Inaugural Issue

Business Forecast Report

2012

San Joaquin Valley

California State University | Stanislaus

Volume 1

MESSAGE FROM THE PRESIDENT

I am very pleased to present this business forecast report prepared by Dr. Gökçe Soydemir, the inaugural Foster Farms Endowed Professor of Business Economics at California State University, Stanislaus. Dr. Soydemir brings strong expertise and experience in business analysis and forecasting and we are very pleased to have him at CSU Stanislaus.

Our primary goal for the Foster Farms Endowed Professor of Business Economics is to serve and support the regional business community. This business forecast is the first of what will be annual reports followed mid-year updates. These forecasts will provide much-needed resources that focus on the San Joaquin Valley, its trends and major industries. It is our hope that they will serve as a tool to keep businesses better informed on past, current and future trends and assist them in their planning.

These forecasts come at a critical time for business leaders. We have been in a serious recession for several years now and the San Joaquin Valley has been rocked by high foreclosure and unemployment rates. There is much uncertainty about the economy and the future. The well-being of our region depends on the success of our businesses and these forecasts can help support that success and an economically vibrant region.

I am appreciative of Foster Farms for its support of the Endowed Professor of Business Economics. The Foster family is deeply committed to the San Joaquin Valley and saw the need for business forecast reports that would focus on this region and support the success of area businesses in their decision-making. Without the vision and financial support of Foster Farms, this endowed professorship and report would not exist.

One final note: business forecasts rely on data. Access to data from area businesses and industries will allow us to expand on the analysis and detail in this forecast. If you are interested in providing data for analysis, please contact Dr. Soydemir. I know that he looks forward to working with area businesses so that he can create forecasts that best support their decision-making needs.

As always, thank you for your support of CSU Stanislaus.

Regards,

Hamid Shirvani

BUSINESS FORECAST REPORT
2012
San Joaquin Valley

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Dr. Gökçe Soydemir

FOSTER FARMS ENDOWED PROFESSOR OF BUSINESS ECONOMICS

Dr. Gökçe Soydemir joined California State University, Stanislaus as the inaugural Foster Farms Endowed Professor of Business Economics in August 2011. Dr. Soydemir brings strong expertise and experience in business analysis and forecasting and has published extensively on applied econometrics, regional economics, financial forecasting, market analysis and international finance.

Dr. Soydemir received his Ph.D. in Economics from Claremont Graduate School, Claremont, CA; an M. Phil. in International Finance from Glasgow University, Scotland, U.K.; and a Bachelor of Science in Economics from Middle East Technical University, Ankara, Turkey. He has several years of central banking experience co-constructing and forecasting large and medium scale macro-econometric models. In addition, he has conducted policy independent research on monetary economics.

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The author would like to acknowledge the assistance of student assistants Gozde Onder and Robert Dylina in the preparation of this report.

Preface

California State University, Stanislaus is pleased to present its inaugural business forecast report for the San Joaquin Valley economy. Forecasts, which will be presented yearly with mid-year updates, will provide businesses with detailed information about trends in the region relative to those of the state and the nation. Providing these trends will help minimize uncertainty surrounding these economic indicators and generate market consensus on a regional basis. Businesses, investors and consumers will thus be equipped with detailed information about the San Joaquin Valley economy that will help them make better-informed decisions.

The forecasts will provide businesses with detailed information about trends in the region relative to those of the state and the nation.

In preparing this report, we had the average non-specialist reader in mind. We want these reports to be useful to the business community and not limited to academia. Therefore, rather than inundating the reader with clusters of numbers that may at times be difficult to interpret, we have plotted the forecasts for visual inspection. These plots are easier to comprehend when it comes to identifying trends and turning points. In certain cases where scale was an issue, we supplemented the plots with corresponding forecast numbers. We use two-year medium range forecasting for superior forecasting. Forecasts will be continuously updated as we receive new data. Our next report will also analyze our forecast's accuracy and performance.

Each mean forecast line extending through 2013 is shown with a 95 percent lower and upper statistical confidence band. The forecasts are expected to vary within this range. Naturally, when the series exhibit high volatility the bands will be wider. Before reporting results for statistical accuracy, we compared the forecasts with actual values from the previous year. The results reveal that generally 80 to 90 percent of the forecasts vary within the upper and lower bounds. Further, the forecasting model correctly identifies turning points.

We look forward to receiving feedback from our readers. Building working relationships with area businesses to facilitate an exchange of data will be critical as we seek to expand and improve the content and coverage of the report. With your assistance, we can work together to elevate the economic well-being of our region.

Executive Summary

The San Joaquin Valley (Valley), relative to the national economy, entered into a more modest recovery phase in the fourth quarter of 2010 and started registering slow but steady growth. Despite short term fluctuations, the average yearly employment growth in 2011 looked better than 2010. Along with the global and national trends, the western region of the country began registering slightly higher inflation rates in the past, mainly due to rising energy costs, excess demand in commodity markets and the recently completed Phase II of the Federal Reserve's Quantitative Easing (QE2). The average sales price of new construction single-family homes continued to decline following its peak in the third quarter of 2006. A leading indicator, foreclosure starts for the U.S. West, unlike other regions such as the U.S. North Central, registered a turning point during the first quarter of 2009. Foreclosures in particular appear to be an independent process likely to continue until all excess inventories are depleted. Another leading indicator, the University of Michigan Consumer Sentiment Index hit a turning point in the second half of 2008 and began to gradually improve toward its long-run average rate. However, in its July 2011 reading it fell to a 30-year low followed by two consecutive increases in August and September. Provided that this fall is one time in nature rather than sustained, the regional along with the national economy is projected to improve gradually. Prices of commodities such as corn, soybeans, and wheat continued to increase, reaching new highs during the 2010-2011 crop years.

The current sentiment of the public in general has been relatively pessimistic simply because the economic recovery has not seen enough job creation and housing market correction. This has caused a lingering surplus of unskilled labor even with the economic recovery slowly underway. As many companies increasingly report, there appear to be significant shortages in skilled labor in certain categories of work. Most notably, shortages appear to exist in health care, higher education, and engineering. Other factors that contribute to this dampened mood are the federal government deficit and the national debt. Consumers have been cautious, with inflation-adjusted yearly growth in consumption increasing at a very modest pace of 0.5 percent per year.

When yearly comparisons are done rather than monthly, incoming numbers reveal that since the 2007-2009 recessionary period, including industries such as the financial sector, the Valley's economy continued to perform below its 10-year average long-run rate. Yet during this time, the Valley economy began reverting back to its mean, showing promising signs of recovery in certain sectors such as transportation and utilities, wholesale trade, non-durables, manufacturing, education and health. Employment in the financial activities and construction sectors continued to register losses due to restructuring of banks and other financial institutions.

In 2011, the U.S. economy fluctuated in a start–stop fashion but overall exhibited a very gradual upward long-term trend. The primary reason for lagging performance was the continuing slump in the housing market. Many analysts agree that a housing turning point has yet to occur and that the correction will be not complete until all excess inventories are gone. Unrest in the Middle East, rising energy costs, and Phase II of Quantitative Easing that came to an end in May 2011 renewed inflation worries in the first quarter of 2011; however, inflation continued to remain at a par with its long-run rate. The depreciation of the dollar had a relatively positive effect on the U.S. current account compared to previous years.

Even though there is market consensus that economic recovery is slowly underway nationwide, many skeptics are jittery because improvements in the labor and housing markets have been relatively much weaker. Job gains nationwide have been around 150,000 per month whereas this number should be in the 250,000 range to bring down the unemployment rate in the near term to its natural rate. National unemployment still looms around 9 percent. However, it is worth keeping in mind that jobs data is a lagging indicator, and often with a long lag. On average, this lag has been at 18 months but under this gradual recovery the lag is expected to be more prolonged. Rather than pre-recession levels, a more realistic benchmark for the unemployment rate is the rate consistent with its long-run trend. With slow recovery under way, regional unemployment rate is projected to reach this natural rate by early 2015.

Since 2000, the U.S. government debt has been increasing at an exponential rate. Not surprisingly, this trend has been of most serious concern to policymakers and analysts. The increase beginning in the second half of 2008 has been the steepest in series history. As the debt approached a bifurcation point in the second half of 2011, it prompted discussions of raising the debt ceiling and eventually led to the lowering of the national credit rating of the United States.

In all, the region's forecasts in the interval 2012-2013 point to a very gradual improvement under the wait-and-see strategy of the Federal Reserve. The odds of a continued gradual recovery increase if the Fed decides to implement its Phase III of Quantitative Easing. Locally, retail sales, education and health services employment will continue to be the areas where the San Joaquin Valley has a comparative advantage. The specializations in these areas present consistent growth even during the sluggish economic activity, but at a much slower pace than 10-year, long-term averages. Relative to the nation, Valley employment grows at a slower pace. Relative to the state, Valley employment historically grew at a faster pace; however, since January 2011 this trend appears to have reversed as state employment growth has steadily registered above Valley employment growth.

Introduction

Our aim with business forecasting is to provide businesses with an unbiased statistical assessment about the past, current and future trends in the region relative to those of the state and the nation. Using state-of-the-art econometric models rather than subjective interpretation of past trends provides a more accurate picture of the business trends in the region.

In this report, we use the Bayesian vector auto-regression (BVAR) model to forecast each economic indicator's medium-term future path. We prefer to rely on visual inspection rather than numbers for ease in identifying trends and turning points. Each mean forecast line extending through the end of 2013 is displayed with lower and upper statistical confidence bands. The actual values (realizations) are expected to fall within this range.

After forecasts are generated, we wait for approximately one calendar quarter for realized values to come in; we then compare the actual values with the forecasts. This procedure, known as an "out-of-sample forecasts accuracy check," allows us to assess the forecasting performance of the model. The BVAR forecasting model predicts the turning points relatively more accurately than the competing models.

This San Joaquin Valley report is based on aggregated data from Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare counties. The metropolitan statistical areas (MSAs) from which data is gathered for this study are Bakersfield-Delano, Fresno, Hanford-Corcoran, Madera, Merced, Modesto, Stockton and Visalia-Porterville. The population of the San Joaquin Valley is about four million, with the agricultural sector being the driving engine of the regional economy. While the Valley at times was one of the fastest growing regions in the nation, the region's income per capita is significantly lower than the state. The Valley's unemployment rate fluctuated between 11 and 18 percent in the years between 2000 and 2011. As many investors already realize, the region's under-utilized resources of land, labor and capital offer many opportunities in education and health services, manufacturing, transportation and logistics, and information technology. The new proposed infrastructure of high speed rail and other projects are expected to make the Valley significantly more attractive to investors.

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The remainder of this report is organized as follows: a discussion of San Joaquin Valley labor market conditions and forecast; the region's housing market conditions; prices and inflation; and depositary institutions and capital markets. The report closes with a summary and concluding remarks.

We hope you find the annual projections informative and we look forward to receiving your comments and suggestions to incorporate into future forecasting reports.

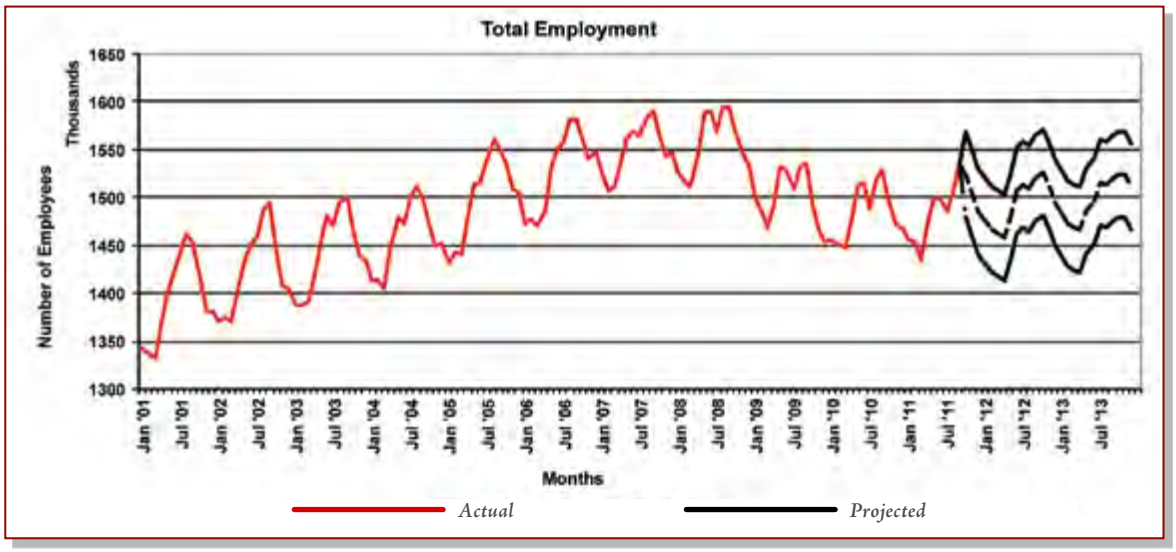
Employment Indicators

San Joaquin Valley employment indicators are obtained from the super-sector classifications of the Bureau of Labor Statistics. The non-farm and farm-related sectors reported in this study are comprised of total employment, manufacturing, construction, leisure and hospitality services, natural resources, logging and mining, education and health services, retail trade, wholesale trade, durable goods, non-durable goods, information, trade, transportation and utilities, construction and financial activities employment.

In 2011, San Joaquin Valley labor market conditions improved at a slower pace than at the national level. The Valley's total employment average annual growth for 2011 was -0.42 percent, significantly lower than its 10-year long-term growth rate of 0.64 percent.[1] However, structural adjustment slowly continues to occur. Despite short-term fluctuations, average yearly employment growth looked better in 2011 than 2010.

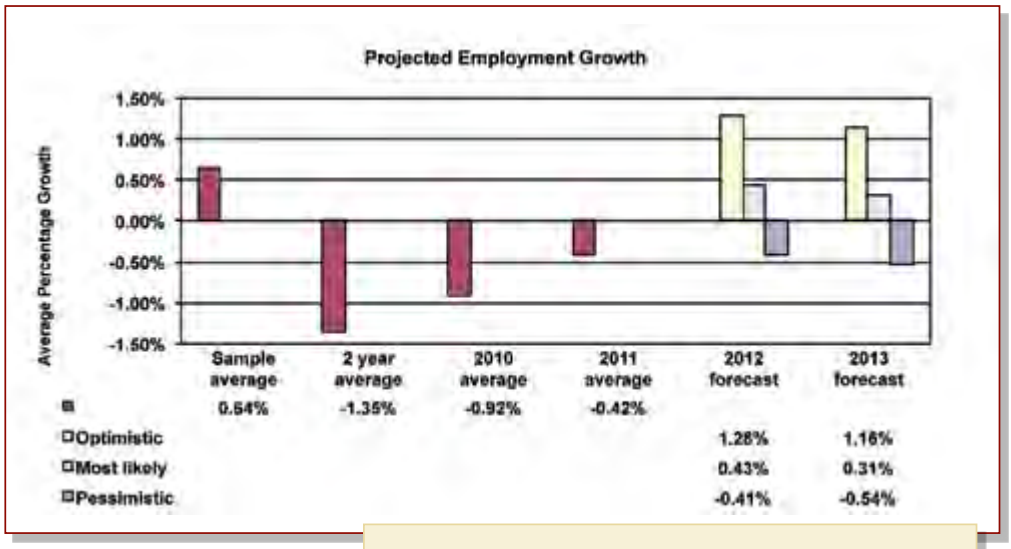
The series is expected to register positive growth rates during the forecasting interval of 2012-2013 with mean reverting behavior in the latter part of 2013.

