

Washington State Economic and Revenue Forecast

February 2020
Volume XLIII, No. 1



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Washington State Economic and Revenue Forecast

Prepared by the
Economic and Revenue Forecast Council

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Preface

ERFC forecasting structure and schedule

The Economic and Revenue Forecast Council is required by Chapter 231, Section 34, Laws of 1992 (RCW 82.33.020) to prepare a quarterly state economic and revenue forecast and submit it to the Forecast Council. This report presents the state's economic and General Fund-State revenue forecast. It is issued four times a year. The Washington State GF-S revenue forecast is prepared quarterly in conjunction with the state economic forecast for the Economic and Revenue Forecast Council. The Council consists of six members, two appointed by the Governor and four appointed by the Legislature – one from each caucus of the Senate and House of Representatives. Current members of the Economic and Revenue Forecast Council are listed inside the front cover of this publication. The GF-S revenue forecast is updated four times per year: March (February in even-numbered years), June, September, and November. The staff of the Economic and Revenue Forecast Council is responsible for the preparation of the state's economic forecast and the forecast of the Department of Revenue's GF-S revenue sources as well as GF-S revenue from fines and forfeitures collected by the Administrative Office of the Courts. The staff is also responsible for review and coordination of the revenue forecasts of other agencies that collect relatively large amounts of GF-S revenue. These are the Department of Licensing, the Office of the Insurance Commissioner, the Lottery Commission, the State Treasurer, the Liquor and Cannabis Board and the Office of Financial Management. The Office of Financial Management is responsible for summarizing the forecasts of all other state agencies that collect relatively smaller amounts of GF-S revenue.

Forecast Procedure

For each quarterly update, the staff of the Economic and Revenue Forecast Council, under the direction of the Executive Director, reviews (and if warranted, modifies) a national economic forecast prepared by Global Insight, Inc. A state economic forecast is then prepared using an econometric model that links Washington's economy to the national economy. After review by forecast workgroups; the Governor's Council of Economic Advisors; and the Economic and Revenue Forecast Council, this state economic forecast (updated for newly released data) is used to prepare a baseline revenue forecast for GF-S and the related funds. The forecasts are based on current law and administrative practices and do not reflect pending legal challenges to GF-S receipts until they are resolved. Additionally, at least two alternative forecasts are prepared for all GF-S and related fund sources and presented to the Forecast Council for approval. Once the Council approves the forecast, it becomes the official forecast of GF-S and related fund revenues.

Data in this publication are accurate through February 27, 2020.

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Executive Summary

- The national economy is expanding at a moderate pace. Real GDP rose 2.1% (SAAR) in the fourth quarter after also growing 2.1% (SAAR) in the third quarter.
- The forecast for GDP growth in 2020 is now 1.9%, up from 1.8% in the November forecast. For 2021, real GDP growth is now 2.0%, up from 1.8% in November. The forecast calls for growth rates of 1.9% in 2022 and 2.0% in each year from 2023 through 2025.
- Coronavirus: Our forecast was made in early February. At the time, we believed the impact on the US economy would be modest and temporary.
- The Washington economy is expanding at a rapid but slowing pace.
- Seattle-area home price appreciation and Washington housing construction have strengthened.
- Compared to November, the Washington economic forecast features higher personal income and higher housing construction.
- General Fund-State (GF-S) revenue collections since the November 2019 forecast have come in \$162 million (2.5%) over the forecasted amount.
- Over half of the collection surplus came from a larger-than-expected rush of property sales ahead of an increase in real estate excise tax (REET) rates that took effect on January 1, 2020. These accelerated sales have decreased forecasted total REET receipts for the current biennium.
- The GF-S forecast was increased by \$307 million in the 2019-21 biennium and \$512 million in the 2021-23 biennium.
- Much of the forecast increase came from a higher-than-expected assessment of property values for next year's levy, which increased forecasted property tax collections.
- Forecasted Near General Fund revenue has increased by \$606 million in the 2019-21 biennium and \$536 million in the 2021-23 biennium.
- This forecast is the first that includes GF-S and Near General Fund revenue for the 2023-25 biennium.
- In general, the pattern of employment change in Washington and the U.S. before, during and after recessions is quite similar.

