

GOVERNMENT OF THE DISTRICT OF COLUMBIA OFFICE OF THE CHIEF FINANCIAL OFFICER OFFICE OF REVENUE ANALYSIS

District of Columbia Economic and Revenue Trends: September 2019

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In the 10 years since the recession's end, jobs located in DC grew about as fast as in the national economy

Compared to the nation as a whole, resident jobs grew much faster in DC—and unemployment fell much more slowly

There are two ways of looking at DC's labor market:(1) payroll jobs located in DC (the majority of which are held by commuters), and (2) jobs held by DC residents (some of which are located outside of DC and which include self-employed persons). In the 10 years since June 2009 when the Great Recession officially ended, both measures of DC's economy have fared well, but the most rapid gains were in resident jobs.

- Payroll jobs located in DC went from 696,900 in the 2009.2 quarter to 796,800 in 2019.2, an increase of 99,900 (14.3%).
- DC resident employment grew twice as fast, going from 303,000 to 386,500 over that time, a gain of 83,500 (27.6%).

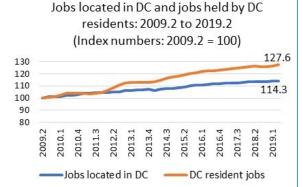
The growth rate for payroll jobs in DC was close to that nationally, but resident employment growth in DC was over twice the US rate. (For details, see appendix table 1.)

HIC

Payroll jobs and resident employment in DC and the US: 10 year % change from 2009.2 to 2019.2

	DC	03
Payroll jobs	14.3	15.0
Resident employment	27.6	11.8
Source: Moody's Analytics		

Other notable developments over the decade since the end of the Great Recession are discussed below:



- The private sector accounted for virtually all of the increase in payroll jobs in DC and its growth outpaced the US.
- Gains in amounts earned in DC and by DC residents were not quite as strong relative to US as job growth.
- Population growth is a major contributor to gains in resident employment.
- Unemployment in DC fell much more slowly in DC compared to the national economy. (Continued on p. 21.)

Wage and salary employment

Employment growth in DC continues to increase, but is still below the US average

- •July wage and salary employment in DC was up 4,633 (0.6%) from a year earlier as measured by the 3-month moving average.
- Federal government employment in DC for July was down 1,567 (0.8%). The private sector gained 5,933 (1.1%).
- •Total year-over-year DC metropolitan area employment increased 29,667 (0.9%) in July as measured by the 3-month moving average. Of the increase, 15.6% was in DC.
- •Suburban Washington employment in July increased 1.0% from a year earlier.
- $\bullet Seasonally$ adjusted DC jobs increased 2,000 in July from the prior month, and are 6,400 more than in February.

Change in wage and salary employment located in DC, the DC suburbs, and the US:

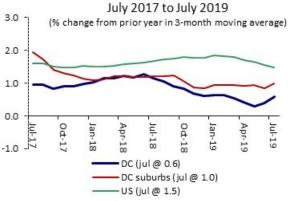


Table 1. Wage and salary employment in DC, the Washington metro area, and the US: July 2019

						3-mo	
Jurisdiction	FY 2015	FY 2016	FY 2017	FY 2018	12-mo avg	average	This month
District of Columbia	759,417	775,183	782,583	790,933	794,658	800,133	809,700
1 year change	12,975	15,767	7,400	8,350	4,850	4,633	8,200
% change	1.7	2.1	1.0	1.1	0.6	0.6	1.0
Washington metro area	3,128,000	3,203,450	3,257,800	3,295,517	3,318,550	3,352,167	3,361,100
1 year change	34,600	62,658	54,350	37,717	29,142	29,667	42,300
% change	1.1	2.0	1.7	1.2	0.9	0.9	1.3
Washington suburbs (% ch)	1.4	2.0	1.9	1.2	1.0	1.0	1.4
US (% ch)	2.1	1.8	1.6	1.6	1.7	1.5	1.5

Not seasonally adjusted. Suburban employment is the difference between the metro area total and the DC portion. Source: BLS. Reflects August revision to July data.

Federal gov. and private sector wage and salary employment in DC: July 2014 to July 2019 (Ch. from prior year in 3-month moving average)



Table 2. Federal government and private sector wage and salary employment in DC: July 2019

					3-month				
Sector	FY 2016	FY 2017	FY 2018	12-mo avg	average	This month			
Federal government	199,717	200,208	197,025	195,200	195,633	196,400			
1 year ch.	1,692	492	-3,183	-2,300	-1,567	-1,200			
% change	0.9	0.2	-1.6	-1.2	-0.8	-0.6			
Private sector	535,125	541,250	552,183	556,817	559,767	563,100			
1 year ch.	13,658	6,125	10,933	6,000	5,933	10,300			
% change	2.6	1.1	2.0	1.1	1.1	1.9			
Source: BLS. Not seasonally adjusted. Reflects August revision to July data.									

Table 3. Seasonally adjusted DC Employment: February 2019 to July 2019

Indicator	February	March	April	May	June	July			
D.C. Wage and Salary employment	794,900	796,700	795,400	795,600	799,300	801,300			
change from prior month	-300	1,800	-1,300	200	3,700	2,000			
% change from prior month	0.0	0.2	-0.2	0.0	0.5	0.3			
Source: BLS seasonally adjusted. Reflects August revision to July data.									

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Resident employment continues to increase more than twice as fast as the national average

- •In July DC resident employment was up 7,768 (2.0%) from a year earlier (3-mo. moving average). The labor force grew 7,858 (1.9%).
- •The seasonally adjusted unemployment rate was 5.6% in July, slightly higher than a year ago.
- •Seasonally adjusted resident employment in July was 1,035 more than in June and 6,763 more than in February.
- •July initial unemployment insurance claims have been slowing although they were still up 13.1% from last year (3-month moving average).

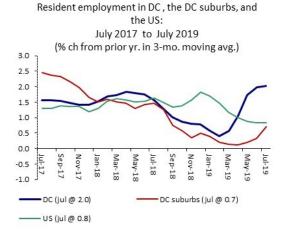




Table 4. Unemployment rates for DC, metro area, and US: July 2019

(percent of labor force)										
	Not seaso	nally adj.	_	Seasona	easonally adj.					
Jurisdiction	July 2018	July 2019		July 2018	July 2019					
US	4.1	4.0		3.9	3.7					
DC	5.9	6.0		5.5	5.6					
DC metro area	3.5	3.3		na	na					
DC suburbs	3.1	3.0		na	na					
Source: U.S. BLS. na= data not available										

Table 5. Resident employment and unemployment: July 2019

Indicator	FY 2015	FY 2016	FY 2017	FY 2018	12-mo avg	3-mo. avg.	This month
DC Labor force summary							
Resident employment	359,584	369,631	375,828	381,405	385,190	392,365	393,749
1 year change	13,081	10,048	6,197	5,578	4,318	7,768	7,277
% change	3.8	2.8	1.7	1.5	1.1	2.0	1.9
Labor Force	387,250	394,238	400,227	404,416	407,737	416,030	418,613
1 year change	10,863	6,988	5,989	4,189	3,415	7,858	7,555
% change	2.9	1.8	1.5	1.0	0.8	1.9	1.8
Unemployed	27,666	24,606	24,399	23,010	22,547	23,665	24,864
1 year change	-2,219	-3,060	-208	-1,388	-903	90	278
% change	-7.4	-11.1	-0.8	-5.7	-3.9	0.4	1.1
Unemployment rate	7.1	6.2	6.1	5.7	5.5	5.7	5.9
DC Unemployment insurance (state	program)						
Initial claims (monthly avg.)	1,596	1,472	1,505	1,611	2,276	2,214	2,352
1 year change	-255	-123	33	106	726	256	124
% change	-13.8	<i>-7.7</i>	2.2	7.1	46.8	13.1	5.6
Weeks compensated (mo. avg.)	32,811	30,261	31,355	30,429	27,952	25,274	30,191
1 year change	-9,322	-2,550	1,094	-926	-3,470	-5,052	-3,314
% change	-22.1	-7.8	3.6	-3.0	-11.0	-16.7	-9.9

Source: Labor force: BLS . Unemployment Insurance: US Dept of Labor. Not seasonally adj.

Table 6. Seasonally adjusted DC Resident employment and unemployment: Feb. 2019 to July 2019

			1 - 1		1	
Indicator	February	March	April	May	June	July
DC Resident employment	382,337	383,332	384,821	386,638	388,065	389,100
change from prior month	296	995	1,489	1,817	1,427	1,035
% change from prior month	0.1	0.3	0.4	0.5	0.4	0.3
DC Unemployment rate (%)	5.5	5.6	5.6	5.7	5.6	5.6
Source: BLS seasonally adjusted. Reflects A	August revision to July	data.				

Jobs by sectors of the economy

Organizations and food service led DC job growth in July

- \bullet In July organizations added 1,367 jobs and food service 1,300 to lead growth in the economy. (3-month moving avg.)
- •Other sectors adding jobs in July included health, amusement and recreation, education, information, and employment services.
- •The sectors with the fastest rate of growth over the prior year in July were amusement and recreation (6.4%), employment services (4.2%), and other services (3.9%).
- Private sector industries losing jobs included business services, accommodations, retail trade, and construction.
- •Local government rose by by 267 (0.6%).
- ullet The federal government accounted for 24.5% of all DC jobs in July. Over the past year, DC's share of federal employment fell in both the metro area and the US.
- •Over the past year DC's share of jobs in the US rose in several sectors: legal services, information, organizations, amusement and recreation, and employment services.

Change in private sector wage and salary jobs located in DC, the DC suburbs, and the US:

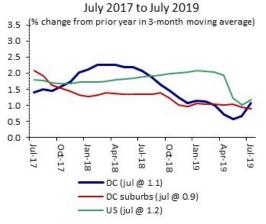


Table 7. Wage and salary employment located in DC: July 2019

	3-mo	nth moving	average		12-mo.		DC share (%) ir	n lul 2019	to Jul 2019	
			1 year ch	ange	moving	Sector % of	of all sector jobs in:		in:	-
					avg:	all DC jobs,			metro	
Industry sector	July 2018	July 2019	Amount		% change	Jul 2019	metro area	US	area	US
Federal government	197,200	195,633	-1,567	-0.8	-1.2	24.5	53.7	6.92	-0.3	-0.12
Local government	44,467	44,733	267	0.6	2.8	5.6	13.1	0.23	-0.2	0.00
Legal services	28,867	29,267	400	1.4	1.0	3.7		2.55		0.03
Professional and tech. (except legal)	90,367	90,600	233	0.3	1.1	11.3	22.5	1.08	-0.4	-0.04
Employment services	13,600	14,167	567	4.2	2.9	1.8	30.6	0.38	0.6	0.01
Business services (except employ.)	35,667	35,300	-367	-1.0	-0.3	4.4	17.7	0.43	-0.1	-0.01
Information	19,500	20,067	567	2.9	6.4	2.5	27.3	0.71	1.3	0.02
Finance	30,000	29,933	-67	-0.2	0.1	3.7	19.1	0.34	0.3	0.00
Organizations	68,000	69,367	1,367	2.0	1.4	8.7	36.9	2.25	0.3	0.02
Education	55,933	56,500	567	1.0	1.0	7.1	47.9	1.56	-1.9	-0.01
Health	71,133	71,867	733	1.0	1.0	9.0	22.0	0.35	0.2	-0.01
Food service	55,967	57,267	1,300	2.3	2.3	7.2	22.3	0.46	-0.3	0.00
Accomodations	15,567	15,533	-33	-0.2	-1.4	1.9	33.7	0.72	0.5	-0.01
Amusement and recreation	9,833	10,467	633	6.4	6.1	1.3	18.5	0.39	0.0	0.02
Retail trade	22,767	22,700	-67	-0.3	-1.9	2.8	8.4	0.14	0.1	0.00
Wholesale trade	4,867	4,933	67	1.4	1.2	0.6	7.9	0.08	0.2	0.00
Construction	15,967	15,900	-67	-0.4	-0.6	2.0	9.8	0.21	-0.1	-0.01
Personal and miscellaneous ser.	8,933	8,767	-167	-1.9	-3.6	1.1		0.30		-0.01
Other private	6,867	7,133	267	3.9	3.1	0.9	5.6	0.04	0.1	0.00
Total	795,500	800,133	4,633	0.6	0.6	100.0	23.9	0.53	-0.1	0.00
Public sector	241,667	240,367	-1,300	-0.5	-0.5	30.0	34.0	1.08	-0.4	-0.01
Private sector	553,833	559,767	5,933	1.1	1.1	70.0	21.2	0.43	0.0	0.00

