, trade and

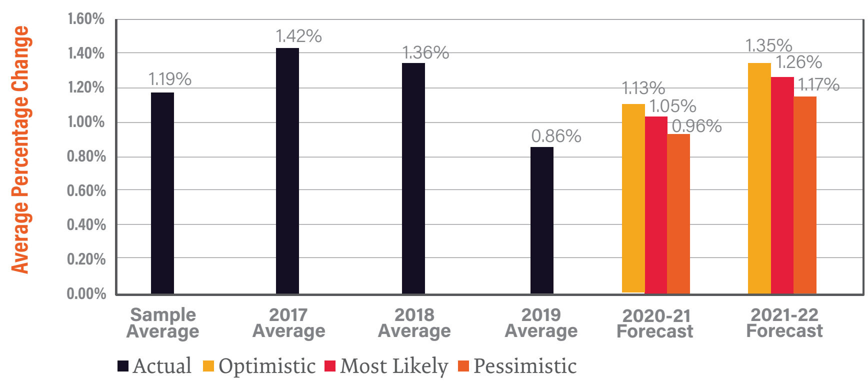
Total Employment



transportation employment is expected to be the second least-affected category.

The average annual growth in Valley total employment was 0.86 percent in 2019, significantly below the 1.19 percent long-term benchmark. Total employment growth had been gradually falling since 2017, with a more significant drop in 2019. The recession means growth rates will switch from positive to negative territory for at least a quarter. With the

Total Employment:
Historical vs. Projected Average Yearly Growth



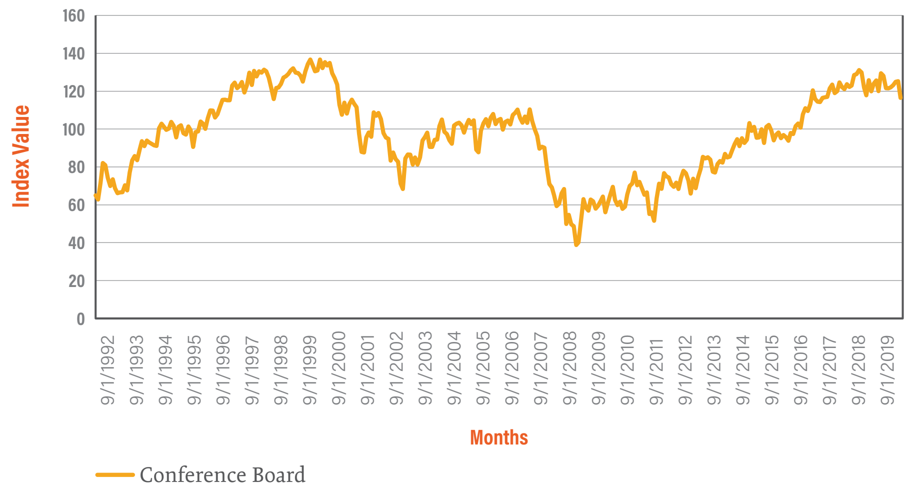
recovery in the second half of 2020 likely extending into to the first half of 2021, the average annual growth rate projects at 1.05 percent. Then recovery will likely continue at a faster average yearly growth of 1.26 percent from the second half of 2021 to the first half of 2022.

The Consumer Confidence Index (CCI) is another important leading indicator predicting economic behavior in the months ahead. The CCI had remained flat (around 130 index points) since the third quarter of 2018, but suddenly took a sharp negative turn in March 2020, falling below 120 points. The pessimistic consumer outlook relative to previous months most likely will continue for a few more months before beginning to rise again.

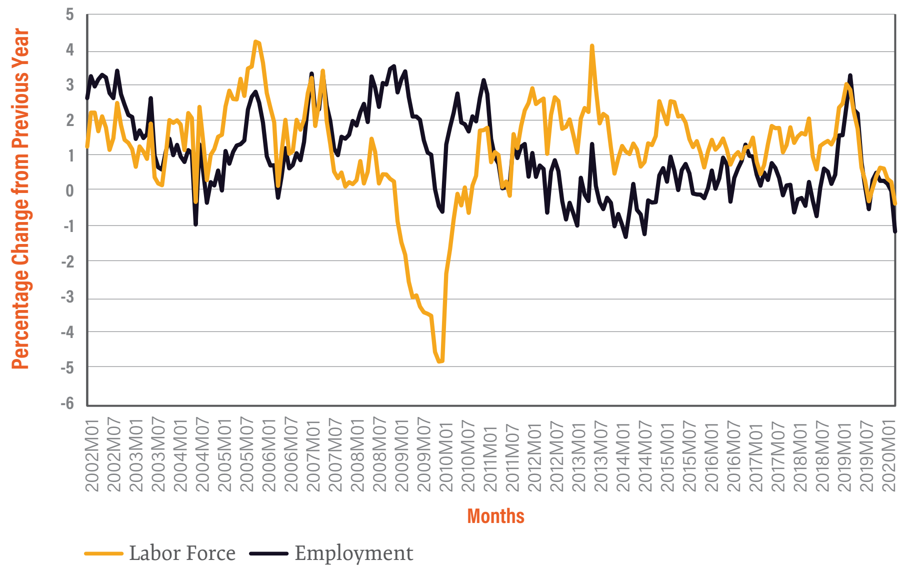
The rates of the Valley's total employment and labor force growth continued to overlap for about 12 months. We flagged this peculiar pattern in our last report as an early warning of a recession, since it last occurred just prior to the onset of the Great Recession. Interestingly, a recession is now following this pattern in the first and second quarter of 2020, establishing this pattern as a viable recessionary warning signal.

Employment growth in the Valley fell below state employment growth in 2019, giving us another indication of the regional economy's vulnerable nature. Further, growth in Valley employment became negative in the month of July 2019 – the first-time monthly decline since the second half of 2011. Recessions are more significantly felt in areas similar to the San Joaquin Valley. where the structure of the labor force is based on lower educational attainment levels and greater proportion of unskilled to skilled workers.

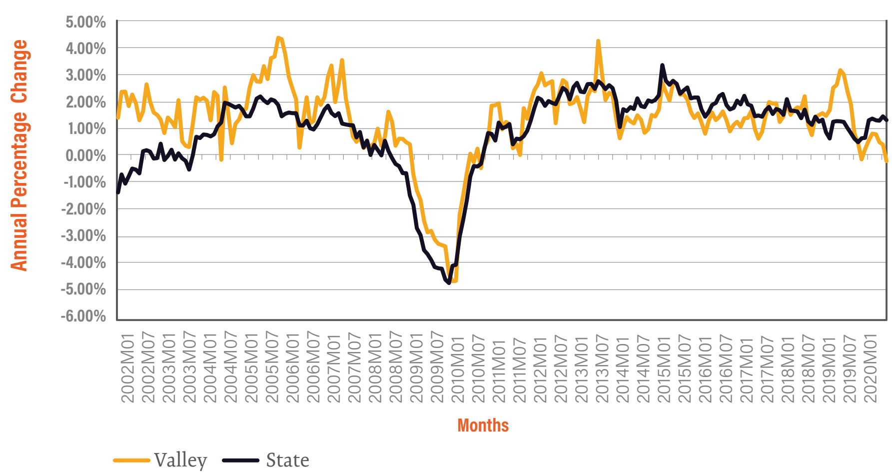
Consumer Confidence Index



Labor Force vs. Employment Growth



Employment Growth: State vs. San Joaquin Valley



Employment Indicators

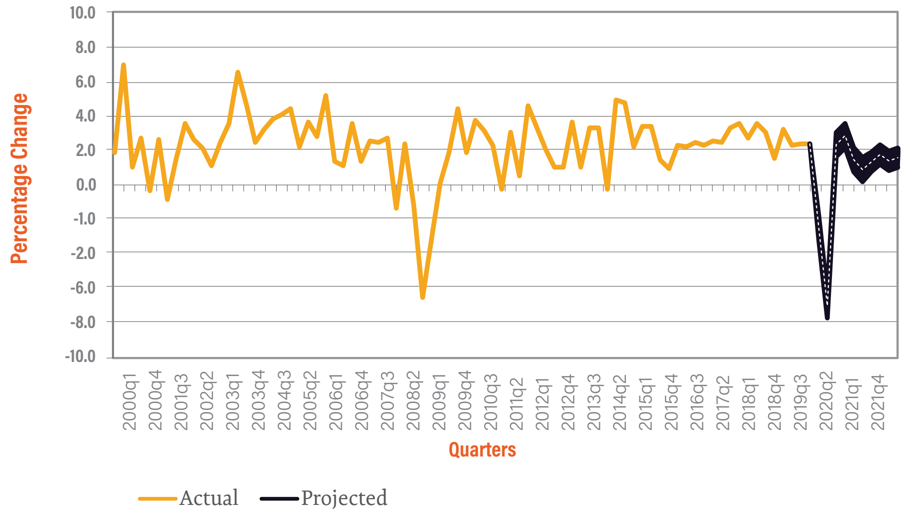
The discrepancy between employment growth in the Valley and the state reversed in the second half of 2019. Employment growth in the Valley switched from positive to negative territory in the first quarter of 2020, while statewide employment growth managed to remain positive. Such a difference in the pattern of both series again underscores the more vulnerable labor conditions in the Valley.

The inverted yield curve as a leading indicator has predicted recessions seven times in the past and again in 2020. The slow-down indications also were present in other leading indicators, such as the CCI, the purchasing managers index and several other important indicators of employment. Our negative GDP growth forecast for the second quarter from the previous report turned out to be accurate. Our updated real GDP forecasts point to a decline of 3.6 percent in the first quarter and an 8.96 percent decline in the second quarter of 2020. Real GDP annual growth is projected to become positive in the third quarter and fourth quarter at 2.06 percent and 2.66 percent, respectively.

