2019 LAEDC

ECONOMIC FORECAST & INDUSTRY OUTLOOK

The US, California and Greater Los Angeles economic outlook for 2019-2020

INSTITUTE FOR APPLIED ECONOMICS
Los Angeles County Economic Development Corporation

This report was produced by LAEDC Institute for Applied Economics

LAEDC Institute for Applied Economics provides objective economic and policy research for public agencies and private firms. The group focuses on economic impact studies, regional industry analyses, economic forecasts and issue studies, particularly in workforce development, transportation, infrastructure and environmental policy.

Every reasonable effort has been made to ensure that the data contained herein reflect the most accurate and timely information possible and they are believed to be reliable.

LAEDC LOS ANGELES COUNTY ECONOMIC DEVELOPMENT CORPORATION

Collectively Advancing Opportunity and Prosperity for All

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FOREWORD

As Los Angeles County's economic development leadership organization, the Los Angeles County Economic Development Corporation (LAEDC) produces an annual forecast to assess and predict key national, state, regional and local economic indicators. This year's forecast focuses on key issues, pressing economic concerns and longer-term systemic challenges at the local, state and national levels. Some of these issues are naturally not exclusive just to one geographic level – housing affordability is a problem for California as a state and as well as Los Angeles as a county – but even these challenges differ in scale and solutions.

While this forecast primarily focuses on the problems and issues facing our economy, the good news is that our economic fundamentals look very strong, with continued economic growth likely across the various regions. Despite public fears of economic slowdown, we find the odds of a full recession within the next two years to be relatively low. Thus, the challenge now facing those engaged in economic development is how to channel top-line economic strength into meaningful bottom-up prosperity and opportunity for more of our neighbors and our communities.

Sincerely,

LAEDC Institute for Applied Economics

I. Forecasting Nationally: Steering the Economic Ship between the Rocks

Entering 2018, a bull stood at the helm of the economic ship of the United States. The bull has since been relieved of duty by a bear. Though by no means stormy, the national economic outlook is less exuberant and more cautious than one year ago. The fiscal stimulus anticipated and associated optimism due to the Tax Cuts and Jobs Act passed in December 2017 buoyed strong quarterly growth in the second and third quarters of 2018 but passed out of the system by the end of last year. Despite this, the U.S. economy, with growth-driving forces prevailing, will exceed all previous post-war economic expansions in duration by July 2019. Moderate, steady growth will likely characterize the national economic landscape in the near term and should be perceived as a net good in the context of increasing global uncertainty.

Taking stock, the U.S. economy is marked by strong fundamentals. Private residential investment, private non-residential investment and industrial production have all increased since at least 2016 on an annual basis. Respectively, these metrics have risen 8 percent, 6 percent and 4 percent year-over-year. Personal consumption also rose again last year, continuing a trend since 2009. Over the long term, the S&P 500 remains at record levels with an average quarterly score of near 2,700 as of fourth quarter of 2018.

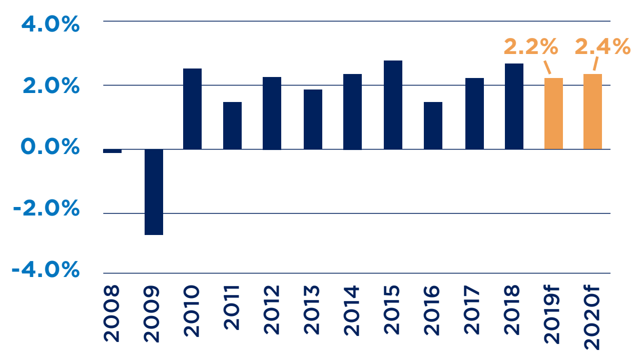
Resting on this foundation, a generally positive business environment and fiscal stimuli early in 2018, the U.S. economy expanded by almost 3 percent in 2018. These general upward trends enable the Los Angeles County Economic Development Corporation (LAEDC) to predict growth for the U.S. through 2020 with 2.2 and 2.4 percent growth in 2019 and 2020, respectively. This growth is forecasted to be augmented by the projected creation of almost 3 million additional jobs by 2020; further declines in unemployment to 3.5 percent in 2019 and 3.1 percent in 2020; and persistent per capita real wage increases to over $51,000 nationally by 2020. Moreover, inflation is likely to remain moderate, hovering around 2 percent in the coming two years.

One source of concern continues to be the trade standoff between the United States and the People's Republic of China. Though promised earlier in the year, additional tariff increases on nearly $200 billion worth of Chinese imports to the U.S., already subject to a 10 percent tariff, did not go into effect pursuant to an agreement of reprieve between President Donald Trump and President Xi Jinping. As of the date of this forecast, ongoing negotiations between American and Chinese representatives have until a March 1st deadline to reach amicable agreements. Otherwise, the promised rate hike from 10 to 25 percent on the $200 billion worth of Chinese imports will be imposed. It is reasonable to presume the Chinese government will respond in kind and impose tariffs on American exports to China.

Outside frosty trade relations, China's economy appears to be slowing after two decades of meteoric growth. Year over year, the Chinese economy grew 0.3 percent less, and some experts estimate Chinese

United States Real GDP Growth

Source: LAEDC



growth might have slowed more precipitously than official numbers state. Both Chinese retail sales and industrial production have followed a longer-term trend of decline, and policymakers have eased lending and reduced bank reserve requirements. At best, these moves signal adjustments to maintain a government-targeted status quo of between 6 and 6.5 percent annual growth; at worst, Chinese government and party officials are demonstrating a rush to compensate for a highly over-leveraged private sector and oversaturated real estate market.

Closer to home, the United States, Canada and Mexico successfully negotiated a new North American Free Trade Agreement (NAFTA) with a new name, the United States Mexico Canada Agreement or USMCA. Signed at the 2018 G20 summit in Buenos Aires, Argentina, the deal portends greater American access to Canadian dairy markets and new tariffs incentivizing greater automotive manufacturing in the United States. This new agreement also encourages Mexico to allow greater labor unionization and extends Canadian copyright protections. The U.S. Senate now has until mid- 2019 to either ratify the USMCA or the withdrawal from NAFTA, executively initiated in December 2018, will occur without a new trilateral trade framework and trigger a reversion to pre-NAFTA trade rules.

Last, but certainly not least, Brexit currently poses additional uncertainty to U.S. and global economic health. As the U.S.'s fifth largest export partner and seventh largest by total trade value, Britain's disorderly exit from the European Union portends disruption and financial loss along high-value supply chains on both sides of the Atlantic, including for aircraft, pharmaceutical products and automobiles. The United Kingdom is also the largest source of foreign direct investment to the U.S., so political and economic chaos would further complicate an extensive and multifaceted bilateral economic relationship.

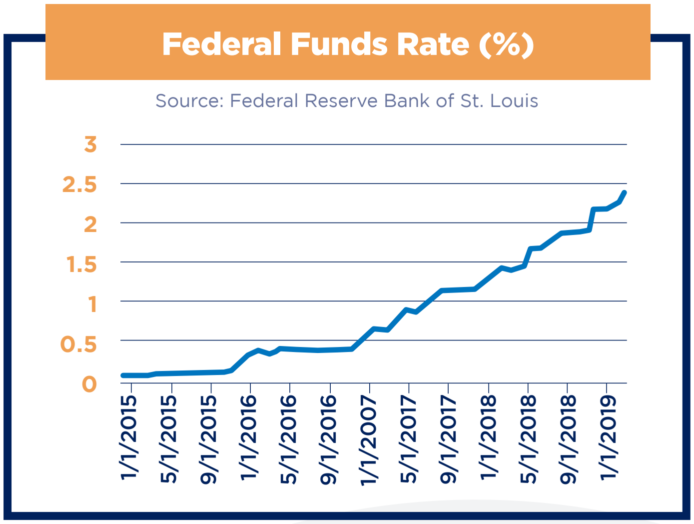
Taking office in January 2019, the 116th Congress of the United States ushered in another biennium of divided government with a Democratic-controlled House and Republican-controlled Senate and White House. This division culminated in a 35-day partial government shutdown lasting from December 22nd, 2018 to January 25th, 2019, marking the longest shutdown, partial or total, in recent U.S. political history. The Congressional Budget Office (CBO) estimates that this shutdown and the associated loss of economic activity cost the U.S. economy $11 billion in nominal terms. This equates to a 0.1 loss in real GDP for fourth quarter 2018 and a 0.2 real GDP loss in first quarter 2019. Though much of this economic loss will be recovered in subsequent quarters, the CBO estimates $3 billion in output will be permanently lost.