Source: BLS. not seasonally adjusted. July data reflects August revisions. For the metro area, legal is included in other professional and technical, and personal and miscellaneous services is included in organizations (a category BLS calls "other services")

Change from Jul 2018

Jobs and wages by sector

The business and professional services sector was the largest source of wage growth in DC over the past year

- For the year ending June the federal government accounted for 24.6% of all jobs and 31.4% of all wages and salaries paid in DC. Over the past year, however, federal jobs fell but the sector still accounted for 22.3% of wage increases.
- •Professional and business services accounted for 26.6% of the net gain in employment and 37.6% of the gain in wages paid in DC for the year ending June.
- •Information and finance accounted for 28.3% of the increase in jobs and 10.6% of the gain in wages over the past year.
- Education and health services accounted for 26.3% of last year's net job increases and 7.1% of the increase in wages.
- •Trade and hospitality accounted for 25.4% of the increase in jobs over the past year and 5.1% of the increase in wages.

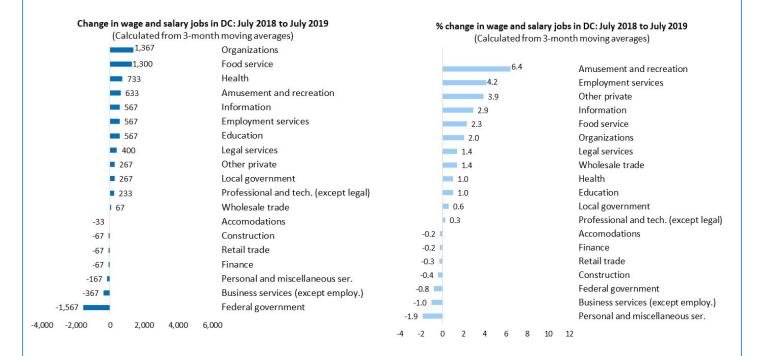


Table 8. Employment and income by sector of the DC economy: 12 mo average ending June 2019 (2019.2)

	•	12 mo. average wage and salary employment in DC ending June			12 mo avg. wages and salaries earned in DC ending			Percentage Distributions			
		2019			June 2019			Employment		ges	
		Change from Mar			Ch. from Mar 2018			Ch from		Ch from	
Sector	Level	2018	% change	Level (\$B)	(\$B)	% change	Jun 19	Jun 2018	Jun 19	Jun 2018	
Total	793,975	4,792	0.6	78.14	3.53	4.7	100.0	100.0	100.0	100.0	
Federal government	195,300	-2,408	-1.2	24.50	0.79	3.3	24.6	-50.3	31.4	22.3	
Local government	42,717	1,208	2.9	3.57	0.22	6.6	5.4	25.2	4.6	6.3	
Business and professional services	168,350	1,500	0.9	20.77	1.33	6.8	21.2	31.3	26.6	37.6	
Information and financial services	49,500	1,358	2.8	7.06	0.37	5.6	6.2	28.3	9.0	10.6	
Education and health services	131,250	1,258	1.0	7.75	0.25	3.3	16.5	26.3	9.9	7.1	
Trade and hospitality services	108,183	1,217	1.1	5.20	0.18	3.6	13.6	25.4	6.6	5.1	
Organizations and personal services	76,333	558	0.7	7.40	0.36	5.1	9.6	11.7	9.5	10.3	
Other private	22,342	100	0.4	1.89	0.03	1.4	2.8	2.1	2.4	0.7	
Private sector	555,958	5,992	1.1	50.07	2.52	5.3	70.0	125.0	64.1	71.5	
Government	238,017	-1,200	-0.5	28.07	1.01	3.7	30.0	-25.0	35.9	28.5	
Source: BLS and BEA. Federal government wage	es and salaries includ	es military.									

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Wages and income

DC's Personal Income growth is below the US average

- Wages and salaries earned in the District of Columbia were 5.1% higher in the June quarter compared to the same quarter of 2018.
- Wages earned by DC residents grew an estimated 4.7% in the June quarter compared to last year.
- •In the June quarter, DC Personal Income grew 4.5%, compared to 4.9% for the US average.
- •The growth rate of proprietors' income was 4.3% in the June quarter.
- •Pensions and other transfers grew 7.7% over last year in the June quarter; property income grew 3.3%.

Wages earned in DC, wages earned by DC residents, and wages earned in the US: 2016.2 to 2019.2

(% change from the prior year in the 12month moving average)

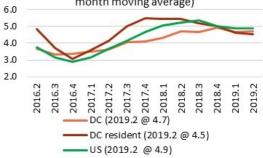


Table 9. DC Wages and Personal Income: June 2019 (2019.2)

(\$ billion at seasonally adjusted annual rates unless otherwise noted)

					4-qtr. moving	Latest qtr.
Indicator	FY 2015	FY 2016	FY 2017	FY 2018	avg.	(June)
Wages and salaries earned in DC	67.10	69.32	72.14	75.51	78.14	79.43
1 year change	3.21	2.22	2.82	3.37	3.53	3.86
% change	5.0	3.3	4.1	4.7	4.7	5.1
Supplements to wages & salaries	17.54	18.31	19.10	19.99	20.59	20.77
% change	4.0	4.4	4.3	4.7	4.3	3.5
Income earned in DC**	82.14	85.48	88.67	92.57	95.60	97.06
% change	5.8	4.1	3.7	4.4	4.5	4.7
Net resident adjustment***	-47.45	-49.03	-50.80	-53.05	-54.91	-55.73
% change	3.4	3.3	3.6	4.4	4.7	5.0
Income earned by DC residents**	34.69	36.44	37.87	39.52	40.69	41.33
% change	9.3	5.1	3.9	4.4	4.1	4.3
Wages and salaries of DC residents****	24.69	25.60	26.88	28.27	29.19	29.66
change from one year ago	1.74	0.91	1.28	1.39	1.27	1.32
% change	7.6	3.7	5.0	5.2	4.5	4.7
Proprietors' income earned by DC residents*	7.07	7.73	7.69	7.78	7.94	8.11
% change	17.4	9.3	-0.5	1.1	2.7	4.3
Property income of DC residents	9.39	9.64	9.95	10.69	11.06	11.17
% change	7.0	2.6	3.2	7.5	5.7	3.3
Pensions and other transfers for DC residents	6.05	6.46	6.64	6.78	7.02	7.26
% change	2.2	6.8	2.7	2.1	4.5	7.7
DC Personal Income	50.13	52.54	54.46	56.99	58.77	59.76
1 year change	3.71	2.42	1.92	2.53	2.50	2.58
% change	8.0	4.8	3.6	4.6	4.4	4.5
US Personal income (% change from prior year)	5.6	2.7	4.1	5.7	5.1	4.9
US Wages and salaries (% change from prior year)	5.6	3.1	4.2	5.3	4.9	5.4
Addendum:						
DC res. wages as % of wages earned in DC	36.8	36.9	37.3	37.4	37.4	37.3
DC Personal Income as % of US	0.32	0.33	0.33	0.32	0.32	0.31

^{*} Proprietors' income is derived from federal tax data and therefore all proprietors' income is earned by DC residents.

Source: BEA; data released September 24, 2019

^{**}does not include social insurance paid by individuals. Wage and salary amounts shown do include social insurance paid by individuals.

^{***}algebraic sum of (1) income earned in DC by non residents (negative) and (2) income earned by DC residents outside of DC (positive).

Since this is a negative number, the larger the increase (or faster the rate of growth), the less growth for income earned by DC residents.

^{****}Est. by ORA; assumes wage and salary suppl. are the same % for DC resident wages as for wages earned in DC; excludes social insurance paid by individuals.

Population, jobs, and per capita income

DC's population is growing faster than the national average, but per capita income is growing more slowly

- For 2018, population increased 6,764 (1.0%) and wage and salary employment increased by 7,658 (1.0%).
- $\bullet \mbox{In } 2018$ population and jobs grew below their 5 year average amount from 2013 to 2018.
- \bullet In the June quarter, DC's per capita income grew at a 3.5% rate compared to 4.3% in the US.
- $\bullet In$ the June quarter wages per job in DC grew faster than in the US (4.6% v 3.7%).

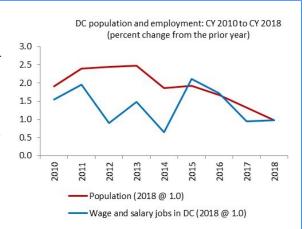




Table 10. DC Population and wage and salary employment located in DC: 2010 to 2018

		Population		Wage and salary employment				
Calendar		Change from	prior yr.		Change from	n prior yr.		
year	Number	Number	%	Number	Number	%		
2010	605,085	11,285	1.9	712,208	10,533	1.5		
2011	619,602	14,517	2.4	726,075	13,867	1.9		
2012	634,725	15,123	2.4	732,550	6,475	0.9		
2013	650,431	15,706	2.5	743,375	10,825	1.5		
2014	662,513	12,082	1.9	748,150	4,775	0.6		
2015	675,254	12,741	1.9	763,975	15,825	2.1		
2016	686,575	11,321	1.7	777,117	13,142	1.7		
2017	695,691	9,116	1.3	784,492	7,375	0.9		
2018	702,455	6,764	1.0	792,150	7,658	1.0		
Ch. from 201	3 to 2018	52,024	8.0		48,775	6.6		
Avg. anı	nual ch.	10,405			9,755			
Source: U.S. Co	ensus Bureau ((population), B	LS (jobs)					

Source: U.S.Census Bureau and BLS

Table 11. Per capita income and wages per job in DC and the US: FY 2016 to June 2019

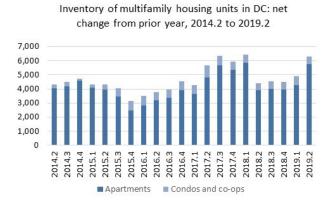
			DC					US		
				12-mo					12-mo	
				avg					avg	
	FY 2016	FY 2017	FY 2018	(Jun)	2019.2	FY 2016	FY 2017	FY 2018	(Jun)	2019.2
Per capita income	76,844	79,210	81,277	82,919	84,376	49,597	51,275	53,867	55,564	56,541
% ch in per capita income	3.0	3.3	2.6	2.7	3.5	2.0	3.4	5.1	4.5	4.3
% ch in population	1.7	1.4	1.1	0.9	1.0	0.7	0.7	0.6	0.6	0.6
% ch in personal income	4.8	3.6	4.6	4.4	4.5	2.7	4.1	5.7	5.1	4.9
Wages per job	89,424	92,176	95,466	98,412	99,694	55,745	57,143	59,247	60,582	61,607
% ch in wages per job	1.2	3.1	3.6	4.1	4.6	1.3	2.5	3.7	3.1	3.7
% ch in wages and salary jobs	2.1	1.0	1.1	0.6	0.5	1.8	1.6	1.6	1.7	1.6
% ch in total wages	3.3	4.1	4.7	4.7	5.1	3.1	4.2	5.3	4.9	5.4
Consumer price index	0.9	1.1	2.1	1.6	2.0	0.9	2.1	2.4	2.1	2.8

Source: BEA for per capita income, population and Personal Income. Moody's Analytics for CPI in the DC metropolitan area and the US. Note: % changes are from the same period of the prior year.

