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### Manufacturing Sector Sustains Its Growth Path

Anderson Center for Economic Research

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## Manufacturing Sector Sustains Its Growth Path

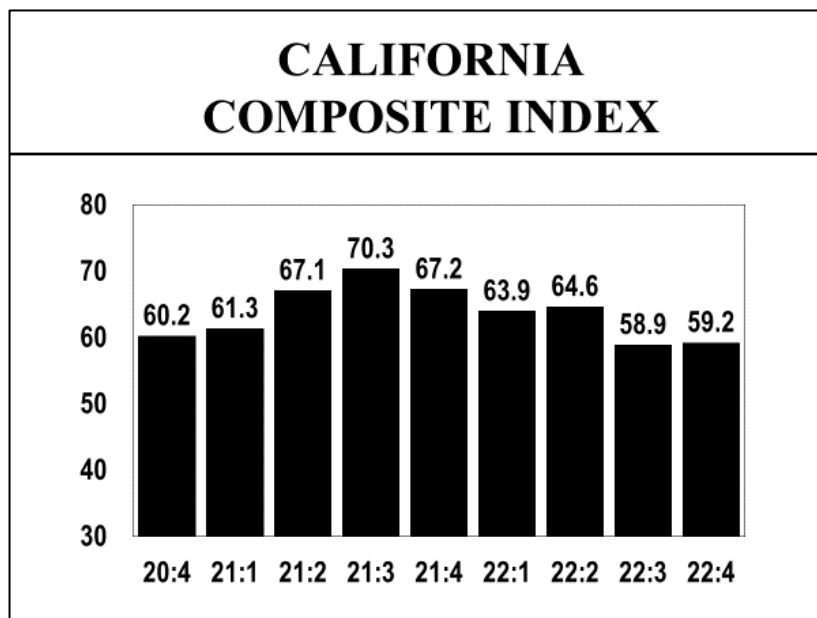
### Comments

This scholarship is part of the [Chapman University COVID-19 Archives](#).

## PRESS RELEASE

# MANUFACTURING SECTOR SUSTAINS ITS GROWTH PATH

ORANGE, CA — Based on a survey of purchasing managers, the California Composite Index, measuring overall manufacturing activity in the state, increased from 58.9 in the third quarter to 59.2 in the fourth quarter, indicating that the manufacturing sector is expected to grow at a slightly faster rate in the fourth quarter. “Some purchasing managers are starting to see an easing in supply chain constraints, and a flattening of some raw materials prices. Nevertheless, difficulty in hiring is still an issue for some, and the inability to fill orders due to delays or shortages of raw materials still prevails in many industries. High inventory levels have also been reported,” said Dr. Raymond Sfeir, director of the purchasing managers’ survey. Commodity prices in general are increasing at a much lower rate, and supplier deliveries are slowing at a lower rate. Production, inventories of purchased materials, new orders and employment are all expected to grow at a higher rate compared to the third quarter.



## California Manufacturing at a Glance

Composite Index	59.2	Increasing at a higher rate
Production	62.2	Increasing at a higher rate
Inventories of purchased materials	55.4	Increasing at a higher rate
Commodity prices	73.7	Rising at a lower rate
Supplier deliveries	57.9	Slowing at a slower rate
New orders	59.6	Increasing at a higher rate
Employment	59.3	Increasing at a higher rate

### Performance by Industry Group

The index for the **non-durable goods industries** increased from 54.4 in the third quarter to 56.7 in the fourth quarter, indicating that these industries are expanding at a higher rate. Production, inventories of purchased materials, new orders and employment are expected to grow at a higher rate. Commodity prices are expected to rise at a much lower rate compared to the third quarter. Nevertheless, supplier deliveries are not expected to slow in the fourth quarter.

The **high-tech industries** include the following: Computer & Electronic Products, and Aerospace Products & Parts. The high-tech industries currently employ about 369,600 employees, amounting to 27.8% of total manufacturing employment in the state. The index for the high-tech industries increased from 64.0 in the third quarter to 66.6 in the fourth quarter, indicating a higher growth rate in the fourth quarter. Production, inventories of purchased materials, commodity prices, new orders and employment are expected to grow at a higher rate. Supplier deliveries are expected to be slowing at a lower rate as the index decreases from 76.7 in the third quarter to 70.6 in the fourth quarter.

