

# Economic Review

March 7, 2019



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 7, 2019  
9:00 a.m.

- Approval of meeting minutes from January 30, 2019
- Presentation of economic outlook and revenue collection experience

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STATE OF WASHINGTON  
ECONOMIC AND REVENUE FORECAST COUNCIL  
PO Box 40912 □ Olympia, Washington 98504-0912 □ (360) 534-1560

**Meeting Minutes**  
**Budget Outlook Methodology & Adoption**  
January 30, 2019  
John A. Cherberg, Hearing Room 3

**Economic and Revenue Forecast Council**

Ed Orcutt, House of Representatives, Chair  
John Braun, Senate  
Duane Davidson, Treasurer  
Vikki Smith, Department of Revenue  
David Schumacher, Office of Financial Management

*Staff*

Steve Lerch, Executive Director  
*Budget Outlook Work Group*  
*representatives:*  
Pam Davidson, OFM  
Sarian Scott, Senate  
Andy Toulon, House

**Call to Order**

Representative Orcutt called the meeting to order at 10:01 a.m.

**Approval of the Minutes**

Treasurer Davidson moved, seconded by Representative Orcutt, to adopt the meeting minutes from November 20, 2018. Motion passed unanimously at 10:02 a.m.

**Presentation on Budget Outlook**

Pam Davidson, Andy Toulon, and Sarian Scott provided an overview of the methodology for the state budget outlook.

**Motion to Adopt the Budget Outlook**

Director Schumacher moved, seconded by Representative Orcutt, to adopt the outlook on the Governor's proposed budget. Motion unanimously passed at 10:21 a.m. The Budget Outlook is adopted.

**Point of Clarification**

Representative Orcutt clarified that adoption of the outlook is not an endorsement or support of policy, but that the outlook is a reflection of taxes and expenses under the proposal.

**Adjournment**

Meeting adjourned at 10:22 a.m.

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



**Economic Review: March 7, 2019**

**Executive Summary**

**United States**

- This forecast is based on a modified version of IHS Markit's February 2019 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 2019 was 2.5%, down from 2.6% in the November 2018 forecast. Otherwise, the new forecast is unchanged from the previous forecast at 1.8%, 1.8%, 1.9%, 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 Friday, February 22, 2018 closing prices for Brent and WTI futures. The latest futures prices are very similar to the prices assumed in November.
- The U.S. economy added 304,000 net new jobs in January; this compares to an average job gain of 233,000 per month in 2018. Employment data for November and December were revised down by 70,000 jobs. Sectors with notable employment gains in January included construction (+52,000), health care (+42,000), food services and drinking places (+37,000), amusements, gambling and recreation (+32,000), transportation and warehousing (+27,000) and retail trade (+21,000). Sectors with net employment declines in January included nondurable manufacturing (-7,000), investigation and security services (-5,000) and state government education (-5,000).
- The initial estimate of real U.S. GDP growth for the fourth quarter of 2018 was 2.6% (SAAR), down from 3.4% in the third quarter. For all of 2018, real GDP growth was 2.9%.
- Two key measures of consumer confidence increased this month. Consumers responding to the University of Michigan consumer sentiment survey responded positively to the end of the federal government shutdown and indicated that long-term inflation expectations have dropped to very low levels, resulting in a 4.3 point increase to 95.5 in the sentiment index in February. The Conference Board index of consumer confidence increased by 9.7 points in February to 131.4. Consumers responding to the Conference Board survey also reacted positively to the end of the government shutdown and indicated they expect the economy to continue expanding albeit at more moderate pace.
- Initial claims for unemployment insurance increased by 8,000 to 225,000 (SA) in the week ending February 23<sup>rd</sup>. The four-week moving average of initial claims decreased by 7,000 to 229,000.
- Industrial production decreased by 0.6% (SA) in January following a revised 0.1% increase in December. New orders for core capital goods (i.e., durables

excluding aircraft and military), which is a proxy for business investment, decreased by 1.0% (SA) in December according to U.S. Census Bureau data.

- Housing data continue to be mixed. Housing units authorized by building permits in December were 0.3% (SA) above their November level and 0.5% above their year-ago level. For all of 2018, building permits were 2.2% above their 2017 level. December housing starts decreased by 11.2% (SA) compared to November and were 10.9% below their December 2017 level. For all of 2018, housing starts were 3.6% above their 2017 level. New home sales in December increased by 3.7% (SA) over November. For all of 2018, new home sales were 1.5% higher than in 2017. Existing home sales decreased in January, falling by 1.2% (SA) compared to December. Existing home sales in January were at their slowest pace since November 2015 and are 8.5% below their year-ago level. The seasonally adjusted Case-Shiller national home price index for December was 0.3% above its November level and 4.7% above its year-ago level.
- Major threats to the U.S. and Washington economies remain, including concerns about international trade and fiscal policy as well as geopolitical risks.

## Washington

- We have three months of new Washington employment data since the November forecast was released. Total nonfarm payroll employment rose 21,800 (seasonally adjusted) in November, December, and January, which was 4,400 more than the 17,400 expected in the November forecast. Manufacturing added 4,100 jobs, including 1,000 aerospace jobs, and construction added 4,200 jobs. Private services-providing sectors added 13,800 jobs but government payrolls lost 400 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 lowered the estimated level of total employment in October 2018 by 15,800 jobs (0.5%). As a result of the downward revision to history and stronger-than-expected growth, the combined effect is 11,400 (0.3%) fewer jobs in January 2019 than expected in the November forecast.
- Washington's January unemployment rate was 4.5%, unchanged from November and December. A year ago, in January 2018, the Washington unemployment rate stood at 4.6%.
- In December, the Bureau of Economic Analysis released estimates for state personal income through the third quarter of 2018. We have incorporated the new BEA estimates as well as additional Washington Quarterly Census of Employment and Wages (QCEW) data. Our current estimate of Washington personal income in the third quarter of 2018 is \$0.1 billion (0.0%) lower than assumed in the November forecast. Wages were \$1.1 billion (-0.4%) lower than expected but nonwage income was \$0.9 billion (0.4%) above the forecast.
- Washington housing construction increased in the fourth quarter of 2018 and exceeded the November forecast. The number of housing units authorized by building permits increased to 48,600 units (SAAR) in the fourth quarter of

- 2018 from 42,400 units in the third quarter. The November forecast expected 42,800 units in the fourth quarter.
- In a sign that the local housing market has cooled, seasonally adjusted Seattle area home prices fell 0.1% in December according to the S&P/Case-Shiller Home Price Indices. This was the sixth consecutive monthly decline. In December, the over-the-year growth was 5.1% in Seattle compared to 12.7% a year ago. Seattle home prices are still up 88% since the December 2011 trough and exceed the May 2007 peak by 31%.
  - Seattle area consumer price inflation remains above the national average. Over the last year, from December 2017 to December 2018, consumer prices in the Seattle area rose 2.8% (seasonally adjusted) compared to 1.9% for the U.S. city average. Core prices, which exclude food and energy, increased 2.6% in Seattle compared to 2.2% for the nation. The higher Seattle inflation was mostly due to more rapid growth in shelter costs. During the year, shelter costs in Seattle rose 5.0% compared to 3.2% for the nation. Excluding shelter costs, Seattle inflation was 1.5% compared to 1.3% U.S. city average.
  - Despite an increase in transportation equipment, Washington exports declined over the year for the first time in more than a year. Exports decreased 2.7% in the fourth quarter of 2018 compared to the fourth quarter of 2017. Transportation equipment exports (mostly Boeing planes) increased 1.8% over the year but exports of agricultural products fell 29.5%. Exports of all other commodities (mostly manufacturing) increased 3.6%.
  - The Institute of Supply Management - Western Washington Index (ISM-WW) increased in January and remained in positive territory. The index, which measures conditions in the manufacturing sector, increased from 52.7 in December to 54.5 in January (index values above 50 indicate growth while values below 50 indicate contraction). The index has exceeded 50 in each of the last 18 months. The production, orders, employment, and deliveries components all indicated expansion in January while the inventory component indicated contraction.
  - Car and truck sales increased in January 2019 but remain below the recent peak. Seasonally adjusted new vehicle registrations increased 0.5% to 301,230 (SAAR) in January. Sales are down 0.5% over the year and 10.0% since the November 2017 post-recession peak.
  - We expect 2.1% Washington employment growth this year compared to 2.2% in the November forecast. As in November, we expect growth to decelerate. We expect employment growth to average 1.1% per year in 2020 through 2023, which is the same rate as in the November forecast. Our forecast for nominal personal income growth this year is 4.6%, down from 4.7% in the November forecast. Our new forecast for nominal personal income growth in 2020 through 2023 averages 4.8% per year, the same rate as in the November forecast.

