CoreLogic®

Special Report: The Role of Housing in the Longest Economic Expansion

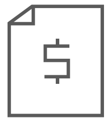
(June 2009 – July 2019 and Counting)

Executive Summary

Just as the development of the railroad or motor vehicles shaped the business cycles of the past, our current business cycle is defined by the democratization of data. The proliferation of computers, advent of the internet and mobile technology have drastically changed how we live, work and access information. In the most recent economic cycle, how we procure information has completely changed with the mass dissemination of data. Technological advancements like this allow businesses to respond to economic shifts effectively and in real-time, contributing to more stable and longer economic cycles.

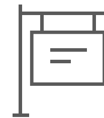
In July 2019, the United States' economic expansion reached 121 months, the longest on record. June 2009 marked the trough of the Great Recession, after which gross domestic product (GDP) and industrial production resumed growth. Since then, the economy has continued to grow. With housing comprising approximately 15% of GDP since 2010, the real estate market is an important indicator of economic health.[1]

This report explores the role and performance of the housing sector during the last 121 months.



The number of homes with negative equity has decreased.

Total percent of homes underwater went from **25.9%** in the first quarter of 2010 to **4.1%** in the first quarter of 2019.



Since 2010, the housing flip rate has increased significantly.

In the first quarter of 2018, the number of properties bought and sold again within a two-year period reached its highest point at **11.4%.**

Total home equity hits new record.

At the end of the first quarter of 2019, total home equity reached **$15.8 trillion**, up from **$6.1 trillion** in the first quarter of 2009.[2] Between the first quarter of 2010 and the first quarter of 2019, the average equity per borrower increased from approximately **$75,000** to approximately **$171,000**.

Strong recovery for home prices and rents.

Since June 2009, home prices and rents have continued to grow. Through May 2019, home prices increased a cumulative **50%** and single-family rents increased **33%** in the United States.

[1] "Housing Share of GDP," Eye on Housing, April 2018
[2] "Financial Accounts of the United States – Z.1," Federal Reserve, June 6, 2019

The Expansion Since 2009: Economics and Policies

A number of economic factors have contributed to the current expansion's longevity. Given the severity of the last recession, the economy began from a low trough point that provided a good runway for growth. Additionally, innovative measures like quantitative easing, stronger capital requirements at financial institutions and additional consumer protections helped buoy the economy.

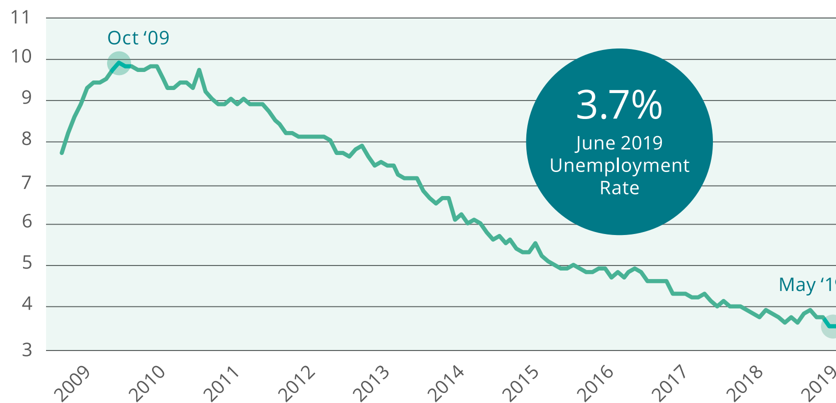
Unemployment and GDP Growth Rates

The unemployment rate, which peaked in October 2009 at 10%, dropped significantly to a 50-year low in May 2019 at 3.6%.[3] Over the past 10 years, the largest drop in unemployment occurred when the average annual rate went from 7.4% in 2013 to 6.2% in 2014. June 2019 marked the 16th consecutive month where the unemployment rate was at or below 4%.[4]

Since 2010, GDP has maintained an annual growth rate between 2.9% and 1.6%. 2015 and 2018 experienced the highest growth rates at 2.9%, as an improving labor market spurred consumption spending in 2015, and the Tax Cuts and Jobs Act boosted growth in 2018.[5]