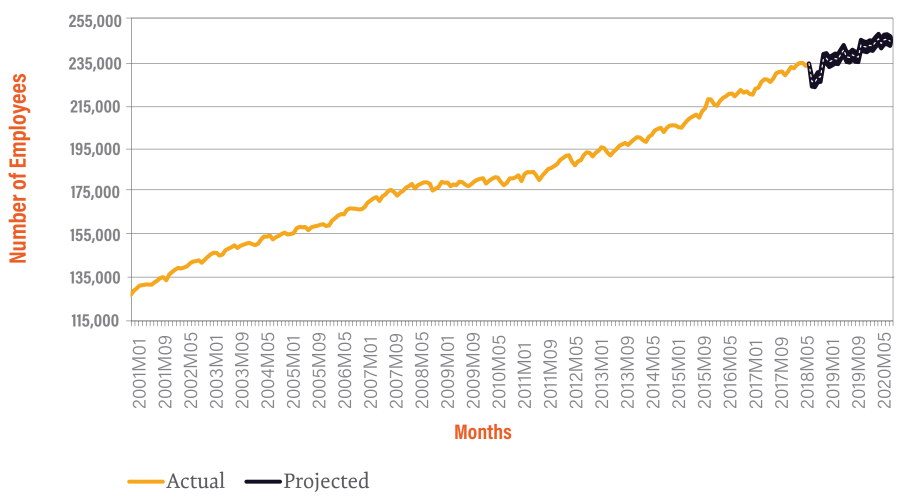
Relatively speaking, the robust dynamic of the education and health employment series is not likely to be altered much during the recession even though the negative employment effect of the COVID-19 pandemic is expected to be across the board. Different from the Great Recession, non COVID-19 related health offices closed temporarily to minimize potential infections. Despite the closure of some health care centers, Valley education and health employment will continue to be one of the fastest-growing categories of employment in 2020. At the slower pace, education and health services employment likely will remain below 255,000 in the next two-year interval.

The rebound in education and health services employment will be quicker than the one observed during the Great Recession. From the second half of 2020 to the first half of 2021, average yearly growth in this category

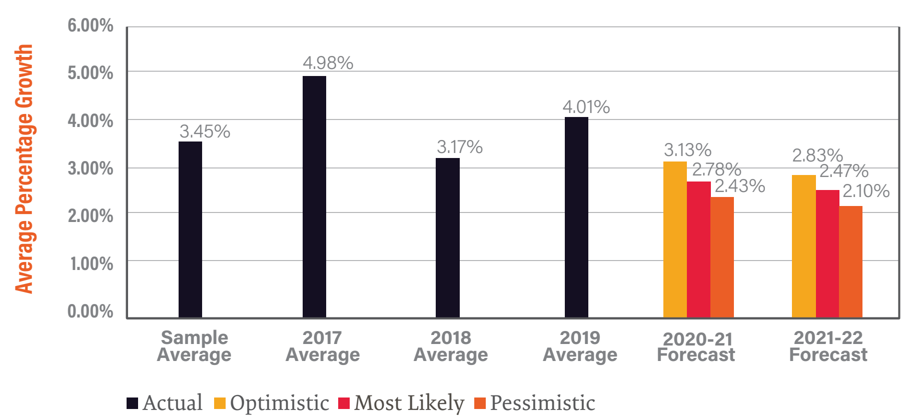
U.S. Real GDP Annual Growth



Education and Health Services Employment



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



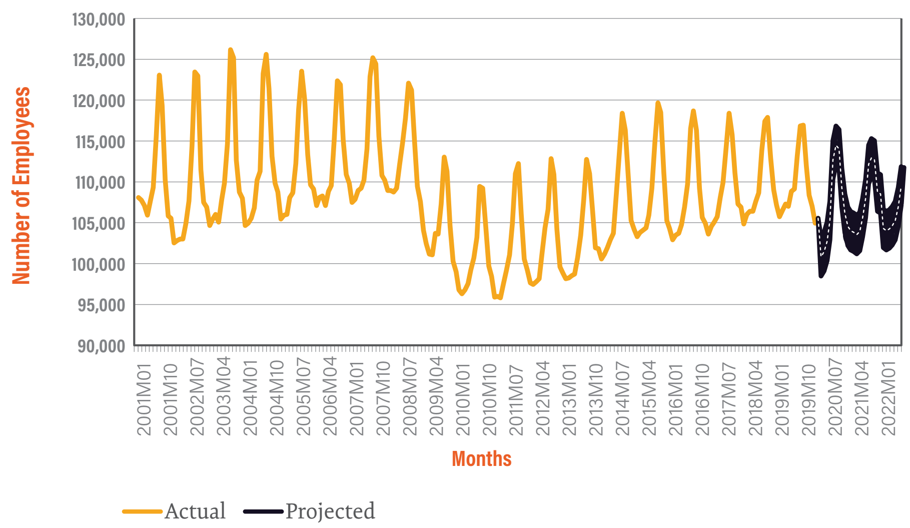
of employment is expected to be 2.78 percent. From the second half of 2021 to the first half of 2022, growth is expected fall a bit to 2.47 percent, growing less than the long-term benchmark growth of 3.45 percent in each of the 12-month intervals.

The manufacturing employment ▶ sector in the Valley had been feeling the impact of ongoing trade wars. Even if trade wars were resolved immediately, the j-curve effect of existing and new contracts to be filled would extend the effects for another six to 12 months. Further, the intensifying economic slowdown had resulted in manufacturing employment to decline in the Valley for the first time since the recessionary years.

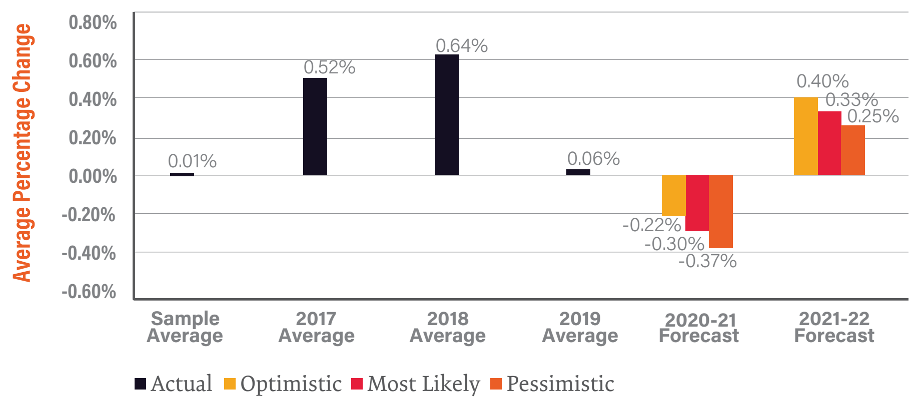
There was basically no manufacturing employment growth in 2019. Due to the pandemic, manufacturing employment will fall initially but stay around 110,000 in the months ahead. Manufacturing ▶ employment also declined statewide and at the national level. Projections point to average yearly decline of 0.30 percent from the second half of 2020 to the first half of 2021 and a small increase of 0.33 percent from the second half of 2021 to the first half of 2022.

The Purchasing Managers Index of Institute for Supply Management (ISM) had begun to improve in the fourth ▶ quarter of 2019 as China and the United States began working together to ease trade restrictions. In the first quarter of 2020, however, COVID-19 news began to lower the ISM purchasing managers index back below 50 points. A reading above 50 points corresponds to expansion in the economy. The incoming index values are expected to fall to multi-year lows following the April reading.

Manufacturing Employment



Manufacturing Employment: Historical vs. Projected Average Yearly Growth



Purchasing Managers Index

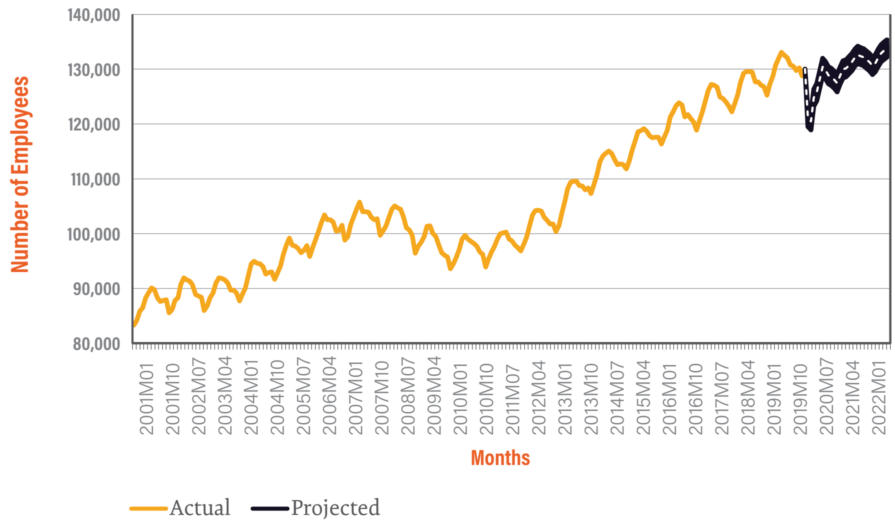
Leisure and hospitality services was the category of employment impacted most by the pandemic. The growth in 2019 was the same as the growth in 2018 (2.47 percent) and in both years came in above the long-term benchmark growth of 2.33 percent. Leisure and hospitality services employment is expected to stay below 135,000 through the first half of 2022. The statewide slowdown in 2019 was not as significant as the slowdown in the Valley. In the Valley, price elasticity of demand is higher for leisure and hospitality services employment because of the higher proportion of income spent on these goods and services.

The long-term benchmark growth for leisure and hospitality services employment stood at 2.33. With the increased activity in the fourth quarter of 2019, employment in this category grew faster than this benchmark rate in 2019. But because the pandemic impact will be felt most intensely on this category of employment, projections point to much lower growth of 1.13 percent in the first 12-month interval, followed by faster growth of 2.24 percent in the second 12-month interval, but still trailing the benchmark.

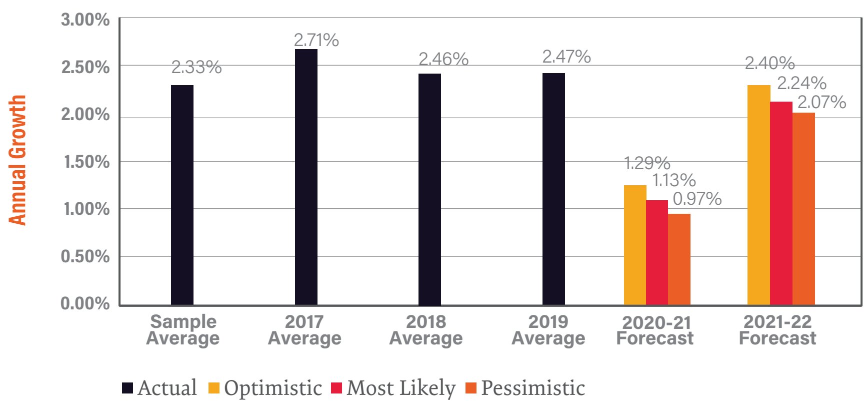
TRADE, TRANSPORTATION AND UTILITIES IS NOT EXPEREINCEING THE PANDEMIC'S IMPACT AS MUCH AS OTHER CATEGORIES BECAUSE THEY WERE CONSIDERED ESSENTIAL.