The series is expected to register positive growth rates during the forecasting interval of 2012-2013 with mean reverting behavior in the latter part of 2013. Total number of employees in the Valley is projected to reach 1,495,000 in 2012 and 1,510,600 in 2013.



1 The Bureau of Labor Statistics publishes employment indicators at the county level beginning from 2001. The yearly growth rates start from 2002 allowing long-term calculations to be for nine years.

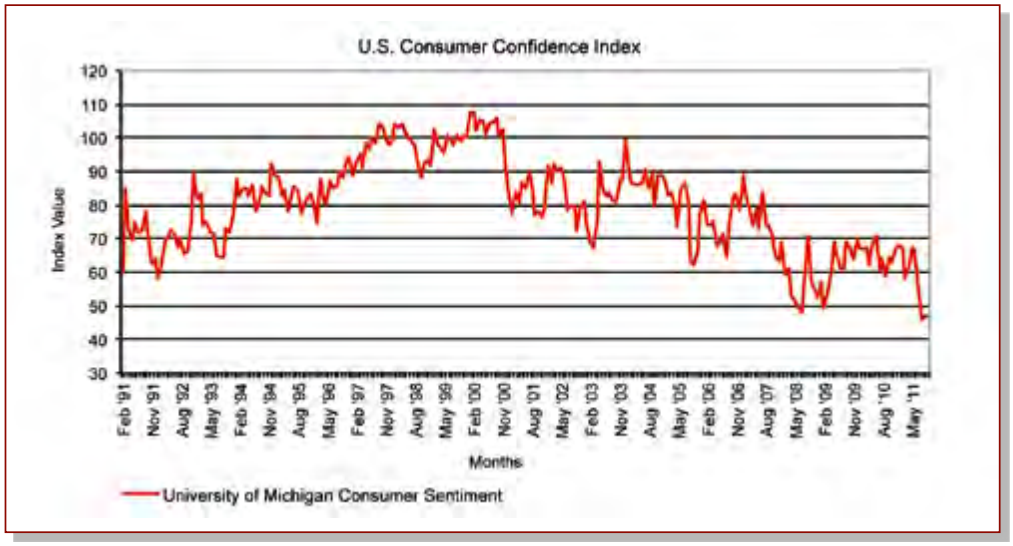
In 2012, yearly employment is expected to grow at an average rate of 0.43 percent. The mean reversion is expected to slightly dampen the employment growth in 2013 at 0.31 percent. The overall average growth rate in the forecasting interval is expected to be around 0.37 percent on an annual basis.



The overall average growth rate in the forecasting interval is expected to be around 0.37 percent on an annual basis.

It is a well-known fact that approximately two-thirds of the U.S. economy is consumption expenditure. It is the engine that drives the U.S. economy. As such, the U.S. Consumer Confidence Index is a leading indicator that closely affects local indicators such as the Valley's total employment. The Index is based on a survey of 5,000 U.S. households, a forward-looking variable that foretells whether U.S. consumers are pessimistic or optimistic about the short-term future.

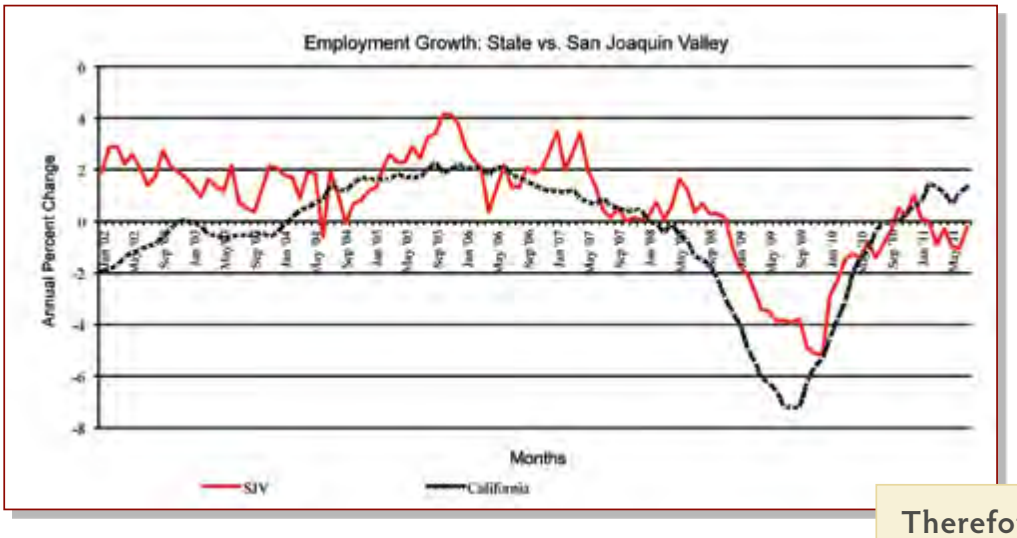
Consumer confidence continued to consistently but very gradually revert back to its long-run mean after hitting a leading trough in November 2008, with the exception of the most recent low value in July 2011. Assuming that this 2011 reading is of a temporary nature rather than sustained, the series dynamic is suggestive of the U.S. economy now being on a slow track toward its new steady long-run equilibrium. The very gradual improvement in sentiment mainly resulted from the cautious and at times jittery outlook of consumers due to the prolonged eclipse in the housing market, rising energy prices, and volatility in the financial markets. Consumer confidence took a downturn in mid-summer followed by flat national job growth of about 20,000 monthly but the upward trend is likely to continue to slope gradually upward with the most recent readings. The newly arriving data in September and October 2011 further signal a gradual recovery. Following the debt ceiling discussions and the lowering of the U.S. credit rating, this leading indicator posted a 30-year low in the first half of 2011. If this fall is once-and-for-all in nature, there appears to be no reason for concern on the reversal of a sustained gradual recovery. However, if the fall appears to be sustained with the dynamics of the series before the recession, then it may foretell a reversal. It is therefore very important to track this series in the upcoming months.



A comparison of the labor force and employment annual growth rate reveals that the gap between the two is closing. Such dynamics are consistent with the view that the past recession's higher-than-average unemployment rate has somewhat decreased the influx of population to the San Joaquin Valley. It is also consistent with the view that the labor force is declining at a faster pace than employment. [2]

A comparison of the labor force and employment annual growth rate reveals that the gap between the two is closing.

Historically, the San Joaquin Valley exhibits higher employment growth than the state; the intervals during which the state posted higher growth numbers have only been temporary. In the sample period of 2001-2011, California's economy registered annual growth in employment of about -0.19 percent whereas the San Joaquin Valley registered 0.70 percent growth. This is consistent with the view that during most of the sample period there was an influx of people to the Valley due to the lower costs and relatively more attractive opportunities of the region. Towards the latter part of the sample period, however, and particularly since January 2011, California's employment growth has been significantly greater than that of the Valley. In particular, California's yearly average rate of employment growth since January 2011 was 1.10 percent, but the San Joaquin Valley's rate of employment growth declined at -0.47 percent.



Even during the recessionary period, when both the state and the Valley had negative employment growth numbers, the state's employment was shrinking at a greater rate than the Valley's employment. When the entire sample is considered, the posted declines of more than -2 percent during the sample's global minimum that occurred in the last quarter of 2009 are descriptive of the rest of the sample. Therefore, the possibility of a "double dip" recession is less likely now that the series is displaying a tendency to catch its long-run steady state of approximately 0.64 percent.

Therefore, the possibility of a "double dip" recession is now less likely…

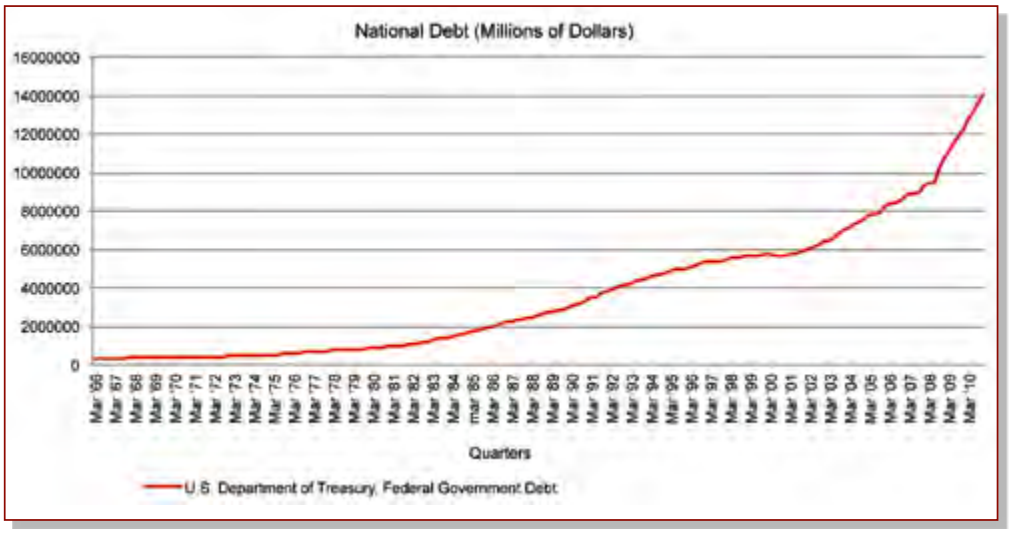
2 *Some reversal of influx has occurred out of state.*

The first quarter announcement that real GDP growth is down, at 1.8 percent compared to 3.1 percent the previous quarter, has brought back fears of a double dip recession. The reading from the leading indicators is consistent, however, with the view that a double dip recession is unlikely. This is supported by the fact that the U.S. economy grew on average 2 percent annually in the last ten years. The third quarter 2011 reading was at 2.5 percent annually, the highest in a year. The drop in the growth rate therefore appears to be more indicative of short-term fluctuations resulting from high energy prices due to the unrest in the Middle East, the Japanese negative supply shock from the earthquakes and tsunami, and debt woes of E.U. member countries such as Greece, Italy and Ireland, rather than from purely domestic events.

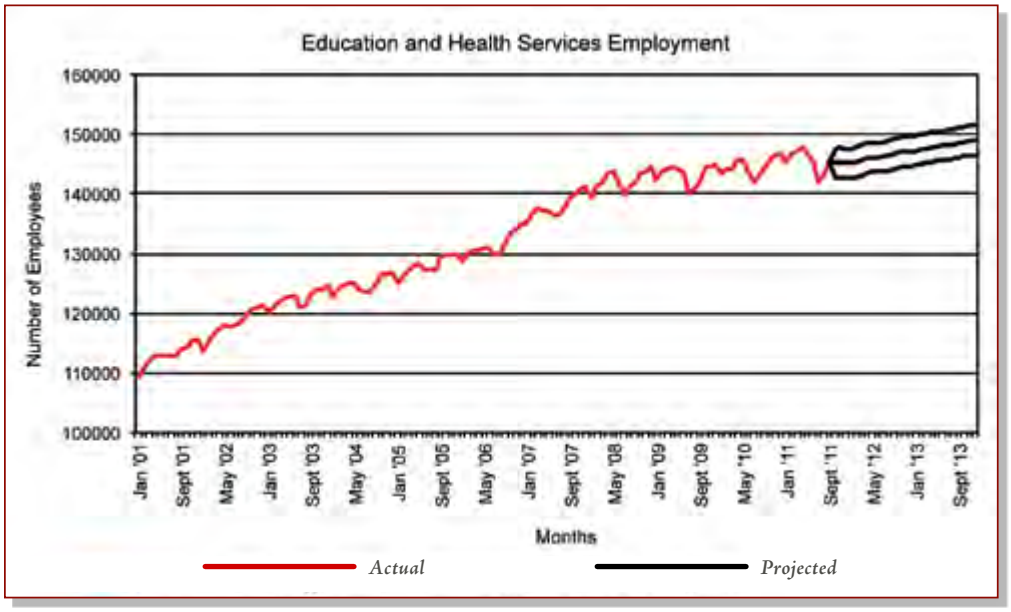
The model's projections indicate that the U.S. economy is likely to fluctuate around this long-run rate with average growth at 2.10 percent in 2012-2013. The projections although slower than expected, do not point to a double dip recession in the forecasting period at the national level. The San Joaquin Valley economy is projected to follow this trend and post similar growth numbers as at the national level.

U.S. government debt began increasing at an exponential rate in 2000. Not surprisingly, this trend is one of the most serious concerns for policymakers and analysts. The increase of debt that began in the second half of 2008 has been the steepest in series history, reaching a point in the second half of 2011 that prompted discussions of raising the debt ceiling and eventually led to the lowering of the national credit rating of the United States.

Many analysts agree that the way to pull out of recessions is by engaging in expansionary fiscal and monetary policies and then, once the economy has recovered, provide fiscal discipline through tax increases and monetary tightening. With the gradual recovery of the U.S. economy, however, this is not seen as a likely option to pursue in the short term. If inflationary pressures are of a more sustained rather than temporary nature, policymakers might have to choose between job creation and price stability.



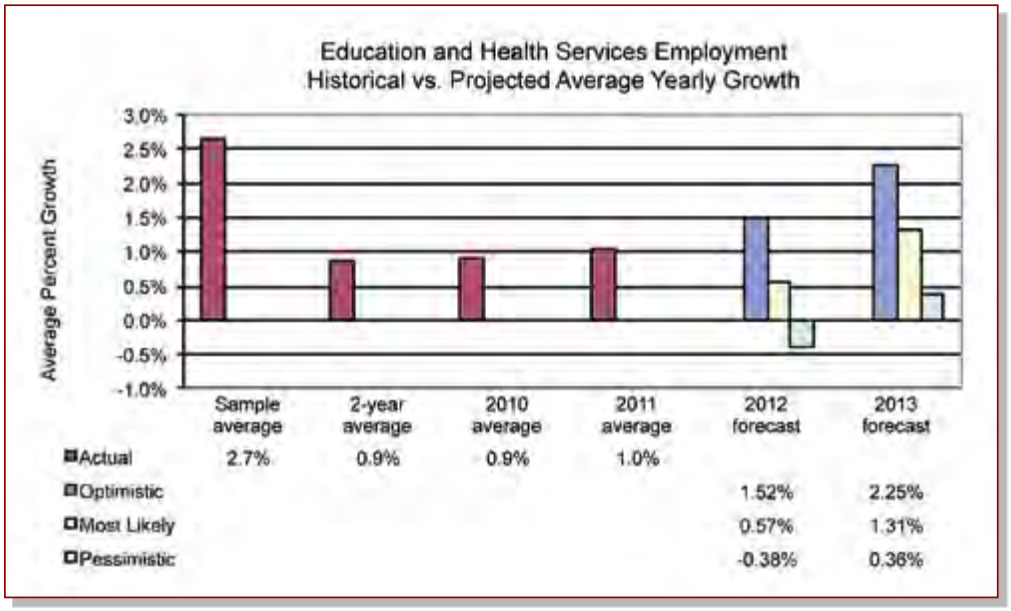
Schools and hospitals employ about 10 percent of all non-farm employment in the San Joaquin Valley, of which nearly 60 percent is private. Education and health services is the sector in which the region has a competitive advantage relative to other sectors. The series faces very inelastic demand, and is therefore not expected to be affected by recessions. In fact, during recessions, the demand for education increases as those workers who are displaced by the recession turn to education.