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# Washington State Economic Outlook & Revenue Collection Experience

Presented to  
The Economic & Revenue Forecast Council

Steve Lerch  
Executive Director

March 7, 2019  
Olympia, Washington



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## Summary

- The preliminary economic forecast for both the U.S. and WA are very similar to the November forecast
- Despite a strong labor market, wage growth and inflation remain moderate
- Downside risks to the baseline include uncertainty regarding trade and fiscal policy, geopolitical concerns and a maturing economic expansion
- Revenue collections since the November forecast are \$154 million (2.9%) above expectations

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## Forecast risks

### Upside

- Elevated consumer, business confidence could translate into stronger growth
- Strong U.S., WA labor markets

### Downside

- International trade and fiscal policy uncertainty
- Geopolitical risks: North Korea, China, Russia, Iran, Venezuela, Brexit
- Rising interest rates
- Maturing economic expansion

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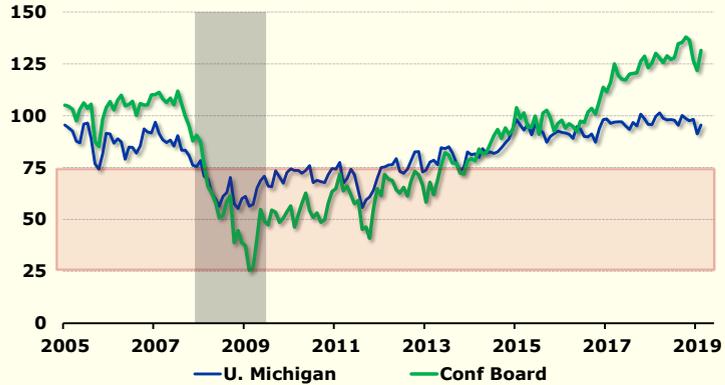
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## Consumer confidence dipped in late 2018 but has partially recovered, remains strong

**Index**  
Mich: 1966Q1 = 100, SA  
Conf Board: 1985 = 100, SA



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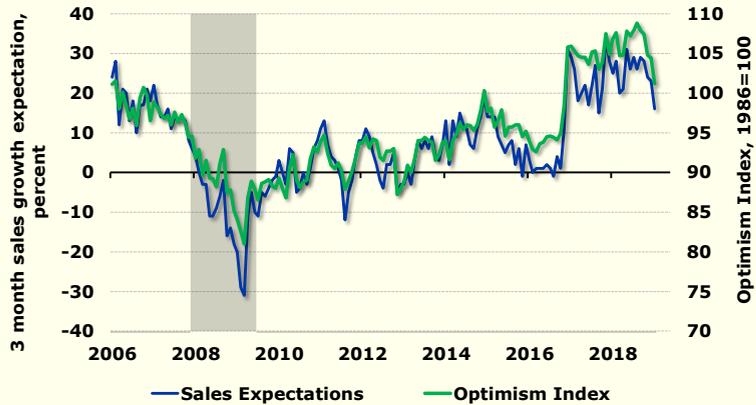
Sources: University of Michigan, Conference Board; data through February 2019

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## Small business optimism has weakened recently but remains strong

**NFIB Small Business Optimism Index**



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Source: National Federation of Independent Business; data through Jan. 2019

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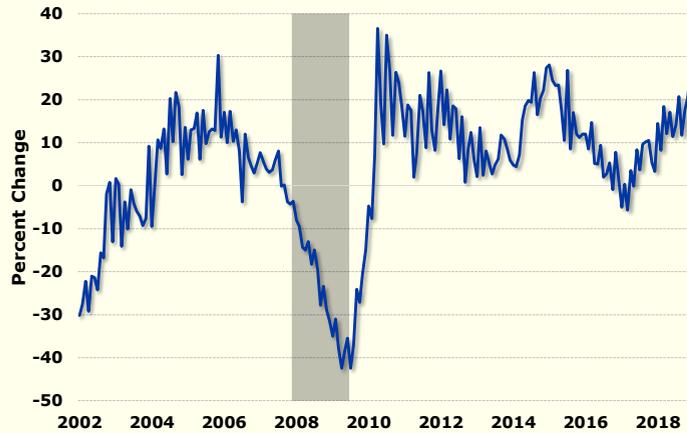
## Job openings continue to grow at a strong pace

An average of 5.7 million jobs were open in 2018

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### U.S. Job Openings, Year over Year Growth (SA)



Source: U.S. Bureau of Labor Statistics, data through Dec. 2018

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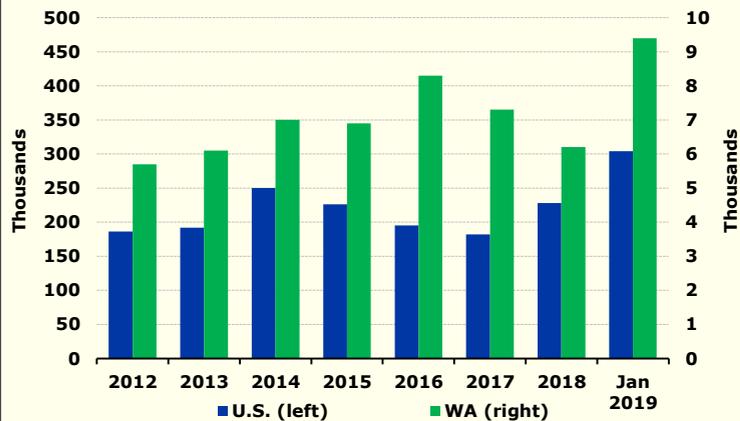


## WA, U.S. job growth remain strong

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### Average monthly employment change

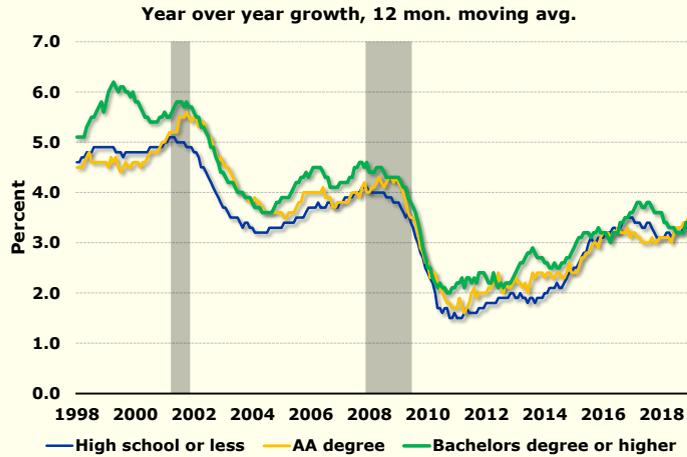


Source: Bureau of Labor Statistics, ERFC; data through Jan. 2019

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## Nominal wage growth has averaged 3.3% in last 12 months regardless of educational level



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Source: Federal Reserve Bank of Atlanta, data through Jan. 2019

