District of Columbia Economic and Revenue Trends: January 2020

Muriel Bowser, Mayor
Jeffrey S. DeWitt, Chief Financial Officer

Fitzroy Lee, Deputy CFO & Chief Economist
Stephen Swaim, Senior Economist

Highlights:

◇   DC private sector job growth higher than the US average...........................4

◇   Rise in housing prices and sales................................12

◇   Rapid tourism growth..14

◇   Growth in tax collections...............................16

Migration and the outlook for DC's economy: it will make a difference if net migration to DC has stopped

In its estimate of DC's population for 2019, the US Census Bureau indicated that net migration into DC had virtually stopped. There is reason to wait until the 2020 Census results are in to draw firm conclusions about current migration trends, but it is useful to take the occasion of the recent Census estimate to assess how important migration patterns are for the course of DC's economy in the years ahead.

The decline in net migration. The Bureau of the Census says DC's population reached 705,749 on July 1, 2019, the 14th year in a row it grew. However, the increase of 4,202 from the prior year was the smallest increase in 12 years. The percentage gain last year (0.6%) was the smallest since 2005, and this rate of growth in DC's population was down close to the national average (see the graph in the appendix).

The principal reason for DC's slower population growth in 2019 was a sharp drop in net in-migration. From around 10,000 per year in 2011 and 2012, when it was the driver of population gains, net migration declined to just a few hundred last year. (See the appendix for details.)

Net migration is the difference between the number of people who move into DC during a year and the number who move out. Net migration is positive if more people move in than move out. Net migration is negative if more people move out than move in. Census reports only the net flow, not the gross numbers of how many people moved in and moved out. Census does, however, estimate both domestic (movement within the United States) and international (movement to or from the rest of the world). According to Census, DC's net domestic migration turned negative in 2018, and it is only net positive international migration that   *(continued on p. 21)*
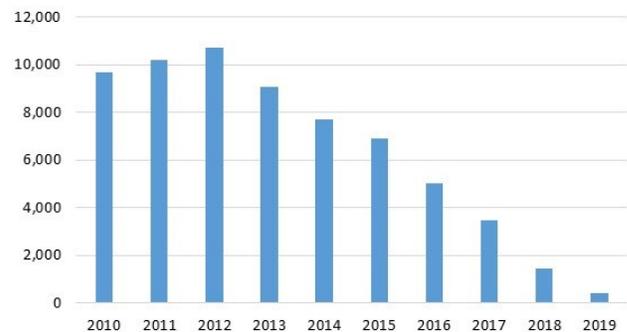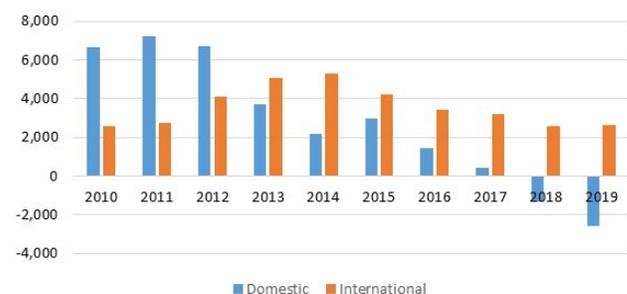
Wage and salary employment

Employment growth in DC is slower than the US and metropolitan area averages

●November wage and salary employment in DC was up 9,467 (1.2%) from a year earlier as measured by the 3-month moving average.

●Federal government employment in DC for November was down 167 (0.1%). The private sector gained 9,600 (1.7%).

●Total year-over-year DC metropolitan area employment increased 50,033 (1.5%) in November as measured by the 3-month moving average. Of the increase, 18.9% was in DC.

●Suburban Washington employment in November increased 1.6% from a year earlier.

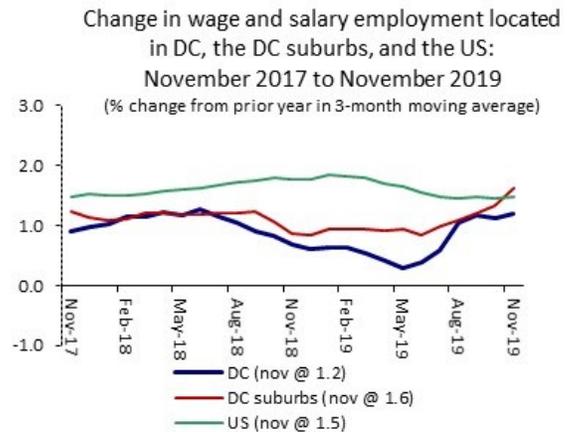●Seasonally adjusted DC jobs rose 2,800 in November from the prior month, and were 5,300 more than in June.

Change in wage and salary employment located in DC, the DC suburbs, and the US: November 2017 to November 2019
(% change from prior year in 3-month moving average)

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

Jurisdiction	FY 2016	FY 2017	FY 2018	FY 2019	12-mo avg	3-mo average	This month
District of Columbia	775,183	782,583	790,933	796,275	797,975	804,267	808,300
1 year change	15,767	7,400	8,350	5,342	6,225	9,467	12,900
% change	*2.1*	*1.0*	*1.1*	*0.7*	*0.8*	*1.2*	*1.6*
Washington metro area	3,203,450	3,257,800	3,295,517	3,324,858	3,334,258	3,362,833	3,386,100
1 year change	62,658	54,350	37,717	29,342	34,883	50,033	62,300
% change	*2.0*	*1.7*	*1.2*	*0.9*	*1.1*	*1.5*	*1.9*
Washington suburbs (% ch)	*2.0*	*1.9*	*1.2*	*1.0*	*1.1*	*1.6*	*2.0*
US (% ch)	*1.8*	*1.6*	*1.6*	*1.6*	*1.6*	*1.5*	*1.5*

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

Federal gov. and private sector wage and salary employment in DC: Nov. 2014 to Nov. 2019
(Ch. from prior year in 3-month moving average)
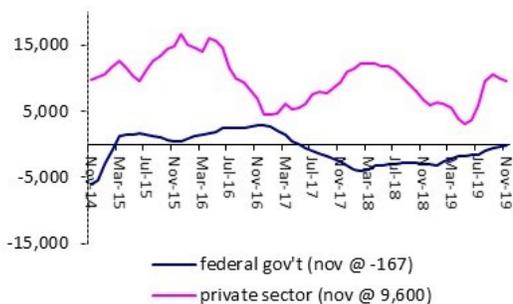
Table 2. **Federal government and private sector wage and salary employment in DC: November 2019**

Sector	FY 2017	FY 2018	FY 2019	12-mo avg	3-month average	This month
Federal government	200,208	197,025	195,158	195,150	195,200	195,300
1 year ch.	492	-3,183	-1,867	-1,358	-167	600
% change	*0.2*	*-1.6*	*-0.9*	*-0.7*	*-0.1*	*0.3*
Private sector	541,250	552,183	558,592	560,317	567,300	570,800
1 year ch.	6,125	10,933	6,408	7,125	9,600	12,200
% change	*1.1*	*2.0*	*1.2*	*1.3*	*1.7*	*2.2*

Source: BLS. Not seasonally adjusted. Reflects December revision to November data.

Table 3. **Seasonally adjusted DC Employment: June 2019 to November 2019**

Indicator	June	July	August	September	October	November
D.C. Wage and Salary employment	799,300	801,300	803,400	801,100	801,800	804,600
change from prior month	3,700	2,000	2,100	-2,300	700	2,800
% change from prior month	*0.5*	*0.3*	*0.3*	*-0.3*	*0.1*	*0.3*

Source: BLS seasonally adjusted. Reflects December revision to November data.

Resident employment continues to outpace the US average

●In Novmeber DC resident employment was up 8,547 (2.2%) from a year earlier *(3-mo. moving average)*. The labor force grew almost the same amount—8,550 (2.1%).

●The seasonally adjusted unemployment rate was 5.3% in November, the same as a year earlier.

●Seasonally adjusted resident employment in November was 893 more than in October and 2,202 more than in June.

●Initial unemployment insurance claims in November were down 0.7% from last year *(3-month moving average)*.
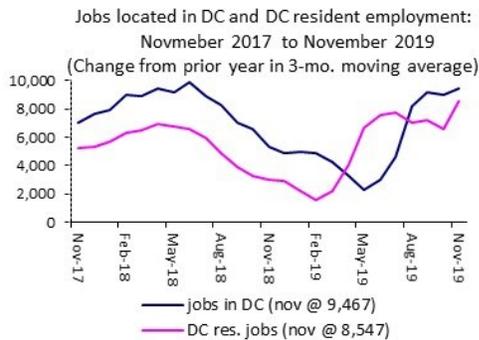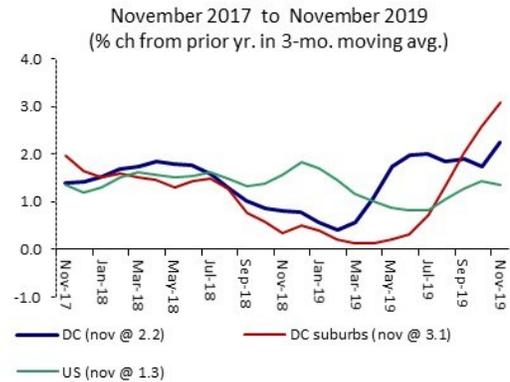
Resident employment in DC , the DC suburbs, and the US:
November 2017 to November 2019
(% ch from prior yr. in 3-mo. moving avg.)

DC (nov @ 2.2)   DC suburbs (nov @ 3.1)
US (nov @ 1.3)

Jobs located in DC and DC resident employment:
Novmeber 2017 to November 2019
(Change from prior year in 3-mo. moving average)

jobs in DC (nov @ 9,467)
DC res. jobs (nov @ 8,547)

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

(percent of labor force)

Jurisdiction	Not seasonally adj.		Seasonally adj.	
	Nov. 2018	Nov. 2019	Nov. 2018	Nov. 2019
US	3.5	3.3	3.7	3.5
DC	5.1	4.9	5.3	5.3
DC metro area	2.9	2.8	*na*	*na*
DC suburbs	2.6	2.5	*na*	*na*

Source: U.S. BLS. na= data not available

Table 5. **Resident employment and unemployment: November 2019**

Indicator	FY 2016	FY 2017	FY 2018	FY 2019	12-mo avg	3-mo. avg.	This month
DC Labor force summary							
Resident employment	369,631	375,828	381,405	386,393	387,869	389,123	394,588
1 year change	10,048	6,197	5,578	4,988	5,955	8,547	12,340
% change	*2.8*	*1.7*	*1.5*	*1.3*	*1.6*	*2.2*	*3.2*
Labor Force	394,238	400,227	404,416	408,810	410,328	410,483	415,128
1 year change	6,988	5,989	4,189	4,394	5,790	8,550	12,317
% change	*1.8*	*1.5*	*1.0*	*1.1*	*1.4*	*2.1*	*3.1*
Unemployed	24,606	24,399	23,010	22,417	22,458	21,360	20,540
1 year change	-3,060	-208	-1,388	-593	-165	3	-23
% change	*-11.1*	*-0.8*	*-5.7*	*-2.6*	*-0.7*	*0.0*	*-0.1*
Unemployment rate	6.2	6.1	5.7	5.5	5.5	5.2	4.9
DC Unemployment insurance (state program)							
Initial claims (monthly avg.)	1,472	1,505	1,611	2,299	2,281	1,966	2,125
1 year change	-123	33	106	687	578	-15	119
% change	*-7.7*	*2.2*	*7.1*	*42.7*	*33.9*	*-0.7*	*5.9*
Weeks compensated (mo. avg.)	30,261	31,355	30,429	27,473	26,844	24,142	22,371
1 year change	-2,550	1,094	-926	-2,956	-3,042	-3,353	-3,978
% change	*-7.8*	*3.6*	*-3.0*	*-9.7*	*-10.2*	*-12.2*	*-15.1*

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

Table 6. **Seasonally adjusted DC Resident employment and unemployment: June 2019 to Nov. 2019**

Indicator	June	July	August	September	October	November
DC Resident employment	388,065	389,100	389,465	389,724	389,374	390,267
change from prior month	*1,427*	*1,035*	*365*	*259*	*-350*	*893*
% change from prior month	*0.4*	*0.3*	*0.1*	*0.1*	*-0.1*	*0.2*
DC Unemployment rate (%)	5.6	5.6	5.5	5.4	5.4	5.3

Source: BLS seasonally adjusted. Reflects December revision to November data.

Professional services led job growth; DC's private sector growth still outpaced the US average

●In November professional and technical services added 3,100 jobs to lead growth in the economy. *(3-month moving avg.)*

●Other sectors adding more than 1,000 jobs in November included organizations, food services, and legal services.

●The sectors with the fastest rate of growth over the prior year in November were amusement and recreation, employment services, and information.

●The only private sector industries losing jobs were business services, wholesale and retail trade, and personal services.

●Local government rose by 33 (0.1%).

●The federal government accounted for 24.3% of all DC jobs in November. Over the past year, DC's share of federal employment continued to fall 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, employment services, information, organizations, and amusement and recreation.

