

# Economic Review

June 6, 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**

June 6, 2019  
10:00 a.m.

- Approval of meeting minutes from March 20, 2019
- Budget outlook
- 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**

**Revenue Review**

March 20, 2019

John A Cherberg, Senate Hearing Room 3

**Economic and Revenue Forecast Council**

*Members Present*

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

*Staff*

Steve Lerch, Executive Director

**Call to Order**

Representative Orcutt called the meeting to order at 10:00 a.m.

**Motion**

Representative Ormsby moved, seconded by Representative Orcutt, to adopt the March 7, 2019 meeting minutes. Motion passed at 10:01 a.m.

**Forecast Presentation**

Dr. Lerch presented information on the economic and revenue forecast. Dr. Lerch summarized the forecast changes. Discussion ensued regarding housing, recession probabilities, and budget stabilization funds.

**Motion**

Representative Ormsby moved, seconded by Representative Orcutt, to adopt the baseline revenue forecast. Council approved the motion unanimously at 10:20 a.m.

**Adjournment**

With no further business, the meeting adjourned at 10:21 a.m.

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



**Economic Review: June 6, 2019**

**Executive Summary**

**United States**

- This forecast is based on a modified version of IHS Markit's May 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 May Blue Chip forecast for real GDP growth in 2019 and 2020 is 2.6% and 1.9% compared to 2.4% and 1.9% in March. The Blue Chip long-range forecast, which has not been updated since March, calls for growth rates of 1.7%, 1.9%, and 2.0% in 2021, 2022, and 2023.
- Our oil price forecast reflects the futures markets, primarily the Brent (North Sea) oil price but also the West Texas Intermediate (WTI) benchmark. This forecast was based on the Wednesday, May 22, 2019 closing prices for Brent and WTI futures. The latest futures prices begin higher but decline faster than the prices assumed in March.
- This forecast includes all tariffs and retaliation that had been imposed as of May 6, 2019 (the IHS forecast release date). This includes tariffs on \$250 billion of goods imported from China and retaliatory tariffs from China on \$110 billion of US goods. Since then, the United States announced it would raise the tariff rate from 10% to 25% on roughly \$200 billion of goods imported from China. China retaliated by raising tariffs on roughly \$60 billion of U.S. goods exported to China.
- The U.S. economy added 263,000 net new jobs in April. Employment data for February and March were revised up by 16,000 jobs. Sectors with notable employment gains in April included administrative and support services (+53,000), construction (+33,000), health care (+27,000), social assistance (+26,000) and food service and drinking places (+25,000). Sectors with net employment declines in April included retail trade (-12,000), state government (-11,000), commercial banking (-4,000) and advertising and related services (-4,000).
- The second estimate of real U.S. GDP growth for the first quarter of 2019 was 3.1% (SAAR), down from 3.2% in the initial estimate. For all of 2018, real GDP growth was 2.9%.
- Two key measures of consumer confidence increased this month. The University of Michigan consumer sentiment survey increased by 2.8 points to 100.0 in May. The Conference Board index of consumer confidence increased by 4.9 points in May to 134.1. Consumers responding to the Conference Board survey indicated a more favorable view of the job market but expressed mixed view regarding future income prospects.
- Initial claims for unemployment insurance increased by 3,000 to 215,000 (SA) in the week ending May 25<sup>th</sup>. The four-week moving average of initial claims decreased by 3,750 to 216,750.

- Industrial production decreased by 0.5% (SA) in April following a revised 0.2% increase in March. New orders for core capital goods (i.e., durables excluding aircraft and military), which is a proxy for business investment, decreased by 0.9% (SA) in April according to advance U.S. Census Bureau data.
- Housing data were mixed this month, with stronger construction activity but weaker sales. Housing units authorized by building permits in April were 0.6% (SA) above their March level but 5.0% below their year-ago level. April housing starts increased by 5.7% (SA) compared to March but were 2.5% below their April 2018 level. New home sales in April decreased by 6.9% (SA) compared to April but were 7.0% above their year-ago level. Existing home sales decreased slightly in April, falling by 0.4% (SA) compared to March and were down 4.4% compared to April 2018. The seasonally adjusted Case-Shiller national home price index for March was 0.3% above its February level and 3.7% 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 two months of new Washington employment data since the March forecast was released. Total nonfarm payroll employment rose 19,800 (seasonally adjusted) in March and April which was 6,000 more than expected in the March forecast. The construction sector added 5,000 jobs but manufacturing lost 400 jobs. Private services-providing sectors added 12,700 jobs in the two-month period and government employment increased by 2,500 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 February 2019 by 3,800 jobs (0.1%). As a result of the downward revision to history and stronger-than-expected growth, the combined effect is 2,200 (0.1%) more jobs in April 2019 than expected in the March forecast.
- Washington's unemployment rate edged up to 4.7% in April from 4.6% in March and 4.5% in February. The rate was at its all-time low of 4.4% as recently as October 2018. The reason for the increase in the last six months is that although employment has continued to grow, the labor force has grown faster.
- In March, the Bureau of Economic Analysis released estimates for state personal income through the fourth 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 fourth quarter of 2018 is \$0.9 billion (0.2%) higher than assumed in the March forecast. Wages were \$1.1 billion (0.4%) higher than expected but nonwage income was \$0.2 billion (0.1%) below the forecast.



- Washington housing construction declined in the first quarter of 2019 but was still slightly higher than expected in the March forecast. Housing units authorized by building permits declined from 48,600 (SAAR) in the fourth quarter of 2018 to 43,800 in the first quarter of 2019. In the first quarter, 21,100 single-family and 22,700 multi-family units were permitted. The March forecast expected 42,900 units in the first quarter as a whole, consisting of 23,800 single-family units and 19,200 multi-family units. Washington housing construction got off to a very strong start in the second quarter of 2019, though mostly as a result of a surge in multi-family permits. In April, 56,700 units (SAAR) were permitted consisting of 21,700 single-family permits and 35,000 multi-family permits. The March forecast assumed an average rate of 42,700 (SAAR) units for the second quarter as a whole.
- Seattle home price appreciation has clearly cooled. According to the S&P/Case-Shiller Home Price Indices, seasonally adjusted Seattle area home prices were unchanged in March following a 0.1% increase in February. On a monthly basis, Seattle home prices have, on average, been trending down since May 2018. In March, the over-the-year growth was 1.6% in Seattle compared to 2.6% for the 20-City Composite Home Price Index. Seattle home prices are still up 89% since the December 2011 trough and exceed the May 2007 peak by 31%.
- Seattle area consumer price inflation remains slightly above the national average due to shelter cost inflation. Over the last year, from April 2018 to April 2019, consumer prices in the Seattle area rose 2.4% (seasonally adjusted) compared to 2.0% for the U.S. city average. Core prices, which exclude food and energy, increased 2.6% in Seattle compared to 2.1% for the nation. Shelter costs rose 5.0% over the year in Seattle compared to the U.S. city average 3.4% rate. Seattle inflation excluding shelter costs was only 0.8% in Seattle during the year compared to the national rate of 1.3%.
- Washington exports declined over the year for a second consecutive quarter. Washington exports declined 3.8% in the first quarter of 2019 compared to the first quarter of 2018. Exports of transportation equipment (mostly Boeing planes) fell 8.0% over the year. Agricultural exports increased 3.1% while exports of all other commodities (mostly manufacturing) decreased 0.5%.
- Washington real Gross Domestic Product (GDP) rose 5.7% in 2018 which was the highest among the states and District of Columbia and was much greater than the 2.9% growth rate for the U.S. as a whole. The difference between Washington and U.S. real GDP growth in 2018 was mostly due to two sectors: retail trade (which includes electronic shopping) and information (which includes software publishing and other IT services such as internet publishing and web search portals).
- The Institute of Supply Management - Western Washington Index (ISM-WW) decreased in April but remained in positive territory. The index, which measures conditions in the manufacturing sector, declined from 57.8 in March to 54.0 in April (index values above 50 indicate growth while values below 50 indicate contraction). The index has exceeded 50 in each of the last 21 months. The production, orders, employment, and vendor deliveries components indicated expansion in April while the inventory component indicated contraction.
- Car and truck sales improved in April. Seasonally adjusted new vehicle registrations rose 2.1% to 300,800 (SAAR) in April. Car and truck sales are

