



September 2016 Preliminary Economic Forecast

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This forecast is based on a modified version of Global Insight's August 2016 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. Since the June forecast, the level of real GDP in 2015 was revised up 0.3% as a result of the annual revision of the national income and product accounts. However, the August Blue Chip forecast calls for growth rates of 1.5% and 2.2% in 2016 and 2017, down from 1.8% and 2.3% in June leaving the level of GDP in 2016 and 2017 virtually unchanged. The forecasts for growth in 2018 through 2021 are unchanged at 2.2%, 2.1%, 2.2%, and 2.1% as there has not been a new Blue Chip long term forecast since March.

Our oil price forecast continues to rely on 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 31, 2016 closing prices for Brent and WTI futures. The latest futures prices are lower than the prices used in the June forecast. The refiner acquisition price of crude oil in the third quarter of 2016 is now expected to average \$42 per barrel compared to \$48 in the June forecast. As in June, oil prices are expected to rise during the remainder of the forecast. By the end of 2021, the refiner acquisition price is expected to increase to \$54 per barrel.

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 13,800 (seasonally adjusted) in June and July, which was 10,600 more than the 3,200 expected in the June forecast. The manufacturing sector accounted for much of the variance in job growth, adding 500 jobs in the two-month period; the June forecast expected reduction of 3,900 jobs. The reason was mostly aerospace which was expected to shed 3,700 jobs but instead added 100. Construction employment increased 1,100 and government payrolls expanded by 1,400

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jobs. As is usually the case, the bulk of the job growth was in private, service-providing sectors which added 10,800 jobs in the last two months

In June we incorporated Boeing's stated intention to reduce its commercial airplane division employment by 4,000 by the middle of the year which we assumed would be by July. The actual decline by July was much smaller than this announcement implied. In the preliminary September forecast we have retained the overall decline implied by the announcement but have spread it over the remaining five months of 2016. In 2017 through 2019 we expect a more gradual decline in aerospace employment similar to the assumption made in June. We project no change in aerospace employment in the final two years of the forecast.

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 raised the estimated level of total employment in May 2016 by 14,800 jobs (0.5%). As a result of the upward revision to history and stronger-than-expected growth, the total effect is 25,400 (0.8%) more jobs in July 2016 than expected in the June forecast.

In June, the Bureau of Economic Analysis released estimates for state personal income through the first quarter of 2016. We have incorporated the new BEA estimates as well as additional Washington Quarterly Census of Employment and Wages (QCEW) and other wage data also through the first quarter. Our current estimate of Washington personal income in the first quarter of 2016 is \$380.6 billion which is \$3.5 billion (0.9%) higher than assumed in the June forecast. Wages and salaries were \$4.5 billion higher than believed in June but other sources of personal income were \$1.0 billion lower.

Washington housing construction was stronger than expected in the second quarter. Washington housing units authorized by building permits averaged 45,300 units (SAAR) in the second quarter of 2016, up from 37,600 in the first quarter. The June forecast expected an average rate of 42,600 units in the second quarter. Multi-family permits averaged 22,700 units in the second quarter, up from 15,300 units in the first quarter and higher than the 20,100 expected in the June forecast. Single-family permits averaged 22,600 units in second quarter, up from 22,300 units in the first quarter and slightly higher than the 22,500 units forecasted for the second quarter. The third quarter of 2016 got off to a weaker start with 39,800 units (SAAR) permitted in July of which 21,600 were single-family and 18,200 were multi-family.

