



# Nevada's Housing Market

## Housing Affordability and Implications of Construction Defect Reform

March 1, 2019

Mr. Steve Thomsen  
President  
Nevada Home Builders Association  
5484 Reno Corporate Dr.  
Reno, NV 89511

**RE: Nevada's Housing Market | Housing Affordability and Implications of Construction Defect Reform**

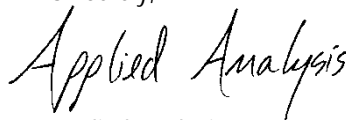
Dear Mr. Thomsen:

In accordance with your request, Applied Analysis ("AA") is pleased to submit this report titled *Nevada's Housing Market | Implications of Construction Defect Reform*. AA was retained to review and analyze the Nevada housing market, including trends in housing affordability and the impacts of construct defect reforms implemented during the 78<sup>th</sup> Session (2015) of the Nevada State Legislature. This summary report outlines the salient findings and conclusions of our review and analysis.

This report was designed by AA in response to your request. However, we make no representations as to the adequacy of these procedures for all your purposes. Generally speaking, our findings and estimates are as of December 2018 and utilize the most recent data available. The information provided in this summary, and the conclusions reached herein, are based on the findings of our research and our knowledge of the market as of the date of this report. Our report contains economic, development and other predominant market data. This information was collected from our internal databases and various third parties, including other public data providers. The data were assembled by AA. While we have no reason to doubt its accuracy, the information collected was not subjected to any auditing or review procedures by AA; therefore, we can offer no representations or assurances as to its completeness.

This report is an executive summary. It is intended to provide an overview of the analyses conducted and a summary of our salient findings. AA will retain additional working papers relevant to this study. If you reproduce this report, it must be done so in its entirety. We welcome the opportunity to discuss this report with you at any time. Should you have any questions, please contact Jeremy Aguero or Brian Gordon at (702) 967-3333.

Sincerely,



Applied Analysis

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# Summary of Findings

# Summary of Findings: Economic Conditions

The state of Nevada leads the nation in population, employment and income growth. By nearly every measure, Nevada is among the leading economies in the United States. Looking forward, most data suggest that economic conditions are likely to continue on a path of growth and expansion.

- **Population:** Nevada currently ranks as the fastest-growing state in the nation, as population grew by 2.1 percent to surpass 3 million residents for the first time in 2018.
- **Employment:** By the close of 2018, Nevada ranked in the top position nationally in overall employment growth, expanding its employment base by 3.9 percent year over year. Among the country's 30 largest metropolitan areas, Southern Nevada ranked fourth with a 3.4 percent annual growth rate. While the Reno metro area is not classified among the top market areas in terms of size, it is important to note the area posted annual employment growth of 5.2 percent. Rising employment levels have pushed Nevada's unemployment rate more in line with the national average at 4.4 percent as of the close of 2018 after reaching a post-recession high of nearly 14 percent in 2010.
- **Personal Income:** The latest rankings indicate that Nevada stands in the first position in terms of personal income growth across the nation.
- **Economic Outlook:** Given current economic fundamentals, the Silver State is well positioned to capitalize on current and future major investments. Billion-dollar projects are underway in the north and south portions of the state, and the development of multi-year projects is expected to pay economic dividends going forward.

## Population Growth

Rank	State	Growth
1	Nevada	+2.09%
2	Idaho	+2.05%
3	Utah	+1.87%
4	Arizona	+1.74%
5	Florida	+1.54%
6	Washington	+1.48%
7	Colorado	+1.42%
8	Texas	+1.34%
9	South Carolina	+1.25%
10	North Carolina	+1.10%
U.S. Average		+0.62%

## Employment Growth

Rank	State	Growth
1	Nevada	+3.9%
2	Arizona	+3.4%
3	Texas	+3.2%
4	Utah	+3.1%
5	Washington	+3.1%
6	Wyoming	+2.8%
7	Colorado	+2.8%
8	New Hampshire	+2.7%
9	Florida	+2.7%
10	Georgia	+2.5%
U.S. Average		+1.9%

## Income Growth

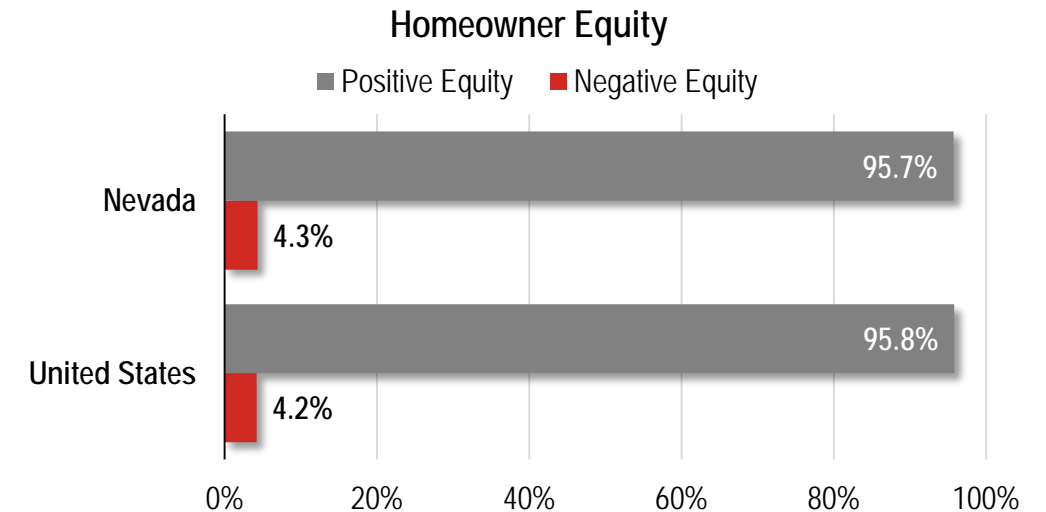
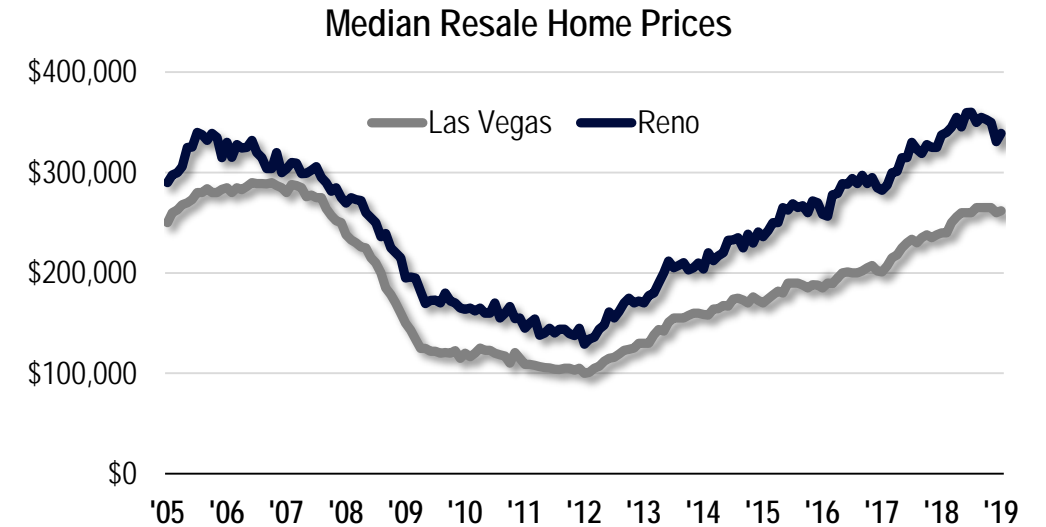
Rank	State	Growth
1	Nevada	+6.21%
2	Washington	+6.16%
3	Arizona	+5.42%
4	Colorado	+5.27%
5	New Hampshire	+5.12%
6	Oregon	+5.10%
7	Utah	+4.75%
8	Pennsylvania	+4.71%
9	Texas	+4.65%
10	North Dakota	+4.63%
U.S. Average		+4.0%

*"Nearly \$36 billion in major investments are either under construction or planned for future development in the state of Nevada"*

# Summary of Findings: Resale Housing Market

Resale housing market conditions continue to experience impressive demand measured both in terms of the number of sales transactions and overall occupancy rates. Overall housing availability remains relatively limited, which is putting upward pressure on pricing.

- **Pace of Sales:** The number of resale transactions remains elevated as demand for housing reflects strong economic fundamentals. In 2018, Southern Nevada reported nearly 48,000 resale transactions, while Northern Nevada witnessed nearly 8,000 closings.
- **Prices:** Median prices in the resale market continued to climb. By January 2019, the median price (including single family homes, condominiums and townhouses) reached \$262,000 in the Las Vegas market area and \$339,000 in the Reno market area.
- **Availability:** The number of units listed for sale at any given point in time is a function of the number of new units coming on the market and the pace of sales taking place. Currently, inventory levels in both the northern and southern portions of the state remain modest (less than four months of effective inventory).
- **Market Position:** During the past several years, the residential market has transitioned from an environment dominated by distressed sales activity (REOs, short sales and auction sales) to one that is nearly exclusively equity sellers. As a result, Nevada has quickly moved from leading the nation in underwater home rankings (where mortgage debt is greater than the home value) to a market that looks more like markets across the nation.

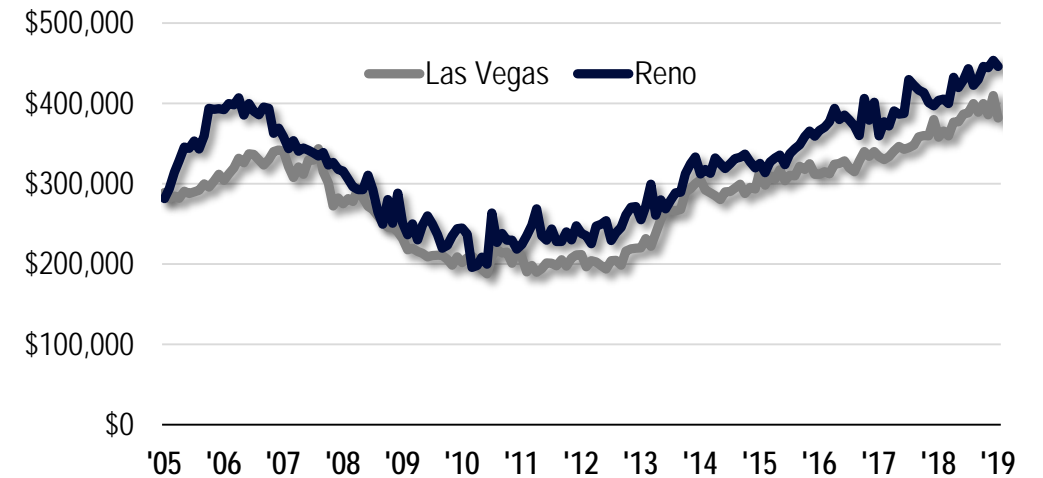


# Summary of Findings: New Home Market

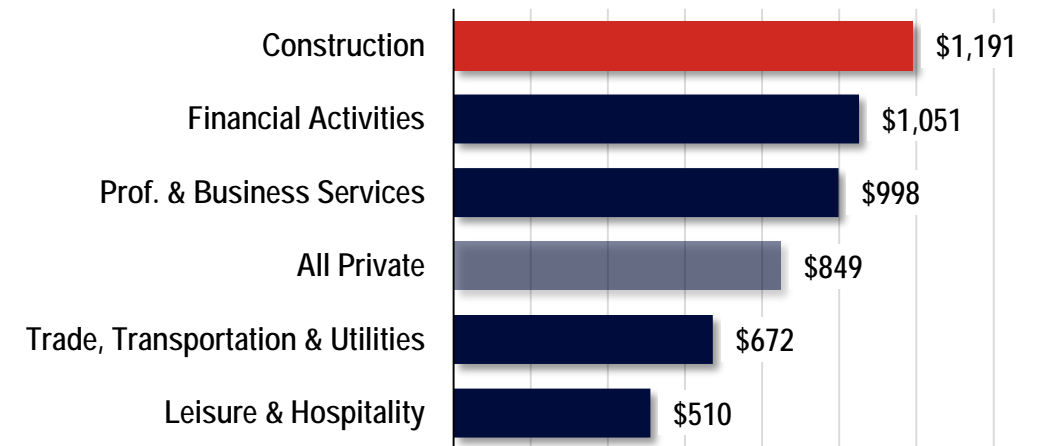
The new home construction market in Nevada has been responding to strong economic fundamentals, elevated land costs, rising costs of materials, labor shortages and other costs of development.

- **Pace of Sales:** While sales volumes in the new home construction market have picked up pace in recent years, the volume remains below historical averages in both absolute terms and on a per-new-employee basis. Southern Nevada reported nearly 10,000 new home closings in 2018, while the northern portion of the state reported nearly 2,000 new home sales.
- **Prices:** The median new home price across all product types in the Las Vegas area stood at \$382,188 in January 2019, while the Reno market area posted a median value of \$446,300. Both markets are trading at or near all-time highs.
- **Land Costs:** A key component of the cost structure of a house includes the underlying real property. Land values have escalated in recent years; and, in many instances, they are cost prohibitive, particularly for builders focused on the lower-cost spectrum of the market. For example, the average price per acre of land that sold during the past year was nearly \$400,000 in Southern Nevada and has tracked in this range for the past several years.
- **Development Costs:** Materials, labor and other residential development costs continue to rise. Lumber prices have increased significantly. At the same time, average weekly wages within the construction industry were the highest among all reporting sectors. Average construction industry wages are up 12.3 percent during the past 12 months.

Median New Home Prices



Average Weekly Wages by Industry



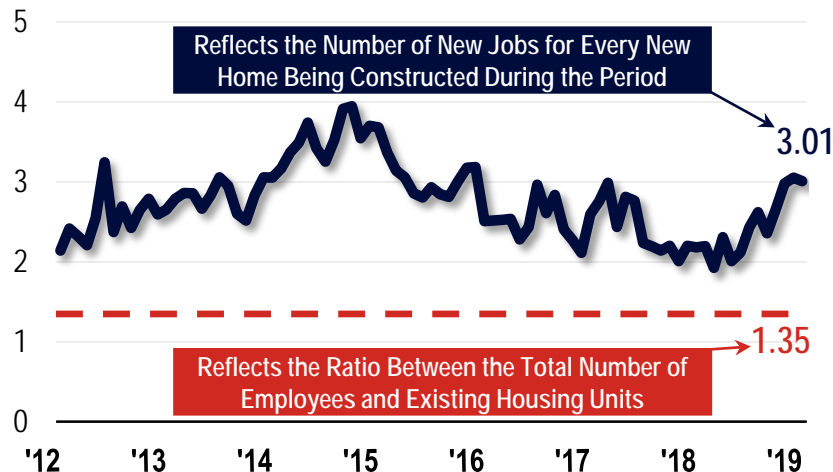


# Summary of Findings: New Home Market

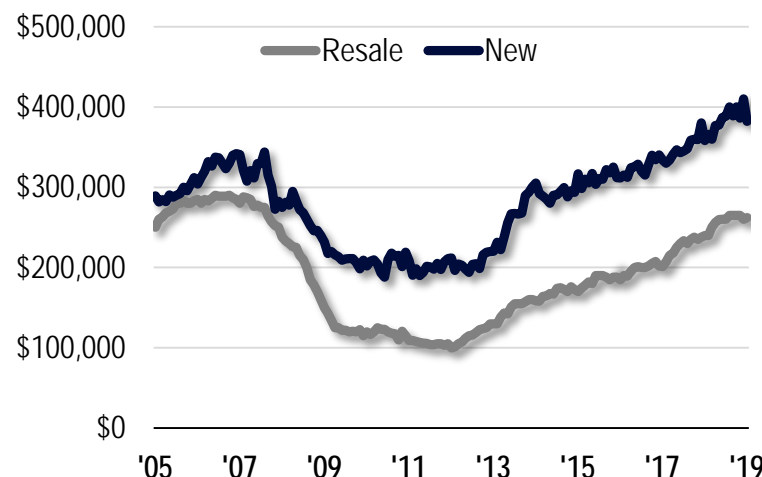
As new home prices have increased significantly in recent years and residential development activity has struggled to keep pace with the rate of population and employment growth, many potential homebuyers have been forced to seek out alternative products.

- New Construction Lagging Behind Growth:** While there has been a significant increase in housing demand fueled by Nevada's strong economy and population growth, the supply of new housing has been slow to respond for a number of reasons. Currently, there are 1.35 employed persons per occupied housing unit in Nevada. However, new units are only being permitted at a rate of 1 for every 3.01 new jobs. Should barriers for future development emerge, housing shortages will only be exacerbated and/or put additional upward pressure on pricing.
- Resale and New Home Construction Relative Costs:** The difference between the median price of new homes and resale homes is now over \$100,000 in both the Reno and Las Vegas markets. While home sizes and other new home attributes play a role in the differential, many potential buyers are priced out of the new construction segment. To the extent higher density developments (e.g., attached homes) are viable, they offer a potentially more affordable product offering.

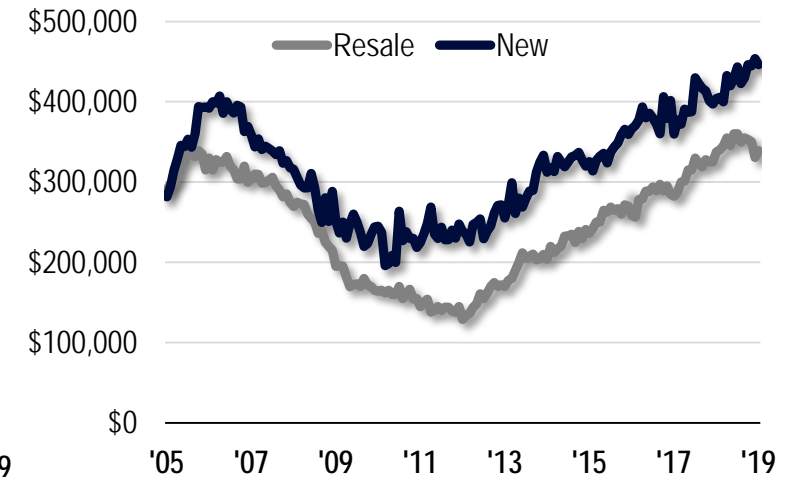
Nevada Employment Growth to New Unit Permit Ratio



Las Vegas Area Median Home Prices



Reno Area Median Home Prices



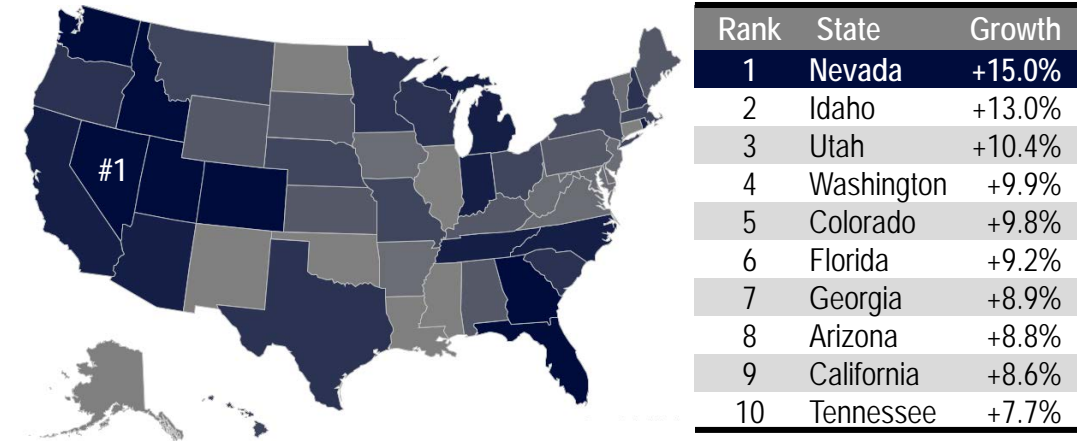


# Summary of Findings: Housing Affordability

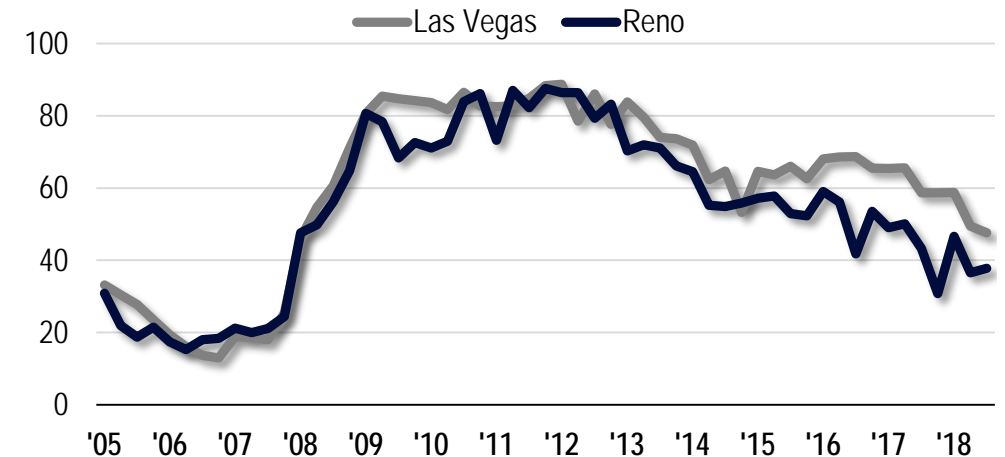
The trajectory of home prices and household incomes suggest housing affordability is likely to become a more acute challenge in 2019 and beyond. The share of residents that is able to afford the median home price continues to dwindle, while the cost of new development is expected to remain elevated.

- Housing Price Appreciation:** During the prior economic cycle, Nevada ranked as the fastest appreciating market in the nation, then the fastest depreciating market in the nation. At present, Nevada ranks again as the fastest appreciating market in the country. Unlike the previous cycle, however, this appreciation is largely sourced to organic demand from end-users rather than being fueled by speculative investors of the early to mid-2000s. The reality is that Nevada is not building a sufficient number of new homes relative to the number of new residents and jobs being created.
- Housing Opportunity Index:** The share of households that can afford the median priced home has declined from the 80 percent range during the 2009 to 2013 timeframe to values about half of that in 2018. By 2018, approximately 48 percent of Las Vegas residents and 38 percent of Reno residents could afford the median home price.
- Mortgage Interest Rates:** While mortgage interest rates have held near historically low levels for the better part of the past decade, modest increases in the late part of 2018 and early 2019 demonstrate the impact on consumer behavior. Higher costs of borrowing can put downward pressure on overall affordability.

Housing Price Appreciation



Housing Opportunity Index



# Summary of Findings: Housing Affordability

The National Association of Home Builders (NAHB) prepares an annual report on the impact of raising the median price of a new home by \$1,000. The analysis computes the number of households that are effectively priced out of the market (i.e., no longer able to afford the median priced home) due to price increases.

- NAHB Reporting:** The first set of columns to the right reflects the median new home price as computed by NAHB and the associated impact of a \$1,000 increase. The first increase prices out a total of 2,285 households. Similarly, a \$20,000 increase prices out 45,687 households. These data are based on estimates published by NAHB.
- Higher Housing Costs Means Lower Affordability:** Given where median new home prices stand in the two largest urban areas of Nevada, an adjusted analysis was requested of NAHB staff utilizing a median new home price of \$390,417, which is more reflective of today's new home prices in Nevada. With a higher price point, a smaller segment of the population is impacted with each price increase, but a much smaller share of households can afford the starting price. The NAHB estimates that only 23 percent of Nevada households can afford a home at \$390,417. A \$1,000 increase in home prices impacts 1,157 households, while a \$20,000 increase prices out 23,142 households, leaving 21 percent of households able to afford a new home at the median price. With each subsequent increases, the percentage of Nevada families able to afford a new home would continue to decline. Regardless of the calculation selected, it is clear that higher price points translate into fewer households having the ability to afford a home.

No. of Households Priced Out of the Housing Market in Nevada  
for Every \$1,000 Price Increase in a Home

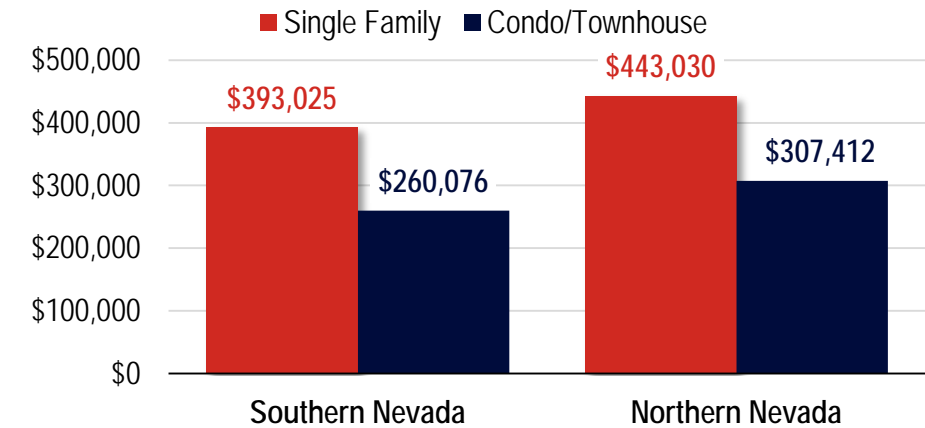
As Reported by NAHB			Adjusted Based on Current Prices		
Median New Home Price	Price Increase	Households Priced Out	Median New Home Price	Price Increase	Households Priced Out
\$255,845	\$ -	-	\$390,417	\$ -	-
\$256,845	\$1,000	2,285	\$391,417	\$1,000	1,157
\$257,845	\$2,000	4,569	\$392,417	\$2,000	2,314
\$258,845	\$3,000	6,853	\$393,417	\$3,000	3,471
\$259,845	\$4,000	9,138	\$394,417	\$4,000	4,628
\$260,845	\$5,000	11,422	\$395,417	\$5,000	5,785
\$261,845	\$6,000	13,706	\$396,417	\$6,000	6,943
\$262,845	\$7,000	15,991	\$397,417	\$7,000	8,100
\$263,945	\$8,000	18,275	\$398,417	\$8,000	9,257
\$264,945	\$9,000	20,559	\$399,417	\$9,000	10,414
\$265,945	\$10,000	22,844	\$400,417	\$10,000	11,571
\$266,845	\$11,000	25,128	\$401,417	\$11,000	12,728
\$267,845	\$12,000	27,412	\$402,417	\$12,000	13,885
\$268,845	\$13,000	29,697	\$403,417	\$13,000	15,042
\$269,845	\$14,000	31,981	\$404,417	\$14,000	16,199
\$270,845	\$15,000	34,265	\$405,417	\$15,000	17,357
\$271,845	\$16,000	36,550	\$406,417	\$16,000	18,514
\$272,845	\$17,000	38,834	\$407,417	\$17,000	19,671
\$273,945	\$18,000	41,118	\$408,417	\$18,000	20,828
\$274,945	\$19,000	43,403	\$409,417	\$19,000	21,985
\$275,945	\$20,000	45,687	\$410,417	\$20,000	23,142

# Summary of Findings: Housing Affordability

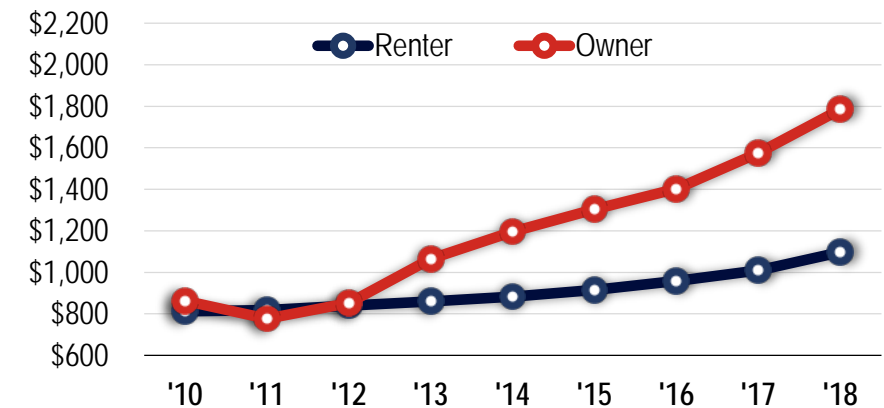
Multi-family housing options tend to offer a more affordable alternative to single family residences. Attached for-sale product (condominiums and townhouses) experience lower overall prices compared to detached residences. Additionally, multi-family rental options are increasingly competitive when considering the monthly cost of housing.

- Affordability Measures Rank Higher in Attached Product:** In 2018, the median price of new condos and townhouses sold in the Las Vegas area was just over \$260,000 compared to the median new single family home price of around \$393,000, a 33.8 percent discount. Both urban areas in Nevada reported a blended average discount of 33.1 percent between single family and attached product pricing. Based on the NAHB data previously detailed, roughly 493,000 Nevada households can afford the median condo price, whereas 268,000 could afford the median-priced single family home, suggesting a quarter million households are priced out of the market between the two. Additional multi-family development can help maintain lower prices for prospective home buyers and make home ownership a reality for a larger share of Nevada's families.
- Higher For-Sale Costs Encourage Renting:** The upward pressure on prices has rippled through the housing market, including the for-rent segment. While rental rates are not keeping pace with for-sale prices, affordability challenges are surfacing within the rental segment.
- The Missing Middle:** As the overall cost of living rises at a faster pace than incomes, a segment of the middle class struggles to make ends meet. With assistance programs for those without the clear ability to afford housing, there is a significant segment of the population (186,000 households in Southern Nevada) that doesn't qualify for assistance yet cannot afford housing. These households are often referred to as the "missing middle" and are among the group that would benefit from additional multi-family housing opportunities.

New Home For-Sale Price Comparison:  
Single Family vs. Condominiums/Townhouses



Las Vegas Monthly Cost of Housing: Rent vs. Own

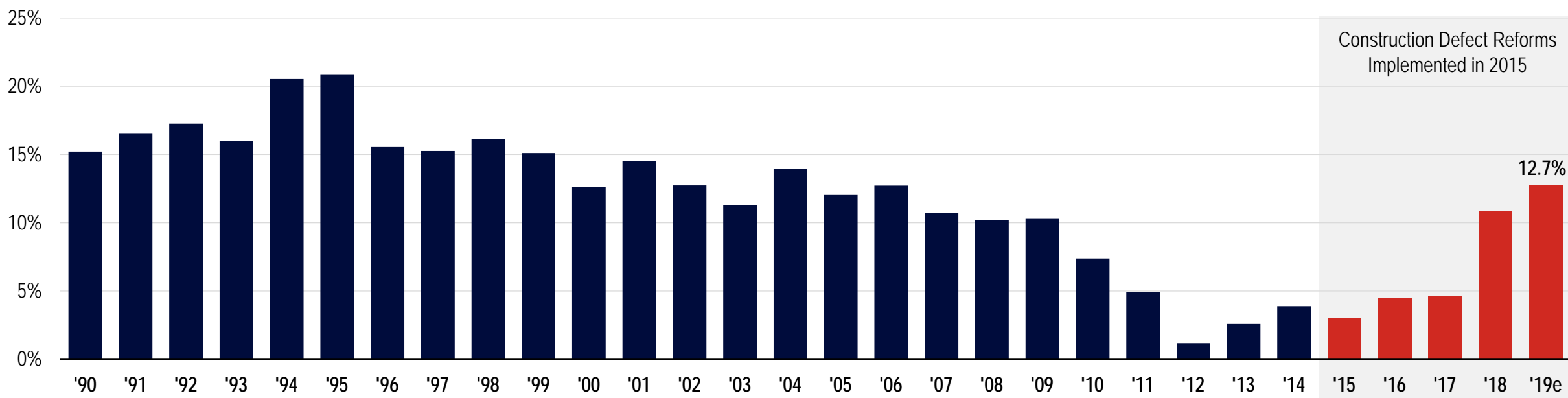


# Summary of Findings: The Builder Response

As housing affordability has become an increasingly greater challenge, the builder community has responded to try and maintain lower absolute price points in the for-sale market.

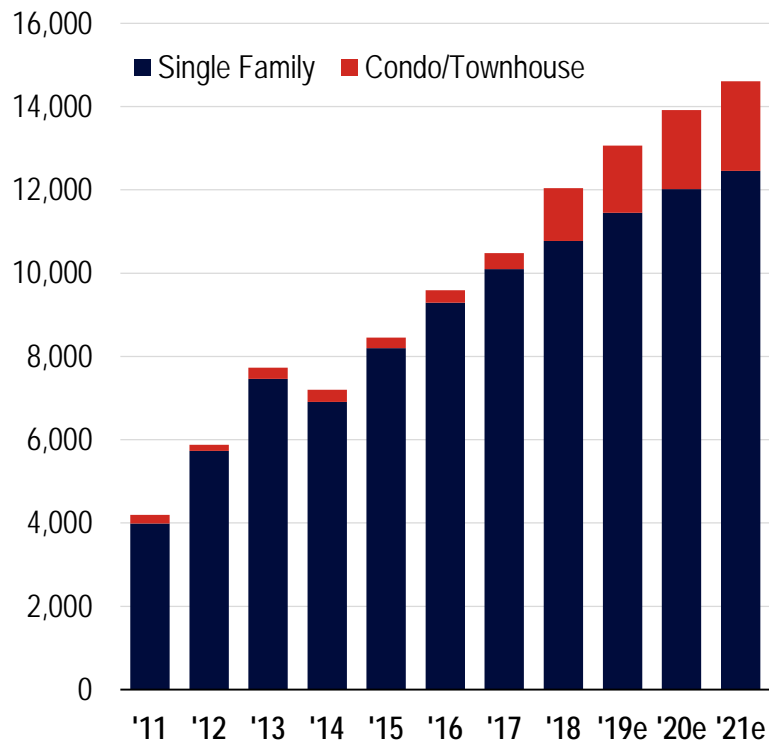
- **Developing Attached Product:** Increased densities (i.e., more residential units on the same amount of land) allow developers to spread the land cost basis across more units, effectively lowering the absolute purchase price of a home. This approach also translates into smaller unit size, another measure to mitigate rising cost concerns.
- **Construction Defect Reforms:** With the passage of Assembly Bill No. 125 (AB 125) in the 2015 legislative session, construction defect reforms resulted in a more predictable and less risky development environment for attached housing products such as condominiums and townhomes. The trend in permitting activity in Southern Nevada clearly demonstrates the impact of such reforms. In 2019, Southern Nevada builders anticipate the construction of nearly 1,700 attached units.

Share of New Home Permits Comprised of Attached Product (Condominiums and Townhomes) in Southern Nevada

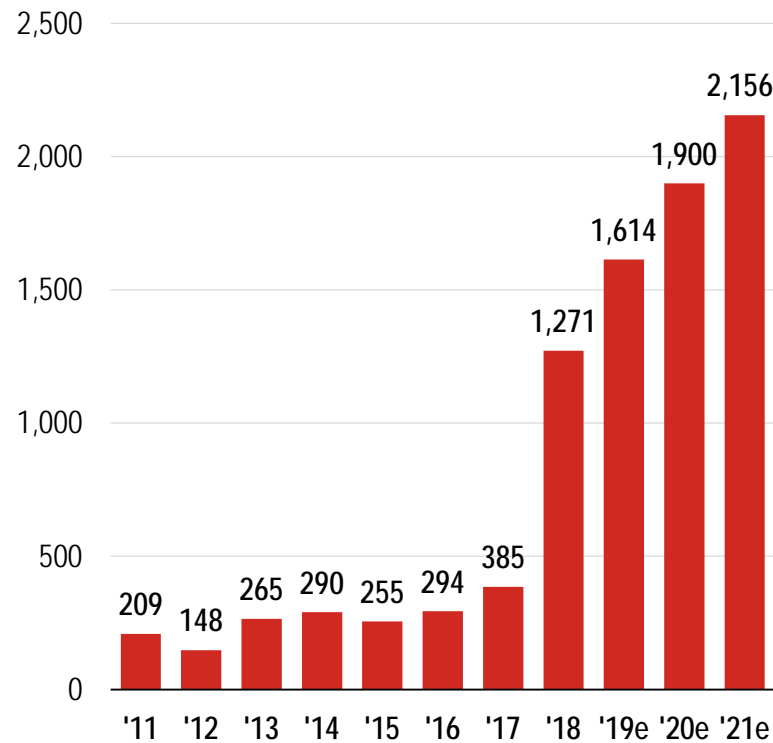


# Summary of Findings: The Builder Response

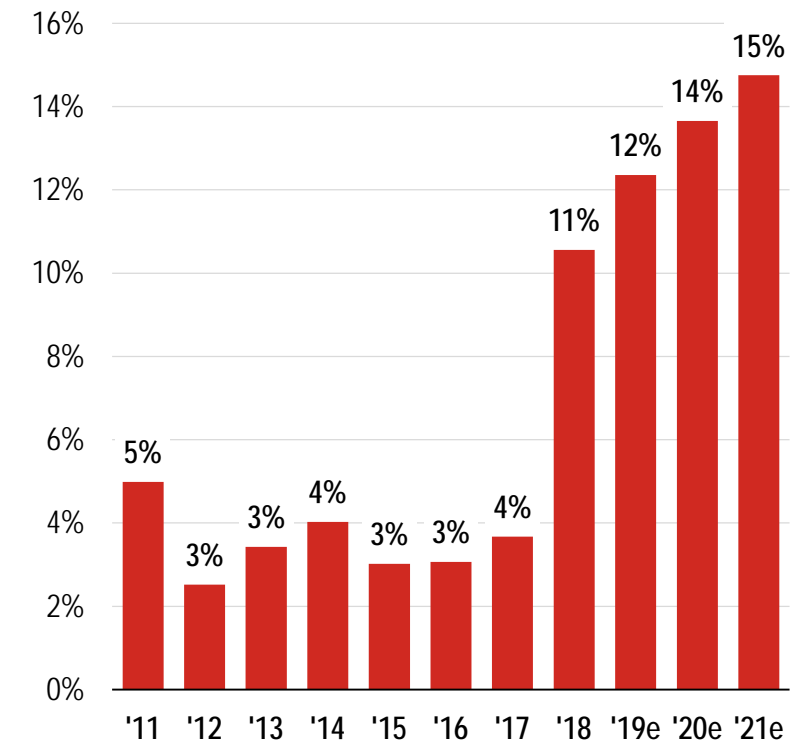
No. of New Home Closings in Nevada  
Single Family and Attached (Condo/Townhouse)



No. of New Home Closings in Nevada  
Attached (Condo/Townhouse)



New Home Closings in Nevada  
Attached (Condo/Townhouse) Market Share

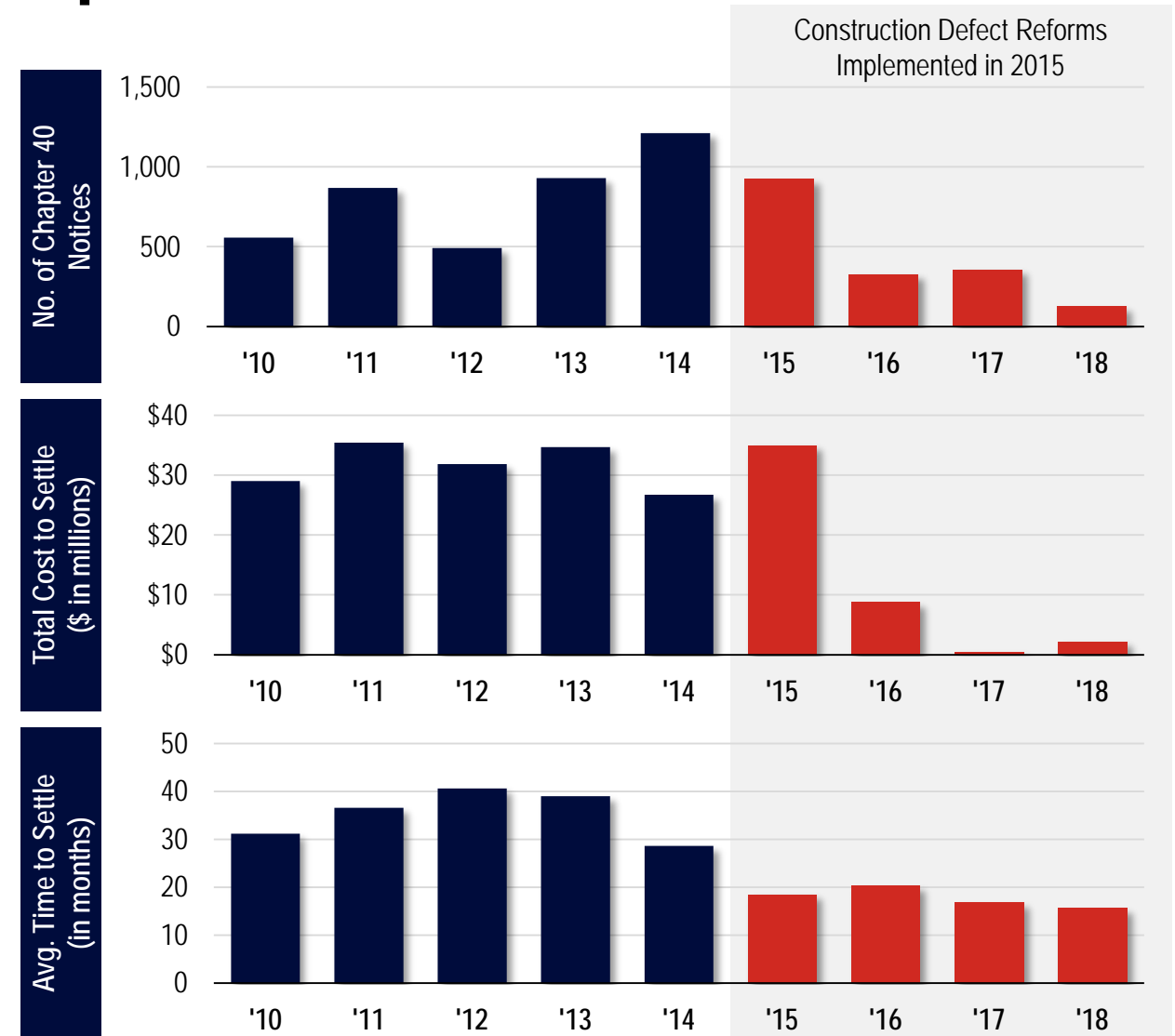


Source: SalesTraq (Excludes High- and Mid-Rises Built Prior to Displayed Periods). Note: Reflects closings in Clark and Washoe Counties.

# Summary of Findings: The Impact of Defect Reforms

AB 125 resulted in meaningful construction defect (“CD”) reforms. Trends in the number of CD notices, the cost to settle those claims and the average length of time to settle demonstrates the positive benefits of AB 125 on the industry and ultimately the home buyer. Reforms also include economic and market benefits sourced to reducing risk management costs in the development of for-sale product.

- **Chapter 40 Notices:** The annual number of homes in Chapter 40 notices (i.e., homes in litigation for construction defects) has fallen by nearly 90 percent from the peak in 2014, the last full year before passage of AB 125, to 2018.
- **Cost to Settle Chapter 40 Claims:** The total cost to settle CD cases averaged \$32.1 million in Nevada from 2010 to 2015, but just \$3.8 million between 2016 and 2018. It is worth noting that given the average length of time to settle a claim, benefits were only starting to be realized in 2016.
- **Average Time to Settle Chapter 40 Claims:** Perhaps more importantly, the average time to settle a Chapter 40 CD claim has fallen dramatically. During 2012, the average length of settlement spanned nearly 41 months. Since passage of AB 125, the average time span is has fallen to 16 months.

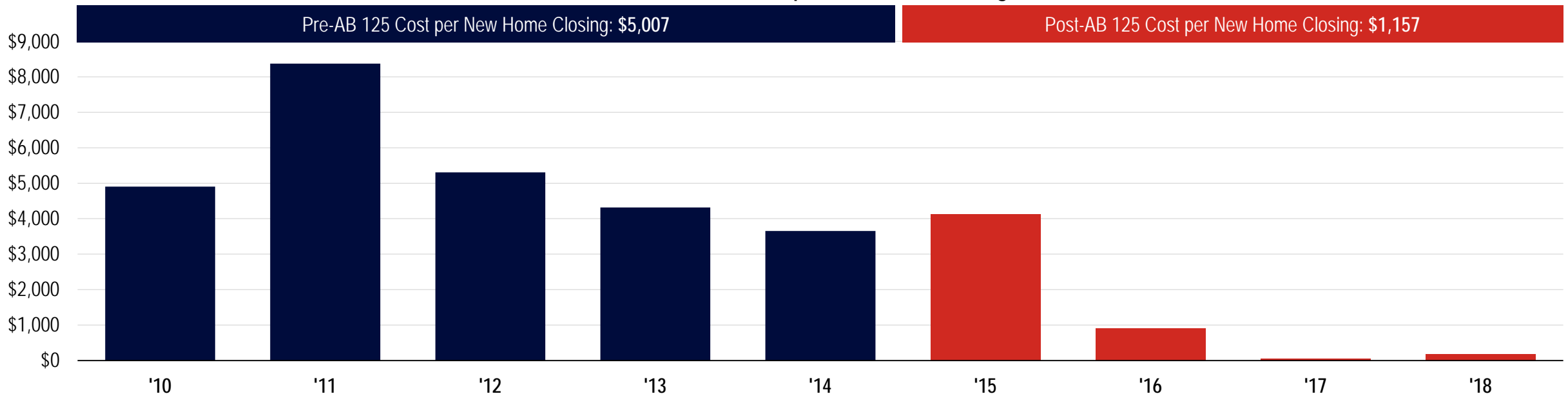




# Summary of Findings: The Impact of Defect Reforms

The effects of construction defect reforms extend beyond home builders and homeowners directly involved in a particular CD claim. All potential buyers of new homes are impacted by way of increased risk management costs (e.g., required builders' insurance costs). While only a portion of new homes were actually involved in such claims prior to the passage of AB 125, the costs incurred by builders ultimately translated into the insurance cost of homes for all buyers. From 2010 to 2014, when comparing the cost of CD claims to the total number of new homes constructed, the average cost per new home closing was roughly \$5,000. Following AB 125, the average settlement cost per new home between 2015 and 2018 was a significantly more modest \$1,157. Excluding 2015 settlement costs from the post-AB 125 calculation since they related to claims filed prior to AB 125, the average cost falls to \$361 per home closing. With the number of CD notices and average cost to settle having both fallen considerably in the years since the passage of AB 125, fewer costs are ultimately included in the cost of the end product. And thus, fewer costs are passed along to homebuyers. Should the construction defect environment revert to something akin to the pre-AB 125 environment, the incremental cost of roughly \$3,850 per home is significant. The resulting increase would be expected to price out approximately 4,000 to 8,000 households and increase housing costs for all buyers.

Construct Defect Settlement Costs per New Home Closing in Nevada

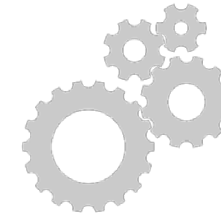




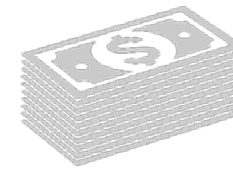
# Summary of Findings: Economic Impact of Builders

Residential construction is a significant portion of Nevada's construction industry and the economy as a whole.

- **Economic Output:** Nevada's residential construction sector is estimated to directly support approximately \$6.6 billion in economic output annually. When the indirect and induced impacts of the industry are considered, total impacts reach nearly \$11.0 billion per year. The construction industry overall is roughly equivalent in size to Nevada's manufacturing, information, and financial sectors in terms of its contribution to the state's GDP.
- **Wages and Salaries:** The home building industry accounts for approximately \$2.5 billion annually in direct wages and salaries in Nevada. Once the ripple effect of the industry is considered, personal incomes for Nevada families supported by the residential construction industry total \$3.9 billion annually. Jobs in the construction field also tend to pay well compared to many of Nevada's other industries, and wages have been rising quickly as demand for labor has increased significantly along with investment in the state. As of December 2018, the average weekly wage for workers in Nevada's construction industry was \$1,191 per week, translating into an annual salary of nearly \$62,000. This is roughly 40 percent higher than wages for all private industry employees in the state.
- **Employment:** Nevada's residential construction industry directly supports in excess of 44,000 workers annually. Including the indirect and induced impacts, the industry supports approximately 75,725 local workers. Stated otherwise, for every 1.0 direct job in the construction industry, a total of 1.7 jobs is created throughout the state's economy.