The index for the **durable goods industries other than high-tech** decreased from 58.9 in the third quarter to 56.0 in the fourth quarter, indicating a lower growth rate in these industries. Production, inventories of purchased materials, commodity prices, and new orders are expected to increase at a lower rate in the third quarter. Supplier deliveries are expected to be slowing at a lower rate as the index decreased from 65.9 to 55.4. Employment is expected to increase at a higher rate in the fourth quarter.

### Comments by the Purchasing Managers

Wage pressure and availability of qualified workers who want to work is still the number one concern at all of our production sites. (Food)

New orders seem to be slowing down, things were really busy initially after the pandemic. Seems like higher prices and economic uncertainty are setting in a bit and clients are hesitant to forecast beyond 2022. (Textile Mill Products)

New orders for big box stores are arriving much slower than last season. Retailers are nervous about talks of a recession. As for manufacturing, China continues to lack transparency regarding capacity and deliveries. Domestic warehouse labor is still challenging to find committed workers. (Apparel)

Regardless of what the kids in D.C. are attempting to convince us of, business has certainly slowed and costs have increased. If we are not in a recession, then we are certainly close to one! (Wood Products)

We are in a seasonal biz where the 4th quarter is huge. We have set up the company for growth even in a recession. However, I can tell you the industrial side of our company (brown boxes) is down. As well my box maker friends across the U.S. have been down since May as much as 30%. The US is in a recession. The box is the forward leading economic indicator. (Paper)

Costs continue to rise across the board sadly. Sales have gone down a bit since interest rates have gone up, most notably in our mortgage / realtor related book of business. Losing a few employees as they move on to other industries with better opportunities than print. Never really thought it would happen here, but have noticed quite an uptick in quiet quitting which has started to noticeably cut into our productivity. Q4 is usually pretty good for us sales-wise, but am seeing some significant headwinds as we roll into year end. Quite a mixed bag to say the least. (Printing & Related Support Activities)

Still struggling to improve margins. Sales are good. Suppliers are keeping up, for the most part, but prices continue to rise-and it is difficult to pass along increases as quickly as we would like. (Chemicals)

Inflation in labor is still super high. Talks of increases in the minimum wage for fast food workers is scary too. The cost of goods sold is coming down fast but sometimes the adjustment is not fast enough in my world. (Plastics & Rubber Products)

There is a lot of infrastructure work ,and we hope to be able to hire enough people to get it all done better than this current quarter. Paperwork processing of projects (getting plans and submittals processed and approved) has been an issue. (Nonmetallic Mineral Products)

Supply chain challenges due to logistics disruptions stemming from Covid-19 continue to impact (plant shutdowns, ports, etc.) business. Production delays due to limited supply of key commodities, limited capacity. Higher material costs, longer lead-times and labor shortages all impact Purchasing. (Primary Metals)

European business is off 90%. Customer sentiment is at a 40 year low. (Fabricated Metal Products)

Backlog increasing but we can't produce enough to make up for it. Metal wire prices are flattening and stopped going up. We are hiring but the candidates aren't great and they don't stay. (Machinery)

The CHIPS act implementation is causing interest in buying capital equipment to support the growing onshore semiconductor industry. (Computer & Electronic Products)

Lots of supply chain disruptions due to many things from employment issues to lack of raw material. (Electrical Equipment, Appliance & Components)

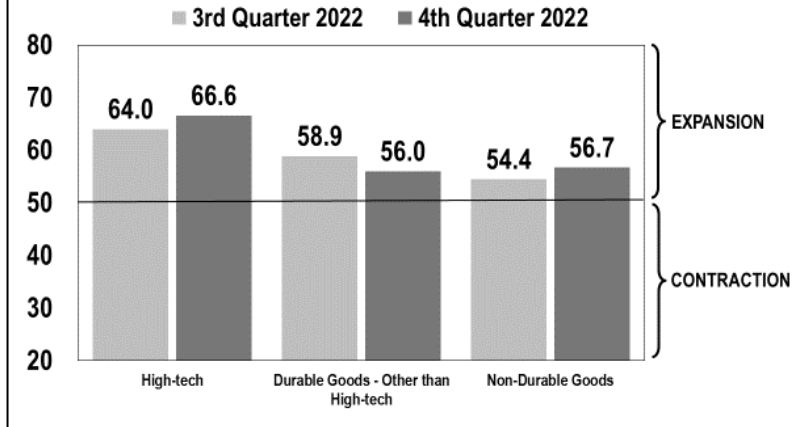
Early in 2022, I have had to put more material raw and finished on order way earlier than I would normally in order to have it end of year and for 2023 for our orders. I have to take more inventory in to combat the long deliveries. That is why our inventory will go up but that I do not feel the supplier deliveries will get better for a while. (Transportation Equipment)