Multifamily-unit housing and housing permits

Over 7,000 housing permits were issued over the past year, a record level.

- •According to CoStar, in June the inventory of apartments and condominiums increased by 6,302 (3.4%) from a year earlier.
- For the 12-month period ending August 7,027 housing permits were issued, up 48.2% from last year and a record level. The 3-month total (1,511) was 29.3% above the same period as last year.
- •Of the increase in inventory of multifamily units over the 12-months ending 2019.2, 91.6% were in apartments. Of the housing permits issued over the past year, 96.2% were included in 45 buildings with 5 or more units.
- •As of the end of the June quarter 16,352 multi-family units were under construction in 89 buildings. Of the construction, apartments accounted for 75.3% of the buildings and 93.5% of the units.



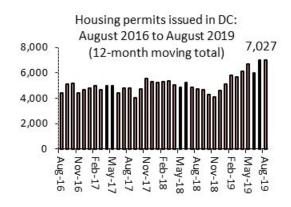


Table 12. Estimated DC households: 2012 to 2018

date		pop/hh	Estimated	
CY	Population	ratio	households	1 yr ch
2012	634,725	2.259	281,000	6,217
2013	650,431	2.260	287,793	6,793
2014	662,513	2.261	292,976	5,183
2015	675,254	2.263	298,441	5,466
2016	686,575	2.267	302,854	4,412
2017	695,691	2.271	306,278	3,424
2018	702,455	2.276	308,636	2,358

Source: 1) Population: US Census Bureau 2) population/household ratio estimated by ORA based on Office of Planning estimates for 2010, 2015, and 2020 3) households: calculated from population using the pop/hh ratio.

Table 13. Housing unit building permits issued in DC: August 2019

				12-mo.	3-mo.	
				moving	moving	This
	FY 2016	FY 2017	FY 2018	total	total	month
Total units	5,129	4,026	4,640	7,027	1,511	384
change from 1 yr ago	998	-1,103	614	2,286	342	44
% change from 1 year	24.2	-21.5	15.3	48.2	29.3	13
Multi-family projects with 5 or more units						
number	40	38	46	61	17	7
average size	128	106	101	115	89	54
Units in small projects						
with up to 4 units	333	376	179	224	34	8
% of all units	6.5	9.3	3.9	3.2	2.3	2.1
Source: Census Bureau (permit	s for private	ely owned u	nits issued	during period).		

Table 14. Inventory and construction for private sector apartments and condominiums in DC: 2013 to 2019.2

		Inventory									Under construction				
	Al	l Units		A	Apartments Condominiums				ns		Apartmen	ts	Co	ondomini	ums
CY		1 year c	h.	build-			build-			build-		units per	build-		units per
	number	number	%	ings	units	1 yr ch	ings	units	1 yr ch	ings	units	bldg.	ings	units	bldg.
2013	165,325	4,046	2.5	2,745	123,781	3,830	597	32,724	216	35	6,786	194	13	297	23
2014	170,063	4,738	2.9	2,763	128,387	4,606	604	32,856	132	42	6,762	161	38	972	26
2015	173,229	3,166	1.9	2,784	130,877	2,490	635	33,532	676	57	10,013	176	42	1,066	25
2016	177,792	4,563	2.6	2,806	134,781	3,904	667	34,191	659	60	11,227	187	35	1,383	40
2017	183,715	5,923	3.3	2,828	140,122	5,341	681	34,749	558	58	11,750	203	32	1,498	47
2018	188,231	4,516	2.5	2,850	144,095	3,973	694	35,292	543	64	13,733	215	25	1,160	46
2019.2	191,680	6,302	3.4	2,864	147,315	5,771	699	35,521	531	67	15,290	228	22	1,062	48
1 Q ch.	2,145			9	2,118		2	27		1	1,691		0	104	

Source: CoStar. Includes units in privately-owned buildings with 5 or more units. CY amounts are last quarter of the year. Includes affordable units. Data is as of August 15, 2019. All units includes cooperative apartments, not shown separately. In 2019.2 there were 121 co-op buildings with 8,786 units with an average building size of 73.

Apartment rents and vacancy rates edge a little higher

- According to CoStar, for the the 12-month period ending June occupied apartments rose by 4,356 (3.3%) from the prior year. The overall vacancy rate was 6.8% and average rents were 3.2% higher.
- Class A units accounted 26.1% of all units in the city and 44.5% of vacant ones. They also accounted for 90.4% of the net additions to apartment inventory over the past year, 97.2% of the increase in occupied units, and 85.8% of the units under construction.
- Over the past year effective rent in all classes of apartments increased: Class A by 3.4%, Class B by 3.5%, and Class C by 2.6%.
- \bullet Vacancy rates in June: Class A 11.6%, Class B 5.2%, and Class C 5.1%.

DC Apartment units: (1) 12-month change in inventory and occupancy, (2) number under construction, and (3)

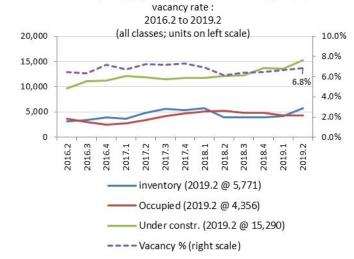
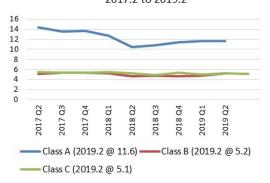
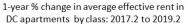


Table 15. Apartment units in DC: 2013 to 2019.2

Tubic 1	. Apartmen	it aimts in De	2013 10	2015.2									
		Leve	el			Cha	nge from	prior p	eriod		Average	rent	1 yr ch in
		number			Inven	tory	Occu	pied	Vac	ant	Effective rent	1 yr %	units under
	Inventory	Occupied	Vacant	% vacant	units	% ch	units	% ch	units	% ch	per unit	change	constr.
2013	123,781	114,101	9,680	7.8	3,830	3.2	2,202	2.0	1628	20.2	\$1,616	2.1	-1,317
2014	128,387	118,306	10,081	7.9	4,606	3.7	4,205	3.7	401	4.1	\$1,681	4.0	-24
2015	130,877	122,565	8,312	6.4	2,490	1.9	4,259	3.6	-1769	-17.5	\$1,759	4.6	3,251
2016	134,781	125,135	9,646	7.2	3,904	3.0	2,570	2.1	1334	16.0	\$1,813	3.1	1,214
2017	140,122	129,869	10,253	7.3	5,341	4.0	4,734	3.8	607	6.3	\$1,850	2.0	523
2018	144,095	134,776	9,319	6.5	3,973	2.8	4,907	3.8	-934	-9.1	\$1,896	2.5	1,983
2019.2	147,315	137,247	10,068	6.8	5,771	4.1	4,356	3.3	1,415	16.4	\$1,955	3.2	3,201
1 Q ch	2118	1706	412								-\$6		
Source: C	CoStar, as of A	ugust 15, 2019	9.										

Vacancy rates in DC apartments by class: 2017.2 to 2019.2





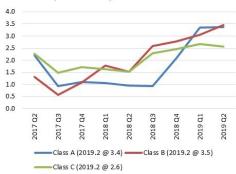


Table 16. Market rate apartment units in DC, Classes A, B, and C: 2019.2

		In	ventory			Оссі	pied units	i	Effective mor	nthly rent	Under	construc	tion
Class			Un	its									
	Buildings 1	Number	1 yr ch	% ch	% vacant	Number	1 yr ch	% ch	\$ per month	1 yr % ch	Buildings	Units	Avg. size
Class A	183	38,496	5,216	15.7	11.6	34,019	4,234	14.2	\$2,721	3.4	45	13,118	292
Class B	816	50,343	795	1.6	5.2	47,727	470	1.0	\$1,857	3.5	20	2,159	108
Class C	1,852	58,350	-240	-0.4	5.1	55,388	-348	-0.6	\$1,360	2.6	2	13	6

Source: CoStar. Includes units in private sector buildings with 5 or more units. Includes affordable units. Vacancy rate is unoccupied units as % of inventory. Data as of Aug. 15, 2019. The total amounts for apartments in table 15 includes a small number of units not shown here.

Commercial office space

Occupied office space and rents are up; the vacancy rate declined slightly

- According to CoStar, for the 12-month period ending June occupied office space increased by 0.67 million sq. ft. from the prior year while inventory rose by 0.16 msf. The vacancy rate edged down to 11.2% (including sublet) and average base rent rose 4.0%.
- •The vacancy rate for class A space was 12.3% in June, the same as a year ago. Class A rent rose 3.7% over the past year.
- •Space under construction in June 2019 (5.03 million square feet in 27 buildings) was 0.17 msf (3.5%) more than a year earlier.
- For Class B and Class C properties, inventory and occupancy declined over the past year. Rents for Class B properties increased slightly more than in Class A ones, but Class C rents declined.