**TOTAL ECONOMIC OUTPUT**  
**\$11.0 Billion**



**TOTAL WAGES & SALARIES**  
**\$3.9 Billion**



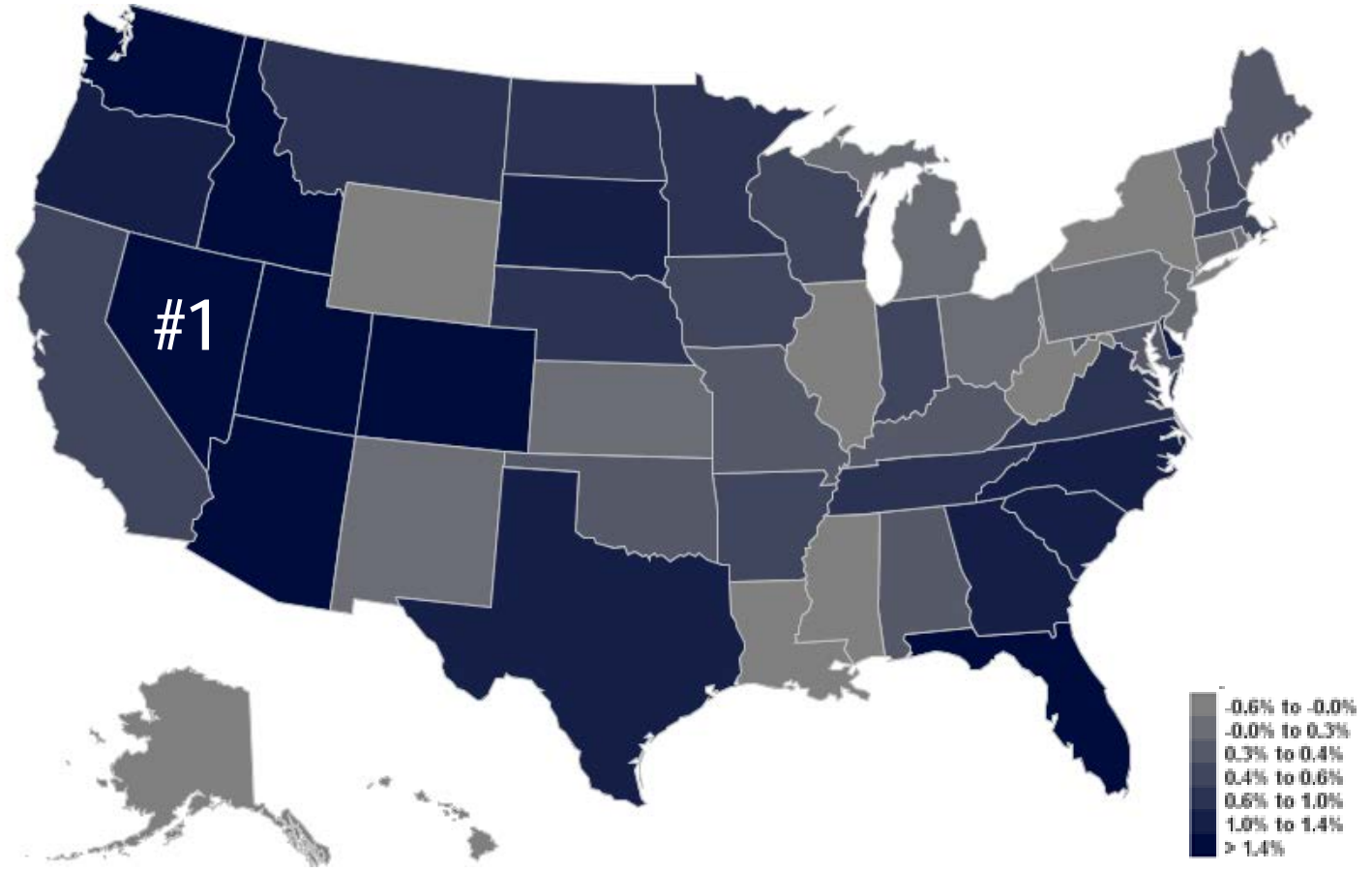
**TOTAL EMPLOYMENT**  
**75,725 Jobs**

# Appendices

# Nevada Economic Fundamentals

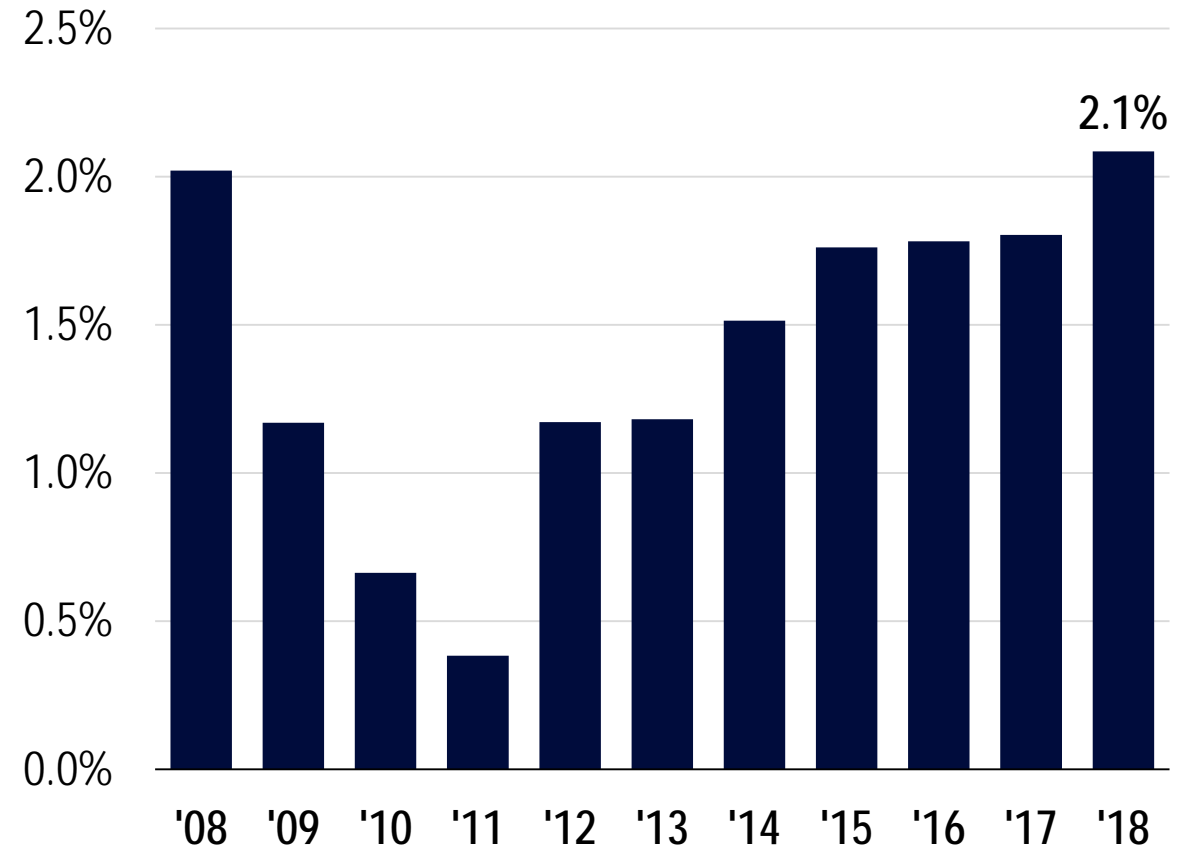
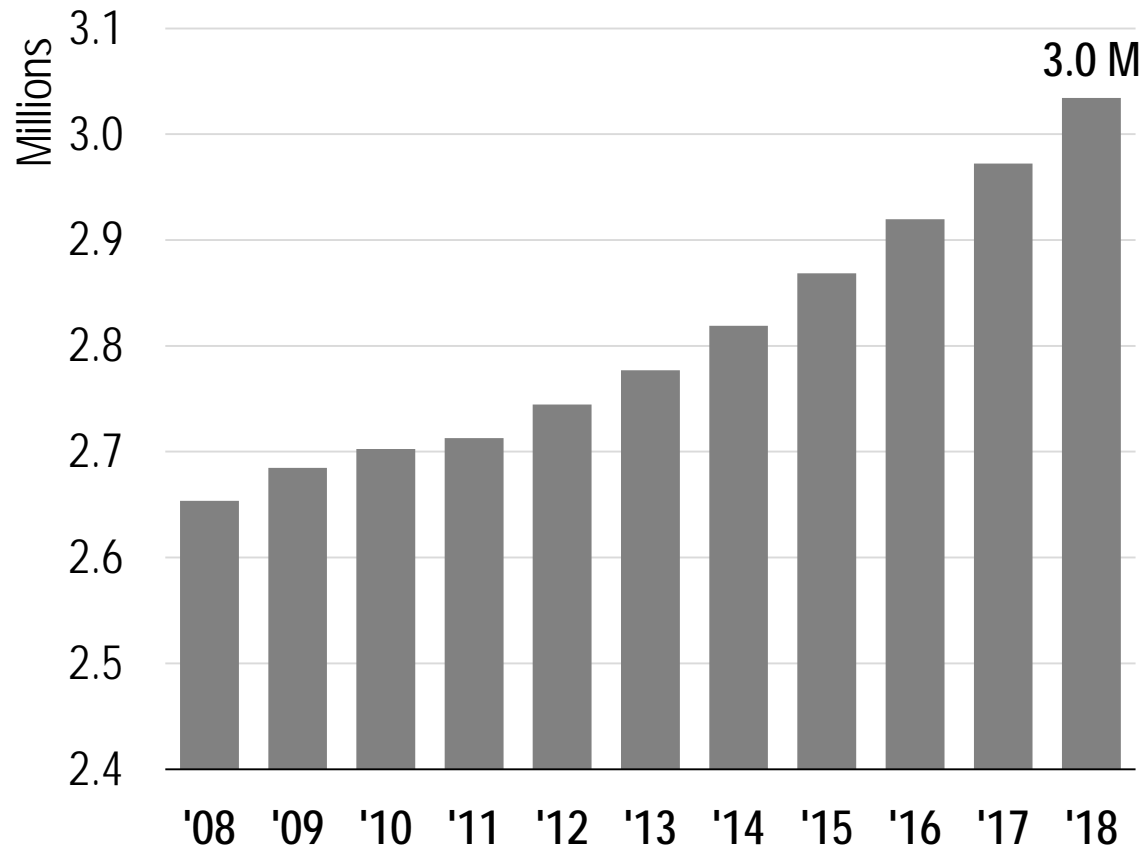
# Resident Population Growth 2017 to 2018

Rank	State	Annual Growth
1	Nevada	+2.09%
2	Idaho	+2.05%
3	Utah	+1.87%
4	Arizona	+1.74%
5	Florida	+1.54%
6	Washington	+1.48%
7	Colorado	+1.42%
8	Texas	+1.34%
9	South Carolina	+1.25%
10	North Carolina	+1.10%
U.S. Average		+0.62%



Source: U.S. Census Bureau

# Nevada Population and Growth



Source: U.S. Census Bureau

# Nevada Population Growth Metrics in 2018

**+2.1%**

Annual Growth  
Rate (Net)

**+61,987**

Number of New  
Residents (Net)

**+170**

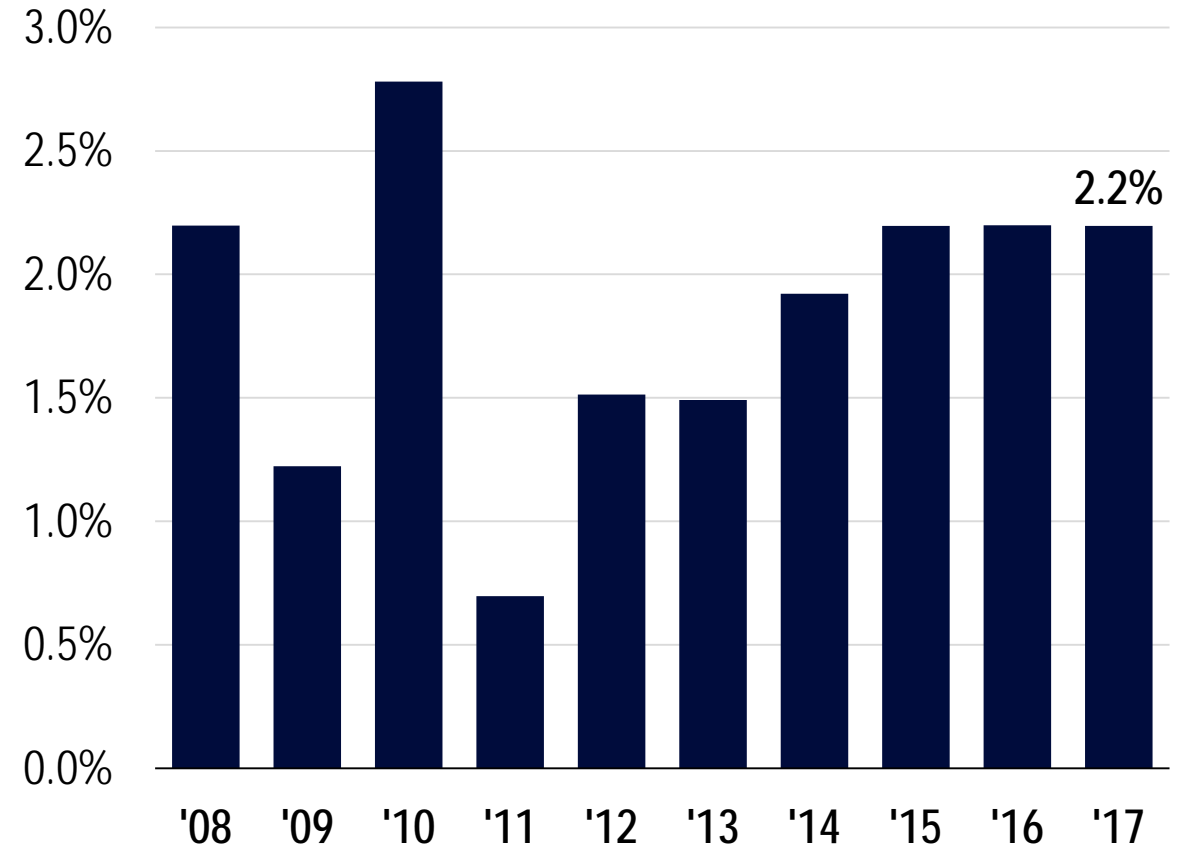
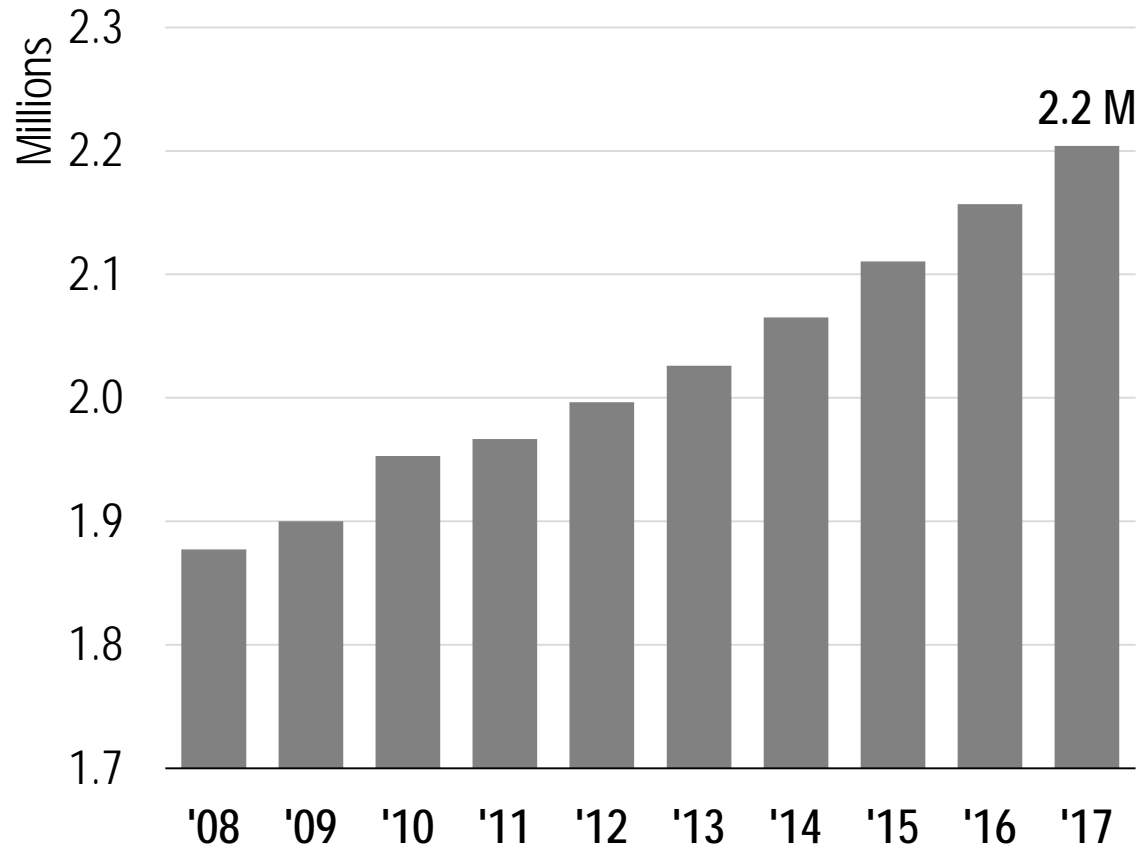
New Residents  
Per Day

**+7.1**

New Residents  
Per Hour

Source: U.S. Census Bureau and Applied Analysis

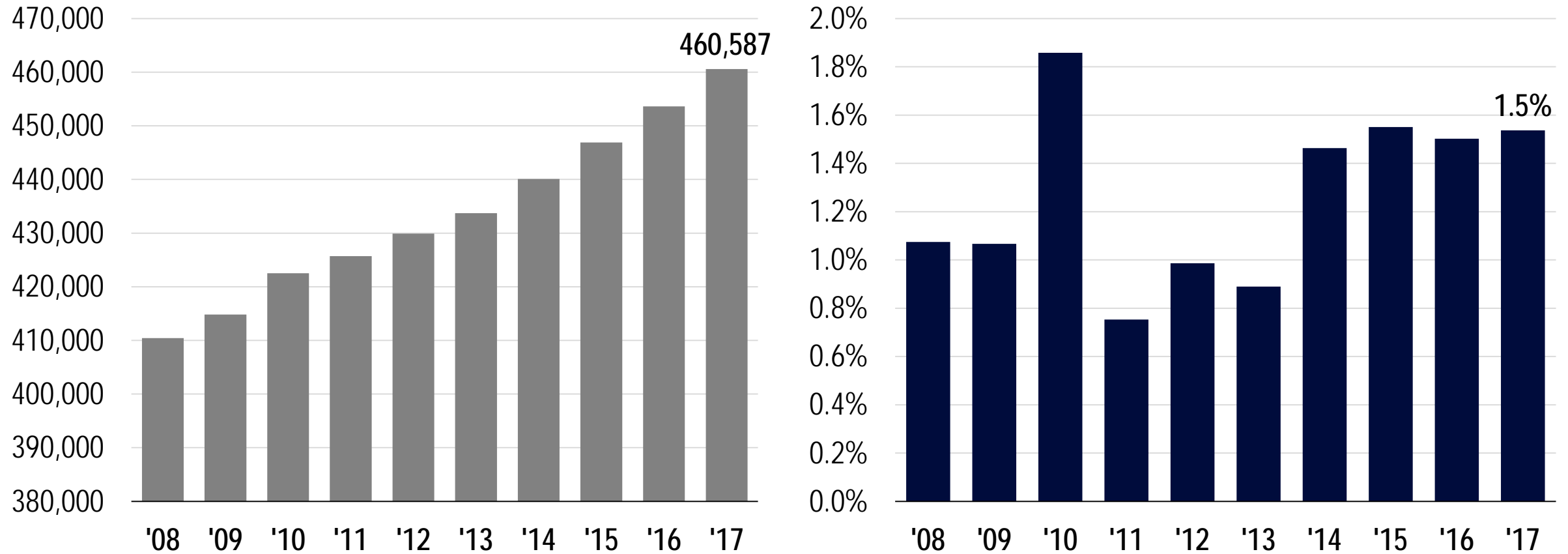
# Clark County Population and Growth



Source: U.S. Census Bureau (latest available data is presented)



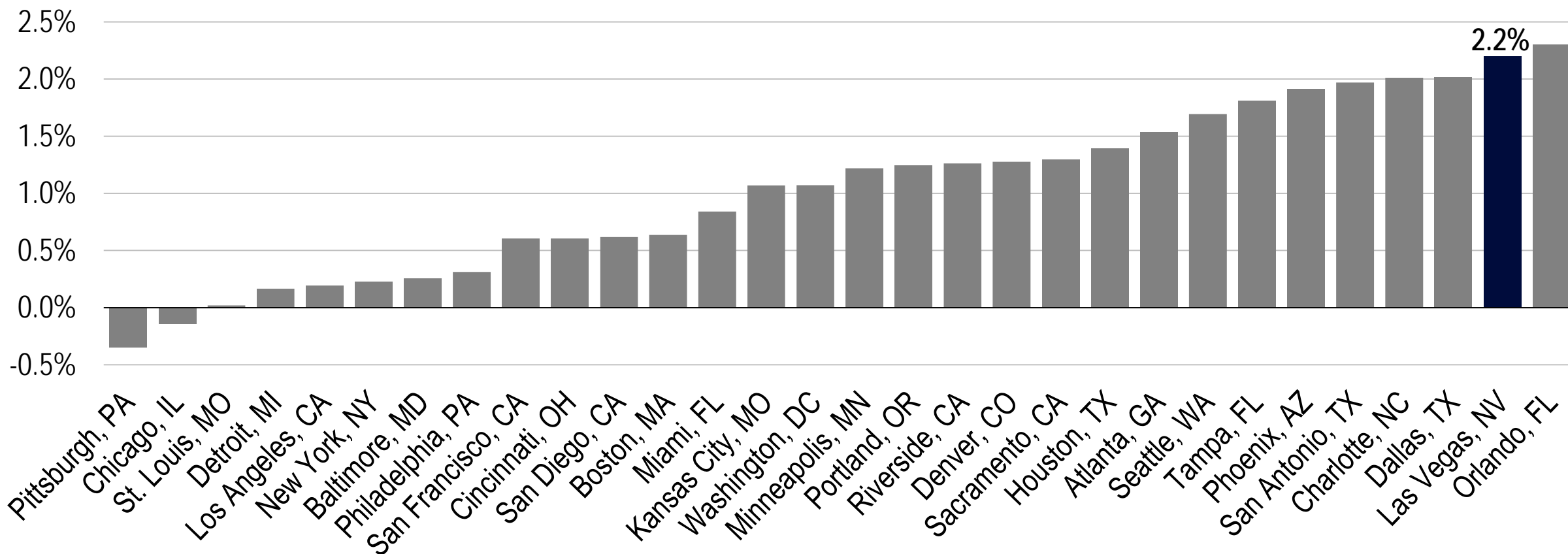
# Washoe County Population and Growth



Source: U.S. Census Bureau (latest available data is presented)

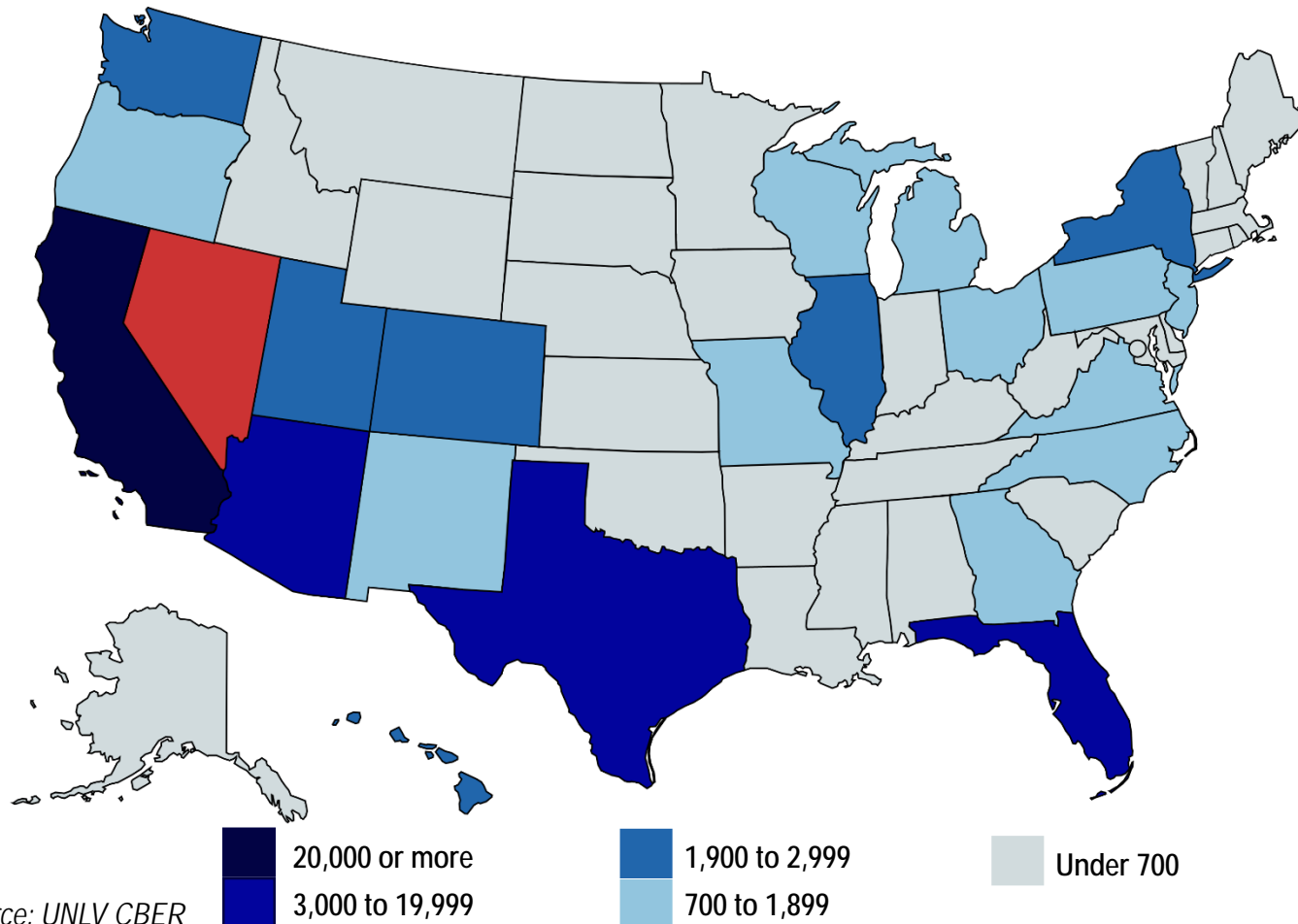
# Population Growth

## Largest 30 Metropolitan Statistical Areas (MSAs)



Source: U.S. Census Bureau

# Driver's License Surrenders To Nevada By State



State	Surrenders	Share
California	27,625	36.2%
Florida	4,619	6.1%
Texas	3,574	4.7%
Arizona	3,409	4.5%
Illinois	2,905	3.8%
Washington	2,838	3.7%
Hawaii	2,531	3.3%
Colorado	2,380	3.1%
Utah	2,198	2.9%
New York	2,025	2.7%

Source: UNLV CBER

Note: Based on driver's license surrenders from the DMV for 2018.

# The New York Times

Sunday, March 4, 2018

SILICON VALLEY IS OVER, SAYS SILICON VALLEY

RENTING A U-HAUL FOR A ONE-WAY TRIP FROM  
SAN JOSE TO LAS VEGAS NOW COSTS ROUGHLY  
\$2,000, COMPARED WITH JUST \$100 FOR A  
TRUCK GOING THE OTHER DIRECTION.



26' truck



3 Bedroom Home to 4 Bedroom Home

- Inside dimensions: 26'5" x 7'8" x 8'3" (LxWxH)
- Door opening: 7'3" x 6'10" (WxH)
- Deck height: 2' 9" Length 23'5"
- EZ-Load Ramp

San Jose, CA  
to  
Las Vegas, NV

**\$2,388.00**

☐ Tow my car

Select

Las Vegas, NV  
to  
San Jose, CA

**\$174.00**

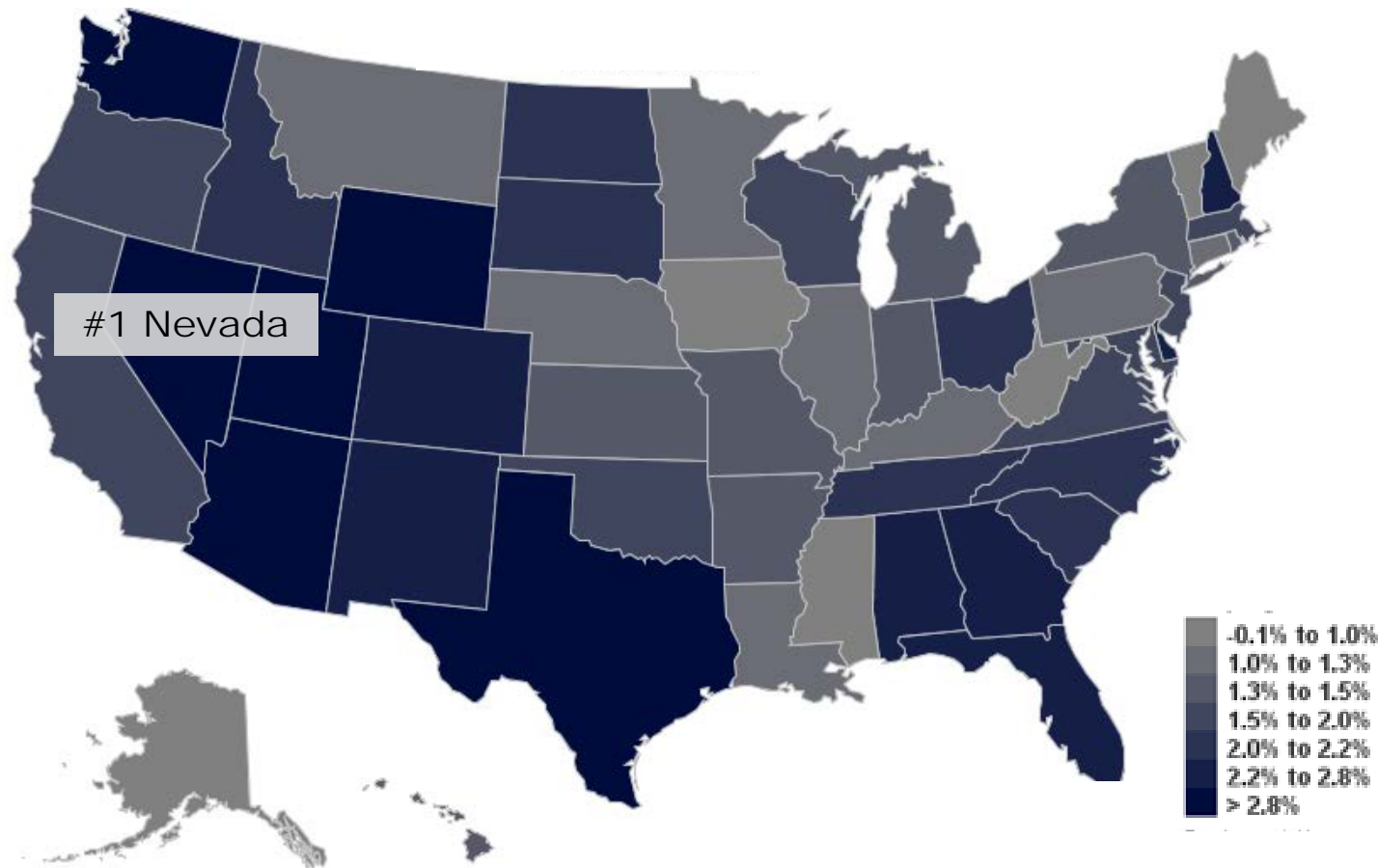
☐ Tow my car

Select

Source: Uhaul

Note: Rates of February 11, 2019 for Travel on February 15, 2019.

# Fastest Job Growth in the Nation

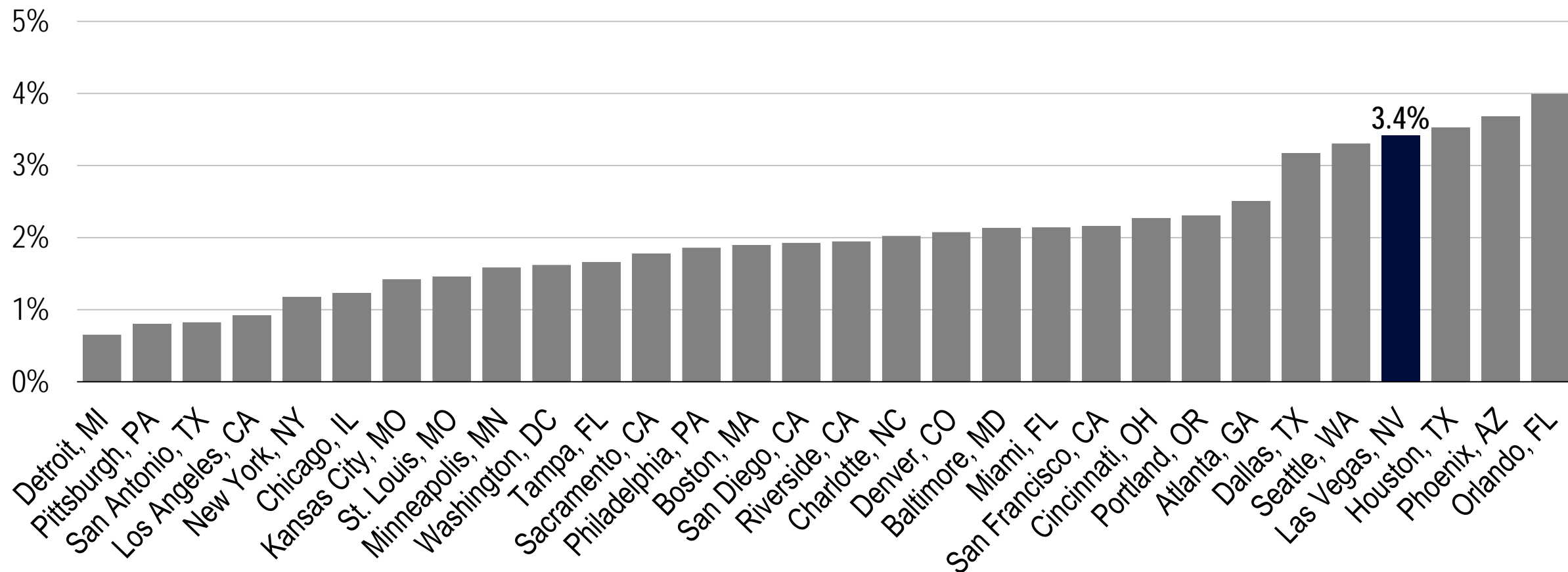


Rank	State	Annual Growth
1	Nevada	+3.9%
2	Arizona	+3.4%
3	Texas	+3.2%
4	Utah	+3.1%
5	Washington	+3.1%
6	Wyoming	+2.8%
7	Colorado	+2.8%
8	New Hampshire	+2.7%
9	Florida	+2.7%
10	Georgia	+2.5%
U.S. Average		+1.9%

Source: U.S. Bureau of Labor Statistics (December 2018 vs. December 2017)

# Employment Growth

## Largest 30 MSAs

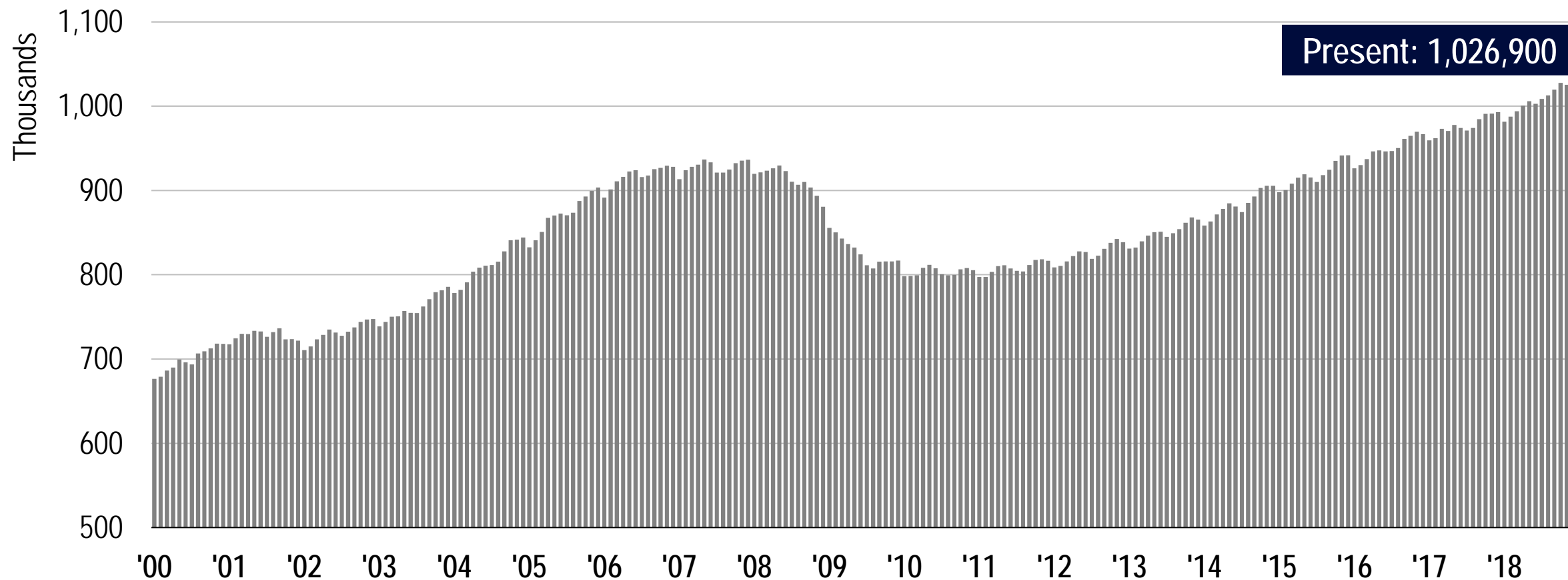


Source: U.S. Bureau of Labor Statistics (December 2018 vs. December 2017). Note: Reno reported growth of 5.2 percent.



# Employment

## Las Vegas MSA

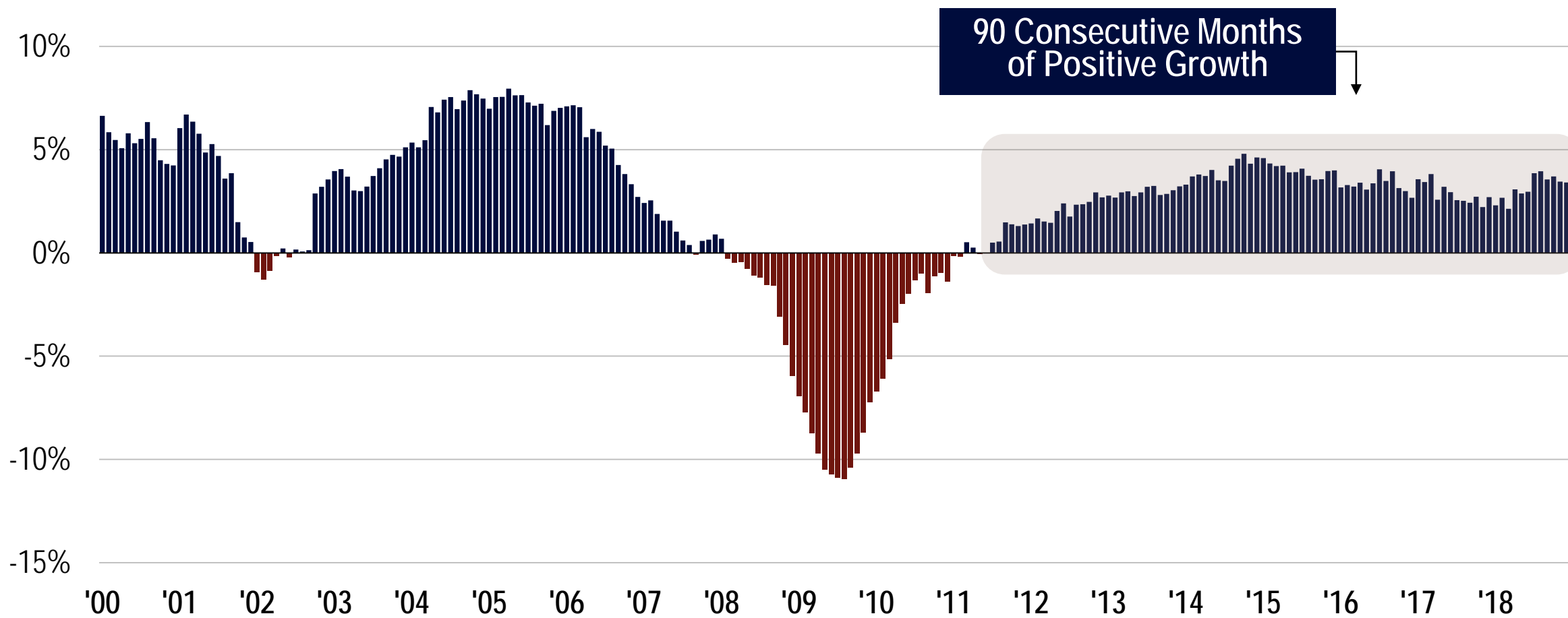


Source: U.S. Bureau of Labor Statistics



# Employment Growth

## Las Vegas MSA | Year-over-Year

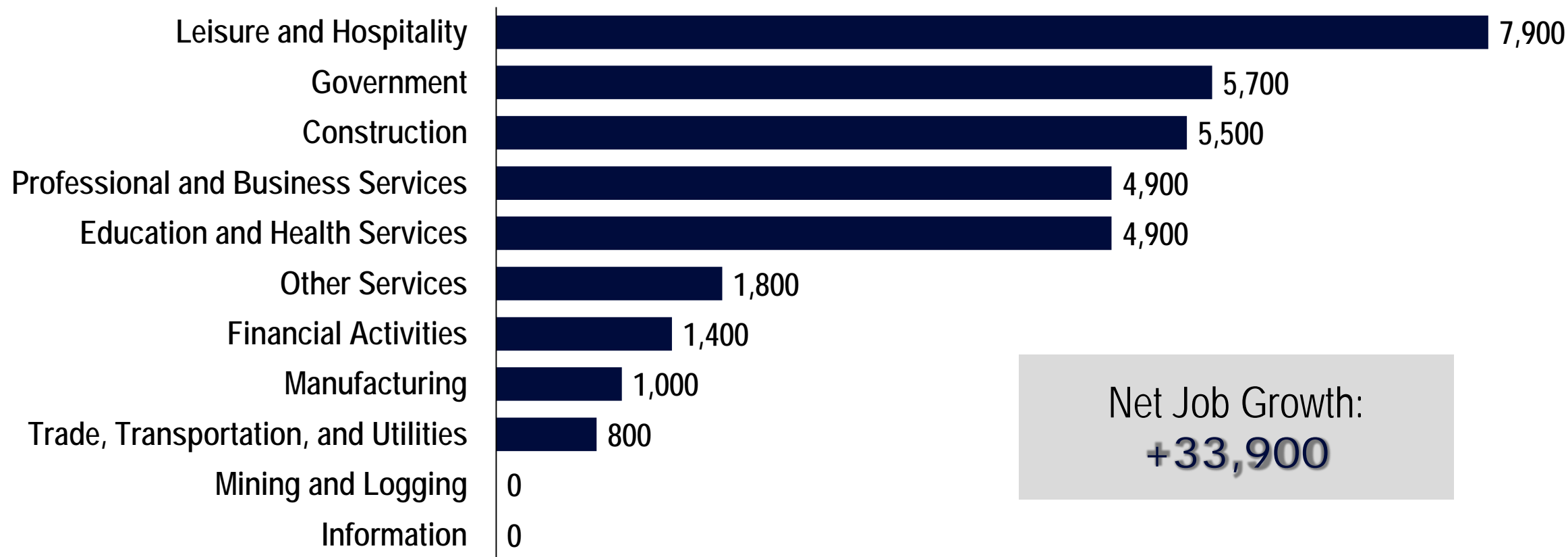


Source: U.S. Bureau of Labor Statistics



# Employment Growth

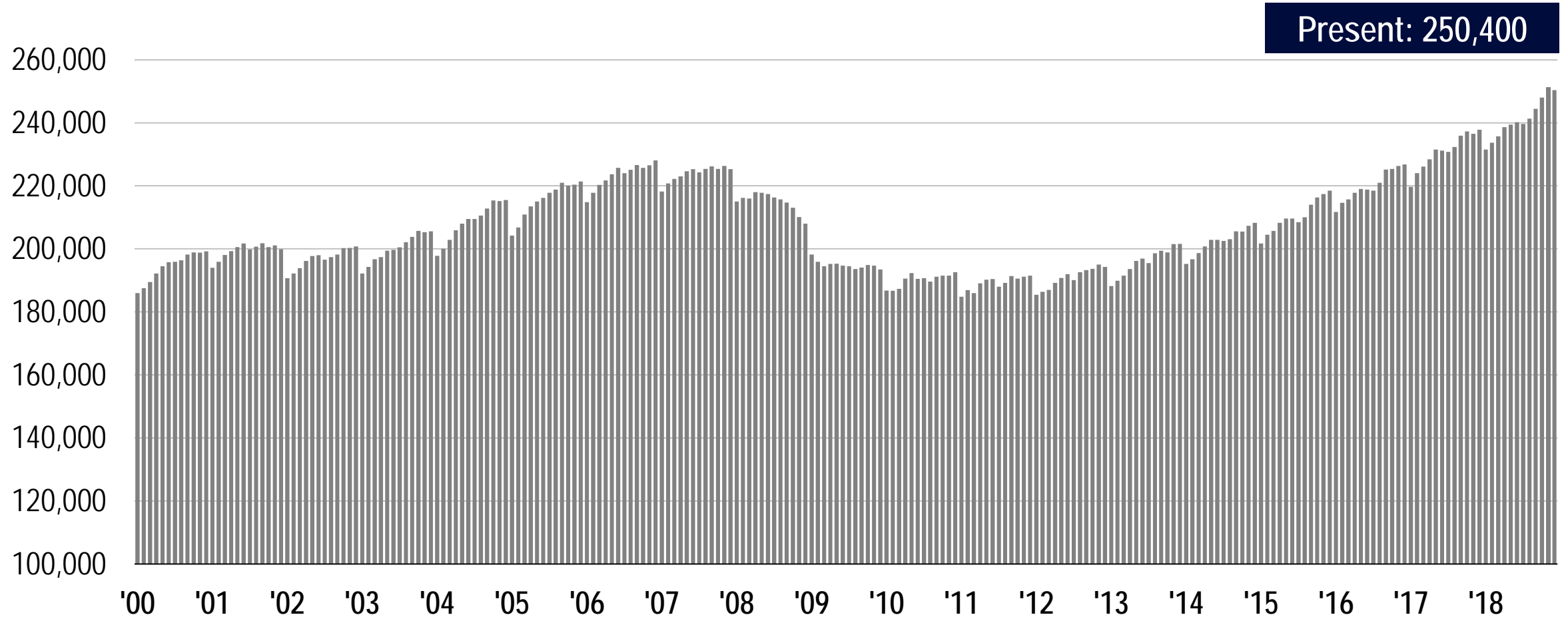
## Las Vegas MSA | Last 12 Months



Source: U.S. Bureau of Labor Statistics (December 2018 vs. December 2017)

# Employment

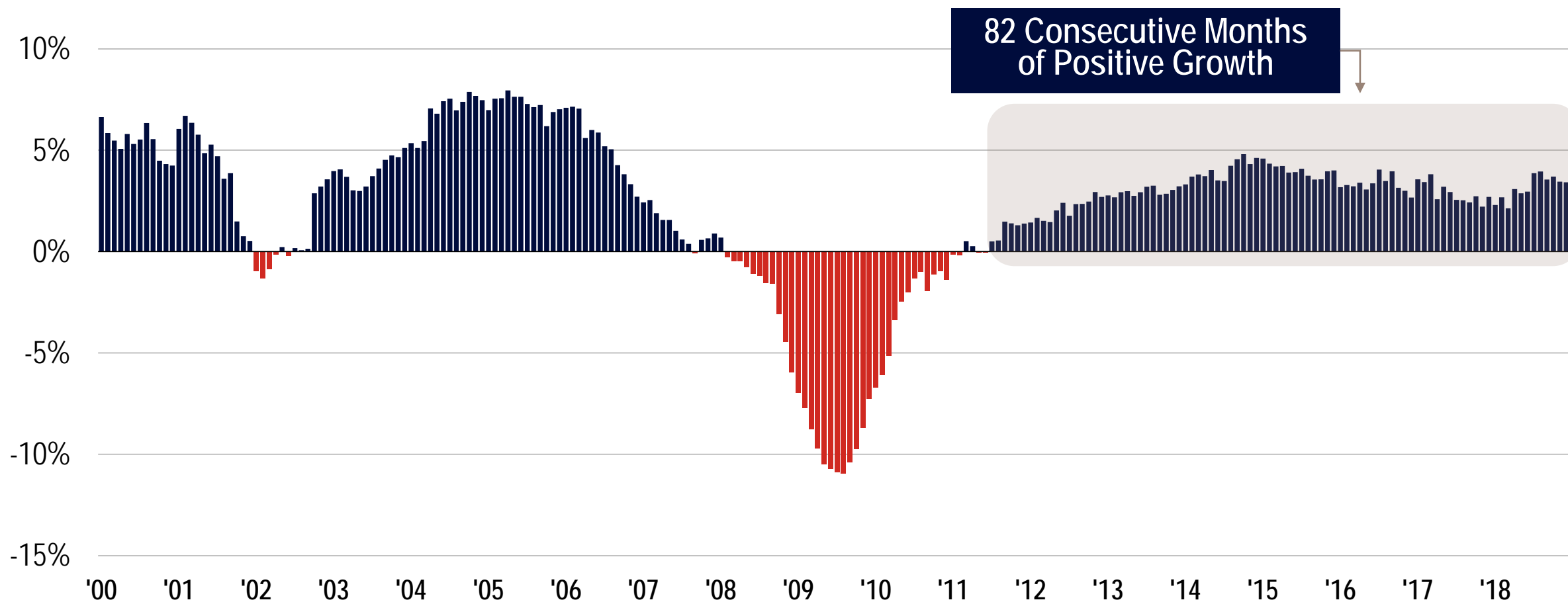
## Reno MSA



Source: U.S. Bureau of Labor Statistics

# Employment Growth

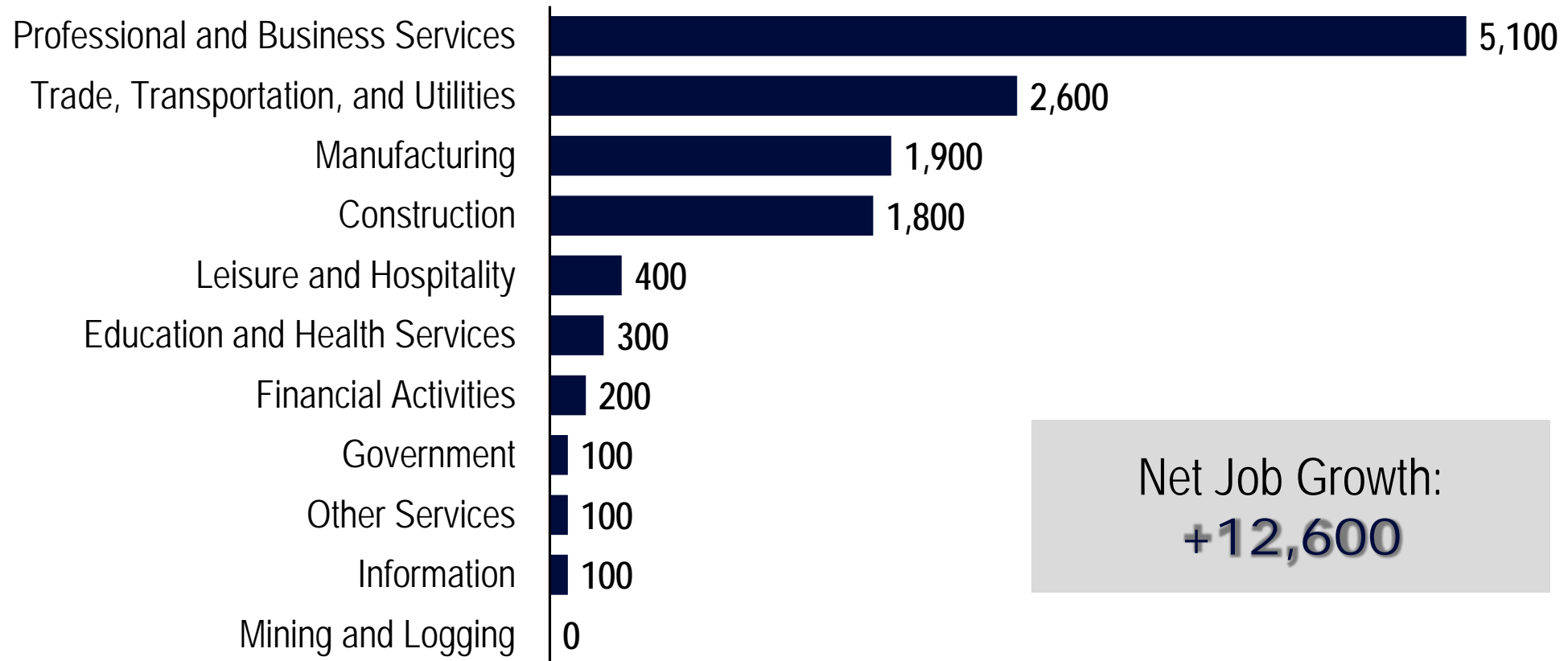
## Reno MSA | Year-over-Year



Source: U.S. Bureau of Labor Statistics

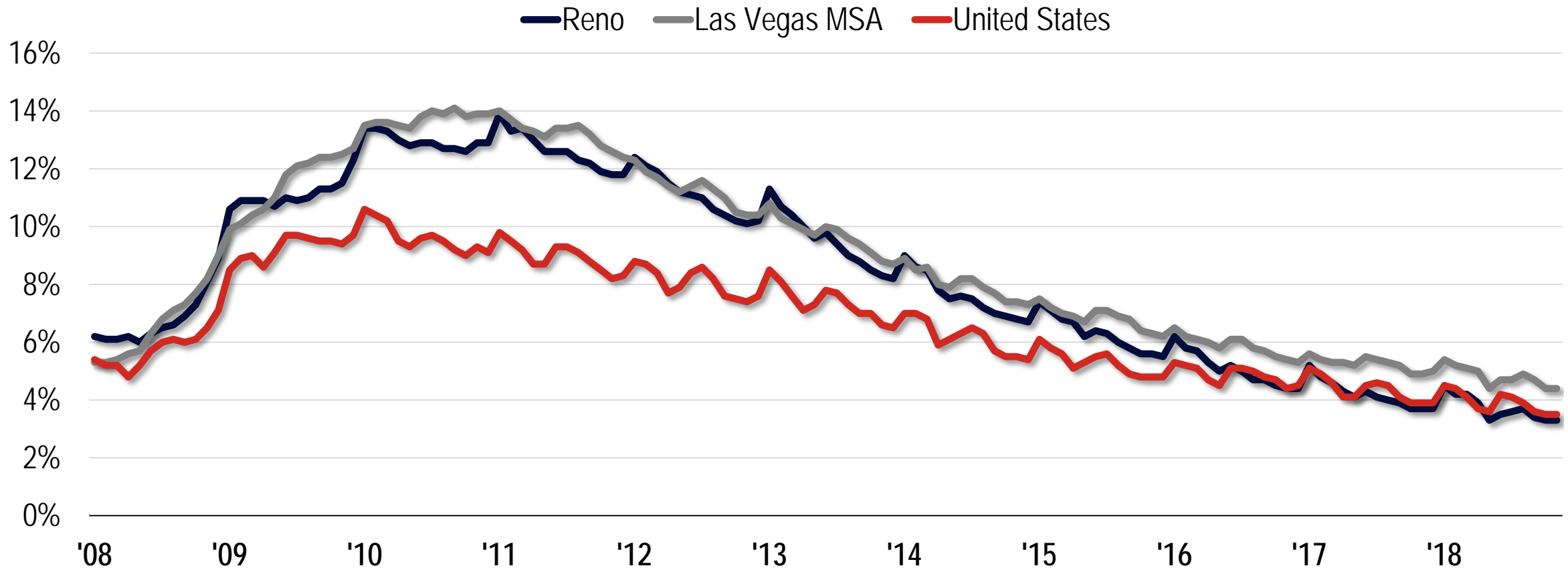
# Employment Growth

## Reno MSA | Last 12 Months



Source: U.S. Bureau of Labor Statistics (December 2018 vs. December 2017)