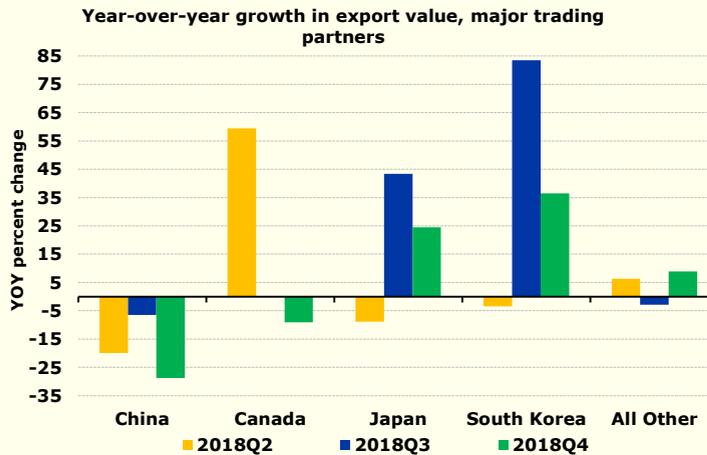
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## Exports to China are declining

After four quarters of year over year growth, WA exports declined in 2018 Q4



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Source: WISERTrade; data through 2018 Q4

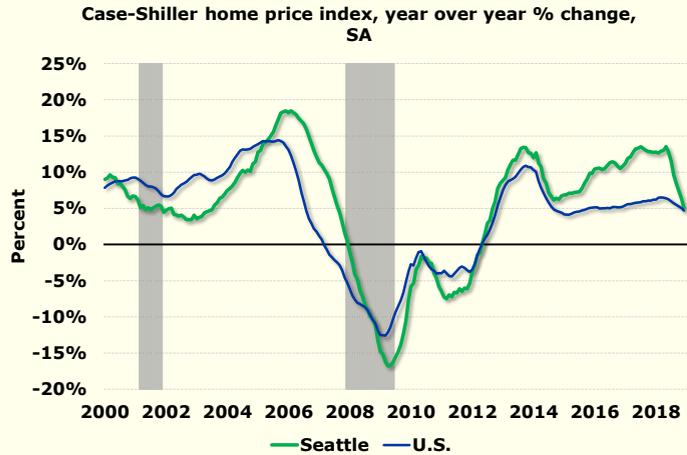
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## Home price growth is slowing

Starting in July 2018, the Case-Shiller index for Seattle has decreased for six consecutive months.



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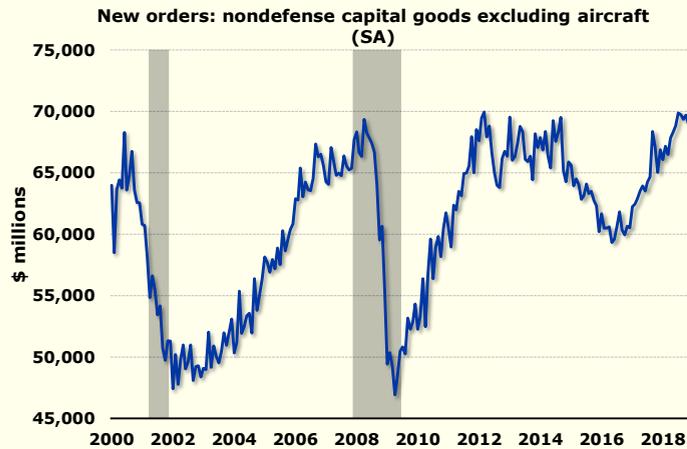
Source: Case-Shiller, data through December 2018

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## Business investment trended down in last five months of 2018



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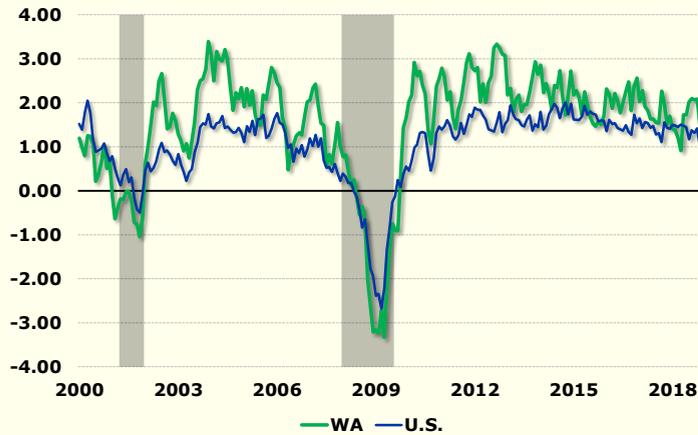
Source: U.S. Census Bureau; data through Dec. 2018

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## Leading economic indexes for WA, U.S. dipped recently but do not suggest a recession in near term



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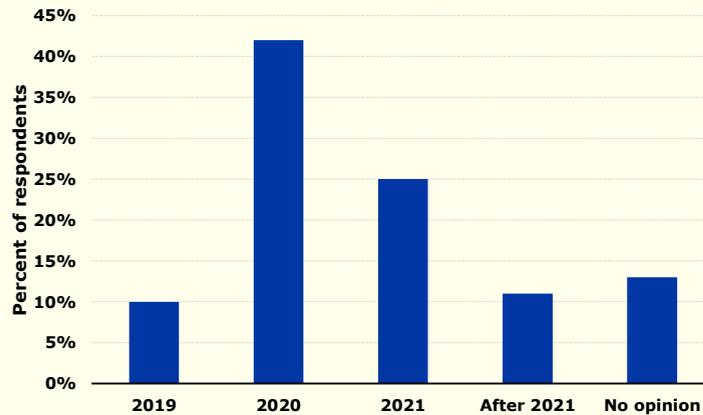
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Source: Federal Reserve Bank of Philadelphia, data through Nov. 2018

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## Timing of next recession: National Assoc. of Business Economists survey



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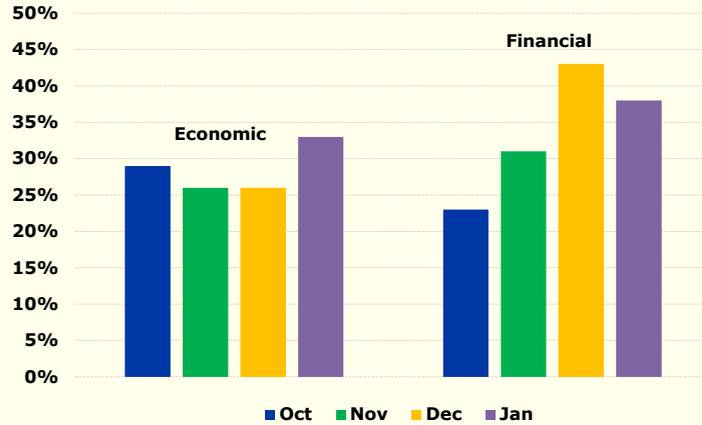
Source: National Association of Business Economists, Economic Policy Survey, Feb. 2019

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## Recession probabilities in next 12 months based on economic and financial markets data

The probabilities are derived from models developed by Moody's Analytics



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Source: Moody's Analytics, October - December 2018

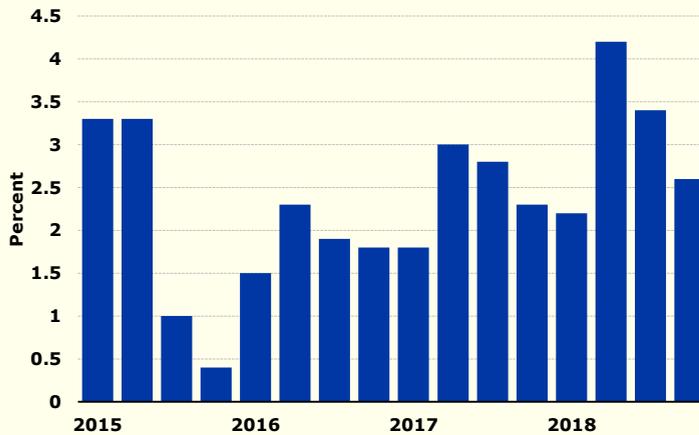
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## U.S. real GDP growth has slowed

Due to the partial Federal government shutdown, 2018 Q4 data, which was released Feb. 28<sup>th</sup>, was not available for this forecast.



