September 2018 Preliminary Economic Forecast

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This forecast is based on a modified version of IHS Markit's August 2018 Control forecast for the U.S. economy. As usual, we have adjusted real gross domestic product (GDP) to match the Blue Chip "Consensus" GDP forecast. As in June, the August Blue Chip forecast for real GDP growth in 2018 and 2019 was 2.9% and 2.6%. The Blue Chip long-range forecast has not been updated since June and remains at 1.9%, 1.9%, 2.1% and 2.1% in 2020 through 2023.

Our oil price forecast reflects the futures markets, primarily the Brent (North Sea) oil price but also the West Texas Intermediate (WTI) benchmark. This forecast was based on the Wednesday, August 29, 2018 closing prices for Brent and WTI futures. The latest futures prices are slightly higher than the prices used in the June forecast. The refiner acquisition price of crude oil in the fourth quarter of 2018 is now expected to average $71 per barrel compared to $69 in the June forecast. By the end of 2023, the refiner acquisition price is now expected to average $59 per barrel compared to $56 in the June forecast.

A comparison of the preliminary September U.S. forecast with the June U.S. forecast is shown in Table 2.

We have two months of new Washington employment data since the June forecast was released. Total nonfarm payroll employment rose 18,100 (seasonally adjusted) in June and July, which was 6,300 more than the 11,800 expected in the June forecast. The variance in employment growth was mostly due to the private services-providing sectors, which added 15,300 jobs compared to 9,400 in the June forecast. Manufacturing employment increased 1,700 in June and July boosted by an increase of 1,300 aerospace employees. Construction employment decreased by 500 jobs while government payrolls expanded by 1,600 jobs.

We have also incorporated another quarter of benchmark employment data from the Quarterly Census of Employment and Wages (QCEW). The new QCEW data and other revisions increased the estimated level of total employment in

May 2018 by 13,400 jobs (0.4%). As a result of the upward revision to history and stronger-than-expected growth, the combined effect is 19,600 (0.6%) more jobs in July 2018 than expected in the June forecast.

In June, after the forecast was released, the Bureau of Economic Analysis released estimates for state personal income through the first quarter of 2018. We have incorporated the new BEA estimates as well as additional Washington QCEW and other wage data. Our current estimate of Washington personal income in the first quarter of 2018 is $441.8 billion, which is $5.0 billion (1.1%) higher than assumed in the June forecast. The new estimate of wage and salary income is $5.6 billion higher than expected and nonwage income is $0.6 billion lower.

Washington housing construction declined in the second quarter of 2018 and fell short of the June forecast. The number of housing units authorized by building permits decreased to 43,200 units (SAAR) in the second quarter of 2018 from 49,200 units in the first quarter. Second quarter permits were made up of 23,000 single-family units and 20,200 multi-family units. The June forecast assumed 46,700 units (SAAR) in the second quarter, consisting of 24,400 single-family units and 22,300 multi-family units. Permits remained weak in July at 35,400 units (SAAR) of which 21,800 were single-family units and 13,700 were multi-family units. The June forecast expected 42,800 units in the third quarter as a whole, consisting of 23,600 single-family units and 19,300 multi-family units.

Washington employment is expected to grow 3.0% this year compared to 2.5% in the June forecast. As in June, we expect growth to decelerate gradually as the recovery matures. We expect employment growth to average 1.2% per year in 2019 through 2023, which is slightly stronger than the 1.1% per year expected in the June forecast. Our forecast for nominal personal income growth this year is 6.6%, up from 5.8% in the June forecast, due mainly to an upward revision to first quarter growth. Our new forecast for nominal personal income growth in 2019 through 2023 averages 4.9% per year compared to 5.1% per year in the June forecast.

A comparison of the preliminary September Washington forecast with the June Washington forecast is shown in Table 3.