up 0.3% over the year but down 10.2% since the November 2017 post-recession peak.

- We expect 2.2% Washington employment growth this year which is the same rate expected in the March forecast. As in March, we expect growth to decelerate. We expect employment growth to average 1.2% per year in 2020 through 2023, up slightly from 1.1% in the March forecast. Our forecast for nominal personal income growth this year is 4.8%, up from 4.6% in the March forecast. Our new forecast for nominal personal income growth in 2020 through 2023 averages 4.8% per year, the same rate as in the March forecast.

# Washington State Economic Outlook & Revenue Collection Experience

Presented to  
The Economic & Revenue Forecast Council

Steve Lerch  
Executive Director

June 6, 2019  
Olympia, Washington



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## Summary

- The preliminary economic forecast for both the U.S. and WA are very similar to the March forecast
- Despite a strong labor market, wage growth and inflation remain moderate
- Downside risks to the baseline include uncertainty regarding trade policy, geopolitical concerns and a maturing economic expansion
- Revenue collections since the March forecast are \$0.4 million (0.0%) 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 policy uncertainty
- Geopolitical risks: North Korea, China, Russia, Iran, Venezuela, Brexit
- Maturing economic expansion

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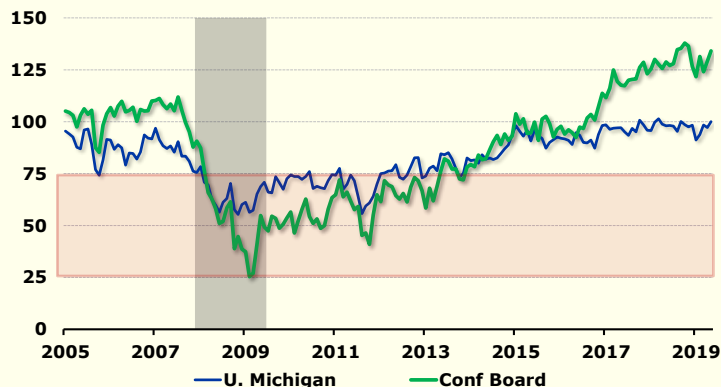
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## Consumer confidence dipped in late 2018 but has largely recovered, remains strong

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



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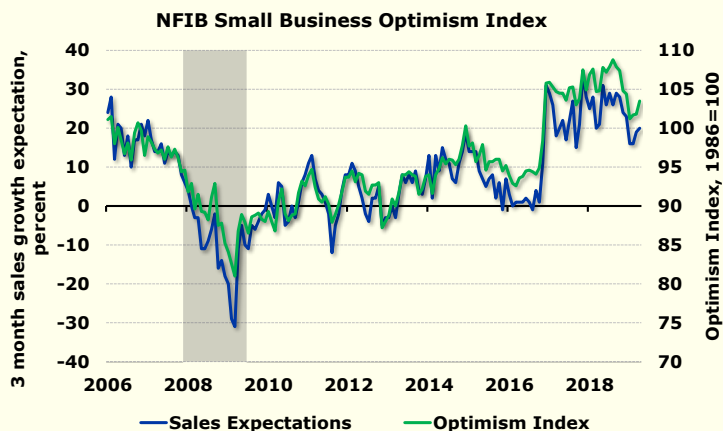
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Sources: University of Michigan, Conference Board; data through May 2019

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## Small business optimism is below its 2018 but remains strong



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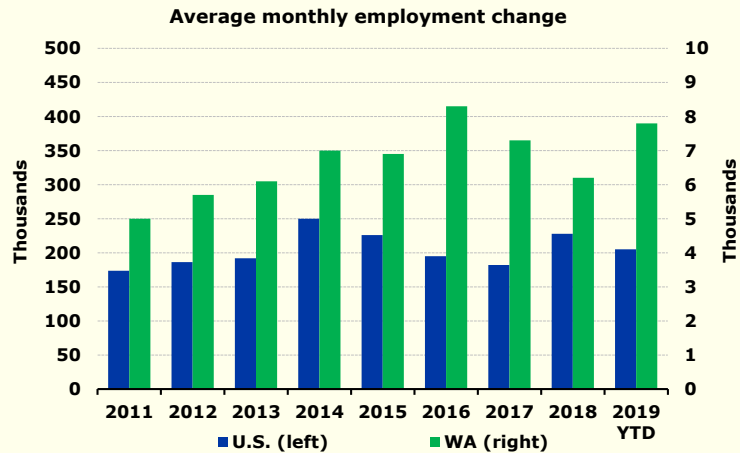
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Source: National Federation of Independent Business; data through April 2019

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## U.S. job growth slowed in February but picked up in March and April



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Source: Bureau of Labor Statistics, Employment Security Dept.; data through Apr. 2019

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## Hourly earnings are increasing but at a moderate rate



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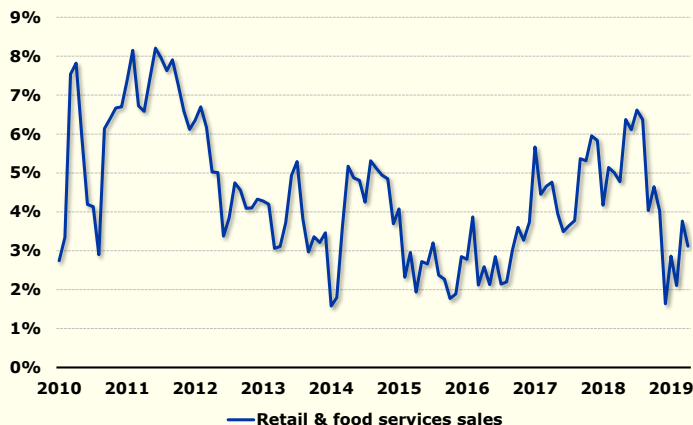
Source: Bureau of Labor Statistics, data through Apr. 2019

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## U.S. retail sales growth slowed in last nine months

Year over year growth, %



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Source: U.S. Census Bureau data through Apr. 2019 advanced release