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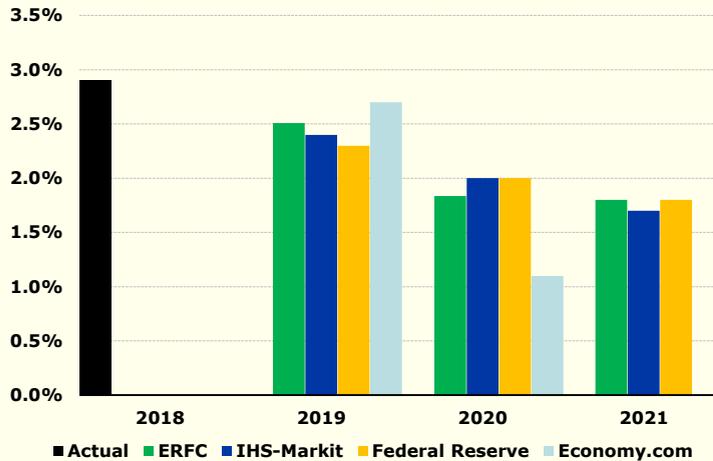
Source: U.S. Bureau of Economic Analysis. Data through Q4 2018

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## U.S. economic growth is expected to slow



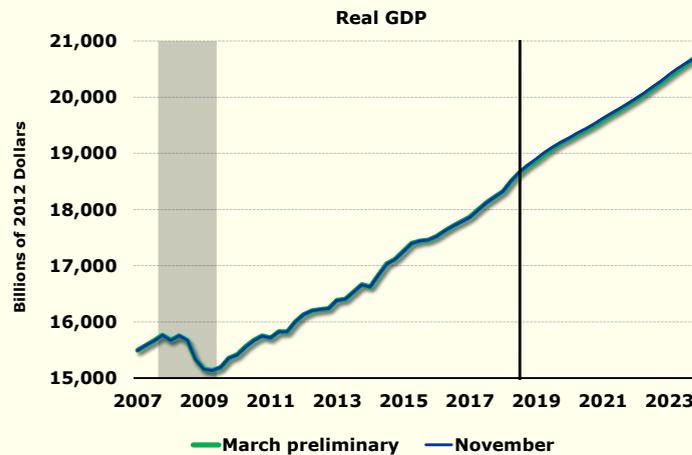
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Sources: U.S. Bureau of Economic Analysis, ERFC Mar. 2019 preliminary forecast, IHS-Markit, Federal Reserve Board, Economy.com  
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## The real GDP forecast is very similar to the November forecast

2018 GDP is 0.01% higher than in our preliminary forecast.  
GDP growth is slightly lower in 2019 but unchanged for 2020 - 2023.



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Source: IHS Markit, ERFC; data through Q3 2018  
Note: Vertical black line indicates last actual  
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## Oil prices are slightly lower than in the November forecast



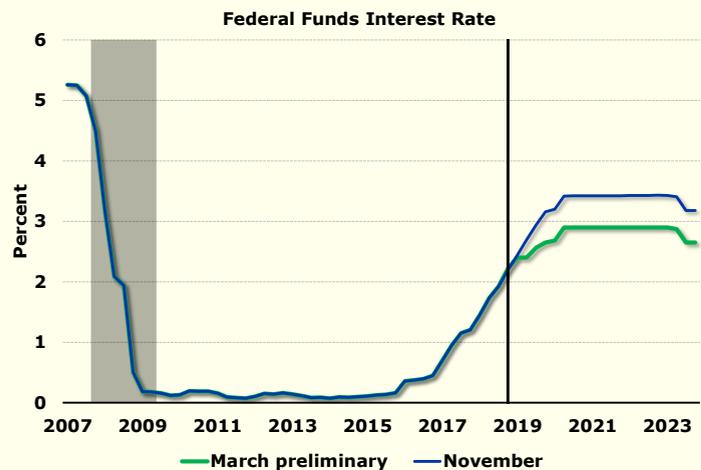
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Source: Energy Information Administration, IHS Markit, ERFC; data through Q4 2018  
Note: Vertical black line indicates last actual

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## The Federal Reserve is not expected to raise interest rates as high as anticipated in November



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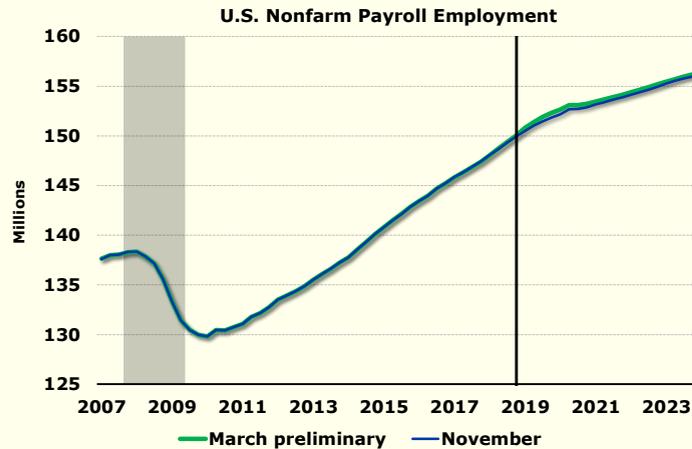
Source: ERFC March 2019 Preliminary forecast; historical data through Q4 2018

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

By the end of 2023, employment is 0.1% higher than in the November forecast.



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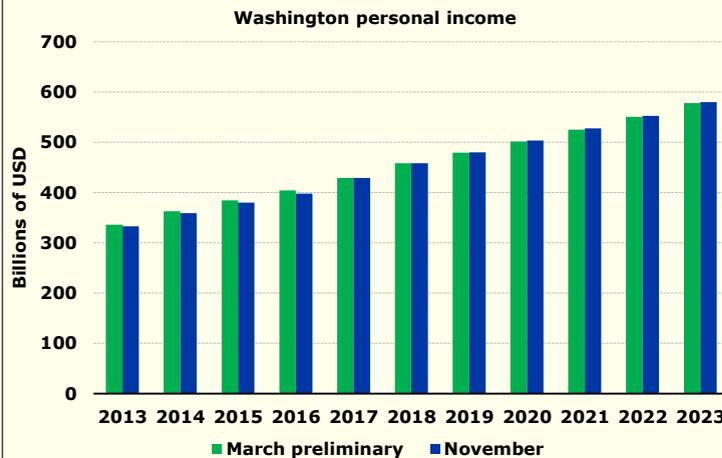
Source: IHS Markit, ERFC; data through Q4 2018

Note: Vertical black line indicates last actual

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## The WA personal income forecast is very similar to the November forecast



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Source: ERFC March 2019 Preliminary forecast; historical data through 2017

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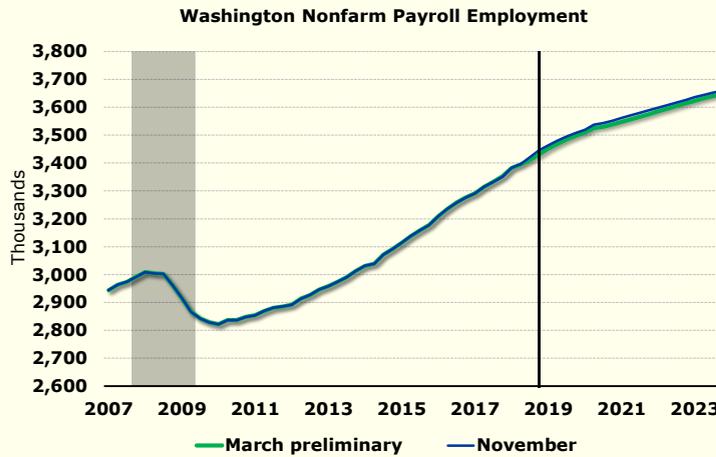
## Washington employment forecast is slightly lower than in November

2018 Q3 employment data were revised down but November, December and January employment data were slightly higher than expected in our November forecast.