# Unemployment Rate



Source: U.S. Bureau of Labor Statistics



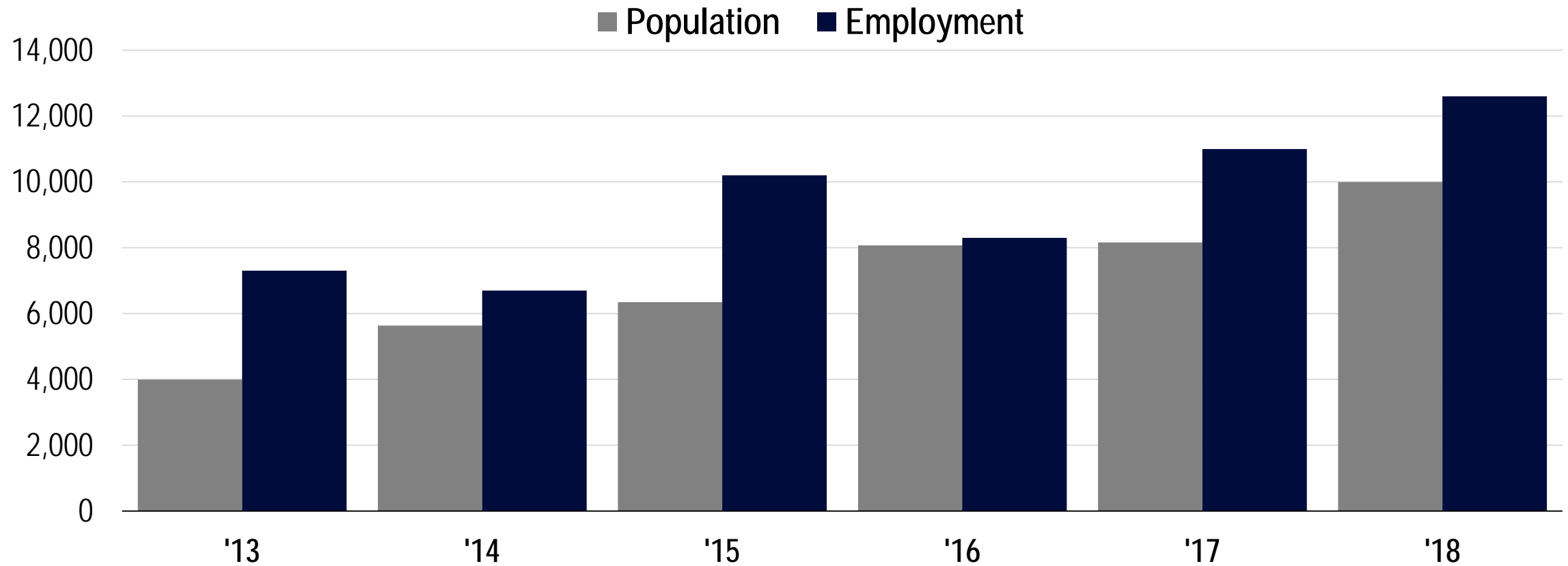
# Changing the Employment Base - Nevada

Sector	2013	2018	Net Growth
Professional and Business Services	151,600	192,300	+40,700
Construction	58,700	97,100	+38,400
Trade, Transportation, and Utilities	225,800	257,700	+31,900
Leisure and Hospitality	327,000	357,700	+30,700
Education and Health Services	112,900	141,000	+28,100
Manufacturing	41,100	58,200	+17,100
Government	151,800	168,700	+16,900
Financial Activities	57,000	66,900	+9,900
Other Services	34,600	43,600	+9,000
Information	13,100	14,500	+1,400
Mining and Logging	14,700	14,500	-200
<b>Total</b>	<b>1,188,200</b>	<b>1,412,200</b>	<b>+224,000</b>

Source: U.S. Bureau of Labor Statistics (Dec 2013 to Dec 2018)

# Population and Employment

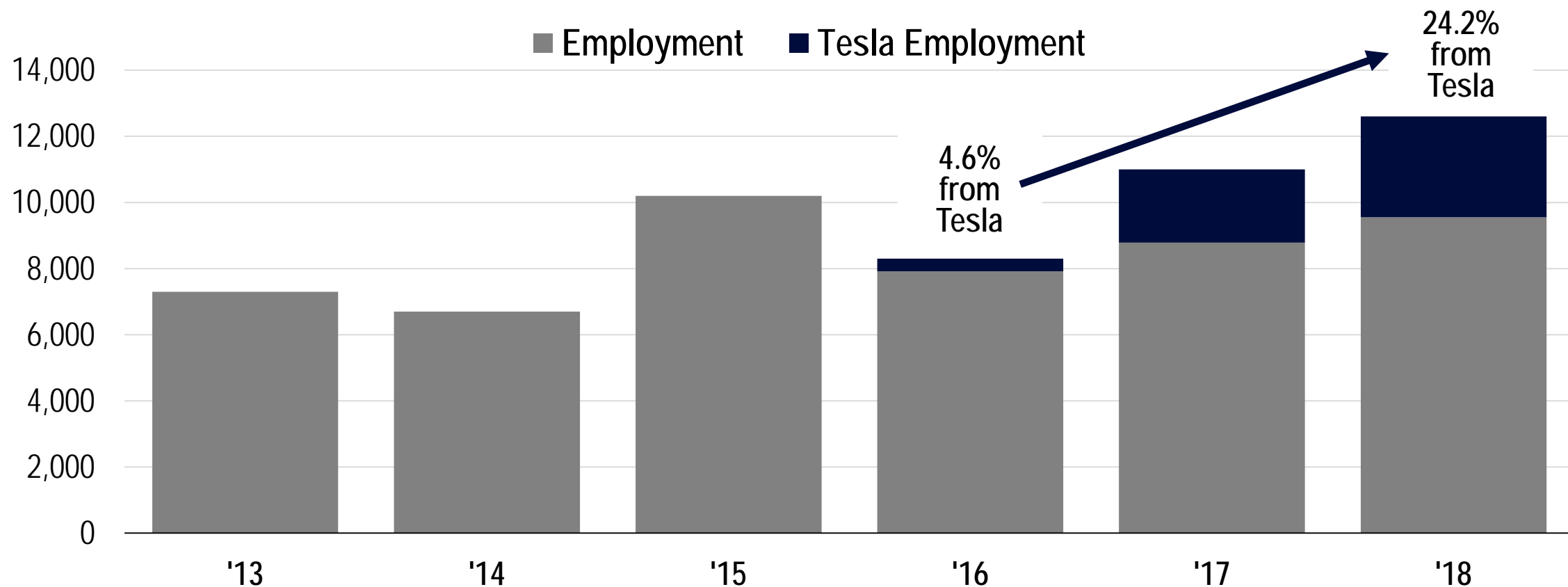
## Reno MSA Total Increase - 2013 to 2018



Source: U.S. Bureau of Labor Statistics, U.S. Census Bureau, EMSI, Governor's Office of Economic Development

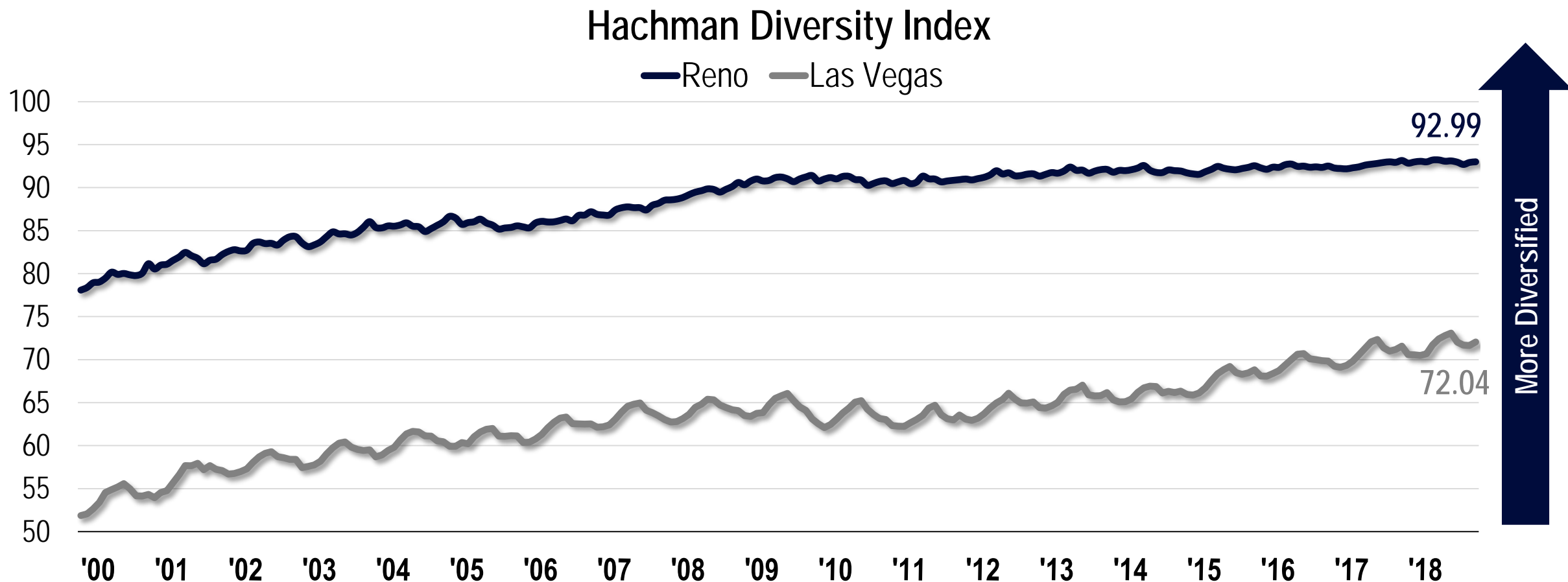
# Impact of Tesla on the Reno MSA

Total Increase - 2013 to 2018



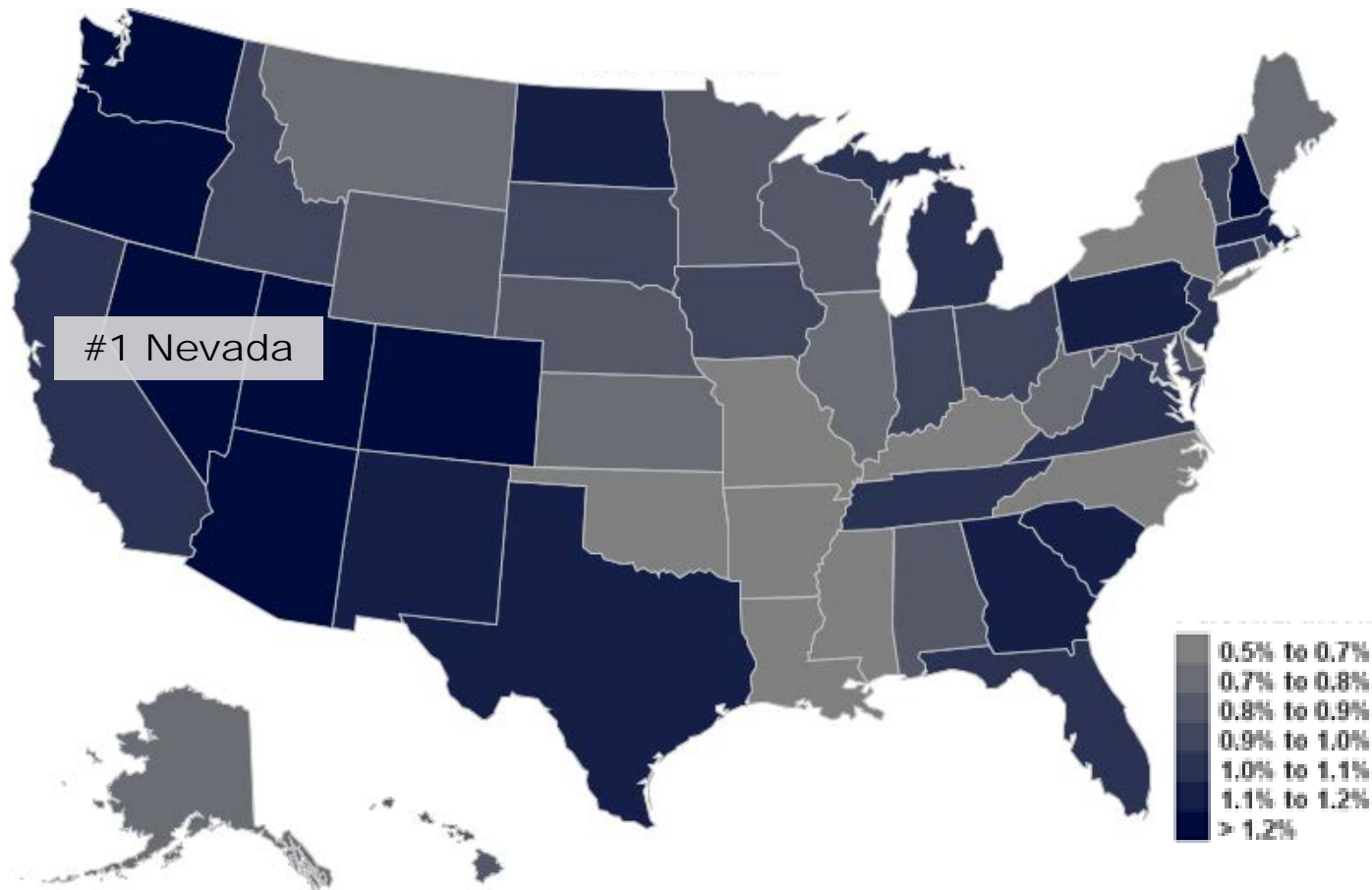
Source: U.S. Bureau of Labor Statistics, U.S. Census Bureau, EMSI, Governor's Office of Economic Development

# Economic Diversification Trends



Source: U.S. Bureau of Labor Statistics and Applied Analysis

# Fastest Growing Personal Income



Rank	State	Quarterly Growth	Annualized Growth
1	Nevada	+1.52%	+6.21%
2	Washington	+1.51%	+6.16%
3	Arizona	+1.33%	+5.42%
4	Colorado	+1.29%	+5.27%
5	New Hampshire	+1.25%	+5.12%
6	Oregon	+1.25%	+5.10%
7	Utah	+1.17%	+4.75%
8	Pennsylvania	+1.16%	+4.71%
9	Texas	+1.14%	+4.65%
10	North Dakota	+1.14%	+4.63%

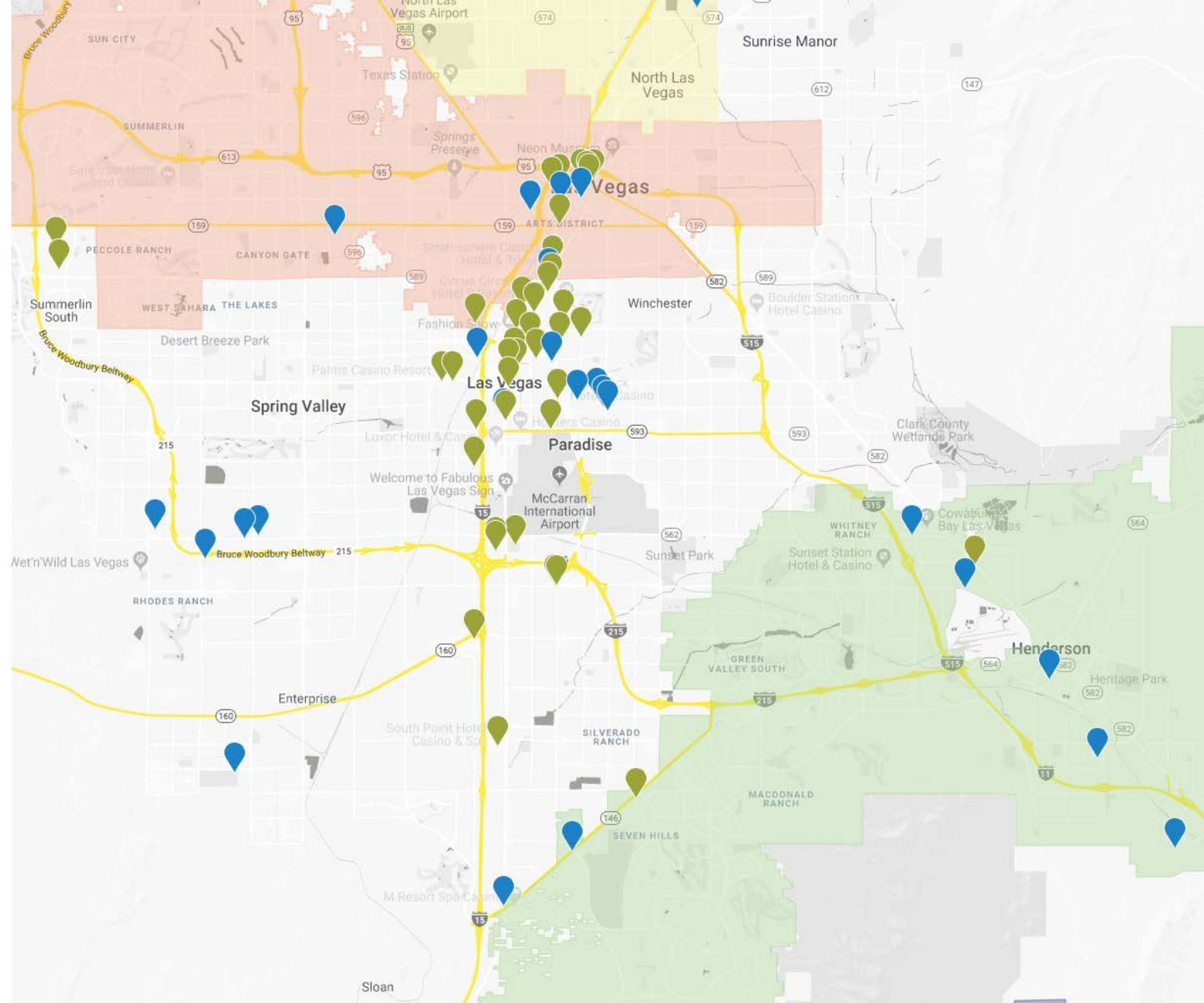
Source: U.S. Bureau of Economic Analysis (Q2 2018 vs. Q3 2018)

# Notable Investments on the Horizon

**\$21.8 Billion**  
Southern Nevada

**\$14.2 Billion**  
Northern Nevada

**\$36.0 Billion**  
Statewide





Project	Cost	Status
<b>Las Vegas Area Projects</b>		
Resorts World Las Vegas	\$4,000,000,000	Under Construction
The Drew	\$3,000,000,000	Planned
Jackie Robinson Arena/Hotel Project	\$2,700,000,000	Planned
Las Vegas Stadium (65,000 Seats)	\$1,800,000,000	Under Construction
Las Vegas Convention Center Exp.	\$1,400,000,000	Under Construction
Union Village	\$1,200,000,000	Under Construction
Henderson West	\$950,000,000	Planned
Project Neon	\$900,000,000	Under Construction
Vegas Extreme Park (The Edge)	\$800,000,000	Planned
Palms Casino Resort Renovation	\$690,000,000	Under Construction
Google Data Center	\$600,000,000	Planned
UnCommons	\$400,000,000	Planned
Caesars FORUM Conference Center	\$375,000,000	Under Construction
UNLV Medical School Building	\$230,000,000	Planned
I-15 and Tropicana Interchange	\$200,000,000	Planned
Hard Rock Hotel Rebrand and Reno.	\$200,000,000	Planned
Clark County Park Upgrades	\$150,000,000	Planned
Las Vegas Ballpark	\$150,000,000	Under Construction
Stratosphere Renovation	\$140,000,000	Under Construction
Las Vegas Monorail Extension	\$110,000,000	Planned
SLS Las Vegas Renovation	\$100,000,000	Under Construction
Elysian at the Hughes Center	\$100,000,000	Under Construction

Project	Cost	Status
Kind Heaven	\$100,000,000	Planned
Centennial Hills Hospital Expansion	\$95,000,000	Planned
AC Hotel by Marriott	\$95,000,000	Planned
CSN Campuses Student Union	\$80,000,000	Under Construction
U.S. 95 Widening	\$78,000,000	Under Construction
Downtown Las Vegas Expo Center	\$76,000,000	Under Construction
Raiders Corporate Headquarters	\$75,000,000	Under Construction
New 215 Interchanges	\$70,000,000	Under Construction
Luxury Apartments at Twain/Dean Martin	\$65,000,000	Under Construction
Nevada State College Education Building	\$62,000,000	Planned
Silverton Village	\$60,000,000	Under Construction
New Las Vegas Municipal Courthouse	\$59,300,000	Planned
Blue Diamond Widening	\$58,560,000	Under Construction
Hampton Inn & Suites/Home2Suites	\$55,000,000	Planned
The Venetian Pool Redesign	\$50,000,000	Under Construction
Downtown Henderson	\$50,000,000	Under Construction
CIM Downtown Grand Third Tower	\$45,000,000	Under Construction
Water Pipeline to Apex Industrial Park	\$42,000,000	Under Construction
South Point Renovation	\$40,000,000	Under Construction
UNLV College of Engineering Expansion	\$35,000,000	Planned
New Smith Center Parking Garages	\$33,000,000	Under Construction
Fremont Street Experience Reno.	\$32,000,000	Planned
Fertitta Football Complex	\$31,000,000	Under Construction

Project	Cost	Status
UNLV Harry Reid Tech Park Bldg. 3	\$30,000,000	Under Construction
Sahara and Las Vegas Pedestrian Bridge	\$27,500,000	Planned
Southern Hills Hospital Health Center	\$26,000,000	Under Construction
UNLV University Gateway	\$18,000,000	Under Construction
Starwood Hotel	\$18,000,000	Planned
Las Vegas Strip Pedestrian Bridge	\$16,900,000	Under Construction
Mountain's Edge Sports Complex	\$16,000,000	Under Construction
Residence Inn - St. Rose	\$16,000,000	Under Construction
McCarran Airport Improvements	\$8,000,000	Planned
Treehouse Las Vegas	\$7,000,000	Planned
Skyline Hotel & Casino Expansion	\$7,000,000	Under Construction
North LV Roadway Improvements	\$3,570,000	Planned
Boulder Highway Upgrade Project	\$1,500,000	Under Construction
UNLV New Lee Business School Bldg	DND	Planned
AREA15	DND	Under Construction
Circa Resort and Casino	DND	Planned
Henderson Executive Airport Expansion	DND	Under Construction
Northwest Las Vegas Fairfield Inn	DND	Under Construction
Wynn Convention Center	DND	Under Construction
Wynn West	DND	Planned
MSG Sphere Las Vegas	DND	Under Construction
Home2 Suites - Dean Martin	DND	Planned
Fairfield Inn & Suites Airport South	DND	Planned

Project	Cost	Status
TownPlace Suites Airport South	DND	Planned
Paris Las Vegas Room Renovation	DND	Planned
Showcase Mall Expansion	DND	Planned
SpringHill Suites Marriott	DND	Planned
Residence Inn - Paradise	DND	Planned
Aloft Hotel	DND	Planned
The Element Hotel by Westin	DND	Planned
Mardi Gras Hotel Redevelopment	DND	Planned
Monorail Station at MSG Sphere	DND	Planned
Hotel Apache at Binions	DND	Under Construction
Boyd Gaming Las Vegas HQ	DND	Planned
Mixed-Use Project	DND	Under Construction
Howard Hughes Ballpark Hotel	DND	Planned



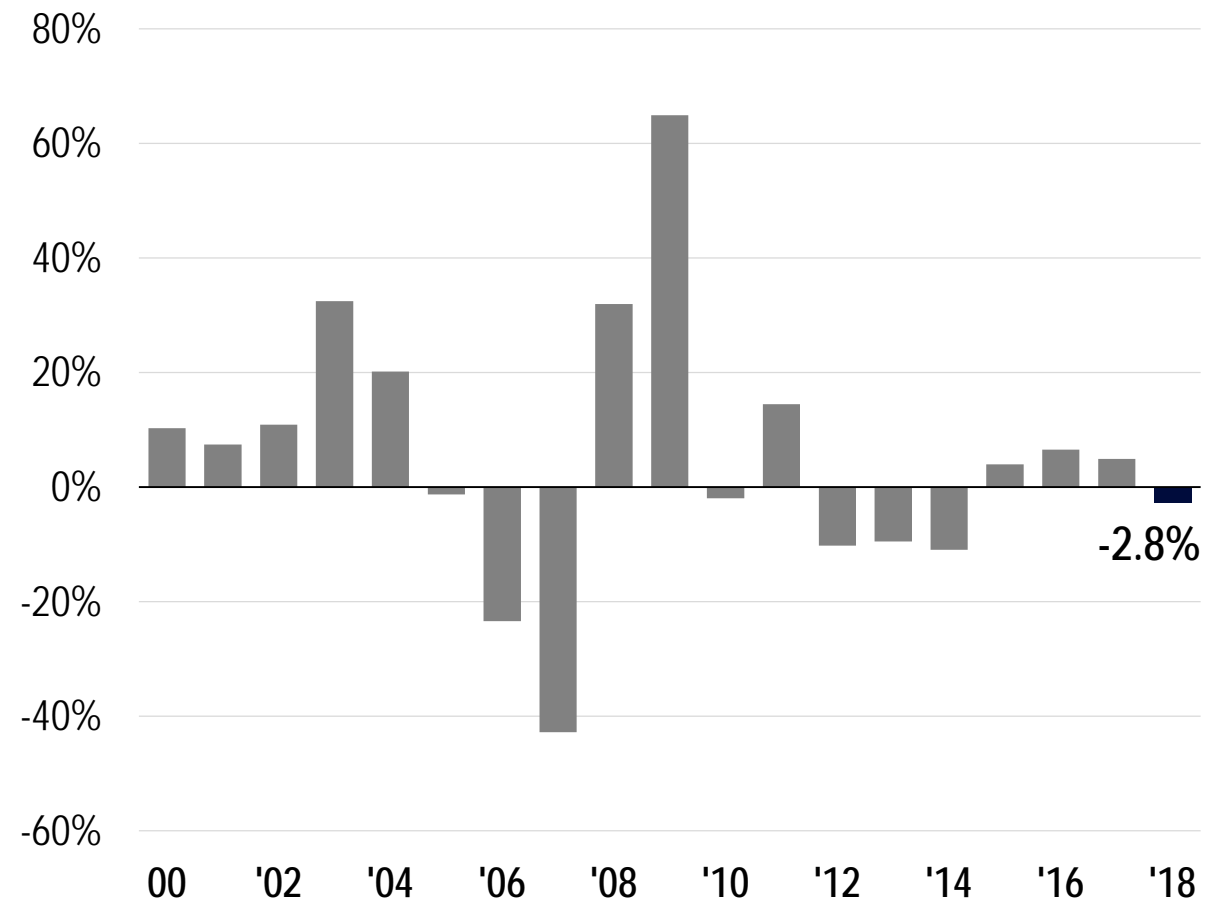
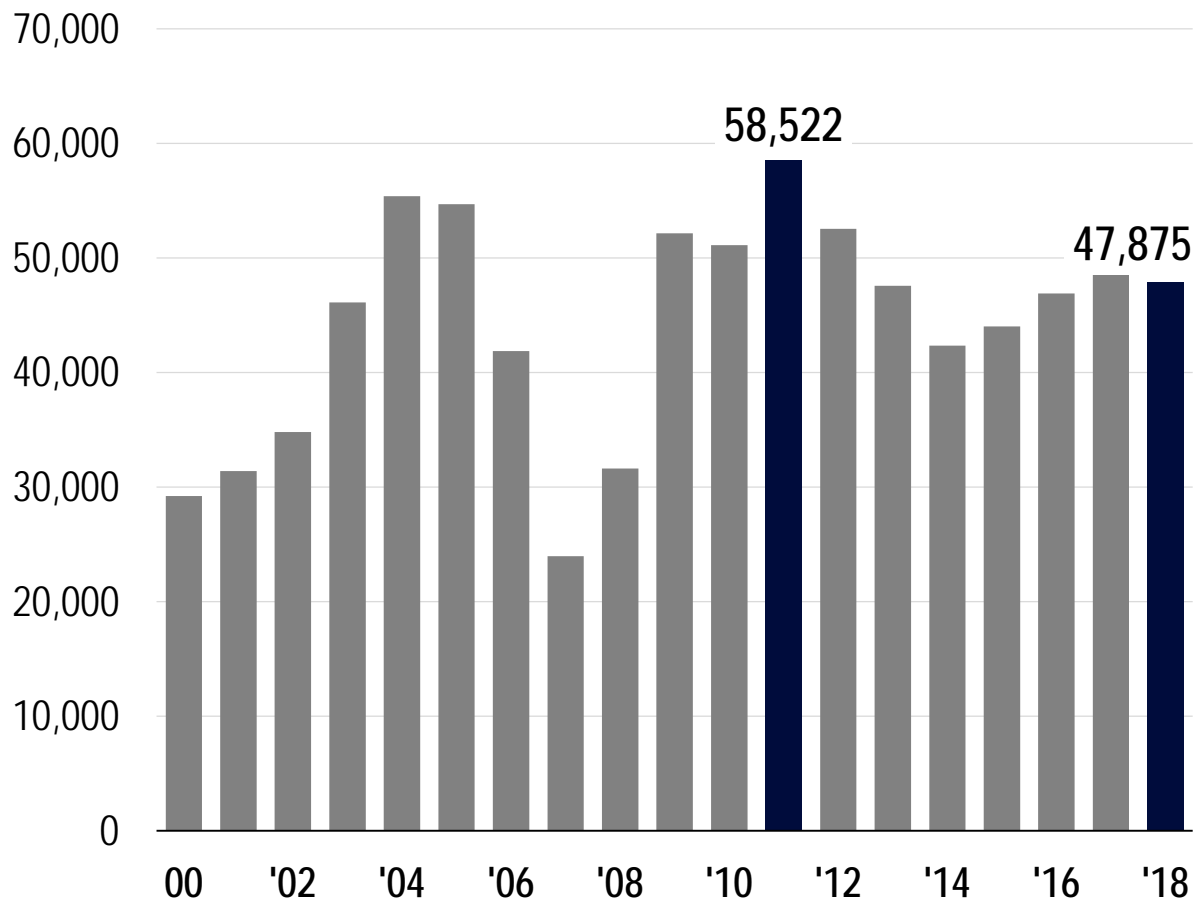
Project	Cost	Status
<b>Reno Area Projects</b>		
Tesla Gigafactory	\$6,000,000,000	Under Construction
Switch Citadel	\$4,000,000,000	Under Construction
Reno-Tahoe Airport Expansion	\$1,600,000,000	Planned
Rancharrah (SF/MF + mixed use)	\$800,000,000	Under Construction
Park Lane (1,600 MF units; 85k sf retail)	\$500,000,000	Under Construction
VA Sierra Nevada Exp. and Renovation	\$200,000,000	Planned
Wildcreek High School	\$190,000,000	Planned
Summit Club Housing Development	\$120,000,000	Under Construction
Eldorado Resorts Master Plan	\$100,000,000	Under Construction
UNR New Engineering Building	\$87,800,000	Planned
Arrowcreek Middle School	\$81,400,000	Under Construction
UNR Gateway District Phase I	\$65,000,000	Planned
Desert Skies Middle School	\$60,600,000	Under Construction
Sky Ranch Middle School	\$60,000,000	Under Construction
Union Pacific Railroad Infrastructure	\$56,200,000	Planned
Station Casinos Gaming Facility	\$50,000,000	Planned
Rancharrah "The Village"	\$40,000,000	Planned
UNR School of Fine Arts	\$35,500,000	Under Construction
Reno Public Market	\$34,000,000	Planned
The Loop	\$30,000,000	Under Construction
Nugget Casino Resort Renovation	\$25,000,000	Under Construction
Nick Poulakidas Elementary School	\$25,000,000	Under Construction

Project	Cost	Status
Reno Events Center Improvements	\$5,700,000	Planned
Apple Purchasing and Receiving Warehouse	\$4,000,000	Planned
Washoe County School Alterations	\$1,000,000	Planned
Google's 1,200-Acre Data Center	DND	Planned
Dermody LogistiCenter 395 Phase 2	DND	Under Construction
Dermody LogistiCenter 395 Phase 3	DND	Under Construction
Stonegate Residential Development	DND	Planned
Daybreak Residential Development	DND	Planned
Park Place Reno (762 beds; 267 units)	DND	Under Construction
Mountain View Corporate	DND	Under Construction
Hug High School Repurpose	DND	Planned
North Valleys Elementary	DND	Planned
Spanish Springs Elementary	DND	Planned

# Resale Home Market Supply and Demand

# Resale Home Closings

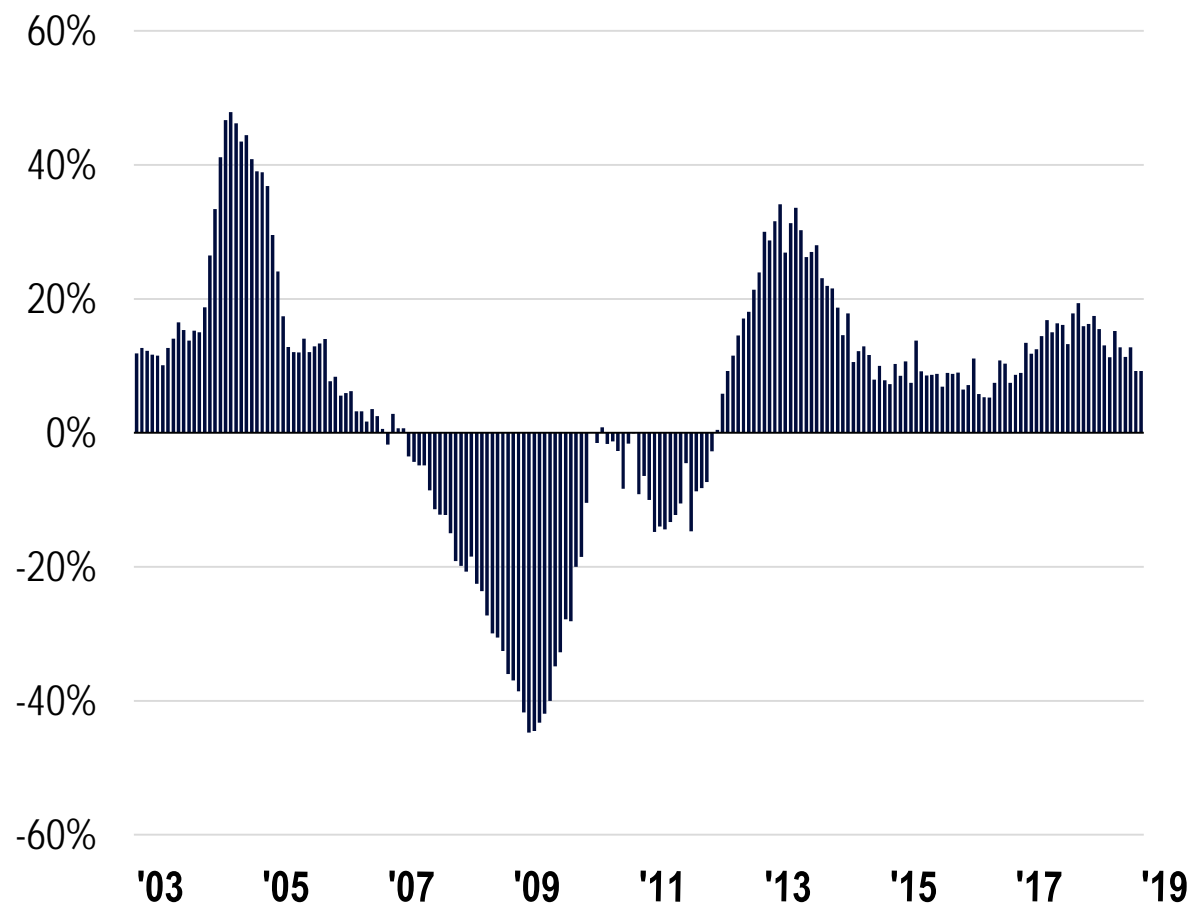
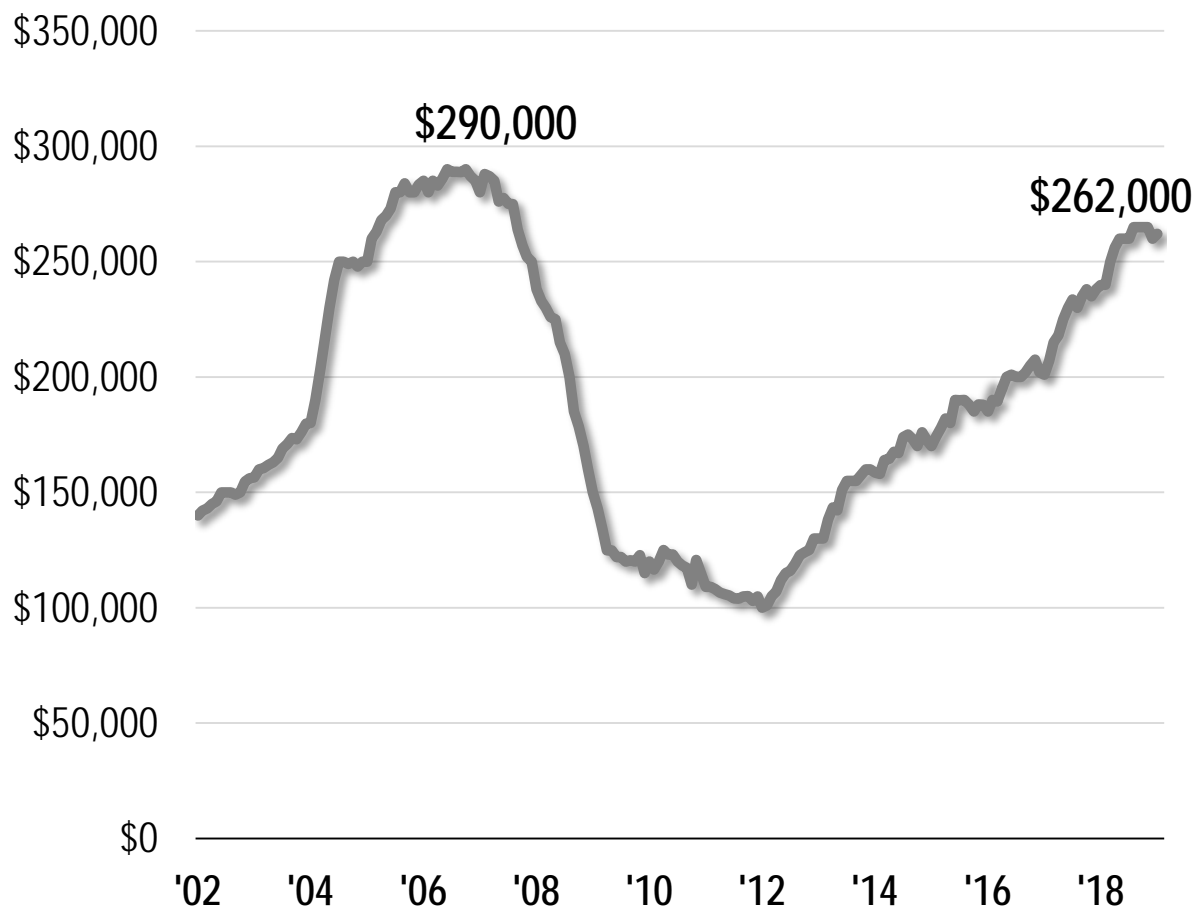
## Las Vegas Area



Source: SalesTraq (includes Realtor and non-Realtor transactions)

# Resale Home Median Closing Price

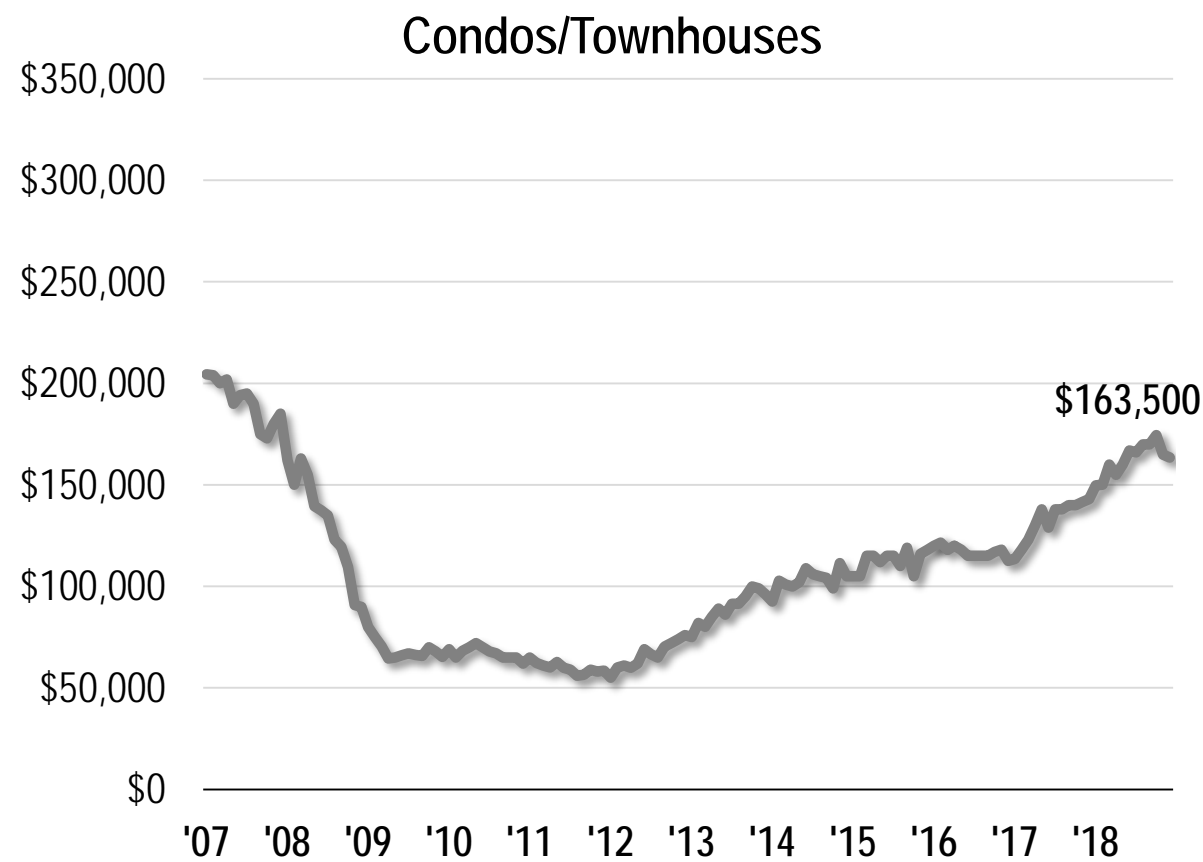
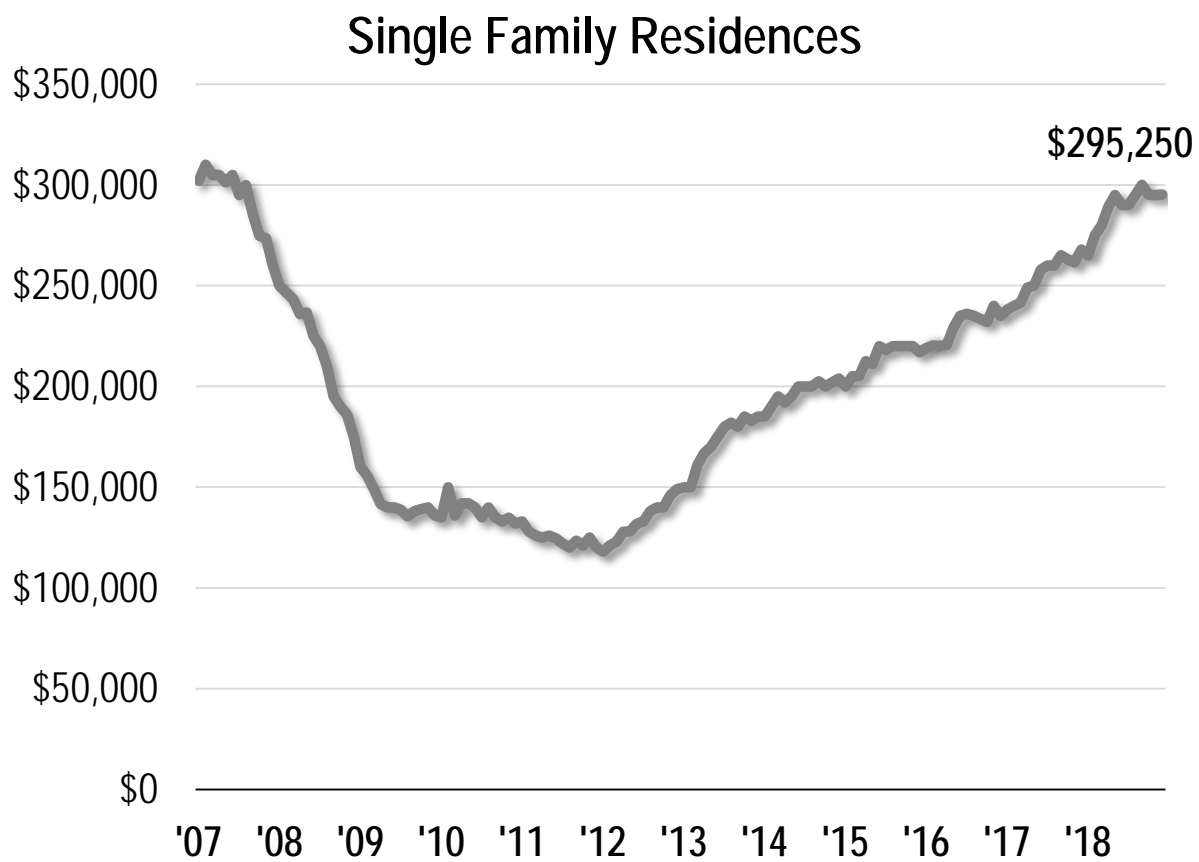
## Las Vegas Area



Source: SalesTraq (includes Realtor and non-Realtor transactions)

