



GREATER HOUSTON  
**PARTNERSHIP.**

Making Houston Greater.

# HOUSTON ECONOMIC HIGHLIGHTS 2018

December 2018

Publication Underwritten by:



2018 Houston Economic Highlights was compiled by the research team of Greater Houston Partnership, including Elizabeth Balderrama, Patrick Jankowski, Roel Gabe Martinez, Josh Pherigo, Nadia Valliani and Melissa Verhoef with assistance from Skip Kasdorf and our intern, Bo Nie. This publication was designed by Marc Keosayan and Suzanne Morgan.

Cover image: Bryan Malloch

# TABLE OF CONTENTS

<b>2</b>	Houston in Perspective	<b>34</b>	New Car, Truck and Suv Sales
<b>4</b>	Payroll Employment	<b>36</b>	Inflation
<b>6</b>	Unemployment Rate	<b>38</b>	Living Cost Comparison
<b>8</b>	Goods-Producing and Service-Providing Jobs	<b>40</b>	Housing Cost Comparison
<b>10</b>	Employment by Industry	<b>42</b>	Houston Region Population
<b>12</b>	Employment Change by Industry	<b>44</b>	Race/Ethnicity
<b>14</b>	Employment Growth in Major Metros	<b>45</b>	Age Distribution
<b>16</b>	Purchasing Managers Index	<b>46</b>	Foreign-Born Population
<b>18</b>	Oil and Natural Gas Prices	<b>48</b>	Most Populous Metropolitan Areas
<b>20</b>	Drilling Activity and Oil Price	<b>49</b>	Most Populous Counties
<b>22</b>	Foreign Trade	<b>50</b>	Most Populous Cities
<b>24</b>	Air Passengers	<b>51</b>	The Work Ethic in Houston
<b>26</b>	Residential Real Estate	<b>52</b>	Gross Area Product Forecast
<b>28</b>	Office Market	<b>54</b>	Population and Employment Forecast
<b>30</b>	Houston Hotel Data	<b>56</b>	Top Metro Areas by Gross Domestic Product
<b>32</b>	Retail Sales		

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 6,892,427 residents as of July 1, 2017, 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 (7,016,270) and ahead of Massachusetts (6,859,819) and Tennessee (6,715,984).

Harris County had a population of 4,652,980 residents as of July 1, 2017, according to estimates by the U.S. Census Bureau. If Harris County were a state, it would have the 26th largest population in the U.S., behind Louisiana (4,684,333) and ahead of Kentucky (4,454,189) and Oregon (4,142,776).

The City of Houston had a population of 2,312,717 residents as of July 1, 2017, 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 (2,913,123) and ahead of New Mexico (2,088,070) and Nebraska (1,920,076).

Among the nation's metropolitan areas, the Houston MSA ranked fifth in percentage of metro population that is foreign-born (23.6 percent), according to the Census Bureau's 2017 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 (\$505.0 billion) and ahead of Maryland (\$393.6 billion).

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).

Selected key economic indicators for '17:

- The Houston Association of Realtors® Multiple Listing Service recorded closings on 94,814 properties (includes single-family homes, townhomes, condos, high rises, etc.), an average of one every 5.6 minutes.
- Houston MSA automobile dealers sold 290,354 new cars, trucks and SUVs, an average of one every 1.8 minutes.
- The Houston Airport System handled 54,168,938 passengers, an average of 103 passengers per minute.
- The City of Houston issued building permits for construction valued at \$6.1 billion, an average of \$193 per second.

## IN 2017

**6,892,427**  
RESIDENTS  
in Metro Houston

**4,652,980**  
RESIDENTS  
in Harris County

**2,312,717**  
RESIDENTS  
in the City of Houston

Nearly **1 IN 4**  
HOUSTONIANS  
is foreign-born

**94,814**  
PROPERTY  
CLOSINGS

**290,354**  
NEW CARS, TRUCKS  
AND SUVs SOLD

**54,168,938**  
AIRPORT  
PASSENGERS

**\$6.1** BILLION  
in CONSTRUCTION  
BUILDING PERMITS



## 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 still to spare.

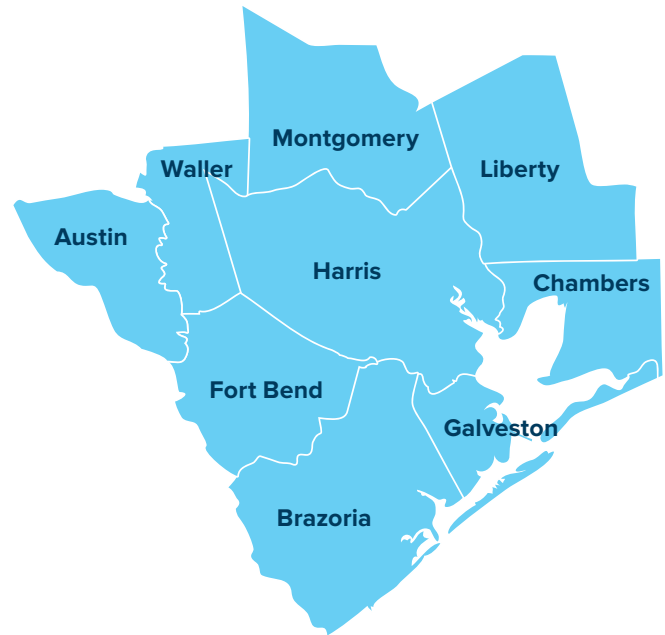
At 665 square miles, the City of Houston is larger than the cities of Chicago, Dallas, Los Angeles, New York, Phoenix and San Diego.

**9,444**  
SQUARE  
MILES

**6,892,427**  
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:

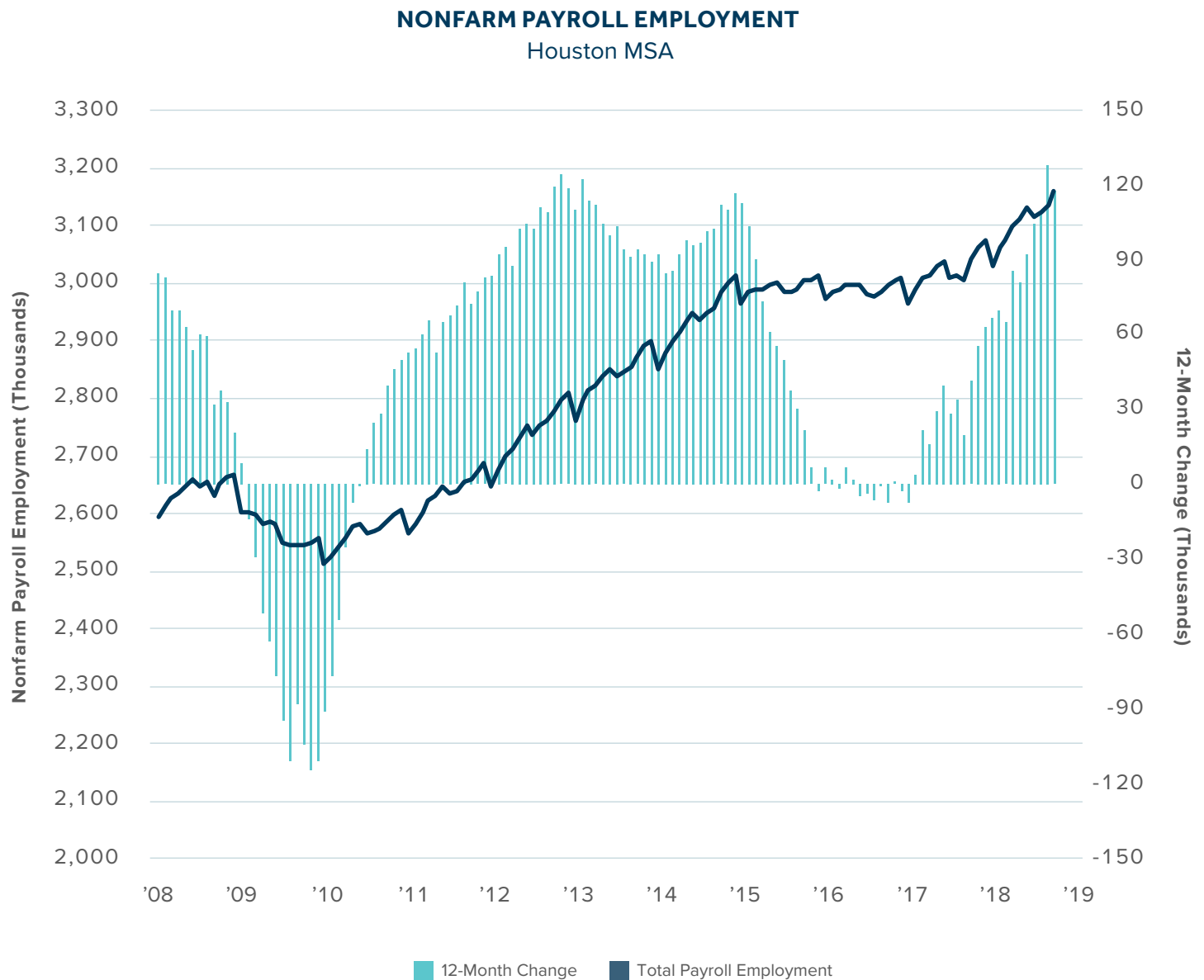
**Houston - Sugar Land - Baytown Metropolitan Statistical Area (MSA)** contains 10 counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, San Jacinto and Waller.

## 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 '18.



Source: Texas Workforce Commission, not seasonally adjusted

- The Texas Workforce Commission reports that nonfarm payroll employment topped 3,158,800 jobs in October '18, a record for the region. That also represents an increase of 117,800 jobs, or 3.9 percent, from October '17.
- After five boom years ('10 – '14), the energy sector went into steep decline starting in January of '15. Over the next 30 months, the sector cut more than 86,000 jobs. Other sectors continued to grow however, helping to offset the losses in oil and gas. Though the energy industry suffered one of the worst recessions in its history, Houston lost fewer than 5,000 jobs during the downturn.
- Houston's relatively mild job losses indicate 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-The Woodlands-Sugar Land Metropolitan Statistical Area

### NONFARM PAYROLL EMPLOYMENT

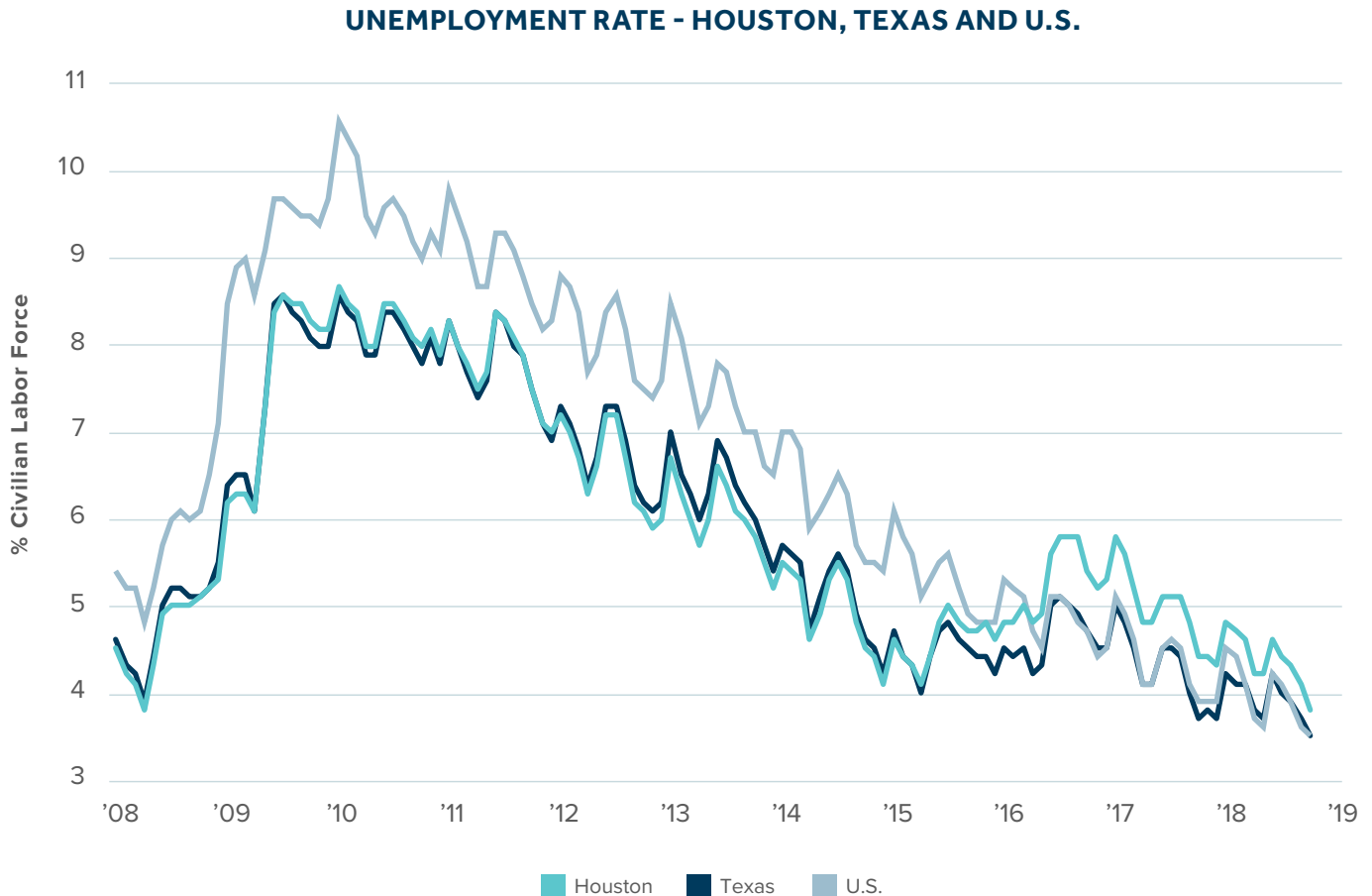
Year-End

Year	Nonfarm Payroll Employment	Change from Prior Year
2008	2,666,800	21,300
2009	2,556,300	-110,500
2010	2,606,600	50,300
2011	2,689,700	83,100
2012	2,808,500	118,800
2013	2,898,500	90,000
2014	3,015,200	116,700
2015	3,012,700	-2,500
2016	3,010,500	-2,200
2017	3,073,400	62,900
12-month average ending October 2018	3,098,100	86,700

Source: Texas Workforce Commission, not seasonally adjusted

## UNEMPLOYMENT RATE

Houston's unemployment rate fell to 3.8 percent in October '18, the second lowest rate in 20 years.



Source: Texas Workforce Commission, not seasonally adjusted

- Houston's unemployment rate was 3.8 percent in October '18, down from 4.1 percent last month and 4.4 percent a year ago. Texas' unemployment rate was 3.5 percent in October '18, down from 3.7 percent in both September '18 and October '17. The U.S. rate was 3.5 in October '18, down from 3.6 in September '18 and 3.9 in October '17. 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 nearly 179,800 jobs over the same period.
- 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 tracked above the national rate.



## UNEMPLOYMENT RATE

Unemployment rate for Houston-The Woodlands-Sugar Land MSA, Texas and the U.S.

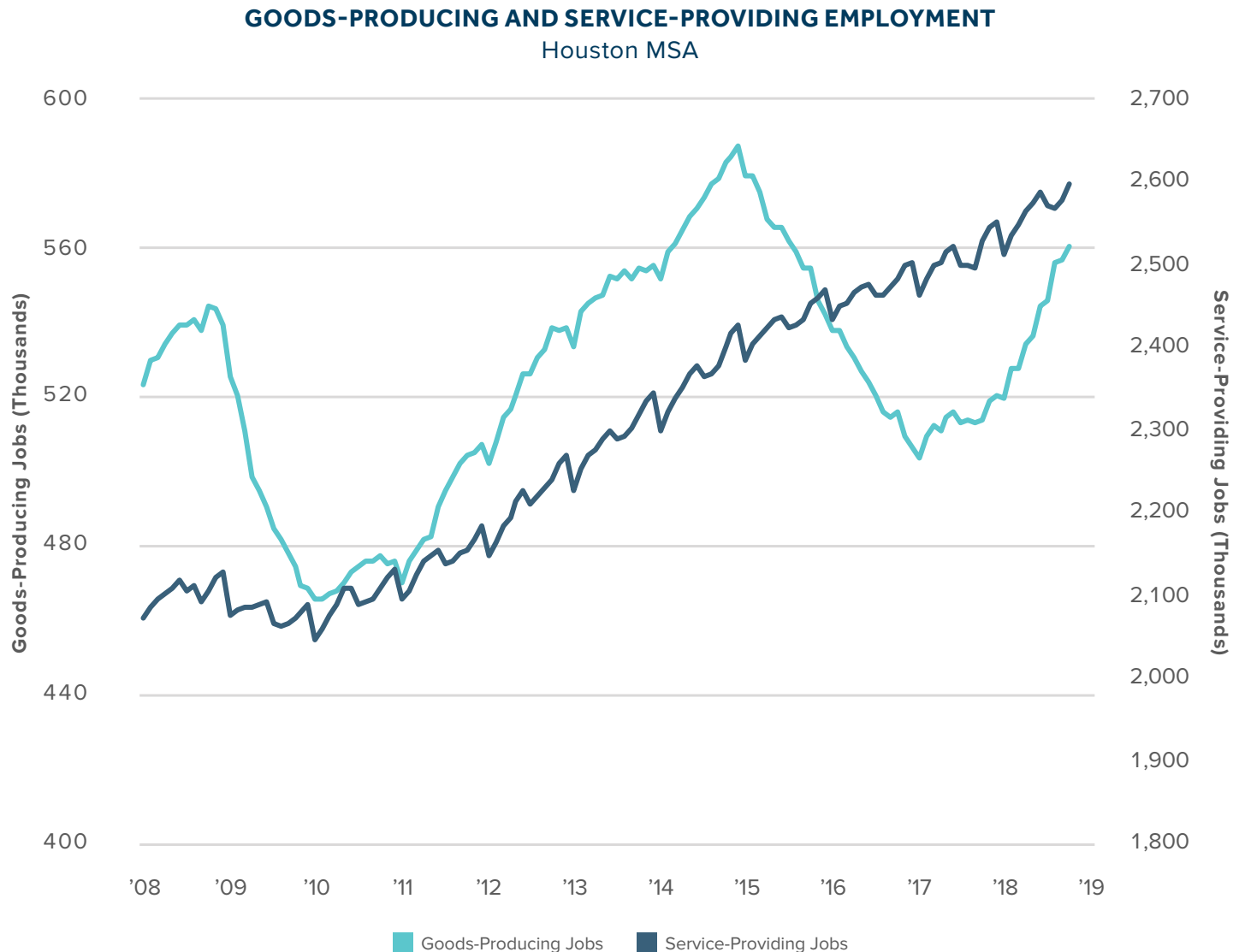
### PERCENT OF UNEMPLOYED CIVILIAN LABOR FORCE

Year	Annual Averages		
	Houston- The Woodlands- Sugar Land MSA	Texas	U.S.
2008	4.7	4.8	5.8
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
12-month average ending October 2018	4.4	3.9	4.0

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, not seasonally adjusted

- Employment in Houston's service-providing sector reached 2,598,600 job in October '18, 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.
- Construction accounts for 44 percent of all goods producing jobs in Houston, manufacturing for 42 percent and mining (energy) for 14 percent. Mining has benefited from rising oil prices, which in turn has supported job growth in manufacturing. Construction is benefiting from strong home and retail construction, the result of population growth, and warehouse construction, the result of activity at the Port of Houston and the growing needs of e-commerce.