Table 1

U.S. Economic Forecast Comparison

August 2018

	2018Q2	2018Q3	2018Q4	2019Q1	2018	2019	2020	2021	2022	2023
Real GDP, Percent Change, Annual Rate										
ERFC (Preliminary September)	4.1	3.3	2.8	2.3	2.9	2.6	1.9	1.9	2.1	2.1
IHS	4.1	3.2	3.2	2.5	2.9	2.7	1.9	1.6	1.8	1.7
Economy.com	4.1	3.7	3.4	2.6	3.0	2.7	0.9			
Blue Chip Average*		3.1	2.8	2.4	2.9	2.6	1.9	1.9	2.1	2.1
Blue Chip Top 10*		3.6	3.3	2.9	3.0	3.0	2.5	2.5	2.6	2.5
Blue Chip Bottom 10*		2.6	1.9	1.7	2.8	2.0	1.2	1.4	1.5	1.6
Real Consumption, Percent Change, Annual Rate										
ERFC (Preliminary September)	4.0	2.7	2.6	2.5	2.6	2.5	2.0	2.0	2.1	2.2
IHS	4.0	2.6	2.7	2.3	2.5	2.5	2.3	2.4	2.4	2.2
Economy.com	4.0	2.6	2.6	2.6	2.5	2.4	0.9			
Blue Chip Average*		2.7	2.5	2.3	2.6	2.5	2.0	2.0	2.1	2.2
Blue Chip Top 10*		3.2	2.9	2.6	2.7	2.9	2.4	2.5	2.5	2.6
Blue Chip Bottom 10*		2.3	2.1	1.7	2.4	2.1	1.4	1.6	1.8	1.8
Federal Funds Rate										
ERFC (Preliminary September)	1.7	1.9	2.2	2.4	1.8	2.8	3.4	3.4	3.4	3.3
IHS	1.7	1.9	2.2	2.4	1.8	2.8	3.4	3.4	3.4	3.3
Economy.com	1.7	2.0	2.3	2.7	1.9	3.1	3.5			
Three Month T-Bill Rate										
ERFC (Preliminary September)	1.8	2.1	2.4	2.5	2.0	2.7	3.1	3.2	3.1	3.0
IHS	1.8	2.1	2.4	2.5	2.0	2.8	3.1	3.2	3.2	3.0
Blue Chip Average*		2.1	2.3	2.5	2.0	2.7	2.7	2.8	2.9	2.9
Blue Chip Top 10*		2.2	2.4	2.6	2.0	2.9	3.3	3.4	3.5	3.5
Blue Chip Bottom 10*		2.0	2.1	2.3	1.9	2.5	2.1	2.1	2.2	2.2
10-Yr. T-Note Yield										
ERFC (Preliminary September)	2.9	3.0	3.1	3.2	2.9	3.3	3.5	3.5	3.4	3.4
IHS	2.9	3.0	3.1	3.2	2.9	3.3	3.5	3.5	3.5	3.5
Economy.com	2.9	3.1	3.2	3.4	3.0	3.5	3.6			
Blue Chip Average*		3.0	3.1	3.2	3.0	3.3	3.5	3.6	3.7	3.7
Blue Chip Top 10*		3.2	3.3	3.5	3.1	3.8	4.2	4.3	4.4	4.4
Blue Chip Bottom 10*		2.9	2.9	2.9	2.8	2.9	2.8	2.9	3.0	3.0