The furniture industry has seen a slowdown on retail floors. That said we have had several record shipping months this year. Perhaps all of this will help in getting lead times closer to pre pandemic times. The good News is... price increases on raw materials have seemed to calm down a bit. (Furniture & Related Products)

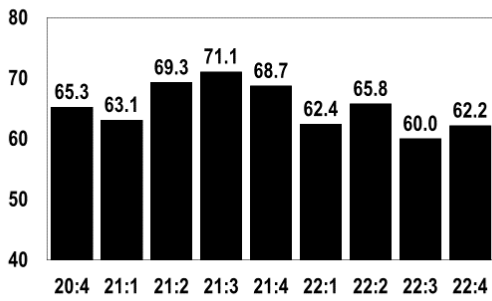
Doing business in California and Los Angeles County continues to be a huge struggle. Costs on everything are sky high. Parts and other items that we purchase to do business are often on backorders or not available at all. Many of our adhesives and paints have been banned in CA with no other alternatives to manufacture signs that are in high demand. It's very frustrating and we don't see any improvement, we actually are projecting that it's only going to get worse as the government is showing no signs of changing their anti-business views.... (Miscellaneous)

We are increasing staffing as well as outsourcing to support demand. (Aerospace Products & Parts)

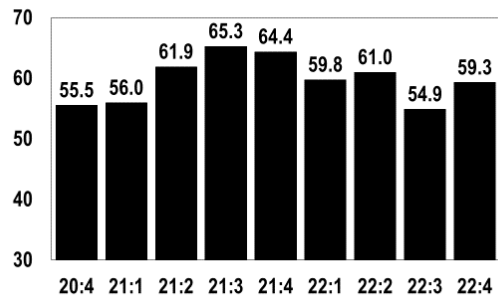
## INDICES FOR INDUSTRY GROUPS



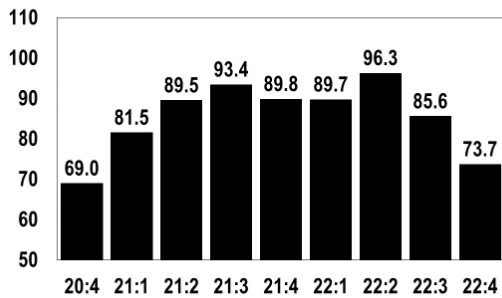
### PRODUCTION INDEX



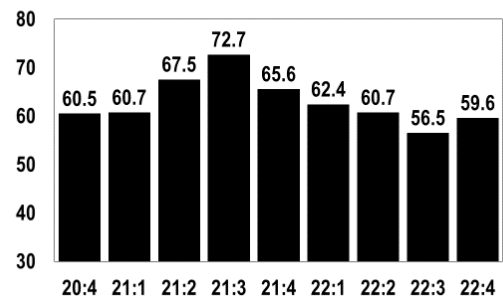
### EMPLOYMENT INDEX



### COMMODITY PRICE INDEX



### NEW ORDERS INDEX



## **Background and Methodology**

The Institute for Supply Management (ISM) conducts a monthly national survey of purchasing managers and publishes the survey results in its *Report on Business*. Such a survey is not available for the state of California. Given the size of our state, and the major role its manufacturing sector plays in the national economy, the A. Gary Anderson Center for Economic Research at Chapman University launched a quarterly survey of California purchasing managers starting in the third quarter of 2002. Similar to the ISM survey, our survey tracks changes in production, employment, new orders, inventories of purchased materials, commodity prices and supplier deliveries. A seasonally adjusted index is computed for each variable except for commodity prices for which no seasonal adjustment is made. Unlike the national survey that tracks the performance of the manufacturing sector in the previous month, the Anderson Center's survey asks the participants to evaluate the expected performance in the coming quarter.