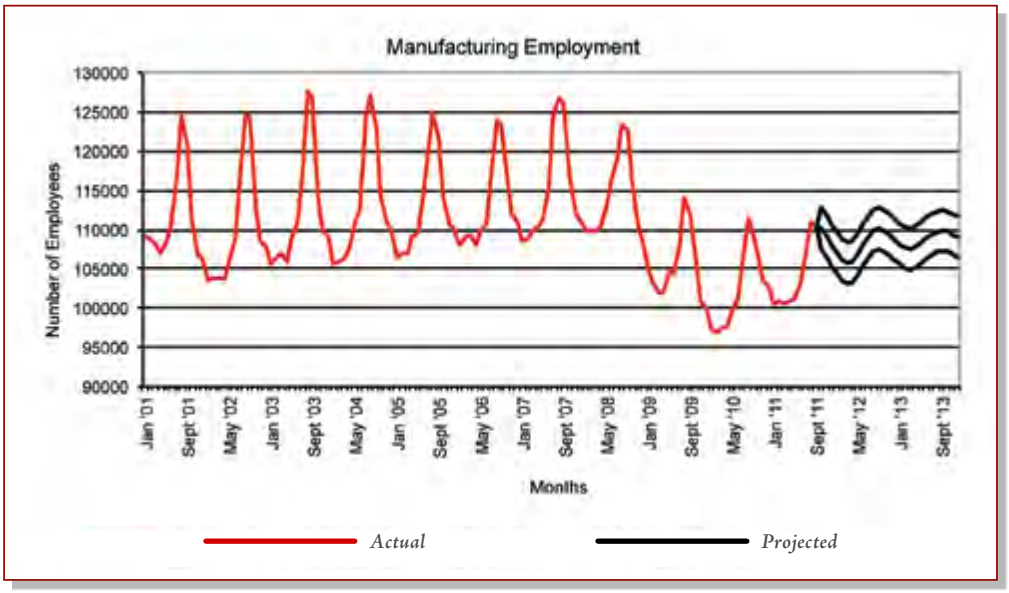
Education and health services employment has exhibited very stable historical growth, displaying an average annual growth around 2.7 percent over the past 10 years. The narrow dispersion around the mean also makes this series more predictable than others. Even during the past recessionary period, the series continued to register positive growth numbers displaying the robustness of this sector.

Education and health services is the sector in which the region has a competitive advantage relative to other sectors.

In the forecasting interval of 2012-2013, the projections show that this trend of growth for education and health services is expected to continue. Employment in these sectors is expected to grow at an average annual rate of 0.57 and 1.31 percent in 2012 and 2013 respectively. Because the series exhibits little volatility historically, the 95 percent upper and lower forecasting bounds display little dispersion, thus resulting in forecasted values that appear very close to each other.



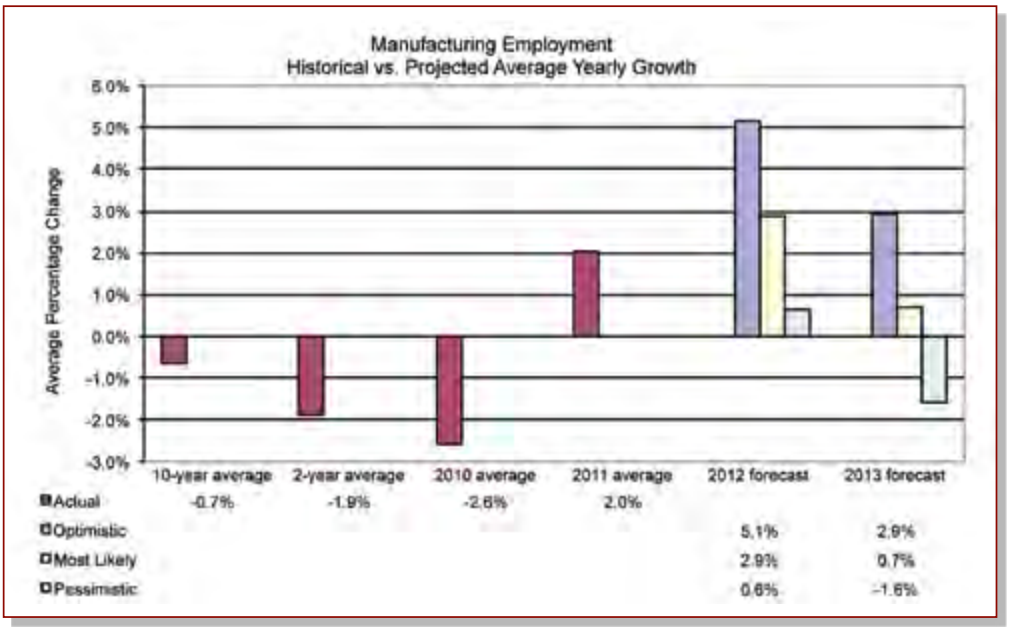
The 10-year annual average growth rate of manufacturing employment in the San Joaquin Valley stood around -0.7 percent. During the past recession, the series posted a significantly larger, average two-year decline of -1.9 percent. In 2011 however, manufacturing employment began to recover at an annual rate of 2.0 percent, continuing to post a steep rise since June 2009 when the series hit a bottom. Some of this increase in 2011 reflects the relocation of certain manufacturing plants in the San Joaquin Valley to take advantage of the relatively attractive opportunities the region offers.



This recovery is surprisingly more significant relative to other sectors in the Valley and is expected to continue into 2012 and 2013 at annual average rates of 2.9 and 0.7 percent, respectively. The series displays a strong seasonal behavior that peaks in the third quarter and bottoms in the first quarter of each year. Because of the volatile history of the series, the confidence bands display wider dispersion around the mean.

This recovery [in manufacturing employment] …is expected to continue into 2012 and 2013.

Two leading indicators on the producers' side are the Purchasing Managers Index (PMI) and the Manufacturing: New Orders Index, which are both prepared by the Institute for Supply Management (ISM).



The PMI is a composite index of five "sub-indicators," which are extracted through surveys of more than 400 purchasing managers from around the country.[3] This sector is important because it historically tends to predict the beginning and ending of recessions. A visual inspection reveals new orders are generally on the rise, with relatively more vibrant manufacturing activity during the first half 2011. Since the summer of 2011, however, the series is reverting back to its mean along with slower than expected growth. The series had hit a bottom in February of 2009 after consumer sentiment dropped, as one would naturally expect the consumer behavior to stall before a cutback in manufacturing activity.

Perhaps the most convincing indicator that a more gradual regional and national recovery is underway is the number of new orders for all manufacturing industries.

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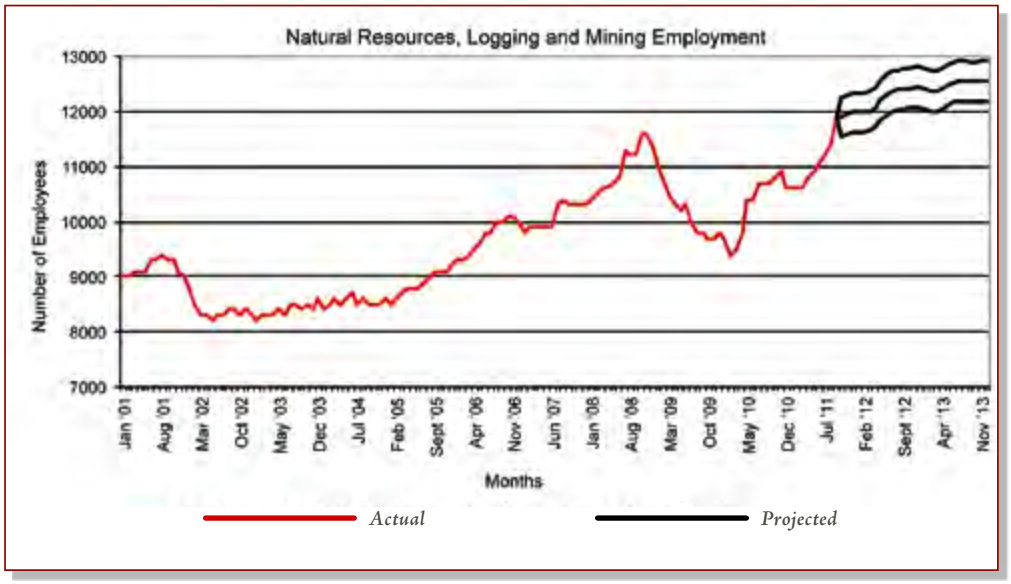
After hitting a bottom in January 2009, the series displayed a consistent upward trajectory, with the exception of the 2010 third quarter. The series fell just short of displaying a global maximum in the first quarter of 2011, yet another convincing sign that a recovery is underway. However, in the second half of 2011, the series began leveling off to a more stagnant pattern indicative of the economy growing at a slower pace than previously expected.

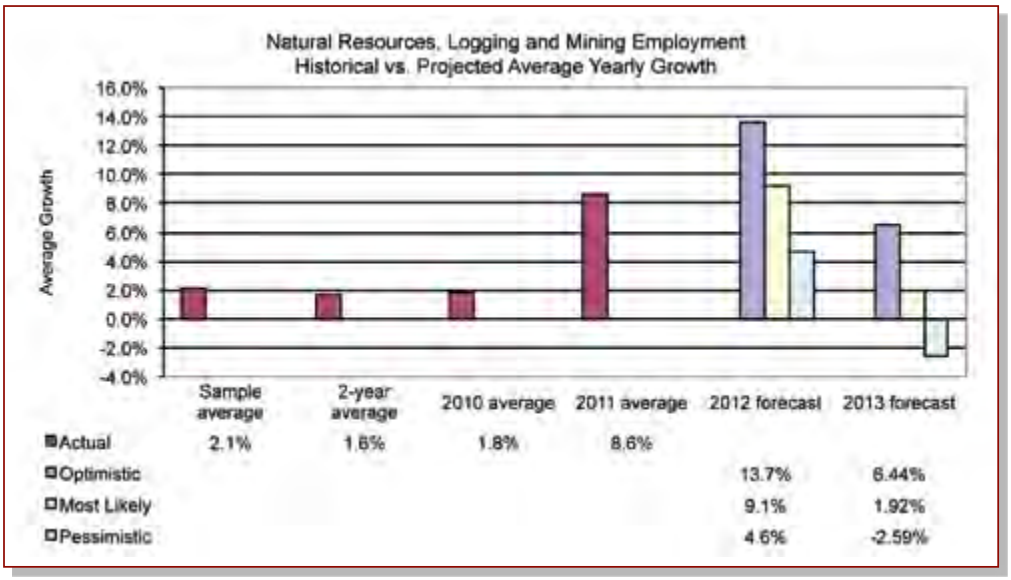
3 The five PMI sub-indicators are production level, new orders, supplier deliveries, inventories, and employment levels.

Since 2001, San Joaquin Valley natural resources, logging and mining employment grew at an annual average rate of 2.1 percent. Unlike education and health services employment growth, natural resources, logging and mining employment suffered a significant decline during the 2007-2009 recessionary period but has been recovering rapidly. Despite a yearly increase of 1.8 percent in 2010, the series grew by 8.6 percent in the first half of 2011.

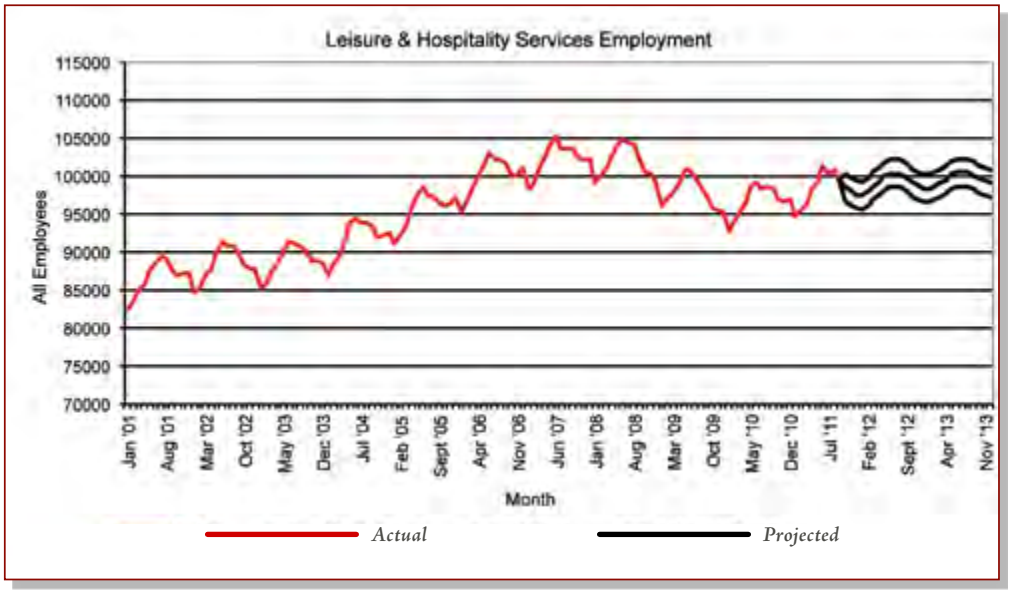
Natural resources, logging and mining employment suffered a significant decline during the 2007-2009 recessionary period but have been recovering rapidly.



For the forecasting interval 2012-2013, the projections indicate a continuation in improvement at 9.1 and 1.92 percent. The average growth in the entire forecasting interval is expected to be around 5.56 percent. In this series as well, the volatile historical pattern has resulted in a wide dispersion around the mean forecast. In the Bakersfield-Delano MSA alone employment in this category increased significantly in September.