# GOODS-PRODUCING AND SERVICE-PROVIDING JOBS

Houston Metropolitan Statistical Area (MSA)

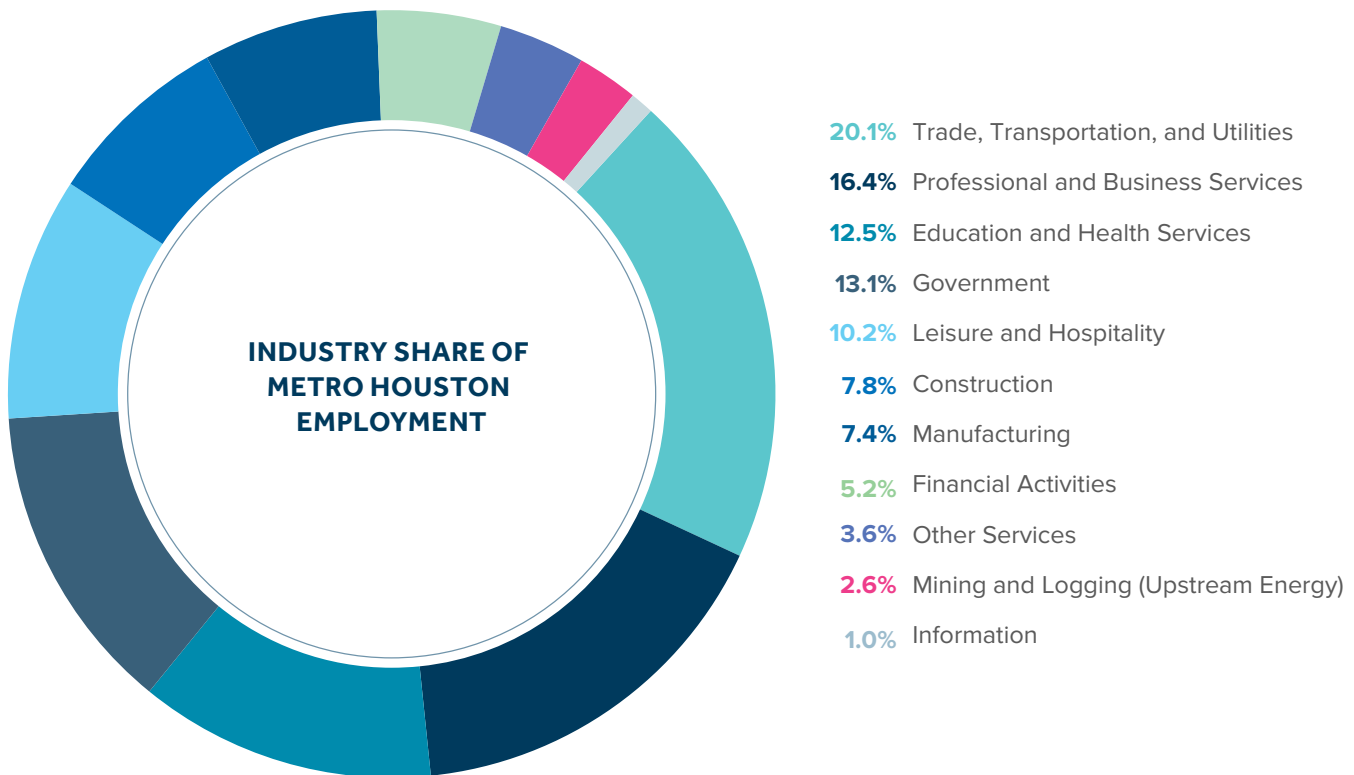
## ANNUAL AVERAGES

Year	Goods-Producing	Service-Providing
2008	536,700	2,104,100
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	513,300	2,508,100
12-month average ending October '18	537,400	2,560,800

Source: Texas Workforce Commission, not seasonally adjusted

## EMPLOYMENT BY INDUSTRY

No single industry or sector dominates Houston employment.



Source: Texas Workforce Commission, October 2018, not seasonally adjusted

- Nonfarm payroll employment in the Houston metro area reached 3,158,800 in October '18, a new record for the region.
- Service industries account for 2.6 million Houston-area jobs or four out of five workers in the region. The largest service industries are trade, transportation, and utilities (20.1 percent of jobs), professional and business services (16.4 percent), and education and health services (12.5 percent).
- The goods-producing sector employs more than half a million Houstonians and accounts for approximately one in five of the region's jobs. Construction is the largest goods-producing industry with 7.8 percent of total jobs, followed closely by manufacturing (7.4 percent), and upstream energy (2.6 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 (MSA) EMPLOYMENT BY INDUSTRY

October 2018

Industry	Jobs	Percent of Total
Total Nonfarm	3,158,800	100.0
Total Private	2,745,000	86.9
Goods Producing	560,200	17.7
Service Providing	2,598,600	82.3
Mining and Logging	81,600	2.6
Oil and Gas Extraction	35,900	1.1
Support Activities for Mining	44,300	1.4
Construction	245,800	7.8
Manufacturing	232,800	7.4
Durable Goods	148,900	4.7
Non-Durable Goods	83,900	2.7
Trade, Transportation, and Utilities	635,900	20.1
Wholesale Trade	171,000	5.4
Retail Trade	316,900	10.0
Transportation, Warehousing, and Utilities	148,000	4.7
Information	31,000	1.0
Financial Activities	165,200	5.2
Finance and Insurance	101,800	3.2
Real Estate and Rental and Leasing	63,400	2.0
Professional and Business Services	519,400	16.4
Professional, Scientific, and Technical Services	238,100	7.5
Management of Companies and Enterprises	43,400	1.4
Admin and Support and Waste Mgmt.	237,900	7.5
Educational and Health Services	395,100	12.5
Educational Services	61,300	1.9
Health Care and Social Assistance	333,800	10.6
Leisure and Hospitality	323,600	10.2
Arts, Entertainment, and Recreation	35,300	1.1
Accommodation and Food Services	288,300	9.1
Other Services	114,600	3.6
Government	413,800	13.1

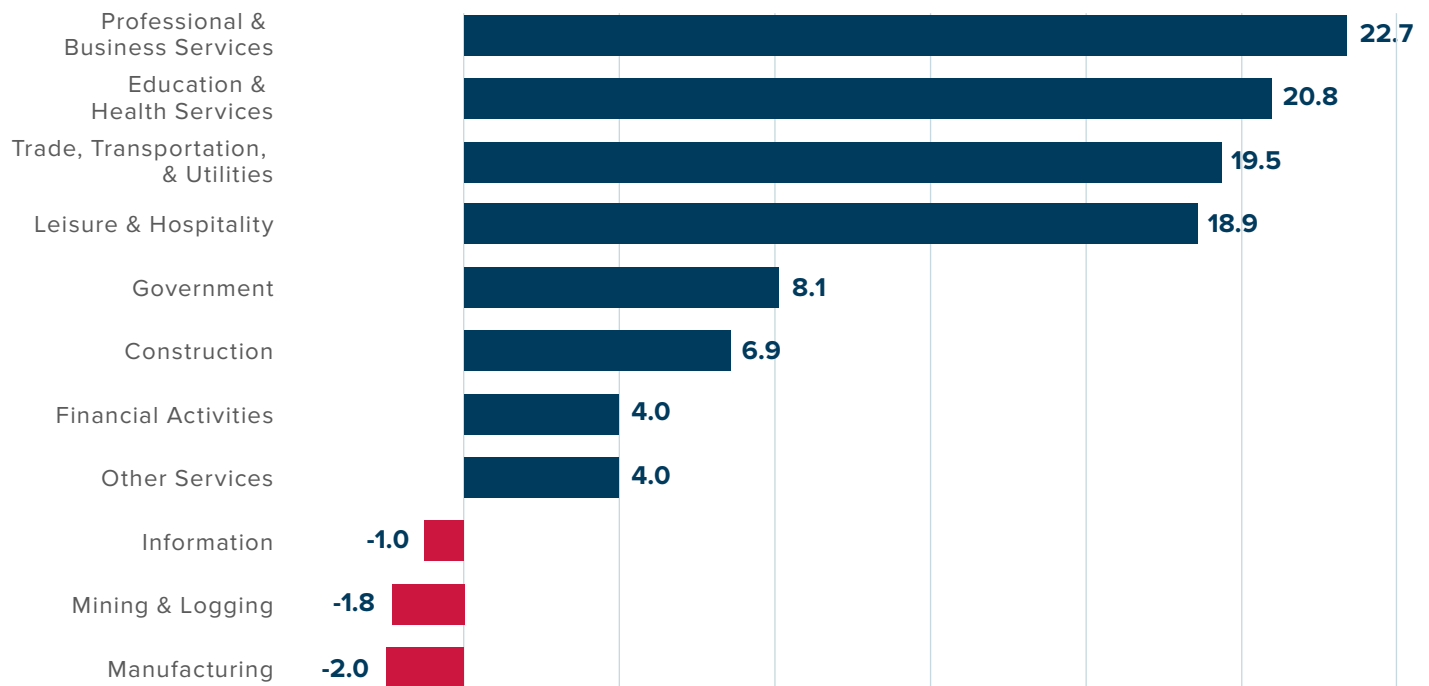
Sources: Texas Workforce Commission, October 2018, not seasonally adjusted

## 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 '08 to October '18



Source: Texas Workforce Commission, not seasonally adjusted

- The Houston region grew by 508,600 jobs between October '08 and October '18. Of those jobs, 22.7 percent are from the professional and business services industry, which has added 115,700 jobs. Subsectors with the largest gains include administrative and support and waste management (48,900 jobs) and professional, scientific, and technical services (48,400 jobs).
- Trade, transportation, and utilities added 99,300 jobs and contributed 19.5 percent to the total job growth in Houston over the past decade. The sector benefits from the \$192 billion in annual trade passing through the Houston-Galveston Customs District, as well as growth in jobs and population.
- Leisure and hospitality gained 95,900 jobs during the last decade, accounting for 18.9 percent of the region's job growth. Houston has more than 88,000 hotel rooms and nearly 11,000 restaurants.
- Education and health services grew by 105,700 jobs from October '08 to October '18, driven primarily by 85,800 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 (MSA)

### JOB GROWTH BY INDUSTRY

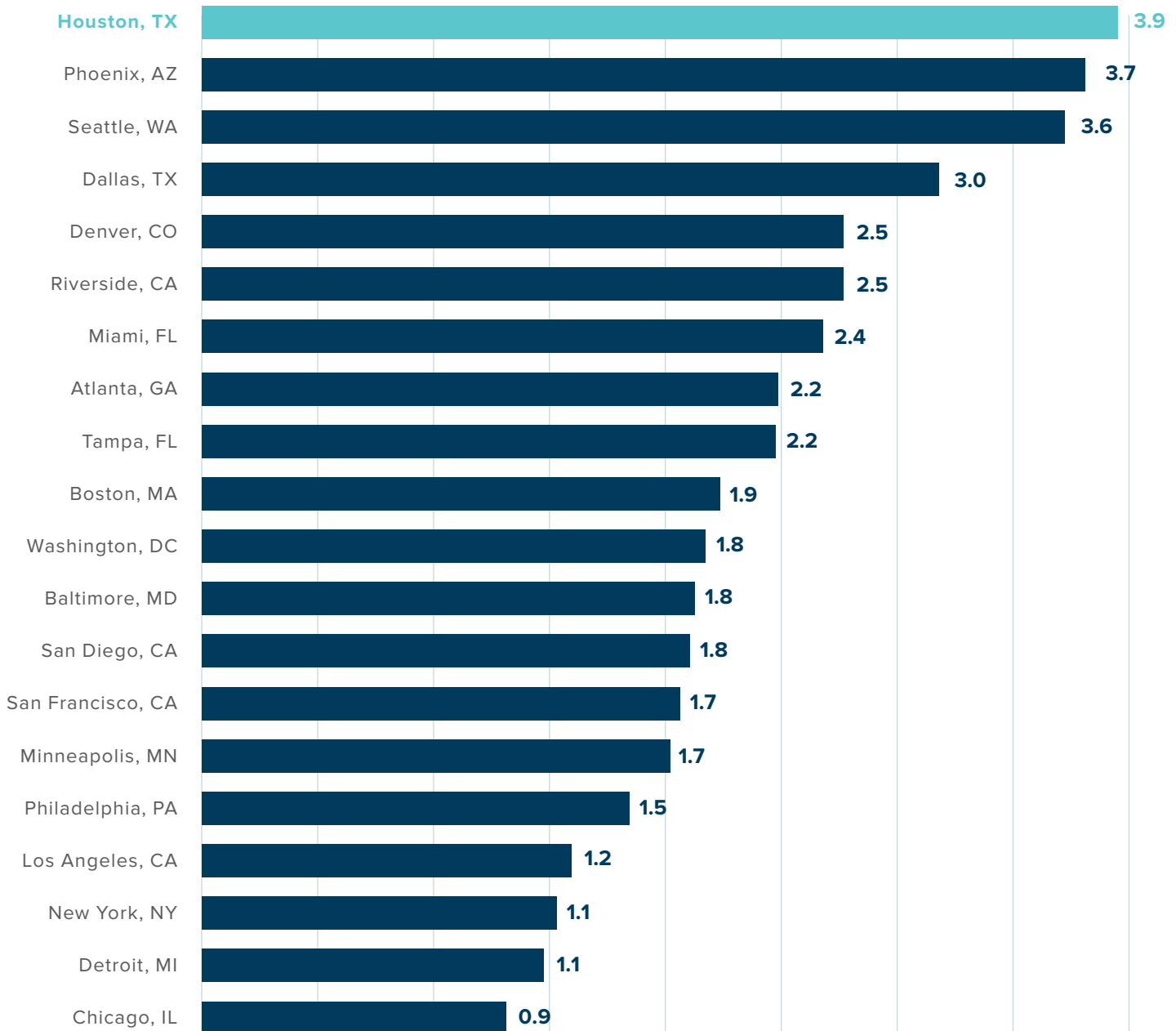
Industry	October '08	October '18	Change	Percent Change	Percent Share of Job Growth
Total Nonfarm	2,650,200	3,158,800	508,600	19.2	--
Mining and Logging	91,000	81,600	-9,400	-10.3	-1.8
Construction	210,800	245,800	35,000	16.6	6.9
Manufacturing	242,900	232,800	-10,100	-4.2	-2.0
Durable Goods	160,700	148,900	-11,800	-7.3	-2.3
Non-Durable Goods	82,200	83,900	1,700	2.1	0.3
Trade, Transportation, and Utilities	536,600	635,900	99,300	18.5	19.5
Wholesale Trade	142,100	171,000	28,900	20.3	5.7
Retail Trade	265,600	316,900	51,300	19.3	10.1
Transportation, Warehousing, and Utilities	128,900	148,000	19,100	14.8	3.8
Information	36,300	31,000	-5,300	-14.6	-1.0
Financial Activities	144,700	165,200	20,500	14.2	4.0
Finance and Insurance	92,100	101,800	9,700	10.5	1.9
Real Estate and Rental and Leasing	52,600	63,400	10,800	20.5	2.1
Professional and Business Services	403,700	519,400	115,700	28.7	22.7
Professional, Scientific, and Technical Services	189,700	238,100	48,400	25.5	9.5
Management of Companies and Enterprises	25,000	43,400	18,400	73.6	3.6
Admin and Support and Waste Mgmt.	189,000	237,900	48,900	25.9	9.6
Educational and Health Services	289,400	395,100	105,700	36.5	20.8
Educational Services	41,400	61,300	19,900	48.1	3.9
Health Care and Social Assistance	248,000	333,800	85,800	34.6	16.9
Leisure and Hospitality	227,700	323,600	95,900	42.1	18.9
Arts, Entertainment, and Recreation	26,300	35,300	9,000	34.2	1.8
Accommodation and Food Services	201,400	288,300	86,900	43.1	17.1
Other Services	94,500	114,600	20,100	21.3	4.0
Government	372,600	413,800	41,200	11.1	8.1

Source: Texas Workforce Commission, not seasonally adjusted

## EMPLOYMENT GROWTH IN MAJOR METROS

Houston led the nation in job growth from October '17 to October '18.