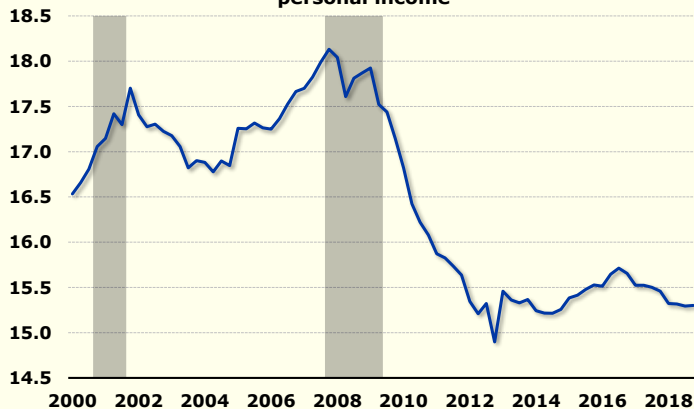
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## Household recurring payments as share of disposable income have declined since the recession

Financial obligations include all debt and other recurring payments such as rent, auto leases and property taxes

Household financial obligations as % disposable personal income



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Source: Federal Reserve Bank of St. Louis, data through 2018 Q4

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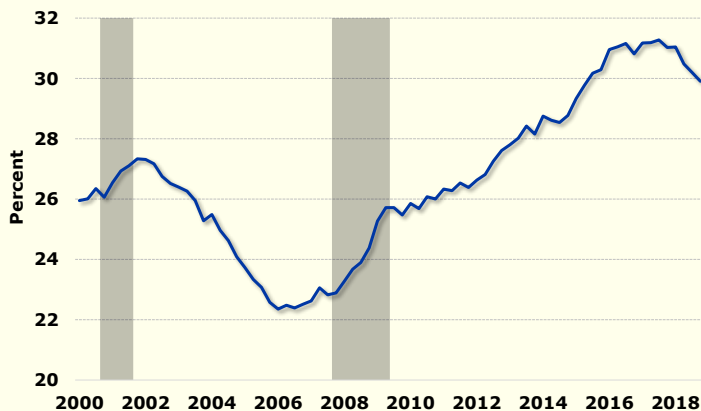
## Corporate debt relative to GDP has increased since the recession

The Federal Reserve has recently expressed concerns about lending to highly indebted companies.

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Nonfinancial corporate debt as % GDP



Source: Federal Reserve Bank of St. Louis, U.S. Bureau of Economic Analysis; data through 2018 Q4

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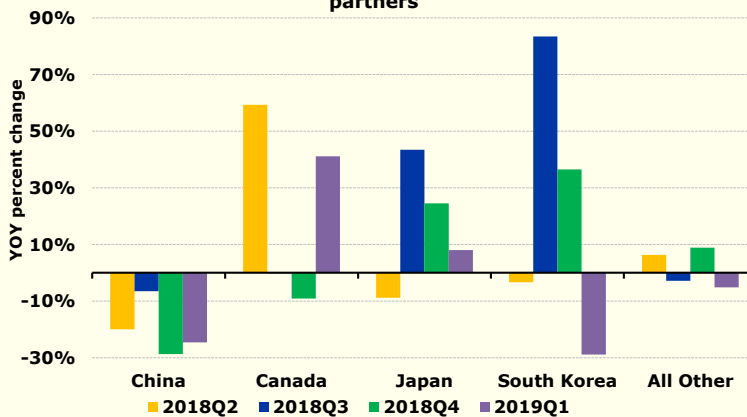
## Exports to China have declined for four consecutive quarters

On a year-over-year basis, WA exports declined in 2018 Q4 and 2019 Q1

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Year-over-year growth in export value, major trading partners



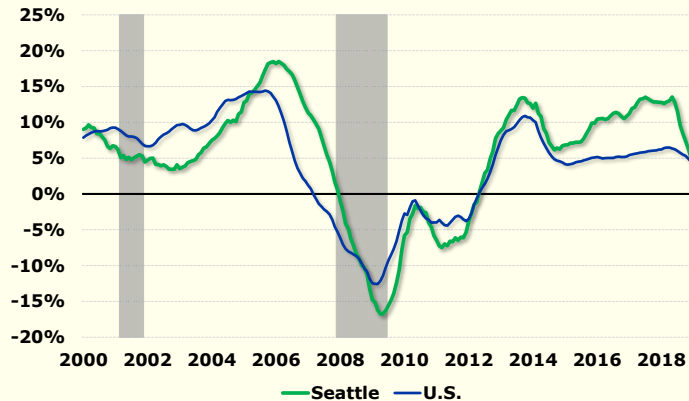
Source: WISERTrade; data through 2019 Q1

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## Home prices in Seattle are growing more slowly than for the U.S.

Case-Shiller home price index, year over year % change, SA



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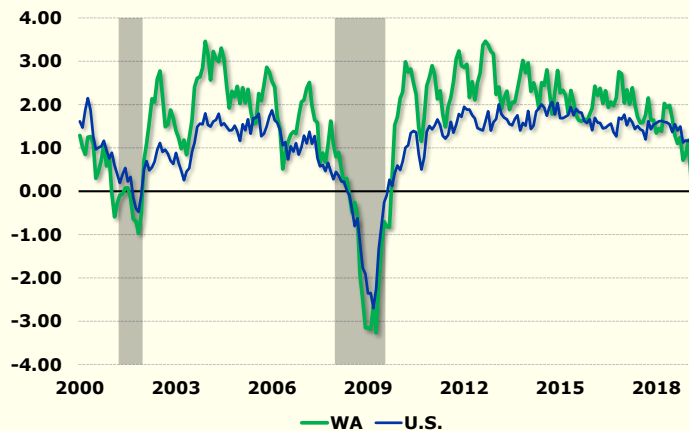
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Source: Case-Shiller, data through March 2019

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



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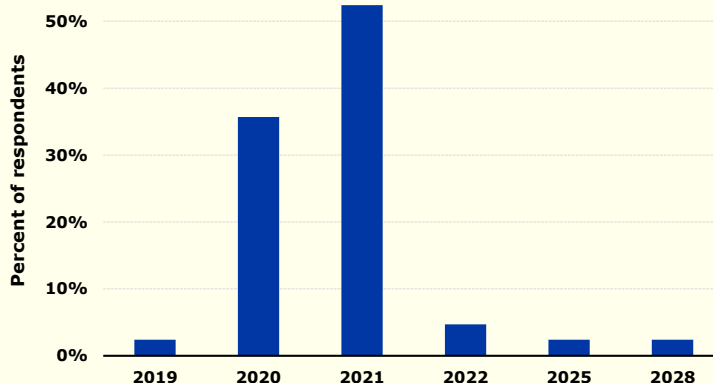
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Source: Federal Reserve Bank of Philadelphia, data through Apr. 2019

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## Timing of next recession: Wall Street Journal economist survey



