

# Economic Review

March 2, 2017



Washington State  
Economic and Revenue Forecast Council

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WASHINGTON STATE  
**ECONOMIC AND REVENUE FORECAST COUNCIL**

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## AGENDA

### **ECONOMIC REVIEW MEETING**

March 2, 2017  
10:00 a.m.

- Approval of meeting minutes:
  - ✓ January 23, 2017
- Presentation of economic outlook and revenue collection experience

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STATE OF WASHINGTON

## ECONOMIC AND REVENUE FORECAST COUNCIL

*Capitol Plaza Building, PO Box 40912 □ Olympia, Washington 98504-0912 □ (360) 534-1560*

### **Meeting Minutes Budget Outlook Adoption**

January 23, 2017

John A. Cherberg, Hearing Room 3

#### **Economic and Revenue Forecast Council**

##### *Members Present*

**Kevin Ranker, Senate, Chair (via phone)**

**John Braun, Senate**

**Terry Nealey, House of Representatives**

**Timm Ormsby, House of Representatives**

**Duane Davidson, Treasurer**

**Vikki Smith, Department of Revenue**

##### *Staff*

Steve Lerch, Executive Director

*Budget Outlook Work Group*

*representatives:*

Michael Bezanson, Senate

Andy Toulon, House

Pam Davidson, OFM

#### **Call to Order**

Representative Ormsby called the meeting to order at 10:04 a.m.

#### **Approval of the Minutes**

Director Smith moved, seconded by Representative Nealey, to adopt the meeting minutes from January 17, 2017. Motion passed at 10:04 a.m.

#### **Presentation on Budget Outlook**

Michael Bezanson, Andy Toulon, and Pam Davidson provided an overview of the methodology for the State Budget Outlook (January 2017).

#### **Motion to Adopt the Budget Outlook**

Senator Braun moved, seconded by Director Smith to adopt the outlook on the Governor's new law budget. Motion passed at 10:15 a.m.

#### **Presentation on Criteria**

The Budget Outlook Work Group provided information on criteria for use of future biennia resources from an expected federal act per the request of ERFC members on January 17, 2017.

Senator Braun moved to apply the current ERFC criteria for assuming state revenue redirections and transfers of existing state revenues to assumptions for estimated revenue changes from a federal act, seconded by Treasurer Davidson. Motion passed unanimously at 10:22 a.m.

#### **Adjournment**

Meeting adjourned at 10:22 a.m.

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**Economic & Revenue Forecast Council  
State of Washington**



**Economic Review: March 2, 2017**

**Executive Summary**

- This preliminary forecast was based on a modified version of Global Insight's February 2017 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. The February Blue Chip forecast for real GDP growth in 2017 and 2018 was revised up to 2.3% and 2.4% from 2.2% and 2.1% in November. The Blue Chip long-range forecast, which is revised only twice per year, has not been updated since the election and remains at 2.1%, 2.1%, and 2.0% in 2019, 2020, and 2021. A new long-range forecast will be released in March and will be reflected in the final March 2017 economic forecast.
- The second estimate of real GDP growth for the fourth quarter, 1.9%, was released after completion of our preliminary economic forecast. Although the overall growth rate was unchanged from the first estimate, the increase in personal consumption expenditures was larger and increases in state and local government spending and in nonresidential fixed investment were smaller than previously estimated. We will incorporate this information into our final economic forecast.
- 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 Thursday, February 23, 2017 closing prices for Brent and WTI futures. The latest futures prices are higher in the near term than the prices used in the November forecast. The refiner acquisition price of crude oil in the second quarter of 2017 is now expected to average \$53 per barrel compared to \$47 in the November forecast. However, oil prices are now expected to decline slightly during the remainder of the forecast rather than rise as in November. By the end of 2021, the refiner acquisition price is expected to average \$52 per barrel compared to \$55 in the November forecast.
- The November U.S. forecast was produced before the national election results were known. The preliminary March forecast incorporates some policies proposed by the new administration, including lower personal and corporate federal tax rates, consistent with the House Republican plan, as well as \$250 billion in additional infrastructure spending over 10 years and a hiring freeze for federal nonmilitary employees. The forecast does not assume a border adjustment tax.
- The U.S. labor market expanded by 227,000 net new jobs in January. This is above the 187,000 average monthly gain in 2016. Data for February employment will be incorporated into our final economic forecast.
- Two key measures of consumer confidence both suggest relatively strong optimism in February. Although the University of Michigan (UM) index of consumer sentiment decreased by 2.2 points to 96.3, the average reading in the last three months was the highest in over a decade. The Conference

Board index of consumer confidence increased 3.2 points to 114.8, its highest level since July 2001.

- Initial claims for unemployment insurance increased by 6,000 to 244,000 (SA) in the week ending February 18<sup>th</sup>. The four-week moving average of initial claims decreased by 1,000 to 238,000, its lowest level since July 21, 1973.
- After a revised 0.6% (SA) increase in December 2016, industrial production decreased by 0.3% (SA) in January. Industrial production is unchanged from its January 2016 level. New orders for core capital goods (i.e., durables excluding aircraft and military), which is a proxy for business investment, increased by 0.7% (SA) in December according to U.S. Census Bureau data. This follows a revised 1.7% (SA) increase in November. New orders for core capitals goods are up 2.9% since December 2016.
- U.S. housing data were generally positive this month. Housing units authorized by building permits in January were 4.6% (SA) above their December 2016 level and 8.2% above their year-ago level. Although January housing starts decreased by 2.6% (SA) compared to December 2016, they were 10.5% above their January 2016 level. Existing home sales in January were 3.3% (SA) above their December 2016 level. January was the strongest month for sales since February 2007. Existing home sales are now 3.8% above January 2016 sales. New single family home sales increased from a revised 535,000 (SAAR) in December 2016 to 555,000 in January, an increase of 3.7% and 5.5% above their year-ago level. The seasonally adjusted Case-Shiller national home price index for December 2016 was 0.7% above its November level and 5.8% above its year-ago level.
- Major threats to the U.S. and Washington economies remain, including a slowing U.S. and global economy, weaker export growth, and slow growth in labor productivity.

## **Washington**

- We have three months of new Washington employment data since the November forecast was released. Total nonfarm payroll employment rose 13,600 (seasonally adjusted) in November, December, and January, which was 1,500 more than the 12,100 expected in the November forecast. The goods producing sectors more than accounted for the variance in job growth. Manufacturing employment, which had been expected to fall 3,300, managed an increase of 400 jobs. About half the variance in manufacturing employment was due to aerospace, which declined less than expected, but other manufacturing industries also grew more than expected. Construction employment increased 2,700 in the three-month period compared to the forecast of a decline of 500 jobs. Government payrolls expanded by 1,500 jobs compared to the forecast of 1,600 jobs but private, service-providing sectors added only 8,900 jobs, far less than the 14,300 expected on 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 October 2016 by 12,200 jobs (0.4%). As a result of the upward revision to history and slightly stronger-than-expected growth, the

total effect is 13,700 (0.4%) more jobs in January 2017 than expected in the November forecast.

