Economic Review

March 3, 2023

Washington State
Economic and Revenue Forecast Council

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WASHINGTON STATE

ECONOMIC AND REVENUE FORECAST COUNCIL

AGENDA

Economic Review Meeting

March 3, 2023
8:00 a.m.

- Call to order
- ERFC chair transition
- Vote on 2023 council meeting format (in-person vs. virtual)
- Approval meeting minutes: January 25, 2023
- Presentation of economic outlook and revenue collection experience.
- Adjournment

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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 and Adoption

January 25, 2023
Conference Call

Economic and Revenue Forecast Council

Tim Ormsby, House of Representatives, Chair
Christine Rolfes, Senate
Lynda Wilson, Senate
Ed Orcutt, House of Representatives
Mike Pellicciotti, Treasurer
John Ryser, Department of Revenue
David Schumacher, Office of Financial Management

Staff
Steve Lerch, Executive Director
Rachel Knutson, OFM
Corban Nemeth, Senate Ways and Means
Andy Toulon, House Appropriations

Call to Order
Representative Ormsby called the meeting to order at 2:01 p.m.

Approval of the Minutes
Representative Orcutt moved, seconded by Representative Ormsby, to adopt the meeting minutes from November 18, 2022. Motion was passed at 2:02 p.m.

Budget Outlook Methodology Adoption Presentation
The Budget Outlook Work Group members presented.

Motion
Director Schumacher moved, seconded by Representative Ormsby, to assume the lease savings as savings in the budget outlook. After discussion Schumacher withdrew motion to be re-entered by a different council member.

Motion
Senator Rolfes moved, seconded by Representative Ormsby, to assume the lease savings as savings in the budget outlook. Motion passed at 2:12 p.m.

Motion
Senator Rolfes moved, seconded by Representative Ormsby, to approve the budget outlook methodology as presented. Orcutt requested an amendment be added to the motion requesting the removal of the capital gains tax from the outlook. Motion did not pass with 5 no votes and 2 yes votes.

Motion Vote
Vote on original motion, without amendment, voted on and passed with 5 yes votes and 2 no votes.

Council Request
Representative Orcutt requested an additional budget outlook be prepared that does not include the capital gains tax. Outlook Workgroup agreed to provide an official outlook an alternative outlook without the capital gains tax included.

Adjournment
With no further business, the meeting adjourned at 2:35 p.m.

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Economic & Revenue Forecast Council
State of Washington

Economic Review: March 3, 2023

Executive Summary

United States

- This forecast is based on a modified version of IHS Markit's February 2023 Control forecast for the U.S. economy. We have adjusted real gross domestic product (GDP) to be consistent with the February Blue Chip "Consensus" GDP forecast for 2023 and 2024. We expect real GDP to increase 0.7% in 2023 and 1.2% in 2024 compared to the 0.2% and 1.5% growth rates assumed in the November forecast. Our forecast for real GDP growth in 2025-27 is based on the most recent long term forecast from Blue Chip which was released in October 2022. As in November, we expect growth rates of 2.1%, 2.1%, and 1.9% in 2025 through 2027. The forecast assumes three quarters of negative growth from the fourth quarter of 2022 to the third quarter of 2023 with a peak-to-trough decline of 0.3%.
- Our oil price forecast reflects the futures markets for the Brent (North Sea) oil price and West Texas Intermediate (WTI) benchmarks. This forecast was based on the Wednesday, February 22, 2023 closing prices for Brent and WTI futures. Oil prices are lower than in the November forecast, especially in the near term. As in November, oil prices are expected to decline throughout the forecast. The latest futures prices indicate that the refiner acquisition price of crude oil will average $75 per barrel in the second quarter of 2023 compared to $83 in the November forecast. By the fourth quarter of 2027 the refiner acquisition price of crude is now expected to average $64 per barrel compared to $66 in the November forecast.
- National employment in January increased by a larger-than-expected 517,000 net jobs. Employment in November and December were revised up by a combined 71,000 jobs. Sectors with the largest job gains in January included food service and drinking places (+97,000), health care (+58,000), professional, scientific, and technical services (+41,000), state government education (+35,000), temporary help services (+26,000) and private educational services (+26,000). Sectors with declining employment in January included motor vehicle and parts manufacturing (-7,000), health and personal care retailers (-6,000), insurance carriers and related activities (-5,000), rental and leasing services (-5,000), chemical manufacturing (-4,000) and other support services (-4,000).
- Two key measures of consumer confidence moved in opposite directions this month. The University of Michigan (UM) consumer sentiment survey increased 2.1 points to 67.0 in February. Consumers expressed slightly greater confidence in both current economic conditions and expectations over the next six months compared to January. The Conference Board index of consumer confidence decreased by 3.1 points to 102.9 in February. Survey results indicated that expectations regarding the short-term economic outlook were less favorable than in January.

- Initial claims for unemployment insurance decreased by 3,000 to 192,000 (SA) in the week ending February 18th. The four-week moving average of initial claims increased by 1,500 to 191,250.
- Industrial production in January was unchanged (SA) following a revised 1.0% decline in December 2022. Industrial production is 0.8% (SA) above its January 2022 level. New orders for core capital goods (i.e., durables excluding aircraft and military), which is a proxy for business investment, increased by 0.8% (SA) in January following a revised 0.3% decrease in December 2022 according to U.S. Census Bureau data. New orders for core capital goods were 5.3% above their January 2022 level.
- Residential construction activity continued to weaken this month. January housing starts decreased by 4.5% (SA) compared to December 2022 and were 21.4% below their January 2022 level. Housing units authorized by building permits in January were 0.1% (SA) above their December 2022 level but 27.3% below their year-ago level. New home sales in January increased by 7.2% (SA) compared to December 2022 but were 19.4% below their year-ago level. Existing home sales declined for a twelfth straight month in January, falling by 0.7% (SA) compared to December 2022 and were down 36.9% compared to January 2022. The seasonally adjusted Case-Shiller national home price index for December was 0.8% below its November level, the sixth consecutive monthly decline in the index. The home price index was 5.8% (SA) above its year-ago level.
- The major threats to the U.S. and Washington economies are the impact of rising prices and interest rates and the potential for a recession.

Washington

- We have two months of new Washington employment data since the November forecast was released. Total seasonally adjusted nonfarm payroll employment increased 16,300 in November and December which was 3,800 more than the forecasted increase of 12,500. Private services-providing sectors added 11,400 jobs in the two-month period. The manufacturing sector added 200 jobs despite the loss of 600 jobs in aerospace manufacturing. Construction employment increased by 600 jobs in November and December. State and local government employment rose by 4,700 jobs but federal government employment declined by 700 jobs.
- Revisions to employment data added 4,900 (0.1%) to the estimated level of total employment in October 2022. The combined effect of the upward revision to historical data and the stronger employment growth in November and December is that December employment is 8,800 (0.2%) higher than expected in the November forecast.
- Washington's unemployment rate increased for a third consecutive month in December. Washington's seasonally adjusted unemployment rate increased to 4.2% (SA) in December from 4.0% in November, 3.8% in October, and 3.7% in September. The September rate matched a record low in the series that dates to 1976.
- After the grounding of the 737 Max and then the pandemic, Washington's aerospace employment declined from 89,600 at end of 2019 to a low of 66,800 in August 2021, a loss of 22,800 jobs. Since August 2021, the industry added back 5,800 jobs, bringing the level to 72,600 in December

2022. We expect aerospace employment to continue to expand in Washington, adding 3,800 jobs from the fourth quarter of 2022 to the third quarter of 2024 with little change through the remainder of the forecast.