Washington employment is expected to grow 2.9% this year, up from 2.4% in the June forecast due mainly to the strong job growth in the first half of the year. As in June, we expect growth to gradually decelerate as the recovery

matures. We expect employment growth to average 1.3% per year in 2017 through 2021 which is the same rate assumed in June. Our preliminary forecast for nominal personal income growth this year is 4.7%, up sharply from 4.1% in the June forecast. The higher growth this year is mainly due to the Quarterly Census of Employment and Wages data for the first quarter which indicates that wages are higher than previously believed. Our new forecast for nominal personal income growth in 2017 through 2021 averages 5.0% per year, the same rate as 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 2016

	2016Q2	2016Q3	2016Q4	2017Q1	2016	2017	2018	2019	2020	2021
Real GDP, Percent Change, Annual Rate										
ERFC (Preliminary September)	1.2	2.9	2.3	2.2	1.5	2.2	2.2	2.1	2.2	2.1
Global Insight	1.2	3.0	2.6	2.7	1.6	2.4	2.4	2.2	2.3	2.3
Economy.com	1.2	3.4	3.0	3.3	1.6	2.9	2.6			
Blue Chip Average*	1.2	2.8	2.3	2.2	1.5	2.2	2.2	2.1	2.2	2.1
Blue Chip Top 10*	1.2	3.8	2.8	2.6	1.7	2.5	2.6	2.6	2.6	2.5
Blue Chip Bottom 10*	1.2	2.1	1.8	1.7	1.4	1.9	1.7	1.5	1.8	1.7
Real Consumption, Percent Change, Annual Rate										
ERFC (Preliminary September)	4.2	2.6	2.5	2.4	2.6	2.5	2.3	2.2	2.2	2.2
Global Insight	4.2	3.5	2.6	2.2	2.7	2.6	2.3	2.6	2.5	2.4
Economy.com	4.2	3.1	2.9	3.5	2.7	3.2	3.1			
Blue Chip Average*	4.2	2.7	2.5	2.3	2.6	2.5	2.3	2.2	2.2	2.2
Blue Chip Top 10*	4.2	3.5	3.1	2.7	2.8	2.9	2.7	2.6	2.5	2.5
Blue Chip Bottom 10*	4.2	2.1	2.0	2.0	2.4	2.2	1.9	1.6	1.9	1.8
Federal Funds Rate										
ERFC (Preliminary September)	0.4	0.4	0.5	0.7	0.4	1.0	1.7	2.7	3.0	3.0
Global Insight	0.4	0.4	0.5	0.7	0.4	1.0	1.7	2.7	3.0	3.0
Economy.com	0.4	0.4	0.6	0.7	0.4	0.9	2.2			
Three Month T-Bill Rate										
ERFC (Preliminary September)	0.3	0.3	0.4	0.6	0.3	0.9	1.6	2.5	2.8	2.8
Global Insight	0.3	0.3	0.4	0.6	0.3	0.9	1.6	2.5	2.8	2.8
Blue Chip Average*	0.3	0.3	0.4	0.6	0.3	0.9	2.3	2.7	2.9	3.0
Blue Chip Top 10*	0.3	0.3	0.6	0.8	0.3	1.2	3.3	3.8	3.8	3.7
Blue Chip Bottom 10*	0.3	0.3	0.3	0.4	0.3	0.6	1.5	1.6	1.9	2.2