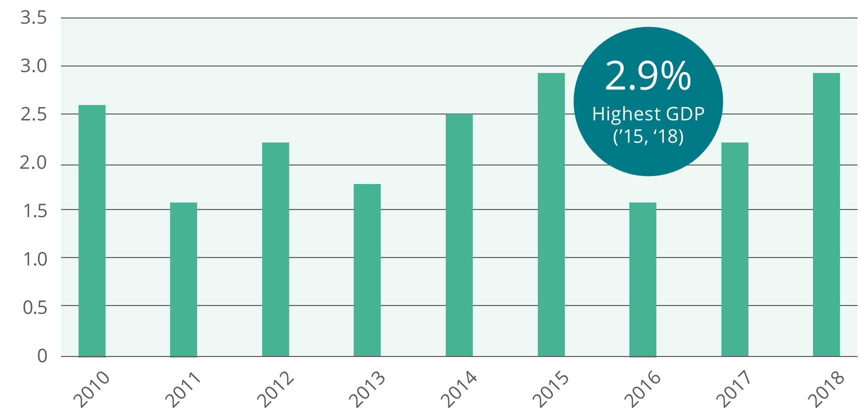
> "During the last nine years, the expansion has created more than 20 million jobs, raised family incomes and rebuilt consumer confidence. The longest stretch of mortgage rates below 5% in more than 60 years has supplemented these factors. These economic forces have driven a recovery in home sales, construction, prices and home equity wealth."
>
> – Frank Nothaft, Chief Economist

Figure 1: Monthly Unemployment Rate



Source: Federal Reserve Bank of St. Louis

Figure 2: GDP Growth Rate



Source: Bureau of Economic Analysis

[3] "Civilian Unemployment Rate," Federal Reserve Bank of St. Louis, June 2019
[4] "Labor Force Statistics from the Current Population Survey," July 2019
[5] "Real Gross Domestic Product," Federal Reserve Bank of St. Louis, June 2019

Ten Years of Technology Advancements and Changing Housing Dynamics

The National Housing Market's Performance During This Economic Expansion Period

Housing has long been associated with wealth creation in the United States. The housing crash resulted in a 33% decline in the CoreLogic Home Price Index (HPI™) between April 2006 and March 2011. Since then, job growth, sound underwriting and an affordable, stable source of mortgage funds have helped the housing economy recover.

Home Equity and Negative Equity Share

In the first quarter of 2010, 25.9% of the total number of mortgaged residential properties in the United States were in negative equity. As the market has improved over the past 10 years, this share has dropped by over 21 percentage points to 4.1% in the first quarter of 2019. The biggest drop (6.2%) occurred between 2012 and 2013 when the share of homes with negative equity went from 22.4% to 15.5%. This can, in part, be attributed to a 10.2% rise in home prices, according to the CoreLogic HPI. Over these two years, the average homeowner gained $35,100 in home equity. Home-price appreciation, paydown of principal and debt cancellation through foreclosure and short sale all contributed to this increase. Since the peak in 2013, the average annual gain per borrower has been slowly decreasing but remains positive. In 2018, the average borrower gained $13,600 in equity.

Total home equity hit a record of $15.8 trillion at the end of the first quarter of 2019, up from $6.1 trillion in the first quarter of 2009. Between the first quarter of 2010 and the first quarter of 2019, the average equity per borrower increased from approximately $75,000 to approximately $171,000.

$13,600
average gain in equity per borrower in 2018.

Table 1: Home Equity and Negative Equity Share

Year	Average Annual Gain (YoY) per Borrower	Negative Equity Share (Annual Average)
2010	N/A	25.3%
2011	-$1,200	24.8%
2012	$3,400	22.4%
2013	$23,500	15.5%
2014	$16,800	11.2%
2015	$11,500	9.0%
2016	$12,000	6.9%
2017	$14,000	5.3%
2018	$13,600	4.3%
2019 Q1	$6,400	4.1%

Source: CoreLogic Q1 2019

"Home prices have increased steadily since 2011, creating record amounts of home equity and putting homeowners in a good position to weather future downturns."

