



Current Employment Statistics  
Houston-The Woodlands-Sugar Land  
***Special Report: 2017 Benchmark Revisions***




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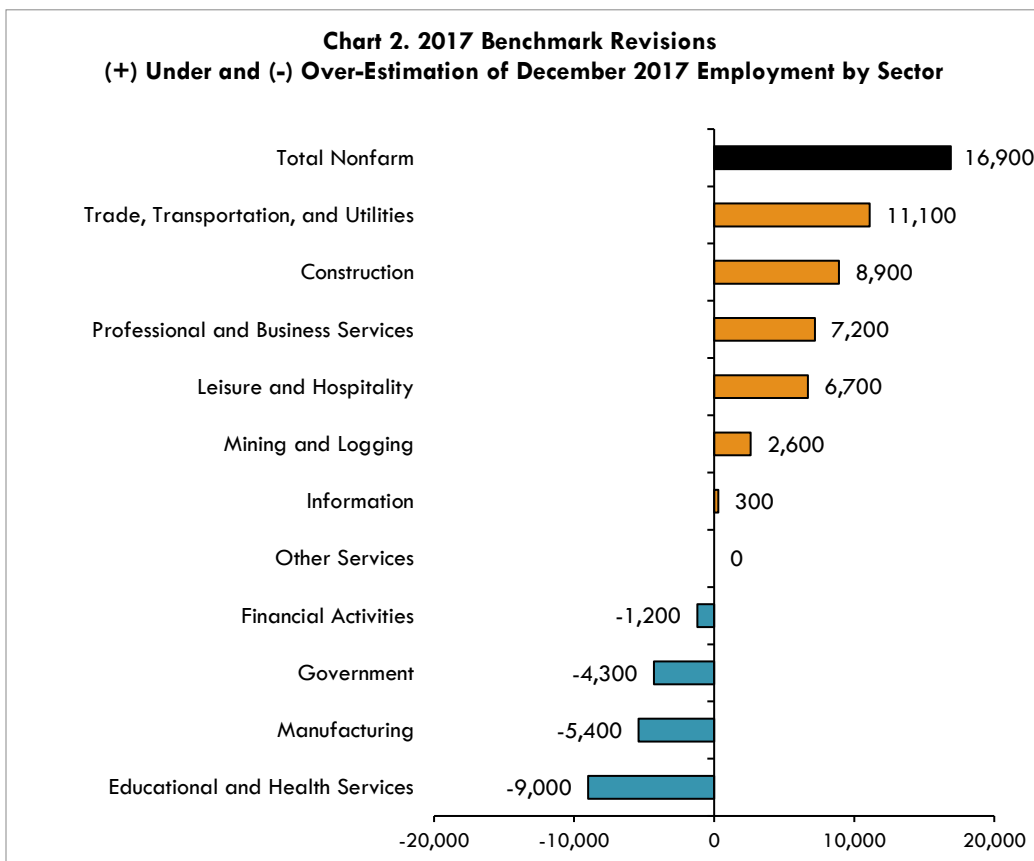
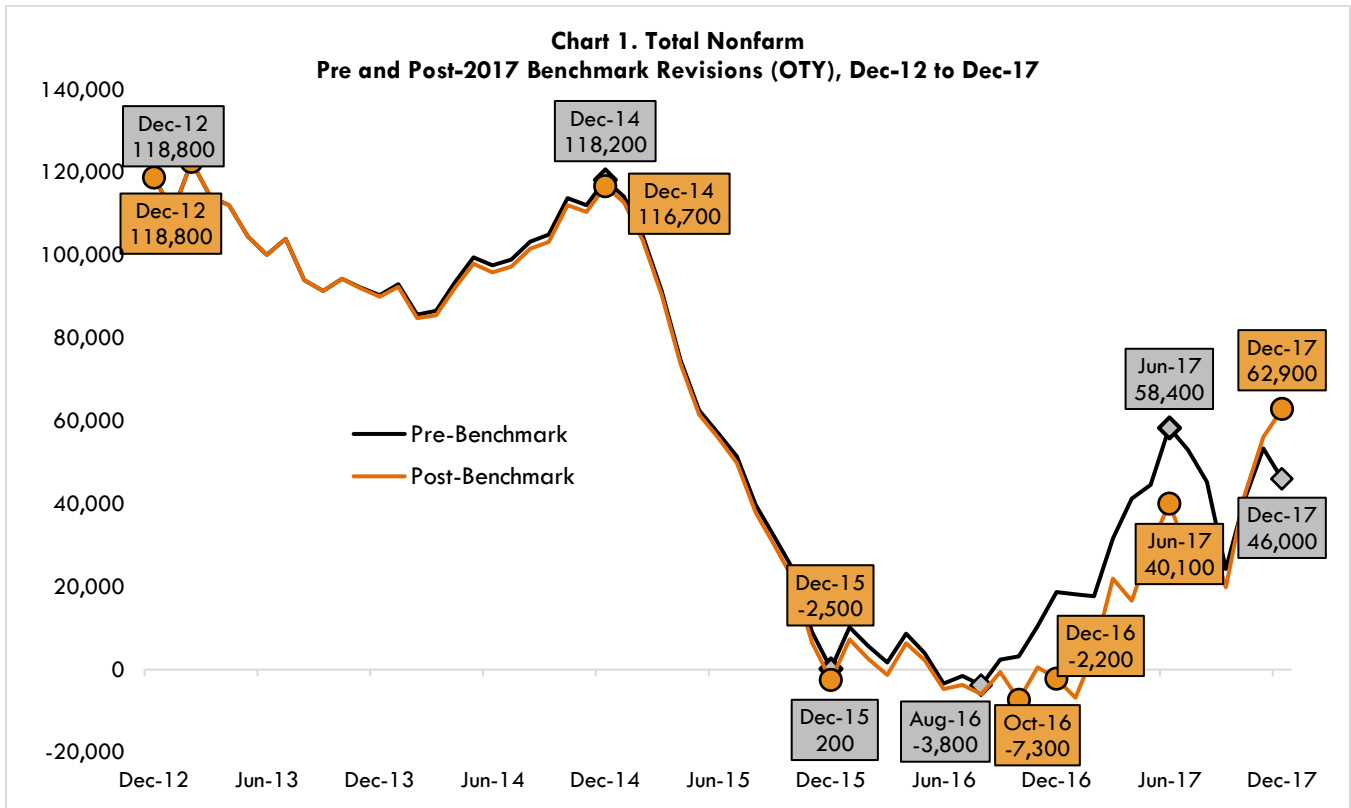
*Workforce Solutions is an affiliate of the Gulf Coast Workforce Board, which manages a regional system that helps employers solve their workforce problems and residents build careers so both can compete in the global economy. The workforce system serves the City of Houston and the surrounding 13 Texas Gulf Coast counties including: Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Harris, Liberty, Matagorda, Montgomery, Walker, Waller, and Wharton.*

## Total Nonfarm Employment and the Impacts of 2017 Benchmark Revisions

- In addition to the release of January 2018's initial estimated employment, 2017 benchmark revisions impacting estimates as far back as late-2013 were also issued by the Texas Workforce Commission. The most significant revisions affected estimated employment for the years 2015, 2016, and 2017.
- Earlier reports of year-end job growth in 2015 (+200 jobs) and 2016 (+18,700 jobs) were revised to show job losses of -2,500 and -2,200, respectively.
- 2015's revised figures revealed an over-estimation of year-end growth by 2,700 jobs largely caused by under-estimating losses in Mining and Logging and over-estimating gains in Educational and Health Services. Professional and Business Services lost fewer jobs than originally believed however this was insufficient to offset misestimation of the previous two sectors. (See Exhibit 3.)
- The differential in pre- and post-benchmark estimates for the year ended in 2016 proved more significant compared to 2015 resulting in an over-estimation of 20,900 jobs. Two-thirds of the over-estimation was found in four sectors where job losses were more severe than originally believed: Professional and Business Services, Mining and Logging, Manufacturing, and Construction. The remaining one-third occurred in Leisure and Hospitality, Government, Educational and Health Services, and Information. Partially offsetting the total over-estimation were additional gains in Trade, Transportation, and Utilities, Financial Activities, and Other services. (See Exhibit 2.)
- December 2017's job growth was revised upward to 62,900 jobs added over the year from the previous estimate of 46,000, resulting in an under-estimation of growth by 16,900 jobs. This revised estimate along with the preliminary estimate for January 2018 (64,400 jobs) suggest significant strengthening of the job market heading into the new year. Virtually all of 2017's under-estimation could be traced to five sectors where more jobs were added than originally believed: Trade, Transportation, and Utilities; Construction; Professional and Business Services, Leisure and Hospitality, and Mining and Logging. Even with over-estimation of jobs added in Educational and Health Services; Manufacturing, Government, and Financial Activities, net under-estimation of total employment still occurred. (See Charts 1 and 2. And Exhibit 1.)
- In terms of broader trends observed over the past three years, previously the worst month for year-over-year job growth since the recession occurred in August 2016 with a loss of -3,800 jobs. Data revisions now indicate that the low point for the most recent downturn occurred two months later, in October 2016 with a loss of -7,300 jobs.
- Another consequence of the benchmark revisions was the discovery that earlier data significantly over-estimated job growth from September 2016 until September of the following year when the data briefly re-converged, coincidentally the same month as the greatest impact from Hurricane Harvey. However, a final and perhaps more positive consequence was a shallower slowing of job growth after June 2017. This period roughly coincided with the start of a decline in the total rig count that lasted through much of fall before resuming growth toward the end of 2017 and accelerating further in the first quarter of 2018.
- NOTE: the majority of the analysis found in this report examines benchmark-related trends within the context of year-over-year net changes in employment. This is due to relatively greater interest in job growth as a measure of the health of the labor market than can usually be obtained from analyzing the absolute number of jobs in individual sectors. However, two sectors closely watched due to their sensitivity to oil prices, Mining and Logging and Manufacturing, saw significant differences in pre- and post-benchmark estimates in the absolute numbers of jobs reported. These differences have significant implications for our understanding of the contributions of these sectors to employment in the region.

### Line Chart Color Key

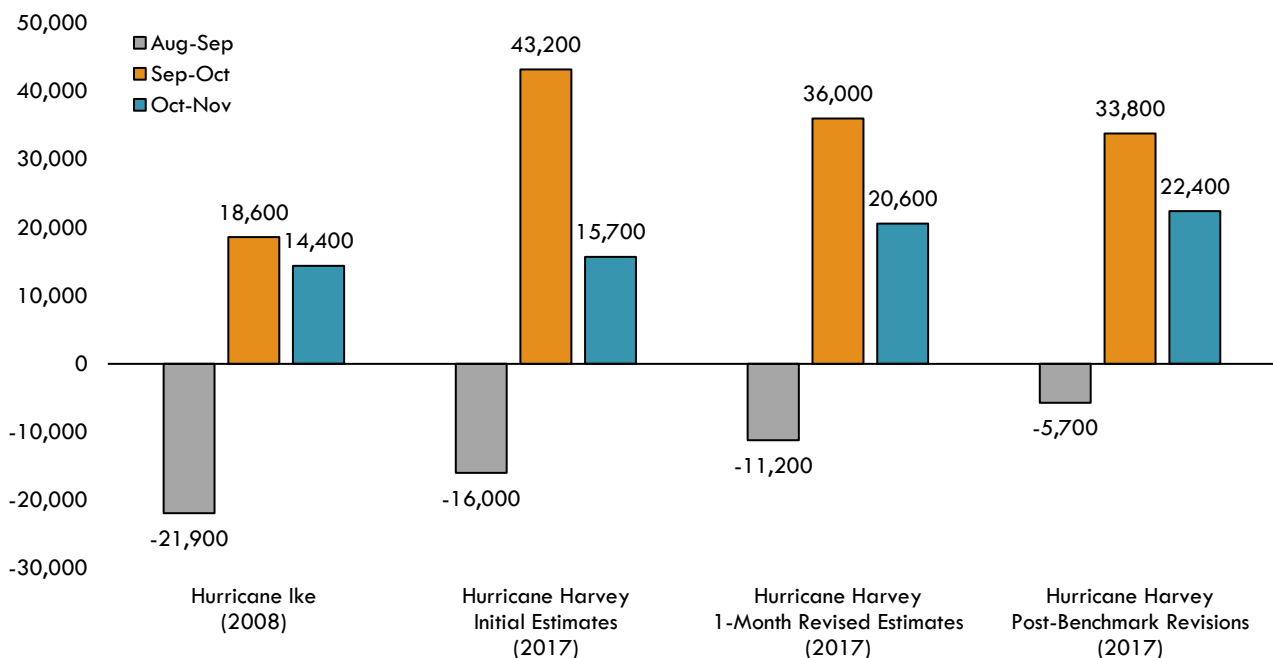
Major Sector Over-the-year Net Change	
Major Sector Absolute Employment Levels	
Sub-sector/Industry Group Over-the-year Net Change	



## A Note on Hurricane Harvey Benchmark Revisions Compared to Hurricane Ike

- September 2008 and September 2017 remain the only instances of over-the-month job losses in that month going back to 1990 as a result of Hurricanes Ike and Harvey, respectively. However, it now appears that Hurricane Harvey’s impact on the job market was significantly less compared to Hurricane Ike. Furthermore, the data suggest that Houston’s job market not only recovered quickly from the storm but strengthened significantly in its wake. (See Chart 3.)
- As context, Hurricane Ike caused a loss of -21,900 jobs in September 2008 followed by a rebound in October of 18,600 jobs, implying that 85% of jobs lost were recovered the following month.
- Initial estimates after Hurricane Harvey reported a loss of -16,000 jobs in September 2017, which was revised to show a smaller decline of -11,200 jobs the following month. October’s initial estimate reported a rebound of 43,200 added, which translated to a delta of 54,400 jobs across the two months. Put differently, Houston gained nearly four times the number of jobs it lost due to the storm in a single month.
- Revised October data reduced the magnitude of the Hurricane Harvey rebound to 36,000 jobs added, which lowered the two-month delta to 47,200, however this remained highly disproportionate relative to the changes during and after Hurricane Ike.
- Benchmark revisions continued the above pattern of attenuating the decline and rebound by reducing September losses to only -5,700 jobs followed by an increase of 33,800 in October i.e. six times the number of jobs lost were added in the first month of recovery after Hurricane Harvey.
- Ultimately, the decrease in reported job losses from the initial estimate of -16,000 to the benchmark revised loss of -5,700 indicates that 10,300 fewer jobs were lost as a result of Hurricane Harvey than originally thought. Overall, the data confirm that Hurricane Harvey was primarily a “residential event” damaging hundreds of thousands of homes, vehicles, and other personal property with perhaps only a highly localized, brief disruption to employment in the region.