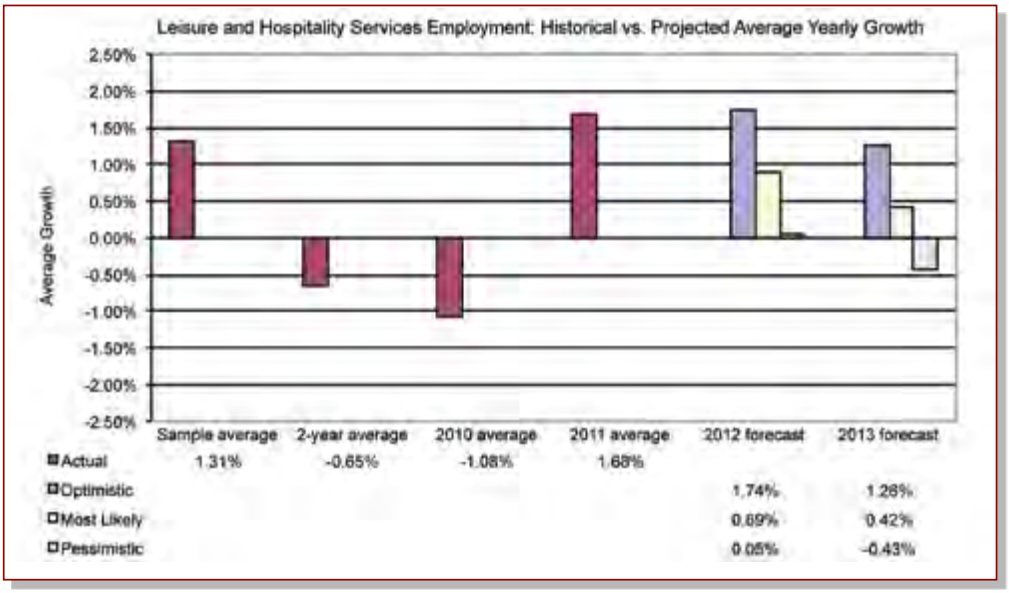


San Joaquin Valley leisure and hospitality services employment grew at an annual average rate of 1.31 percent over the sample period. In 2010, the growth rate declined at a much faster rate of around -1.08 percent. In the first half of 2011, the series began registering positive growth rates. We expect this dampened positive growth to continue with the series mimicking its seasonal pattern, peaking during the summer season and reaching a seasonal trough during the winter season.



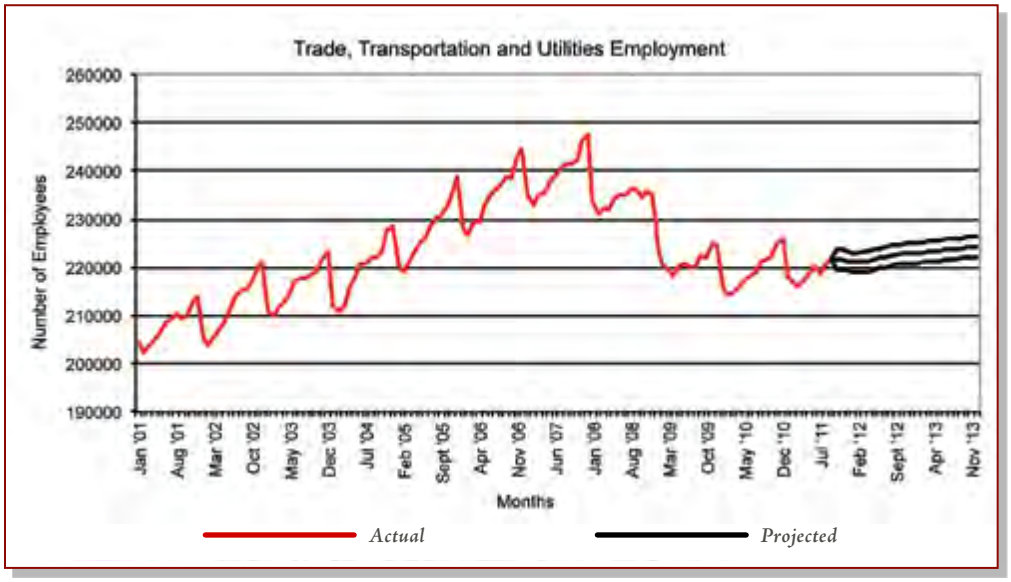
The Valley's leisure and hospitality services employment is projected to grow at 0.89 and 0.42 percent during 2012-2013. The series reached a lagged bottom in the winter of 2010 but has been recovering while repeating its seasonal pattern. The overall projected growth is expected to be around 0.66 percent during the entire 2012-2013 forecasting period and the series is displaying signs of reverting back to its long-run average growth rate.

Leisure and hospitality … reached a lagged bottom in the winter of 2010 but has been recovering while repeating its seasonal pattern.

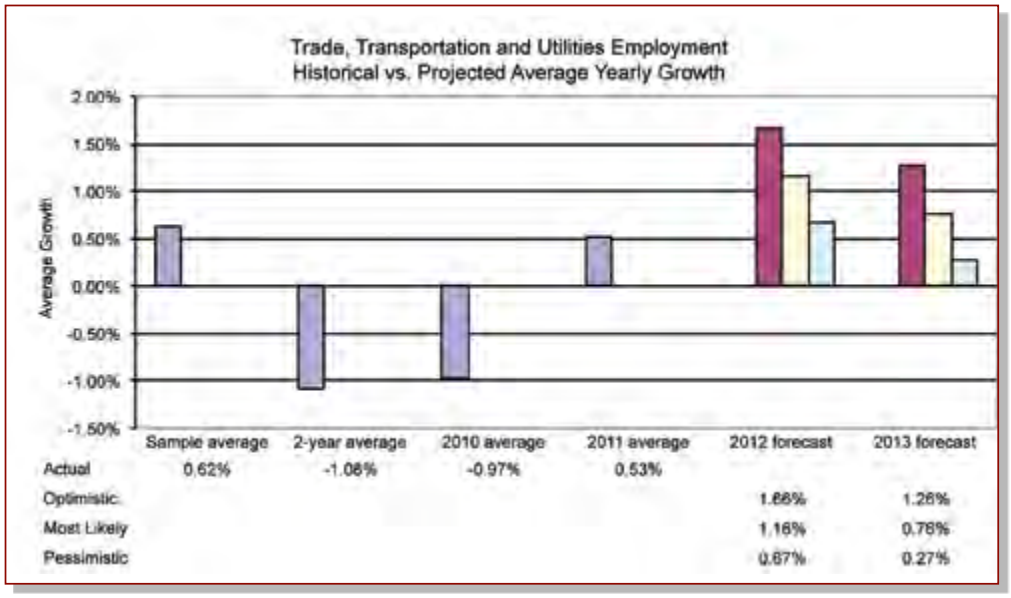


Trade, transportation, and utilities employment began improving after reaching a bottom in February 2010.

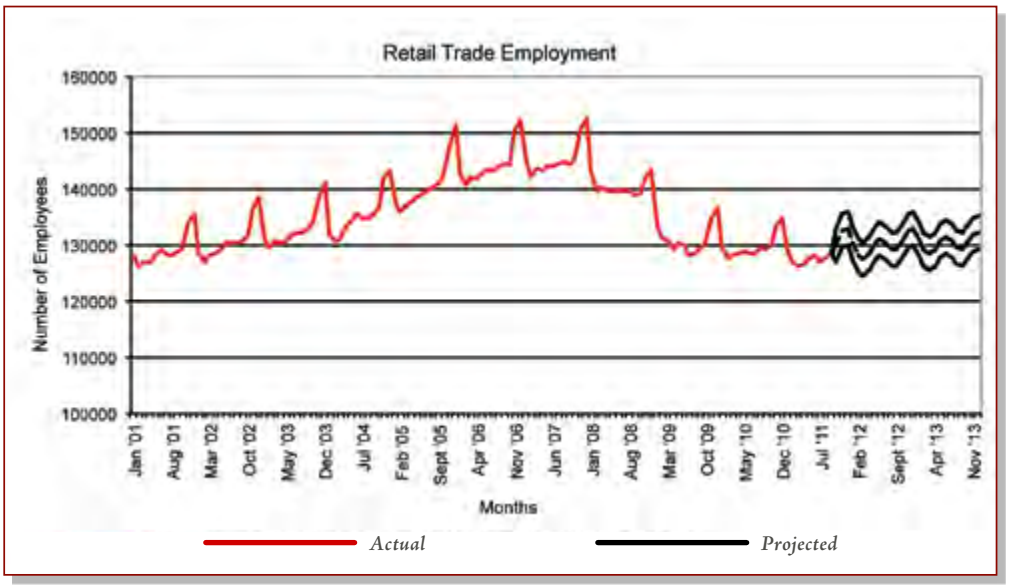
San Joaquin Valley trade, transportation, and utilities employment exhibits a distinct seasonal pattern peaking in the month of December and reaching a lagged seasonal trough in February. The sample average growth of the series stands at 0.62 percent. In 2010, the series exhibited annual average decline of -.97 percent. Trade, transportation, and utilities employment began improving after reaching a bottom in February 2010.



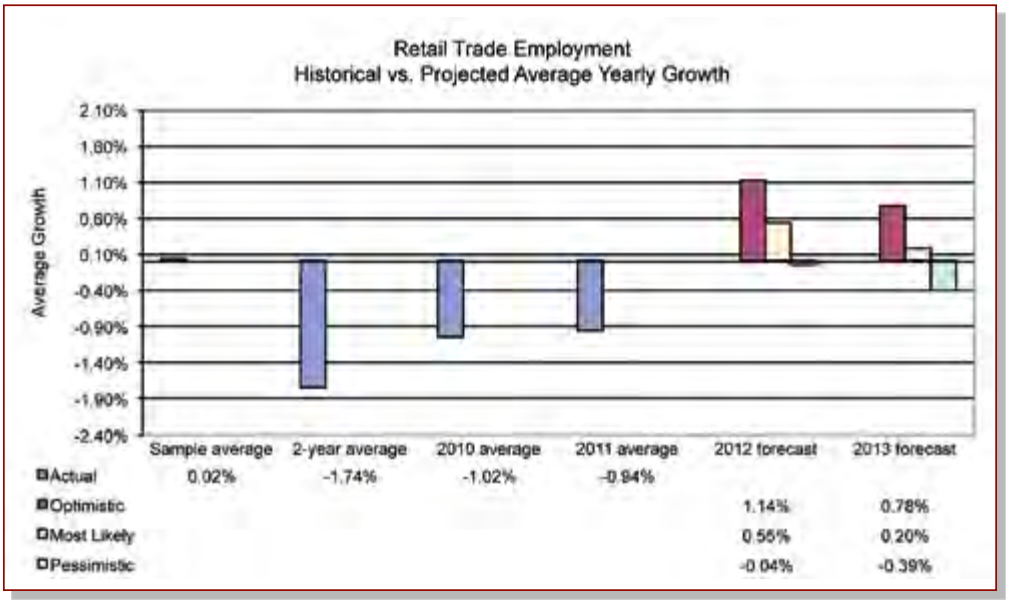
In 2011, Valley trade, transportation and utilities employment grew at a yearly average rate of 0.53 percent, a rate lower to its long-run historical growth rate of 0.62 percent. In 2012 and 2013, the series is expected to grow at 1.16 and 0.76 percent, respectively.



Apart from its seasonal peaks in the month of December, San Joaquin Valley retail trade employment has displayed a declining trend since the fourth quarter of 2007. Following August 2009, however, the series has exhibited a very slow decline with almost a horizontal trend. The sample average of the series in 2001-2011 is 0.02 percent. In the past two years, the series declined at a yearly average rate of -1.74 percent. In 2010, the yearly percentage change registered at -1.02 percent, further reflecting weak consumer confidence.

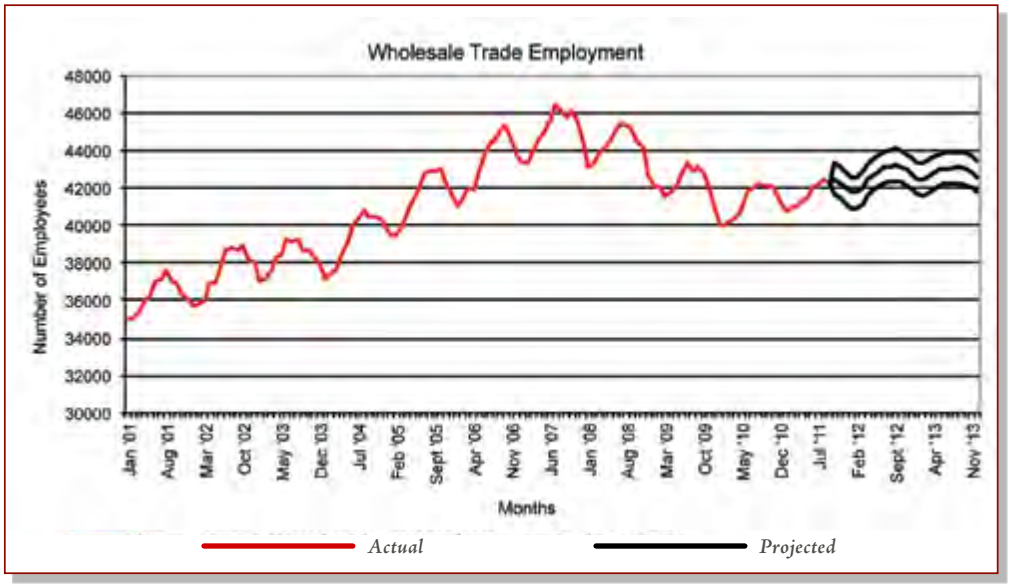


By the third quarter of 2011, the series posted -0.94 percent growth, indicative of this flat trend. In the 2012 forecasting interval, the model predicts a turning point with a yearly positive average growth rate of about .55 percent. This positive trend is expected to continue into 2013 and, consistent with the fluctuating behavior of the series, is expected to exhibit a dampening at an average yearly growth rate of 0.19 percent.

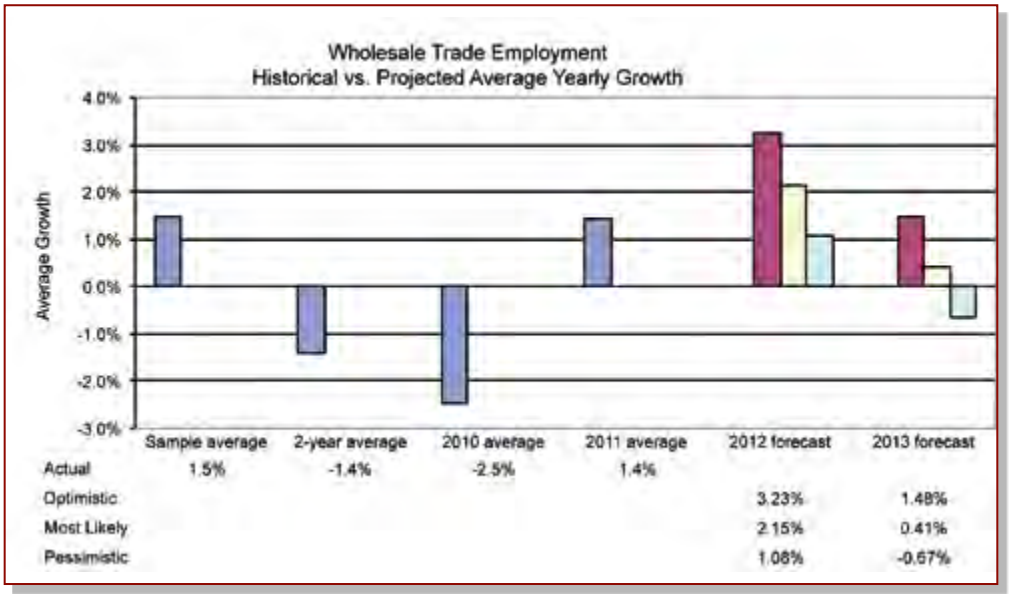


San Joaquin Valley wholesale trade employment performed significantly better than retail trade employment, posting a yearly average growth rate of 1.5 percent over the entire sample. Historically, the region's wholesale trade employment amounts to three times more than retail trade employment, indicative of comparative advantage. The seasonal peak occurs in July of every year and the trough occurs in February. The series appears to have already hit a bottom in February 2010 and its recovery phase is well underway.