# Single Family Residence vs. Condo Closing Prices

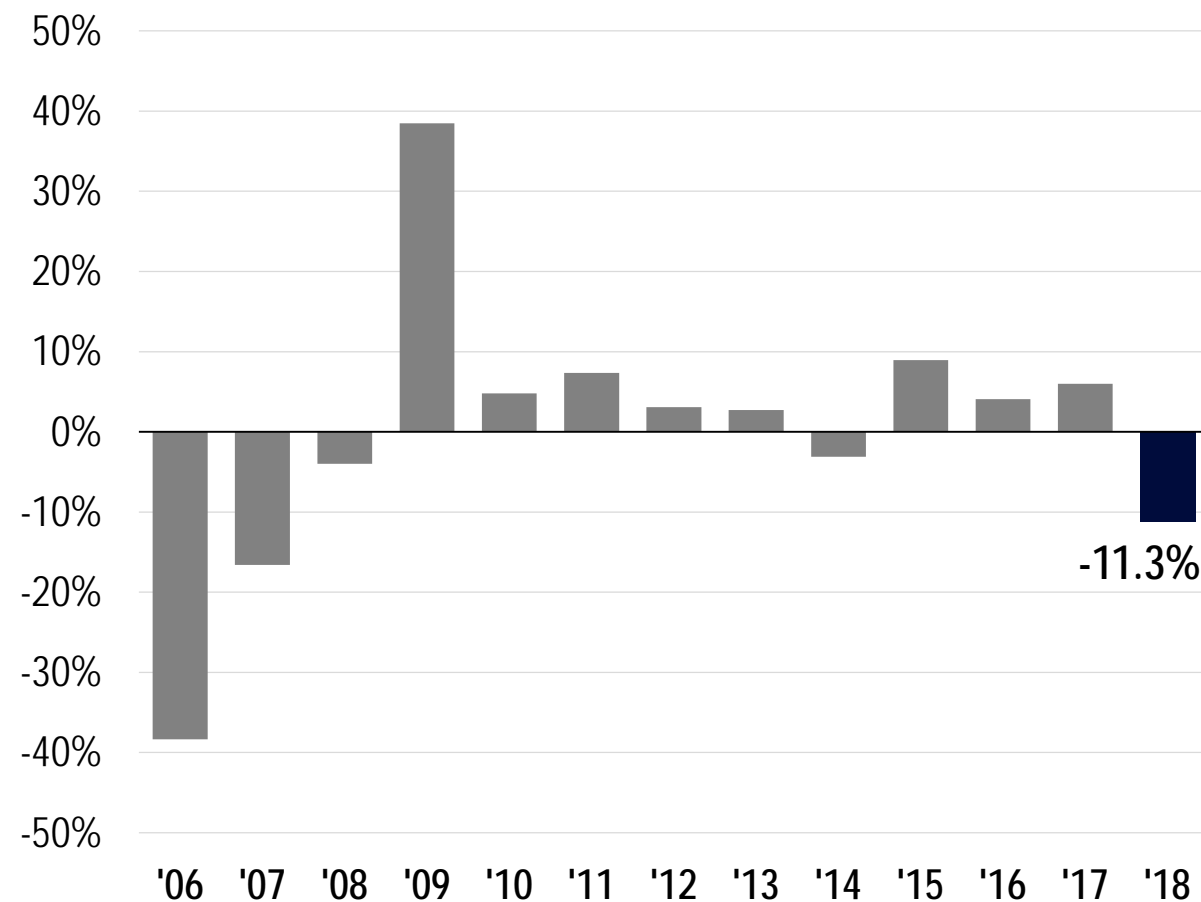
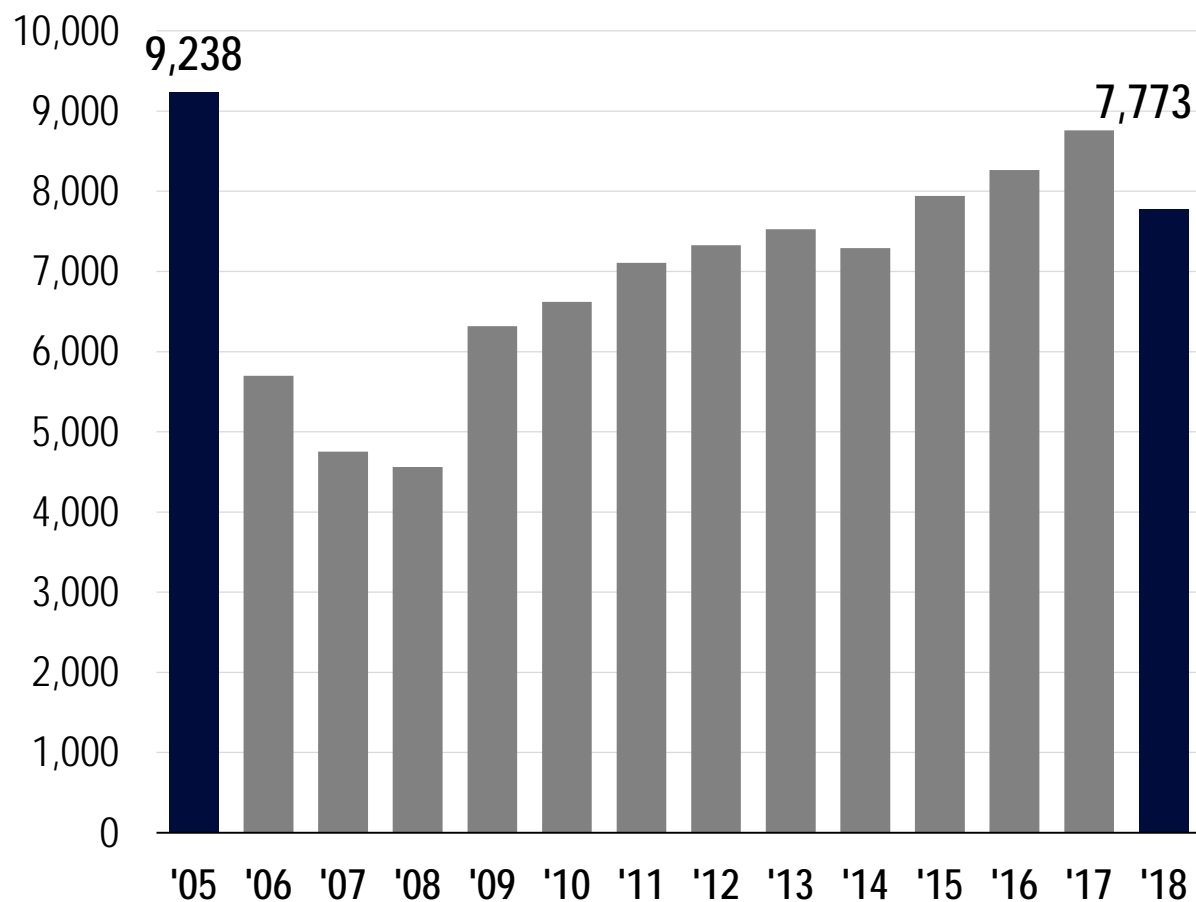
## Las Vegas Area



Source: GLVAR

# Resale Home Closings

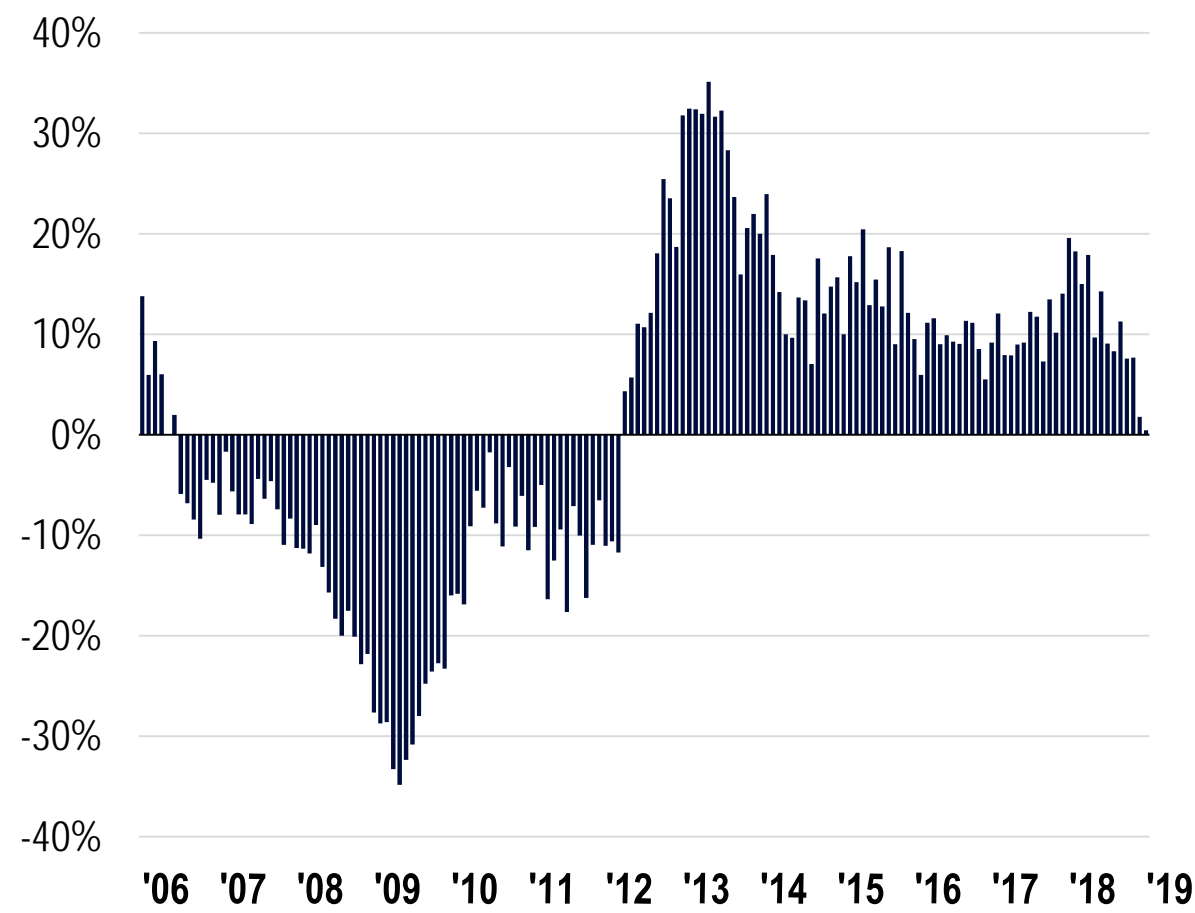
## Washoe County



Source: SalesTraq (includes Realtor and non-Realtor transactions)

# Resale Home Median Closing Price

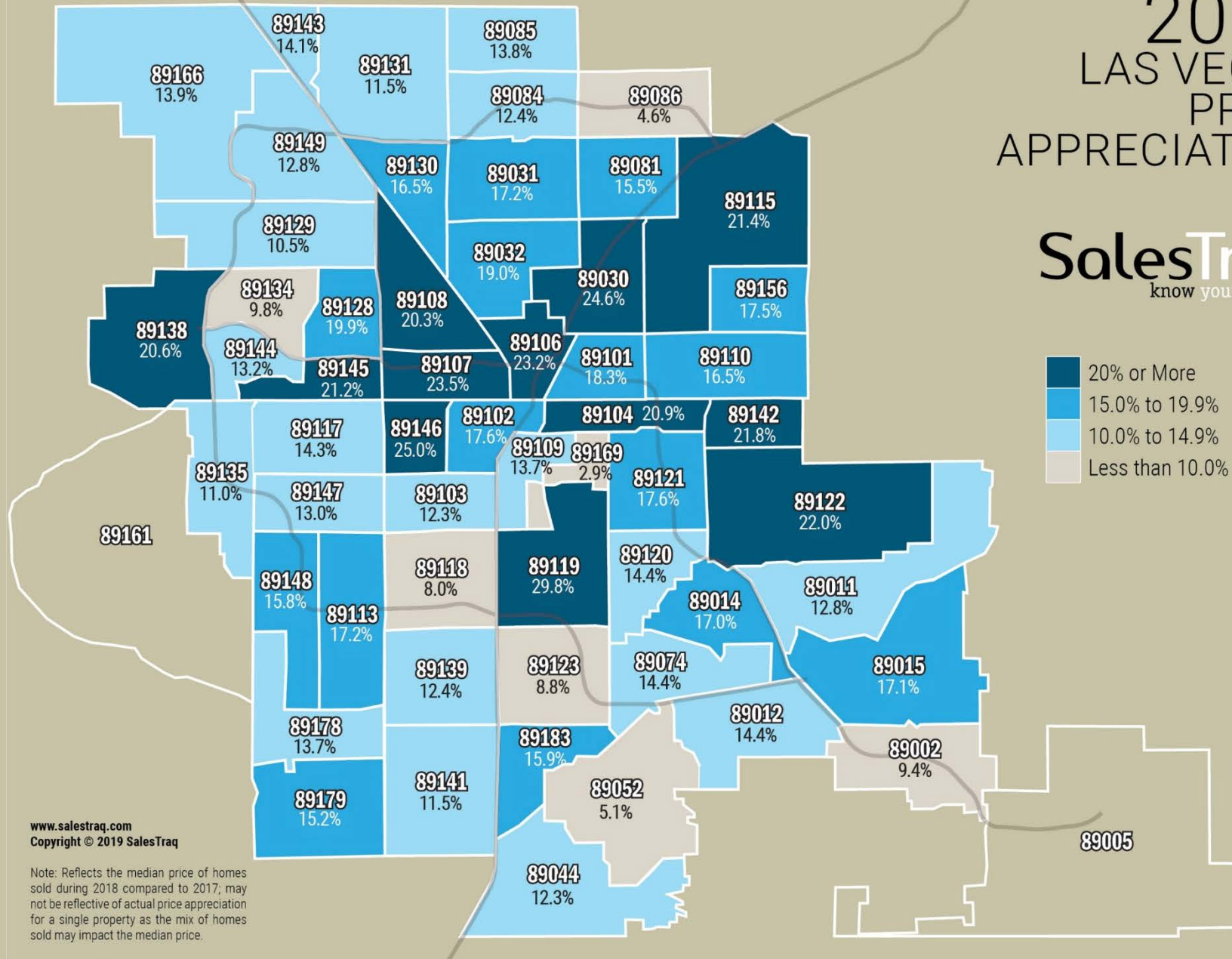
## Washoe County



Source: SalesTrac (includes Realtor and non-Realtor transactions)

# 2018 LAS VEGAS PRICE APPRECIATION

**SalesTrac**  
know your market



www.salestrac.com  
Copyright © 2019 SalesTrac

Note: Reflects the median price of homes sold during 2018 compared to 2017; may not be reflective of actual price appreciation for a single property as the mix of homes sold may impact the median price.

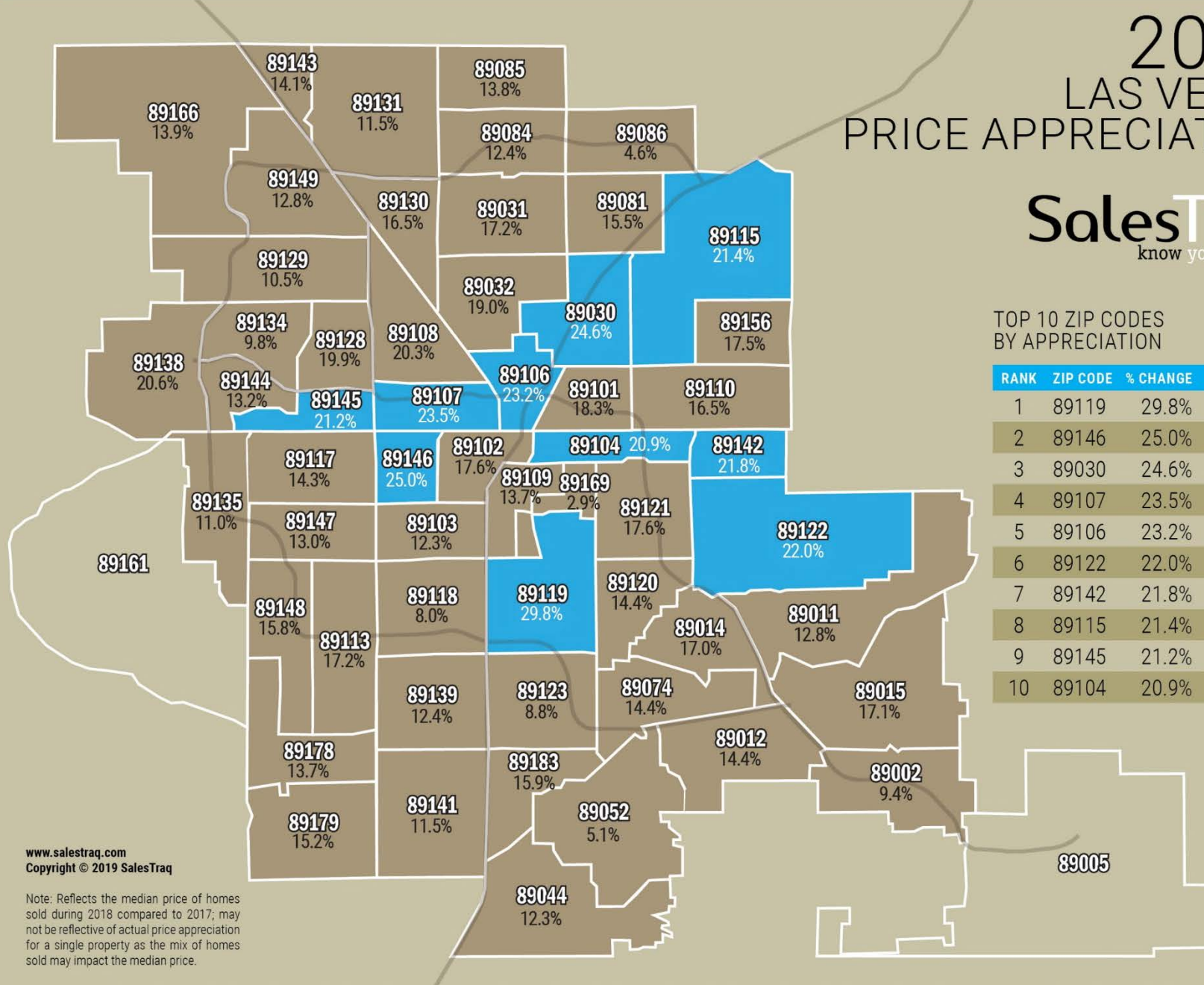


# 2018 LAS VEGAS PRICE APPRECIATION

**SalesTraq**  
know your market

## TOP 10 ZIP CODES BY APPRECIATION

RANK	ZIP CODE	% CHANGE	PRICE
1	89119	29.8%	\$185,000
2	89146	25.0%	\$250,000
3	89030	24.6%	\$152,000
4	89107	23.5%	\$200,000
5	89106	23.2%	\$170,000
6	89122	22.0%	\$205,000
7	89142	21.8%	\$212,000
8	89115	21.4%	\$176,000
9	89145	21.2%	\$225,000
10	89104	20.9%	\$208,000



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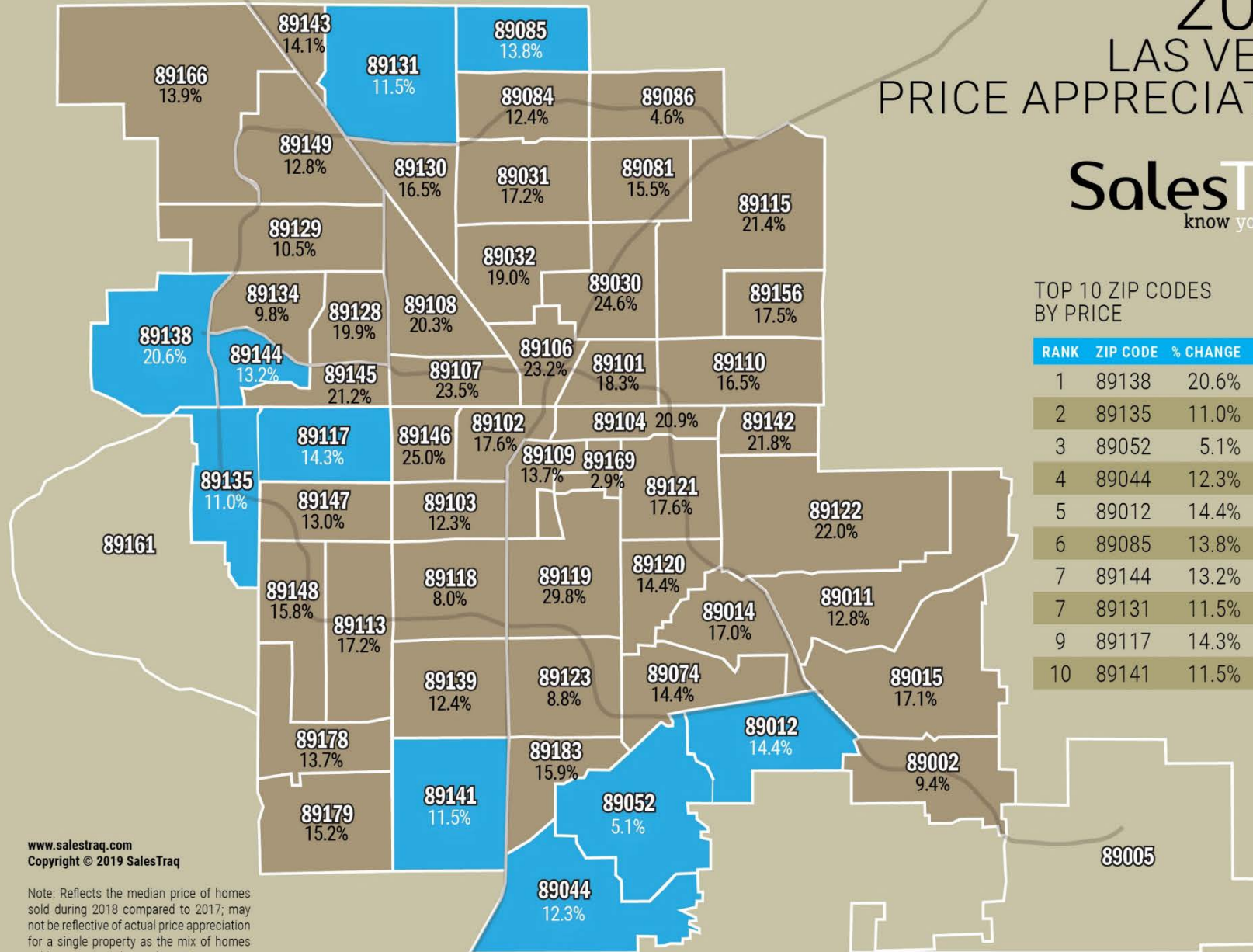
Note: Reflects the median price of homes sold during 2018 compared to 2017; may not be reflective of actual price appreciation for a single property as the mix of homes sold may impact the median price.

# 2018 LAS VEGAS PRICE APPRECIATION

**SalesTraq**  
know your market

## TOP 10 ZIP CODES BY PRICE

RANK	ZIP CODE	% CHANGE	PRICE
1	89138	20.6%	\$464,500
2	89135	11.0%	\$420,500
3	89052	5.1%	\$370,000
4	89044	12.3%	\$355,000
5	89012	14.4%	\$340,000
6	89085	13.8%	\$330,000
7	89144	13.2%	\$325,000
7	89131	11.5%	\$319,999
9	89117	14.3%	\$317,750
10	89141	11.5%	\$315,000

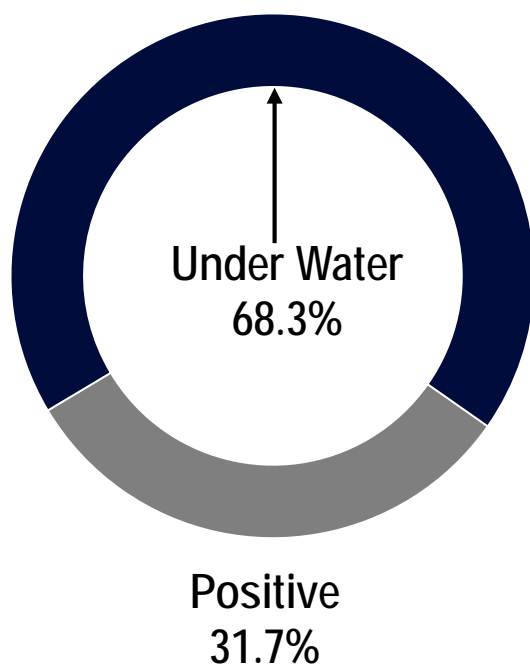


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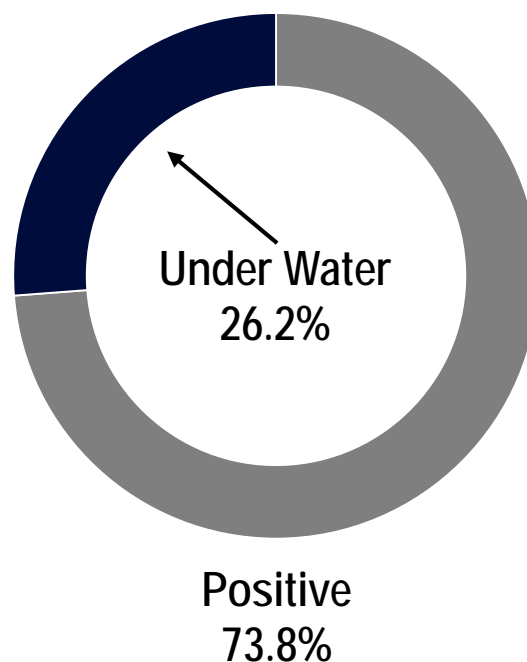
Note: Reflects the median price of homes sold during 2018 compared to 2017; may not be reflective of actual price appreciation for a single property as the mix of homes sold may impact the median price.

# Nevada Homeowner's Equity

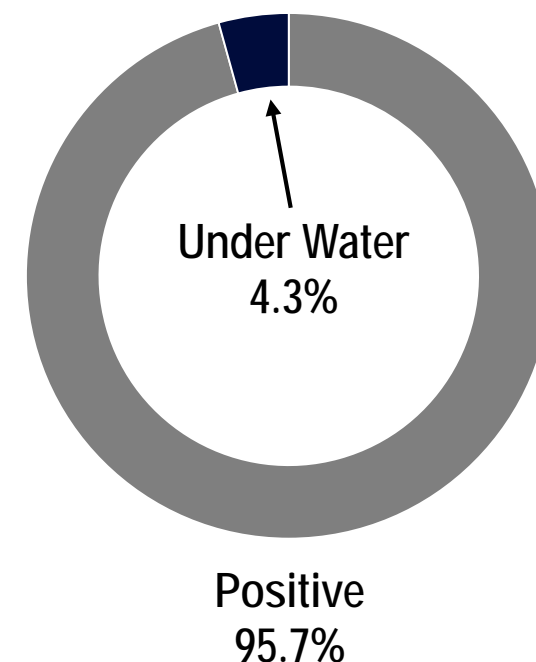
Q4 2010



Q4 2014

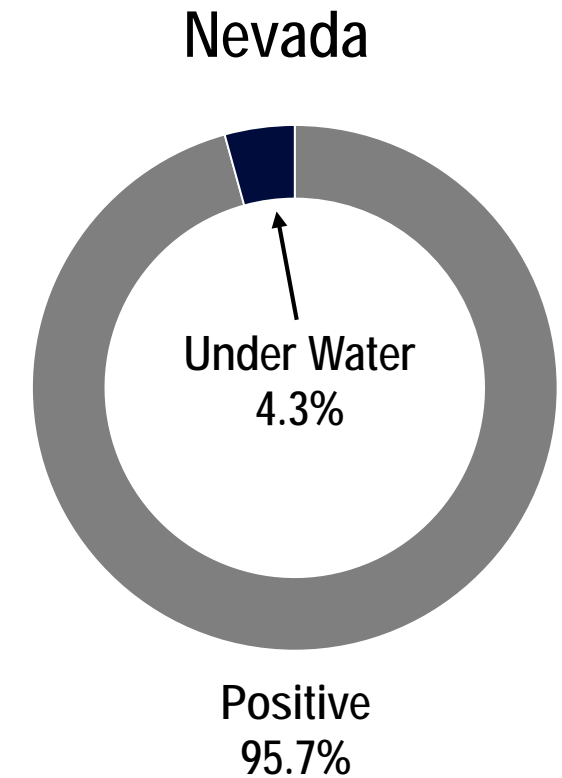
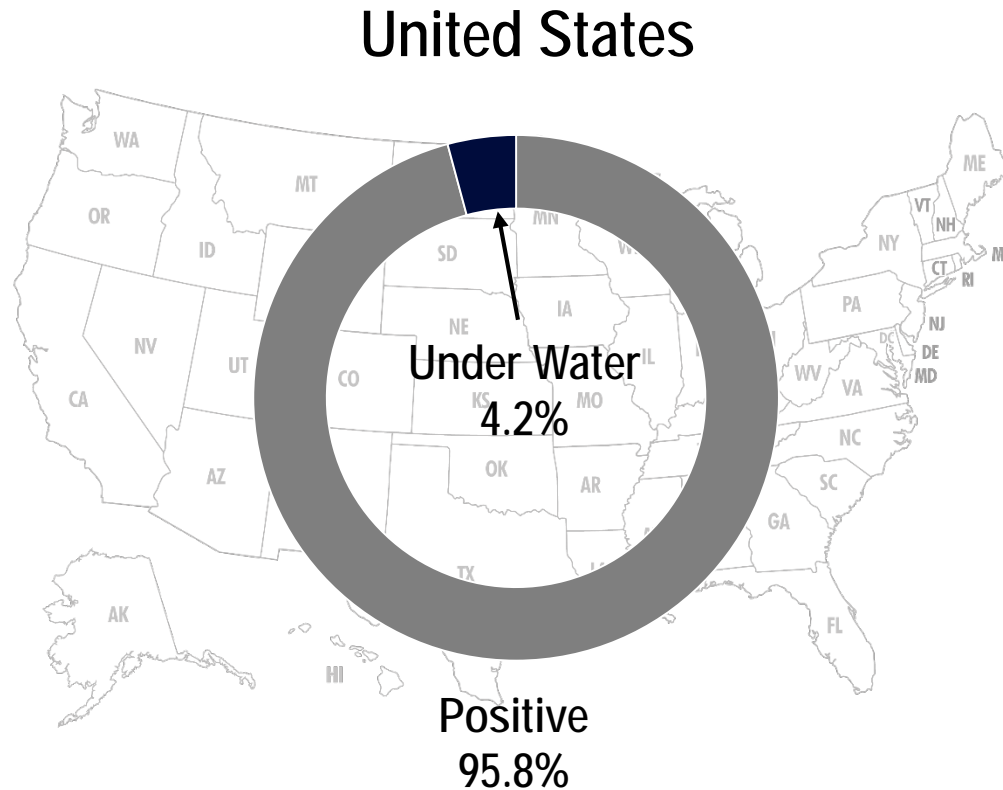


Q4 2018



Source: CoreLogic

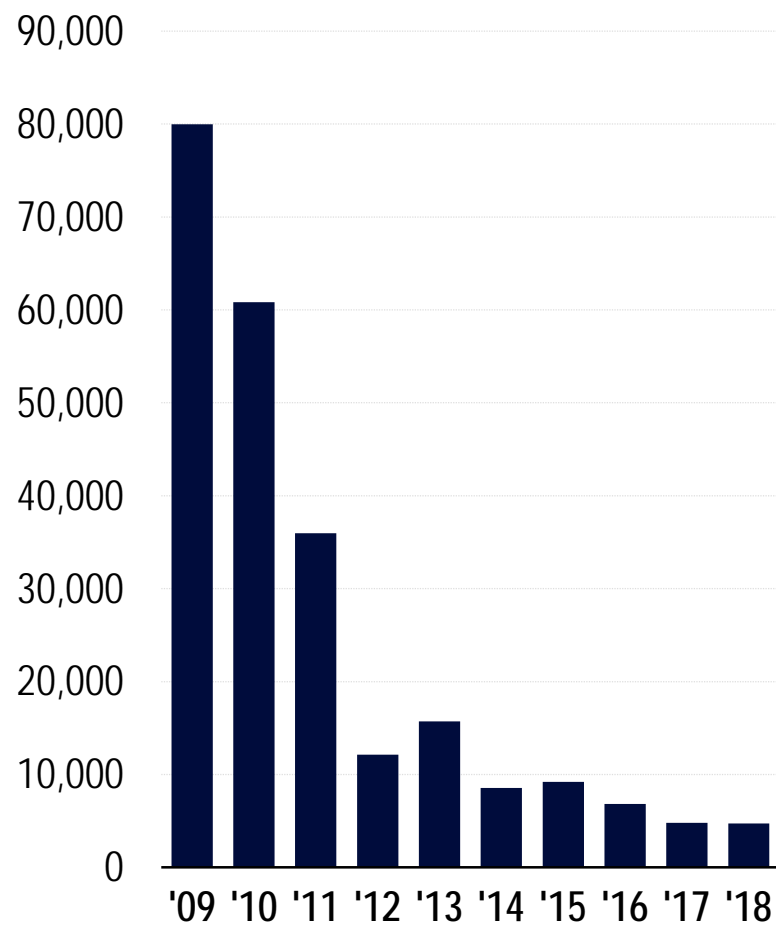
# Homeowner's Equity



Source: CoreLogic

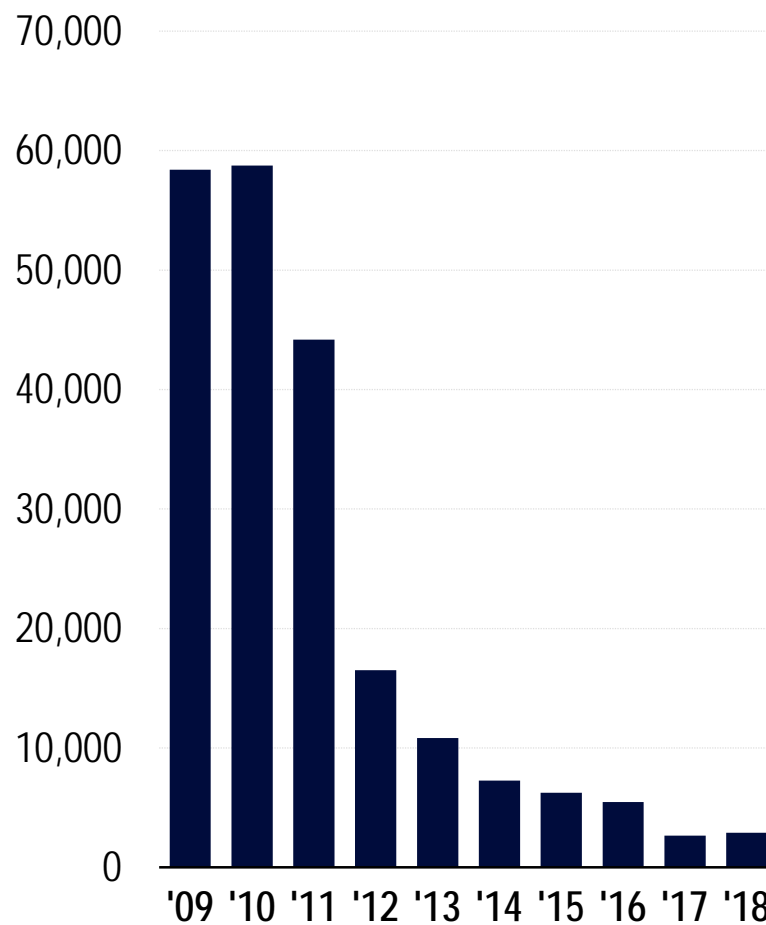
## Notices of Breach and Default

Clark County, NV



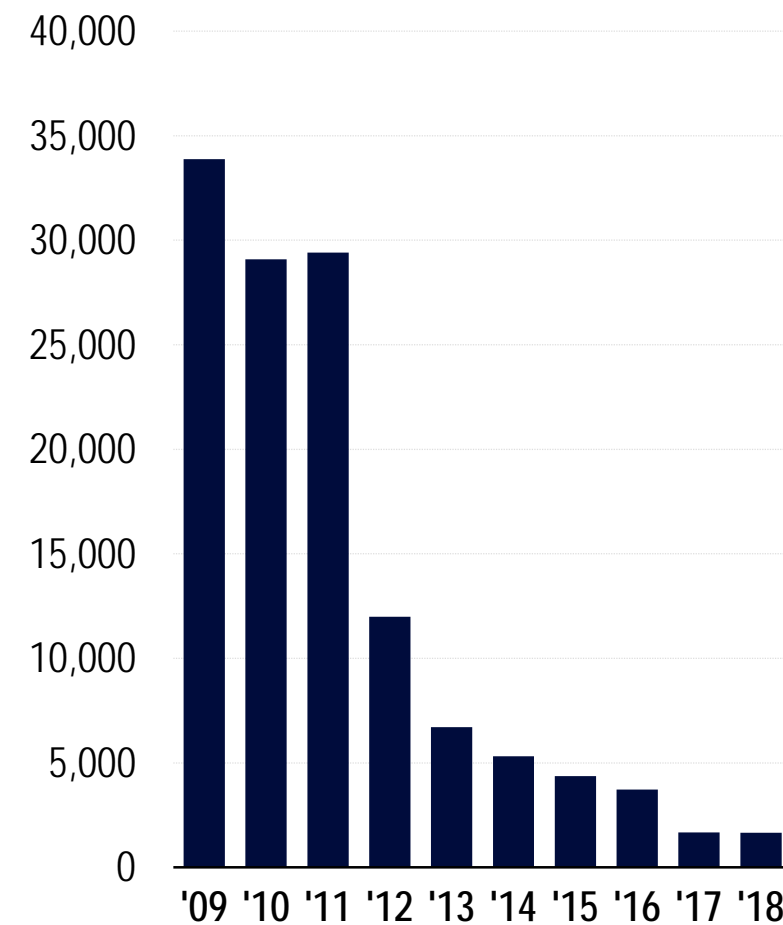
## Notices of Trustee Sale

Clark County, NV



## Trustee Deeds (Foreclosures)

Clark County, NV

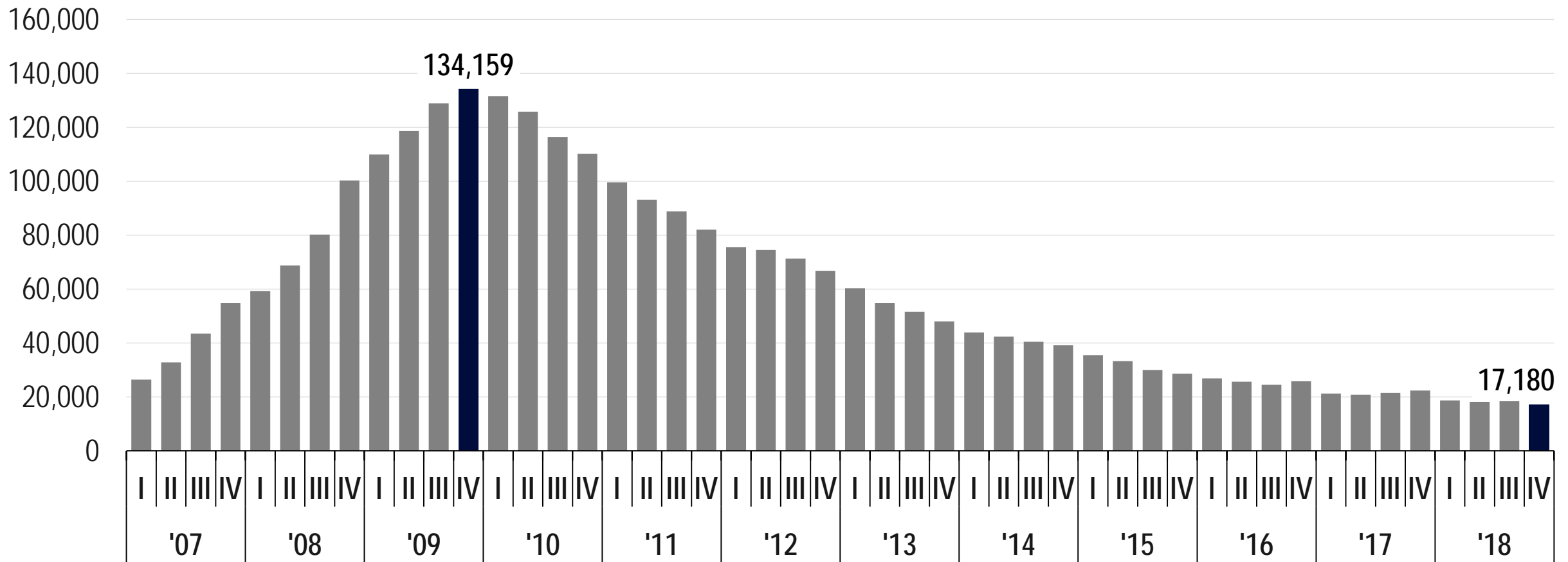


Source: Clark County Assessor's Office



# Mortgage Defaults in Nevada

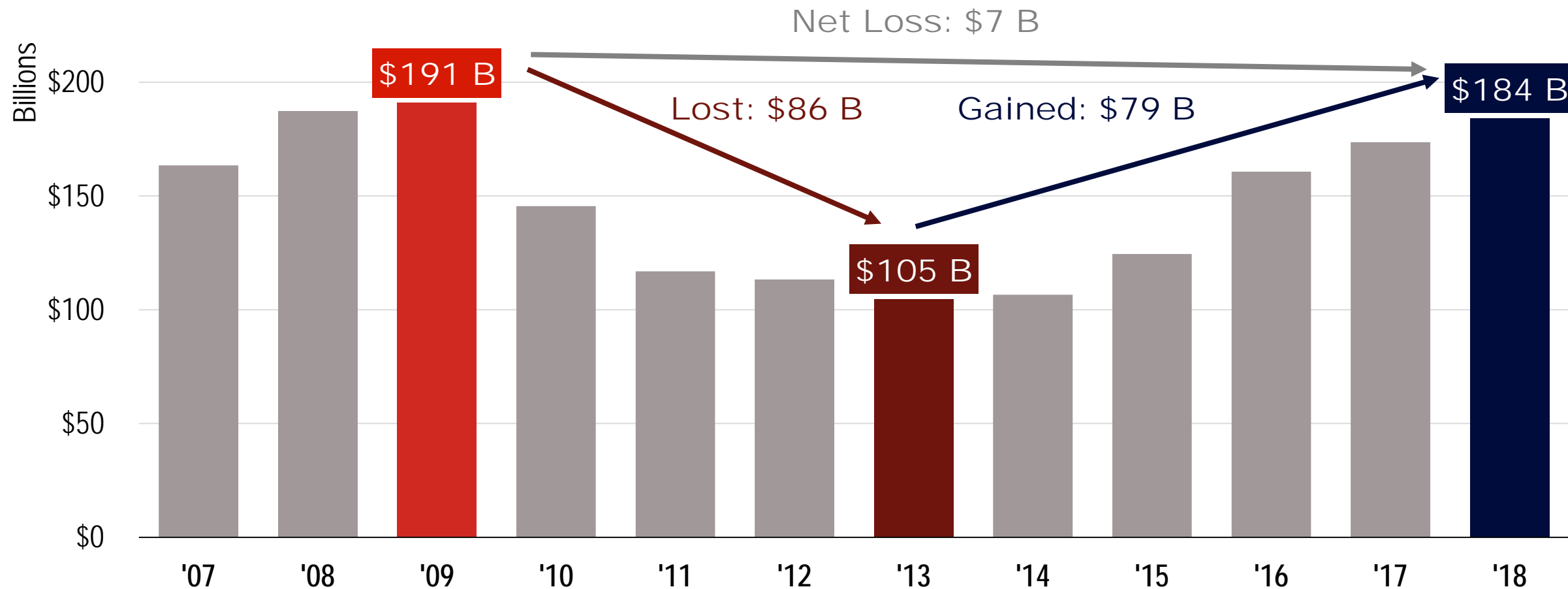
## Mortgages Past Due or in Foreclosure



Source: Mortgage Banker's Association, National Delinquency Survey

# Homeowner Equity Trends

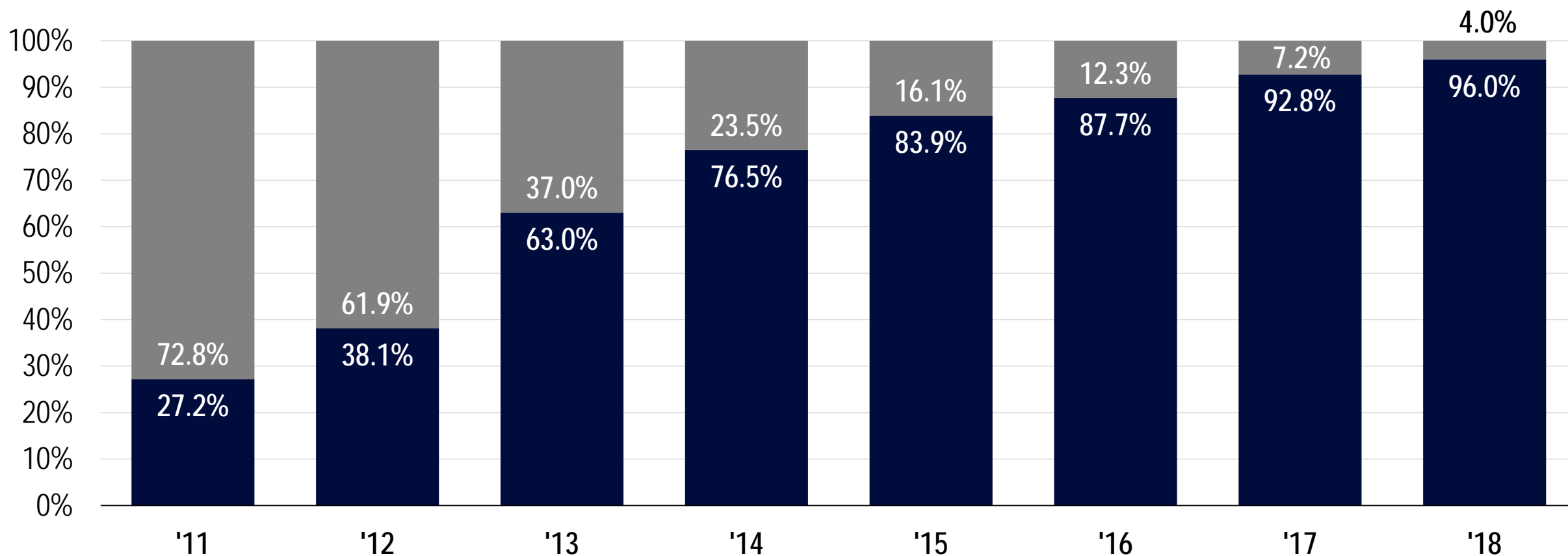
## Single Family Residences in Nevada (Taxable Value in Billions)