**EMPLOYMENT GROWTH, PERCENT CHANGE, OCT '17 TO OCT '18**  
20 Most Populous Metro Areas



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

- All 20 of the most populous U.S. metro areas posted net job gains from October '17 to October '18. During this period, the Houston metro led the nation in job growth with 117,800 jobs, a 3.9 percent increase.
- 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 regained its leading position, both in absolute numbers and percentage change.

# EMPLOYMENT GROWTH IN MAJOR METROS

## Nonfarm Payroll Employment

### 20 MOST POPULOUS U.S. METROPOLITAN STATISTICAL AREAS

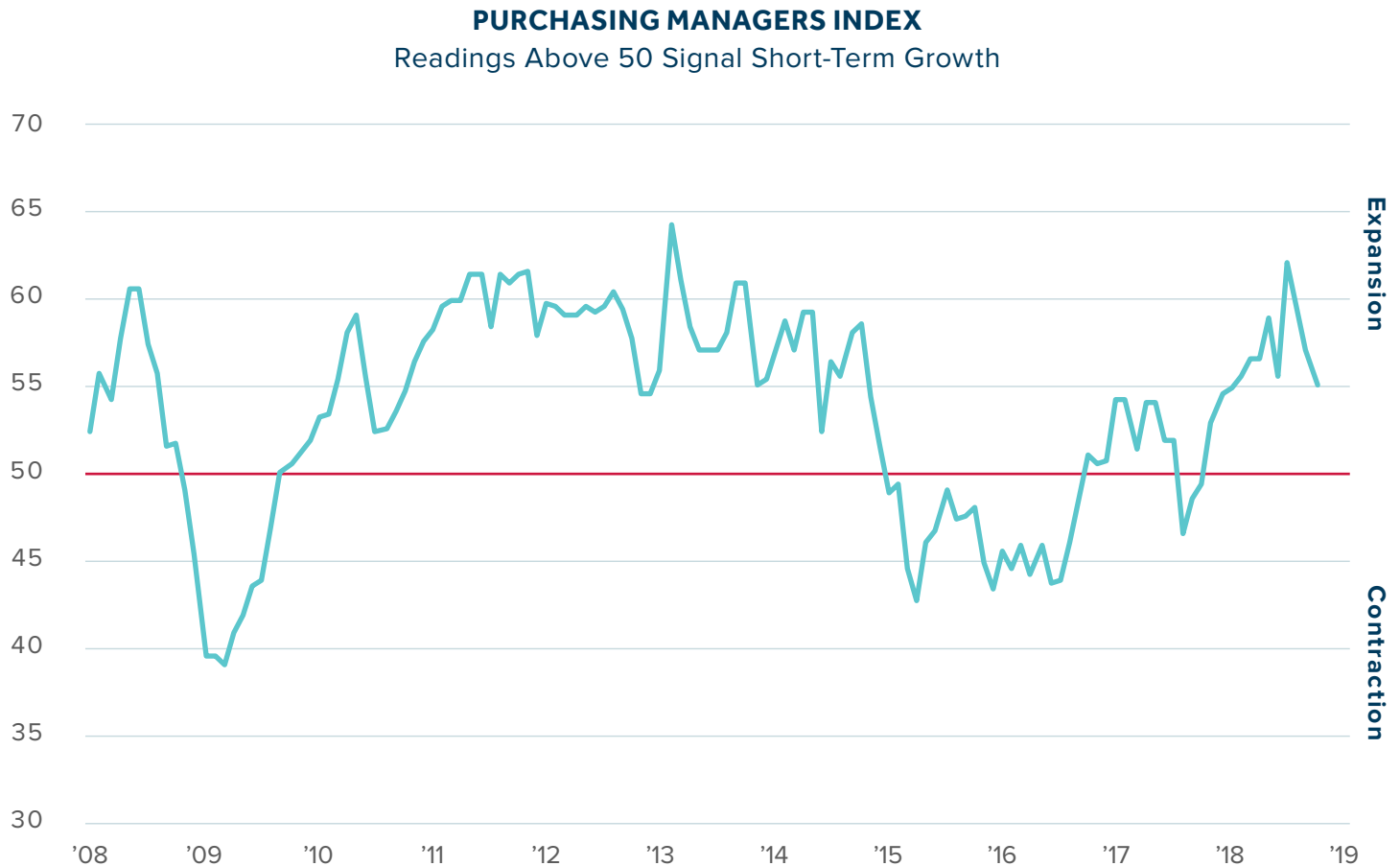
Ranked by Percent Change, October '17 to October '18

Metro Area	Change in Jobs (Thousands)	Percent Change
<b>Houston-The Woodlands-Sugar Land, TX</b>	<b>117.8</b>	<b>3.9</b>
Phoenix-Mesa-Scottsdale, AZ	76.7	3.7
Seattle-Tacoma-Bellevue, WA	73.3	3.6
Dallas-Fort Worth-Arlington, TX	109.0	3.0
Denver-Aurora-Lakewood, CO	37.3	2.5
Riverside-San Bernardino-Ontario, CA	37.2	2.5
Miami-Fort Lauderdale-West Palm Beach, FL	64.0	2.4
Atlanta-Sandy Springs-Roswell, GA	60.8	2.2
Tampa-St. Petersburg-Clearwater, FL	29.1	2.2
Boston-Cambridge-Nashua, MA-NH NECTA	53.1	1.9
Washington-Arlington-Alexandria, DC-VA-MD-WV	60.7	1.8
Baltimore-Columbia-Towson, MD	25.4	1.8
San Diego-Carlsbad, CA	26.0	1.8
San Francisco-Oakland-Hayward, CA	41.7	1.7
Minneapolis-St. Paul-Bloomington, MN-WI	33.7	1.7
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	43.6	1.5
Los Angeles-Long Beach-Anaheim, CA	72.4	1.2
New York-Newark-Jersey City, NY-NJ-PA	108.5	1.1
Detroit-Warren-Dearborn, MI	21.3	1.1
Chicago-Naperville-Elgin, IL-IN-WI	41.3	0.9

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

## PURCHASING MANAGERS INDEX

The October PMI for Houston marks a twelve-month expansionary period and signals a near complete recovery from Hurricane Harvey.



Source: Institute for Supply Management-Houston

- The Houston Purchasing Managers Index (PMI), a short-term leading indicator of regional production, registered 55.0 in October '18. Readings above 50 signal likely expansion over the next three or four months in Houston's goods producing sectors.
- The collapse of oil prices 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 22 out of 25 months. The three months of contraction in late '17 were due to Hurricane Harvey. The Houston PMI averaged 57.1 for the first 10 months of '18.
- 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 recent downturn. Instead, the region experienced a shallower but more protracted contraction.
- Since the 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 23 years, the PMI has tracked at 50 or above for 234 months and below 50 for 52 months.
- The Houston PMI is based on a survey of some 80 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

Above 50 signals expansion, below 50 signals contraction

## ANNUAL AVERAGES

Year	Houston	United States
2008	54.3	45.6
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
52-week average ending October 2018	50.9	55.0

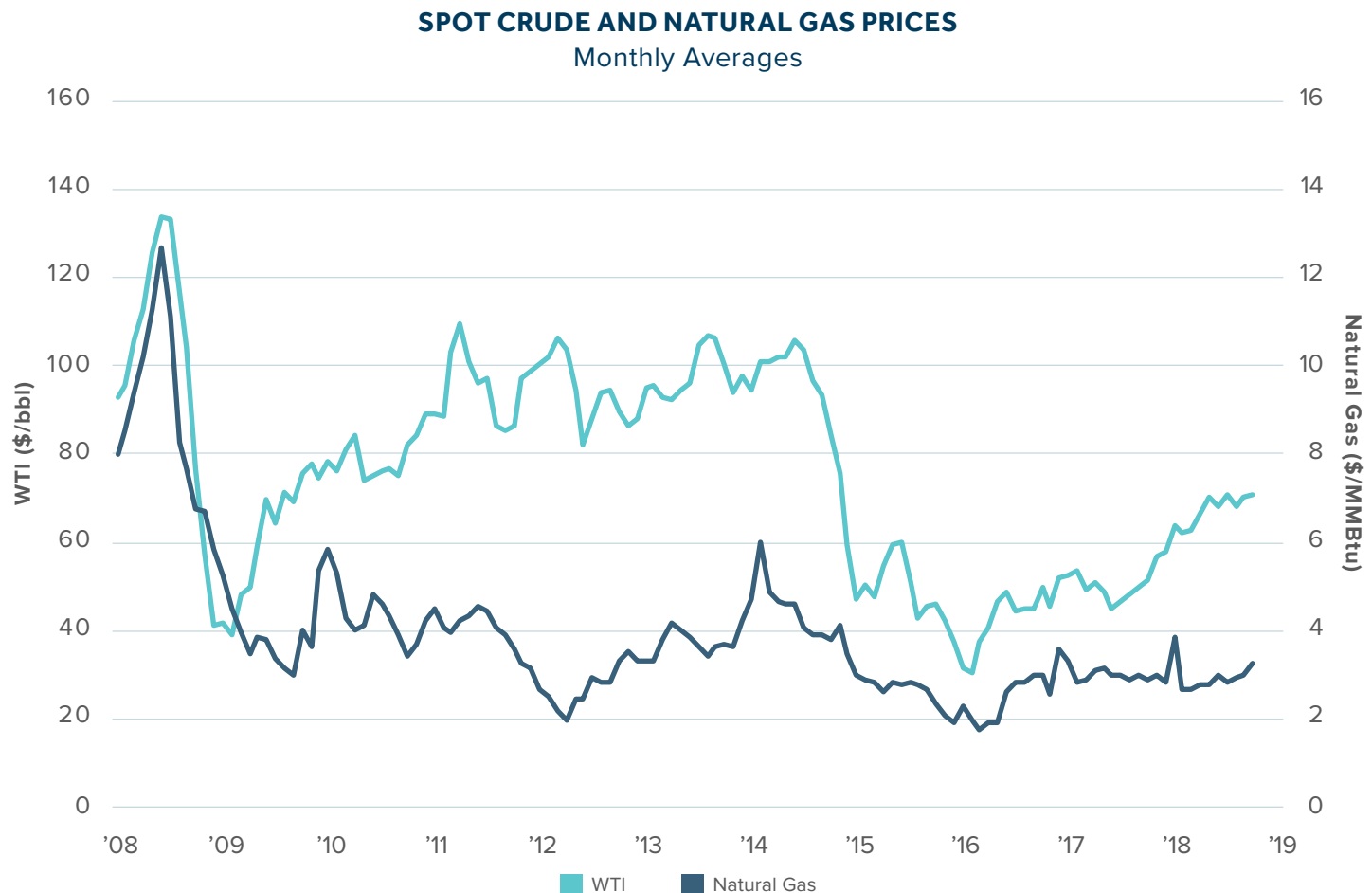
Note: The PMI has a possible range from zero to 100. Readings above the neutral point of 50 indicate likely growth in production over the next three to four months; readings below 50 suggest contraction.

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 rose in '18 but remain well below their recent peak.



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 \$67.32 per barrel through the first 10 months of '18, a 36.0 percent increase from \$49.51 for the same span in '17. The weekly WTI spot price fell from \$105.78 in June '14 to \$30.19 in February '16, a 71.5 percent decline. Prices rose slightly in '17, hovering near \$50 for much of the year.
- Natural gas prices averaged \$3.01 per million British thermal units (MMBtu) through the first 10 months of '18, compared to \$3.00 for the same period in '17. 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, despite a dip earlier in the year, averaging \$2.99 per MMBtu.
- In its November Short-Term Energy Outlook, the U.S. Energy Information Administration forecasts WTI spot prices to average \$64.85 in '19. Henry Hub natural gas spot prices are projected to average \$2.98 in '19.
- 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 6. 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 will be spent on projects in the Houston area.



## OIL AND NATURAL GAS PRICES

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

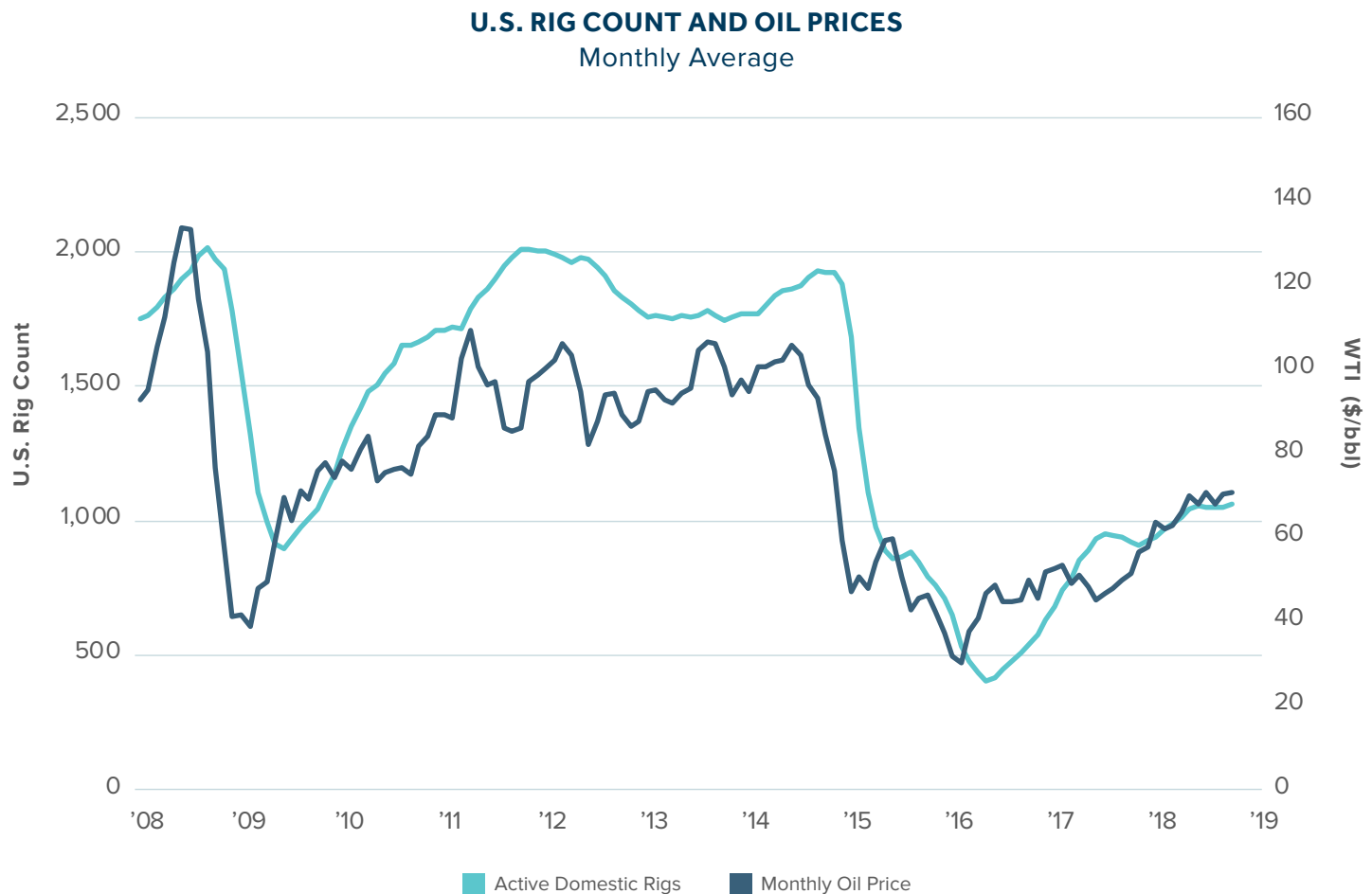
### ANNUAL AVERAGES

Year	WTI Crude Price (\$/bbl)	Natural Gas Price (\$/MMBtu)
2008	99.67	8.86
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
52-week average ending October 2018	65.57	2.99

Source: U.S. Energy Information Administration

## DRILLING ACTIVITY AND OIL PRICE

The U.S. rig count grew steadily in '18 as oil prices stabilized.



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

- Drilling activity increased significantly in the first 10 months of '18, topping out at 1,063 rigs in October, as West Texas Intermediate (WTI) oil prices averaged \$71 per barrel. The weekly rig count through the first 10 months of '18 averaged 1,023, up 18.0 percent from 867 rigs during the same span in '17. During the downturn, 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.
- The rise in exploration activity has led to an increase in U.S. production. Domestic crude production averaged 10.7 million barrels a day through October '18, up 15.3 percent from 9.2 million over the same period in '17.
- The Permian Basin accounts for the majority of the rig growth. Of the 159 rigs added in the U.S. since October '17, 110 went to the Permian. As of October '18, the Permian was home to 45.8 percent of the U.S. drilling fleet, up from 41.7 percent the same time last year.
- Barclay's Midyear Upstream Spending Survey forecasts North America exploration budgets to increase 15 percent in '18, up from 9 percent in April.

