



GREATER HOUSTON
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Making Houston Greater.

HOUSTON ECONOMIC HIGHLIGHTS

2019

December 2019



2019 Houston Economic Highlights was compiled by the research team of Greater Houston Partnership, including Elizabeth Balderrama, Patrick Jankowski, Roel Gabe Martinez, Josh Pherigo, Berina Suljic Cologlu and Nadia Valliani with assistance from our intern, Bill Sanders. This publication was designed by Marc Keosayan and Suzanne Morgan.

Cover image: Bryan Malloch

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Houston Economic Highlights, a publication of the Greater Houston Partnership, is designed to impart a brief understanding of the changes in Houston's economy over the past decade.

Each page is devoted to a single economic indicator or a few related indicators. In most cases, a key point and a few paragraphs that amplify the data appear on one page, and a table with historical data follows on the next.

HOUSTON IN PERSPECTIVE

PEOPLE

The nine-county Houston MSA had a population of 6,997,384 residents as of July 1, 2018, according to estimates by the U.S. Census Bureau. If metro Houston were a state, it would have the 15th largest population in the U.S., behind Arizona (7,171,646) and ahead of Massachusetts (6,902,149) and Tennessee (6,770,010).

Harris County had a population of 4,698,619 residents as of July 1, 2018, according to estimates by the U.S. Census Bureau. If Harris County were a state, it would have the 25th largest population in the U.S., behind Alabama (4,887,871) and ahead of Louisiana (4,659,978) and Kentucky (4,468,402).

The City of Houston had a population of 2,325,502 residents as of July 1, 2018, according to estimates by the U.S. Census Bureau. If the city were a state, it would rank 36th in population in the U.S., behind Kansas (2,911,505) and ahead of New Mexico (2,095,428) and Nebraska (1,929,268).

Among the nation's metropolitan areas, the Houston MSA ranked sixth in percentage of metro population that is foreign-born (23.6 percent), according to the Census Bureau's 2018 American Community Survey.

ECONOMY

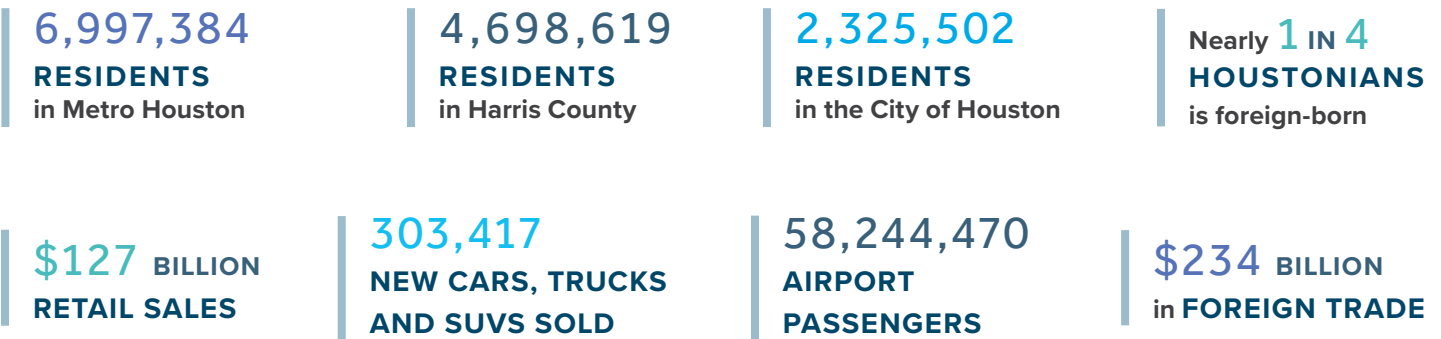
The U.S. Bureau of Economic Analysis estimates metro Houston's Gross Domestic Product (GDP) at \$490.1 billion in '17. If Houston were a state, its economy would rank 15th, after Michigan (\$505.6 billion) and ahead of Maryland (\$394.3 billion).

If Houston were an independent nation, the region would have the 26th largest economy in the world, placing it behind Belgium (\$495.8 billion) and ahead of Thailand (\$455.3 billion).

Selected key economic indicators for '18:

- The Houston market posted \$127 billion in retail sales, an average of \$241,000 in sales every minute.
- Houston MSA automobile dealers sold 303,417 new cars, trucks and SUVs, an average of one every 1.7 minutes.
- The Houston Airport System handled 58,244,470 passengers, an average of 111 passengers per minute.
- The Houston-Galveston Customs District handled \$234.0 billion in foreign trade, an average of \$445,200 in trade every minute.

IN 2018



AREA

The nine-county **Houston - The Woodlands - Sugar Land Metropolitan Statistical Area (MSA)** covers 9,444 square miles, an area larger than five states, including New Hampshire, New Jersey, Connecticut, Delaware and Rhode Island.

Harris County covers 1,778 square miles, enough space to fit the cities of Austin, Boston, Chicago, Dallas, New York and Seattle with room to spare.

At 665 square miles, the City of Houston is larger than the cities of Chicago, Dallas, Los Angeles, New York, Phoenix and San Diego.

9,444
SQUARE
MILES

6,997,384
RESIDENTS

\$490.1
BILLION GDP

9-COUNTY HOUSTON MSA



GEOGRAPHY FOR THE DATA IN THIS PUBLICATION

Metropolitan statistical areas are geographic delineations defined by the Office of Management and Budget for use by federal statistical agencies in collecting, tabulating and publishing federal statistics. These geographic delineations change over time, with the most recent change occurring in March 2013.

This publication contains data based on both of the 2009 and 2013 delineations for the Houston MSA, depending on the source. Where possible, every effort was made to revise data to reflect the new nine-county Houston MSA.

2009 MSA DELINEATION FOR THE HOUSTON REGION:

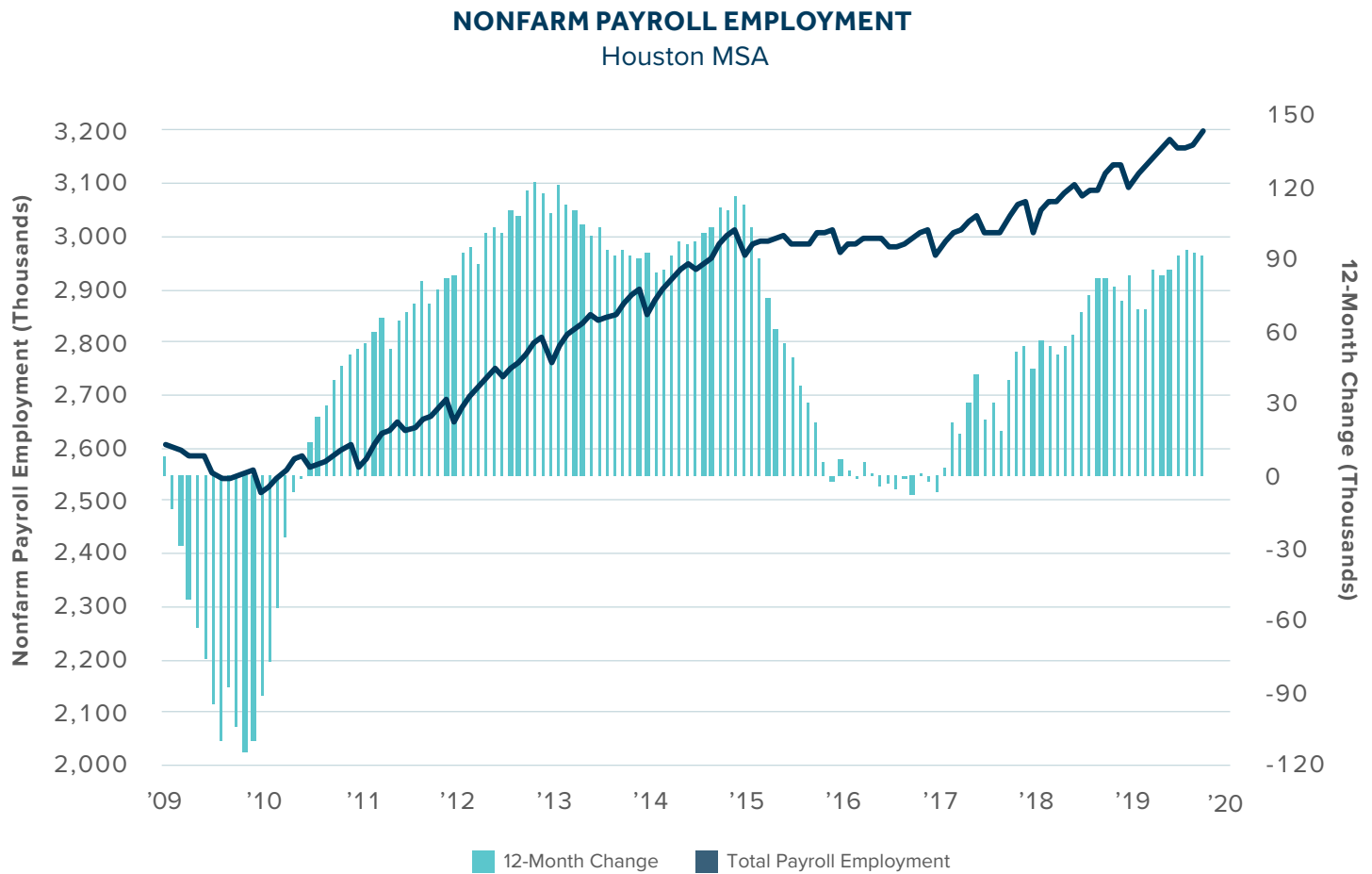
Houston - Sugar Land - Baytown Metropolitan Statistical Area (MSA) contains 10 counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, San Jacinto and Waller.

2013 MSA DELINEATION FOR THE HOUSTON REGION:

Houston - The Woodlands - Sugar Land Metropolitan Statistical Area (MSA) contains nine counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller.

PAYROLL EMPLOYMENT

Nonfarm payroll employment reached a new peak in October '19.



Source: Texas Workforce Commission, not seasonally adjusted

- The Texas Workforce Commission reports that nonfarm payroll employment topped 3,202,100 jobs in October '19, a record for the region. That also represents an increase of 80,400 jobs, or 2.6 percent, from October '18.
- Following the Great Recession years ('08 – '09), Houston entered a period of rapid growth until the energy sector went into a steep decline in January '15. Despite energy sector job losses, other sectors continued to grow, helping to offset the losses in oil and gas. Since October '17, Houston has renewed its job growth, with net average monthly gains of 6,800 jobs.
- Houston's resilient employment indicates that while oil is still important, it no longer determines the region's fate. Houston's ties to the U.S. and global economies are equally as important as its ties to the oil and gas industry.

PAYROLL EMPLOYMENT

Houston Metropolitan Statistical Area (MSA)

NONFARM PAYROLL EMPLOYMENT

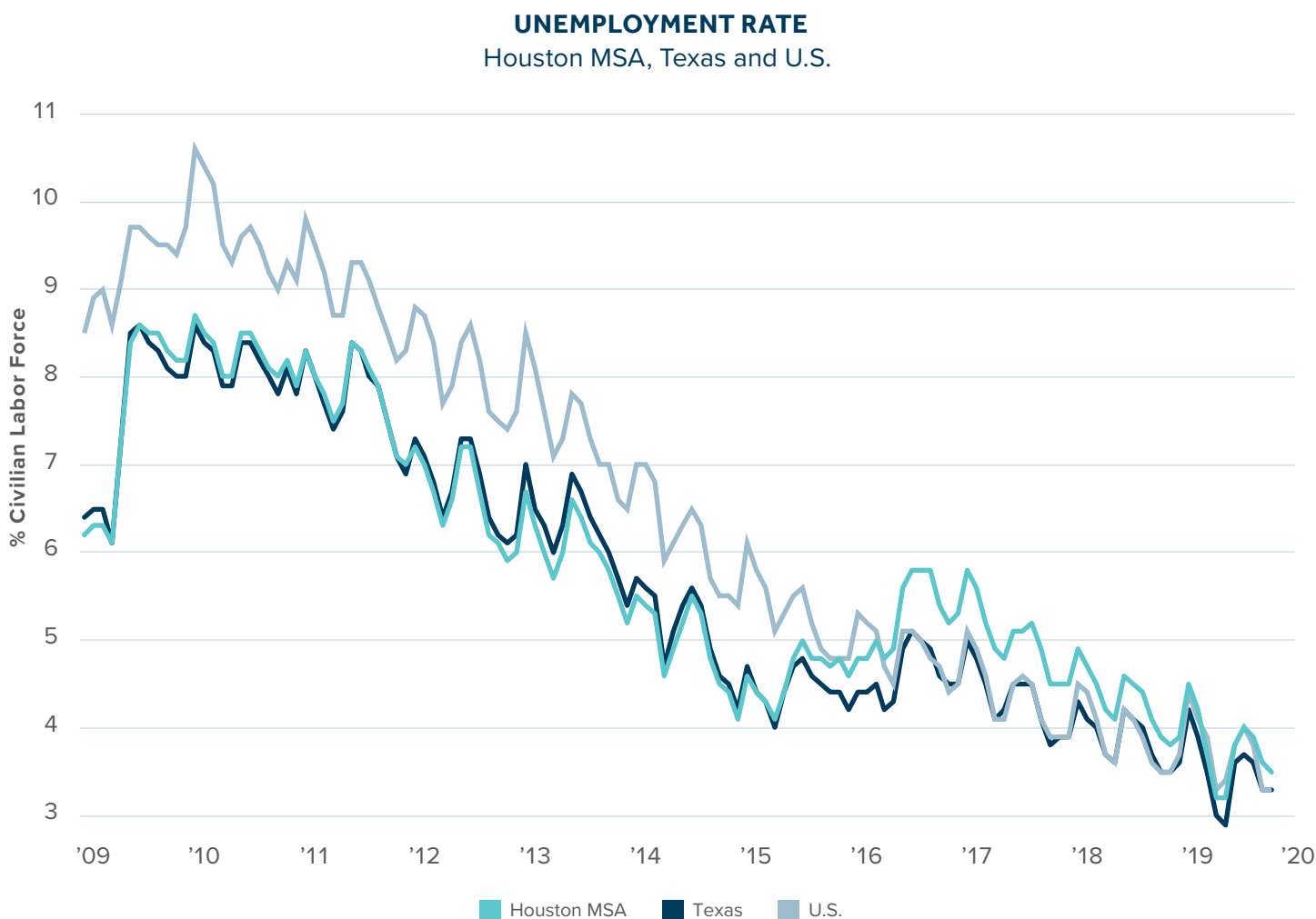
Year-End

Year	Nonfarm Payroll Employment	Change from Prior Year
2009	2,557,500	-110,500
2010	2,608,000	50,500
2011	2,690,900	82,900
2012	2,808,400	117,500
2013	2,898,400	90,000
2014	3,015,100	116,700
2015	3,012,600	-2,500
2016	3,010,200	-2,400
2017	3,064,400	54,200
2018	3,137,700	73,300
12-month total ending Oct 2019	3,202,100	80,400

Source: Texas Workforce Commission, not seasonally adjusted

UNEMPLOYMENT RATE

Houston's unemployment rate fell to 3.5 percent in October '19.



Source: Texas Workforce Commission, not seasonally adjusted

- Houston's unemployment rate was 3.5 percent in October '19, down from 3.6 percent last month and 3.9 percent a year ago. Texas' unemployment rate was 3.3 percent in October '19, down from 3.5 percent in both October and November '18. The U.S. rate was also 3.3 percent in October '19, unchanged from last month and down from 3.5 percent in October '18. The rates are not seasonally adjusted.
- Houston's unemployment rate remained relatively low through the energy downturn. It reached a high of 5.8 percent in January '17 but has since trended down.

Subsequent to the unemployment rate's recent peak, the size of the civilian labor force has been trending upwards, gaining 232,369 jobs since January '17.

- Houston's unemployment rate tracked below the U.S. rate for nearly a decade from December '06 to early '16. During much of this period, the region's unemployment rate was below the national rate by at least one percentage point. Since April '16, Houston's unemployment rate has generally tracked above the national rate.

UNEMPLOYMENT RATE

Unemployment rate for Houston Metropolitan Statistical Area (MSA), Texas and the U.S.

PERCENT OF UNEMPLOYED CIVILIAN LABOR FORCE

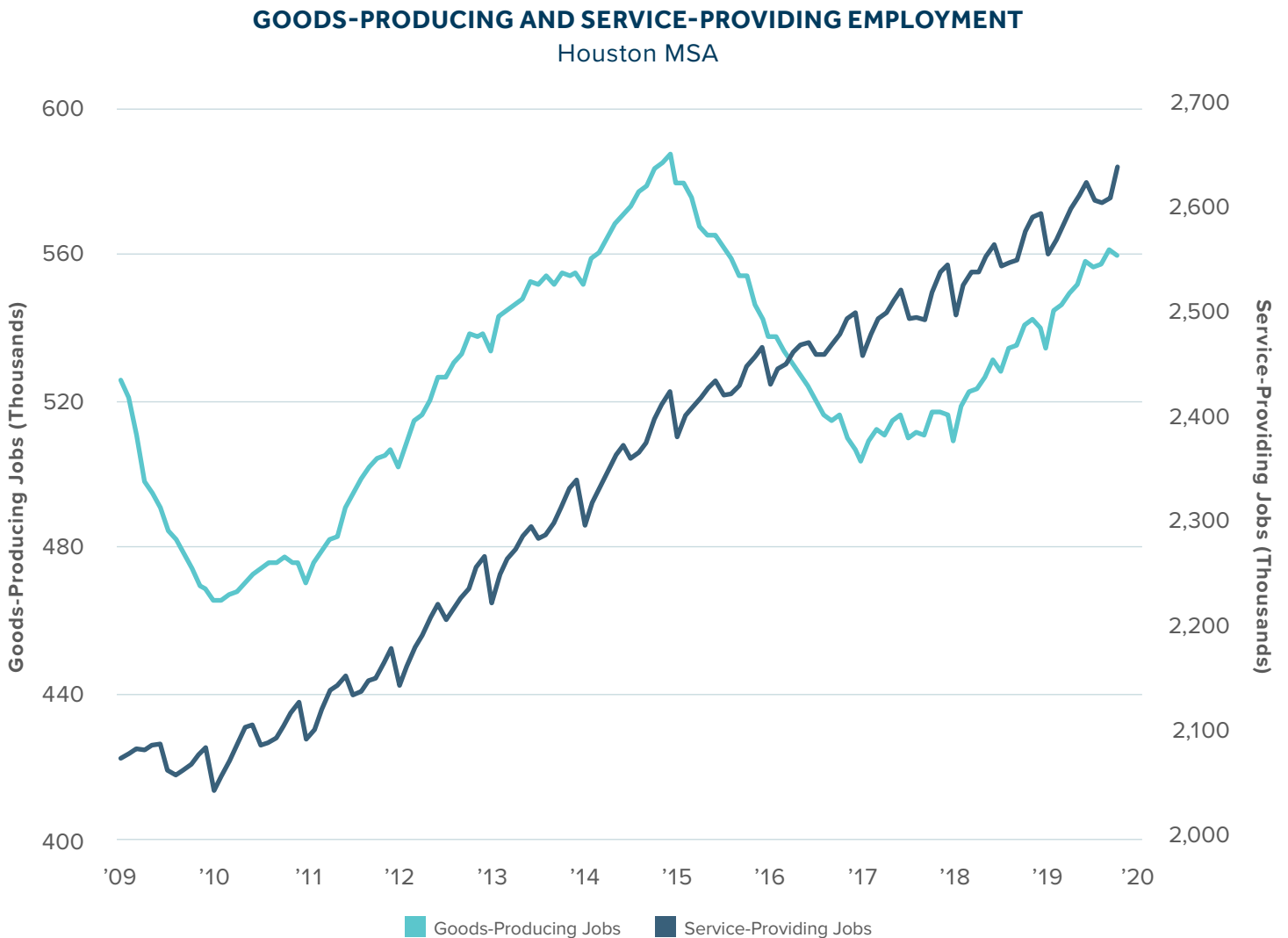
Annual Averages

Year	Houston MSA	Texas	U.S.
2009	7.6	7.6	9.3
2010	8.3	8.1	9.6
2011	7.8	7.8	8.9
2012	6.6	6.7	8.1
2013	6.0	6.3	7.4
2014	4.9	5.1	6.2
2015	4.6	4.4	5.3
2016	5.3	4.6	4.9
2017	5.0	4.3	4.4
2018	4.3	3.9	3.9
12-month average ending Oct 2019	3.8	3.5	3.7

Source: Texas Workforce Commission, not seasonally adjusted.

GOODS-PRODUCING AND SERVICE-PROVIDING JOBS

Employment in Houston's service-providing sector is at an all-time high while goods-producing employment remains below its previous peak.



Source: Texas Workforce Commission

- Employment in Houston's service-providing sector reached 2,642,400 jobs in October '19, a record for the region. Gains were concentrated in health care and public education, sectors that depend heavily on population growth, and employment services, the result of companies relying more on contract workers than they have in the past.
- Goods-producing employment (jobs in mining, construction and manufacturing) peaked at 587,300 in December '14 before falling to a low of 503,300 in January '17. As of October '19, Houston had regained two-thirds of the losses, with goods-producing employment at 559,700 jobs.