Source: Applied Analysis

# Mix of Resale Closings in Southern Nevada

## Distressed Sales (Short, Auction and REO)

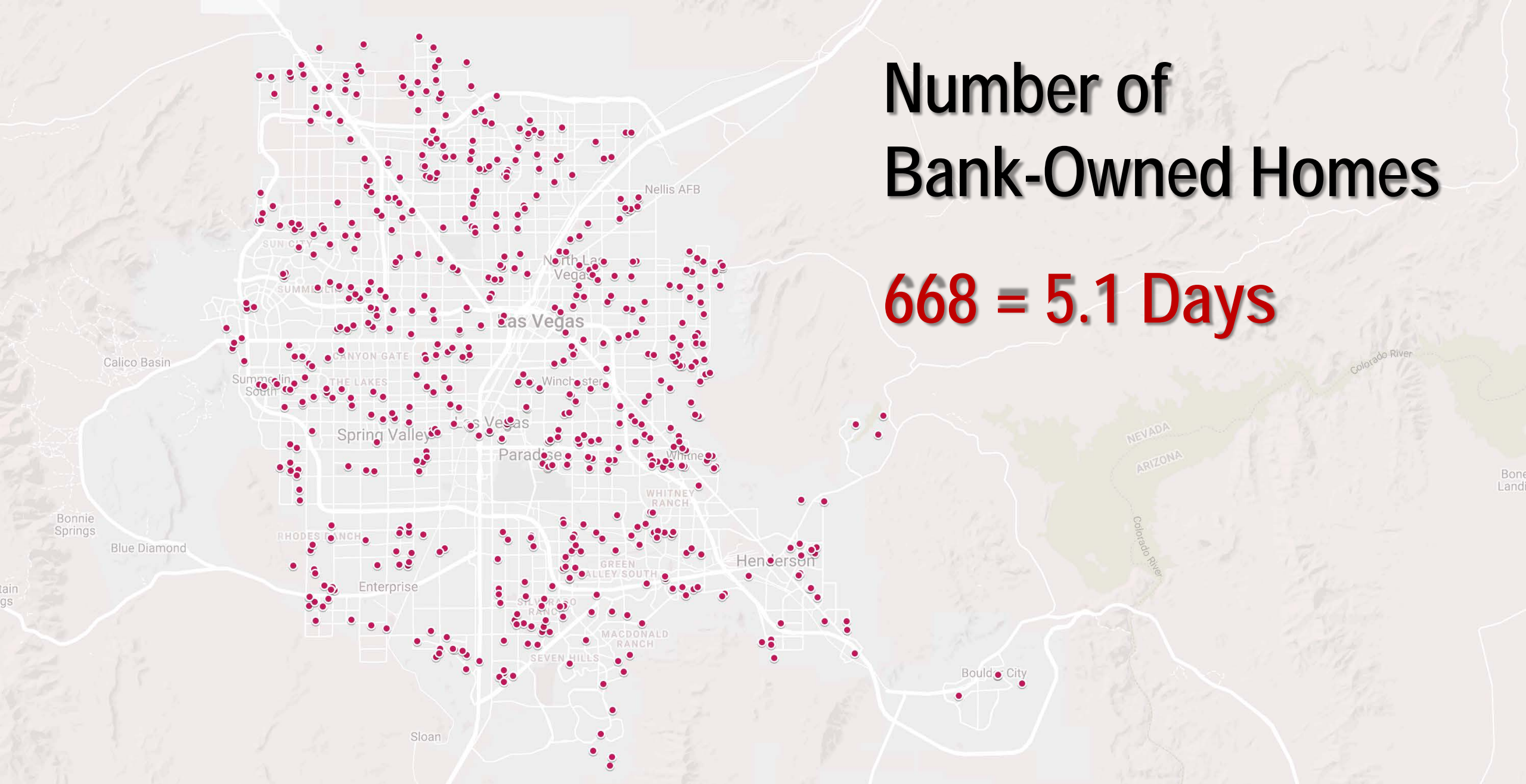


Source: Applied Analysis/SalesTraq



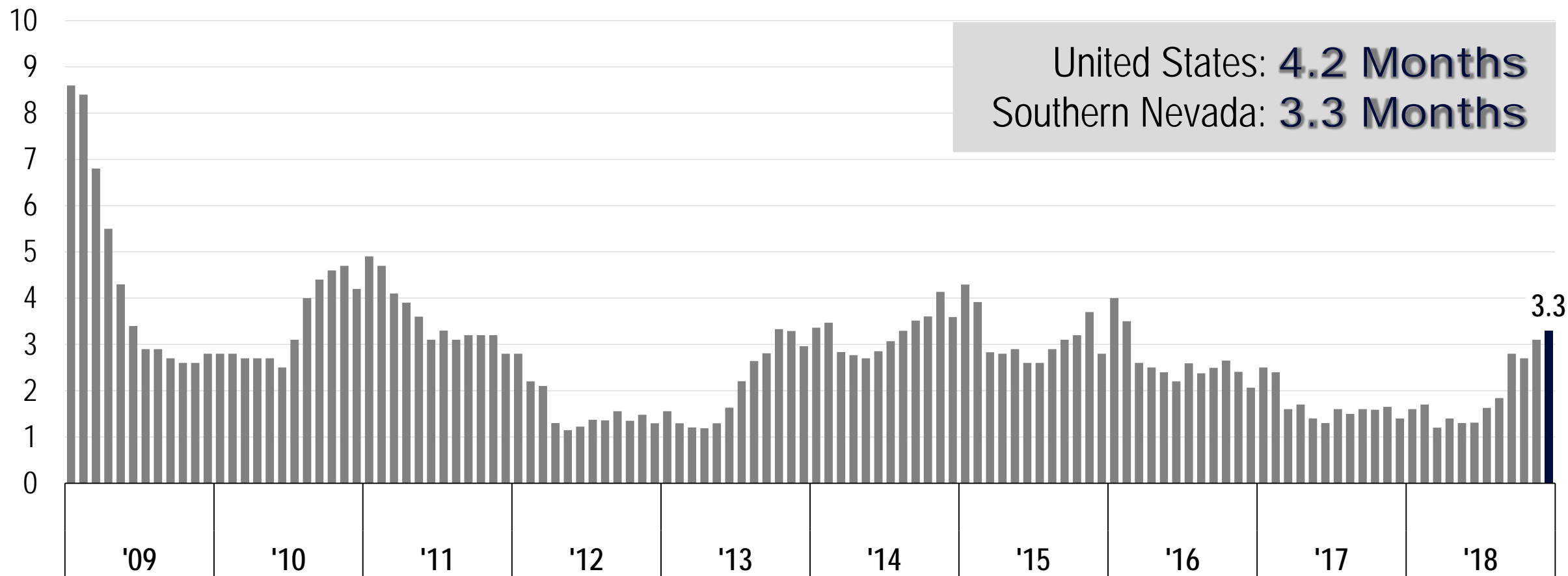
# Number of Bank-Owned Homes

**668 = 5.1 Days**



# Effective Months of Availability in Southern Nevada

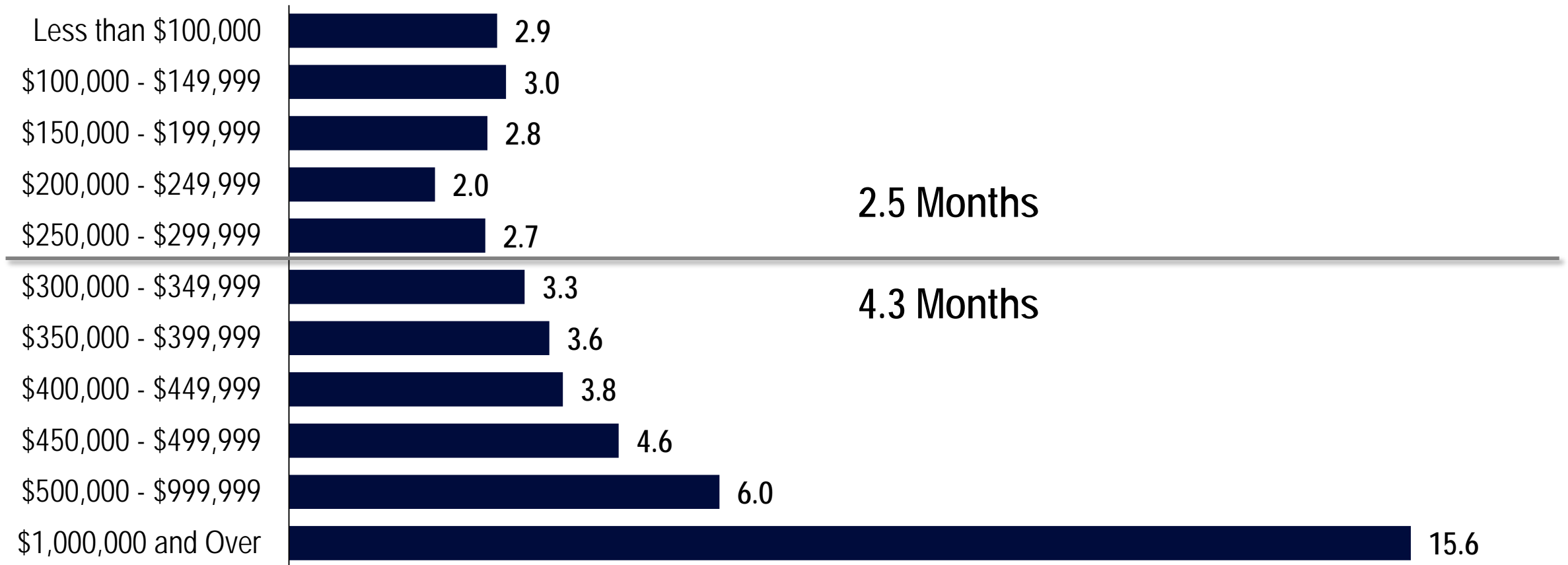
## Multiple Listing Service



Source: MLS/SalesTraq

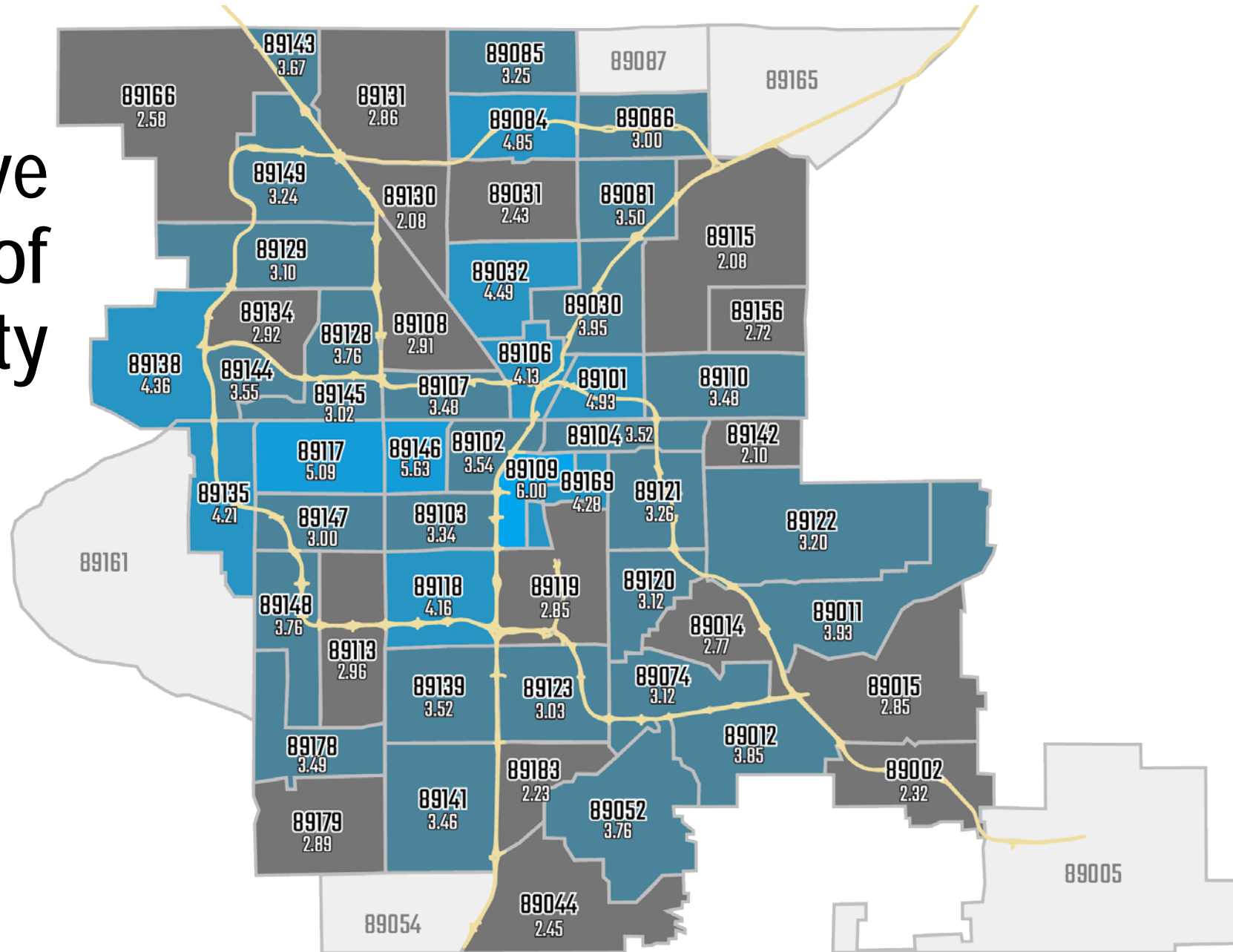
# Effective Months of Availability in Southern Nevada

## By Price Segment



Source: MLS/SalesTraq

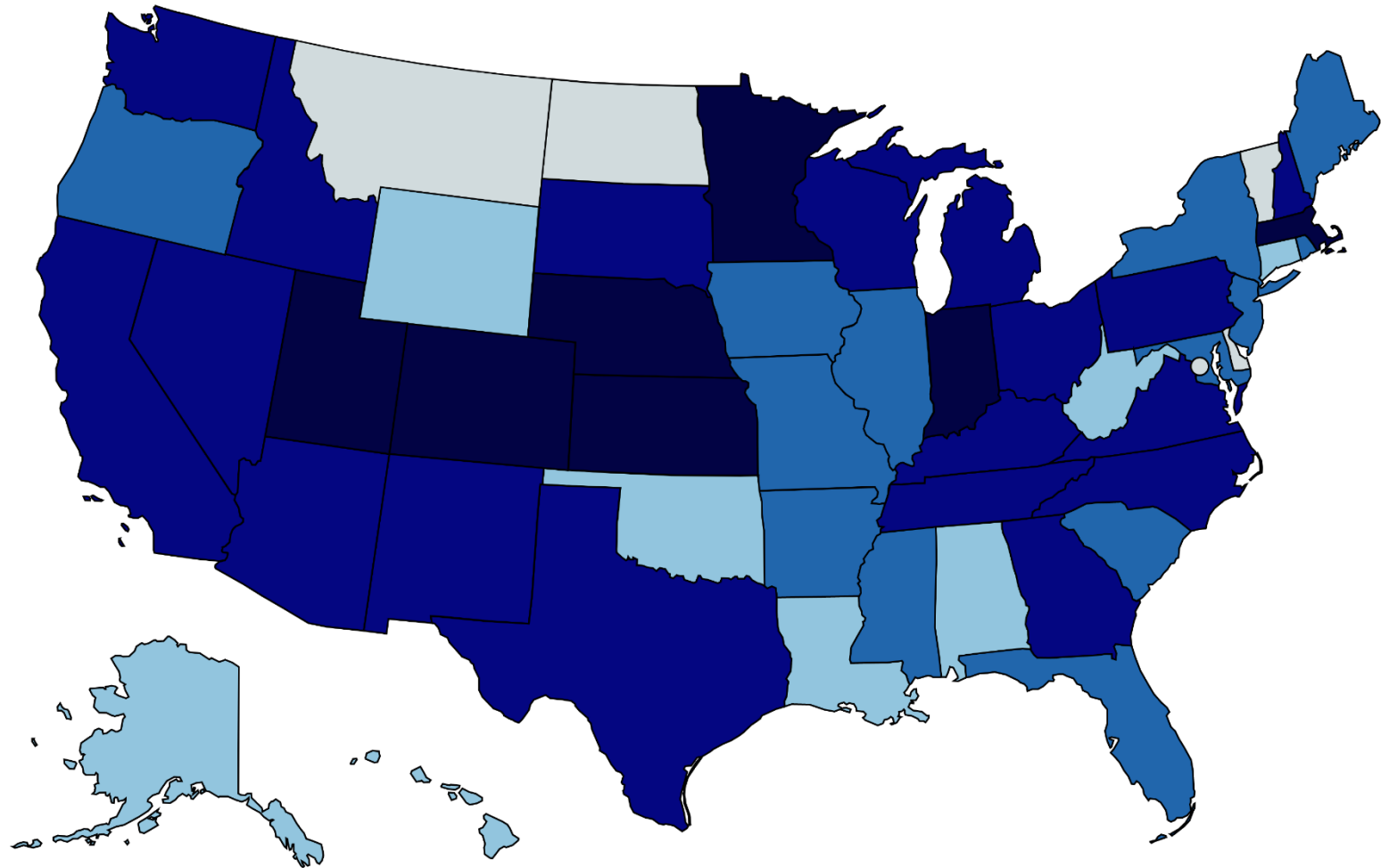
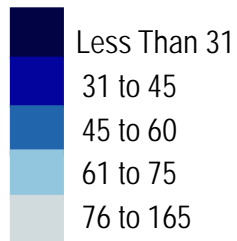
# Effective Months of Availability



# Median Days on the Market

**46 Days**

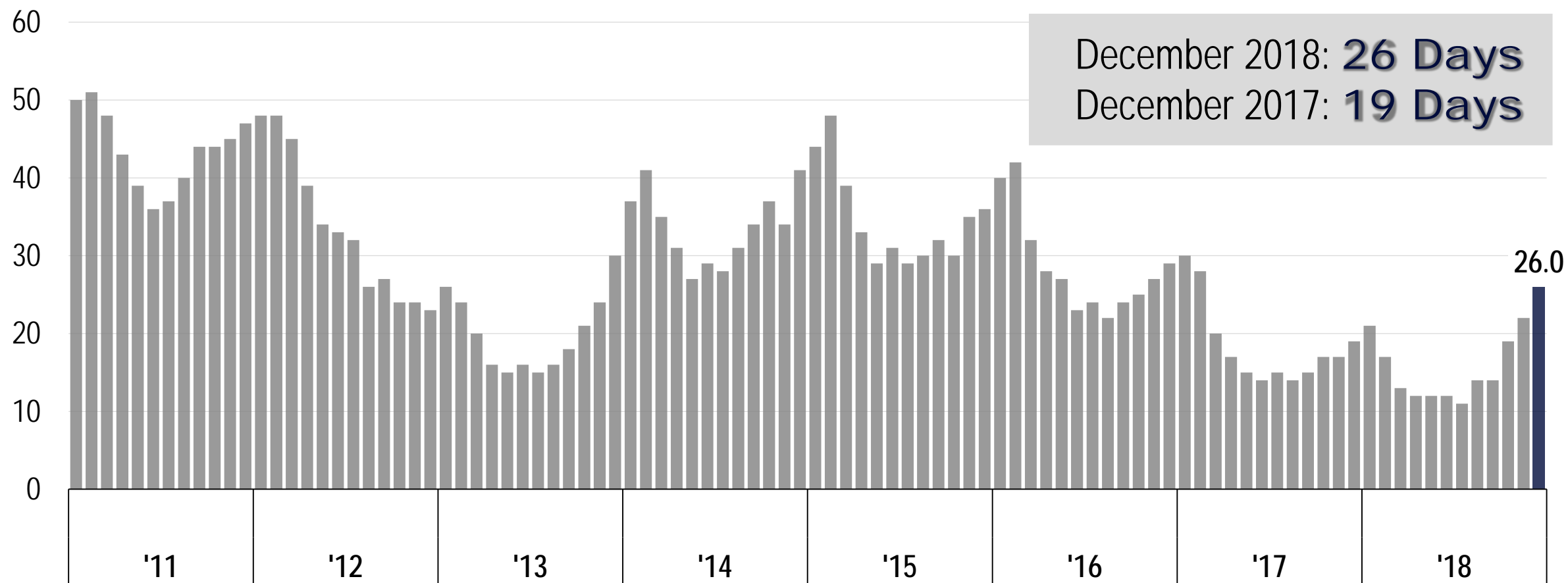
U.S. Average Median  
Days on the Market



Source: SalesTraq, GLVAR/MLS, NAR

# Median Days on the Market

## Las Vegas Area Single Family Market



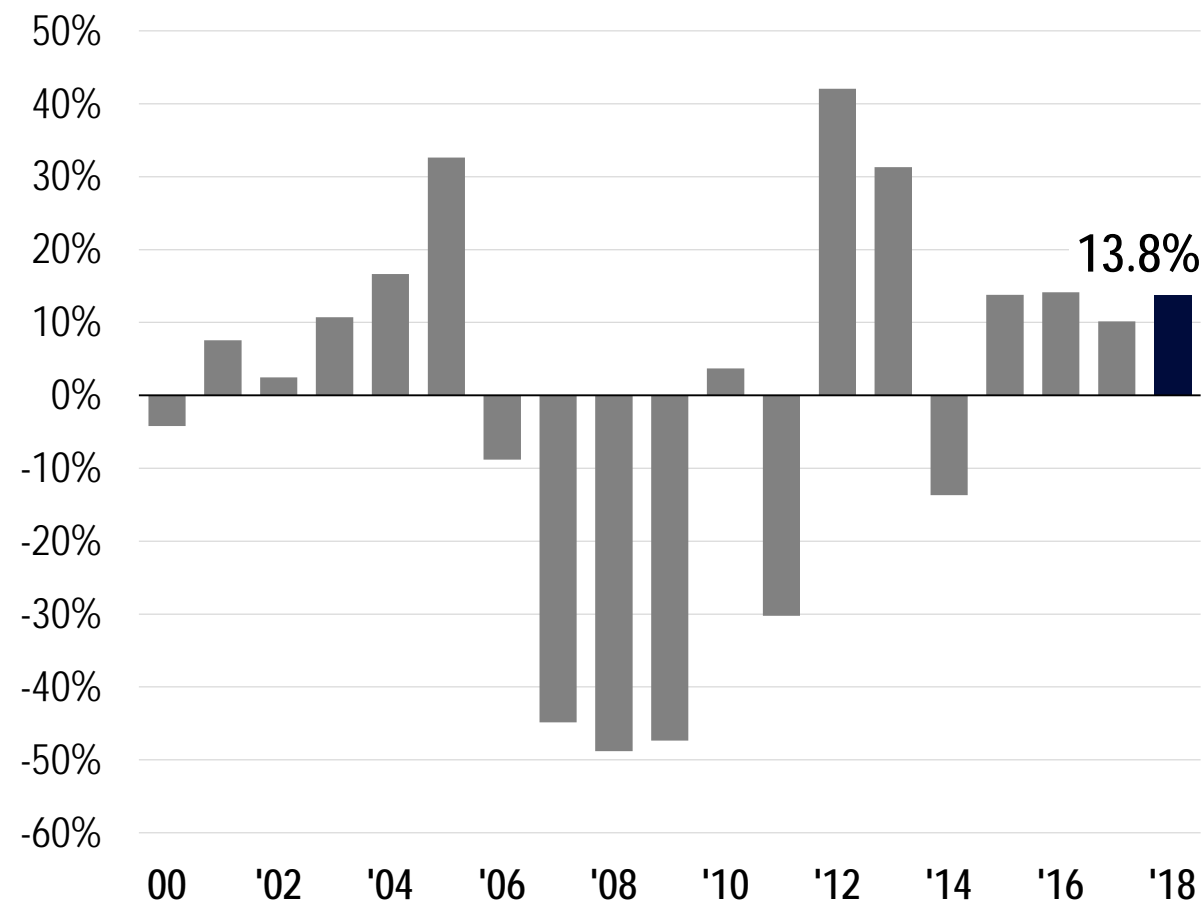
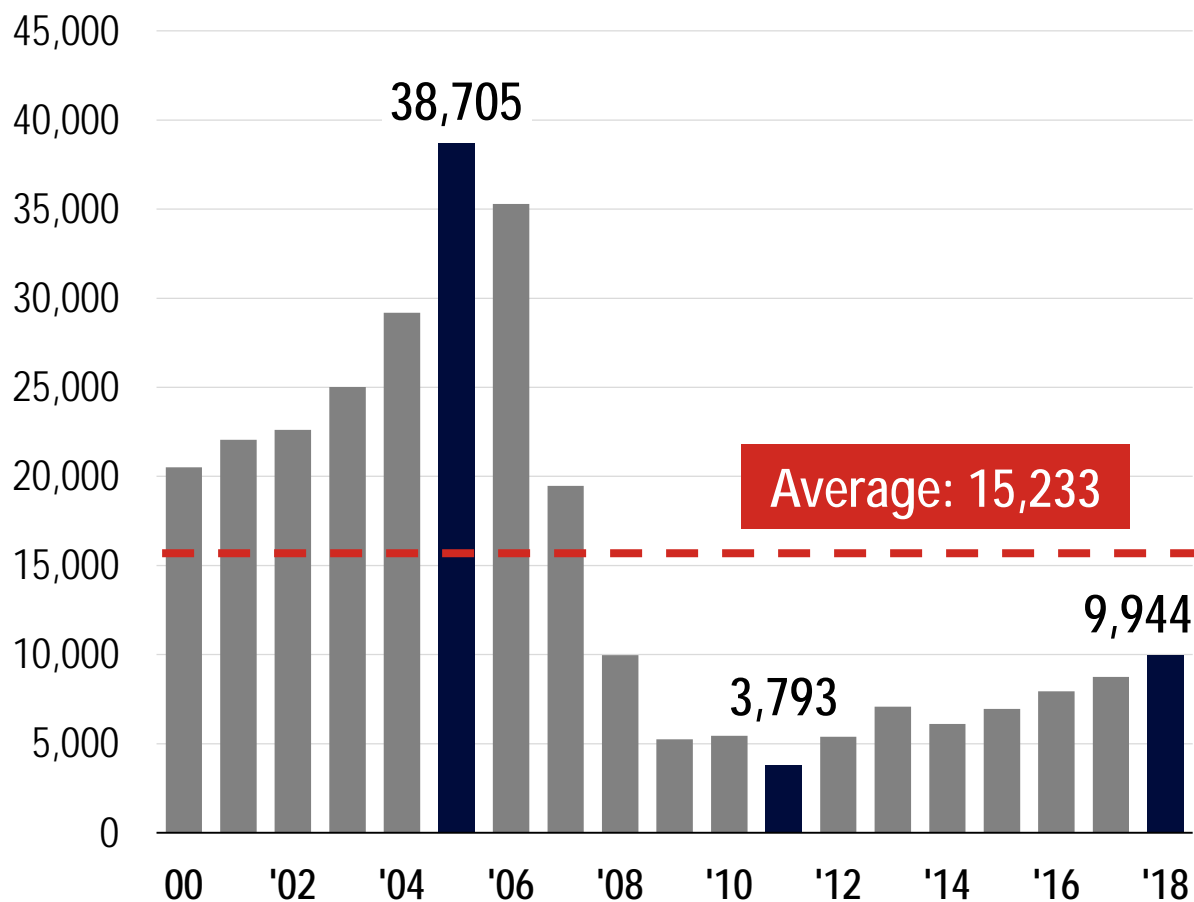
Source: SalesTraq, GLVAR/MLS

# New Home Market Supply and Demand



# New Home Closings

## Las Vegas Area

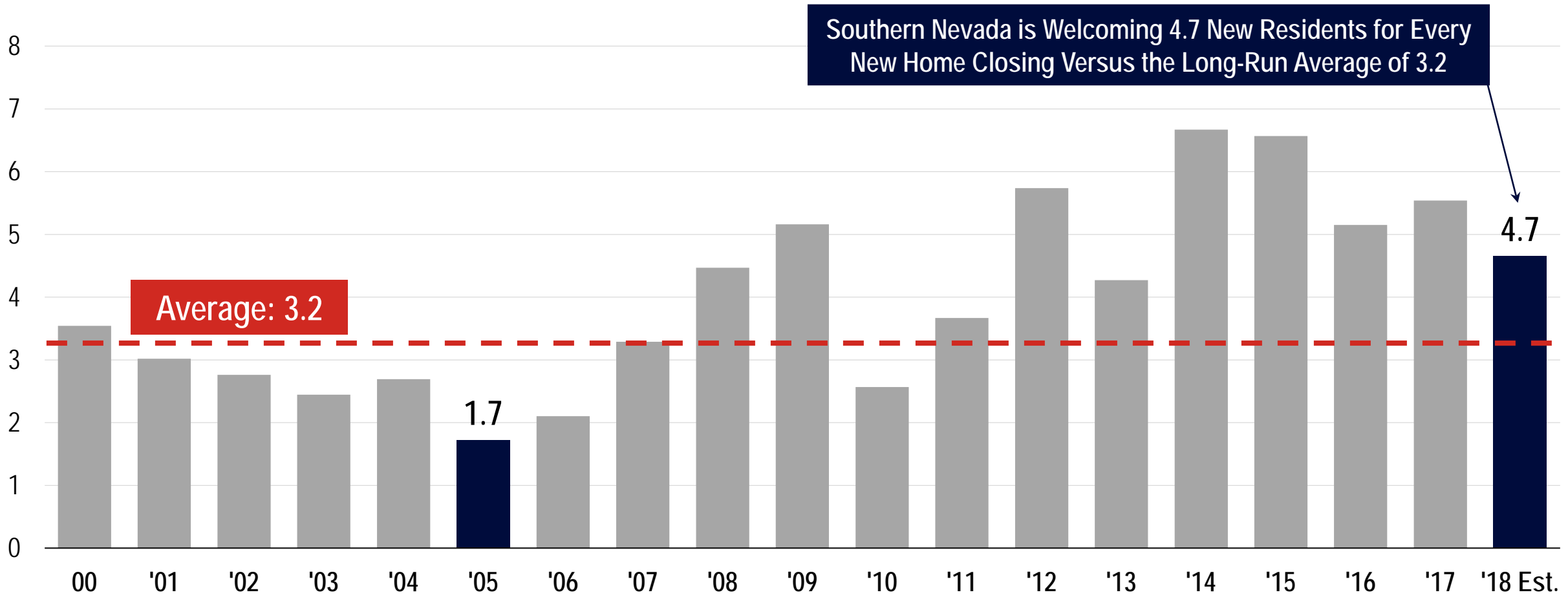


Source: SalesTraq



# New Residents per New Home Closing

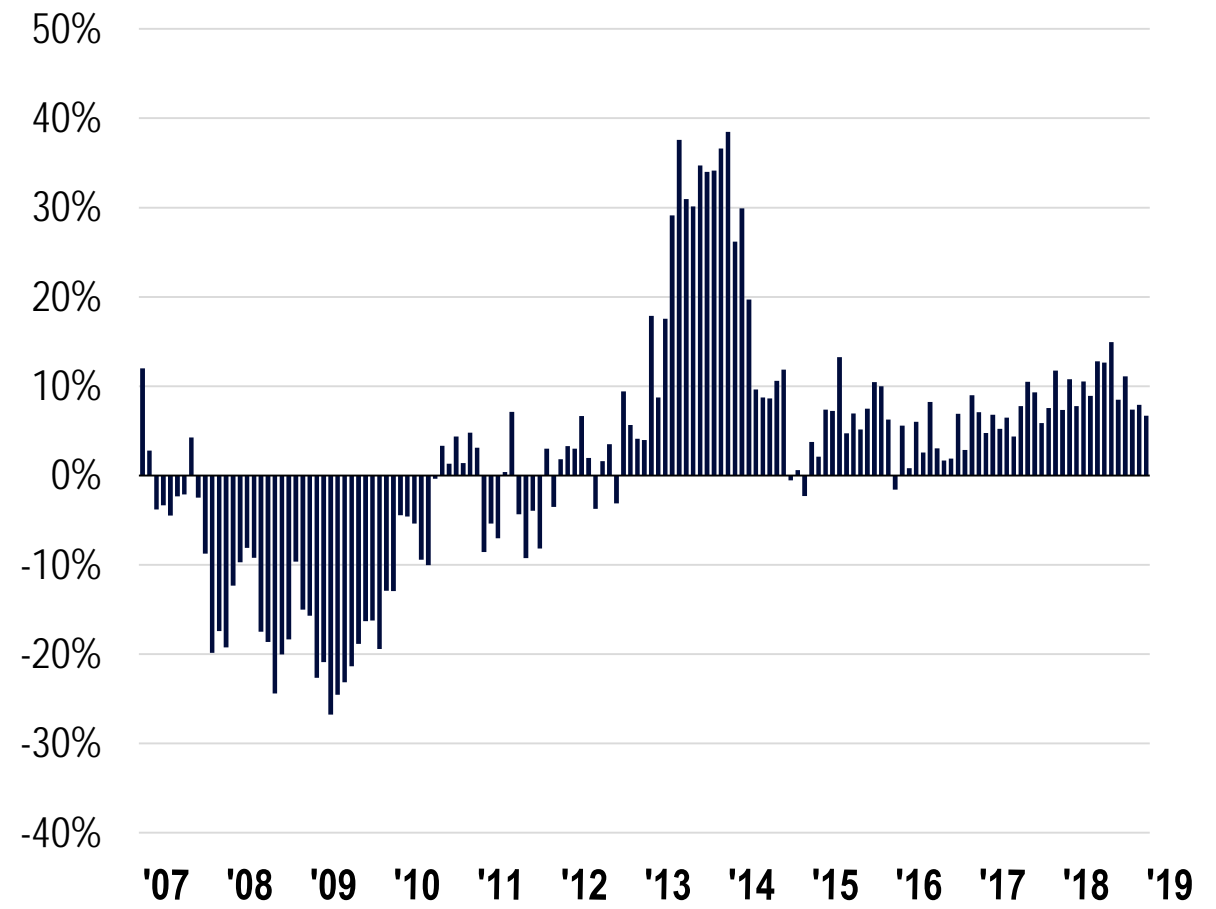
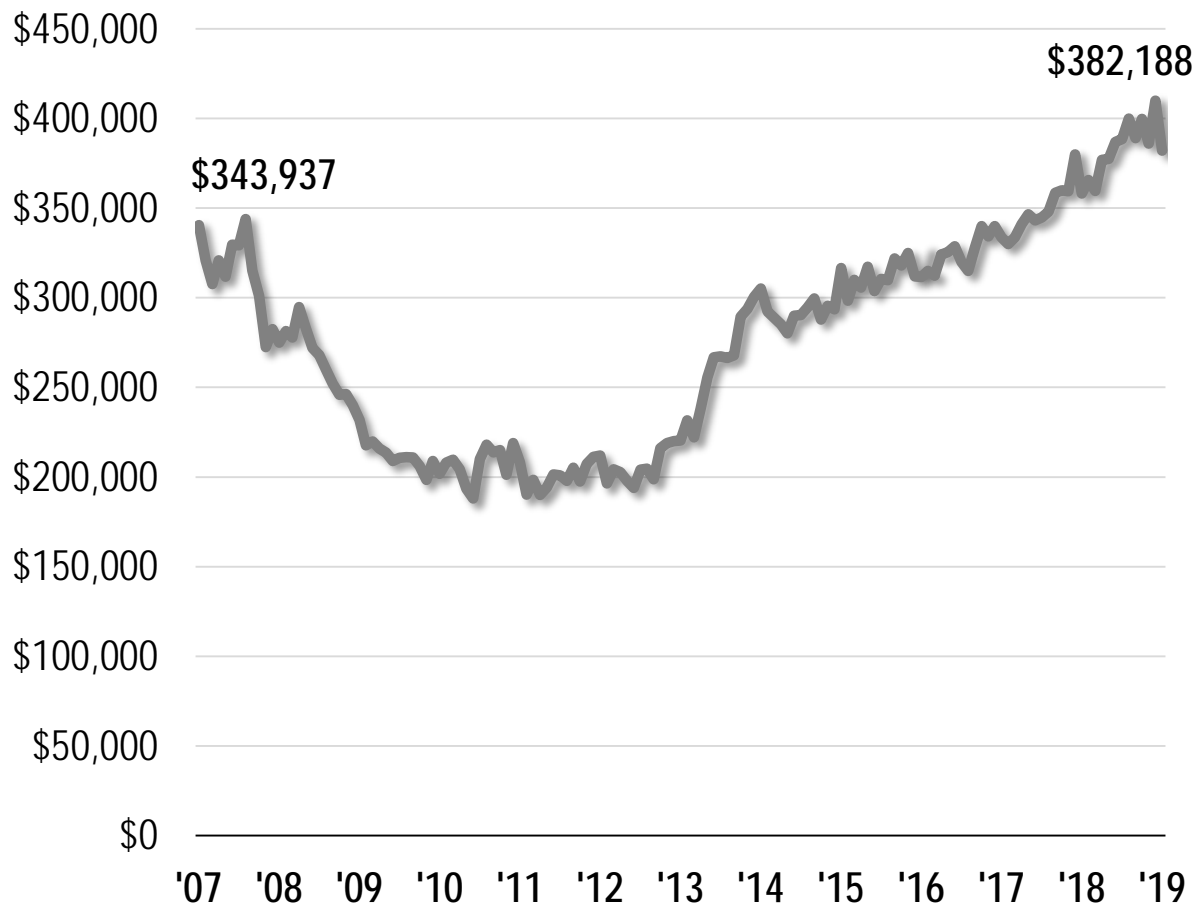
## Las Vegas Area



Source: SalesTraq, U.S. Census Bureau, Applied Analysis

# New Home Median Closing Price

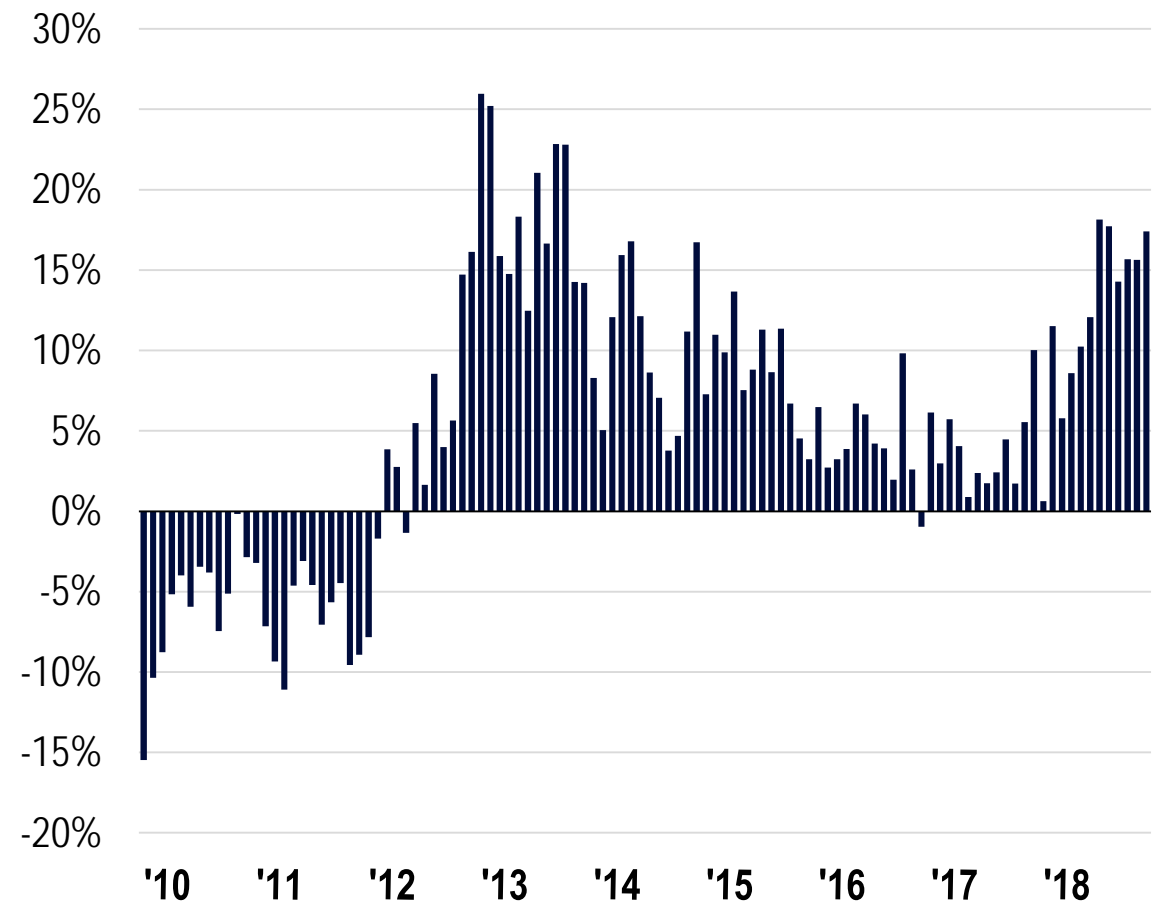
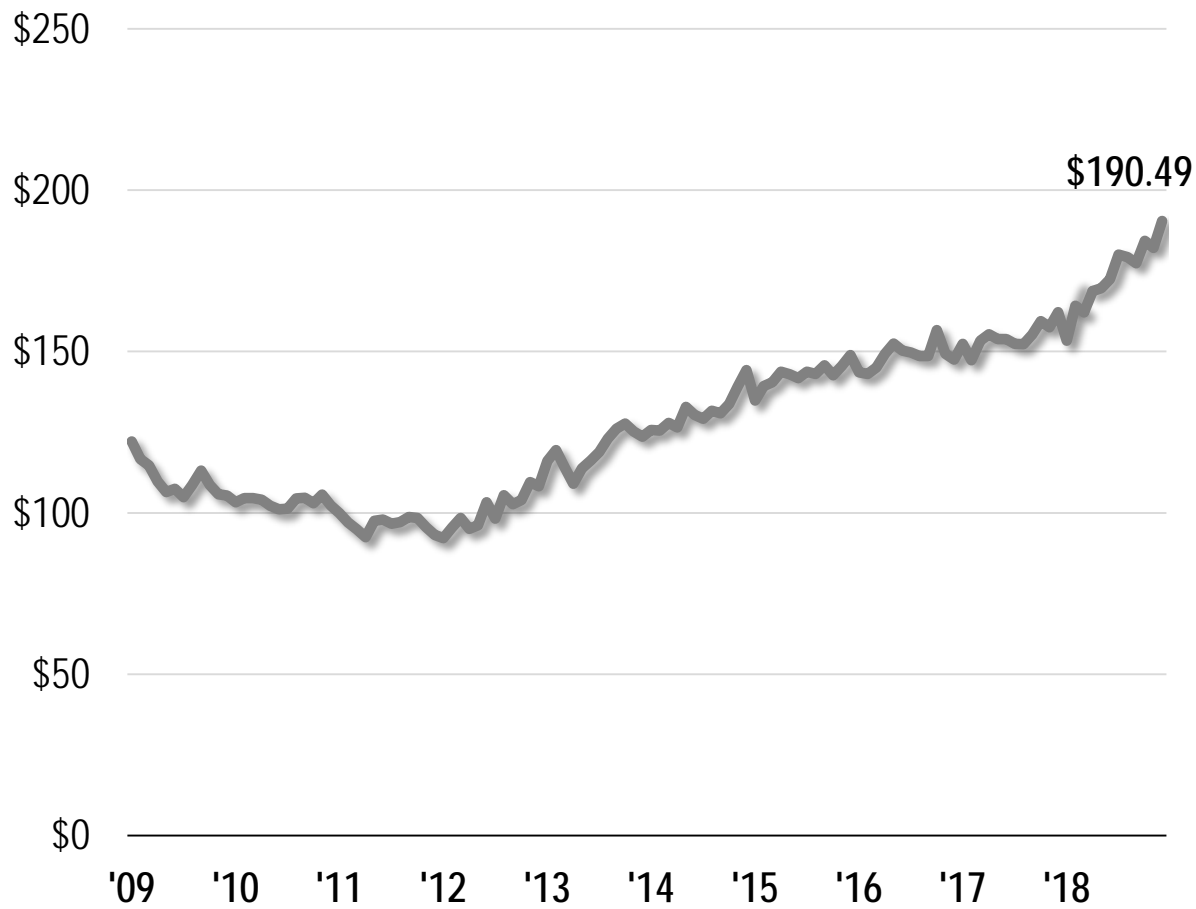
## Las Vegas Area



Source: SalesTraq

# New Home Average Price per Square Foot

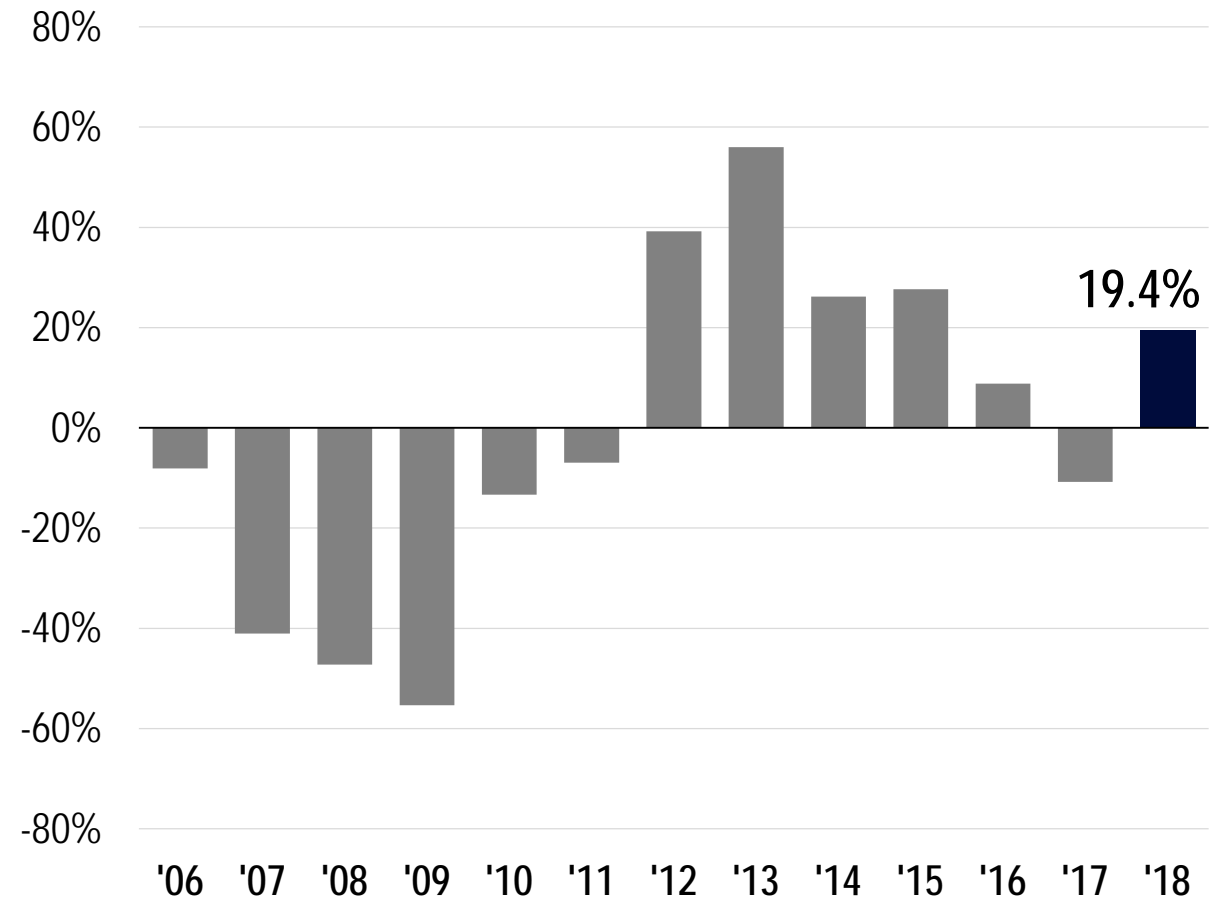
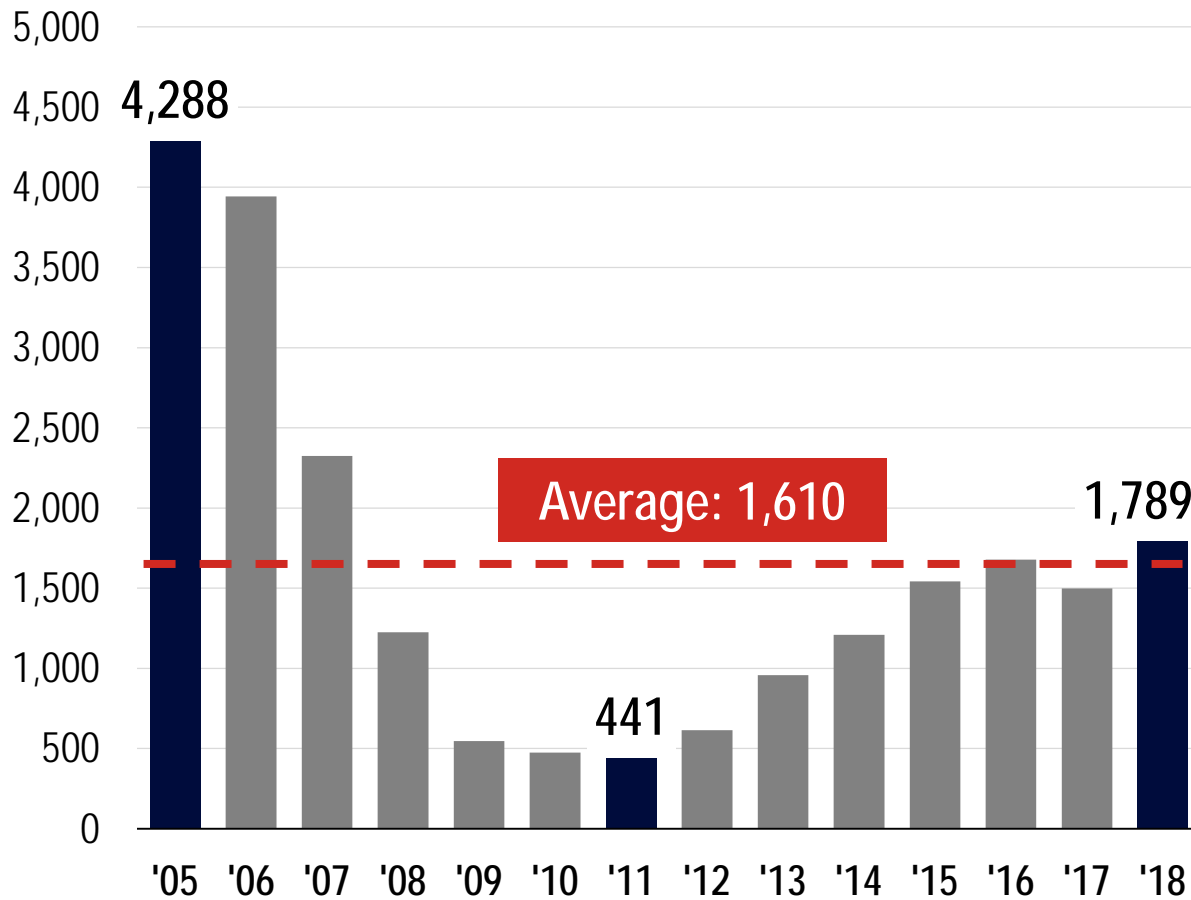
## Las Vegas Area



Source: SalesTraq

# New Home Closings

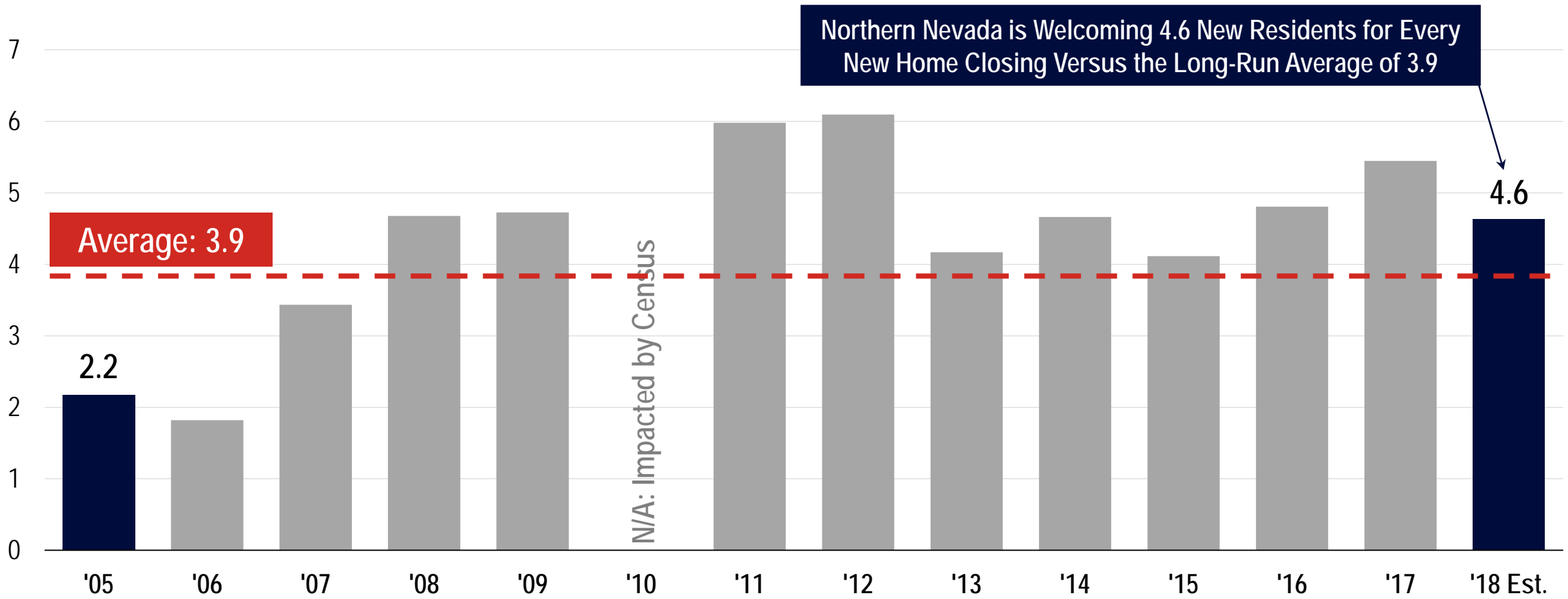
## Washoe County



Source: SalesTraq

# New Residents per New Home Closing

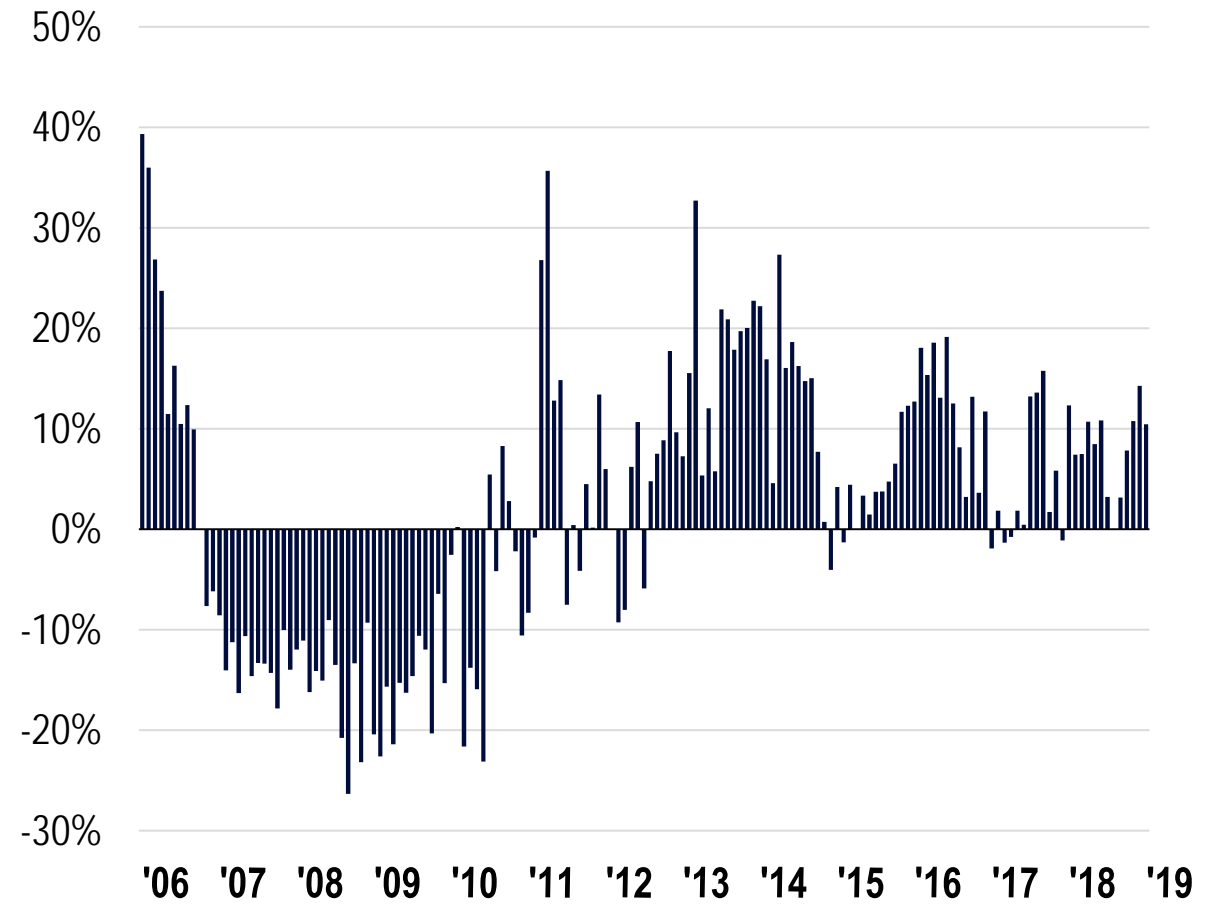
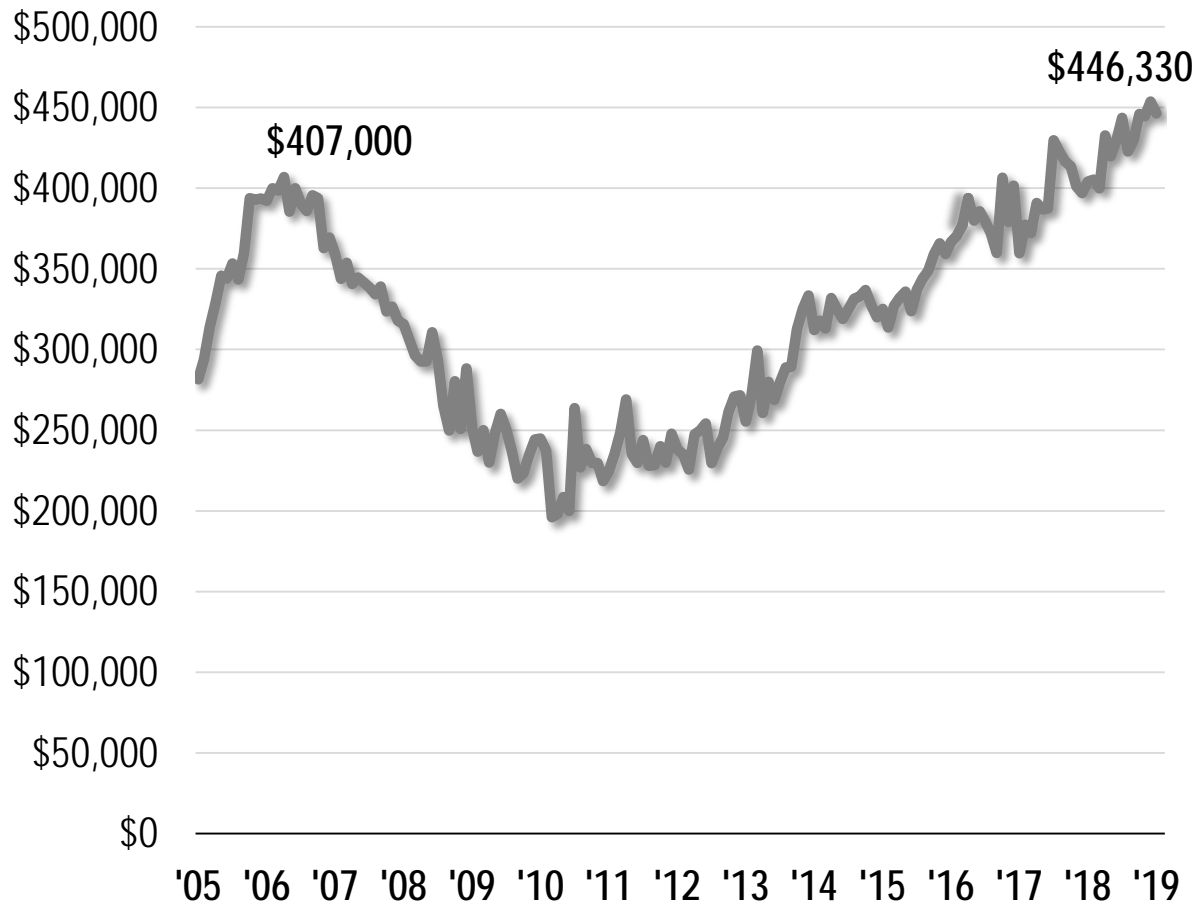
## Washoe County