- In December, the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) released state personal income estimates for the third quarter of 2022. Washington personal income increased from $584.2 billion (SAAR) in the second quarter of 2022 to $587.9 billion in the third quarter. The 2.6% increase (SAAR) in Washington personal income was the 47th highest among the states and District of Columbia and trailed the 5.3% rate of increase for the U.S. as a whole. At 3.5% (SAAR), growth in Washington net earnings trailed the 6.5% national average rate. Transfer receipts fell at a 6.4% annual rate in Washington compared to a 1.0% increase for the nation. However, property income (dividends, interest, and rent) grew 6.7% in Washington compared to the 5.5% national average.
- Washington housing construction continued to slow in the fourth quarter of 2022 and early 2023. The number of housing units authorized by building permits declined from 58,300 (SAAR) in the first quarter to 55,800 in the second quarter, 44,800 units in the third quarter, and 38,200 in the fourth quarter. Fourth quarter permits consisted of 15,200 single-family units and 23,000 multi-family units. The November forecast assumed 41,500 units for the fourth quarter. Permits continued to decline in January 2023 when 30,500 units (SAAR) were permitted consisting of 13,600 single-family units and 16,900 multi-family units.
- Seattle-area home prices are declining. According to the S&P/Case-Shiller Home Price Indices, seasonally adjusted Seattle home prices fell 1.2% in December which was the seventh consecutive decline in the series. In comparison, the composite-20 index declined 0.5% in December, its fifth consecutive monthly decrease. December Seattle home prices were down 1.8% over the year which was the first over-the-year decline since July 2019. In comparison, the composite-20 index was up 4.7% over the year.
- Seattle metropolitan area consumer price inflation outpaced the national average in the year ending in December 2022. From December 2021 to December 2022, the seasonally adjusted Seattle CPI rose 8.4% compared to the 6.4% increase in the U.S. City Average index. Seattle over-the-year food price inflation remained high at 11.3% in December, but energy price inflation eased to 5.8% compared to 31.7% in June. Core prices, which exclude food and energy, increased 8.1% in Seattle and 5.7% in the national index. Seattle shelter cost inflation exceeded the national average at 10.7% compared to 7.5%. Seattle inflation excluding shelter also exceeded the national average at 7.1% compared to 5.9%.
- According to the World Institute for Strategic Economic Research (WISER), Washington exports decreased 7% from the fourth quarter of 2021 to the fourth quarter of 2022. This was the first over-the-year decline in Washington exports since the fourth quarter of 2020. Washington exports of transportation equipment (mostly Boeing planes) declined 20% over the year. Agricultural exports declined 1% over the year but this could be misleading as the data include soybean and corn exports which receive only minimal processing in Washington. Exports from all other sectors (mostly manufacturing) increased 5% over the year.

- Washington car and truck sales declined in December and January following two monthly increases. The seasonally adjusted number of new vehicle registrations decreased 2.8% in December and 7.6% in January after increases of 11.6% and 0.7% in October and November. The number of registrations was up 5.5% over the year in January.
- We expect a 1.4% increase in Washington employment this year up from the 0.9% growth rate expected in the November forecast. We expect slower growth during the remainder of the forecast as the U.S economy slows. We expect employment growth to average 0.7% per year in 2024 through 2027 which is slightly lower than the 0.9% average rate in the November forecast. Our forecast for nominal personal income growth this year is 4.3%, down from 5.4% in the November forecast. Our new forecast for nominal personal income growth in 2024 through 2027 averages 5.1% per year which is which is the same average 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 3, 2023

WASHINGTON STATE
ECONOMIC AND REVENUE FORECAST COUNCIL

Summary

- Slightly negative U.S. GDP growth for first three quarters of 2023, but higher than expected 2022 Q4 data raises GDP forecast slightly
- Inflation is expected to be slightly lower in 2023 and 2024 compared to the November forecast
- The Federal Reserve is expected to raise the federal funds interest rate to a range of 5.0% – 5.25% by May 2023; a decrease in rates not expected until 2024 Q2
- WA building permits forecast has been revised down compared to November
- Revenue collections since the November forecast are $89 million (1.1%) above expectations

Economic Review
March 3, 2023

Slide 1

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Forecast risks

Upside

- Consumer spending, labor productivity are stronger than expected
- Quicker resolution of Russia – Ukraine conflict leads to lower energy and grain prices

Downside

- Rising interest rates push economy into recession
- Russia – Ukraine conflict intensifies, leading to higher prices for energy and grains
- Congress fails to raise debt ceiling

Economic Review
March 3, 2023

Slide 2

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Recession views

February 2023 Blue Chip Survey

Probability of U.S. recession in 2023:

- 58%

Q1 2023 (January) WSJ Forecasting Survey

Probability of U.S. recession in next 12 months:

- 61%

January 2023 Natl. Assoc. Bus. Economists

Probability of U.S. recession in 2023:

- 54%

Recession Pro and Con

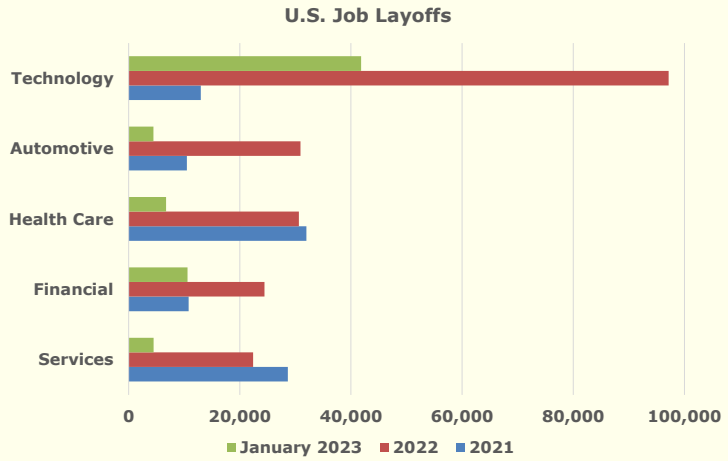
Recession is likely because:

- Inflation remains high, leading Federal Reserve to continue to raise interest rates
- Yield curve is inverted
- Layoff announcements have increased

Recession is unlikely because:

- Labor market remains very strong
- Consumption patterns returning to pre-pandemic patterns
- Inflation has slowed, allowing Federal Reserve to forego further interest rate hikes

Job cuts in sectors with highest 2022 layoff announcements



Source: Challenger, Gray and Christmas, Inc.

Economic Review
March 3, 2023

Slide 5

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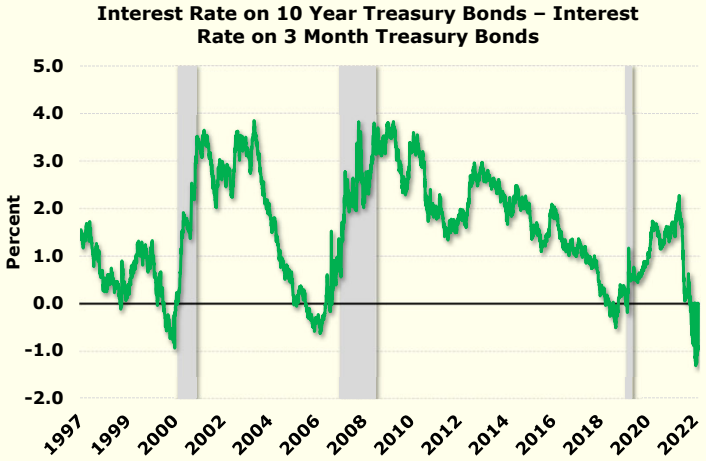
An inverted yield curve frequently signals a recession within the next year

An inverted yield curve occurs when interest rates on longer term bonds are lower than interest rates on shorter term bonds.



Source: Federal Reserve Bank of St. Louis, daily data through Feb. 27 2023

Economic Review
March 3, 2023

Slide 6

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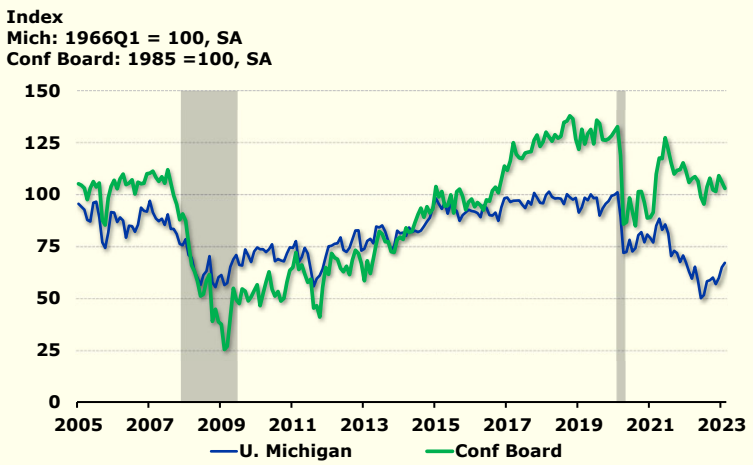
Consumer confidence has trended up since June but remains below pre-pandemic levels



Sources: University of Michigan, Conference Board; data through February 2023

Economic Review
March 3, 2023

Slide 7

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U.S. retail trade sales were down 1.0% in November, 1.3% in December but up 3% in January