Change in private sector wage and salary jobs located in DC, the DC suburbs, and the US: November 2017 to November 2019
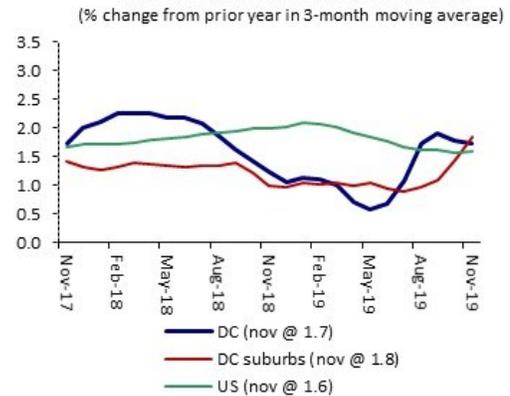(% change from prior year in 3-month moving average)

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

Industry sector	3-month moving average		1 year change		12-mo. moving avg: % change	Sector % of all DC jobs, Nov 2019	DC share (%) in Nov 2019 of all sector jobs in:		Change from Nov 2018 to Nov 2019 in DC share of sector jobs in:	
	Nov. 2018	Nov. 2019	Amount	%			metro area	US	metro area	US
Federal government	195,367	195,200	-167	-0.1	-0.7	24.3	53.7	6.88	-0.1	-0.09
Local government	41,733	41,767	33	0.1	1.1	5.2	12.2	0.21	-0.1	0.00
Legal services	28,233	29,333	1,100	3.9	2.1	3.6		2.55		0.08
Professional and tech. (except legal)	90,233	93,333	3,100	3.4	1.6	11.6	22.9	1.10	0.0	0.00
Employment services	13,833	14,533	700	5.1	3.8	1.8	30.5	0.38	0.2	0.02
Business services (except employ.)	35,700	34,700	-1,000	-2.8	-1.1	4.3	17.6	0.42	-0.4	-0.02
Information	19,633	20,467	833	4.2	5.0	2.5	27.8	0.72	1.3	0.03
Finance	29,733	29,967	233	0.8	0.0	3.7	19.0	0.34	0.1	0.00
Organizations	67,500	69,133	1,633	2.4	1.7	8.6	37.1	2.28	0.6	0.03
Education	61,867	62,733	867	1.4	1.4	7.8	50.4	1.59	-0.6	-0.02
Health	71,667	71,800	133	0.2	0.7	8.9	21.7	0.35	-0.3	-0.01
Food service	55,033	56,500	1,467	2.7	2.5	7.0	22.0	0.46	-0.9	0.00
Accomodations	15,600	15,600	0	0.0	-0.6	1.9	34.2	0.76	0.2	-0.01
Amusement and recreation	9,700	10,333	633	6.5	7.5	1.3	20.2	0.43	-0.3	0.02
Retail trade	23,033	22,800	-233	-1.0	-1.3	2.8	8.4	0.14	0.0	0.00
Wholesale trade	4,967	4,767	-200	-4.0	-0.3	0.6	7.6	0.08	-0.2	0.00
Construction	15,533	15,867	333	2.1	-0.1	2.0	9.6	0.21	0.1	0.00
Personal and miscellaneous ser.	8,733	8,467	-267	-3.1	-4.3	1.1		0.29		-0.01
Other private	6,700	6,967	267	4.0	3.5	0.9	5.5	0.04	0.1	0.00
Total	**794,800**	**804,267**	**9,467**	**1.2**	**0.8**	100.0	**23.9**	**0.53**	**-0.1**	**0.00**
Public sector	*237,100*	*236,967*	*-133*	*-0.1*	*-0.4*	29.5	33.6	1.03	-0.1	-0.01
Private sector	*557,700*	*567,300*	*9,600*	*1.7*	*1.3*	70.5	21.4	0.44	0.0	0.00

Source: BLS. not seasonally adjusted. November data reflect December 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").

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

●For the year ending September the federal government accounted for 24.5% of all jobs and 31.4% of all wages and salaries in DC. Over the past year, although federal jobs fell the sector still accounted for 23.0% of wage increases.

●Professional and business services accounted for 31.7% of the net gain in employment and 34.0% of the gain in wages paid in DC for the year ending September.

●Information and finance accounted for 19.1% of the increase in jobs and 14.2% of the gain in wages over the past year.

●Education and health services accounted for 25.8% of last year's net job increases and 10.2% of the increase in wages.

●Trade and hospitality accounted for 27.1% of the increase in jobs over the past year and 7.6% of the increase in wages.
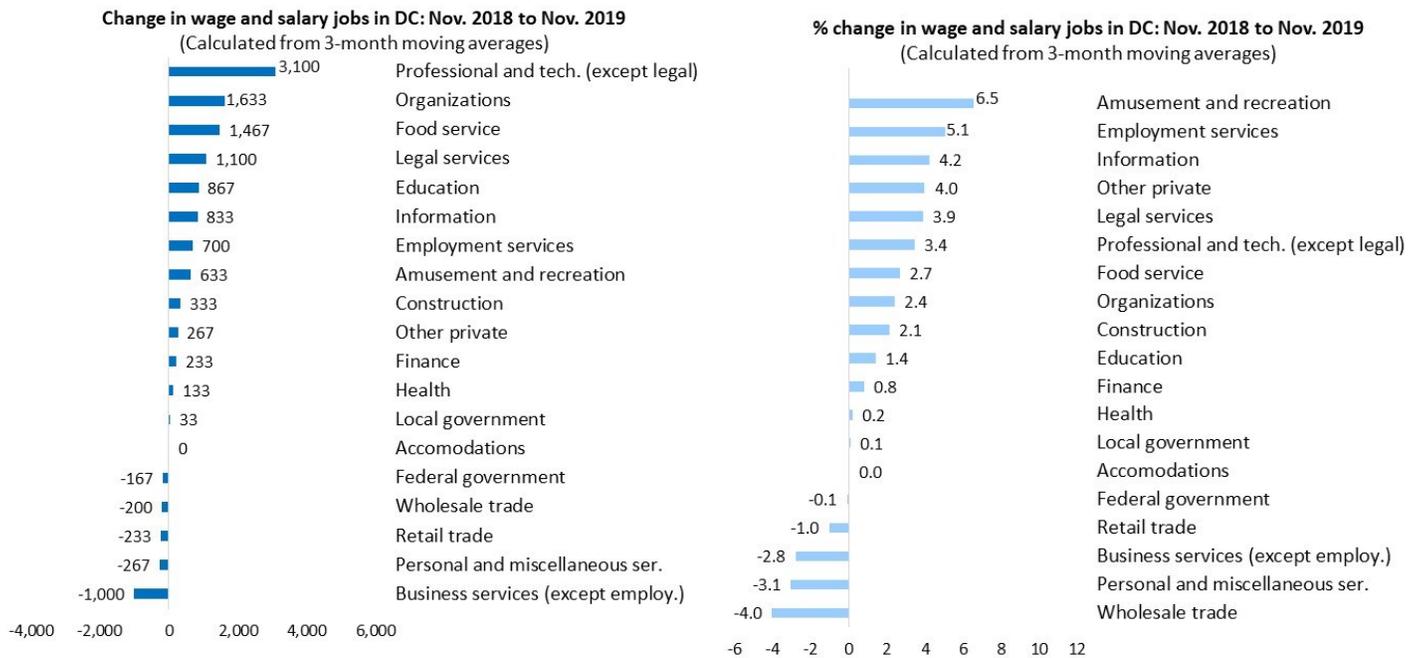
Change in wage and salary jobs in DC: Nov. 2018 to Nov. 2019
(Calculated from 3-month moving averages)

Value	Sector
3,100	Professional and tech. (except legal)
1,633	Organizations
1,467	Food service
1,100	Legal services
867	Education
833	Information
700	Employment services
633	Amusement and recreation
333	Construction
267	Other private
233	Finance
133	Health
33	Local government
0	Accomodations
-167	Federal government
-200	Wholesale trade
-233	Retail trade
-267	Personal and miscellaneous ser.
-1,000	Business services (except employ.)

% change in wage and salary jobs in DC: Nov. 2018 to Nov. 2019
(Calculated from 3-month moving averages)

Value	Sector
6.5	Amusement and recreation
5.1	Employment services
4.2	Information
4.0	Other private
3.9	Legal services
3.4	Professional and tech. (except legal)
2.7	Food service
2.4	Organizations
2.1	Construction
1.4	Education
0.8	Finance
0.2	Health
0.1	Local government
0.0	Accomodations
-0.1	Federal government
-1.0	Retail trade
-2.8	Business services (except employ.)
-3.1	Personal and miscellaneous ser.
-4.0	Wholesale trade

Table 8. Employment and income by sector of the DC economy: 12 mo average ending September 2019 (2019.3)

Sector	12 mo. average wage and salary employment in DC ending September 2019			12 mo avg. wages and salaries earned in DC ending September2019			Percentage Distributions			
							Employment		Wages	
	Level	Change from Sep 2018	% change	Level ($B)	Ch. from Sep 2018 ($B)	% change	Sep 19	Ch from Sep 2018	Sep 19	Ch from Sep 2018
Total	796,275	5,450	0.7	78.47	2.96	3.9	100.0	100.0	100.0	100.0
Federal government	195,158	-1,692	-0.9	24.65	0.68	2.8	24.5	-31.0	31.4	23.0
Local government	42,525	633	1.9	3.52	0.14	4.2	5.3	11.6	4.5	4.7
Business and professional services	168,892	1,725	1.0	20.77	1.01	5.1	21.2	31.7	26.5	34.0
Information and financial services	49,683	1,042	2.2	7.14	0.42	6.3	6.2	19.1	9.1	14.2
Education and health services	131,833	1,408	1.1	7.87	0.30	4.0	16.6	25.8	10.0	10.2
Trade and hospitality services	108,875	1,475	1.4	5.28	0.23	4.5	13.7	27.1	6.7	7.6
Organizations and personal services	76,833	675	0.9	7.41	0.26	3.6	9.6	12.4	9.4	8.7
Other private	22,475	183	0.8	1.83	-0.07	-3.8	2.8	3.4	2.3	-2.5
Private sector	*558,592*	*6,508*	*1.2*	*50.30*	*2.14*	*4.4*	*70.2*	*119.4*	*64.1*	*72.3*
Government	*237,683*	*-1,058*	*-0.4*	*28.17*	*0.82*	*3.0*	*29.8*	*-19.4*	*35.9*	*27.7*

Source: BLS and BEA.   Federal government wages and salaries includes military.

Wages and income

DC's Personal Income growth is below the US average

●Wages and salaries earned in the District of Columbia were 3.0% higher in the September quarter compared to the same quarter of 2018.

●Wages earned by DC residents grew an estimated 3.0% in the September quarter compared to last year.

●In the September quarter, DC Personal Income grew 3.3%, compared to 4.5% for the US average.

●The growth rate of proprietors' income was 6.1% in the September quarter.

●Pensions and other transfers grew 5.9% over last year in the September quarter; property income grew 1.4%.

Wages earned in DC, wages earned by DC residents, and wages earned in the US: 2016.3 to 2019.3 (% change from the prior year in the 12-month moving average)
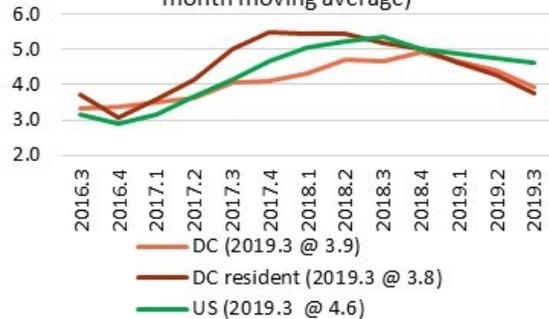
— DC (2019.3 @ 3.9)
— DC resident (2019.3 @ 3.8)
— US (2019.3 @ 4.6)

Table 9. **DC Wages and Personal Income: September 2019 (2019.3)**
($ billion at seasonally adjusted annual rates unless otherwise noted)

Indicator	FY 2015	FY 2016	FY 2017	FY 2018	4-qtr. moving avg.	Latest qtr. (Sept.)
Wages and salaries earned in DC	67.10	69.32	72.14	75.51	78.47	79.41
1 year change	3.21	2.22	2.82	3.37	2.96	2.28
% change	*5.0*	*3.3*	*4.1*	*4.7*	*3.9*	*3.0*
Supplements to wages & salaries	17.54	18.31	19.10	19.99	20.67	20.91
% change	*4.0*	*4.4*	*4.3*	*4.7*	*3.4*	*2.3*
Income earned in DC**	82.14	85.48	88.67	92.57	96.08	97.35
% change	*5.8*	*4.1*	*3.7*	*4.4*	*3.8*	*3.0*
Net resident adjustment***	-47.45	-49.03	-50.80	-53.05	-55.12	-55.77
% change	*3.4*	*3.3*	*3.6*	*4.4*	*3.9*	*2.8*
Income earned by DC residents**	34.69	36.44	37.87	39.52	40.96	41.58
% change	*9.3*	*5.1*	*3.9*	*4.4*	*3.6*	*3.4*
Wages and salaries of DC residents****	24.69	25.60	26.88	28.27	29.33	29.68
change from one year ago	1.74	0.91	1.28	1.39	1.06	0.85
% change	*7.6*	*3.7*	*5.0*	*5.2*	*3.8*	*3.0*
Proprietors' income earned by DC residents*	7.07	7.73	7.69	7.78	8.06	8.30
% change	*17.4*	*9.3*	*-0.5*	*1.1*	*3.7*	*6.1*
Property income of DC residents	9.39	9.64	9.95	10.69	11.09	11.13
% change	*7.0*	*2.6*	*3.2*	*7.5*	*3.7*	*1.4*
Pensions and other transfers for DC residents	6.05	6.46	6.64	6.78	7.13	7.29
% change	*2.2*	*6.8*	*2.7*	*2.1*	*5.1*	*5.9*
DC Personal Income	50.13	52.54	54.46	56.99	59.18	60.00
1 year change	3.71	2.42	1.92	2.53	2.19	1.93
% change	*8.0*	*4.8*	*3.6*	*4.6*	*3.8*	*3.3*
US Personal income (% change from prior year)	*5.6*	*2.7*	*4.1*	*5.7*	*4.7*	*4.5*
US Wages and salaries (% change from prior year)	*5.6*	*3.1*	*4.2*	*5.3*	*4.6*	*4.6*
Addendum:						
DC res. wages as % of wages earned in DC	*36.8*	*36.9*	*37.3*	*37.4*	*37.4*	*37.4*
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.