Consumer Price Index, Percent Change, Annual Rate										
ERFC (Preliminary September)	1.7	2.7	2.6	2.1	2.6	2.2	2.1	1.9	1.9	1.9
IHS	1.7	2.7	2.7	2.7	2.6	2.3	2.4	2.2	2.1	2.1
Economy.com	1.7	2.8	2.4	2.6	2.6	2.5	2.3			
Blue Chip Average*		2.4	2.2	2.3	2.5	2.3	2.3	2.3	2.3	2.3
Blue Chip Top 10*		2.9	2.8	2.9	2.7	2.7	2.8	2.8	2.8	2.8
Blue Chip Bottom 10*		1.9	1.6	1.6	2.4	1.9	1.8	1.9	2.0	2.0
Payroll Employment, Millions										
ERFC (Preliminary September)	148.7	149.4	150.0	150.5	149.0	151.2	152.6	153.5	154.6	155.5
Percent Change, Annual Rate	1.7	1.8	1.7	1.4	1.6	1.4	1.0	0.6	0.7	0.6
IHS	148.7	149.4	150.0	150.6	149.0	151.3	152.8	153.5	154.1	154.7
Percent Change, Annual Rate	1.7	1.8	1.8	1.5	1.6	1.5	1.0	0.4	0.4	0.4
Economy.com	148.7	149.3	149.9	150.5	149.0	151.1	151.6			
Percent Change, Annual Rate	1.8	1.5	1.8	1.5	1.6	1.4	0.3			
Unemployment Rate, Percent										
ERFC (Preliminary September)	3.9	3.8	3.6	3.6	3.9	3.5	3.6	3.8	3.8	3.9
IHS	3.9	3.8	3.6	3.5	3.9	3.5	3.6	3.8	4.0	4.2
Economy.com	3.9	3.8	3.7	3.5	3.9	3.4	3.9			
Blue Chip Average*		3.8	3.7	3.6	3.9	3.6	4.0	4.2	4.3	4.4
Blue Chip Top 10*		3.9	3.9	3.8	4.0	3.9	4.7	5.1	5.3	5.3
Blue Chip Bottom 10*		3.7	3.6	3.4	3.8	3.3	3.5	3.6	3.6	3.7
Real Disposable Personal Income, Percent Change, Annual Rate										
ERFC (Preliminary September)	2.6	1.4	1.5	3.6	2.7	2.5	2.5	2.2	2.3	2.4
IHS	2.6	1.4	1.5	3.3	2.7	2.5	2.4	2.1	2.2	2.2
Blue Chip Average*		2.4	2.4	2.7	2.8	2.4	2.2	2.2	2.3	2.3
Blue Chip Top 10*		3.2	3.3	4.0	3.0	3.0	2.9	2.9	2.9	2.9
Blue Chip Bottom 10*		1.3	1.5	1.6	2.2	1.7	1.4	1.7	1.8	1.8
West Texas Intermediate										
ERFC (Preliminary September)	68.0	69.5	69.2	68.3	67.4	66.9	63.2	60.3	58.3	57.1
IHS	68.0	70.4	70.0	71.7	67.8	69.6	75.9	76.8	76.1	75.2
Economy.com	67.9	71.1	70.1	70.1	68.0	67.9	59.9			