Because we are a farm-related economy, the category of trade, transportation and utilities employment is not as heavily impacted by the virus as the leisure and hospitality sector. This is because Valley agricultural goods are considered essential and therefore must continue to be produced during the pandemic. However, growth in this category already slowed in 2019 to rates below the long-term benchmark rate. Employment levels in this category likely will remain below 300,000 in the coming two-year period.

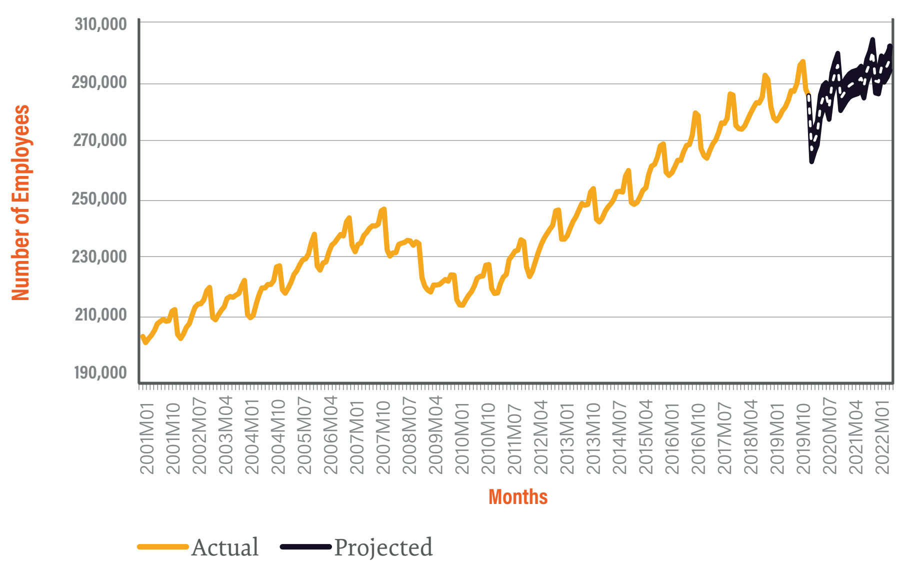
Leisure and Hospitality Services Employment



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



Trade, Transportation and Utilities Employment



Projections point to an average yearly growth of 1.57 percent from the second half of 2020 to the first half of 2021 and 1.94 percent from the second half of 2021 to the first half of 2022.

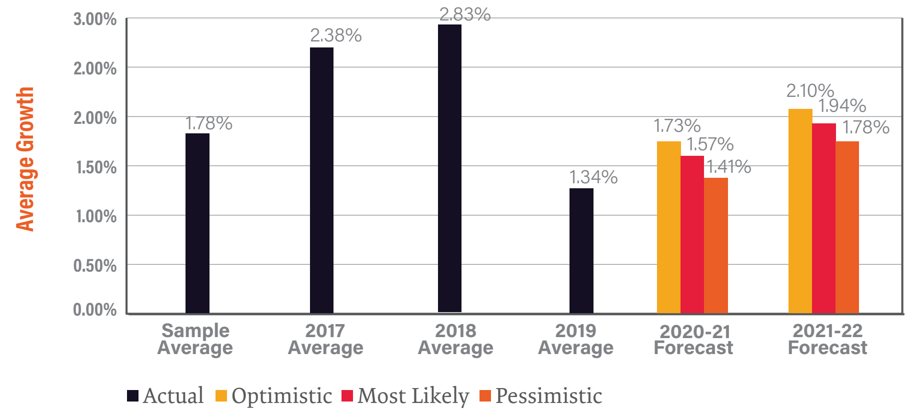
IN THE NEXT TWO-YEAR INTERVAL, RETAIL TRADE EMPLOYMENT WILL FALL TO

150,000

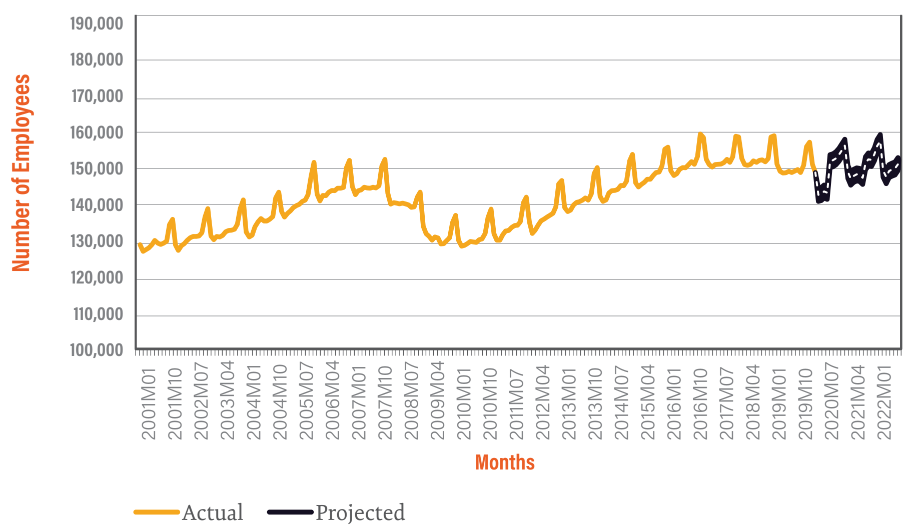
Retail trade employment was one of the worst-performing categories of employment in 2019, posting a decline for the first time since the Great Recession. COVID-19 made the decline much worse in the first half of 2020. The decline in 2019 already was quite significant. With the added effect of COVID-19, retail trade employment will fall to 150,000 in the next two-year interval.

Undoubtedly, online purchasing has made an impact on Valley retail trade employment for the past several years, causing the average yearly growth to consistently fall – from 0.71 percent in 2017 to 0.14 percent in 2018 and eventually a significant decline of -1.59 percent in 2019. Retail trade employment in the Valley is more sensitive to interest rate increases than the state and the nation. Projections point to a pick-up in the next 12-month period at an average yearly rate of 1.52 percent and then stabilizing at more sustained rates of 0.61 percent in the 12-month interval beginning with the second half of 2021.

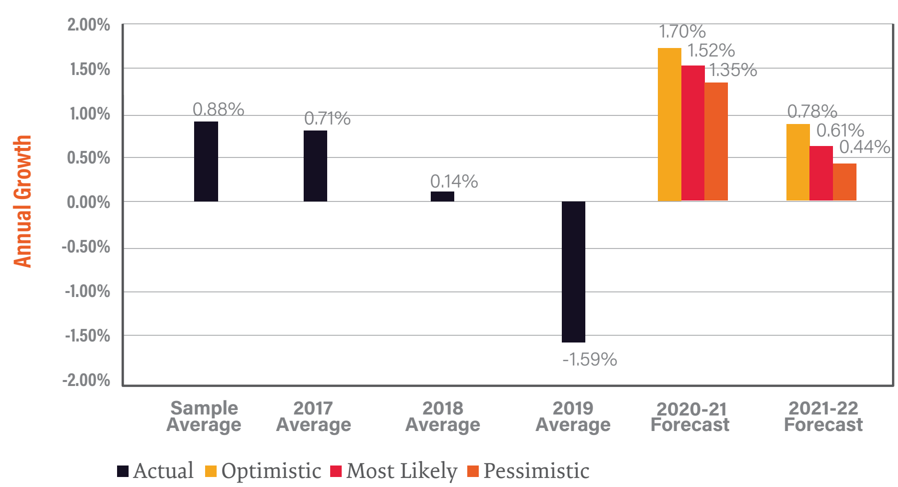
Trade, Transportation and Utilities Employment: Historical vs. Projected Average Yearly Growth



Retail Trade Employment



Retail Trade Employment: Historical vs. Projected Average Yearly Growth

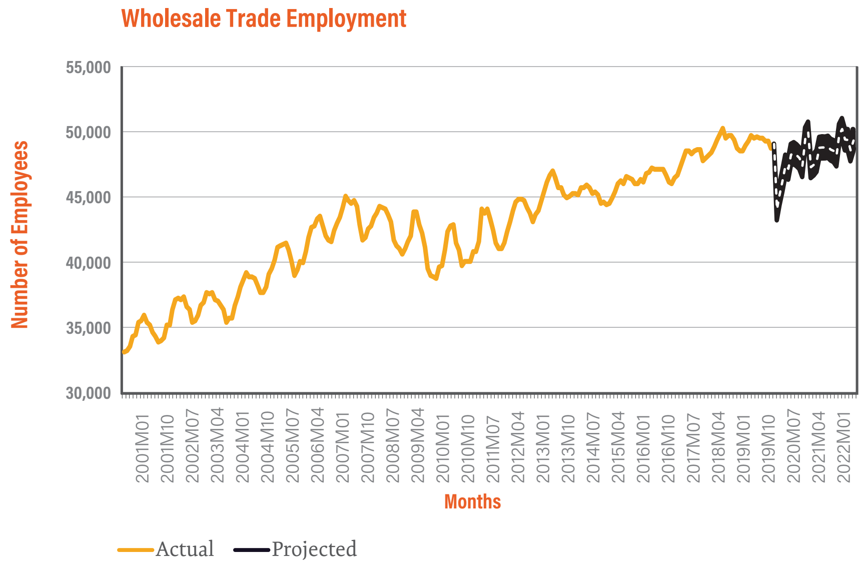


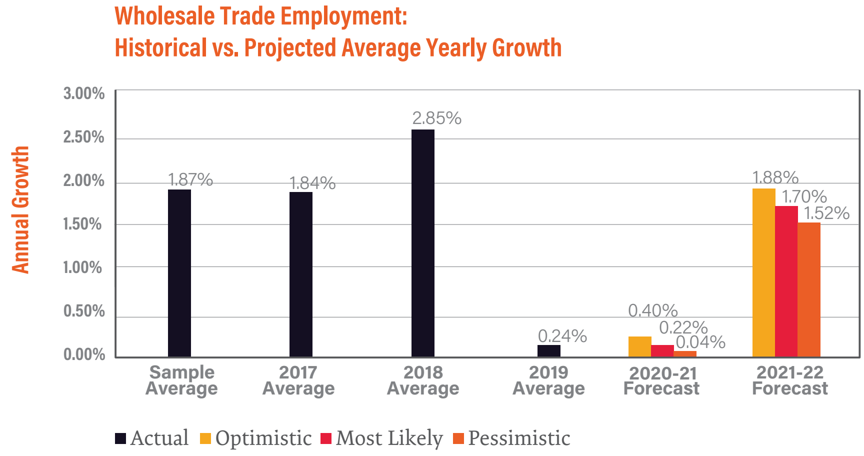
Valley wholesale trade employment grew 0.24 percent in 2019, a rate significantly less than the typical 1.98 percent.