**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.

Source: BEA; data released December 18, 2019

DC's per capita income growth is less than the US average

●At mid-year 2019, population had increased 4,202 (0.6%) over the prior year and wage and salary employment increased by 4,000 (0.5%).

●In 2019 population and jobs grew less than half of their annual average over the 5 years 2014 to 2019.

●In the September quarter, DC's per capita income grew at a 2.4% rate compared to 3.9% in the US.

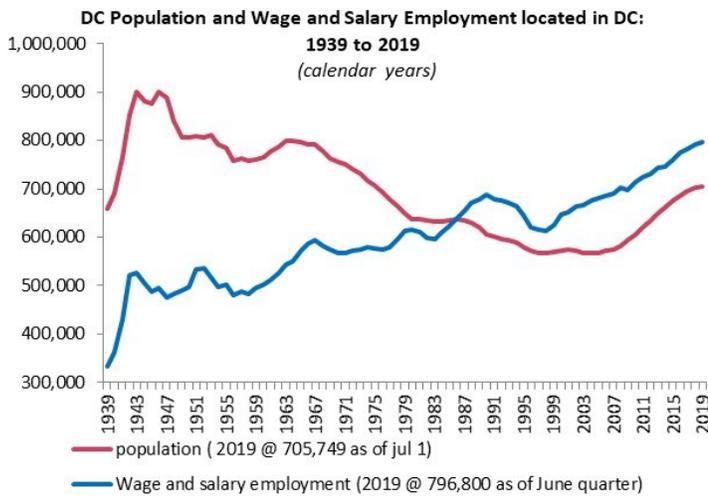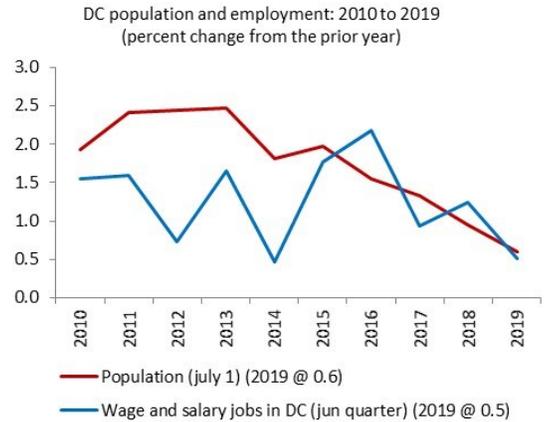●In the September quarter wages per job in DC grew more slowly than in the US (2.3% v 3.1%).

DC population and employment: 2010 to 2019
(percent change from the prior year)

Population (july 1) (2019 @ 0.6)
Wage and salary jobs in DC (jun quarter) (2019 @ 0.5)

DC Population and Wage and Salary Employment located in DC:
1939 to 2019
(calendar years)

population (2019 @ 705,749 as of jul 1)
Wage and salary employment (2019 @ 796,800 as of June quarter)

Source: U.S.Census Bureau and BLS

Table 10. **DC Population and wage and salary employment located in DC: 2010 to 2019**

	Population			Wage and salary employment		
		Change from prior yr.			Change from prior yr.	
Year	Number	Number	%	Number	Number	%
2010	605,226	11,426	1.9	713,800	16,900	2.4
2011	619,800	14,574	2.4	725,200	11,400	1.6
2012	634,924	15,124	2.4	730,500	5,300	0.7
2013	650,581	15,657	2.5	742,600	12,100	1.7
2014	662,328	11,747	1.8	746,100	3,500	0.5
2015	675,400	13,072	2.0	759,300	13,200	1.8
2016	685,815	10,415	1.5	775,800	16,500	2.2
2017	694,906	9,091	1.3	783,100	7,300	0.9
2018	701,547	6,641	1.0	792,800	9,700	1.2
2019	705,749	4,202	0.6	796,800	4,000	0.5
Ch. from 2014 to 2019		*43,421*	*6.6*		*50,700*	*6.8*
Avg. annual ch.		*8,684*			*10,140*	

Source:U.S. Census Bureau (population) as of July 1 for year shown; BLS (jobs) June quarter, seasonally adjusted, for year shown, accessed through Moody's Analytics

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

	DC					US				
	FY 2016	FY 2017	FY 2018	12-mo avg (Sep)	2019.3	FY 2016	FY 2017	FY 2018	12-mo avg (Sep)	2019.3
Per capita income	76,844	79,210	81,277	83,158	84,503	49,597	51,275	53,867	56,054	56,832
% ch in per capita income	3.0	3.3	2.6	2.3	2.4	2.0	3.4	5.1	4.1	3.9
% ch in population	1.7	1.4	1.1	0.8	0.9	0.7	0.7	0.6	0.6	0.6
% ch in personal income	4.8	3.6	4.6	3.8	3.3	2.7	4.1	5.7	4.7	4.5
Wages per job	89,424	92,176	95,466	98,546	99,539	55,745	57,143	59,247	60,962	61,620
% ch in wages per job	1.2	3.1	3.6	3.2	2.3	1.3	2.5	3.7	2.9	3.1
% ch in wages and salary jobs	2.1	1.0	1.1	0.7	0.6	1.8	1.6	1.6	1.7	1.5
% ch in total wages	3.3	4.1	4.7	3.9	3.0	3.1	4.2	5.3	4.6	4.6
Consumer price index	*0.9*	*1.1*	*2.0*	*1.2*	*1.0*	*0.9*	*2.1*	*2.4*	*1.9*	*1.8*

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

The number of housing permits issued slowed in the last 3 months

●According to CoStar, in December the inventory of apartments and condominiums increased by 5,690 (3.0%) from a year earlier.

●For the 12-month period ending December 5,945 housing permits were issued, up 28.8% from last year. The 3-month total (1,099) was, however, 52.7% below the same period as last year.

●Of the increase in inventory of multifamily units over the 12-months ending 2019.4, 93.1% were in apartments. Of the housing permits issued over the past year, 95.6% were included in 59 buildings with 5 or more units.

●As of the end of December 14,248 multi-family units were under construction in 88 buildings. Of the construction, apartments accounted for 78.4% of the buildings and 93.2% of the units.

Inventory of multifamily housing units in DC: net change from prior year, 2014.4 to 2019.4

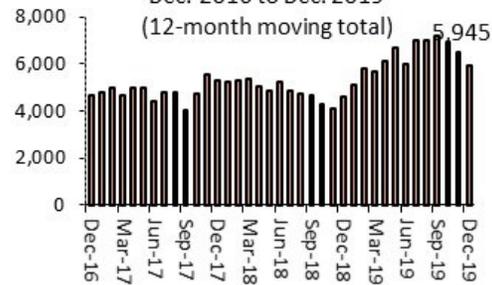Housing permits issued in DC: Dec. 2016 to Dec. 2019 (12-month moving total)

Table 12. Estimated DC households: 2012 to 2019

date CY	Population	pop/hh ratio	Estimated households	1 yr ch
2012	634,924	2.259	281,088	6,305
2013	650,581	2.260	287,859	6,771
2014	662,328	2.261	292,894	5,034
2015	675,400	2.263	298,453	5,560
2016	685,815	2.267	302,521	4,068
2017	694,906	2.271	305,991	3,470
2018	701,547	2.275	308,372	2,381
2019	705,749	2.280	309,539	1,167

Source: 1) Population: US Census Bureau (jul 2020); 2) population/household ratio estimated by ORA based on Oct. 2018 Office of Planning estimates for 2015, and 2020 3) households: calculated from population using the pop/hh ratio.

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

	FY 2017	FY 2018	FY 2019	12-mo. moving total	3-mo. moving total	This month
Total units	4,026	4,640	7,168	5,945	1,099	57
change from 1 yr ago	-1,103	614	2,528	1,330	-1,223	-580
% change from 1 year	*-21.5*	*15.3*	*54.5*	*28.8*	*-52.7*	*-91.1*
Multi-family projects with 5 or more units						
number	38	46	63	59	11	2
average size	106	101	114	101	100	14
Units in small projects with up to 4 units	376	179	218	262	74	29
% of all units	*9.3*	*3.9*	*3.0*	*4.4*	*6.7*	*50.9*

Source: Census Bureau (permits for privately owned units issued during period).

Table 14. Inventory and construction for private sector apartments and condominiums in DC: 2014 to 2019.4

	Inventory									Under construction					
	All Units			Apartments			Condominiums			Apartments			Condominiums		
CY		1 year ch.		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.
2014	171,618	5,004	3.0	2,810	129,636	4,872	610	33,161	132	42	6,763	161	38	972	26
2015	174,701	3,083	1.8	2,831	132,043	2,407	641	33,837	676	56	9,976	178	42	1,066	25
2016	179,262	4,561	2.6	2,852	135,945	3,902	673	34,496	659	59	10,718	182	36	1,393	39
2017	185,166	5,904	3.3	2,874	141,251	5,306	689	35,070	574	62	11,580	187	30	1,375	46
2018	189,735	4,569	2.5	2,898	145,248	3,997	704	35,642	572	71	13,716	193	23	1,058	46
2019	195,425	5,690	3.0	2,926	150,546	5,298	716	36,034	392	69	13,283	193	19	965	51
2019.4	195,425	5,690	3.0	2,926	150,546	5,298	716	36,034	392	69	13,283	193	19	965	51
1 Q ch.	928			4	876		4	52		1	144		-3	-8	

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 January 14, 2020. All units includes cooperative apartments, not shown separately. In 2019.4 there were 123 co-op buildings with 8,845 units with an average building size of 72.

Apartment vacancy rates are stable and rents are a little higher

● According to CoStar, for the the 12-month period ending December occupied apartments rose by 4,658 (3.4%) from the prior year. The overall vacancy rate was 6.7% and average rents were 3.1% higher.

● Class A units accounted for 26.7% of all units in the city and 40.1% of vacant ones. They also accounted for 81.8% of the net additions to apartment inventory over the past year, 93.8% of the increase in occupied units, and 85.0% of the units under construction.

● Over the past year effective rent in all classes of apartments increased: Class A by 3.5%, Class B by 3.3%, and Class C by 2.5%.

● Vacancy rates in December: Class A 10.2%, Class B 5.8%, and Class C 5.4%.

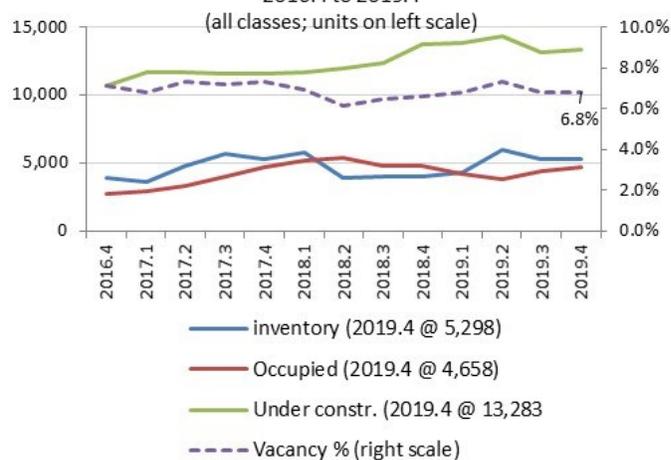DC Apartment units: (1) 12-month change in inventory and occupancy, (2) number under construction, and (3) vacancy rate : 2016.4 to 2019.4 (all classes; units on left scale)

- inventory (2019.4 @ 5,298)
- Occupied (2019.4 @ 4,658)
- Under constr. (2019.4 @ 13,283)
- Vacancy % (right scale)

Table 15. Apartment units in DC: 2014 to 2019.4

| | Level | | | | Change from prior period | | | | | | Average rent | | 1 yr ch in |
| | number | | | | Inventory | | Occupied | | Vacant | | Effective rent | 1 yr % | units under |
	Inventory	Occupied	Vacant	% vacant	units	% ch	units	% ch	units	% ch	per unit	change	constr.
2014	129,636	119,828	9,808	7.6	4,872	3.9	4,128	3.6	744	8.2	$1,675	3.1	-206
2015	132,043	123,480	8,563	6.5	2,407	1.9	3,652	3.0	-1245	-12.7	$1,771	5.7	3,213
2016	135,945	126,264	9,681	7.1	3,902	3.0	2,784	2.3	1118	13.1	$1,814	2.4	742
2017	141,251	130,932	10,319	7.3	5,306	3.9	4,668	3.7	638	6.6	$1,859	2.5	862
2018	145,248	135,692	9,556	6.6	3,997	2.8	4,760	3.6	-763	-7.4	$1,909	2.7	2,136
2019	150,546	140,350	10,196	6.8	5,298	3.6	4,658	3.4	640	6.7	$1,969	3.1	-433
2019.4	150,546	140,350	10,196	6.8	5,298	3.6	4,658	3.4	640	6.7	$1,969	3.1	-433
1 Q ch	*876*	*876*	*0*								*$4*		

Source: CoStar, as of January 14, 2020.