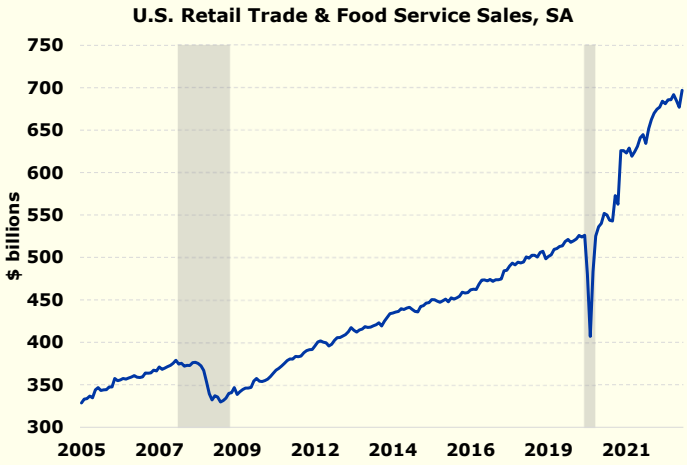
Sectors with large sales increases in January:

Department stores: +17.5%

Food services & drinking places: +7.2%

Auto & motor vehicle dealers: +6.4%

Furniture & home furnishing stores: +4.4%



Source: U.S. Census Bureau; data through advanced January 2023

Economic Review
March 3, 2023

Slide 8

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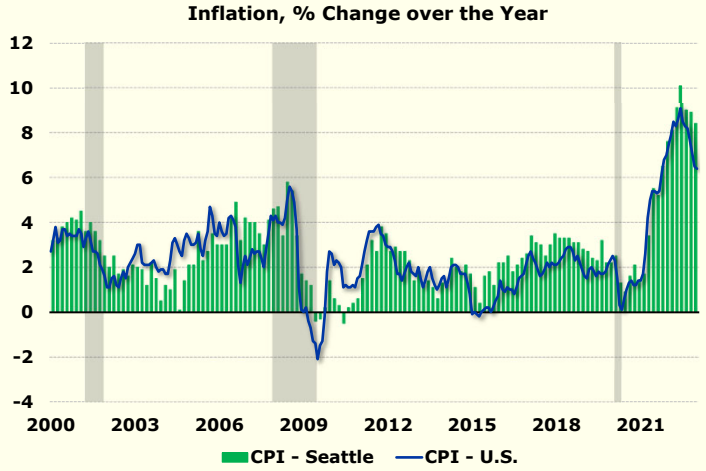
Inflation over the year has trended down since June but remains at historically high levels



Source: U.S. Bureau of Labor Statistics; U.S. data through January 2023, Seattle data through December 2022

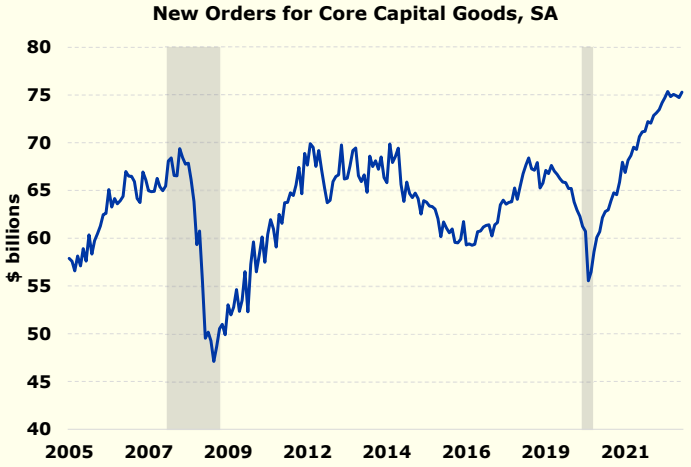
WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Economic Review
March 3, 2023

Slide 9

New orders for U.S. core capital goods slowed in Nov. and Dec. 2022, picked up in Jan. 2023

Core capital goods (durable goods excluding aircraft and military) are a proxy for business investment



Source: U.S. Census Bureau; data through preliminary January 2023

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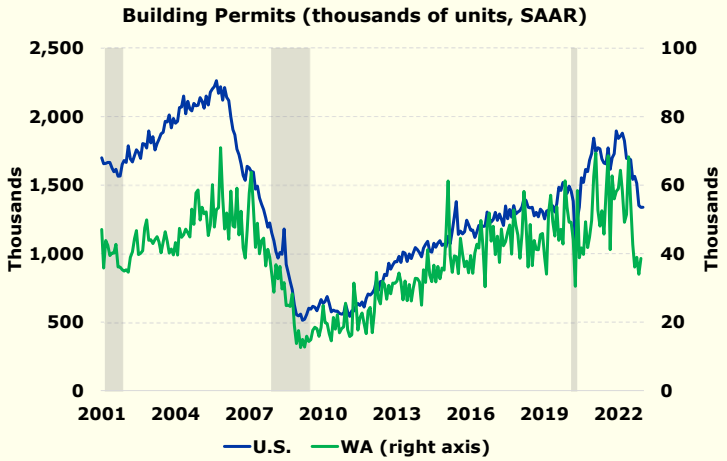
Economic Review
March 3, 2023

Slide 10

WA and U.S. residential construction activity has trended down since July



Source: U.S. Census Bureau; monthly, U.S. data through Jan. 2023, WA data through Dec. 2022

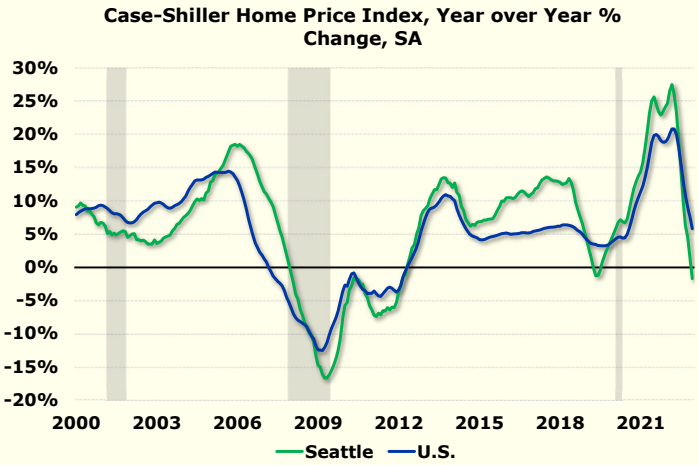
WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Economic Review
March 3, 2023

Slide 11

While still elevated over the year, national home prices have declined for the last six months

Seattle home prices have declined for the last seven months



Source: Case-Shiller, data through December 2022

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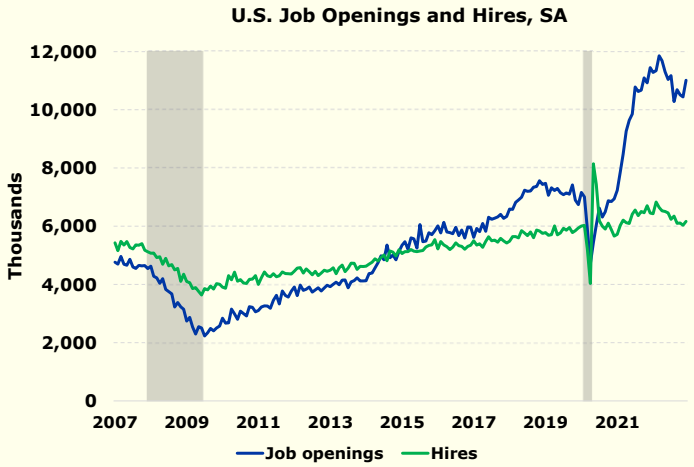
Economic Review
March 3, 2023

Slide 12

U.S. job openings down from recent peak but remain at very high levels



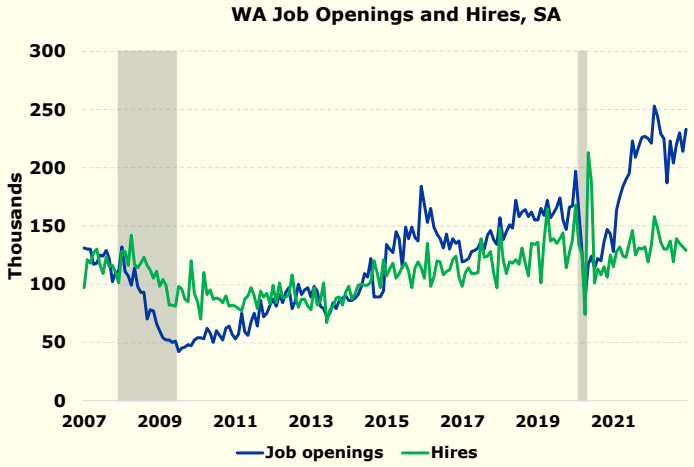
Source: U.S. Bureau of Labor Statistics, data through December 2022

