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2014
San Joaquin Valley
Midyear Update

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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; a Master of Philosophy 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.
The author would like to acknowledge the contributions of student assistants

Haider Alkaabi, Bruce Curtis and Vitaly Polovin

in the preparation of this report.

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Executive Summary

For the first time since the recession, total employment numbers in the San Joaquin Valley have begun registering new highs. While numbers at or below 1.6 million were seen before, Valley total employment reached an all-time high of 1,613,166 in the third quarter of 2013. This accelerated performance is likely to continue through the latter part of 2014 and into the first half of 2016. Employment in construction grew the fastest in 2013, but the most remarkable growth was observed in retail trade employment. Average yearly growth in this category for 2013 was 3.74 percent, more than four times the 10-year benchmark growth rate of 0.83 percent. Consequently, retail trade employment is beginning to show early signs of becoming another strong sector in the Valley. Other sectors that posted high growth were: trade, transportation and utilities employment; leisure and hospitality employment; and wholesale trade employment.

Interruptions such as the Great Recession occur very rarely. To have a better understanding of post-recession behavior, it may be worthwhile to exclude such intervals. Once the recessionary interval is excluded, the benchmark yearly Valley total employment growth averages about 1.63 percent. This rate is more typical of long-run growth behavior in the Valley. In 2013, yearly total employment growth began to converge to this rate of 1.93 percent. The projections point to a steady rate of 1.75 percent of average growth in the two-year forecasting period.

Not all categories of employment performed well in 2013. There was little or no change in the performance of information and financial activities employment. These categories are not projected to improve significantly anytime soon. Education and health services employment grew significantly less in 2013. Considering that more than two-thirds of the unemployed in the Valley are unskilled, poor growth numbers in this category is a concern for the long run. Government employment declined at a slower pace in 2013. The decline in information employment was worse in 2013 than 2012. The weakness in some categories was more than compensated by the strength in others, which resulted in an overall increase in Valley total employment.

In the real estate market, home values continued to post double-digit growth numbers during 2013. Bouncing back from very low values, the steep upward trend in Valley housing permits is projected to continue into 2016 at about 18 percent per year. Given the Federal Reserve’s tapering activity, inflation remained at moderate levels in 2013. There were, however, consecutive monthly upward ticks in the first quarter of 2014, raising the inflation rate to 1.77 percent. The reversal of the very long-run business cycles — along with a strong performance of the U.S. equity market — is increasingly attracting dollars inward from abroad, which may potentially create a stronger aggregate demand pull on the overall price level.

Incoming numbers as of the first quarter of 2014 have not reflected the impact of drought to a significant degree. However, the impact of the ongoing drought is already being felt in higher meat and dairy prices in grocery stores. With conditions already bad, another year of drought may derail farm-related business indicators. Other potential risk factors include growing instability in Ukraine and the Middle East and a stronger than expected contractionary impact from the Federal Reserve’s tapering in 2014 and 2015.

All counties posted total employment growth numbers above 1.2 percent in 2013, with Merced and Madera growing the fastest. Valley economic performance is now almost on par with pre-recession levels — fully overcoming the discrepancy that existed during recessionary years — and is projected to cover new territory by mid-2015, in line with our earlier projections.
Introduction

In this report, we provide an assessment of past, current and future business trends in the Valley relative to the state and the nation. Our medium-term projections span from the second half of 2014 to the first half of 2016.

Our aim is to forecast a range rather than a point, to provide a more realistic assessment of likely future values. The actual numbers are expected to fall within the upper and lower forecast bands. We generate forecasts using realizations up until January 2014. The yearly average figure belonging to 2013 is from the full 12 months.