DC commercial office space: (1) 1 yr change in inventory and occupied space, (2) under construction, and (3) vacancy rate: 2017.2 to 2019.2 (million square feet)

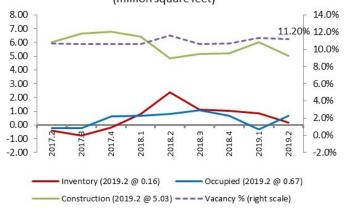


Table 17. DC commercial office space: 2013 to 2019.2

			upied spa	<u> </u>		e	Base rent (d	direct)	Under constr.						
CY (year	Build-	Level	1 yr ch	1 yr %	Level	1 yr ch		Level	Direct	Total	\$	1 yr	Build-		Avg. sf per
end)	ings	(msf)	(msf)	ch	(msf)	(msf)	% ch	(msf)	only %	%	per sq ft.	% ch	ings	msf	bldg
2013	2,391	153.00	0.71	0.5	138.66	0.73	0.5	14.3	8.8	9.4	\$47.16	0.2	12	2.13	177,112
2014	2,385	153.49	0.49	0.3	138.87	0.20	0.1	14.6	9.0	9.5	\$47.69	1.1	14	2.41	172,489
2015	2,378	154.28	0.78	0.5	138.31	-0.55	-0.4	16.0	9.9	10.3	\$48.34	1.4	16	3.08	192,393
2016	2,376	154.77	0.49	0.3	137.63	-0.68	-0.5	17.1	10.5	11.1	\$50.00	3.4	20	5.29	264,509
2017	2,369	154.59	-0.17	-0.1	138.26	0.62	0.5	16.3	9.9	10.6	\$51.08	2.2	24	6.77	281,982
2018	2,368	155.61	1.02	0.7	138.95	0.69	0.5	16.7	10.0	10.7	\$52.24	2.3	21	5.19	247,327
2019.2	2,374	156.87	0.16	0.1	139.23	0.67	0.5	17.6	10.5	11.2	\$53.45	4.0	27	5.03	186,396
1 Q ch	2	0.89			0.93				-0.1	-0.1	\$0.14		1	-1.00	

Source: CoStar, all classes and sizes. Data as of August 15, 2019





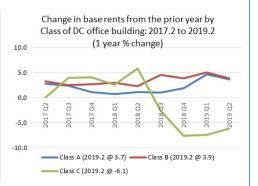


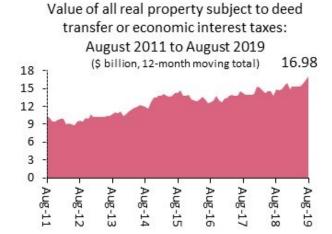
Table 18. DC Class A, B, and C commercial office space: 2019.2

	Inventory				Occupied space			Va	acant spa	ace	Base rent (direct)		Under constr.	
	Build-	Level	1 yr ch	1 yr %	Level	1 yr ch		Level	Direct		\$	1 yr	build-	
Class	ings	(msf)	(msf)	ch	(msf)	(msf)	% ch	(msf)	%	Total %	per sq ft.	% ch	ings	msf
Class A	321	89.17	2.14	2.5	78.18	1.87	7 2.4	11.0	11.3	12.3	\$57.09	3.7	21	4.80
Class B	945	57.35	-1.43	-2.4	51.35	-0.95	-1.8	6.0	10.0	10.5	\$49.51	3.9	6	0.24
Class C	1,102	10.33	-0.55	-5.1	9.68	-0.24	1 -2.5	0.7	6.0	6.3	\$35.31	-6.1	0	
Source: Co	Star. Data	as of Augu	st 15, 2019)										

Property transfers and deed taxes

Strong growth continues in the value of real property transfers other than home sales

- •The value of August property transfers rose by 14.1% to \$16.98 billion from last year as measured by the 12-month moving total. The 3-month moving total, \$5.64 billion, was 41.5% above last year.
- •Over the 12 month period ending August, the estimated value of brokered home sales fell 3.8% while the value of all other real property transfers rose 26.8%. For the last 3 months, the value of non-home transfers was 79.9% above last year.



Value of real property transfers (including transfers of economic interest): August 2018 to August 2019 (% change in 3-month and 12-month moving totals) 50 40 30 20 10 0 Apr-19 an-19 -10 -20 12-month moving total (aug @ 14.1) 3-month moving total (aug @ 41.5)

Table 19. Market Value of Real Property transfers subject to the Deed Transfer or Economic Interest tax: August 2019

							5 1110111111	
						12-mo	moving	
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	moving total	total	This month
All property transfers (\$ million)	11,569.8	14,766.3	13,035.9	13,998.6	14,646.3	16,976.8	5,642.9	2,431.0
change from one year ago (\$M)	505.8	3,196.5	-1,730.3	962.6	647.8	2,097.0	1,654.1	597.9
% change from 1 year ago	4.6	27.6	-11.7	7.4	4.6	14.1	41.5	32.6

Note: represents value of property or economic interest transferred as of date deed noted by the Recorder of Deeds.

Source: OCFO/Recorder of Deeds and OCFO/ORA (calculated from tax collections and deposits adjusted for tax rate changes).

Estimated value of homes sold through brokers and all other DC real property transfers: Aug. 2017 to Aug. 2019 (% change in 12-month moving totals)



Table 19A. Value of (1) brokered home sales and (2) all other real property subject to the Deed Transfer and Economic Interest taxes:

FY 2016 to August 2019

				12-1110	3-1110111111
				moving	moving
	FY 2016	FY 2017	FY 2018	total	total
Brokered home sales (\$M)	5,465.4	5,823.3	6,184.2	5,952.3	1,743.0
All other property transfers (\$M)	7,570.6	8,175.3	8,462.1	11,024.5	3,899.9
% change from 1 year ago					
Brokered home sales	8.0	6.6	6.2	-3.8	-4.3
All other property transfers	-22.0	8.0	3.5	26.8	79.9
Sources: Brokered sales of single famil	y homes an	d condomin	nium units a	re from Mark	cetStats
by ShowingTime (see Table 20); Other	r property ti	ansfers equ	uals the diff	erence betwe	en the
value of all real property transfers cale	culated from	n deed tax c	collections r	eported by th	e OCFO
(see table 19) and the value of brokers	ed home sal	es.			

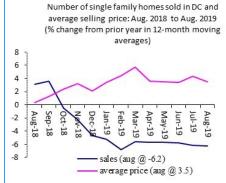
12-mo 3-month

3-month

Single family and condominium housing

Home sales continued to fall, but prices were up slightly

- •The 3-month moving total of single family home sales in August was down 4.2% from a year earlier, while the average selling price was 1.1% higher. The year-to-date median sales price of detached homes (\$779,950) was 9.4% less than the prior year, while the median price of attached homes (\$730,000) was 7.2% higher.
- •August condominium sales were down 6.7% from last year as measured by the 3-month moving total, while the average selling price was 0.4% higher. The year-to-date median sales price (\$475,000) was 1.7% higher than last year.
- •The total value of all home sales in August was down 4.3% from last year as measured by the 3-month moving total. For the past 12-months the total was down by 3.8%.







12-mo moving 3-mo moving

Table 20. D.C. Residential Real Estate Indicators: August 2019

						total or	total or	
Indicator	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	average	average	This month
Number of sales (settled contracts)								
Single family	4,024	4,097	4,385	4,552	4,717	4,439	1,287	412
1 year change	45	73	288	167	165	-295	-56	-20
% change	1.1	1.8	8.7	3.8	3.6	-6.2	-4.2	-4.6
Condo	3,592	3,832	3,955	4,046	4,240	3,988	1,153	379
1 year change	105	240	123	91	194	-258	-83	-28
% change	3.0	6.7	5.6	2.3	4.8	-6.1	-6.7	-6.9
Total	7,616	7,929	8,340	8,598	8,957	8,427	2,440	791
1 year change	150	313	411	258	359	-553	-139	-48
% change	2.0	4.1	7.2	3.1	4.2	-6.2	-5.4	-5.7
Average prices of units sold								
Single family (\$)	736,362	767,870	794,668	824,857	835,130	861,520	882,940	883,713
1 year change	23,563	31,508	26,798	30,189	10,273	28,822	9,198	8,336
% change	3.3	4.3	5.8	3.8	1.2	3.5	1.1	1.0
Condo (\$)	472,419	499,650	500,824	511,247	529,463	533,604	526,175	515,252
1 year change	24,592	27,232	1,173	10,423	18,215	4,706	1,839	-1,903
% change	5.5	5.8	2.2	2.1	3.6	0.9	0.4	-0.4
Total value of all sales (\$ million)	4,660.0	5,060.6	5,465.4	5,823.3	6,184.2	5,952.3	1,743.0	559.4
1 year change	262.2	400.6	404.8	357.9	361.0	-235.4	-78.5	-29.3
% change	6.0	8.6	12.4	6.5	6.2	-3.8	-4.3	-5.0
Ratio: active inventory to sales								
Single family	1.6	1.5	1.6	1.6	1.5	1.5	1.6	1.8
Condo	1.9	1.7	1.8	1.8	2.0	1.7	1.7	1.5

Median contract prices, CY to date (August): single family detached \$779,950 (-9.4% 1 yr ch); single-family attached \$730,000 (7.2% 1 yr ch); condominium and co-ops \$475,000 (1.7% 1 yr ch).

Closed (settled) contracts. Average prices calculated by ORA based on number of sales and total value of sales.

Source: MarketStats by ShowingTime, accessed by Bright MLS and (for median contract prices) GCAAR.

Single family and condominium housing

Growth in FHFA house price index for DC is slowing and trails the US average

- •The percentage change in DC home prices increased 3.6% in the June quarter, according to the Federal Housing Finance Agency Index of single-family same-property transactions. The US index was up 5.5%, and the Washington metropolitan area gain was 4.4%.
- •28.7% of all single family sales for the 12-months ending August were for properties greater than \$1 million.
- •In the June quarter, sales of new condominiums over the past 12 months were 9.6% less than a year earlier.

Table 21. Federal Housing Finance Agency Price Index for single family property in DC, DC metro area, and US: June 2019 (2019.2)

	Fiscal year average								
Indicator	FY 2015	FY 2016	2019.1	2019.2					
% change from prior year									
DC	8.4	4.8	7.1	5.9	5.5	3.6			
DC metro area	3.3	2.6	4.3	4.7	4.7	4.4			
US	5.5	5.5	6.3	7.0	6.1	5.5			

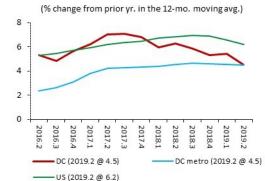
Source: Federal Housing Finance Agency "Expanded-data HPI Index" (sales plus refinancings) (nsa). This quarterly index is a broad measure of the movement of single-family house price, measuring the average price changes in repeat sales or refinancings of the same properties. This information is estimated using Enterprise, FHA, and Real Property County Recorder data licensed from DataQuick. Data is collected quarterly.



FHFA expanded-data housing price index for DC, the Washington Metropolitan area, and the US: 2016.2 to 2019.2

12-mo avg (2019.2 @ 4.5)

3-mo (2019.2 @ 3.6)



DC Personal Income and FHFA Housing index: 2011.2 to 2019.2 (% change from prior year in 12-month moving

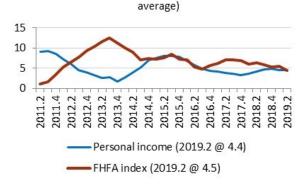


Table 22. D.C. Single family and condominium home sales at prices of \$1 million or more: August 2019

August 2015							
				12-	mo	3-mo	
				mo	ving	moving	This
Category	FY 2016	FY 2017	FY 2018	to	tal	total	month
Single family homes	936	1,057	1,192	1	,223	369	104
1 year change	171	121	135		40	-5	-6
% change	30.5	12.9	12.8		3.4	-1.3	-5.5
percent of all single family sales	21.3	23.2	25.3		27.6	28.7	25.2
Condominiums	167	189	222		208	51	17
1 year change	7	22	33		-16	-8	-8
% change	21.9	13.2	17.5		-7.1	-13.6	-32.0
percent of all condominium sales	4.2	4.7	5.2		5.2	4.4	4.5
Comment Administrator by Chambridge Time	h. Databa AALC	C-1	/ .	- 441 - 41 - 4		at a at a la accoun	

Source: MarketStats by ShowingTime, accessed by Bright MLS. Sales are ones closed (settled) during period shown.