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Economic Review
March 3, 2023

Slide 13

Washington job openings down from February peak but trending up since June



Source: U.S. Bureau of Labor Statistics, data through December 2022

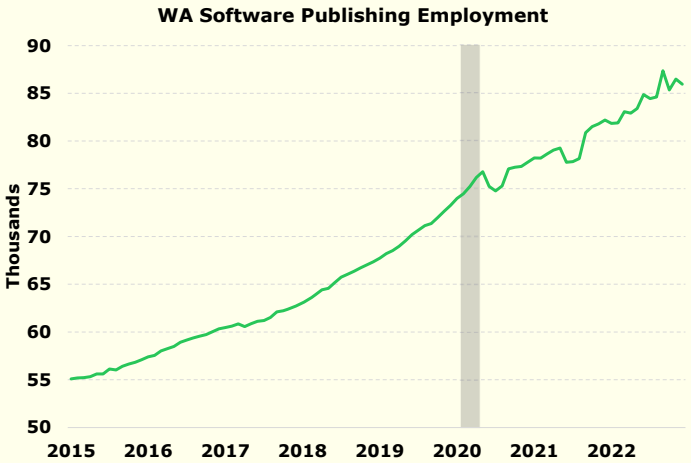
WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Economic Review
March 3, 2023

Slide 14

WA software publishing employment is down 1,400 since September 2022

Microsoft announced layoffs in October; other tech firms have announced plans to slow or reduce hiring.



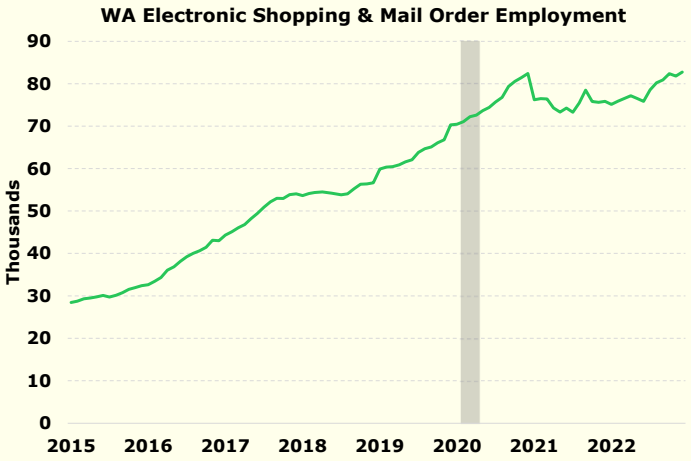
Source: ERFC, U.S. Bureau of Labor Statistics, Employment Security Dept., data through December 2022

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Economic Review
March 3, 2023

Slide 15

Announced layoffs have not shown up yet in WA electronic shopping & mail order employment data



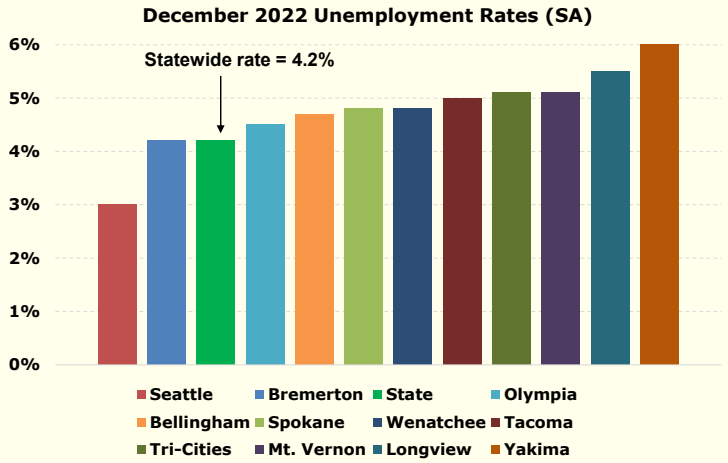
Source: ERFC, U.S. Bureau of Labor Statistics, Employment Security Dept., data through December 2022

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Economic Review
March 3, 2023

Slide 16

Unemployment rates vary widely across Washington metro areas



Source: WA Employment Security Dept.

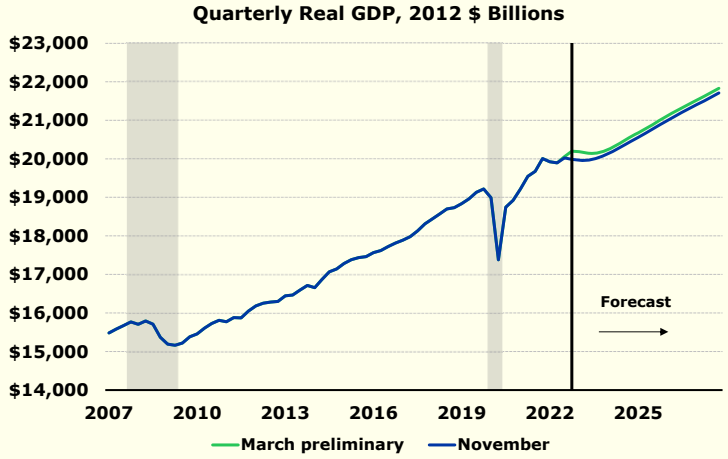
Economic Review
March 3, 2023

Slide 17

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

U.S. GDP is slightly higher than in November

Fourth quarter 2022 GDP was higher than expected in the November forecast.



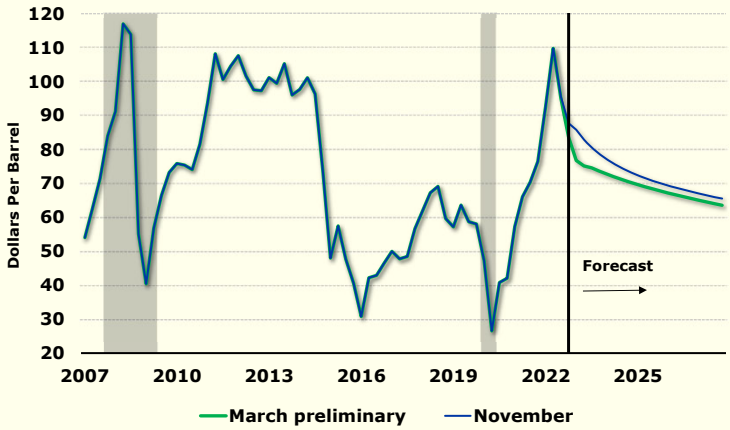
Source: IHS Markit, ERFC March 2023 Preliminary forecast; historical data through 2022 Q4

Economic Review
March 3, 2023

Slide 18

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Oil prices are lower than in the November forecast



Source: Energy Information Administration, IHS Markit, ERFC; data through 2022 Q4
Note: Vertical black line indicates last actual

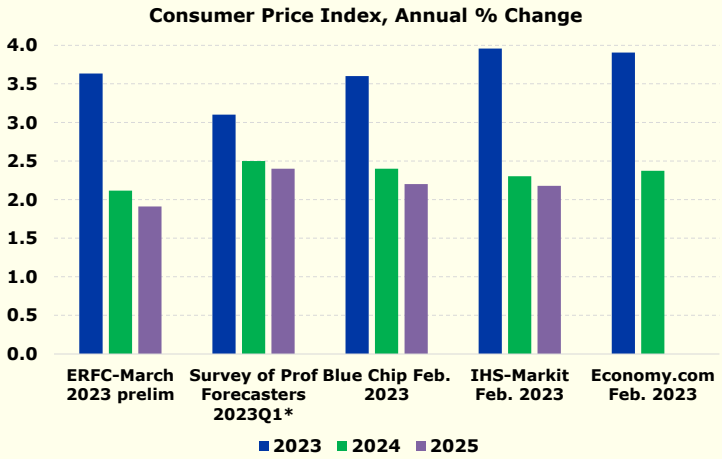
WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Economic Review
March 3, 2023

Slide 19

ERFC inflation forecasts slightly lower in 2023 and 2024 compared to November

The Consumer Price Index increased by 8.0% in 2022



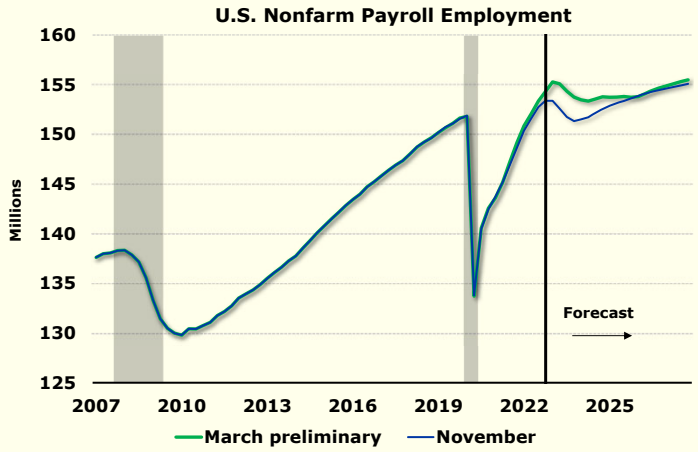
Survey of Professional Forecasters reflects change in price level in 4th quarter compared to 4th quarter of prior year; all others reflect average change over the year compared to prior year.