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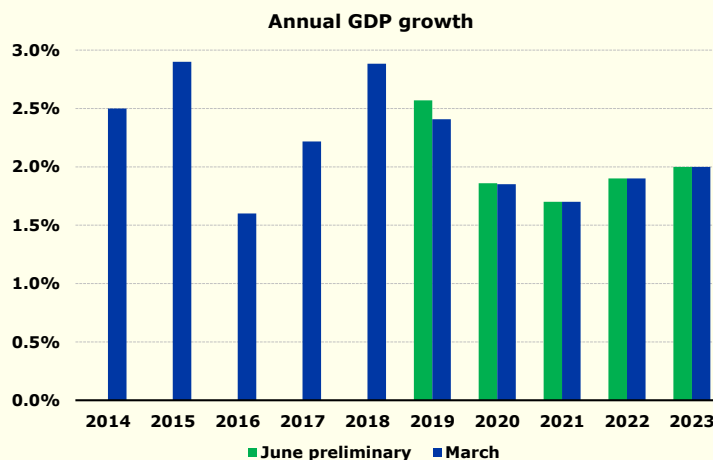
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Source: Wall Street Journal, monthly economist survey, May 2019

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## GDP growth is slightly higher this year but otherwise unchanged from March



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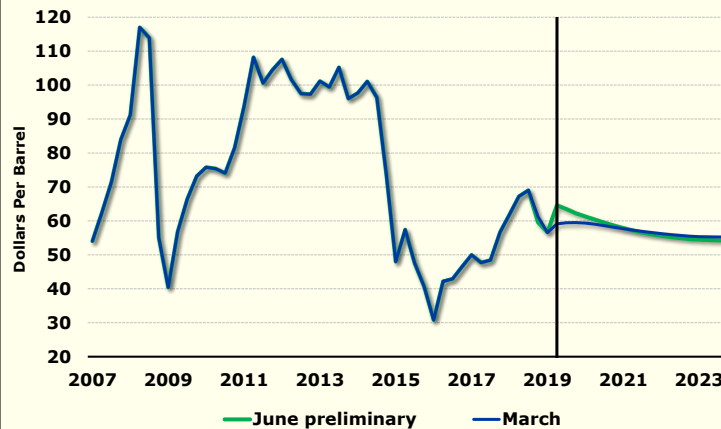
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Source: IHS Markit, ERFC June preliminary forecast; data through 2018

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



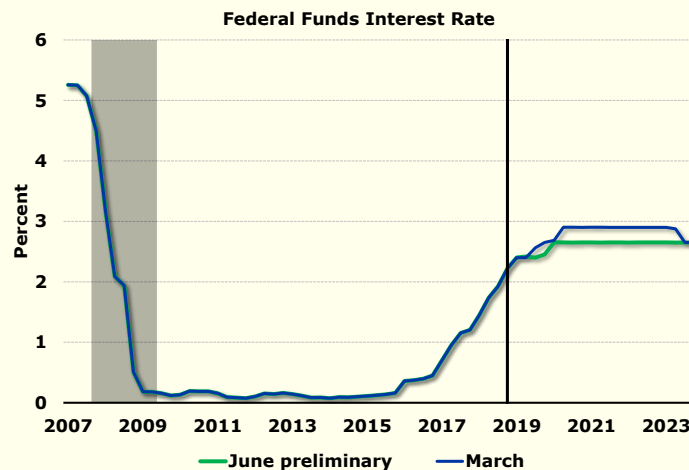
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Source: Energy Information Administration, IHS Markit, ERFC; data through Q1 2019  
Note: Vertical black line indicates last actual

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## The Federal Reserve is now expected to raise interest rates by 0.25% in late 2019



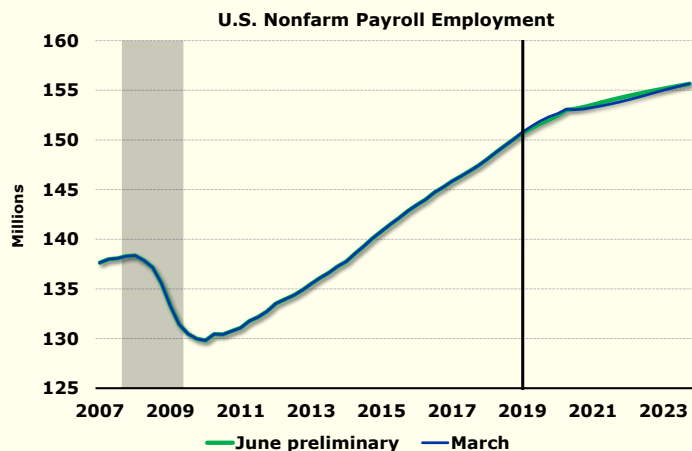
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Source: ERFC June 2019 Preliminary forecast; historical data through Q1 2019

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## U.S. nonfarm payroll employment growth is almost unchanged from March



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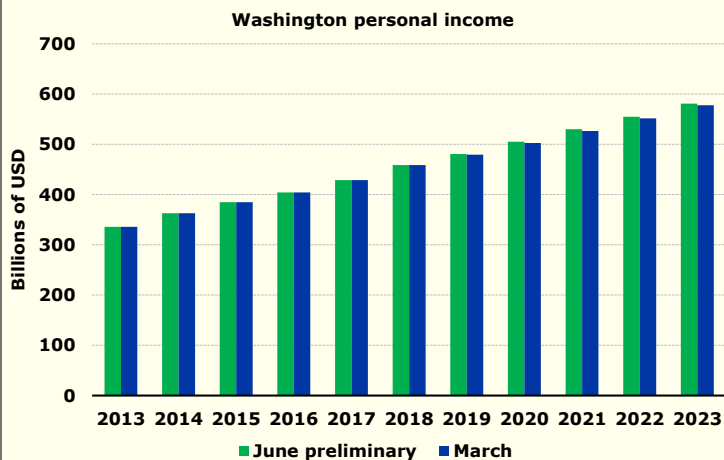
Source: IHS Markit, ERFC; data through Q1 2019

Note: Vertical black line indicates last actual

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## The WA personal income forecast is slightly higher than in the March forecast



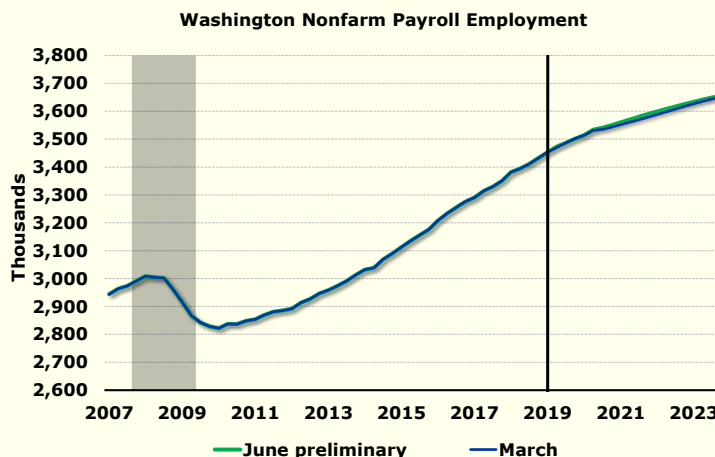
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Source: ERFC June 2019 Preliminary forecast; historical data through 2018

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## Washington employment forecast is nearly identical to March