10-Yr. T-Note Yield										
ERFC (Preliminary September)	1.8	1.6	1.7	2.0	1.7	2.3	2.8	3.5	3.7	3.7
Global Insight	1.8	1.5	1.7	2.0	1.7	2.3	2.9	3.5	3.8	3.8
Economy.com	1.8	1.7	2.0	2.3	1.8	2.9	3.9			
Blue Chip Average*	1.8	1.6	1.7	1.9	1.7	2.1	3.4	3.7	3.8	3.9
Blue Chip Top 10*	1.8	1.7	1.9	2.2	1.8	2.5	4.2	4.4	4.5	4.5
Blue Chip Bottom 10*	1.8	1.5	1.5	1.5	1.6	1.7	2.6	2.8	3.0	3.2
Consumer Price Index, Percent Change, Annual Rate										
ERFC (Preliminary September)	2.5	1.8	3.3	1.9	1.3	2.3	2.1	2.1	2.3	2.3
Global Insight	2.5	1.2	3.5	2.5	1.2	2.5	2.4	2.4	2.6	2.7
Economy.com	2.5	1.8	1.8	2.6	1.2	2.3	2.7			
Blue Chip Average*	2.5	2.0	2.2	2.3	1.3	2.3	2.3	2.3	2.3	2.3
Blue Chip Top 10*	2.5	2.7	2.9	2.7	1.4	2.7	2.8	2.8	2.7	2.7
Blue Chip Bottom 10*	2.5	1.4	1.5	1.8	1.2	2.0	1.9	1.9	1.9	2.0
Payroll Employment, Millions										
ERFC (Preliminary September)	144.0	144.7	145.2	145.6	144.3	146.0	147.1	148.2	149.3	150.3
Percent Change, Annual Rate	1.3	1.9	1.4	1.2	1.8	1.2	0.7	0.7	0.7	0.7
Global Insight	144.0	144.6	145.1	145.6	144.3	146.1	147.3	148.4	149.8	151.0
Percent Change, Annual Rate	1.3	1.7	1.4	1.5	1.7	1.2	0.8	0.8	0.9	0.9
Economy.com	144.0	144.6	145.2	145.8	144.3	146.6	148.7			
Percent Change, Annual Rate	1.3	1.7	1.8	1.6	1.8	1.6	1.4			
Unemployment Rate, Percent										
ERFC (Preliminary September)	4.9	4.8	4.7	4.7	4.8	4.7	4.6	4.6	4.7	4.8
Global Insight	4.9	4.9	4.8	4.7	4.9	4.7	4.8	4.9	5.0	5.0
Economy.com	4.9	4.9	4.9	4.8	4.9	4.7	4.5			
Blue Chip Average*	4.9	4.8	4.7	4.7	4.8	4.6	4.6	4.7	4.7	4.8
Blue Chip Top 10*	4.9	4.9	4.9	4.8	4.9	4.8	5.1	5.2	5.1	5.2
Blue Chip Bottom 10*	4.9	4.7	4.6	4.4	4.8	4.3	4.1	4.2	4.2	4.3
Real Disposable Personal Income, Percent Change, Annual Rate										
ERFC (Preliminary September)	1.2	3.1	1.9	2.6	2.5	2.3	2.7	2.6	2.4	2.3
Global Insight	1.2	3.9	2.3	2.7	2.6	2.6	2.9	2.9	2.7	2.5
Blue Chip Average*	1.2	2.2	2.3	2.6	2.4	2.3	2.6	2.4	2.4	2.4
Blue Chip Top 10*	1.2	2.9	3.1	3.3	2.6	2.8	3.5	3.4	3.0	3.0
Blue Chip Bottom 10*	1.2	1.4	1.7	1.9	2.2	1.9	2.0	1.6	1.9	1.8
West Texas Intermediate										
ERFC (Preliminary September)	45.6	44.7	45.3	47.0	42.3	48.5	50.7	52.1	53.2	54.2
Global Insight	45.6	44.1	47.6	52.5	42.7	56.2	61.1	68.6	76.8	86.5
Economy.com	45.6	47.8	50.3	53.8	44.3	56.6	62.7			