Source: SalesTraq, U.S. Census Bureau, Applied Analysis

# New Home Median Closing Price

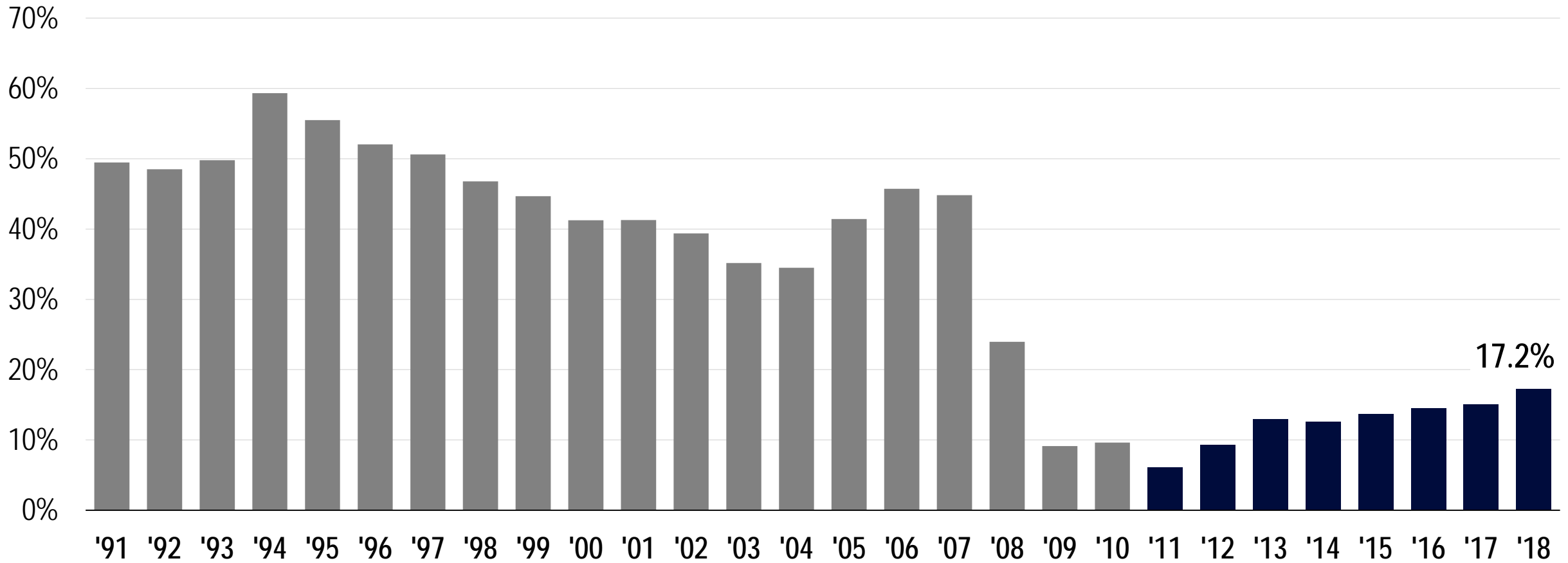
## Washoe County



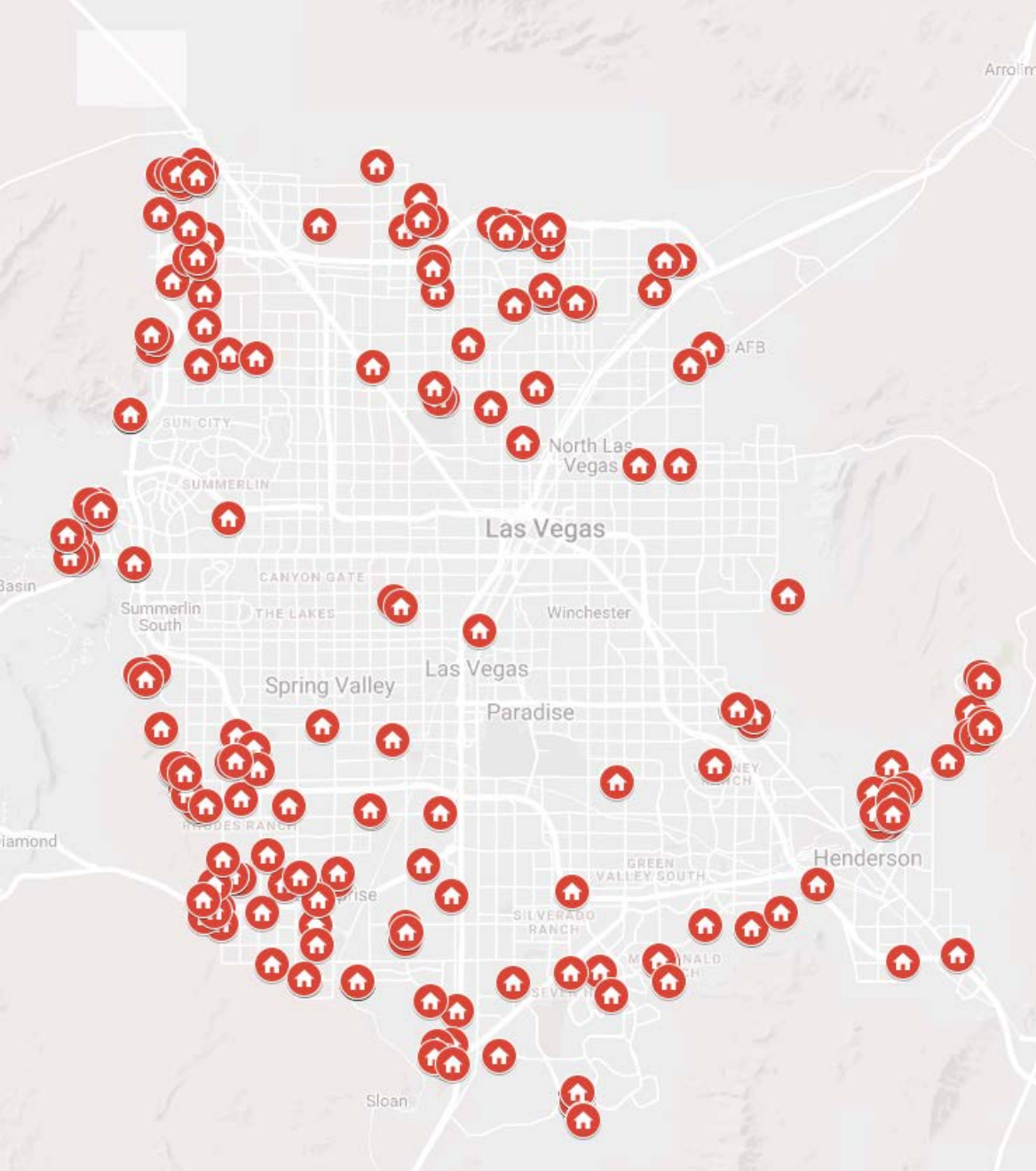
Source: SalesTraq

# New Home Market Share

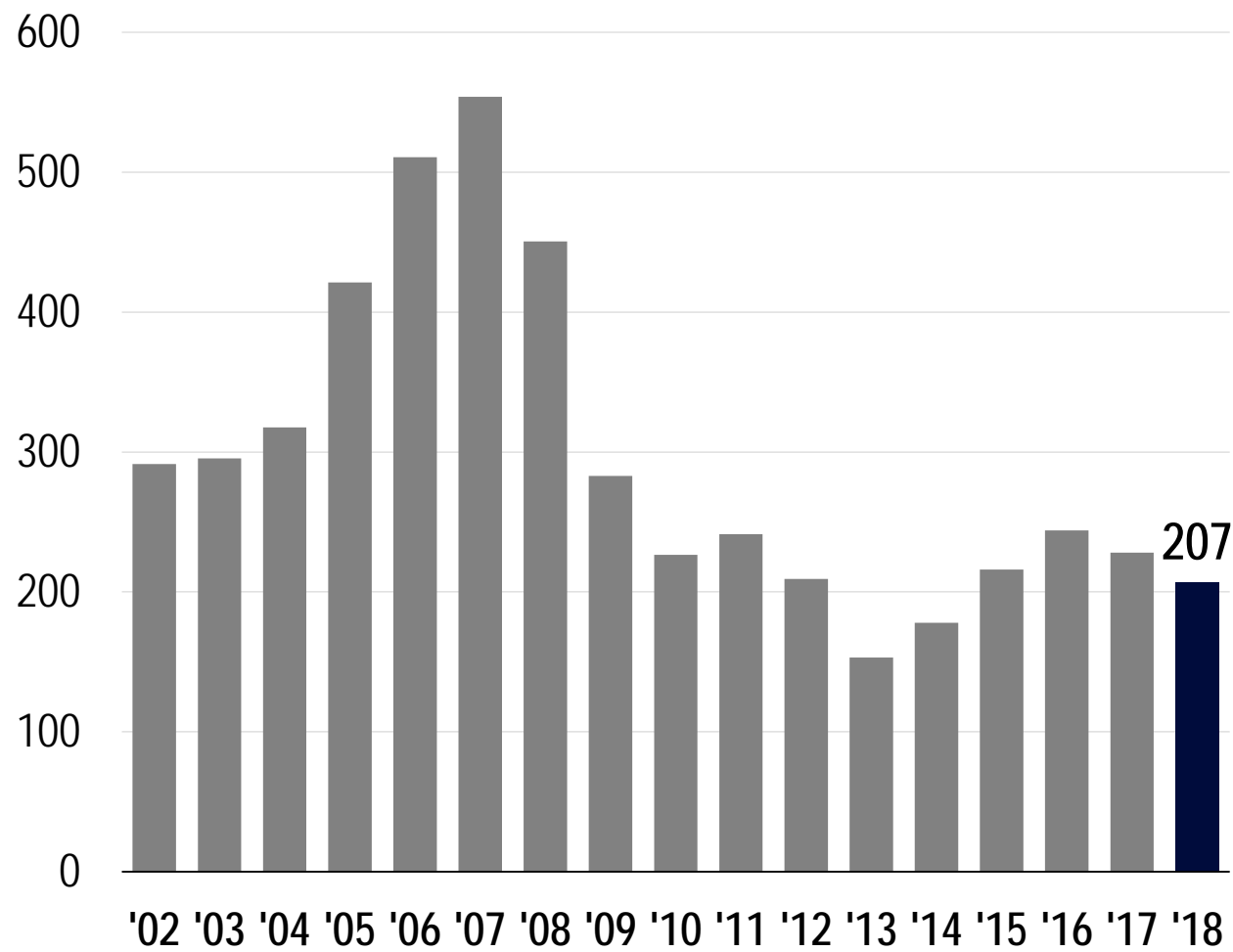
As a Percentage of Total Home Sales - Las Vegas Area



Source: SalesTraq



## Actively Selling Subdivisions in Southern Nevada

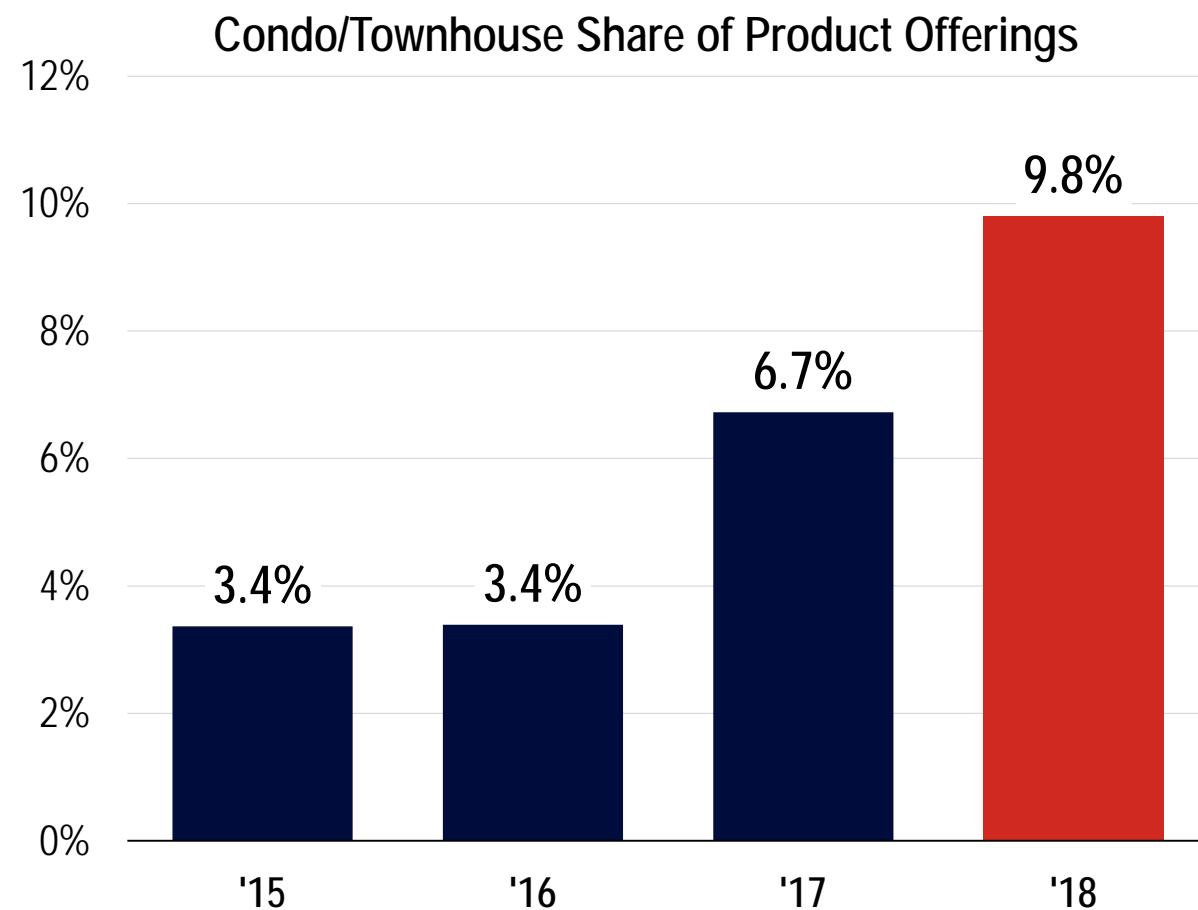
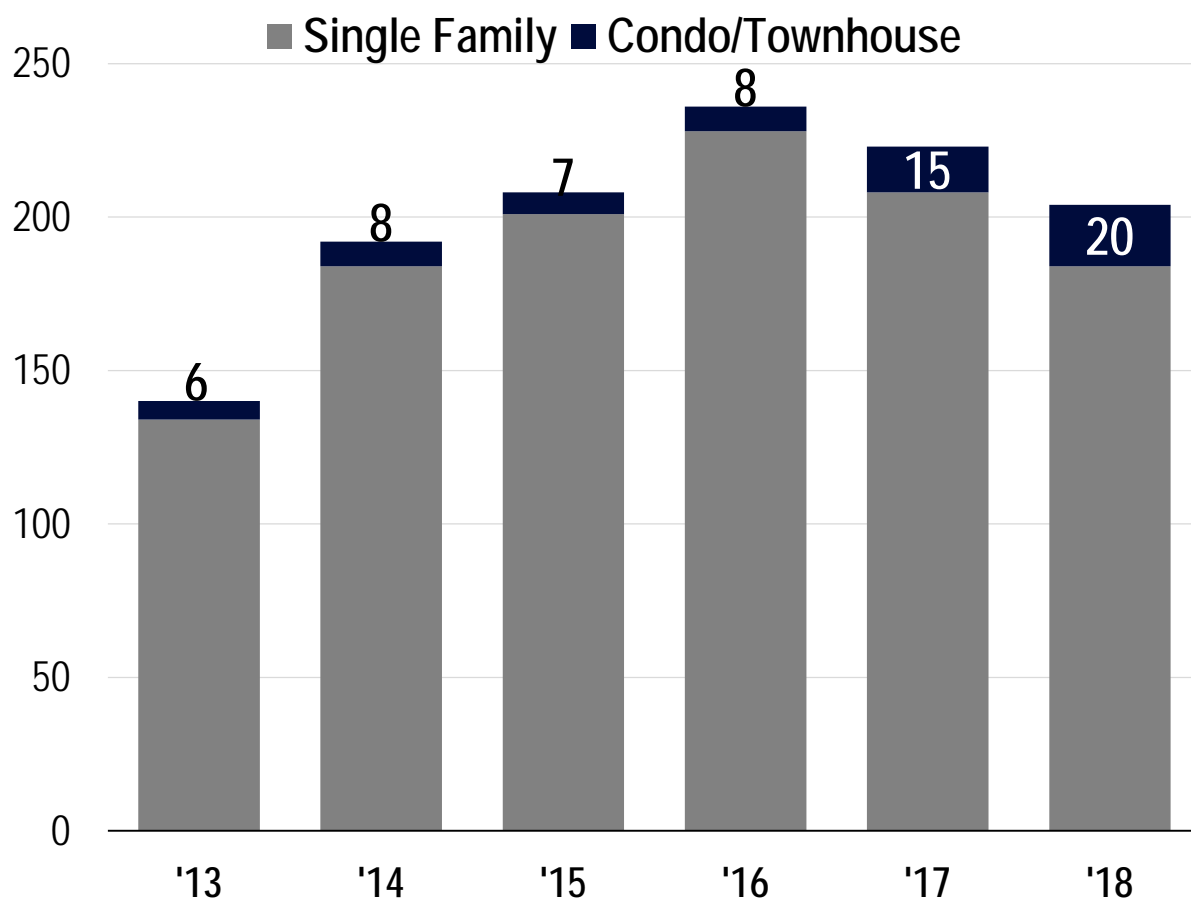


Source: SalesTraq



# Actively Selling Subdivisions in Southern Nevada

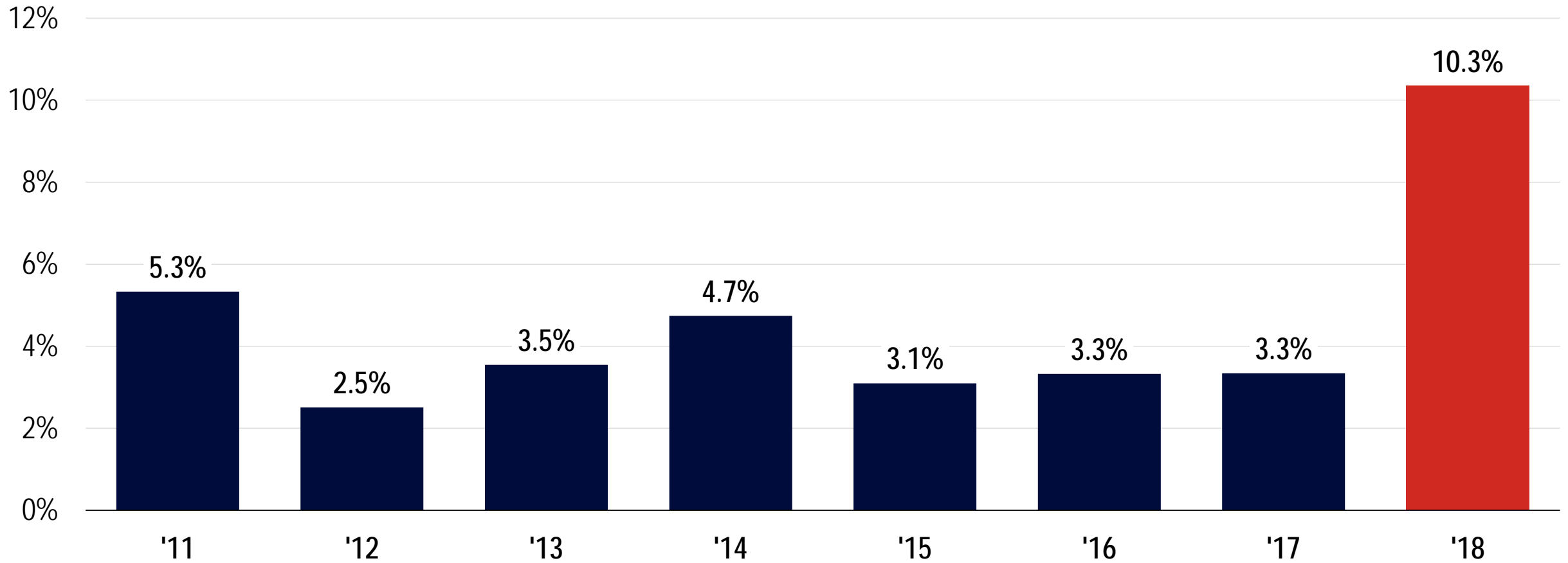
## By Product Type



Source: SalesTraq (Excludes High- and Mid-Rises Built Prior to Displayed Periods)

# New Home Closings in Southern Nevada

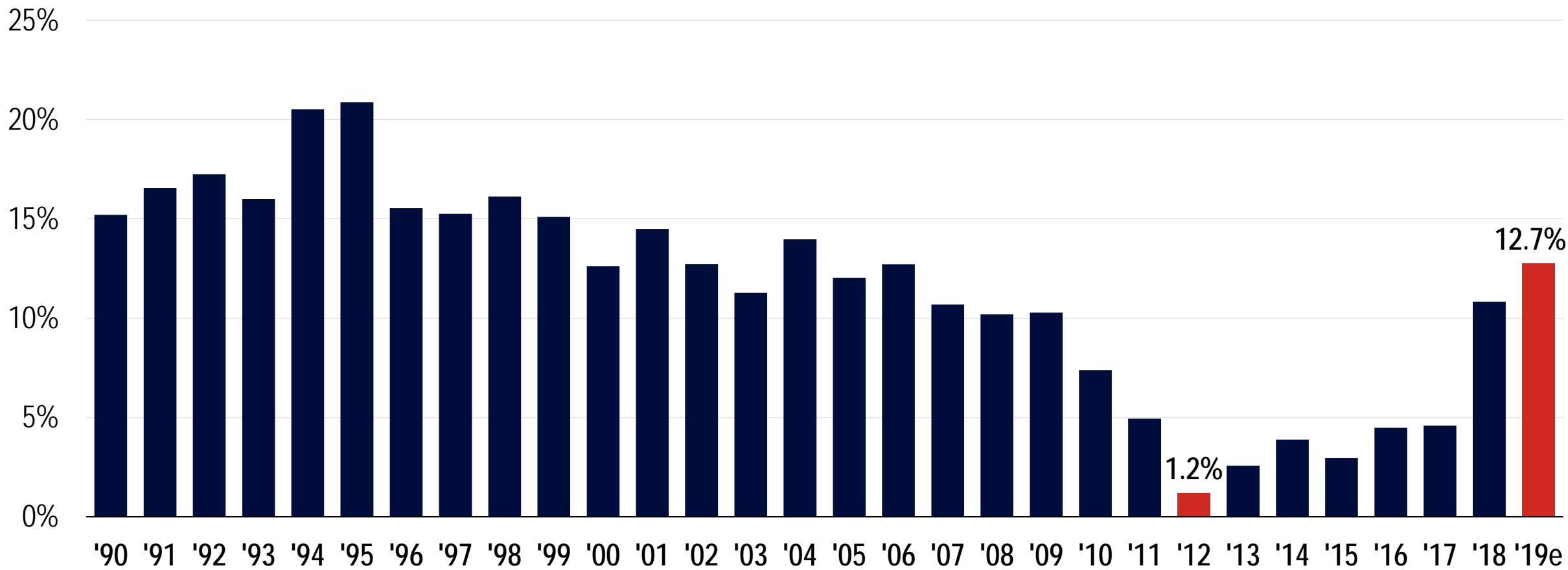
## Condo/Townhouse Market Share



Source: SalesTraq (Excludes High- and Mid-Rises Built Prior to Displayed Periods)

# New Home Permitting Volumes in Southern Nevada

## Condo/Townhouse Market Share

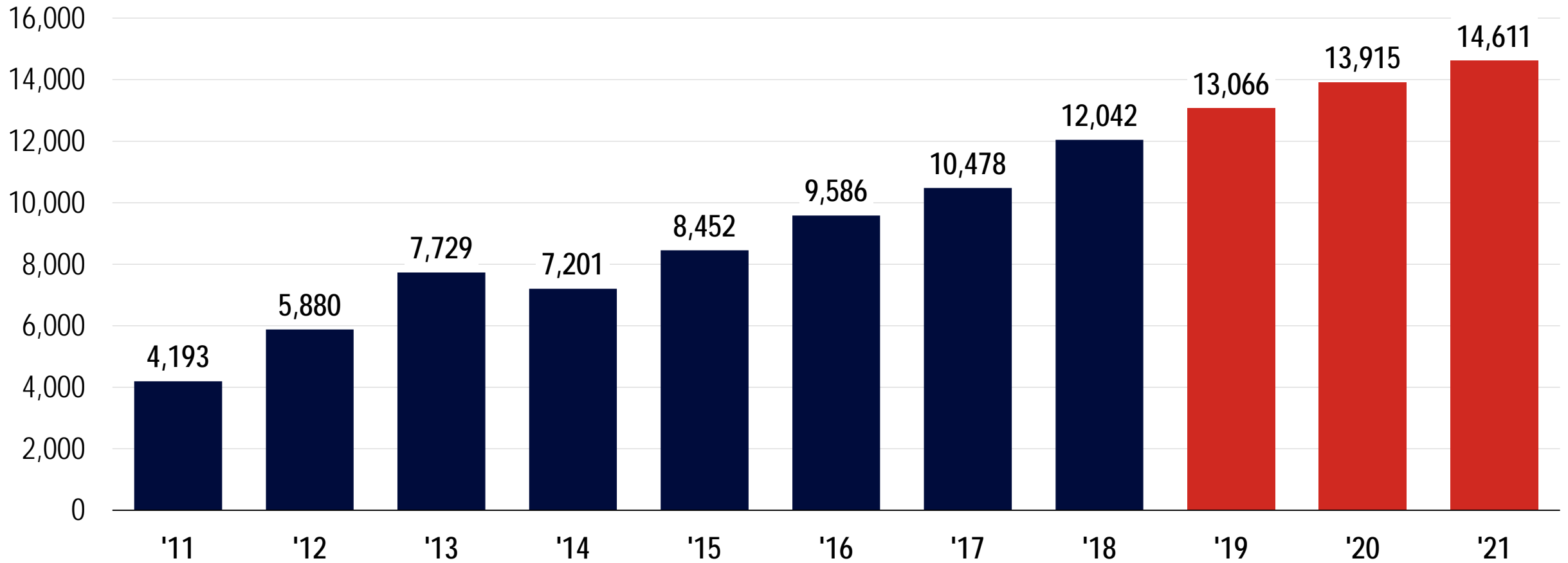


Source: SNHBA



# New Home Closings in Nevada

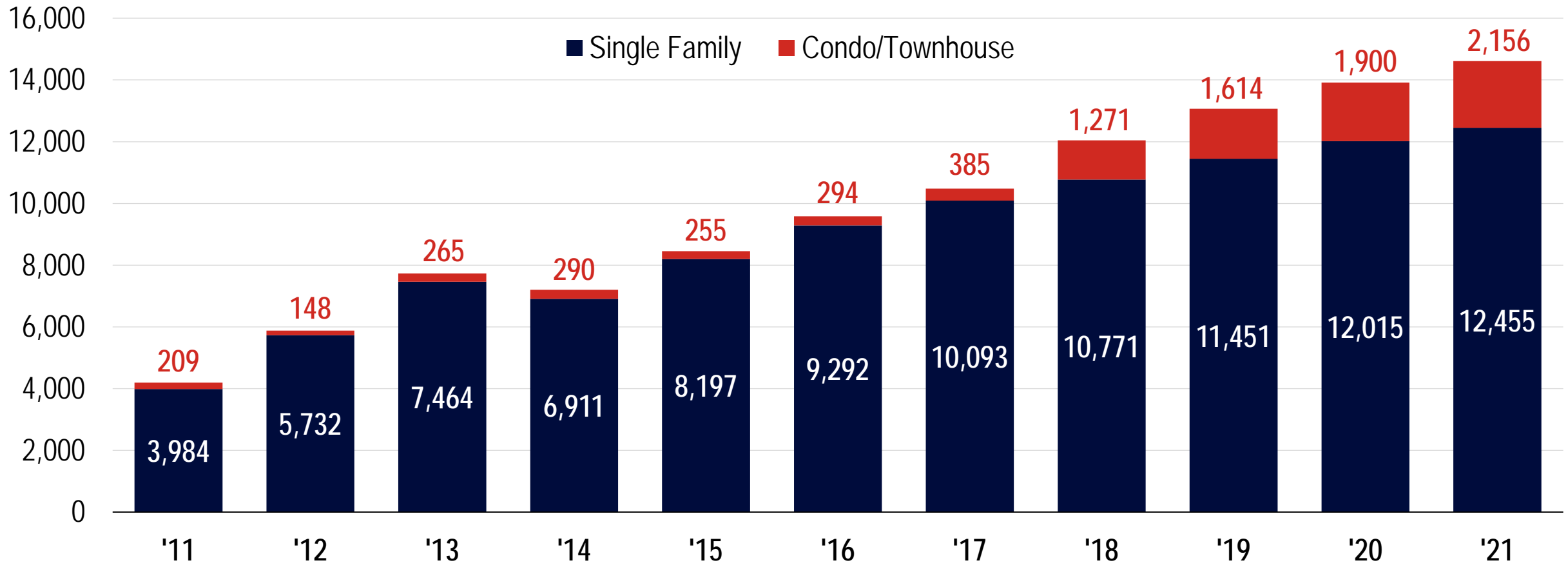
## Single Family and Condominium/Townhouse



Source: SalesTraq (Excludes High- and Mid-Rises Built Prior to Displayed Periods). Note: Reflects closings in Clark and Washoe Counties.

# New Home Closings in Nevada

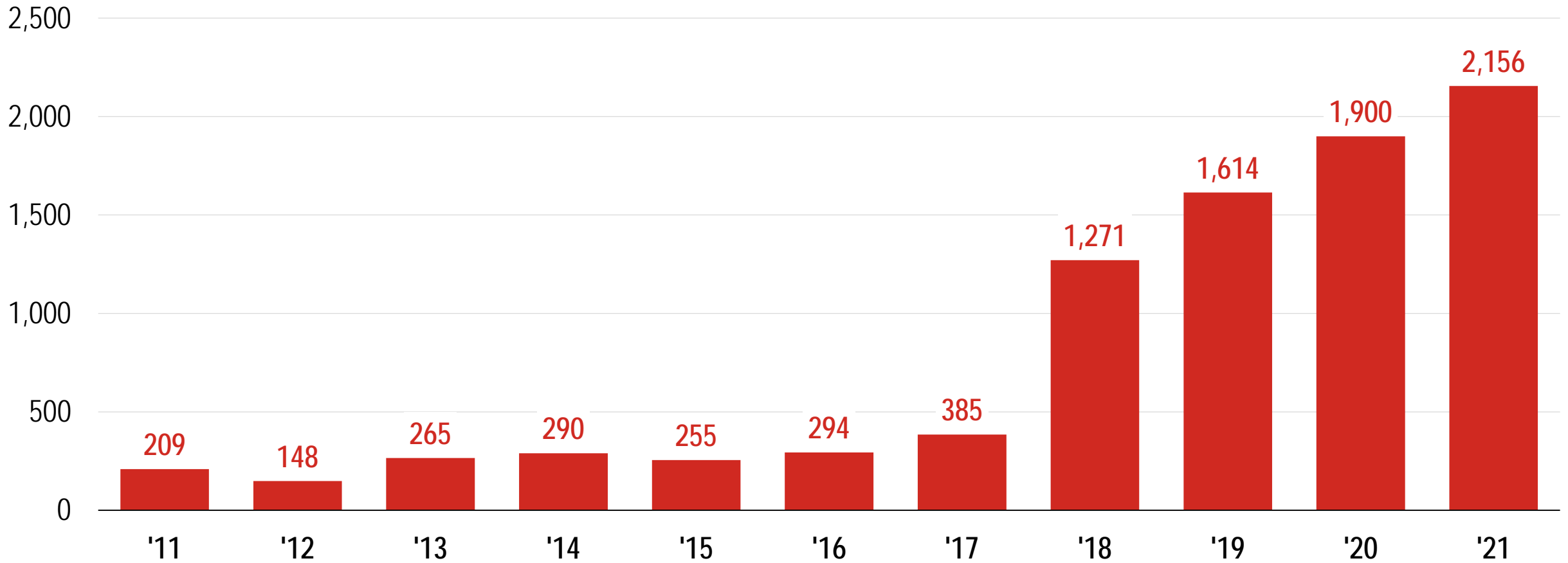
## Single Family and Condominium/Townhouse



Source: SalesTraq (Excludes High- and Mid-Rises Built Prior to Displayed Periods). Note: Reflects closings in Clark and Washoe Counties.

# New Home Closings in Nevada

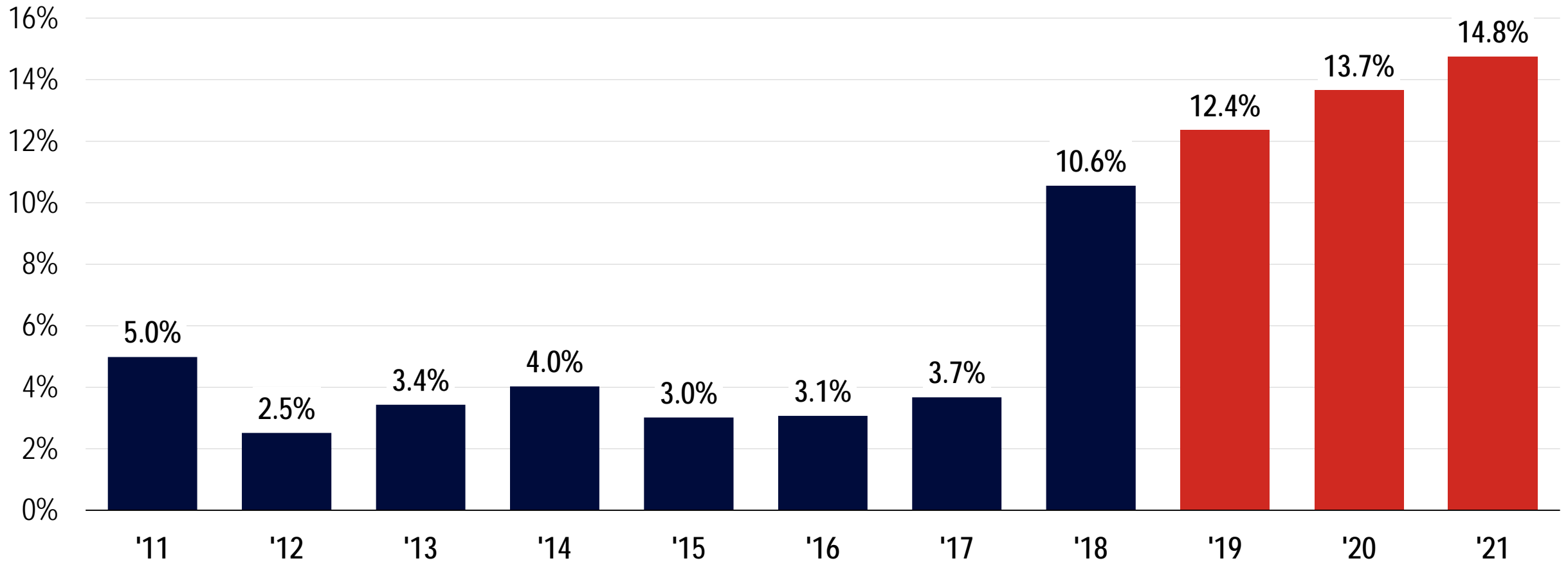
## Condominium/Townhouse



Source: SalesTraq (Excludes High- and Mid-Rises Built Prior to Displayed Periods). Note: Reflects closings in Clark and Washoe Counties.

# New Home Closings in Nevada

## Condominium/Townhouse Market Share



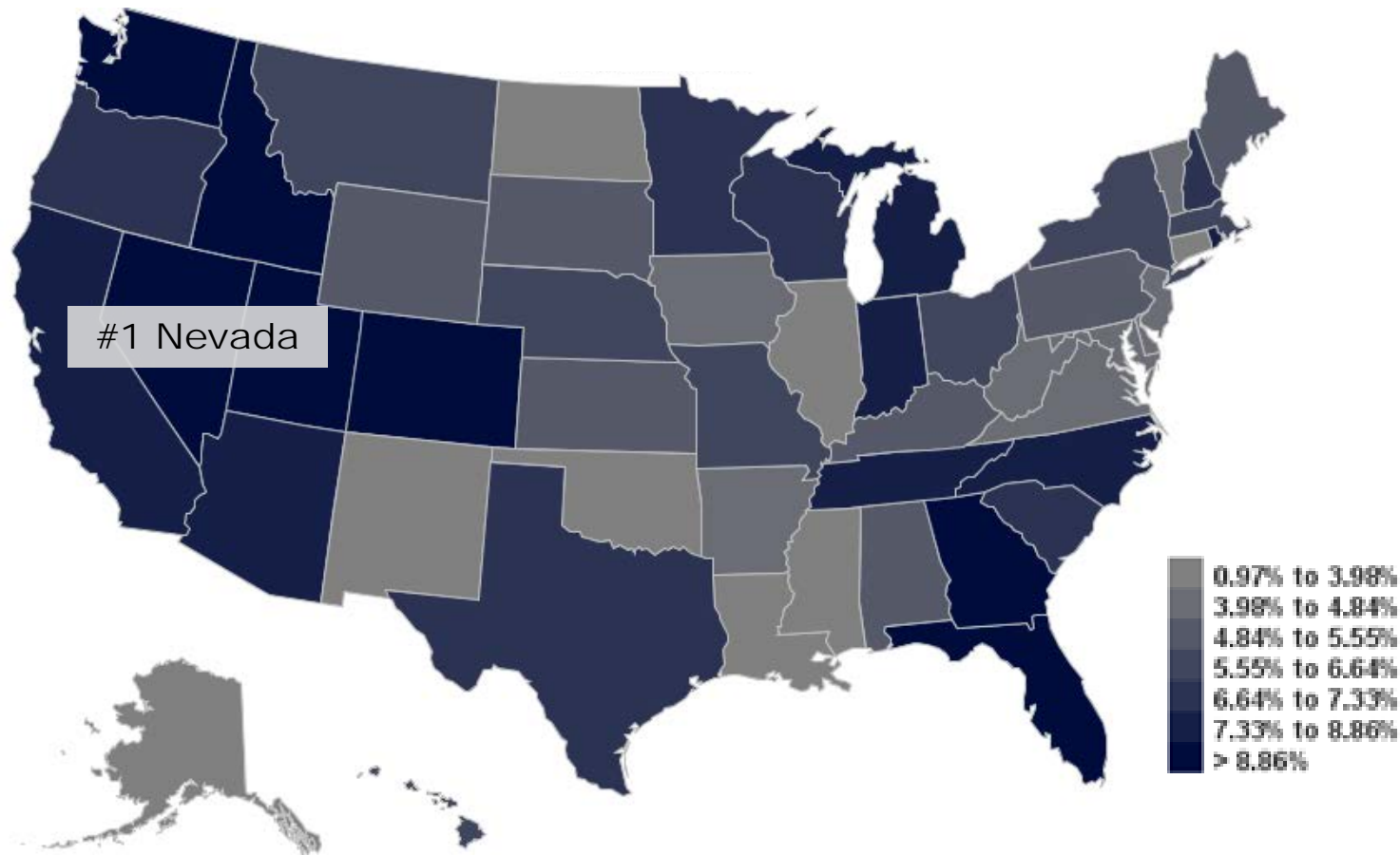
Source: SalesTraq (Excludes High- and Mid-Rises Built Prior to Displayed Periods). Note: Reflects closings in Clark and Washoe Counties.