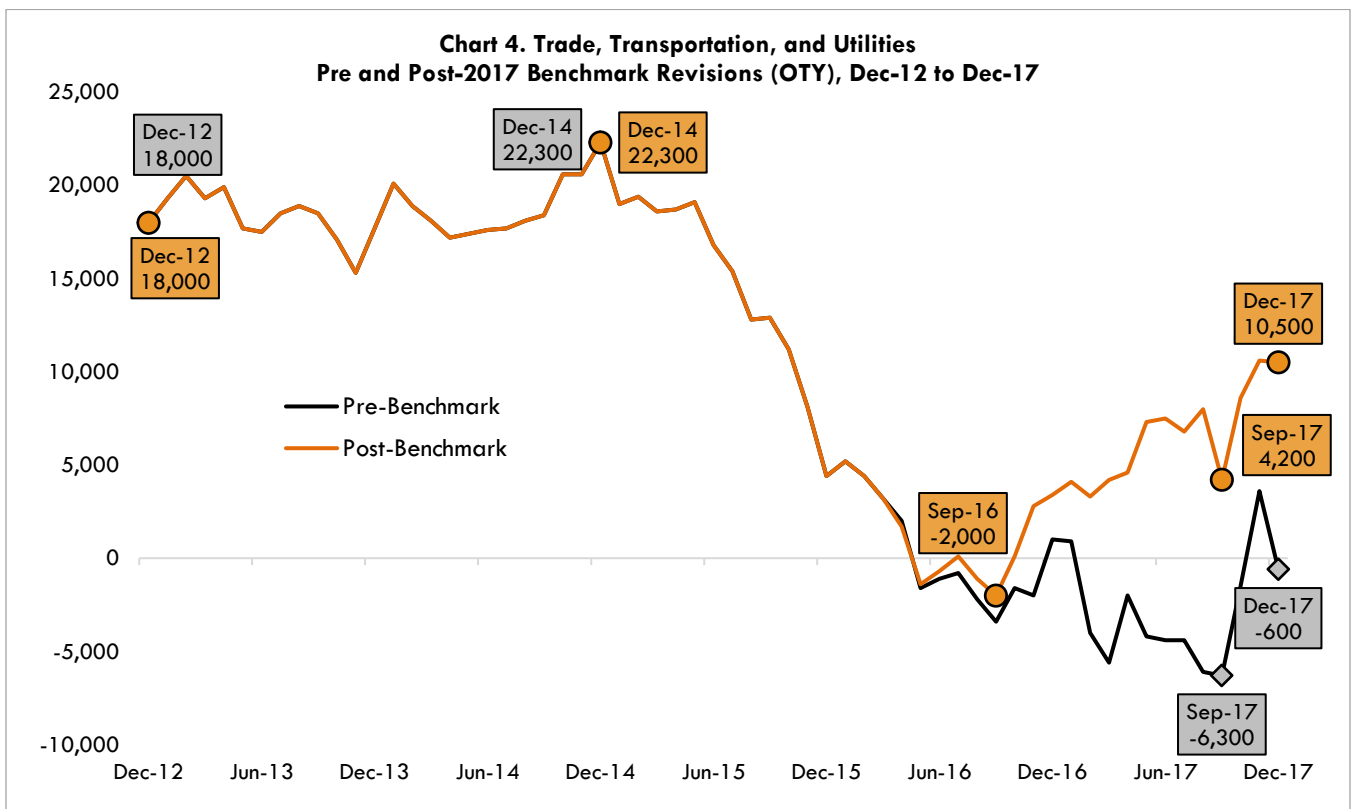
**Chart 3. Comparison of Impacts on Houston Area Total Nonfarm Employment, Hurricane Ike (2008) and Initial, One-month Revised, and Benchmark Estimates Hurricane Harvey (2017)**



## SECTORS WITH UNDER-ESTIMATED EMPLOYMENT

### Trade, Transportation, and Utilities

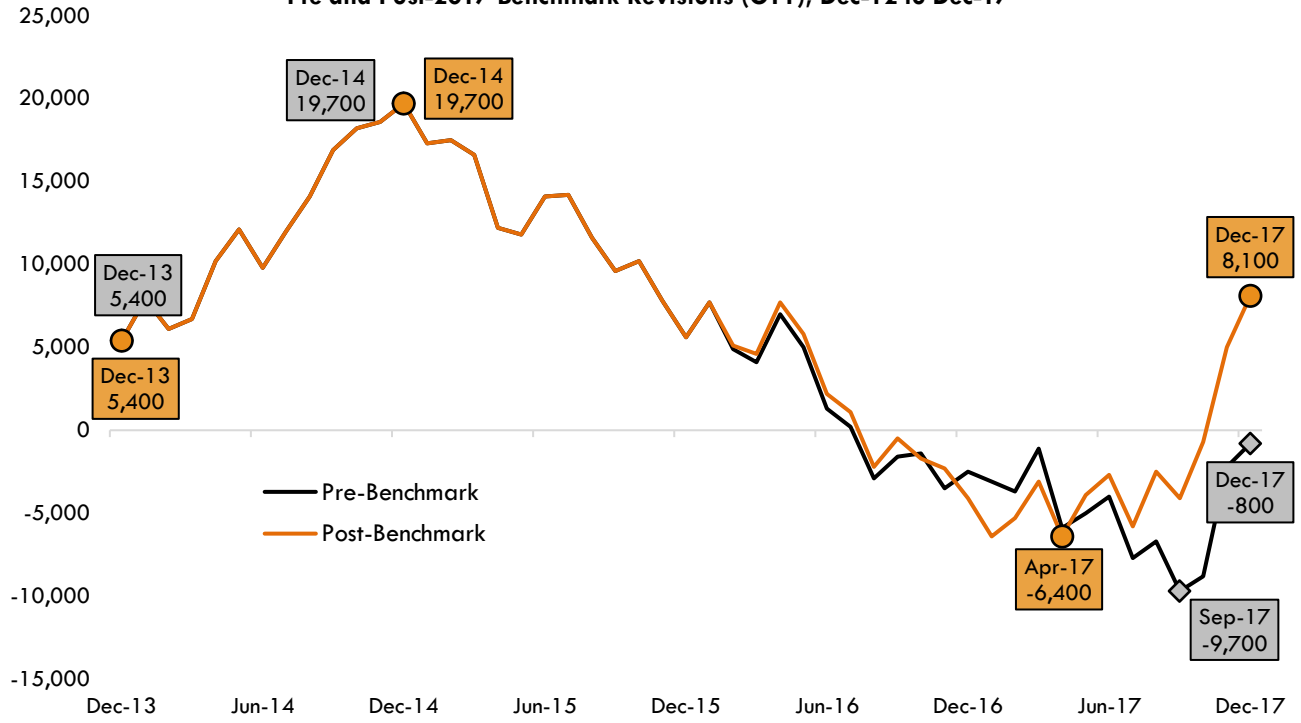
- Whether before or after benchmark revisions, year-over-year job growth in Trade Transportation and Utilities, peaked in December 2014 along with the overall job market and began to slow, turning negative in May 2016 for the first time since the recession. (See Chart 4.)
- However, from May 2016 onward a significant divergence between pre- and post-benchmark trajectories began to appear. Prior to benchmark revisions, this sector spent most of 2016 and 2017 in negative territory, resulting in a post-oil crash low in September 2017 of -6,300 jobs followed by a sharp recovery to +3,800 jobs in November and a return to job losses of -600 by December. In contrast, post-benchmark revision estimates showed a much shallower low point of -2,000 jobs lost in September 2016 followed by a rally to 10,500 jobs in December 2017. The only significant deviation in this upward trend was a brief dip to 4,200 jobs in September 2017, presumably due to Hurricane Harvey.
- Ultimately, pre- and post-benchmark revisions (-600 original vs. +10,500 revised) resulted in an under-estimation of 11,100 jobs added in this sector for 2017, the largest under-estimation of any sector. The drivers of this under-counting were all three major components of Trade Transportation and Utilities: Wholesale Trade (7,300); Transportation Warehousing and Utilities (3,700); and a modest under-estimation of Retail Trade by 100 jobs. Within Wholesale Trade, the official cause of the 7,300-job under-estimation could not be determined directly from published data. However, assuming the third category that comprises Wholesale Trade, Wholesale Electronic Markets and Agents and Brokers, constitutes the unpublished balance of the total, we can attribute an under-counting of Merchants of Durable Goods jobs by 3,400 as largely responsible for the post-benchmark revision upward trend followed by Nondurable Goods (2,300) and Wholesale Electronics (1,600). Given the interconnectedness of Wholesale Trade; Mining and Logging; Manufacturing; and Professional and Business Services, and the varying degrees of recovery in the latter three sectors, some amount of under-estimation was to be expected in Wholesale Trade and therefore the Trade, Transportation, and Utilities sector as a whole.