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Economic Review
March 3, 2023

Slide 20

U.S. nonfarm employment peaks in early 2023, decreases slightly through mid-2024



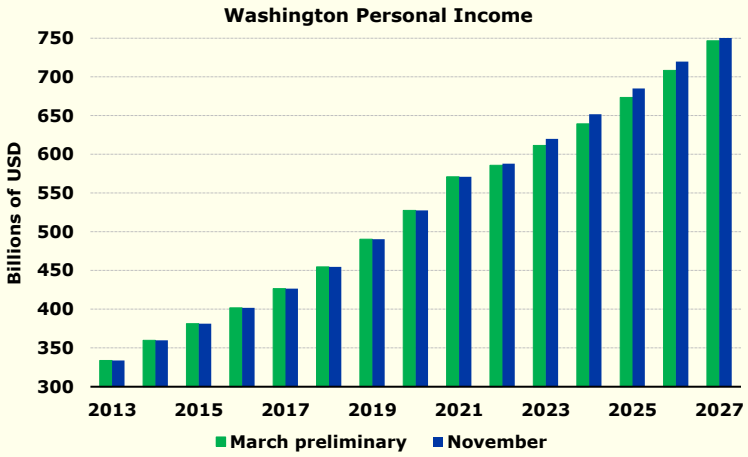
Source: IHS Markit, ERFC March 2023 Preliminary forecast; data through 2022 Q4

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Economic Review
March 3, 2023

Slide 21

WA personal income growth slightly lower for 2023, 2024; slightly higher for 2024-2027



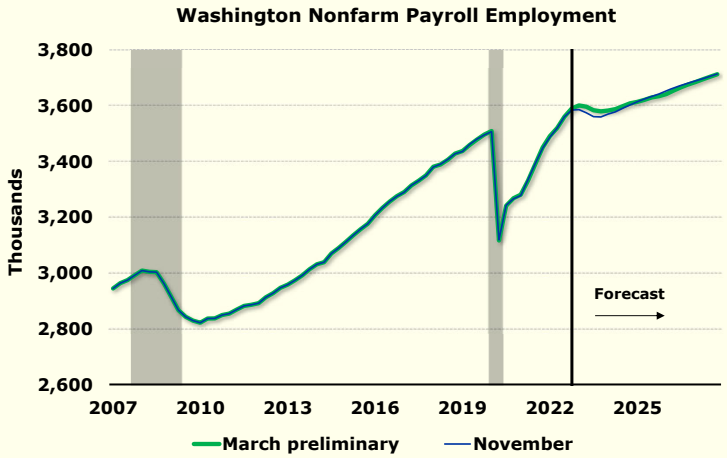
Source: ERFC March 2023 Preliminary forecast; historical data through 2021

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Economic Review
March 3, 2023

Slide 22

WA employment forecast is slightly stronger this year and in 2024 compared to November



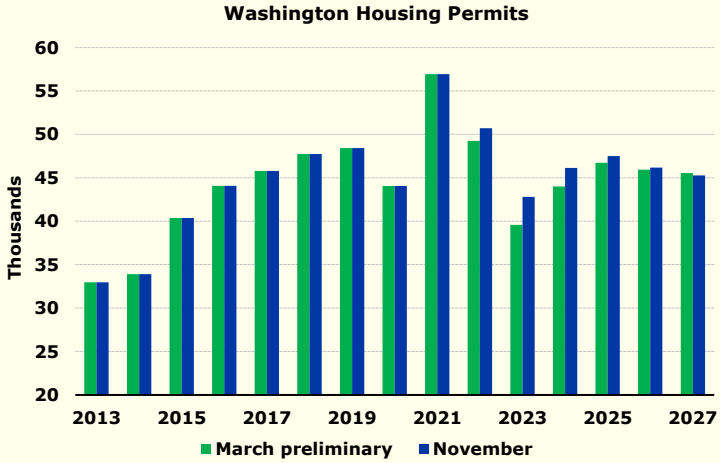
Source: ERFC March 2023 Preliminary forecast; historical data through 2022 Q4

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Economic Review
March 3, 2023

Slide 23

WA housing permits forecast has been decreased by an average of 1,200 units per year for 2023 - 2027



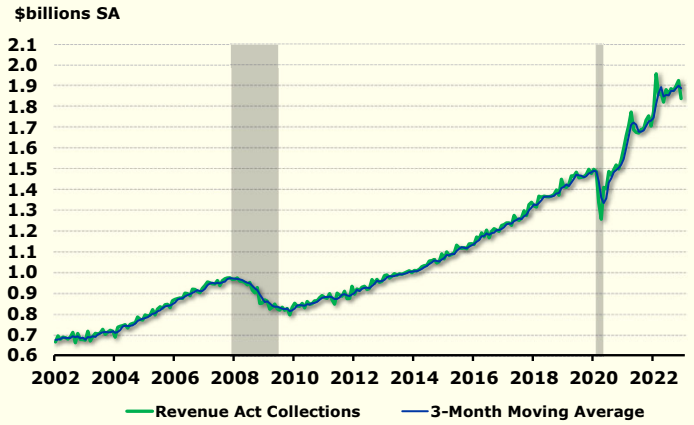
Source: ERFC March 2023 Preliminary forecast; historical data through 2022

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Economic Review
March 3, 2023

Slide 24

Revenue Act collections growth for December activity was 6.4%, down from 10.2% for November activity



* Adjusted for large one-time transactions, amnesty payments, reporting frequency change and deferred 2020 payments, current definition of Revenue Act
Source: DOR and ERFC; monthly data through December 2022 activity

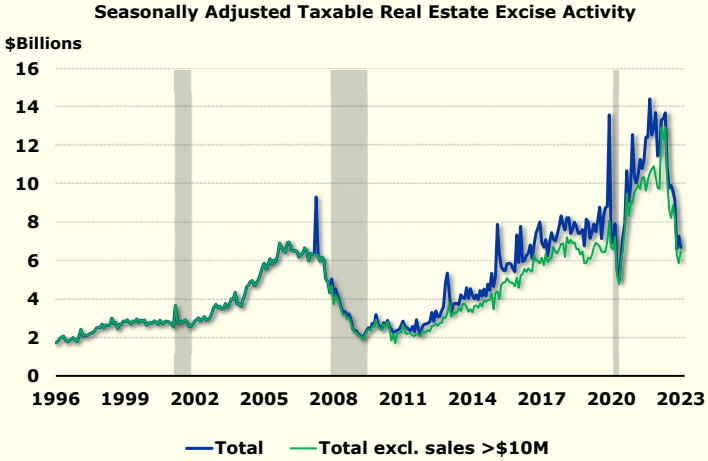
Economic Review
March 3, 2023

Slide 25

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Seasonally adjusted taxable real estate activity decreased in January, although residential activity increased slightly

Transactions of $10 million or more decreased from $1.4 billion in December 2022 to $265 million in January 2023



Source: ERFC; Monthly data through January 2023 estimate

Economic Review
March 3, 2023

Slide 26

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Revenue collections to date

Collections Variance Since November Forecast
(November 11, 2022 – February 10, 2023)
dollars in thousands