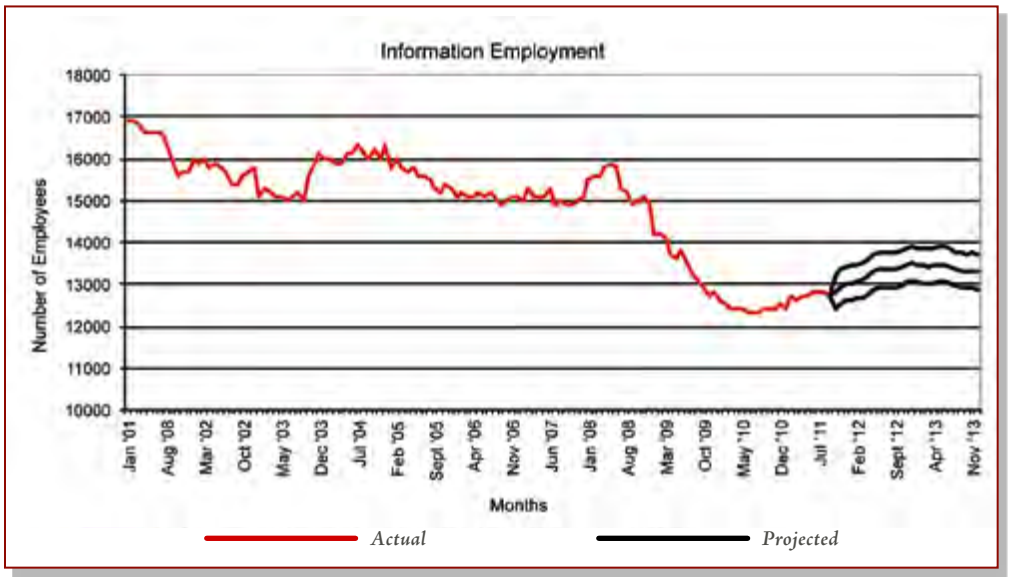
San Joaquin Valley wholesale trade employment performed significantly better than retail trade employment.



The series declined at -2.5 percent in 2010 but grew at 1.4 percent by September of 2011. In 2012, the series is projected to grow at an annual rate of 2.15 percent, and in line with its fluctuating pattern, it is projected to grow in 2013 at a rate of 0.41 percent. The relatively vibrant activity in wholesale trade relative to retail is more reflective of the manufacturing activity and retail demand outside the region and the state.

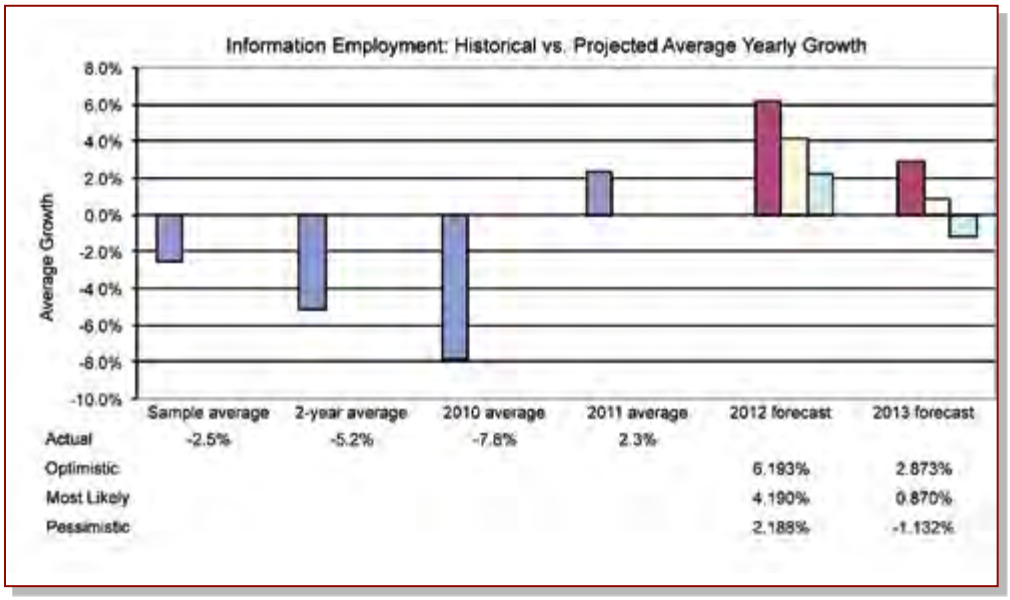


San Joaquin Valley information employment as categorized by the Bureau of Labor Statistics exhibited a steady decline after hitting a peak in June 2008. Following a trough in August 2010, Valley information employment began posting job gains. The series is expected to continue to recover following the same steady pattern it exhibited during the decline, growing at 2.3 percent by the third quarter of 2011.

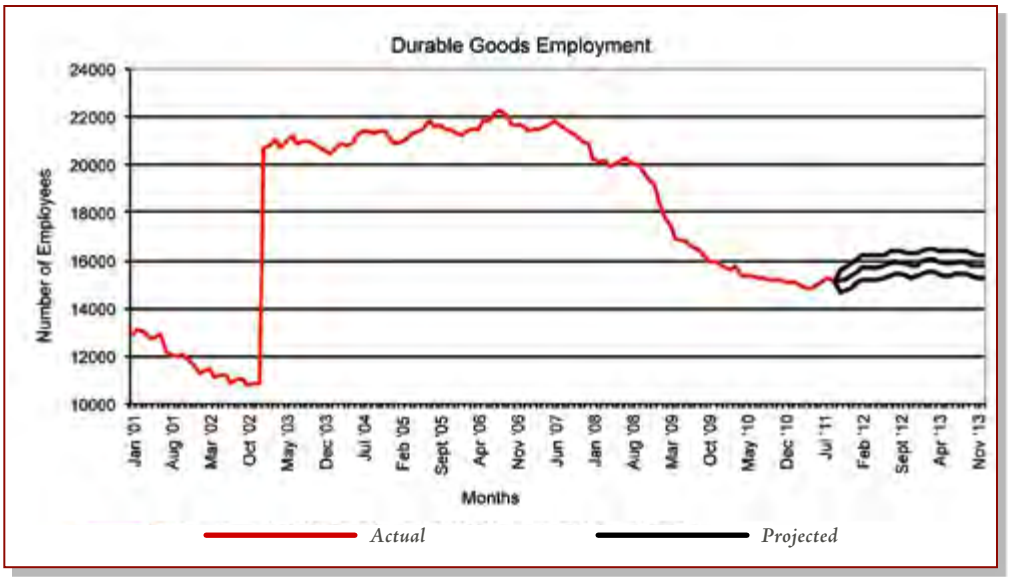


The average yearly decline in the sample period was -2.5 percent. In the last two years it declined at a much-accelerated rate of -5.2 percent. In the forecasting interval 2012-2013, Valley information employment is projected to grow at 4.19 and 0.87 percent, respectively. By the end of the forecasting interval, Valley information employment is projected to catch its long-term level at 13,294 employees.

By the end of the forecasting interval, Valley information employment is projected to catch its long-term level.



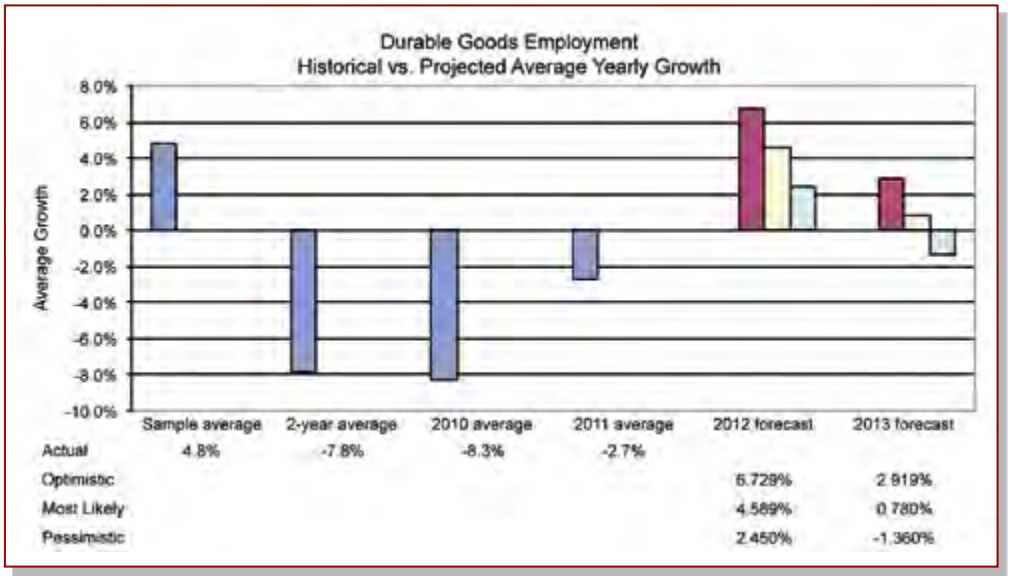
San Joaquin Valley durable goods employment registered a spike in December 2002 perhaps due to hiring by a major employer that had relocated to the area. The series held steady at 20,000 employees until June 2008 when it began to show a significant decline; since April 2010, this decline has continued but at a much slower pace.



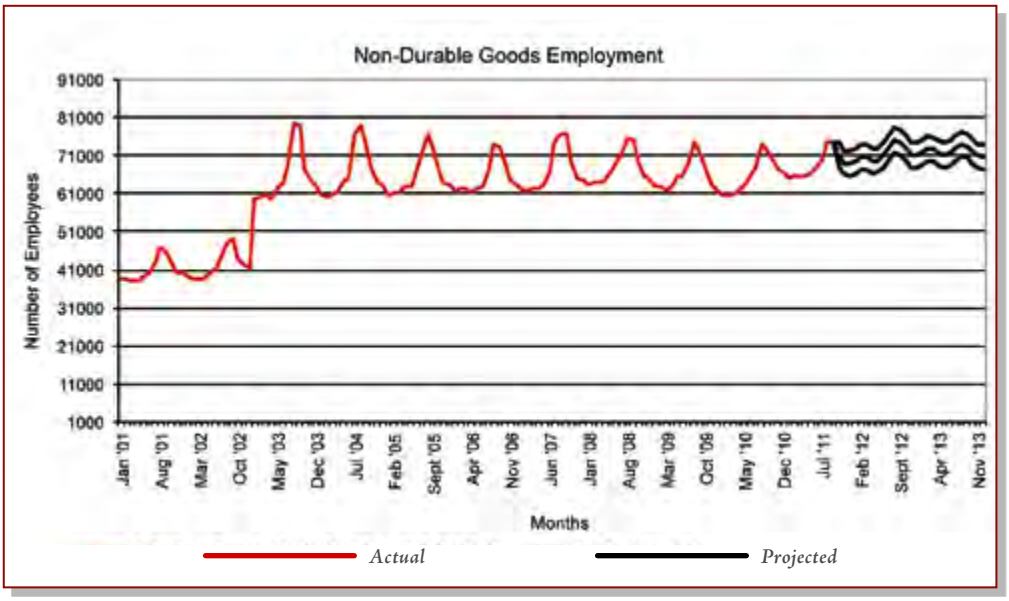
The model predicts a turning point in the fourth quarter of 2011 with a steady increase afterward toward its long-run rate.

The model predicts a turning point in the fourth quarter of 2011 with a steady increase afterward toward its long-run rate.

San Joaquin Valley durable goods employment increased at an annual average rate of 4.8 percent in the sample interval of 2001-2011. In the last two years, however, the series registered a very significant decline of -7.8 percent. By the third quarter of 2011, this decline receded to -2.7 percent, thus posting a recovery of about 5 percent. In 2012 and 2013, the projections show an average yearly increase of 2.68 percent. Valley durable goods employment is projected to reach 15,763 by the end of 2013.

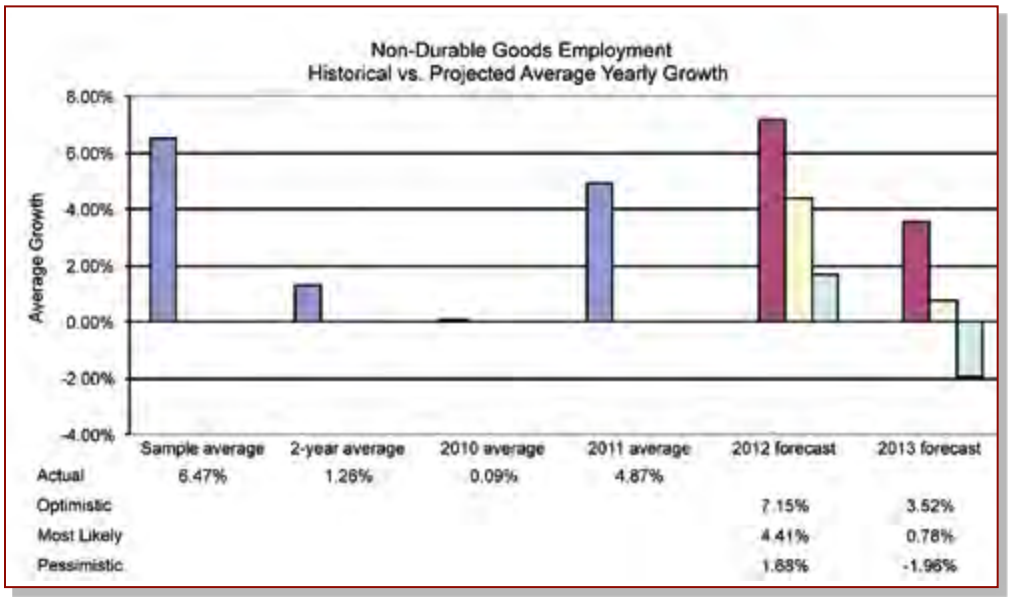


San Joaquin Valley non-durable goods employment exhibits a seasonal behavior, reaching a peak in September and hitting a trough in February of each year. Non-durable goods employment was affected less by the recession when compared to the region's other sectors. The relatively robust pattern of the series indicates that the region has yet another competitive advantage in this job classification. This robust behavior is projected to increase during the forecasting interval 2012-2013.