## 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)
2008	1,880	99.67
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
52-week average ending October 2018	1,005	65.57

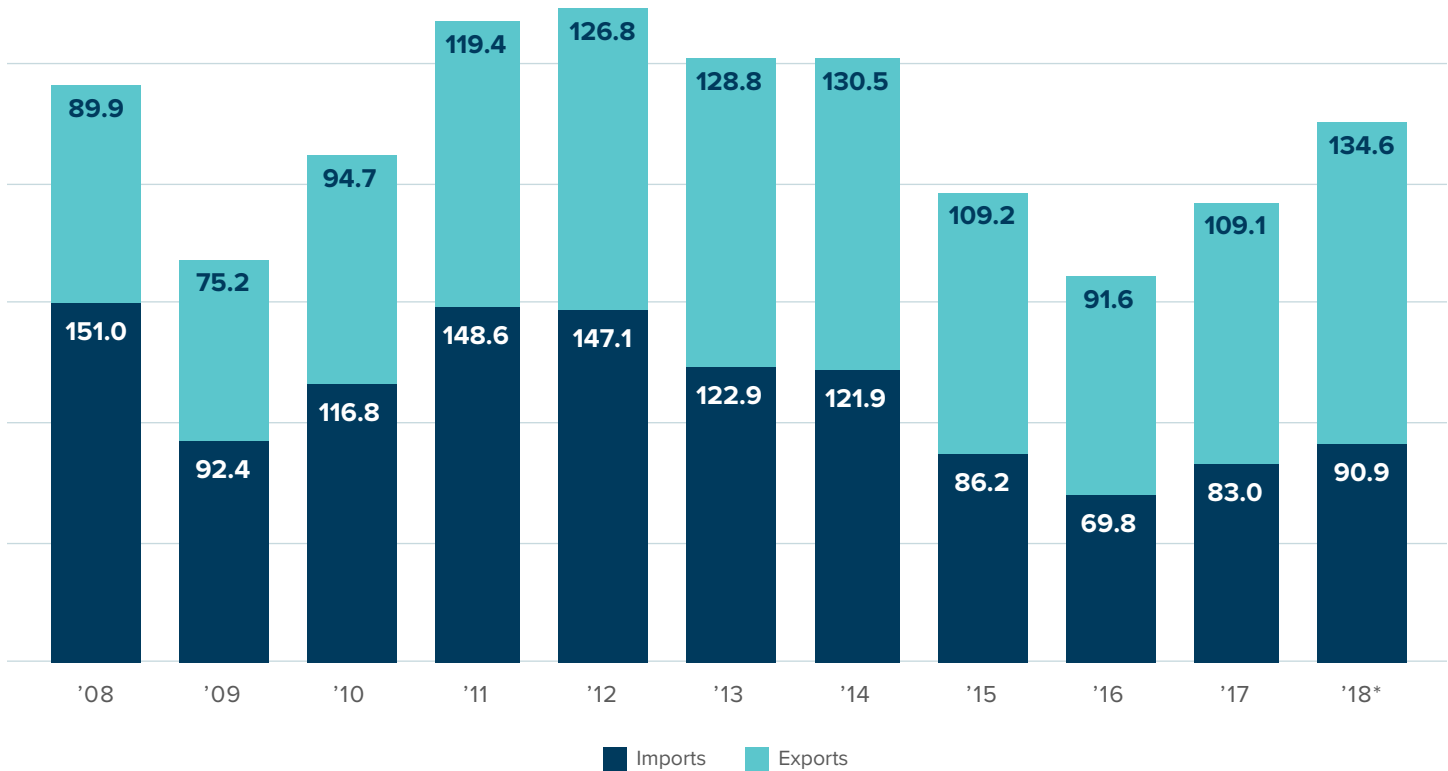
Sources: Baker Hughes, a GE company; U.S. Energy Information Administration

## FOREIGN TRADE

More than \$192 billion in foreign trade passed the Houston-Galveston Customs District in '17, making it the seventh busiest in the U.S.

### HOUSTON-GALVESTON CUSTOMS DISTRICT TRADE

\$ Billions



\* 12-months ending Sep '18

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

- Thirty-nine countries logged more than \$1 billion each in trade through the Houston-Galveston Customs District in '17. Houston's top 10 trading partners are Mexico (\$20.0 billion), China (\$18.8 billion), Brazil (\$12.8 billion), Germany (\$9.6 billion), the Netherlands (\$8.5 billion), South Korea (\$6.7 billion), Japan (\$6.4), Saudi Arabia (\$5.6 billion), the United Kingdom (\$5.5) and Colombia (\$5.2 billion).
- Imports totaled \$83.0 billion in '17. The top five imports were mineral fuels, oil, and refined products (\$25.2 billion), industrial equipment and computers (\$10.5 billion), articles or iron or steel (\$6.8 billion), motor vehicles and parts (\$5.2 billion) and electrical machinery, equipment, and parts (\$4.5 billion).
- Exports totaled \$109.1 billion in '17. Leading exports included mineral fuels, oil, and refined products (\$50.7 billion), organic chemicals (\$12.8 billion), industrial equipment and computers (\$9.4 billion), plastics and plastic products (\$7.0 billion) and electrical machinery, equipment and parts (\$3.7 billion).
- Oil and gas trade increased in both volume and value, driving the 19.0 increase in the overall value from '16 to '17. Exports climbed 19.1 percent and imports 18.8 percent.
- In the 12 months ending September '18, \$225.5 billion in goods and commodities passed through the district, up 23.7 percent over comparable period ending September '17. Imports are up 13.6 percent, while exports have climbed 31.7 percent during the same period.

# FOREIGN TRADE

## Houston–Galveston Customs District

### ANNUAL TOTALS IN FOREIGN TRADE

Value - \$ Billions

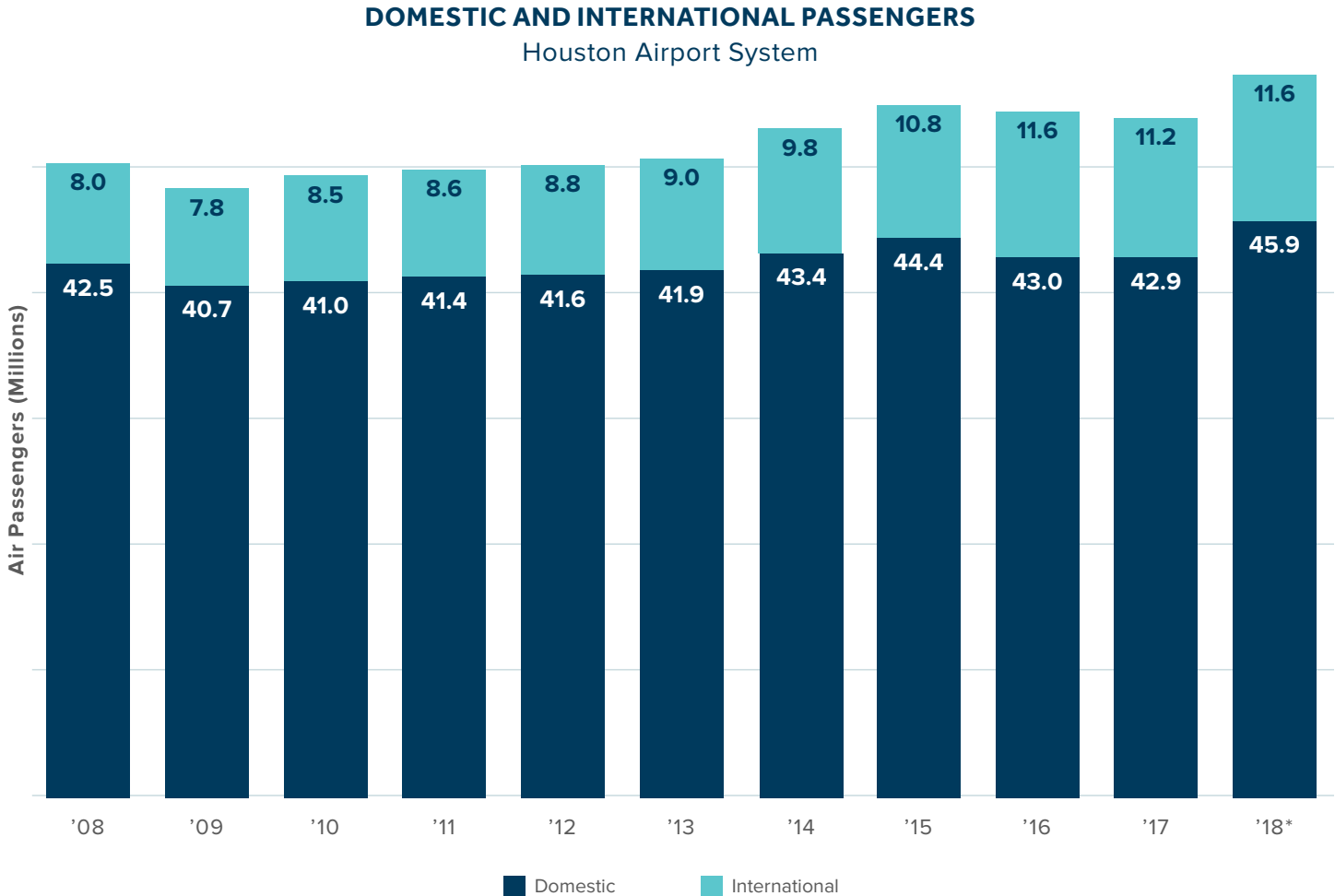
Year	Imports	Exports	Total
2008	150.998	89.906	240.904
2009	92.426	75.233	167.659
2010	116.771	94.685	211.456
2011	148.629	119.400	268.029
2012	147.123	126.818	273.941
2013	122.895	128.835	251.731
2014	121.935	130.506	252.440
2015	86.219	109.248	195.467
2016	69.810	91.583	161.393
2017	82.964	109.085	192.048
12-month total ending September 2018	90.892	134.618	225.510

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 7.0 million passengers since '08.



\* 12-months ending Sep '18  
Source: Houston Airport System

- The Houston Airport System (HAS) offers nonstop flights to more than 180 domestic and international destinations in 39 countries. George Bush Intercontinental Airport (IAH), Houston's largest airport and a significant hub for United Airlines, is the 15th busiest airport in the U.S. for total passenger traffic according to the FAA. 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 2.6 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 '18, HAS handled 57.5 million travelers, up 7.0 percent from the 53.7 million handled in the 12 months ending September '17. International passenger volume totaled 11.6 million, up 2.6 percent from 11.3 million for the 12 months ending September '17. Over the same period, domestic passenger traffic rose 8.2 percent from 42.5 million to 45.9 million.
- Domestic and international passenger service have grown substantially over the past decade. Domestic passenger counts grew by 3.4 million, or 8.0 percent, from '08 to '18. International passengers increased by 3.6 million, or 45.4 percent, during the same period.



## AIR PASSENGERS

### Houston Airport System – Domestic and International Air Passengers

#### ANNUAL TOTALS

Millions

Year	Domestic	International	Total
2008	42.525	7.960	50.485
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	11.194	54.126
12-month total ending September 2018	45.933	11.577	57.509

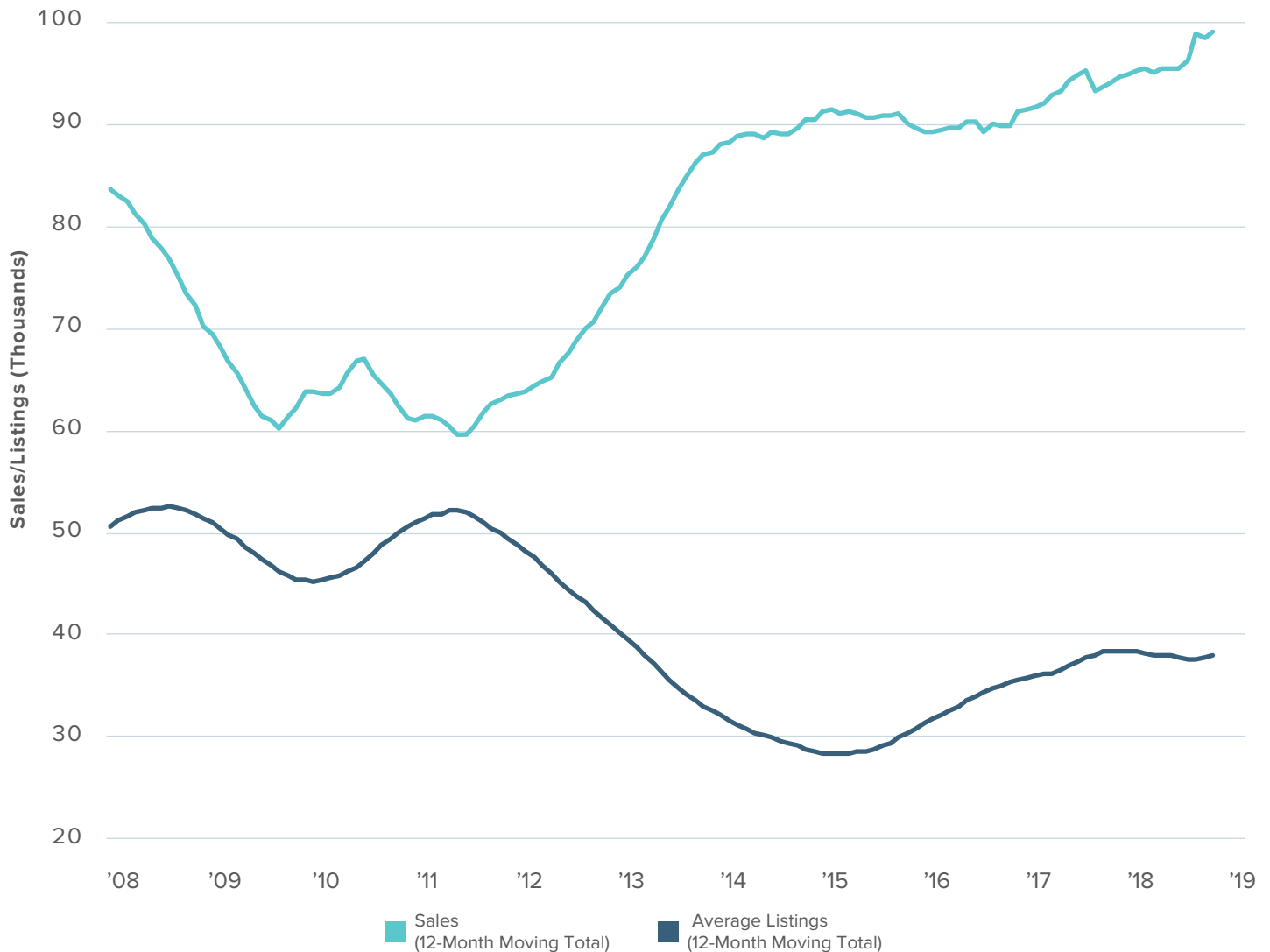
Note: Sums may not total due to rounding.

Source: Houston Airport System

## RESIDENTIAL REAL ESTATE

Houston's housing market reached record-breaking sales in October '18.

### HOUSTON MSA RESIDENTIAL HOUSING MARKET



Source: Houston Association of Realtors®

- Houston-area realtors sold 98,967 homes in the 12 months ending October '18, a record for the region. The previous peak was 98,868 homes sold in the 12 months ending August '18.
- The median price of a single-family home also reached a new peak of \$234,731 for the 12-months ending October '18, a 3.1 percent increase from \$227,707 for the 12-months ending October '17.
- Houston's housing inventory stood at 3.9 months in October '18, up from 3.7 months in October '17. U.S. inventory was 4.4 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

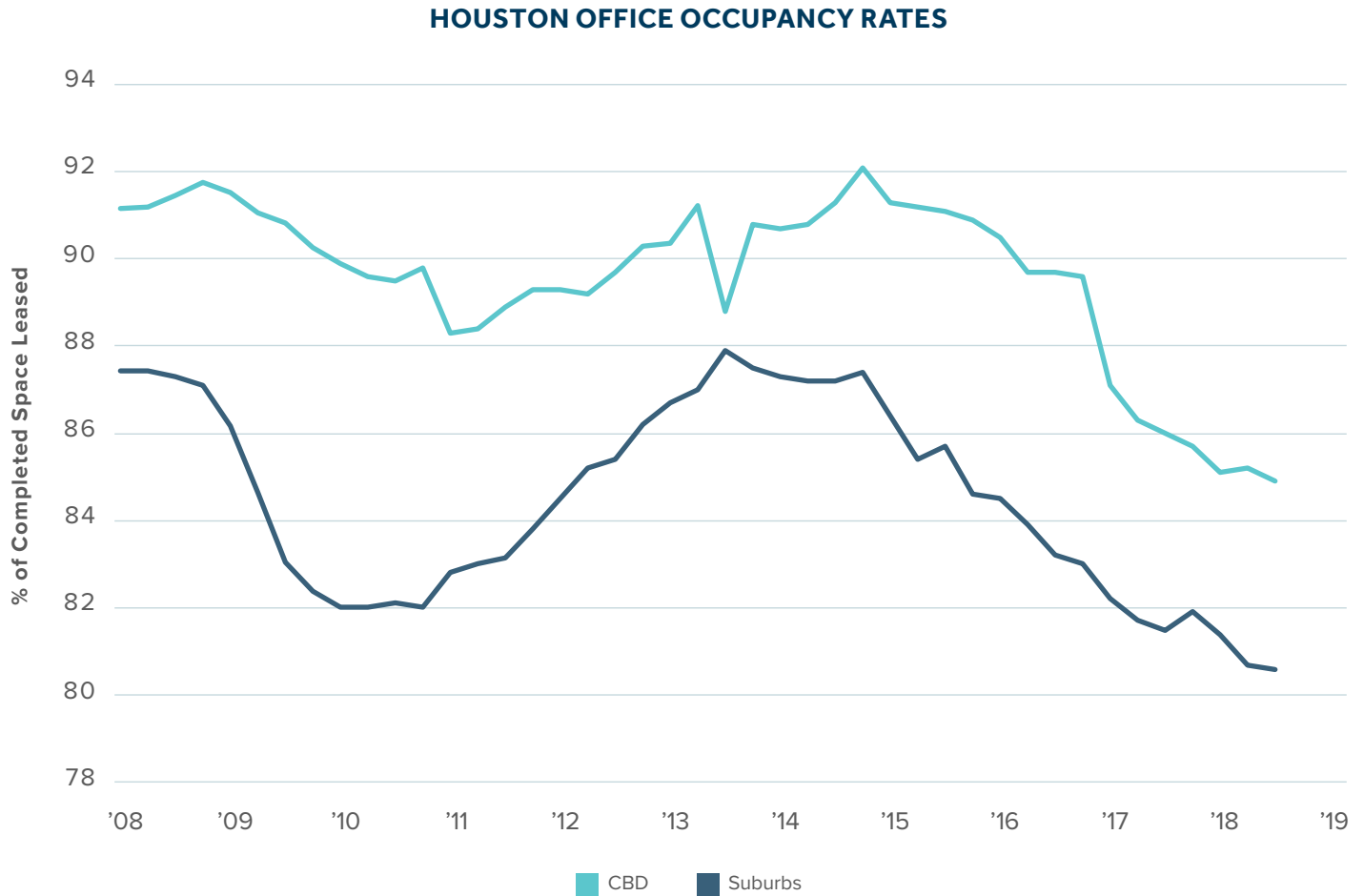
Year	Total Closings	Median Sales Price (\$)*	Average Active Listings
2008	69,336	150,724	50,946
2009	63,801	151,000	45,286
2010	61,004	153,001	51,097
2011	63,606	153,618	48,800
2012	74,116	162,502	40,247
2013	88,080	179,737	32,101
2014	91,340	197,462	28,363
2015	89,296	211,396	31,326
2016	91,530	220,211	35,753
2017	94,816	228,203	38,353
12-month total ending October 2018	98,967	234,731	37,950

\* Average of monthly medians

Source: Houston Association of Realtors®

## OFFICE MARKET

The decline in Houston's office occupancy translates into a significant amount of space available 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 '18 stood at 81.5 percent. Occupancy in the Central Business District (CBD) was 84.9 percent, while the suburbs had an occupancy rate of 80.6 percent. Houston's 115.8 msf of Class A space was 83.6 percent leased.
- According to CBRE, Class A demand in the CBD saw positive absorption in only four out of the past 16 quarters.
- Overall sublease space has decreased from 10.5 msf in Q3/17 to 9.1 msf in Q3/18, accounting for nearly 4.3 percent of Houston's office market. Expiring subleases will likely lift direct vacancy and drive down office rental rates.
- A total of 2.8 million square feet of office space was under construction as of Q3/18.