– Molly Boesel, Principal Economist

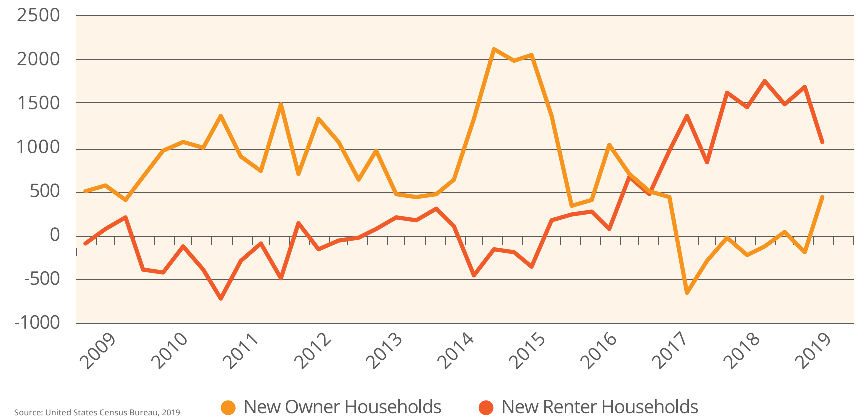
Household Formation and Home Prices

Between the third quarter of 2009 and the fourth quarter of 2012, the number of owner households in the United States decreased by 2.7 million while renter households increased by 12.9 million. During this time, the CoreLogic HPI increased by 1.8% while its Single-Family Rent Index (SFRI) increased by 7.1%. After the recession and resulting loss in home value, the foreclosure crisis led to an influx of previous homeowners to the rental market, correlating with the drop in negative equity share. Additionally, many first-time buyers delayed homeownership after the recession, choosing to rent for longer.

Inventory constraints prevented many homeowners from entering the market. Between the third quarter of 2014 and the second quarter of 2015, homeowner households decreased by 1.1 million while the rental market soared adding 7.5 million tenant households.[6]

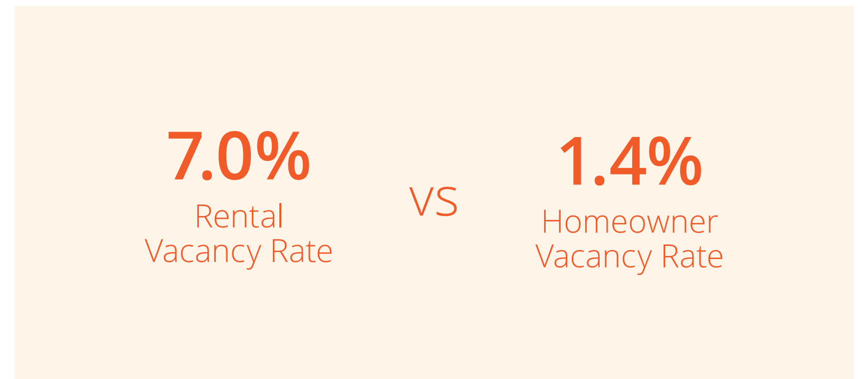
In the first quarter of 2019, 1.1 million new owners joined the housing economy, while the number of renters increased by only 458,000, following a decrease of 167,000 in the last quarter of 2018. This may correlate with millennial buyers – those born from 1981 to 1996 – finally entering the homeowner market. Millennials made up the largest cohort for finance home purchases in 2018, accounting for 44% of home-purchase mortgage applications.

Figure 3: Net Household Formations: Owners vs. Renters



Source: United States Census Bureau, 2019

Residential Vacancies and Homeownership First Quarter 2019



Source: United States Census Bureau, 2019

[6] "The CRE 2016-2017 Top Ten Issues Affecting Real Estate," The Counselors of Real Estate

Cost of Labor and Materials

While there has been a shift from renting to owning, lack of supply continues to drive up home prices, adding to affordability concerns. In recent years, increasing materials and labor costs have compounded constraints on supply. In June 2018, the cost of materials was up 7.3% year over year after the United States imposed steel and aluminum tariffs in March 2018. Meanwhile, labor costs continue to rise (3.2% year over year in March 2019) because of the low supply of construction workers.

7.3% YoY

change in cost of materials after U.S. imposed steel and aluminum tariffs in March of 2018.

3.2% YoY

change in cost of labor during the same period.