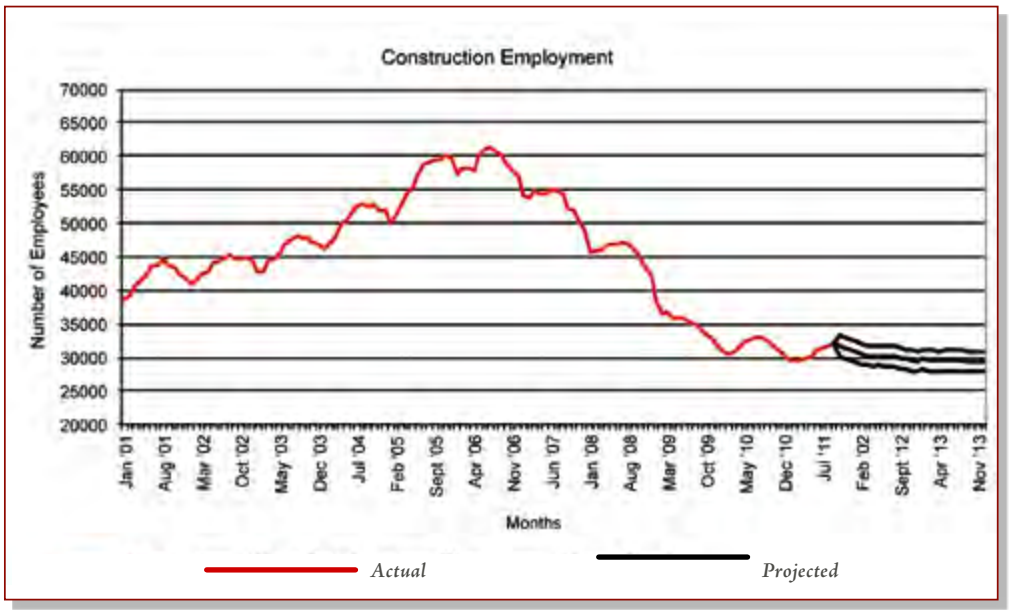
Non-durable goods employment was affected less by the recession when compared to the region's other sectors. The relatively robust pattern of the series indicates that the region has yet another competitive advantage in this job classification.

San Joaquin Valley non-durable goods employment grew at an average yearly rate of 6.47 percent in the sample interval of 2001-2011. In the last two years, as a result of the recession, the series grew at an average yearly rate of 1.26 percent. Non-durable goods employment recovered very quickly by the third quarter of 2011, posting an annual average growth rate of 4.87 percent. In the forecasting interval 2012-2013, non-durable goods employment is projected to grow at a rate of 2.6 percent. Employment in this category is predicted to reach 70,586 by the end of 2013.



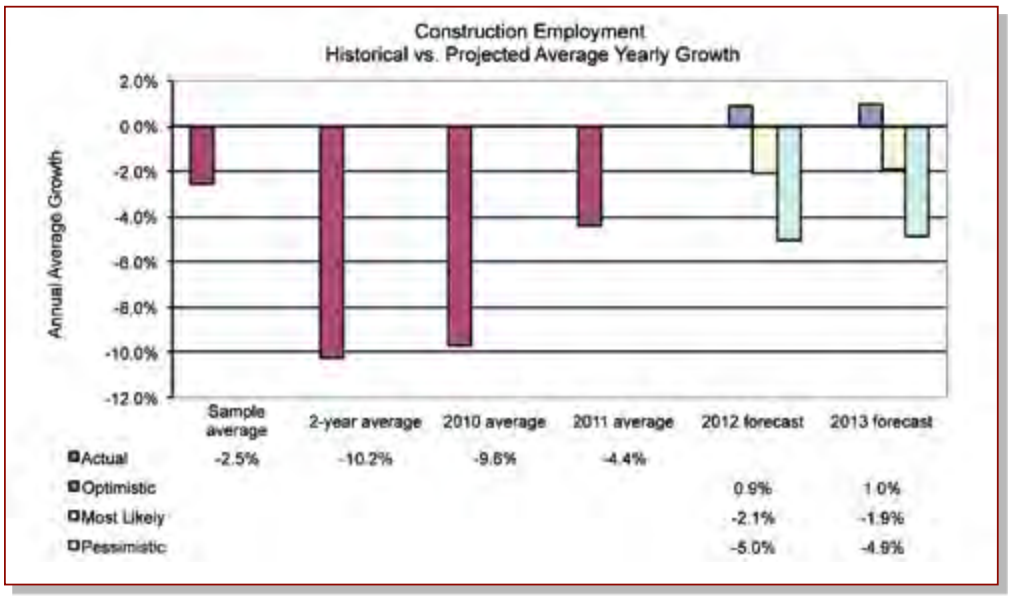
San Joaquin Valley construction employment declined at a very steep rate after reaching a peak in August 2006. Since March 2010, the rate of decline has been at a much slower pace. The model does not predict a turning point in the 2012-2013 forecasting interval but instead predicts a hyperbolic pattern in which employment in construction holds steady at around 30,000.

Over the sample period of 2001-2011, the series declined at a rate of -2.5 percent. The boom that occurred in the early part of the sample mitigated the larger decline in the latter part of the sample; in the last two years, construction employment declined at a phenomenal rate of -10.2 percent. By the third quarter of 2011 this decline slowed to -4.4 percent.



The projections point to an average yearly decline of -2.0 percent in the 2012-2013 forecasting interval. Undoubtedly, the construction sector is the hardest hit sector nationwide Valley being at the epicenter of the housing crisis. Construction employment, which is a lagging indicator in this sector, is the worst performing series in the San Joaquin Valley.

No well-defined turning point is yet predicted and any sustained turnaround is at best deferred to the latter part of 2013 until all excess inventories are depleted.



No well-defined turning point is yet predicted by the incoming data and any sustained turnaround is at best deferred to the latter part of 2013 until all excess inventories are depleted. This minimal performance, to hold steady at around 29,000 employees, is predicted to last until at least the end of 2013.

San Joaquin Valley financial activities employment appears to have clearly hit a turning point in January 2011 and has been steadily recovering since then. Growth was slower than expected in the second half of 2011, but this is not anticipated to obscure the recovery of the series.

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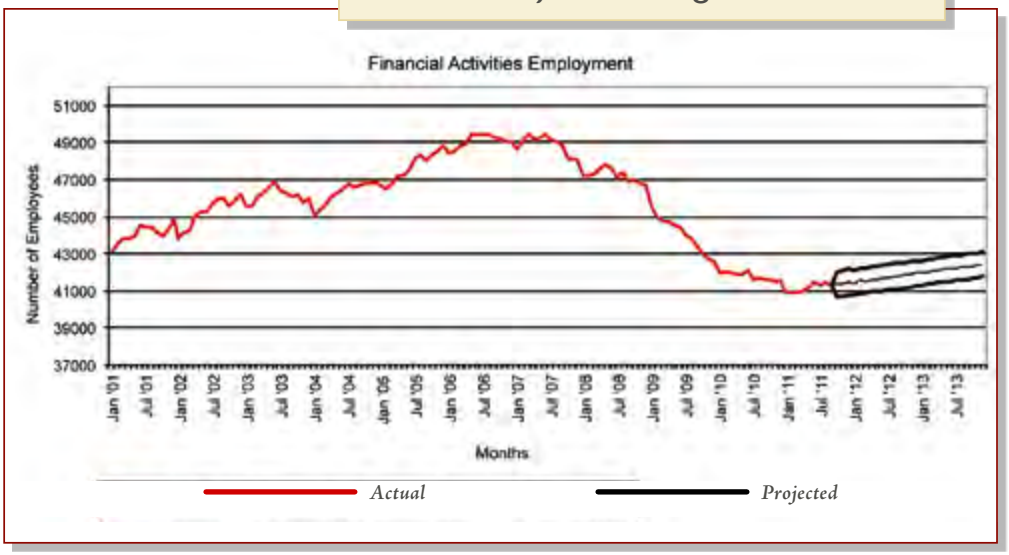
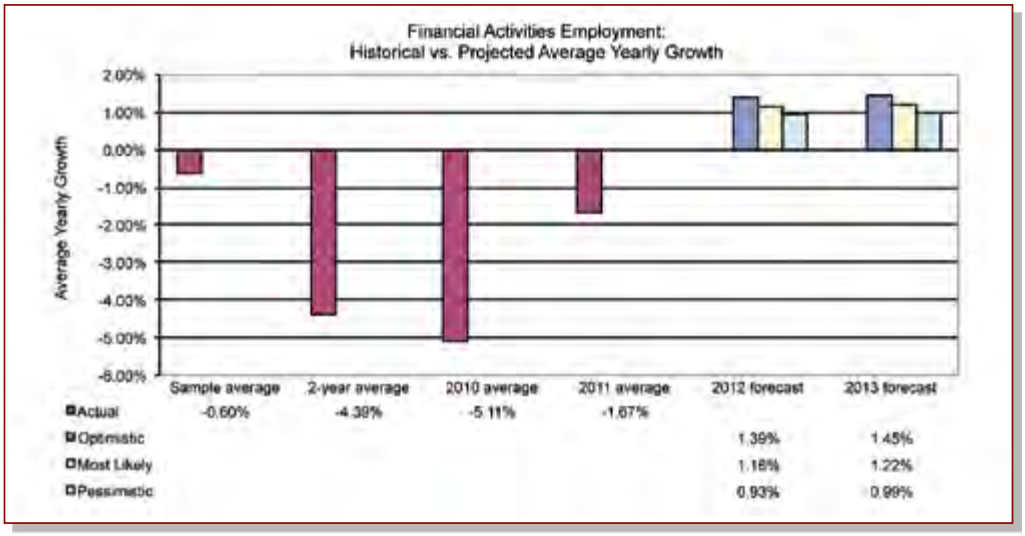


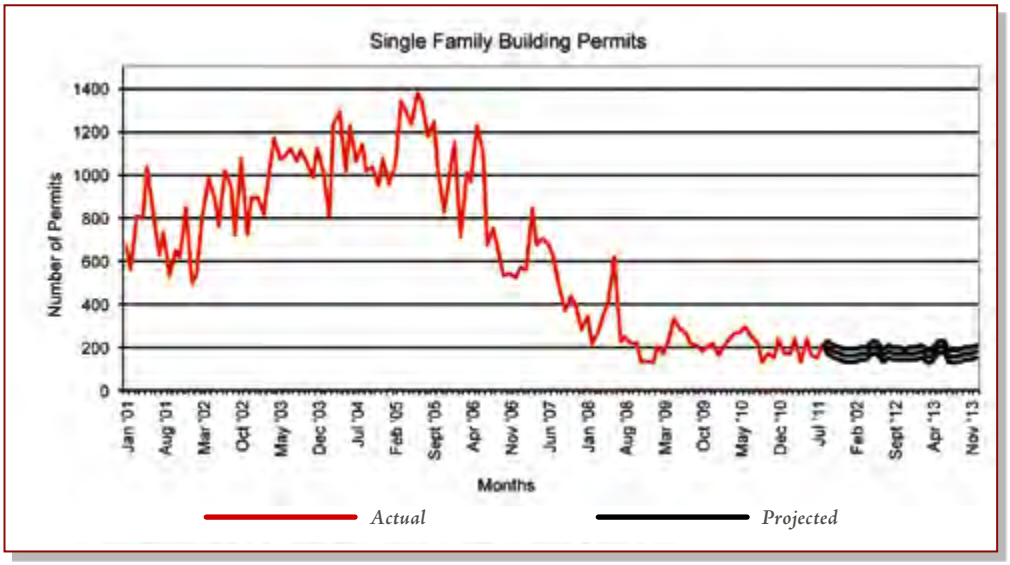
During the past 10 years, Valley financial activities employment declined at a yearly average rate of -0.60 percent. In the past two years, the decline has become more pronounced at -4.39 percent; 2010 registered the worst decline at -5.11 percent. The series exhibited a clear turning point in January 2011, when Valley financial activities employment began to gradually improve.

In the forecasting interval of 2012-2013, Valley financial activities employment is projected to register positive growth… and may further signal the region's gradual recovery toward a more sustainable equilibrium.

The series experienced a much improved but still negative average growth rate of -1.7 percent in 2011. In the forecasting interval of 2012-2013, Valley financial activities employment is projected to register positive growth of 1.16 and 1.22 percent, respectively. The financial sector leads other sectors in a recovery and therefore these numbers may further signal the region's gradual recovery toward a more sustainable equilibrium.



Housing Sector

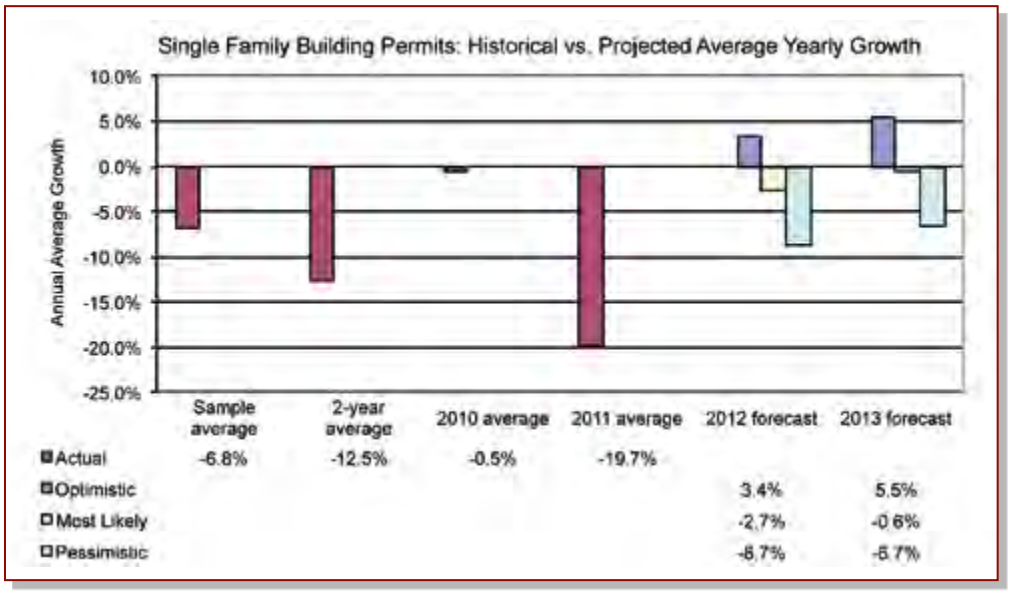


Housing permits for the San Joaquin Valley are from the imputed values of the U.S. Census Department and belong to major metropolitan statistical areas as defined by the U.S. Bureau of Labor Statistics. Temporary, seasonal peaks occurred mostly in the month of May each year and were not sustained; building permits have consistently declined since May 2006 when they reached the sample's global maximum. Since February 2008, the number has held steady at about 230 permits per month.