In order to have one single indicator for the performance of the state manufacturing sector, the Anderson Center has developed a Composite Index that is a weighted average of the underlying indices. A value of 50 for the Composite Index shows a general expansion of the manufacturing economy of the state and a value below 50 shows a decline. The industries are classified according to the North American Industry Classification System (NAICS).



**Detailed Results of the Survey of  
California Purchasing Managers' Expectations  
for the Fourth Quarter of 2022**

In its attempt to present you with a better delivery of the survey results, the A. Gary Anderson Center for Economic Research has calculated an index for every variable in the survey. The "% Better," is added to half of the "% Same," after which a seasonal factor is used to get a seasonally adjusted index for each variable (except commodity prices). A value over 50 for an index indicates growth and a value below 50 indicates a decline. If for example the index increases from 55 to 59, we say that the growth rate is higher than the previous quarter because 59 is bigger than 55. If the index remains at 55, we say that the growth rate remains the same as the previous quarter. If the index decreases from 55 to 52, we say that we still have growth but that the growth rate is lower than the previous quarter because 52 is smaller than 55. Each industry in the manufacturing sector is represented in the survey based on its employment share of total manufacturing employment in the state.

**Production:** The seasonally adjusted index for production is expected to increase from 60.0 in the third quarter to 62.2 in the fourth quarter, indicating that production is expected to increase at a higher rate in the fourth quarter. This is the tenth consecutive quarter that the production index has been above 50. Production is expected to increase most rapidly in the following industries: Food; Printing & Related Support Activities; Petroleum & Coal Products; Chemicals; Primary Metals; Fabricated Metal Products; Computer & Electronic Products; Aerospace Products & Parts; and Miscellaneous. Production is expected to decrease most rapidly in the following industries: Paper; Wood Products; Electrical Equipment, Appliance & Components; and Furniture & Related Products.

<b>Production</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Seasonally Adjusted Index</b>
4 <sup>th</sup> Quarter of 2022	37.3	42.2	20.5	16.9	62.2
3 <sup>rd</sup> Quarter of 2022	40.3	42.7	17.1	23.2	60.0
2 <sup>nd</sup> Quarter of 2022	52.6	33.6	13.8	38.8	65.8
1 <sup>st</sup> Quarter of 2022	41.1	40.6	18.3	22.8	62.4

**Inventories of Purchased Materials:** The seasonally adjusted index for inventories of purchased materials is expected to increase from 53.4 in the third quarter to 55.4 in the fourth quarter, indicating that inventories are expected to increase at a higher rate in the fourth quarter. Inventories of purchased materials are expected to increase most rapidly in the following industries: Food; Primary Metals; Machinery; Computer & Electronic Products; and Electrical Equipment, Appliance & Components. Inventories of purchased materials are expected to decrease most rapidly in the following industries: Beverage & Tobacco; Textile Mill Products; Paper; Printing & Related Support Activities; Chemicals; Plastics & Rubber Products; Wood Products; Electrical Equipment, Appliance & Components; and Furniture & Related Products.

<b>Inventories of Purchased Materials</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Seasonally Adjusted Index</b>
4 <sup>th</sup> Quarter of 2022	31.3	41.8	26.9	4.4	55.4
3 <sup>rd</sup> Quarter of 2022	33.5	43.7	22.8	10.7	53.4
2 <sup>nd</sup> Quarter of 2022	45.1	37.4	17.5	27.5	61.3
1 <sup>st</sup> Quarter of 2022	45.5	37.2	17.4	28.1	65.1

**Commodity Prices:** The seasonally unadjusted index for commodity prices is expected to decrease from 85.6 in the third quarter to 73.7 in the fourth quarter, indicating that commodity prices are expected to rise at a much lower rate in the fourth quarter. Commodity prices are expected to increase most rapidly in the following industries: Food; Beverage & Tobacco; Printing & Related Support Activities; Petroleum & Coal Products; Plastics & Rubber Products; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Transportation Equipment (other than Aerospace Products & Parts); Aerospace Products & Parts; Furniture & Related Products; and Miscellaneous. The Paper industry reported an expected decrease in commodity prices.