In 2023, employment is 0.3% lower than forecasted in November.

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Source: ERFC March 2019 Preliminary forecast; historical data through Q4 2018

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## Online retail employment forecast consistent with press comments about future hiring plans

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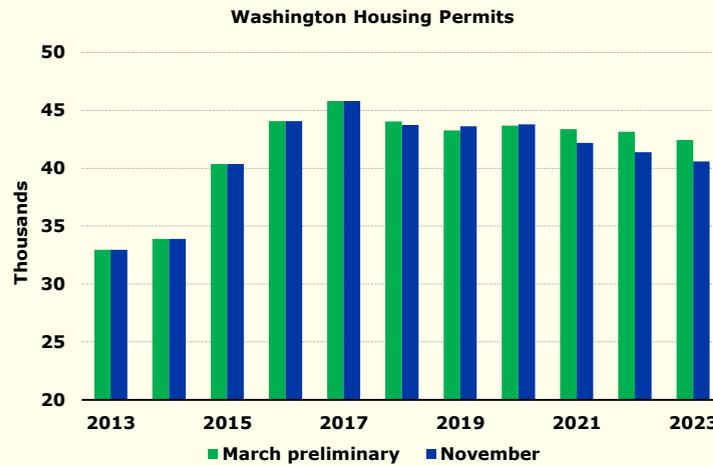


Source: ERFC March 2019 Preliminary forecast; historical data through Q4 2018

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## Washington housing permits forecast is slightly higher in 2021-23 compared to November



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Source: ERFC March 2019 Preliminary forecast; historical data through 2017

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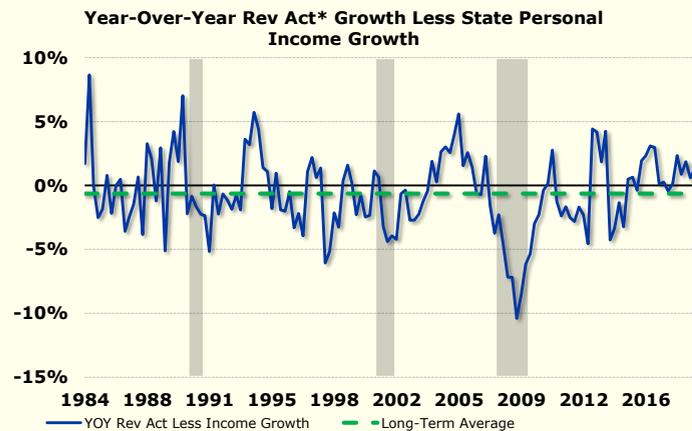
## Rev Act collections still growing faster than personal income

Adjusted Rev Act growth YOY:

18Q1: 8.2%  
18Q2: 8.8%  
18Q3: 7.6%  
18Q4: 7.5%

November personal income YOY growth estimates:

18Q1: 7.3%  
18Q2: 7.0%  
18Q3: 6.9%  
18Q4: 6.2%



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\*Adjusted for large one-time payments and refunds and payments under the amnesty program  
Source: ERFC; Quarterly revenue data through Q4 2018, November 2018 income estimates

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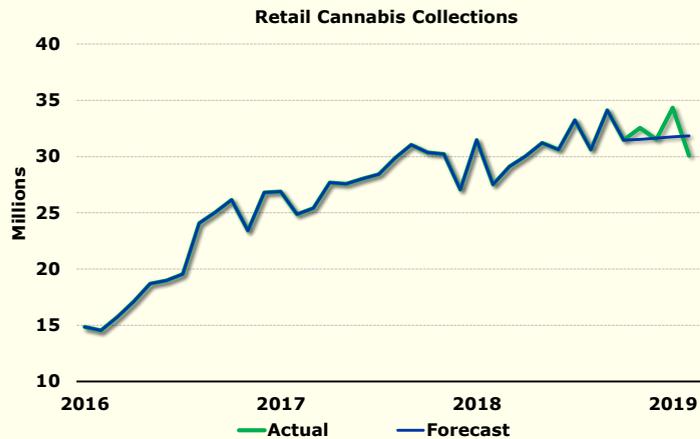
## Cannabis revenue continues to be volatile

Collections were 5.4% below forecast in February

Collections are 1.4% above forecast since November

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Source: LCB, ERFC November 2018 Forecast; data through February 2019

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## Commercial REET activity continues to be strong; residential activity picked up in January and February (SA)

Large commercial sales (>\$10 million) totaled \$2.1 billion in December, \$1.9 billion in January and \$0.9 billion in February (preliminary).

On a seasonally adjusted basis, residential sales in January and February bounced back to the levels of last fall.

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Source: ERFC; Monthly data through February 2019 preliminary

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## Revenue collections to date

### Collections Variance Since November Forecast (November 11, 2018 – February 10, 2019) dollars in thousands

	<u>Estimate</u>	<u>Actual</u>	<u>Difference</u>	<u>Pct.</u>
Dept. of Revenue	\$5,245,919	\$5,398,817	\$152,899	2.9%
All other agencies	\$17,421	\$18,136	\$714	4.1%
<b>Total GF-S</b>	<b>\$5,263,340</b>	<b>\$5,416,953</b>	<b>\$153,613</b>	<b>2.9%</b>

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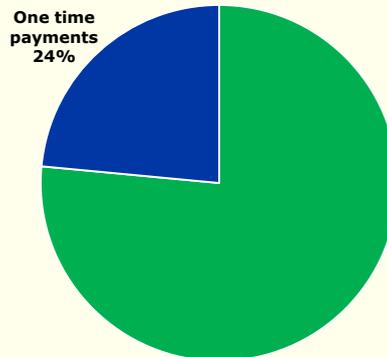
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## \$36 million of collections variance is due to large one time payments net of refunds

Collections variance: \$154 M



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## Conclusion

- The U.S. and Washington economic forecasts are similar to November, with WA employment and personal income slightly weaker
- As has been the case for some time, Washington's economy is continuing to outperform the nation
- Threats to economic expansion include concerns about international trade and fiscal policy, geopolitical risks and a maturing expansion
- The next monthly revenue collection report will be available on March 15<sup>th</sup> and the revenue forecast will be presented on March 20<sup>th</sup>

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## Questions



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**Economic & Revenue Forecast Council**  
PO BOX 40912  
Olympia WA 98504-0912

[www.erc.wa.gov](http://www.erc.wa.gov)  
360-534-1560

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**U.S. Economic Forecast Comparison**