Change from the prior year in occupied Class A and all other classes of apartments: 2017.4 to 2019.4

Class A (2019.4 @ 4,367) — All other classes (2019.4 @ 291)

Vacancy rates in DC apartments by class: 2017.4 to 2019.4

Class A (2019.4 @ 10.2) — Class B (2019.4 @ 5.8) — Class C (2019.4 @ 5.4)

1-year % change in average effective rent in DC apartments by class: 2017.4 to 2019.4

Class A (2019.4 @ 3.5) — Class B (2019.4 @ 3.3) — Class C (2019.4 @ 2.5)

Table 16. Market rate apartment units in DC, Classes A, B, and C: 2019.4

| | Inventory | | | | | Occupied units | | | Effective monthly rent | | Under construction | | |
| Class | | Units | | | | | | | | | | | |
	Buildings	Number	1 yr ch	% ch	*% vacant*	Number	1 yr ch	% ch	$ per month	1 yr % ch	Buildings	Units	Avg. size
Class A	189	40,234	4,332	12.1	10.2	36,148	4,367	13.7	$2,665	3.5	47	11,297	240
Class B	847	52,393	1,462	2.9	5.8	49,434	904	1.9	$1,891	3.3	21	1,977	94
Class C	1,878	57,823	-496	-0.9	5.4	54,678	-612	-1.1	$1,377	2.5	1	9	9

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 Jan. 14, 2020. The total amounts for apartments in table 15 includes a small number of units not shown here.

Commercial office space

Occupied office space fell slightly and the vacancy rate rose

● According to CoStar, for the 12-month period ending December occupied office space fell by by 0.09 million sq. ft. from the prior year while inventory rose by 2.08 msf. The vacancy rate has edged up to 11.8% (including sublet) and average base rent rose 1.1%.

●The vacancy rate for class A space was 12.5% in December, up from 12.1% a year ago. Class A rent rose 1.6% over the past year.

●Space under construction in December 2019 (4.54 million square feet in 24 buildings) was 0.68 msf (13.0%) less 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 at the same rate as 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: 2017.4 to 2019.4 (million square feet)
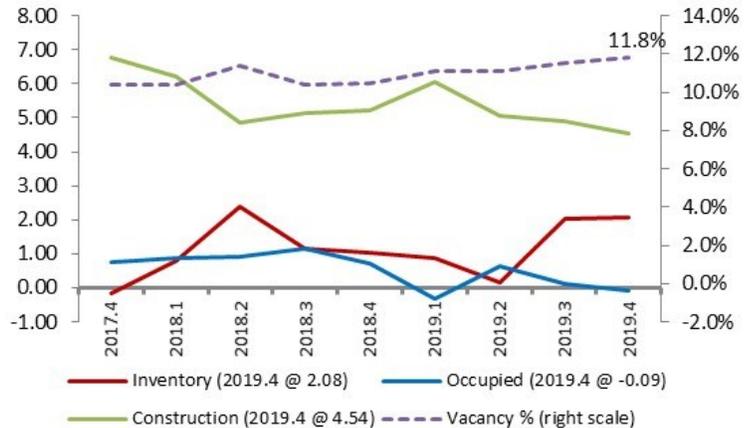
Inventory (2019.4 @ 2.08) — Occupied (2019.4 @ -0.09) — Construction (2019.4 @ 4.54) — Vacancy % (right scale)

Table 17. **DC commercial office space: 2014 to 2019.4**

		Inventory			Occupied space			Vacant space			Base rent (direct)		Under constr.		
CY (year end)	Build- ings	Level (msf)	1 yr ch (msf)	1 yr % ch	Level (msf)	1 yr ch (msf)	% ch	Level (msf)	Direct only %	Total %	$ per sq ft.	1 yr % ch	Build- ings	msf	Avg. sf per bldg
2014	2,388	154.13	0.49	0.3	139.47	0.19	0.1	14.7	9.0	9.5	$47.47	1.3	14	2.42	172,598
2015	2,381	154.91	0.79	0.5	138.90	-0.57	-0.4	16.0	9.9	10.3	$48.17	1.5	16	3.08	192,591
2016	2,378	155.40	0.49	0.3	138.31	-0.59	-0.4	17.1	10.4	11.0	$50.01	3.8	21	5.32	253,163
2017	2,371	155.23	-0.17	-0.1	139.08	0.77	0.6	16.1	9.7	10.4	$51.00	2.0	24	6.77	281,908
2018	2,370	156.25	1.02	0.7	139.81	0.74	0.5	16.4	9.8	10.5	$52.18	2.3	22	5.22	237,103
2019	2,379	158.33	2.08	1.3	139.72	-0.09	-0.1	18.6	10.7	11.8	$52.78	1.1	24	4.54	189,091
2019.4	2,379	158.33	2.08	1.3	139.72	-0.09	-0.1	18.6	10.7	11.8	$52.78	1.1	24	4.54	189,091
1 Q ch	2	0.39			-0.13				0.2	0.3	-$0.63		-1	-0.34	

Source: CoStar, all classes and sizes. Data as of January 14, 2020.

Change from the prior year in occupied space for Class A and all other classes: 2017.4 to 2019.4 (millions of square feet)

Class A (2019.4 @ 1.93) — All other (2019.4 @ -2.03)

Vacancy rate by class of DC office building: 2017.4 to 2019.4 (percent)

Class A (2019.4 @ 12.5) — Class B (2019.4 @ 11.8) — Class C (2019.4 @ 4.8)

Change in base rents from the prior year by Class of DC office building: 2017.4 to 2019.4 (1 year % change)

Class A (2019.4 @ 1.6) — Class B (2019.4 @ 1.6) — Class C (2019.4 @ -2.5)

Table 18. **DC Class A, B, and C commercial office space: 2019.4**

		Inventory			Occupied space			Vacant space			Base rent (direct)		Under constr.	
Class	Build- ings	Level (msf)	1 yr ch (msf)	1 yr % ch	Level (msf)	1 yr ch (msf)	% ch	Level (msf)	Direct %	Total %	$ per sq ft.	1 yr % ch	build- ings	msf
Class A	329	90.60	2.59	2.9	79.27	1.93	2.5	11.3	11.2	12.5	$56.37	1.6	19	4.38
Class B	913	57.58	-0.29	-0.5	50.80	-1.74	-3.3	6.8	11.1	11.8	$49.14	1.6	5	0.16
Class C	1,131	10.13	-0.22	-2.1	9.64	-0.29	-2.9	0.5	3.8	4.8	$34.17	-2.5	0	

Source: CoStar. Data as of January 14, 2020

The value of real property transfers except for brokered home sales is less than last year

●The value of property transfers in December, $15.58 billion, was 2.5% below a year ago as measured by the 12-month moving total. The 3-month moving total, $3.15 billion, was 36.0% below last year.

●Over the 12-month period ending December the estimated value of brokered home sales was 4.3% above last year while the value of all other real property transfers was 6.6% below last year. For the last 3 months, the value of non-home transfers was 57.6% below last year—but home transfers were 20.8% higher.

Value of all real property subject to deed transfer or economic interest taxes: December 2011 to December 2019 ($ billion, 12-month moving total)

Value of real property transfers (including transfers of economic interest): December 2018 to December 2019 (% change in 3-month and 12-month moving totals)

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

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	12-mo moving total	3-month moving total	This month
All property transfers ($ million)	14,766.3	13,035.9	13,998.6	14,646.3	17,355.2	15,583.1	3,150.5	1,250.0
change from one year ago ($M)	3,196.5	-1,730.3	962.6	647.8	2,708.8	-396.8	-1,772.1	-451.9
% change from 1 year ago	*27.6*	*-11.7*	*7.4*	*4.6*	*18.5*	*-2.5*	*-36.0*	*-26.6*

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: Dec. 2017 to Dec. 2019 (% change in 12-month moving totals)
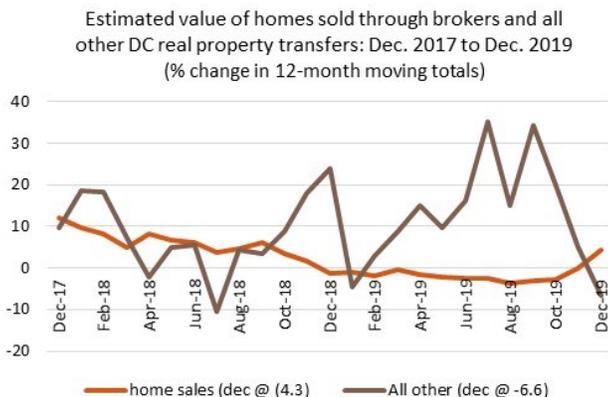
Table 19A. **Value of (1) brokered home sales and (2) all other real property subject to the Deed Transfer and Economic Interest taxes: FY 2017 to December 2019**

	FY 2017	FY 2018	FY 2019	12-mo moving total	3-mo moving total
Brokered home sales ($M)	5,823.3	6,184.2	5,985.6	6,267.4	1,638.9
All other property transfers ($M)	8,175.3	8,462.1	11,369.5	9,315.7	1,511.6
% change from 1 year ago					
Brokered home sales	6.6	6.2	-3.2	4.3	20.8
All other property transfers	8.0	3.5	34.4	-6.6	-57.6

Sources: Brokered sales of single family homes and condominium units are from MarketStats by ShowingTime (see Table 20); Other property transfers equals the difference between the value of all real property transfers calculated from deed tax collections reported by the OCFO (see table 19) and the value of brokered home sales.

Single family and condominium housing

Big increase in sales volume for both single family homes and condominium housing units

●The 3-month moving total of single family home sales in December was up 15.6% from a year earlier, while the average selling price was 5.3% higher. The year-to-date median sales price of detached homes ($849,825) was 1.3% more than the prior year, while the median price of attached homes ($724,950) was 5.8% higher.

●December condominium sales were up 16.2% from last year as measured by the 3-month moving total, while the average selling price was 2.5% higher. The year-to-date median sales price ($479,000) was 3.0% higher than last year.

●The total value of all home sales in December was up 20.8% from last year as measured by the 3-month moving total. For the past 12-months the total was 4.3% higher.
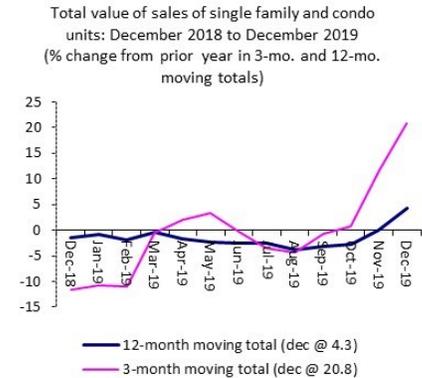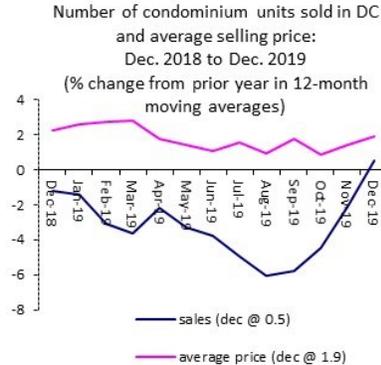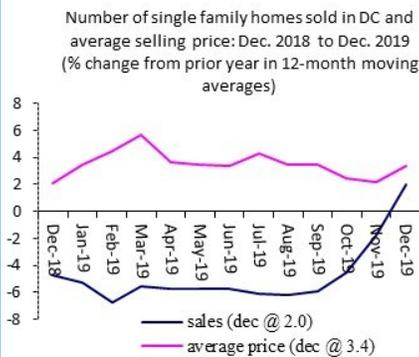

Number of single family homes sold in DC and average selling price: Dec. 2018 to Dec. 2019 (% change from prior year in 12-month moving averages)

Number of condominium units sold in DC and average selling price: Dec. 2018 to Dec. 2019 (% change from prior year in 12-month moving averages)

Total value of sales of single family and condo units: December 2018 to December 2019 (% change from prior year in 3-mo. and 12-mo. moving totals)

Table 20. **D.C. Residential Real Estate Indicators: December 2019**

Indicator	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	12-mo moving total or average	3-mo moving total or average	This month
Number of sales (settled contracts)									
Single family	4,024	4,097	4,385	4,552	4,717	4,439	4,600	1,192	407
1 year change	45	73	288	167	165	-278	89	161	91
% change	*1.1*	*1.8*	*8.7*	*3.8*	*3.6*	*-5.9*	*2.0*	*15.6*	*28.8*
Condo	3,592	3,832	3,955	4,046	4,240	3,995	4,137	1,018	339
1 year change	105	240	123	91	194	-245	20	142	74
% change	*3.0*	*6.7*	*5.6*	*2.3*	*4.8*	*-5.8*	*0.5*	*16.2*	*27.9*
Total	7,616	7,929	8,340	8,598	8,957	8,434	8,737	2,210	746
1 year change	150	313	411	258	359	-523	109	303	165
% change	*2.0*	*4.1*	*7.2*	*3.1*	*4.2*	*-5.8*	*1.3*	*15.9*	*28.4*
Average prices of units sold									
Single family ($)	736,362	767,870	794,668	824,857	835,130	863,640	874,770	895,391	936,835
1 year change	23,563	31,508	26,798	30,189	10,273	28,511	28,722	44,701	97,167
% change	*3.3*	*4.3*	*5.8*	*3.8*	*1.2*	*3.4*	*3.4*	*5.3*	*11.6*
Condo ($)	472,419	499,650	500,824	511,247	529,463	538,660	542,299	561,468	565,509
1 year change	24,592	27,232	1,173	10,423	18,215	9,197	10,068	13,487	14,881
% change	*5.5*	*5.8*	*2.2*	*2.1*	*3.6*	*1.7*	*1.9*	*2.5*	*2.7*
Total value of all sales ($ million)	4,660.0	5,060.6	5,465.4	5,823.3	6,184.2	5,985.6	6,267.4	1,638.9	573.0
1 year change	262.2	400.6	404.8	357.9	361.0	-198.6	259.7	281.8	161.7
% change	*6.0*	*8.6*	*12.4*	*6.5*	*6.2*	*-3.2*	*4.3*	*20.8*	*39.3*

Median contract prices, CY to date (December) *: single family detached $849,825 (1.3% 1 yr ch); single-family attached $724,950 (5.8% 1 yr ch); condominium and co-ops $479,000 (3.0% 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.