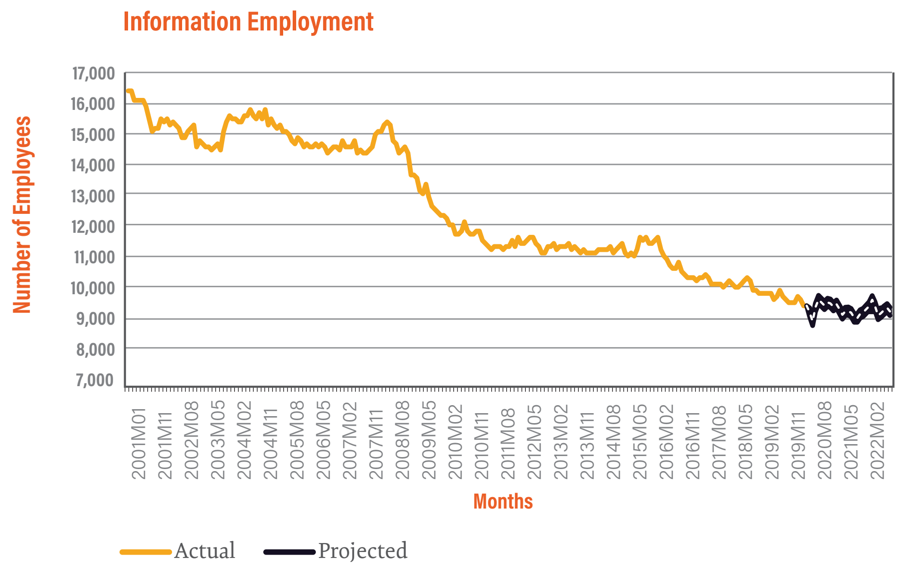
The Valley's wholesale trade employment trajectory likely will be similar to trade, transportation and utilities employment. Growth in this category will remain below 50,000 during the next two years, due to the pandemic and the slowing pattern observed before the pandemic hit. Growth at 0.24 percent in 2019 was the slowest observed since the end of the drought years. Two-year-ahead projections point to an average annual growth of 0.22 percent from the second half of 2020 to the first half of 2021. The pace of growth is projected to pick up a bit, at 1.70 percent, from the second half of 2021 to the first half of 2022.

INFORMATION EMPLOYMENT HAD BEEN SUFFERING SINCE THE END OF THE GREAT RECESSION.

Valley information employment had been suffering since the end of the Great Recession, exhibiting as one of the worst performing categories of employment. The same dynamic is prevalent both statewide and in the nation as media companies continue their move to digital mediums as the influence of social media continues to grow. With the slowing of the economy being more visible, the rate of decline in information employment accelerated in 2019.





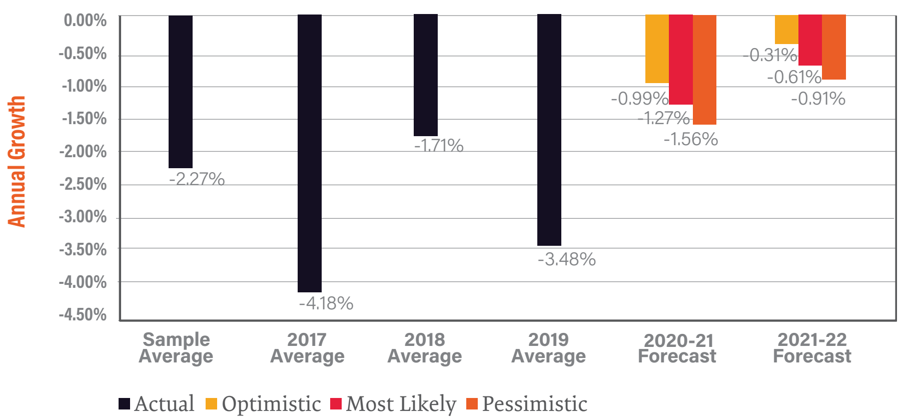


With the accelerating decline in 2019, the long-term benchmark rate of decline in Valley information employment fell further to -3.48 percent. Employment in this category also declined at a faster rate nationwide and there was no significant growth statewide. However, the worsening was more pronounced in the Valley. With the COVID-19 pandemic, the level of employment is projected to fall further to 9,000 level in the two-year ahead period. Projections point to a slower decline at -1.27 percent in the first 12-month interval and -0.61 percent during the second interval. ▶

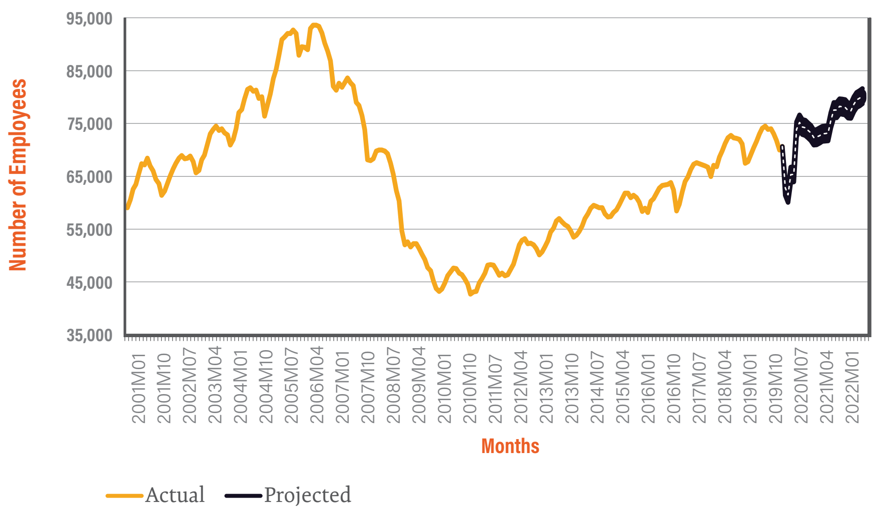
Valley construction employment was the fastest-growing category of employment in 2019. The recovery in construction had lagged at the end of the recession and it appeared the slowdown in construction employment also would come with a lag. High permit fees and the length of time it takes to get a permit are factors is this lagged behavior. Because of the pandemic, employment levels in this category are expected to stay below 80,000 through the first half of 2022. ▶

The Valley's growth in construction employment slowed to 2.25 percent in 2019 – a rate still faster than the state and the nation. Even though construction employment grew the fastest among other categories of employment in the Valley, the average annual rate was less than the rates that prevailed in 2017 and 2018, which were at 5.32 and 7.81 percent, respectively. Due to the impact of COVID-19, projections point to an average annual growth of 5.51 percent from the second half of 2020 to the first half of 2021 and 6.25 percent from the second half of 2021 to the first half of 2022. Faster rates are projected because of the Federal Reserve's zero rates, low inventory and increased demand after the pandemic as more and more Bay Area residents choose to live in the Valley to mitigate the effects of events similar to COVID-19 on their lives. ▶

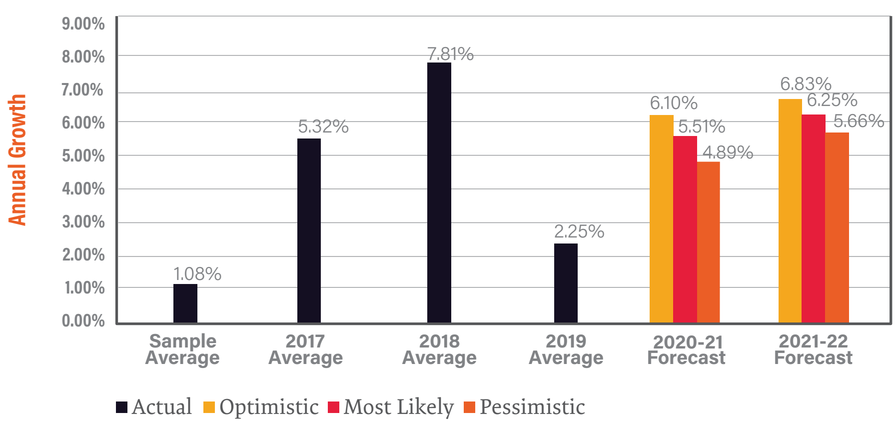
Information Employment: Historical vs. Projected Average Yearly Growth



Construction Employment



Construction Employment: Historical vs. Projected Average Yearly Growth



Employment Indicators

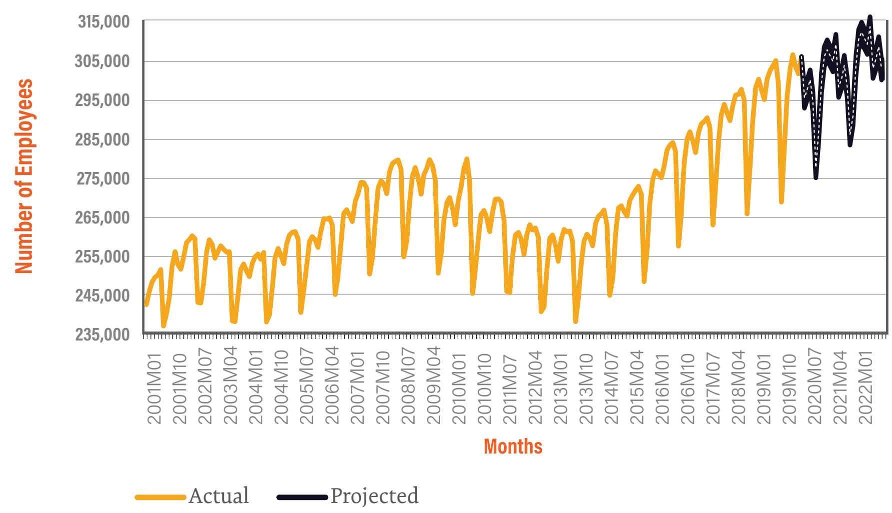
Similar to other employment categories in the Valley, government employment grew slower in 2019 than in the preceding year. This is another lagging variable, recovering later than other employment categories after an expansionary phase of the business cycle. Due to the COVID-19 pandemic, government employment is projected to remain below 305,000 by the second half of 2022. ▶

Growth in government employment at 1.91 percent was the slowest in three years but still outpaced the typical long-term growth of 1.03 percent. Because of the pandemic, government employment is expected to grow 1.20 percent from the second half of 2020 to the first half of 2021, then pick up a bit in pace of growth at 1.61 percent from the second half of 2021 to the first half of 2022. ▶

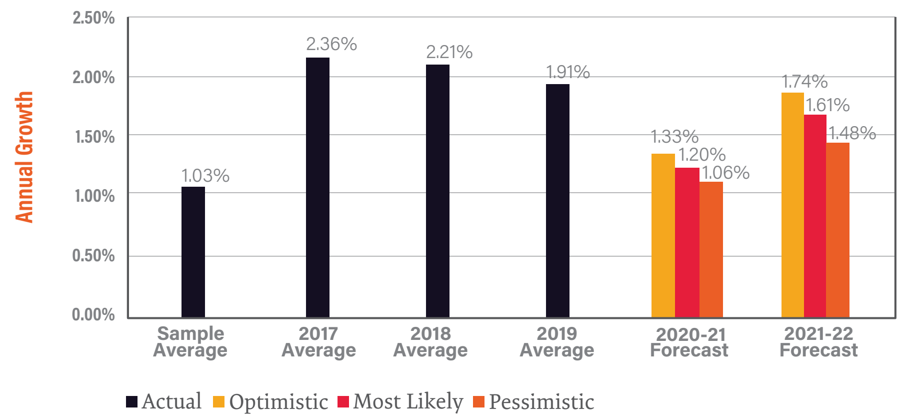
GROWTH IN GOVERNMENT EMPLOYMENT AT 1.91 PERCENT WAS THE SLOWEST IN THREE YEARS.