* Forecasts beyond 2018 are from the March 2018 Blue Chip Economic Indicators

Table 2

U.S. Forecast Comparison

	2018Q2	2018Q3	2018Q4	2019Q1	2017	2018	2019	2020	2021	2022	2023
Real GDP (Billions of 2012 Dollars)											
September Forecast, Preliminary	18,507	18,657	18,789	18,897	18,051	18,569	19,050	19,411	19,789	20,198	20,613
Percent Change	*4.1%*	*3.3%*	*2.8%*	*2.3%*	*2.2%*	*2.9%*	*2.6%*	*1.9%*	*1.9%*	*2.1%*	*2.1%*
June Forecast	18,445	18,582	18,710	18,820	17,989	18,506	18,982	19,341	19,718	20,125	20,539
Percent Change	*3.5%*	*3.0%*	*2.8%*	*2.4%*	*2.3%*	*2.9%*	*2.6%*	*1.9%*	*1.9%*	*2.1%*	*2.1%*
Real Consumption (Billions of 2012 Dollars)											
September Forecast, Preliminary	12,848	12,932	13,015	13,094	12,559	12,879	13,199	13,457	13,732	14,025	14,329
Percent Change	*4.0%*	*2.7%*	*2.6%*	*2.5%*	*2.5%*	*2.6%*	*2.5%*	*2.0%*	*2.0%*	*2.1%*	*2.2%*
June Forecast	12,901	12,988	13,071	13,148	12,619	12,941	13,253	13,511	13,787	14,082	14,387
Percent Change	*3.1%*	*2.7%*	*2.6%*	*2.4%*	*2.8%*	*2.6%*	*2.4%*	*2.0%*	*2.0%*	*2.1%*	*2.2%*
PCE Price Index (2012=100)											
September Forecast, Preliminary	108.0	108.6	109.2	109.7	106.1	108.3	110.5	112.7	114.8	116.8	118.8
Percent Change	*1.8%*	*2.2%*	*2.2%*	*2.0%*	*1.8%*	*2.1%*	*2.0%*	*2.0%*	*1.8%*	*1.8%*	*1.8%*
June Forecast	108.1	108.7	109.2	109.7	106.2	108.4	110.5	112.8	115.1	117.5	119.9
Percent Change	*2.0%*	*2.0%*	*2.0%*	*1.8%*	*1.7%*	*2.1%*	*1.9%*	*2.1%*	*2.0%*	*2.1%*	*2.1%*
Real Personal Income (Billions of 2012 Dollars)											
September Forecast, Preliminary	16,204	16,262	16,332	16,471	15,867	16,226	16,629	17,035	17,435	17,880	18,335
Percent Change	*2.4%*	*1.4%*	*1.7%*	*3.4%*	*2.6%*	*2.3%*	*2.5%*	*2.4%*	*2.3%*	*2.6%*	*2.5%*
June Forecast	14,821	14,898	15,013	15,151	14,583	14,870	15,293	15,677	16,062	16,461	16,876
Percent Change	*2.0%*	*2.1%*	*3.1%*	*3.7%*	*1.4%*	*2.0%*	*2.8%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*
Nonfarm Payroll Employment (Millions)											
September Forecast, Preliminary	148.7	149.4	150.0	150.5	146.6	149.0	151.2	152.6	153.5	154.6	155.5
Percent Change	*1.7%*	*1.8%*	*1.7%*	*1.4%*	*1.6%*	*1.6%*	*1.4%*	*1.0%*	*0.6%*	*0.7%*	*0.6%*
June Forecast	148.6	149.2	149.8	150.3	146.6	148.9	150.9	152.3	153.3	154.1	154.8
Percent Change	*1.4%*	*1.7%*	*1.6%*	*1.3%*	*1.6%*	*1.6%*	*1.3%*	*0.9%*	*0.6%*	*0.5%*	*0.5%*
Unemployment Rate (Percent of Labor Force)											
September Forecast, Preliminary	3.9	3.8	3.6	3.6	4.4	3.9	3.5	3.6	3.8	3.8	3.9
June Forecast	3.9	3.8	3.6	3.6	4.4	3.8	3.6	3.7	3.8	4.0	4.1
Oil Price, Refiner's Acquisition											
September Forecast, Preliminary	67.0	69.4	70.9	70.3	50.7	67.3	69.0	65.5	62.5	60.5	59.3
June Forecast	69.1	69.6	68.7	67.9	50.7	67.3	66.3	62.6	59.9	58.1	56.8
30 Year Fixed Mortgage Rate (Percent, average)											
September Forecast, Preliminary	4.5	4.6	4.8	4.9	4.0	4.6	5.0	5.2	5.2	5.1	5.1
June Forecast	4.5	4.6	4.7	4.8	4.0	4.5	5.0	5.3	5.3	5.3	5.2
3 Month T-Bill Rate (Percent, average)											
September Forecast, Preliminary	1.8	2.1	2.4	2.5	0.9	2.0	2.7	3.1	3.2	3.1	3.0
June Forecast	1.9	2.1	2.3	2.4	0.9	1.9	2.7	3.1	3.2	3.2	3.0