- Though aerospace employment declined less than expected in November, December, and January, Boeing has made it clear that significant reductions should be expected in 2017. As a result, the aerospace employment forecast is 2,100 lower by the end of 2017 than in the November forecast.
- In December, the Bureau of Economic Analysis released estimates for state personal income through the third 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 third quarter. Our current estimate of Washington personal income in the third quarter of 2016 is \$391.7 billion, which is \$0.4 billion (0.1%) higher than assumed in the November forecast. Wages and salaries were \$0.1 billion higher than believed in November and other sources of personal income were \$0.3 billion higher.
- Washington housing construction finished the year on a high note. The number of housing units authorized by building permits in the fourth quarter averaged 22,300 single-family units and 28,700 multi-family units permitted for a total of 50,900 units (SAAR). The forecast expected 21,500 single-family and 17,700 multi-family units for a total of 39,200 units in the fourth quarter. It is worth noting that the variance was nearly entirely in the multi-family segment.
- Seattle home prices continue to rise rapidly. According to the S&P/Case-Shiller Home Price Indices, seasonally adjusted Seattle area home prices rose 1.4% in December following a 1.0% increase in November. Recent growth is probably overstated due to problems with the seasonal adjustment process. A more reliable measure is the over-the-year growth, which shows a 10.8% increase in prices since the previous December, nearly double the 5.6% increase in the Composite-20 index. Seattle home prices are up 58.0% since the November 2011 trough and now exceed the May 2007 peak by 9.8%.
- Seattle area consumer price inflation remains well above the national average. Over the last year, from December 2015 to December 2016, consumer prices in the Seattle area rose 2.6% compared to 2.1% for the U.S. city average. Core prices, which exclude food and energy, were up 3.0% in Seattle compared to 2.2% for the nation. The higher Seattle inflation is due to more rapid growth in shelter costs. During the year, shelter costs in Seattle rose 7.3% compared to 3.6% for the nation.
- The Institute of Supply Management - Western Washington Index (ISM-WW) moved back into positive territory in January. The index, which measures conditions in the manufacturing sector, increased from 47.3 in December to 54.2 in January (index values above 50 indicate growth while values below 50 indicate contraction). The production, orders, employment, and inventories components indicated expansion in January while only the deliveries component indicated contraction. Manufacturing has fluctuated around the 50 mark since mid-2015.
- Fourth quarter 2016 Washington exports were down 4.7% from the fourth quarter of 2015. Transportation equipment exports (mostly Boeing planes) declined 12.4% over the year but exports of agricultural products increased 19.9%. Exports of all other commodities declined 0.1% over the year.

- Washington employment is expected to grow 2.2% this year, up from 1.9% in the November forecast. As in November, we expect growth to decelerate gradually as the recovery matures. We expect employment growth to average 1.4% per year in 2018 through 2021, which is slightly higher than the 1.3% rate assumed in November. Our preliminary forecast for nominal personal income growth this year is 4.9%, up from 4.5% in the November forecast. Our new forecast for nominal personal income growth in 2018 through 2021 averages 5.1% per year, also up slightly from the 5.0% rate in the November forecast.

# Washington State Economic Outlook & Revenue Collection Experience

Presented to  
The Economic & Revenue Forecast Council

Steve Lerch  
Executive Director

March 2, 2017  
Olympia, Washington



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## Summary

- The preliminary economic forecast for both the U.S. and WA is slightly stronger than in November
- The forecast assumes the Federal Reserve will increase interest rates by 0.25% in June; two additional 0.25% rate increases are assumed during 2017
- Downside risks to the baseline remain similar to those discussed in November: slow global and U.S. economic growth, the impact of a stronger dollar on exports, weak labor productivity growth
- Revenue collections since the November forecast are \$110 million (2.2%) above expectations

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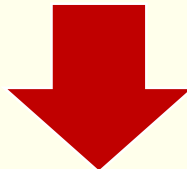
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## Economic news continues to suggest risks to forecast



- Manufacturing, business investment showing improvement
- Consumer spending growing at moderate pace
- Small business optimism improving



- Slower 2016 economic growth in developed countries
- Declining labor force participation
- Negative impact of stronger dollar on exports
- Slow growth in labor productivity

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## Business investment appears to be picking up



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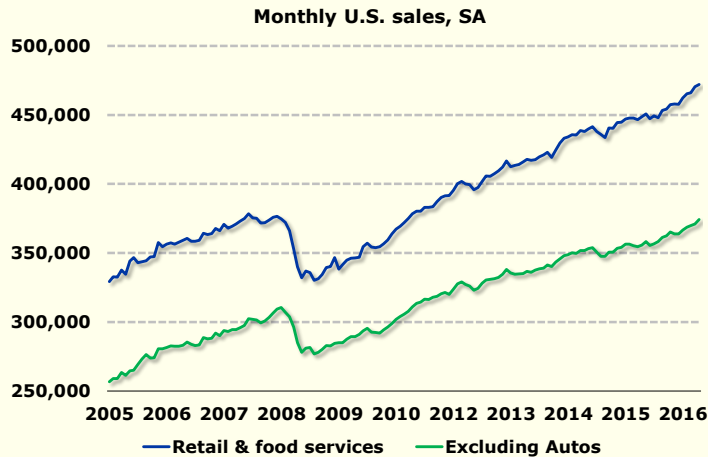
Source: U.S. Census Bureau, data through Dec. 2016

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## January U.S. retail and food service sales were 5.6% above January 2016

Excluding  
autos, sales  
were up 5.3%  
year over year



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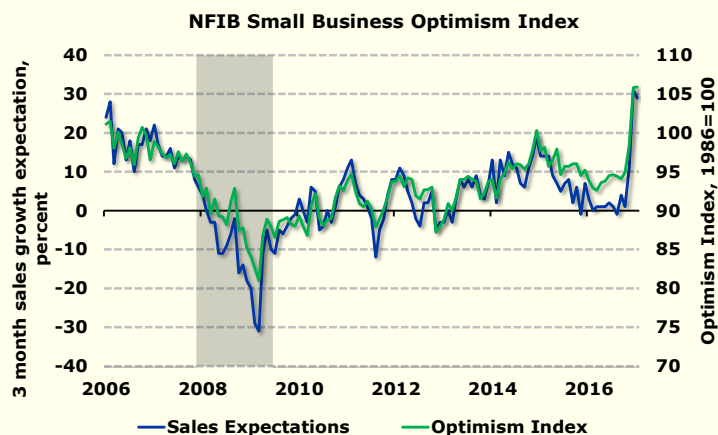
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Source: U.S. Census Bureau, data through January 2017