# Nevada Housing Affordability



# Fastest House Price Appreciation

## House Price Index Growth

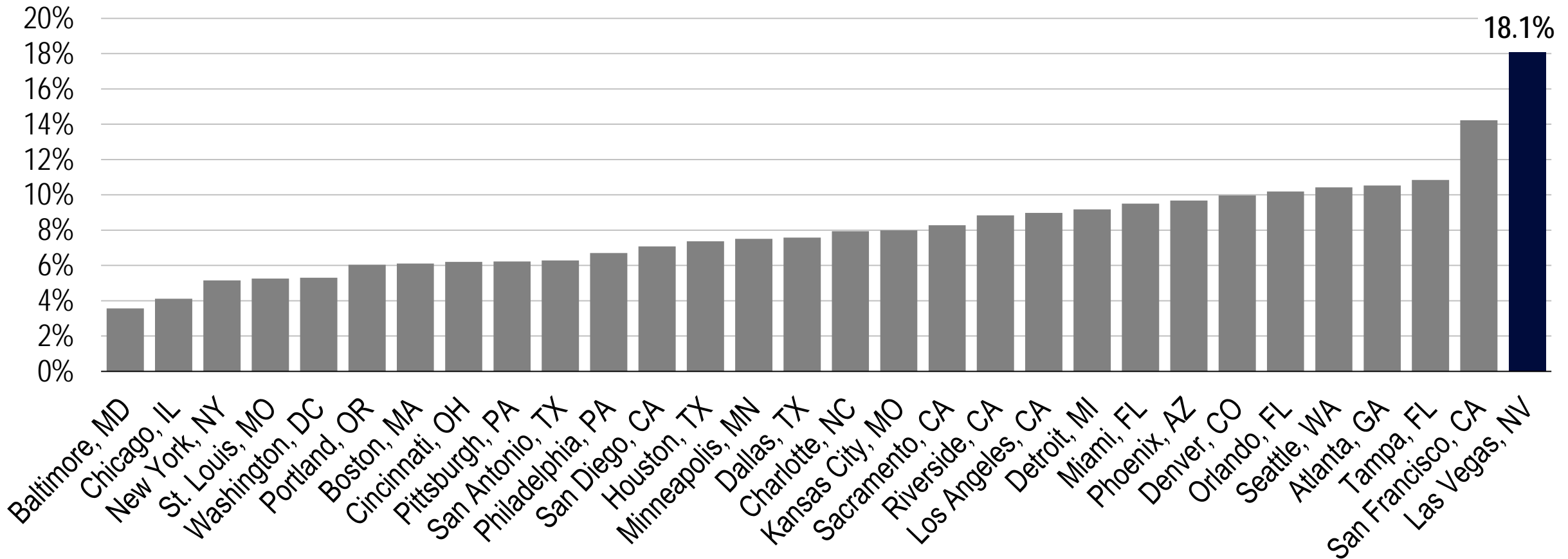


Rank	State	Annual Growth
1	Nevada	+15.0%
2	Idaho	+13.0%
3	Utah	+10.4%
4	Washington	+9.9%
5	Colorado	+9.8%
6	Florida	+9.2%
7	Georgia	+8.9%
8	Arizona	+8.8%
9	California	+8.6%
10	Tennessee	+7.7%

Source: Federal Housing Finance Agency (Q3 2017 vs. Q3 2018)

# House Price Index Growth

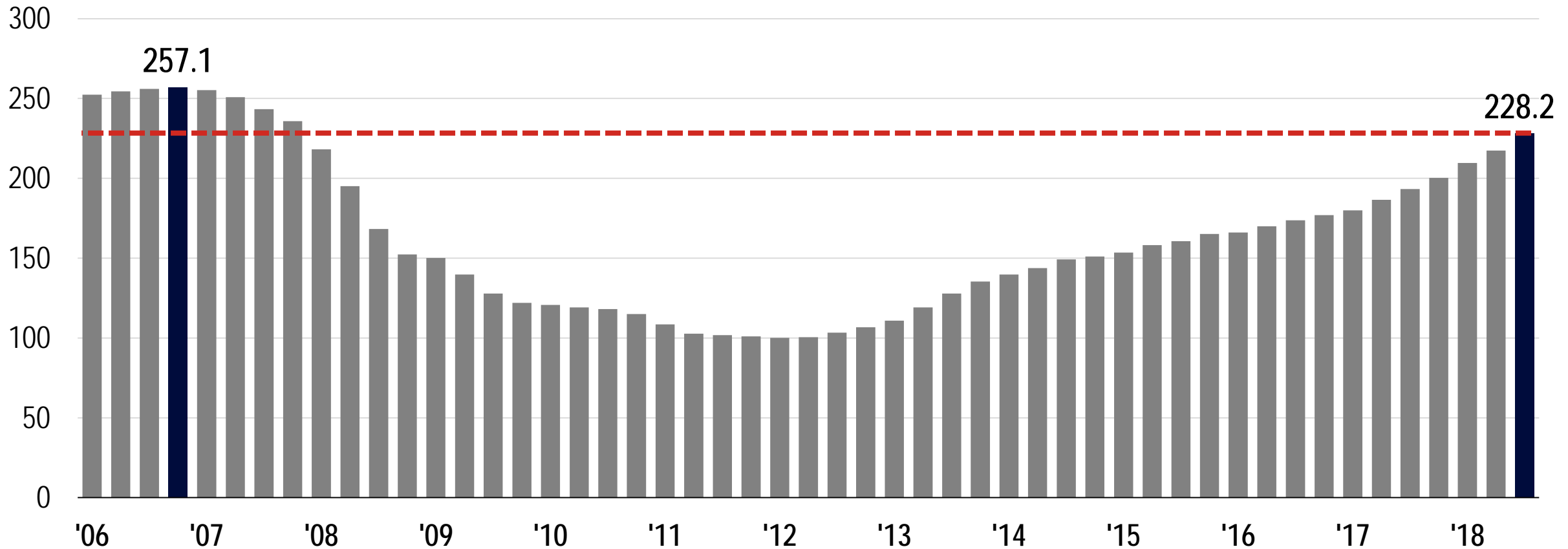
## Largest 30 MSAs



Source: Federal Housing Finance Agency (Q3 2017 vs. Q3 2018)

# House Price Index

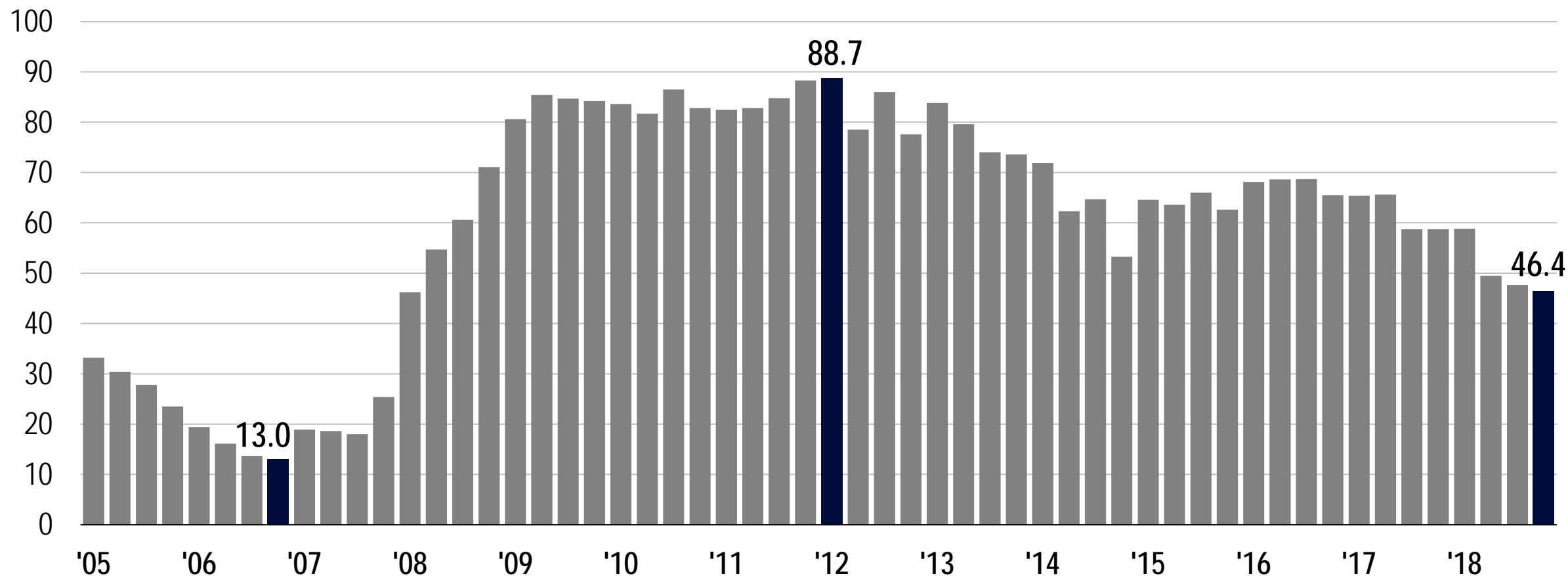
## Las Vegas MSA



Source: Federal Housing Financing Agency (1995=100)

# Housing Opportunity Index

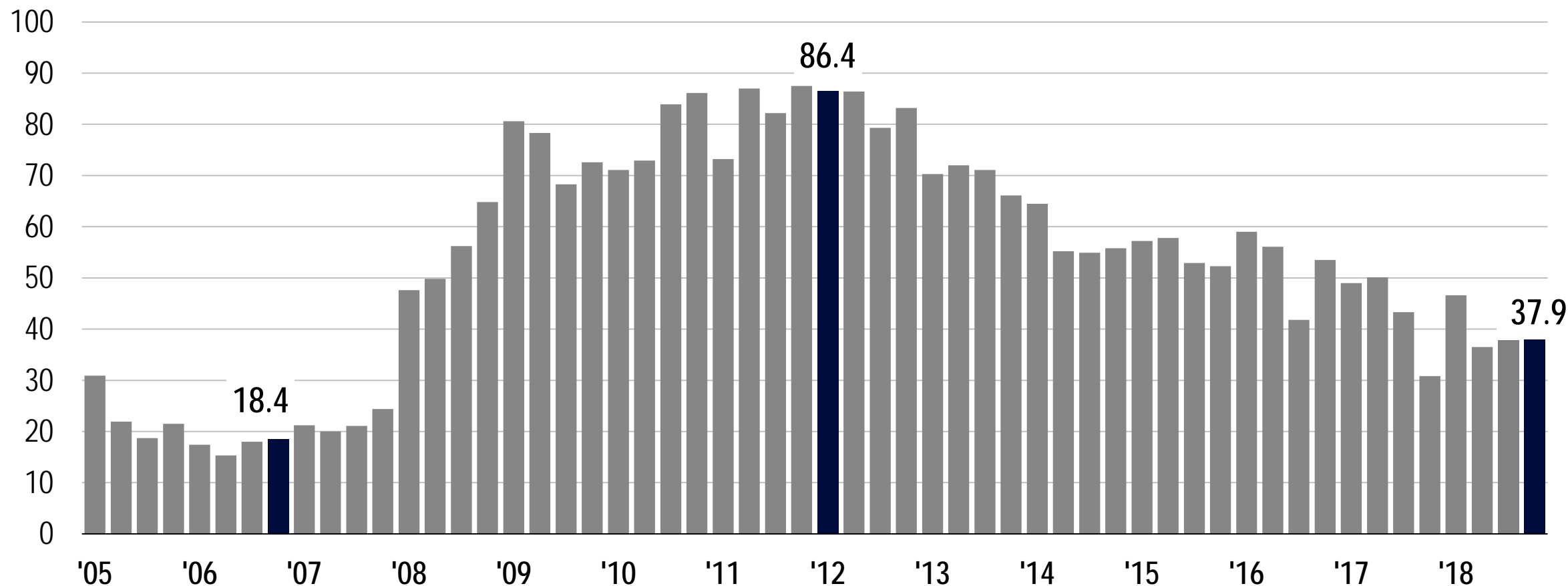
## Las Vegas MSA



Source: National Association of Homebuilders

# Housing Opportunity Index

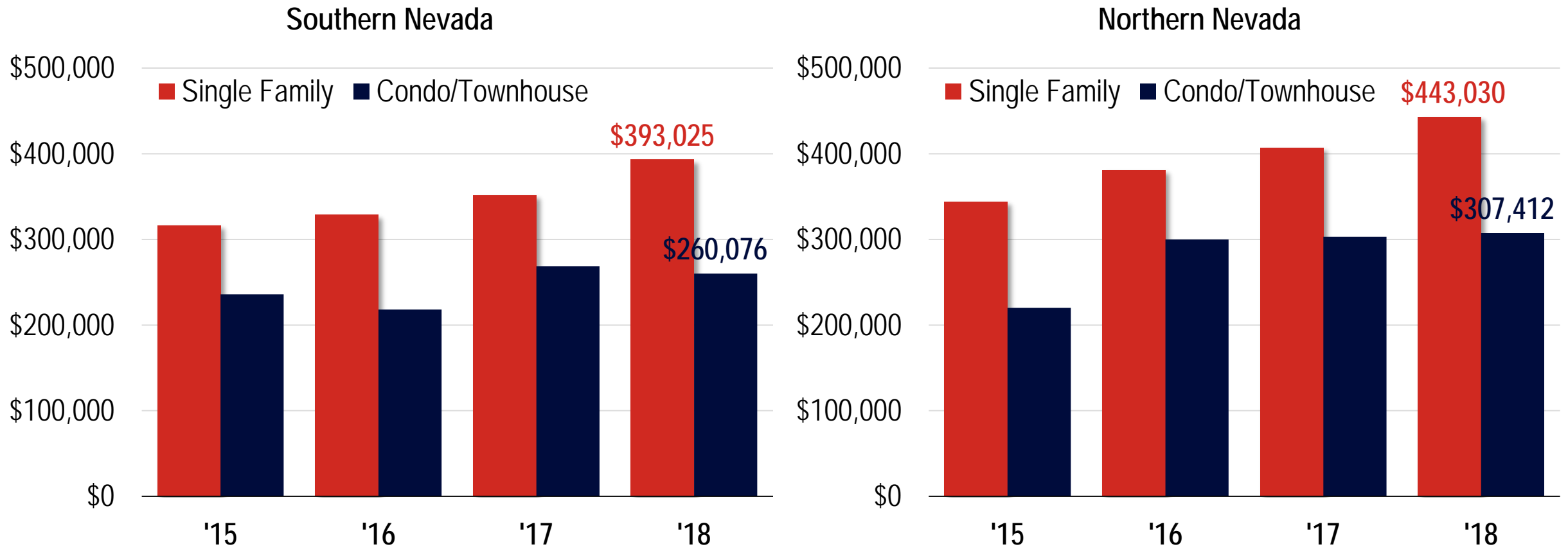
## Reno MSA



Source: National Association of Homebuilders

# New Home Median Closing Prices by Product Type

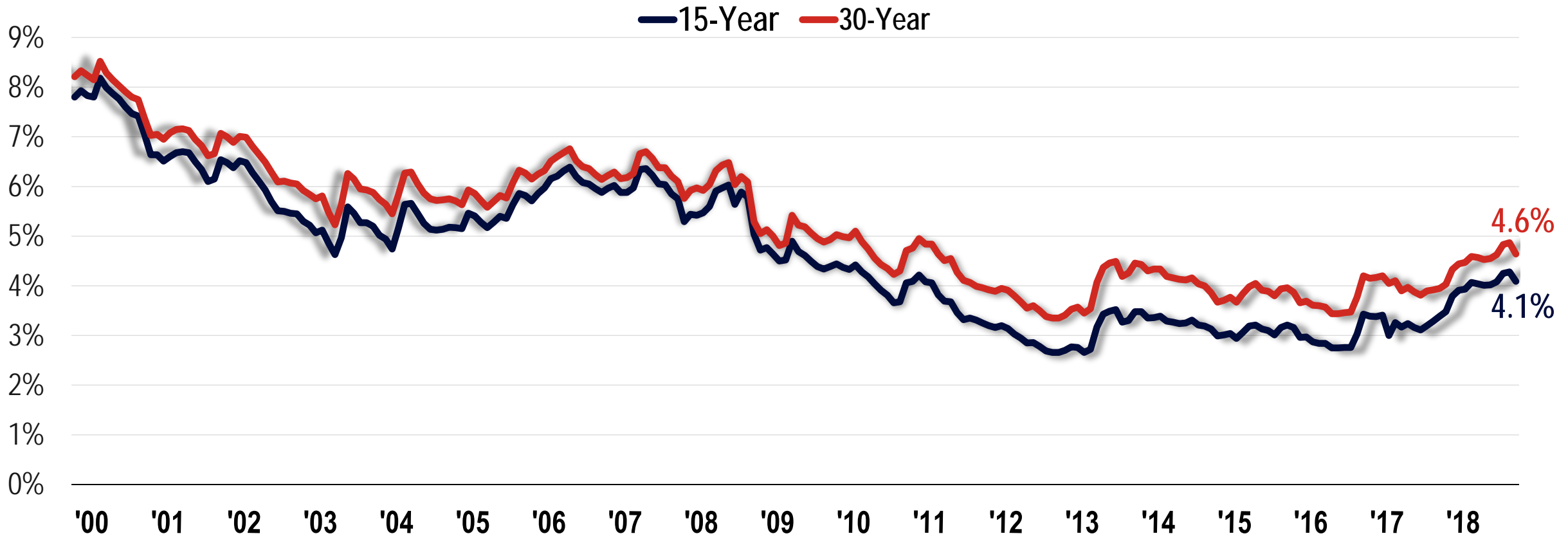
## Southern Nevada and Northern Nevada



Source: SalesTraq

# U.S. Mortgage Interest Rates

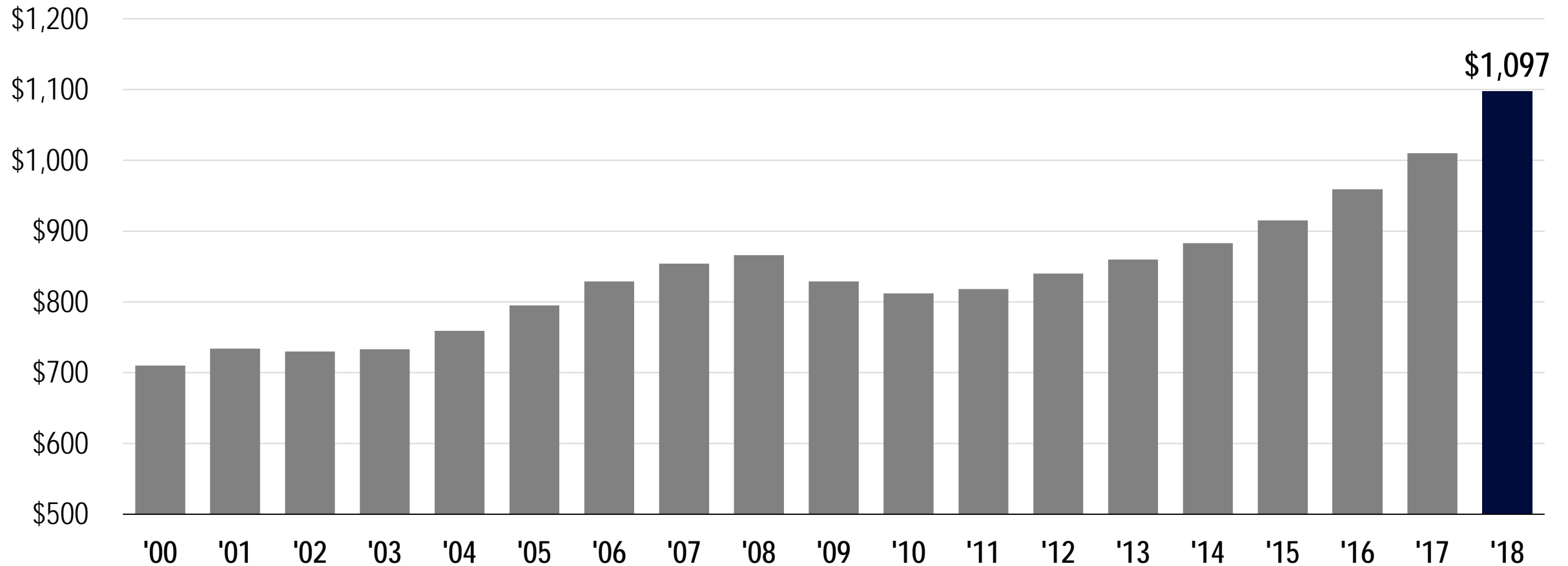
## Fixed-Rate



Source: Freddie Mac

# Average Apartment Rents

## Las Vegas Valley

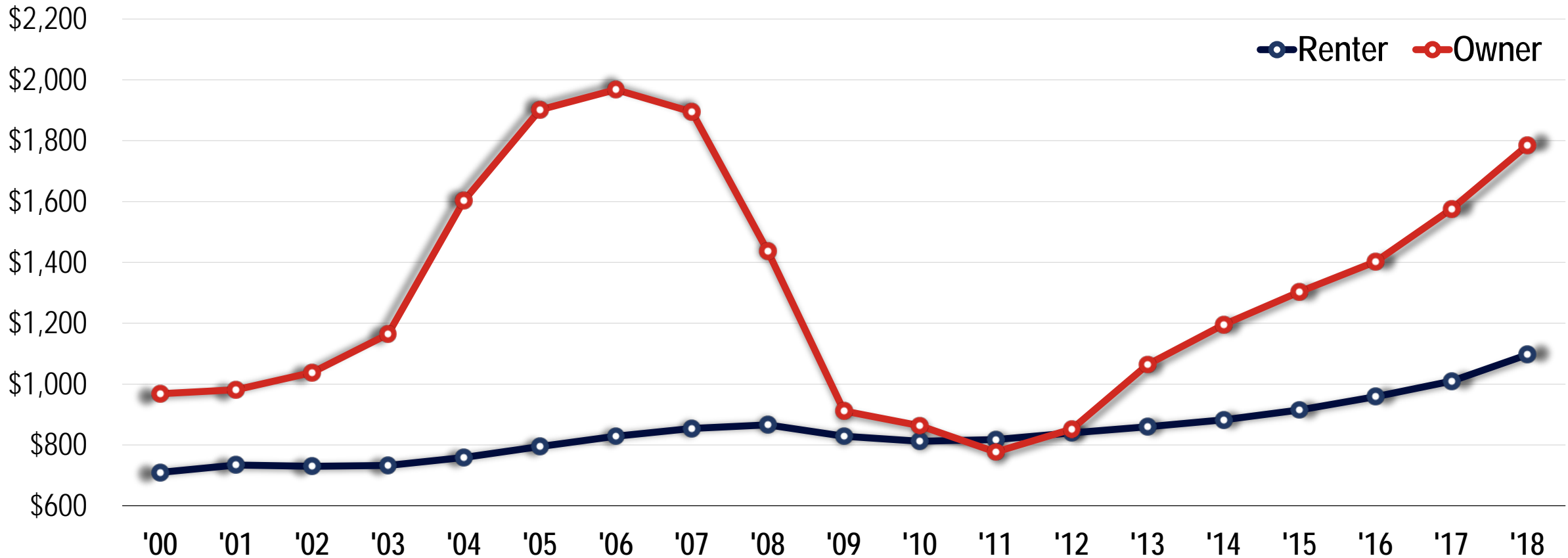


Source: REIS

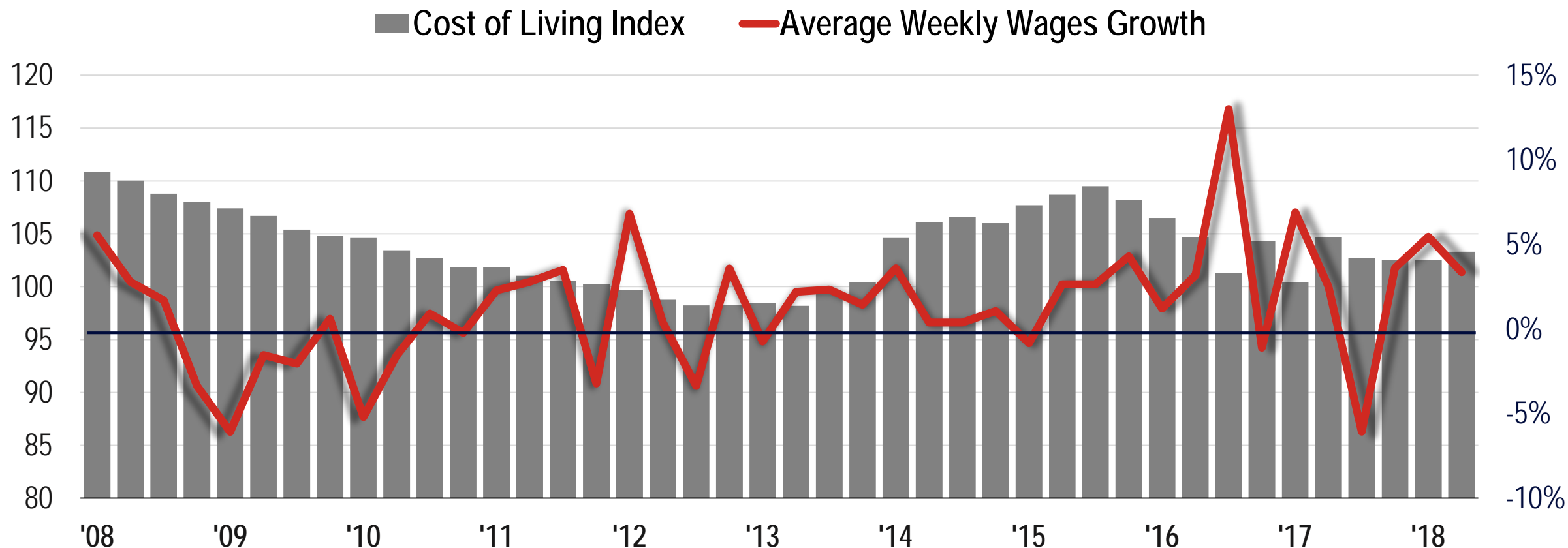


# Las Vegas Owner vs. Renter Comparative Analysis

## Monthly Average Rents vs. Estimated Cost of Ownership



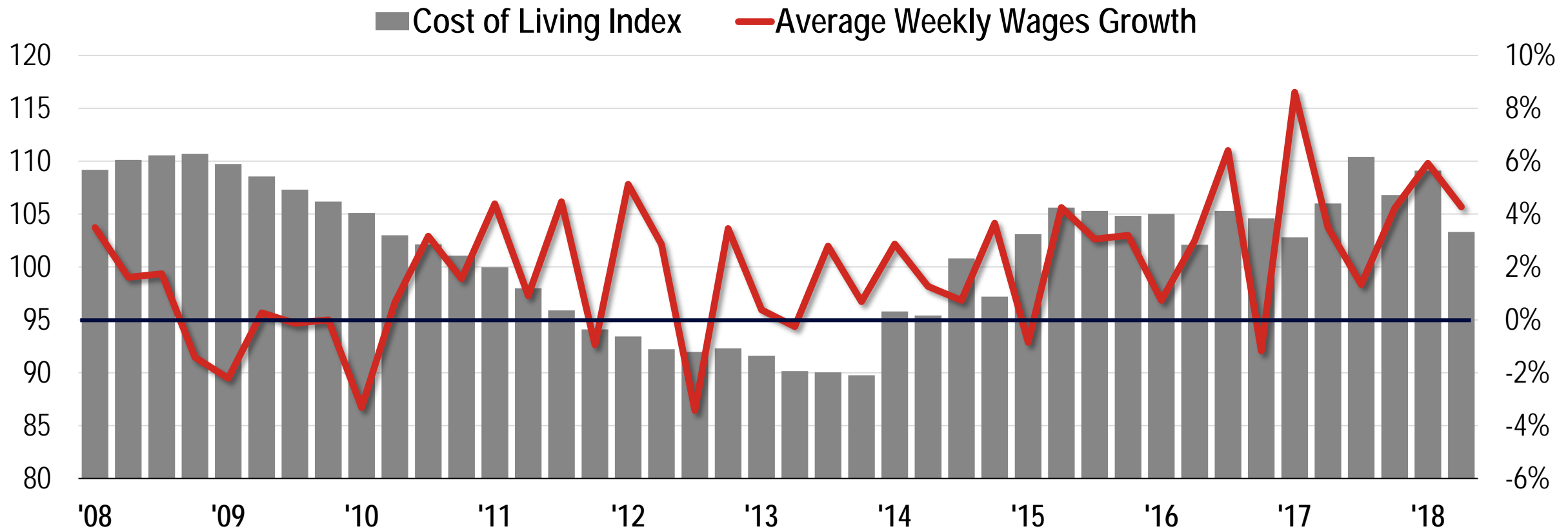
# Cost of Living Index (COLI) vs. Average Weekly Wage Growth Southern Nevada



Source: U.S. Bureau of Labor Statistics and The Council for Community and Economic Research

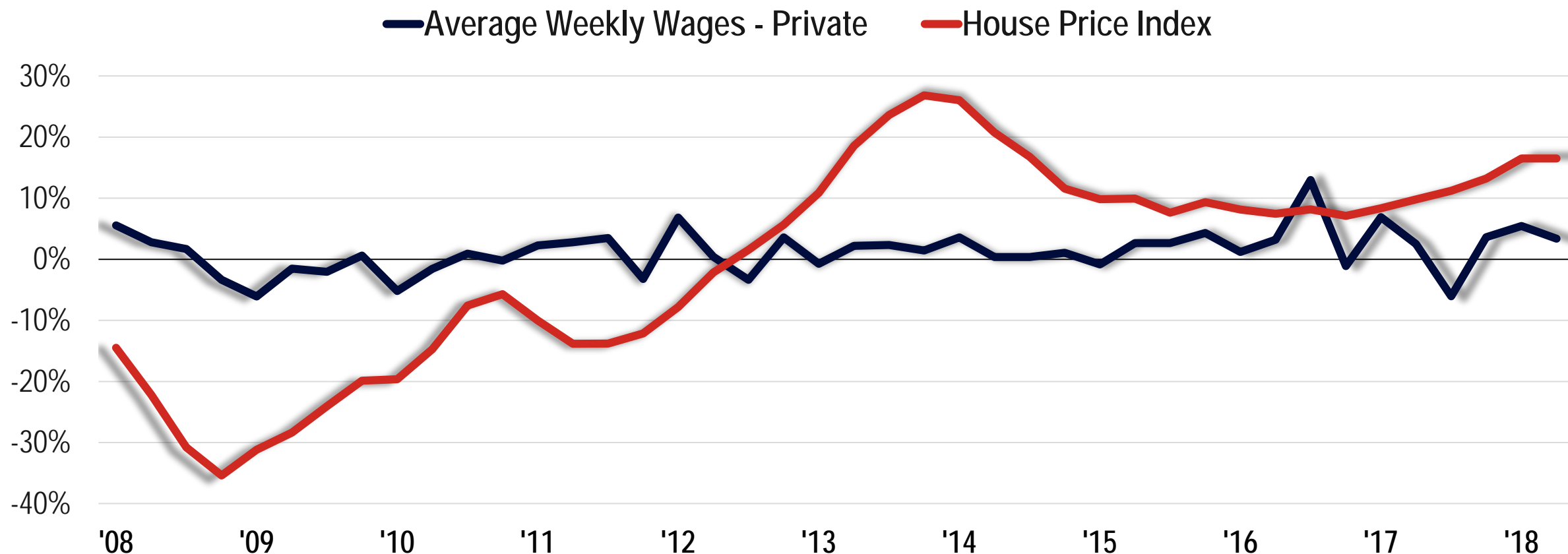
# Cost of Living Index (COLI) vs. Average Weekly Wage Growth

## Northern Nevada



Source: U.S. Bureau of Labor Statistics and The Council for Community and Economic Research

# Average Weekly Wage vs. House Price Index (HPI) Growth Southern Nevada



Source: U.S. Bureau of Labor Statistics and Federal Housing Finance Agency

# The Missing Middle

1 in 4  
Southern Nevada  
Households  
Fall into the  
Missing Middle



186,000  
Households



129,500  
Family Households

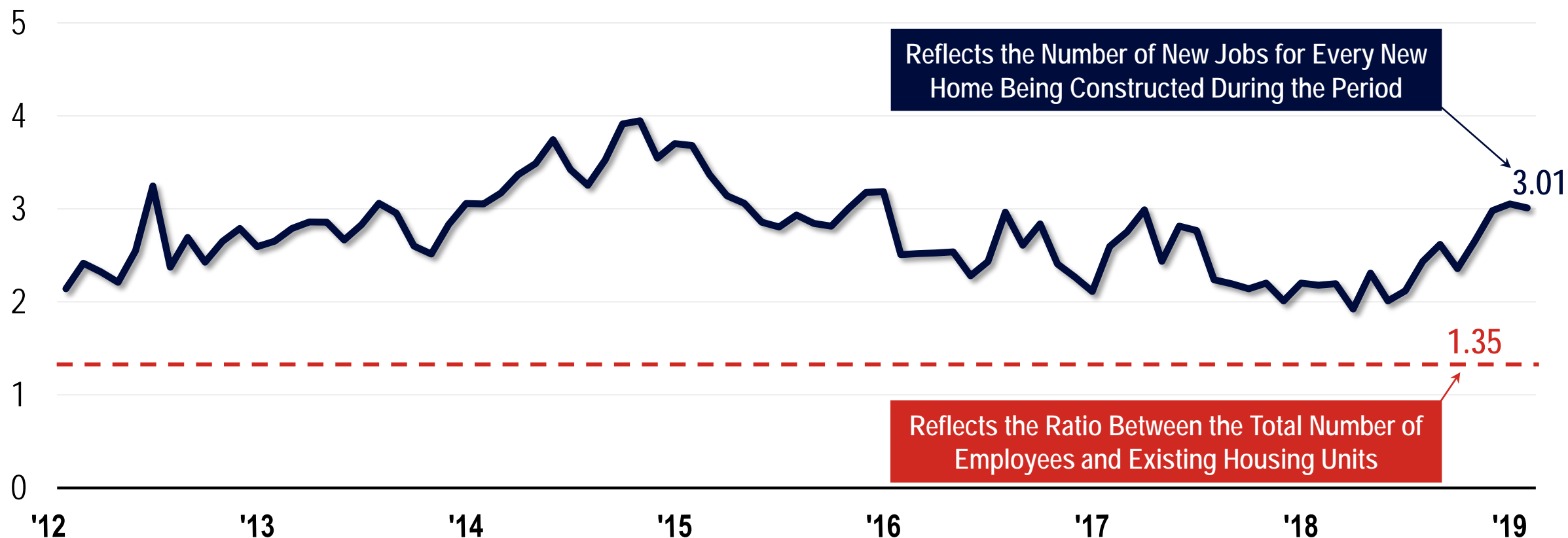


72,700  
Households with Children

Source: U.S. Census Bureau, Applied Analysis

# Employment-Growth-to-Permit Ratio (E/P Ratio)

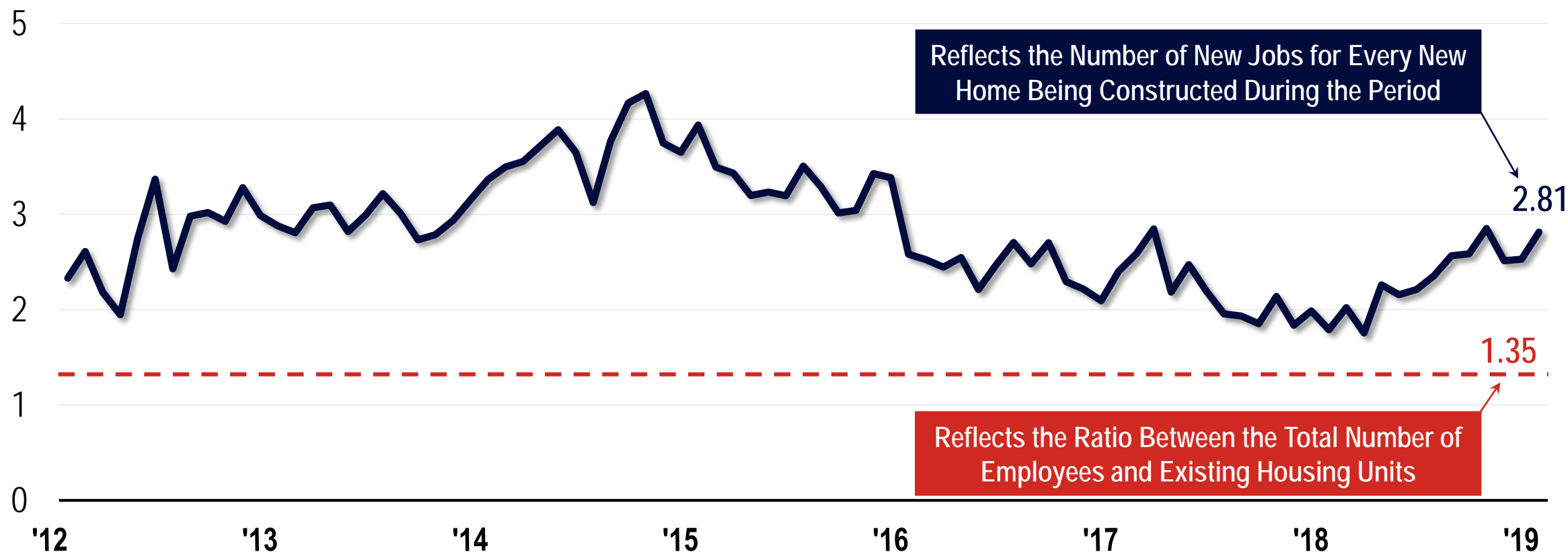
## Nevada



Source: U.S. Bureau of Labor Statistics, U.S. Census Bureau and Applied Analysis

# Employment-Growth-to-Permit Ratio (E/P Ratio)

Las Vegas



Source: United States Bureau of Labor Statistics, United States Census Bureau and Applied Analysis

# Employment-Growth-to-Permit Ratio (E/P Ratio)

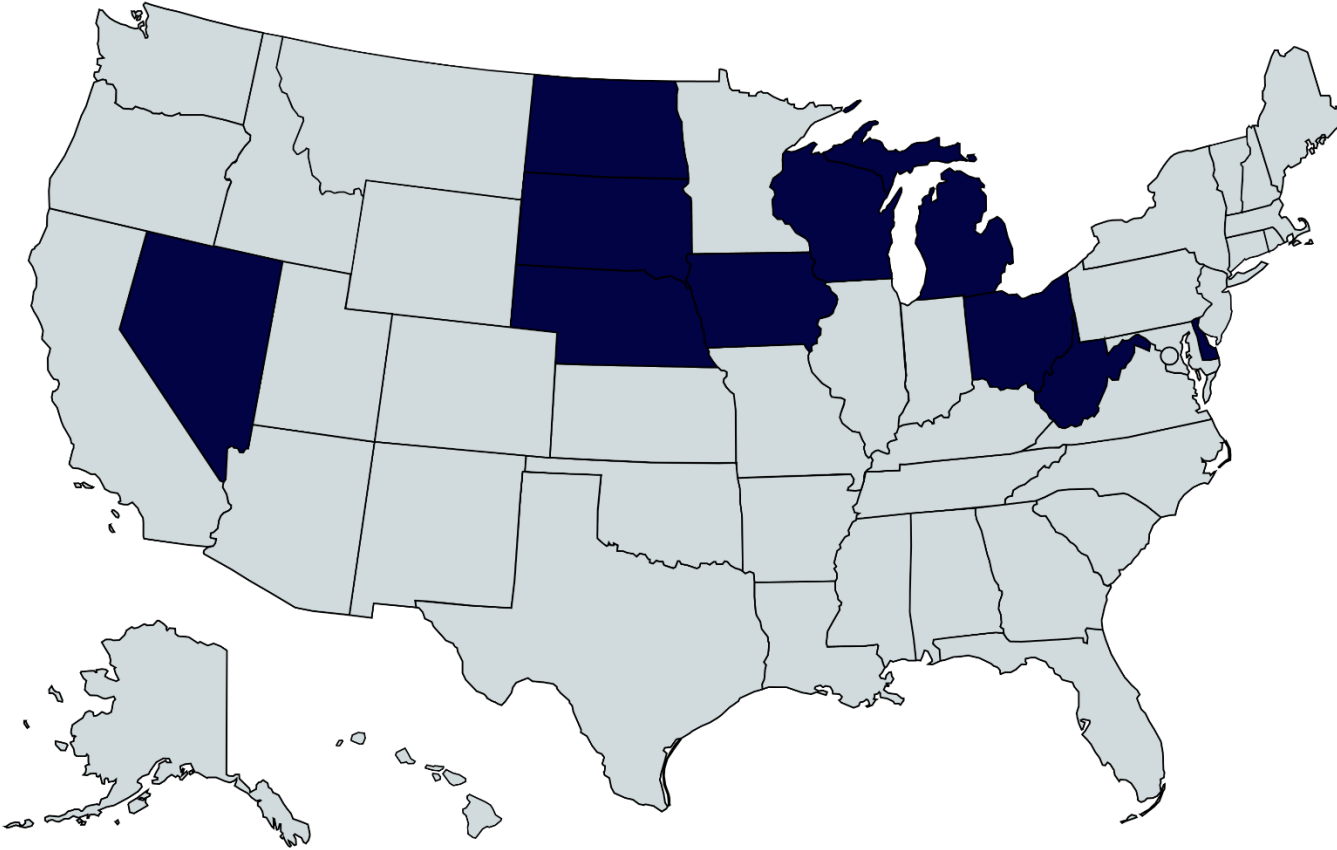
Reno



Source: U.S. Bureau of Labor Statistics, U.S. Census Bureau and Applied Analysis



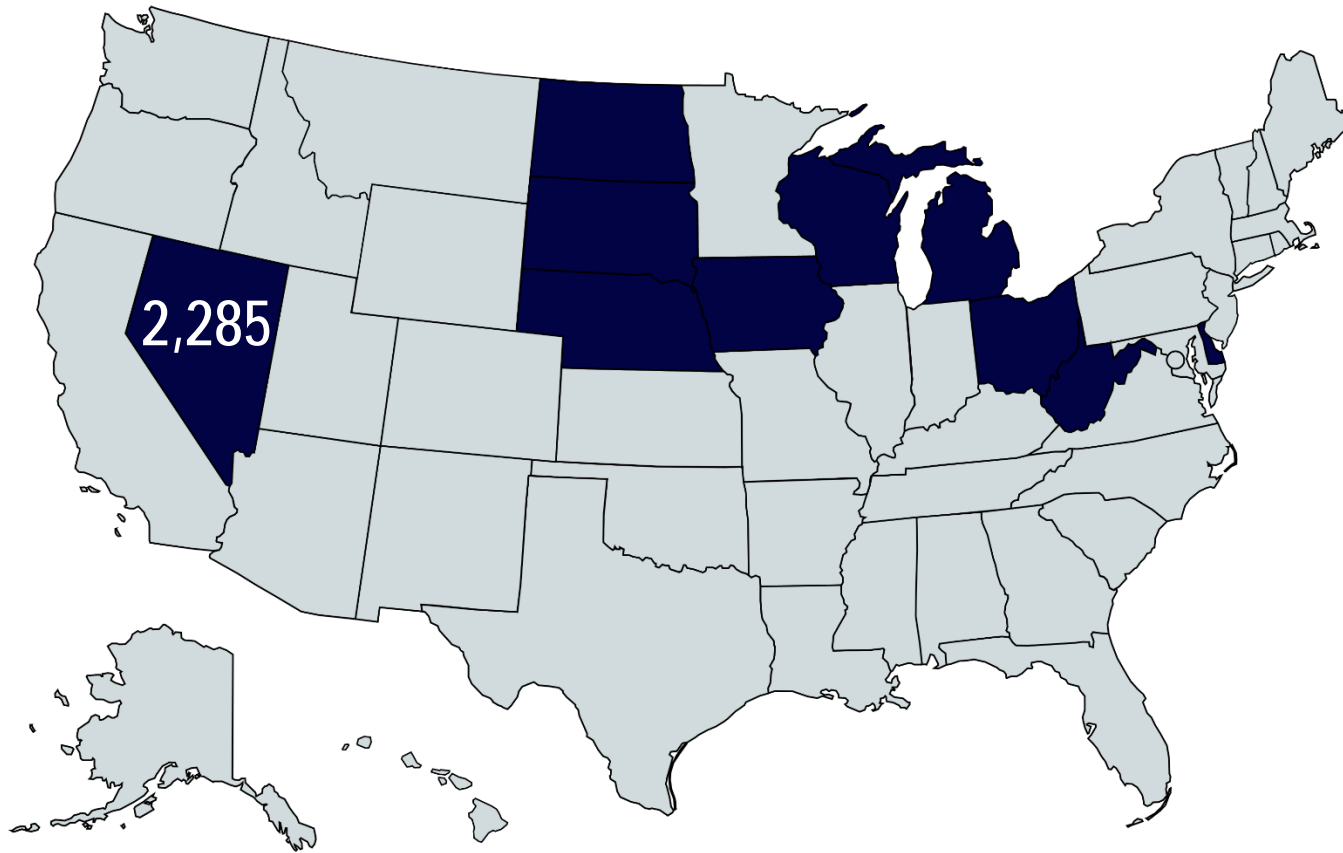
# Percentage of Households Priced Out of Market by \$1,000 Price Increase



Rank	State	Share Priced Out
1	Nevada	0.19%
2	Delaware	0.18%
3	Iowa	0.17%
4	Nebraska	0.17%
5	Wisconsin	0.17%
6	West Virginia	0.17%
7	South Dakota	0.17%
8	Michigan	0.16%
9	North Dakota	0.16%
10	Ohio	0.15%
U.S. Average		0.10%

Source: National Association of Home Builders

# Households Priced Out of Market by \$1,000 Price Increase



## State of Nevada

Median New Home Price	\$255,845
Income Needed to Qualify	\$64,514
Total No. of Households	1,178,004
Priced Out by \$1,000 Price Increase	2,285

Source: National Association of Home Builders

# No. of Households Priced Out of the Market in Nevada

(Based on a \$1,000 Price Increase)

Reflects the median new home price as computed by NAHB and the associated impact of a \$1,000 increase. The first increase prices out a total of 2,285 households. Similarly, a \$20,000 increase prices out 45,687 households. These data are based on estimates published by NAHB.

Median New Home Price	Price Increase	Households Priced Out	Median New Home Price	Price Increase	Households Priced Out
\$255,845	\$ -	-	\$266,845	\$11,000	25,128
\$256,845	\$1,000	2,285	\$267,845	\$12,000	27,412
\$257,845	\$2,000	4,569	\$268,845	\$13,000	29,697
\$258,845	\$3,000	6,853	\$269,845	\$14,000	31,981
\$259,845	\$4,000	9,138	\$270,845	\$15,000	34,265
\$260,845	\$5,000	11,422	\$271,845	\$16,000	36,550
\$261,845	\$6,000	13,706	\$272,845	\$17,000	38,834
\$262,845	\$7,000	15,991	\$273,945	\$18,000	41,118
\$263,945	\$8,000	18,275	\$274,945	\$19,000	43,403
\$264,945	\$9,000	20,559	\$275,945	\$20,000	45,687
\$265,945	\$10,000	22,844			

Source: National Association of Home Builders and Applied Analysis

# No. of Households Priced Out of the Market in Nevada

(Based on a \$1,000 Price Increase)

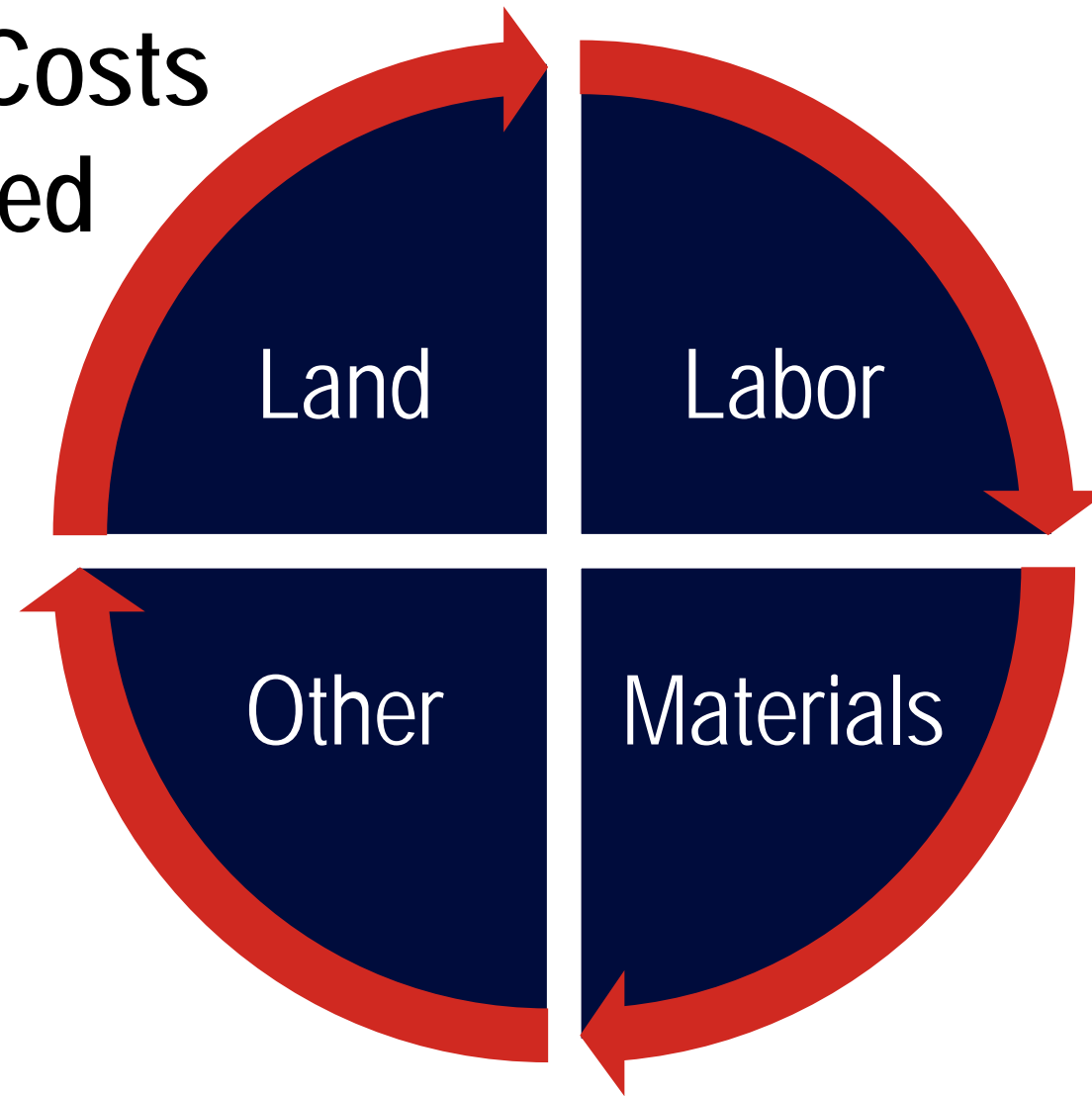
Given where median new home prices stand in the two largest urban areas of Nevada, an adjusted analysis was requested of NAHB staff utilizing a price of \$390,417. A \$1,000 increase in home prices impacts 1,157 households, while a \$20,000 increase prices out 23,142 households.