U.S. Economic Forecast

The national economy is expanding at a moderate pace

The national economy is expanding at a moderate pace. Real GDP rose 2.1% (SAAR) in the fourth quarter after also growing 2.1% in the third quarter. Job gains remain strong. The unemployment rate has fallen to below 4%. Consumer and business confidence remain near cyclical highs. Oil prices remain low despite international turmoil. Monetary policy has shifted to a more dovish stance. The housing market may be finally showing some signs of life after years of stagnation. On the downside, the manufacturing sector has declined recently. The outbreak of the coronavirus developing into a pandemic is the largest downside risk to the economy.

Our forecast was based on the February IHS Markit forecast

The economic forecast is based on a modified version of IHS Markit's February 2020 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 forecast for GDP growth in 2020 is now 1.9%, up from 1.8% in the November forecast. For 2021, real GDP growth is now 2.0%, up from 1.8% in November. The Blue Chip long-range forecast has not changed since November and calls for growth rates of 1.9% in 2022 and 2.0% in 2023. The February 2020 forecast is the first to extend to 2024 and 2025. We assume real GDP will grow 2.0% in each year as in the latest Blue Chip long-range forecast.

Minimal coronavirus impact in the forecast

Our forecast was produced in early February prior to much of the outbreak of the coronavirus. The forecast includes the financial conditions which reflected investors' reaction to the coronavirus outbreak at the time the forecast was released. The economic forecast does not include adjustments for potential disruptions. At the time, we believed the impact on the US economy would be modest and temporary. Since the forecast was released, the situation has deteriorated.

Washington Economic Forecast

The Washington economy is expanding at a rapid but slowing pace

The Washington economy is expanding at a rapid but slowing pace. Washington job growth remains strong and the unemployment rate is at an all-time low. Washington initial claims for unemployment insurance declined to an all-time low. Seattle-area home price appreciation and Washington housing construction have strengthened. Washington exports declined sharply over the year. Washington manufacturing activity continues to expand. Seattle consumer price inflation remains slightly above the national average.

Compared to November, the Washington economic forecast

Compared to November, the Washington economic forecast features higher personal income and higher housing construction. We expect 1.8% Washington employment growth this year, up slightly from the 1.6% rate in the November forecast. As in November, we expect growth to continue to

*features
higher
personal
income and
higher
housing
construction*

decelerate. We expect employment growth to average 1.0% per year in 2021 through 2023, which is slightly faster than the 0.9% rate expected in November. Our forecast for nominal personal income growth this year is 4.7%, up from 3.9% in the November forecast. Our new forecast for nominal personal income growth in 2021 through 2023 averages 4.4% per year, which is down from the 4.7% rate expected in the November forecast. While personal income growth is lower than in November, the level is higher due to an upward revision to history. We expect 45,500 housing units authorized by building permits this year, up from 43,600 units in the November forecast. We expect permits to average 43,500 in 2021 through 2023, up from 42,100 in the November forecast. We expect the Seattle CPI to rise 1.6% this year compared to 1.9% in the November forecast. As in November, we expect Seattle inflation to average 2.1% per year in 2021 through 2023.

Revenue Forecast

*Much of the
forecasted
increase in GF-
S revenue
came from
property taxes*

Since the November 2019 forecast, General Fund – State (GF-S) revenue collections have come in higher than forecasted, but much of the extra revenue was due to accelerated property sales that will result in decreased sales in the future. The February economic forecast was similar to the November forecast but resulted in slight increases in forecasted taxable activity, particularly due to increased housing and construction activity. Forecasted revenue was also increased from an upward revision of the expected value of taxable property for the calendar year 2020 property tax levy. This increase, which carries forward into the expected assessment for future years as well, is responsible for almost half of the increase in forecasted GF-S revenue for the current biennium and over half of the increase for the next biennium.