	Estimate	Actual	Difference	Pct.
Dept. of Revenue	$8,114,937	$8,201,995	$87,058	1.1%
Other revenue	9,101	10,594	1,493	16.4%
Total GF-S	**$8,124,038**	**$8,212,589**	**$88,551**	**1.1%**

Economic Review
March 3, 2023

Slide 27

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Conclusion

- The U.S. forecast has slightly higher GDP growth in 2023, slightly lower growth in 2024 compared to November; GDP growth is negative for first three quarters of 2023
- WA building permits are weaker than in the November forecast
- Impacts of the Russia-Ukraine war, potential for recession, failure to raise debt ceiling pose risks to the forecast
- The next monthly revenue collection report will be available on March 14th and the revenue forecast will be presented on March 20th

Economic Review
March 3, 2023

Slide 28

WASHINGTON STATE ECONOMIC AND REVENUE FORECAST COUNCIL

Questions

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

www.erfc.wa.gov
360-534-1560

Economic Review
March 3, 2023

Slide 29

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U.S. Economic Forecast Comparison
February 2023

	2022Q4	2023Q1	2023Q2	2023Q3	2022	2023	2024	2025	2026	2027
Real GDP, Percent Change, Annual Rate										
ERFC (Preliminary March)	2.9	-0.3	-0.6	-0.2	2.1	0.7	1.2	2.1	2.1	1.9
IHS	2.9	-1.3	-0.2	0.7	2.1	0.7	1.6	2.0	1.8	1.6
Economy.com	2.9	-0.4	1.0	1.8	2.1	1.3	2.2			
Blue Chip Average*		-0.1	-0.5	-0.1		0.7	1.2	2.1	2.1	1.9
Blue Chip Top 10*		1.2	1.2	1.8		1.5	2.0	2.5	2.4	2.2
Blue Chip Bottom 10*		-1.5	-2.3	-2.3		0.1	0.3	1.7	1.8	1.7
Real Consumption, Percent Change, Annual Rate										
ERFC (Preliminary March)	2.1	0.7	0.0	0.0	2.8	1.0	1.1	2.2	2.2	2.1
IHS	2.1	-0.1	0.4	0.7	2.8	1.0	1.1	1.7	1.9	2.1
Economy.com	2.1	1.0	1.5	2.1	2.8	1.7	2.3			
Blue Chip Average*		0.8	0.1	0.1		1.0	1.1	2.2	2.2	2.1
Blue Chip Top 10*		1.9	1.6	1.8		1.7	2.0	2.6	2.5	2.3
Blue Chip Bottom 10*		-0.3	-1.3	-1.6		0.4	0.0	1.8	1.9	1.9
Federal Funds Rate										
ERFC (Preliminary March)	3.7	4.5	5.0	5.1	1.7	4.9	4.4	3.0	2.6	2.6
IHS	3.7	4.5	5.0	5.1	1.7	4.9	4.4	3.0	2.6	2.6
Economy.com	3.6	4.5	4.8	4.8	1.7	4.8	4.2			
Three Month T-Bill Rate										
ERFC (Preliminary March)	4.0	4.7	4.8	4.8	2.0	4.8	4.1	2.7	2.4	2.4
IHS	4.0	4.6	4.8	4.8	2.0	4.8	4.0	2.7	2.4	2.4
Blue Chip Average*		4.7	4.9	4.8		4.7	3.7	2.6	2.4	2.4
Blue Chip Top 10*		4.9	5.1	5.2		5.0	4.7	3.3	2.9	2.8
Blue Chip Bottom 10*		4.5	4.4	4.1		4.1	2.6	2.0	1.9	2.0
10-Yr. T-Note Yield										
ERFC (Preliminary March)	3.8	3.6	3.6	3.5	3.0	3.5	3.3	3.1	3.2	3.2
IHS	3.8	3.6	3.7	3.6	3.0	3.6	3.4	3.2	3.2	3.2
Economy.com	3.8	3.7	4.0	4.1	3.0	4.0	3.9			
Blue Chip Average*		3.7	3.7	3.6		3.6	3.3	3.2	3.1	3.2
Blue Chip Top 10*		3.9	4.1	4.1		4.0	3.9	3.7	3.6	3.6
Blue Chip Bottom 10*		3.5	3.3	3.1		3.1	2.7	2.7	2.7	2.8
Consumer Price Index, Percent Change, Annual Rate										
ERFC (Preliminary March)	3.1	2.6	3.1	2.7	8.0	3.6	2.1	1.9	2.0	2.1
IHS	3.1	3.2	3.5	3.1	8.0	4.0	2.3	2.2	2.1	2.2
Economy.com	3.1	3.5	3.3	2.5	8.0	3.9	2.4			
Blue Chip Average*		3.4	3.1	2.8		3.6	2.4	2.2	2.2	2.2
Blue Chip Top 10*		5.3	4.2	3.4		4.2	2.8	2.5	2.4	2.4
Blue Chip Bottom 10*		2.0	1.9	2.0		2.8	2.0	2.0	2.0	2.0
Payroll Employment, Millions										
ERFC (Preliminary March)	154.3	155.3	155.1	154.3	152.6	154.6	153.5	153.8	154.2	155.2
Percent Change, Annual Rate	2.5	2.6	-0.5	-1.9	4.3	1.3	-0.7	0.1	0.3	0.6
IHS	154.3	155.2	155.0	154.3	152.6	154.6	153.8	154.1	154.7	155.1
Percent Change, Annual Rate	2.5	2.3	-0.5	-1.7	4.3	1.3	-0.5	0.2	0.4	0.3
Economy.com	154.3	155.2	155.4	155.5	152.6	155.4	156.0			
Percent Change, Annual Rate	2.5	2.4	0.6	0.2	4.3	1.8	0.4			
Unemployment Rate, Percent										
ERFC (Preliminary March)	3.6	3.4	3.7	4.2	3.6	3.9	4.7	4.6	4.4	4.2
IHS	3.6	3.4	3.7	4.2	3.6	3.9	4.6	4.5	4.4	4.4
Economy.com	3.6	3.4	3.4	3.5	3.6	3.5	3.9			
Blue Chip Average*		3.6	3.9	4.2		4.0	4.6	4.1	4.1	4.1
Blue Chip Top 10*		3.8	4.3	4.9		4.5	5.3	4.5	4.5	4.4
Blue Chip Bottom 10*		3.4	3.5	3.7		3.6	3.9	3.7	3.7	3.7
Real Disposable Personal Income, Percent Change, Annual Rate										
ERFC (Preliminary March)	3.3	5.8	0.9	2.7	-6.4	2.7	3.2	3.3	2.6	2.8
IHS	3.3	5.1	0.6	2.8	-6.4	2.6	3.3	2.8	2.6	2.6
Blue Chip Average*		2.7	0.8	1.5		1.7	2.1	2.2	2.0	2.0
Blue Chip Top 10*		5.8	2.3	3.4		2.9	3.5	2.5	2.3	2.2
Blue Chip Bottom 10*		-0.3	-1.1	-0.6		0.4	0.9	1.8	1.8	1.8
West Texas Intermediate										
ERFC (Preliminary March)	82.8	76.2	74.2	74.0	94.8	74.3	70.9	68.0	65.4	63.0
IHS	82.8	80.2	81.7	83.7	94.8	83.0	80.7	83.5	84.2	86.4
Economy.com	82.6	80.7	88.3	85.6	94.4	84.3	72.8			