Valley financial activities employment was another category that posted a decline for the first time since the end of the recessionary years. The steady rate of growth that took place in the past 11 years switched from positive to negative territory, bringing with it worries about an oncoming recession. Financial sector employment is one of the first indicators to signal a recession. The Fed's earlier decision to cut rates twice in a row, along with balance sheet expansion, did not help much in maintaining growth in this category of employment during 2019. ▶

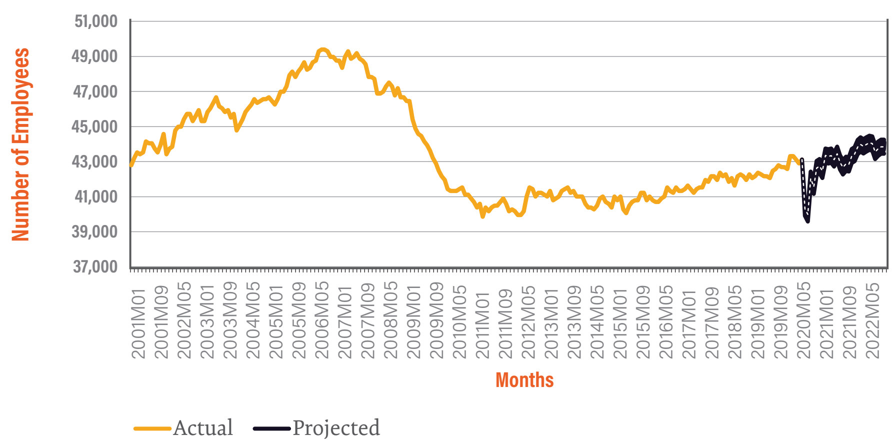
Government Employment



Government Employment: Historical vs. Projected Average Yearly Growth



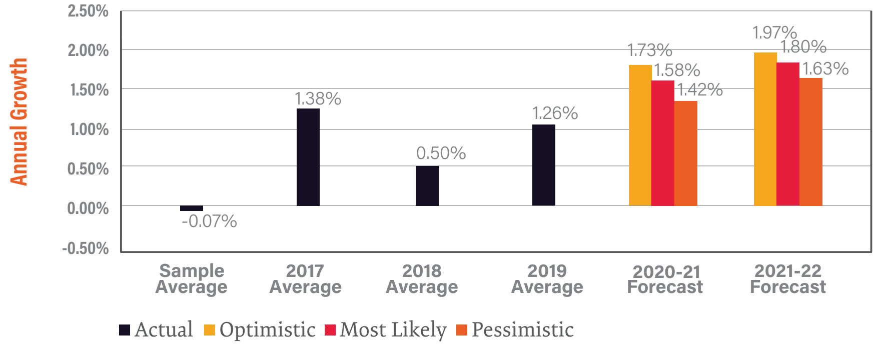
Financial Activities Employment



Financial activities employment had picked up a bit due to an active housing market in the Valley following lower interest rates and refinancing but is projected to remain below 45,000 in the coming two-year period. The long-term benchmark rate remained in negative territory but improved slightly from the preceding year. In the months following the pandemic, it does appear likely that the financial activities employment long-term benchmark rate will finally switch from negative to positive territory. Employment in financial activities is to grow 1.58 percent in the first 12 months and 1.80 percent in the following 12-month interval.

Given that the economic impact of COVID-19 mostly will be felt during the first and second quarters of 2020, and that a second wave that may occur will be relatively mild, the Valley economy likely will begin improving in the second half of 2020. The bulk of the improvement is expected in the last quarter. This is because the life of the pandemic (as observed in countries in which the arrival of the virus was earlier than in America) is about three to four months and because a vaccine is in a human trial stage. The pandemic altered the trajectory of the economy from an intensifying slowdown to one with a very drastically worsening of the economy to an improving one after the pandemic ends.

Financial Activities Employment:
Historical vs. Projected Average Yearly Growth



Housing Sector

The San Joaquin Valley's eight Metropolitan Statistical Areas (MSAs) are Bakersfield-Delano, Fresno, Hanford-Corcoran, Madera-Chowchilla, Merced, Modesto, Stockton and Visalia-Porterville. The aggregate data from these MSAs make up the total single-family building permits in the Valley.

THE PANDEMIC WILL KEEP VALLEY HOUSING PERMITS AT AROUND 700 PER MONTH THROUGH THE END OF THE FIRST HALF OF 2022.

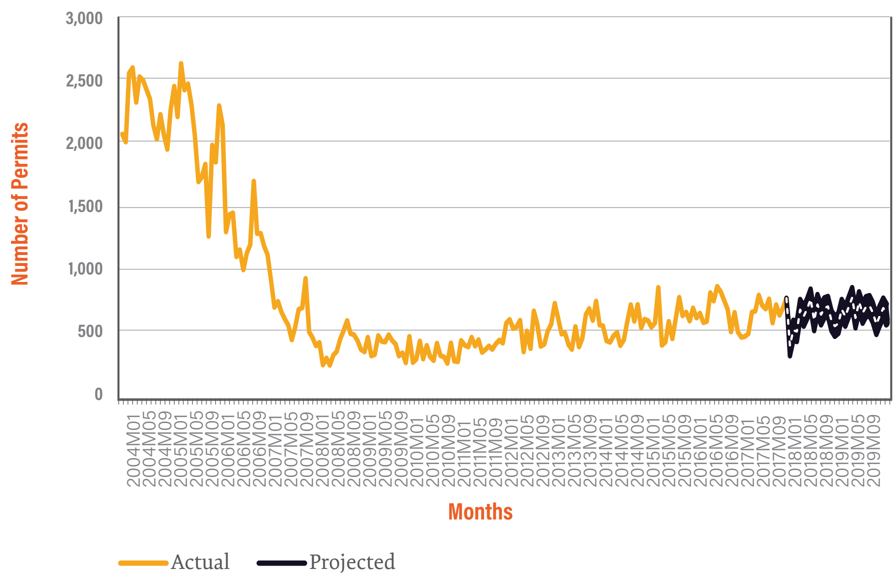
The 2018 building permit spike in growth was the fastest observed in the past several years. The very gradual increase in permits over time has changed slightly, now becoming parallel due to a horizontal axis. The pandemic will keep Valley housing permits at around 700 per month through the end of the first half of 2022.

The average annual growth of 1.52 percent in 2019 is indeed mean-reverting behavior after a very significant spike in 2018. Relative to other MSAs, permit fees take longer to obtain in the Valley and the high cost of permits does not help the Valley's low inventory situation.

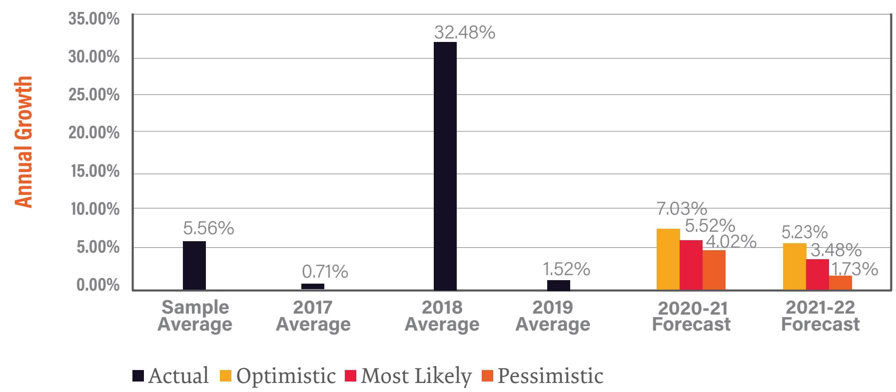
With 2,100, Fresno issued the most building permits in 2019, followed by 1,939 in Stockton and 1,590 in Bakersfield. Visalia issued 1,568 permits, while Madera and Merced issued 632 and 175 permits, respectively. Modesto issued only 16. There were no housing permits issued in Hanford-Corcoran. Projections point to an average annual growth of 5.52 percent from the second half of 2020 to the first half of 2021 and 3.48 percent from the second half of 2021 to the first half of 2022.

The foreclosures started series in California continued to remain flat but a temporary spike is expected as a result of the impact of the COVID-19 pandemic on the housing sector. Following Federal Reserve's zero rates and injection of liquidity to help alleviate the impact of the pandemic on the economy, the housing market is expected to begin recovery in the second half of 2020.