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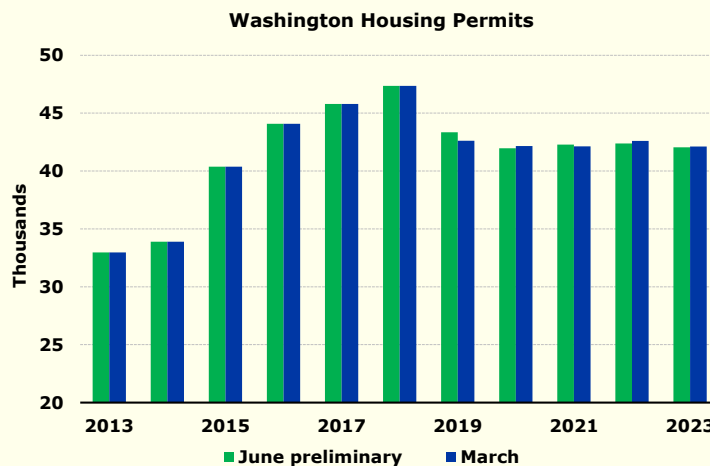
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Source: ERFC June 2019 Preliminary forecast; historical data through Q1 2019

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## Washington housing permits forecast is slightly higher in 2019 compared to March



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Source: ERFC June 2019 Preliminary forecast; historical data through 2018

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## Rev Act collections still growing faster than personal income

Adjusted Rev Act growth YOY:

18Q2: 8.8%  
18Q3: 7.6%  
18Q4: 7.4%  
19Q1: 5.6%

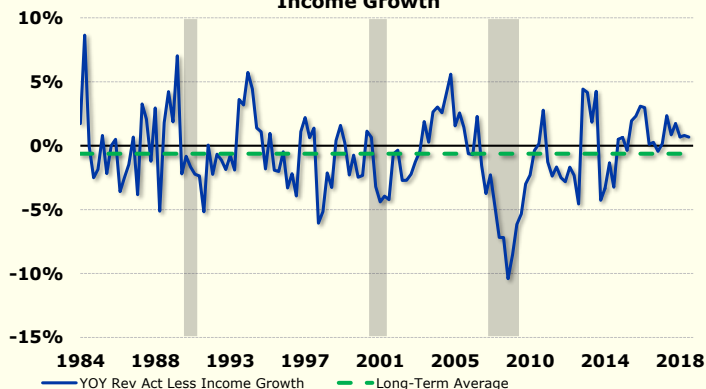
June preliminary personal income YOY growth estimates:

18Q2: 7.1%  
18Q3: 6.9%  
18Q4: 6.7%  
19Q1: 4.9%

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Year-Over-Year Rev Act\* Growth Less State Personal Income Growth



\*Adjusted for large one-time payments and refunds and payments under the amnesty program  
Source: ERFC; Quarterly revenue data through Q1 2019, June 2019 preliminary income estimates

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## Cannabis revenue continues to be volatile

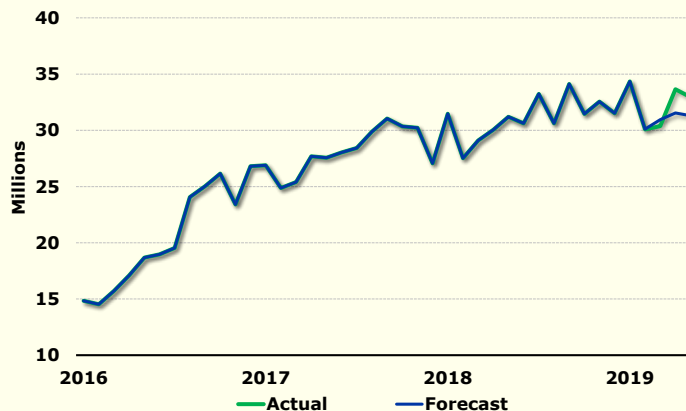
Collections were 5.2% above forecast in May

Collections are 3.4% above forecast since March

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Retail Cannabis Collections



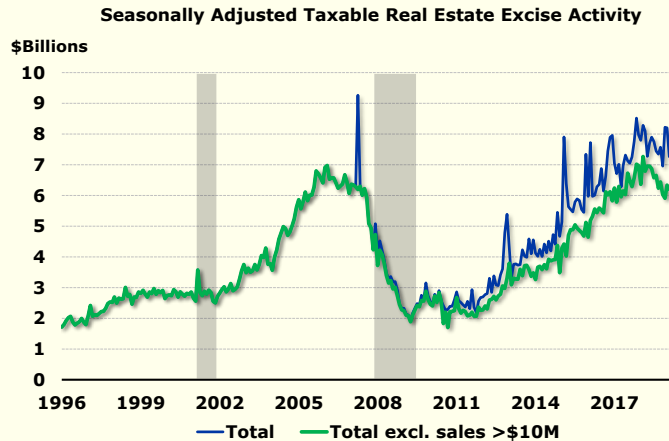
Source: LCB, ERFC March 2019 Forecast; data through May 2019

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## Residential REET activity has picked up while commercial remains strong

Large commercial sales (>\$10 million) averaged \$1.2 billion per month from February through April



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## Revenue collections to date

### Collections Variance Since March Forecast (March 11 – May 10, 2019) dollars in thousands

	<u>Estimate</u>	<u>Actual</u>	<u>Difference</u>	<u>Pct.</u>
Dept. of Revenue	\$3,193,068	\$3,193,889	\$821	0.0%
All other agencies	\$11,994	\$11,615	(\$379)	-3.2%
<b>Total GF-S</b>	<b>\$3,205,062</b>	<b>\$3,205,504</b>	<b>\$442</b>	<b>0.0%</b>

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## Conclusion

- The U.S. and Washington economic forecasts are very similar to March, with WA personal income slightly stronger
- 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 June 17<sup>th</sup> and the revenue forecast will be presented on June 25<sup>th</sup>

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## Questions



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# U.S. Economic Forecast Comparison