February 2019

	2018Q4	2019Q1	2019Q2	2019Q3	2018	2019	2020	2021	2022	2023
<b>Real GDP, Percent Change, Annual Rate</b>										
ERFC (Preliminary March)	2.4	2.0	2.6	2.2	2.9	2.5	1.8	1.8	1.9	2.1
IHS	2.4	1.6	2.5	2.1	2.9	2.4	2.0	1.7	1.6	1.4
Economy.com	2.7	2.4	3.1	2.0	2.9	2.7	1.1			
Blue Chip Average*	2.6	2.0	2.6	2.2	2.5	1.8	1.8	1.9	2.1	
Blue Chip Top 10*	3.0	2.6	3.3	2.7	2.8	2.4	2.3	2.4	2.5	
Blue Chip Bottom 10*	2.2	1.5	2.1	1.7	2.2	1.1	1.2	1.5	1.8	
<b>Real Consumption, Percent Change, Annual Rate</b>										
ERFC (Preliminary March)	3.6	2.0	2.4	2.2	2.7	2.7	2.0	2.0	2.1	2.2
IHS	3.6	1.6	2.1	2.5	2.7	2.6	2.4	2.0	1.7	1.4
Economy.com	4.0	2.4	2.3	1.8	2.7	2.8	0.8			
Blue Chip Average*	3.4	2.2	2.5	2.3	2.7	2.0	2.0	2.1	2.2	
Blue Chip Top 10*	3.9	2.9	3.0	2.6	3.0	2.4	2.4	2.5	2.5	
Blue Chip Bottom 10*	2.7	1.5	2.1	1.8	2.4	1.3	1.4	1.7	1.8	
<b>Federal Funds Rate</b>										
ERFC (Preliminary March)	2.2	2.4	2.4	2.6	1.8	2.5	2.8	2.9	2.9	2.8
IHS	2.2	2.4	2.4	2.6	1.8	2.5	2.8	2.9	2.9	2.8
Economy.com	2.2	2.4	2.4	2.7	1.8	2.6	3.2			
<b>Three Month T-Bill Rate</b>										
ERFC (Preliminary March)	2.4	2.5	2.6	2.6	1.9	2.6	2.7	2.7	2.7	2.6
IHS	2.4	2.5	2.6	2.6	1.9	2.6	2.7	2.7	2.7	2.5
Blue Chip Average*	2.4	2.4	2.5	2.6		2.6	2.7	2.9	2.8	2.9
Blue Chip Top 10*		2.5	2.7	2.8		2.8	3.2	3.4	3.3	3.4
Blue Chip Bottom 10*		2.4	2.4	2.4		2.4	2.0	2.2	2.1	2.4
<b>10-Yr. T-Note Yield</b>										
ERFC (Preliminary March)	3.0	2.8	2.9	3.0	2.9	2.9	3.2	3.3	3.3	3.3
IHS	3.0	2.7	2.9	3.0	2.9	2.9	3.2	3.3	3.3	3.4
Economy.com	3.0	2.9	3.0	3.2	2.9	3.1	3.4			
Blue Chip Average*	3.0	2.8	2.9	3.0		2.6	2.7	2.9	2.8	2.9
Blue Chip Top 10*		3.0	3.1	3.2		2.8	3.2	3.4	3.3	3.4
Blue Chip Bottom 10*		2.7	2.7	2.7		2.4	2.0	2.2	2.1	2.4
<b>Consumer Price Index, Percent Change, Annual Rate</b>										
ERFC (Preliminary March)	1.8	1.3	2.4	2.4	2.4	1.9	2.1	2.2	2.2	2.3
IHS	1.8	0.9	3.1	2.6	2.4	2.0	2.1	2.3	2.4	2.4
Economy.com	1.8	1.6	2.7	2.8	2.4	2.1	2.2			
Blue Chip Average*	1.8	1.5	2.3	2.3		1.9	2.2	2.2	2.2	2.3
Blue Chip Top 10*		2.5	3.0	2.8		2.2	2.7	2.6	2.6	2.5
Blue Chip Bottom 10*		0.3	1.6	1.8		1.5	1.8	1.8	1.9	2.0
<b>Payroll Employment, Millions</b>										
ERFC (Preliminary March)	150.1	150.8	151.4	151.9	149.1	151.6	153.0	153.8	154.8	155.8
Percent Change, Annual Rate	1.7	2.0	1.6	1.4	1.7	1.7	0.9	0.5	0.6	0.7
IHS	150.1	150.8	151.3	151.8	149.1	151.5	153.0	153.7	154.5	154.9
Percent Change, Annual Rate	1.7	1.9	1.5	1.2	1.7	1.7	0.9	0.5	0.5	0.3
Economy.com	150.1	150.7	151.2	151.7	149.1	151.5	152.3			
Percent Change, Annual Rate	1.7	1.7	1.4	1.4	1.7	1.6	0.6			
<b>Unemployment Rate, Percent</b>										
ERFC (Preliminary March)	3.8	3.7	3.6	3.5	3.9	3.6	3.6	3.7	3.7	3.7
IHS	3.8	3.8	3.6	3.6	3.9	3.6	3.6	3.7	3.9	4.1
Economy.com	3.8	3.8	3.7	3.5	3.9	3.6	3.7			
Blue Chip Average*	3.8	3.8	3.7	3.6		3.7	3.7	4.1	4.2	4.3
Blue Chip Top 10*		3.9	3.9	3.9		3.9	4.3	4.8	4.9	5.0
Blue Chip Bottom 10*		3.7	3.5	3.4		3.5	3.3	3.4	3.6	3.7
<b>Real Disposable Personal Income, Percent Change, Annual Rate</b>										
ERFC (Preliminary March)	2.8	3.2	2.1	1.9	2.7	2.5	2.0	2.1	2.2	2.3
IHS	2.8	3.4	1.6	1.7	2.7	2.4	2.1	2.0	2.0	1.9
Blue Chip Average*	2.7	2.9	2.3	2.3		2.5	2.0	1.9	2.0	2.1
Blue Chip Top 10*	3.5	3.9	2.9	2.8		2.9	2.6	2.4	2.4	2.5
Blue Chip Bottom 10*	1.9	1.9	1.6	1.7		2.0	1.3	1.4	1.6	1.8
<b>West Texas Intermediate</b>										
ERFC (Preliminary March)	58.9	54.6	57.8	59.0	64.9	57.7	58.4	56.5	55.2	54.5
IHS	58.9	53.3	61.0	62.5	64.9	60.0	60.4	62.7	65.3	67.6
Economy.com	59.0	52.4	57.0	61.4	64.8	58.7	64.6			

\* Forecasts beyond 2019 are from the October 2018 Blue Chip Economic Indicators

### U.S. Forecast Comparison

	2018Q4	2019Q1	2019Q2	2019Q3
<b>Real GDP (Billions of 2012 Dollars)</b>				
March Forecast, Preliminary	18,776	18,869	18,990	19,093
Percent Change	2.4%	2.0%	2.6%	2.2%
November Forecast	18,790	18,905	19,021	19,117
Percent Change	2.6%	2.5%	2.5%	2.0%
<b>Real Consumption (Billions of 2012 Dollars)</b>				
March Forecast, Preliminary	13,070	13,135	13,212	13,285
Percent Change	3.6%	2.0%	2.4%	2.2%
November Forecast	13,036	13,121	13,199	13,267
Percent Change	2.1%	2.6%	2.4%	2.1%
<b>PCE Price Index (2012=100)</b>				
March Forecast, Preliminary	108.8	109.2	109.8	110.4
Percent Change	1.4%	1.4%	2.1%	2.1%
November Forecast	108.9	109.5	110.0	110.5
Percent Change	1.8%	1.9%	2.0%	1.9%
<b>Real Personal Income (Billions of 2012 Dollars)</b>				
March Forecast, Preliminary	16,377	16,514	16,606	16,694
Percent Change	2.7%	3.4%	2.2%	2.1%
November Forecast	16,374	16,472	16,588	16,697
Percent Change	1.9%	2.4%	2.8%	2.7%
<b>Nonfarm Payroll Employment (Millions)</b>				
March Forecast, Preliminary	150.1	150.8	151.4	151.9
Percent Change	1.7%	2.0%	1.6%	1.4%
November Forecast	150.0	150.5	151.0	151.5
Percent Change	1.7%	1.5%	1.4%	1.2%
<b>Unemployment Rate (Percent of Labor Force)</b>				
March Forecast, Preliminary	3.8	3.7	3.6	3.5
November Forecast	3.7	3.5	3.4	3.4
<b>Oil Price, Refiner's Acquisition</b>				
March Forecast, Preliminary	61.2	57.1	60.5	60.8
November Forecast	64.0	59.0	59.7	60.0
<b>30 Year Fixed Mortgage Rate (Percent, average)</b>				
March Forecast, Preliminary	4.8	4.5	4.8	4.8
November Forecast	4.8	4.9	5.0	5.0
<b>3 Month T-Bill Rate (Percent, average)</b>				
March Forecast, Preliminary	2.4	2.5	2.6	2.6
November Forecast	2.4	2.6	2.7	2.8