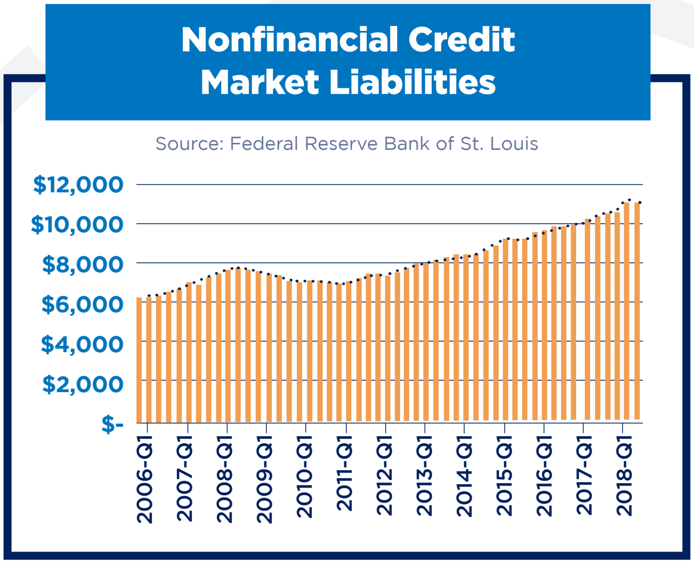
It is conceivable that deep partisan divisions will continue through the 2020 elections. Alternatively, the current apparent strength of the House speakership in this Congress could also translate into an amicable political cohabitation between Capitol Hill and White House commensurate with that of the 1980's. However, any political uncertainty and gridlock, fiscal or otherwise, can only hurt national economic prospects.

Beyond animal tropes, whether we've transitioned from a bull market to a bona fide bear market is still to be determined. What we do know is that market volatility is the new norm for now after a year of crests and corrections. Major indices, such as the Dow Jones Industrial Average and Standard and Poor's 500, peaked in January and September 2018 only to crater in early December of last year. Market gyrations were largely driven by tech stocks that failed to perform to investor expectations. These fluctuations are concomitant with flattening yield curve between short- and long-term interest rates, since both of these portend sobering investor sentiment. Though current market indices remain below the bullish highs of the previous year, a shifting tech-sector focus to services, and a market well above longer-term average, means these changes in fortune appear, for the moment, more corrective than chronic as would be seen in a full-blown and extended bear market, such as in the early 1970s.

Federal monetary policy has also given cause for greater market turbulence over the last four quarters. As expected, the Open Market Committee voted to raise the Federal Funds Target by 100 basis points by the end of 2018, the last rate hike incurring some political rancor. Current expectations project two additional rate hikes totaling a 50-basis point increase by the end of the current calendar year, though the first of these hikes are likely to be later in 2019 than originally anticipated. In addition, the Federal Reserve will likely continue its course of reversing quantitative easing, referred to by some as quantitative tightening, though recent anxiety in the financial markets might encourage a slower, if also more irregular, deleveraging regimen.

Like its chief economic competitor, China, the post-recession United States has become heavily dependent on debt to finance economic activity. Since the end of 2010, nonfinancial corporate debt has ballooned from just over $6 trillion to over $9.6 trillion, or just over 50 percent of GDP. In the context of an economy *also* dependent on monetary intervention for liquidity and a federal budget on track to run regular annual trillion-dollar deficits, these trends are cause for concern.





[1] Barchetto, Tony. "Tech Driving Most of the Market Gain so far in 2018 – Is that Unusual?" Seeking Alpha. October 8, 2018.

Moreover, this does not speak to the proliferation of so-called shadow banking, such as hedge and private equity funds, and the tech sector's dependence on these non-bank financial institutions for cash.

The U.S. macroeconomy faces many challenges in the several years ahead. Policy uncertainty, political gridlock, systemic vulnerabilities and the proliferation of debt all present risks to continued economic health both nationally and internationally. However, these issues should be cause for concern, not panic. Real incomes continue to rise, and macroeconomic forecasts portend steady if modest continued GDP growth. Inflation also remains low and stable, meaning these gains are real and appear persistent over the near-term.

United States Headline Economic Statistics and Forecast

	2014	2015	2016	2017	2018	2019f	2020f
Real GDP Growth	2.5%	2.9%	1.6%	2.2%	2.9%	2.2%	2.4%
Real Personal Income Growth	4.2%	4.6%	1.5%	2.6%	2.2%	2.7%	2.5%
Total Employment Growth	2,567,500	2,882,200	2,530,000	2,275,300	2,399,300	2,515,300	2,424,900
Unemployment Rate	6.2%	5.3%	4.9%	4.4%	3.9%	3.5%	3.1%
Real Per Capita Income ($2012)	$45,772	$47,523	$47,883	$48,799	$49,578	$50,569	$51,509
CPI Change	1.6%	0.1%	1.3%	2.1%	2.4%	2.2%	1.9%

II. Passing the Baton: New California Priorities with a New Governor

The era of Governor Brown has given way to that of Governor Newsom, and contrary to many expectations, Governor Newsom's proposed budget builds on the fiscal fastidiousness of his predecessor. Broadly, the proposed budget prioritizes education, health care, housing and disaster preparedness. Presuming continued revenue increases spurred by a continuously growing state economy, this proposed priority spending plan also includes a healthy dose of California optimism.

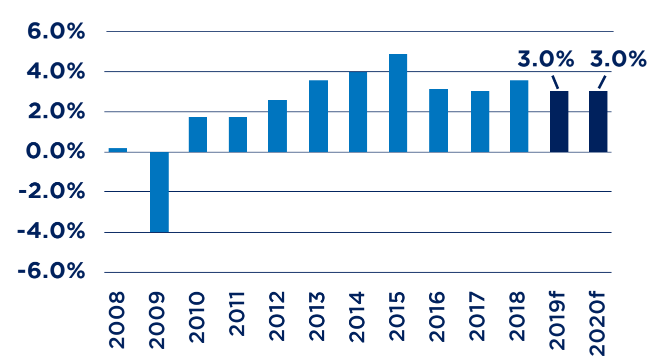
LAEDC expects, all else being held relatively equal, the trend of aggregate Californian economic confidence should continue. These good expectations are forecast to include 3.0 percent gross state product growth in both 2019 and 2020, furthering the trend of Californian economic growth exceeding national growth. This gross state growth is forecasted to precipitate gains in real personal income by 2.9 and 2.8 percent in the coming two years, meaning the average Californian will earn over $52,000 in real annual terms by 2020. Moreover, this forecast predicts additional employment growth of roughly 320,000 jobs in both 2019 and 2020 with associated declines in unemployment to 3.7 and 3.4 in the respective forecast years. These job gains are estimated to occur across all sectors with the largest gains in construction, logistics, utilities, business services, education, health and tourism. The demand for housing, especially in coastal California, is also predicted to continue to motivate additional supply gains, with an over 8,000 year-over-year increase in permits in both 2019 and 2020. Despite these additions, home values are also expected to rise through 2020 to an average state value of over $593,000 by the end of 2020.

In keeping with local priorities, and state and local concerns, Governor Newsom's budget allocates $1.3 billion in one-time grants and loans to aid localities in building affordable housing units alongside new housing production goals to be developed by the Department of Housing and Community Development. Failure to meet these housing goals will incur limitations to a locality's access to state transportation funding. As goals are attained, additional monies will be made available. To broaden the housing focus, the governor's plan incorporates $500 million to expand middle-income housing loan access through the state's housing finance agency. Finally, the spending scheme recommends streamlining CEQA (California Environmental Quality Act) processes for homeless shelters, navigation centers and supportive housing.

These proposals could not come at a more opportune moment in California's history. In 2018, then-Lt. Governor Newsom cited in a 2016 McKinsey Global Institute study asserting California's status as 49th of the 50 states in per capita housing units. Based upon that metric, the state would need to build 3.5 million homes by 2025. Estimates vary regarding total housing stock shortfall; however, all estimates agree on the need for a significant acceleration of construction over the average of 100,000 units added per year between 2014 and 2018. Supply constraints and affordability are greatest in the Los Angeles Metropolitan and San Francisco Bay areas, where

California Real Real GDP Growth

Source: LAEDC



homes are only affordable to 29 and 18 percent of the resident populations, respectively.

Urban planners recommend that cities make every effort to keep the ratio of median household income to median house price under 4 to 1 to ensure a healthy economy and an undistorted housing market.[2] Currently no county in Southern California does so, and indeed the entire Southern California region averages a ratio of nearly 8 to 1, with the state not far behind.