GOODS-PRODUCING AND SERVICE-PROVIDING JOBS

Houston Metropolitan Statistical Area (MSA)

ANNUAL AVERAGES

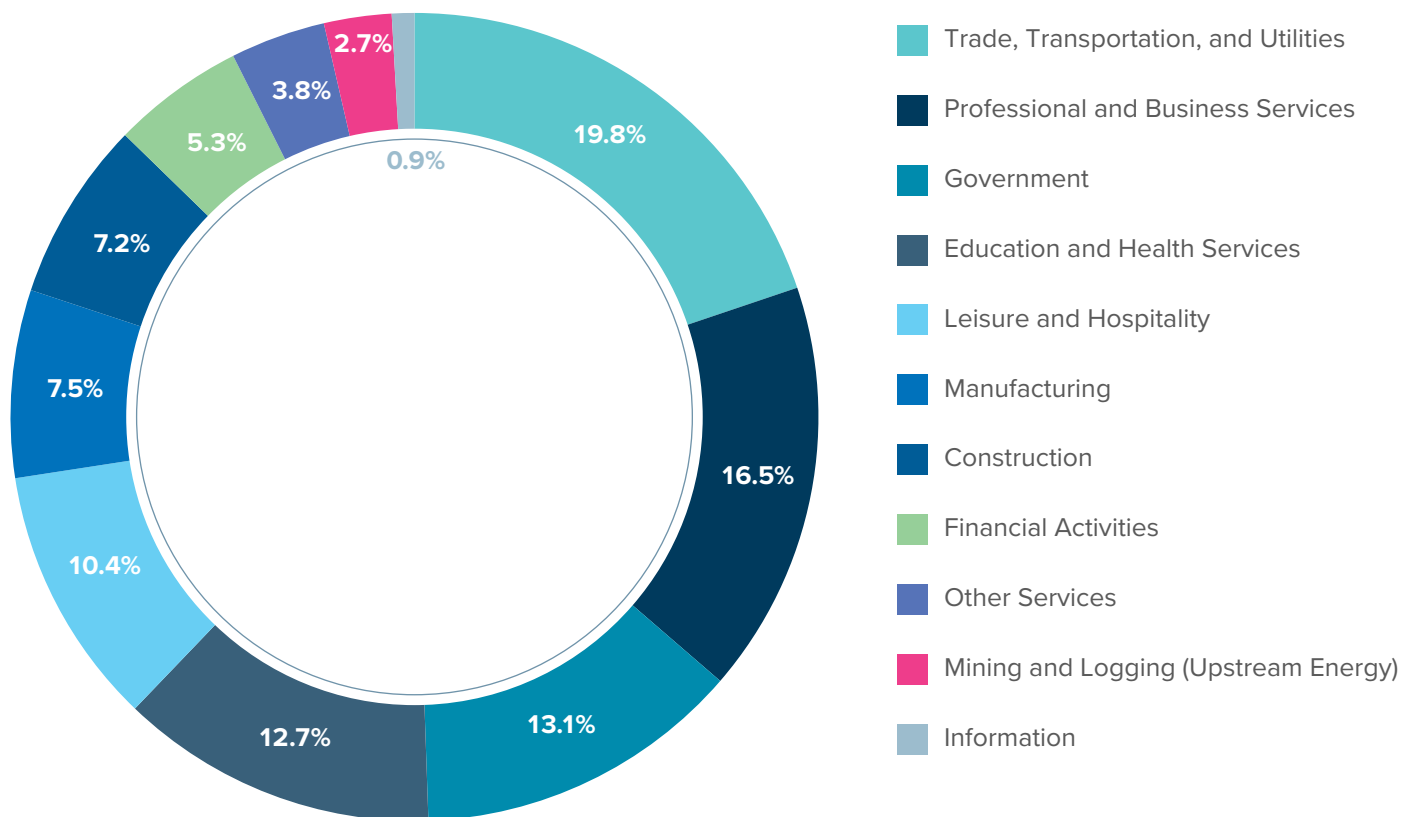
Year	Goods-Producing	Service-Providing
2009	491,500	2,078,800
2010	471,900	2,094,100
2011	491,000	2,142,200
2012	524,300	2,213,400
2013	549,100	2,291,000
2014	571,700	2,367,600
2015	562,500	2,430,300
2016	522,800	2,469,500
2017	512,292	2,507,475
2018	529,175	2,555,525
12-month average ending Oct 2019	550,158	2,602,575

Source: Texas Workforce Commission, not seasonally adjusted

EMPLOYMENT BY INDUSTRY

No single industry or sector dominates Houston employment.

INDUSTRY SHARE OF METRO HOUSTON EMPLOYMENT



Source: Texas Workforce Commission, October 2019, not seasonally adjusted

- Nonfarm payroll employment in the Houston metro area reached 3,202,100 in October '19, a record for the region.
- Service industries account for more than 2.6 million Houston-area jobs or four out of five workers in the region. The largest service industries are trade, transportation and utilities (19.8 percent of jobs), professional and business services (16.5 percent) and government (13.1 percent).
- The goods-producing sector employs 559,700 Houstonians and accounts for approximately one in five of the region's jobs. Manufacturing is the largest goods-producing industry with 7.5 percent of total jobs, followed closely by construction (7.2 percent) and upstream energy (2.7 percent).
- Nearly two-thirds of Houston's manufacturing jobs involve the production of durable goods, items with a useful life of three years or more. In Houston, this includes items such as oil field equipment, structural steel and computers.

EMPLOYMENT BY INDUSTRY

HOUSTON METROPOLITAN STATISTICAL AREA EMPLOYMENT BY INDUSTRY

October 2019

Industry	Jobs	Percent of Total
Total Nonfarm	3,202,100	100.0
Total Private	2,781,100	86.9
Goods Producing	559,700	17.5
Service Providing	2,642,400	82.5
Mining and Logging	87,400	2.7
Oil and Gas Extraction	39,500	1.2
Support Activities for Mining	44,600	1.4
Construction	231,300	7.2
Manufacturing	241,000	7.5
Durable Goods	154,500	4.8
Non-Durable Goods	86,500	2.7
Trade, Transportation, and Utilities	632,700	19.8
Wholesale Trade	172,000	5.4
Retail Trade	303,400	9.5
Transportation, Warehousing, and Utilities	157,300	4.9
Information	30,000	0.9
Financial Activities	168,800	5.3
Finance and Insurance	105,400	3.3
Real Estate and Rental and Leasing	63,400	2.0
Professional and Business Services	529,500	16.5
Professional, Scientific, and Technical Services	252,900	7.9
Management of Companies and Enterprises	46,800	1.5
Admin and Support and Waste Mgmt.	229,800	7.2
Educational and Health Services	407,900	12.7
Educational Services	63,700	2.0
Health Care and Social Assistance	344,200	10.7
Leisure and Hospitality	331,500	10.4
Arts, Entertainment, and Recreation	34,400	1.1
Accommodation and Food Services	297,100	9.3
Other Services	121,000	3.8
Government	421,000	13.1

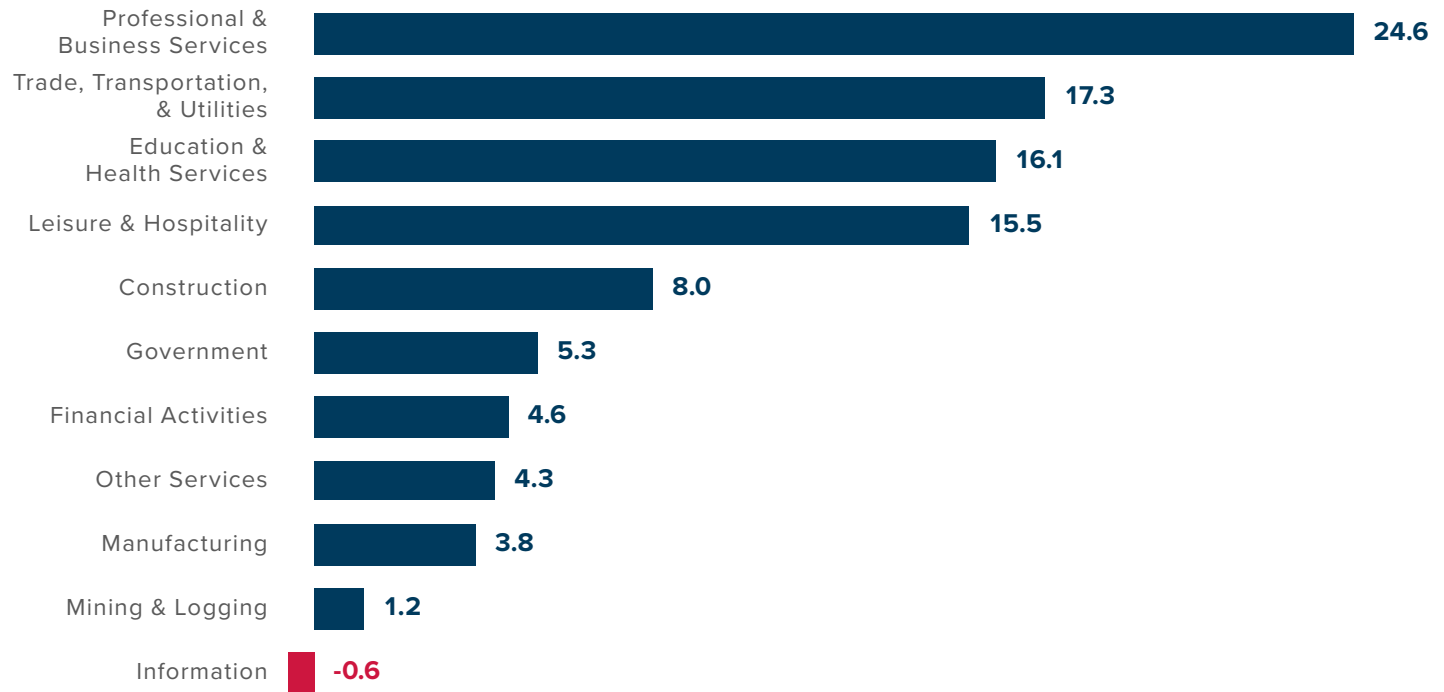
Source: Texas Workforce Commission, October 2019, not seasonally adjusted

EMPLOYMENT CHANGE BY INDUSTRY

Nearly a quarter of Houston's job growth over the past ten years was in professional and business services.

PERCENT SHARE OF METRO HOUSTON JOB GROWTH BY SELECTED INDUSTRIES

October '09 to October '19



Source: Texas Workforce Commission, not seasonally adjusted

- The Houston region grew by 654,500 jobs between October '09 and October '19. Of those jobs, 24.6 percent are from the professional and business services industry, which has added 160,700 jobs. Subsectors with the largest gains include administrative, support and waste management (62,900 jobs) and professional, scientific and technical services (76,200 jobs).
- Trade, transportation, and utilities added 113,200 jobs and contributed 17.3 percent to the total job growth in Houston over the past decade. The sector benefits from the \$234.0 billion in annual trade passing through the Houston-Galveston Customs District, as well as growth in jobs and population.
- Leisure and hospitality gained 101,400 jobs during the last decade, accounting for 15.5 percent of the region's job growth. Houston has more than 92,000 hotel rooms and nearly 11,000 restaurants.
- Education and health services grew by 105,200 jobs from October '09 to October '19, driven primarily by 83,700 new jobs in healthcare and social assistance. Health care continues to expand in Houston, which is home to the Texas Medical Center, the largest such center in the world.

EMPLOYMENT CHANGE BY INDUSTRY

Houston–The Woodlands–Sugar Land Metropolitan Statistical Area

JOB GROWTH BY INDUSTRY

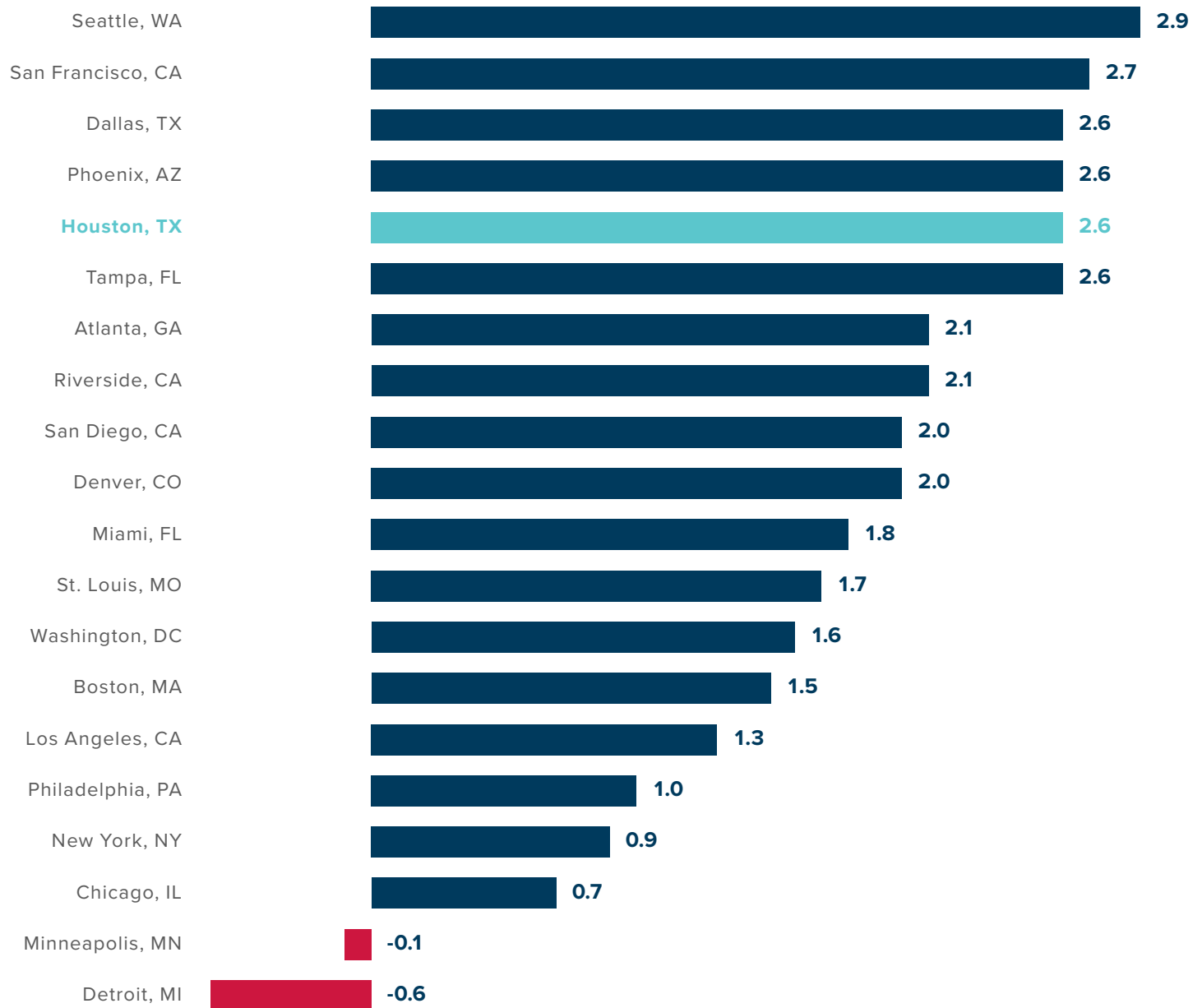
Industry	October '09	October '19	Change	Percent Change	Percent Share of Job Growth
Total Nonfarm	2,547,600	3,202,100	654,500	25.7	--
Mining and Logging	79,600	87,400	7,800	9.8	1.2
Construction	179,000	231,300	52,300	29.2	8.0
Manufacturing	215,900	241,000	25,100	11.6	3.8
Durable Goods	138,600	154,500	15,900	11.5	2.4
Non-Durable Goods	77,300	86,500	9,200	11.9	1.4
Trade, Transportation, and Utilities	519,500	632,700	113,200	21.8	17.3
Wholesale Trade	134,000	172,000	38,000	28.4	5.8
Retail Trade	263,200	303,400	40,200	15.3	6.1
Transportation, Warehousing, and Utilities	122,300	157,300	35,000	28.6	5.3
Information	34,000	30,000	-4,000	-11.8	-0.6
Financial Activities	138,700	168,800	30,100	21.7	4.6
Finance and Insurance	89,100	105,400	16,300	18.3	2.5
Real Estate and Rental and Leasing	49,600	63,400	13,800	27.8	2.1
Professional and Business Services	368,800	529,500	160,700	43.6	24.6
Professional, Scientific, and Technical Services	176,700	252,900	76,200	43.1	11.6
Management of Companies and Enterprises	25,200	46,800	21,600	85.7	3.3
Admin and Support and Waste Mgmt.	166,900	229,800	62,900	37.7	9.6
Educational and Health Services	302,700	407,900	105,200	34.8	16.1
Educational Services	42,200	63,700	21,500	50.9	3.3
Health Care and Social Assistance	260,500	344,200	83,700	32.1	12.8
Leisure and Hospitality	230,100	331,500	101,400	44.1	15.5
Arts, Entertainment, and Recreation	26,600	34,400	7,800	29.3	1.2
Accommodation and Food Services	203,500	297,100	93,600	46.0	14.3
Other Services	92,900	121,000	28,100	30.2	4.3
Government	386,400	421,000	34,600	9.0	5.3

Source: Texas Workforce Commission, not seasonally adjusted

EMPLOYMENT GROWTH IN MAJOR METROS

Houston ranked fifth in the nation in job growth from October '18 to October '19.

EMPLOYMENT GROWTH, PERCENT CHANGE, 20 MOST POPULOUS METRO AREAS Oct '18 to Oct '19



Source: U.S. Bureau of Labor Statistics, not seasonally adjusted

- All but two of the 20 most populous U.S. metro areas posted net job gains from October '18 to October '19. During this period, the Houston metro ranked fifth in the nation in job growth with a 2.6 percent increase, totaling 80,400 jobs.
- After leading the nation in employment gains coming out of the Great Recession, Houston experienced a slower pace of job growth during the energy downturn. The most recent data show that Houston holds fourth place in absolute job gains of 80,400 jobs (following Dallas, New York and Los Angeles) and fifth place in job change of 2.6 percent (following Seattle, San Francisco, Dallas and Phoenix).