## OFFICE MARKET

### Office Occupancy: Houston Metropolitan Statistical Area (MSA)

#### PERCENT OF COMPLETED SPACE OCCUPIED

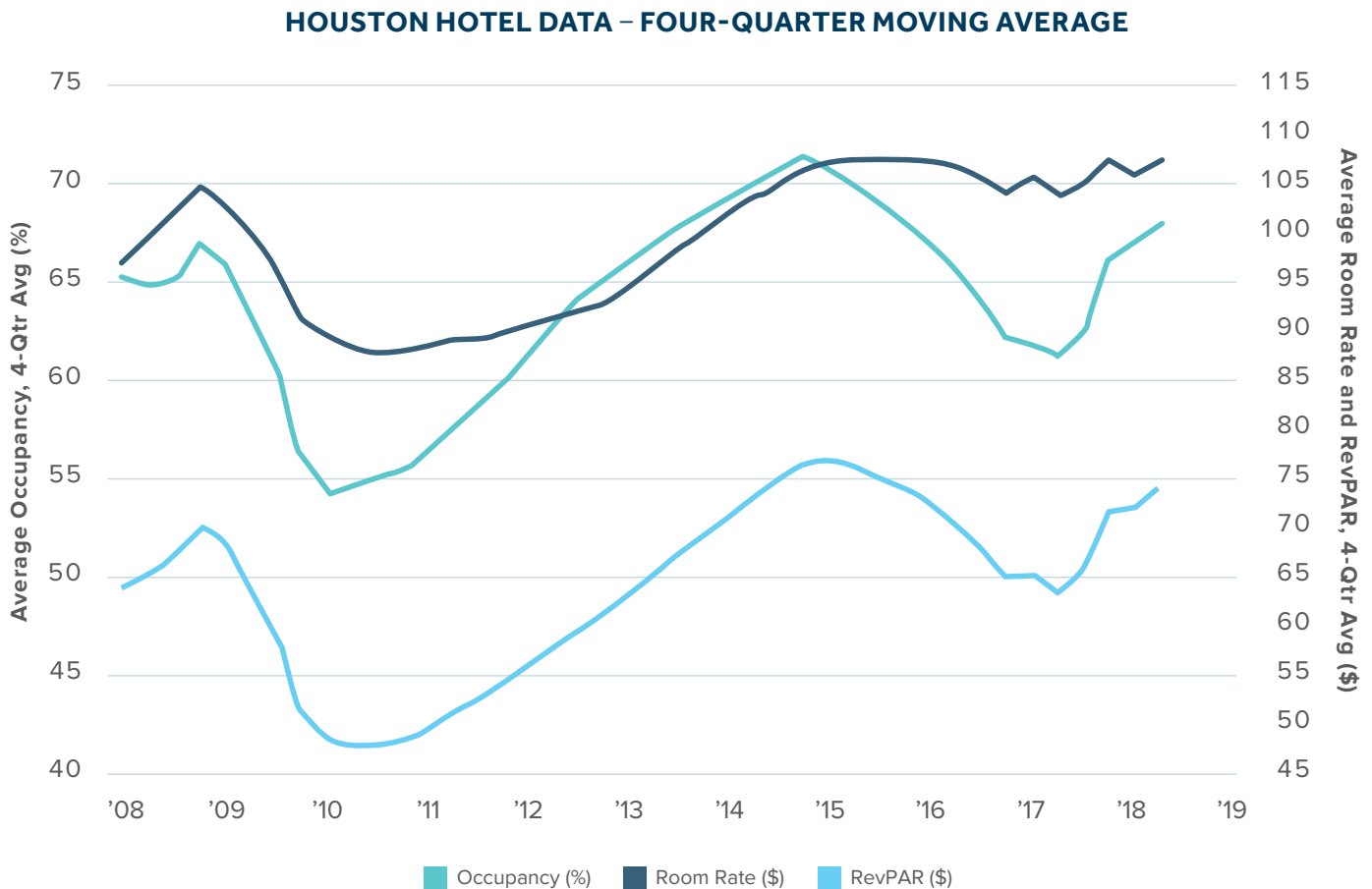
##### Central Business District and Suburban Office Markets

Year	Central Business District				Suburbs			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
2008	91.1	91.2	91.4	91.7	87.4	87.4	87.3	87.1
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	---	81.4	80.7	80.6	---

Source: CBRE

## HOUSTON HOTEL DATA

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



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

- Houston's hotel inventory, approximately 89,000 rooms across 904 properties, averaged 65.6 percent occupancy in the second quarter of '18, up from 62.9 percent in Q2/17. The average daily room rate during this period was \$108.26 and revenue per available room (RevPAR) averaged \$71.05 per day compared to \$103.44 and \$65.03 a year earlier.
- More than 5,200 rooms across 40 properties were under construction in Q2/18. Another 4,700 rooms across 46 properties have confirmed construction starts in the next 12 months. Hotel construction has slowed since Q2/17, when 7,881 rooms across 51 properties were under construction and 8,337 rooms across 88 properties had confirmed construction starts.
- The region's average occupancy was 68.6 percent for the four quarters ending Q2/18, up from 61.0 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.



# HOUSTON HOTEL DATA

## Occupancy, Room Rates and Revenue Per Available Room

### ANNUAL AVERAGES

Year	Occupancy (Percent)	Room Rate (\$/Day)	Revenue Per Available Room (\$/Day)
2008	67.6	104.75	70.92
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	107.14	77.11
2015	68.5	108.73	74.48
2016	62.3	104.65	65.35
2017	66.7	107.98	71.97
Four quarters ending Q2/18	68.6	107.73	73.98

Source: CBRE Hotel Horizons Houston

## RETAIL SALES

Retail sales hit a three-year high in Q1/18.

**HOUSTON MSA GROSS RETAIL SALES**  
Four-Quarter Moving Totals - \$ Billions



Source: Texas Comptroller of Public Accounts

- The Houston Metro area's nominal gross retail sales totaled \$123.2 billion in the four quarters ending Q1/18, the most for a four-quarter span since the period ending Q2/15. On an inflation adjusted basis, the four-quarter sum is the highest since the period ending Q1/16. 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 Q1/18 retail sales occurred in three counties: Harris County (\$22.6 billion, 77.2 percent), Fort Bend County (\$2.1 billion, 7.1 percent) and Montgomery County (\$1.9 billion, 6.6 percent).

# RETAIL SALES

## Houston MSA Gross Retail Sales

### ANNUAL TOTALS

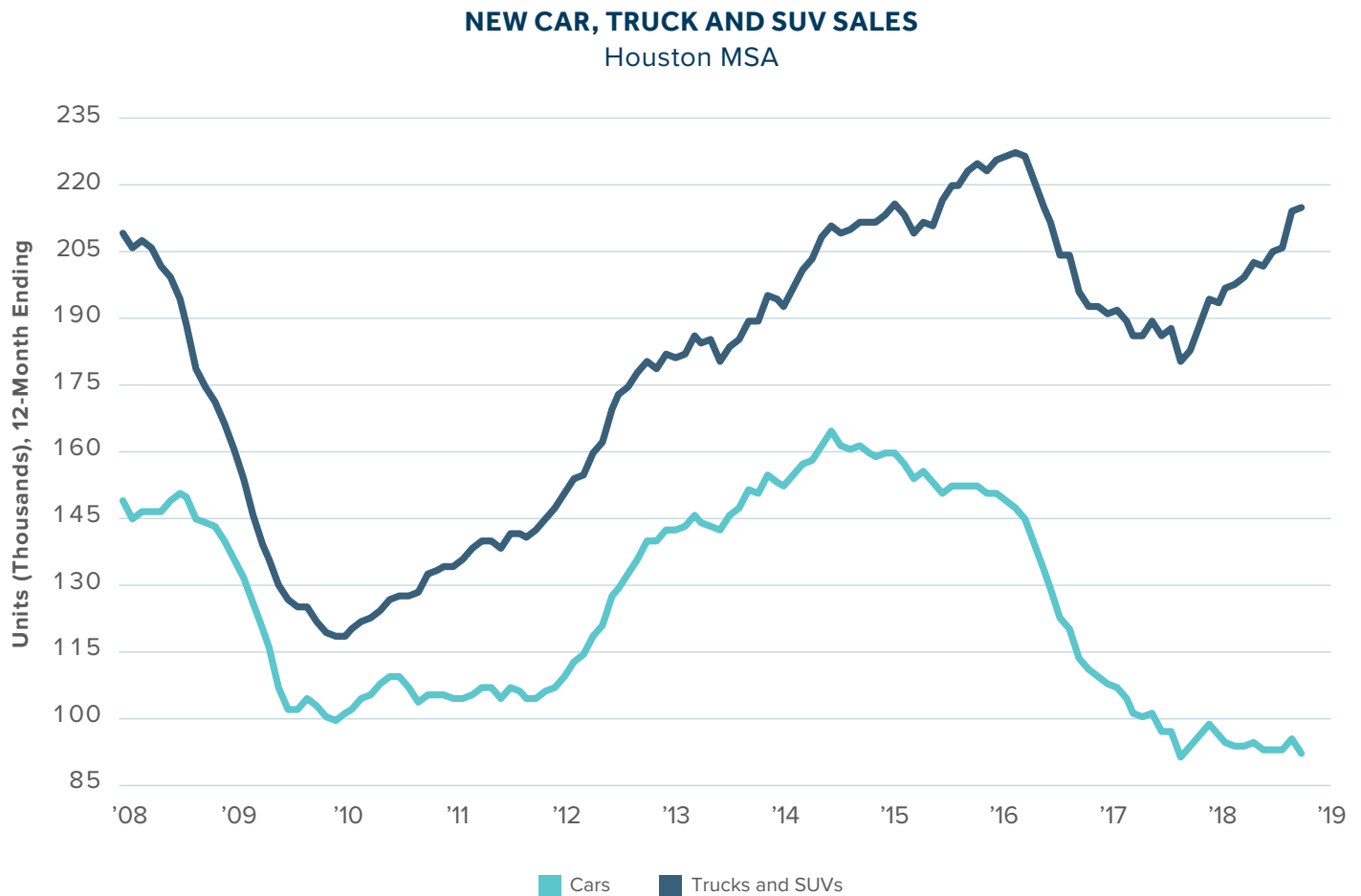
\$ Billions

Year	Nominal Sales	Constant 2008 Dollars
2008	101.402	101.402
2009	87.845	87.603
2010	90.195	88.243
2011	100.712	95.424
2012	108.344	100.787
2013	115.392	105.606
2014	126.245	112.402
2015	118.418	105.566
2016	116.252	102.033
2017	120.983	104.090
Four quarters ending Q1/18	123.164	105.345

Source: Texas Comptroller of Public Accounts

## NEW CAR, TRUCK AND SUV SALES

While car sales trended downward in '18, truck and SUV sales continue to rise.



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

- For the 12 months ending September '18, Houston-area auto dealers sold 307,123 vehicles, up 10.6 percent from the 277,621 sold in the 12 months ending September '17. Sales in the Houston region hit a record of 377,705 in the 12 months ending October '15 but fell to 272,621 in the 12 months ending August '17. Since then, vehicle sales have trended upwards.
- Low gasoline prices have encouraged consumers to purchase more trucks and SUVs than cars. Trucks and SUVs captured 70.1 percent of the market in the 12 months ending September '18, up from 66.1 percent over the same period in '17 and 63.3 percent during the same period in '16.
- The average retail sales price per vehicle rose to \$36,893 in September '18, up 4.3 percent from the same month '17. The average retail sales price for the truck/SUV segment, which accounted for 70.7 percent of new vehicle sales in September, was \$39,598 compared to \$30,232 for the car segment.

# NEW CAR, TRUCK AND SUV SALES

Houston Metropolitan Statistical Area

## ANNUAL TOTALS

Houston-Sugar Land-Baytown MSA\*

Year	Cars	Trucks and SUVs	Totals
2008	140,088	166,772	306,860
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
12-month total ending September 2018	91,976	215,147	307,123

\* 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 two years.

INFLATION, 12-MONTH CHANGE



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 2.5 percent nationwide from October '17 to October '18, 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 2.1 percent.
- From October '17 to October '18, consumer prices in the Houston-The Woodlands-Sugar Land metro area grew 2.2 percent. Core inflation rose 1.6 percent. The cost of shelter rose 2.3 percent since October '17, the largest contributor to the rise in core inflation.
- The U.S. energy index increased 8.9 percent from October '17 to October '18, while Houston's energy index advanced 9.3 percent. Rising motor fuel and electricity prices contributed to the higher local and national energy index. In contrast, natural gas costs decreased.
- Houston's food index rose 1.2 percent from October '17 to October '18, similar to the U.S. increase. The cost of dining out in Houston increased 4.1 percent while grocery prices declined 1.6 percent. Both sub-components of the food index increased slightly nationwide.

## INFLATION

**CONSUMER PRICE INDEX**  
Annual 12-Month Change

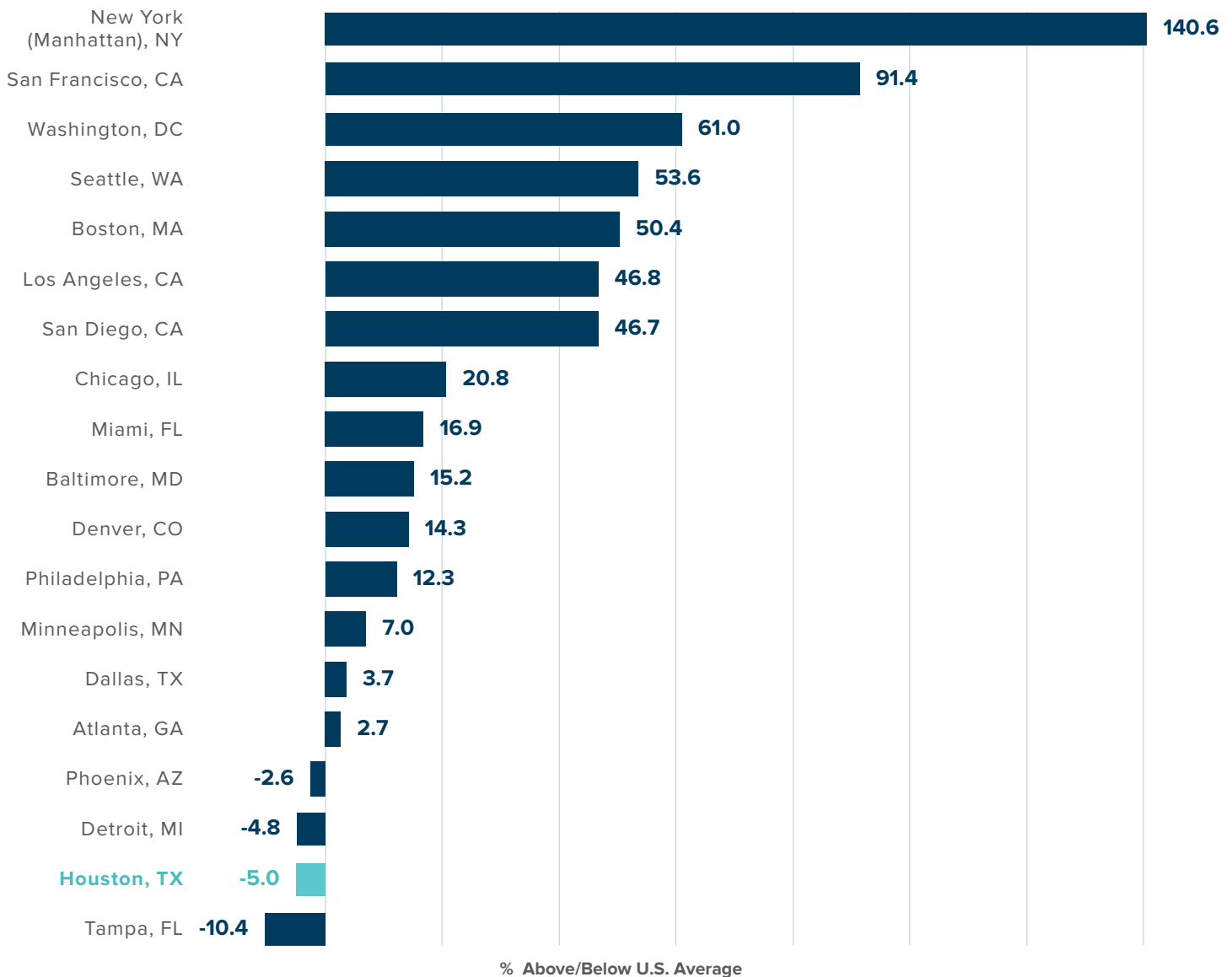
Year	Houston CPI	U.S. CPI
2008	-0.17	0.09
2009	2.69	2.72
2010	1.86	1.50
2011	3.08	2.96
2012	1.00	1.74
2013	3.62	1.50
2014	1.12	0.76
2015	0.36	0.73
2016	2.26	2.07
2017	1.75	2.11
12-month total ending October 2018	2.18	2.52

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\*



\*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 2018  
(Data based on a survey of 268 urban areas, published October 2018)

- The C2ER *Cost of Living Index* for Q3 '18 indicates that Houston's living costs are 26.6 percent below the average of the nation's 20 most populous metropol-

itan areas, ranking it second most affordable among its peers. Houston's overall living costs are 5.0 percent below the average for all U.S. metros.