Table 2: Change in Cost of Labor and Materials

Year	Jun-09	Jun-10	Jun-11	Jun-12	Jun-13	Jun-14	Jun-15	Jun-16	Jun-17	Jun-18	Mar-19
Labor Chg/yr	5.7%	2.5%	2.4%	2.4%	1.2%	2.3%	2.2%	1.1%	2.2%	2.1%	3.2%
Materials Chg/yr	-11.1%	6.8%	6.4%	4.0%	3.8%	0%	1.9%	-5.5%	5.8%	7.3%	0%

Source: CoreLogic April 2019

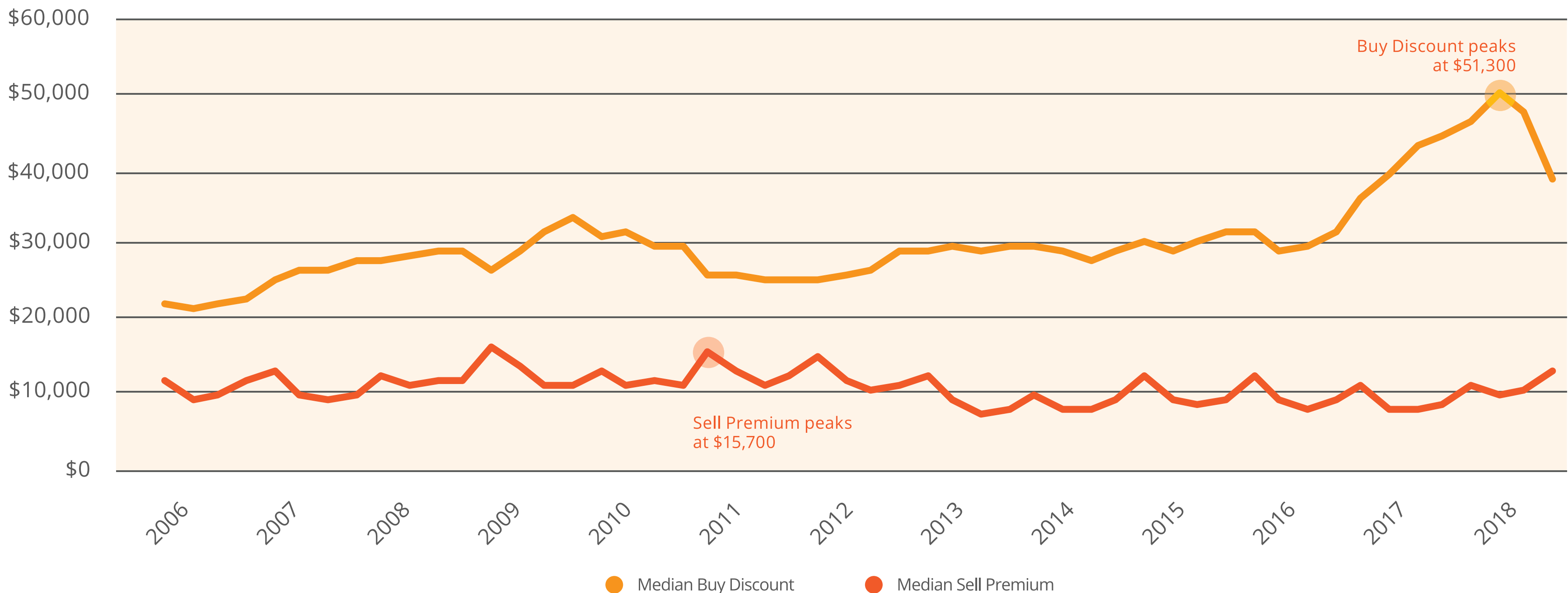
Home Flipping

Speculation on the housing market led to the last recession with many consumers purchasing homes in hopes of turning a quick profit. Home flipping – the act of buying a property with the intent to sell in a short period of time for a profit – reached its peak in the first quarter of 2006 when 11.3% of homes on the market were flipped. After the recession, the two-year flip rate reached its lowest point in the third quarter of 2010 (4.9%). Since then, the flip rate has increased, reaching its highest point in the first quarter of 2018 at 11.4%.

The buy discount for flipped homes – how much the buyer paid below market value – was $22,700 in the first quarter of 2006, while the sell premium – the amount the home resold for above market value – was $12,100. The buy discount for flipped homes peaked in the second quarter of 2018 at $51,300 after steep growth from the third quarter of 2016. The sell premium has remained relatively stable, peaking at $15,700 in the first quarter of 2011.

This suggests flippers are speculating less on the housing market. Instead, they are making flipping investments more sustainable. Additionally, the age of homes and the type of buyers differ greatly from the last recession. Instead of novices, professionals are flipping older homes with the median age of the homes being 39 years.