Table 23. Single family housing permits and sales of new condo. units in DC: FY 2013 to 2019.2

		Condo.
	Permits	Sales
FY 2013	368	442
FY 2014	267	516
FY 2015	293	483
FY 2016	283	680
FY 2017	367	482
FY 2018	133	525
12-mo. ending:		
2019.2	153	442
1 yr ch	-56	-47
% ch.	-26.8	-9.6

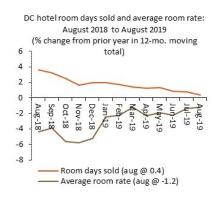
Source: Census Bur. (permits), and Delta Associates (condo sales)

Hospitality

Hotel stays and revenues are showing modest growth from a year ago

- •For the past 3 months, the number of room-days sold in August was 1.2% more than a year ago, the average room rate was up 0.5%, and hotel revenues were 1.7% higher. The 12-month moving total for hotel room-days sold was 0.4% above a year earlier, and revenues were 0.8% lower.
- •Employment in food services was 2.3% more in July than a year earlier as measured by the 3-month moving average. Hotel employment was 0.2% lower.
- •July airline traffic into the DC area was 1.1% higher compared to a year earlier as measured by the 3-month moving total. Reagan National was also up 1.1%. For the past 12-months, total traffic into the DC area was 1.0% more than the prior year, with Dulles the only airport to experience a gain in traffic.







3-month

moving

12-month

moving

Table 27. Hospitality Industry: August 2019

							total or	total or	
Indicator	Units	date	FY 2015	FY 2016	FY 2017	FY 2018	average*	average* -	This month
Hotel stays									-
Hotel room-days sold	('M)	August	8.197	8.332	8.740	9.020	9.079	2.490	0.781
	1 yr ch		0.328	0.135	0.408	0.280	0.035	0.030	0.004
	1 yr % ch		4.2	1.3	4.9	3.2	0.4	1.2	0.5
Average room rate	\$	August	215.34	221.19	233.03	224.03	221.62	202.35	164.52
	1 yr ch		5.46	7.18	11.84	-9.00	-2.71	1.00	-0.87
	1 yr % ch		2.6	3.3	5.4	-3.9	-1.2	0.5	-0.5
Occupancy rate	%	August	77.5	78.0	78.5	78.1	76.3	82.0	75.9
(average)	1 yr ch		0.9	0.5	0.5	-0.5	-2.2	-2.0	-1.8
	1 yr % ch		1.2	0.7	0.6	-0.6	-2.8	-2.3	-2.3
Room revenue	(\$M)	August	1,765.1	1,843.0	2,036.7	2,020.8	2,012.0	503.9	128.5
	1 yr ch		113.6	83.2	193.7	-15.9	-16.7	8.5	0.0
	1 yr % ch		6.9	4.7	10.5	-0.8	-0.8	1.7	0.0
Airline passengers									
DCA	1 yr % ch	jul	10.3	2.8	3.2	-1.2	-0.2	1.1	-0.5
IAD	1 yr % ch	jul	0.3	-0.1	5.0	4.1	4.8	4.2	2.9
BWI	1 yr % ch	jul	4.1	6.0	5.6	4.5	-1.4	-1.8	-1.6
Total	1 yr % ch	jul	4.8	3.0	4.6	2.5	1.0	1.1	0.3
Employment									
Accommodations	level ('000)	July	15.2	14.9	15.0	14.8	15.4	15.5	15.6
	1 yr ch		0.0	-0.3	0.1	-0.2	-0.2	0.0	0.3
	1 yr % ch		-0.2	-1.9	0.6	-1.3	-1.4	-0.2	2.0
Food and bev	level ('000)	July	49.7	51.5	52.0	54.3	55.5	57.3	57.0
	1 yr ch		2.7	1.7	0.6	2.2	1.2	1.3	1.8
	1 yr % ch		5.6	3.5	1.1	4.3	2.3	2.3	3.3
* Total for hotel rooms sold a	and room revenue								

^{*} Total for hotel rooms sold and room revenue.

Source: STR (hotel data);BLS (employment); Airport authorities (airline passengers).

US economy and the federal government sector

Federal non-defense spending increasing at about the same rate as nominal GDP

- \bullet Compared to the same quarter a year ago, in the June quarter Nominal GDP growth was 4.0% and real growth was 2.3%
- •During the June quarter, quarterly GDP growth was 2.0% (real) and 4.6% (nominal) (annualized growth rates).
- Federal government non-defense spending for consumption and investment increased 4.1% in the 2019.2 quarter from a year earlier. Defense spending grew 6.6%.

Table 29. Federal government consumption and investment, US GDP accounts: 2019.2

(percent	change	trom	same	period	ot	prior	year)

					12-mo	
Indicator	FY 2015	FY 2016	FY 2017	FY 2018	avg	2019.2
Non-defense	4.1	3.2	3.1	5.9	4.3	4.1
Compensation of employees	4.3	4.5	3.8	3.6	3.5	3.6
Purchases of goods and services	6.1	3.8	0.5	12.6	5.7	4.1
Gross investment	3.7	1.8	3.9	3.2	3.8	5.1
Defense	-2.4	-0.3	1.5	5.5	7.3	6.6
Compensation of employees	-0.3	1.3	1.4	4.2	5.0	4.3
Purchases of goods and services	-5.4	-0.5	3.0	7.8	12.0	11.4
Gross investment	-2.5	-1.0	1.2	6.9	7.4	6.5
All federal consumption and invest.	0.1	1.1	2.2	5.7	6.1	5.6

Source: BEA (August 29, 2019). Nominal values.

 ${\it Note: federal spending \ does \ not \ include \ social \ security, \ medicare, \ or \ grants.}$

Table 30. Qtr. to Qtr. ch. in US GDP: 2018.2 to 2019.2

(% ch from	previous quarter at seasonally adi, annual rates	s١

(/o om mom previous quar		,		,	
Indicator	2018.2	2018.3	2018.4	2019.1	2019.2
US GDP real	3.5	2.9	1.1	3.1	2.0
US GDP nominal	7.1	4.8	2.9	3.9	4.6
Wages and salaries	3.1	4.4	2.1	9.9	4.7
Personal income	4.2	4.6	3.4	6.0	5.3

Note: GDP=Gross Domestic Product Source: BEA, updated Aug. 29, 2019.

Federal non-defense spending and US GDP: 2015.2 to 2019.2 (1 year % change)



Table 28. US GDP, income, and inflation: 2019.2

(percent change from same period of prior year)

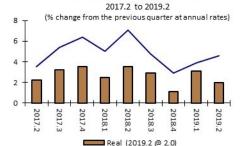
					12-mo	
Indicator	FY 2015	FY 2016	FY 2017	FY 2018	avg	2019.2
GDP real	3.2	1.6	2.2	3.0	2.6	2.3
GDP nominal	4.4	2.5	3.9	5.4	4.8	4.0
Personal Income Consumption Investment	5.6 4.4 7.5	2.7 3.5 -1.5	4.1 4.3 4.9	5.7 5.2 7.3	5.1 4.6 7.0	4.9 4.1 5.3
Corporate profits* S and P stock index US CPI	1.6 9.7 0.3	3.2 0.4 0.9	0.7 13.8 2.1	2.2 16.2 2.4	2.2 6.1 2.4	2.7 6.6 2.6

Source: BEA (August 29, 2019), BLS, Fred.

*Before tax, with IVA and CCAdj.

Defense and non-defense federal spending: 2015.2 to 2019.2 (1 Year % change)



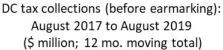


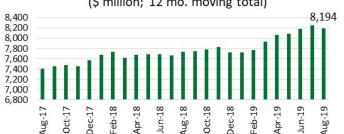
Quarterly change in US Real and Nominal GDP:

Table 31. Monthly selected US Indicators: Apri					
Indicator	April	May	June	July	August
S and P stock index (level)	2904	2855	2890	2996	2897
% change from prior month	3.6	-1.7	1.2	3.7	2.9
% change from 1 year ago	9.4	5.7	4.9	7.2	2.8
10 yr. Treasury Interest rate (level)	2.53	2.40	2.07	2.06	1.63
CPI % ch from prior month (seasonally adjusted)	0.32	0.08	0.06	0.34	0.05
CPI % ch from prior year (seasonally adjusted)	1.98	1.84	1.77	1.94	1.77
Jobs (seasonally adjusted level, in millions)	151.01	151.07	151.41	151.41	151.54
change from prior month (thousands)	216	62	159	159	130
% change from prior month	0.1	0.0	0.1	0.1	0.1
Resident employment (season. adj. level, in mil.)	156.65	156.76	157.01	157.29	157.88
change from prior month (thousands)	-103	113	247	283	590
% change from prior month	-0.1	0.1	0.2	0.2	0.4
Unemployment rate (seasonally adj.) Source: BLS and Fred (Federal Reserve data base)	3.6	3.6	3.7	3.7	3.7

Nominal (2019.2 @ 4.6)

DC tax collections





One year change in 12-mo. moving total DC tax collections: Aug. 2018 to Aug. 2019 (\$M)

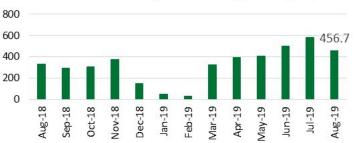


Table 32. Tax Collections (before earmarking): August 2019 (Preliminary)

(\$ million)		Revenue (fro	om CAFR)		Tax collections			
				_	12-month	FY 2019	3-month	
Tax	FY 2015	FY 2016	FY 2017	FY 2018	moving total	to date	moving total	This month
Total taxes	6,916.8	7,241.0	7,472.9	7,771.3	8,194.1	6,630.3	1,600.7	508.9
1 year change	626.9	324.2	239.3	298.5	456.7	440.9	102.0	-56.7
% change	10.0	4.7	3.3	4.0	5.9	7.1	6.8	-10.0
Real property	2,194.5	2,357.5	2,473.3	2,554.2	2,550.6	1,523.7	140.3	115.3
1 year change	178.9	163.0	115.9	80.9	-4.4	-5.0	-46.2	-59.0
% change	8.9	7.4	4.9	3.3	-0.2	-0.3	-24.8	-33.8
General sales	1,315.3	1,343.1	1,419.2	1,492.6	1,549.0	1,452.9	416.8	115.8
1 year change	143.2	27.8	76.1	73.4	67.7	66.4	22.7	0.2
% change	12.2	2.1	5.7	5.2	4.6	4.8	5.8	0.2
Individual income	1,868.0	1,907.9	1,958.3	2,066.8	2,287.5	2,041.3	543.0	141.4
1 year change	188.9	39.8	50.4	108.6	214.5	199.2	47.0	-2.2
% change	11.2	2.1	2.6	5.5	10.3	10.8	9.5	-1.5
withholding	1,553.2	1,627.6	1,766.6	1,818.2	1,937.1	1,781.4	465.2	140.3
1 year change	80.3	74.4	139.0	51.6	100.3	104.3	34.7	-4.2
% change	5.5	4.8	8.5	2.9	5.5	6.2	8.1	-2.9
non-withholding	314.8	280.3	191.7	248.7	350.4	259.9	77.8	1.1
1 year change	108.6	-34.5	-88.6	56.9	114.2	94.9	12.4	2.0
% change	52.7	-11.0	-31.6	29.7	48.3	<i>57.5</i>	18.9	na
Corporate income	308.0	387.1	389.2	436.5	494.9	413.3	92.2	13.6
1 year change	27.8	79.1	2.1	47.3	92.8	81.9	13.5	5.0
% change	9.9	25.7	0.6	12.2	23.1	24.7	17.1	58.7
Unincorporated Bus.	139.8	169.4	165.0	138.2	130.9	106.7	15.8	-4.7
1 year change	4.4	29.6	-4.4	-26.8	-2.8	-2.1	1.5	-5.3
% change	3.2	21.2	-2.6	-16.2	-2.1	-2.0	10.8	na
Deed taxes*	480.6	445.2	460.9	472.3	509.8	476.4	154.1	52.3
1 year change	89.4	-35.4	16.7	11.4	32.6	38.5	26.1	-8.4
% change	22.8	-7.4	3.8	2.5	6.8	8.8	20.4	-13.8
Other taxes	610.6	630.9	606.9	610.7	671.5	616.0	238.5	75.1
1 year change	-5.8	20.3	-17.6	3.7	56.4	62.1	37.4	12.9
% change	-0.9	3.3	-2.8	0.6	9.2	11.2	18.6	20.7

^{*}Deed taxes include deed recordation, deed transfer, and economic interest taxes on real property transactions.