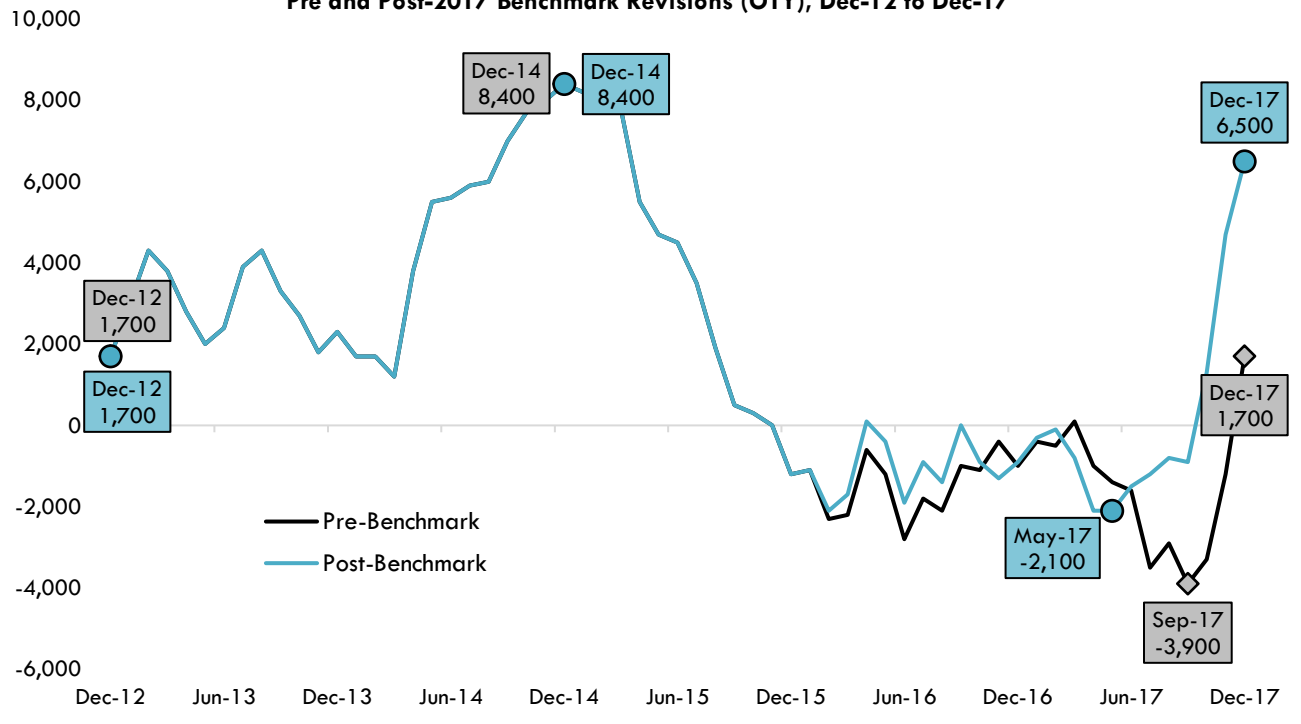
## Construction

- Given the role of Construction in recovery and rebuilding efforts post-Hurricane Harvey, this sector was expected to show some degree of positive momentum after September 2017 once benchmark revisions were released. This was in fact the case as evidenced by an original estimate for December 2017 of -800 jobs lost year over year, which after revisions became an increase of 8,100 jobs. This returns growth in this sector to levels not seen since October to November of 2015 and furthermore reverses a downward trend in Construction job growth that began in December 2014 at the start of the most recent downturn in oil and gas. (See Chart 5.)
- Another noteworthy development as a result of benchmark revisions was an earlier trough of April 2017 with losses -6,400 jobs compared to the original estimated low point of -9,700 jobs in September 2017.
- Ultimately, the difference in estimates for December 2017 resulted in an under-estimation of job growth of 8,900 for the year, the second-largest under-estimation of the 11 major sectors that comprise Houston's labor market. The bulk of the under-estimation came from the sub-sector Construction of Buildings (4,800) followed by Heavy and Civil Engineering Construction (2,900), and Specialty Trade Contractors (1,200).
- Interestingly, the combination of a post-Harvey boost in demand for construction services and benchmark revisions had decidedly different impacts on Construction of Buildings compared to Specialty Trade Contractors. The former Construction sub-sector saw its year-over-year December increase in employment rise from 1,700 jobs to 6,500 jobs, the latter matching a pace of growth last seen in early 2015. In contrast, Specialty Trade Contractors saw little benefit from the hurricane or revisions. Pre-benchmark estimates indicated this sub-sector saw a sharp drop in employment in September 2017, the month during which Hurricane Harvey brought the majority of damage to the region, shedding -4,800 jobs over-the-year. This was followed by a modest rebound to a loss of only -1,000 jobs in December 2017. Post-benchmark revisions in this sub-sector resulted in a shallower September decline of -2,800 and ending the year in December with a meagre 200 jobs added. The reason for these contrasting trends is unclear. The defining feature of Hurricane Harvey was flooding resulting in extensive but mainly cosmetic damage rather than wind, which is more likely to compromise the structural integrity of dwellings. Therefore, we might expect any surge in Construction employment to occur among Specialty Trade Contractors, who are more likely to perform repairs, than Construction of Buildings, which connotes the construction of buildings in their entirety. Another plausible scenario would have seen moderate spikes in both sub-sectors, which given the tendency of firms classified under Construction of Buildings to sub-contract with Specialty Trade Contractors, would have been a reasonable outcome. (See Charts 6 and 7.)
- Regardless, while an increase in Construction employment was expected, it is uncertain whether the strength observed in this sector will continue throughout 2018 as repairs to dwellings are completed.

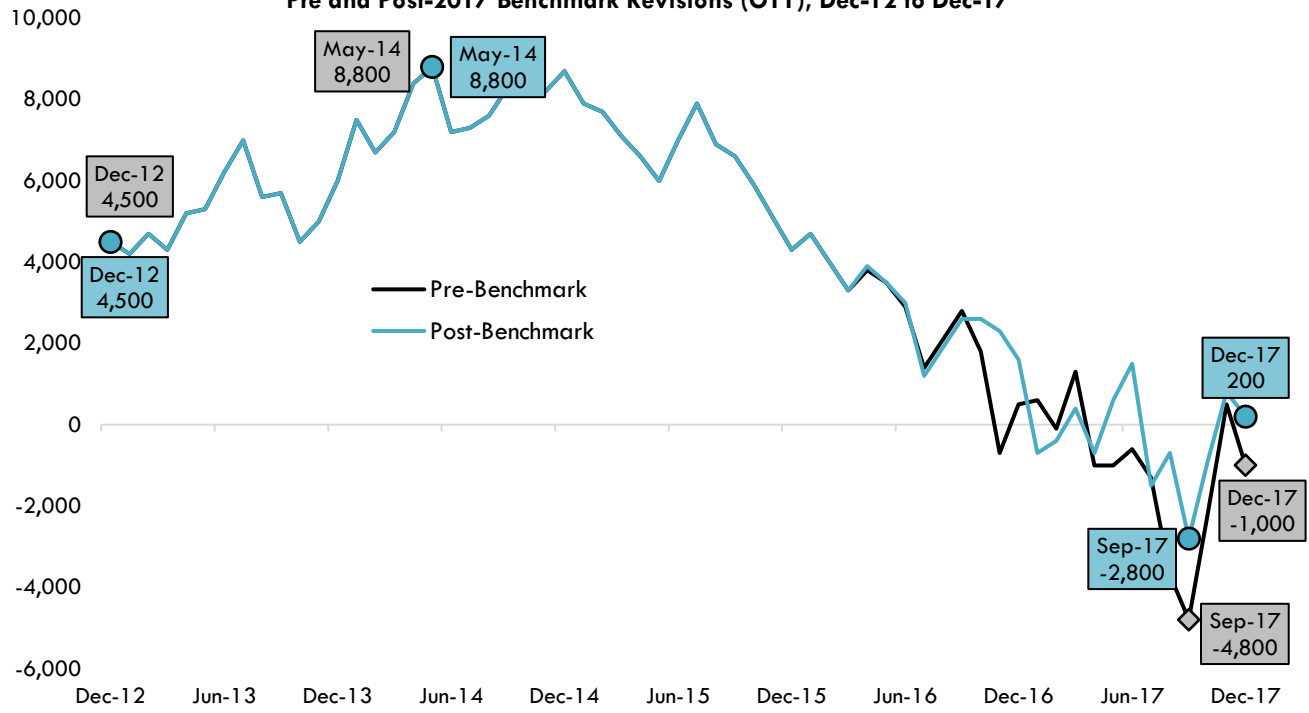
**Chart 5. Construction**  
Pre and Post-2017 Benchmark Revisions (OTY), Dec-12 to Dec-17



**Chart 6. Construction of Buildings**  
Pre and Post-2017 Benchmark Revisions (OTY), Dec-12 to Dec-17



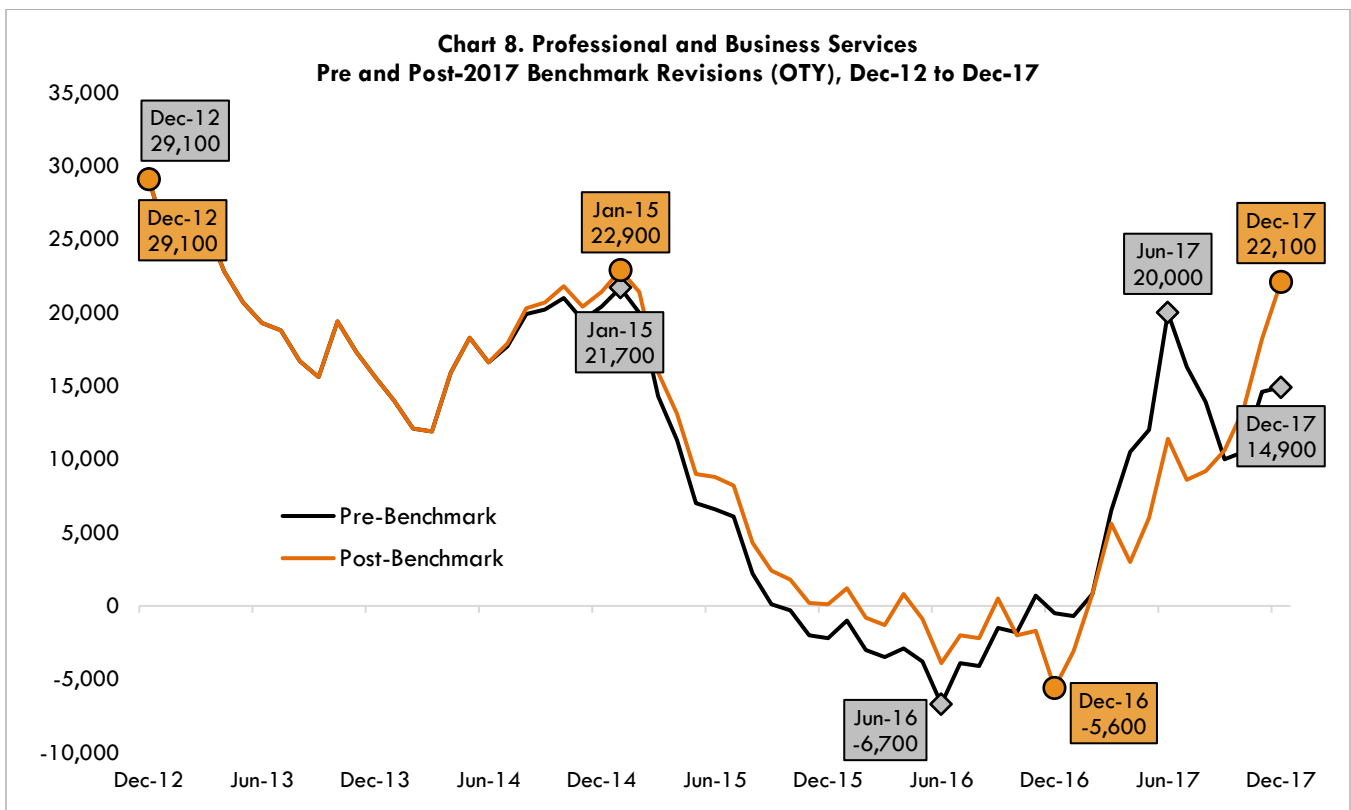
**Chart 7. Specialty Trade Contractors**  
**Pre and Post-2017 Benchmark Revisions (OTY), Dec-12 to Dec-17**