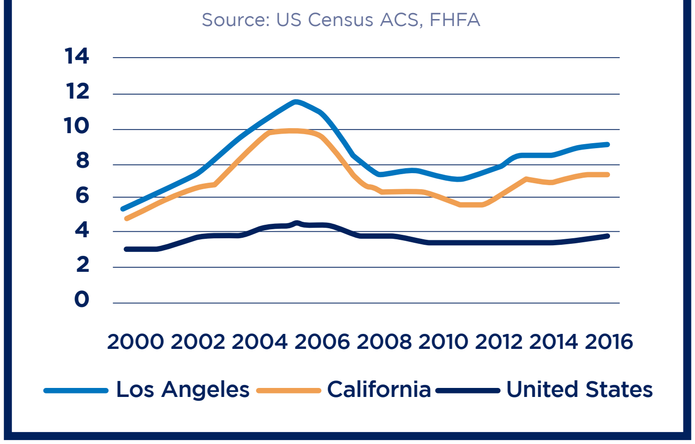
In addition to its short-term social considerations, the paucity of affordable housing in California arguably serves as the strongest short- and long-term structural economic headwind in the state. In the short-term, housing unaffordability hampers household formation, limits mobility and incentivizes talent to relocate out-of-state. Over the longer-term, the bifurcation of income distribution will worsen inequality; firms will relocate or select other states in the interest of their employees and labor costs; and economic growth will decelerate, decline or disappear.

The Governor's budget also prioritizes natural disaster-preparedness and emergency response infrastructure, including $415.1 million toward state silviculture practices and $172.3 million to improve emergency response communications. Major wildfires alone in 2018 cost the state an estimated $24 billion[3], at the lower bound, in economic losses. Moreover, the extent of economic costs from natural disasters, among them fires, floods and earthquakes, persist across time due to capital destruction and may shift the economy to a lower long-term growth rate.

Natural disasters and extreme weather, both events and patterns, pose longer-term implications to cornerstones of California's economy going forward. Chronic extreme weather, whether climate-induced drought or abnormally cold temperatures, stand to drastically impact the state's $48.4 billion agriculture industry. Given the trend of large wildfire events in Northern California, air and burn impacts should be expected on the state's wine grape crop. Central Valley production will also likely suffer from extreme heat and cold as temperature anomalies become more frequent.

In addition to economic impacts, natural disasters will cut into an already supply-strapped housing stock. Policymakers and builders will not only have to contend with the rate of household formation in considering housing targets, but attrition rates due to natural disaster will also need to be a primary factor in setting construction targets. Indeed, the 2018 Camp Fire in Butte County destroyed 14,000 homes in the City of Paradise alone.

Median Household Income to Median House Price Ratio



[2] *See, e.g.*, Alain Bertaud, "Order Without Design: How Markets Shape Cities" (MIT Press), November 2018

[3] National Oceanic and Atmospheric Administration

Though not a priority in the proposed state budget, the high-tech centers in San Diego, the San Francisco Bay, Silicon Valley, Los Angeles and other economic regions across the state are the apple in every policymaker's eye. The appeal of high technology industry concentrations as engines of economic growth cannot be understated. However, the clout of these innovation-rich economic geographies is largely supported not by their own profitability but private equity. As an illustration, mobility giant Uber still reported net losses of nearly $1 billion in third quarter 2018, despite being nearly 10 years old. This narrative represents the rule rather than exception in the world of tech startups, where a 10-year birthday celebration is rare, acquisition common, and addiction to venture capital ubiquitous.

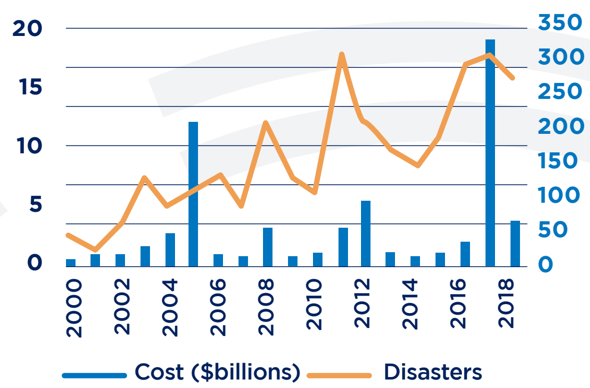
This reliance on venture capital at aggressively stepped-up valuations should be a cause for concern and caution. As reported by PricewaterhouseCoopers, the total venture capital investment amount in California reached an all-time high in third quarter of 2018 with $14.6 billion invested. However, the number of investment deals reached the lowest point in six years, and the number of seed investments as measured by both total value investment and the number deals were also at the lowest level since 2012. Expansion-stage investment was at a record high and late-stage investment similarly strong, indicating "smart money" chasing fewer deals, likely at higher valuations, and the early venture capital pipeline might be drying up.

As a primary catalyst of the last decade of Californian prosperity, systemic weaknesses in the "Silicon" landscape pose structural threats to the California dream. These risks are threefold. First, a potential withdrawal of venture capital away from the seed-stage ecosystem could pose a stumbling block to tech entrepreneurship and future product/service development and commercialization. In the context of rising interest rates, California's high-tech centers might see fewer new denizens in the coming years.

Second, the shift of venture capital toward later-stage investments reflects the broader trend of the tech sector toward concentration. This poses a rent-seeking problem best exemplified by lavish benefits heaped on Amazon by states and localities in the bid to host the second Amazon headquarters. While entrepreneurship endures, the ambition to have a "Silicon *somewhere*" is palpable. However, a tech industry dominated by giants means the competition between beach, valley, prairie, desert and any other aspirant Silicon geography will indeed be zero-sum to the detriment of all but the corporate actors extracting rent.

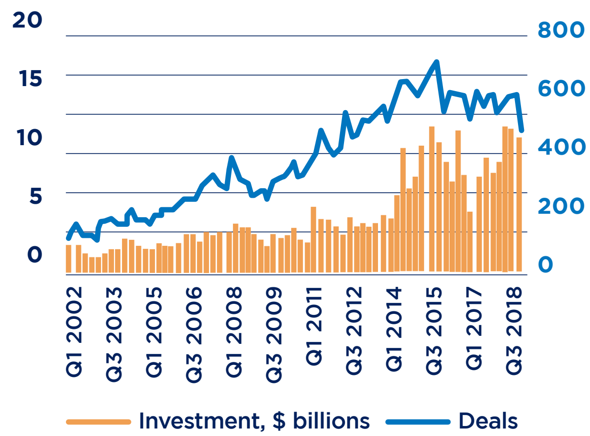
Billion Dollar Disasters in the US

Source: NOAA



California Venture Capital Investment

Source: PwC



Thirdly, and finally, many highly valued firms concentrated in the state's technology-intensive centers are not generating revenues commensurate to their hype. The profitability problems of Tesla, Snap and Uber, among others, are well-documented and need not be belabored here. However, the dynamics of business have not changed to the extent that profit and profitability have become increasingly less important. Either through institutional fatigue or failure, financing for many of these companies can just as quickly disappear and companies not unwritten by the financial markets will collapse à la the Dot-Com Bubble in 2000.

Buoyed by an economic expansion commensurate with and often in excess of the rest of the nation, the Golden State has gained much since the end of the Great Recession and therefore has much to lose. Though confronted with challenges, beyond even those presented here, California is famous for optimism, invention and re-invention. Appreciating and understanding these hindrances toward offering all current and future state residents the fullness of the California dream is the essential first step to making progress to ever-greater prosperity.

California Headline Economic Statistics and Forecast

	2014	2015	2016	2017	2018	2019f	2020f
Real GSP Growth	4.0%	5.0%	3.1%	3.0%	3.4%	**3.0%**	**3.0%**
Real Personal Income Growth	5.0%	7.4%	2.3%	2.7%	2.7%	**2.9%**	**2.8%**
Total Employment Growth	424,200	474,000	427,100	340,200	330,600	**322,700**	**318,500**
Unemployment Rate	7.5%	6.2%	5.5%	4.8%	4.2%	**3.7%**	**3.4%**
Real Per Capita Income ($2012)	$44,875	$47,775	$48,541	$49,438	$50,363	**$51,436**	**$52,447**

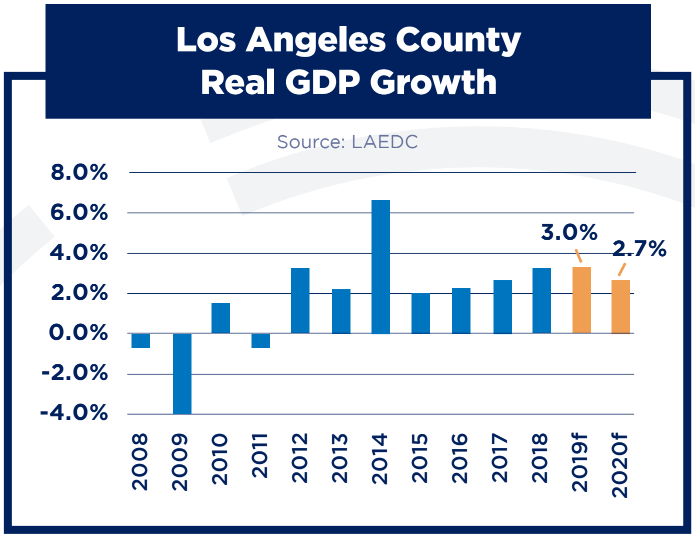
III. 88 Cities, 125 Unincorporated Areas, One Common Future: Understanding the Trajectory of the LA County Economy