# LIVING COST COMPARISON

## COST OF LIVING COMPARISONS

20 Most Populous U.S. Metros\* (Average for 268 Urban Areas = 100)

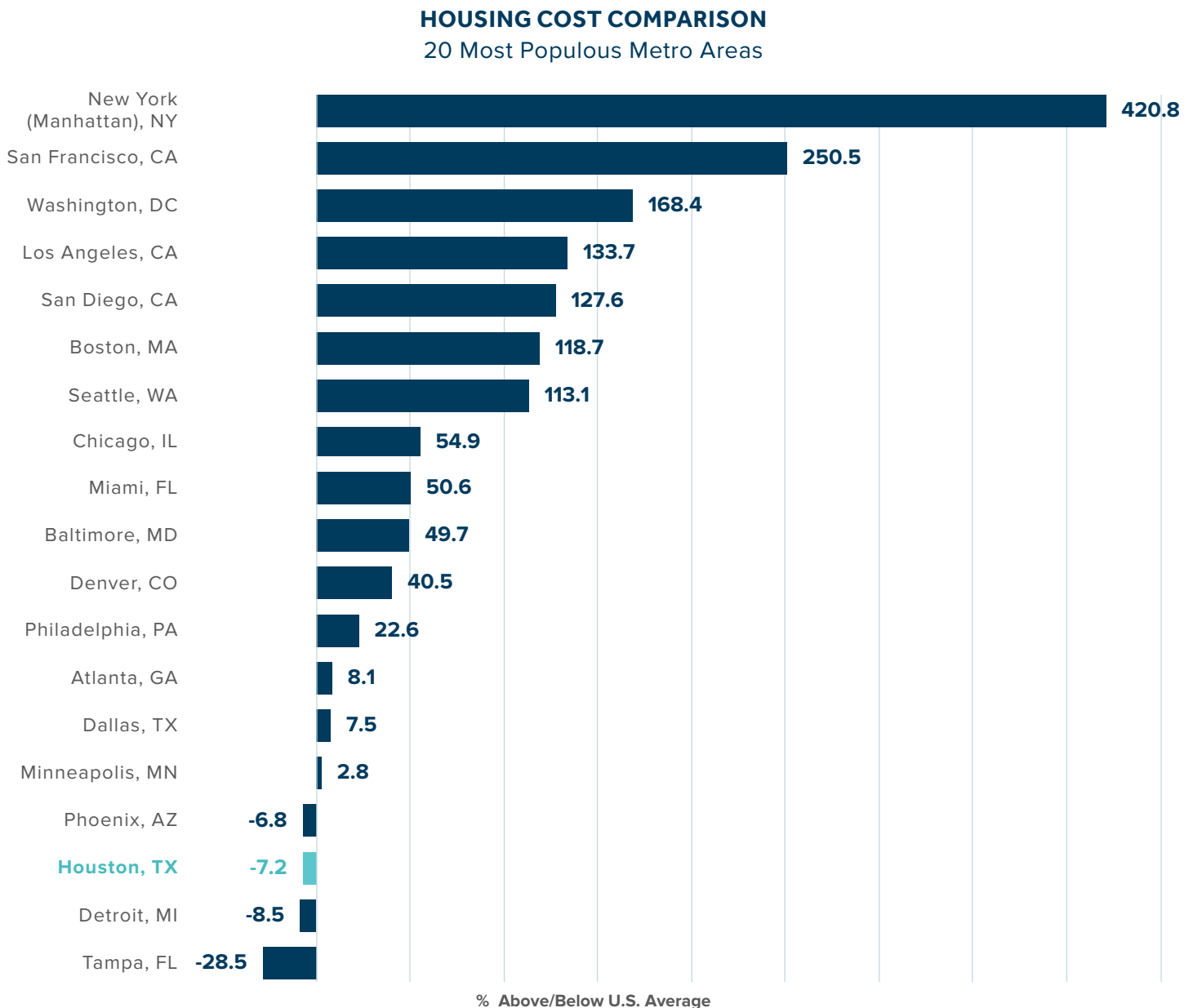
Urban Area	Composite	Groceries	Housing	Utilities	Transportation	Health Care	Misc. Goods & Services
New York (Manhattan), NY	240.6	138.2	520.8	119.7	117.7	112.8	136.9
San Francisco, CA	191.4	131.6	350.5	125.8	133.9	124.1	128.3
Washington, DC	161.0	127.1	268.4	114.3	95.0	99.3	125.8
Seattle, WA	153.6	125.7	213.1	109.6	137.0	124.7	136.9
Boston, MA	150.4	108.9	218.7	121.3	114.9	133.8	130.9
Los Angeles, CA	146.8	115.2	233.7	108.1	126.5	107.6	110.3
San Diego, CA	146.7	113.5	227.6	134.3	132.6	107.9	106.6
Chicago, IL	120.8	99.7	154.9	92.8	125.9	101.3	110.6
Miami, FL	116.9	109.5	150.6	100.2	103.9	98.2	103.0
Baltimore, MD	115.2	111.6	149.7	107.5	91.6	89.7	100.3
Denver, CO	114.3	100.5	140.5	79.3	106.4	102.6	111.9
Philadelphia, PA	112.3	119.3	122.6	106.3	109.6	103.4	104.9
Minneapolis, MN	107.0	105.0	102.8	98.1	106.2	106.7	114.0
Dallas, TX	103.7	102.7	107.5	104.4	95.7	105.1	102.8
Atlanta, GA	102.7	99.9	108.1	87.0	100.8	108.8	103.5
Phoenix, AZ	97.4	99.5	93.2	110.2	100.6	90.7	96.5
Detroit, MI	95.2	86.3	91.5	93.4	107.1	92.8	99.5
<b>Houston, TX</b>	<b>95.0</b>	<b>86.0</b>	<b>92.8</b>	<b>107.7</b>	<b>97.4</b>	<b>93.9</b>	<b>96.1</b>
Tampa, FL	89.6	105.4	71.5	85.7	99.6	96.5	95.7
Miami, FL	41.0	16.8	11.6	13.6	27.4	12.8	17.9
Tampa, FL	42.0	16.6	11.3	13.2	25.7	13.6	19.6

\*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 2018 (Data based on a survey of 268 urban areas, published October 2018)

## 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 did not submit COLI data.

Source: Council for Community and Economic Research (C2ER), *Cost of Living Index*, Q3 2018  
(Data based on a survey of 268 urban areas, published August 2018)

- The C2ER *Cost of Living Index* for Q3 '18 indicates that Houston's housing costs are 7.2 percent below the nationwide average and 48.4 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 26.6 percent below the large-metro average. (This housing index is based 71.0 percent on homeownership and 29.0 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 38.1 percent below the major metro average.

## HOUSING COST COMPARISON

### HOUSING COST COMPARISON

20 Most Populous U.S. Metros\* (Average for 268 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	520.8	420.8	\$1,915,000
San Francisco, CA	350.5	250.5	\$1,232,712
Washington, DC	268.4	168.4	\$937,500
Los Angeles, CA	233.7	133.7	\$800,535
San Diego, CA	227.6	127.6	\$820,461
Boston, MA	218.7	118.7	\$683,258
Seattle, WA	213.1	113.1	\$741,428
Chicago, IL	154.9	54.9	\$503,813
Miami, FL	150.6	50.6	\$438,221
Baltimore, MD	149.7	49.7	\$490,556
Denver, CO	140.5	40.5	\$505,485
Philadelphia, PA	122.6	22.6	\$413,629
Atlanta, GA	108.1	8.1	\$356,097
Dallas, TX	107.5	7.5	\$337,892
Minneapolis, MN	102.8	2.8	\$364,067
Phoenix, AZ	93.2	-6.8	\$325,725
<b>Houston, TX</b>	<b>92.8</b>	<b>-7.2</b>	<b>\$309,383</b>
Detroit, MI	91.5	-8.5	\$309,945
Tampa, FL	71.5	-28.5	\$211,736

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

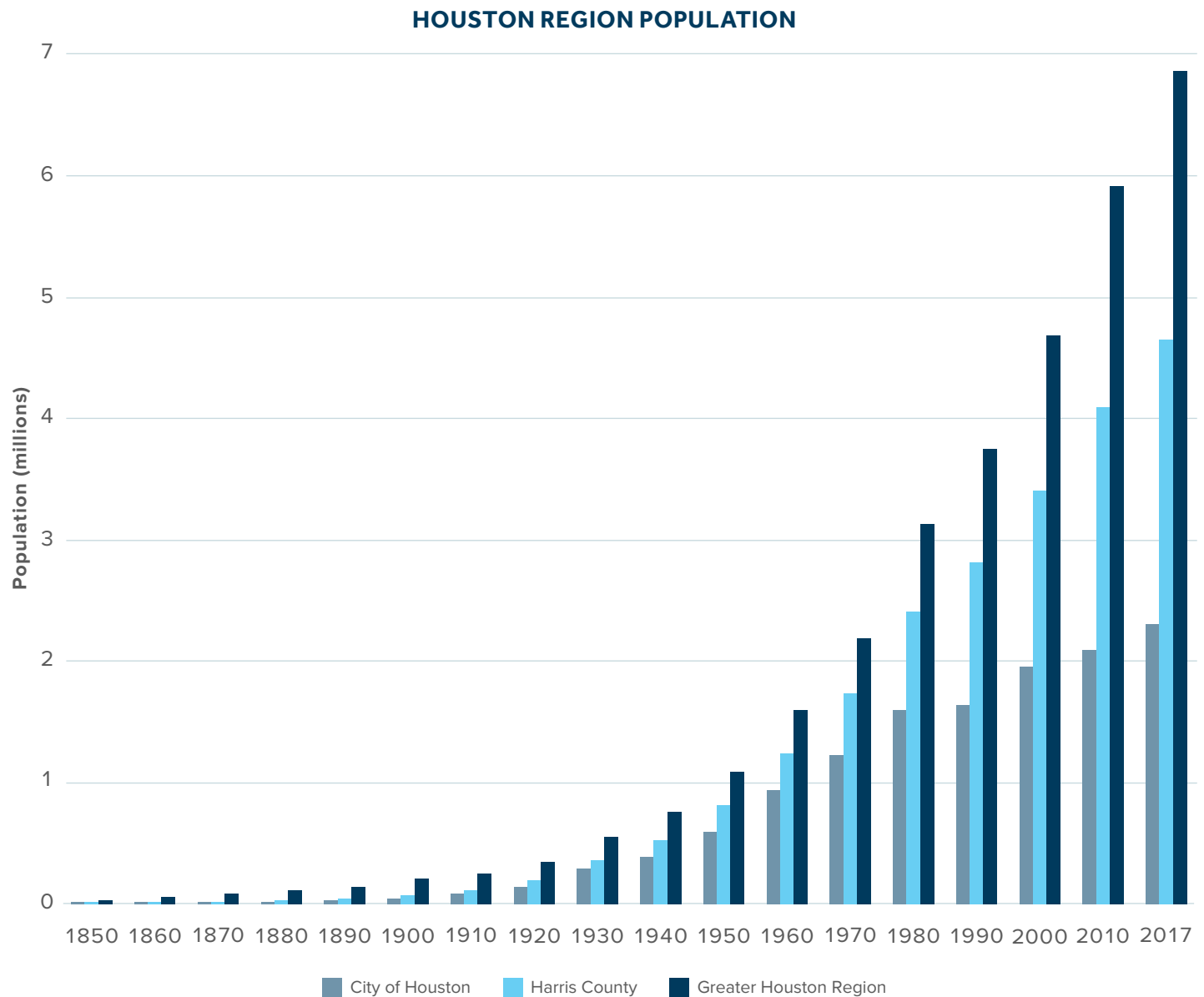
\*\* Index is based 71.0 percent on homeownership costs and 29.0 percent on apartment rent.

\*\*\* 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 2018 (Data based on a survey of 268 urban areas, published October 2018)

# HOUSTON REGION POPULATION

Houston has a sustained history of exponential population growth.



Source: U.S. Census Bureau, 2017 Population Estimates

- From the first census in Texas in 1850 through the 2017 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 '17 (the period for which the Bureau of the Census released its most recent population estimates), metro Houston added 972,011 residents, the second largest gain of any U.S. metro over that period. About 44.9 percent of this growth came from the natural increase (births minus deaths) and around 54.9 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	6,057,947	4,180,816	2,125,450
2012	6,183,726	4,262,689	2,159,824
2013	6,329,553	4,353,517	2,198,244
2014	6,496,862	4,452,695	2,238,795
2015	6,664,187	4,551,362	2,282,235
2016	6,798,010	4,617,041	2,304,482
2017	6,892,427	4,652,980	2,312,717

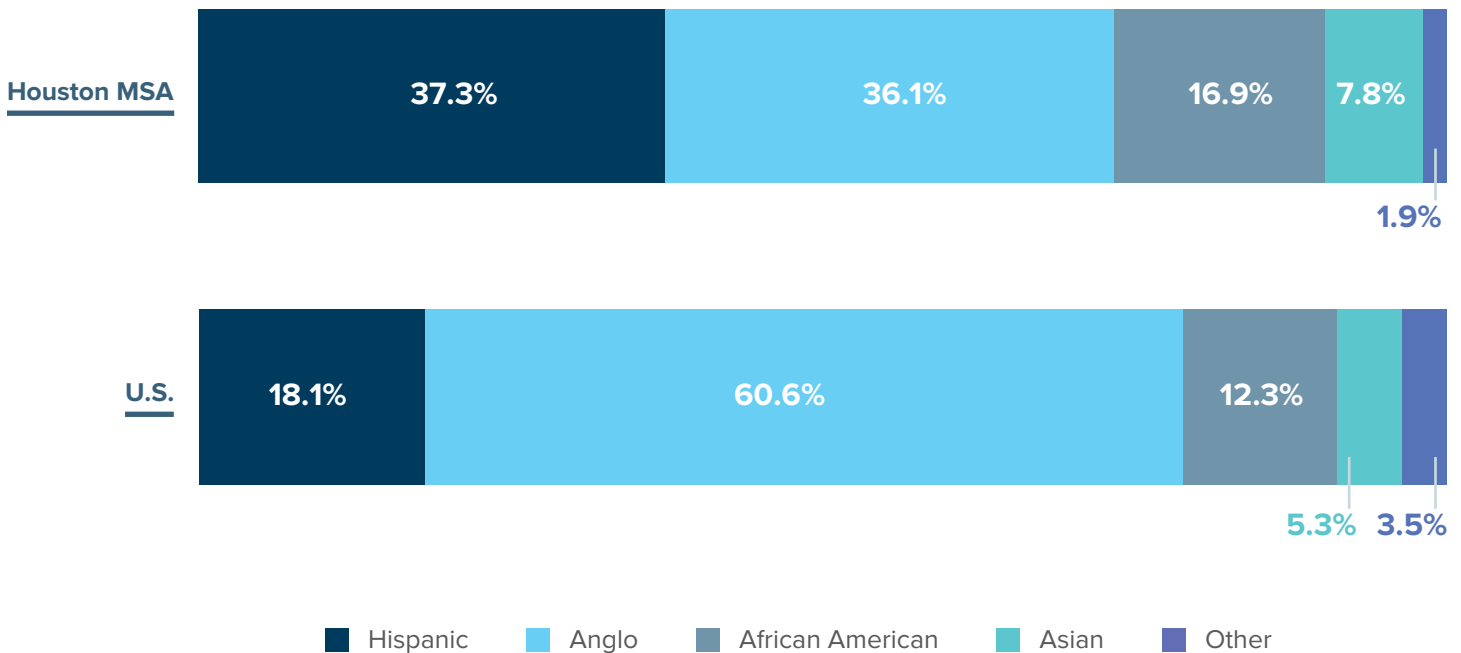
Source: U.S. Census Bureau, Texas Almanac

## RACE/ETHNICITY

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

### 2017 POPULATION BY RACE/ETHNICITY

Percentage Distribution



Source: U.S. Census Bureau, 2017 American Community Survey

- The U.S. Census Bureau's 2017 American Community Survey showed that while no racial or ethnic group constitutes a majority of the Houston-The Woodlands-Sugar Land MSA population, '17 marks the first year that the Hispanic population is larger than the Anglo population.
- The Houston MSA is home to the nation's fourth-largest Hispanic population. Its Hispanic population of 2.6 million in '17 is larger than the total populations of 15 states and the District of Columbia.
- The Houston-The Woodlands-Sugar Land MSA contains the nation's seventh-largest Asian population (539,239)—larger than the total population of the Corpus Christi, Brownsville or Beaumont MSAs.
- Between '08 and '17, the metro area population increased by 20.4 percent. The Asian population increased by 62.8 percent, the Hispanic population by 32.3 percent, the African American population by 24.3 percent and the Anglo population by 2.5 percent.
- Between '08 and '17, the foreign-born population increased by 31.6 percent. In '17, nearly one in four residents of the Houston MSA was foreign-born. Top regions of birth for the Houston MSA's foreign-born are: Latin America (63.1 percent), Asia (25.1 percent), Africa (5.8 percent) and Europe (4.6 percent).