* Forecasts beyond 2023 are from the October 2022 Blue Chip Economic Indicators

U.S. Forecast Comparison

	2022Q4	2023Q1	2023Q2	2023Q3	2021	2022	2023	2024	2025	2026	2027
Real GDP (Billions of 2012 Dollars)											
March Forecast, Preliminary	20,198	20,183	20,152	20,144	19,610	20,018	20,163	20,406	20,835	21,272	21,676
Percent Change	*2.9%*	*-0.3%*	*-0.6%*	*-0.2%*	*5.9%*	*2.1%*	*0.7%*	*1.2%*	*2.1%*	*2.1%*	*1.9%*
November Forecast	19,987	19,964	19,959	19,993	19,610	19,957	19,993	20,293	20,719	21,154	21,556
Percent Change	*-0.7%*	*-0.5%*	*-0.1%*	*0.7%*	*5.9%*	*1.8%*	*0.2%*	*1.5%*	*2.1%*	*2.1%*	*1.9%*
Real Consumption (Billions of 2012 Dollars)											
March Forecast, Preliminary	14,252	14,278	14,279	14,279	13,754	14,140	14,283	14,442	14,760	15,085	15,402
Percent Change	*2.1%*	*0.7%*	*0.0%*	*0.0%*	*8.3%*	*2.8%*	*1.0%*	*1.1%*	*2.2%*	*2.2%*	*2.1%*
November Forecast	14,156	14,157	14,168	14,200	13,754	14,108	14,194	14,407	14,724	15,048	15,364
Percent Change	*0.2%*	*0.0%*	*0.3%*	*0.9%*	*8.3%*	*2.6%*	*0.6%*	*1.5%*	*2.2%*	*2.2%*	*2.1%*
PCE Price Index (2012=100)											
March Forecast, Preliminary	124.7	125.5	126.2	127.0	115.6	122.8	126.6	129.2	131.7	134.2	136.8
Percent Change	*3.2%*	*2.4%*	*2.5%*	*2.5%*	*4.0%*	*6.2%*	*3.1%*	*2.1%*	*1.9%*	*1.9%*	*1.9%*
November Forecast	125.2	126.3	126.9	127.7	115.6	122.9	127.3	130.1	132.5	134.9	137.4
Percent Change	*4.8%*	*3.5%*	*2.2%*	*2.4%*	*4.0%*	*6.3%*	*3.6%*	*2.2%*	*1.8%*	*1.8%*	*1.9%*
Real Personal Income (Billions of 2012 Dollars)											
March Forecast, Preliminary	17,777	17,871	17,852	17,876	18,427	17,695	17,883	18,209	18,718	19,205	19,759
Percent Change	*2.6%*	*2.1%*	*-0.4%*	*0.5%*	*3.3%*	*-4.0%*	*1.1%*	*1.8%*	*2.8%*	*2.6%*	*2.9%*
November Forecast	17,789	17,828	17,878	17,951	18,427	17,721	17,921	18,330	18,837	19,354	19,868
Percent Change	*1.7%*	*0.9%*	*1.1%*	*1.7%*	*3.3%*	*-3.8%*	*1.1%*	*2.3%*	*2.8%*	*2.7%*	*2.7%*
Nonfarm Payroll Employment (Millions)											
March Forecast, Preliminary	154.3	155.3	155.1	154.3	146.3	152.6	154.6	153.5	153.8	154.2	155.2
Percent Change	*2.5%*	*2.6%*	*-0.5%*	*-1.9%*	*2.9%*	*4.3%*	*1.3%*	*-0.7%*	*0.1%*	*0.3%*	*0.6%*
November Forecast	153.4	153.4	152.6	151.7	146.1	152.0	152.3	152.0	153.2	154.2	154.8
Percent Change	*1.7%*	*0.0%*	*-2.0%*	*-2.2%*	*2.8%*	*4.0%*	*0.2%*	*-0.2%*	*0.8%*	*0.6%*	*0.4%*
Unemployment Rate (Percent of Labor Force)											
March Forecast, Preliminary	3.6	3.4	3.7	4.2	5.4	3.6	3.9	4.7	4.6	4.4	4.2
November Forecast	3.7	4.0	4.5	5.1	5.4	3.7	4.7	5.0	4.5	4.2	4.1
Oil Price, Refiner's Acquisition											
March Forecast, Preliminary	83.7	76.7	75.1	74.5	67.5	95.2	75.0	71.5	68.6	66.3	64.2
November Forecast	87.7	85.8	82.9	80.6	67.5	96.4	82.0	75.1	71.2	68.4	66.2
30 Year Fixed Mortgage Rate (Percent, average)											
March Forecast, Preliminary	6.6	6.3	6.3	6.2	3.0	5.4	6.2	5.6	5.0	5.0	4.9
November Forecast	7.0	7.0	6.8	6.6	3.0	5.4	6.7	5.6	5.0	4.9	4.8
3 Month T-Bill Rate (Percent, average)											
March Forecast, Preliminary	4.0	4.7	4.8	4.8	0.0	2.0	4.8	4.1	2.7	2.4	2.4
November Forecast	3.9	4.5	4.7	4.6	0.0	2.0	4.6	4.0	2.7	2.4	2.3

Washington Forecast Comparison

	2022Q4	2023Q1	2023Q2	2023Q3	2021	2022	2023	2024	2025	2026	2027
Real Personal Income (Billions of 2012 Dollars)											
March Forecast, Preliminary	479.4	481.7	481.7	482.8	494.1	477.2	482.9	494.7	511.5	527.8	545.7
Percent Change	*3.6%*	*2.0%*	*0.0%*	*1.0%*	*4.1%*	*-3.4%*	*1.2%*	*2.5%*	*3.4%*	*3.2%*	*3.4%*
November Forecast	481.3	483.0	485.3	488.0	494.1	478.4	486.9	500.8	516.9	533.6	550.5
Percent Change	*2.6%*	*1.5%*	*1.9%*	*2.3%*	*4.1%*	*-3.2%*	*1.8%*	*2.9%*	*3.2%*	*3.2%*	*3.2%*
Personal Income (Billions of Dollars)											
March Forecast, Preliminary	597.8	604.4	608.1	613.3	570.9	585.9	611.4	639.4	673.5	708.4	746.5
Percent Change	*6.9%*	*4.5%*	*2.5%*	*3.5%*	*8.2%*	*2.6%*	*4.3%*	*4.6%*	*5.3%*	*5.2%*	*5.4%*
November Forecast	602.4	609.9	616.0	623.1	570.9	588.0	619.9	651.6	684.9	719.6	756.3
Percent Change	*7.6%*	*5.0%*	*4.1%*	*4.7%*	*8.2%*	*3.0%*	*5.4%*	*5.1%*	*5.1%*	*5.1%*	*5.1%*
Disposable Personal Income (Billions of Dollars)											
March Forecast, Preliminary	510.4	522.8	528.2	536.4	504.4	500.2	533.2	566.4	598.9	629.8	663.2
Percent Change	*7.4%*	*10.0%*	*4.3%*	*6.3%*	*6.5%*	*-0.8%*	*6.6%*	*6.2%*	*5.7%*	*5.2%*	*5.3%*
November Forecast	515.3	527.2	535.0	544.7	504.4	502.0	540.3	575.8	605.6	636.3	669.4
Percent Change	*9.3%*	*9.6%*	*6.1%*	*7.5%*	*6.5%*	*-0.5%*	*7.6%*	*6.6%*	*5.2%*	*5.1%*	*5.2%*
Nonfarm Payroll Employment (Thousands)											
March Forecast, Preliminary	3590	3601	3596	3583	3363	3540	3590	3594	3624	3659	3699
Percent Change	*3.4%*	*1.2%*	*-0.5%*	*-1.4%*	*2.4%*	*5.3%*	*1.4%*	*0.1%*	*0.9%*	*1.0%*	*1.1%*
November Forecast	3584	3586	3574	3560	3363	3538	3570	3585	3628	3667	3701
Percent Change	*2.7%*	*0.2%*	*-1.3%*	*-1.5%*	*2.4%*	*5.2%*	*0.9%*	*0.4%*	*1.2%*	*1.1%*	*0.9%*
Unemployment Rate (Percent of Labor Force)											
March Forecast, Preliminary	4.0	4.2	4.4	4.8	5.3	4.0	4.6	5.1	5.0	4.7	4.6
November Forecast	3.9	4.2	4.7	5.2	5.3	4.0	4.9	5.2	4.8	4.5	4.4
Manufacturing Employment (Thousands)											
March Forecast, Preliminary	276.8	277.5	277.2	276.1	259.2	272.0	275.9	267.6	265.3	266.0	268.7
Percent Change	*3.4%*	*1.0%*	*-0.4%*	*-1.6%*	*-4.6%*	*4.9%*	*1.5%*	*-3.0%*	*-0.9%*	*0.3%*	*1.0%*
November Forecast	276.7	278.6	278.2	276.2	259.2	271.9	276.7	271.8	271.4	271.9	272.5
Percent Change	*3.4%*	*2.8%*	*-0.6%*	*-2.8%*	*-4.6%*	*4.9%*	*1.8%*	*-1.8%*	*-0.1%*	*0.2%*	*0.2%*
Construction Employment (Thousands)											
March Forecast, Preliminary	239.5	238.4	233.1	230.1	223.4	236.0	233.2	230.8	231.3	234.5	236.9
Percent Change	*4.5%*	*-1.8%*	*-8.7%*	*-5.1%*	*4.5%*	*5.7%*	*-1.2%*	*-1.0%*	*0.2%*	*1.4%*	*1.1%*
November Forecast	240.1	237.6	233.1	229.6	223.4	236.1	232.8	230.5	229.6	230.3	232.2
Percent Change	*5.8%*	*-4.2%*	*-7.3%*	*-5.8%*	*4.5%*	*5.7%*	*-1.4%*	*-1.0%*	*-0.4%*	*0.3%*	*0.9%*
Housing Permits (Thousands)											
March Forecast, Preliminary	38.2	35.8	39.8	40.8	56.9	49.3	39.6	44.0	46.7	45.9	45.6
Percent Change	*-47.5%*	*-22.3%*	*53.0%*	*9.7%*	*29.8%*	*-13.5%*	*-19.7%*	*11.2%*	*6.2%*	*-1.7%*	*-0.8%*
November Forecast	41.5	42.4	42.5	42.9	56.9	50.7	42.8	46.1	47.5	46.2	45.3
Percent Change	*-24.5%*	*8.6%*	*1.3%*	*3.5%*	*29.2%*	*-11.0%*	*-15.6%*	*7.8%*	*2.9%*	*-2.8%*	*-2.0%*