The remainder of this report is structured as follows: Section B provides a discussion of San Joaquin Valley labor market conditions; Section C reports on the region’s real estate market; Section D reports on prices and inflation; and Section E reports on banking and capital market indicators.
Employment Indicators

Over the entire sample, average yearly growth in total employment — otherwise known as the benchmark rate — occurs at 1.08 percent. Historically, interruptions such as the Great Recession are extremely rare. An exclusion of the recessionary interval may therefore yield a better picture of post-recession economic behavior. Once the recessionary years are excluded from the sample, the Valley’s benchmark average yearly growth in total employment becomes 1.69 percent. In 2013, Valley total employment grew at an average yearly rate of 1.93 percent. When this pace is compared with previous years, it becomes apparent that Valley employment growth is now converging to this more representative rate of 1.69 percent a year.
Job numbers for all counties grew above 1.2 percent per year. The fastest-growing counties were Merced and Madera. Construction employment posted the highest growth numbers in 2013, followed by wholesale trade employment. Decline in information employment worsened in 2013. Government employment also continued to decline, but at a slower pace in 2013. Medium-term forecasts now point to varying degrees of positive growth in all categories, with the exception of information employment.

Valley total employment reached previously unseen highs in the third quarter of 2013. Projections show that Valley total employment levels will exceed pre-recession levels by the second half of 2015.
A fairly accurate leading indicator of business cycles in the United States is the Conference Board’s Consumer Confidence Index. The improvement in consumer confidence is now very apparent from the increase in the number of months posting above 80 points. The rise in home values, together with very low inflation rates that have prevailed for some time, has increased consumer confidence since the second quarter of 2009. Another sign of rising consumer confidence is the gradual rising demand for luxury goods in 2013 compared to previous years.
The vertical distance between employment growth and labor force growth continued to widen in 2013. This pattern is representative of growing regions such as the San Joaquin Valley. The decline in labor force worsened in 2013, consistent with the structure of labor market dynamics in the nation. With progressively rising employment, labor force growth is projected to level off in the coming years and begin trending upward.
Once again, the Valley’s 2013 employment growth did not surpass the state’s employment growth in a consistent fashion. However, there are some initial signs, particularly in the latter part of the sample period, that suggest employment growth in the Valley will exceed the state. When compared with previous years, there appear to be more months during which the Valley’s employment growth is higher than the state’s in 2013. Employment generally grows faster in those regions that have relatively abundant land, labor and capital.
Sustained recovery was most evident in real GDP growth numbers from the last three quarters at 0.1, 2.6 and 4.1 percent respectively. 2014, first quarter low growth at 0.1 percent was mainly weather related. These growth rates were significantly different than previous three quarters at 2.5, 1.1 and 0.1 percent. Mid-year projections now point to a higher average real GDP growth of 3.1 percent from the second half of 2014 to the first half of 2016.
Jobs in education and health services grew in 2013 but the growth took place at a much slower 1.04 percent, relative to 1.3 in 2012 and 2.93 in 2011. A concaving pattern in the education and health services employment series is now clearly apparent, given the new 2013 numbers. Some of this slow growth pace is attributed to declining government employment over the same previous period.
The 10-year benchmark rate of education and health services employment fell to 2.5 percent with the slower than usual pace of growth. With the improving economy expected to impact education and health care jobs, projections point to an average yearly growth of 1.3 percent from the second half of 2014 to the first half of 2016. In a region where two-thirds of the long-term unemployed are unskilled, it is imperative to allocate greater resources to the education and training of the existing workforce.
Manufacturing employment growth in 2013 was higher than in 2012, but the rate of increase was very small, at about 0.07 percent. With this slow pace, almost displaying a flat trend, it will be difficult for manufacturing employment to attain pre-recession levels anytime soon. However, it is encouraging to see that the long-run benchmark growth rate has continued to edge closer to positive territory.
Jobs in the manufacturing sector are projected to grow at an average annual rate of 1.1 percent in the medium-term forecasting interval. The model projects some acceleration in pace with an improving economy, but the realizations will probably fall somewhere between the pessimistic and most likely intervals. A lack of skilled workers in the region, relative to the other regions in proximity, undoubtedly contributes to the low growth in the manufacturing sector.