Growth in FHFA house price index for DC outpaced the US in the September quarter

●The percentage change in DC home prices increased 6.3% in the September quarter, according to the Federal Housing Finance Agency Index of single-family same-property transactions. The US index was up 5.4%, and the Washington metropolitan area gain was 4.0%.

●28.3% of all single family sales for the 12-months ending December 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: September 2019 (2019.3)**

	Fiscal year average				Last 2 Q's	
Indicator	FY 2015	FY 2016	FY 2017	FY 2018	2019.2	2019.3
% change from prior year in value of index						
DC	8.3	4.8	7.0	5.3	4.9	6.3
DC metro area	3.3	2.6	4.2	4.5	5.0	4.0
US	5.4	5.5	6.3	6.8	5.7	5.4

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.
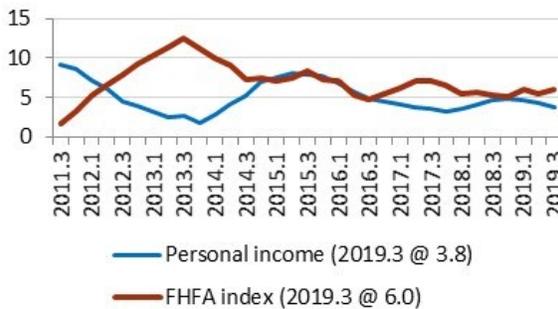

FHFA Expanded-data housing price index for DC: 2017.3 to 2019.3 (% ch from prior year in 3-mo and 12-mo avg)
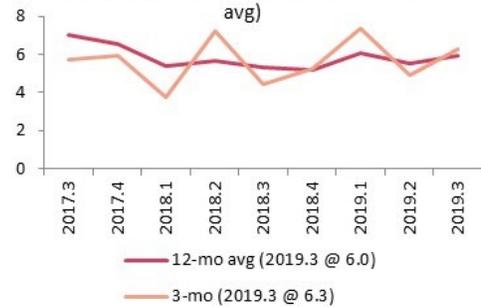
DC Personal Income and FHFA Housing index: 2011.3 to 2019.3 (% change from prior year in 12-month moving average)

FHFA expanded-data housing price index for DC, the Washington Metropolitan area, and the US: 2016.3 to 2019.3 (% change from prior yr. in the 12-mo. moving avg.)
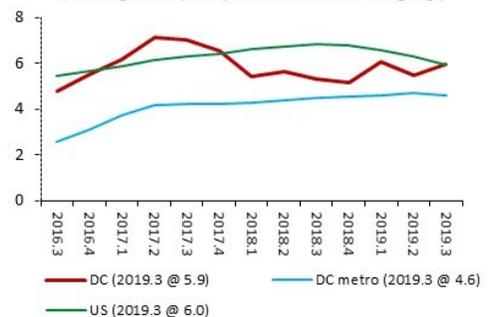
Table 22. **D.C. Single family and condominium home sales at prices of $1 million or more: December 2019**

Category	FY 2017	FY 2018	FY 2019	12-mo moving total	3-mo moving total	This month
Single family homes	1,057	1,192	1,232	1,300	346	127
1 year change	121	135	40	134	68	45
% change	*12.9*	*12.8*	*3.4*	*11.5*	*24.5*	*54.9*
percent of all single family sales	23.2	25.3	27.8	28.3	29.0	31.2
Condominiums	189	222	213	227	66	20
1 year change	22	33	-9	16	14	5
% change	*13.2*	*17.5*	*-4.1*	*7.6*	*26.9*	*33.3*
percent of all condominium sales	4.7	5.2	5.3	5.5	6.5	5.9

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 2015 to 2019.4**

	Permits	Condo. Sales
FY 2015	293	483
FY 2016	283	680
FY 2017	367	482
FY 2018	133	525
FY 2019	138	478
12-mo. ending:		
2019.4	158	543
1 yr ch	*46*	*73*
% ch.	*41.1*	*15.5*

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

Hospitality

Hotel stays and revenues continue to increase

●For the 3 months ending December 2019 the number of room-days sold was 3.5% more than a year ago, the average room rate was up 5.2%, and hotel room sales revenues were 8.9% higher. The 12-month moving total for hotel room-days sold was 2.0% above a year earlier, and revenues were 4.2% higher.

●Employment in food services was 2.7% more in November than a year earlier as measured by the 3-month moving average. Hotel employment was the same as a year earlier.

●November airline traffic into the DC area was 1.2% higher compared to a year earlier as measured by the 3-month moving total. Reagan National was up 1.9%. For the past 12-months, total traffic into the DC area was 0.8% more than the prior year, with Dulles experiencing the largest percentage gain (2.9%).
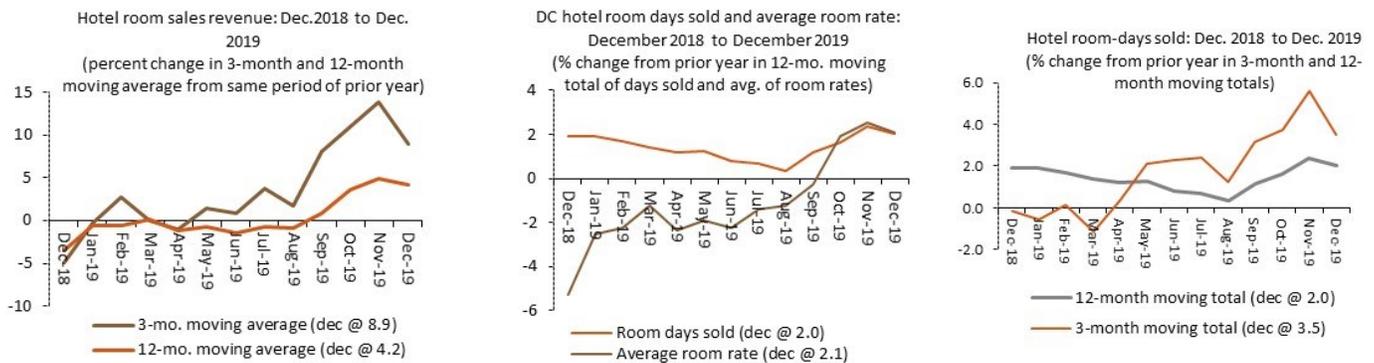

Hotel room sales revenue: Dec.2018 to Dec. 2019 (percent change in 3-month and 12-month moving average from same period of prior year)
- 3-mo. moving average (dec @ 8.9)
- 12-mo. moving average (dec @ 4.2)

DC hotel room days sold and average room rate: December 2018 to December 2019 (% change from prior year in 12-mo. moving total of days sold and avg. of room rates)
- Room days sold (dec @ 2.0)
- Average room rate (dec @ 2.1)

Hotel room-days sold: Dec. 2018 to Dec. 2019 (% change from prior year in 3-month and 12-month moving totals)
- 12-month moving total (dec @ 2.0)
- 3-month moving total (dec @ 3.5)

Table 27. **Hospitality Industry: December 2019**

Indicator	Units	date	FY 2016	FY 2017	FY 2018	FY 2019	12-month moving total or average*	3-month moving total or average*	This month
Hotel stays									
Hotel room-days sold	('M)	dec	8.332	8.740	9.018	9.125	9.200	2.214	0.611
	1 yr ch		0.135	0.408	0.278	0.106	0.184	0.075	0.000
	1 yr % ch		*1.3*	*4.9*	*3.2*	*1.2*	*2.0*	*3.5*	*0.1*
Average room rate	$	dec	221.19	233.03	223.98	223.33	226.00	228.35	172.93
	1 yr ch		7.18	11.84	-9.05	-0.66	4.59	11.31	-4.78
	1 yr % ch		*3.3*	*5.4*	*-3.9*	*-0.3*	*2.1*	*5.2*	*-2.7*
Occupancy rate	%	dec	78.0	78.5	78.0	76.4	76.5	72.6	59.5
(average)	1 yr ch		0.5	0.5	-0.5	-1.6	-1.0	0.5	-1.3
	1 yr % ch		*0.7*	*0.6*	*-0.6*	*-2.0*	*-1.3*	*0.7*	*-2.1*
Room revenue	($M)	dec	1,843.0	2,036.7	2,019.9	2,037.8	2,079.2	505.6	105.7
	1 yr ch		83.2	193.7	-16.8	17.8	83.1	41.4	-2.8
	1 yr % ch		*4.7*	*10.5*	*-0.8*	*0.9*	*4.2*	*8.9*	*-2.6*
Airline passengers									
DCA	1 yr % ch	nov	2.8	3.2	-1.2	0.7	1.2	1.9	-2.8
IAD	1 yr % ch	nov	-0.1	5.0	4.1	4.4	2.9	0.3	-1.0
BWI	1 yr % ch	nov	6.0	5.6	4.5	-1.4	-1.3	1.4	-0.9
Total	1 yr % ch	nov	3.0	4.6	2.5	1.1	0.8	1.2	-1.5
Employment									
Accommodations	level ('000)	nov	14.9	15.0	14.8	15.4	15.4	15.6	15.4
	1 yr ch		-0.3	0.1	-0.2	-0.1	-0.1	0.0	-0.3
	1 yr % ch		-1.9	0.6	-1.3	-0.9	-0.6	0.0	-1.9
Food and bev	level ('000)	nov	51.5	52.0	54.3	55.8	56.0	56.5	56.5
	1 yr ch		1.7	0.6	2.2	1.3	1.4	1.5	2.0
	1 yr % ch		3.5	1.1	4.3	2.3	2.5	2.7	3.7

* Total for hotel rooms sold and room revenue.

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

Federal non-defense spending increasing faster than nominal GDP

● Compared to the same quarter a year ago, in the December quarter Nominal GDP growth was 4.0% and real growth was 2.3%

● During the December quarter, quarterly GDP growth was 2.1% (real) and 3.6% (nominal) *(annualized growth rates)*.

● Federal government non-defense spending for consumption and investment increased 5.4% in the 2019.4 quarter from a year earlier. Defense spending grew 6.1%.
.

Federal non-defense spending and US GDP: 2015.4 to 2019.4 (1 year % change)

US GDP (2019.4 @ 4.0)
Federal non-defense (consumption and investment) 2019.4 @ 5.4

Table 29. **Federal government consumption and investment, US GDP accounts: FY 2016 to 2019.4**

(percent change from same period of prior year)

Indicator	FY 2016	FY 2017	FY 2018	FY 2019	12-mo avg	2019.4
Non-defense	***3.2***	***3.1***	***5.9***	***3.9***	***4.2***	***5.4***
Compensation of employees	4.5	3.8	3.6	3.5	3.5	3.5
Purchases of goods and services	3.8	0.5	12.6	3.9	4.6	9.2
Gross investment	1.8	3.9	3.2	4.3	4.9	5.0
Defense	***-0.3***	***1.5***	***5.5***	***6.9***	***6.7***	***6.1***
Compensation of employees	1.3	1.4	4.2	4.6	4.4	4.3
Purchases of goods and services	-0.5	3.0	7.8	11.2	10.6	8.5
Gross investment	-1.0	1.2	6.9	8.0	8.1	8.5
All federal consumption and invest.	***1.1***	***2.2***	***5.7***	***5.7***	***5.7***	***5.8***

Source: BEA (January 30,2020). Nominal values.

Note: federal spending does not include social security, medicare, or grants.