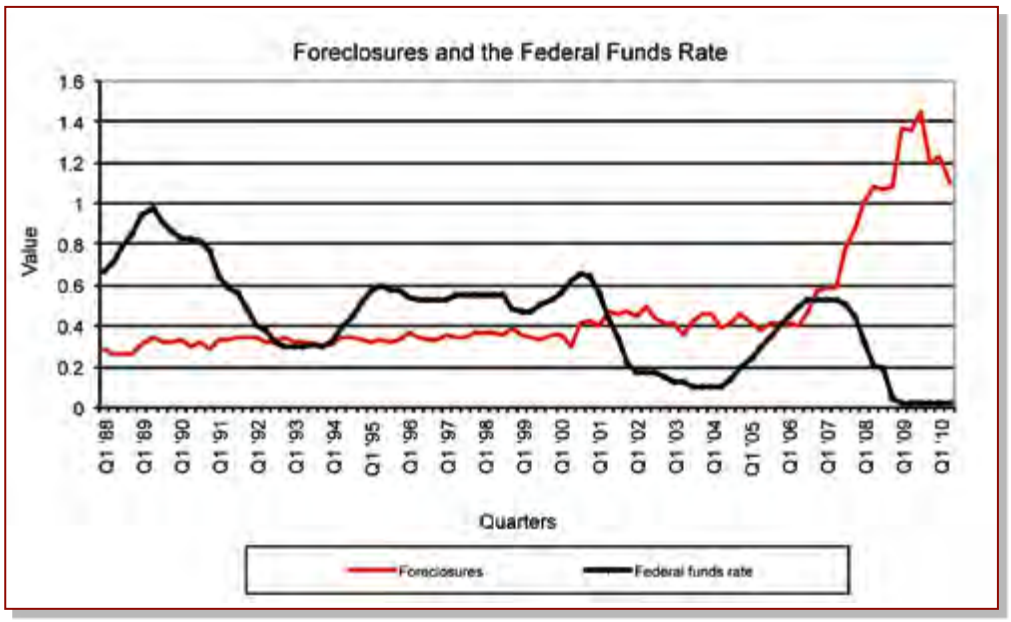
During the sample period of 2001-2011 San Joaquin Valley building permits declined at an average yearly rate of -6.8 percent. During 2010, the decline temporarily slowed and then worsened at an average yearly rate of -19.7 percent by the third quarter of 2011.

The model predicts a weak improvement in the negative territory during the latter part of 2012 and is likely to improve in 2013.

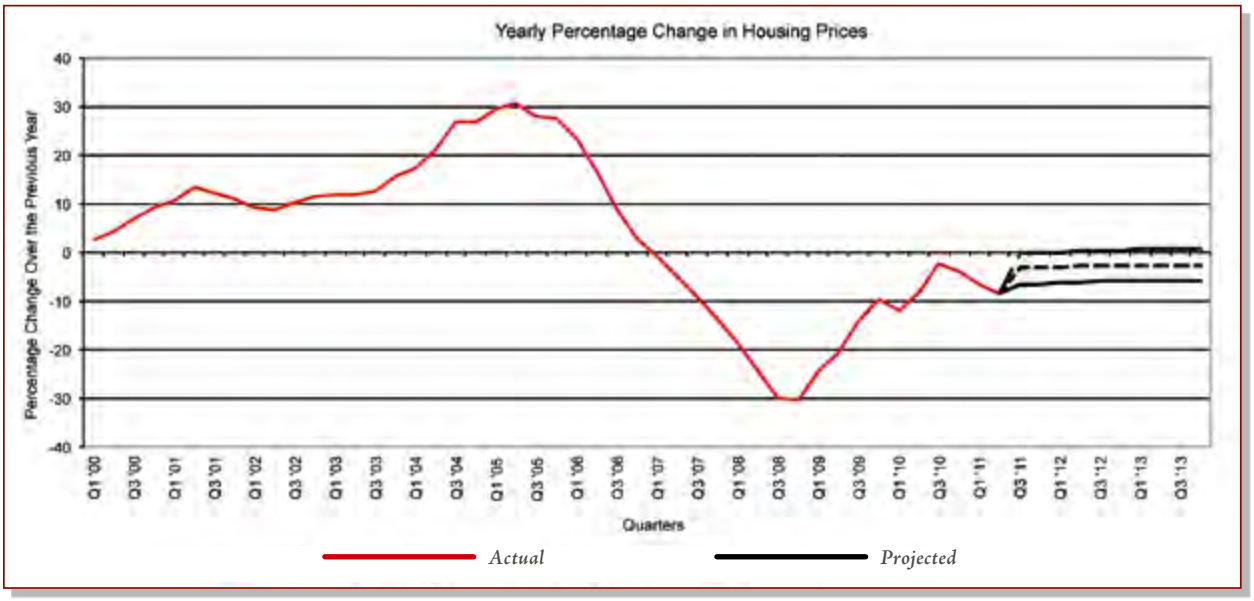
The model predicts a weak improvement in the negative territory during the latter part of 2012 at -2.7 percent and that is likely to improve in 2013 to -.6 percent. The number of permits is expected to be around a low value of 200 per month by 2013. One encouraging sign is that banks have begun to work more closely with homeowners on short sales. This has led to a decrease in foreclosure starts and caused inventories to run lower. The many for-sale sign postings that were observed on almost every street during the winter of 2011 significantly declined this summer, and the rental market has become more active than in previous years.



Key interest rates have been kept at very low rates by the Federal Reserve in an effort to revive the housing market. Expansionary monetary policy implemented by Phase I and II of Quantitative Easing and a policy of low interest rates have not done much to bring the housing market crisis to an end, especially in the West. The federal funds rate remains unchanged in 2011.



A visual inspection suggests that foreclosure starts around the nation generally have not been responsive to low interest rates but have been mainly an independent policy process. Foreclosure starts crested in the third quarter of 2009. Since then, the series has exhibited a steep decline back to its sample average rate. The 30-year mortgage interest rate is tied more strongly to 30-year bond rates rather than key interest rates such as the federal funds rate have also remained low during 2011 and are expected to remain that way in most of 2012 and 2013.



The yearly change in San Joaquin Valley housing prices registered a turning point in the third quarter of 2008 and has been improving steadily ever since, albeit with short-run troughs and peaks.

The yearly change in San Joaquin Valley housing prices registered a turning point in the third quarter of 2008 and has been improving steadily ever since, albeit with short-run troughs and peaks. This upward trend is expected to continue. In the 2012-2013 forecasting interval, and under the optimistic scenario, small but positive growth rates are projected.

In 2012 and 2013, average growth in housing prices is projected to improve though continue to remain negative.

During the 10-year sample interval of 2001-2011, the San Joaquin Valley average housing price increased by 3.90 percent a year. The series registered significant declines in 2010 and 2011 at -6.60 and -7.53 percent, respectively. In 2012 and 2013, average growth in housing prices is projected to improve though continue to remain negative. Growth in 2012 and 2013 is projected to register at -2.85 and -2.64 percent, respectively. Under the optimistic scenario, positive growth is projected to materialize at 0.33 and 0.55 percent in 2012 and 2013.

Inflation and Prices

In 2011 there was an uptick in inflation due to cost-push factors such as energy prices, and demand-pull factors, such as the implementation of Quantitative Easing Phase II. Most notably, in April, the yearly inflation reading rose to 3.56 percent. Taking core inflation into account, this was the biggest increase since 2006. This increase is mainly attributed to the rise in commodity prices such as cotton and wheat, commodities for which there is a worldwide shortage. Many analysts interpreted this increase as temporary and expected inflation rates to fall in the ensuing months. As some circles argue however, lagging employment numbers coupled with high inflation rates can tie the hands of the Federal Reserve in further implementing monetary easing to keep the economy vibrant. The rising fears of a further slowdown in the U.S. economic performance did re-ignite discussions of Phase III of the Fed's Quantitative Easing. The wait-and-see approach that the Federal Reserve adopted in the second half of 2011 has prompted other agents of the economy, such as investors and consumers, to behave similarly. The trade-off therefore between higher inflation rates due to a possible Phase III Quantitative Easing has to be weighed carefully against lowering unemployment. In the latter part of 2011, energy prices fell but the price of other items, such as groceries, rose. As such the Fed put into implementation "Operation Twist" that intended to lower long-term borrowing rates. However, the policy failed to convince investors and the national economy continued to remain relatively stagnant.

Since January 2010, prices in the western region of the U.S. rose less than at the national level.

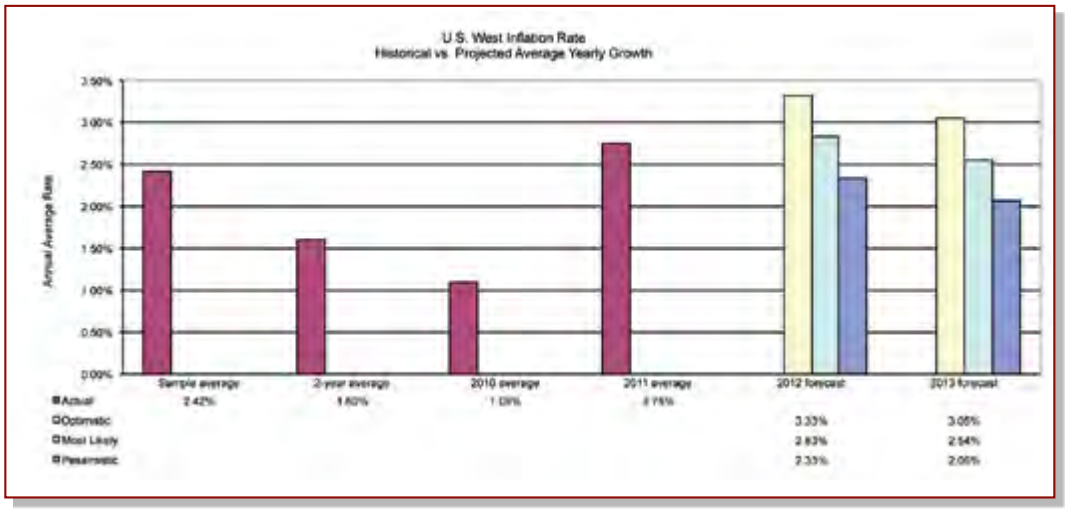
Since January 2010, prices in the western region of the U.S. rose less than at the national level. This difference was mainly attributable to weaker cost-push and demand-pull factors in the region resulting from the housing slump, lower wages and higher unemployment. Under the Fed's new wait-and-see approach, the Consumer Price Index's measurement of yearly inflation is projected to settle at an annual average of 2.5 percent during the forecasting period 2012-2013.

Since 2001, the inflation rate in the western region of the U.S. has fluctuated around a yearly average value of 2.42 percent. As commonly observed during recessions, the annual inflation rate declined to a yearly value of 1.09 in 2010. Following the implementation of Phase

In the forecasting interval of 2012-2013, the inflation rate in the West region is projected to fluctuate around an average yearly value of 2.83 and 2.06 percent.

I and II of QE2, the average yearly inflation rate in 2011 rose to 2.75 percent, a value higher than the long-run average rate value of 2.42 percent. In the forecasting interval of 2012-2013, the inflation rate in the West region is projected to fluctuate around an average yearly value of 2.83 and 2.54 percent.

The Fed's policy stance, however, may change to a more expansionary mode by implementation of Phase III of Quantitative Easing. Under such a scenario, inflation is projected to be significantly higher.



Under the wait-and-see approach, the Fed announced in the summer 2011 that it had no intention of changing interest rates until 2013. Given this announcement, interest rates are not expected to change significantly in 2012 and 2013. The lowering of the nation's credit rating results in higher risk premium, which ultimately means higher anticipated mortgage interest rates.

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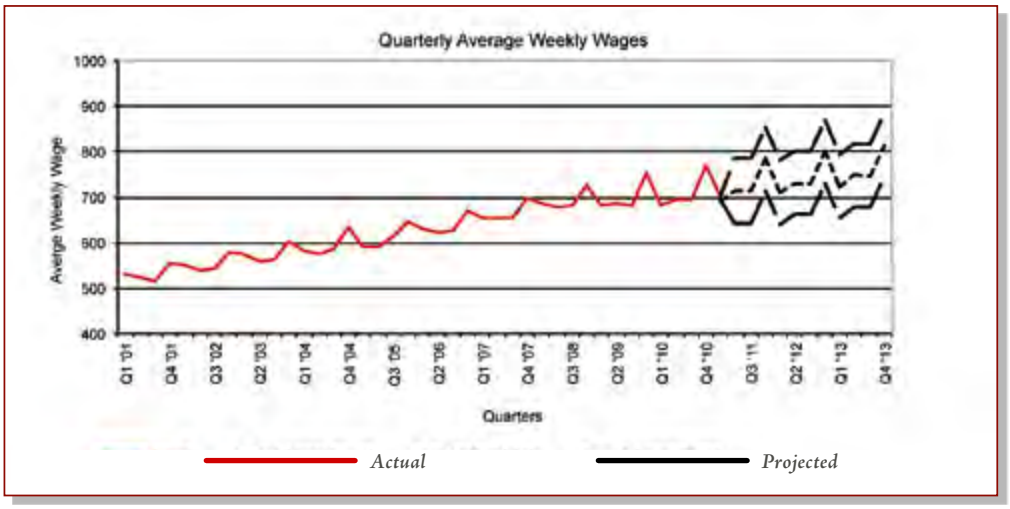
In 2011, the dollar has mainly weakened against the major trading partners of the U.S., such as the European Union and China, but kept its value and even appreciated against emerging markets. Although the rate of depreciation, especially against the Chinese renminbi, was not seen as satisfactory by the U.S. policymakers, it still helped somewhat improve the U.S. current account deficit. In line with the expansionary monetary policy implementation, the dollar is not expected to appreciate against the major trading partners in 2012 and 2013. If upward inflationary pressures become a serious concern, however, this trend may be reversed.



San Joaquin Valley average weekly wages exhibited their seasonal pattern, peaking in the fourth quarter and reaching a trough in the first quarter of every year. The series displayed a stable upward trend, however, despite the recessionary period of 2007-2009. This trend is expected to continue well into 2012 and 2013.

In the forecasting interval of 2012-2013, weekly wages are projected to keep pace at 2.0 and 2.1 percent. As such, real wages are projected to remain constant during 2012 and 2013.

San Joaquin Valley weekly wages rose at 3.3 percent, higher than the average rate of inflation over the same interval of 2001-2010. Thus the Valley region experienced an increase in real wages over the 10-year period. In the recessionary period, Valley weekly wages continued to increase, albeit at a slower rate of 1.5 percent. In 2011, however, the series caught its long-term trend and rose at 3.0 percent. In the forecasting interval of 2012-2013, weekly wages are projected to keep pace at 2.0 and 2.1 percent. As such, real wages are projected to remain constant during 2012 and 2013.