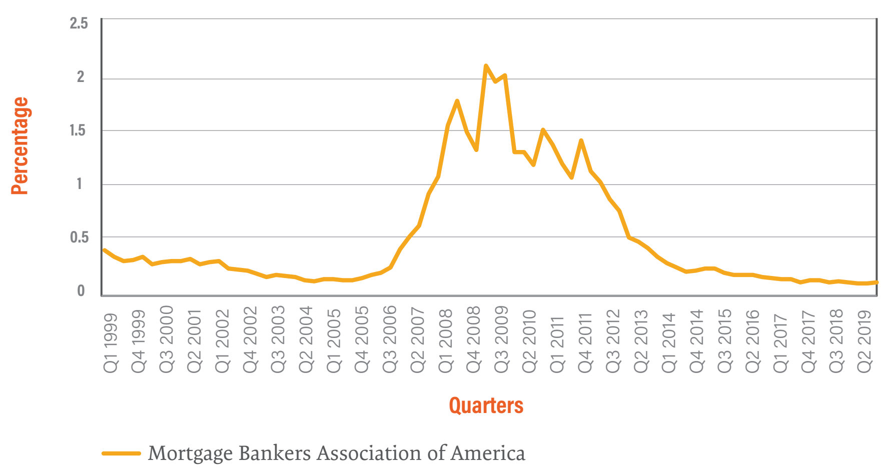
Single-Family Building Permits



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



Foreclosure Starts in California



While the Federal Reserve's zero rates have helped the long-term interest rates come down further, they have not yet reached 2013's all-time lows. After the end of the pandemic, refinancing and home buying activity in the Valley is projected to be consistent with long-term benchmark levels. ▶

HOME VALUES IN THE VALLEY INCREASED AT A SLOWER PACE IN 2019.

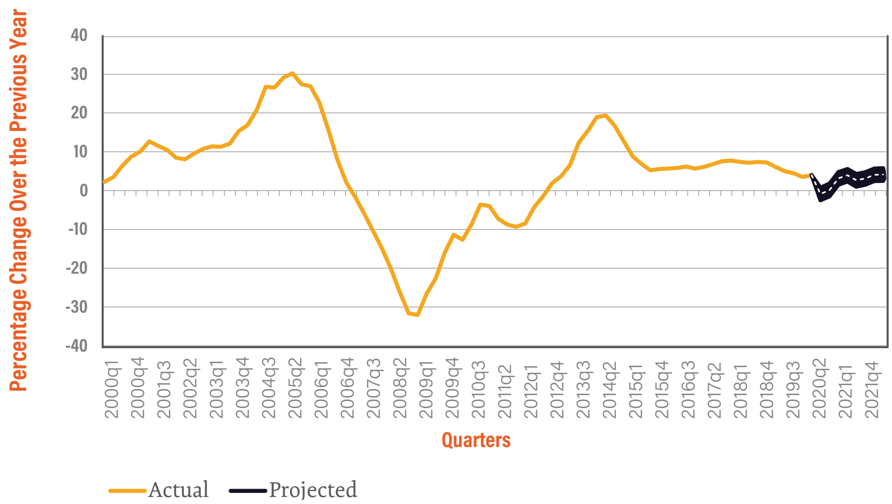
Home values in the Valley increased at a slower pace in 2019 than in the previous two years. The average annual rate of increase of 4.90 percent in 2019 was below the series' long-term typical rate of 5.10 percent. The pandemic is bringing a temporary pause in housing market activity, causing very little price appreciation during the first and second quarters of 2020. Home values are ▶ projected to increase at a yearly average of 4.21 percent in the two year ahead interval.

The fastest increase in home values took place in Madera, which reported a 6.19 percent average annual increase in 2019. This increase was no surprise given that Madera issued fewer housing permits. The second fastest increase in home values was in Merced at 5.18 percent, followed by 4.99 percent in Visalia. Modesto's increase in home prices was 4.89 percent. Fresno home prices increased 4.45 percent while Bakersfield home prices rose by 4.68 percent. Stockton and Hanford reported the slowest increase in home prices at an average annual rate of 4.44 percent and 4.39 percent, respectively. ▶

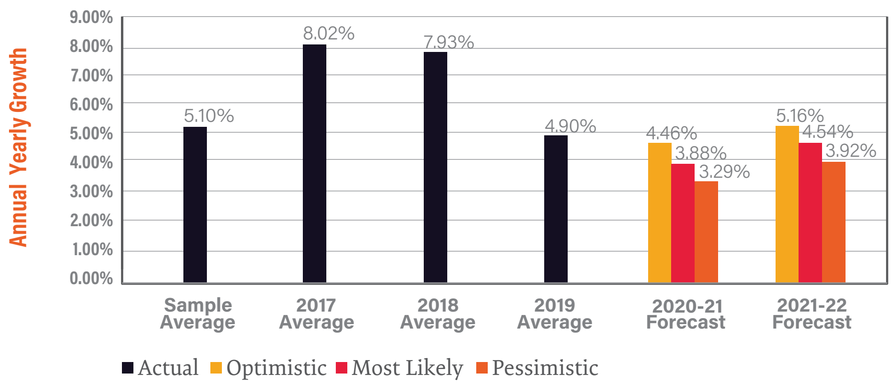
Zero rates and liquidity injection should help provide some relief to an economy disrupted by the COVID-19 pandemic. The price of oil, after falling to 18-year lows, has stabilized slightly following the new agreement among oil-exporting countries. Building permits likely will continue to increase in the months after the pandemic as the construction sector reals from paused activity. Housing values are likely to increase at a slower pace than in previous years but at rates little less than the long-term benchmark rate.

30-Year Fixed Rate

Yearly Percentage Change in Housing Prices



Yearly Growth in Housing Prices: Historical vs. Projected Average Yearly Growth



Inflation and Prices

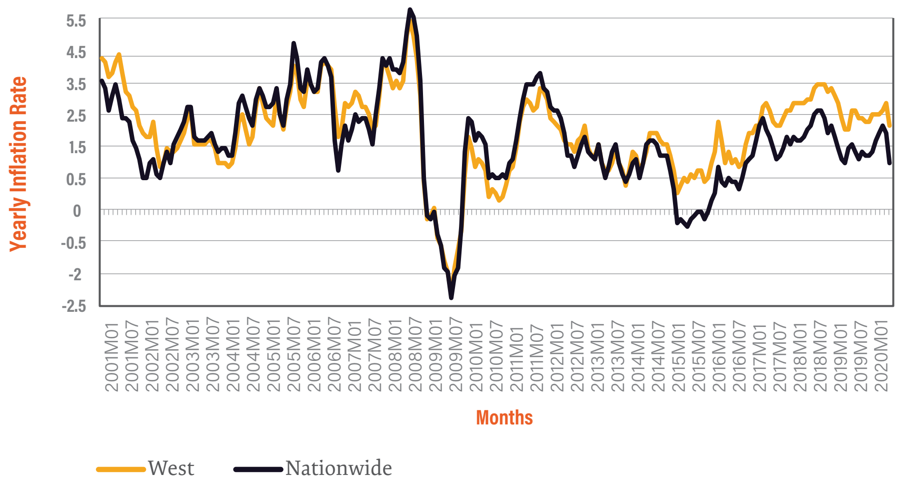
Deflation occurs whenever there is a recession. Further, during the COVID-19 pandemic, agreement among oil-exporting countries broke, causing an 18-year low in oil prices. The price of oil is one of the main drivers of inflation in the United States. Consequently, the overall price level fell drastically in March and the second quarter will likely see the first deflation since the Great Recession. ▶

DURING THE COVID-19 PANDEMIC, OIL PRICES DROPPED TO AN 18-YEAR LOW.

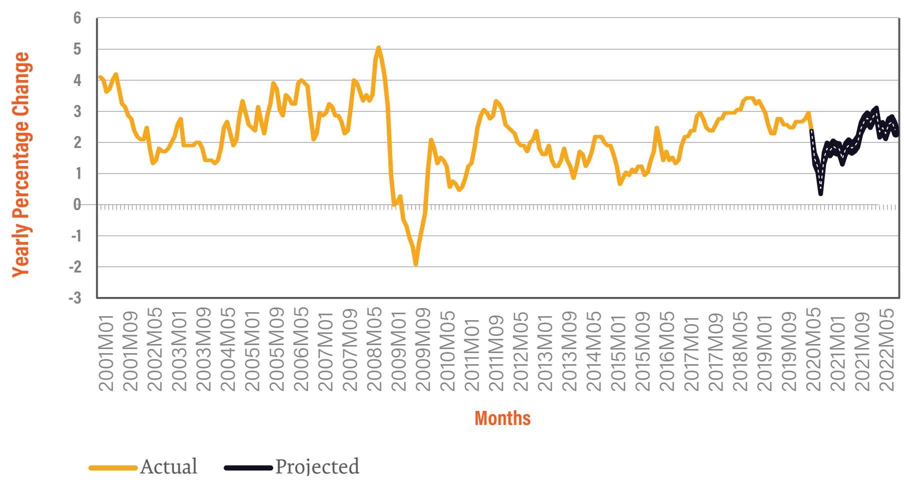
Regardless of deflation, prices in the West will continue to stay above national levels in 2020. This discrepancy emerged in 2014 and has continued with an increasing rate. The new agreement, signed between oil exporters in April, will raise prices, beginning in the ▶ second half of 2020. As the devastating effect of COVID-19 dissipates and the economy begins to recover, inflation will catch up with the long-term benchmark rate quickly since prices adjust faster upward than downward.

The average yearly rate of inflation in 2019 was 2.69 percent, lower than the 3.35 percent of 2018. Several factors likely will cause overall price levels to fall. These factors are the rate cuts on the part of the Federal Reserve along with liquidity injection, which will serve to increase prices from the demand-pull side and cost-push side resulting from the expected rise in the price of oil. ▶

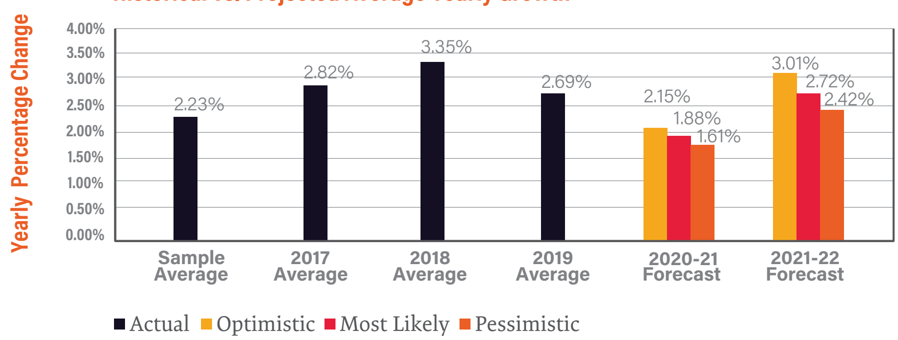
Inflation Rate: Nationwide vs. West



U.S. West Inflation Rate



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



In each of the past three years, the rate of inflation came in higher than the long-term benchmark rate. This was reversed during the pandemic, resulting in deflation for the first time since the Great Recession. Projections point to an average yearly increase of 1.88 percent from the second half of 2020 to the first half of 2021 and 2.72 percent from the second half of 2021 to the first half of 2022.