Table 30. **Qtr. to Qtr. ch. in US GDP: 2018.4 to 2019.4**

(% ch. from previous quarter at seasonally adj. annual rates)

Indicator	2018.4	2019.1	2019.2	2019.3	2019.4
US GDP real	1.1	3.1	2.0	2.1	2.1
US GDP nominal	2.9	3.9	4.7	3.8	3.6
Wages and salaries	2.1	9.9	2.7	3.5	4.2
Personal income	3.4	6.0	4.4	3.5	3.2

Note: GDP=Gross Domestic Product Source: BEA, updated Jan. 30, 2020.
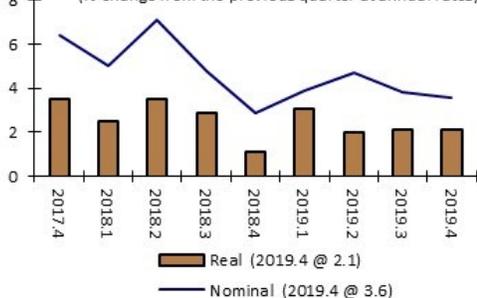
Table 28. **US GDP, income, and inflation: FY 2016 to 2019.4**
(percent change from same period of prior year)

Indicator	FY 2016	FY 2017	FY 2018	FY 2019	12-mo avg	2019.4
GDP real	1.6	2.2	3.0	2.4	2.3	2.3
GDP nominal	2.5	3.9	5.4	4.3	4.1	4.0
Personal Income	2.7	4.1	5.7	4.7	4.5	4.3
Consumption	3.5	4.3	5.2	4.2	4.0	4.1
Investment	-1.5	4.9	7.3	5.3	3.2	-0.8
Corporate profits*	3.2	0.7	2.2	0.5	na	na
S and P stock index	0.4	13.8	16.2	3.3	6.1	14.7
US CPI	0.9	2.1	2.4	1.9	1.8	2.0

Source: BEA (January 30, 2020), BLS, Fred.

 **Before tax, with IVA and CCAdj.   na = not availab le*

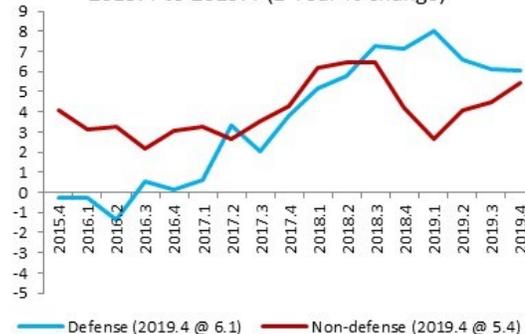**Defense and non-defense federal spending: 2015.4 to 2019.4 (1 Year % change)**

Defense (2019.4 @ 6.1)
Non-defense (2019.4 @ 5.4)

Quarterly change in US Real and Nominal GDP: 2017.4 to 2019.4
(% change from the previous quarter at annual rates)

Real (2019.4 @ 2.1)
Nominal (2019.4 @ 3.6)

Table 31. **Monthly selected US Indicators: August 2019 to December 2019**

Indicator	August	September	October	November	December
S and P stock index (level)	2897	2982	2978	3105	3177
% change from prior month	-3.3	2.9	-0.2	4.3	2.3
% change from 1 year ago	1.4	2.8	6.9	14.0	23.8
10 yr. Treasury Interest rate (level)	1.63	1.70	1.71	1.81	1.86
CPI % ch from prior month *(seasonally adjusted)*	0.05	0.02	0.36	0.26	0.22
CPI % ch from prior year *(seasonally adjusted)*	1.77	1.73	1.76	2.00	2.28
Jobs (seasonally adjusted level, in millions)	151.64	151.83	151.98	152.24	152.38
change from prior month (thousands)	219	193	152	256	145
% change from prior month	0.1	0.1	0.1	0.2	0.1
Resident employment (season. adj. level, in mil.)	157.90	158.30	158.54	158.54	158.80
change from prior month (thousands)	549	403	246	-8	267
% change from prior month	0.3	0.3	0.2	0.00	0.2
Unemployment rate (seasonally adj.)	3.7	3.5	3.6	3.5	3.5

Source: BLS and Fred (Federal Reserve data base)

DC tax collections

DC tax collections (before earmarking):
December 2017 to December 2019
($ million; 12 mo. moving total)
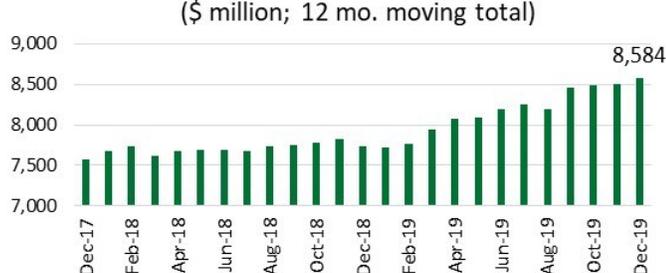
One year change in 12-mo. moving total DC
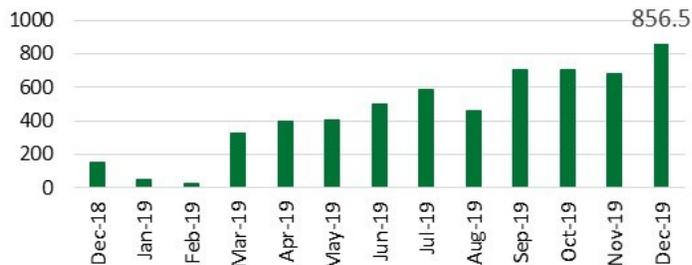tax collections: Dec. 2018 to Dec. 2019 ($M)

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

($ million)	Revenue (from CAFR)				Tax collections			
Tax	FY 2016	FY 2017	FY 2018	FY 2019	12-month moving total	FY 2020 to date	3-month moving total	This month
Total taxes	7,241.0	7,472.9	7,771.3	8,454.4	8,584.5	1,352.9	1,352.9	510.1
1 year change	324.2	239.3	298.5	701.2	856.5	130.1	130.1	74.9
% change	*4.7*	*3.3*	*4.0*	*9.0*	*11.1*	*10.6*	*10.6*	*17.2*
Real property	2,357.5	2,473.3	2,554.2	2,731.6	2,728.0	33.4	33.4	5.8
1 year change	163.0	115.9	80.9	176.0	202.7	-3.6	-3.6	5.7
% change	*7.4*	*4.9*	*3.3*	*6.9*	*8.0*	*-9.7*	*-9.7*	*nm*
General sales	1,343.1	1,419.2	1,492.6	1,573.7	1,599.6	428.2	428.2	124.3
1 year change	27.8	76.1	73.4	91.2	100.7	25.9	25.9	3.2
% change	*2.1*	*5.7*	*5.2*	*6.2*	*6.7*	*6.4*	*6.4*	*2.6*
Individual income	1,907.9	1,958.3	2,066.8	2,293.5	2,341.6	492.0	492.0	178.3
1 year change	39.8	50.4	108.6	205.1	297.3	48.2	48.2	29.1
% change	*2.1*	*2.6*	*5.5*	*9.8*	*14.5*	*10.8*	*10.8*	*19.5*
withholding	1,627.6	1,766.6	1,818.2	1,936.5	1,983.7	478.4	478.4	164.1
1 year change	74.4	139.0	51.6	103.7	137.0	47.1	47.1	20.5
% change	*4.8*	*8.5*	*2.9*	*5.7*	*7.4*	*10.9*	*10.9*	*14.2*
non-withholding	280.3	191.7	248.7	356.9	357.9	13.5	13.5	14.2
1 year change	-34.5	-88.6	56.9	101.4	160.4	1.0	1.0	8.6
% change	*-11.0*	*-31.6*	*29.7*	*39.7*	*81.2*	*8.1*	*8.1*	*156.4*
Corporate income	387.1	389.2	436.5	510.1	540.5	128.3	128.3	97.3
1 year change	79.1	2.1	47.3	97.0	110.2	30.4	30.4	28.0
% change	*25.7*	*0.6*	*12.2*	*23.5*	*25.6*	*31.1*	*31.1*	*40.4*
Unincorporated Bus.	169.4	165.0	138.2	130.9	147.6	35.3	35.3	26.8
1 year change	29.6	-4.4	-26.8	-2.1	26.4	16.8	16.8	6.1
% change	*21.2*	*-2.6*	*-16.2*	*-1.6*	*21.8*	*90.6*	*90.6*	*29.1*
Deed taxes*	445.2	460.9	472.3	550.4	550.7	138.6	138.6	46.6
1 year change	-35.4	16.7	11.4	79.1	57.5	0.2	0.2	-5.6
% change	*-7.4*	*3.8*	*2.5*	*16.8*	*11.7*	*0.2*	*0.2*	*-10.7*
Other taxes	630.9	606.9	610.7	664.3	676.4	97.1	97.1	30.9
1 year change	20.3	-17.6	3.7	54.9	61.7	12.1	12.1	8.5
% change	*3.3*	*-2.8*	*0.6*	*9.0*	*10.0*	*14.3*	*14.3*	*38.0*

*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.

(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.

Source: OCFO/ORA   nm = not meaningful
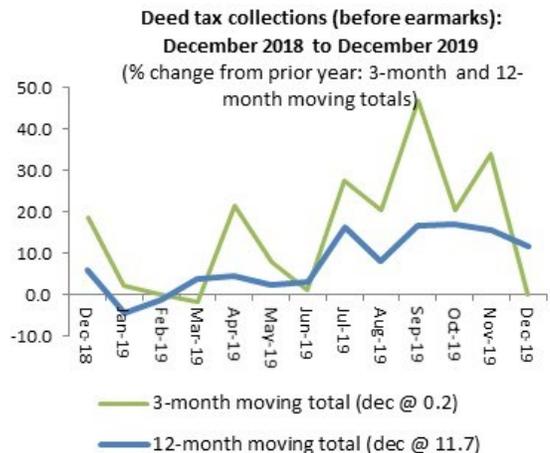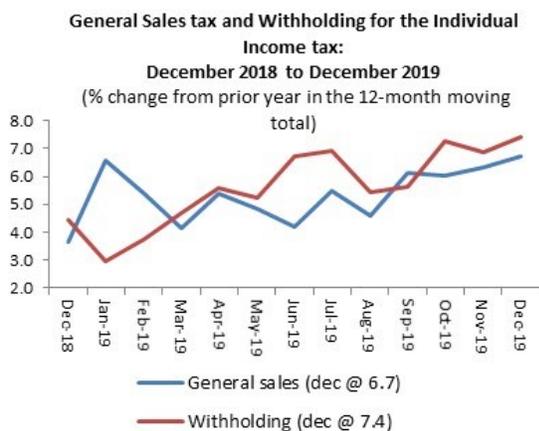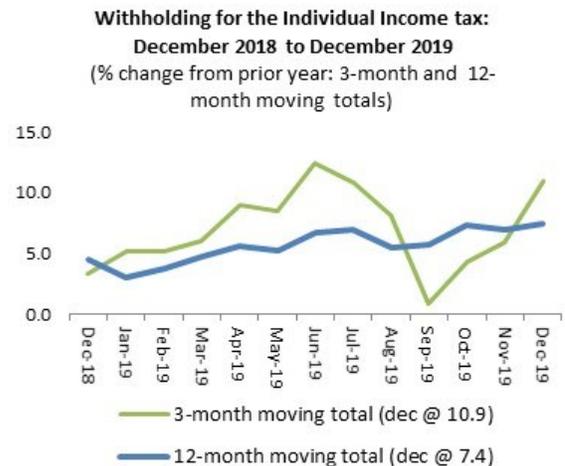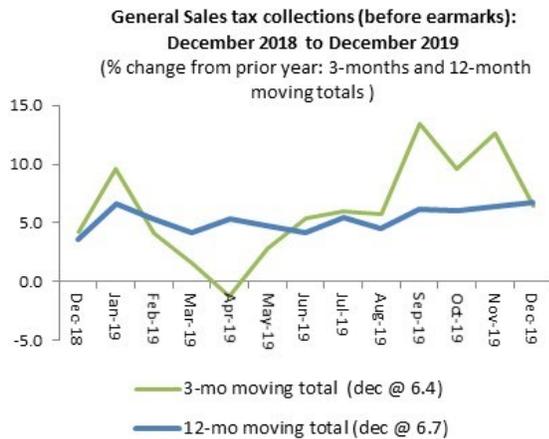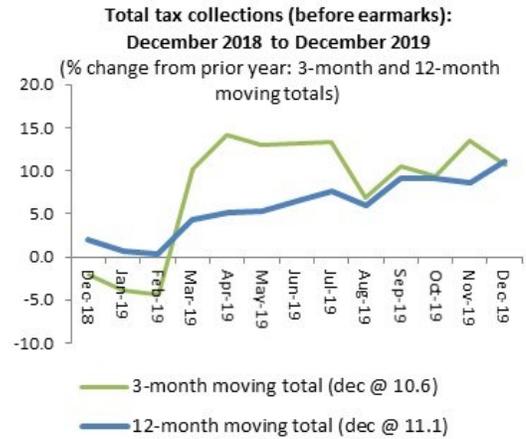
Tax collections continue to increase quite rapidly

●For the 12 month period ending December total tax collections (before earmarking) were $856.5 million (11.1%) more than in the prior year. For the last 3 months they were up 10.6% from last year.

●Individual income tax collections were 14.5% above last year for the 12-months ending December and withholding was 7.4% higher. For the past 3 months, total income tax collections were up 10.8% and withholding was up 10.9%.

●General sales tax collections were 6.7% above last year for the 12-months ending December. For the past 3 months, they were 6.4% above last year.