EMPLOYMENT GROWTH IN MAJOR METROS

Nonfarm Payroll Employment

20 MOST POPULOUS U.S. METROPOLITAN STATISTICAL AREAS

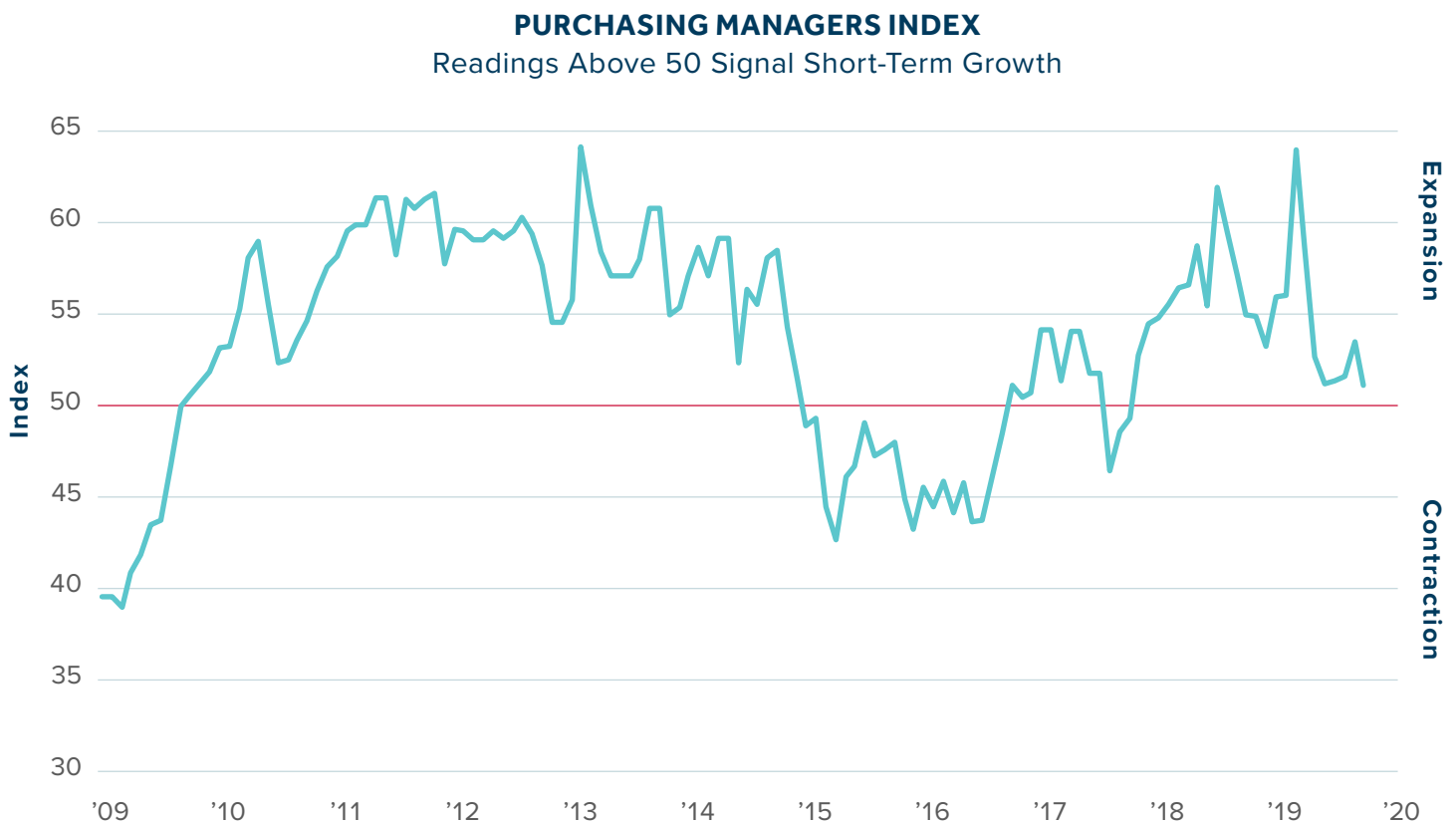
Ranked by Percent Change, October '18 to October '19

Metro Area	Change in Jobs (Thousands)	Percent Change
Seattle-Tacoma-Bellevue, WA	59.6	2.9
San Francisco-Oakland-Hayward, CA	66.8	2.7
Dallas-Fort Worth-Arlington, TX	98.7	2.6
Phoenix-Mesa-Scottsdale, AZ	56.5	2.6
Houston-The Woodlands-Sugar Land, TX	80.4	2.6
Tampa-St. Petersburg-Clearwater, FL	34.8	2.6
Atlanta-Sandy Springs-Roswell, GA	59.2	2.1
Riverside-San Bernardino-Ontario, CA	31.9	2.1
San Diego-Carlsbad, CA	30.2	2.0
Denver-Aurora-Lakewood, CO	30.9	2.0
Miami-Fort Lauderdale-West Palm Beach, FL	49.0	1.8
St. Louis, MO-IL	23.4	1.7
Washington-Arlington-Alexandria, DC-VA-MD-WV	52.3	1.6
Boston-Cambridge-Newton, MA-NH	40.9	1.5
Los Angeles-Long Beach-Anaheim, CA	80.7	1.3
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	28.6	1.0
New York-Newark-Jersey City, NY-NJ-PA	84.6	0.9
Chicago-Naperville-Elgin, IL-IN-WI	35.8	0.7
Minneapolis-St. Paul-Bloomington, MN-WI	-1.1	-0.1
Detroit-Warren-Dearborn, MI	-11.3	-0.6

Source: U.S. Bureau of Labor Statistics, not seasonally adjusted

PURCHASING MANAGERS INDEX

The October PMI for Houston marks two years of expansion.



Source: Institute for Supply Management-Houston

- The Houston Purchasing Managers Index (PMI), a short-term leading indicator of regional production, registered 51.1 in October '19. Readings above 50 signal growth in the overall economy, while readings below 50 signal contraction. Some sectors are more sensitive than others, like manufacturing, and will start showing signs of contraction once the PMI falls below 50. All sectors of the economy will be in contraction once the PMI falls below 45.
- The oil downturn that began in late '14 preceded 21 consecutive months of below 50 readings, a period of contraction that lasted from January '15 through September '16. Since then, the PMI has signaled expansion for 39 consecutive months. For three months following Hurricane Harvey in the fall of '17, the PMI dipped below 50 but stayed above 45, signaling a temporary slow-down before expansion continued. The Houston PMI averaged 54.6 for the first 10 months of '19.
- During the Great Recession, Houston's PMI registered below 50 from November '08 to August '09, bottoming out at 39.0 in March '09 and bouncing back to 59.0 in May '10. A similar v-shaped recovery did not occur in the most recent downturn. Instead, the region experienced a shallower but more protracted contraction.
- Since Houston PMI's inception in January '95, the all-time low for the index was 39.0 in March '09. The all-time high occurred in January '06, when the PMI reached 67.9. Over the past 24 years, the PMI has tracked at 50 or above for 246 months and below 50 for 52 months.
- The Houston PMI is based on a survey of purchasing executives in key Houston industries—oil and gas exploration and production; manufacturing; engineering and construction; chemicals; distribution; health care; and business and financial services. It measures over-the-month changes in sales (new orders), production, employment, purchases of new equipment, prices paid for major purchases, lead times from sellers, purchased materials inventory and finished goods inventory.

PURCHASING MANAGERS INDEX

ANNUAL AVERAGES

Year	Houston	United States
2009	44.9	46.3
2010	55.1	57.5
2011	60.1	55.3
2012	58.5	51.7
2013	58.4	53.9
2014	56.5	55.8
2015	46.5	51.4
2016	46.7	51.5
2017	51.9	57.4
2018	56.6	58.8
12-month average ending Oct 2019	54.5	52.7

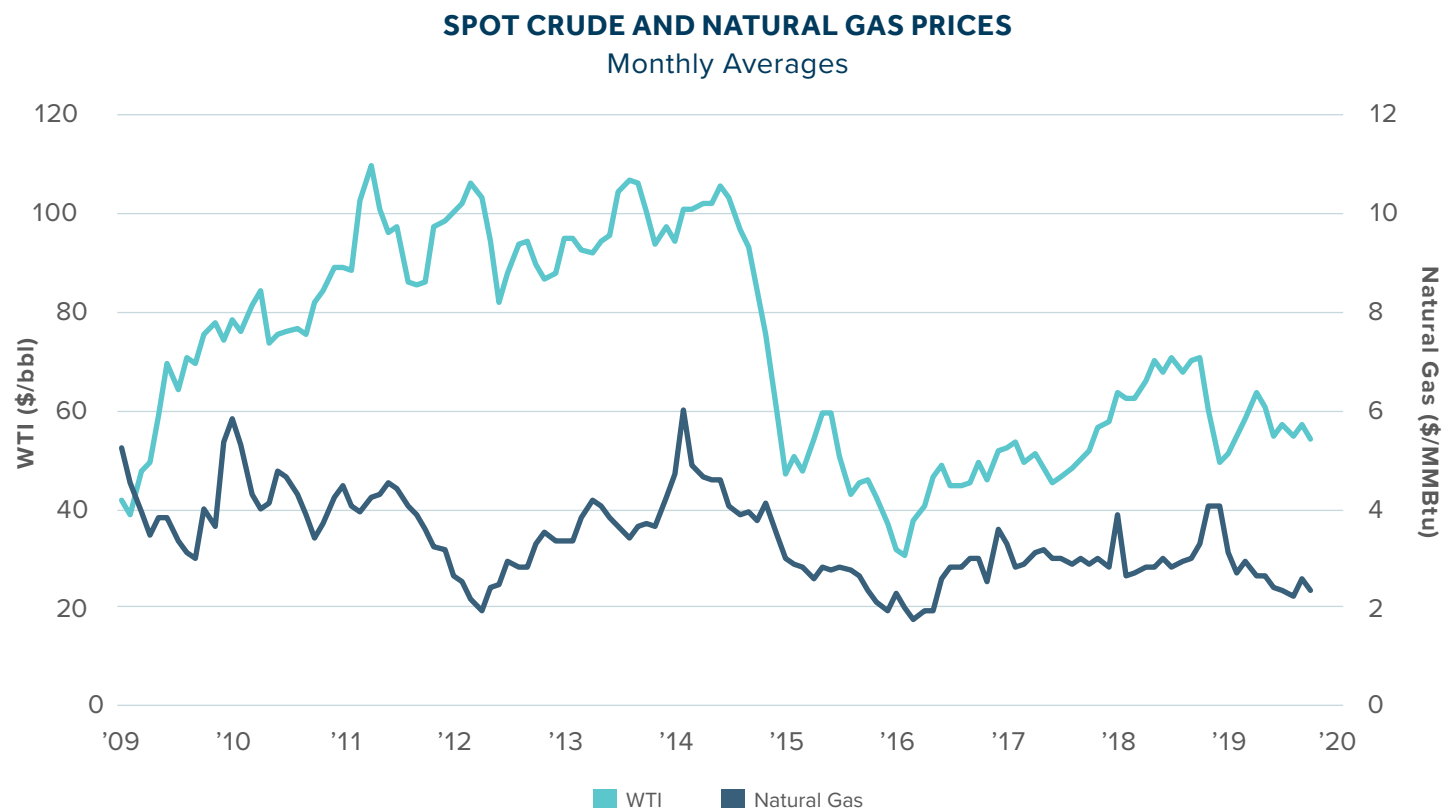
Note: The PMI has a possible range from zero to 100. Readings above 50 generally indicate expansion in Houston's manufacturing sector while readings below 50 signal contraction in manufacturing. The PMI needs to drop below 45, however, before it signals contraction in the overall Houston economy.

The Houston and U.S. Purchasing Managers Indexes are conceptually similar but not identical.

Source: Institute for Supply Management-Houston

OIL AND NATURAL GAS PRICES

Oil prices hovered in the \$50s for much of the year.



Source: U.S. Energy Information Administration

- The closing spot price for a barrel of West Texas Intermediate (WTI), the U.S. benchmark for light, sweet crude, averaged \$53.96 per barrel in October '19, down 23.7 percent from \$70.75 in October '18, according to the U.S. Energy Information Administration. Through the first 10 months of '19, the WTI averaged \$56.69, a 15.7 percent decrease from \$67.28 for the same span in '18. During the most recent oil bust, the weekly WTI spot price fell from a high of \$105.78 in June '14 to a low of \$30.19 in February '16—a 71.5 percent decline. Prices rose slightly in '17, ramped up in '18, but fell and remained flat for much of this year.
- Natural gas prices averaged \$2.33 per million British thermal units (MMBtu) in October '19, down 29.0 percent from \$3.28 in October last year. Through October of '19, gas prices averaged \$2.59 per MMBtu, compared to \$2.99 for the same period in '18. During the downturn, the spot price for natural gas followed that of oil, falling from a peak of \$6.00 per MMBtu in February '14 to \$1.70 in March '16. Natural-gas prices remained steady over '17 and '18.
- The U.S. Energy Information Administration (EIA) expects WTI to average around \$55 per barrel in '20, down from \$56 per barrel in '19. EIA expects the Henry Hub natural gas spot prices to average \$2.48/MMBtu in '20, down 13 cents from the '19 average.
- Gulf Coast petrochemical manufacturers, unlike their counterparts elsewhere, rely heavily on natural gas as a feedstock. As a rule of thumb, Gulf Coast plants can compete on the world market so long as the ratio of oil price to gas price exceeds six. The ratio is expected to stay above that level over the next several decades. As a result, U.S. and foreign companies have announced a major expansion of chemical plants. Since '10, the American Chemistry Council has identified 333 chemical industry investment projects valued at \$202.4 billion that have been publicly announced; more than \$60 billion has been invested in projects in the Houston area.

OIL AND NATURAL GAS PRICES

Spot Market Prices for West Texas Intermediate Crude and Henry Hub Natural Gas

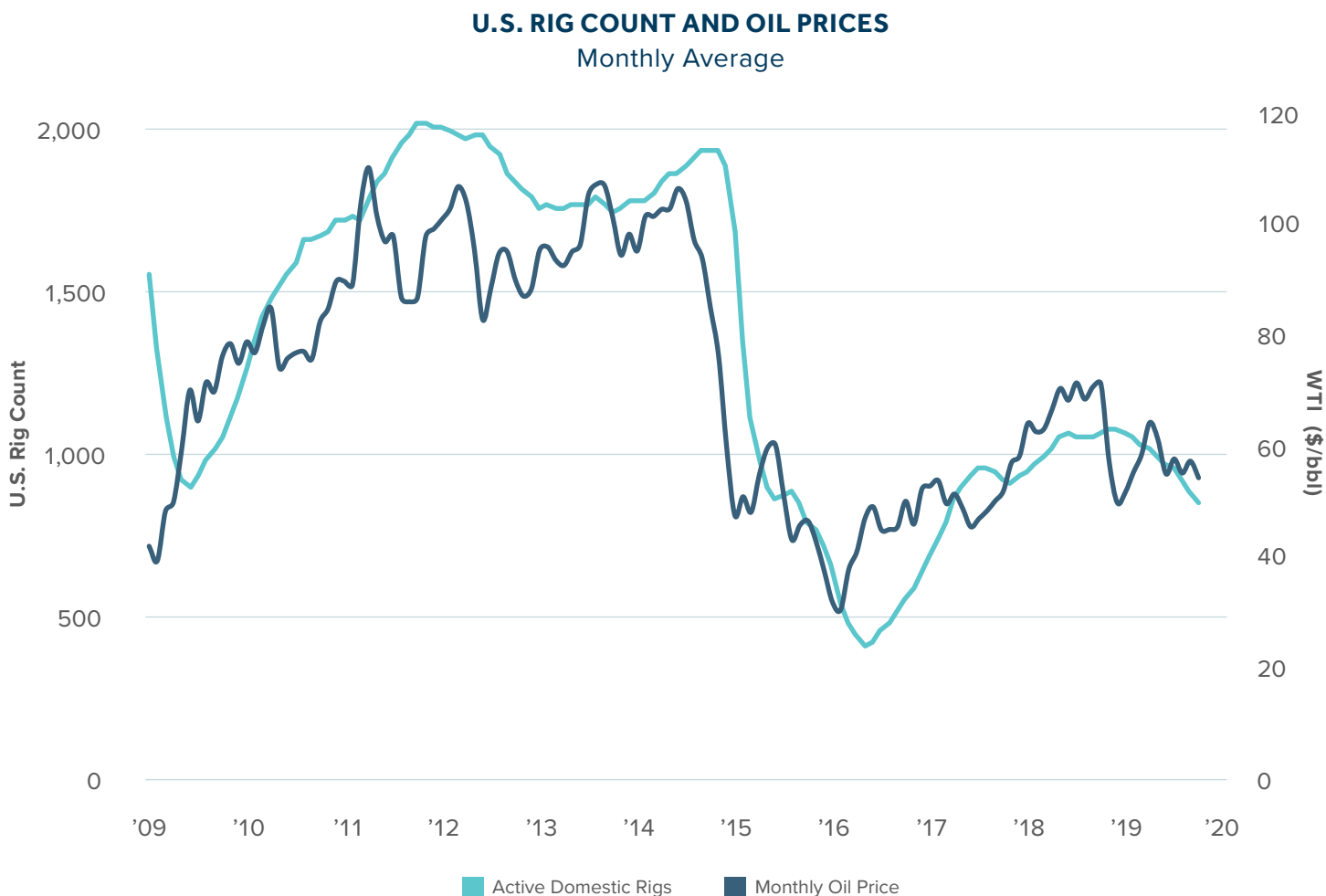
ANNUAL AVERAGES

Year	WTI Crude Price (\$/bbl)	Natural Gas Price (\$/MMBtu)
2009	61.95	3.94
2010	79.48	4.37
2011	94.88	4.00
2012	94.05	2.75
2013	97.98	3.73
2014	93.17	4.37
2015	48.66	2.62
2016	43.29	2.52
2017	50.80	2.99
2018	65.23	3.15
12-month average ending Oct 2019	56.12	2.84

Source: U.S. Energy Information Administration

DRILLING ACTIVITY AND OIL PRICE

The U.S. rig count fell in '19 as oil prices remained flat.



Sources: Baker Hughes, a GE company; U.S. Energy Information Administration

- Drilling activity decreased significantly in the first 10 months of '18, falling to 848 working rigs in October. The weekly rig count through the first 10 months of '19 averaged 972, down 5.0 percent from 1,023 rigs during the same span in '18. During the most recent oil bust, the rig count dropped from a high of 1,930 in September '14 to a low of 407 in May '16, a 78.9 percent decline.
- Despite falling exploration activity, U.S. production increased. Domestic crude production averaged 12.2 million barrels a day through October '19, up 14.0 percent from 10.7 million over the same period in '18.
- The Permian Basin accounts for the majority of U.S. rig activity. As of October '18, the Permian was home to 50.2 percent of the U.S. drilling fleet, up from 45.8 percent the same time last year.

DRILLING ACTIVITY AND OIL PRICE

U.S. Rig Count and Spot Market Prices for West Texas Intermediate Crude

ANNUAL AVERAGES

Year	U.S. Rig Count	WTI Crude Price (\$/bbl)
2009	1,086	61.95
2010	1,541	79.48
2011	1,875	94.88
2012	1,919	94.05
2013	1,761	97.98
2014	1,862	93.17
2015	977	48.66
2016	510	43.29
2017	876	50.80
2018	1,032	65.23
52-week average ending Oct 2019	975	56.20

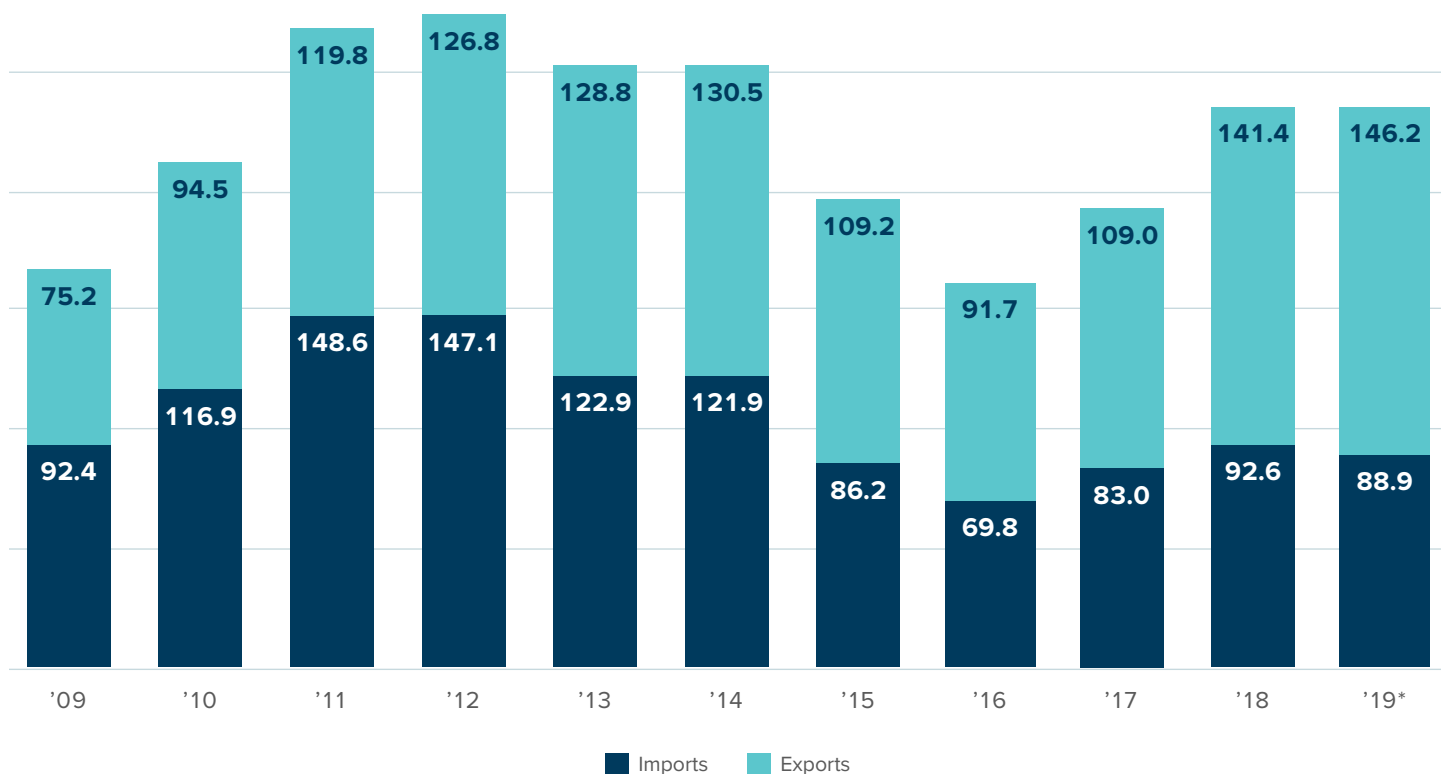
Sources: Baker Hughes, a GE company; U.S. Energy Information Administration

FOREIGN TRADE

More than \$234 billion in foreign trade passed the Houston-Galveston Customs District in '18, making it the seventh busiest customs district in the U.S.