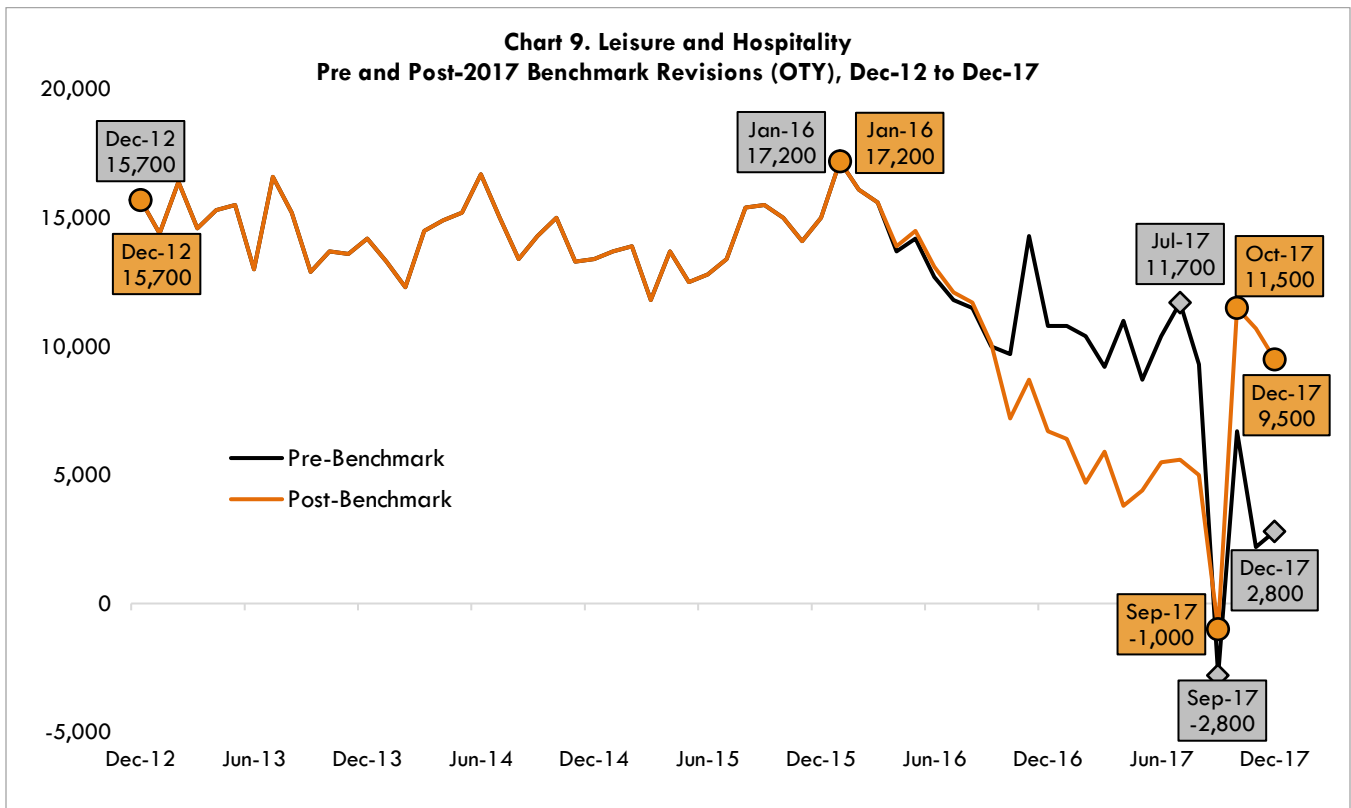
## Professional and Business Services

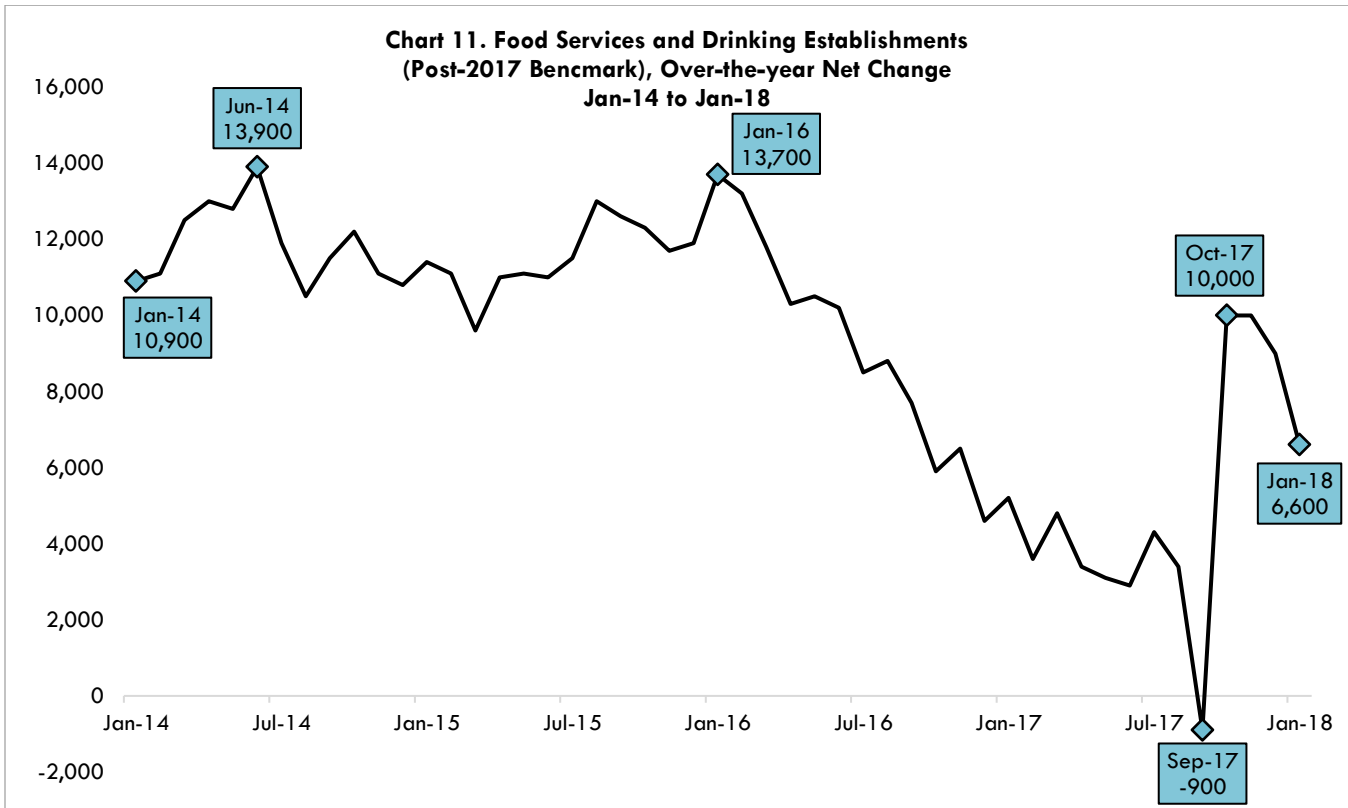
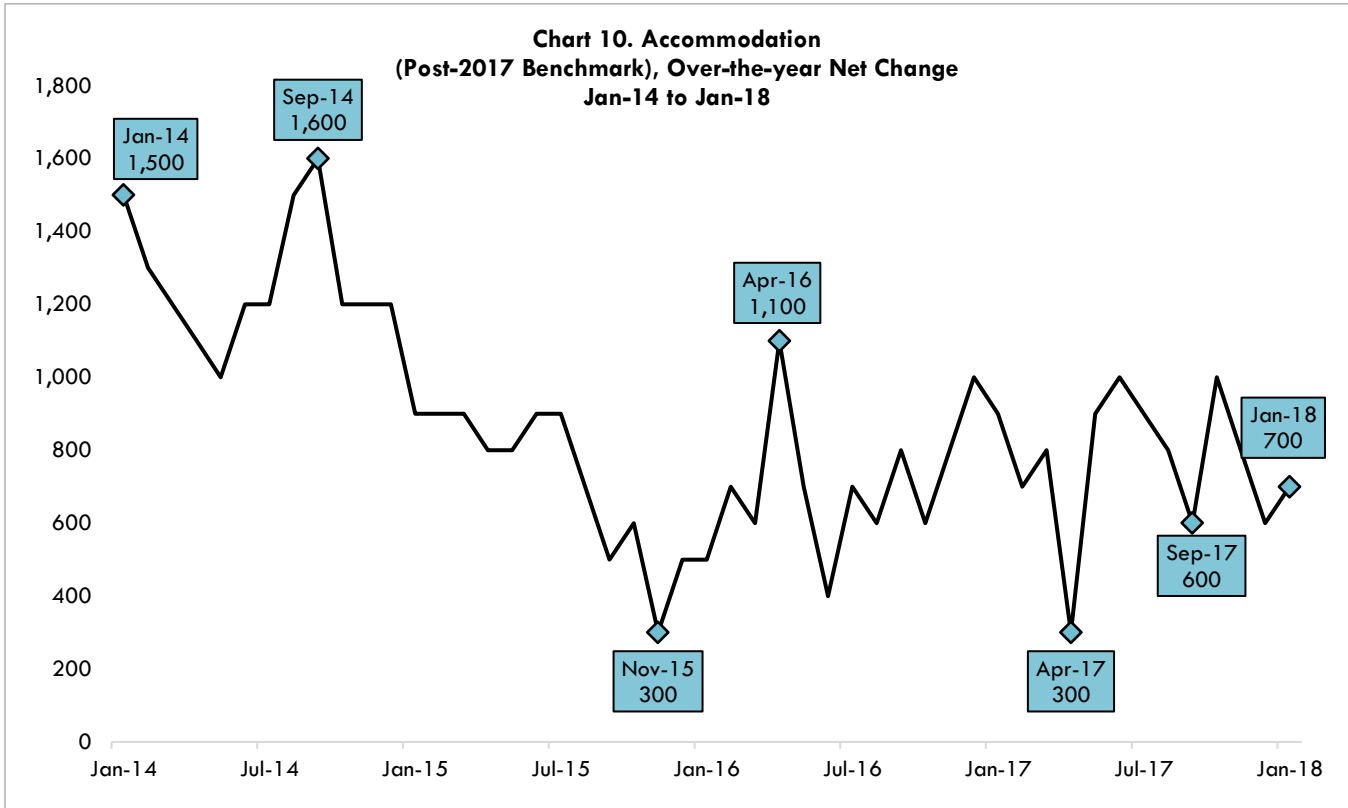
- As a result of benchmark revisions, Professional and Business Services demonstrated either slightly higher year-over-year growth or less severe declines from August 2014 through October 2016. (See Chart 8.)
- Prior to benchmark revisions, this sector experienced its steepest year-over-year job losses throughout the most recent downturn with a decline of -6,700 in October 2016. Benchmark revisions resulted in a shallower low of -5,600 jobs lost that occurred six months later in December 2016.
- Before benchmark revisions, Professional and Business Services showed signs of peaking in June 2017 with year-over-year growth of 20,000 jobs, which was the culmination of a sharp rise from January 2017 onward. The revisions now indicate that this sector has yet to peak and furthermore January 2018's estimate of 21,400 jobs (not shown in chart below) indicates that Professional and Business Services is only 1,500 jobs shy of tying its most recent peak of 22,900 jobs recorded in January 2015.
- Treating December 2017 as the gauge of performance for the full year, it appears that job growth in Professional and Business Services was under-estimated by 7,200 jobs, mirroring the rapid strengthening of the overall job market seen in Total Nonfarm employment.
- The December 2017 under-estimation for overall Professional and Business Services was the result of under-estimation of all three sector subcomponents: Administrative and Support and Waste Management and Remediation Services (3,900), Professional, Scientific, and Technical Services (1,900), and Management of Companies and Enterprises (1,400).
- Nearly 2 years passed before this sector reached a low and only one year to recover back to the pace growth seen just before the start of the most recent downturn in oil and gas.



## Leisure and Hospitality

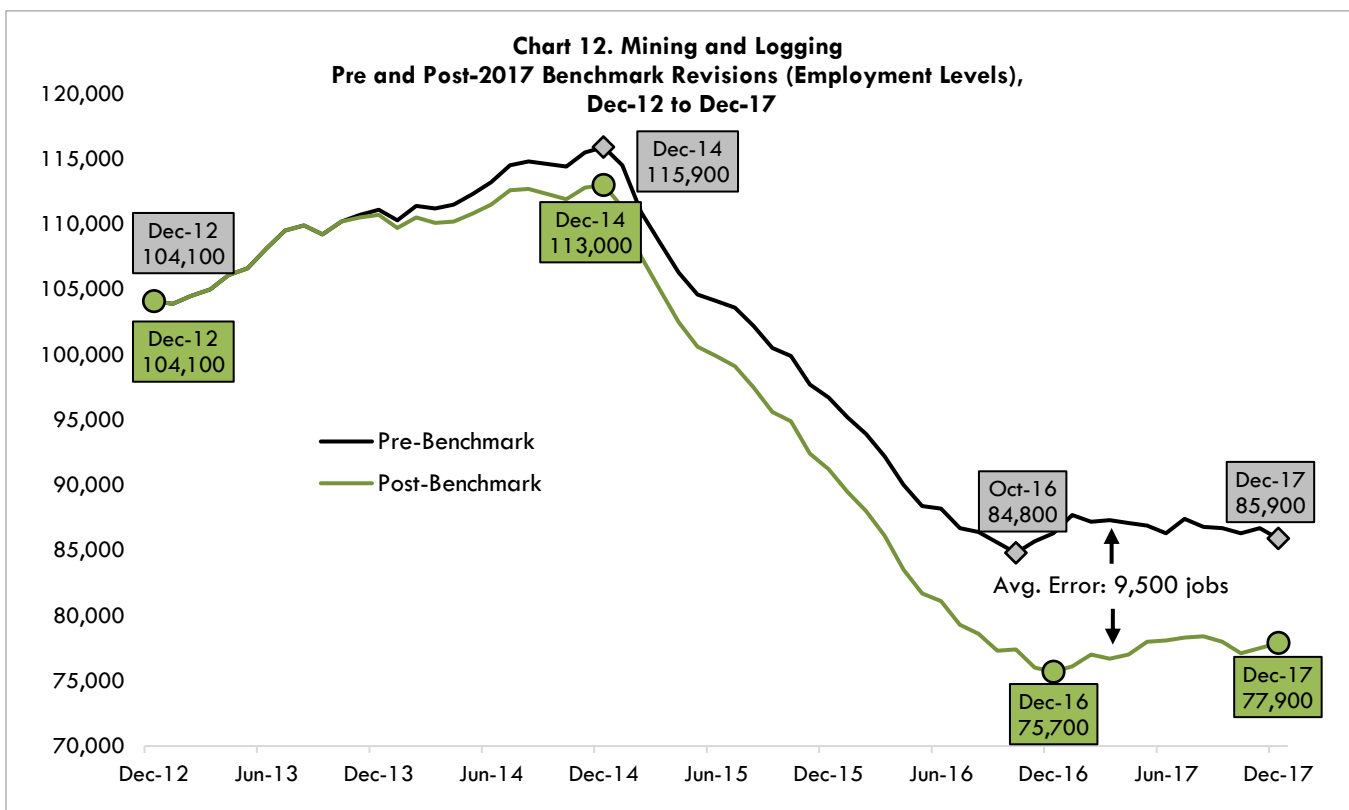
- Prior to benchmark revisions, Leisure and Hospitality exhibited positive yet slowing year-over-year growth from its recent peak in January 2016 until August 2017. After revisions, this sector showed even weaker growth from September 2016 onward as seen in the divergence of the trend lines below. (See Chart 9.)
- Of the 11 major sectors that comprise Houston's labor market, Leisure and Hospitality experienced the most pronounced disruption to year-over-year growth as a result of Hurricane Harvey, either before or after benchmark revisions (-2,800 pre-benchmark, -1,000 post-benchmark).
- The October 2017 rebound in Leisure and Hospitality after Hurricane Harvey was comparably pronounced, particularly after benchmark revisions, as this sector reached year-over-year growth of 11,500 jobs, a figure last seen in August 2016. In other words, it appears that Hurricane Harvey reversed a downward trend that had been in place for approximately 20 months, a mild slowdown to 9,500 jobs in December 2017 notwithstanding.
- Ultimately this sector saw an under-estimation of full-year employment (i.e. December 2016 to 2017) of 6,700 jobs (original 2,800 vs. revised 9,500), the entirety of which resulted from an under-estimation of 7,000 jobs in Accommodation and Food Services. Offsetting this was a small over-estimation in Arts, Entertainment, and Recreation of 300 jobs. Disaggregating Accommodation from Food Service revealed that Accommodation never saw job losses over the past few years and from November 2015 vacillated between year-over-year gains of 300 and 1,000. Interestingly, this industry showed no signs of impact from Hurricane Harvey, posting a gain of 600 jobs in September 2017, well within the range of previous two years. This was despite a hotel occupancy rate that spiked from 41.4 percent on August 25, 2017 to 90.4 percent on September 6<sup>th</sup> and remained elevated after the storm.<sup>i</sup> Food Services and Drinking Establishments also remained positive over the past few years but on a gradual downward trend from January 2016 onward, finally turning negative year over year in September 2017 with a loss of -900 jobs. The following month, Food Services surged to +10,000 jobs, presumably due to the reliance of flood-displaced individuals on restaurants for food given damage to approximately 100,000 residences and presumably a comparable number of personal kitchen facilities. (See Charts 10 and 11.)