●Deed tax collections for the 12-months ending December were up 11.7% from last year; for the past 3 months they were up 0.2%.

●Corporate income taxes for the 12 months ending December were up 25.6% while unincorporated business income taxes were 21.8% above last year.

Total tax collections (before earmarks): December 2018 to December 2019 (% change from prior year: 3-month and 12-month moving totals)

- 3-month moving total (dec @ 10.6)
- 12-month moving total (dec @ 11.1)

General Sales tax collections (before earmarks): December 2018 to December 2019 (% change from prior year: 3-months and 12-month moving totals)

- 3-mo moving total (dec @ 6.4)
- 12-mo moving total (dec @ 6.7)

Withholding for the Individual Income tax: December 2018 to December 2019 (% change from prior year: 3-month and 12-month moving totals)

- 3-month moving total (dec @ 10.9)
- 12-month moving total (dec @ 7.4)

General Sales tax and Withholding for the Individual Income tax: December 2018 to December 2019 (% change from prior year in the 12-month moving total)

- General sales (dec @ 6.7)
- Withholding (dec @ 7.4)

Deed tax collections (before earmarks): December 2018 to December 2019 (% change from prior year: 3-month and 12-month moving totals)

- 3-month moving total (dec @ 0.2)
- 12-month moving total (dec @ 11.7)

US economic forecasts

Outlook for the US economy: around 2% annual growth in real GDP, 4% in nominal terms, 2% inflation, and mixed views of the stock market

●The January Blue Chip Indicators pegs real GDP growth for FY 2020 at 2.0%, and FY 2021 at 1.9%, compared to 2.4% achieved in FY 2019. Nominal growth falls from 4.3% in FY 2019 to 4.0% in both FY 2020 and FY 2021.

●CBO's January 2020 Economic and Budget outlook: nominal GDP growth rate of 4.2% in FY 2020 and 4.2% for FY 2021.

●The Blue Chip Indicators' January forecast for inflation (CPI): 2.2% in FY 2020 and 2.0% in FY 2021.

●IHS Markit and Moody's Analytics January forecasts for US Personal Income growth are between 4.0% and 4.5% each year for Fiscal Years 2020, 2021, and 2022.

●S&P 500 January baseline forecasts: IHS Markit says the stock market in the last quarter of 2020 will be 6.7% above 2019, whille Moody's expects a 4.2% decline.

Table 33. **Forecasts for US nominal and real GDP: FY 2016 through FY 2021**
(% change from prior fiscal year)

Fiscal year and date of forecast	real			nominal		
	Blue Chip	Moody's Analytics	IHS Markit	Blue Chip	Moody's Analytics	IHS Markit
FY 2016 Actual	1.6	1.6	1.6	2.5	2.5	2.5
FY 2017 Actual	2.2	2.2	2.2	3.9	3.9	3.9
FY 2018 Actual	3.0	3.0	3.0	5.4	5.4	5.4
FY 2019 Actual	2.4	2.4	2.4	4.3	4.3	4.3
FY 2020						
October	1.9	1.9	2.0	4.0	3.6	4.4
November	1.9	1.9	2.0	3.9	3.7	4.1
December	1.9	2.0	2.1	3.9	3.8	4.0
January	2.0	2.0	2.2	4.0	3.9	4.0
FY 2021						
October		1.7	2.0		3.6	4.5
November		1.6	2.1		3.5	4.4
December		1.6	2.1		3.6	4.3
January	1.9	1.8	2.2	4.0	3.7	4.5

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

Table 34. **CBO estimates of US economic indicators: FY 2018 to FY 2022**

Indicator	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Real GDP *(% ch from prior yr.)*	3.0	2.4	2.2	2.1	1.7
Nominal GDP *(% ch from prior yr.*	5.4	4.3	4.2	4.2	3.9
Personal Income	5.7	4.7	4.0	4.2	4.2
CPI *(% ch from prior yr.)*	2.4	1.9	2.3	2.5	2.6
10 yr. Treasury bond rate	2.7	2.5	1.9	2.1	2.5
Unemployment rate	4.0	3.7	3.5	3.5	3.8

Source: Congressional Budget Office, An Update to The Budget and Economic Outlook: 2019 to 2029, January 2020

Table 34A. **Alternate forecasts of nominal US GDP: FY 2018 to FY 2023** *(% change from prior FY)*

	2018	2019	2020	2021	2022	2023
IHS Markit	5.4	4.3	4.0	4.5	4.4	4.1
Moody's Analytics	5.4	4.3	3.9	3.7	4.9	4.4
CBO	5.4	4.3	4.2	4.2	3.9	3.7

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

Table 35. **Forecasts for US Personal Income: FY 2019 to FY 2022**

Forecast date	% change from prior fiscal yr				% change from prior fiscal yr			
	2019	2020	2021	2022	2019	2020	2021	2022
	IHS Markit				Moody's Analytics			
Oct	4.8	4.4	4.3	4.4	4.8	4.4	3.8	4.5
Nov	4.8	4.1	4.0	4.3	4.8	4.3	3.7	4.5
Dec	4.7	3.7	4.1	4.4	4.7	4.1	3.8	4.4
Jan	4.7	4.0	4.3	4.5	4.7	4.1	4.1	4.4

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

Table 36. **Forecasts for S and P 500: 2019.4 to 2021.4**

Forecast date	% change from prior year			% change from prior year		
	2019.4	2020.4	2021.4	2019.4	2020.4	2021.4
	IHS Markit			Moody's Analytics		
October	11.1	0.5	1.4	10.8	-7.0	8.4
November	12.9	2.5	0.9	11.9	-8.1	8.4
December	14.2	6.1	0.7	13.5	-8.4	6.5
January	14.7	6.7	1.7	14.7	-4.2	4.2

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

Table 37. **Blue Chip forecasts for CPI and 10 year Treasury interest rate: FY 2019 to FY 2021**

(% change from prior fiscal year)

Forecast date	CPI			10 yr Treasury rate		
	2019	2020	2021	2019	2020	2021
Oct	1.9	2.1	2.1	2.5	1.8	1.8
Nov	1.9	2.0	2.0	2.5	1.8	1.8
Dec	1.9	2.1	2.1	2.5	1.8	1.8
Jan	1.9	2.2	2.0	2.5	1.9	2.1

Source: Blue Chip Indicators

DC outlook for FY 2020 and FY 2021: job and income growth similar to the US average

●*Jobs:* IHS Markit anticipates increased DC job growth of 10,496 in FY 2020, with slowing again in FY 2021. Moody's has a similar outlook, and both forecasts are close to their estimates for the growth rate in the US economy. Moody's also expects almost no resident employment growth in FY 2021.

●*Population:* IHS Markit anticipates DC population growth will continue to slow each year, essentially ruling out any net in-migration. Moody's expects the amount of growth to edge up each year which would require some net in-migration.

●*Income:* IHS Markit and Moody's both expect Personal Income growth to equal exceed the FY 2019 rate of 3.8%. The forecasts are similar to the ones they have for the US economy.

●*Apartments and office space.* Delta Associates anticipates that the supply of new Class A apartment space will outpace demand over the next 3 years, and the supply of new office space is also a little higher than demand for the next 2 years.

Table 38. Forecasts of DC jobs and population to FY 2022

	FY	IHS Markit			Moody's Analytics		
		Level	1 yr ch	%ch	Level	1 yr ch	%ch
Jobs	2017	782,867	7,908	1.0	782,875	7,925	1.0
	2018	791,075	8,208	1.0	791,075	8,200	1.0
	2019	796,892	5,817	0.7	796,900	5,825	0.7
	2020	807,388	10,496	1.3	806,500	9,600	1.2
	2021	813,344	5,956	0.7	812,125	5,625	0.7
	2022	817,793	4,450	0.5	817,625	5,500	0.7
Population	2017	693,617	9,186	1.3	693,750	9,175	1.3
	2018	700,564	6,948	1.0	700,750	7,000	1.0
	2019	705,220	4,656	0.7	705,325	4,575	0.7
	2020	709,311	4,091	0.6	710,000	4,675	0.7
	2021	713,251	3,940	0.6	715,575	5,575	0.8
	2022	717,084	3,833	0.5	721,975	6,400	0.9

Source: January baseline forecasts from IHS Markit and Moody's Analytics

Table 39. DC resident jobs, households, and housing starts to FY 2022

FY	IHS Markit	Moody's Analytics
Resident jobs *(1 year change)*		
2017	6,124	6,125
2018	5,682	5,700
2019	3,614	3,600
2020	6,900	5,825
2021	6,227	475
2022	4,472	800
Households *(1 year change)*		
2017	448	10,325
2018	4,692	6,350
2019	3,045	3,575
2020	2,418	4,325
2021	2,328	3,975
2022	2,285	4,375
Housing starts		
2017	4,325	4,111
2018	4,757	4,290
2019	6,643	5,949
2020	3,799	4,297
2021	3,143	3,537
2022	2,556	3,407

Source: January baseline forecasts

Table 40. Forecasts of DC Personal Income to FY 2022

Date of est.	IHS Markit						Moody's Analytics					
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Oct	3.6	4.6	4.1	4.3	5.2	3.7	3.6	4.6	4.2	3.9	3.5	4.7
Nov	3.6	4.6	4.1	3.8	4.4	3.2	3.6	4.6	4.2	4.5	3.8	4.8
Dec	3.6	4.6	4.1	3.5	4.4	3.5	3.6	4.6	4.2	4.3	3.9	4.8
Jan	3.6	4.6	3.8	3.9	4.8	3.8	3.6	4.6	3.8	4.5	4.5	5.0

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

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

(percent change from prior year)

Indicator	IHS Markit				Moody's Analytics			
	2018	2019	2020	2021	2018	2019	2020	2021
Wage and salary jobs								
DC	1.0	0.7	1.3	0.7	1.0	0.7	1.2	0.7
Metro area					1.1	0.9	1.3	0.2
US	1.6	1.7	1.4	0.8	1.6	1.7	1.3	0.5
Personal Income								
DC	4.6	3.8	3.9	4.8	4.6	3.8	4.5	4.5
Metro area					4.6	3.7	3.8	2.8
US	5.7	4.7	4.0	4.3	5.7	4.7	4.1	4.1

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

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

IHS Markit				Moody's Analytics			
2018	2019	2020	2021	2018	2019	2020	2021
Wages and salaries earned in DC							
4.7	3.9	4.2	4.9	4.4	3.8	4.5	3.5
DC resident wages and salaries							
5.2	3.8	4.1	5.4	5.2	3.8	4.8	4.4
DC Unemployment rate (level)							
5.7	5.5	5.2	4.9	5.7	5.5	5.3	5.5

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: December 2019 to December 2022

Indicator	DC	No VA	Sub MD	Total	DC % of total
Inventory December 2019					
Inventory (msf)	31,907	70,880	41,711	144,498	*22.1*
Estimated net activity to December 2022					
new supply (msf)	16,918	13,528	7,973	38,419	*44.0*
new demand (msf)	10,355	10,355	6,540	27,250	*38.0*

Source: Delta Associates

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

Indicator	DC	No VA	Sub MD	Total	DC % of total
Inventory December 2019					
Inventory (msf)	148.0	185.5	86.3	419.8	*35.3*
Estimated net activity to December 2021					
new supply (msf)	4.1	3.7	3.0	10.8	*38.0*
new demand (msf)	3.5	4.1	2.4	10.0	*35.0*

Source: Delta Associates   msf = million square feet

DC revenue estimate

Tax revenue growth is expected to continue in FY 2020 and FY 2021, but at a much slower pace than the $684 million, 8.8% gain in FY 2019

●Tax revenue increases are estimated at $162 million (1.9%) for FY 2020 and $323 million (3.8%) for FY 2021.

●Real property tax growth of $65 million in FY 2020 is estimated to account for 40.2% of the net increase in taxes for that year. Real property's share of the increase for FY 2021 is 26.9%.

●Individual income tax revenue, which rose 11.2% in FY 2019, is expected to grow 2.5% in FY 2020 and 4.3% in FY 2021.

●The General sales tax, which grew 7.0% in FY 2019, is expected to grow 6.6% in FY 2020 and 3.8% in FY 2021.

●Deed taxes grew 18.8% FY 2019, are expected to grow 5.5% in FY 2020, and 6.8% in FY 2021.

●As a % of DC Personal Income, tax revenue rose to 14.2% in FY 2019, and is expected to be a smaller share—13.9%—in both FY 2020 and FY 2021.

Table 45. **DC Tax Revenue (before earmarks) for FY 2018 through FY 2021: December 2019 revenue estimate**

Tax	FY level ($ million)				Change from prior year ($ M)				% change from prior year			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Real property	2,554.2	2,710.1	2,775.1	2,861.8	80.9	155.9	65.0	86.8	3.3	6.1	2.4	3.1
Deed taxes	472.3	560.9	591.6	632.1	11.4	88.7	30.6	40.5	2.5	18.8	5.5	6.8
General sales	1,492.6	1,597.7	1,703.3	1,768.0	73.4	105.2	105.6	64.7	5.2	7.0	6.6	3.8
Individual income	2,066.8	2,299.3	2,356.7	2,458.6	108.6	232.5	57.3	101.9	5.5	11.2	2.5	4.3
Withholding	*1,818.2*	*1,912.2*	*1,992.5*	*2,077.4*	*51.6*	*94.0*	*80.3*	*84.9*	*2.9*	*5.2*	*4.2*	*4.3*
non-withholding	*248.7*	*387.1*	*364.1*	*381.2*	*56.9*	*138.4*	*-23.0*	*17.1*	*29.7*	*55.7*	*-5.9*	*4.7*
Business income	574.7	642.7	570.2	594.1	20.5	67.9	-72.4	23.9	3.7	11.8	-11.3	4.2
Other	610.7	644.6	620.1	625.6	3.7	33.9	-24.4	5.5	0.6	5.5	-3.8	0.9
Total	7,771.3	8,455.3	8,617.0	8,940.2	298.5	684.0	161.7	323.2	4.0	8.8	1.9	3.8

Source: ORA. Dec. 30, 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.