	2017	2018	2019	2020	2021	2022	2023
<b>Real GDP (Billions of 2012 Dollars)</b>							
	18,051	18,569	19,035	19,384	19,733	20,108	20,530
Percent Change	2.2%	2.9%	2.5%	1.8%	1.8%	1.9%	2.1%
	18,051	18,574	19,060	19,403	19,753	20,128	20,551
Percent Change	2.2%	2.9%	2.6%	1.8%	1.8%	1.9%	2.1%
<b>Real Consumption (Billions of 2012 Dollars)</b>							
	12,559	12,897	13,246	13,513	13,783	14,072	14,382
Percent Change	2.5%	2.7%	2.7%	2.0%	2.0%	2.1%	2.2%
	12,559	12,892	13,228	13,479	13,749	14,038	14,347
Percent Change	2.5%	2.7%	2.6%	1.9%	2.0%	2.1%	2.2%
<b>PCE Price Index (2012=100)</b>							
	106.1	108.2	110.1	112.3	114.6	116.9	119.4
Percent Change	1.8%	2.0%	1.7%	2.0%	2.0%	2.0%	2.1%
	106.1	108.3	110.3	112.4	114.7	117.0	119.4
Percent Change	1.8%	2.1%	1.9%	1.9%	2.1%	2.0%	2.0%
<b>Real Personal Income (Billions of 2012 Dollars)</b>							
	15,867	16,229	16,648	17,006	17,368	17,759	18,175
Percent Change	2.6%	2.3%	2.6%	2.1%	2.1%	2.2%	2.3%
	15,867	16,244	16,639	17,053	17,430	17,819	18,249
Percent Change	2.6%	2.4%	2.4%	2.5%	2.2%	2.2%	2.4%
<b>Nonfarm Payroll Employment (Millions)</b>							
	146.6	149.1	151.6	153.0	153.8	154.8	155.8
Percent Change	1.6%	1.7%	1.7%	0.9%	0.5%	0.6%	0.7%
	146.6	149.0	151.2	152.6	153.5	154.5	155.6
Percent Change	1.6%	1.6%	1.5%	0.9%	0.6%	0.7%	0.7%
<b>Unemployment Rate (Percent of Labor Force)</b>							
	4.4	3.9	3.6	3.6	3.7	3.7	3.7
	4.4	3.9	3.5	3.6	3.7	3.8	3.8
<b>Oil Price, Refiner's Acquisition</b>							
	50.7	64.9	59.8	59.7	57.8	56.5	55.8
	50.7	65.5	59.6	59.8	59.6	59.4	59.0
<b>30 Year Fixed Mortgage Rate (Percent, average)</b>							
	4.0	4.5	4.7	4.9	5.0	5.0	4.9
	4.0	4.6	5.0	5.2	5.2	5.2	5.1
<b>3 Month T-Bill Rate (Percent, average)</b>							
	0.9	1.9	2.6	2.7	2.7	2.7	2.6
	0.9	2.0	2.8	3.1	3.2	3.2	3.0

**Washington Forecast Comparison**

	2018Q4	2019Q1	2019Q2	2019Q3	2017	2018	2019	2020	2021	2022	2023
<b>Real Personal Income (Billions of 2012 Dollars)</b>											
March Forecast, Preliminary	427.7	431.8	434.1	436.8	404.2	423.3	435.5	446.9	458.5	470.8	483.9
Percent Change	3.0%	3.9%	2.1%	2.5%	4.2%	4.7%	2.9%	2.6%	2.6%	2.7%	2.8%
November Forecast	427.6	430.2	433.6	436.9	404.2	423.2	435.2	448.3	460.1	472.4	485.7
Percent Change	2.8%	2.4%	3.3%	3.0%	4.2%	4.7%	2.8%	3.0%	2.6%	2.7%	2.8%
<b>Personal Income (Billions of Dollars)</b>											
March Forecast, Preliminary	465.5	471.6	476.6	482.0	428.8	458.2	479.4	501.9	525.4	550.5	577.8
Percent Change	4.4%	5.3%	4.3%	4.6%	6.1%	6.9%	4.6%	4.7%	4.7%	4.8%	5.0%
November Forecast	465.9	470.9	477.0	482.9	428.8	458.2	479.9	503.8	527.8	552.8	579.8
Percent Change	4.6%	4.4%	5.3%	5.0%	6.1%	6.9%	4.7%	5.0%	4.8%	4.7%	4.9%
<b>Disposable Personal Income (Billions of Dollars)</b>											
March Forecast, Preliminary	414.6	419.8	424.2	428.9	380.3	408.0	426.6	446.3	467.4	489.6	513.6
Percent Change	4.5%	5.2%	4.2%	4.5%	6.0%	7.3%	4.6%	4.6%	4.7%	4.7%	4.9%
November Forecast	414.6	419.2	424.8	430.1	380.3	407.9	427.4	449.3	471.0	492.7	515.6
Percent Change	4.5%	4.5%	5.4%	5.2%	6.0%	7.3%	4.8%	5.1%	4.8%	4.6%	4.6%
<b>Nonfarm Payroll Employment (Thousands)</b>											
March Forecast, Preliminary	3430	3452	3468	3484	3322	3404	3475	3525	3561	3599	3636
Percent Change	2.2%	2.6%	1.9%	1.9%	2.4%	2.5%	2.1%	1.4%	1.0%	1.1%	1.0%
November Forecast	3446	3462	3480	3495	3322	3411	3486	3538	3575	3612	3648
Percent Change	3.0%	2.0%	2.0%	1.7%	2.4%	2.7%	2.2%	1.5%	1.0%	1.0%	1.0%
<b>Unemployment Rate (Percent of Labor Force)</b>											
March Forecast, Preliminary	4.3	4.4	4.2	4.2	4.8	4.6	4.3	4.3	4.5	4.6	4.6
November Forecast	4.3	4.2	4.1	4.1	4.8	4.6	4.1	4.3	4.5	4.6	4.6
<b>Manufacturing Employment (Thousands)</b>											
March Forecast, Preliminary	290.3	292.8	293.4	294.1	283.8	286.6	293.9	294.9	293.6	294.6	297.9
Percent Change	4.4%	3.5%	0.9%	0.9%	-2.1%	1.0%	2.5%	0.3%	-0.5%	0.4%	1.1%
November Forecast	289.0	289.6	290.0	290.0	283.8	286.4	290.1	290.5	290.2	292.2	295.8
Percent Change	1.9%	0.8%	0.6%	0.0%	-2.1%	0.9%	1.3%	0.1%	-0.1%	0.7%	1.2%
<b>Construction Employment (Thousands)</b>											
March Forecast, Preliminary	216.4	219.6	219.5	219.0	199.7	212.5	219.3	218.0	217.0	216.5	216.3
Percent Change	6.3%	6.0%	-0.2%	-0.9%	7.0%	6.4%	3.2%	-0.6%	-0.5%	-0.2%	-0.1%
November Forecast	215.9	215.8	215.8	215.6	199.7	212.5	215.8	215.7	214.9	213.8	212.5
Percent Change	4.8%	-0.1%	0.1%	-0.5%	7.0%	6.4%	1.6%	-0.1%	-0.3%	-0.5%	-0.6%
<b>Housing Permits (Thousands)</b>											
March Forecast, Preliminary	44.1	42.9	43.3	43.4	45.8	44.0	43.3	43.7	43.4	43.2	42.4
Percent Change	52.3%	-10.0%	3.4%	0.6%	3.9%	-3.8%	-1.8%	1.0%	-0.7%	-0.5%	-1.7%
November Forecast	42.8	42.9	43.6	43.9	45.8	43.7	43.6	43.8	42.2	41.4	40.6
Percent Change	35.9%	0.9%	6.7%	2.5%	3.9%	-4.5%	-0.2%	0.4%	-3.7%	-1.9%	-2.0%