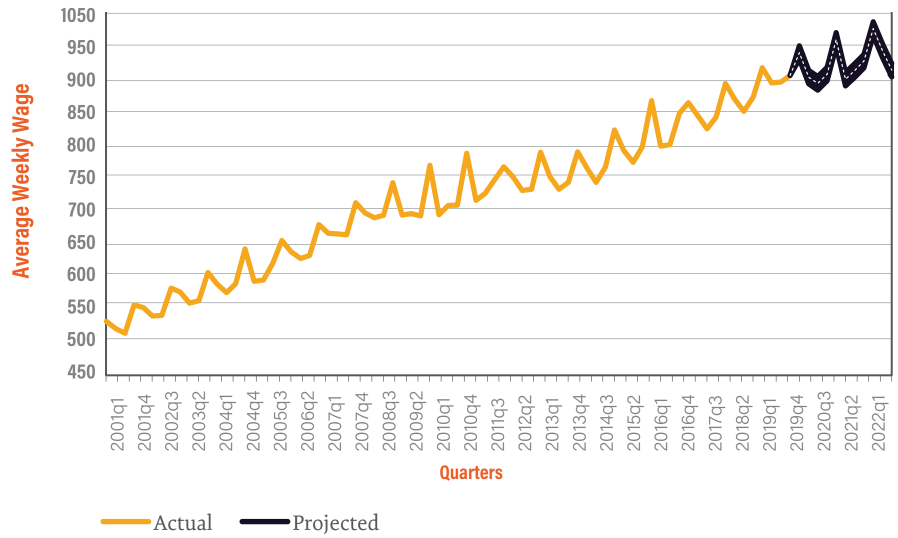
IN 2019 AVERAGE WEEKLY WAGES ROSE

3.75 %

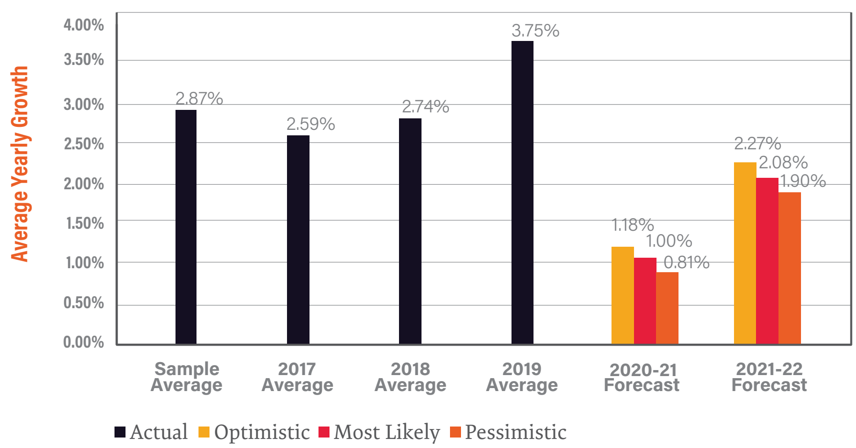
Average weekly wages rose 3.75 percent in 2019, faster than the rates observed in 2017 and 2018, and this growth rate was another factor on the cost-push side that continued in 2019. In all three years, the increase in wages was faster than the long-term benchmark rate of 2.87 percent. There was a real wage gain in 2019. Wage growth will decline considerably in the first and second quarters of 2020 in line with a recessionary economy. At this pace, average weekly wages in the Valley likely will stay below $875 through the first half of 2022. ▶

Valley unemployment numbers suddenly shot upward during the COVID-19 pandemic, and rising unemployment always depresses wages. The recovery expected to begin in the second half of 2020 will revert wage growth back to normal. Projections point to an increase in average weekly wages at an annual rate of 1 percent for the first 12-month interval and 2.08 percent for the second interval of the forecasting horizon. Wages increased 3.75 percent in 2019. Since the inflation rate was 2.66 percent, there was a real wage gain of 1.09 percent in 2019. Due to the pandemic and across-the-board recessionary unemployment, wage growth will decline significantly, and deflation ▶ will occur before returning to rates more reflective of the long-term benchmark rate.

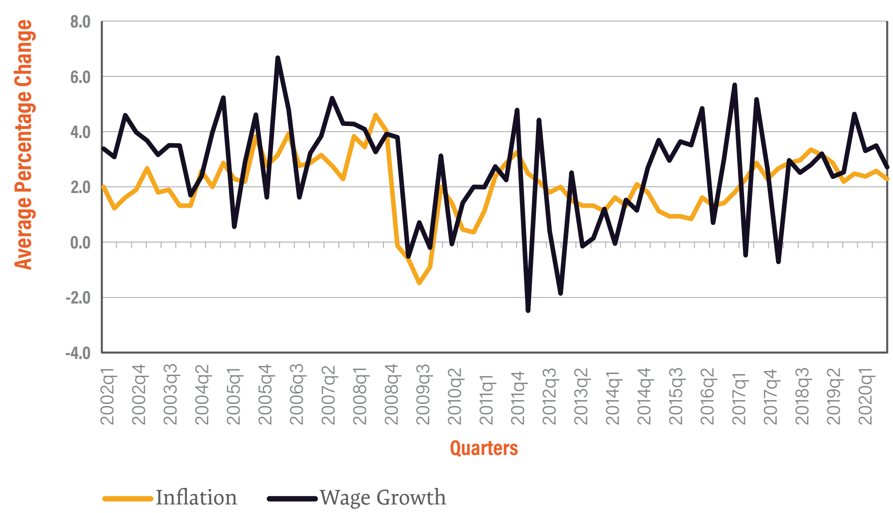
Quarterly Average Weekly Wages



Weekly Wage Growth: Historical vs. Projected Average Yearly Growth



Yearly Wage Growth vs. Inflation



Consistent with other indicators, Valley community bank deposits and net loans and leases in 2019 grew slower than the two preceding years.

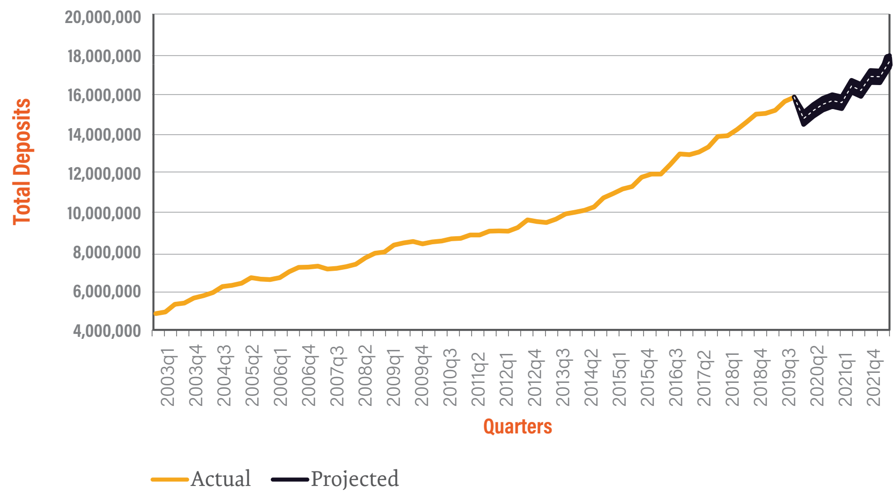
In addition to the impact of COVID-19, the Federal Reserve's zero rates contribute to slowing of the growth rate in Valley total bank deposits and will continue to do so even as the economy reopens. Community bank deposits in the Valley are projected to increase at an average annual rate 2.94 percent from the second half of 2020 to the first half of 2021 and then grow at rates consistent with long-term benchmark growth as rates rise from zero rates, at 7.21 percent from the second half of 2021 to the first half of 2022.

Following the turning point reached in the third quarter of 2017, bank assets in non-accrual continued to increase in 2019. The pandemic undoubtedly will cause non-accruals to rise faster for several months before resuming its long-term flatter trend. The federal relief package will help contain non-accruals that would reach more serious levels without such intervention.

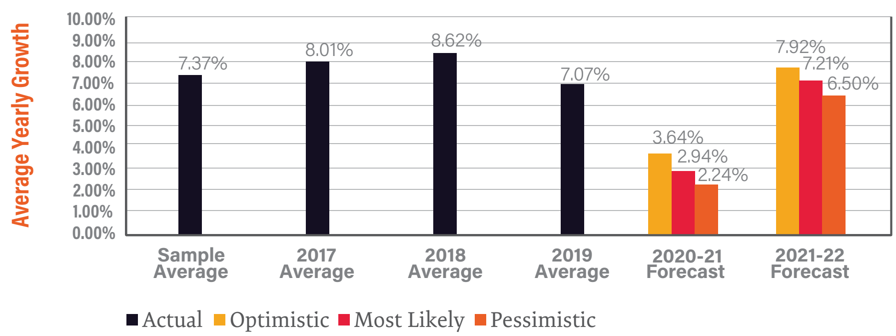
Valley bank assets in default 30-to-89 days and 90-plus days display a consistent pattern with assets in non-accrual. All series have gradually trended upward in 2019. The pandemic will make assets in default 30-89 days and 90-plus days series trend steeper in a similar fashion to assets in non-accrual before resuming its long-term typical pace of increase following the pandemic. As is the case with assets in non-accrual, the Federal Reserve's zero rates and liquidity injection along with relief packages will help mitigate the extent of the damage from the pandemic.