HOUSTON-GALVESTON CUSTOMS DISTRICT TRADE

\$ Billions



*12-months ending September '19

Source: WISERTrade from U.S. Census Bureau, Foreign Trade Division data

The Houston-Galveston Customs District includes the ports of Houston, Galveston, Freeport, Texas City, Corpus Christi, Port Lavaca, Bush Intercontinental Airport and Sugar Land Regional Airport

- Forty-three countries logged more than \$1 billion each in trade through the Houston-Galveston Customs District in '18. Houston's top 10 trading partners are Mexico (\$24.9 billion), China (\$19.9 billion), Brazil (\$12.7 billion), South Korea (\$10.4 billion), the Netherlands (\$10.0 billion), Germany (\$9.7 billion), Japan (\$9.7 billion), United Kingdom (\$7.4 billion), India (\$7.2) and Italy (\$6.8 billion).
- Imports totaled \$92.6 billion in '18. The top five imports were mineral fuels, oil, and refined products (\$28.3 billion), industrial equipment and computers (\$11.8 billion), articles of iron or steel (\$7.8 billion), motor vehicles and parts (\$6.0 billion), and organic chemicals (\$4.6 billion).
- Exports totaled \$141.4 billion in '18. Leading exports included mineral fuels, oil and refined products (\$77.3 billion), organic chemicals (\$15.8 billion), industrial equipment and computers (\$10.1 billion), plastics and plastic products (\$8.1 billion), and motor vehicles and parts (\$4.7 billion).
- Oil and gas trade increased in both volume and value, driving the 21.9 percent increase in the overall value from '17 to '18. Exports climbed 29.7 percent and imports 11.6 percent.

FOREIGN TRADE

Houston–Galveston Customs District

ANNUAL TOTALS IN FOREIGN TRADE

Value - \$ Billions

Year	Imports	Exports	Total
2009	92.416	75.233	167.649
2010	116.858	94.539	211.397
2011	148.610	119.764	268.374
2012	147.123	126.818	273.941
2013	122.895	128.835	251.731
2014	121.935	130.506	252.440
2015	86.219	109.248	195.467
2016	69.792	91.665	161.457
2017	82.973	109.030	192.003
2018	92.582	141.442	234.024
12-month total ending Sept 2019	88.915	146.212	235.128

Note: Sums may not total due to rounding.

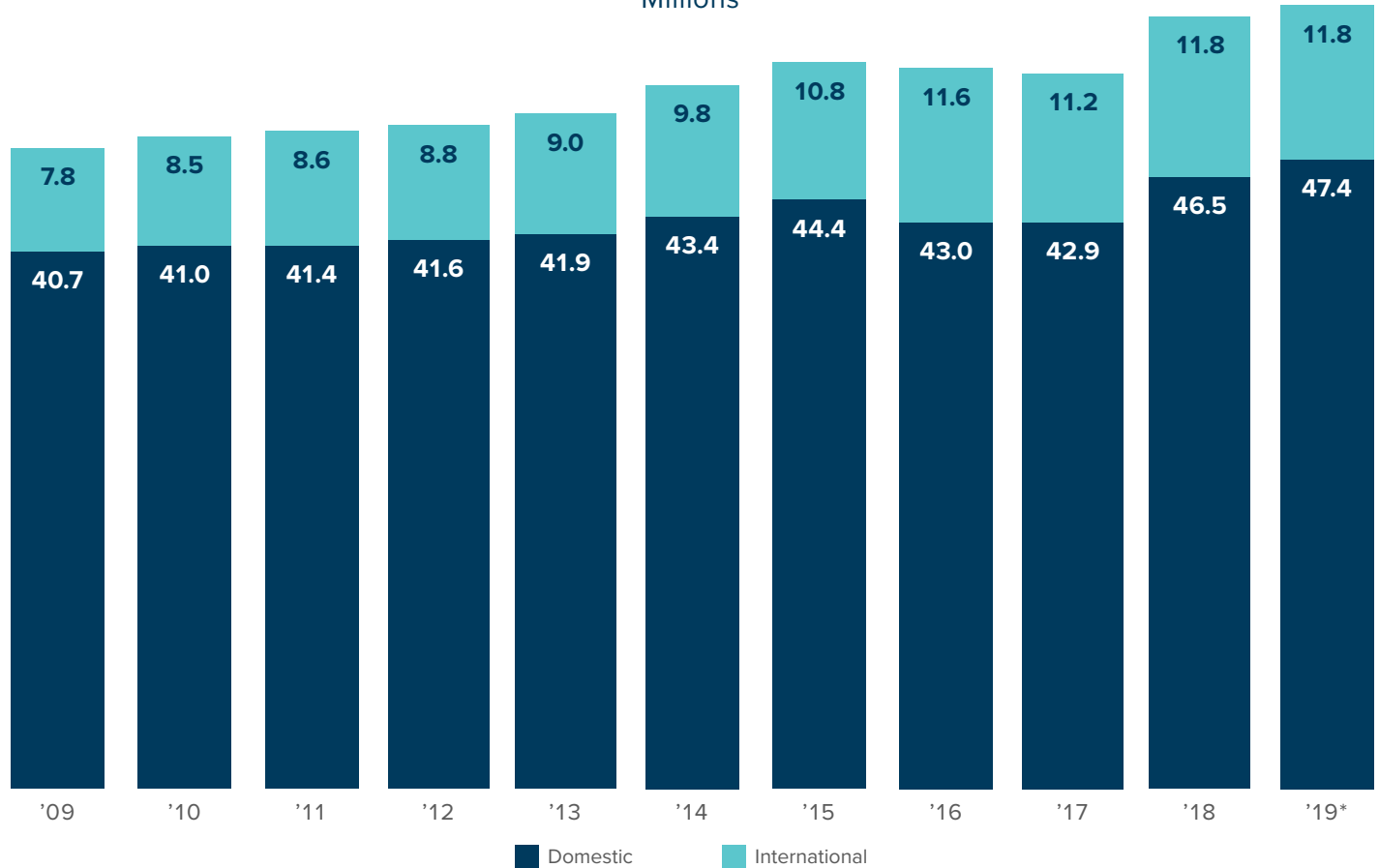
Source: WISERTrade from U.S. Census Bureau, Foreign Trade Division data

AIR PASSENGERS

Traffic through the Houston Airport System has grown by 10.8 million passengers since '09.

DOMESTIC AND INTERNATIONAL PASSENGERS

Millions



* 12-months ending Sep '19
Source: Houston Airport System

- The Houston Airport System (HAS) offers nonstop flights to some 190 domestic and international destinations in 37 countries. George Bush Intercontinental Airport (IAH), Houston's largest airport and a significant hub for United Airlines, is the 14th busiest airport in the U.S. for total passenger traffic according to the U.S. Department of Transportation. William P. Hobby Airport (HOU), a key hub for Southwest Airlines, ranks as the nation's 35th busiest airport.
- Since the launch of international service at HOU in October '15, the airport has recorded more than 3.4 million global passengers. Houston and New York are the only two municipalities in the U.S. with two international airports.
- In the 12 months ending September '19, HAS handled 59.3 million travelers, up 3.0 percent from the 57.6 million handled in the 12 months ending September '18. International passenger volume totaled 11.8 million, up 1.9 percent from 11.6 million for the 12 months ending September '18. Over the same period, domestic passenger traffic rose 3.3 percent from 45.9 million to 47.4 million.
- Domestic and international passenger service has grown substantially over the past decade. Domestic passenger counts grew by 6.8 million, or 16.6 percent, from '09 to '19. International passengers increased by 4.0 million, or 51.6 percent, during the same period.

AIR PASSENGERS

Houston Airport System – Domestic and International Air Passengers

ANNUAL TOTALS

Millions

Year	Domestic	International	Total
2009	40.696	7.810	48.506
2010	41.026	8.508	49.534
2011	41.378	8.637	50.016
2012	41.565	8.765	50.329
2013	41.923	8.986	50.909
2014	43.387	9.816	53.202
2015	44.425	10.759	55.184
2016	42.965	11.626	54.591
2017	42.932	11.236	54.168
2018	46.481	11.763	58.244
12-month total ending Sept 2019	47.447	11.837	59.284

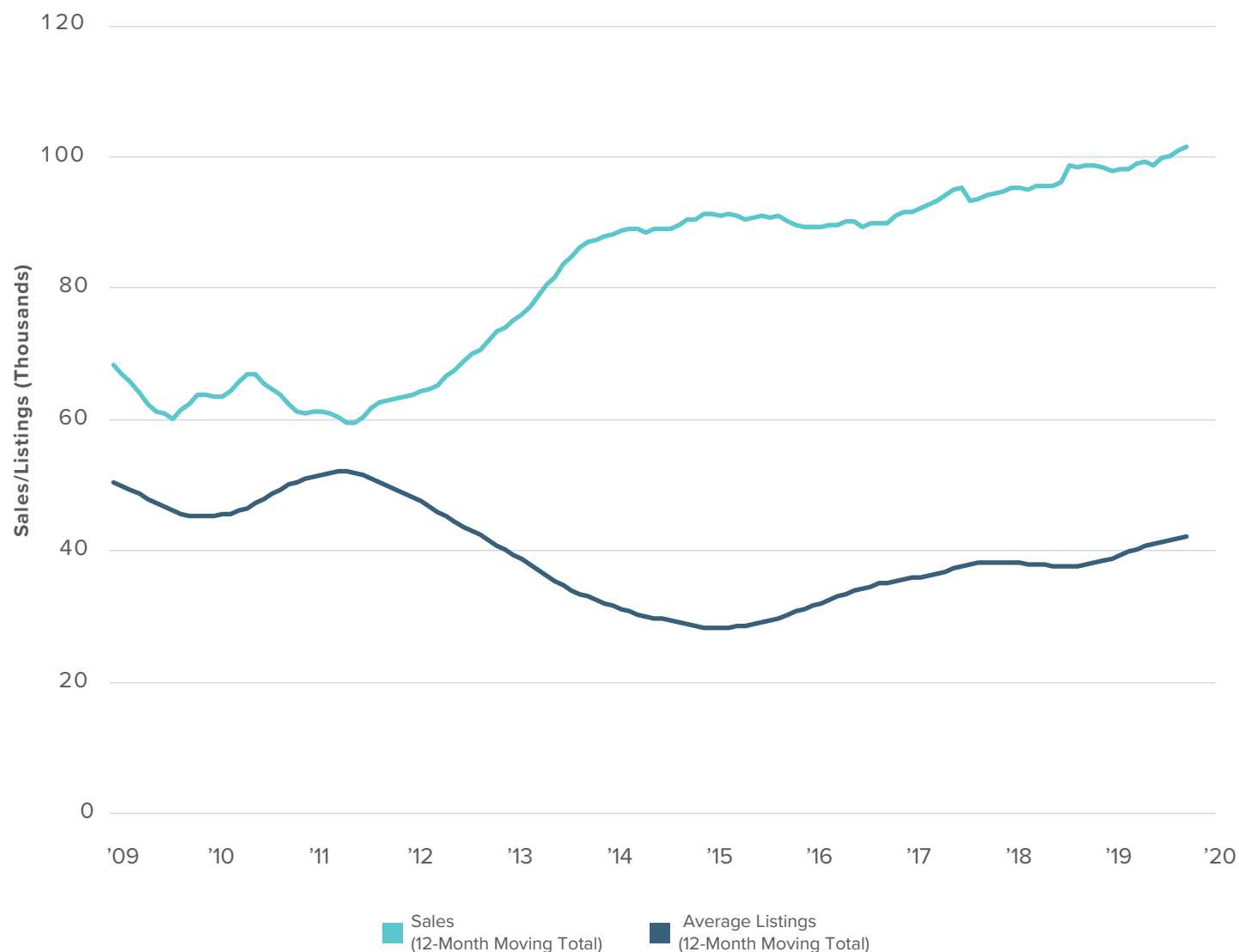
Note: Sums may not total due to rounding.

Source: Houston Airport System

RESIDENTIAL REAL ESTATE

Houston's housing market reached record-breaking sales in October '19.

METRO HOUSTON RESIDENTIAL HOUSING MARKET



Source: Houston Association of Realtors®

- Houston-area realtors sold 101,416 homes in the 12 months ending October '19, a 2.7 percent increase from the 12-month span ending October '18 and a new record for the region.
- The median price of a single-family home also reached a new peak of \$242,005 for the 12-months ending October '19, a 3.1 percent increase from \$234,760 for the 12-months ending October '18.
- Houston's housing inventory stood at 4.0 months in October '19, up from 3.9 months in October '18. U.S. inventory was 4.1 months. That reflects the number of months it will take to deplete current active inventory based on the prior 12 months sales activity. The market is considered balanced with inventory at six months. However, this may be too high, given how technological advancements have shortened the buying cycle.

RESIDENTIAL REAL ESTATE

Houston Multiple Listing Service Data

ANNUAL CLOSINGS

Sales Prices and Listings

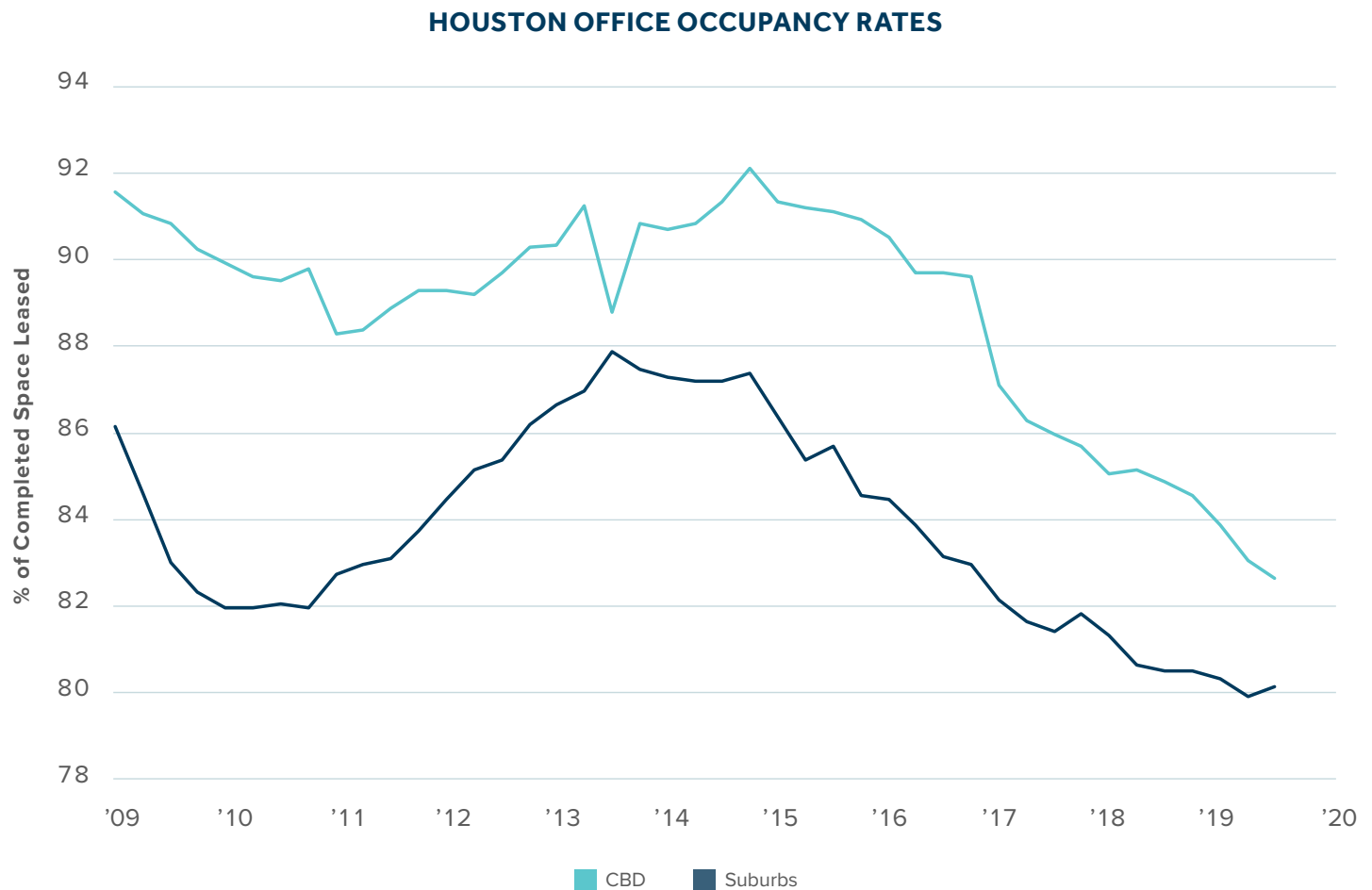
Year	Total Closings	Median Sales Price (\$)*	Average Active Listings
2009	63,801	151,000	45,286
2010	61,004	153,001	51,097
2011	63,606	153,618	48,800
2012	74,116	162,502	40,247
2013	88,080	179,737	32,101
2014	91,340	197,462	28,363
2015	89,296	211,396	31,326
2016	91,530	220,211	35,753
2017	94,816	228,199	38,406
2018	98,394	236,260	38,521
12-month total ending Oct 2019	101,416	242,005	42,213

* Average of monthly medians

Source: Houston Association of Realtors®

OFFICE MARKET

Low occupancy rates in Houston's office market translate into significant space availability at highly favorable terms.



Source: CBRE

- In Houston—the nation's sixth-largest office market with 212.8 million square feet (msf) of net rentable area—overall occupancy at the end of the third quarter of '19 stood at 80.7 percent. Occupancy in the Central Business District (CBD) was 82.7 percent, while the suburbs had an occupancy rate of 80.2 percent. Houston's 116.1 msf of Class A space was 83.0 percent leased.
- According to CBRE, Class A demand in the CBD saw positive absorption in only six of the past 20 quarters.
- Overall sublease space has decreased from 9.1 msf in Q3/18 to 6.7 msf in Q3/19, accounting for 3.1 percent of Houston's total office market. Sublease space often includes furniture and offers lower rental rates in higher quality properties.
- A total of 2.3 msf of office space was under construction as of Q3/19.

OFFICE MARKET

Office Occupancy: Houston Metropolitan Statistical Area

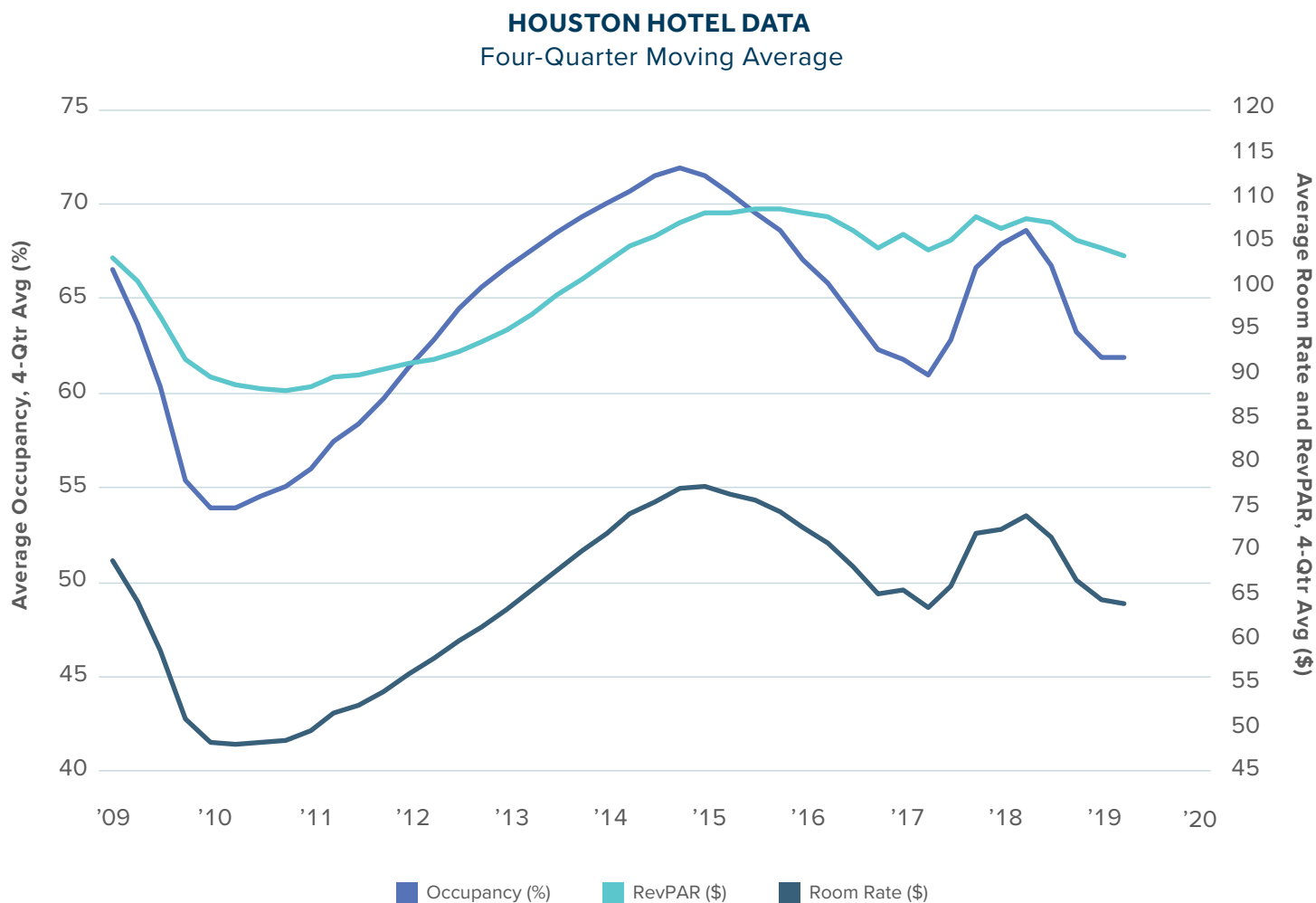
PERCENT OF COMPLETED SPACE OCCUPIED Central Business District and Suburban Office Markets

Year	Central Business District				Suburbs			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
2009	91.5	91.0	90.8	90.2	86.2	84.6	83.0	82.4
2010	89.9	89.6	89.5	89.8	82.0	82.0	82.1	82.0
2011	88.3	88.4	88.9	89.3	82.8	83.0	83.1	83.8
2012	89.3	89.2	89.7	90.3	84.5	85.2	85.4	86.2
2013	90.3	91.2	88.8	90.8	86.7	87.0	87.9	87.5
2014	90.7	90.8	91.3	92.1	87.3	87.2	87.2	87.4
2015	91.3	91.2	91.1	90.9	86.4	85.4	85.7	84.6
2016	90.5	89.7	89.7	89.6	84.5	83.9	83.2	83.0
2017	87.1	86.3	86.0	85.7	82.2	81.7	81.5	81.9
2018	85.1	85.2	84.9	84.6	81.4	80.7	80.6	80.6
2019	83.9	83.1	82.7	--	80.4	80.0	80.2	--

Source: CBRE

HOUSTON HOTEL DATA

Occupancy rates in Houston hotels increased temporarily due to Hurricane Harvey but have since returned to normal levels.