* Forecasts beyond 2017 are from the March 2016 Blue Chip Economic Indicators

Table 2

U.S. Forecast Comparison

	2016Q2	2016Q3	2016Q4	2017Q1
Real GDP (Billions of 2009 Dollars)				
September Forecast, Preliminary	16,575	16,694	16,791	16,882
Percent Change	1.2%	2.9%	2.3%	2.2%
June Forecast	16,588	16,681	16,782	16,884
Percent Change	2.0%	2.3%	2.4%	2.5%
Real Consumption (Billions of 2009 Dollars)				
September Forecast, Preliminary	11,483	11,558	11,630	11,699
Percent Change	4.2%	2.6%	2.5%	2.4%
June Forecast	11,459	11,532	11,605	11,677
Percent Change	2.6%	2.6%	2.5%	2.5%
Implicit Price Deflator, PCE (2009=1.00)				
September Forecast, Preliminary	1.105	1.109	1.115	1.119
Percent Change	1.9%	1.5%	2.2%	1.4%
June Forecast	1.105	1.110	1.117	1.121
Percent Change	2.3%	1.6%	2.5%	1.5%
Real Personal Income (Billions of 2009 Dollars)				
September Forecast, Preliminary	14,348	14,452	14,523	14,627
Percent Change	0.9%	2.9%	2.0%	2.9%
June Forecast	14,375	14,442	14,500	14,617
Percent Change	1.4%	1.9%	1.6%	3.3%
Nonfarm Payroll Employment (Millions)				
September Forecast, Preliminary	144.0	144.7	145.2	145.6
Percent Change	1.3%	1.9%	1.4%	1.2%
June Forecast	144.0	144.3	145.0	145.6
Percent Change	1.2%	1.1%	1.9%	1.5%
Unemployment Rate (Percent of Labor Force)				
September Forecast, Preliminary	4.9	4.8	4.7	4.7
June Forecast	4.8	4.7	4.7	4.6
30 Year Fixed Mortgage Rate (Percent, average)				
September Forecast, Preliminary	3.6	3.5	3.6	3.8
June Forecast	3.6	3.7	4.0	4.1
3 Month T-Bill Rate (Percent, average)				
September Forecast, Preliminary	0.3	0.3	0.4	0.6
June Forecast	0.3	0.4	0.5	0.7

2015	2016	2017	2018	2019	2020	2021
16,397	16,646	17,016	17,391	17,756	18,147	18,528
2.6%	1.5%	2.2%	2.2%	2.1%	2.2%	2.1%
16,349	16,639	17,022	17,397	17,762	18,153	18,534
2.4%	1.8%	2.3%	2.2%	2.1%	2.2%	2.1%
11,215	11,509	11,799	12,071	12,336	12,608	12,885
3.2%	2.6%	2.5%	2.3%	2.2%	2.2%	2.2%
11,213	11,495	11,779	12,050	12,315	12,586	12,862
3.1%	2.5%	2.5%	2.3%	2.2%	2.2%	2.2%
1.095	1.107	1.126	1.145	1.165	1.187	1.210
0.4%	1.1%	1.7%	1.7%	1.8%	1.9%	1.9%
1.094	1.108	1.128	1.149	1.171	1.194	1.217
0.3%	1.2%	1.9%	1.9%	1.9%	1.9%	1.9%
14,113	14,410	14,766	15,180	15,599	16,019	16,408
4.0%	2.1%	2.5%	2.8%	2.8%	2.7%	2.4%
14,026	14,411	14,754	15,139	15,546	15,959	16,361
4.1%	2.7%	2.4%	2.6%	2.7%	2.7%	2.5%
141.8	144.3	146.0	147.1	148.2	149.3	150.3
2.1%	1.8%	1.2%	0.7%	0.7%	0.7%	0.7%
141.8	144.2	146.1	147.1	148.2	149.3	150.3
2.1%	1.7%	1.3%	0.7%	0.7%	0.8%	0.7%
5.3	4.8	4.7	4.6	4.6	4.7	4.8
5.3	4.8	4.6	4.5	4.5	4.6	4.7
3.9	3.6	4.1	4.8	5.5	5.8	5.8
3.9	3.8	4.2	4.9	5.7	5.7	5.6
0.1	0.3	0.9	1.6	2.5	2.8	2.8
0.1	0.4	1.1	2.1	2.8	2.8	2.8