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## Small business optimism and sales expectations jumped in December, remain elevated in January



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Source: National Federation of Independent Business; data through January 2017

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## Developed country economies slowed in 2016



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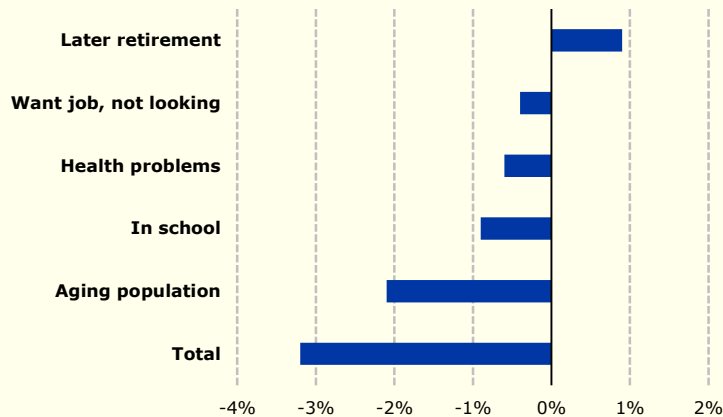
Source: Organization for Economic Cooperation and Development; data through 2016

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## Components of change in labor force participation rate, 2007Q4 to 2016Q4

Labor force participation rate = % of population age 16+ working or looking for a job



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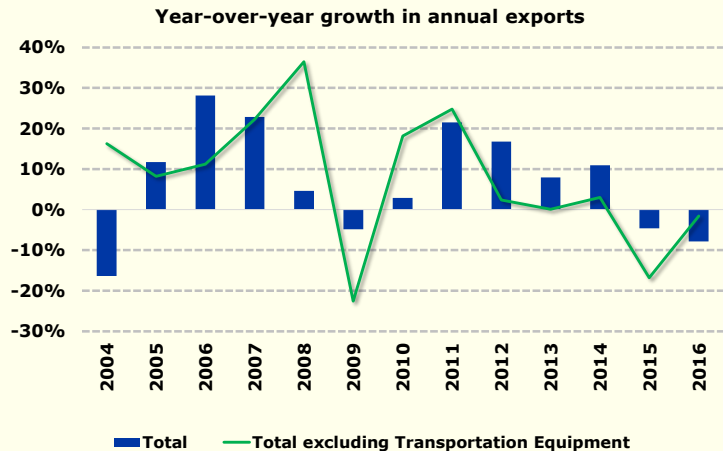
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Source: U.S. Bureau of Labor Statistics, Federal Reserve Bank of Atlanta

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## Washington exports: still declining, but at slower rate for non-transportation equipment goods



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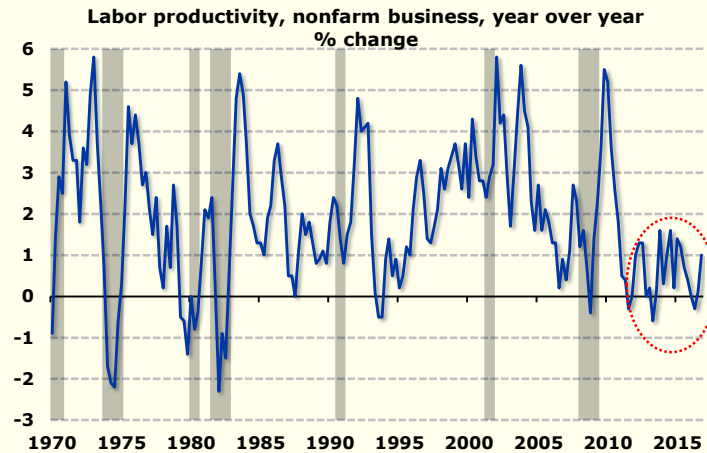
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Source: WiserTrade; data through 2016

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## Labor productivity growth has remained low since 2011



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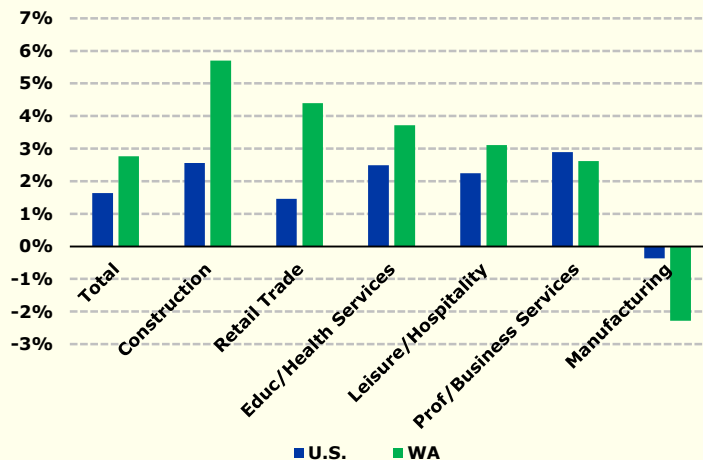
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Source: U.S. Bureau of Labor Statistics, data through 2016 Q4

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## Washington vs U.S. employment growth: Jan. 2016 to Jan. 2017



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Source: Employment Security Dept., ERFC; data through January 2017

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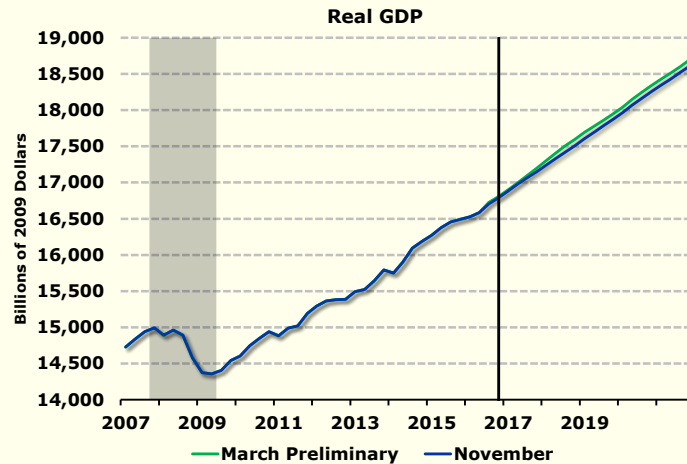


## Real GDP is slightly higher than in the November forecast

Real GDP at the end of 2021 is 0.5% higher than in the November forecast.