## AGE DISTRIBUTION

Houston's median age of 34.4 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
<b>Houston, TX</b>	<b>34.4</b>	<b>22.3</b>	<b>13.4</b>	<b>15.0</b>	<b>27.1</b>	<b>11.3</b>	<b>10.8</b>
Riverside, CA	34.5	21.4	14.7	14.5	25.2	11.3	12.7
Dallas, TX	34.9	21.8	13.5	14.8	27.5	11.3	11.1
San Diego, CA	35.8	18.4	13.9	16.5	25.9	11.9	13.6
Atlanta, GA	36.4	20.4	13.5	14.0	28.4	11.9	11.8
Denver, CO	36.6	18.8	11.9	16.5	27.8	12.2	12.7
Phoenix, AZ	36.7	20.0	13.2	14.3	25.7	11.5	15.3
Los Angeles, CA	36.9	18.2	13.4	15.7	27.2	12.1	13.5
Minneapolis, MN	37.0	19.9	12.4	14.6	26.5	13.0	13.5
Washington, D.C.	37.1	19.2	12.5	15.0	28.5	12.1	12.6
Seattle, WA	37.1	18.1	11.8	16.7	27.8	12.5	13.0
Chicago, IL	37.4	19.0	13.2	14.4	26.6	12.8	14.1
<b>United States Average</b>	<b>38.1</b>	<b>18.8</b>	<b>13.3</b>	<b>13.8</b>	<b>25.7</b>	<b>12.9</b>	<b>15.5</b>
New York, NY	38.5	17.8	12.5	14.8	26.7	12.8	15.4
Baltimore, MD	38.6	18.2	12.5	14.6	26.1	13.5	15.2
Philadelphia, PA	38.7	18.0	12.9	14.3	25.6	13.5	15.6
Boston, MA	38.7	16.4	13.8	15.0	26.3	13.4	15.3
San Francisco, CA	39.0	16.6	11.2	16.3	28.4	12.6	15.2
Detroit, MI	40.0	18.2	12.5	13.2	26.1	14.1	16.0
Miami, FL	41.0	16.8	11.6	13.6	27.4	12.8	17.9
Tampa, FL	42.0	16.6	11.3	13.2	25.7	13.6	19.6

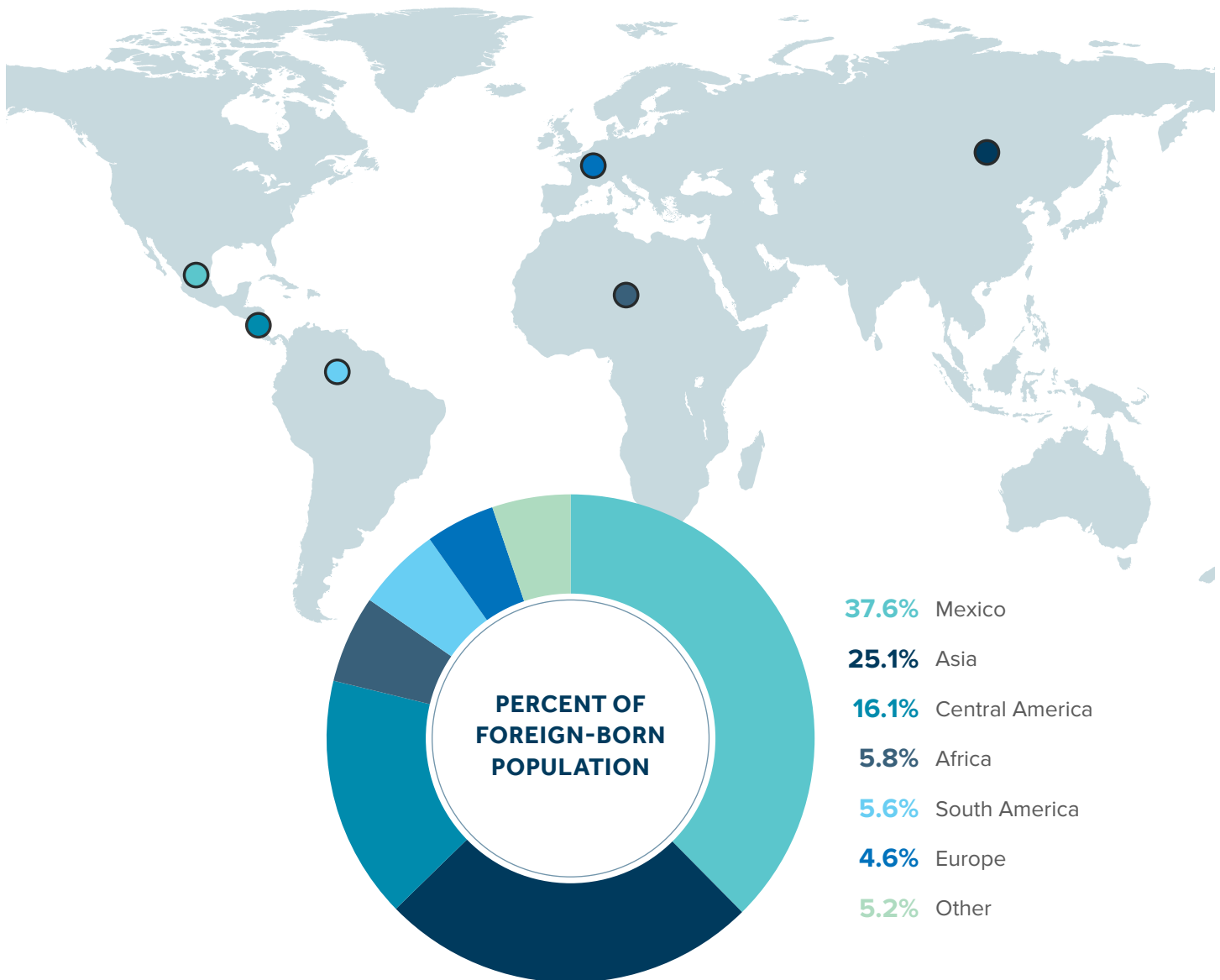
Note: Sums may not total due to rounding.

Source: U.S. Census Bureau, 2017 American Community Survey

## FOREIGN-BORN POPULATION

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

### PLACE OF ORIGIN, FOREIGN-BORN RESIDENTS Metro Houston, 2017



Source: U.S Census Bureau, 2017 American Community Survey

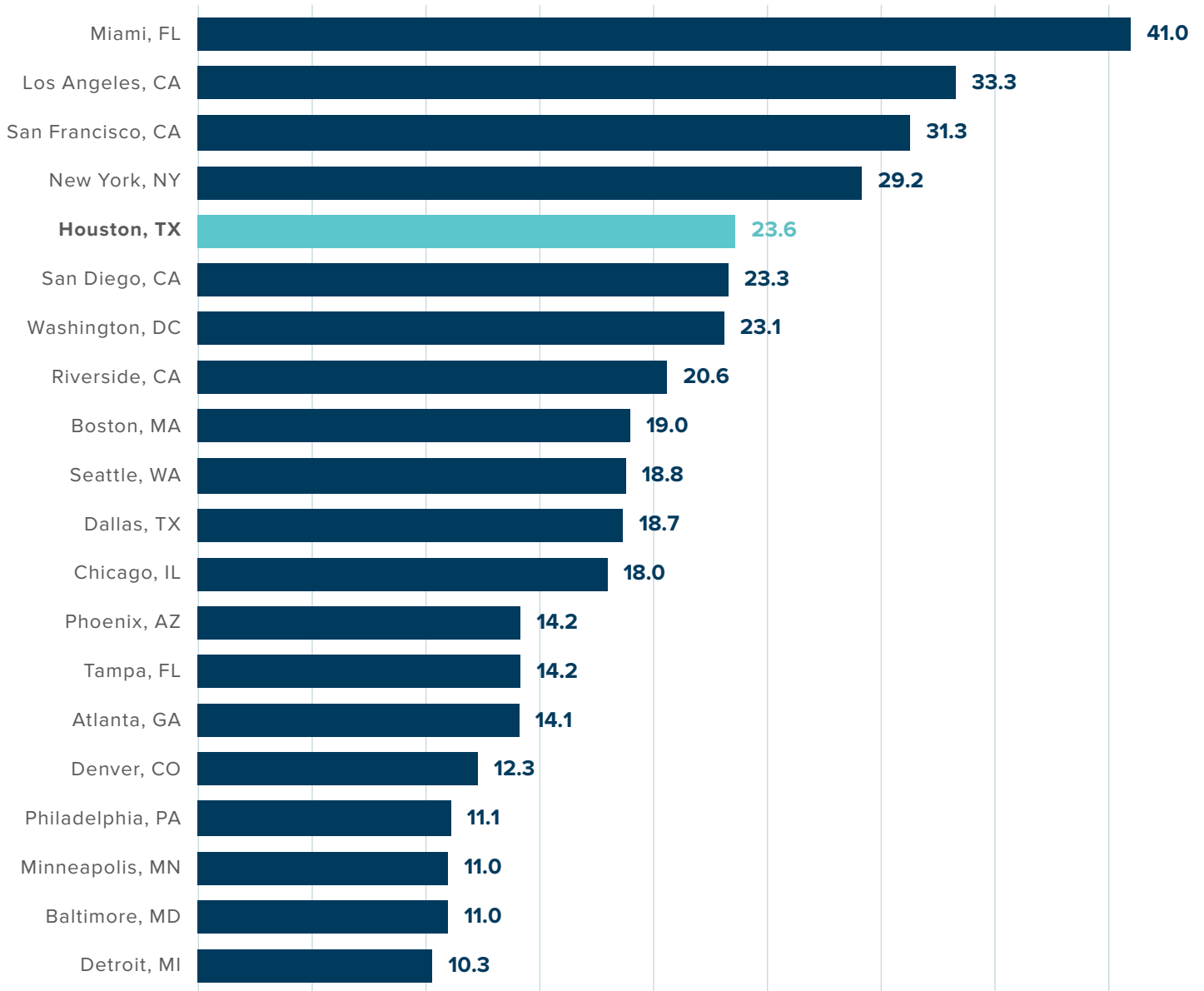
- In '17, the Houston Metropolitan Statistical Area (MSA) contained an estimated 1.6 million foreign-born residents, according to the U.S. Census Bureau. This figure represents 23.6 percent of the metro population.
- Mexico accounts for nearly two-fifths of Houston's foreign-born residents (611,911). El Salvador (129,311) was the birthplace of the next largest group from Central America, followed by Honduras (70,448) and Guatemala (46,686).
- One-fourth of Houston's foreign-born residents were born in Asia (409,395). Asian nations with the largest populations in Houston include India (92,912), Vietnam (91,066), China (62,941), Philippines (37,631) and Pakistan (34,082).



# 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, 2017 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 '17.
- In '17, nearly one in four Houstonians was foreign-born, versus one in seven nationwide.
- Only four of the nation's 20 most populous metropolitan areas—New York, Los Angeles, Miami and Chicago—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, 2017		Residents added 7/1/16 to 7/1/17	% change
New York-Newark-Jersey City, NY-NJ-PA	20,320,876		45,697	0.2%
Los Angeles-Long Beach-Anaheim, CA	13,353,907		25,646	0.2%
Chicago-Naperville-Elgin, IL-IN-WI	9,533,040	-13,286		-0.1%
Dallas-Fort Worth-Arlington, TX	7,399,662		146,238	2.0%
<b>Houston-The Woodlands-Sugar Land, TX</b>	<b>6,892,427</b>		<b>94,417</b>	<b>1.4%</b>
Washington-Arlington-Alexandria, DC-VA-MD-WV	6,216,589		65,908	1.1%
Miami-Fort Lauderdale-West Palm Beach, FL	6,158,824		51,391	0.8%
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	6,096,120		18,968	0.3%
Atlanta-Sandy Springs-Roswell, GA	5,884,736		89,013	1.5%
Boston-Cambridge-Newton, MA-NH	4,836,531		30,589	0.6%
Phoenix-Mesa-Scottsdale, AZ	4,737,270		88,772	1.9%
San Francisco-Oakland-Hayward, CA	4,727,357		28,280	0.6%
Riverside-San Bernardino-Ontario, CA	4,580,670		57,017	1.2%
Detroit-Warren-Dearborn, MI	4,313,002		7,133	0.2%
Seattle-Tacoma-Bellevue, WA	3,867,046		64,386	1.7%
Minneapolis-St. Paul-Bloomington, MN-WI	3,600,618		43,342	1.2%
San Diego-Carlsbad, CA	3,337,685		20,485	0.6%
Tampa-St. Petersburg-Clearwater, FL	3,091,399		54,874	1.8%
Denver-Aurora-Lakewood, CO	2,888,227		36,379	1.3%
Baltimore-Columbia-Towson, MD	2,808,175		7,147	0.3%

Source: U.S. Census Bureau, 2017 Population Estimates

- Between July 1, 2016 and July 1, 2017 (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 second 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

	Residents July 1, 2017		Residents added 7/1/16 to 7/1/17	% change
Los Angeles County, CA	10,163,507		12,949	0.1%
Cook County, IL	5,211,263	-20,093		-0.4%
<b>Harris County, TX</b>	4,652,980		35,939	0.8%
Maricopa County, AZ	4,307,033		73,650	1.7%
San Diego County, CA	3,337,685		20,485	0.6%
Orange County, CA	3,190,400		12,697	0.4%
Miami-Dade County, FL	2,751,796		15,253	0.6%
Kings County, NY	2,648,771		-2,088	-0.1%
Dallas County, TX	2,618,148		30,686	1.2%
Riverside County, CA	2,423,266		36,744	1.5%
Queens County, NY	2,358,582		2,538	0.1%
Clark County, NV	2,204,079		47,355	2.2%
King County, WA	2,188,649		32,687	1.5%
San Bernardino County, CA	2,157,404		20,273	0.9%
Tarrant County, TX	2,054,475		32,729	1.6%
Bexar County, TX	1,958,578		30,831	1.6%
Santa Clara County, CA	1,938,153		6,578	0.3%
Broward County, FL	1,935,878		18,756	1.0%
Wayne County, MI	1,753,616	-2,982		-0.2%
New York County, NY	1,664,727		2,563	0.2%

Source: U.S. Census Bureau, 2017 Population Estimates

- Between July 1, 2016 and July 1, 2017 (the period for which the U.S. Census Bureau released its most recent

population estimates), Harris County added the fourth 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, 2017		Residents added 7/1/16 to 7/1/17	% change
New York, NY	8,622,698		7,272	0.1%
Los Angeles, CA	3,999,759		18,643	0.5%
Chicago, IL	2,716,450	-3,825		-0.1%
<b>Houston, TX</b>	<b>2,312,717</b>		8,235	0.4%
Phoenix, AZ	1,626,078		24,036	1.5%
Philadelphia, PA	1,580,863		6,098	0.4%
San Antonio, TX	1,511,946		24,208	1.6%
San Diego, CA	1,419,516		12,834	0.9%
Dallas, TX	1,341,075		18,935	1.4%
San Jose, CA	1,035,317		3,375	0.3%
Austin, TX	950,715		12,515	1.3%
Jacksonville, FL	892,062		11,169	1.3%
San Francisco, CA	884,363		8,260	0.9%
Columbus, OH	879,170		15,429	1.8%
Fort Worth, TX	874,168		18,664	2.1%
Indianapolis, IN	863,002		5,549	0.6%
Charlotte, NC	859,035		15,551	1.8%
Seattle, WA	724,745		17,490	2.4%
Denver, CO	704,621		9,844	1.4%
Washington, DC	693,972		9,636	1.4%