Figure 4: Home Flipping Buy and Sell Prices Over Time



Source: CoreLogic April 2019

State and Metro Level Housing Analysis During This Economic Expansion Period

Home price growth began falling just before the start of the recession and continued to decline at a more rapid pace throughout 2008 and 2009. In 2009, national home prices dropped 11.2%. Only two states, North Dakota and South Dakota, experienced an annual average growth in 2009 at 2.4% and 0.2%, respectively. Nevada, which experienced the highest year-over-year home price growth rates during the last expansion, fell into rapid decline during and after the recession. In 2009, Nevada home prices dropped 25.5%, followed by Arizona (-21.3%), Florida (-19.7%) and California (-14.5%).

Figure 5: Map of Select States

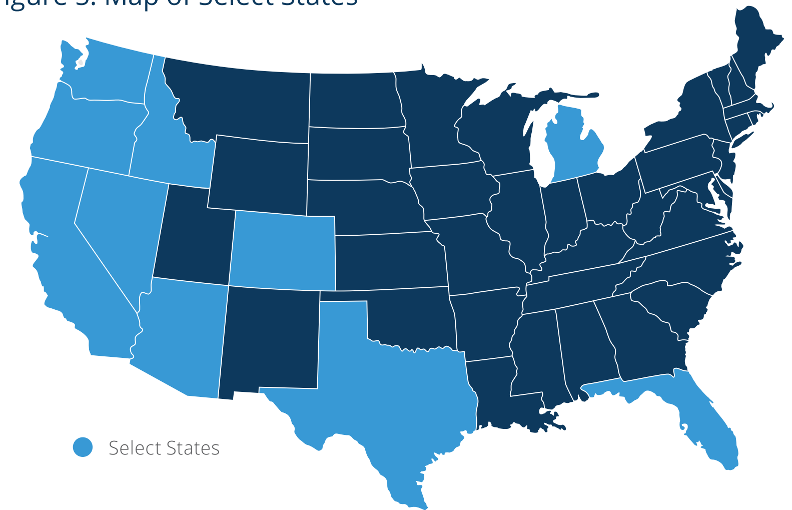


Table 3: Annual Average Change in HPI, Select States

	Arizona	California	Colorado	Florida	Idaho	Michigan	Nevada	Oregon	Texas	Washington
2008	-21.8%	-22.0%	-5.2%	-21.8%	-11.3%	-16.5%	-25.5%	-6.8%	-4.0%	-6.1%
2009	-21.3%	-14.5%	-3.1%	-19.7%	-14.0%	-14.0%	-25.5%	-11.2%	-3.1%	-10.1%
2010	-5.7%	2.0%	-0.7%	-6.0%	-10.4%	-2.2%	-7.3%	-5.9%	-0.9%	-4.9%
2011	-5.3%	-3.4%	-2.1%	-2.9%	-5.3%	-0.2%	-8.3%	-5.3%	-0.3%	-6.0%
2012	12.8%	5.1%	4.7%	6.2%	9.4%	7.0%	5.5%	2.8%	4.2%	1.6%
2013	15.2%	18.0%	8.5%	11.2%	12.0%	11.8%	22.2%	11.2%	7.4%	9.2%
2014	6.5%	10.8%	7.7%	8.4%	5.4%	9.6%	11.6%	8.1%	7.4%	7.5%
2015	4.9%	7.3%	9.7%	7.3%	5.6%	6.7%	7.7%	8.2%	6.2%	8.0%
2016	5.8%	6.8%	9.0%	7.4%	7.5%	6.6%	7.1%	10.2%	5.7%	10.2%
2017	6.6%	7.2%	8.3%	6.5%	8.8%	8.0%	9.0%	8.6%	5.5%	11.6%
2018	7.3%	7.4%	7.6%	6.0%	11.7%	7.2%	12.2%	6.6%	5.4%	10.0%
2019	7.0%	4.9%	6.3%	5.3%	11.3%	6.3%	10.4%	5.4%	4.6%	6.6%

Source: CoreLogic HPI released July 2, 2019

Home prices in California grew considerably from 2013 to 2018. However, affordability issues in the state have hampered growth rates with the average annual home price dropping from 7.4% in 2018 to 4.9% in 2019. Metros in California also had the lowest percentage of millennials applying for a mortgage. Home prices in other western states like Oregon, Idaho, Colorado, Nevada and Washington have each experienced robust growth since 2013.