RevPAR = Revenue Per Available Room (\$/day)
Source: CBRE Hotel Horizons Houston

- Houston's hotel inventory, approximately 92,600 rooms across 944 properties, averaged 65.6 percent occupancy in the second quarter of '19, unchanged from Q2/18. The average daily room rate during this period was \$104.36 and revenue per available room (RevPAR) averaged \$68.47 per day compared to \$108.20 and \$70.93, respectively, a year earlier.
- The region's average occupancy was 61.9 percent for the four quarters ending Q2/19, down from 68.6 percent a year ago. Hurricane Harvey caused a spike in hotel demand, first from evacuees and then from out-of-town workers in Houston to assist with recovery efforts. Without a similar event to boost demand in the near future, the four-quarter occupancy rate will likely decrease, drawing down both the four-quarter average daily room rate and RevPAR.
- About 3,400 rooms across 32 properties were under construction in Q2/19, which is lower than Q2/18, when nearly 5,260 rooms across 40 properties were under construction. However, another 5,438 rooms across 50 properties have confirmed construction starts in the next 12 months, which is slightly higher than a year ago, when approximately 4,700 rooms across 46 properties were in the final planning stage.

HOUSTON HOTEL DATA

Occupancy, Room Rates and Revenue Per Available Room

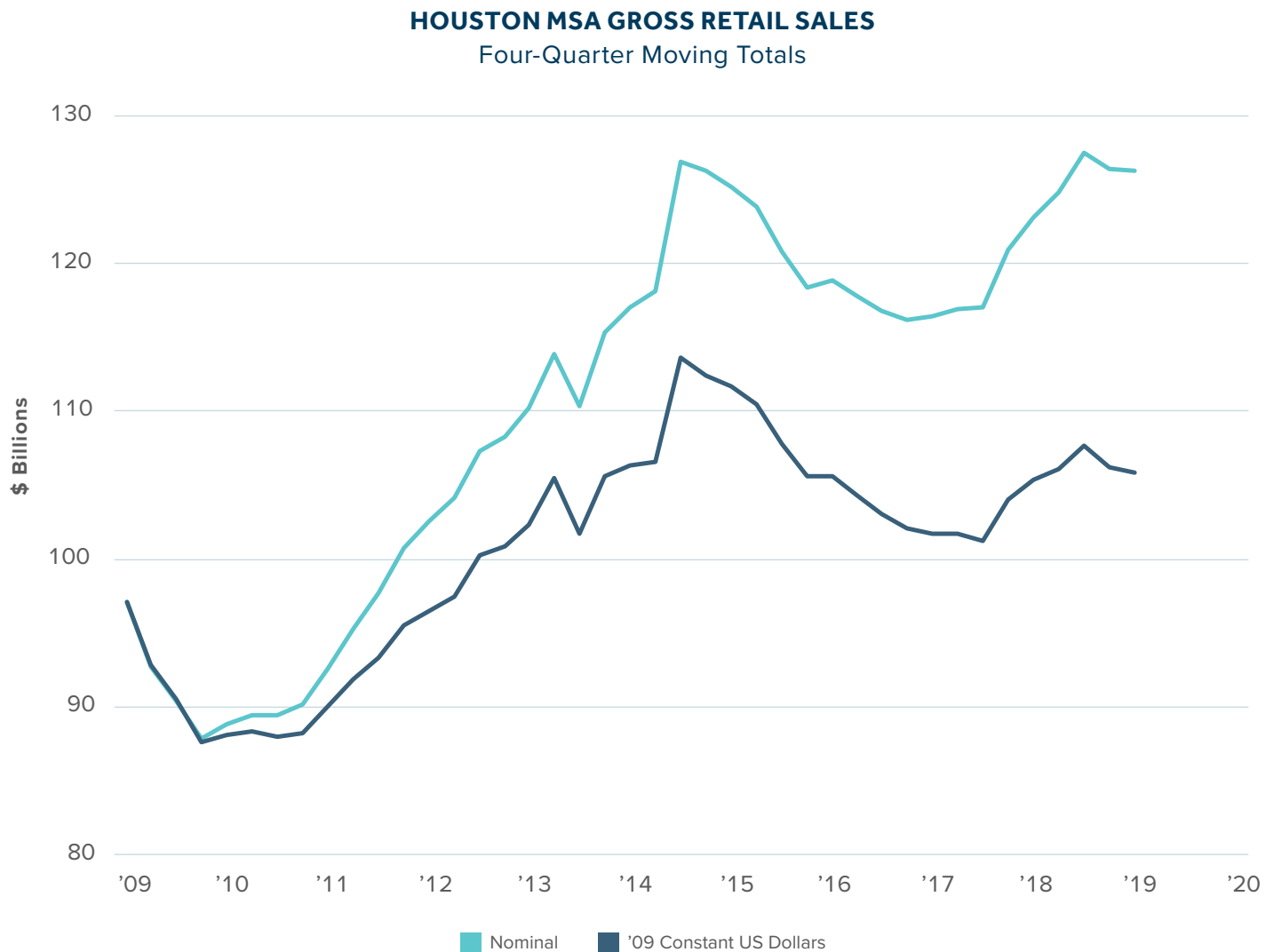
ANNUAL AVERAGES

Year	Occupancy (Percent)	Room Rate (\$/Day)	Revenue Per Available Room (\$/Day)
2009	55.4	91.64	51.00
2010	55.0	88.24	48.57
2011	59.8	90.49	54.13
2012	65.6	93.58	61.43
2013	69.3	100.96	70.00
2014	72.0	107.08	77.05
2015	68.6	108.63	74.53
2016	62.3	104.33	65.20
2017	66.6	107.94	71.88
2018	63.2	105.18	66.63
Four quarters ending Q2/2019	61.9	103.32	63.96

Source: CBRE Hotel Horizons Houston

RETAIL SALES

Retail sales set a record in the four quarters ending Q3/18.



Source: Texas Comptroller of Public Accounts

- The Houston Metro area's nominal gross retail sales totaled \$126.3 billion in the four quarters ending Q1/19, levels on-par with the oil boom year of '14. On an inflation adjusted basis, the four-quarter sum totaled \$105.8 billion in '09 real dollars. Retail sales have increased steadily since Q4/16, which was the nadir of a two-year decline caused by low oil prices.
- The majority of the region's Q1/19 retail sales occurred in three counties: Harris County (\$22.4 billion, 77.7 percent), Fort Bend County (\$2.0 billion, 6.9 percent) and Montgomery County (\$1.9 billion, 6.6 percent).

RETAIL SALES

Houston MSA Gross Retail Sales

ANNUAL TOTALS

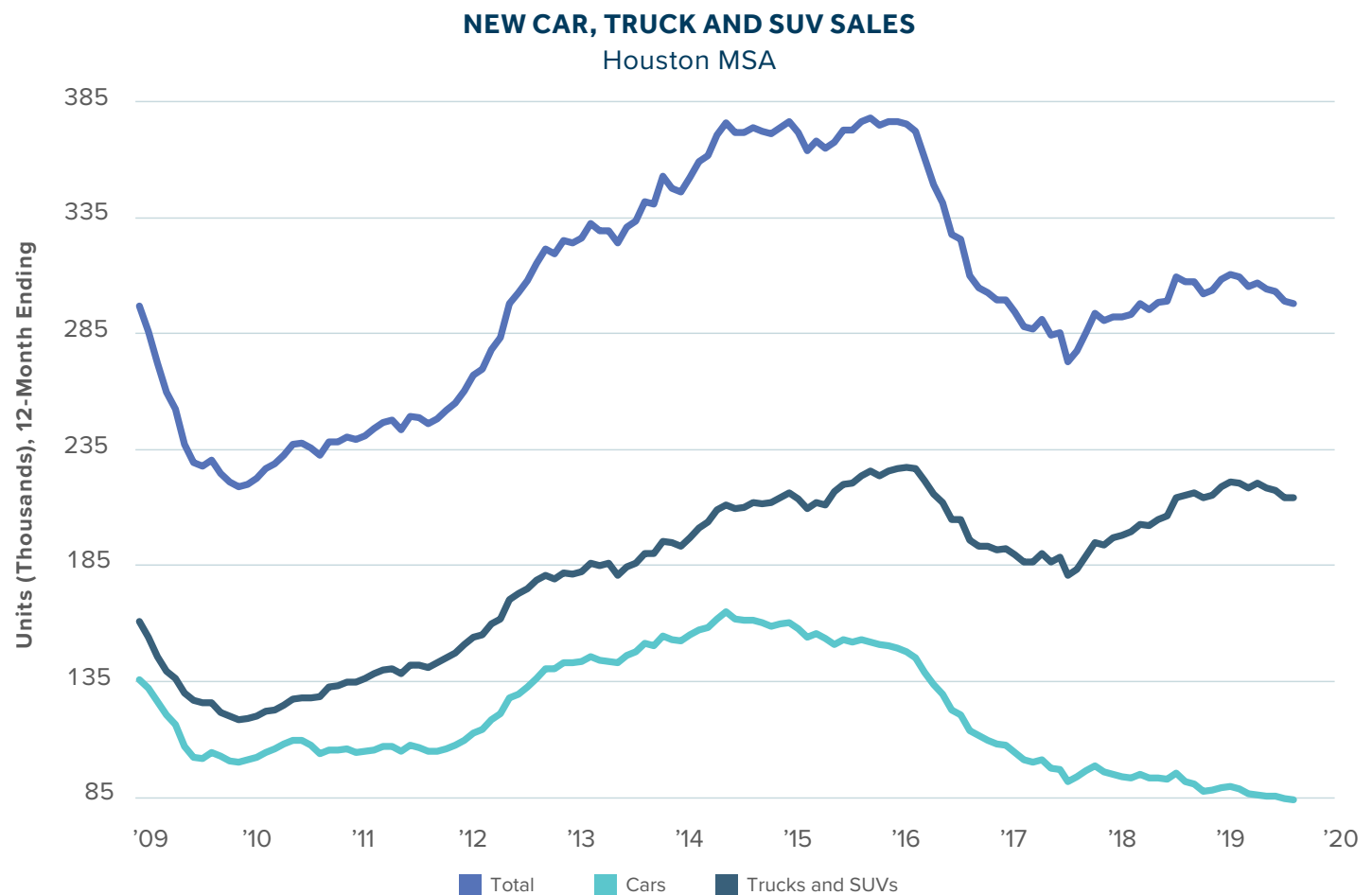
\$ Billions

Year	Nominal Sales	Constant 2009 Dollars
2009	87.845	87.845
2010	90.195	88.487
2011	100.712	95.689
2012	108.344	101.066
2013	115.445	105.946
2014	126.302	112.764
2015	118.477	105.911
2016	116.277	102.338
2017	120.874	104.284
2018	126.787	106.806
Four quarters ending Q1/19	126.315	105.765

Source: Texas Comptroller of Public Accounts

NEW CAR, TRUCK AND SUV SALES

While car sales trended downward in '19, truck and SUV sales continue to rise.



Source: *TexAuto Facts Report*, InfoNation, Inc., Sugar Land, TX

- For the 12 months ending September '19, Houston-area auto dealers sold 298,074 vehicles, down 2.9 percent from the 307,123 sold in the 12 months ending September '18. Sales in the Houston region hit a record of 377,705 in the 12 months ending October '15 but have averaged 301,133 on a rolling 12-month basis over the last four years.
- Houston consumers continue to purchase more trucks and SUVs than cars. Trucks and SUVs captured 71.9 percent of the market in the 12 months ending September '19, up from 70.7 percent over the same period in '18, and 66.1 percent during the same period in '17.
- The average retail sales price per vehicle rose to \$38,369 in September '19, up 4.0 percent from the same month in '18.
- Total vehicle sales in '19 started strong but have slowed in recent months. Year-to-date vehicle sales are down 2.4 percent relative to last year. The bulk of the decline is due to lower car sales.
- The decline in Houston mirrors a national trend of slowing new car sales despite reduced interest rates offered to consumers. Nationally, nine-month sales are down 1.6 percent compared to the same period in '18. U.S. retail sales fell in September for first time in seven months, primarily a result of weak automobile sales. Analysts continue to forecast weak vehicle sales for the remainder of the year.

NEW CAR, TRUCK AND SUV SALES

Houston Region

ANNUAL TOTALS Houston-Sugar Land-Baytown MSA*

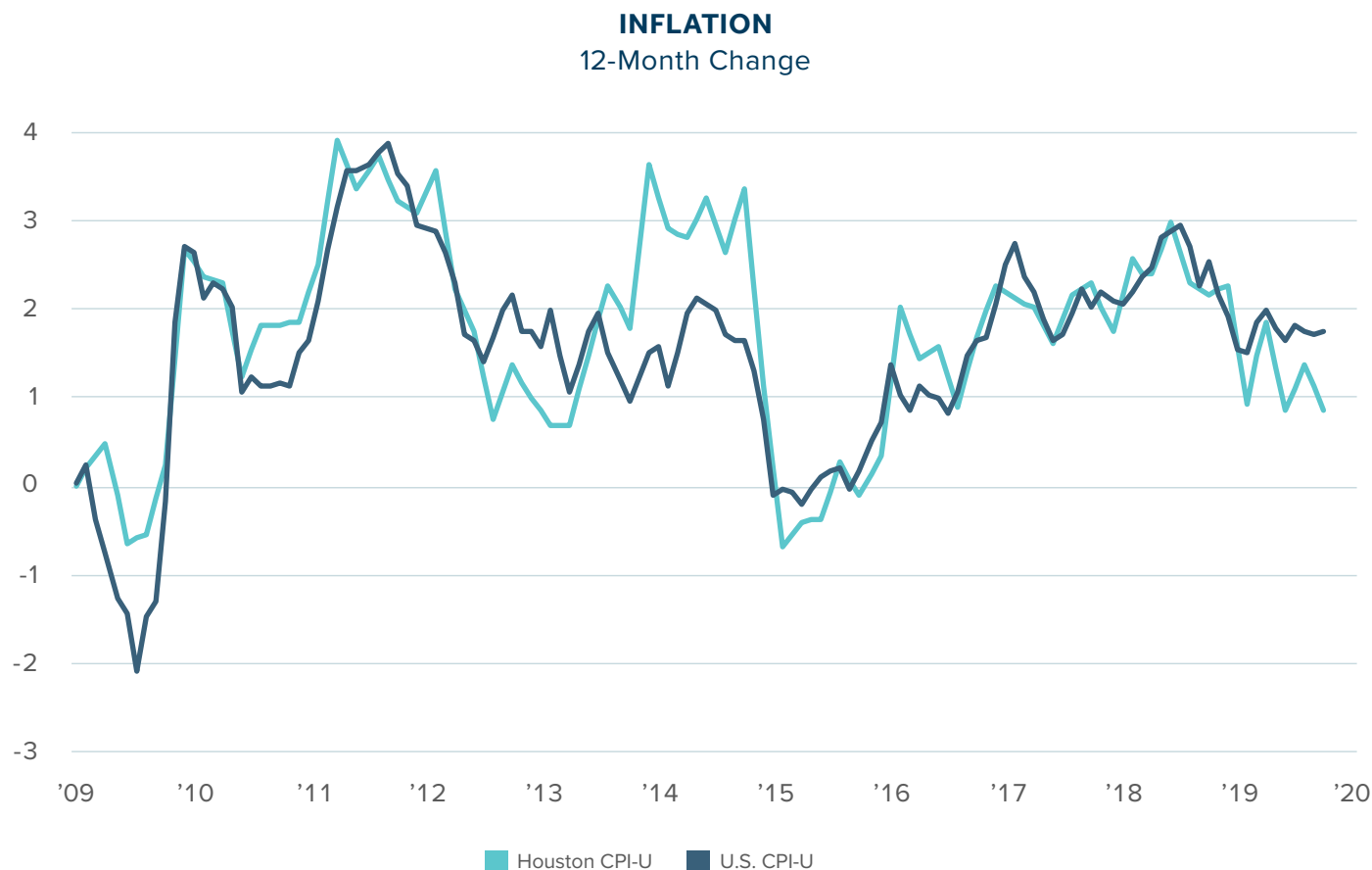
Year	Cars	Trucks and SUVs	Total
2009	100,129	118,581	218,710
2010	105,753	134,601	240,354
2011	107,552	147,444	254,996
2012	143,061	182,027	325,088
2013	153,210	194,649	347,859
2014	159,899	214,099	373,998
2015	150,622	225,859	376,481
2016	107,943	191,518	299,461
2017	96,251	194,103	290,354
2018	87,979	215,438	303,417
12-Month total ending September 2019	83,772	214,302	298,074

* Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, San Jacinto and Waller counties.

Source: *TexAuto Facts Report*, InfoNation, Inc., Sugar Land, TX

INFLATION

Houston's inflation rate has tracked below that of the U.S. for most of the past three years.



Source: U.S. Bureau of Labor Statistics, not seasonally adjusted

- The cost of consumer goods and services as measured by the Consumer Price Index for All Urban Consumers (CPI-U) rose 1.8 percent nationwide from October '18 to October '19, according to the U.S. Bureau of Labor Statistics. Over the same period, core inflation (all items less the volatile food and energy categories) increased 2.3 percent.
- From October '18 to October '19, consumer prices in the Houston-The Woodlands-Sugar Land metro area ticked up 0.9 percent. Core inflation rose 2.0 percent. The cost of shelter rose 2.3 percent since October '18, the largest contributor to the rise in core inflation.
- The U.S. energy index decreased 4.2 percent from October '18 to October '19, while Houston's energy index fell 10.0 percent. Declining motor fuel prices contributed to the lower local and national energy index. In contrast, natural gas costs increased.
- The food index increased 1.6 percent for Houston and 2.1 percent for the U.S. from October '18 to October '19. The cost of dining out in Houston grew 2.5 percent and grocery prices nudged up 0.6 percent. Both sub-components of the food index increased at similar rates nationwide.