*GF-S forecast
change by
biennium
(millions):*

*19-21: +\$307
21-23: +\$512*

In the current biennium, revenue collections that are tracked monthly came in \$162 million higher than forecasted. Forecasted growth from economic changes added \$144 million, resulting in a total forecast change of \$307 million. The forecast for the 2021-23 biennium was increased by \$512 million. The February 2020 forecast for GF-S revenue totals \$50,611.1 million in the 2019-21 biennium and \$54,291.3 million in the 2021-23 biennium. The initial forecast of GF-S revenue for the 2023-25 biennium is \$57,930.0 million.

*Near General
Fund forecast
change by
biennium
(millions):*

*19-21: +606
21-23: +536*

The forecast of Near General Fund revenue for the 2019-21 biennium is \$52,339.5 million, \$606.0 million more than the November forecast. The large change in the NGF forecast relative to the change in forecasted GF-S revenue was due to a large increase in estate tax receipts between the November and February forecasts. The forecast of Near General Fund revenue for the 2021-23 biennium is \$55,689.8 million, \$535.7 million

more than the November forecast. The initial forecast for the 2023-25 biennium is \$59,175.8 million.

Comparing Washington and U.S. Employment Before, During and After Recession

This chapter compares Washington and U.S. employment before, during and after the last seven recessions.

This chapter focuses on changes in employment around and during recessions to look for similarities or differences between Washington and the U.S. as a whole. In general, the pattern of employment change in Washington and the U.S. before, during and after recessions is quite similar.



Chapter 1: U.S. Economy – Current Conditions and Forecast

- **The national economy is expanding at a moderate pace. Real GDP rose 2.1% (SAAR) in the fourth quarter after also growing 2.1% (SAAR) in the third quarter.**
- **Employment growth is strong and unemployment remains low.**
- **Consumer confidence remains high.**
- **The construction sector is showing signs of life while manufacturing has recently declined.**
- **U.S. oil production is at an all-time high; oil prices remain low.**
- **Inflation remains low.**
- **The forecast for GDP growth in 2020 is now 1.9%, up from 1.8% in the November forecast. For 2021, real GDP growth is now 2.0%, up from 1.8% in November. The forecast calls for growth rates of 1.9% in 2022 and 2.0% in each year from 2023 through 2025.**
- **The forecast includes tariffs enacted by the US and China since 2017 and still in effect. The forecast reflects the “phase-one” trade deal between the United States and China.**
- **Coronavirus: Our forecast was made in early February. At the time, we believed the impact on the US economy would be modest and temporary.**
- **Higher business and consumer confidence leading to more hiring and spending is the most significant upside risk. A coronavirus pandemic is the most significant downside risk.**

Current Conditions

The national economy is expanding at a moderate pace

The national economy is expanding at a moderate pace. Real GDP rose 2.1% (SAAR) in the fourth quarter after also growing 2.1% in the third quarter. Job gains remain strong. The unemployment rate has fallen to below 4%. Consumer and business confidence remain near cyclical highs. Oil prices remain low despite international turmoil. Monetary policy has shifted to a more dovish stance. The housing market may be finally showing some signs of life after years of stagnation. On the downside, the manufacturing sector has declined recently. The outbreak of the

coronavirus developing into a pandemic is the largest downside risk to the economy.

U.S. real GDP rose 2.1% (SAAR) in the fourth quarter

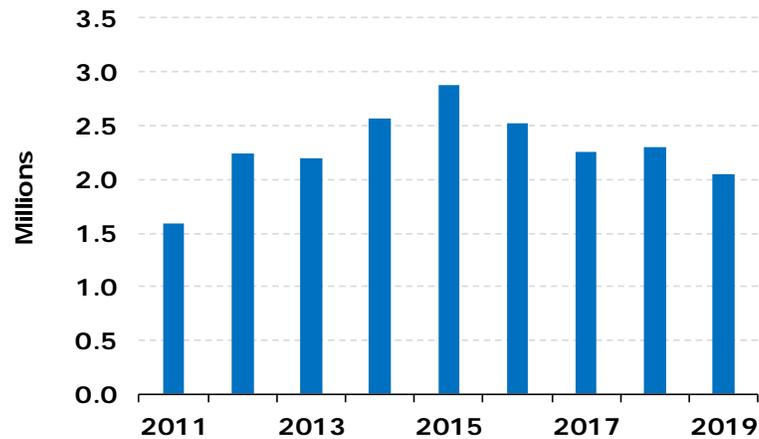
U.S. real GDP increased 2.1% (SAAR) in the fourth quarter after also growing 2.1% (SAAR) in the third quarter. Final sales, which exclude the impact from inventories, rose 3.1% (SAAR) after growing 2.1% (SAAR) in the third quarter. Consumer spending slowed, growing 1.7% (SAAR) after third quarter growth of 3.2% (SAAR). Growth of consumer spending on services remained at 2.2% (SAAR) in the fourth quarter while goods spending growth slowed to just 0.7% (SAAR). Consumer spending contributed 1.2 points to top line GDP growth. Fixed investment declined 0.5% (SAAR) in the fourth quarter due to declines in nonresidential construction and equipment. Residential construction increased 6.2% (SAAR) in the fourth quarter. Government spending increased 2.6% (SAAR) led by federal defense spending. Exports increased 2.0% while imports fell 8.6% (SAAR) increasing top line GDP growth by 1.5 points.