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Source: ERF March 2017 Preliminary forecast; data through Q4 2016

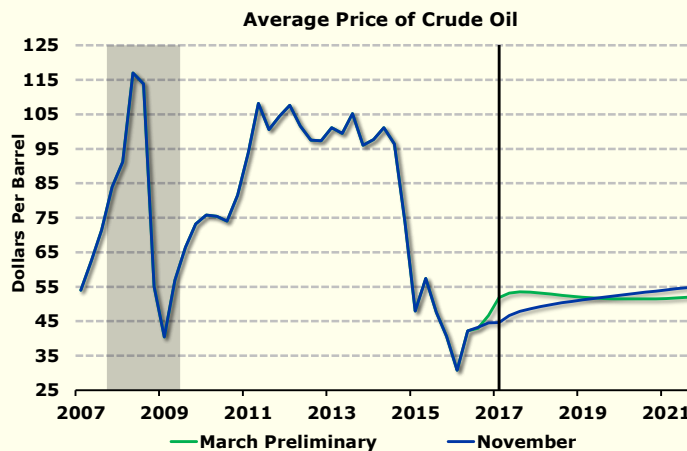
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## Oil prices are slightly higher in the near term compared to the November forecast

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Source: DOE, ERF March 2017 Preliminary forecast; historical data through 2016Q4

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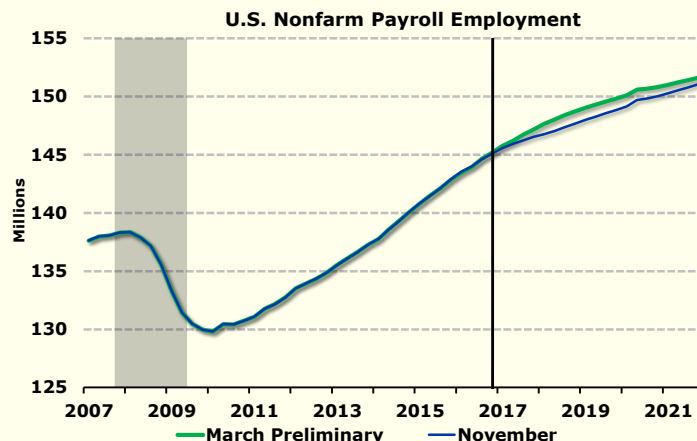


## The U.S. nonfarm payroll employment forecast is slightly higher than in November

Monthly employment growth averaged 239,000 in the third quarter and 148,000 in the fourth quarter.

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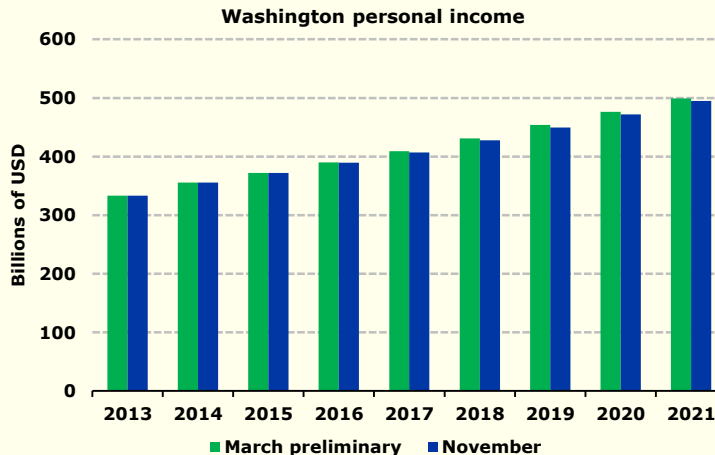


## Washington personal income is slightly higher than in November

WA personal income is 0.8% higher in 2021 compared to the November forecast

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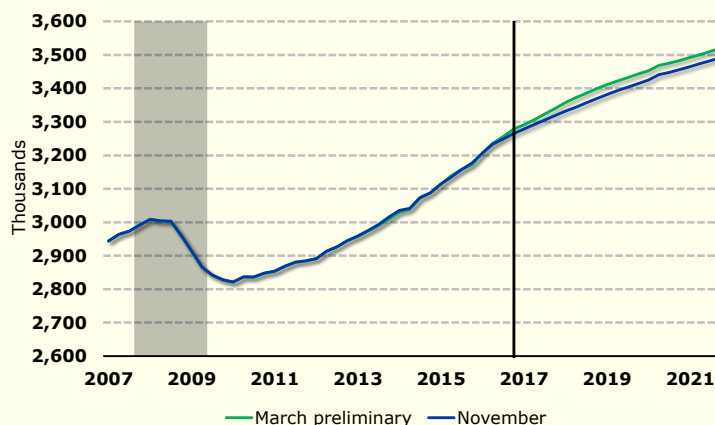
## Washington employment forecast is slightly higher than in November

The WA nonfarm employment forecast is 28,000 jobs higher by 2021 compared to November

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Washington Nonfarm Payroll Employment



Source: ERFC March 2017 Preliminary forecast; historical data through 2016

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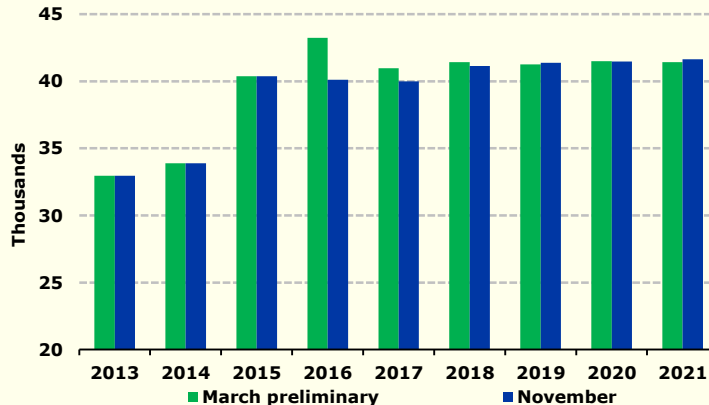
## Washington housing permits forecast is higher in the near term compared to November

Fourth quarter 2016 saw a spike in multi-family building permits which is expected to moderate

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Washington Housing Permits



Source: ERFC March 2017 Preliminary forecast; historical data through 2016

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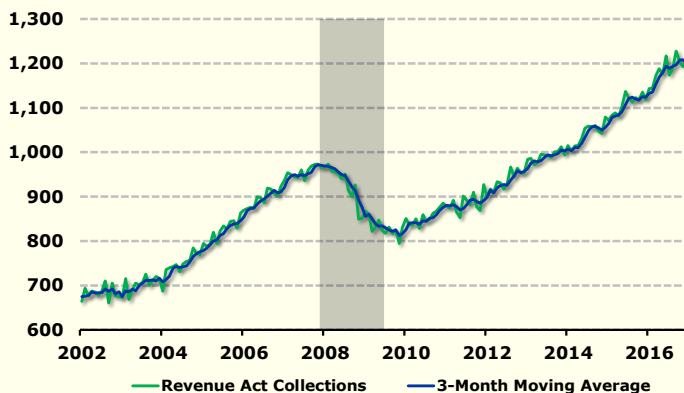
## Seasonally adjusted Revenue Act collections growth showing signs of slowing

Revenue Act collections for 2016 Q4 grew at a 6.4% year over year rate, following 7.2% growth in the third quarter and 7.6% growth in the second quarter

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\$millions SA



\* Adjusted for large one-time transactions, amnesty payments and reporting frequency change, current definition of Revenue Act

Source: DOR and ERFC; monthly data through estimated December 2016 activity

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## Large commercial property sales slowed in January as other activity grew

Large commercial sales (>\$10 million) were \$2.1 billion in December and \$540 million in January.