![Manufacturing Employment: Historical vs. Projected Average Yearly Growth](image)

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual Average</th>
<th>2011 Average</th>
<th>2012 Average</th>
<th>2013 Average</th>
<th>2014-15 Forecast</th>
<th>2015-16 Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Average</td>
<td>-0.56%</td>
<td>0.55%</td>
<td>0.65%</td>
<td>0.72%</td>
<td>1.37%</td>
<td>1.45%</td>
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<tr>
<td>Optimistic</td>
<td></td>
<td>0.01%</td>
<td>1.20%</td>
<td></td>
<td>0.65%</td>
<td>0.96%</td>
</tr>
<tr>
<td>Most Likely</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pessimistic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Institute for Supply Management’s Purchasing Managers Index (PMI) has consistently stayed above 50 points, indicative of a sustained recovery. As a leading indicator with considerable predictive power, PMI points to expansion in the manufacturing sector well into 2015 and 2016.
The Institute for Supply Management’s New Exports Index (NEI) has displayed a rising trend since 2012, pointing to improving activity in new exported goods and services. Emerging market currencies, however, have recently lost considerable value against the U.S. dollar. The reversal of long-run business cycles and improving economy here at home were contributing factors. However, an excessively appreciating dollar against other currencies may undermine the international competitiveness of domestically manufactured goods.
Leisure and hospitality services employment continued an upbeat performance in 2013. Hotel occupancy rates remained high, pointing to lucrative business opportunities for potential investors in this sector. In 2013, employment in this category grew 2.13 percent. The 10-year benchmark rate rose steadily over the past three years to 1.5 percent.
Leisure and hospitality services employment in the Valley has been performing well above the 10-year benchmark rate since 2012. This above-average dynamic is very good news for the Valley, making leisure and hospitality services a sector in which the Valley has a competitive advantage. Employment numbers in this sector are set to significantly increase for some time to come.

Leisure and hospitality services are closely linked to retail trade. Recent above-average performance in both of these sectors provides strong evidence of potential gains to be made from these sectors all around the Valley. During 2013, leisure and hospitality services employment rose 2.96 percent in the Valley, which was 1.36 percent above the benchmark rate of 1.6 percent. Two-year projections point to an average annual increase of 2.78 percent.
Trade, transportation and utilities employment was the third-best-performing category of employment in 2013. With the arrival of strong employment numbers, the 10-year benchmark rate rose further to 1.38 percent in 2013. When compared to the years before the recession, trade, transportation and utilities employment is now one of the few categories of employment that displays a steeper trend during the post-recessionary years.
Compared to the 10-year benchmark rate, Valley trade, transportation and utilities employment growth has consistently materialized above 2 percent in 2011, 2012 and 2013. Growth in 2013 was even higher, at 3 percent above the 10-year benchmark rate. This increasing dynamic is set to prevail in the upcoming months. Trade, transportation and utilities employment is projected to increase at an average annual rate of 3.95 percent from the second half of 2014 to the first half of 2016.
Average annual growth in Valley retail trade employment oscillated from 2011 to 2013. After posting an upbeat performance in 2011 at 2.4 percent — three times the 10-year benchmark rate — growth, although still above the long-term rate, declined to 1.99 percent in 2012. In 2013, however, retail trade employment posted incredible growth at 3.74 percent — more than four times the 10-year benchmark rate, steepening the trend line following the recessionary years.
The fast pace of growth is expected to prevail in the two-year forecasting horizon, at an average annual rate of 4.73 percent. In all years since the recession, average annual growth has consistently materialized at rates multiple times the long-term average rate. It is very encouraging to see retail trade poised to become one of the Valley’s strong growth sectors in the coming years.
The fast pace of growth in wholesale trade employment was not surprising given the farm-related nature of this category. Wholesale trade employment, after construction employment, was the second-fastest-growing category of employment in the Valley. The trend formed post-recession continued to steepen in 2013.
The average yearly growth at 4.45 percent in 2013 was the strongest performance of wholesale trade employment since the end of the recession in 2009. A similar pattern is projected to prevail in the two years ahead. The projections point to an average annual increase of 5.02 percent from the second half of 2014 to the first half of 2016.
Valley information employment numbers stayed mostly constant in 2013. Such poor performance caused the 2013 average annual growth rate to dip back into negative territory at a rather significant rate of -2.56 percent. Information employment is another category in which pre-recession levels are not projected to be attained anytime soon.
The turning point that previously occurred was not permanent, and information employment began to worsen in 2012 and 2013. Because the information technology sector is not farm related, employment under this category suffers in the Valley. The hyperbolic pattern is likely to be observed for some time to come. The projections point to further worsening of information employment at an average annual rate of -0.88 percent from the second half of 2014 to the first half of 2016.
The construction sector had the fastest job growth numbers in 2013. The 7.1 percent average annual growth in construction employment was about equal to the benchmark average growth rate once the recessionary period is excluded from the calculation. The Federal Reserve's tapering is expected to continue in 2014 and 2015. This tapering activity is likely to somewhat dampen growth in the construction sector.
Construction jobs are projected to grow at an average annual rate of 5.65 percent from the second half of 2014 to the first half of 2016. The trend forming post-recession is likely to remain flatter than pre-recession years. However, construction employment will likely remain one of the fastest-growing categories of employment in the Valley.