Net loans and leases grew at a much slower rate in 2019 than in the previous year, consistent with a slowing economy. The COVID-19 pandemic impacted capital markets at an unprecedented level. The Federal

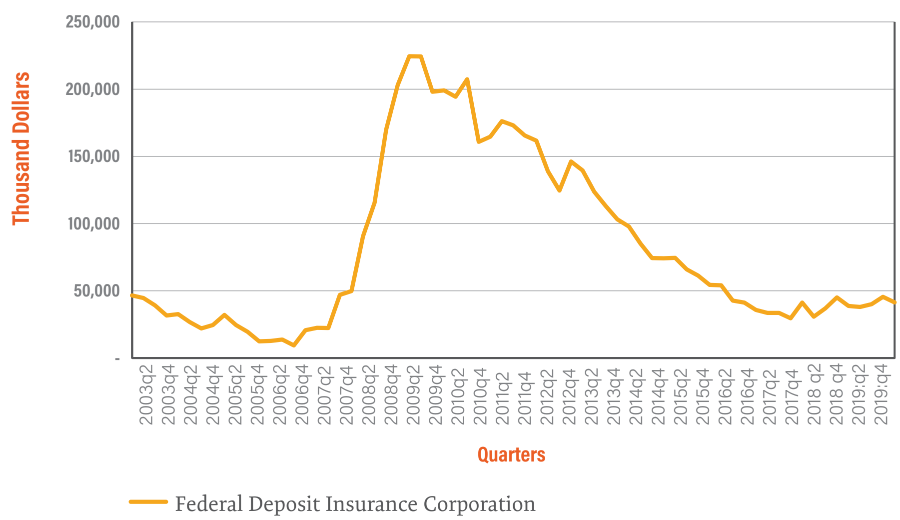
Total Bank Deposits (in $ Thousands)



Total Bank Deposits:
Historical vs. Projected Average Yearly Growth



Assets in Nonaccrual



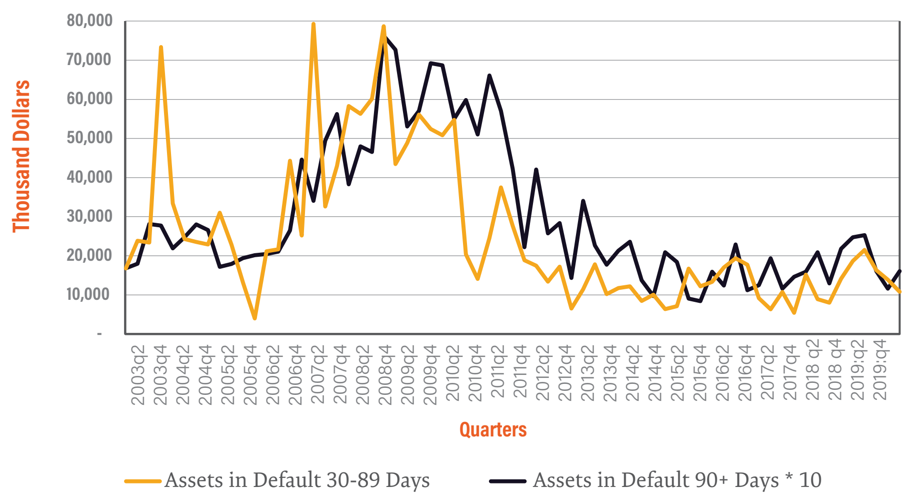
Reserve's immediate intervention in terms of zero rate policy and liquidity injection has had a positive impact on the banking sector - a lesson learned from the Great Depression that non-intervention makes the magnitude of the crisis bigger and duration longer. During and after the pandemic, it is important for Valley banks to continue extending loans to shorten the negative impact of the crisis on the regional economy.

BANK PROFITABILITY LIKELY WILL GROW AT A RATE SIGNIFICANTLY SLOWER THAN THE PRECEDING YEAR, AGAIN DUE TO THE PANDEMIC.

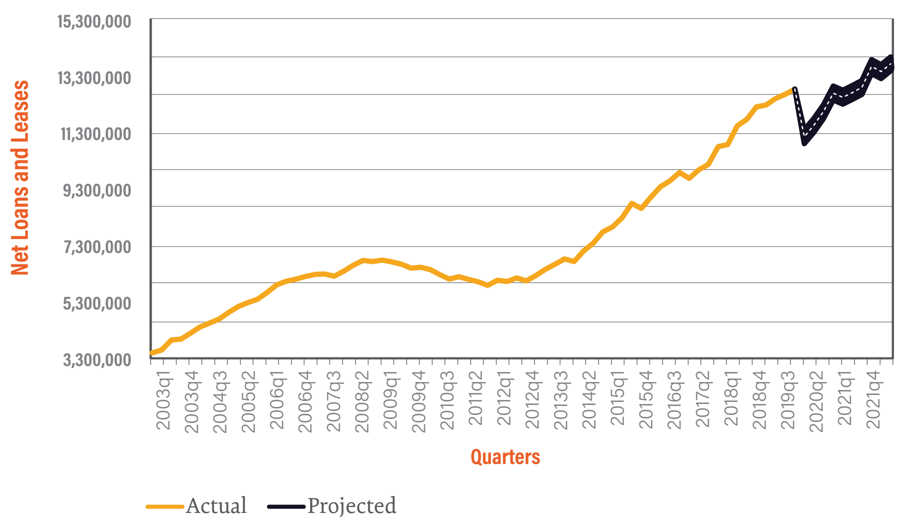
Bank profitability likely will grow at a rate significantly slower than the preceding year, after the pandemic. After the pandemic, deposits and loans likely will grow at rates consistent with historic benchmark rates. Net loans and leases are projected to increase at an average yearly rate of 4 percent from the second half of 2020 to the first half of 2022 and then at a more normal rate of 7.19 percent from the second half of 2021 to the first half of 2022.

Default rates have been increasing in the first half of 2020 and likely will continue to increase until the unemployment rate and jobs numbers revert to normal. Total deposits and net loans and leases will increase at rates much slower than the long-term benchmark rate in the first 12 months and then revert to their mean in the second 12-month forecast horizon.

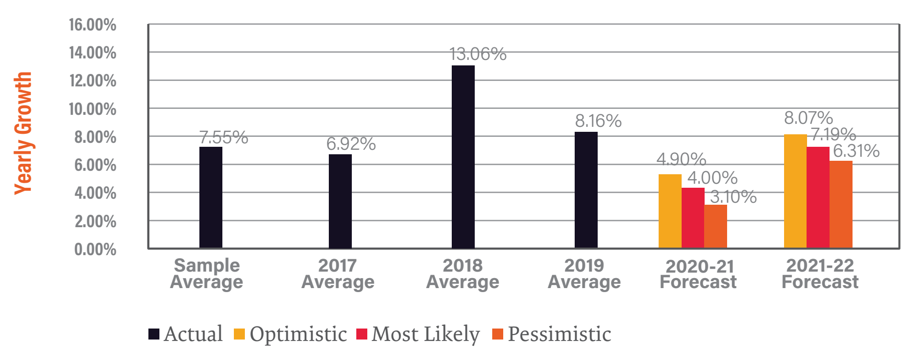
Assets in Default 30+ Days



Net Loans and Leases (in $ Thousands)



Net Loans and Leases:
Historical vs. Projected Average Yearly Growth



Concluding Remarks

Before the pandemic began, the trajectory was that the slowdown in the Valley economy was intensifying in 2019. This trajectory was interrupted as the pandemic hit the nation in the first quarter of 2020. A recovery is expected to begin the in the second half of 2020, which is most likely to set the Valley economy on a new path of expansion rather than into a slowing phase once things revert to normal.

Our prediction of negative economic growth in the second quarter of 2020 accurately captured the turning point. The Valley's recovery is expected to be slower than the state and nation due to the less-developed structure of the Valley's labor markets. Typically, the Valley's unemployment rate runs twice the rate of the nation.

A vaccine has been in the works and is scheduled to conclude the second phase of human trials by August. Consequently, the recovery most likely will begin in the second half of this year followed by increased activity in the fourth quarter of 2020. The projections point to a quick recovery within the Valley's own dynamics but slower relative to the nation. The recovery is expected to take place with an annualized growth of 1.05 percent in total employment from the second half of 2020 to the first half of 2021, falling behind the Valley's typical growth of 1.19. In the following interval from the second half of 2021 to the second half of 2022, Valley total employment will grow at an average annual rate of 1.26 percent. With the new trajectory forming after the end of the pandemic, the growth in the second 12-month interval will be above this long-term benchmark growth of 1.19 percent.

Leisure and hospitality services employment likely will be affected the most, while education and health services employment the least. Because the Valley has a farm-related economy, the effect on trade and transportation as well as wholesale will be a bit softer than on other categories of employment. Retail employment, already declining before COVID-19, appears to be another category that will feel the impact quite heavily. Building permits likely will decline as an economy goes into recession, but the recovery will be quickest in the construction sector due to Federal Reserve's action to pull the federal funds rate to zero, the relief package already in place and the low housing inventory in the Valley. The effect on construction employment likely will be less than on other categories of employment. The demand for housing will increase further in the Valley as a higher-than-normal number of Bay Area residents seek to live in safer cities, which can be found in the Valley. The foreclosures started series will climb a bit due to the recessionary period but will fall back to the all-time lows following the recovery. The recession will suppress home values for about six quarters. The rate of appreciation will remain positive but below the long-term benchmark rate, growing at rates less than those observed in 2019 and 2018.

Recession means deflation and depressed wages. Following the initial break-up of the oil cartel in March, the price of oil fell to 18-year lows. This, along with recession, will mean lower inflation rates in the nation and in the Valley for the next couple of months. The yearly inflation rate will fall well below the long-term typical rate. As it does with recessions, wage growth will fall below the long-term benchmark rate, as will the rate of inflation. Falling wages and rising unemployment will correspond to significantly decreased purchasing power during the recessionary months, only to start climbing back in the fourth quarter of 2020 as the economy bounces back.

During the recessionary months, the growth in Valley total deposits is projected to stagnate and the growth in net loans and leases will fall way below their long-term benchmark rates in the first 12-month period. The expectation is that Valley banks will keep extending loans to alleviate the negative effect of the recession. Valley banks deferred extending loans for a long time during the Great Recession. Valley bank non-accruals likely will trend relatively sharply upward during the recessionary months and during the recovery period, along with accruals 30-to-89 days and accruals 90-plus days, until the Valley economy is fully back to normal, erasing the unemployment resulting from the pandemic.

Forecast Accuracy Table

	Error	Accuracy	Turning Point
Total Employment	1.42%	98.58%	Yes
Real GDP Growth	0.75%	99.25%	Yes
Construction	4.62%	95.38%	No
Education & Health	0.68%	99.32%	Yes
Government	0.59%	99.41%	No
Financial Services	1.71%	98.29%	No
Information	3.56%	96.44%	Yes
Leisure & Hospitality	0.35%	99.65%	No
Manufacturing	0.56%	99.44%	Yes
Retail Trade	1.47%	98.53%	Yes
Trade, Transportation & Utilities	1.26%	98.74%	Yes
Wholesale Trade	0.93%	99.07%	Yes
Inflation	6.24%	93.76%	Yes
Quarterly Average Wage	1.77%	98.23%	Yes
Housing Permits	15.74%	84.26%	No
Change in Housing Price	0.24%	99.76%	Yes
Total Bank Deposits	1.17%	98.83%	Yes
Net Loans and Leases	0.39%	99.61%	Yes
Overall	2.41%	97.59%	

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