U.S. Forecast Comparison						Fiscal Years
	2022	2023	2024	2025	2026	2027
Real GDP						
Billions of 2012 dollars						
March Preliminary Forecast	19,875	20,147	20,229	20,620	21,057	21,474
Growth	*4.0%*	*1.4%*	*0.4%*	*1.9%*	*2.1%*	*2.0%*
November Forecast	19,875	19,983	20,107	20,502	20,939	21,357
Growth	*4.0%*	*0.5%*	*0.6%*	*2.0%*	*2.1%*	*2.0%*
Difference in level	0	164	121	118	118	118
Difference in growth forecast	***0.0%***	***0.8%***	***-0.2%***	***0.0%***	***0.0%***	***0.0%***
Real Consumption						
Billions of 2012 dollars						
March Preliminary Forecast	13,996	14,247	14,328	14,599	14,922	15,245
Growth	*5.4%*	*1.8%*	*0.6%*	*1.9%*	*2.2%*	*2.2%*
November Forecast	13,996	14,158	14,279	14,560	14,886	15,208
Growth	*5.4%*	*1.2%*	*0.9%*	*2.0%*	*2.2%*	*2.2%*
Difference in level	0	89	49	38	36	37
Difference in growth forecast	***0.0%***	***0.6%***	***-0.3%***	***-0.1%***	***0.0%***	***0.0%***
PCE Price Index						
2012 = 100						
March Preliminary Forecast	119.3	125.0	128.0	130.4	132.9	135.5
Growth	*5.8%*	*4.8%*	*2.4%*	*1.9%*	*1.9%*	*1.9%*
November Forecast	119.3	125.5	128.8	131.3	133.7	136.1
Growth	*5.8%*	*5.2%*	*2.6%*	*2.0%*	*1.8%*	*1.8%*
Difference in level	0.0	-0.5	-0.7	-0.9	-0.7	-0.6
Difference in growth forecast	***0.0%***	***-0.4%***	***-0.2%***	***-0.1%***	***0.1%***	***0.1%***
Unemployment Rate						
Percent of Labor Force						
March Preliminary Forecast	4.2%	3.5%	4.5%	4.7%	4.5%	4.3%
November Forecast	4.2%	3.9%	5.2%	4.7%	4.3%	4.2%
Difference in forecast	***0.0%***	***-0.4%***	***-0.7%***	***0.0%***	***0.2%***	***0.1%***
30 Year Fixed Mortgage Rate						
Annual Average						
March Preliminary Forecast	3.8%	6.2%	5.9%	5.2%	5.0%	4.9%
November Forecast	3.7%	6.6%	6.1%	5.3%	4.9%	4.8%
Difference in forecast	***0.1%***	***-0.4%***	***-0.2%***	***-0.1%***	***0.1%***	***0.1%***
3 Month T-Bill Rate						
Annual Average						
March Preliminary Forecast	0.4%	4.0%	4.6%	3.3%	2.4%	2.4%
November Forecast	0.4%	4.0%	4.5%	3.2%	2.4%	2.4%
Difference in forecast	***0.0%***	***0.1%***	***0.1%***	***0.0%***	***-0.1%***	***0.0%***

Washington Forecast Comparison						Fiscal Years
	2022	**2023**	**2024**	**2025**	**2026**	**2027**
Real Personal Income						
Billions of 2012 dollars						
March Preliminary Forecast	480.6	479.5	487.3	503.2	519.4	536.7
Growth	*-1.8%*	*-0.2%*	*1.6%*	*3.3%*	*3.2%*	*3.3%*
November Forecast	480.6	482.0	493.4	508.6	525.2	542.0
Growth	*-1.8%*	*0.3%*	*2.4%*	*3.1%*	*3.3%*	*3.2%*
Difference in level	0.0	-2.5	-6.1	-5.4	-5.8	-5.3
Difference in growth forecast	***0.0%***	***-0.5%***	***-0.7%***	***0.2%***	***0.0%***	***0.1%***
Nominal Personal Income						
Billions of dollars						
March Preliminary Forecast	573.3	599.6	623.8	656.5	690.5	727.2
Growth	*3.9%*	*4.6%*	*4.1%*	*5.2%*	*5.2%*	*5.3%*
November Forecast	573.3	604.9	635.3	668.0	702.1	737.7
Growth	*3.9%*	*5.5%*	*5.0%*	*5.1%*	*5.1%*	*5.1%*
Difference in level	0.0	-5.4	-11.5	-11.6	-11.5	-10.5
Difference in growth forecast	***0.0%***	***-0.9%***	***-1.0%***	***0.1%***	***0.1%***	***0.2%***
Nonfarm Payroll Employment						
Thousands						
March Preliminary Forecast	3,462.4	3,586.7	3,583.0	3,610.0	3,639.7	3,679.9
Growth	*5.5%*	*3.6%*	*-0.1%*	*0.8%*	*0.8%*	*1.1%*
November Forecast	3,461.7	3,575.9	3,566.8	3,607.5	3,647.6	3,684.7
Growth	*5.5%*	*3.3%*	*-0.3%*	*1.1%*	*1.1%*	*1.0%*
Difference in level	0.7	10.8	16.2	2.5	-7.9	-4.8
Difference in growth forecast	***0.0%***	***0.3%***	***0.2%***	***-0.4%***	***-0.3%***	***0.1%***
Housing Permits						
Units Authorized, Thousands						
March Preliminary Forecast	58.1	39.7	42.2	45.9	46.4	45.7
Growth	*17.4%*	*-31.8%*	*6.3%*	*8.7%*	*1.2%*	*-1.6%*
November Forecast	58.3	42.7	44.3	47.5	46.8	45.6
Growth	*17.1%*	*-26.7%*	*3.6%*	*7.4%*	*-1.6%*	*-2.4%*
Difference in level	-0.2	-3.1	-2.1	-1.7	-0.3	0.0
Difference in growth forecast	***0.3%***	***-5.1%***	***2.8%***	***1.3%***	***2.8%***	***0.8%***

Year-Over-Year Employment Growth by Industry
(December 2021 to December 2022)
Washington vs. U.S.

	Washington		U.S.
	(000)	% Chg.	% Chg.
Total	**136.8**	**4.0%**	**3.2%**
Electronic Shopping and Mail-Order Houses	6.9	9.1%	NA
Leisure and Hospitality	24.6	7.9%	7.0%
Aerospace Product and Parts Manufacturing	4.9	7.2%	7.2%
Information Excluding Software	5.7	6.9%	3.9%
Wholesale Trade	7.3	5.5%	3.4%
Other Services	6.2	5.3%	3.3%
Construction	11.0	4.8%	3.5%
Software Publishers	3.8	4.6%	9.7%
Education and Health Services	20.4	4.0%	3.9%
Manufacturing Excluding Aerospace	7.7	3.9%	3.0%
Professional and Business Services	16.5	3.5%	3.4%
State and Local Gov Education	7.0	2.9%	1.0%
Financial Activities	4.1	2.5%	1.9%
Mining and Logging	0.1	2.4%	8.6%
State and Local Gov Non-Education	3.9	1.8%	1.8%
Transportation, Warehousing and Utilities	0.0	0.0%	4.0%
Information	9.4	5.7%	5.1%
Retail Trade	13.2	3.2%	0.6%
Manufacturing	12.5	4.7%	3.1%

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