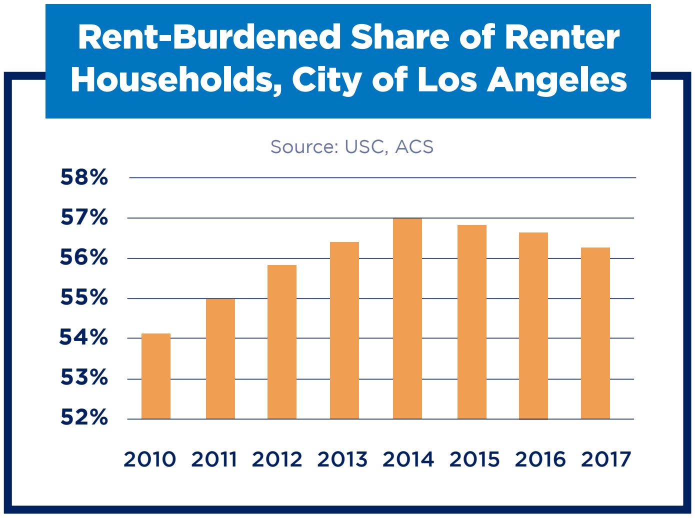
With over one in four Californians living in Los Angeles County alone, it goes almost without saying that whatever happens in Los Angeles greatly affects and influences the rest of the state. The current prosperity enjoyed by the county, on aggregate, and the long-awaited real income gains are emblematic of the trends taking place across the state. Job creation remains strong overall and in, though not exclusively so, high-paying industries offering upward mobility for Angelenos. Inasmuch as recent trends can inform future predictions, the Los Angeles County economy demonstrates strength, if imperfectly.

LAEDC projects 3.0% growth in real county product for 2019 and 2.7% growth in 2020, roughly keeping pace with state economy and exceeding national growth. This expansion will be on the back of robust employment increases in key service sectors such as health care and professional and business services, which will drive an additional increase in roughly 60,000 jobs per year. This will continue the long-term decline in the unemployment rate, although at a projected 4.3% in 2020 it should remain stubbornly higher than the national average.

Although strong real personal income growth is expected, averaging 2.6% in 2019 and 2.1% the following year, it will lag behind that of the state as a whole due to the relatively higher unemployment rate and greater degree of labor market slack.

As above, so below, however: Los Angeles is at the vanguard of California's housing shortage emergency. Indeed, over 57 percent of renter households in the Los Angeles metropolitan area – which includes Orange County – are considered rent burdened, that is, they spend one-third or more of their income on rental costs. Almost a full third of Los Angeles metropolitan residents are considered severely rent burdened, meaning they spend half or more of their income on rental costs. And, with two out of three Los Angeles households renting their residences, this critical situation affects — or could affect — more county households than not.





Though hardly the only smudge on the region's good news story of economic recovery and growth, this crisis poses the greatest long-term threat to local economic mobility and bottom-up prosperity. To the extent that a household is burdened with basic rental costs, less money is available to save, invest, consume or otherwise contribute to the economy, while also further burdening public social services and programs. Exacerbating matters, the movement of work away from salaried, full-time employment toward "gig", temporary or contract work means households increasingly face dual pressures from the labor and housing markets.

Moreover, the likelihood of buying and owning a home and accruing associated equity is also increasingly unlikely. The California Association of Realtors estimated that in the fourth quarter of 2018 only 24 percent of households in the county could afford a home, meaning they made at least $124,900 per year to afford the median home price of $576,100. (In Orange County, only 20 percent of households were found to be able to purchase a home.) Changing housing preferences aside (e.g., Millennials are more likely to rent and live in urban centers), these patterns bode poorly for economically stable household and family formation going forward.

Though its causes transcend the economic, homelessness, especially working homelessness, is, in large part, a result of housing unaffordability in the region. The Department of Housing and Urban Development's definition of homelessness limits who count as homeless to those at imminent risk of losing their domicile; those without fixed or adequate nighttime shelter; or those without shelter considered suitable for human beings. These counts therefore do not consider those who have impermanent housing accommodations, such as those who might be moving from couch to couch. In a multi-jurisdictional effort to battle homelessness, the County of Los Angeles has committed $3.5 billion through Measure H, and the City of Los Angeles has similarly pledged $1.2 billion through Proposition HHH.

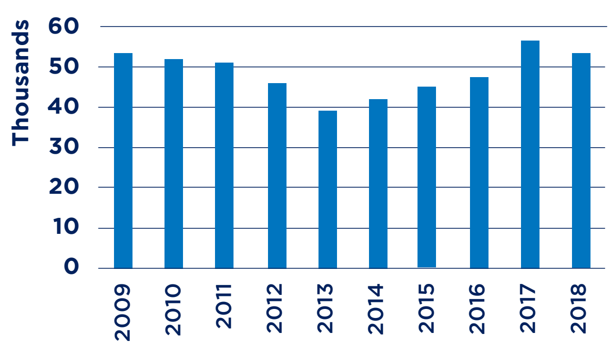
The latest counts of homelessness from 2018 estimate almost 53,000 residents of Los Angeles County at any one point in time grapple with homelessness, the majority without shelter and the remainder in tents, vans, automobiles and RV's. The good news is that this is a four percent decrease from 2017. The cities of Pasadena, Glendale and Long Beach, which conduct their own censuses of the homeless, estimate roughly 700, 260 and 1,860, respectively, of their residents experience homelessness at any point in time.

The key to a long-term solution to homelessness will not only be affordable housing and permanent supportive housing but *housing that is affordable*, that is, saturating the housing stock to the point of bringing rents and home prices to reasonable levels.

To this end, Los Angeles has begun to rise to the challenge in terms permitting of housing units, significantly outpacing the state and the region – indeed permitting is only marginally behind pre-Recession highs - but affordability remains elusive and housing construction will have to continue to rise markedly to make up the housing gap that has opened up over years of suppressed development. LAEDC forecasts roughly 23,000 new units permitted in 2019, and 24,000 in 2020, an upward trend that will have to continue if home prices, which we see reaching nearly $650,000 dollars in 2020, are to decline to more attainable levels.

Los Angeles County Homeless Count

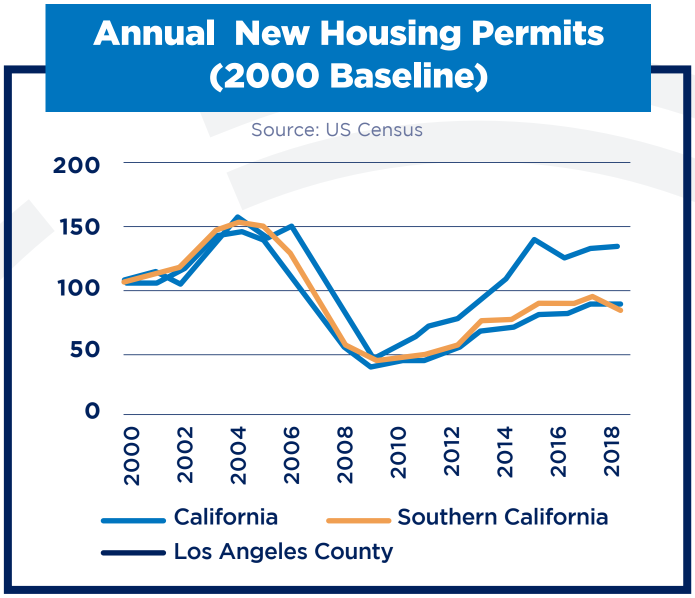
Source:LAHSA, LAEDC



The battle to increase housing volume will continue and likely intensify the battle over zoning restrictions in Los Angeles County. In 1960, the City of Los Angeles alone was zoned to accommodate 10 million residents, only marginally below the current population of the entire county. Community-based urban planning practices starting in the 1960s resulted in the city being presently zoned for only 4.3 million residents.[4] However, the issue of zoning transcends the multigeneration – and perhaps intergenerational – struggle between single-family and multifamily residential zones. Indeed, it is estimated that a full 14 percent of all incorporated land in Los Angeles County is devoted to parking alone.[5] Solutions, however, need not be extraordinary or highly distortionary. For example, City of San Diego Mayor Kevin Faulconer announced a plan in December 2018 to eliminate parking minimums for developments within half a mile of transit hubs. The City of Buffalo approved a similar measure in 2017.