<b>Commodity Prices</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
4 <sup>th</sup> Quarter of 2022	60.6	26.3	13.1	47.4	73.7
3 <sup>rd</sup> Quarter of 2022	76.1	18.9	5.0	71.1	85.6
2 <sup>nd</sup> Quarter of 2022	92.9	6.7	0.4	92.5	96.3
1 <sup>st</sup> Quarter of 2022	84.0	11.4	4.6	79.4	89.7

**Supplier Deliveries:** For this variable, an index value over 50 indicates slower deliveries, and an index value under 50 indicates faster deliveries. The seasonally adjusted index for supplier deliveries is expected to decrease from 69.4 in the third quarter to 57.9 in the fourth quarter, indicating that supplier deliveries are expected to slow at a lower rate in the fourth quarter. Supplier deliveries are expected to be slowest in the following industries: Beverage & Tobacco; Wood Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Aerospace Products & Parts; and Furniture & Related Products. Supplier deliveries are expected to be fastest in the following industries: Textile Mill Products; and Paper.

<b>Supplier Deliveries</b>	<b>% Slower</b>	<b>% Same</b>	<b>% Faster</b>	<b>Net</b>	<b>Seasonally Adjusted Index</b>
4 <sup>th</sup> Quarter of 2022	28.0	60.9	11.1	16.9	57.9
3 <sup>rd</sup> Quarter of 2022	45.8	46.5	7.7	38.1	69.4
2 <sup>nd</sup> Quarter of 2022	58.8	35.4	5.8	52.9	76.0
1 <sup>st</sup> Quarter of 2022	54.0	40.5	5.5	48.6	75.0

**New Orders:** The seasonally adjusted index for new orders is expected to increase from 56.5 in the third quarter to 59.6 in the fourth quarter, indicating that new orders are expected to increase at a higher rate in the fourth quarter. New orders are expected to increase most rapidly in the following industries: Food; Printing & Related Support Activities; Petroleum & Coal Products; Chemicals; Primary Metals; Fabricated Metal Products; Computer & Electronic Products; and Aerospace Products & Parts. New orders are expected to decrease most rapidly in the following industries: Beverage & Tobacco; Textile Mill Products; Wood Products; Nonmetallic Mineral Products; and Furniture & Related Products.

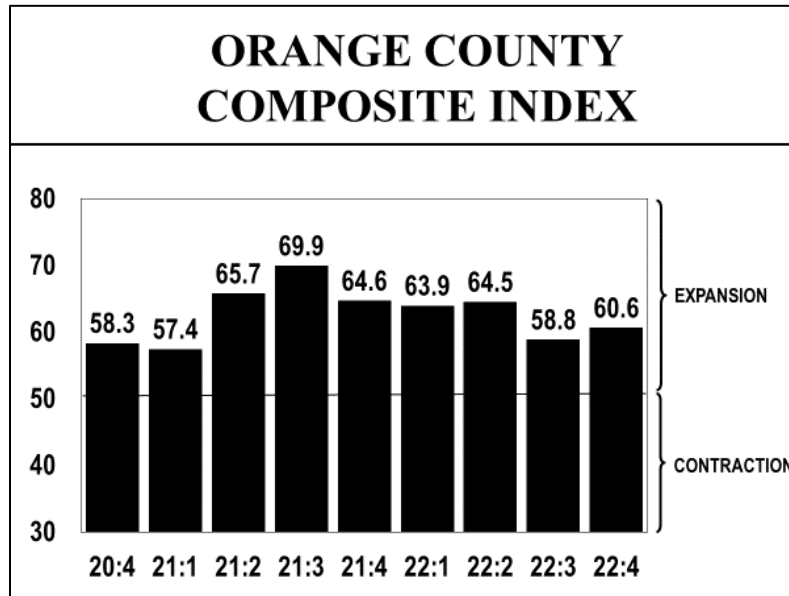
<b>New Orders</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Seasonally Adjusted Index</b>
4 <sup>th</sup> Quarter of 2022	34.7	42.6	22.6	12.1	59.6
3 <sup>rd</sup> Quarter of 2022	34.6	46.1	19.4	15.2	56.5
2 <sup>nd</sup> Quarter of 2022	40.9	46.3	12.8	28.1	60.7
1 <sup>st</sup> Quarter of 2022	38.0	47.4	14.6	23.5	62.4