Table 3

Washington Forecast Comparison

	2018Q2	2018Q3	2018Q4	2019Q1	2017	2018	2019	2020	2021	2022	2023
Real Personal Income (Billions of 2012 Dollars)											
September Forecast, Preliminary	411.5	414.4	416.6	420.7	395.9	413.4	425.6	438.3	450.6	464.0	477.6
Percent Change	*0.5%*	*2.9%*	*2.2%*	*3.9%*	*3.7%*	*4.4%*	*3.0%*	*3.0%*	*2.8%*	*3.0%*	*2.9%*
June Forecast	408.5	411.2	414.8	418.9	395.8	410.1	423.3	435.6	448.4	461.4	474.8
Percent Change	*2.4%*	*2.8%*	*3.5%*	*4.0%*	*3.9%*	*3.6%*	*3.2%*	*2.9%*	*2.9%*	*2.9%*	*2.9%*
Personal Income (Billions of Dollars)											
September Forecast, Preliminary	444.4	450.0	455.0	461.6	420.0	447.8	470.4	494.0	517.1	541.8	567.6
Percent Change	*2.4%*	*5.1%*	*4.5%*	*5.9%*	*5.6%*	*6.6%*	*5.1%*	*5.0%*	*4.7%*	*4.8%*	*4.8%*
June Forecast	441.6	446.8	452.9	459.4	420.1	444.6	467.7	491.4	516.0	542.0	569.1
Percent Change	*4.4%*	*4.8%*	*5.5%*	*5.8%*	*5.6%*	*5.8%*	*5.2%*	*5.1%*	*5.0%*	*5.0%*	*5.0%*
Disposable Personal Income (Billions of Dollars)											
September Forecast, Preliminary	397.8	402.7	406.9	413.0	374.2	400.6	421.0	442.4	462.6	483.6	505.8
Percent Change	*2.7%*	*5.0%*	*4.3%*	*6.1%*	*5.6%*	*7.1%*	*5.1%*	*5.1%*	*4.6%*	*4.6%*	*4.6%*
June Forecast	392.9	397.4	403.0	408.9	372.3	395.3	416.6	437.7	458.7	480.5	503.5
Percent Change	*5.0%*	*4.7%*	*5.7%*	*6.1%*	*5.0%*	*6.2%*	*5.4%*	*5.1%*	*4.8%*	*4.7%*	*4.8%*
Nonfarm Payroll Employment (Thousands)											
September Forecast, Preliminary	3409	3436	3454	3471	3322	3421	3494	3544	3578	3610	3637
Percent Change	*2.7%*	*3.2%*	*2.1%*	*2.0%*	*2.4%*	*3.0%*	*2.1%*	*1.4%*	*0.9%*	*0.9%*	*0.8%*
June Forecast	3396	3414	3432	3448	3323	3405	3469	3517	3550	3578	3601
Percent Change	*2.2%*	*2.2%*	*2.1%*	*1.9%*	*2.4%*	*2.5%*	*1.9%*	*1.4%*	*1.0%*	*0.8%*	*0.6%*
Unemployment Rate (Percent of Labor Force)											
September Forecast, Preliminary	4.7	4.6	4.4	4.3	4.8	4.6	4.2	4.2	4.3	4.3	4.4
June Forecast	4.7	4.6	4.4	4.3	4.8	4.6	4.3	4.3	4.4	4.5	4.6
Manufacturing Employment (Thousands)											
September Forecast, Preliminary	285.5	287.9	289.7	290.9	283.8	286.8	291.4	292.7	294.3	296.8	299.5
Percent Change	*1.9%*	*3.5%*	*2.5%*	*1.7%*	*-2.1%*	*1.1%*	*1.6%*	*0.5%*	*0.5%*	*0.9%*	*0.9%*
June Forecast	285.9	287.1	288.7	289.8	283.8	286.6	290.8	293.2	295.3	296.7	297.9
Percent Change	*1.4%*	*1.7%*	*2.2%*	*1.5%*	*-2.1%*	*1.0%*	*1.5%*	*0.8%*	*0.7%*	*0.5%*	*0.4%*
Construction Employment (Thousands)											
September Forecast, Preliminary	211.6	211.7	212.3	212.8	199.7	211.1	213.3	214.6	214.1	213.4	212.0
Percent Change	*5.5%*	*0.3%*	*1.0%*	*0.9%*	*7.0%*	*5.7%*	*1.1%*	*0.6%*	*-0.2%*	*-0.3%*	*-0.7%*
June Forecast	210.7	211.9	212.4	213.1	199.7	210.8	213.9	215.0	214.8	214.1	212.2
Percent Change	*4.8%*	*2.3%*	*1.0%*	*1.1%*	*7.0%*	*5.6%*	*1.4%*	*0.5%*	*-0.1%*	*-0.3%*	*-0.9%*
Housing Permits (Thousands)											
September Forecast, Preliminary	43.2	40.1	43.0	43.4	45.8	43.9	43.9	44.3	43.4	42.3	41.2
Percent Change	*-40.2%*	*-25.8%*	*32.0%*	*3.6%*	*3.9%*	*-4.2%*	*0.1%*	*0.8%*	*-2.1%*	*-2.6%*	*-2.6%*
June Forecast	46.7	42.8	42.9	43.2	45.8	45.4	43.0	43.4	42.7	42.0	40.9
Percent Change	*-18.6%*	*-29.2%*	*0.8%*	*2.3%*	*3.9%*	*-0.8%*	*-5.3%*	*0.9%*	*-1.6%*	*-1.7%*	*-2.7%*