Fortunately, transit-oriented development has already reached the City of Los Angeles through the voter-approved Measure M, passed in 2016 and made effective September 2017. Based on data from June 2018, the City had 112 Transit Oriented Communities (TOC) project applications, with the potential of yielding 5,571 new housing units. Of these, over 1,100 are designated as affordable units. Developments outside the urban core, such as the 19,000 home Centennial development near the Tejon Pass, might be essential ingredients to the housing affordability solution, but there are concerns about these more remote developments being too far from gainful employment, as well as cultural and recreational amenities (thus increasing GHG and other noxious emissions from mobile sources), and too exposed to natural disaster. The City of Los Angeles – the largest but still only one of 88 cities – has also embarked on a comprehensive revision of the zoning code that has largely not changed since 1946.

Almost as urgent as the housing crisis in both the state and county, concerns over traffic congestion and gridlock have taken on new urgency in the context of the Super Bowl in 2022, the World Cup in 2026 and the 2028 Olympic Games, and worsening traffic congestion continues to be drag on productivity and, above a certain threshold, economic growth, in addition to a source of personal stress. Metro's massive transit expansion plans are the county's most visible effort to relieve some congestion across the region, and LA Metro CEO proposed (January 2019) a congestion fee during peak automobile traffic hours along with new subsidies for rail and bus fares.



[4] Morrow, G. D. (2013). "The Homeowner Revolution: Democracy, Land Use and the Los Angeles Slow-Growth Movement, 1965-1992. Ph.D. dissertation., University of California Los Angeles. ProQuest ID: Morrow_ucla_0031D_11873.

[5] Mikhail Chester, Andrew Fraser, Juan Matute, Carolyn Flower, and Ram Pendyala. Parking Infrastructure: A Constraint on or Opportunity for Urban Redevelopment? A Study of Los Angeles County Parking Supply and Growth Journal of the American Planning Association, 2015, 81(4), pp. 268-286, doi: 10.1080/01944363.2015.1092879

Los Angeles also supports a vibrant ecosystem of electric and autonomous vehicle designers, manufacturers and service providers. Many ancillary industries, such as battery design and manufacturing and charger manufacturing, have also taken root. Not a moment too soon, either: in the City of Los Angeles alone, over 12,000 new electric vehicles (EVs) were sold in 2017 with several hundred to over a thousand new EV's sold in other cities across the county, from Santa Clarita to Long Beach, and Santa Monica to Pomona. Unfortunately, Los Angeles County only hosts 1,818 charging stations, of which only seven percent (7%) are fast chargers and many of those only available to Tesla vehicles.

In addition to being a logistical, productivity, economic growth and environmental problem, inadequate transportation infrastructure poses an equity problem when coupled with housing affordability. Both housing and transportation in tandem will likely be the primary local issues for the foreseeable future.

In assessing the economic trajectory of Los Angeles, it is important to appreciate and account for the preferences of the culturally diverse Millennial generation that calls Los Angeles home. According to the Brookings Institute, Los Angeles County is over one-quarter Millennial, more than half of whom are Hispanic.

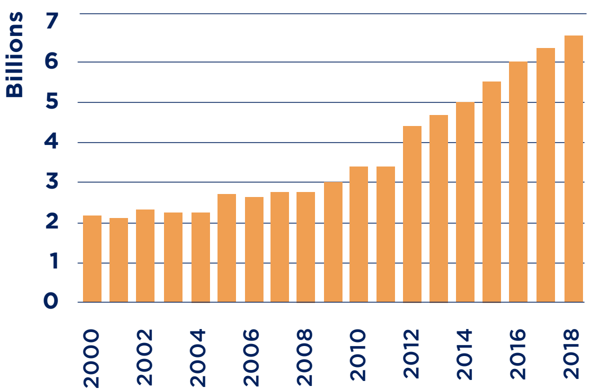
While Los Angeles has not seen a large aggregate attrition within this demographic cohort, it is also not one of the regions for high growth, that is, the region may not be attracting its fair share of young people. Moreover, their move to Los Angeles has been uneven: the areas with the highest Millennial growth are in Downtown and the Mid-Wilshire corridor.[6] In a county as balkanized as Los Angeles, generational movement toward some localities and not others is, or will become, a zero-sum game for the economic activity and revenue millennials and their successors generate.

Going forward, Los Angeles County will have to contend with challenging attributes that have also made it one of the most unique metropolitan areas

in the world: a strong historical emphasis on vast sprawls of single-family dwellings; a mosaic of cities with diverse populations and priorities; and a car culture that until recently eschewed extensive investment in alternative mobility solutions. These obstacles and the solutions proposed to overcome them will have lasting ramifications within and across the 88 cities and over 100 unincorporated areas. The collective decisions made in the next few years on critical policy issues, such as housing affordability and transportation, will be decisive to the longer-term economic trajectory of the county and region.

LA Metro Expenditures

Source: LA Metro



[6] Hudson, Erin. "The zip codes where millennials congregate." The Real Deal. September 30th, 2018.

Los Angeles County Headline Economic Statistics and Forecast

	2014	2015	2016	2017	2018	2019f	2020f
Real GCP Growth	4.1%	6.4%	2.1%	2.4%	2.8%	3.0%	2.7%
Real Personal Income Growth	5.3%	6.7%	1.7%	1.6%	1.4%	2.6%	2.1%
Total Employment Growth	75,700	92,400	109,600	53,100	59,000	61,000	60,700
Unemployment Rate	8.3%	6.6%	5.2%	4.7%	4.6%	4.4%	4.3%
Real Per Capita Income ($2012)	$40,695	$43,099	$43,675	$44,239	$44,737	$45,689	$46,480

The following pages of this forecast include economic outlooks, historical data, current statistics and key indicator forecasts for the United States, California, the Southern California region and the 10 counties composing the Southern California region. These counties, in order of presentation, are Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura, Santa Barbara, Imperial, Kern and San Luis Obispo. For each geographical region, historical data and forecasts are given for real gross regional product; real per capita income; total employment changes; unemployment rates; real per capita income in chained 2012 dollars; employment by industrial super-sectors; housing permits; and estimated home values.

United States

- The United State economy will likely continue to grow at a moderate pace with additional real per capita income gains and stable inflation.
- The most pressing threats to continued growth are the ongoing trade disputes with China, a slowing Chinese economy, domestic political gridlock and monetary policy overreach.
- Despite market corrections through 2018, the financial markets appear relatively strong going into 2019. However, nonfinancial corporate liabilities have been rising and could be a cause for concern.

QUICK FACTS

Population: 327.2 MILLION

Median Household Income* $61,372

39.3% % Prime Age (25-54)

3.7 Median Home Price to Household Income Ratio*

Gross Domestic Product $20.5 TRILLION

13.4% Poverty Rate*

3.9% Unemployment Rate

*2017 Estimate
Sources: US Census ACS, CA DoF, IHS, FHFA, BLS

EXHIBIT 1

	2014	2015	2016	2017	2018	2019f	2020f
Real GDP Growth	2.5%	2.9%	1.6%	2.2%	2.9%	2.2%	2.4%
Real Personal Income Growth	4.2%	4.6%	1.5%	2.6%	2.2%	2.7%	2.5%
Total Employment Growth	2,567,500	2,882,200	2,530,000	2,275,300	2,399,300	2,515,300	2,424,900
Unemployment Rate	6.2%	5.3%	4.9%	4.4%	3.9%	3.5%	3.1%
Real Per Capita Income ($2012)	$45,772	$47,523	$47,883	$48,799	$49,578	$50,569	$51,509
CPI Change	1.6%	0.1%	1.3%	2.1%	2.4%	2.2%	1.9%
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	328,300	225,400	119,600	237,600	353,900	300,300	318,100
Manufacturing	173,500	148,600	6,400	86,900	224,500	126,200	146,000
Transportation, Trade and Utilities	530,400	575,900	370,400	227,300	341,800	309,200	318,100
Information	24,200	32,500	46,200	3,100	-5,100	-3,600	-6,200
Financial Activities	71,100	139,700	145,600	137,600	109,200	112,500	119,000
Professional & Business Services	567,800	541,500	406,100	319,500	489,100	571,000	518,500
Education & Health	396,200	533,700	583,500	508,500	469,900	462,000	490,900
Leisure & Hospitality	431,400	480,400	465,900	329,600	373,200	368,100	361,700
Other Services	93,400	72,000	88,600	46,100	68,800	64,700	63,800
Government	55,300	122,900	196,700	129,900	80,800	108,000	94,800
Housing Permits	990,447	1,182,369	1,206,976	1,282,156	1,312,724	1,329,198	1,422,616
Home Values	$175,331	$194,032	$204,804	$217,600	$227,300	$237,698	$248,084

California

- As in the previous five years, California is expected to outpace the nation in real GDP and per capita income growth through 2020.
- California skews slightly younger than the rest of the country, though housing affordability issues across the state might motivate younger Californians to move elsewhere.
- Tourism, healthcare, education, trade, logistics, business services and construction are forecasted to continue to fuel diverse if moderate job growth.