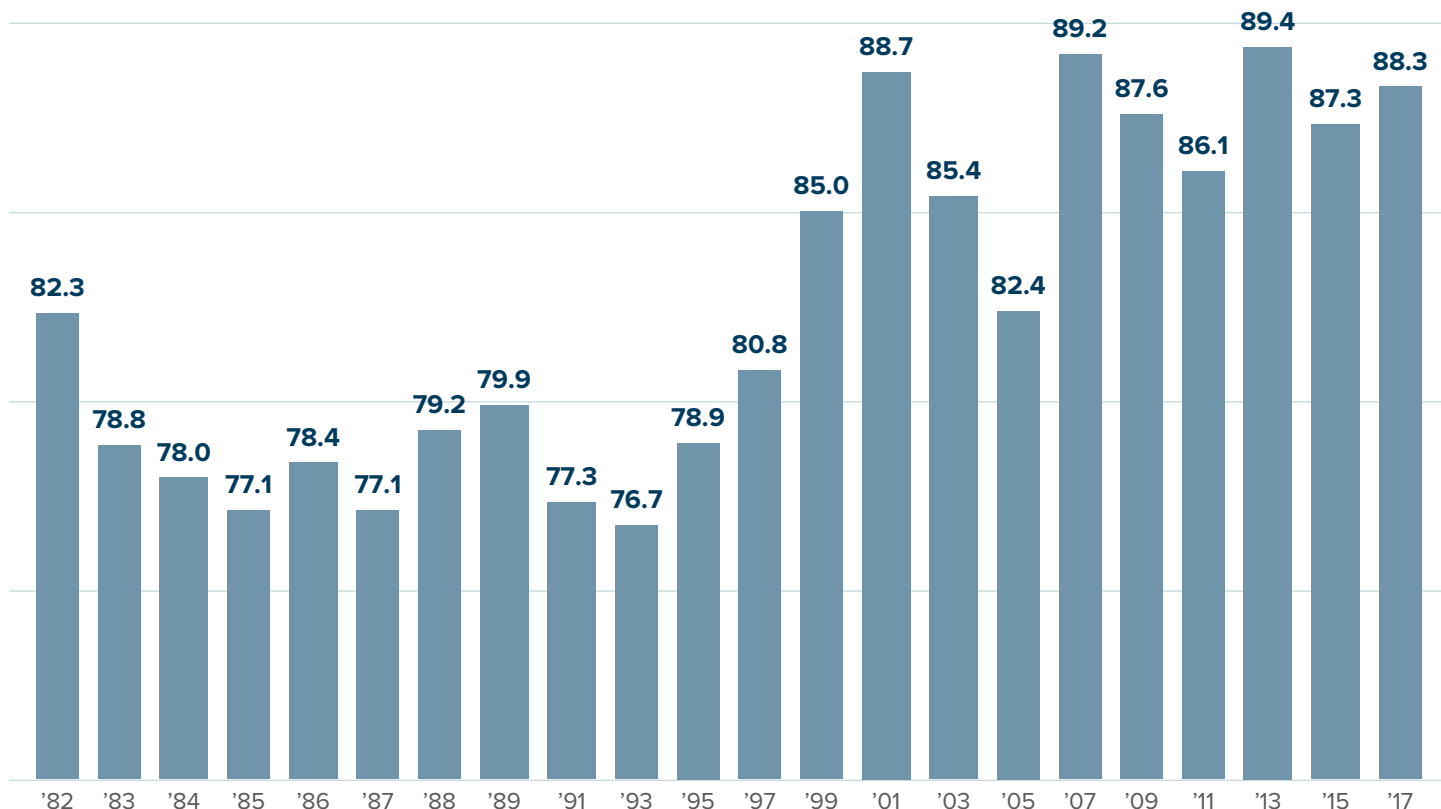
Source: U.S. Census Bureau, 2017 Population Estimates

## 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.

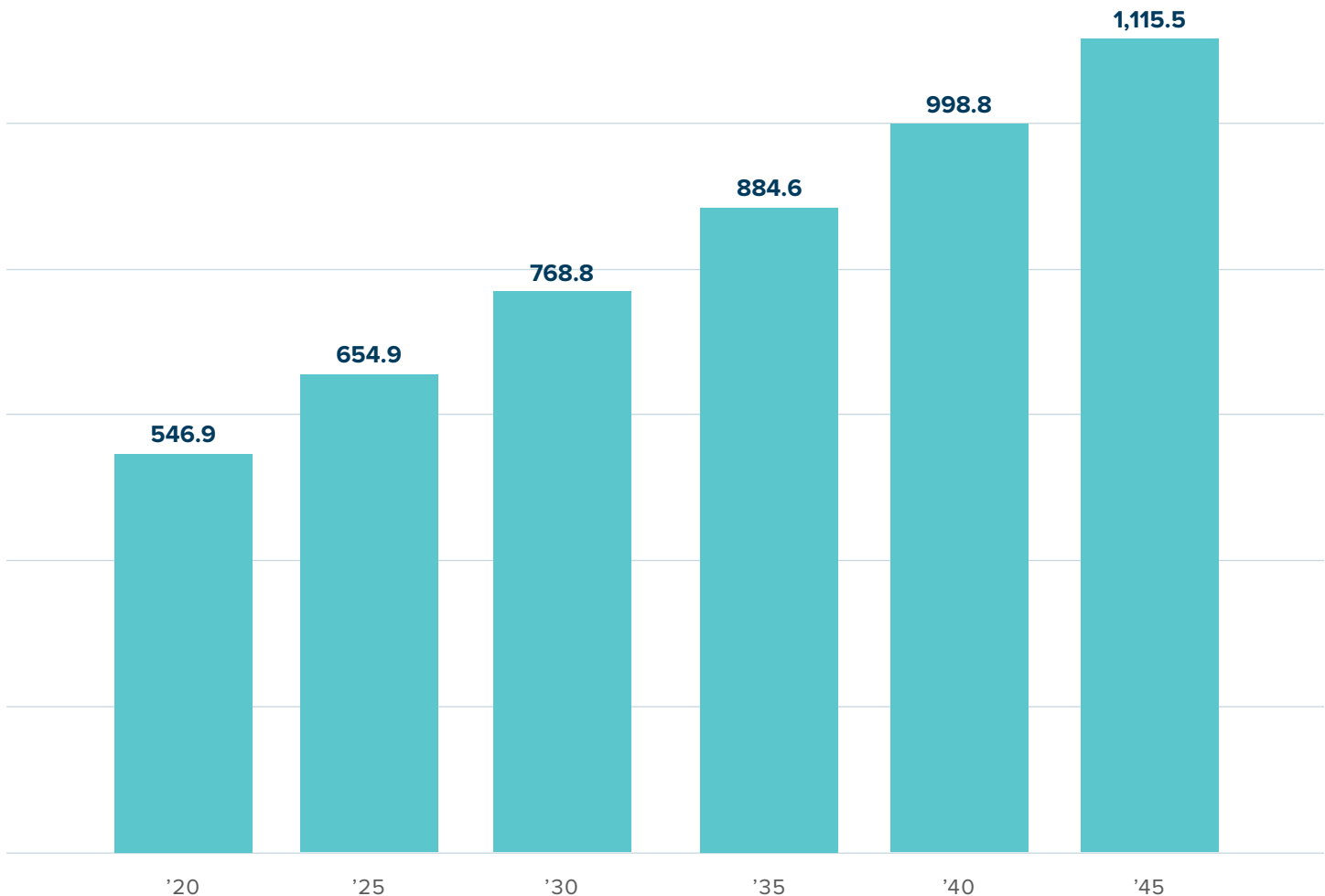
Source: Kinder Institute, *Houston Area Survey*

- 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 six 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 AREA PRODUCT FORECAST

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

**REAL GROSS AREA PRODUCT FORECAST  
HOUSTON-THE WOODLANDS-SUGAR LAND MSA**  
\$ Billions\*



Source: The Perryman Group  
\*\*09 Constant Dollars

- Real (i.e., net of inflation) Gross Area Product (GAP) in the Houston region is expected to grow at an average annual rate of 2.9 percent from '20 to '45 in The Perryman Group's forecast.
- The Houston MSA's real GAP is projected to more than double between '20 and '45.
- Compound annual growth rates of real gross area product from '20 to '45 are highest in manufacturing (3.8 percent), information (3.7 percent) and professional and business services (3.6 percent).

# GROSS AREA PRODUCT FORECAST

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

## ESTIMATES AND FORECASTS

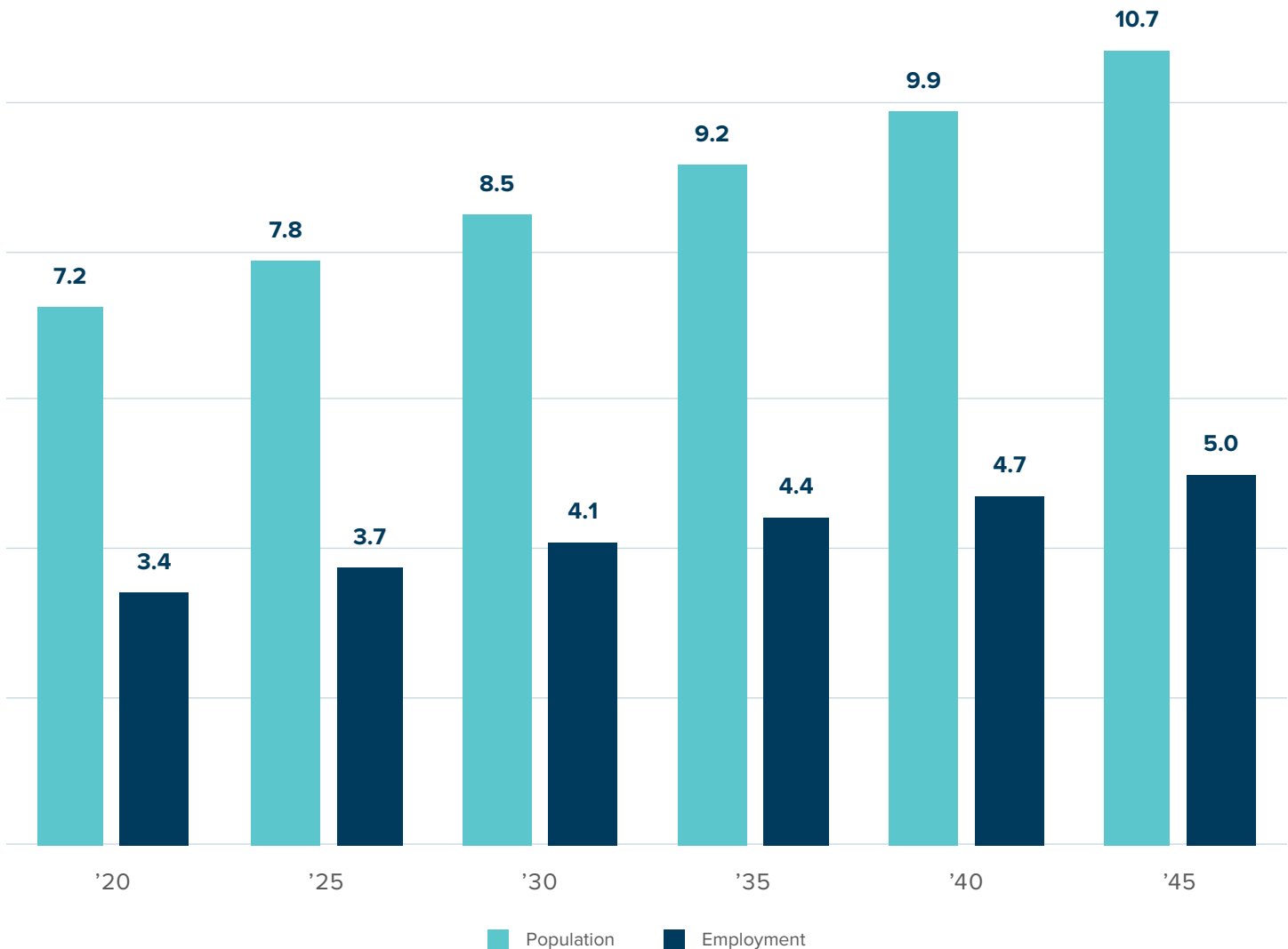
Year	Real Gross Area Product \$ Billions, Constant '09 Dollars	Compound Annual Growth Rate Percent, 5 Years Ending
2020	546.891	3.29
2025	654.935	3.67
2030	768.761	3.26
2035	884.626	2.85
2040	998.837	2.46
2045	1,115.472	2.23

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 10.7 million and employment to grow to 5.0 million by '45.

**POPULATION AND EMPLOYMENT  
HOUSTON-THE WOODLANDS-SUGAR LAND MSA**  
Millions



Source: The Perryman Group

- From '20 to '45, The Perryman Group sees population growth averaging 1.6 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 same rate of 1.6 percent annually.
- The Houston–The Woodlands–Sugar Land Metro Area will add 3.4 million residents between '20 and '45. Perryman also forecasts that Houston will add an additional 1.6 million 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

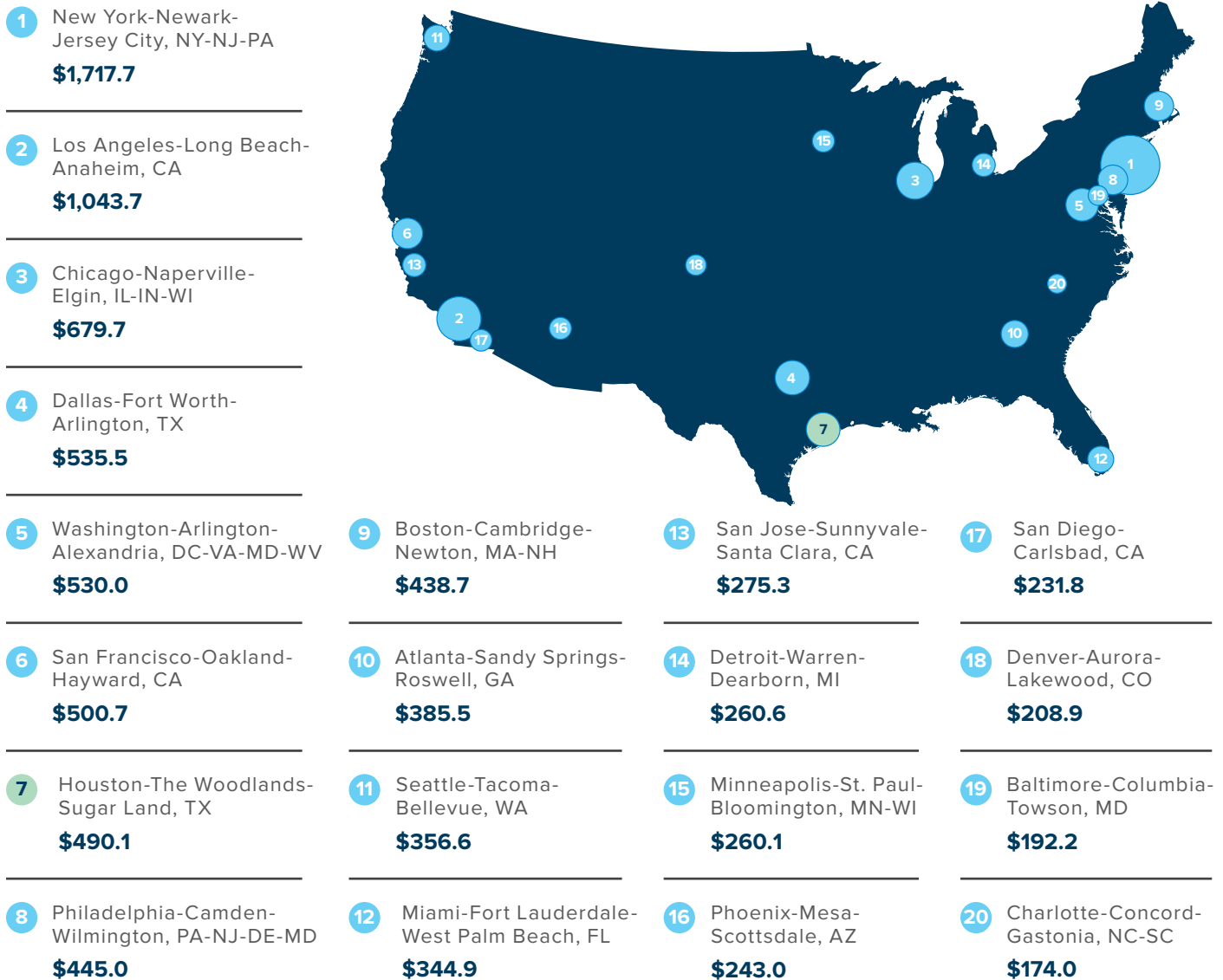
Year	Population (Millions)	Payroll Employment (Millions)
2020	7.248	3.391
2025	7.846	3.737
2030	8.487	4.078
2035	9.174	4.405
2040	9.909	4.707
2045	10.695	5.011

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)

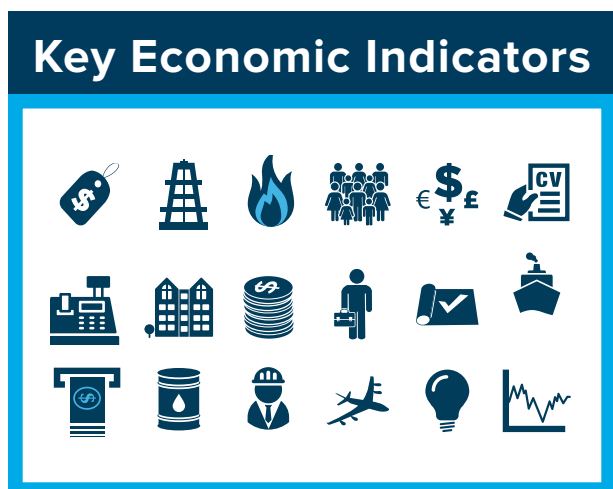
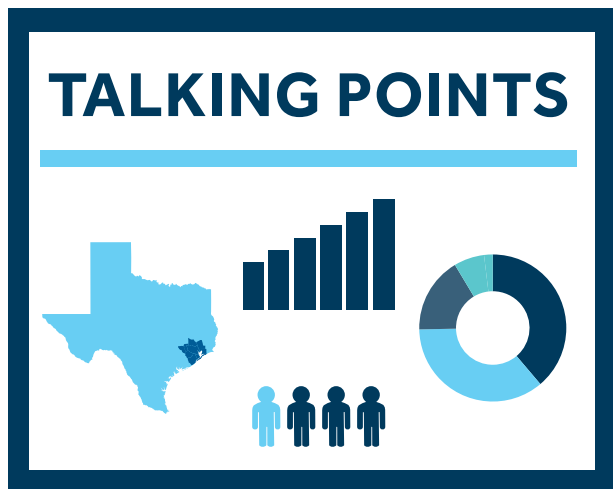


Source: U.S. Bureau of Economic Analysis, 2017 GDP by Metropolitan Area, current dollars

- 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](http://houston.org/economy).







# GREATER HOUSTON **PARTNERSHIP**

Making Houston Greater.

Publication underwritten by:

**WELLS  
FARGO**