Since 2014, Connecticut has been one of the slowest-appreciating states with home price growth varying from 2.4% in 2014 to 0.9% in 2019. Similarly, New York and Alaska have both experienced modest growth over the past few years.

Population growth rates mirror the home price growth rates with Idaho and Nevada becoming the fastest-growing states between July 2017 and July 2018, increasing by 2.1%. Similarly, New York, Connecticut and Alaska were three of the nine states with decreases in population at that time.[7]

As of May 2019, when the U.S. unemployment rate was 3.6%, Nevada and New York's unemployment rates were above the national average at 4% each. Idaho had the fifth lowest unemployment rate in the nation at 2.8%, while Connecticut's unemployment rate was slightly above the national average at 3.8%. Alaska had the highest unemployment rate in the nation at 6.4% and Vermont had the lowest at 2.1%.

Historical Share of Overvalued Metros

According to CoreLogic Market Condition Indicators (MCI), 32.4% of the 392 metro areas analyzed were overvalued in May 2019. This compares to 70.2% of overvalued markets in September 2006 when the share of overvalued homes peaked during the last expansion. February 2012 experienced the lowest share of overvalued homes when just 7.9% of homes were considered overvalued. Since then, the largest increase in the share of overvalued metros occurred between 2012 and 2013, when the average annual share jumped from 9.9% to 15.8%.

In May 2019, of the top 10 metros for millennial buyers, four were undervalued (Pittsburgh; Rochester, New York; Wichita, Kansas and Grand Rapids, Michigan), five were at value (Buffalo, New York; Milwaukee; Albany, New York; Provo, Utah and Des Moines, Iowa) and one was overvalued (Salt Lake City). These numbers confirm the millennial share of homebuyers is higher in more affordable markets.

The CoreLogic MCI analysis categorizes home prices in individual markets as undervalued, at value or overvalued, by comparing home prices to their long-run, sustainable levels, which are supported by local market fundamentals (such as disposable income).

Figure 6: Historical Share of Metro Areas Considered "Overvalued"

Source: CoreLogic July 2019

[7] "Nevada and Idaho Are the Nation's Fastest-Growing States," United States Census Bureau, December 2018

When Could a Recession Start and How Severe Would It Be?

With the unemployment rate at or near a 50-year low, inflation rates below the Federal Reserve Board's 2% target and strong GDP growth (3.1%) in the first quarter of 2019, the current economic outlook appears positive.

However, as the economy continues to progress, concerns over an imminent recession have been rising. The 10-Year Treasury Yield dropped to roughly 2% in June 2019 from 3.2% in November 2018, a sign that the bond market fears a slowdown.[8] Additionally, the stock market has experienced some bumps in the past year with two corrections (a decline of 10% or more in the Standard & Poor's 500 Index) occurring in the past 15 months.

Experts have also hinted to a likely recession. Forty-nine percent of the respondents in the Wall Street Journal's Economic Forecasting Survey expect a recession to occur in 2020 while 36.6% expect one the following year.[9] Similarly, the NABE Outlook Survey panelists believe the U.S. economy has reached an inflection point, forecasting real GDP growth to slow from 2.9% in 2018 to 2.4% in 2019, and to 2% in 2020.[10]

In the housing economy, while home prices are still growing, they are doing so at a slower pace. Home prices increased just 3.6% year over year in May 2019, down from 4.1% in January. Additionally, housing starts in May 2019 underperformed, dropping 0.9% below the revised April estimate.[11] Still, some signs are positive. The overall mortgage delinquency rate reached a record low in April 2019 at 3.6%. With mortgage rates currently at a two-year low, providing much needed improvement in mortgage affordability for prospective home buyers, the CoreLogic HPI Forecast™ expects a moderate, 5.6% acceleration in annual home price growth from June 2019 to June 2020.

"We expect the housing market to enter a normalcy phase over the next 24 months. With prices neither rising too fast nor too slow, and with a growing stream of young households looking to buy homes over the next two decades, the long-term view looks healthy."