<table>
<thead>
<tr>
<th>Year/Forecast</th>
<th>Average Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Average</td>
<td>-0.2%</td>
</tr>
<tr>
<td>2011</td>
<td>1.6%</td>
</tr>
<tr>
<td>2012</td>
<td>10.9%</td>
</tr>
<tr>
<td>2013</td>
<td>7.1%</td>
</tr>
<tr>
<td>2014-15 Forecast</td>
<td>6.78%</td>
</tr>
<tr>
<td>2015-16 Forecast</td>
<td>6.26%</td>
</tr>
</tbody>
</table>

- Actual
- Optimistic
- Most Likely
- Pessimistic

![Construction Employment: Historical vs. Projected Average Yearly Growth](chart)
Government employment is another category that worsened in 2013, although the rate of decline was significantly less than in 2012. The rate of decline was so small, at -0.36 percent, that one can easily argue that the worsening in government employment has finally ended. Prior to the recession, government employment typically rose at 1.3 percent per year. A turning point is projected in 2014 whereby government employment growth numbers will again enter into positive territory.
Although the Valley economy has been recovering for the past couple of years, recovery in government employment has not yet begun. Typically, however, in a recovering economy, government employment begins to increase in proportion to the overall economic activity. The projections, however, show that this anomaly will end in 2014, with government employment projected to increase 0.68 percent per year on average in the two-year forecasting interval.
Following the turning point in 2011, financial activities employment began registering positive growth. However, growth in 2013 at 0.57 percent was significantly lower than in 2012 at 1.17 percent. The recovery in financial activities is not strong enough to bring employment levels back to pre-recession levels.
The slowing pace of growth from 2012 to 2013 is a growing concern, given the already weak performance of financial activities since the recessionary years. The rise in long-term interest rates, which brought refinancing activity to zero, largely contributed to this weak performance in 2013. Given that interest rates are likely to rise further with the Federal Reserve’s tapering, projections point to a slow average annual increase of 0.77 percent from the second half of 2014 to the first half of 2016.

Although total employment grew in all counties by more than 1.2 percent, not all categories improved. The weakness in some categories was compensated by the strength in others. Among those that strongly improved were construction and wholesale trade employment, and those that worsened were information and government employment. Total employment in the Valley, however, reached an all-time high in the third quarter of 2013 and is projected to post new highs pulling the economy above pre-recession levels by mid-2015.
The eight major Metropolitan Statistical Areas (MSAs) of the San Joaquin Valley are Fresno, Bakersfield-Delano, Hanford-Corcoran, Madera-Chowchilla, Merced, Modesto, Stockton and Visalia-Porterville. These MSAs are tracked by the Bureau of Labor Statistics. Single-family building permits constitute the aggregate of the eight MSAs.