**Employment:** The seasonally adjusted index for employment is expected to increase from 54.9 in the third quarter to 59.3 in the fourth quarter, indicating that employment in manufacturing is expected to improve in the fourth quarter. Employment is expected to increase most rapidly in the following industries: Food; Paper; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Computer & Electronic Products; and Aerospace Products & Parts. The Textile Mill Products industry reported an expected decrease in employment.

<b>Employment</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Seasonally Adjusted Index</b>
4 <sup>th</sup> Quarter of 2022	26.0	62.6	11.4	14.6	59.3
3 <sup>rd</sup> Quarter of 2022	27.4	57.9	14.8	12.6	54.9
2 <sup>nd</sup> Quarter of 2022	34.9	54.2	10.9	24.1	61.0
1 <sup>st</sup> Quarter of 2022	33.0	52.4	14.5	18.5	59.8

## Orange County's Manufacturing Survey

The Orange County manufacturing sector's Composite Index increased from 58.8 in the third quarter to 60.6 in the fourth quarter, indicating that the county's manufacturing economy is expected to expand at a higher rate in the fourth quarter of this year.



The seasonally adjusted index for production increased from 60.9 in the third quarter to 64.3 in the fourth quarter, indicating that production is expected to increase at a higher rate in the fourth quarter. The seasonally adjusted index for employment increased from 53.6 to 60.0 recuperating from the third quarter, and indicating that employment is expected to increase at a higher rate. Inventories of purchased materials and new orders are expected to increase at a higher rate. The seasonally unadjusted index for commodity prices is expected to decrease from 89.6 to 74.9 indicating that commodity prices are expected to rise at a much lower rate.

The index for the **non-durable goods industries** increased from 53.5 in the third quarter to 58.9 in the fourth quarter, indicating that these industries are expected to expand at a higher rate in the fourth quarter. The index for production increased from 51.4 to 59.5, indicating that production is expected to increase at a higher rate. Commodity prices are expected to rise at a lower rate. The index for the **high-tech industries** increased from 61.0 to 67.5, indicating that these industries are expected to expand at a higher rate. The index for production increased from 63.1 to 70.0 indicating that production is expected to increase at a higher rate. The index for inventories of purchased materials increased from 49.3 to 62.4 indicating that inventories of purchased materials are expected to increase substantially compared to the third quarter. The index for the **durable goods industries other than high-tech** decreased from 60.3 to 58.7 indicating that the durable goods industries other than high-tech are expected to expand at a lower rate. Commodity prices are expected to rise at a lower rate. Employment is expected to increase at a higher rate in the fourth quarter.

## **ABOUT THE ANDERSON CENTER FOR ECONOMIC RESEARCH**

The A. Gary Anderson Center for Economic Research (ACER) was established in 1979 to provide data, facilities and support in order to encourage the faculty and students at Chapman University to engage in economic and business research of high quality, and to disseminate the results of this research to the community.

## **ANNUAL SCHEDULE OF CONFERENCES AND PRESS RELEASES**

- |                 |                                                                                                                                                       |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>JANUARY</b>  | <ul style="list-style-type: none"><li>› Economic Forecast Conferences for the Inland Empire</li><li>› California Purchasing Managers Survey</li></ul> |
| <b>APRIL</b>    | <ul style="list-style-type: none"><li>› California Purchasing Managers Survey</li></ul>                                                               |
| <b>JUNE</b>     | <ul style="list-style-type: none"><li>› Economic Forecast Update Conference for the U.S, California and Orange County</li></ul>                       |
| <b>JULY</b>     | <ul style="list-style-type: none"><li>› California Purchasing Managers Survey</li></ul>                                                               |
| <b>OCTOBER</b>  | <ul style="list-style-type: none"><li>› California Purchasing Managers Survey</li></ul>                                                               |
| <b>DECEMBER</b> | <ul style="list-style-type: none"><li>› Economic Forecast Conference for the U.S., California and Orange County</li></ul>                             |