Table 3

Washington Forecast Comparison

	2016Q2	2016Q3	2016Q4	2017Q1
Real Personal Income (Billions of 2009 Dollars)				
September Forecast, Preliminary	345.7	347.7	348.7	355.2
Percent Change	-0.5%	2.3%	1.2%	7.7%
June Forecast	344.6	345.7	346.6	351.1
Percent Change	1.8%	1.4%	0.9%	5.4%
Personal Income (Billions of Dollars)				
September Forecast, Preliminary	382.0	385.6	388.8	397.4
Percent Change	1.5%	3.8%	3.4%	9.2%
June Forecast	380.9	383.7	387.0	393.5
Percent Change	4.1%	2.9%	3.4%	7.0%
Nonfarm Payroll Employment (Thousands)				
September Forecast, Preliminary	3231	3249	3257	3270
Percent Change	2.6%	2.3%	1.0%	1.6%
June Forecast	3215	3223	3239	3254
Percent Change	2.0%	1.0%	2.0%	1.8%
Unemployment Rate (Percent of Labor Force)				
September Forecast, Preliminary	5.8	5.8	5.7	5.6
June Forecast	5.8	5.7	5.6	5.5
Manufacturing Employment (Thousands)				
September Forecast, Preliminary	290.0	289.1	284.3	284.0
Percent Change	-1.4%	-1.2%	-6.4%	-0.5%
June Forecast	286.8	282.9	284.1	284.4
Percent Change	-1.7%	-5.4%	1.8%	0.3%
Construction Employment (Thousands)				
September Forecast, Preliminary	183.3	184.3	184.0	183.9
Percent Change	3.5%	2.2%	-0.7%	-0.2%
June Forecast	182.5	183.4	184.4	185.4
Percent Change	1.9%	1.9%	2.2%	2.2%
Housing Permits (Thousands)				
September Forecast, Preliminary	45.3	40.5	41.0	41.7
Percent Change	110.7%	-35.9%	5.3%	6.3%
June Forecast	42.6	41.0	41.2	41.7
Percent Change	65.8%	-14.3%	1.5%	5.0%

	2015	2016	2017	2018	2019	2020	2021
September Forecast, Preliminary	335.0	347.1	356.6	369.0	381.3	393.3	404.5
Percent Change	4.4%	3.6%	2.7%	3.5%	3.3%	3.1%	2.8%
June Forecast	335.4	345.0	354.1	365.2	376.8	388.7	400.2
Percent Change	4.4%	2.9%	2.6%	3.1%	3.2%	3.1%	3.0%
September Forecast, Preliminary	367.0	384.2	401.4	422.4	444.3	467.0	489.5
Percent Change	4.7%	4.7%	4.5%	5.2%	5.2%	5.1%	4.8%
June Forecast	367.0	382.2	399.5	419.7	441.5	464.0	486.9
Percent Change	4.8%	4.1%	4.5%	5.0%	5.2%	5.1%	4.9%
September Forecast, Preliminary	3146	3237	3286	3335	3379	3419	3456
Percent Change	2.8%	2.9%	1.5%	1.5%	1.3%	1.2%	1.1%
June Forecast	3145	3219	3269	3311	3352	3391	3426
Percent Change	2.8%	2.4%	1.6%	1.3%	1.2%	1.2%	1.0%
September Forecast, Preliminary	5.7	5.8	5.5	5.2	5.1	5.1	5.1
June Forecast	5.7	5.7	5.4	5.2	5.1	5.1	5.1
September Forecast, Preliminary	290.8	288.6	284.6	285.0	287.1	289.6	292.5
Percent Change	0.7%	-0.7%	-1.4%	0.1%	0.7%	0.9%	1.0%
June Forecast	290.3	285.5	284.7	284.5	285.7	287.9	290.7
Percent Change	0.6%	-1.7%	-0.3%	-0.1%	0.4%	0.8%	1.0%
September Forecast, Preliminary	173.2	183.3	186.3	194.7	200.5	203.6	205.7
Percent Change	8.5%	5.8%	1.7%	4.5%	3.0%	1.5%	1.0%
June Forecast	173.2	183.0	188.0	195.0	200.7	204.8	207.4
Percent Change	8.5%	5.6%	2.7%	3.8%	2.9%	2.1%	1.2%
September Forecast, Preliminary	40.4	41.1	43.0	44.9	45.0	44.9	44.7
Percent Change	19.1%	1.8%	4.6%	4.5%	0.2%	-0.2%	-0.4%
June Forecast	40.4	40.6	42.5	44.0	44.1	44.4	44.3
Percent Change	19.1%	0.6%	4.6%	3.5%	0.4%	0.5%	-0.1%