CONSUMER PRICE INDEX
Annual Change

Year	Houston CPI	U.S. CPI
2009	2.69	2.72
2010	1.86	1.50
2011	3.08	2.96
2012	1.00	1.74
2013	3.62	1.50
2014	1.12	0.76
2015	0.36	0.73
2016	2.26	2.07
2017	1.75	2.11
2018	2.25	1.91
12-month change ending Oct 2019	0.86	1.76

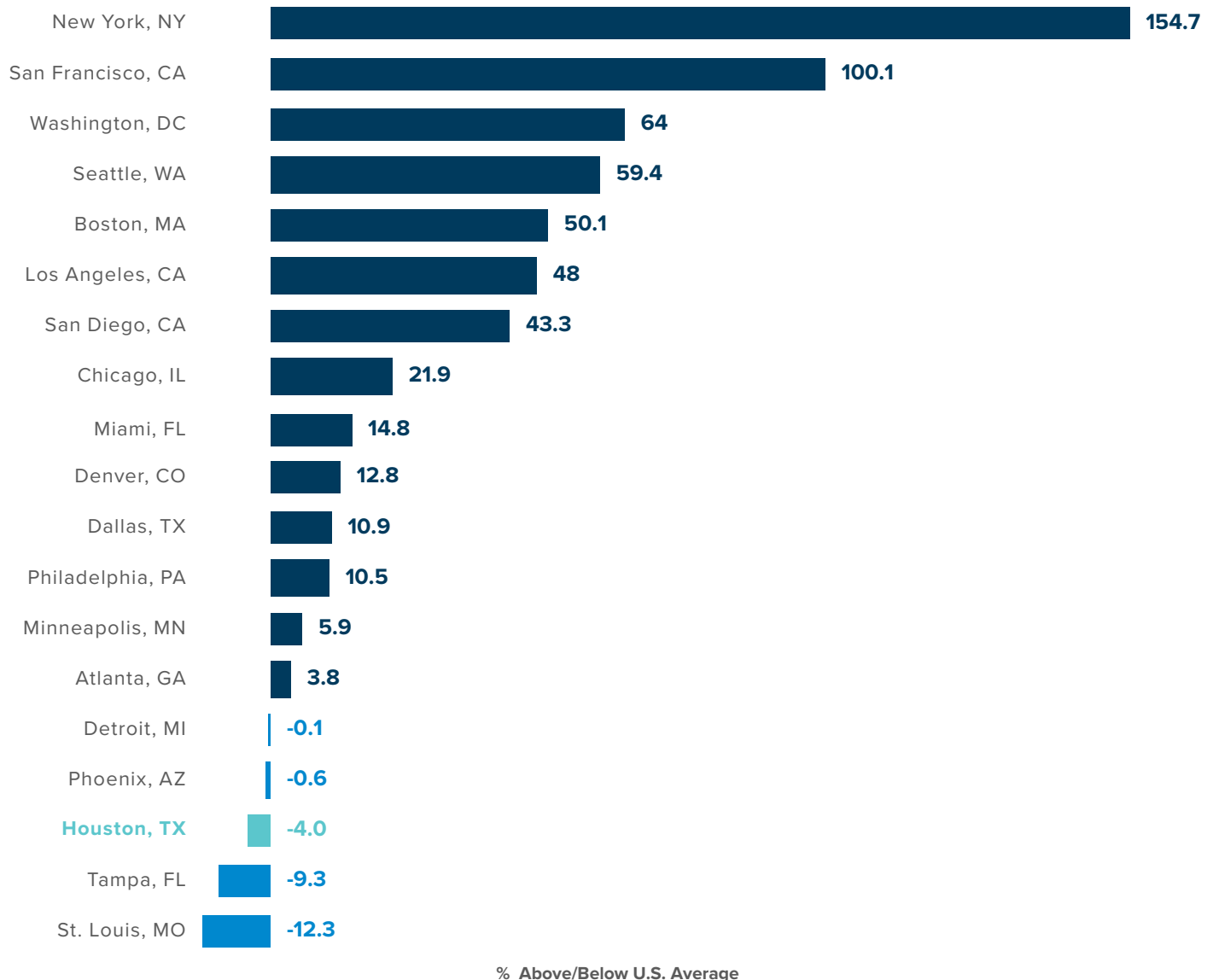
Source: U.S. Bureau of Labor Statistics, not seasonally adjusted

LIVING COST COMPARISON

Houston offers a low cost of living while maintaining a high quality of life with the amenities expected in a world-class city.

COST OF LIVING COMPARISON

20 Most Populous Metro Areas*



% Above/Below U.S. Average

*Metro areas represented by most dominant urban area. Riverside, California is among the 20 most populous metros, but did not submit COLI data.

Source: Council for Community and Economic Research (C2ER), Cost of Living Index, Q3 2019
(Data based on a survey of 255 urban areas, published October 2019).

- The C2ER Cost of Living Index for Q3 '19 indicates that Houston's living costs are 4.0 percent below the nationwide average and 26.3 percent below the average of the nation's 20 most populous metropolitan areas, ranking it third most affordable among its peers.

LIVING COST COMPARISON

COST OF LIVING COMPARISONS – Q3 2019

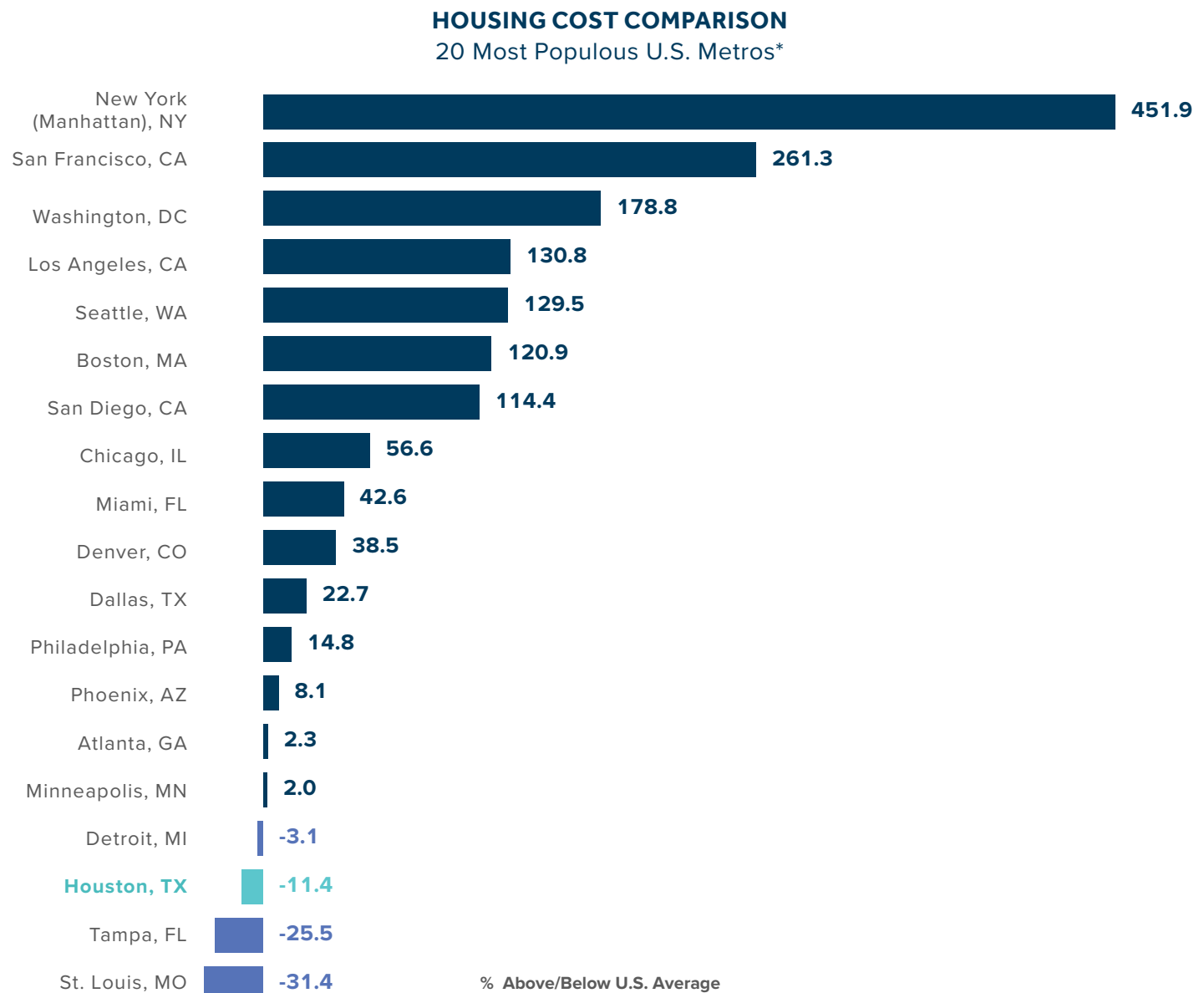
20 Most Populous U.S. Metros* (Average for 255 Urban Areas = 100)

Urban Area	Composite	Groceries	Housing	Utilities	Transportation	Health Care	Misc. Goods & Services
New York (Manhattan), NY	254.7	141.7	551.9	111.2	127.5	110.1	136.1
San Francisco, CA	200.1	126.9	361.3	122.3	140.9	127.4	137.1
Washington, D.C.	164.0	115.7	278.8	115.5	107.9	93.1	121.8
Seattle, WA	159.4	129.4	229.5	107.0	134.8	127.9	135.7
Boston, MA	150.1	108.1	220.9	114.8	111.3	118.4	129.8
Los Angeles, CA	148.0	115.6	230.8	106.8	126.4	111.2	111.6
San Diego, CA	143.3	115.9	214.4	119.0	129.8	109.6	108.0
Chicago, IL	121.9	104.0	156.6	92.7	124.6	99.8	109.0
Miami, FL	114.8	110.6	142.6	97.7	112.0	106.5	99.1
Denver, CO	112.8	98.0	138.5	80.8	104.0	104.2	108.5
Dallas, TX	110.9	100.7	122.7	108.0	98.5	108.2	109.3
Philadelphia, PA	110.5	117.1	114.8	107.9	115.0	103.1	104.6
Minneapolis, MN	105.9	103.1	102.0	97.3	104.1	103.3	113.3
Atlanta, GA	103.8	104.4	102.3	85.8	107.5	109.1	107.9
Detroit, MI	99.9	93.0	96.9	93.7	114.4	92.7	103.6
Phoenix, AZ	99.4	100.3	108.1	106.9	100.1	89.0	90.8
Houston, TX	96.0	88.9	88.6	107.3	97.4	91.8	102.1
Tampa, FL	90.7	104.3	74.5	90.4	99.4	102.7	95.3
St. Louis, MO	87.7	105.4	68.6	101.0	95.0	91.7	91.0

*Metro areas represented by most dominant urban area. Riverside, California, is among the 20 most populous metros, but did not submit COLI data.
Source: Council for Community and Economic Research (C2ER), Cost of Living Index, Q3 2019 (Data based on a survey of 255 urban areas, published October 2019).

HOUSING COST COMPARISON

Houston's housing costs are among the lowest of the major U.S. metro areas.



*Metro areas represented by most dominant urban area. Riverside, California is among the 20 most populous metros, but it did not submit COLI data.

Source: Council for Community and Economic Research (C2ER), *Cost of Living Index*, Q3 2019 Data
(Data based on a survey of 257 urban areas, published October 2019).

- The C2ER Cost of Living Index for Q3 '19 indicates that Houston's housing costs are 11.4 percent below the nationwide average and 50.5 percent below the average for the 20 most populous U.S. metros. Lower housing costs are one of the reasons Houston's overall living costs are 26.3 percent below the large-metro average. (This housing index is based 70.3 percent on homeownership and 29.7 percent on rental occupancy.)
- Excluding the two most expensive housing markets – New York and San Francisco – which tend to skew the average, Houston's housing costs are still 39.5 percent below the major metro average.

HOUSING COST COMPARISON

HOUSING COST COMPARISON – Q3 2019

20 Most Populous U.S. Metros* (Average for 257 Urban Areas = 100)

Urban Area	Housing Cost Index**	Percent Above or Below the Nationwide Average	Average Price for New 2,400-Square-Foot House***
New York (Manhattan), NY	551.9	451.9	\$2,034,671
San Francisco, CA	361.3	261.3	\$1,281,311
Washington, DC	278.8	178.8	\$1,015,852
Los Angeles, CA	230.8	130.8	\$812,462
Seattle, WA	229.5	129.5	\$795,437
Boston, MA	220.9	120.9	\$707,904
San Diego, CA	214.4	114.4	\$805,675
Chicago, IL	156.6	56.6	\$513,862
Miami, FL	142.6	42.6	\$450,432
Denver, CO	138.5	38.5	\$512,845
Dallas, TX	122.7	22.7	\$376,613
Philadelphia, PA	114.8	14.8	\$418,471
Phoenix, AZ	108.1	8.1	\$332,584
Atlanta, GA	102.3	2.3	\$366,569
Minneapolis, MN	102.0	2.0	\$369,941
Detroit, MI	96.9	-3.1	\$332,413
Houston, TX	88.6	-11.4	\$305,973
Tampa, FL	74.5	-25.5	\$244,916
St. Louis, MO	68.6	-31.4	\$239,572

*Metro areas represented by most dominant urban area. Riverside, California is one of the 20 most populous areas, but did not submit COLI data.

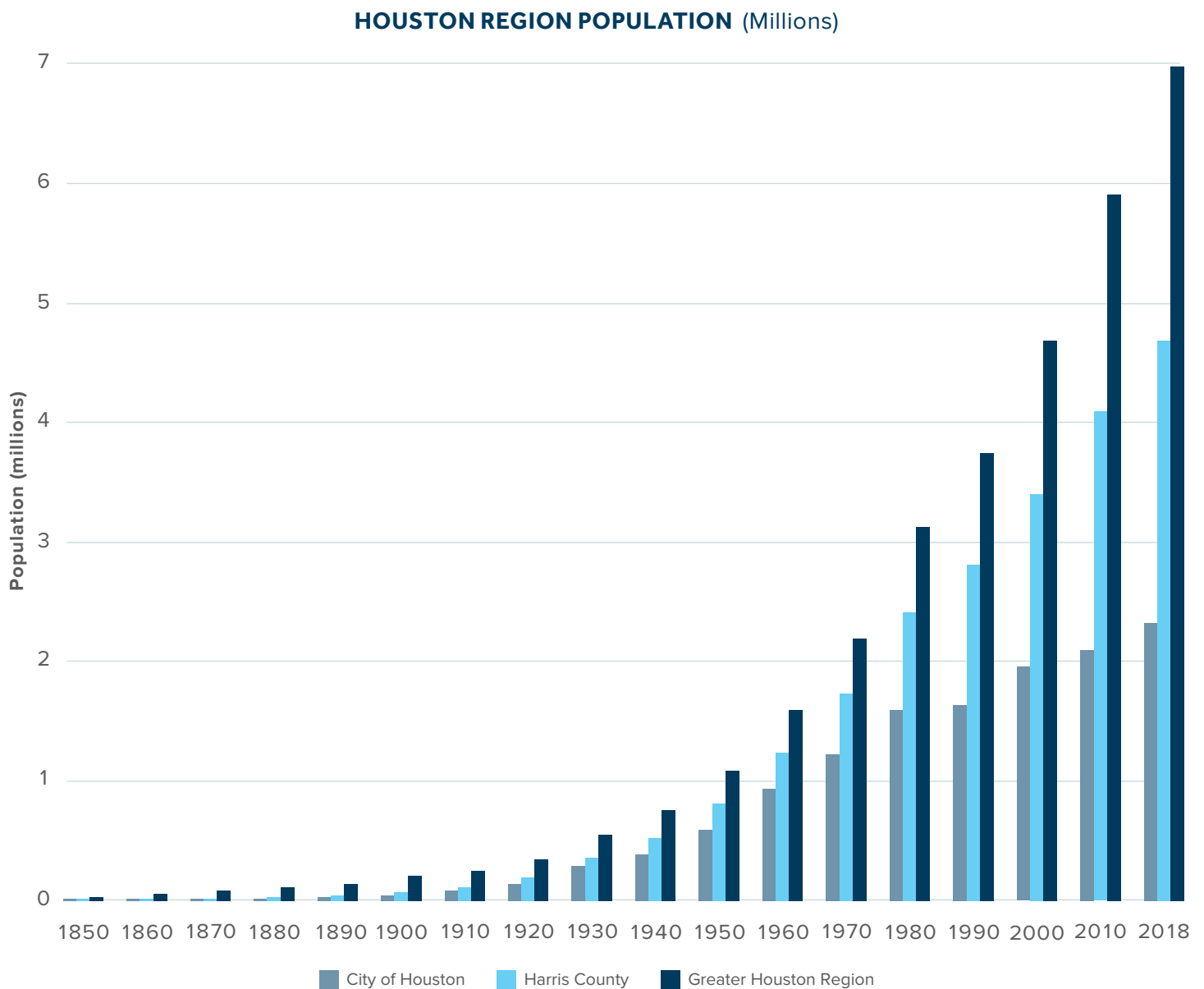
** Index is based 70.3 percent on homeownership costs and 29.7 percent on apartment rent.

*** Approximately 2,400 square foot home with 4 bedrooms, 2 baths, family-room (or equivalent), 2-car garage and 8,000 square foot lot. Neighborhoods are typical for corporate middle-management transferees.

Source: Council for Community and Economic Research (C2ER), Cost of Living Index, Q3 2019 (Data based on a survey of 257 urban areas, published October 2019).

HOUSTON REGION POPULATION

Houston has a sustained history of exponential population growth.



Source: U.S. Census Bureau, Decennial and 2018 Population Estimates; Texas Almanac

- From the first census in Texas in 1850 through the '18 intercensal estimates, the Greater Houston area has averaged a compound annual growth rate of 3.4 percent.
- The Houston-The Woodlands-Sugar Land MSA is the nation's fifth most populous metropolitan area. As Houston's population has grown, the region has climbed in the rankings. In 1970, Houston was the nation's 14th most populous metro, 10th in 1990, eighth in '00 and sixth in '10.
- Between '10 and '18 (the period for which the Bureau of the Census released its most recent population estimates), metro Houston added 1,076,897 residents, the second largest gain of any U.S. metro over that period. About 45.5 percent of this growth came from the natural increase (births minus deaths) and around 54.5 percent came from net in-migration (more residents moving in than out).

HOUSTON REGION POPULATION

POPULATION TOTALS

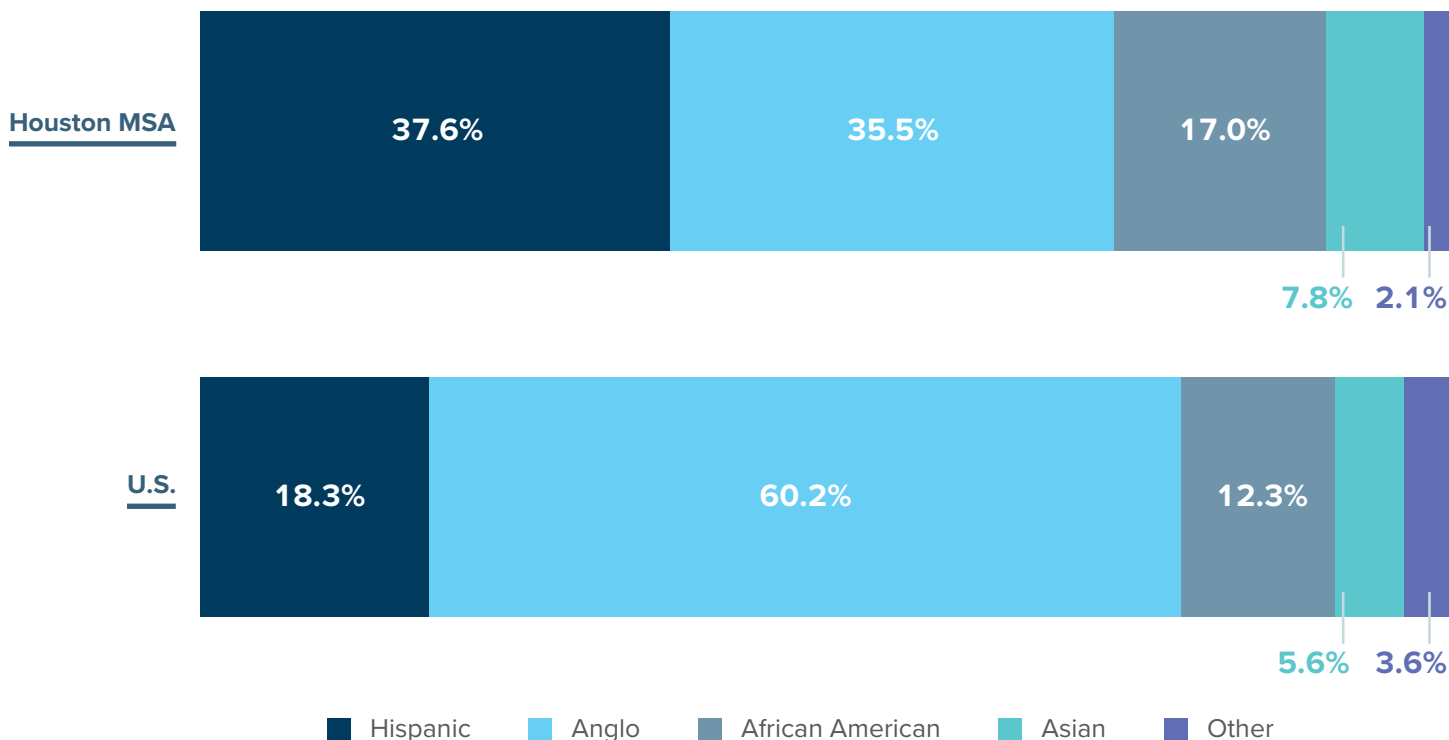
Census Year	Metro Houston	Harris County	City of Houston
1850	27,984	4,668	2,396
1860	55,317	9,070	4,845
1870	80,866	17,375	9,382
1880	112,053	27,985	16,513
1890	137,800	37,249	27,557
1900	202,438	63,786	44,633
1910	252,066	115,693	78,800
1920	348,661	186,667	138,276
1930	545,547	359,328	292,352
1940	752,937	528,961	384,514
1950	1,083,100	806,701	596,163
1960	1,594,894	1,243,158	938,219
1970	2,195,146	1,741,912	1,232,802
1980	3,135,806	2,409,544	1,594,086
1990	3,750,411	2,818,199	1,637,859
2000	4,693,161	3,400,578	1,953,631
2010	5,920,416	4,092,459	2,099,451
2011	6,056,366	4,179,796	2,124,143
2012	6,184,861	4,264,193	2,160,086
2013	6,330,657	4,355,158	2,198,280
2014	6,503,618	4,458,709	2,240,982
2015	6,676,565	4,561,939	2,286,630
2016	6,812,260	4,629,189	2,309,752
2017	6,905,695	4,664,159	2,317,445
2018	6,997,384	4,698,619	2,325,502

Source: U.S. Census Bureau, Decennial and 2018 Population Estimates; Texas Almanac

RACE/ETHNICITY

Houston is more racially and ethnically diverse than the nation as a whole.