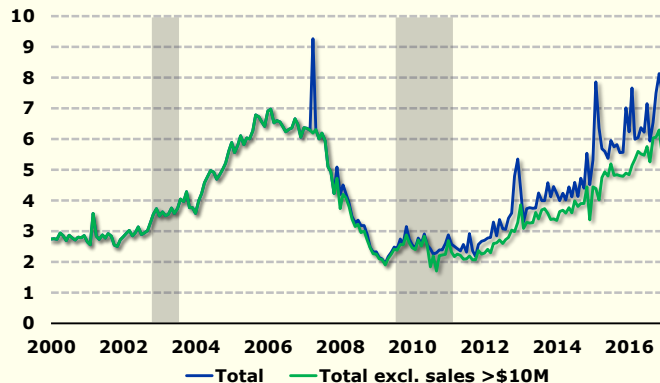
Residential prices are still growing faster than sales volume.

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Seasonally Adjusted Taxable Real Estate Excise Activity

\$Billions, SA

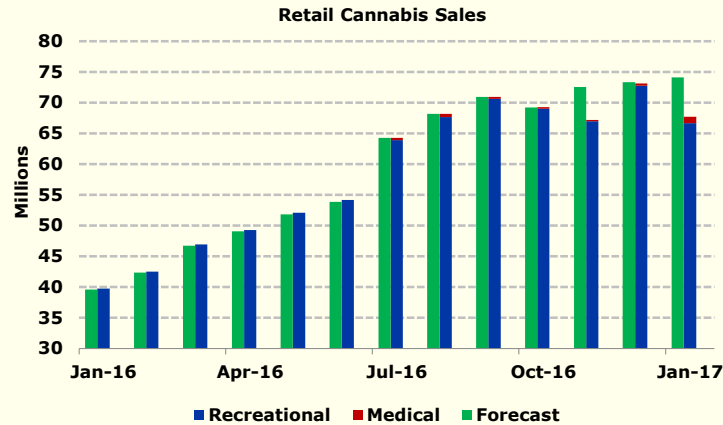


Source: ERFC; Monthly data through January 2017 preliminary

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## Cannabis revenue growth has stalled



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Source: LCB, ERFC; data through January 2016

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## Revenue collections to date

### Collections Variance Since November Forecast (November 11, 2016 – February 10, 2017) dollars in thousands

	<u>Estimate</u>	<u>Actual</u>	<u>Difference</u>	<u>Pct.</u>
Dept. of Revenue	\$5,023,048	\$5,134,534	\$111,486	2.2%
All other agencies	\$20,239	\$19,212	(\$1,027)	(5.1%)
<b>Total GF-S</b>	<b>\$5,043,287</b>	<b>\$5,153,746</b>	<b>\$110,460</b>	<b>2.2%</b>

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## Conclusion

- The U.S. and Washington economic forecasts are slightly stronger than in November; we continue to expect moderate growth
- As has been the case for some time, Washington's economy is continuing to outperform the nation
- Threats to economic expansion include slower domestic and international economic growth, the impact of a stronger dollar on exports, and a slowdown in labor productivity
- The next monthly revenue collection report will be available on March 13<sup>th</sup> and the revenue forecast will be presented on March 16<sup>th</sup>

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## Questions



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# U.S. Economic Forecast Comparison