May 2019

	2019Q1	2019Q2	2019Q3	2019Q4	2018	2019	2020	2021	2022	2023
<b>Real GDP, Percent Change, Annual Rate</b>										
ERFC (Preliminary June)	3.2	1.7	2.0	2.0	2.9	2.6	1.9	1.7	1.9	2.0
IHS	3.2	2.0	2.2	2.1	2.9	2.7	2.1	1.8	1.5	1.5
Economy.com	3.2	1.7	2.5	2.3	2.9	2.6	1.7	2.1		
Blue Chip Average*		2.0	2.2	2.0		2.6	1.9	1.7	1.9	2.0
Blue Chip Top 10*		2.6	2.7	2.6		2.8	2.3	2.2	2.3	2.4
Blue Chip Bottom 10*		1.4	1.7	1.3		2.3	1.2	1.3	1.6	1.6
<b>Real Consumption, Percent Change, Annual Rate</b>										
ERFC (Preliminary June)	1.2	2.7	2.3	2.3	2.6	2.4	2.1	1.9	2.0	2.0
IHS	1.2	3.0	2.4	2.6	2.6	2.5	2.8	2.8	2.4	2.2
Economy.com	1.2	2.3	1.9	1.7	2.6	2.2	1.4	1.4		
Blue Chip Average*		2.8	2.3	2.2		2.4	2.1	1.9	2.0	2.0
Blue Chip Top 10*		3.4	2.8	2.7		2.5	2.6	2.3	2.5	2.5
Blue Chip Bottom 10*		2.2	1.8	1.6		2.1	1.5	1.4	1.7	1.6
<b>Federal Funds Rate</b>										
ERFC (Preliminary June)	2.4	2.4	2.4	2.5	1.8	2.4	2.7	2.6	2.7	2.6
IHS	2.4	2.4	2.4	2.5	1.8	2.4	2.7	2.6	2.7	2.6
Economy.com	2.4	2.4	2.5	2.5	1.8	2.4	2.7	2.9		
<b>Three Month T-Bill Rate</b>										
ERFC (Preliminary June)	2.4	2.5	2.4	2.4	1.9	2.4	2.5	2.4	2.4	2.4
IHS	2.4	2.5	2.4	2.4	1.9	2.4	2.5	2.5	2.4	2.4
Blue Chip Average*		2.4	2.4	2.4		2.4	2.4	2.5	2.6	2.7
Blue Chip Top 10*		2.5	2.5	2.6		2.6	2.8	3.2	3.3	3.2
Blue Chip Bottom 10*		2.4	2.3	2.2		2.4	1.8	1.6	1.7	2.0
<b>10-Yr. T-Note Yield</b>										
ERFC (Preliminary June)	2.7	2.6	2.7	2.7	2.9	2.7	2.9	3.1	3.2	3.2
IHS	2.7	2.6	2.7	2.8	2.9	2.7	2.9	3.1	3.2	3.3
Economy.com	2.7	2.5	2.7	2.9	2.9	2.7	3.2	3.5		
Blue Chip Average*		2.6	2.6	2.7		2.6	2.8	3.1	3.2	3.4
Blue Chip Top 10*		2.7	2.8	3.0		2.8	3.1	3.8	3.8	3.8
Blue Chip Bottom 10*		2.5	2.5	2.4		2.5	2.4	2.4	2.7	2.9
<b>Consumer Price Index, Percent Change, Annual Rate</b>										
ERFC (Preliminary June)	0.9	4.1	2.5	2.2	2.4	2.1	2.2	2.1	2.1	2.0
IHS	0.9	4.4	3.0	2.2	2.4	2.2	2.2	2.3	2.4	2.4
Economy.com	0.9	3.4	2.4	2.2	2.4	2.0	2.1	2.2		
Blue Chip Average*		3.1	2.2	2.1		1.9	2.2	2.2	2.2	2.2
Blue Chip Top 10*		4.2	2.8	2.5		2.2	2.6	2.6	2.6	2.6
Blue Chip Bottom 10*		1.9	1.7	1.6		1.7	1.8	1.9	1.9	1.9
<b>Payroll Employment, Millions</b>										
ERFC (Preliminary June)	150.7	151.2	151.6	152.0	149.1	151.4	153.0	153.9	154.7	155.4
Percent Change, Annual Rate	1.7	1.3	1.2	1.1	1.7	1.5	1.1	0.6	0.5	0.4
IHS	150.7	151.2	151.7	152.1	149.1	151.4	153.2	154.3	154.8	154.9
Percent Change, Annual Rate	1.7	1.4	1.3	1.2	1.7	1.6	1.2	0.7	0.3	0.1
Economy.com	150.7	151.3	151.8	152.3	149.1	151.5	152.9	152.8		
Percent Change, Annual Rate	1.7	1.6	1.4	1.4	1.7	1.6	0.9	-0.1		
<b>Unemployment Rate, Percent</b>										
ERFC (Preliminary June)	3.9	3.7	3.6	3.5	3.9	3.7	3.6	3.7	4.0	4.2
IHS	3.9	3.7	3.5	3.5	3.9	3.6	3.5	3.6	3.9	4.3
Economy.com	3.9	3.6	3.5	3.4	3.9	3.6	3.4	4.2		
Blue Chip Average*		3.7	3.6	3.6		3.7	3.6	4.1	4.2	4.3
Blue Chip Top 10*		3.8	3.8	3.9		3.8	4.2	4.9	5.0	4.9
Blue Chip Bottom 10*		3.6	3.5	3.4		3.6	3.3	3.5	3.6	3.7
<b>Real Disposable Personal Income, Percent Change, Annual Rate</b>										
ERFC (Preliminary June)	2.4	0.3	1.8	2.6	2.9	2.3	2.6	2.4	2.1	2.0
IHS	2.4	0.2	1.6	2.7	2.9	2.2	2.7	2.5	1.9	1.8
Blue Chip Average*		1.4	2.1	2.3		2.4	2.1	1.8	2.0	2.1
Blue Chip Top 10*		2.7	2.9	2.9		2.9	2.7	2.2	2.4	2.4
Blue Chip Bottom 10*		0.1	1.4	1.7		1.9	1.5	1.4	1.7	1.7
<b>West Texas Intermediate</b>										
ERFC (Preliminary June)	54.8	62.4	61.5	61.2	64.9	60.0	59.0	55.9	54.0	53.2
IHS	54.8	65.6	67.1	66.9	64.9	63.6	62.7	62.9	65.1	67.3
Economy.com	54.7	61.2	62.4	63.1	64.8	60.4	62.5	61.3		

\* Forecasts beyond 2020 are from the March 2019 Blue Chip Economic Indicators

**U.S. Forecast Comparison**

	2019Q1	2019Q2	2019Q3	2019Q4
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**Real GDP (Billions of 2012 Dollars)**

June Forecast, Preliminary	18,912	18,992	19,088	19,182
Percent Change	3.2%	1.7%	2.0%	2.0%
March Forecast	18,852	18,971	19,078	19,172
Percent Change	1.4%	2.6%	2.3%	2.0%

**Real Consumption (Billions of 2012 Dollars)**

June Forecast, Preliminary	13,071	13,160	13,236	13,312
Percent Change	1.2%	2.7%	2.3%	2.3%
March Forecast	13,101	13,183	13,259	13,333
Percent Change	1.7%	2.5%	2.3%	2.2%

**PCE Price Index (2012=100)**

June Forecast, Preliminary	109.0	109.8	110.3	110.9
Percent Change	0.6%	2.7%	2.1%	2.0%
March Forecast	109.3	109.9	110.4	111.0
Percent Change	1.4%	2.2%	2.1%	2.0%

**Real Personal Income (Billions of 2012 Dollars)**

June Forecast, Preliminary	16,539	16,561	16,634	16,739
Percent Change	2.7%	0.5%	1.8%	2.6%
March Forecast	16,520	16,598	16,691	16,783
Percent Change	2.3%	1.9%	2.3%	2.2%

**Nonfarm Payroll Employment (Millions)**

June Forecast, Preliminary	150.7	151.2	151.6	152.0
Percent Change	1.7%	1.3%	1.2%	1.1%
March Forecast	150.8	151.4	151.9	152.3
Percent Change	1.9%	1.5%	1.4%	1.1%

**Unemployment Rate (Percent of Labor Force)**

June Forecast, Preliminary	3.9	3.7	3.6	3.5
March Forecast	3.8	3.5	3.5	3.5

**Oil Price, Refiner's Acquisition**

June Forecast, Preliminary	56.7	64.6	63.5	62.2
March Forecast	56.6	59.1	59.4	59.5