Table 46. **DC population and employment: FY 2018 to FY 2021**

item	2018	2019	2020	2021
Wage and salary employment	791,075	796,892	805,342	810,570
1 year change	8,208	5,817	8,450	5,228
% change	*1.0*	*0.7*	*1.1*	*0.6*
DC population	701,607	708,297	714,884	721,309
1 year change	7,203	6,690	6,587	6,426
% change	*1.0*	*1.0*	*0.9*	*0.9*
Unemployment rate	5.7	5.5	5.3	5.2

Source: ORA December 2019 revenue estimate.

Table 47. **DC Income and stock market assumption FY 2018 to FY 2021** (% change from prior year)

item	2018	2019	2020	2021
Wages and salaries earned in DC	4.7	4.6	4.1	4.0
Wages and salaries earned by DC residents	5.2	4.9	4.3	4.3
DC Personal income	4.6	4.4	4.1	4.1
S and P 500 stock index	3.3	13.0	2.9	2.9

Source: ORA December 2019 revenue estimate. Stock index, on a CY basis, 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**

item	2012	2013	2014	2015	2016	2017	2018	2019 est	2020 est	2021 est
Tax revenue ($ million)										
Level	5,853	6,100	6,290	6,917	7,234	7,473	7,771	8,455	8,617	8,940
Change from prior year	528	247	189	627	317	239	298	684	162	323
Percent change from prior year										
Tax revenue	9.9	4.2	3.1	10.0	4.6	3.3	4.0	8.8	1.9	3.8
Personal Income	4.5	2.7	5.3	8.0	4.8	3.6	4.6	4.4	4.1	4.1
Tax revenue as percent of Personal Income	13.6	13.8	13.5	13.8	13.8	13.7	13.6	14.2	13.9	13.9

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

kept overall migration positive for the past two years.

The conclusion that net migration has almost come to a halt must be considered a tentative one because the Census Bureau typically revises data from prior years when it releases annual population estimates. Regardless of what is determined to have occurred over the past few years, however, migration will be a major factor in what the city will look like in the years ahead.

Migration and future population growth. The importance of migration can be illustrated by three alternative forecasts of DC's population for the next decade. Two are from private sector economic consulting and forecasting companies, and one is from the Metropolitan Washington Council of Governments (COG). Currently, the natural increase in DC's population (calculated as births minus deaths) is running about 4,000 per year and that is not expected to change a great deal over the next 10 years. (Births are rising as the population grows, but so are deaths as the population ages, and the difference between the two doesn't change too much.) The differences in the three forecasts have mostly to do with differences in each forecast's migration projection.

Alternate forecasts of DC Populaton from 2020 to 2030

| | Level | | 10 year change | | | net migration |
	2020	2030	amount	% ch	avg rate per yr	over 10 yrs.
IHS Markit	711,790	744,390	32,600	4.6	0.45	-6,000
Moody's Analytics	713,400	781,000	67,600	9.5	0.91	30,000
COG 9.1 forecast	729,500	842,200	112,700	15.4	1.45	72,000 (est)

Source: IHS Makit and Moody's Analytics, January 2020 baseline forecasts, 4th quarter of year shown. Metropolitan Washington Council of Governments Final Round 9.1 Cooperative Forecasts, adopted Oct. 2018. Net migration is estimated for the COG forecast by subtracting an estimate for natural increase of 40,000 from the total amount of population change. (Natural increase over the decade will be about 4,000 per year.)

- The private firm IHS Markit says that there will be net **out-**migration of 6,000 over the next decade. Accordingly, this estimate pegs DC's 2030 population at 744,000, an increase of 32,600 from 2020. In percentage terms population increases 4.6% over the 10 years, an average annual increase of 0.45% per year.

- Moody's Analytics, another private firm, suggests there will be a modest uptick in net in-migration, but not nearly as much as in the early years of the last decade. In this forecast DC's 2030 population will be 781,000, an increase of 67,600 of which 30,000 is attributable to net in-migration. This is a 9.5% increase in population over the 10 years, an annual average rate of growth of 0.91%.

- The forecast of DC's population contained in the Metropolitan Washington Council of Governments Final Round 9.1 Cooperative Forecasts was officially approved in October 2018. It projects much more growth than those of the private firms. In the COG forecast, DC's population increases by 112,700 from 2020 to 2030, a 15.4% increase over the 10 years (an average annual rate of growth of 1.45%). In the COG forecast approximately 72,000 of the growth can be attributable to net migration. This forecast assumes that migration over the next decade will continue at about the pace (7,000 per year) of the nine years 2000 through 2008.

Clearly, assumptions regarding migration can make a substantial difference in what the District of Columbia could look like in 10 years. The range of these three 2030 forecasts differ by 80,000, more than 10% of the city's current population. These differences ultimately are not only about numbers of people in the abstract, but also about things like the number of houses and school children that there will be in the city.

Concluding observations. Regardless of what the 2020 Census shows about recent migration, what happens to migration in the coming years will be determined by the market forces and government policies that are relevant to those years, not to those of the past decade.

People will move here or, if they are here already, decide whether to stay or leave based on a number of factors—jobs, availability and price of housing, family situation, the quality of schools and other public services, and the attractiveness of other places to live, to name some important ones. Some of these factors can to some extent be

influenced by things the local government can do, such as improve public services. But some of the factors are also influenced by developments in the broader national economy over which the city has little control.

If there is a decline in net international migration into the United States over the next few years, for example, it would be expected that net international migration in DC would also decline. For this not to happen, DC would have to be able to capture a rising share of the shrinking national total.

In the same vein, the Bureau of the Census expects the 25 to 30 age group, a group with high mobility, to be smaller in the US in 2030 than in 2020. (As shown in the appendix table, from 2010 to 2020 this age cohort increased by 11.4%, but it is expected to decline 2.3% between 2020 to 2030.) As with international migration, if net in-migration in DC is to increase, a larger share of this shrinking age group would likely have to be attracted to the city.

Jobs located in DC are an incentive for people to move to the city, but adding the jobs that would attract more people may be getting harder. After more than 10 years of recovery from the Great Recession and with the unemployment rate at a 50-year low, job growth in the US is expected to slow. According to Moody's, from 2020 to 2030, the US economy will add 8.3 million jobs, just 36% as many as the 22.7 million added in the decade from 2010 to 2020. In this environment, to the extent new jobs are needed to raise net migration to the city this may require an increase in the share of new jobs in the nation that are located in DC.

Government jobs are, of course, a special feature of the District of Columba's economy. Whether federal employment increases, decreases, or stays about the same can have a significant impact on net migration but is beyond the control of city officials.

DC is the central city of a much larger metropolitan area, accounting for just over 10% of the region's population. The entire area in many ways is an integrated economy in which people can easily work in DC and live outside of the city, and vice versa. Accordingly, how many people move into or out of DC is related to what is happening in the region as a whole. The recent decision by Amazon to locate a second headquarters in Arlington is an example of a development important to the region that could also be of great benefit to the District of Columbia. If net migration into the region slows, a growing share of migration into the region would have to locate in DC if net migration into DC is to increase.

In the final analysis, net migration will turn out to be whatever it is given all of the various factors involved. What matters most, however, is not what that number is but the quality of life for District of Columbia residents.

—Stephen Swaim, DC Office of Revenue Analysis

About the data: The data on net migration reported here are from IHS Markit. This information is based on data from the US Bureau of the Census. The latest Census Bureau estimates are the tables released in December 2019 in connection with the annual population estimates for the 50 states and the District of Columbia as of July 1, 2019. The tables include (1) total population; (2) population as of April 1, 2010 in the decennial census and as of July 1 of each year from 2010 through 2019; (3) components of population change from July 1, 2018 to July 1, 2019, and (4) components of population change from April 1, 2010, to July 1, 2019. The components of change are natural increase (with births and deaths shown separately) and net migration (with international and domestic migration shown separately). The data included revisions to the years 2010 through 2018. IHS Markit uses the Census data to compile quarterly and annual estimates for each population component for each year from 2010 to 2019.

The IHS Markit and Moody's Analytics forecasts of DC population and net migration to 2030 are from the January baseline forecasts of these economic forecasting firms.

The forecast to 2030 from the Metropolitan Washington Council of Governments is from the Cooperative regional forecast 9.1 which was adopted formally in October 2018. The forecast includes population, households, and employment in the District of Columbia and each of the other major jurisdictions that comprise the Council of Governments. The forecast runs from 2016 to 2045 and is in 5-year increments starting in 2020.

Appendix

DC and US population: 2001 to 2019
(% change from the prior year)
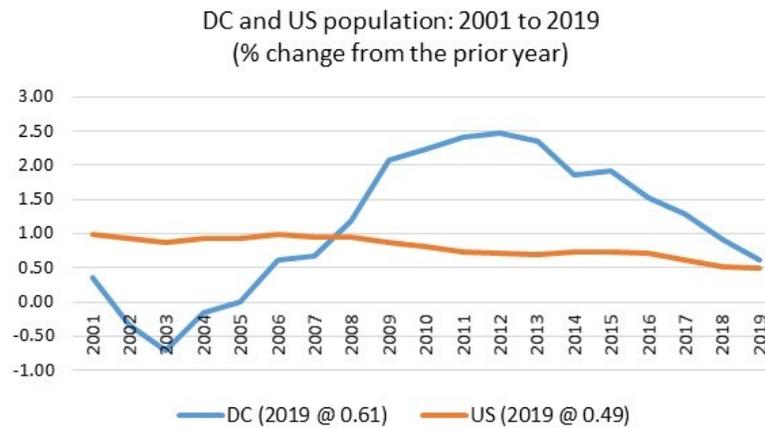
Source: Moody's Analytics

Components of population change in DC: 2010 to 2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Natural increase										
Births	9,011	9,224	9,351	9,383	9,469	9,716	9,720	9,609	9,492	9,506
Deaths (decrease)	4,758	4,550	4,690	4,735	4,753	4,870	4,976	5,227	5,502	5,748
Net natural increase	4,253	4,674	4,661	4,647	4,716	4,845	4,744	4,382	3,990	3,758
Net migration										
Net domestic	6,649	7,236	6,713	3,721	2,177	2,947	1,432	436	-1,332	-2,561
Net internatioinal	2,557	2,724	4,127	5,055	5,292	4,189	3,423	3,203	2,588	2,637
Net migration	9,672	10,175	10,729	9,055	7,694	6,898	5,009	3,484	1,431	398

Source: HIS Markit. Detail may not add due to small statistical discrepancies.

Estimated US population 25 to 30 years of age and US payroll employment: 2010, 2020, and 2030

	Level			amount of change		% change	
	2010	2020	2030	2010 to 2020	2020 to 2030	2010 to 2020	2020 to 2030
Population 25 to 30 years of age	21,102,000	23,512,000	22,963,000	2,410,000	-549,000	11.4	-2.3
Payroll employment	130,749,000	153,428,000	161,680,000	22,679,000	8,252,000	17.3	5.4

Source: (1) Populaton: US Census Bureau, projections for the United States: 2017-2060, Main Series, Table 3. (2) Employment: Moody's Analytics.

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.

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).*

Table 49. **Information sources**			
Indicator	Source	Period covered in this report	Next release
D.C. Jobs and Labor Force information	BLS	November/December	March 20
D.C. Personal Income	BEA	2019.3	March 24
D.C. Tax Collections	OTR/ORA	December	c. February 15
D.C. Housing Sales	MarketStats by ShowingTime*	December	c February 10
D.C. Commercial Office Building data	CoStar and Delta	2019.4	c. April 10
DC Apartment data	CoStar and Delta	2019.4	c. April 10
D.C. Hotel stay information	STR	December	c. February 20
Consumer Price Index	BLS	December	February 13
U.S. Jobs and Labor Force	BLS	November/December	February 7
U.S. GDP and Personal Income	BEA	2019.4	February 27
S and P 500 Stock Index	FRED (St. Louis Fed Reserve)	December	February 1
Interest rate on 10-Year Treasury Securities	FRED (St. Louis Fed Reserve)	December	February 1
IHS Markit D.C. forecast	IHS Markit	January	c. February 20
Moody's Analytics D.C. forecast	Moody's Analytics	January	c. February 20
Blue Chip Economic Indicators for the U.S.	Wolters Kluwer	January	c. February 10
Accessed through Bright MLS & the Greater Capital Area Association of Realtors.			

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.

Fitzroy Lee, Deputy Chief Financial Officer and Chief Economist
Office of Revenue Analysis
1101 4th St., SW, Suite W770
Washington D.C. 20024
202-727-7775