February 2016

	2016Q4	2017Q1	2017Q2	2017Q3	2016	2017	2018	2019	2020	2021
<b>Real GDP, Percent Change, Annual Rate</b>										
ERFC (Preliminary March)	1.9	2.2	2.3	2.4	1.6	2.3	2.4	2.1	2.1	2.0
Global Insight	1.9	2.1	2.2	2.8	1.6	2.3	2.7	2.3	2.1	2.2
Economy.com	1.9	2.6	3.1	2.7	1.6	2.6	2.9	2.2		
Blue Chip Average*	1.9	2.2	2.3	2.4		2.3	2.4	2.1	2.1	2.0
Blue Chip Top 10*		2.7	2.7	3.0		2.6	2.9	2.5	2.5	2.4
Blue Chip Bottom 10*		1.9	1.8	1.9		2.1	2.0	1.6	1.6	1.6
<b>Real Consumption, Percent Change, Annual Rate</b>										
ERFC (Preliminary March)	2.5	2.4	2.5	2.6	2.7	2.7	2.5	2.2	2.1	2.1
Global Insight	2.5	2.7	2.7	2.8	2.7	2.8	3.2	2.9	2.4	2.3
Economy.com	2.5	3.4	3.4	3.4	2.7	3.2	3.2	2.1		
Blue Chip Average*	2.5	2.4	2.5	2.6		2.7	2.5	2.2	2.1	2.1
Blue Chip Top 10*		3.0	2.9	3.4		2.9	3.0	2.6	2.5	2.5
Blue Chip Bottom 10*		1.9	2.1	2.2		2.4	2.1	1.7	1.6	1.7
<b>Federal Funds Rate</b>										
ERFC (Preliminary March)	0.5	0.7	0.8	1.0	0.4	0.9	1.7	2.6	3.0	3.0
Global Insight	0.5	0.7	0.8	1.0	0.4	0.9	1.7	2.6	3.0	3.0
Economy.com	0.4	0.7	0.9	1.0	0.4	1.0	1.9	3.4		
<b>Three Month T-Bill Rate</b>										
ERFC (Preliminary March)	0.4	0.5	0.7	1.0	0.3	0.9	1.6	2.5	2.8	2.8
Global Insight	0.4	0.5	0.7	1.0	0.3	0.9	1.7	2.5	2.9	2.9
Blue Chip Average*		0.6	0.7	0.9		0.8	1.6	2.2	2.5	2.7
Blue Chip Top 10*		0.9	0.9	1.2		1.1	2.1	3.2	3.4	3.5
Blue Chip Bottom 10*		0.5	0.5	0.7		0.7	1.2	1.2	1.6	1.8
<b>10-Yr. T-Note Yield</b>										
ERFC (Preliminary March)	2.1	2.5	2.6	2.7	1.8	2.7	3.2	3.8	4.0	3.9
Global Insight	2.1	2.5	2.6	2.7	1.8	2.6	3.2	3.8	4.1	4.1
Economy.com	2.1	2.6	2.7	3.0	1.8	2.9	3.7	4.3		
Blue Chip Average*	2.1	2.5	2.6	2.7		2.7	3.1	3.1	3.4	3.6
Blue Chip Top 10*		2.6	2.8	3.0		2.9	3.6	4.0	4.4	4.3
Blue Chip Bottom 10*		2.4	2.5	2.5		2.5	2.7	2.2	2.5	2.7
<b>Consumer Price Index, Percent Change, Annual Rate</b>										
ERFC (Preliminary March)	3.4	2.8	1.7	2.9	1.3	2.5	2.0	2.0	2.2	2.2
Global Insight	3.4	2.5	1.9	2.5	1.3	2.4	1.9	2.4	2.7	2.6
Economy.com	3.4	3.5	2.4	2.4	1.3	2.8	2.7	3.1		
Blue Chip Average*	3.4	2.5	2.3	2.4		2.5	2.3	2.3	2.3	2.3
Blue Chip Top 10*		3.2	3.0	2.9		2.8	2.8	2.7	2.7	2.6
Blue Chip Bottom 10*		1.9	1.6	1.9		2.2	2.0	2.0	1.9	1.8
<b>Payroll Employment, Millions</b>										
ERFC (Preliminary March)	145.2	145.7	146.2	146.7	144.3	146.5	148.2	149.4	150.5	151.3
Percent Change, Annual Rate	1.4	1.6	1.3	1.4	1.8	1.5	1.2	0.8	0.7	0.5
Global Insight	145.2	145.7	146.2	146.7	144.3	146.4	148.5	150.2	151.5	152.5
Percent Change, Annual Rate	1.4	1.5	1.2	1.6	1.8	1.5	1.4	1.1	0.9	0.7
Economy.com	145.2	145.7	146.2	146.7	144.3	146.5	148.6	150.4		
Percent Change, Annual Rate	1.4	1.6	1.4	1.4	1.8	1.5	1.4	1.2		
<b>Unemployment Rate, Percent</b>										
ERFC (Preliminary March)	4.7	4.7	4.6	4.5	4.9	4.6	4.3	4.3	4.4	4.5
Global Insight	4.7	4.7	4.6	4.6	4.9	4.6	4.2	4.1	4.2	4.3
Economy.com	4.7	4.7	4.8	4.7	4.9	4.7	4.5	4.3		
Blue Chip Average*	4.7	4.7	4.6	4.6		4.6	4.4	4.7	4.7	4.8
Blue Chip Top 10*		4.8	4.8	4.8		4.8	4.9	5.4	5.2	5.3
Blue Chip Bottom 10*		4.5	4.5	4.4		4.5	4.1	4.2	4.3	4.3
<b>Real Disposable Personal Income, Percent Change, Annual Rate</b>										
ERFC (Preliminary March)	1.5	1.9	3.1	2.2	2.7	2.3	3.5	2.6	2.1	2.1
Global Insight	1.5	2.5	3.3	2.9	2.7	2.6	4.1	3.0	2.4	2.5
Blue Chip Average*	1.5	2.1	2.5	2.9		2.3	2.7	2.3	2.2	2.2
Blue Chip Top 10*		2.9	3.1	4.8		2.7	3.5	2.7	2.7	2.8
Blue Chip Bottom 10*		1.3	2.0	2.0		2.0	2.1	1.7	1.7	1.6
<b>West Texas Intermediate</b>										
ERFC (Preliminary March)	49.3	53.5	54.7	55.2	43.2	54.7	54.7	53.8	53.3	53.4
Global Insight	49.3	55.3	58.6	57.5	43.2	56.7	55.7	63.9	74.7	80.5
Economy.com	49.4	52.9	55.5	58.1	43.4	56.9	62.3	65.7		

\* Forecasts beyond 2018 are from the October 2016 Blue Chip Economic Indicators

### U.S. Forecast Comparison

	2016Q4	2017Q1	2017Q2	2017Q3
<b>Real GDP (Billions of 2009 Dollars)</b>				
March Forecast, Preliminary	16,805	16,897	16,994	17,096
Percent Change	1.9%	2.2%	2.3%	2.4%
November Forecast	16,789	16,882	16,977	17,067
Percent Change	2.1%	2.2%	2.3%	2.1%
<b>Real Consumption (Billions of 2009 Dollars)</b>				
March Forecast, Preliminary	11,640	11,708	11,781	11,858
Percent Change	2.5%	2.4%	2.5%	2.6%
November Forecast	11,620	11,687	11,754	11,817
Percent Change	2.6%	2.3%	2.3%	2.1%
<b>Implicit Price Deflator, PCE (2009=1.00)</b>				
March Forecast, Preliminary	1.115	1.120	1.123	1.129
Percent Change	2.2%	1.6%	1.4%	2.0%
November Forecast	1.115	1.119	1.124	1.130
Percent Change	2.3%	1.4%	1.7%	2.1%
<b>Real Personal Income (Billions of 2009 Dollars)</b>				
March Forecast, Preliminary	14,575	14,646	14,759	14,849
Percent Change	1.6%	1.9%	3.1%	2.4%
November Forecast	14,510	14,603	14,698	14,770
Percent Change	1.2%	2.6%	2.6%	2.0%
<b>Nonfarm Payroll Employment (Millions)</b>				
March Forecast, Preliminary	145.2	145.7	146.2	146.7
Percent Change	1.4%	1.6%	1.3%	1.4%
November Forecast	145.1	145.6	145.9	146.2
Percent Change	1.4%	1.3%	1.0%	0.9%
<b>Unemployment Rate (Percent of Labor Force)</b>				
March Forecast, Preliminary	4.7	4.7	4.6	4.5
November Forecast	4.9	4.8	4.7	4.7
<b>30 Year Fixed Mortgage Rate (Percent, average)</b>				
March Forecast, Preliminary	3.8	4.2	4.2	4.3
November Forecast	3.5	3.7	3.8	3.9
<b>3 Month T-Bill Rate (Percent, average)</b>				
March Forecast, Preliminary	0.4	0.5	0.7	1.0
November Forecast	0.4	0.6	0.6	0.7