Coming from very low values, single-family housing permits in 2013 registered a very significant average annual rate of increase at 33.51 percent. Building permits began to rise rapidly in 2013 and are projected to continue at this accelerated pace into 2015 and 2016.
The Federal Reserve’s tapering activity is not expected to slow the recovery in the construction sector to any significant degree. We may, however, observe a more balanced growth in single housing permits and construction employment in the coming years, which would preclude any recurrence of speculative bubbles as was observed in the recent past. Single-family building permits are projected to grow at an average annual rate of 19.21 percent in the two-year forecasting interval.
Foreclosure starts in California have dropped to the levels that existed before the recessionary years and are likely to stay at these low rates for some time to come. Undoubtedly, the drop in foreclosure rates helped revive the construction sector. Some of the increase in home values can also be attributed to the drop in foreclosure starts.
The Freddie Mac 30-year fixed rate rose to 4.46 percent in December 2012 and came down to 4.3 percent in February 2014. It appears that the long-term yields will face upward pressure in the coming months as the Federal Reserve gradually intensifies tapering activity. The rise in long-term yields, however, is likely to prevent any potential bubbles that may result from speculative activity in the recovering housing market.
Home values, bouncing back from very low values, increased most significantly in 2013. The second, third and fourth quarter yearly increases were 12.25, 14.37 and 18.53 percent respectively. The steep upward trend in home values continued, but the rate of increase is projected to converge to rates more in line with the 10-year benchmark rate over the next couple of years — about 12.42 percent when recessionary years are excluded from the calculation.

The increase in home values from 2012 to 2013 was an additional 12 percent. This steep trend will eventually follow an inverse U-shaped pattern before settling into a steady state of growth. Home values are projected to increase at an average annual rate of 20.29 percent from the second half of 2014 to the first half of 2016.
Currently, there is a shortage in the housing market as demand exceeds supply. The shortage is temporarily creating an added upward pressure on home values. But as more new homes are built and supply gradually adjusts to demand, home values are projected then to increase at single-digit rates.
Inflation and Prices

The consumer price index (CPI) rose modestly in 2013, mainly staying below 2 percent. The CPI rose at an annual rate of 1.3 percent in January 2014, compared with a rise of 1.7 percent in January 2013. There was basically no cost-push inflation as oil prices continued to remain low. Demand-pull factors were tamed by the Federal Reserve’s slowing of its bond-buying program and the rise in long-term yields.
Despite the moderate increase in CPI, prices rose faster in the Western region than the national average in the second half of 2013. Aggregate demand in the West rose greater than at the national level, creating stronger demand-pull inflation.
CPI-based inflation in the West is projected to remain at moderate levels in the two-year forecasting interval. The projections of moderate increases in prices are in line with an expectation of higher long-term yields and tapering by the Federal Reserve. From the second half of 2014 to the first half of 2016, projections point to an average yearly rate of 1.94 percent rise in consumer prices.
Rising interest rates and a well-performing equity market at home are increasingly creating capital inflows from abroad. International investors are reshuffling their portfolios to take advantage of higher returns and lower risk in the U.S. relative to emerging market countries. Capital outflows are putting downward pressure on the currencies of emerging markets against the dollar.

Wage growth patterns did not look bright for the Valley in 2013. After posting 2.02 and 1.55 percent consecutive increases in 2011 and 2012, yearly growth in Valley average weekly wages turned negative in 2013 at -0.04 percent. The sustained decline in wage growth is a concern, particularly in a recovering economy.
Valley average weekly wage growth series leveled off and turned negative in 2013. One bright side was the slight increase in the third quarter of 2013 relative to the same period the year before. Projections point to a very small increase in the two-year forecasting interval of about 0.15 percent per year. The pessimistic forecast points to an average yearly decline in weekly wages of about -0.08 percent from the second half of 2014 to first half of 2016.
Average weekly wages rose less than the rise in CPI in 2012. The picture did not improve in 2013. While consumer prices rose on average 1.56 percent over the first three quarters in 2013, weekly wages declined by -0.04 percent, bringing the total loss in purchasing power of a representative individual to -1.6 percent. The third quarter of 2013 was an exception, however, whereby prices rose by 1.3 percent and average weekly wages rose by 1.46 percent. The 2013 third quarter reading might be an early indication of rising real wages that may finally prevail in a recovering economy over the next couple of months.
Banking and Capital Markets