– Ralph McLaughlin, Deputy Chief Economist

[8] "Fed Finds Itself in a 'Tough Spot' as 10-Year Treasury Yield Slides to a 21-Month Low," MarketWatch, June 2019
[9] "Q&A: Recession Timing," Wall Street Journal, 2019
[10] "Economic Momentum Moderates in 2019, with Trade Policy and Global Slowdown as Greatest Downside Risks," National Association for Business Economics, March 2019
[11] "United States Housing Starts," Trading Economics, June 2019

Methodology

The data in this report represents home price activity reported through May 2019 and home equity data through the first quarter of 2019.

CoreLogic Home Equity Data: The amount of equity for each property is determined by comparing the estimated current value of the property against the mortgage debt outstanding (MDO). If the MDO is greater than the estimated value, then the property is determined to be in a negative equity position. If the estimated value is greater than the MDO, then the property is determined to be in a positive equity position. The data is first generated at the property level and aggregated to higher levels of geography. CoreLogic data includes more than 50 million properties with a mortgage, which accounts for more than 95% of all mortgages in the U.S. CoreLogic uses public record data as the source of the MDO, which includes both first-mortgage liens and second liens, and is adjusted for amortization and home equity utilization in order to capture the true level of MDO for each property. The calculations are not based on sampling, but rather on the full data set to avoid potential adverse selection due to sampling. The current value of the property is estimated using a suite of proprietary CoreLogic valuation techniques, including valuation models and the CoreLogic Home Price Index (HPI). Only data for mortgaged residential properties that have a current estimated value are included. There are several states or jurisdictions where the public record, current value or mortgage data coverage is thin and have been excluded from the analysis. These instances account for fewer than 5% of the total U.S. population.

The CoreLogic HPI™ is built on industry-leading public record, servicing and securities real-estate databases and incorporates more than 40 years of repeat-sales transactions for analyzing home price trends. Generally released on the first Tuesday of each month with an average five-week lag, the CoreLogic HPI is designed to provide an early indication of home price trends by market segment and for the "Single-Family Combined" tier, representing the most comprehensive set of properties, including all sales for single-family attached and single-family detached properties. The indices are fully revised with each release and employ techniques to signal turning points sooner. The CoreLogic HPI provides measures for multiple market segments, referred to as tiers, based on property type, price, time between sales, loan type (conforming vs. non-conforming) and distressed sales. Broad national coverage is available from the national level down to ZIP Code, including non-disclosure states.

CoreLogic Market Condition Indicators (MCI) analysis categorizes home prices in individual markets as undervalued, at value or overvalued. The MCI analysis defines an overvalued housing market as one in which home prices are at least 10 percent higher than the long-term, sustainable level. It defines an undervalued housing market as one in which home prices are at least 10 percent below the sustainable level.

The CoreLogic Single-Family Rent Index (SFRI): The single-family rental market accounts for half of the rental housing stock, yet unlike the multifamily market, which has many different sources of rent data, there are minimal quality adjusted single-family rent transaction data. The CoreLogic Single-Family Rent Index (SFRI) serves to fill that void by applying a repeat pairing methodology to single-family rental listing data in the Multiple Listing Service. CoreLogic constructed the SFRI for over 70 Core Based Statistical Areas (CBSAs)—including 40 CBSAs with four value tiers—and a national composite index.

Labor and Materials Cost: CoreLogic developed the industry-recognized standard for estimating reconstruction costs referred to as the "Total Component Methodology." This methodology applies current, localized labor and building materials prices to create a reconstruction cost estimate that is unique to a specific home. Price research by CoreLogic represents the most basic building elements used in the construction process. This data is collected using our extensive network of building material suppliers, labor organizations and automatic data feeds. Data sources also include government statistics, procured proprietary data, as well as published data and information from major trade organizations. To expand the number of labor data points, third-party data sources are used to augment the research collected from CoreLogic researchers and validate findings.

House Flipping: Home flips are calculated using CoreLogic's national level data set on housing transactions between 2000 and 2018 for the U.S. and the one hundred largest metropolitan areas. A home flip is defined as a sale of a property which had previously been sold within 24 months prior.

About CoreLogic

CoreLogic (NYSE: CLGX), the leading provider of property insights and solutions, promotes a healthy housing market and thriving communities. Through its enhanced property data solutions, services and technologies, CoreLogic enables real estate professionals, financial institutions, insurance carriers, government agencies and other housing market participants to help millions of people find, acquire and protect their homes. For more information, please visit www.corelogic.com.

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