	2015	2016	2017	2018	2019	2020	2021
	16,397	16,660	17,046	17,454	17,821	18,195	18,559
	2.6%	1.6%	2.3%	2.4%	2.1%	2.1%	2.0%
	16,397	16,650	17,019	17,376	17,741	18,114	18,476
	2.6%	1.5%	2.2%	2.1%	2.1%	2.1%	2.0%
	11,215	11,515	11,820	12,120	12,387	12,647	12,913
	3.2%	2.7%	2.7%	2.5%	2.2%	2.1%	2.1%
	11,215	11,504	11,783	12,042	12,307	12,565	12,829
	3.2%	2.6%	2.4%	2.2%	2.2%	2.1%	2.1%
	1.095	1.107	1.126	1.144	1.163	1.185	1.207
	0.4%	1.1%	1.7%	1.6%	1.7%	1.9%	1.9%
	1.095	1.107	1.127	1.148	1.168	1.191	1.215
	0.4%	1.1%	1.8%	1.8%	1.8%	1.9%	2.0%
	14,113	14,455	14,802	15,248	15,693	16,095	16,457
	4.0%	2.4%	2.4%	3.0%	2.9%	2.6%	2.2%
	14,113	14,418	14,732	15,121	15,535	15,947	16,336
	4.0%	2.2%	2.2%	2.6%	2.7%	2.7%	2.4%
	141.8	144.3	146.5	148.2	149.4	150.5	151.3
	2.1%	1.8%	1.5%	1.2%	0.8%	0.7%	0.5%
	141.8	144.3	146.1	147.2	148.4	149.7	150.7
	2.1%	1.7%	1.2%	0.8%	0.8%	0.8%	0.7%
	5.3	4.9	4.6	4.3	4.3	4.4	4.5
	5.3	4.9	4.7	4.6	4.7	4.7	4.8
	3.9	3.6	4.3	5.1	5.8	6.0	5.9
	3.9	3.6	3.9	4.7	5.3	5.6	5.6
	0.1	0.3	0.9	1.6	2.5	2.8	2.8
	0.1	0.3	0.7	1.4	2.2	2.6	2.6

### Washington Forecast Comparison

	2016Q4	2017Q1	2017Q2	2017Q3
<b>Real Personal Income (Billions of 2009 Dollars)</b>				
March Forecast, Preliminary	356.0	360.8	361.9	363.2
Percent Change	3.3%	5.5%	1.2%	1.5%
November Forecast	353.9	359.9	360.5	360.5
Percent Change	1.3%	6.9%	0.7%	0.0%
<b>Personal Income (Billions of Dollars)</b>				
March Forecast, Preliminary	397.0	403.9	406.5	410.0
Percent Change	5.5%	7.2%	2.6%	3.5%
November Forecast	394.7	402.8	405.2	407.4
Percent Change	3.6%	8.4%	2.5%	2.1%
<b>Nonfarm Payroll Employment (Thousands)</b>				
March Forecast, Preliminary	3279	3293	3307	3325
Percent Change	2.9%	1.7%	1.8%	2.1%
November Forecast	3265	3278	3291	3305
Percent Change	2.0%	1.6%	1.6%	1.6%
<b>Unemployment Rate (Percent of Labor Force)</b>				
March Forecast, Preliminary	5.3	5.1	5.0	4.9
November Forecast	5.4	5.3	5.2	5.1
<b>Manufacturing Employment (Thousands)</b>				
March Forecast, Preliminary	286.2	286.1	285.8	285.5
Percent Change	-3.9%	-0.1%	-0.5%	-0.4%
November Forecast	282.6	281.2	281.8	282.2
Percent Change	-6.8%	-2.0%	0.9%	0.5%
<b>Construction Employment (Thousands)</b>				
March Forecast, Preliminary	190.1	191.5	193.1	195.0
Percent Change	7.2%	3.0%	3.4%	3.9%
November Forecast	185.6	185.4	186.2	187.6
Percent Change	3.2%	-0.4%	1.8%	3.0%
<b>Housing Permits (Thousands)</b>				
March Forecast, Preliminary	50.9	40.1	40.7	40.5
Percent Change	183.5%	-61.6%	6.1%	-1.7%
November Forecast	39.2	39.4	39.8	40.2
Percent Change	8.6%	1.7%	4.7%	3.6%

	2015	2016	2017	2018	2019	2020	2021
March Forecast, Preliminary	339.7	352.0	363.2	376.6	389.9	401.9	413.2
Percent Change	4.3%	3.6%	3.2%	3.7%	3.6%	3.1%	2.8%
November Forecast	339.7	351.7	361.2	372.7	384.8	396.5	407.5
Percent Change	4.3%	3.5%	2.7%	3.2%	3.2%	3.1%	2.8%
March Forecast, Preliminary	372.1	389.8	409.1	430.8	453.6	476.2	498.8
Percent Change	4.6%	4.7%	4.9%	5.3%	5.3%	5.0%	4.7%
November Forecast	372.1	389.4	407.1	427.7	449.5	472.1	495.0
Percent Change	4.6%	4.7%	4.5%	5.1%	5.1%	5.0%	4.8%
March Forecast, Preliminary	3146	3244	3316	3380	3428	3471	3507
Percent Change	2.9%	3.1%	2.2%	1.9%	1.4%	1.2%	1.1%
November Forecast	3146	3238	3298	3350	3398	3442	3479
Percent Change	2.8%	2.9%	1.9%	1.6%	1.4%	1.3%	1.1%
March Forecast, Preliminary	5.7	5.6	5.0	4.6	4.5	4.5	4.5
November Forecast	5.7	5.7	5.2	4.9	4.9	4.9	4.9
March Forecast, Preliminary	291.8	290.0	285.6	287.3	290.9	293.9	296.3
Percent Change	1.1%	-0.6%	-1.5%	0.6%	1.2%	1.1%	0.8%
November Forecast	290.7	287.8	281.9	283.9	286.5	290.0	293.5
Percent Change	0.7%	-1.0%	-2.0%	0.7%	0.9%	1.2%	1.2%
March Forecast, Preliminary	173.3	186.2	194.3	201.4	204.9	207.3	211.0
Percent Change	8.5%	7.5%	4.4%	3.7%	1.7%	1.2%	1.8%
November Forecast	173.2	183.6	187.3	194.5	199.2	202.1	204.5
Percent Change	8.5%	6.0%	2.0%	3.8%	2.4%	1.4%	1.2%
March Forecast, Preliminary	40.4	43.2	40.5	40.9	40.8	40.9	40.9
Percent Change	19.1%	7.1%	-6.4%	1.2%	-0.5%	0.5%	-0.2%
November Forecast	40.4	40.1	40.0	41.1	41.4	41.5	41.6
Percent Change	19.1%	-0.6%	-0.3%	2.9%	0.6%	0.2%	0.4%