QUICK FACTS

Population: 39.8 MILLION

Median Household Income* $69,759

41.2% % Prime Age (25-54)

7.3 Median Home Price to Household Income Ratio*

Gross Domestic Product $3.0 TRILLION

13.3% Poverty Rate*

4.2% Unemployment Rate

*2017 Estimate

Sources: US Census ACS, CA DoF, IHS, FHFA, BLS

EXHIBIT 2

	2014	2015	2016	2017	2018	2019f	2020f
Real GDP Growth	4.0%	5.0%	3.1%	3.0%	3.4%	3.0%	3.0%
Real Personal Income Growth	5.0%	7.4%	2.3%	2.7%	2.7%	2.9%	2.8%
Total Employment Growth	424,200	474,000	427,100	340,200	330,600	322,700	318,500
Unemployment Rate	7.5%	6.2%	5.5%	4.8%	4.2%	3.7%	3.4%
Real Per Capita Income ($2012)	$44,875	$47,775	$48,541	$49,438	$50,363	$51,436	$52,447
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	37,800	54,700	39,600	34,200	45,900	43,200	44,900
Manufacturing	17,800	21,800	6,400	900	6,000	300	1,100
Transportation, Trade and Utilities	69,500	73,400	60,600	52,500	34,300	41,200	40,600
Information	13,300	24,300	38,100	2,600	9,900	9,300	8,800
Financial Activities	-500	19,600	20,700	9,100	4,800	4,100	7,500
Professional & Business Services	78,500	65,500	41,000	45,200	67,100	67,400	65,400
Education & Health	68,400	85,500	85,500	95,600	78,700	86,700	86,400
Leisure & Hospitality	80,700	71,600	72,700	51,400	53,000	53,600	53,200
Other Services	19,300	8,600	10,300	8,700	-800	4,000	2,900
Government	39,500	49,000	52,300	40,000	31,600	33,700	32,900
Housing Permits	82,603	97,611	100,629	111,788	114,370	122,879	131,494
Home Values	$410,886	$440,251	$471,918	$509,400	$537,400	$564,110	$593,474

Southern California

- In aggregate, the 10-county Southern California region is expected to roughly keep pace with the state through 2019 but fall somewhat behind by 2020.
- An aging population, housing affordability and job creation in industries with a wide distribution of income outcomes, like healthcare and professional services, are expected to be primary factors affecting the entire region.
- However, regional real per capita income will continue to marginally outpace the state.

QUICK FACTS

Population:
24.1 MILLION

41.8%
% Prime Age (25-54)

Gross Domestic Product
$1.7 TRILLION

Median Household Income*
$68,942

7.7
Median Home Price to Household Income Ratio*

13.9%
Poverty Rate*

4.6%
Unemployment Rate

*2017 Estimate
Sources: US Census ACS, CA DoF, IHS, FHFA, BLS
**LAEDC Estimate

EXHIBIT 3

	2014	2015	2016	2017	2018	2019f	2020f
Real GDP Growth	3.4%	5.9%	1.9%	2.3%	2.7%	2.9%	2.6%
Real Personal Income Growth	4.8%	6.6%	2.1%	2.0%	1.6%	2.7%	2.2%
Total Employment Growth	211,800	254,700	242,800	177,600	163,600	159,800	182,300
Unemployment Rate	7.6%	6.3%	5.4%	4.7%	4.3%	3.9%	3.6%
Real Per Capita Income ($2012)	$47,371	$50,095	$50,860	$51,511	$51,972	$52,986	$53,750
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	22,500	27,500	21,300	18,000	18,000	16,400	18,200
Manufacturing	2,500	4,800	-2,800	-7,400	2,000	-1,500	-700
Transportation, Trade and Utilities	42,400	46,000	33,100	36,600	11,600	18,300	18,000
Information	1,200	9,400	22,300	-13,700	3,200	3,000	2,900
Financial Activities	-2,200	8,600	7,600	3,700	-300	0	1,400
Professional & Business Services	24,000	26,200	21,100	21,000	44,600	32,400	35,300
Education & Health	38,300	48,200	53,900	58,000	42,200	50,800	49,300
Leisure & Hospitality	53,100	49,700	51,100	33,200	30,800	25,600	44,500
Other Services	12,000	4,800	5,700	2,600	1,900	2,400	2,500
Government	18,100	29,500	29,600	25,700	9,500	12,400	11,100
Housing Permits	49,586	59,672	59,601	63,971	59,144	61,804	64,254
Home Values	$440,942	$462,168	$495,065	$532,497	$556,559	$574,512	$587,984

Los Angeles County

- Los Angeles County will continue its shift from production industries like manufacturing and logistics to service based ones, with major growth in professional business services, health care and hospitality.
- Major investment in transit will continue to support strong economic growth, although failure to increase density along transit routes heavily limits the potential positive impacts.
- Failure to meaningfully address the housing and homeless crises will put a damper what is otherwise likely to be strong output and wage growth.

QUICK FACTS

Population:
10.2 MILLION

42.8%
% Prime Age (25-54)

Gross Domestic Product
$807 BILLION

Median Household Income*
$65,006

9.1
Median Home Price to Household Income Ratio*

14.9%
Poverty Rate*

4.6%
Unemployment Rate

*2017 Estimate
Sources: US Census ACS, CA DoF, IHS, FHFA, BLS

EXHIBIT 4

	2014	2015	2016	2017	2018	2019f	2020f
Real GDP Growth	4.1%	6.4%	2.1%	2.4%	2.8%	3.0%	2.7%
Real Personal Income Growth	5.3%	6.7%	1.7%	1.6%	1.4%	2.6%	2.1%
Total Employment Growth	75,700	92,400	109,600	53,100	59,000	61,000	60,700
Unemployment Rate	8.3%	6.6%	5.2%	4.7%	4.6%	4.4%	4.3%
Real Per Capita Income ($2012)	$40,695	$43,099	$43,675	$44,239	$44,737	$45,689	$46,480
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	3,600	7,400	7,400	3,600	4,800	4,800	4,800
Manufacturing	-4,600	-3,400	-7,400	-9,900	0	-3,700	-2,900
Transportation, Trade and Utilities	16,800	17,500	12,800	10,400	-2,200	400	0
Information	1,700	8,600	21,900	-14,700	3,700	2,800	2,900
Financial Activities	-1,900	4,300	4,300	1,500	1,000	1,000	1,100
Professional & Business Services	6,800	2,100	9,600	10,600	15,000	12,000	12,800
Education & Health	18,400	20,400	26,700	27,300	18,400	24,100	22,900
Leisure & Hospitality	25,100	22,500	23,500	14,200	22,000	19,600	20,000
Other Services	4,800	600	2,300	900	-1,300	300	100
Government	4,800	12,400	8,300	9,200	-2,200	-400	-1,000
Housing Permits	17,659	23,263	20,591	21,574	22,354	23,122	24,315
Home Values	$480,057	$506,035	$544,584	$588,700	$614,829	$632,235	$647,332

Orange County

- Orange County will continue to see strong output and wage growth on the back of a strong labor market.
- Higher-than-average education will continue to drive real wage growth higher than the regional average and in middle and high skill industries such as business services and healthcare.
- However, home prices are also expected to grow above that of any other county in Southern California.

QUICK FACTS

Population: 3.2 MILLION

Median Household Income* $86,217

42.1% % Prime Age (25-54)

7.9 Median Home Price to Household Income Ratio*

Gross Domestic Product $291 BILLION

11.5% Poverty Rate*

2.9% Unemployment Rate

*2017 Estimate
Sources: US Census ACS, CA DoF, IHS, FHFA, BLS

EXHIBIT 5

	2014	2015	2016	2017	2018	2019f	2020f
Real GDP Growth	4.3%	9.0%	0.8%	3.0%	2.3%	2.9%	2.6%
Real Personal Income Growth	3.8%	7.9%	3.4%	3.0%	1.5%	2.7%	2.3%
Total Employment Growth	33,300	48,300	40,600	33,000	18,500	22,700	23,200
Unemployment Rate	5.5%	4.5%	4.0%	3.5%	2.9%	2.6%	2.3%
Real Per Capita Income ($2012)	$55,041	$58,897	$60,545	$61,816	$62,331	$63,558	$64,578
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	4,700	8,500	5,700	4,500	2,500	2,500	2,800
Manufacturing	-600	-400	100	1,700	-3,000	-1,500	-1,900
Transportation, Trade and Utilities	3,400	3,400	1,400	2,700	-300	700	500
Information	-400	1,000	900	900	-100	300	200
Financial Activities	500	2,500	1,600	1,400	-1,100	-900	300
Professional & Business Services	9,200	10,100	10,400	5,000	8,800	8,100	8,300
Education & Health	4,700	8,000	7,300	9,800	9,100	8,300	8,800
Leisure & Hospitality	6,700	9,300	8,300	6,300	4,300	6,100	5,500
Other Services	1,700	1,700	1,500	-100	-900	-500	-600
Government	3,500	4,300	3,200	900	-800	-300	-600
Housing Permits	9,291	10,771	11,523	9,510	8,201	9,055	9,017
Home Values	$578,308	$600,460	$639,426	$679,400	$708,383	$721,737	$732,350

Riverside County

- Riverside County should continue its run of stellar economic growth on the back of its role as a key transportation and shipping hub.
- The relative affordability of housing in the region should drive population growth as families move from the high-priced coastal regions.
- Riverside County is predicted to lead the region in real personal income growth.