Median New Home Price	Price Increase	Households Priced Out	Median New Home Price	Price Increase	Households Priced Out
\$390,417	\$ -	-	\$401,417	\$11,000	12,728
\$391,417	\$1,000	1,157	\$402,417	\$12,000	13,885
\$392,417	\$2,000	2,314	\$403,417	\$13,000	15,042
\$393,417	\$3,000	3,471	\$404,417	\$14,000	16,199
\$394,417	\$4,000	4,628	\$405,417	\$15,000	17,357
\$395,417	\$5,000	5,785	\$406,417	\$16,000	18,514
\$396,417	\$6,000	6,943	\$407,417	\$17,000	19,671
\$397,417	\$7,000	8,100	\$408,417	\$18,000	20,828
\$398,417	\$8,000	9,257	\$409,417	\$19,000	21,985
\$399,417	\$9,000	10,414	\$410,417	\$20,000	23,142
\$400,417	\$10,000	11,571			

Source: National Association of Home Builders and Applied Analysis

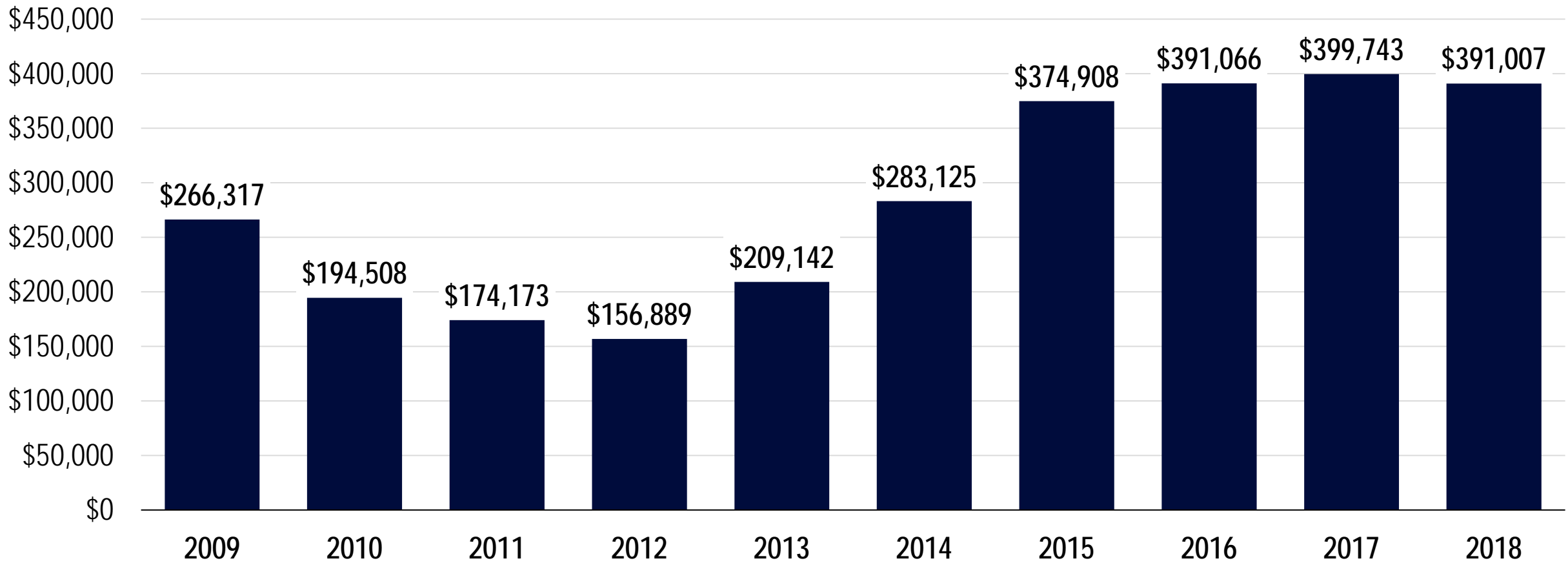
# Trends in Construction Costs

# Development Costs Remain Elevated



# Vacant Land Costs - Las Vegas

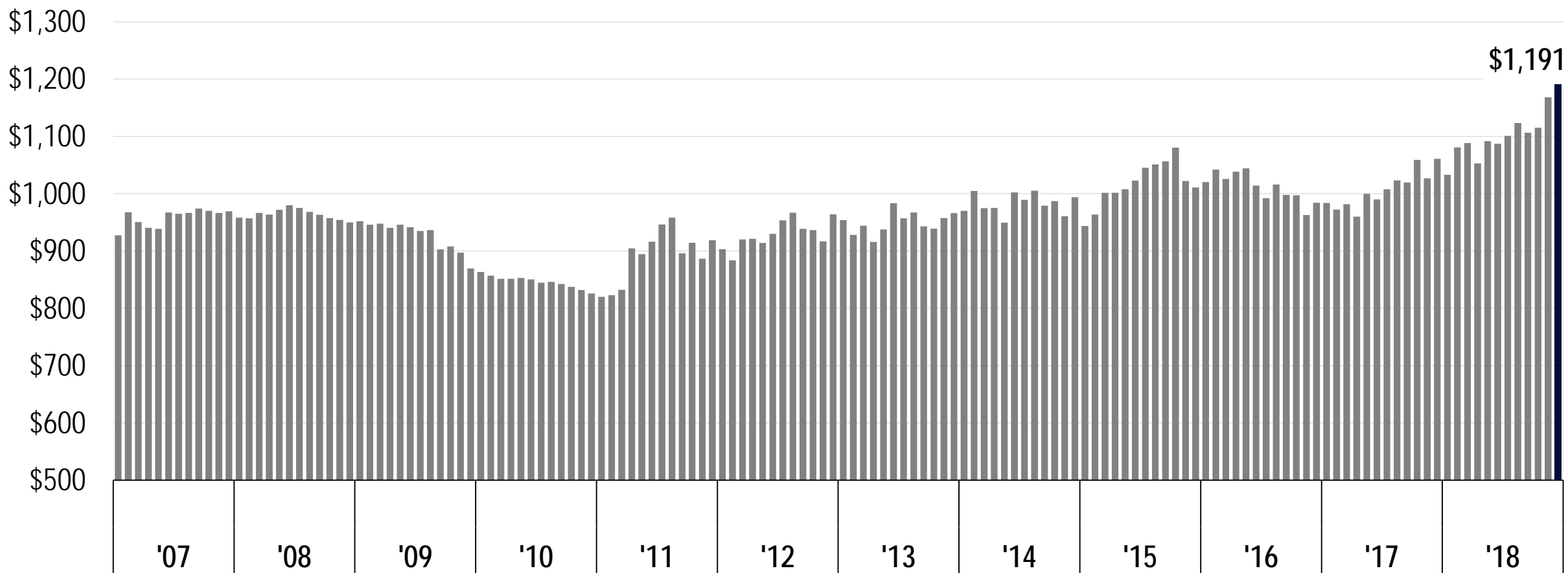
## Annual Average Price per Acre



Source: Applied Analysis

# Average Weekly Wage - Construction

## Nevada

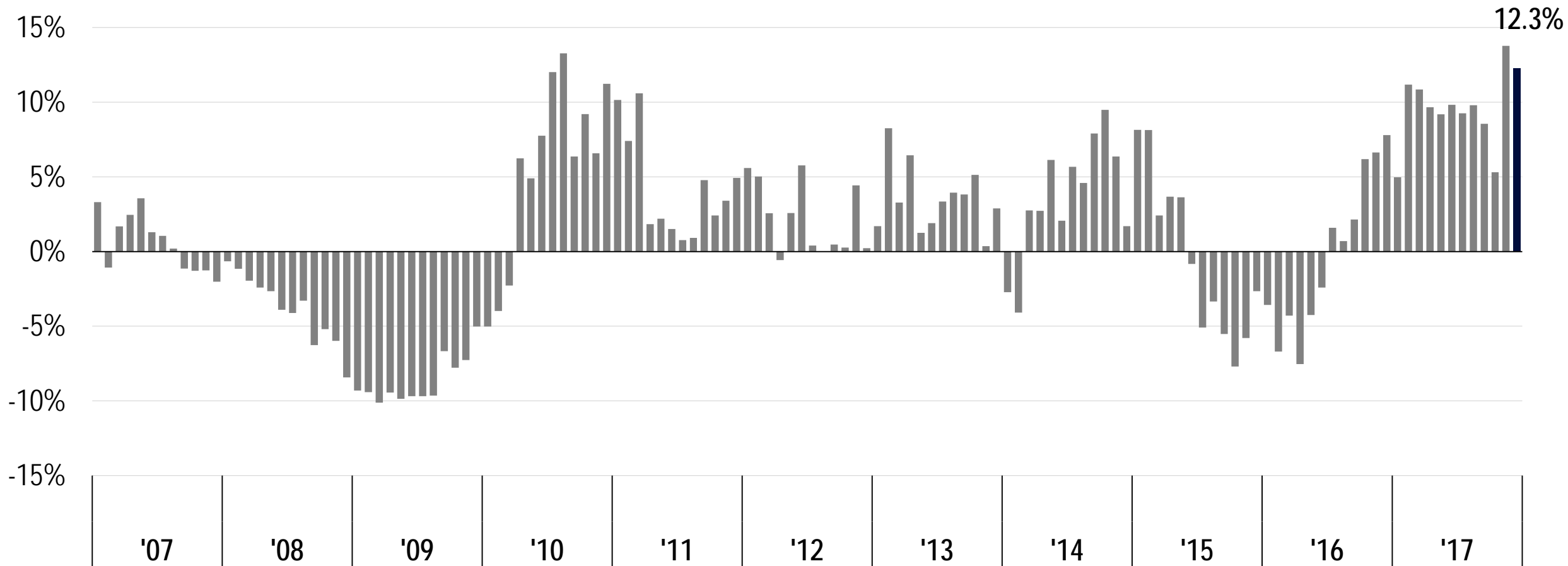


Source: U.S. Bureau of Labor Statistics



# Average Weekly Wage Growth - Construction

## Nevada



Source: U.S. Bureau of Labor Statistics

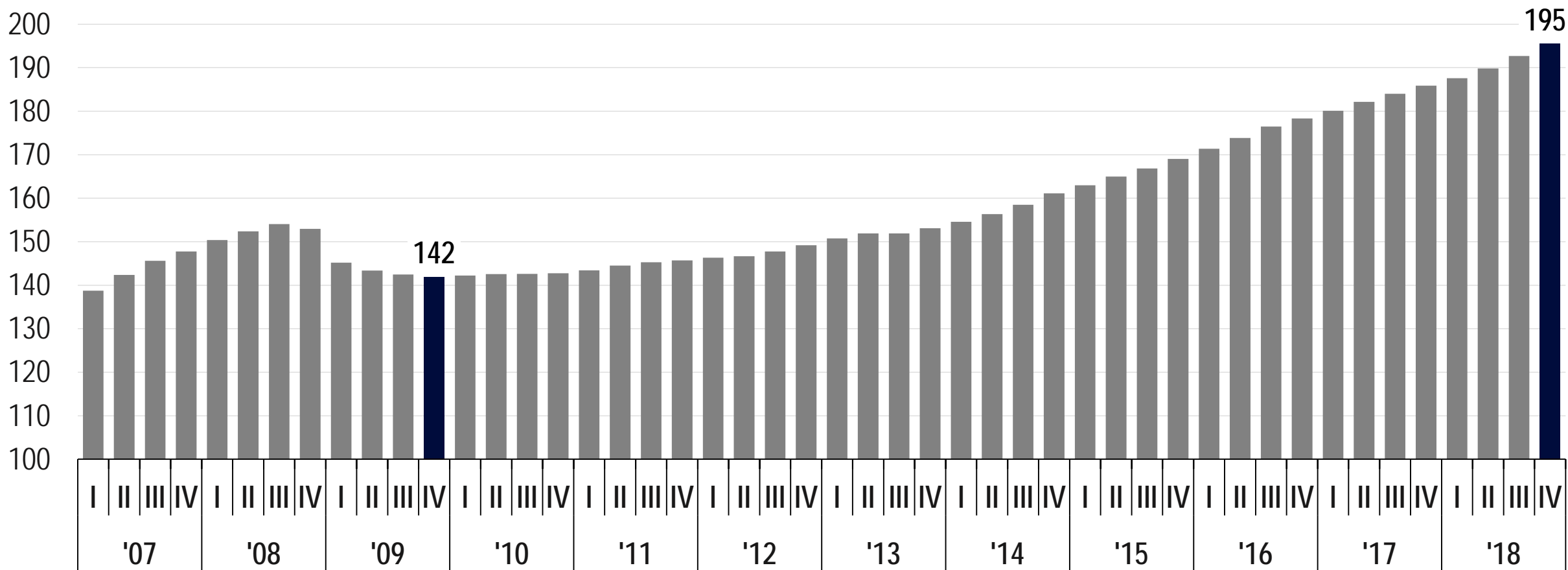
# Average Weekly Wages by Industry

## Nevada



Source: U.S. Bureau of Labor Statistics

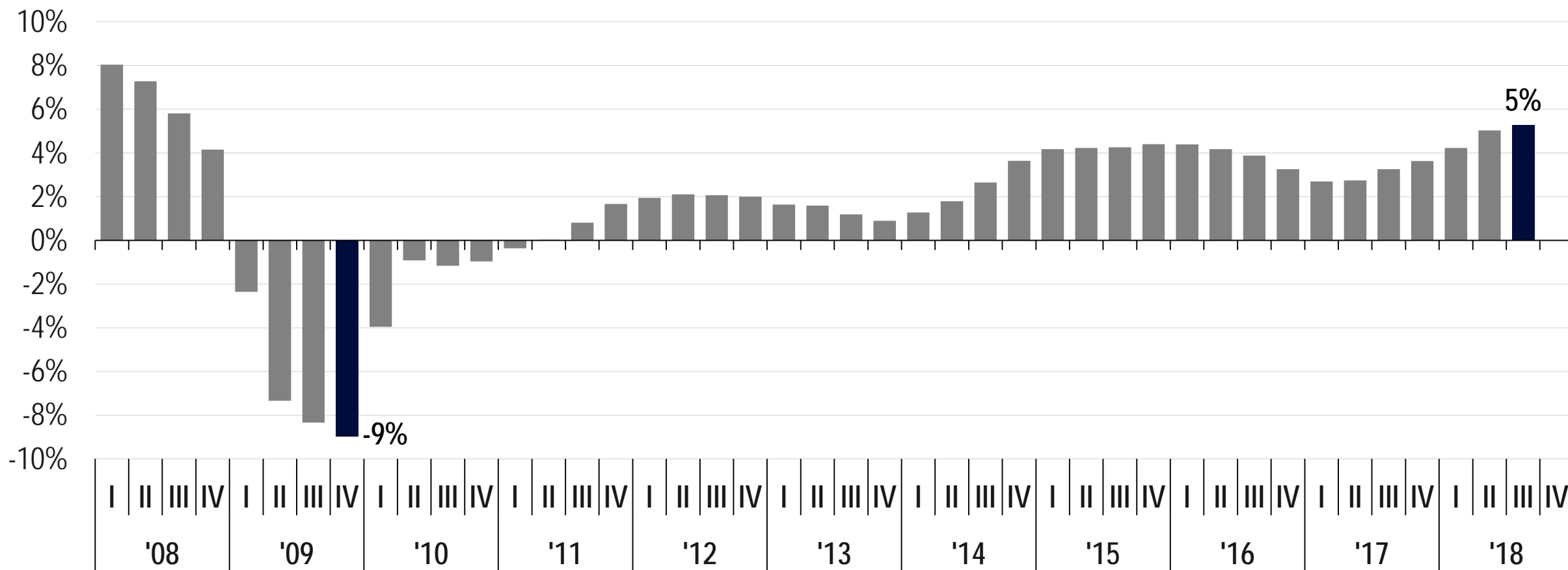
# National Construction Cost Index



Source: Rider Levett Bucknall

# Construction Cost Index – Las Vegas

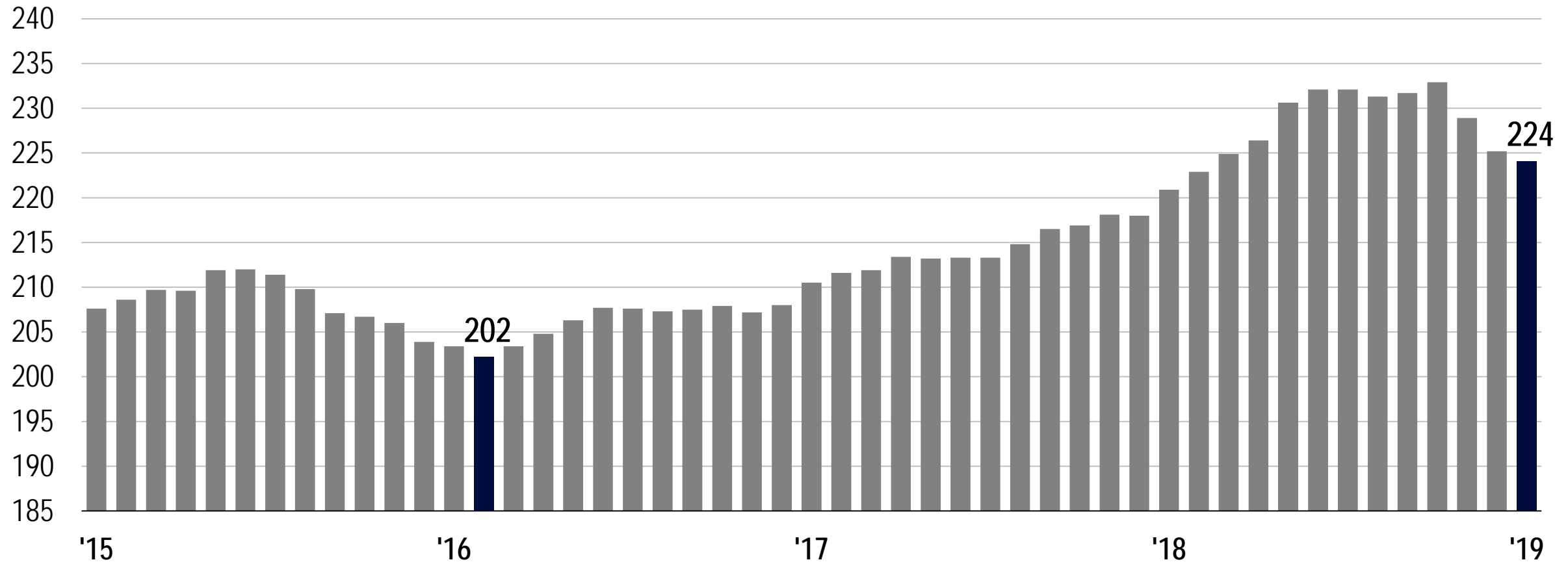
## Year-over-Year Growth



Source: Rider Levett Bucknall

# National Producer Price Index

## Residential Construction

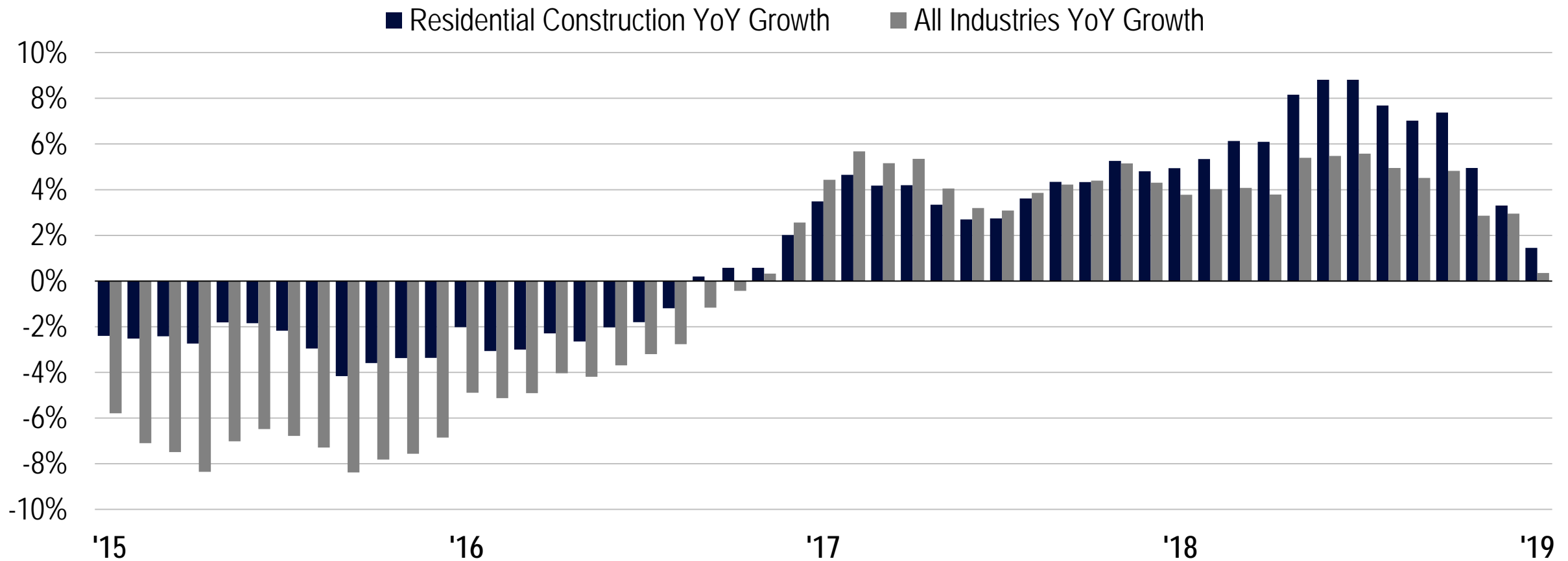


Source: U.S. Bureau of Labor Statistics



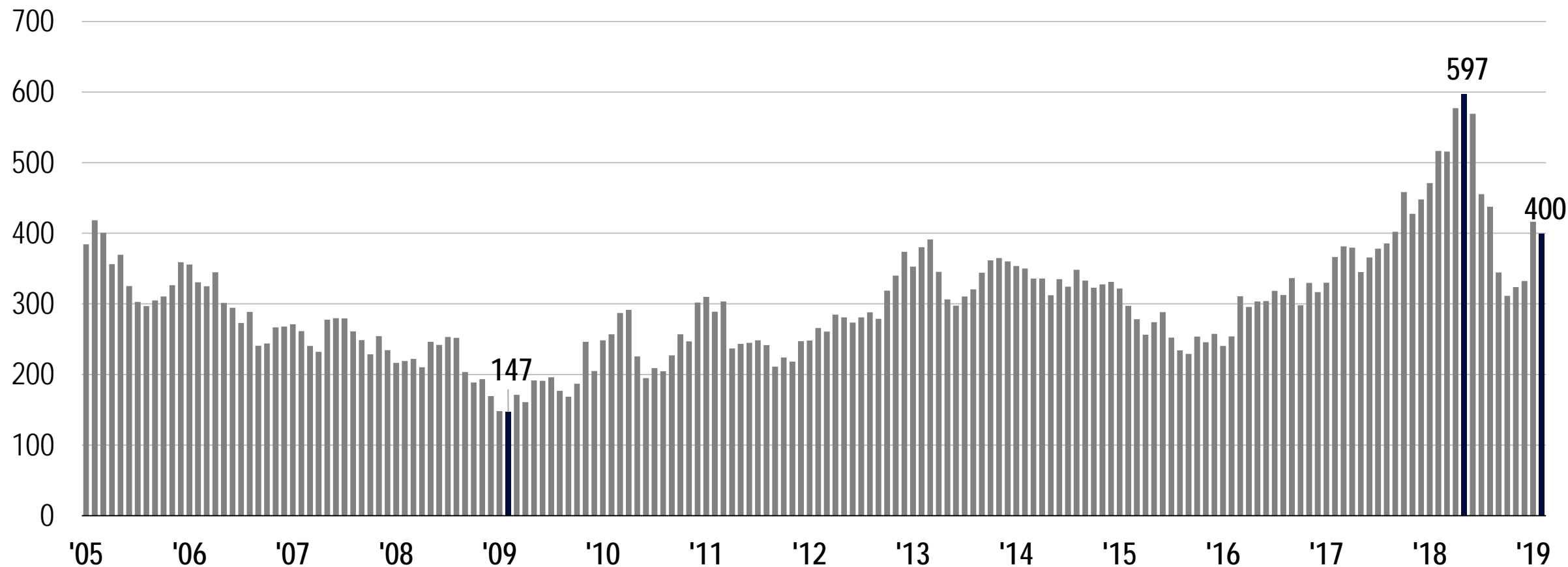
# National Producer Price Index

## Residential Construction vs All Industries



Source: U.S. Bureau of Labor Statistics

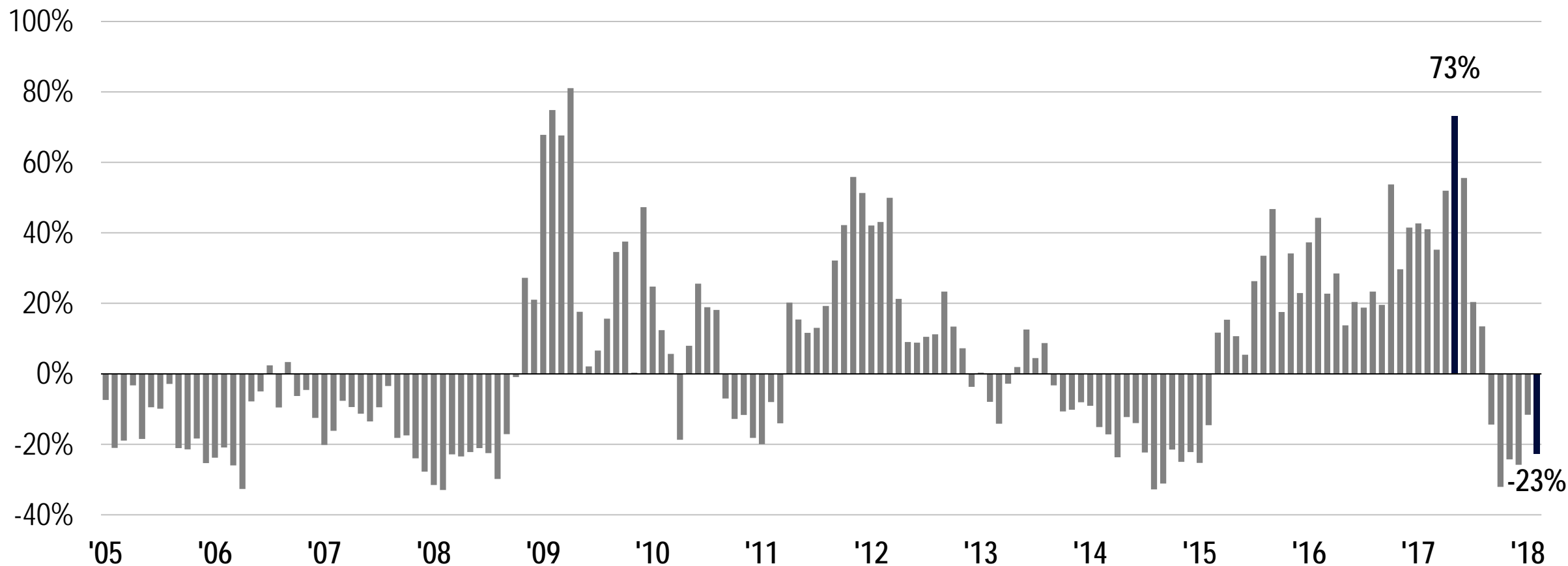
# National Monthly Lumber Futures Prices



Source: U.S. Bureau of Labor Statistics



# National Monthly Lumber Futures Prices Growth



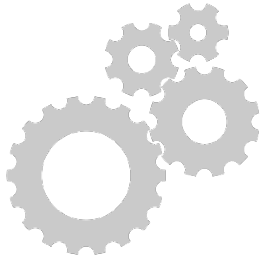
Source: U.S. Bureau of Labor Statistics



# Residential Construction Industry Economic Impacts

# Economic Impact Analysis

## Types of Impacts



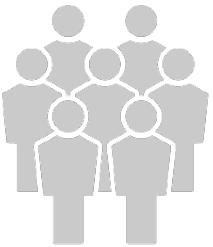
### ECONOMIC OUTPUT

Impact of Total Spending within the Local Economy



### WAGES AND SALARIES

Impact on Personal Incomes for Local Residents



### EMPLOYMENT

Impact on the Number of Jobs within the Local Economy

### DIRECT IMPACTS

Generated by direct spending of the College (during the construction and operational phases of the project)

### INDIRECT IMPACTS

Secondary impacts generated by businesses supporting the economic activities of the College

### INDUCED IMPACTS

Sourced to businesses that are supported by the spending of employees supported by direct impacts

### TOTAL IMPACTS

The sum of direct, indirect and induced impacts



# Economic Impact Analysis

## Methodology

### IMPLAN MODEL

- 1 of 3 nationally recognized impact analysis software tools
- Developed by Minnesota IMPLAN Group, Inc. and used by more than 1,000 public and private institutions
- IMPLAN is an input-output model that utilizes complex economic equations to explain how the “outputs” of one industry become the “inputs” of others, and vice versa
- This relationship is sometimes referred to as the “multiplier effect”, illustrating how changes in one sector of the economy can affect other sectors

# Economic Impact Analysis

## Methodology

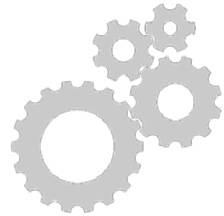
### LIMITATIONS AND ASSUMPTIONS

- Input-output models, as is the case with all econometric models, are not without their limitations; the statistical model used in this analysis, IMPLAN, for example, assumes that capital and labor are used in fixed proportions
- This means that for every job created or lost, a fixed change in investment, income and employment results
- In reality, developers, consumers and governments respond to stimuli in complex ways, including changing the mix of capital or labor as well as the types and frequencies of investment
- Importantly, each impacting force has its own unique characteristics, affecting how consumers and businesses respond to the given change

# Economic Impact Analysis

## Residential Construction Industry Impacts

**TOTAL ECONOMIC OUTPUT**  
**\$11.0 Billion**



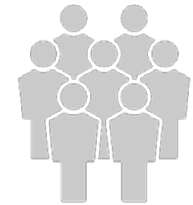
Nevada's residential construction sector is estimated to directly support approximately \$6.6 billion in economic output annually. When the indirect and induced impacts of the industry are considered, total impacts reach nearly \$11.0 billion per year.

**TOTAL WAGES & SALARIES**  
**\$3.9 Billion**



The home building industry accounts for approximately \$2.5 billion annually in direct wages and salaries in Nevada. Once the ripple effect of the industry is considered, personal incomes for Nevada families tied to the residential construction industry total \$3.9 billion annually.

**TOTAL EMPLOYMENT**  
**75,725 Jobs**



Nevada's residential construction industry directly supports in excess of 44,000 workers annually. Including the indirect and induced impacts, the industry supports approximately 75,725 local works. Stated otherwise, for every 1.0 direct job in the construction industry, a total of 1.7 jobs is created throughout the state's economy.

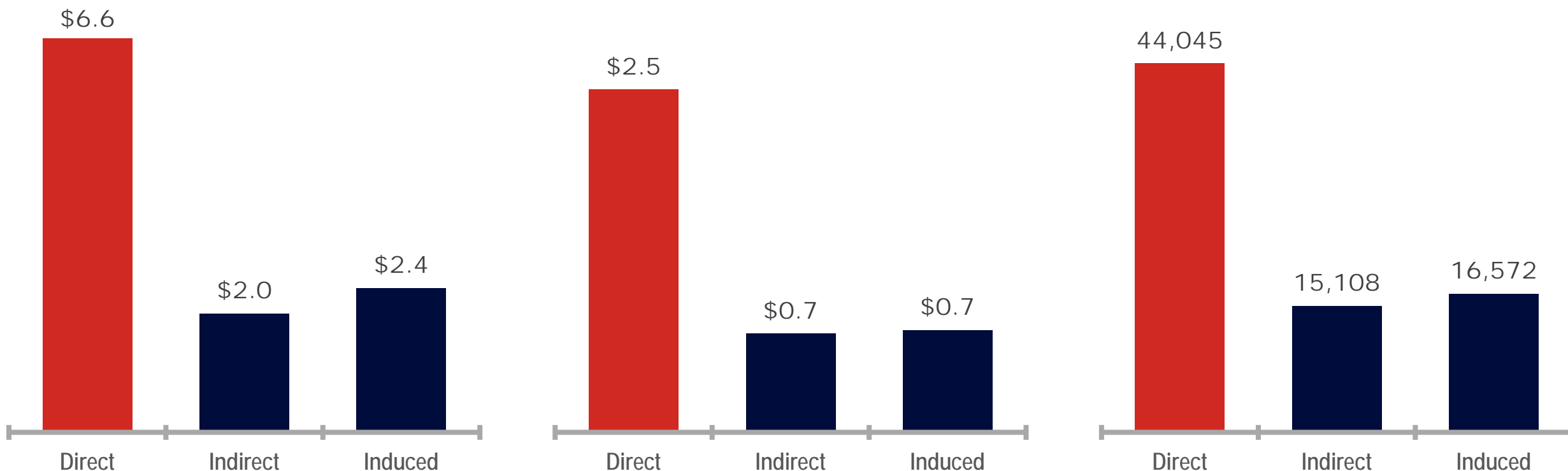
# Economic Impact Analysis

## Residential Construction Industry Impacts (\$ in Billions)

**TOTAL ECONOMIC OUTPUT**  
\$11.0 Billion

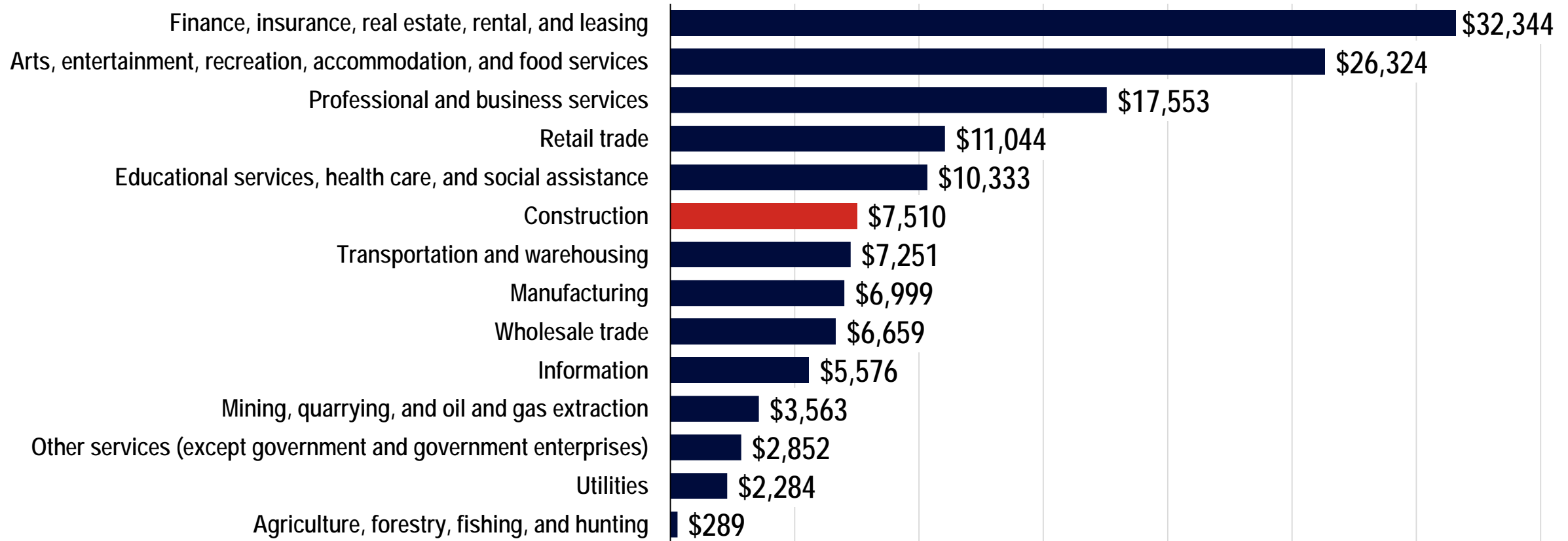
**TOTAL WAGES & SALARIES**  
\$3.9 Billion

**TOTAL EMPLOYMENT**  
75,725 Jobs



# Relative Size of Construction Industry

## Direct Contribution to Nevada GDP



Source: U.S. Bureau of Economic Analysis, Q3 2018

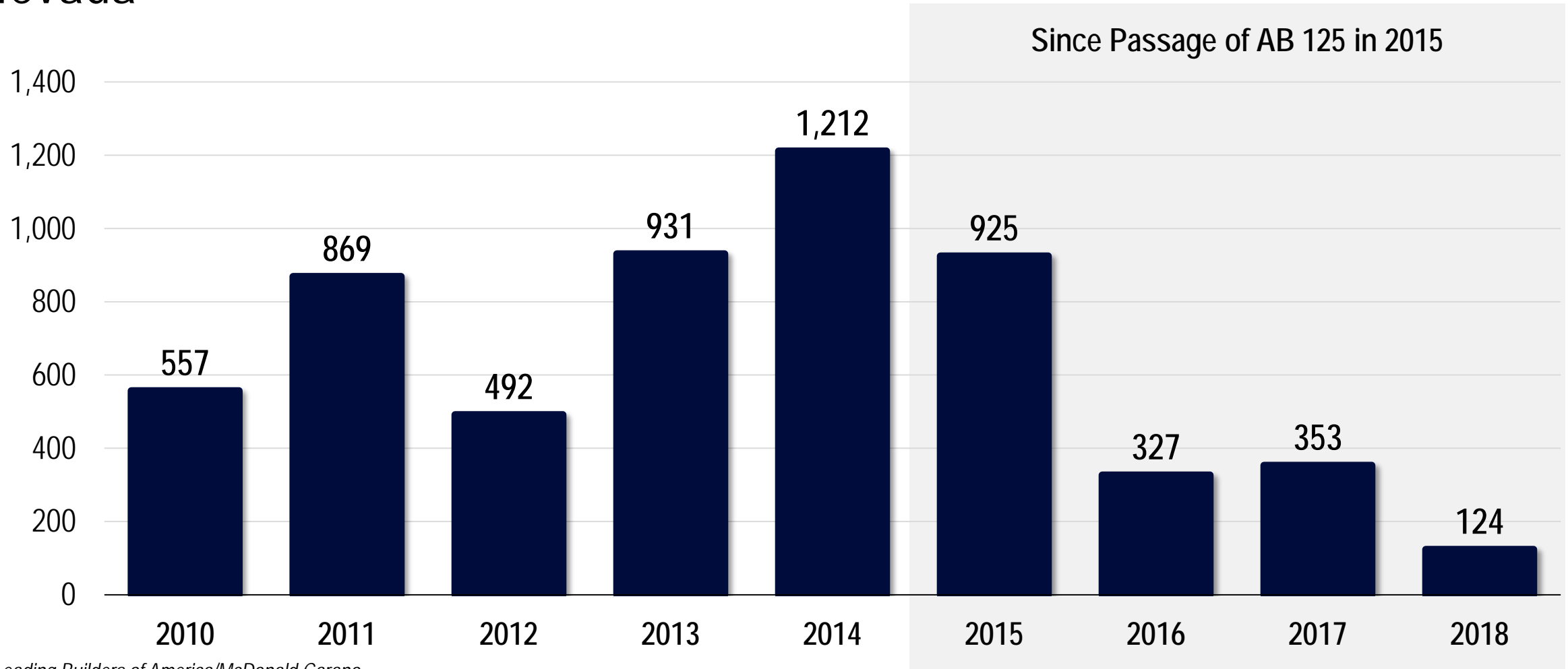
# Impacts of Construction Defect Reforms



# Nevada Homebuilder Survey

<b>General Approach:</b>	To evaluate the impact of construction defect reforms in the state of Nevada, a survey of residential builders operating in the state was conducted. The survey focused on the historical number of NRS Chapter 40 notices filed and the ultimate resolution of those filings.
<b>Participants:</b>	Participating builders included some of the largest national builders and reflected a representative sample of those constructing in Nevada.
<b>Methodology:</b>	Given the confidential nature of litigation-related data, builder construction defect related metrics were collected by the law firm of McDonald Carano to ensure the underlying data remain proprietary. Survey respondents accounted for roughly 35.8 percent of new home closings in Nevada between 2010 and 2018, the period covered by the survey. Their responses were aggregated and extrapolated to reach the estimates of industry-wide impacts within the state of Nevada.
<b>Timeline:</b>	Responses were collected during January and February of 2019.
<b>Results:</b>	While there may be variation in the data on a year-to-year basis, the broader trend lines are clear. The data demonstrate the volume and value of construction defect claims has been on a decline since the passage of AB 125 in 2015. Additionally, there has been an increase in the number of attached products being developed in an effort to offer lower-cost housing options for consumers.

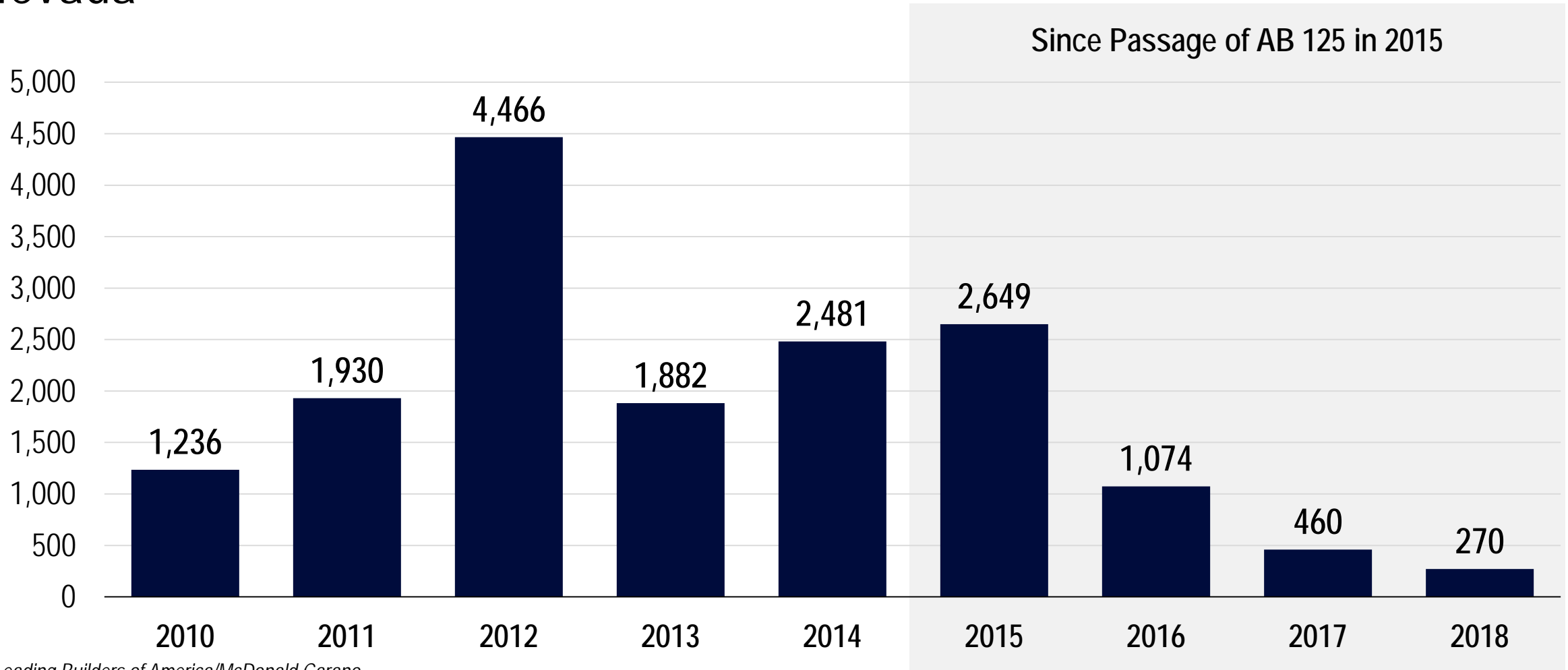
# Number of Chapter 40 Notices Nevada



Source: Leading Builders of America/McDonald Carano

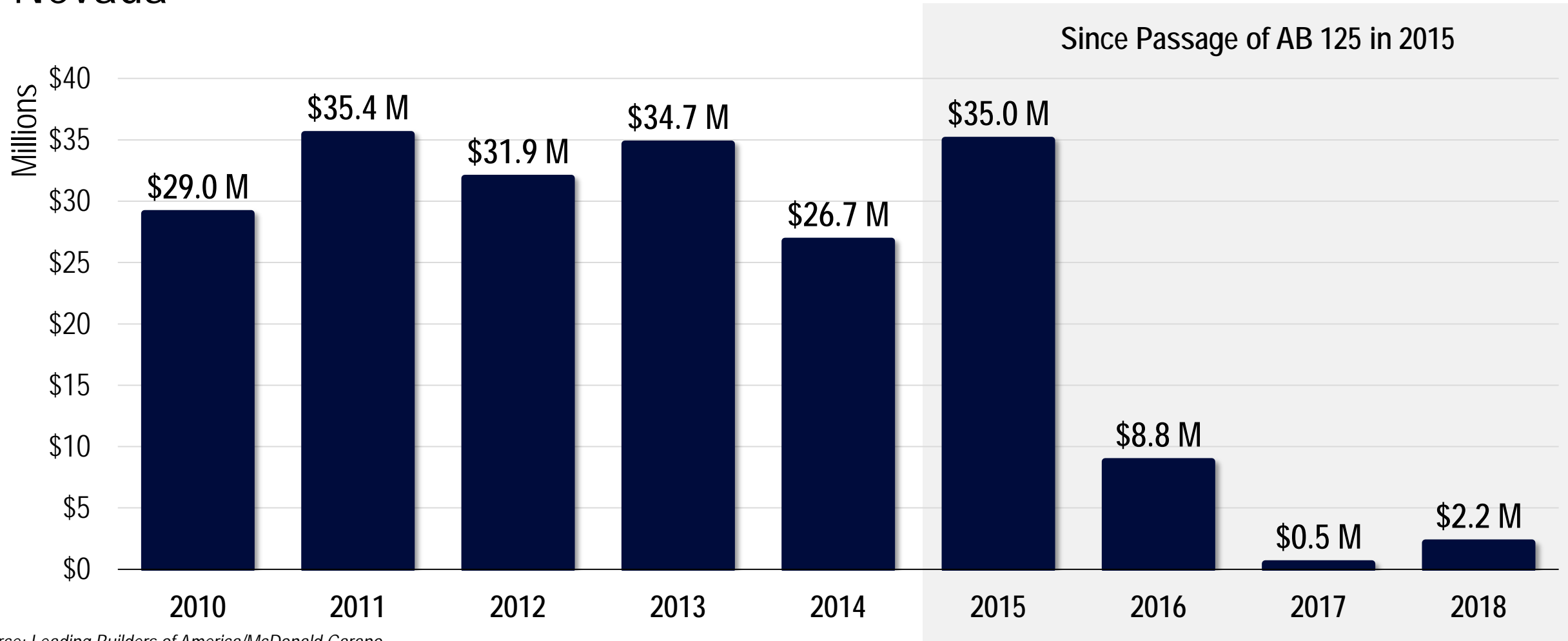
# Number of Homes in Chapter 40 Notices

## Nevada



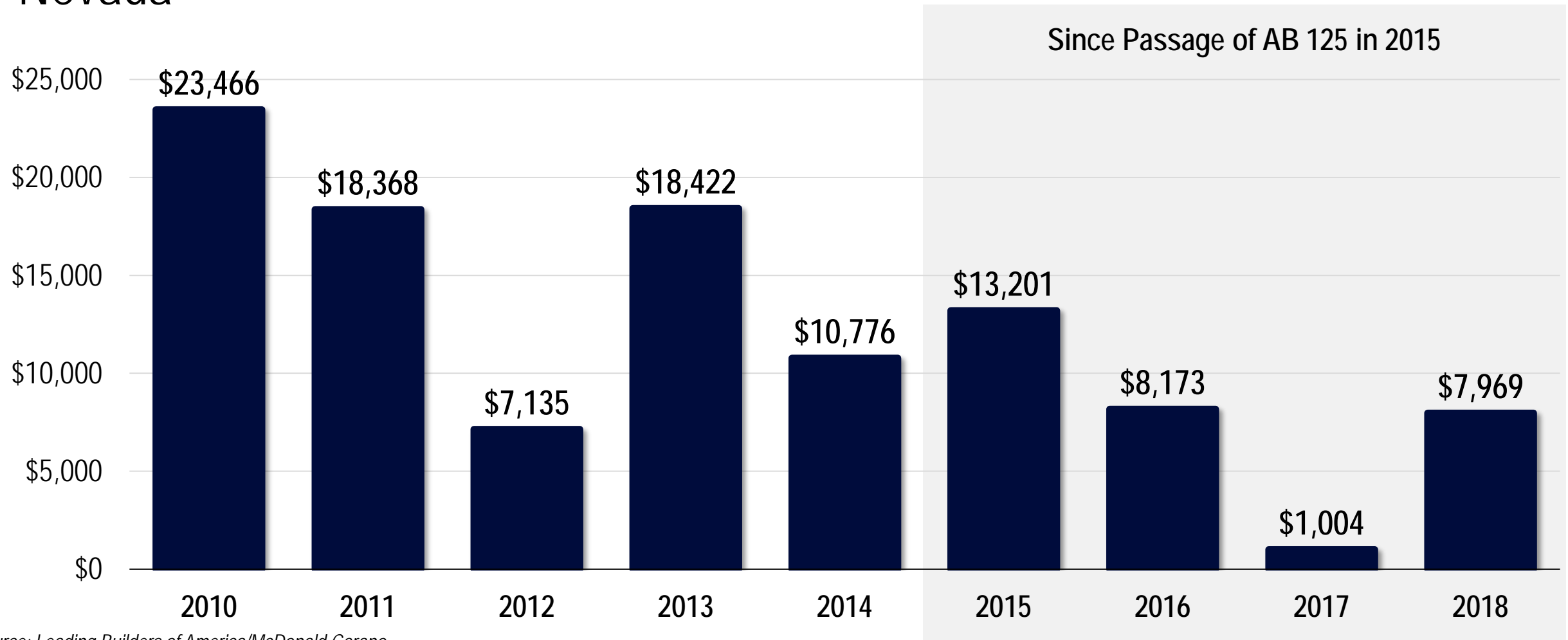
Source: Leading Builders of America/McDonald Carano

# Total Cost to Settle Nevada



Source: Leading Builders of America/McDonald Carano

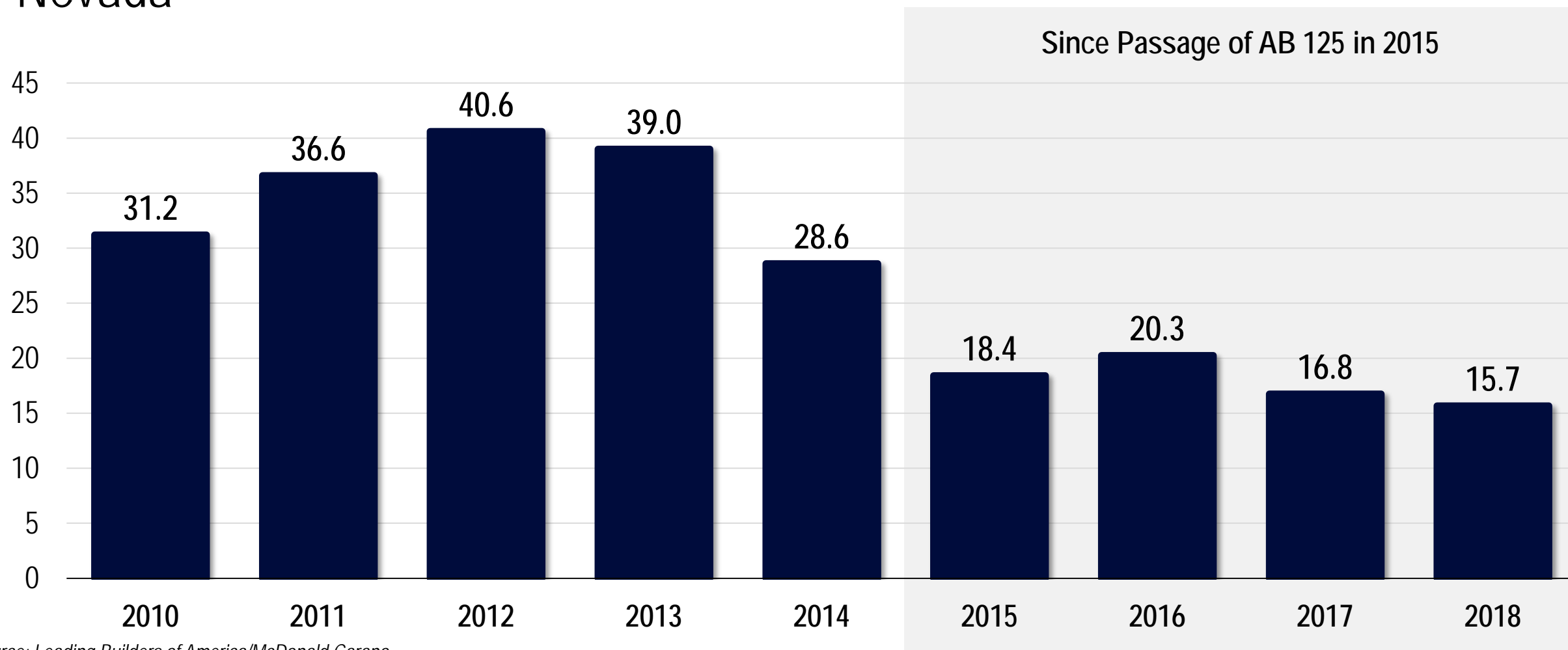
# Average Cost to Settle per Home in Chapter 40 Notice Nevada



Source: Leading Builders of America/McDonald Carano

# Average Time to Settle (Months)

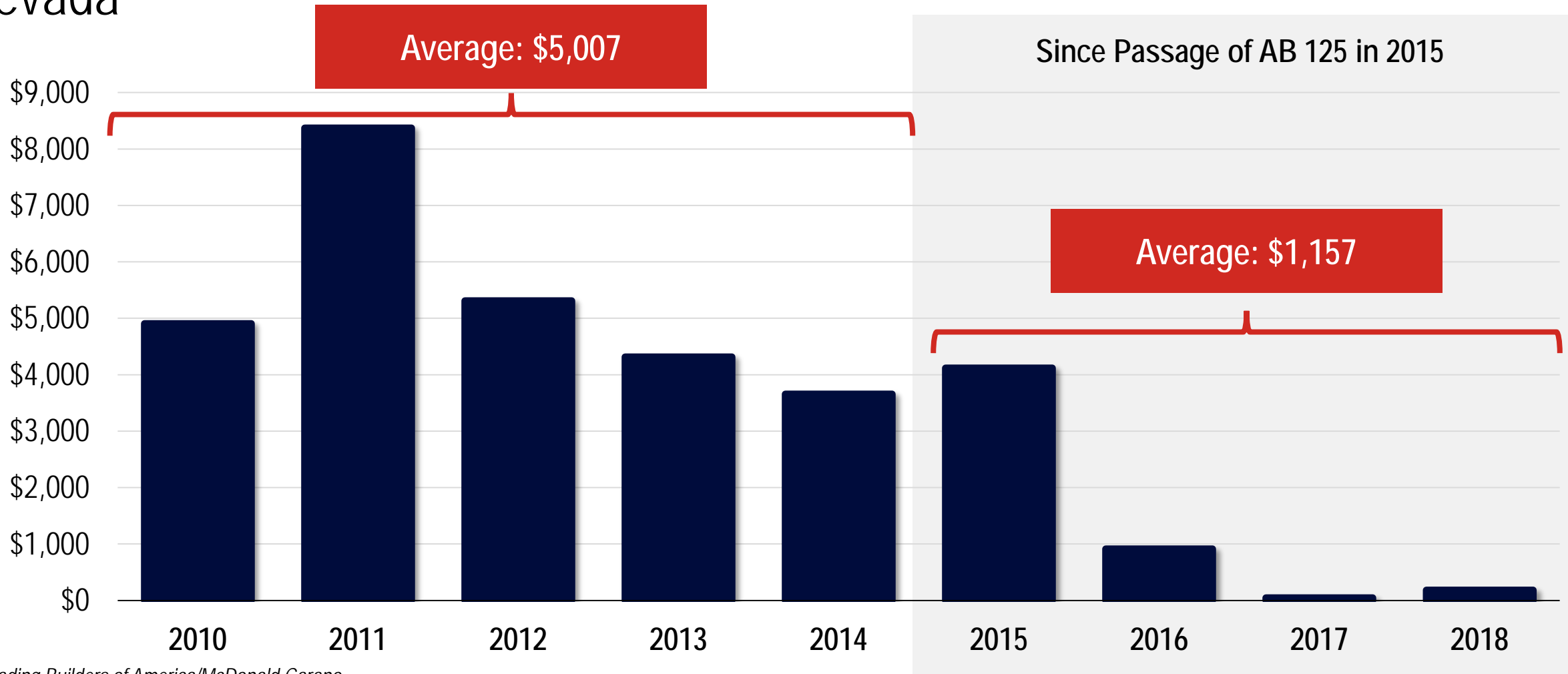
## Nevada



Source: Leading Builders of America/McDonald Carano

# Chapter 40 Settlement Costs per New Home Closing

## Nevada



Source: Leading Builders of America/McDonald Carano



# Nevada's Housing Market

## Housing Affordability and Implications of Construction Defect Reform