U.S. Forecast Comparison				Fiscal Years		
	2016	2017	2018	2019	2020	2021
<b>Real GDP</b>						
Billions of 2009 dollars						
March Preliminary Forecast	16,513	16,856	17,252	17,644	18,002	18,380
Growth	1.7%	2.1%	2.3%	2.3%	2.0%	2.1%
November Forecast	16,513	16,837	17,198	17,558	17,925	18,297
Growth	1.7%	2.0%	2.1%	2.1%	2.1%	2.1%
Difference in level	0	18	53	85	77	83
Difference in growth forecast	0.0%	0.1%	0.2%	0.2%	-0.1%	0.0%
<b>Real Consumption</b>						
Billions of 2009 dollars						
March Preliminary Forecast	11,356	11,675	11,974	12,256	12,515	12,780
Growth	2.7%	2.8%	2.6%	2.4%	2.1%	2.1%
November Forecast	11,356	11,652	11,910	12,179	12,434	12,698
Growth	2.7%	2.6%	2.2%	2.3%	2.1%	2.1%
Difference in level	0	23	64	77	82	81
Difference in growth forecast	0.0%	0.2%	0.3%	0.1%	0.0%	0.0%
<b>Implicit Price Deflator</b>						
Index 2009 = 100						
March Preliminary Forecast	110.0	111.7	113.5	115.3	117.4	119.6
Growth	0.7%	1.5%	1.7%	1.6%	1.8%	1.9%
November Forecast	110.0	111.7	113.8	115.8	117.9	120.3
Growth	0.7%	1.5%	1.8%	1.8%	1.9%	2.0%
Difference in level	0.0	0.0	-0.2	-0.4	-0.5	-0.7
Difference in growth forecast	0.0%	0.0%	-0.2%	-0.2%	-0.1%	-0.1%
<b>Unemployment Rate</b>						
Percent of Labor Force						
March Preliminary Forecast	5.0%	4.7%	4.4%	4.3%	4.3%	4.4%
November Forecast	5.0%	4.8%	4.7%	4.6%	4.7%	4.7%
Difference in forecast	0.0%	-0.1%	-0.2%	-0.3%	-0.3%	-0.3%
<b>30 Year Fixed Mortgage Rate</b>						
Annual Average						
March Preliminary Forecast	3.8%	3.9%	4.7%	5.4%	6.0%	5.9%
November Forecast	3.8%	3.6%	4.3%	5.0%	5.6%	5.6%
Difference in forecast	0.0%	0.3%	0.4%	0.5%	0.4%	0.4%
<b>3 Month T-Bill Rate</b>						
Annual Average						
March Preliminary Forecast	0.2%	0.5%	1.3%	2.1%	2.8%	2.8%
November Forecast	0.2%	0.5%	1.0%	1.8%	2.5%	2.6%
Difference in forecast	0.0%	0.0%	0.3%	0.3%	0.3%	0.3%

## Washington Forecast Comparison

Fiscal Years

	2016	2017	2018	2019	2020	2021
<b>Real Personal Income</b>						
Billions of 2009 dollars						
March Preliminary Forecast	345.8	357.9	369.8	383.6	396.0	407.6
Growth	3.6%	3.5%	3.3%	3.7%	3.2%	2.9%
November Forecast	346.1	356.7	366.9	378.9	390.6	402.1
Growth	3.7%	3.1%	2.8%	3.3%	3.1%	2.9%
Difference in level	-0.3	1.2	2.9	4.7	5.3	5.5
<i>Difference in growth forecast</i>	<i>-0.1%</i>	<i>0.4%</i>	<i>0.5%</i>	<i>0.5%</i>	<i>0.1%</i>	<i>0.0%</i>
<b>Nominal Personal Income</b>						
Billions of dollars						
March Preliminary Forecast	380.5	399.8	419.9	442.4	464.9	487.6
Growth	4.3%	5.1%	5.0%	5.4%	5.1%	4.9%
November Forecast	380.8	398.5	417.4	438.7	460.7	483.6
Growth	4.3%	4.6%	4.7%	5.1%	5.0%	5.0%
Difference in level	-0.3	1.3	2.5	3.7	4.2	3.9
<i>Difference in growth forecast</i>	<i>-0.1%</i>	<i>0.4%</i>	<i>0.3%</i>	<i>0.3%</i>	<i>0.1%</i>	<i>-0.1%</i>
<b>Nonfarm Payroll Employment</b>						
Thousands						
March Preliminary Forecast	3,193.4	3,283.5	3,349.5	3,405.3	3,450.0	3,488.6
Growth	2.9%	2.8%	2.0%	1.7%	1.3%	1.1%
November Forecast	3,193.1	3,271.0	3,324.8	3,375.4	3,420.9	3,460.8
Growth	2.9%	2.4%	1.6%	1.5%	1.3%	1.2%
Difference in level	0.3	12.4	24.7	29.9	29.1	27.8
<i>Difference in growth forecast</i>	<i>0.0%</i>	<i>0.4%</i>	<i>0.4%</i>	<i>0.1%</i>	<i>0.0%</i>	<i>0.0%</i>
<b>Housing Permits</b>						
Units Authorized, Thousands						
March Preliminary Forecast	39.7	42.7	40.8	40.8	40.8	41.0
Growth	2.6%	7.7%	-4.6%	0.1%	-0.2%	0.5%
November Forecast	39.8	39.2	40.7	41.3	41.4	41.6
Growth	3.0%	-1.5%	3.8%	1.5%	0.2%	0.6%
Difference in level	-0.1	3.6	0.1	-0.5	-0.6	-0.6
<i>Difference in growth forecast</i>	<i>-0.4%</i>	<i>9.2%</i>	<i>-8.4%</i>	<i>-1.4%</i>	<i>-0.4%</i>	<i>0.0%</i>

## Year-Over-Year Employment Growth by Industry (January 2016 to January 2017) Washington vs. U.S.

	Washington		U.S.
	(000)	% Chg.	% Chg.
<b>Total</b>	<b>88.5</b>	<b>2.8%</b>	<b>1.6%</b>
Electronic Shopping and Mail-Order Houses	10.2	31.3%	NA
Construction	10.3	5.7%	2.6%
Software Publishers	2.7	4.6%	NA
Information Excluding Software	2.7	4.5%	NA
State and Local Gov Non-Education	8.0	3.9%	0.8%
Education and Health Services	17.0	3.7%	2.5%
Leisure and Hospitality	9.9	3.1%	2.2%
Financial Activities	4.4	3.0%	2.3%
Professional and Business Services	10.4	2.6%	2.9%
State and Local Gov Education	6.0	2.4%	0.4%
Wholesale Trade	2.4	1.8%	0.6%
Transportation, Warehousing and Utilities	1.6	1.6%	2.0%
Mining and Logging	0.1	1.5%	-7.7%
Other Services	1.4	1.2%	1.2%
Manufacturing Excluding Aerospace	0.3	0.1%	NA
Aerospace Product and Parts Manufacturing	-6.9	-7.4%	NA
Information	5.4	4.6%	0.1%
Retail Trade	15.8	4.4%	1.5%
Manufacturing	-6.7	-2.3%	-0.4%

Source: WA State ERFC Kalman filtered data, U.S. Bureau of Labor Statistics