**U.S. Forecast Comparison** **Fiscal Years**

	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Real GDP</b>						
Billions of 2012 dollars						
March Preliminary Forecast	18,295	18,825	19,222	19,555	19,914	20,317
<i>Growth</i>	2.6%	2.9%	2.1%	1.7%	1.8%	2.0%
November Forecast	18,295	18,847	19,239	19,576	19,931	20,344
<i>Growth</i>	2.6%	3.0%	2.1%	1.7%	1.8%	2.1%
Difference in level	0	-22	-18	-20	-18	-28
<i>Difference in growth forecast</i>	<b>0.0%</b>	<b>-0.1%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

<b>Real Consumption</b>						
Billions of 2012 dollars						
March Preliminary Forecast	12,714	13,092	13,385	13,645	13,924	14,227
<i>Growth</i>	2.5%	3.0%	2.2%	1.9%	2.0%	2.2%
November Forecast	12,714	13,081	13,355	13,613	13,889	14,198
<i>Growth</i>	2.5%	2.9%	2.1%	1.9%	2.0%	2.2%
Difference in level	0	11	30	32	35	29
<i>Difference in growth forecast</i>	<b>0.0%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

<b>PCE Price Index</b>						
2012 = 100						
March Preliminary Forecast	107.2	109.1	111.2	113.4	115.7	118.1
<i>Growth</i>	1.9%	1.8%	1.9%	2.0%	2.1%	2.1%
November Forecast	107.2	109.2	111.3	113.5	115.9	118.2
<i>Growth</i>	1.9%	1.9%	1.9%	2.0%	2.1%	2.0%
Difference in level	0.0	-0.1	-0.1	-0.1	-0.1	0.0
<i>Difference in growth forecast</i>	<b>0.0%</b>	<b>-0.1%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.1%</b>

<b>Unemployment Rate</b>						
Percent of Labor Force						
March Preliminary Forecast	4.1%	3.7%	3.5%	3.7%	3.7%	3.7%
November Forecast	4.1%	3.6%	3.5%	3.7%	3.8%	3.8%
<i>Difference in forecast</i>	<b>0.0%</b>	<b>0.1%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

<b>30 Year Fixed Mortgage Rate</b>						
Annual Average						
March Preliminary Forecast	4.2%	4.6%	4.9%	5.0%	5.0%	5.0%
November Forecast	4.2%	4.8%	5.1%	5.2%	5.2%	5.2%
<i>Difference in forecast</i>	<b>0.0%</b>	<b>-0.2%</b>	<b>-0.2%</b>	<b>-0.3%</b>	<b>-0.3%</b>	<b>-0.2%</b>

<b>3 Month T-Bill Rate</b>						
Annual Average						
March Preliminary Forecast	1.4%	2.4%	2.7%	2.7%	2.7%	2.7%
November Forecast	1.4%	2.4%	3.0%	3.2%	3.2%	3.1%
<i>Difference in forecast</i>	<b>0.0%</b>	<b>-0.1%</b>	<b>-0.3%</b>	<b>-0.5%</b>	<b>-0.5%</b>	<b>-0.5%</b>

**Washington Forecast Comparison**
**Fiscal Years**

	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Real Personal Income</b>						
Billions of 2012 dollars						
March Preliminary Forecast	414.3	429.5	441.1	452.7	464.5	477.3
<i>Growth</i>	4.7%	3.7%	2.7%	2.6%	2.6%	2.8%
November Forecast	414.2	429.0	441.9	454.3	466.1	479.1
<i>Growth</i>	4.7%	3.6%	3.0%	2.8%	2.6%	2.8%
Difference in level	0.1	0.5	-0.8	-1.6	-1.6	-1.8
<b><i>Difference in growth forecast</i></b>	<b>0.0%</b>	<b>0.1%</b>	<b>-0.3%</b>	<b>-0.2%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Nominal Personal Income</b>						
Billions of dollars						
March Preliminary Forecast	444.0	468.6	490.5	513.4	537.7	564.0
<i>Growth</i>	6.7%	5.5%	4.7%	4.7%	4.7%	4.9%
November Forecast	443.9	468.6	491.9	515.7	540.1	566.1
<i>Growth</i>	6.6%	5.6%	5.0%	4.8%	4.7%	4.8%
Difference in level	0.1	0.0	-1.4	-2.3	-2.4	-2.2
<b><i>Difference in growth forecast</i></b>	<b>0.0%</b>	<b>0.0%</b>	<b>-0.3%</b>	<b>-0.2%</b>	<b>0.0%</b>	<b>0.1%</b>
<b>Nonfarm Payroll Employment</b>						
Thousands						
March Preliminary Forecast	3,365.3	3,440.0	3,504.2	3,542.6	3,580.0	3,618.4
<i>Growth</i>	2.4%	2.2%	1.9%	1.1%	1.1%	1.1%
November Forecast	3,365.5	3,452.0	3,515.0	3,556.5	3,593.5	3,630.8
<i>Growth</i>	2.4%	2.6%	1.8%	1.2%	1.0%	1.0%
Difference in level	-0.3	-12.0	-10.9	-13.8	-13.5	-12.4
<b><i>Difference in growth forecast</i></b>	<b>0.0%</b>	<b>-0.3%</b>	<b>0.0%</b>	<b>-0.1%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Housing Permits</b>						
Units Authorized, Thousands						
March Preliminary Forecast	47.1	42.5	43.6	43.5	43.4	42.8
<i>Growth</i>	5.9%	-9.8%	2.5%	-0.2%	-0.3%	-1.3%
November Forecast	47.1	42.3	44.1	42.9	41.8	41.0
<i>Growth</i>	5.9%	-10.3%	4.2%	-2.6%	-2.6%	-2.0%
Difference in level	0.0	0.2	-0.5	0.6	1.6	1.8
<b><i>Difference in growth forecast</i></b>	<b>0.0%</b>	<b>0.5%</b>	<b>-1.7%</b>	<b>2.4%</b>	<b>2.3%</b>	<b>0.7%</b>

**Year-Over-Year Employment Growth by Industry  
(December 2017 to December 2018)  
Washington vs. U.S.**

	Washington		U.S.
	(000)	% Chg.	% Chg.
<b>Total</b>	<b>74.9</b>	<b>2.2%</b>	<b>1.8%</b>
Software Publishers	4.3	6.9%	6.1%
Information Excluding Software	4.1	6.2%	-0.8%
Construction	11.6	5.6%	4.5%
Aerospace Product and Parts Manufacturing	4.2	5.2%	6.7%
Electronic Shopping and Mail-Order Houses	1.9	3.5%	2.1%
Transportation, Warehousing and Utilities	3.6	3.4%	3.6%
Professional and Business Services	11.8	2.8%	2.7%
Education and Health Services	12.5	2.6%	2.3%
Leisure and Hospitality	8.6	2.6%	2.2%
Wholesale Trade	3.3	2.4%	1.3%
Manufacturing Excluding Aerospace	4.6	2.3%	1.9%
Other Services	2.5	2.1%	1.3%
Financial Activities	2.0	1.3%	1.4%
State and Local Gov Non-Education	0.7	0.3%	0.6%
Mining and Logging	0.0	-0.2%	8.8%
State and Local Gov Education	-3.7	-1.4%	0.5%
Information	8.4	6.6%	0.1%
Retail Trade	4.6	1.2%	0.0%
Manufacturing	8.8	3.1%	2.1%

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