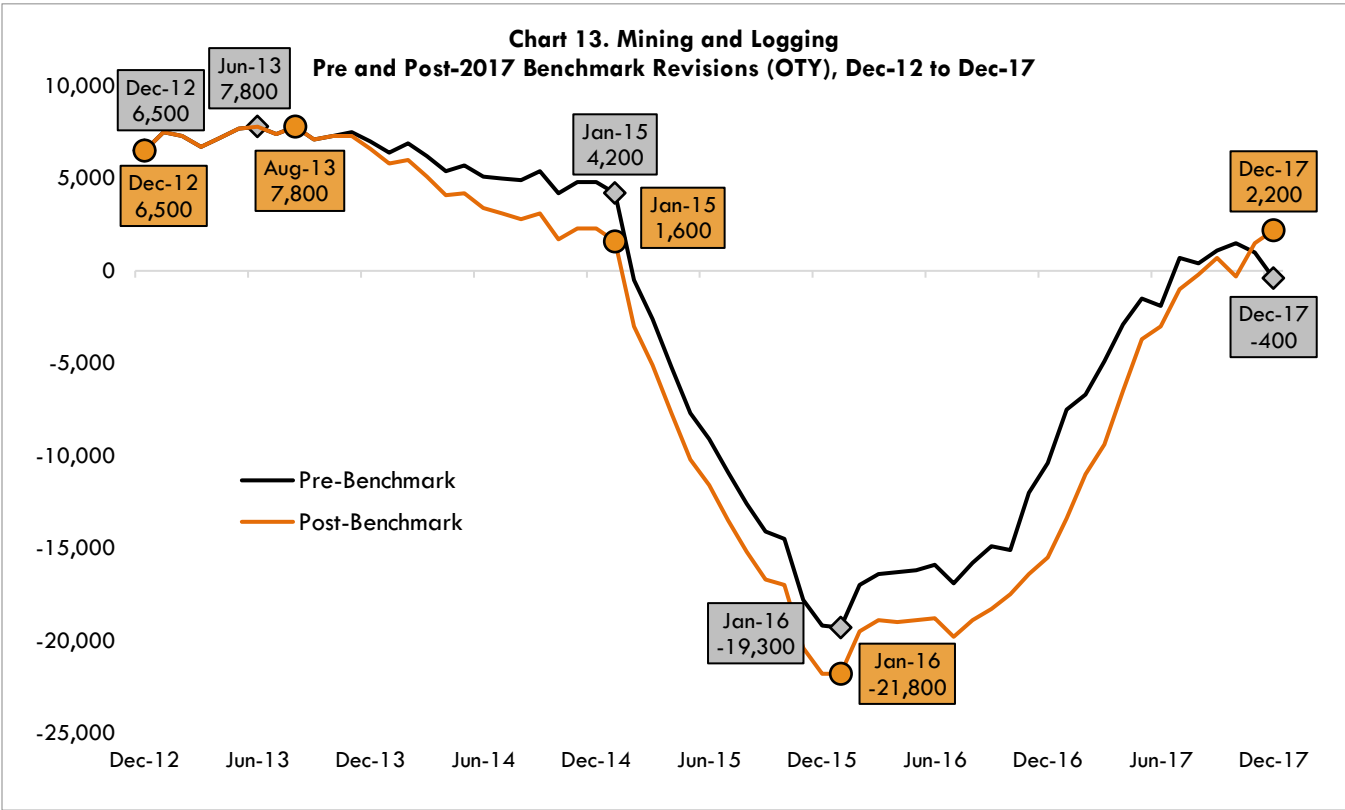




## Mining and Logging

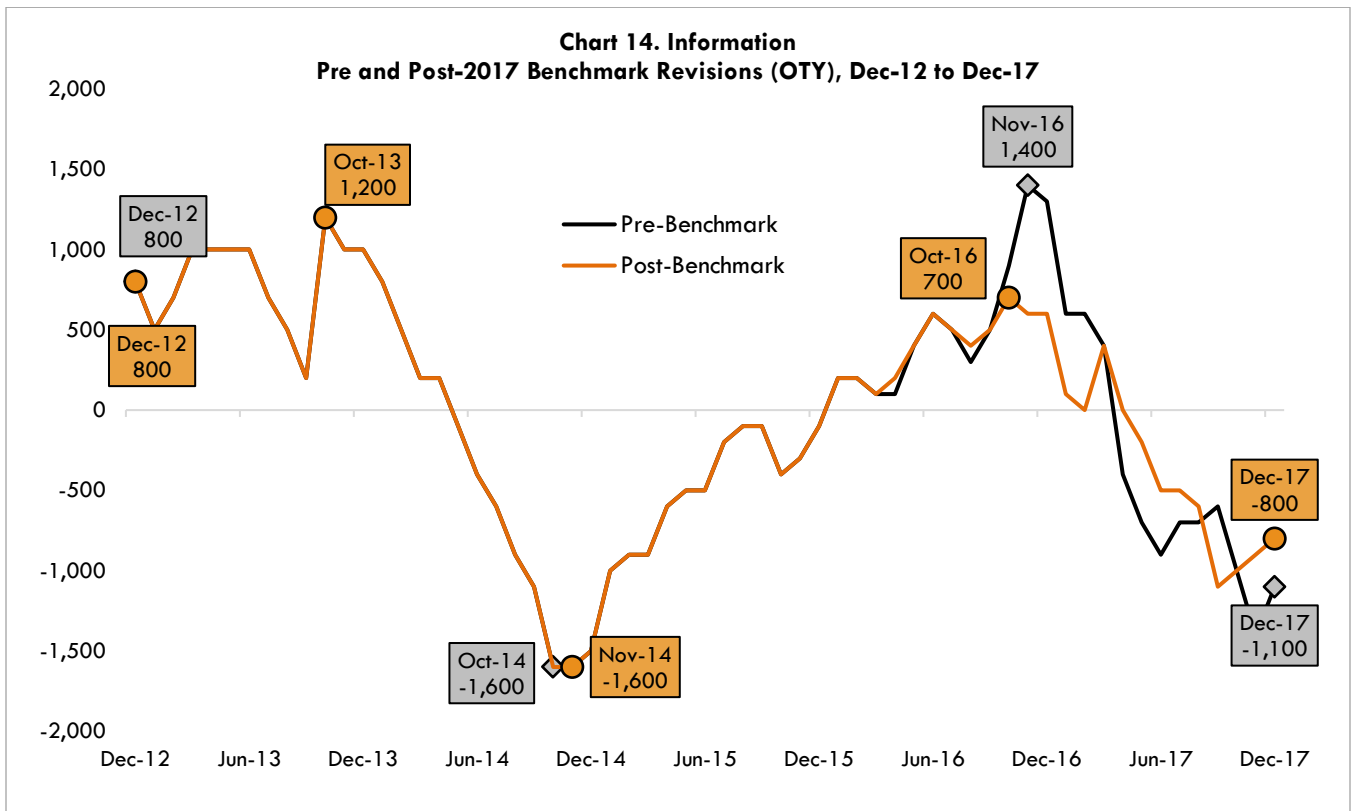
- A comparison of pre- and post-benchmark revisions in Mining and Logging revealed a relatively earlier deviation between the two estimates compared to other sectors, in this case November 2013.
- While all sectors saw changes in the absolute numbers of jobs reported due to benchmark revisions, Mining and Logging displayed the largest discrepancy between estimates. The average “error” between pre- and post-benchmark revisions for this sector was 6,300 jobs between November 2013 and December 2017. Between December 2016 and December 2017, the error widened significantly to 9,500 jobs. Given post-benchmark reported employment at 77,900 jobs in December 2017, this latter error represents around 12 percent of employment in the sector. Of the two sub-components that comprise Mining and Logging, Oil and Gas Extraction and Support Activities for Mining, the former was overwhelmingly the cause of error as evidenced by pre- and post-benchmark reported employment levels of 43,500 and 36,600, respectively. Another consequence of the revisions for the sector as a whole was larger peak to trough change resulting in a larger loss of -37,300 jobs compared to -31,300 previously. Lastly, the sector’s share of total employment fell from 2.8 percent to 2.5 percent, before and after revisions, which is on par with record lows first seen December 2016. (See Chart 12.)
- From an over-the-year job growth perspective, the revisions resulted in steeper declines and losses consistently until December 2017 when the trends inverted resulting in a gain for 2017 of 2,200 jobs compared to an original estimated loss of 400 jobs. (See Chart 13.)
- Interestingly, despite earlier and deeper loss of jobs after benchmark revisions, both sets of estimates shared the same trough month and year, January 2016, with an estimated -19,300 jobs loss previously as compared to -21,800 jobs lost after revisions.
- Ultimately, the difference in the estimates for 2017 resulted in an under-estimation of job growth by 2,600, the entirety of which came from under-estimation of 1,800 jobs added in Oil and Gas Extraction. Support Activities for Mining remained a strong performer adding 4,800 jobs in December 2017 before and after benchmark revisions (i.e. no change in estimate). The balance of the under-estimation for overall Mining and Logging could not be attributed explicitly to any published sub-sector or industry however calculations imply an under-estimation of 800 jobs in an undefined mining and logging-related category.





## Information

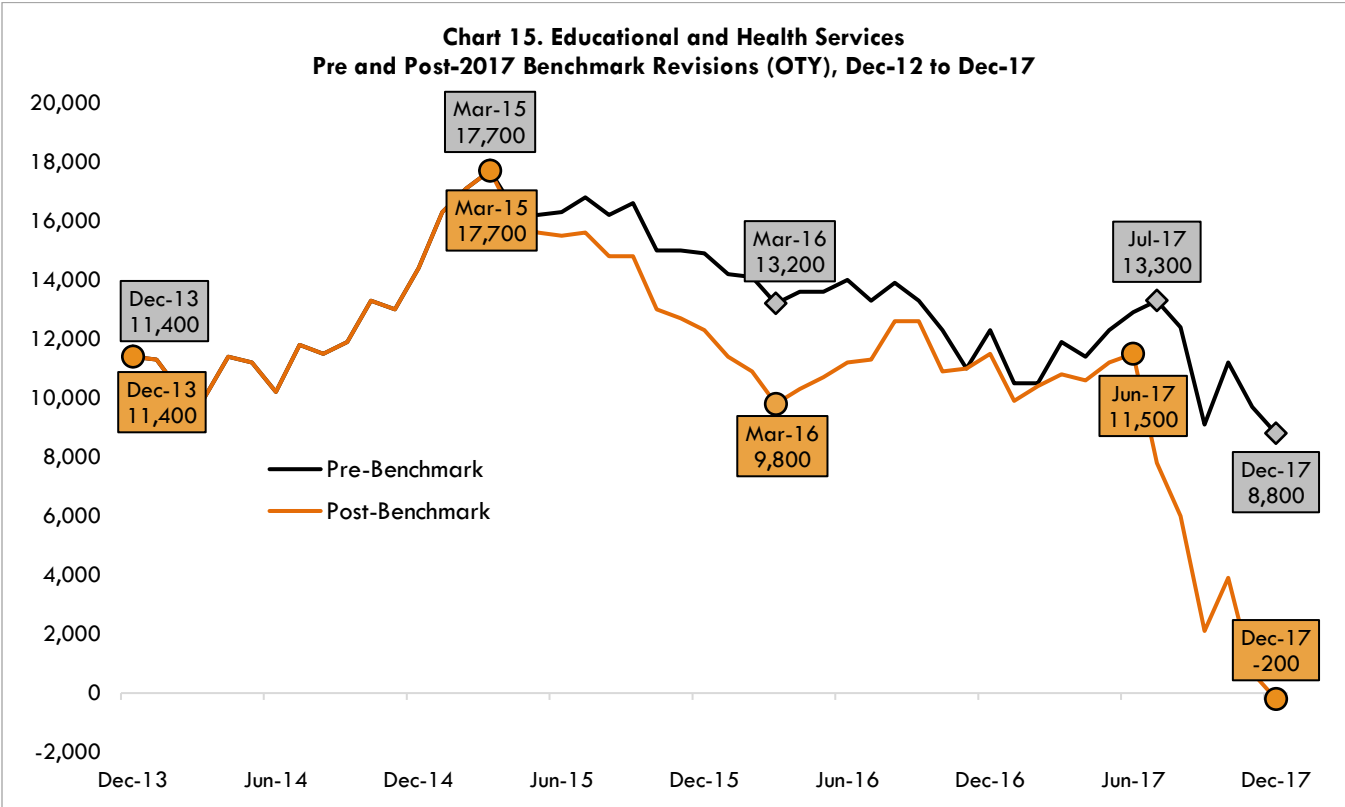
- Given that the Information sector continues to struggle in securing profitable financial models roughly two decades after the proliferation of the Internet, it is not surprising to see declines in this sector that do not correspond to the region's oil and gas cycle. Evidence of this can be found in the peaking of employment in October 2013, more than a full year earlier than the overall labor market and subsequent drop in oil prices. (See Chart 14.)
- Regardless of pre- or post-benchmark revisions, this sector's most recent nadir occurred in late-2014, either October or November, with declines of identical magnitudes (-1,600 jobs).
- From the aforementioned bottom, both sets of estimates increased in tandem until October 2016. Original estimates showed stronger growth topping out in November 2016 (+1,400 jobs) while the post-benchmark peak occurred a month earlier at with only half the number of jobs added (+700).
- For the full year ended in 2017, Information ended on a weak note post-benchmark with a net loss of -800 jobs, marginally better than the original estimate of -1,100.