Note: (1) Revenues for the fiscal years 2015 through 2018 are based on the CAFR for those years.

Source: OCFO/ORA na = not meaningful due to negative numbers

⁽²⁾ Tax collections data subject to accounting adjustments.

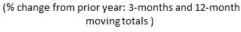
⁽³⁾ This table and the graphs on the next page may include adjustments to the timing and consistency of collection reporting intended to make comparisons with prior year periods more meaningful. The data may therefore vary from other OCFO reports.

Tax collections continued to increase in August

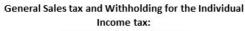
- For the 12 month period ending August total tax collections (before earmarking) were \$456.7 million (5.9%) more than in the prior year. For the last 3 months they were up 6.8% from last vear.
- •Individual income tax collections were 10.3% above last year for the 12-months ending August and withholding was 5.5% higher. For the past 3 months, total income tax collections were up 9.5% and withholding was up 8.1%.
- •General sales tax collections were 4.6% above last year for the 12-months ending August. For the past 3 months, they were 5.8% above last year.
- •Deed tax collections for the 12-months ending August were up 6.8% from last year; for the past 3 months they were up 20.4%.
- Corporate income taxes for the 12 months ending August were up 23.1% while unincorporated business income fell 2.1% from last year.

Total tax collections (before earmarks): August 2018 to August 2019 (% change from prior year: 3-month and 12-month 20.0 moving totals) 15.0 10.0 5.0 0.0 Jun-19 Aug-18 -5.0 -10.0 3-month moving total (aug @ 6.8) 12-month moving total (aug @ 5.9)

General Sales tax collections (before earmarks): August 2018 to August 2019







August 2018 to August 2019 (% change from prior year in the 12-month moving total)



Withholding for the Individual Income tax: August 2018 to August 2019

(% change from prior year: 3-month and 12month moving totals)



Deed tax collections (before earmarks): August 2018 to August 2019



US economic forecasts

Blue Chip real GDP outlook for FY 2019: about the same as FY 2018, with slowing in FY 2020

- •The September Blue Chip Indicators pegs real GDP growth for FY 2019 at 2.8%, falling to 1.9% in FY 2020. Nominal growth falls from 4.8% in FY 2019 to 4.0% in FY 2020.
- •CBO's August 2019 Economic and Budget outlook: nominal GDP growth rate of 4.6% in FY 2019 and 4.0% for FY 2020.
- •The Blue Chip Indicators September forecast for inflation (CPI): 1.9% in FY 2019 and 2.1% in FY 2020.
- •IHS Markit and Moody's Analytics September forecasts expect US Personal Income growth to be between 4.4% and 4.8% in FY 2020 and between 3.8% and 4.8% in FY 2021.
- •S&P 500 September baseline forecasts: For the 4th quarter of 2019, IHS Markit says the stock market will be 9.3% higher than a year earlier, and Moody's says it will be 10.9% higher. By the 4th quarter of 2020, IHS Markit says it will grow another 2.3%, while Moody's expects a 6.8% decline.

Table 33. Forecasts for US nominal and real GDP: FY 2015 through FY 2020 (% change from prior fiscal year)

		real			nominal Moody's			
Fiscal year and		Moody's						
date of forecast	Blue Chip	Analytics	IHS Markit	Blue Chip	Analytics	IHS Markit		
FY 2015 Actual	3.1	3.1	3.1	4.4	4.4	4.4		
FY 2016 Actual	1.6	1.6	1.6	5.5	5.5	5.5		
FY 2017 Actual	2.1	2.1	2.1	3.9	3.9	3.9		
FY 2018 Actual	2.7	2.7	2.7	5.0	5.0	5.0		
FY 2019								
June	2.7	2.7	2.7	4.6	4.5	4.6		
July	2.8	2.8	2.8	4.6	4.7	4.6		
August	2.8	2.4	2.4	4.8	4.3	4.4		
September	2.8	2.4	2.4	4.8	4.3	4.4		
FY 2020								
June	1.9	1.9	1.8	4.1	3.7	4.0		
July	1.9	1.9	1.9	4.0	3.8	4.2		
August	2.0	1.9	2.3	4.1	3.7	4.7		
September	1.9	1.9	2.1	4.0	3.7	3.7		

 $Sources: \textit{BEA}, \ \textit{Blue Chip Indicators, Moody's Economy.com, and IHS Markit.}$

Table 34.CBO estimates of US economic indicators: FY 2018 to FY 2021

Indicator	FY 2018	FY 2019	FY 2020	FY 2021
Real GDP (% ch from prior yr.)	2.7	2.7	2.2	1.9
Nominal GDP (% ch from prior yr.)	5.0	4.6	4.0	3.9
Personal Income	4.0	4.4	4.4	4.4
CPI (% ch from prior yr.)	2.4	1.9	2.3	2.5
10 yr. Treasury bond rate	2.7	2.5	2.2	2.4
Unemployment rate	4.0	3.7	3.7	3.8

Source: Congressional Budget Office, An Update to <u>The Budget and Economic Outlook: 2019 to 2029</u>, August 2019

Table 36. Forecasts for S and P 500: 2018.4 to 2020.4

% change f	rom prior		% change f	% change from prior				
yea	ar		ye	ar				
2018.4	2019.4	2020.4	2018.4	2019.4	2020.4			
IHS M	arkit		Moody's	Analytics				
3.3	5.1	4.0	3.3	7.7	-6.2			
3.3	10.7	2.2	3.3	9.1	-6.5			
3.3	12.3	0.5	3.3	9.5	-6.8			
3.3	9.3	2.3	3.3	10.9	-6.8			
	yea 2018.4 IHS M 3.3 3.3 3.3	IHS Markit 3.3 5.1 3.3 10.7 3.3 12.3	year 2018.4 2019.4 2020.4 IHS Markit 3.3 5.1 4.0 3.3 10.7 2.2 3.3 12.3 0.5	year yes 2018.4 2019.4 2020.4 2018.4 IHS Markit Moody's 3.3 5.1 4.0 3.3 3.3 10.7 2.2 3.3 3.3 12.3 0.5 3.3	year year 2018.4 2019.4 2020.4 2018.4 2019.4 IHS Markit Moody's Analytics 3.3 5.1 4.0 3.3 7.7 3.3 10.7 2.2 3.3 9.1 3.3 12.3 0.5 3.3 9.5			

Blue Chip Indicators estimate of US Nominal and Real GDP: FY 2013 to FY 2020 (% change from the prior year; Sep. 2019 estimate)

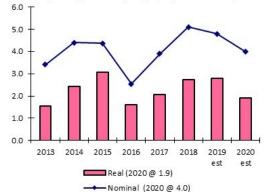


Table 34A. Alternate forecasts of nominal US GDP: FY 2017 to FY 2023

(% change from prior	FY)						
	2017	2018	2019	2020	2021	2022	2023
IHS Markit	3.9	5.4	4.4	4.7	4.6	4.2	4.0
Moody's Analytics	3.9	5.4	4.3	3.7	3.6	5.2	4.3
СВО	3.9	5.0	4.6	4.0	3.9	3.7	3.7

Source: IHS Markit (Sep.); Moody's Analytics (Sep.); CBO (Aug.)

Table 35. Forecasts for US Personal Income: FY 2018 to FY 2021

Forecast	1	fiscal yr				yer		
date	2018	2019	2020	2021	2018	2019	2020	2021
	IH	S Markit	:		Moo	dy's Anal	ytics	
Jun	4.5	4.0	4.4	4.5	4.5	4.1	4.7	3.7
Jul	4.5	4.1	4.6	4.6	4.5	4.1	4.6	4.0
Aug	5.7	4.8	4.8	4.8	5.7	4.8	4.5	3.8
Sep	5.7	4.8	4.8	4.8	5.7	4.8	4.4	3.8

Source: IHS Markit , Moody's Analytics. Baseline forecasts

Table 37. Blue Chip forecasts for CPI and 10 year Treasury interest rate: FY 2018 to FY 2020

rreasury n	illerest ic	110.1120	J10 (0 1 1	2020		
(% change f	rom prior f	iscal year)			
Forecast		CPI		10 yr	Treasury ra	ate
date	2018	2019	2020	2018	2019	2020
Jun	2.4	1.9	2.2	2.8	2.6	2.6
Jul	2.4	1.9	2.1	2.8	2.5	2.3
Aug	2.4	1.9	2.1	2.8	2.5	2.1
Sep	2.4	1.9	2.1	2.8	2.5	2.1
Source: Blue	Chip Indic	ators				

Source: IHS Markit , Moody's Analytics. Baseline forecasts

Moody's Analytics forecasts dips in DC jobs and income in FY 2021

- Jobs: IHS Markit anticipates DC job growth of 5,838 in FY 2019, rising to 10,965 in FY 2020 and 6,370 in FY 2021. Moody's has a similar outlook for FY 2019, but only 1,625 net new jobs in FY 2021.
- Population: Both anticipate a gradual slowdown in annual population growth; Moody's no longer cuts all net in-migration into DC.
- •Income: IHS Markit has higher income growth in fiscal years 2020 through 2022.
- Apartments and office space. Delta Associates anticipates that the supply of new Class A apartment space will outpace demand over the next several years, but demand and supply are about equal for new office space.