**30 Year Fixed Mortgage Rate (Percent, average)**

June Forecast, Preliminary	4.4	4.3	4.4	4.4
March Forecast	4.4	4.5	4.6	4.6

**3 Month T-Bill Rate (Percent, average)**

June Forecast, Preliminary	2.4	2.5	2.4	2.4
March Forecast	2.4	2.5	2.6	2.6

2017	2018	2019	2020	2021	2022	2023
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18,051	18,566	19,044	19,398	19,727	20,102	20,504
2.2%	2.9%	2.6%	1.9%	1.7%	1.9%	2.0%
18,051	18,571	19,018	19,370	19,700	20,074	20,476
2.2%	2.9%	2.4%	1.9%	1.7%	1.9%	2.0%

12,559	12,888	13,195	13,474	13,730	14,005	14,285
2.5%	2.6%	2.4%	2.1%	1.9%	2.0%	2.0%
12,559	12,891	13,219	13,487	13,744	14,018	14,299
2.5%	2.6%	2.5%	2.0%	1.9%	2.0%	2.0%

106.1	108.2	110.0	112.2	114.5	116.7	118.9
1.8%	2.0%	1.6%	2.0%	2.0%	1.9%	1.8%
106.1	108.2	110.1	112.4	114.7	117.0	119.3
1.8%	2.0%	1.8%	2.1%	2.1%	2.0%	1.9%

15,867	16,245	16,618	17,038	17,446	17,831	18,235
2.6%	2.4%	2.3%	2.5%	2.4%	2.2%	2.3%
15,867	16,244	16,648	17,004	17,360	17,744	18,144
2.6%	2.4%	2.5%	2.1%	2.1%	2.2%	2.3%

146.6	149.1	151.4	153.0	153.9	154.7	155.4
1.6%	1.7%	1.5%	1.1%	0.6%	0.5%	0.4%
146.6	149.1	151.6	153.0	153.5	154.4	155.3
1.6%	1.7%	1.7%	0.9%	0.4%	0.6%	0.6%

4.4	3.9	3.7	3.6	3.7	4.0	4.2
4.4	3.9	3.6	3.7	3.9	4.0	4.1

50.7	64.4	61.8	60.0	56.9	55.1	54.3
50.7	64.9	58.7	58.8	57.1	55.8	55.3

4.0	4.5	4.4	4.6	4.8	4.8	4.8
4.0	4.5	4.5	4.8	4.9	4.9	4.9

0.9	1.9	2.4	2.5	2.4	2.4	2.4
0.9	1.9	2.5	2.7	2.7	2.7	2.5

### Washington Forecast Comparison

	2019Q1	2019Q2	2019Q3	2019Q4
<b>Real Personal Income (Billions of 2012 Dollars)</b>				
June Forecast, Preliminary	434.5	435.1	437.2	440.6
Percent Change	4.5%	0.5%	2.0%	3.1%
March Forecast	431.6	433.5	436.5	439.6
Percent Change	2.5%	1.7%	2.8%	2.9%
<b>Personal Income (Billions of Dollars)</b>				
June Forecast, Preliminary	473.7	477.5	482.4	488.5
Percent Change	5.1%	3.2%	4.1%	5.2%
March Forecast	471.6	476.2	482.1	487.9
Percent Change	4.0%	4.0%	5.0%	4.9%
<b>Disposable Personal Income (Billions of Dollars)</b>				
June Forecast, Preliminary	421.3	424.7	429.1	434.6
Percent Change	4.7%	3.2%	4.2%	5.2%
March Forecast	420.0	424.3	429.5	434.8
Percent Change	4.1%	4.2%	5.0%	4.9%
<b>Nonfarm Payroll Employment (Thousands)</b>				
June Forecast, Preliminary	3453	3473	3487	3501
Percent Change	2.4%	2.4%	1.6%	1.6%
March Forecast	3454	3469	3487	3502
Percent Change	2.6%	1.8%	2.0%	1.8%
<b>Unemployment Rate (Percent of Labor Force)</b>				
June Forecast, Preliminary	4.6	4.6	4.5	4.5
March Forecast	4.5	4.4	4.3	4.4
<b>Manufacturing Employment (Thousands)</b>				
June Forecast, Preliminary	292.2	292.8	292.6	293.2
Percent Change	1.1%	0.8%	-0.2%	0.9%
March Forecast	292.6	293.0	293.5	294.3
Percent Change	2.1%	0.5%	0.7%	1.2%
<b>Construction Employment (Thousands)</b>				
June Forecast, Preliminary	220.9	223.0	221.8	221.3
Percent Change	4.5%	3.7%	-2.1%	-0.8%
March Forecast	217.7	216.8	215.8	215.6
Percent Change	1.6%	-1.6%	-1.9%	-0.3%
<b>Housing Permits (Thousands)</b>				
June Forecast, Preliminary	43.8	48.0	40.7	41.0
Percent Change	-34.6%	44.6%	-48.4%	2.9%
March Forecast	42.9	42.7	42.4	42.4
Percent Change	-39.3%	-2.6%	-2.3%	0.3%

	2017	2018	2019	2020	2021	2022	2023
	404.2	423.8	436.8	450.0	462.9	475.3	488.6
	4.2%	4.9%	3.1%	3.0%	2.9%	2.7%	2.8%
	404.2	423.7	435.3	447.0	458.8	471.3	484.2
	4.2%	4.8%	2.7%	2.7%	2.6%	2.7%	2.7%
	428.8	458.7	480.5	505.1	530.1	554.9	580.8
	6.1%	7.0%	4.8%	5.1%	5.0%	4.7%	4.7%
	428.8	458.5	479.5	502.5	526.5	551.6	577.6
	6.1%	6.9%	4.6%	4.8%	4.8%	4.8%	4.7%
	380.3	408.5	427.4	449.6	472.3	493.9	515.7
	6.0%	7.4%	4.6%	5.2%	5.0%	4.6%	4.4%
	380.3	408.3	427.1	448.1	469.9	491.9	514.3
	6.0%	7.3%	4.6%	4.9%	4.9%	4.7%	4.6%
	3321	3405	3478	3535	3575	3612	3645
	2.4%	2.5%	2.2%	1.6%	1.1%	1.0%	0.9%
	3321	3405	3478	3531	3565	3603	3640
	2.4%	2.5%	2.2%	1.5%	1.0%	1.1%	1.0%
	4.7	4.5	4.5	4.5	4.7	4.8	5.0
	4.7	4.5	4.4	4.5	4.7	4.8	4.9
	284.2	287.5	292.7	292.2	291.7	293.3	295.7
	-2.1%	1.2%	1.8%	-0.2%	-0.2%	0.5%	0.8%
	284.2	287.4	293.3	293.1	291.7	293.4	296.3
	-2.1%	1.1%	2.1%	-0.1%	-0.5%	0.6%	1.0%
	199.8	213.4	221.7	219.7	218.7	218.7	219.1
	7.0%	6.8%	3.9%	-0.9%	-0.5%	0.0%	0.2%
	199.8	213.0	216.5	214.7	214.0	215.0	216.6
	7.0%	6.6%	1.6%	-0.8%	-0.3%	0.5%	0.8%
	45.8	47.4	43.3	42.0	42.3	42.4	42.0
	3.9%	3.4%	-8.5%	-3.2%	0.8%	0.2%	-0.8%
	45.8	47.4	42.6	42.2	42.1	42.6	42.1
	3.9%	3.4%	-10.0%	-1.1%	-0.1%	1.1%	-1.2%