# SECTORS WITH OVER-ESTIMATED EMPLOYMENT

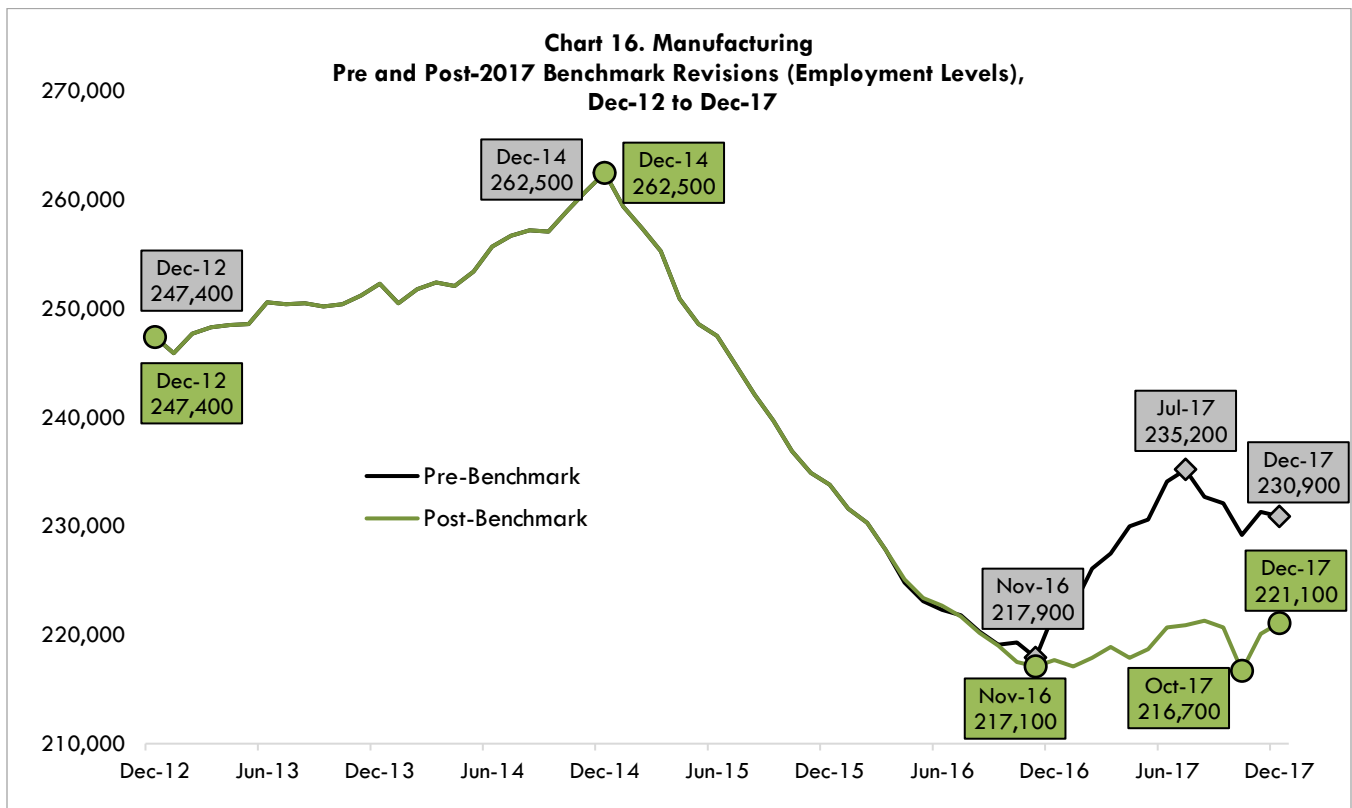
## Educational and Health Services

- Prior to benchmark revisions, Educational and Health Services, while still exhibiting positive year-over-year growth through December 2017, was already showing signs of slowing after reaching a peak in March 2015. As a result of benchmark revisions, Educational and Health Services demonstrated even weaker growth over this same timeframe and furthermore experienced the largest over-estimation of employment of any sector. (See Chart 15.)
- The most significant divergence in trends between pre- and post-benchmark revisions occurred around June and July 2017 where the latter proved to be the start of a sharp drop in job growth culminating in year-over-year job losses of 200 in December 2017.
- Treating December 2017 as the gauge of performance for the full year, job growth in Educational and Health Care Services was over-estimated by 9,000 jobs.
- The over-estimation noted above was primarily the result of over-estimation in Health Care and Social Assistance (-7,800 jobs) and to a lesser extent Educational Services (-1,200). Within these two subcomponents, Hospital employment was over-estimated by 3,900 jobs.
- Sources of the over-estimation/decline in Hospital employment may include Kindred Hospital Town and Country in West Houston (133 layoffs in June 2017)<sup>ii</sup>, HopeBridge Psychiatric Hospital in southwest Houston (160 layoffs in May 2017)<sup>iii</sup>, Memorial Hermann (350 layoffs in June 2017).<sup>iv</sup> MD Anderson announced 800 to 1,000 layoffs in January 2017 however the exact timing of these layoffs is unclear from various news sources.<sup>v</sup>



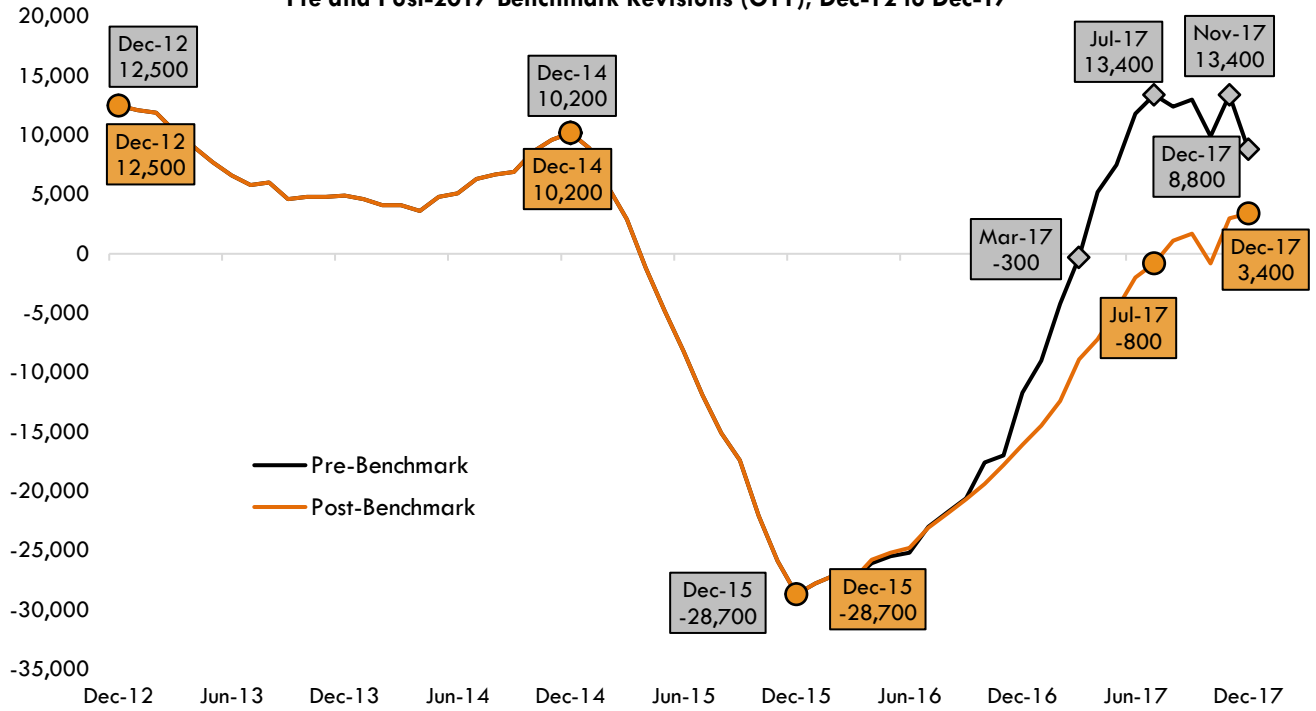
## Manufacturing

- Pre- and post-benchmark Manufacturing data show little deviation from one another until September 2016. Before revisions, the absolute number of jobs in this sector began to rise from this date onward, reaching a post oil-crash high of 235,200 jobs in July 2017, and followed by a modest decline to 230,900 jobs in December. This implied that 29 percent of the -44,600 jobs lost since the start of the crash in December 2014 had been recovered. However, the clearly-defined bottom observed in pre-benchmark estimates virtually disappeared after revisions along with much of the implied recovery. While the peak-to-trough number of jobs lost only increased -45,400, the lack of significant rebound meant that Manufacturing employment was only 4,000 jobs above the low for a recovery rate of only 9 percent. (See Chart 16.)
- The dynamics above were also reflected in year-over-year growth as noted by a much sharper recovery according to the original estimates, resulting in return to job growth between March and April 2017 for the first time in nearly two years. This momentum continued through November 2017, save a brief decline due to Hurricane Harvey, and finishing 2017 up 8,800 jobs over the year. However, benchmark revisions delayed the return to job growth by another five months (i.e. between July and August) and a far less impressive finish to the year of 3,400 jobs. (See Chart 17.)
- The difference in pre- and post-benchmark revisions was an over-estimation of Manufacturing job growth of 5,400 jobs, the entirety of which came from over-estimation of Durable Goods Manufacturing of 6,400 jobs. In contrast Non-Durable Goods Manufacturing saw an under-estimation of 1,000 jobs.
- On a final note, original estimates throughout 2017 indicated a strong recovery in Fabricated Metal Product Manufacturing beginning in early 2017 with gains of 7,500 jobs in November tapering off to 5,400 in December. Benchmark revisions continue to reflect recovery in this sub-sector but at nearly half the magnitude of the original estimate in December. On the other hand, Machinery Manufacturing was originally believed to have found a bottom in March 2016 but failed to see any job growth, posting a year-over-year loss of -4,100 jobs in December 2017. Revisions now show this sub-sector turning positive in August 2017 and finishing the year up 1,700 jobs. (See Charts 18 and 19.)