	Ta	able 38.	Forecast	s of DC j	obs and	populatio	on to FY	2022							
					IHS	Markit		Mod	ody's Ar	nalytics	5		Table 39. DC reside	ent jobs, hou	seholds,
				FY	Level	1 yr ch	%ch	Level	1 yı	r ch	%ch		and housing starts	to FY 2022	
			lobs :	2017	782,867	7,909	1.0	782,8	75 7	,925	1.0				Moody's
			:	2018	791,075	8,208	1.0	791,0	75 8	,200	1.0		FY	IHS Markit	Analytics
			:	2019	796,913	5,838	0.7	796,7	00 5	,625	0.7		Resident jobs (1 ye	σ,	
			:	2020	807,878	10,965	1.4	804,8	00 8	,100	1.0		2017	-,	6,125
			:	2021	814,248	6,370	0.8	806,4	25 1	,625	0.2		2018	,	5,700
			:	2022	818,507	4,259	0.5	810,5	25 4	,100	0.5		2019	-,	3,800
						•		•		•			2020 2021	,	7,175 150
		Popula			694,405	9,382	1.4	694,5		,350	1.4		2021	-,-	1,150
					701,607	7,203	1.0	701,7		,125	1.0		Households (1 yea	,	1,130
			:	2019	708,297	6,690	1.0	707,6	00 5	,900	0.8		2017	5,	9,200
			:	2020	714,795	6,498	0.9	713,2	50 5	,650	0.8		2018		3,800
			:	2021	720,825	6,030	0.8	718,7	75 5	,525	0.8		2019	2,272	3,400
			:	2022	726,327	5,503	0.8	725,0	50 6	,275	0.9		2020	3,311	4,250
	So	urce: Sep	tember b	aseline fo	recasts fr	om IHS M	arkit and I	Moody's A	nalytics				2021	-,-	3,825
Table 40. F	orecasts	of DC P	ersonal I	ncome to	n FY 2022	,								-,	,
Date of est.	O. C. Cast.	0.00.	IHS N		JII LULI			N	100dy's	Analyt	ics		2022 Housing starts	3,244	4,250
Dute of est.	FY 2017	FY 2018			FY 2021	FY 2022	FY 2017					21 FY 2022	2017	4,362	4,111
1													2017	,	4,111
Jun	4.8	3.7	3.8	3.8	5.1	4.4	4.8		2.6	2.		.9 4.2	2019	,	6,441
Jul	4.8	3.7	3.4	3.5	4.9	4.1	4.8	3.7	3.5	2.	.7 2	.9 4.2	2020	-,	5,234
Aug	4.8	3.7	3.7	3.9	5.6	4.7	4.8	3.7	3.6	2.	.5 2	.7 4.2	2021	-,	4,019
Sep	4.8	3.7	3.8	4.2	5.6	4.4	4.8	3.7	3.7	2.	.8 2	.8 4.3	2022	2,442	3,732
Source: Bas							1.0	3.7	3.7				Source: September be	seline forecas	its
Course. Das	,0,,,,0,1010	ouolo non	o iviai	in and wic	ou, s And	1,71,00									

Table 41. September forecasts for employment and Personal Income for DC, the metro area, and the US: FY 2018 to FY 2021

(percent change from prior year)

		IHS N	1arkit			M	oody's	Analyti	cs
Indicator	2018	2019	2020	2021	2	2018	2019	2020	2021
Wage and salary jobs									
DC	1.0	0.7	1.4	0.8		1.0	0.7	1.0	0.2
Metro area						1.1	0.9	1.1	0.2
US	1.6	1.7	1.3	1.1		1.6	1.7	1.0	0.1
Personal Income									
DC	3.7	3.8	4.2	5.6		3.7	3.7	2.8	2.8
Metro area						3.8	3.4	3.4	2.7
US	5.7	4.8	4.8	4.8		5.7	4.8	4.4	3.8

Source: IHS Markit and Moody's Analytics. Baseline forecasts

Table 43. Delta Associates outlook for Class A apartments in DC and the surrounding metro area: June 2019 to June 2022

Indicator	DC	No VA	Sub MD	Total	DC % of total
Inventory June 2019					
Inventory (msf)	28,406	68,512	38,903	135,821	20.9
Estimated net activity to	June 2022				
new supply (msf)	16,524	12,817	7,880	37,221	44.4
new demand (msf)	11,550	8,800	7,150	27,500	42.0
Source: Delta Associates					

Table 42. Sep. DC forecasts for wages and unemployment: FY 2018 to FY 2021 (% change from prior year)

II	HS Marki	t		Mood	dy's Analy	tics	
2018	2019	2020	2021	2018	2019	2020	2021
Wages a	nd salari	es earne	d in DC				
3.2	4.1	4.7	5.3	3.2	4.3	4.5	2.5
DC resid	ent wage	s and sal	aries				
3.2	3.5	4.6	7.1	3.2	4.1	5.5	3.6
DC Unen	nployme	nt rate (I	evel)				
5.7	5.5	5.3	4.9	5.7	5.5	5.5	5.7

Source: IHS Markit and Moody's Analytics . Baseline forecasts.

Table 44. Delta Associates outlook for Class A commercial office space in DC and the surrounding metro area: June 2019 to June 2021

Indicator	DC	No VA	Sub MD	Total	DC % of total
Inventory June 2019					
Inventory (msf)	146.4	185.5	85.9	417.8	35.0
Estimated net activity t	o June 2021				
new supply (msf)	4.2	3.5	3.2	10.9	38.5
new demand (msf)	4.3	3.6	2.7	10.6	40.6
Source: Delta Associates	msf = million sqเ	ıare feet			

DC revenue estimate

The June revenue estimate for FY 2020 and subsequent years was unchanged from February's. FY 2019 tax revenue is now expected to be \$116.6 million higher, but no changes were made for subsequent years due to the possibility that unresolved federal budget issues could adversely affect DC's economy. These issues were resolved by the recent Bipartisan Budget Act of 2019.

- •The tax revenue increase (before earmarks) of 4.0% in FY 2018 is estimated to be followed by a 3.1% increase in FY 2019, and a 3.7% increase in FY 2020.
- •Real property tax growth of \$80.9 million in FY 2018 accounted for 27.1% of the net increase in taxes for that year. Real property's share of the increase for FY 2019 is 58.9% and for FY 2020 is 24.0%.
- •Individual income tax revenue rose 5.5% in FY 2018, and is expected to grow 3.4% in FY 2019 and 4.5% in FY 2020.
- •The General sales tax, which grew 5.2% in FY 2018, is estimated to grow 3.9% in FY 2019 and 7.3% in FY 2020.
- •Deed taxes grew 2.5% in FY 2018, and are estimated to rise 2.2% in FY 2019 and 2.8% in FY 2020.

8,595.3

•As a % of DC Personal Income, tax revenue is expected to fall slightly from 13.7% in FY 2018 to 13.4% in FY 2020.

Table 45. DC Tax Re	venue (befor	e earmarks)	for FY 2018	through FY 2	021: Februai	ry 2019 rev	enue estim	ate					
Tax	•	FY level (\$	million)		Char	nge from pr	ior year (\$	M)	%	% change from prior year			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	
Real property	2,554.2	2,696.8	2,768.9	2,857.5	80.9	142.6	72.0	88.7	3.3	5.6	2.7	3.2	
Deed taxes	472.3	482.7	496.2	516.4	11.4	10.5	13.5	20.2	2.5	2.2	2.8	4.1	
General sales	1,492.6	1,551.1	1,664.5	1,735.2	73.4	58.6	113.4	70.7	5.2	3.9	7.3	4.2	
Individual income	2,066.8	2,136.5	2,232.4	2,319.7	108.6	69.7	95.9	87.3	5.5	3.4	4.5	3.9	
Withholding	1,818.2	1,873.6	1,965.3	2,048.5	51.6	55.4	91.8	83.2	2.9	3.0	4.9	4.2	
non-withholding	248.7	263.0	267.1	271.1	56.9	14.3	4.1	4.1	29.7	5.8	1.6	1.5	
Business income	574.7	540.4	554.0	564.1	20.5	-34.3	13.6	10.0	3.7	-6.0	2.5	1.8	
Other	610.7	605.9	597.4	602.4	3.7	-4.8	-8.5	5.0	0.6	-0.8	-1.4	0.8	

298.5 Source: ORA. Feb. 28, 2019 revenue estimate. Deed taxes include economic interest. The table includes tax revenue only, before all earmarks, and excludes all non-tax revenues, lottery, and "O-type" earmarked revenues. FY 2018 is from the CAFR.

242.2

299.8

Table 46. DC population and employment: F	Y 2	2018	to	FΥ	2021
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7.771.3

Total

8,013.5

8,313.4

item	2018	2019	2020	2021		
Wage and salary						
employment	794,792	798,647	804,643	810,300		
1 year change	6,217	3,856	5,995	5,658		
% change	0.8	0.5	0.8	0.7		
DC population	701,610	707,155	713,873	721,277		
1 year change	7,206	5,545	6,717	7,404		
% change	1.0	0.8	0.9	1.0		
Unemployment rate	5.7	5.6	5.5	5.4		
Source: ORA February 2019 revenue estimate.						

Table 47. DC Income and stock market assumption

281.9

FY 2017 to FY 2020 (% char	-)			
item	2018	2019	2020	2021
Wages and salaries earned in DC	3.0	2.9	3.6	3.8
Wages and salaries earned by DC residents	3.1	3.5	4.1	4.3
DC Personal income	3.6	4.3	4.5	4.4
S and P 500 stock index	3.6	3.1	3.1	3.1
Source: ORA February 2019 revenu	ue estimate.	Stock index	x, on a CY basi	S,

4.0

3.1

DC Office of Revenue Analysis

3.4

represents the % ch. from the December quarter of the prior yr.

Table 48. DC tax revenue (before earmarks) and DC Personal Income: FY 2012 to FY 2021

2012	2013	2014	2015	2016	2017	2018	2019 est	2020 est	2021 est
5,853	6,100	6,290	6,917	7,234	7,473	7,771	8,014	8,313	8,595
528	247	189	627	317	239	298	242	300	282
9.9	4.2	3.1	10.0	4.6	3.3	4.0	3.1	3.7	3.4
4.6	2.7	5.0	7.8	4.6	4.8	3.6	4.3	4.5	4.4
13.6	13.8	13.5	13.8	13.8	13.6	13.7	13.5	13.4	13.3
	5,853 528 9.9 4.6	5,853 6,100 528 247 9.9 4.2 4.6 2.7	5,853 6,100 6,290 528 247 189 9.9 4.2 3.1 4.6 2.7 5.0	5,853 6,100 6,290 6,917 528 247 189 627 9.9 4.2 3.1 10.0 4.6 2.7 5.0 7.8	5,853 6,100 6,290 6,917 7,234 528 247 189 627 317 9.9 4.2 3.1 10.0 4.6 4.6 2.7 5.0 7.8 4.6	5,853 6,100 6,290 6,917 7,234 7,473 528 247 189 627 317 239 9.9 4.2 3.1 10.0 4.6 3.3 4.6 2.7 5.0 7.8 4.6 4.8	5,853 6,100 6,290 6,917 7,234 7,473 7,771 528 247 189 627 317 239 298 9.9 4.2 3.1 10.0 4.6 3.3 4.0 4.6 2.7 5.0 7.8 4.6 4.8 3.6	5,853 6,100 6,290 6,917 7,234 7,473 7,771 8,014 528 247 189 627 317 239 298 242 9.9 4.2 3.1 10.0 4.6 3.3 4.0 3.1 4.6 2.7 5.0 7.8 4.6 4.8 3.6 4.3	5,853 6,100 6,290 6,917 7,234 7,473 7,771 8,014 8,313 528 247 189 627 317 239 298 242 300 9.9 4.2 3.1 10.0 4.6 3.3 4.0 3.1 3.7 4.6 2.7 5.0 7.8 4.6 4.8 3.6 4.3 4.5

Source: ORA. February 2019 revenue estimate. The table includes tax revenue only, before all earmarks, and excludes all non-tax revenues, lottery, and "O-type" earmarked revenues.

Payroll jobs and wages earned in DC since the end of the recession.