2018 POPULATION BY RACE/ETHNICITY
Percentage Distribution



Source: U.S. Census Bureau, 2018 American Community Survey

- The U.S. Census Bureau's 2018 American Community Survey showed that no racial or ethnic group constitutes a majority of the Houston-The Woodlands-Sugar Land MSA population.
- The Houston MSA is home to the nation's fourth-largest Hispanic population. Its Hispanic population of 2.6 million in '18 is larger than the total populations of 15 states and the District of Columbia. '18 marks the second consecutive year that the Hispanic population is larger than the Anglo population.
- The Houston-The Woodlands-Sugar Land MSA contains the nation's seventh-largest Asian population (547,690)—larger than the total population of the Corpus Christi, Brownsville or Beaumont MSAs.
- Between '09 and '18, the metro area population increased by 19.3 percent. The Asian population increased by 55.9 percent, the Hispanic population by 30.6 percent, the African American population by 22.9 percent and the Anglo population by 1.6 percent.

AGE DISTRIBUTION

Houston's median age of 34.6 is the lowest of the nation's major metro areas.

AGE DISTRIBUTION FOR 20 MOST POPULOUS U.S. MSAs (Age groups as a percentage of total population)

Metro Area	Median Age	0-14 Years	15-24 Years	25-34 Years	35-54 Years	55-64 Years	65 and Over
Houston, TX	34.6	22.2	13.4	15.0	27.1	11.2	11.2
Riverside, CA	34.8	21.3	14.4	14.6	25.2	11.4	13.1
Dallas, TX	35.1	21.5	13.6	14.8	27.4	11.4	11.3
San Diego, CA	36.1	18.1	13.7	16.5	25.8	11.8	14.1
Atlanta, GA	36.6	20.1	13.5	14.1	28.2	11.9	12.3
Denver, CO	36.6	18.6	11.8	16.8	27.7	12.1	12.9
Phoenix, AZ	36.9	19.7	13.2	14.4	25.4	11.6	15.6
Seattle, WA	37.0	18.1	11.6	17.0	27.6	12.3	13.4
Los Angeles, CA	37.1	18.0	13.1	15.8	27.0	12.2	13.9
Washington, DC	37.1	19.2	12.6	14.9	28.1	12.2	13.0
Minneapolis, MN	37.3	19.7	12.3	14.6	26.3	13.1	14.0
Chicago, IL	37.7	18.8	13.0	14.4	26.4	12.8	14.6
United States Average	38.2	18.6	13.2	13.9	25.4	12.9	16.0
Boston, MA	38.8	16.2	13.7	15.2	25.9	13.4	15.7
Philadelphia, PA	38.8	17.9	12.7	14.3	25.5	13.6	16.0
New York, NY	38.8	17.8	12.3	14.7	26.4	13.0	15.7
San Francisco, CA	39.1	16.4	11.0	16.3	28.2	12.6	15.5
St. Louis, MO	39.6	18.3	12.1	13.7	25.1	14.2	16.5
Detroit, MI	40.1	18.0	12.3	13.4	25.7	14.1	16.4
Miami, FL	41.1	16.8	11.5	13.5	27.1	13.0	18.2
Tampa, FL	42.3	16.5	11.2	13.2	25.6	13.7	19.8

Note: Sums may not total due to rounding.

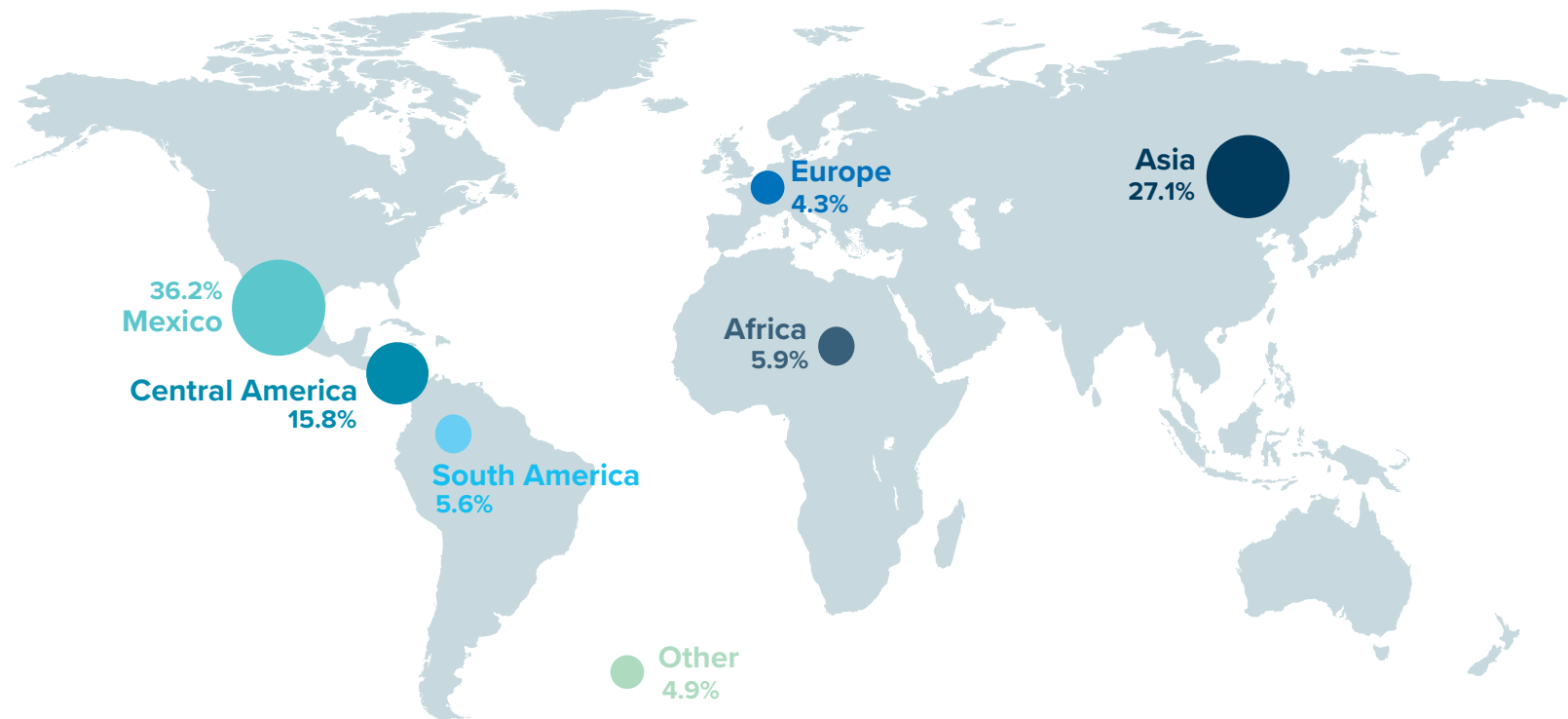
Source: U.S. Census Bureau, 2018 American Community Survey

FOREIGN-BORN POPULATION

Nearly one in four Houstonians was born outside the U.S.

PLACE OF ORIGIN, FOREIGN-BORN RESIDENTS PERCENT OF FOREIGN-BORN POPULATION

Metro Houston, 2018



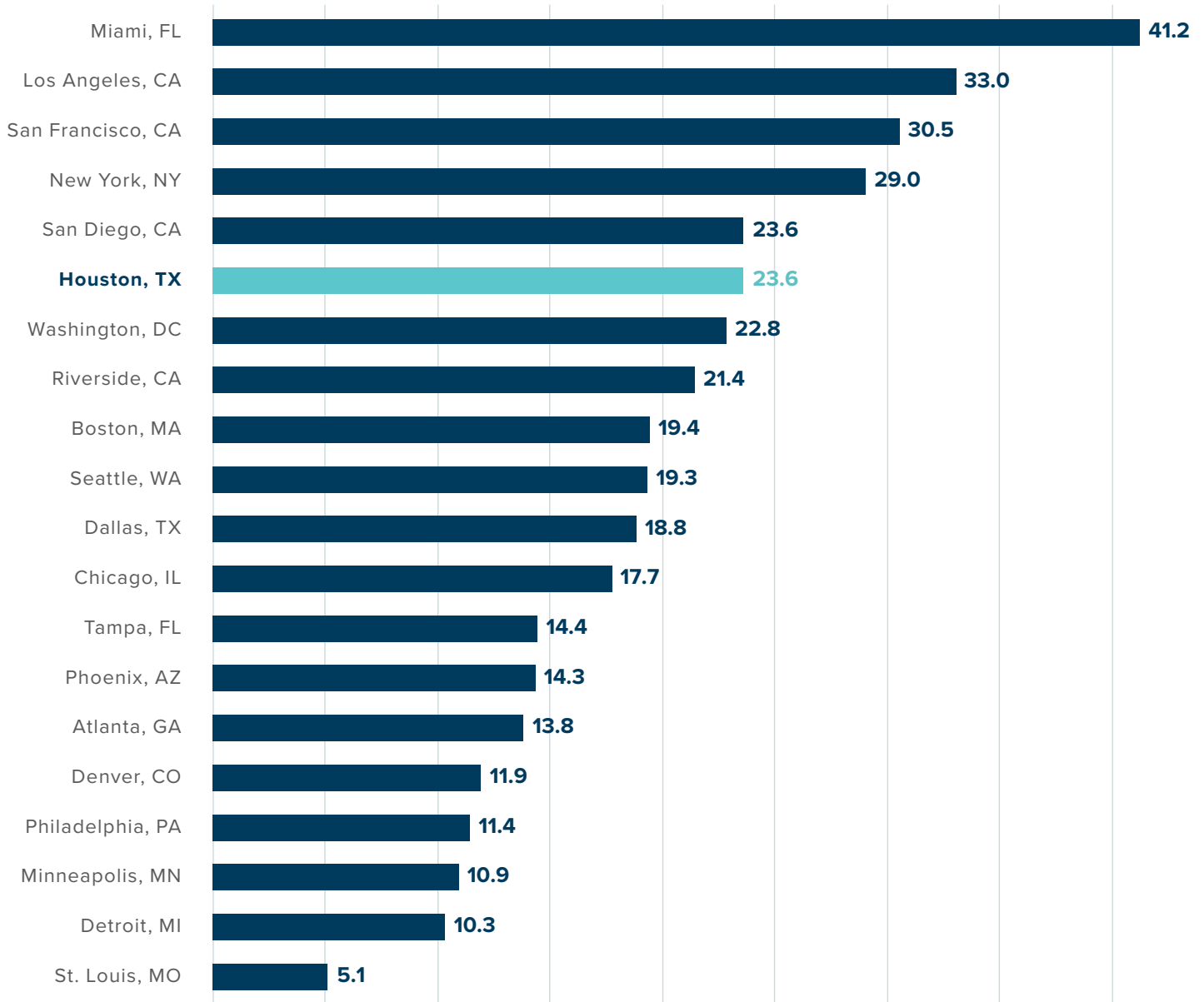
Source: U.S Census Bureau
2018 American Community Survey

- In '18, the Houston Metropolitan Statistical Area (MSA) contained an estimated 1.6 million foreign-born residents, according to the U.S. Census Bureau. This figure represents 23.6 percent of the metro population.
- Mexico accounts for nearly two-fifths of Houston's foreign-born residents (598,860). El Salvador (128,437) was the birthplace of the next largest group from Central America, followed by Honduras (77,698) and Guatemala (39,884).
- One-fourth of Houston's foreign-born residents were born in Asia (447,431). Asian nations with the largest populations in Houston include India (97,149), Vietnam (92,700), China (75,369), the Philippines (39,282) and Pakistan (30,379).

FOREIGN-BORN POPULATION

Houston is a magnet for international migration.

PERCENT OF METRO POPULATION FOREIGN-BORN
20 Most Populous Metro Areas



Source: U.S. Census Bureau, 2018 American Community Survey

- Over the past decade, the foreign-born population in metro Houston increased by almost one-third, from 1.2 million in '08 to 1.6 million in '18.
- In '18, nearly one in four Houstonians was foreign-born, versus less than one in seven nationwide.
- Only five of the nation's 20 most populous metropolitan areas—New York, Los Angeles, Chicago, Miami and San Diego—have more foreign-born residents than Houston.

MOST POPULOUS METROPOLITAN AREAS

Houston is the fifth most populous metro in the nation.

POPULATION ESTIMATES - U.S. Metros

	Residents July 1, 2018		Residents added 7/1/17 to 7/1/18	% change
New York-Newark-Jersey City, NY-NJ-PA	19,979,477		-19,474	-0.1%
Los Angeles-Long Beach-Anaheim, CA	13,291,486		-7,223	-0.1%
Chicago-Naperville-Elgin, IL-IN-WI	9,498,716		-22,068	-0.2%
Dallas-Fort Worth-Arlington, TX	7,539,711		131,767	1.8%
Houston-The Woodlands-Sugar Land, TX	6,997,384		91,689	1.3%
Washington-Arlington-Alexandria, DC-VA-MD-WV	6,249,950		49,949	0.8%
Miami-Fort Lauderdale-West Palm Beach, FL	6,198,782		49,095	0.8%
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	6,096,372		17,921	0.3%
Atlanta-Sandy Springs-Roswell, GA	5,949,951		75,702	1.3%
Boston-Cambridge-Newton, MA-NH	4,875,390		30,793	0.6%
Phoenix-Mesa-Scottsdale, AZ	4,857,962		96,268	2.0%
San Francisco-Oakland-Hayward, CA	4,729,484		18,791	0.4%
Riverside-San Bernardino-Ontario, CA	4,622,361		51,934	1.1%
Detroit-Warren-Dearborn, MI	4,326,442		4,738	0.1%
Seattle-Tacoma-Bellevue, WA	3,939,363		54,894	1.4%
Minneapolis-St. Paul-Bloomington, MN-WI	3,629,190		36,521	1.0%
San Diego-Carlsbad, CA	3,343,364		17,896	0.5%
Tampa-St. Petersburg-Clearwater, FL	3,142,663		51,438	1.7%
Denver-Aurora-Lakewood, CO	2,932,415		39,436	1.4%
St. Louis, MO-IL	2,805,465		385	0.0%

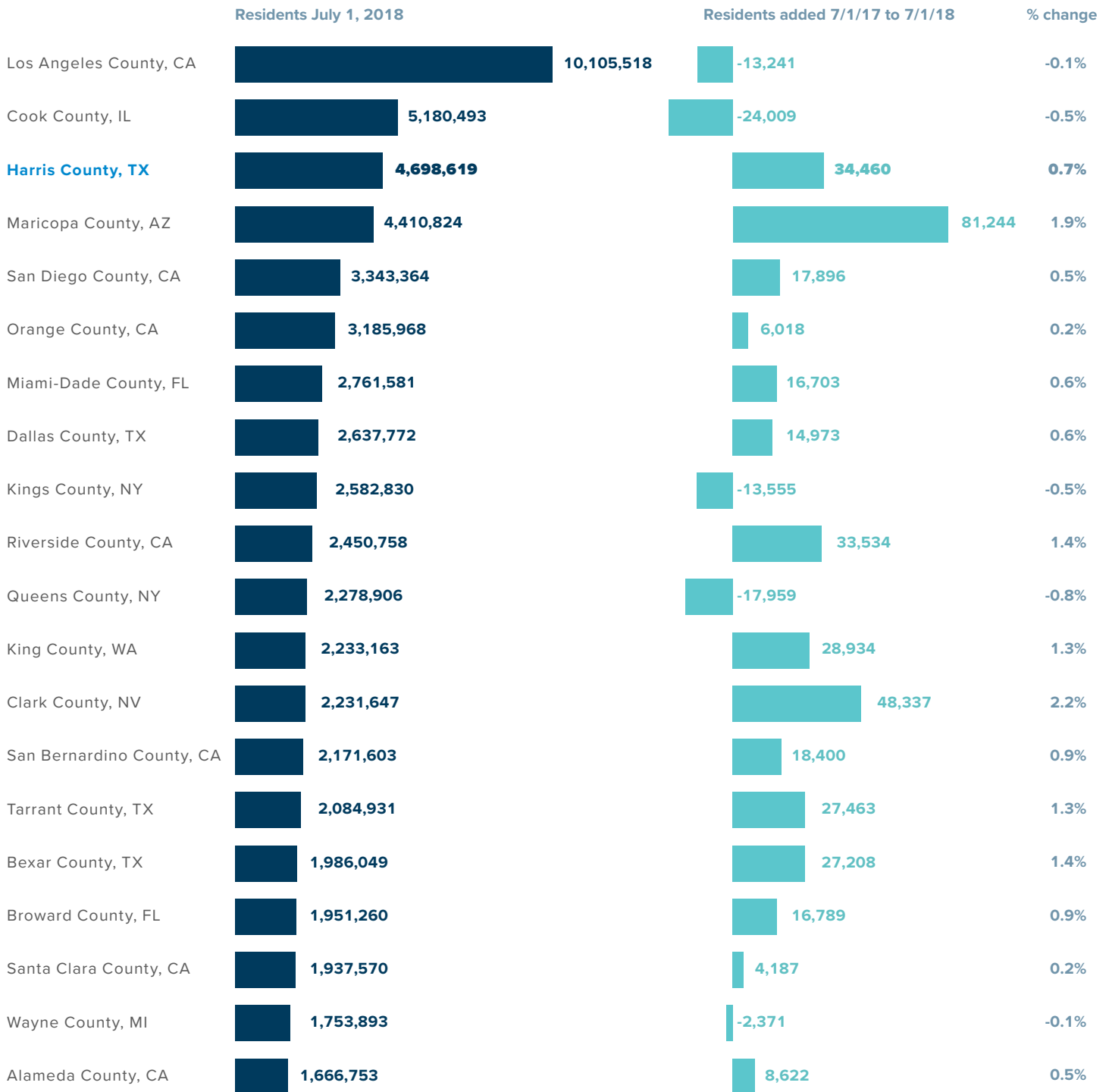
Source: U.S. Census Bureau, 2018 Population Estimates

- Between July 1, 2017 and July 1, 2018 (the period for which the U.S. Census Bureau released its most recent population estimates), the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area (MSA) added the third most residents among all metros in the U.S.

MOST POPULOUS COUNTIES

Harris County is the third most populous county in the nation.

POPULATION ESTIMATES - U.S. Counties



Source: U.S. Census Bureau, 2018 Population Estimates

- Between July 1, 2017 and July 1, 2018 (the period for which the U.S. Census Bureau released its most recent population estimates), Harris County added the third most residents of all counties in the nation.

MOST POPULOUS CITIES

Houston is the fourth most populous city in the nation.