QUICK FACTS

Population: 2.4 MILLION

40.6% % Prime Age (25-54)

Gross Domestic Product $82 BILLION

Median Household Income* $63,944

5.5 Median Home Price to Household Income Ratio*

12.9% Poverty Rate*

4.4% Unemployment Rate

*2017 Estimate
Sources: US Census ACS, CA DoF, IHS, FHFA, BLS
**LAEDC Estimate

EXHIBIT 6

	2014	2015	2016	2017	2018	2019f	2020f
Real GCP Growth	3.5%	7.8%	4.2%	2.9%	4.0%	3.9%	3.7%
Real Personal Income Growth	4.0%	6.7%	3.0%	2.6%	2.8%	3.3%	2.9%
Total Employment Growth	29,100	32,800	31,900	25,100	26,200	16,000	36,900
Unemployment Rate	8.2%	6.7%	6.1%	5.2%	4.4%	4.0%	3.7%
Real Per Capita Income ($2012)	$34,064	$35,934	$36,556	$36,944	$37,443	$38,145	$38,702
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	4,900	5,800	5,400	3,400	3,200	2,800	3,500
Manufacturing	1,400	1,000	700	600	500	300	400
Transportation, Trade and Utilities	7,900	10,900	7,400	5,600	6,400	6,100	6,100
Information	0	0	-100	-200	-100	0	-100
Financial Activities	400	1,000	200	600	300	300	400
Professional & Business Services	3,000	2,500	3,400	1,300	4,300	3,400	3,700
Education & Health	3,300	6,400	4,500	6,800	3,500	5,300	4,900
Leisure & Hospitality	5,500	3,500	4,700	2,500	2,800	-7,100	12,800
Other Services	900	300	400	600	700	600	600
Government	1,600	1,400	5,300	4,000	4,600	4,400	4,500
Housing Permits	6,761	6,158	6,996	8,001	8,859	8,137	8,572
Home Values	$290,252	$305,101	$324,893	$352,700	$369,821	$388,086	$400,923

San Bernardino

- The region's importance as a key logistics hub will continue, with strong employment and wage growth coming from transportation and trade.
- Because of its location as a stopping point for trade coming through the ports, it is possible that mounting trade tensions with China will cause a drag on local growth.
- The county will continue to appeal to families searching for more space and affordability.

QUICK FACTS

Population: 2.2 MILLION

Median Household Income*: $60,420

41.0% % Prime Age (25-54)

5.4 Median Home Price to Household Income Ratio*

Gross Domestic Product: $85.2 BILLION

16.2% Poverty Rate*

4.0% Unemployment Rate

*2017 Estimate
Sources: US Census ACS, CA DoF, IHS, FHFA, BLS

EXHIBIT 7

	2014	2015	2016	2017	2018	2019f	2020f
Real GCP	2.8%	7.1%	2.2%	2.5%	3.2%	3.3%	3.0%
Real Personal Income	5.0%	6.6%	3.2%	2.4%	2.2%	3.0%	2.5%
Total Employment Change	27,300	30,800	17,000	25,600	21,300	20,900	21,200
Unemployment Rate	8.0%	6.5%	5.8%	4.9%	4.0%	3.5%	3.1%
Real Per Capita Income ($2012)	$33,308	$35,181	$36,079	$36,586	$37,048	$37,811	$38,417
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	2,800	2,200	600	1,700	1,900	1,600	1,800
Manufacturing	2,600	3,700	1,800	-400	0	-200	-100
Transportation, Trade and Utilities	7,400	7,400	7,500	12,600	7,900	8,600	8,700
Information	-200	100	100	0	-100	-100	-100
Financial Activities	600	100	500	-700	0	-100	-100
Professional & Business Services	3,700	6,200	-5,800	1,000	3,600	1,100	1,600
Education & Health	3,900	3,800	4,600	4,000	2,500	4,100	3,700
Leisure & Hospitality	3,500	3,300	3,700	3,200	1,900	2,400	2,300
Other Services	1,000	700	300	400	500	400	400
Government	2,100	3,100	3,700	3,800	3,200	3,100	3,000
Housing Permits	3,405	3,768	3,925	6,675	4,713	5,260	5,638
Home Values	$267,652	$282,322	$300,653	$326,600	$347,063	$365,307	$381,166

San Diego County

- Expansion in Biotech and Healthcare will continue to drive employment gains and real wage growth.
- The mayor's plans to eliminate barriers to housing construction should help to ameliorate the housing crisis, although prices will remain high in the short term.
- Trolley expansion and elimination of parking minimums on new housing should help drive adoption of public transit in a county with severe car-dependency

QUICK FACTS

Population: 3.3 MILLION

Median Household Income* $76,207

42.4% % Prime Age (25-54)

7.4 Median Home Price to Household Income Ratio*

Gross Domestic Product $246 BILLION

11.8% Poverty Rate*

3.3% Unemployment Rate

*2017 Estimate
Sources: US Census ACS, CA DoF, IHS, FHFA, BLS

EXHIBIT 8

	2014	2015	2016	2017	2018	2019f	2020f
Real GCP	1.7%	3.2%	3.9%	1.8%	3.0%	2.9%	2.8%
Real Personal Income	5.1%	5.9%	2.1%	2.6%	2.0%	2.8%	2.4%
Total Employment Change	29,100	39,900	37,600	28,800	25,000	27,200	27,500
Unemployment Rate	6.4%	5.2%	4.7%	4.0%	3.3%	2.8%	2.4%
Real Per Capita Income ($2012)	$51,190	$53,628	$54,403	$55,372	$56,020	$57,151	$58,046
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	3,000	5,900	6,400	3,100	2,800	2,600	3,000
Manufacturing	2,700	4,000	1,800	1,000	4,000	3,400	3,600
Transportation, Trade and Utilities	2,700	4,300	2,900	4,100	0	1,600	1,400
Information	100	-600	-100	300	100	100	100
Financial Activities	-1,300	1,700	1,600	1,300	-500	-200	-200
Professional & Business Services	3,200	5,700	4,000	2,300	11,000	6,900	7,900
Education & Health	5,000	6,600	6,000	5,800	5,300	5,700	5,600
Leisure & Hospitality	8,500	6,900	7,900	4,600	-2,700	2,100	1,400
Other Services	2,700	1,300	1,200	400	2,100	1,100	1,400
Government	2,500	4,200	6,100	5,800	2,800	3,900	3,500
Housing Permits	6,875	9,883	10,791	10,441	9,577	10,257	10,449
Home Values	$466,626	$485,826	$522,042	$563,800	$590,605	$618,943	$631,977

Ventura County

- Ventura County enjoys the lowest poverty rate in the region and a median household income second only to Orange County.
- Limited growth in population and new construction will constrain economic output, limiting real output growth to below 1%.
- Given that Ventura County serves as home to many residents employed in adjacent counties, particularly Los Angeles, employment growth is predicted to be primarily driven by tourism and population-serving industries.

QUICK FACTS

Population: 860K

Median Household Income* $82,857

40.4% % Prime Age (25-54)

7.2 Median Home Price to Household Income Ratio*

Gross Domestic Product $52.9 BILLION

9.3% Poverty Rate*

3.8% Unemployment Rate

*2017 Estimate

Sources: US Census ACS, CA DoF, IHS, FHFA, BLS

EXHIBIT 9

	2014	2015	2016	2017	2018	2019f	2020f
Real GCP	0.7%	1.9%	-0.9%	-0.3%	1.6%	0.6%	0.8%
Real Personal Income	4.0%	5.4%	1.4%	1.6%	1.4%	2.2%	1.8%
Total Employment Change	4,300	2,800	3,900	3,800	4,700	4,400	4,500
Unemployment Rate	6.6%	5.6%	5.2%	4.5%	3.8%	3.1%	2.6%
Real Per Capita Income ($2012)	$51,090	$53,572	$54,158	$54,908	$55,496	$56,564	$57,424
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	1,190	170	340	1,060	1,390	1,330	1,370
Manufacturing	650	-40	50	-130	60	-150	-110
Transportation, Trade and Utilities	750	570	570	350	-130	600	480
Information	140	-280	-80	40	-130	-80	-80
Financial Activities	-190	-980	-330	-450	180	-40	10
Professional & Business Services	-1,130	-100	120	660	130	260	300
Education & Health	1,270	1,300	1,500	940	530	930	840
Leisure & Hospitality	1,060	900	670	900	2,050	1,110	1,250
Other Services	130	-150	-100	30	-50	-10	-20
Government	390	1,380	1,200	380	650	420	440
Housing Permits	1,314	1,433	1,609	2,565	1,239	1,751	1,857
Home Values	$503,981	$521,306	$557,042	$592,500	$619,807	$635,872	$649,145

Santa Barbara County

- As a prime location for retirement and home to several prominent universities, health services and education are predicted to remain primary drivers of employment growth.
- Real growth county product, despite a decline in 2016, is expected to grow modestly through 2020.
- Real per capita income is forecasted to remain roughly $3,000 above regional averages.