- The private sector accounted for all of DC's net job growth. The sector's increase of 100,300 was 433 more than the total net increase in all jobs. (In the public sector federal employment declined.)
- Private sector job growth was faster in DC than in the US—21.9% compared to 18.2%.
- Wage and salary growth in DC for all jobs was slower than in the US—41.6% compared to 49.0%. (The average annual rates of growth for the 10 years were 3.5% in DC and 4.1% in the US.)
- Private sector wages and salaries earned in DC grew almost the same as in the US—54.2% in DC, 55.0% in the US. (The average annual rates growth rate for the 10 years were 4.4% in DC and 4.5% in the US.)
- Wages per job in DC continue to be significantly higher than in the US (59% higher for all jobs, 49% higher for private sector jobs). However, over the past decade the percentage increases in wages per job in DC were below national averages for both total and private sector jobs.

For additional details, see appendix tables 2 and 3.

Payroll jobs and wages earned in DC and the						
US: 10 year % change from 2009.2 to 2019.2						
	DC	US				
Payroll jobs	14.3	15.0				
Wages and salaries	41.6	49.0				
Wages per job	23.8	29.6				

Source: Moody's Analytics

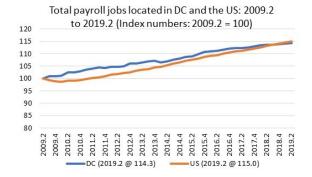
Private sector payroll jobs and wages earned in I	DC
and the US: 10 year % change from 2009.2 to	
2019.2	

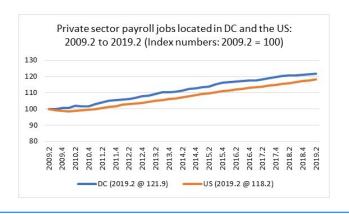
	DC	US
Private sector payroll jobs	21.9	18.2
Wages and salaries	54.2	55.0
Wages per job	26.6	31.2
Source: Moody's Analytics		

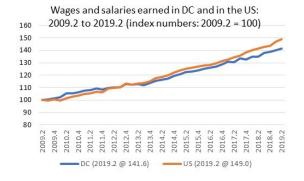
Wages per job in DC and the US: 2009.2 and 2019.2 (\$)

	2009.2	2019.2
All payroll jobs		
DC	79,182	98,048
US	47,576	61,673
ratio: DC to US	1.66	1.59
Private sector		
DC	72,358	91,574
US	46,745	61,338
ratio: DC to US	1.55	1.49
C	1	

Source: Moody's Analytics. Wages per job calculated by dividing total wages by the number of jobs.







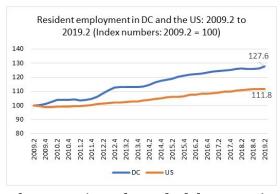


Jobs and earning of DC residents since the end of the recession.

- Earnings of DC residents grew 69.2% compared to 51.4% for the US. (The average annual rate of growth of resident earnings for the 10 years was 5.4% in DC compared to 4.2% in the US.) (Resident earnings are wages, benefits, and proprietors' income.)
- The amount earned per resident employed person in DC in the 2019.2 quarter, \$106,926, was 44% higher than in the US. Over the past decade, however, growth in this measure in DC lagged slightly behind the US.
- DC's population and labor force grew well above the national averages due largely to net in-migration. It is inconceivable that the relatively rapid growth in DC resident employment would have been possible without these new residents.

Population, labor force, and resident employment in DC and the US: 10 year % change from 2009.2 to 2019.2

	DC	US
Population	19.6	7.3
Labor force	22.9	5.2
Resident employment	27.6	11.8
Source: Moody's Analytics		



Resident employment and resident earnings in DC and the US: 10 year % change from 2009.2 to 2019.2

	DC	US
Resident employment	27.6	11.8
Resident earnings	69.2	51.4
Earnings per employed resident	32.7	35.5

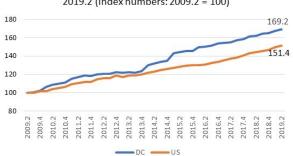
Source: Moody's Analytics

Larrings per employed person in De and							
the US: 2009.2 and 2019.2 (\$)							
	2009.2	2019.2					
DC	80,602	106,926					
US	54,827	74,277					
ratio: DC to US	1.47	1.44					

Farnings per employed person in DC and

Source: Moody's Analytics. Earnings per resident employed person calculated by dividing total resident earnings by resident employment.

Resident earnings in DC and the US: 2009.2 to 2019.2 (Index numbers: 2009.2 = 100)



Unemployment since the end of the recession.

- The number of unemployed persons fell much more slowly in DC than in the US, falling 23.8% in DC and 59.0% in the US,
- The 7,200 decrease in the number of unemployed in DC was the equivalent of just 8.6% of the increase in resident employment. For the US as a whole, the reduction in unemployment equaled 51% of resident employment growth.
- Some labor force growth can occur without net in-migration, but new residents likely account for a large share of the net increase in resident employment.

Reduction in unemployment and change in resident employment in DC and the US: 2009.2 to 2019.2

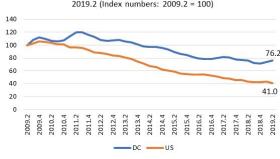
	DC	US
Reduction in unemployment	7,200	8,500,000
Change in resident employment	83,500	16,500,000
Reduced unemployment as % of change in resident employment Source: Moody's Analytics	8.6	51.5

The number of unemployed in DC and the US: 10 year % change from 2009.2 to 2019.2

DC US Unemployment -23.8 -59.0

Source: Moody's Analytics

Number of unemployed persons in DC and the US: 2009.2 to 2019.2 (Index numbers: 2009.2 = 100)



22

Appendix tables.

1. Payroll jobs and resident employment in DC and the US: 2009.2 to 2019.2

	Level i	n DC	10 year c		10 year change: 10 yr. % c		10 yr. % ch	Average annual rate of change:	
	2009.2	2019.2	number	%	in the US:	DC	US		
Payroll jobs in DC	696,900	796,800	99,900	14.3	15.0	1.3	1.4		
Resident employment	303,000	386,500	83,500	27.6	11.8	2.5	1.1		

Source: Moody's Analytics. Payroll jobs are wage and salay jobs reported by employers. Resident employment represents persons reporting on a household survey that they are working (including as proprietor or self employed).

2. Payroll jobs and wages earned in DC and the US: 2009.2 to 2019.2

	Level i	n DC	10 year cl	hange:	10 yr. % ch	rate of	
	2009.2	2019.2	number	%	in the US:	DC	US
Payroll jobs in DC	696,900	796,800	99,900	14.3	15.0	1.3	1.4
Wages and salaries (\$B)	55.18	78.12	22.94	41.6	49.0	3.5	4.1
Wages per job	79,182	98,048	18,866	23.8	29.6	2.2	2.6

Source: Moody's Analytics. Wages per job are calculated by dividing total wages by total payroll jobs.

3. Private sector payroll jobs andwages earned in DC and the US: 2009.2 to 2019.2

_	Level i	n DC	10 year cl	nange:	10 yr. % ch	rate of	
	2009.2	2019.2	number	%	in the US:	DC	US
Private sector payroll jobs in DC	458,400	558,700	100,300	21.9	18.2	2.0	1.7
Wages and salaries (\$B)	33.17	51.16	17.99	54.2	55.0	4.4	4.5
Wages per job	72,358	91,574	19,217	26.6	31.2	2.4	2.8

Source: Moody's Analytics. Wages per job are calculated by dividing total private sector wages by total private sector jobs.

4. Resident employment and resident earnings in DC and the US: 2009.2 to 2019.2

	Level i	n DC	10 year cl	nange:	10 yr. % ch	ū	e annual change:
	2009.2	2019.2	number	%	in the US:	DC	US
Resident employment	303,000	386,500	83,500	27.6	11.8	2.5	1.1
Resident earnings	24.42	41.33	16.90	69.2	51.4	5.4	4.2
Earnings per employed resident	80,602	106,926	26,324	32.7	35.5	2.9	3.1

Source: Moody's Analytics. Earnings includes wages, benefits, and propprietors's income. Earnings per job are calculated by dividing total earnings by total resident employment.

About the data. The data used here are quarterly estimates accessed from Moody's Analytics. The source data for all labor force information is the US Bureau of Labor Statistics. The source data for all income information is the Regional Personal Income accounts prepared by the US Bureau of Economic Analysis. All data are subject to revision by the sources.

—Stephen Swaim, DC Office of Revenue Analysis

ORA reports and documents. From time to time the Office of Revenue Analysis prepares revenue estimates, fiscal impact statements on pending legislation, reports, and other documents on subjects related to DC 's economy and taxes. These documents are posted on the OCFO web site (www.cfo.dc.gov) under subcategories of "Reports and Publications" and "Budget and Revenue."

District, Measured. Information on the economic and demographic trends taking shape in the city can be found on the ORA Blog, District, Measured (districtmeasured.com). You can sign up at the blog page to receive updates as new articles are posted.

Recent ORA reports:

June revenue estimate. June 28, 2019.

DC Tax Facts, 2018. Details on all DC taxes.

Tax Rates and Tax Burdens 2017 Nationwide. This annual publication compares DC tax rates and estimated DC tax burdens for households of different income levels with the rates and burdens of state and local taxes in the principal cities in all 50 states.

Tax Rates and Tax Burdens 2017 Washington Metropolitan Area. This annual publication compares DC tax rates and estimated DC tax burdens for households of different income levels with the rates and burdens of the surrounding jurisdictions in the DC metropolitan area.

Briefing documents. A series with information related to DC's economy and taxes.

Review of economic development tax expenditures. November 2018. Comprehensive description and analysis of DC tax expenditures related to economic development incentives.

About this report. District of Columbia Economic and Revenue Trends is generally issued toward the end of every month. Employment and most other DC information reported on a monthly basis is from one to two months prior to the Trends date. Lags can be greater with quarterly data such as Personal Income and commercial real estate. Data in the tables are believed to be reliable, but original sources are definitive. All data are subject to revision by the information source. The Trends report is available at the DC Chief Financial Officer web-site: www.cfo.dc.gov (click on Budget and Revenue/Economy/ Economic and Revenue Trends).

Indicator	Source	Period covered in this report	Next release
D.C. Jobs and Labor Force information	BLS	July/August	October 18
D.C. Personal Income	BEA	2019.2	December 18
D.C. Tax Collections	OTR/ORA	August	c. October 15
D.C. Housing Sales	MarketStats by ShowingTime*	August	c October 10
D.C. Commercial Office Building data	CoStar and Delta	2019.2	c. October 10
DC Apartment data	CoStar and Delta	2019.2	c. October 10
D.C. Hotel stay information	Smith Travel Research	August	c. October 20
Consumer Price Index	BLS	August	October 10
J.S. Jobs and Labor Force	BLS	July/August	October 4
J.S. GDP and Personal Income	BEA	2019.2	October 30
and P 500 Stock Index	FRED (St. Louis Fed Reserve)	August	October 1
nterest rate on 10-Year Treasury Securities	FRED (St. Louis Fed Reserve)	August	October 1
HS Markit D.C. forecast	IHS Markit	September	c. October 20
Moody's Analytics D.C. forecast	Moody's Analytics	September	c. October 20
Blue Chip Economic Indicators for the U.S.	Wolters Kluwer	September	c. October 10

For further information or to comment on this report, contact: Stephen Swaim (202-727-7775) or stephen.swaim@dc.gov See also the *Economic Indicators* issued monthly by the D.C. Office of the Chief Financial Officer (www.cfo.dc.gov).

District of Columbia Economic and Revenue Trends is prepared by the Office of Revenue Analysis, which is part of the Office of the Chief Financial Officer of the District of Columbia government.

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