POPULATION ESTIMATES - U.S. Cities

	Residents July 1, 2018		Residents added 7/1/17 to 7/1/18	% change
New York, NY	8,398,748		-39,523	-0.5%
Los Angeles, CA	3,990,456		8,454	0.2%
Chicago, IL	2,705,994		-7,073	-0.3%
Houston, TX	2,325,502		8,057	0.3%
Phoenix, AZ	1,660,272		25,288	1.5%
Philadelphia, PA	1,584,138		3,917	0.2%
San Antonio, TX	1,532,233		20,824	1.4%
San Diego, CA	1,425,976		11,549	0.8%
Dallas, TX	1,345,047		1,960	0.1%
San Jose, CA	1,030,119		-2,017	-0.2%
Austin, TX	964,254		12,504	1.3%
Jacksonville, FL	903,889		12,153	1.3%
Fort Worth, TX	895,008		19,552	2.2%
Columbus, OH	892,533		10,770	1.2%
San Francisco, CA	883,305		4,139	0.5%
Charlotte, NC	872,498		13,151	1.5%
Indianapolis, IN	867,125		5,235	0.6%
Seattle, WA	744,955		15,354	2.1%
Denver, CO	716,492		11,053	1.5%
Washington, DC	702,455		6,764	1.0%

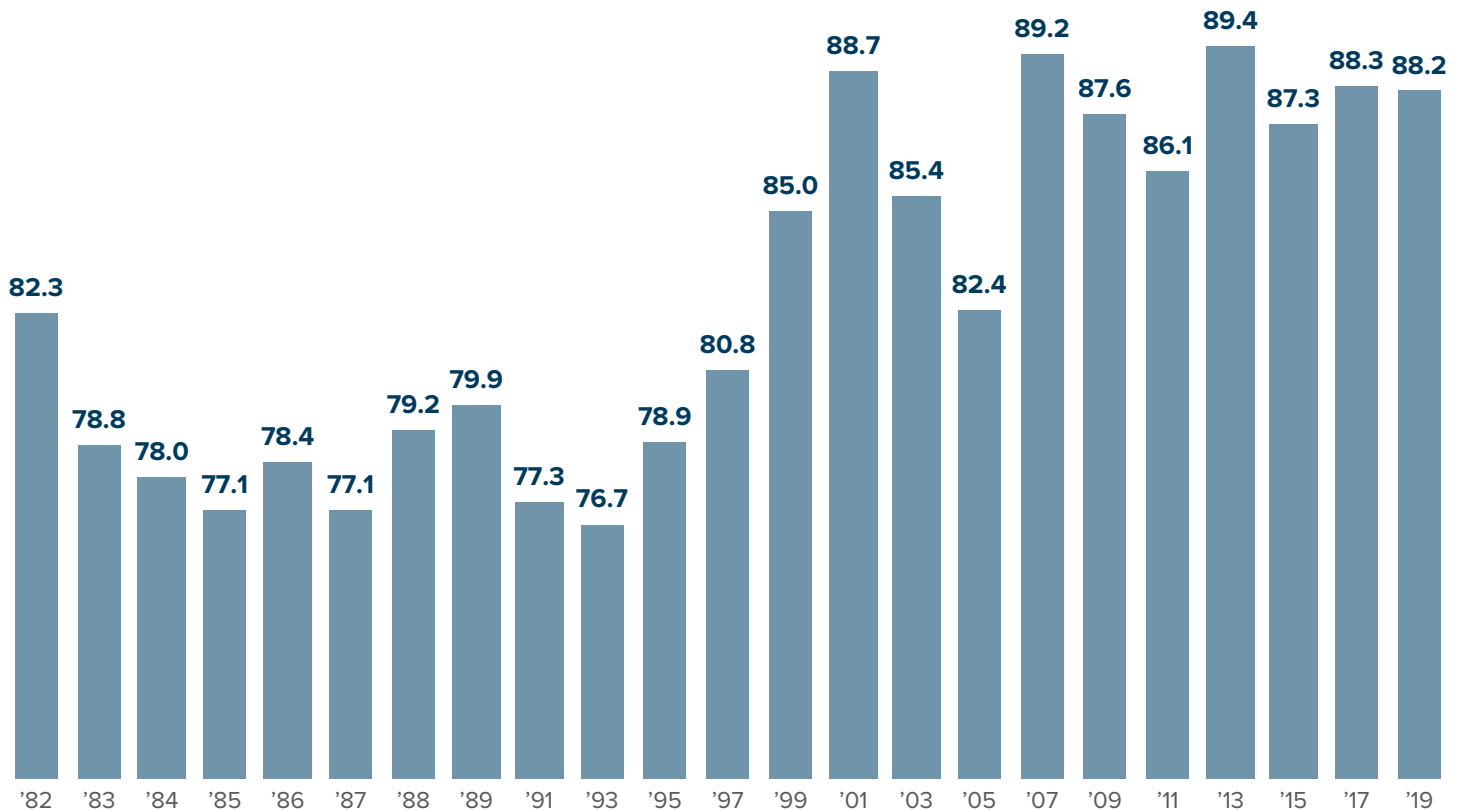
Source: U.S. Census Bureau, 2018 Population Estimates

THE WORK ETHIC IN HOUSTON

The work ethic is alive, well and flourishing in Houston.

"IF YOU WORK HARD IN THIS CITY, EVENTUALLY YOU WILL SUCCEED."

Percent who agree



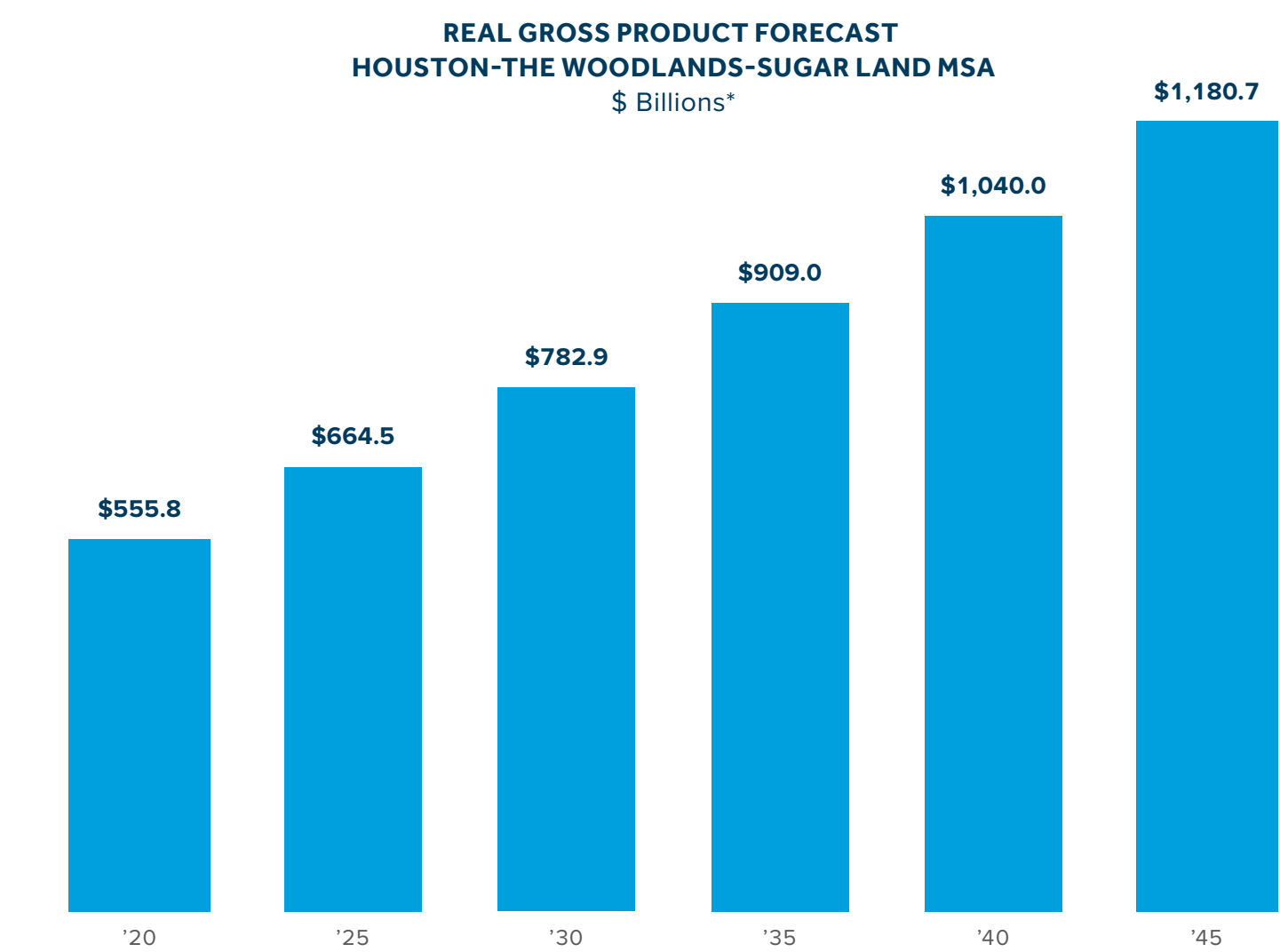
Note: The question was asked every other year starting in '91.

Source: Kinder Institute, *Houston Area Survey*

- Houston's business success appears related, at least in part, to the overwhelming prevalence of a strong work ethic and to confidence that Houston provides an environment in which individual effort is rewarded.
- According to Rice University's annual Houston Area Survey, a large majority of Houstonians agree that "if you work hard in this city, eventually you will succeed." In '15, as the region struggled through a downturn with significant job losses in the oil and gas industry, Houstonians remained optimistic, with 87.3 percent agreeing with the statement. Work ethic increased slightly in '17, when 88.3 percent of respondents agreed.
- In March 1982, when employment in Houston stood at what was then the all-time peak, 82.3 percent of respondents agreed. In February 1987, when Houston was at the bottom of its recession and unemployment stood above 10 percent, 77.1 percent of respondents still shared this view. In 1999, 85.0 percent of Houstonians accepted this statement — a record at the time. And in '01, agreement soared to 88.7 percent. In the years that followed, agreement on work ethic followed the course of the economy, eventually climbing to an all-time high of 89.4 percent agreement in '13.
- In contrast to Houston's strongly positive attitude, agreement with this same statement in national samples over the same period has ranged only from 58 to 63 percent. The difference between Houston and the nation as a whole is significant and has endured through the entire range of the regional business cycle.
- The confidence that personal effort will be rewarded in Houston transcends racial and ethnic categories. Over the past several surveys, on average 85 percent of Anglos, 82 percent of African Americans, 88 percent of U.S.-born Latinos and 94 percent of U.S.-born Asians agreed with the statement.

GROSS PRODUCT FORECAST

The Perryman Group forecasts sustained economic growth for the Houston metro over the next quarter century.



Source: The Perryman Group
*’12 constant dollars

- Real (i.e., net of inflation) gross product in the Houston region is expected to grow at an average annual rate of 3.1 percent from ’20 to ’45 in The Perryman Group’s forecast. Gross product, often referred to as output and interchangeable with gross domestic product (GDP), is the final value of all goods and services produced in an economy during a given period of time.
- The Houston MSA’s real GDP is projected to more than double between ’20 and ’45.
- Compound annual growth rates of real gross product from ’20 to ’45 are highest in the industries of management of companies and enterprises (3.9 percent), manufacturing (3.8 percent) and administrative/support and waste management/remediation services (3.7 percent).

GROSS PRODUCT FORECAST

Real Gross Product: Houston-The Woodlands-Sugar Land Metropolitan Area

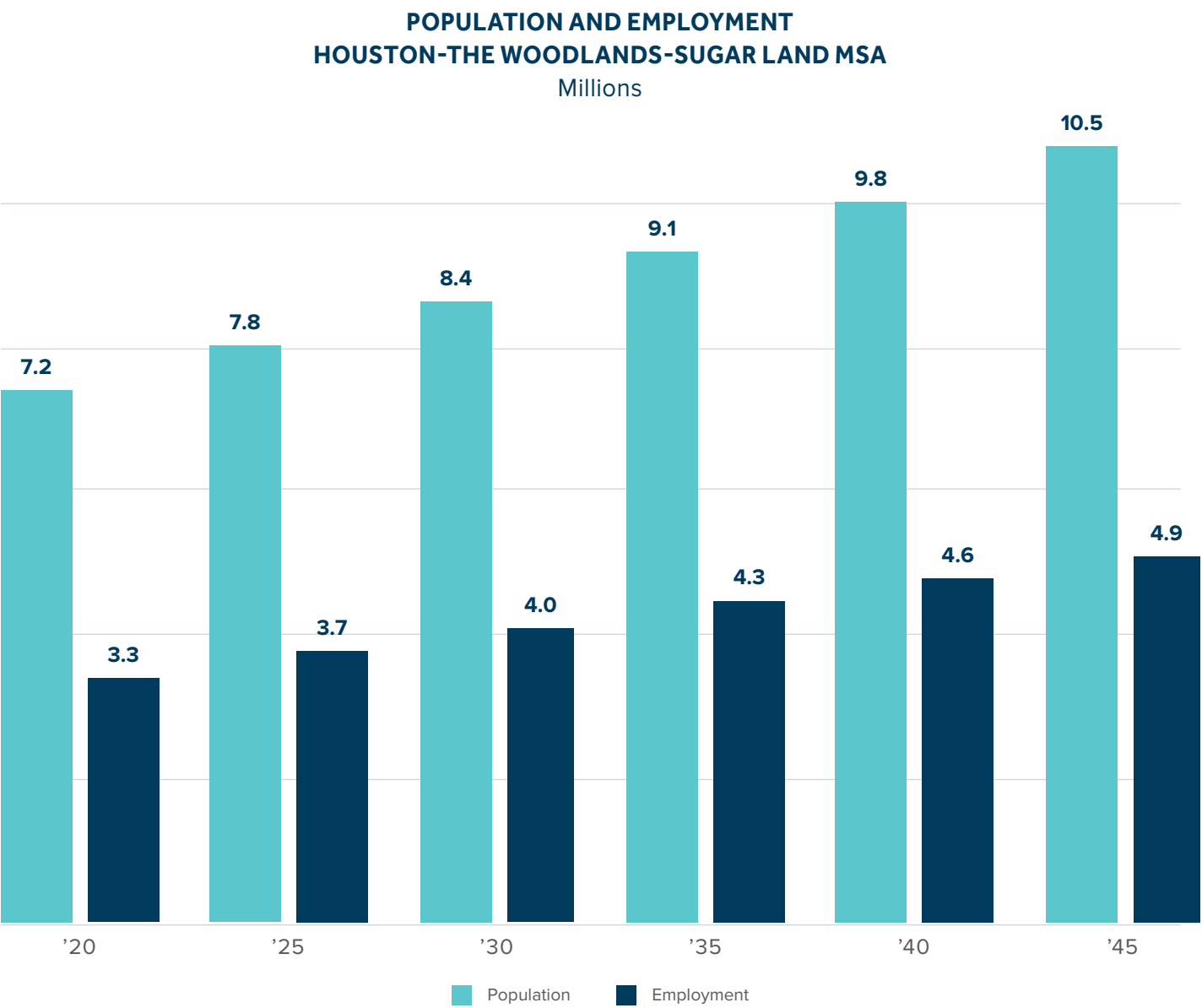
ESTIMATES AND FORECASTS

Year	Real Gross Product \$ Billions, Constant '12 Dollars	Compound Annual Growth Rate Percent, 5 Years Ending
2020	555.815	1.81
2025	664.481	3.64
2030	782.925	3.34
2035	908.967	3.03
2040	1,040.038	2.73
2045	1,180.741	2.57

Source: The Perryman Group; growth rate calculations by the Greater Houston Partnership

POPULATION AND EMPLOYMENT FORECAST

The Perryman Group forecasts Houston’s population to reach 10.5 million and payroll employment to grow to 4.9 million by ’45.



Source: The Perryman Group

- From '20 to '45, The Perryman Group anticipates population growth to average 1.5 percent annually in the Houston region. Over the same period, the Texas-based economic forecasting firm expects wage and salary employment to rise at the rate of 1.6 percent annually.
- The Houston–The Woodlands–Sugar Land Metro Area will add 3.3 million residents between '20 and '45. Perryman also forecasts that Houston will add an additional 1.6 million payroll jobs and account for one-fourth of Texas job growth during that time frame.

POPULATION AND EMPLOYMENT FORECAST

Houston-The Woodlands-Sugar Land MSA

ESTIMATES AND FORECASTS

Millions

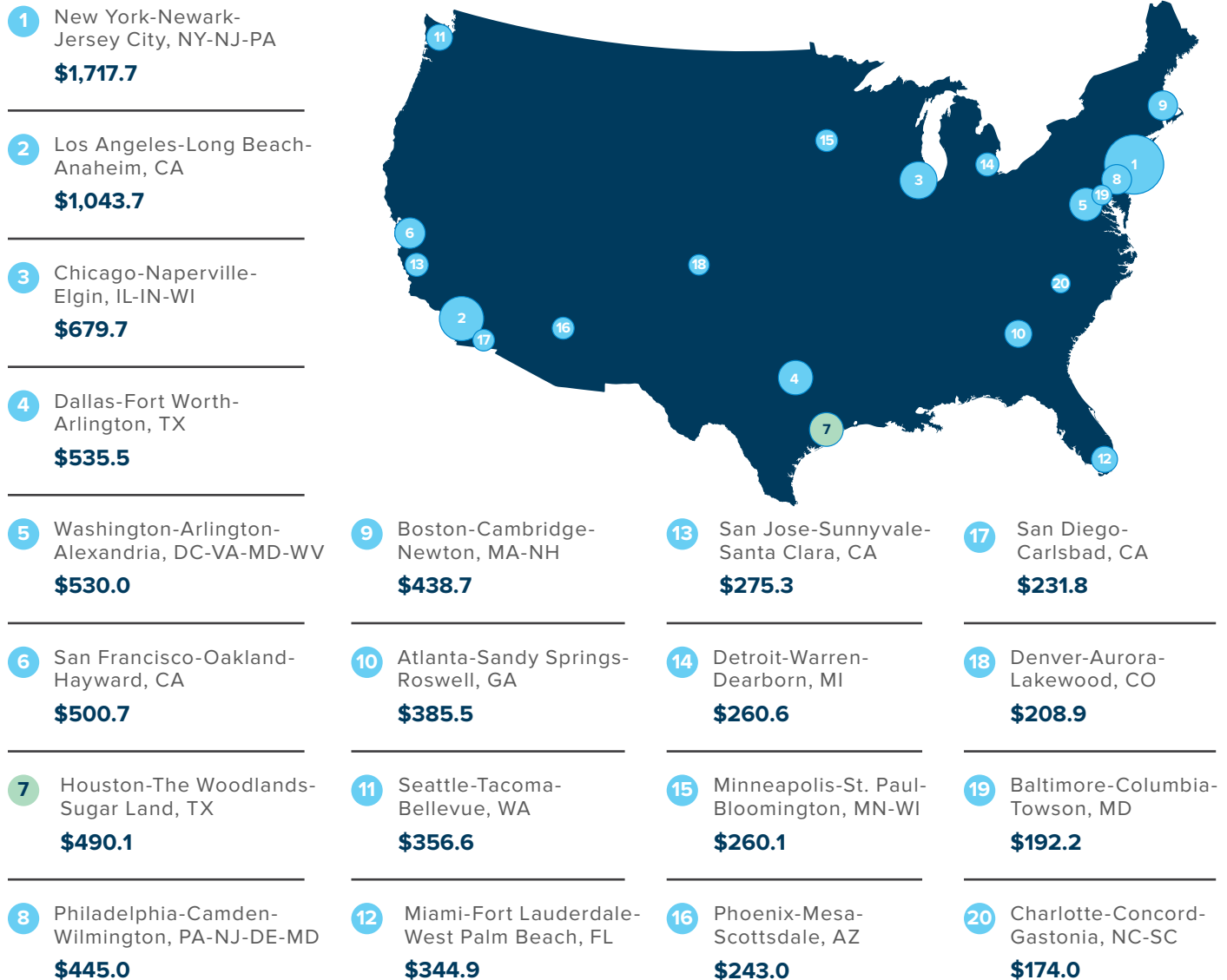
Year	Population	Payroll Employment
2020	7.215	3.338
2025	7.786	3.676
2030	8.398	4.010
2035	9.052	4.329
2040	9.752	4.624
2045	10.499	4.919

Source: The Perryman Group

TOP METRO AREAS BY GROSS DOMESTIC PRODUCT

Houston has the seventh largest metro GDP in the nation.

GROSS DOMESTIC PRODUCT – TOP 20 METROS (\$ Billions)

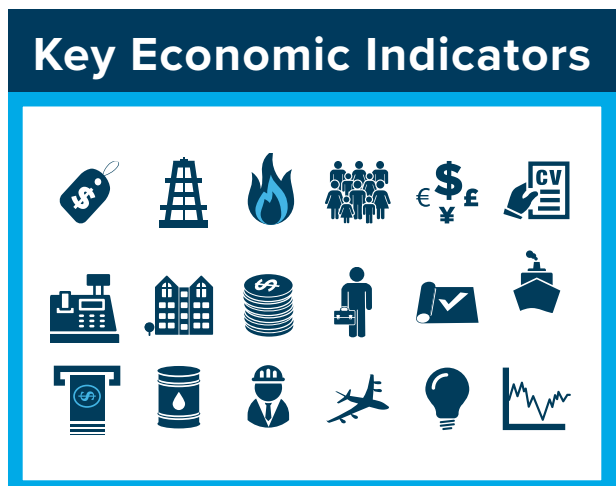
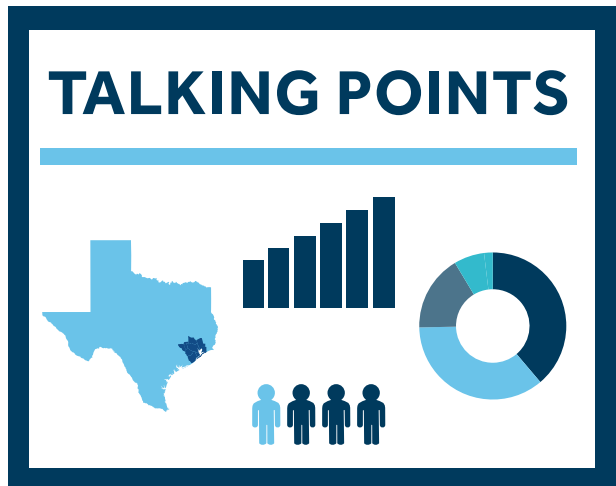


Source: U.S. Bureau of Economic Analysis, 2017 GDP by Metropolitan Area, current dollars

- The U.S. Bureau of Economic Analysis (BEA) estimates Houston's gross domestic product (GDP) at \$490.1 billion in '17, ranking it as the nation's seventh largest metro economy.
- Metro Houston's GDP declined 6.9 percent from \$507.2 billion in '14 (10-year peak) to \$472.3 billion in '16 but increased 3.8 percent from '16 to '17.
- The Houston region has a gross domestic product greater than 36 states and accounted for 28.9 percent of Texas' GDP.
- If Houston were an independent nation, the region would have the 26th largest economy in the world, placing it behind Belgium (\$494.7 billion) and ahead of Thailand (\$455.4 billion).
- While subject to revision, Houston's GDP related to construction declined 4.1 percent whereas mining and oil and gas extraction increased 7.2 percent compared to '16.

Stay up to date on the Houston economy through the year.

Check out other Partnership Research publications at
houston.org/economy.





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