QUICK FACTS

Population: 453K

Median Household Income* $71,106

37.6% % Prime Age (25-54)

8.0 Median Home Price to Household Income Ratio*

Gross Domestic Product $27.1 BILLION

14.5% Poverty Rate*

3.9% Unemployment Rate

*2017 Estimate
Sources: US Census ACS, CA DoF, IHS, FHFA, BLS

EXHIBIT 10

	2014	2015	2016	2017	2018	2019f	2020f
Real GCP	1.5%	6.5%	-1.5%	1.7%	1.1%	1.5%	1.3%
Real Personal Income	5.3%	7.1%	0.0%	1.5%	1.0%	2.3%	1.7%
Total Employment Change	2,600	3,100	1,000	2,100	1,800	2,000	2,000
Unemployment Rate	6.1%	5.3%	5.1%	4.5%	3.9%	3.2%	2.7%
Real Per Capita Income ($2012)	$52,222	$55,385	$54,863	$55,300	$55,418	$56,212	$55,668
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	230	260	110	200	600	360	410
Manufacturing	240	640	500	-390	-30	0	0
Transportation, Trade and Utilities	510	250	-240	-60	70	100	110
Information	80	270	290	80	-40	60	40
Financial Activities	-120	20	40	80	120	30	50
Professional & Business Services	-600	-420	-790	-100	150	110	70
Education & Health	560	540	910	900	850	670	710
Leisure & Hospitality	1,160	980	630	570	-500	380	210
Other Services	170	190	120	10	-10	0	0
Government	430	340	-580	830	620	320	420
Housing Permits	755	1,082	842	1,280	846	929	922
Home Values	$476,676	$505,325	$539,113	$567,600	$587,597	$607,646	$628,490

Imperial County

- The low prime age working population will limit the potential for growth in economic output.
- Nonfarm employment growth will continue to be minimal, with what little expansion there is being concentrated in healthcare, education and government services.
- The cross-border relationship with Mexicali will continue to be an important economic driver, and if trade and political tensions spike, the county will be disproportionately impacted.

QUICK FACTS

Population: 191K

Median Household Income*: $47,211

37.5% % Prime Age (25-54)

4.3 Median Home Price to Household Income Ratio*

Gross Domestic Product $6.2 BILLION

20.7% Poverty Rate*

17.5% Unemployment Rate

*2017 Estimate

Sources: US Census ACS, CA DoF, IHS, FHFA, BLS

EXHIBIT 11

	2014	2015	2016	2017	2018	2019f	2020f
Real GDP	-5.1%	6.3%	-1.2%	-0.3%	0.7%	-0.2%	0.1%
Real Personal Income	-1.3%	7.8%	-0.7%	1.1%	1.1%	1.4%	1.2%
Total Employment Change	800	-100	500	1,100	800	700	700
Unemployment Rate	24.0%	24.1%	23.6%	19.1%	17.5%	15.2%	13.0%
Real Per Capita Income ($2012)	$31,093	$33,059	$32,561	$32,574	$32,459	$32,562	$32,567
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	330	200	-730	-20	170	0	10
Manufacturing	-800	-520	180	60	60	-10	-10
Transportation, Trade and Utilities	730	210	170	160	-220	70	30
Information	-10	0	0	0	0	0	0
Financial Activities	0	-40	-110	-60	-90	-50	-50
Professional & Business Services	-90	-250	60	240	50	20	20
Education & Health	290	160	400	360	370	300	330
Leisure & Hospitality	170	130	200	-30	20	90	80
Other Services	0	30	20	100	50	20	20
Government	230	20	320	230	360	230	250
Housing Permits	246	293	215	191	400	350	400
Home Values	$161,544	$174,571	$189,192	$200,700	$207,610	$213,460	$219,858

Kern County

- California's intensive climate and environmental goals will continue to impact the economy of this oil and resource dependent county.
- Employment growth will be concentrated in local population serving industries like education and healthcare.
- The future California High Speed Rail route will bring the Bakersfield and Los Angeles metros closer together, with both its construction and eventual route driving future economic growth for the county.

QUICK FACTS

Population:
906K

Median Household Income*
$49,854

39.7%
% Prime Age (25-54)

4.1
Median Home Price to Household Income Ratio*

Gross Domestic Product
$39.4 BILLION

21.4%
Poverty Rate*

8.0%
Unemployment Rate

*2017 Estimate
Sources: US Census ACS, CA DoF, IHS, FHFA, BLS

EXHIBIT 12

	2014	2015	2016	2017	2018	2019f	2020f
Real GDP	2.4%	-7.0%	-2.7%	0.8%	3.1%	0.8%	1.2%
Real Personal Income	5.5%	2.9%	-0.7%	0.6%	1.5%	1.3%	1.1%
Total Employment Change	5,900	1,500	-2,300	2,200	5,000	2,900	3,600
Unemployment Rate	10.4%	10.2%	10.4%	9.2%	8.0%	7.0%	5.9%
Real Per Capita Income ($2012)	$36,640	$37,333	$36,827	$36,645	$36,793	$36,894	$36,931
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	1,300	-3,200	-4,400	200	300	100	100
Manufacturing	500	-400	-600	0	200	100	100
Transportation, Trade and Utilities	1,900	1,300	400	400	500	200	800
Information	-200	300	-500	-200	0	-100	-100
Financial Activities	-200	-200	-200	-200	-100	-100	0
Professional & Business Services	-300	-300	-400	-100	1,600	400	500
Education & Health	300	900	1,300	1,700	1,200	1,100	1,100
Leisure & Hospitality	900	1,300	400	300	500	500	500
Other Services	300	-100	0	100	300	100	100
Government	1,300	1,800	1,600	100	400	600	400
Housing Permits	2,297	2,200	2,256	2,640	2,210	2,040	2,167
Home Values	$182,675	$190,920	$197,059	$205,700	$215,162	$223,342	$232,897

San Luis Obispo County

- Low prime age population will limit the potential economic growth of the county.
- However, unemployment is expected to remain well below the regional average.
- Leisure and hospitality is predictably forecasted to remain a primary driver of job creation, followed by personal services and healthcare.

QUICK FACTS

Population:
280K

36.3%
% Prime Age (25-54)

Gross Domestic Product
$15.8 BILLION

Median Household Income*
$71,880

8.0
Median Home Price to Household Income Ratio*

12.1%
Poverty Rate*

2.9%
Unemployment Rate

*2017 Estimate
Sources: US Census ACS, CA DoF, IHS, FHFA, BLS

EXHIBIT 13

	2014	2015	2016	2017	2018	2019f	2020f
Real GDP	0.8%	5.9%	1.8%	1.5%	1.3%	1.9%	1.8%
Real Personal Income	4.8%	7.0%	1.1%	1.9%	1.2%	2.8%	2.0%
Total Employment Change	3,700	3,300	2,900	2,800	1,400	2,000	2,000
Unemployment Rate	5.6%	4.7%	4.3%	3.6%	2.9%	2.5%	2.2%
Real Per Capita Income ($2012)	$47,825	$50,998	$51,265	$52,047	$52,480	$53,685	$54,554
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	350	310	450	350	300	250	320
Manufacturing	310	170	0	240	240	210	220
Transportation, Trade and Utilities	130	160	300	300	-340	-20	-80
Information	40	70	-140	30	90	20	20
Financial Activities	-50	70	-30	120	-50	-10	40
Professional & Business Services	120	680	400	160	-140	120	80
Education & Health	460	100	550	460	390	350	390
Leisure & Hospitality	610	720	1,000	620	380	540	510
Other Services	430	420	40	210	530	370	390
Government	1,350	640	370	310	-20	180	160
Housing Permits	983	821	853	1,094	745	903	917
Home Values	$474,021	$496,350	$537,828	$574,400	$600,248	$627,354	$635,111

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