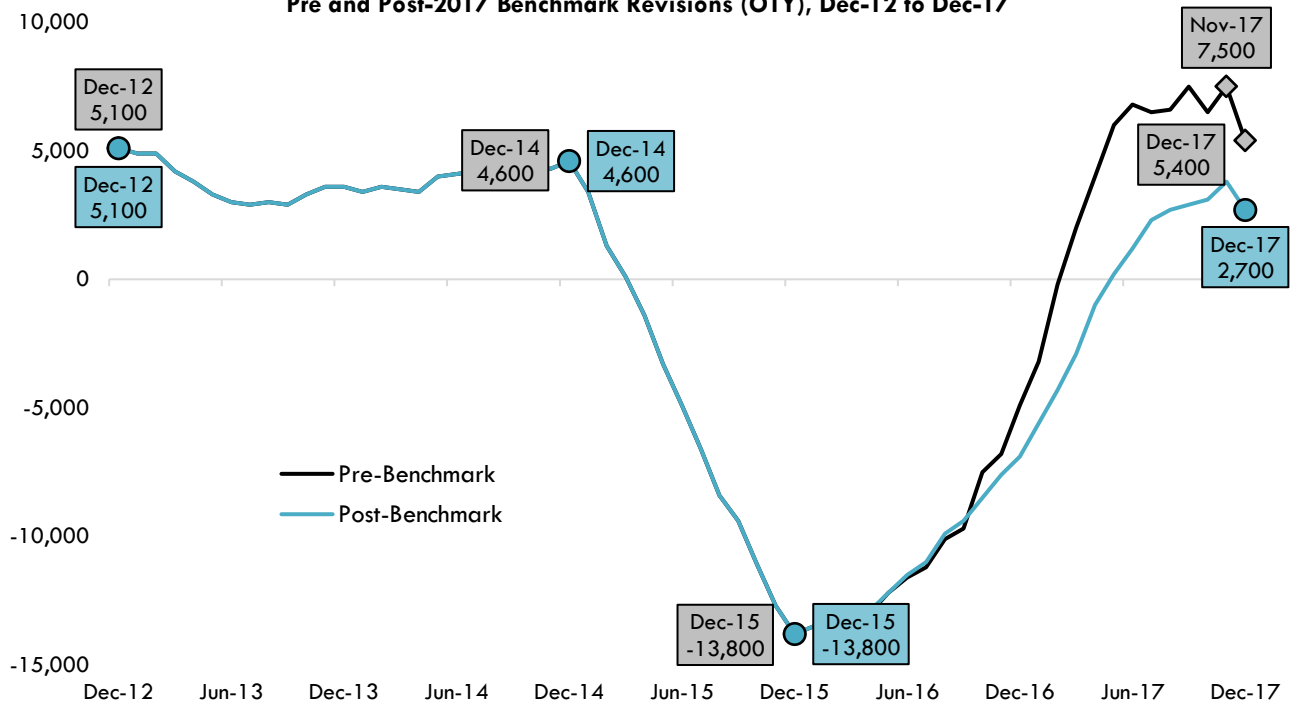




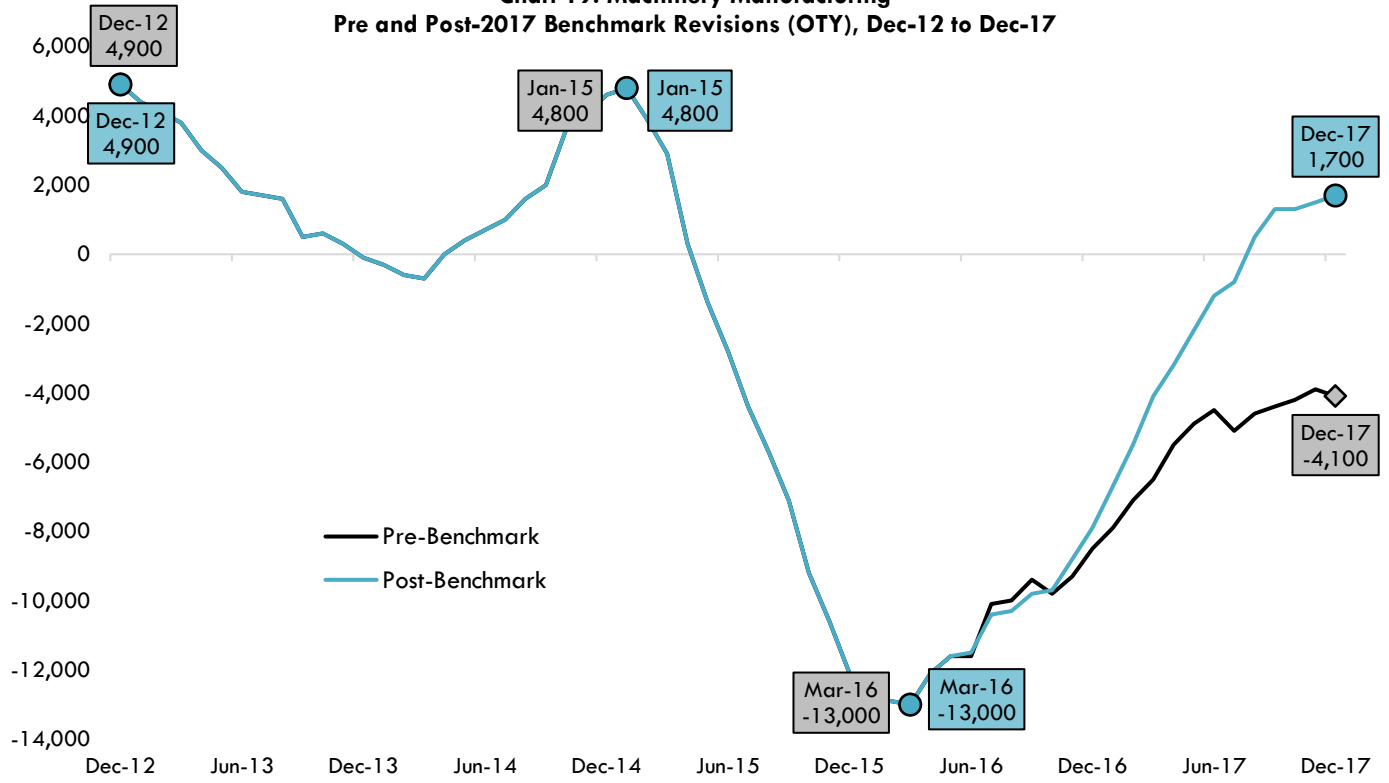
**Chart 17. Manufacturing**  
Pre and Post-2017 Benchmark Revisions (OTY), Dec-12 to Dec-17



**Chart 18. Fabricated Metal Product Manufacturing**  
Pre and Post-2017 Benchmark Revisions (OTY), Dec-12 to Dec-17

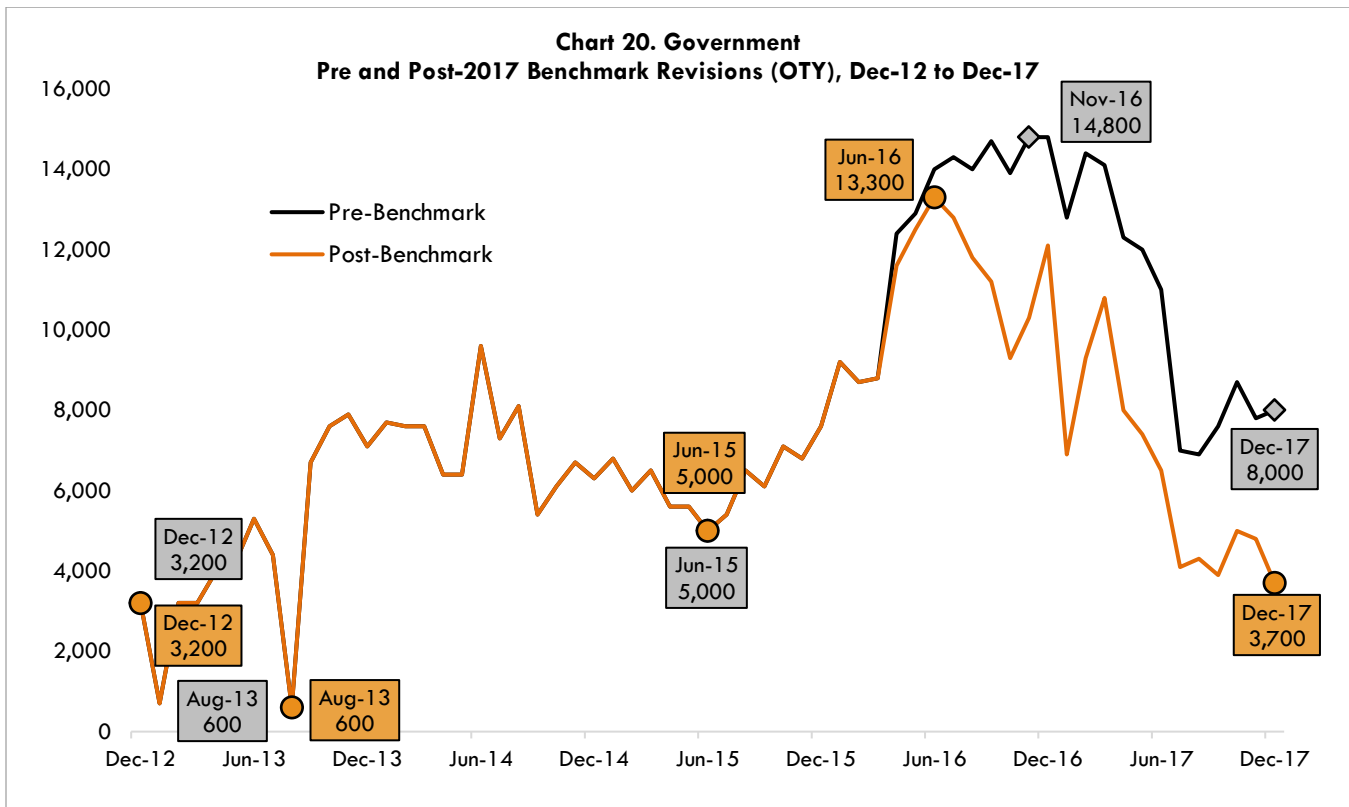


**Chart 19. Machinery Manufacturing**  
**Pre and Post-2017 Benchmark Revisions (OTY), Dec-12 to Dec-17**

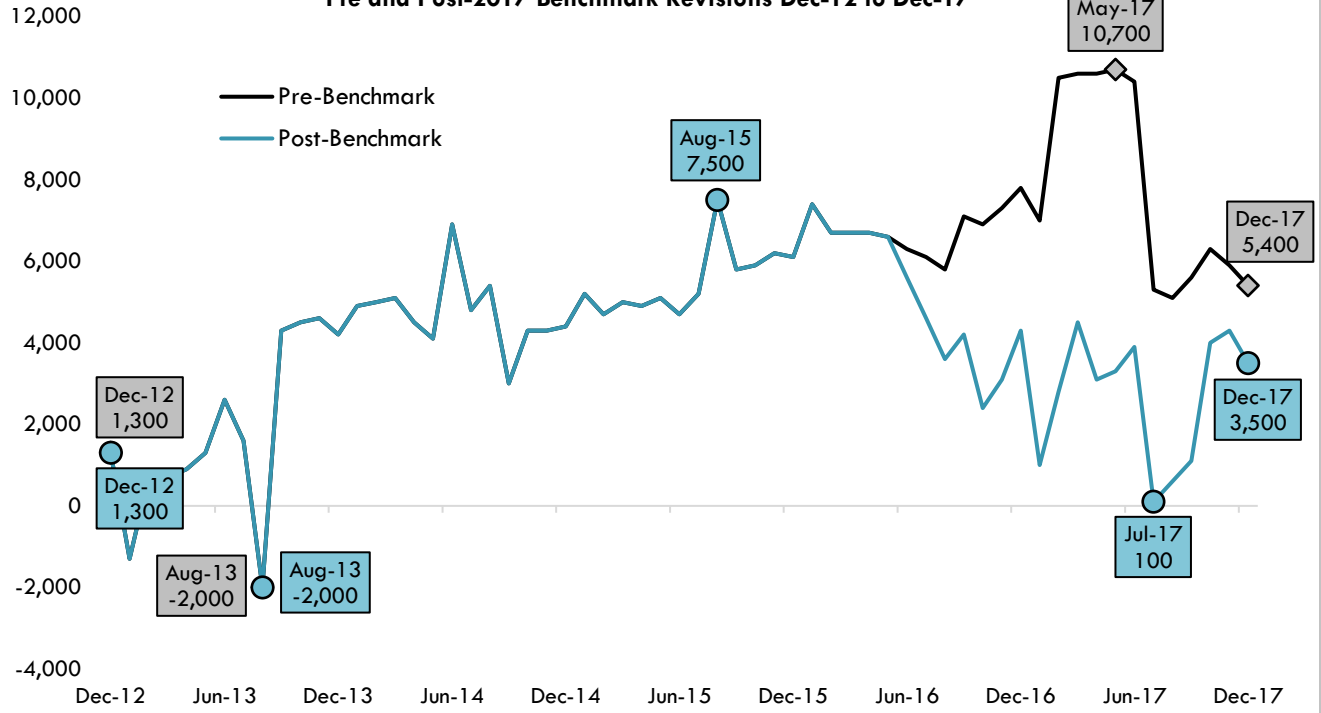


## Government

- As a share of the region's total employment, Government consistently ranks among the top-three largest sectors largely due to its inclusion of public educational services. Given that growth in this sector is typically a function of state finances and population growth, Government tends to exhibit acyclical trends in contrast to other Houston area sectors that follow the price of oil. Year-over-year growth in Government employment in the past five years supports this notion, particularly from June 2015 onward which proved to be an inflection point leading to rapid growth until June the following year at the very least. (See Chart 20.)
- It is here in June 2016 that pre- and post-benchmark revisions diverge, altering our understanding of recent trends in this sector. Pre-benchmark revision estimates indicated that year-over-year Government job growth continued to rise, peaking in November 2016 at 14,800 jobs before slowing sharply throughout mid-to-late 2017 and finally settling at 8,000 jobs added in December of that year. In contrast, post-benchmark revisions indicate employment growth peaked in June 2016 and then began to slow even more sharply compared to original estimates resulting in a much lower estimate for December 2017 of 3,700 jobs added over the previous 12 months. The net result of these differences was an over-estimation of Government job growth by 4,300 jobs.
- The vast majority of the over-estimation noted above came from Local Government, specifically Local Government Educational Services i.e. public primary and secondary schools. Original estimates suggested a significant ramp-up in hiring from February through June 2017, which appears inconsistent with a school year that begins in fall and concludes in early-summer. Benchmark revisions have corrected this and now show a moderate slowdown in growth although the overall trend remains within range of changes in year-over-year employment observed over the past several years. (See Chart 21.)