U.S. Forecast Comparison				Fiscal Years		
	2018	2019	2020	2021	2022	2023
<b>Real GDP</b>						
Billions of 2012 dollars						
June Preliminary Forecast	18,295	18,834	19,226	19,560	19,909	20,302
Growth	2.6%	2.9%	2.1%	1.7%	1.8%	2.0%
March Forecast	18,295	18,818	19,209	19,531	19,879	20,275
Growth	2.6%	2.9%	2.1%	1.7%	1.8%	2.0%
Difference in level	0	15	17	29	29	27
Difference in growth forecast	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%
<b>Real Consumption</b>						
Billions of 2012 dollars						
June Preliminary Forecast	12,714	13,054	13,346	13,596	13,867	14,144
Growth	2.5%	2.7%	2.2%	1.9%	2.0%	2.0%
March Forecast	12,714	13,070	13,364	13,609	13,880	14,159
Growth	2.5%	2.8%	2.2%	1.8%	2.0%	2.0%
Difference in level	0	-16	-18	-13	-14	-14
Difference in growth forecast	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
<b>PCE Price Index</b>						
2012 = 100						
June Preliminary Forecast	107.2	109.0	111.1	113.4	115.6	117.8
Growth	1.9%	1.8%	1.9%	2.0%	2.0%	1.9%
March Forecast	107.2	109.1	111.3	113.6	115.9	118.2
Growth	1.9%	1.8%	2.0%	2.1%	2.1%	2.0%
Difference in level	0.0	-0.1	-0.1	-0.2	-0.3	-0.4
Difference in growth forecast	0.0%	-0.1%	0.0%	0.0%	-0.1%	-0.1%
<b>Unemployment Rate</b>						
Percent of Labor Force						
June Preliminary Forecast	4.1%	3.8%	3.6%	3.7%	3.8%	4.1%
March Forecast	4.1%	3.7%	3.6%	3.8%	4.0%	4.0%
Difference in forecast	0.0%	0.1%	0.0%	-0.2%	-0.1%	0.0%
<b>30 Year Fixed Mortgage Rate</b>						
Annual Average						
June Preliminary Forecast	4.2%	4.5%	4.5%	4.7%	4.8%	4.8%
March Forecast	4.2%	4.6%	4.7%	4.9%	4.9%	4.9%
Difference in forecast	0.0%	-0.1%	-0.2%	-0.2%	-0.1%	-0.1%
<b>3 Month T-Bill Rate</b>						
Annual Average						
June Preliminary Forecast	1.4%	2.3%	2.4%	2.5%	2.4%	2.4%
March Forecast	1.4%	2.3%	2.6%	2.7%	2.7%	2.7%
Difference in forecast	0.0%	0.0%	-0.2%	-0.2%	-0.2%	-0.2%

## Washington Forecast Comparison

Fiscal Years

	2018	2019	2020	2021	2022	2023
<b>Real Personal Income</b>						
Billions of 2012 dollars						
June Preliminary Forecast	414.3	430.9	442.7	456.6	469.0	481.9
Growth	4.7%	4.0%	2.7%	3.1%	2.7%	2.7%
March Forecast	414.3	429.7	441.2	452.9	464.9	477.7
Growth	4.7%	3.7%	2.7%	2.7%	2.7%	2.8%
Difference in level	0.0	1.3	1.6	3.7	4.1	4.1
<i>Difference in growth forecast</i>	<i>0.0%</i>	<i>0.3%</i>	<i>0.1%</i>	<i>0.5%</i>	<i>0.1%</i>	<i>0.0%</i>
<b>Nominal Personal Income</b>						
Billions of dollars						
June Preliminary Forecast	444.0	469.9	492.1	517.7	542.4	567.7
Growth	6.7%	5.8%	4.7%	5.2%	4.8%	4.7%
March Forecast	444.0	468.8	490.9	514.4	538.9	564.5
Growth	6.7%	5.6%	4.7%	4.8%	4.8%	4.8%
Difference in level	0.0	1.0	1.2	3.4	3.6	3.2
<i>Difference in growth forecast</i>	<i>0.0%</i>	<i>0.2%</i>	<i>0.0%</i>	<i>0.4%</i>	<i>0.0%</i>	<i>-0.1%</i>
<b>Nonfarm Payroll Employment</b>						
Thousands						
June Preliminary Forecast	3,363.9	3,442.3	3,509.0	3,555.2	3,594.5	3,629.4
Growth	2.4%	2.3%	1.9%	1.3%	1.1%	1.0%
March Forecast	3,363.9	3,441.5	3,508.4	3,547.9	3,583.5	3,621.9
Growth	2.4%	2.3%	1.9%	1.1%	1.0%	1.1%
Difference in level	0.0	0.8	0.6	7.3	10.9	7.5
<i>Difference in growth forecast</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.2%</i>	<i>0.1%</i>	<i>-0.1%</i>
<b>Housing Permits</b>						
Units Authorized, Thousands						
June Preliminary Forecast	48.6	45.7	41.3	42.2	42.4	42.2
Growth	9.2%	-6.0%	-9.7%	2.1%	0.7%	-0.5%
March Forecast	48.6	44.2	42.4	41.9	42.6	42.4
Growth	9.2%	-9.1%	-4.1%	-1.1%	1.5%	-0.3%
Difference in level	0.0	1.5	-1.1	0.2	-0.1	-0.2
<i>Difference in growth forecast</i>	<i>0.0%</i>	<i>3.2%</i>	<i>-5.6%</i>	<i>3.2%</i>	<i>-0.8%</i>	<i>-0.1%</i>

## Year-Over-Year Employment Growth by Industry (March 2018 to March 2019) Washington vs. U.S.

	Washington		U.S.
	(000)	% Chg.	% Chg.
<b>Total</b>	<b>71.5</b>	<b>2.1%</b>	<b>1.7%</b>
Electronic Shopping and Mail-Order Houses	4.6	8.4%	2.3%
Software Publishers	4.0	6.2%	5.0%
Construction	12.1	5.7%	3.5%
Information Excluding Software	3.7	5.6%	-0.8%
Aerospace Product and Parts Manufacturing	4.6	5.6%	6.8%
Leisure and Hospitality	11.8	3.5%	2.7%
Education and Health Services	16.4	3.4%	2.3%
Professional and Business Services	9.7	2.3%	2.5%
Other Services	2.5	2.0%	1.7%
Wholesale Trade	2.5	1.9%	1.5%
Manufacturing Excluding Aerospace	1.8	0.9%	1.9%
Transportation, Warehousing and Utilities	5.5	0.9%	2.9%
Financial Activities	0.9	0.6%	1.2%
Mining and Logging	0.0	0.5%	5.9%
State and Local Gov Non-Education	-1.2	-0.5%	0.6%
State and Local Gov Education	-2.1	-0.8%	0.5%
Information	7.7	5.9%	-0.3%
Retail Trade	3.6	0.9%	-0.2%
Manufacturing	6.5	2.3%	1.8%

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