San Joaquin Valley weekly wage growth on a yearly basis stayed mostly above the yearly inflation rate in the western region. Although deflation occurred together with falling wages during 2007-2009, wage growth continued to remain above the inflation rate.

Over most of the sample, there were gains in purchasing power as real wages continued to increase in the Valley. Instead of hiring more employees, businesses in the region chose to pay existing employees, wages slightly above the inflation rate.

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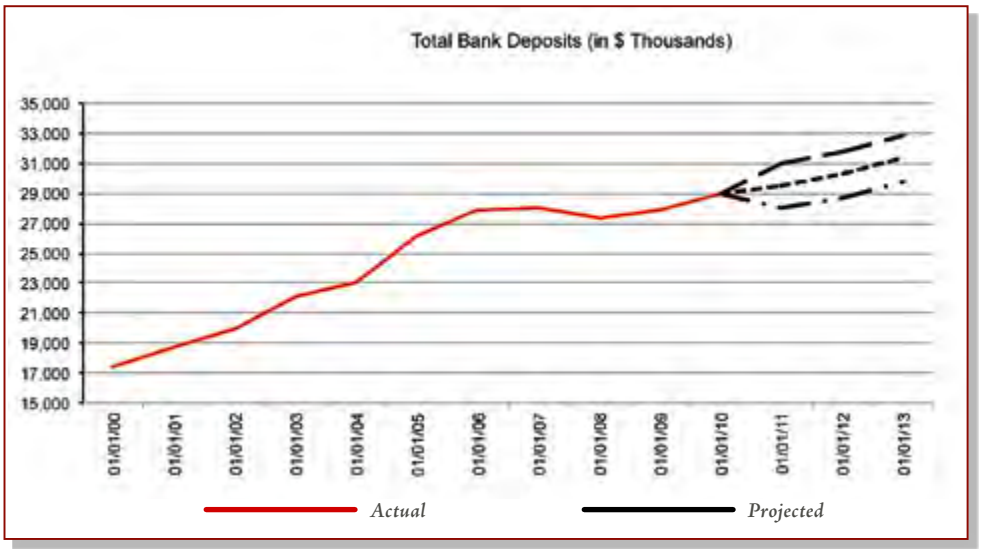
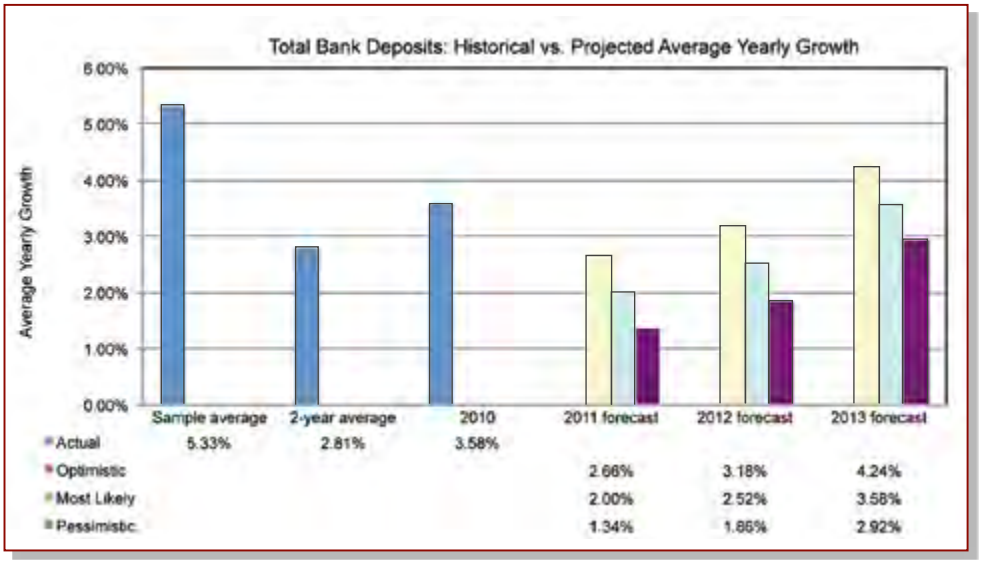
Banking and Capital Markets



Banks continued to feel pressures resulting from the prolonged housing slump, weak recovery, and underperforming stock market following the second half of 2011. As such, banks are finding it difficult to remain standing after the Federal Reserve's intervention to mitigate the effect of the financial crisis. Total deposits in the Valley began to decline following the peak in the second half of 2007 until it hit a bottom in the second half of 2008.

San Joaquin Valley bank deposits are on track to catching its historical trend and thus have been steadily improving. The increase in Valley deposits is encouraging because they are ultimately channeled back to the community in the form of increased loans. The dampening in the rate of growth in 2011 is mainly due to the economy growing slower than previously expected.



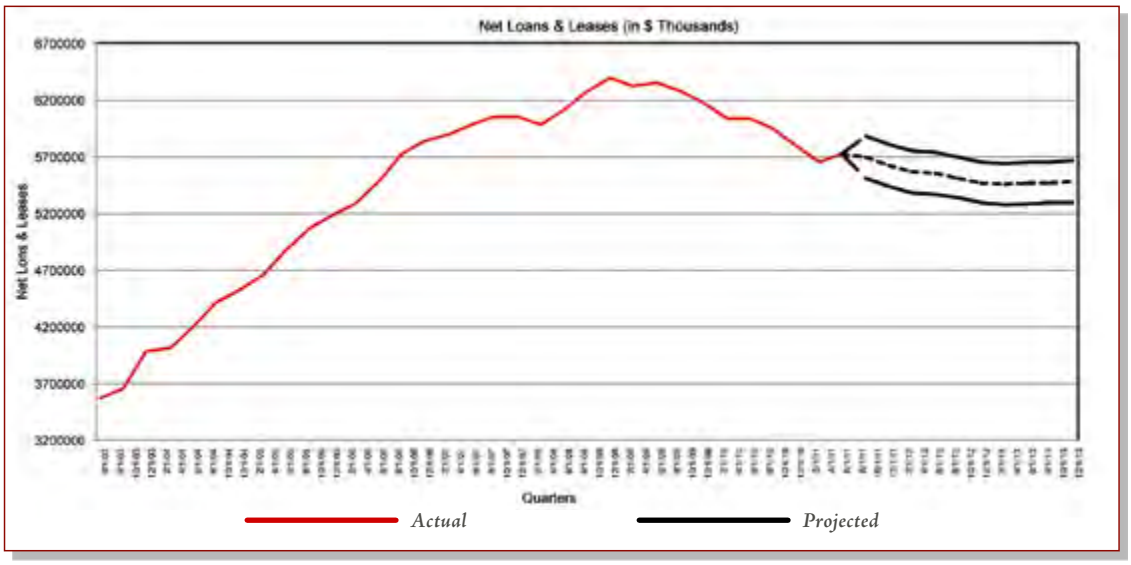
Valley bank deposits grew at an average rate of 5.3 percent on an annual basis since 2000. The average growth in 2009 and 2010 registered at 2.04 and 3.58 percent en route to catching its yearly long run average rate. In the forecasting period of 2012-2013, Valley bank deposits are projected to grow at 2.52 and 3.58 percent, respectively.

Valley net loans and deposits reached a peak in December 2008 and have been declining since then with the exception of a seasonal increase in the second quarter of 2011. The increase in Valley bank loans does not appear to have been channeled into loans and deposits, perhaps indicating the struggling nature of the banks in the Valley and due to new regulation making it more difficult for banks to extend loans. [4]

4 The sample of banks included in the calculation of net loans and leases are the following; Farmers & Merchants Bank of Central California, Bank of Stockton, Bank of Agriculture and Commerce, Delta Bank - National Association, Visalia Community Bank, Bank of the Sierra, Central Valley Community Bank, Murphy Bank, Finance and Thrift Company, United Security Bank, Oak Valley Community Bank, Mojave Desert Bank - National Association, Valley Business Bank, Mission Bank, Community Bank of San Joaquin, Premier Valley Bank, Fresno First Bank, Security First Bank, Suncrest Bank, and Valley Republic Bank

Since 2003, average yearly change in the Valley net loans and deposits stood at -.2 percent. In 2010 the series declined at -4.5 percent and worsened in 2011 to -5.8 percent. Although the series registered a small increase in the second quarter of 2011 this was mainly attributed to seasonal factors. In the forecasting interval 2012 the rate of growth is projected to stay in the negative territory but improve at -2.6 percent and improve further at -1.0 percent in 2013.

In 2012 the rate of growth is projected to stay in the negative territory but improve.



In 2012 therefore, a turning point is predicted in the Valley net loans and leases. As the Valley's total bank deposits continue to increase and banks complete their restructuring processes, these deposits will inevitably return back to community in the form of increased loans and leases.

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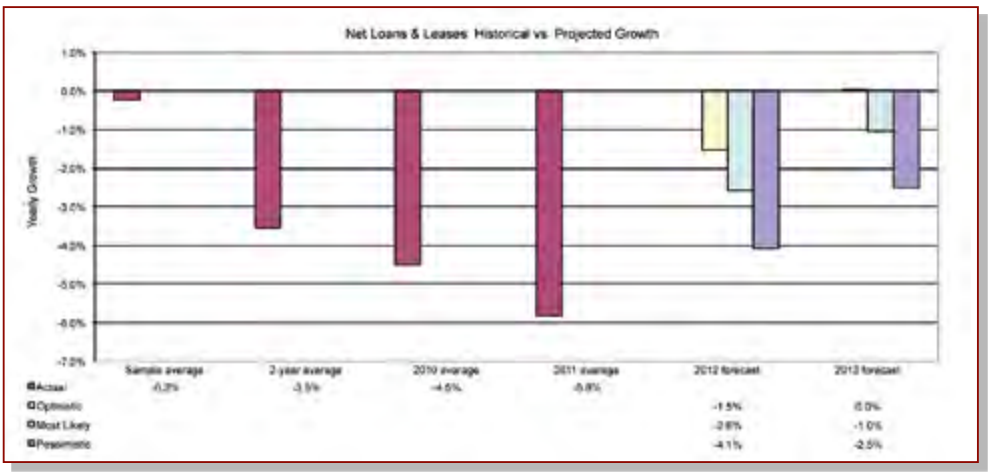
After eliminating outliers, the Valley banks' assets that are past due 90 days increased steadily until the fourth quarter of 2008. After remaining roughly at the same level since then, the series began exhibiting a declining pattern following the second half of 2010.

Similarly, Valley banks' total assets that are on a non-accrual status increased exponentially beginning from the third quarter of 2007 until the second half of 2009. Since then, the series have been horizontal indicating that non-accrual status assets have stopped growing, remaining almost constant. The pattern exhibited here is consistent with the decline in foreclosure starts and increase in bank deposits reported earlier. Such indicators portray a more convincing picture that the worst phase of adjustment is now behind and the economy is now on route to recovery.



Summary and Concluding Remarks

The San Joaquin Valley economy performed below its 10-year long-term average but has been recovering at a gradual pace since the recessionary interval 2007-2009. The extent of this improvement has been more subdued than nationwide trends. Consistent with business cycle patterns of the region, the forecasts in the interval 2012-2013 indicate an improvement in 2012 followed by a slight mean reversion in 2013.

In all, wholesale trade sales, education and health services, trade, transportation and utilities, leisure and hospitality services and non-durable goods employment appear to be the sectors in which the San Joaquin Valley economy has comparative advantage. Specializations in these areas are likely to continue but at a slower pace than the 10-year long-term averages. Those sectors that continue to be problematic are construction, financial activities, durable goods and retail trade employment. The employment growth numbers appear to be slower in the second half of 2011 and are projected to grow gradually closer in 2012 and 2013 to those structural values that are more representative of the performance of the region.

Once year-to-year comparisons are done rather than month-to-month, it becomes apparent that most unemployment began since the fourth quarter of 2009. The region along with rest of the U.S. economy began registering slightly higher inflation rates mainly due to rising energy costs, excess demand in commodity markets and the recently completed Phase II of the Federal Reserve's Quantitative Easing. However, prices rose less in the western region of the U.S. than at the national level. Prices of commodities such as corn, soybean, and wheat continued to increase, reaching new highs during the 2010-2011 crop years.

The average sales price of new single family houses continued to decline following its peak in the third quarter of 2006 and is projected to hit a bottom in the latter part of the 2012-2013 forecasting period. In its July reading, consumer confidence fell to a 30-year low. Given that this fall is one-time in nature rather than a sustained fall, the regional economy is projected to improve gradually.

The current sentiment of the general public has been more pessimistic simply because of the belief that the economic recovery has not resulted in enough job creation and housing market correction. This has caused a lingering surplus of unskilled labor even though numbers indicate that a gradual economic recovery is underway. As many companies increasingly report, there appear to be significant shortages in trained and skilled labor in certain categories of work amounting to three million nationwide. This shortage exists to the extent that educational institutions fall short of meeting this demand. Most notably, shortages appear to exist in sectors like health care, higher education, and engineering.

Other factors that contributed to this dampened mood are the federal government deficit and the national debt. As a result, consumers have been cautious, with inflation-adjusted yearly growth in consumption increasing at a very modest annual pace of 0.5 percent.

National stock markets exhibited significant volatility in 2011 mainly due to debt worries of the European Union. In sectors such as the information sector, the Valley economy continued to perform far below its 10-year average long-run rate but began reverting back to its mean, showing promising signs of recovery. The recovery is more significant in sectors such as transportation and utilities, and education and health services. Valley employment in the financial sector continued to register losses due to restructuring of banks and other financial institutions; the construction sector also saw continued losses.

In 2011, the U.S. economy fluctuated in a start-stop fashion but overall exhibited a very gradual upward year-to-year trend. The primary reason for this lagging performance was the continuing slump in the housing market. Many analysts agree that a housing turning point is yet to occur. Even though there is market consensus that economic recovery nationwide is underway, many skeptics are jittery because improvements in the labor and housing markets have been stagnant. Job gains nationwide have been around 150,000 per month whereas for many this number should be more like 250,000 on a monthly basis. It is worth keeping in mind that jobs data is a lagging indicator and often with a long lag. On average, this lag has been 18 months but under this gradual recovery the lag is expected to be more prolonged. Consistent with the Federal Reserve's the unemployment rate is projected to improve back to its natural rate in early 2015.

Government debt has been increasing at an exponential rate since 2000. Not surprisingly, this trend has recently been of a most serious concern to policymakers and analysts. The increase beginning in the second half of 2008 has been the steepest in series history hitting a bifurcation point in the second half of 2011 that prompted discussions of raising the debt ceiling and eventually led to the lowering of the national credit rating of the United States.

In all, the region's forecasts in the interval 2012-2013 point to a very gradual improvement under the wait-and-see strategy of the Federal Reserve. The odds of a continued gradual recovery will increase if the Fed was to decide to implement its Phase III of Quantitative Easing, however, this will lead to increased inflation worries on the part of investors and consumers.

List of Figures

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