Following the recessionary years, bank deposits grew consecutively in 2011, 2012 and 2013 at more than 4 percent per year. Although below the 10-year benchmark rate of 7.0 percent, the 2013 growth at 4.64 percent was significant enough to extend loans and leases with more ease in the Valley.
While the 2012 bank deposit growth rate was higher at 5.17 percent, 2013 was another good year for the community banks in the Valley. Projections point to 4.71 percent average yearly increase in community bank deposits from the second half of 2014 to the first half of 2016.
Bank assets in default fell further in 2013, in line with improving consumer confidence. The 2013 third-quarter assets in default at 90-plus days dipped to the second-lowest level in the past 10 years, which includes the period prior to the recession. Assets in default 30 to 89 days also followed a similar pattern, falling to their lowest level in the past seven years.
The improvement in the consumer balance sheet is even more apparent from assets in nonaccrual, which continued to fall drastically in 2013 to a six-year low in the third quarter. As delinquencies decreased over time following the recession, it became yet easier for banks to extend loans and leases relative to prior years.
After entering into positive growth territory in 2012, average yearly growth in net loans and leases registered a spike in 2013. The yearly growth in 2013 was a big jump from 2012 at 5.52 percent. The improvement in bank deposits together with the decline in delinquencies has helped Valley net loans and leases to perform better than in previous years.
The expectation of higher long-term interest rates will likely mitigate further increases in net loans and leases. The yearly rate of increase in 2013 was equal to the 10-year benchmark rate of 5.32 percent. Similar growth patterns are likely to prevail in the coming months as the Federal Reserve's grip on monetary expansion continues to tighten.

The projections point to 5.43 percent average yearly growth in net loans and leases from the second half of 2014 to the first half of 2016. Pre-recession levels of loan activity are expected to be reached by the first quarter of 2015.
Summary and Concluding Remarks

Valley total employment attained an all-time high in 2013. The third quarter total employment reading was slightly above 1.6 million. Similarly, high employment levels were attained during the boom period before the recession. Mid-2015 projections now exceed these pre-recession levels, as total employment begins to cover new territory on a more consistent basis.

Construction was the fastest growing category, followed by wholesale trade employment. Information and government employment worsened in 2013. Although total employment is set to exceed pre-recession levels in the very near future, this is not true for some categories of employment, such as information, government and financial activities employment. Employment in these categories is not expected to reach pre-recession levels in the near future.

Total employment in all counties grew more than 1.2 percent. The fastest-growing counties were Merced and Madera, which were bouncing back from very low levels. Categories such as construction employment, wholesale trade employment, leisure and hospitality employment, and trade, transportation and utility services employment are about to fully close the gap that formed during the recessionary years. The pace of growth in education and health services employment, despite staying positive from 2011 to 2013, has declined considerably and is a serious concern for the long run.

Home values in the Valley posted double-digit growth numbers in 2013 and are projected to rise further in the two-year forecasting interval, along with building permits. Such high growth numbers are normal for those indicators that are bouncing back from all-time lows. In the medium term, however, these indicators are projected to grow at a rate more in line with their single-digit 10-year benchmark rates.

The pace of average weekly wage growth declined over the previous years, and 2013 saw a -0.04 percent yearly decline. Inflation remained moderate at 1.55 percent, resulting in a total -1.6 percent reduction in purchasing power in 2013. Wages, however, are projected to post slightly positive growth in the two-year forecasting interval, as would normally be expected during a recovering economy.

The steep fall in accruals continued in 2013. Net loans and leases spiked and bank deposits increased significantly during 2013. The positive reading in these banking indicators paints a brighter picture for community banks in the coming years.

Most key business indicators in the Valley are now about to fully close the gap formed during the recessionary years. Mid-year projections show that these indicators will be the first ones to register new highs by the first half of 2015.
## Appendix

### Forecast Accuracy Table

<table>
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<tr>
<th></th>
<th>Error</th>
<th>Accuracy</th>
<th>Turning Point</th>
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<tr>
<td>Real GDP Growth</td>
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<td>Construction</td>
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<td>Net Loans and Leases</td>
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</tbody>
</table>