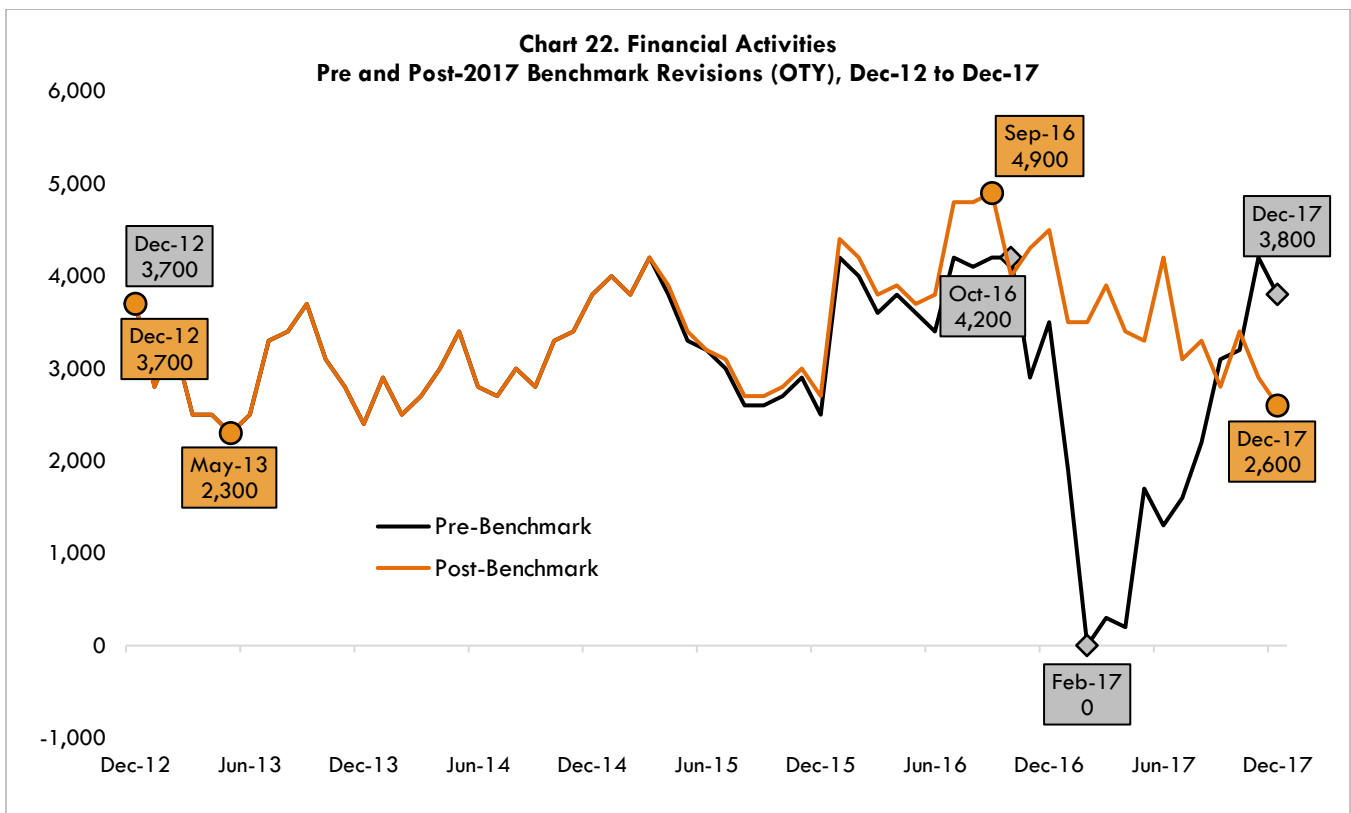


**Chart 21. Local Government Educational Services  
Pre and Post-2017 Benchmark Revisions Dec-12 to Dec-17**



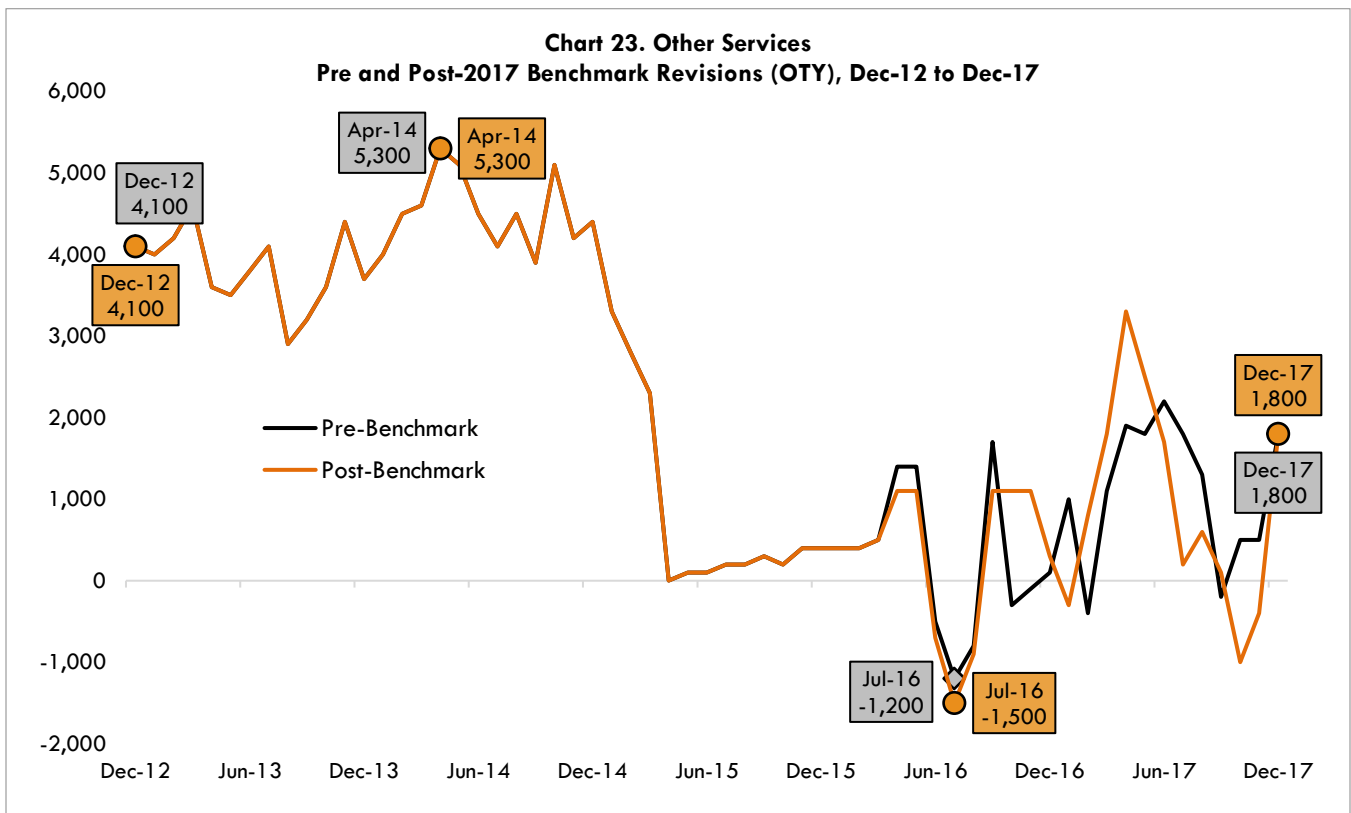
## Financial Activities

- From approximately October 2016 through February 2017, it appeared that Financial Activities experienced a precipitous drop with year-over-year growth declining from 4,200 to zero jobs added. Just as quickly, employment rose reaching a pre-benchmark estimated 3,800 jobs in December 2017. At the time of publication of pre-benchmark estimates, plausible explanations for this sudden decline proved difficult to determine. After benchmarking it now appears that the aforementioned decrease was in fact simply an estimation error, although it should be noted that since peaking in September 2016 with 4,900 jobs, this sector has begun a gradual decline culminating in a December 2017 post-benchmark estimate of 2,600 jobs added over the previous year. In other words, for 2017 employment growth in this sector was over-estimated by 1,200 jobs. (See Chart 22.)
- Of the two components that make up Financial Services, Finance and Insurance was responsible for the over-estimation by 1,700 jobs while Real Estate and Rental and Leasing saw an under-estimation of 500 jobs. It is in this last sub-sector that much of the extreme discrepancy in pre- and post-benchmark revisions mentioned above could be found. On a final note, Finance and Insurance appears to be the driver of the overall slowing of job growth in the Financial Activities sector.



## Other Services

- As per the title, Other Services acts as a catchall category for services that do not fit into the 10 remaining sectors that comprise the labor market. An analysis of Quarterly Census of Employment and Wages data revealed that Automotive Repair and Maintenance (23 percent), Personal Care Services (16 percent), Commercial Machinery Repair and Maintenance (12 percent) were the three largest components of Other Services as of third quarter 2017. Note that the data included in this report are the product of monthly employment estimates known as Current Employment Statistics (CES), which does not publish data on the components of Other Services. (See Chart 23.)
- Overall, pre- and post-benchmark estimates were fairly similar in trend even during the most recent year two years wherein most other sectors saw significant deviations between estimates.
- The consistency of the estimates continued through December 2017 resulting in no change in pre- and post-benchmarks, which in turn allowed Other Services to finish 2017 up 1,800 jobs.



**Exhibit 1. 2017 Benchmark Revisions, Over and Under-Estimation of December 2017 Over-The-Year Employment Growth by Sector**

**Sectors where we lost fewer jobs than originally thought**

Information	300
	<u>300</u>

**Sectors where we added more jobs than originally thought**

Professional and Business Services	7,200
Construction	8,900
Leisure and Hospitality	6,700
Trade, Transportation, and Utilities	11,100
Mining and Logging	2,600
	<u>36,500</u>

**Sectors that saw no revision**

Other Services	0
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**Sectors where we gained fewer jobs than originally thought**

Educational and Health Services	-9,000
Manufacturing	-5,400
Government	-4,300
Financial Activities	-1,200
	<u>-</u>
	19,900

fewer jobs lost than thought + more jobs added than thought =	36,800
no revision =	0
	-
fewer jobs gained than thought =	<u>19,900</u>
net underestimation for 2017 =	<u>16,900</u>

**Exhibit 2. 2017 Benchmark Revisions, Over and Under-Estimation of December 2016 Over-The-Year Employment Growth by Sector**

<b>Sectors where we lost fewer jobs than originally thought</b>	
None	<u>0</u>
	0
<b>Sectors where we added more jobs than originally thought</b>	
Financial Activities	1,000
Trade, Transportation, and Utilities	2,400
Other Services	200
	<u>3,600</u>
<b>Sectors where we gained fewer jobs than originally thought</b>	
Information	-700
Government	-2,700
Educational and Health Services	-800
Leisure and Hospitality	-4,100
	<u>-8,300</u>
<b>Sectors where we lost more jobs than originally thought</b>	
Professional and Business Services	-5,100
Construction	-1,600
Mining and Logging	-5,100
Manufacturing	-4,400
	<u>-16,200</u>
fewer jobs lost than thought + more jobs added than thought =	3,600
fewer jobs gained than thought + more jobs lost than thought =	-24,500
net over-estimation for 2016 =	<u>-20,900</u>



### Exhibit 3. 2017 Benchmark Revisions, Over and Under-Estimation of December 2015 Over-The-Year Employment Growth by Sector

**Sectors where we lost fewer jobs than originally thought**

Professional and Business Services	<u>2,300</u>
	2,300

**Sectors that saw no revisions**

Manufacturing	0
Government	0
Leisure and Hospitality	0
Other Services	0
Construction	0
Information	0
Trade, Transportation, and Utilities	<u>0</u>
	0

**Sectors where we added more jobs than originally thought**

Financial Activities	<u>200</u>
	200

**Sectors where we gained fewer jobs than originally thought**

Educational and Health Services	<u>-2,600</u>
	-2,600

**Sectors where we lost more jobs than originally thought**

Mining and Logging	<u>-2,600</u>
	-2,600

fewer jobs lost than thought + more jobs added than thought =	2,500
fewer jobs gained than thought + more jobs lost than thought =	<u>-5,200</u>
net over estimation =	-2,700

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<sup>i</sup> <https://www.chron.com/business/texanomics/article/Hotel-occupancy-soared-during-Harvey-and-so-12194753.php>

<sup>ii</sup> <https://www.houstonchronicle.com/news/medical/article/Southwest-Houston-psychiatric-hospital-closes-11165050.php>

<sup>iii</sup> <https://www.houstonchronicle.com/business/bizfeed/article/West-Houston-hospital-to-lay-off-all-staff-11111915.php>

<sup>iv</sup> <https://rare.us/local/houston/after-a-round-of-layoffs-in-jan-350-more-employees-are-set-to-lose-their-jobs-at-one-of-the-largest-hospitals-in-houston/>

<sup>v</sup> <https://www.bizjournals.com/houston/news/2017/01/05/m-d-anderson-to-cut-1-000-jobs-in-houston.html>