Employment growth continues to be strong

Employment growth continues to be strong. Nonfarm payrolls increased by 225,000 jobs in January. For all of 2019, the economy added 2.042 million jobs on an annual average basis. This marked the eighth consecutive year of job growth over 2 million (see Figure 1.1). In January, job growth was led by gains in construction (+44,000) which was helped by mild winter conditions. There were also strong gains in health care (+35,500), education services (+24,900), food and drinking places (+24,400), and local government (+20,000). Manufacturing employment (-12,000) declined, due primarily to a drop in motor vehicle and parts employment (-10,600). There was also net job losses in the retail trade sector led by department stores (-16,900).

Figure 1.1: U.S. Total Nonfarm Employment Growth

The economy has added over 2 million jobs per year for eight straight years



Source: U.S. Bureau of Labor Statistics; data through 2019

The unemployment rate remains at historic lows

The unemployment rate remains at historic lows. The unemployment rate edged up to 3.6% in January from 3.5% in September. The last time the unemployment rate reached 3.5% was in 1969. The labor force participation rate rose from 63.2% to 63.4%, a new high for the business cycle. Average hourly earnings rose 0.2% in January while the average workweek was unchanged at 34.3 hours.

Consumer attitudes remain high

Consumer confidence is once again improving and remains high. Any threat from the coronavirus has yet to show up in consumer attitudes. The Conference Board measure of consumer confidence rose 0.3 points to 130.7 in February. Confidence is down 0.7 points from a year ago. The present situation component declined as assessments of the labor market deteriorated in February. The expectations index increased as respondents had a more upbeat view of their incomes going forward. The University of Michigan Consumer Sentiment index increased 1.0 points in February and is now up 7.1 points from last year. Like the Conference Board measure, the current conditions component fell while expectations improved.

Oil prices have remained stable

Oil prices have remained in the \$60 per barrel range the past few months. Increases in U.S. production have kept price increases in check. West Texas Intermediate (WTI) declined to \$58 per barrel in January, down from \$60 the month before. Brent crude oil has followed a similar path, declining to \$64 from \$67 the previous month. Oil production in the U.S. was at 12.879 million barrels per day (bpd) in November, a new all-time high. A year ago, production was at 11.999 million bpd. The U.S. has now become a net exporter of oil and refined fuels for the first time in decades. Despite the increase in production, the number of drilling structures has fallen recently. The Baker Hughes rig count fell to 791 in the third week of February, a decline of 224 since last year. Coronavirus fears are likely to limit demand and keep downward pressure on prices in the near term.

Inflation remains tame

Headline inflation is once again starting to creep up. The Consumer Price Index (CPI) was up 2.5% over the year in January, up from 2.3% year-over-year growth in December. A year ago, headline inflation was 1.5%. Much of the recent increase was due to a rise in energy prices. Energy prices fell 0.7% in January but remain up 6.2% since last year. Food prices were up 0.2% and are now 1.8% higher than a year ago. Shelter costs continue to be a steady driver of overall price inflation as rents continue to rise. Shelter costs increased 0.4% in January and are now up 3.3% over the year. Core consumer prices, which exclude food and energy, were up 0.2% in October and 2.3% over the year.

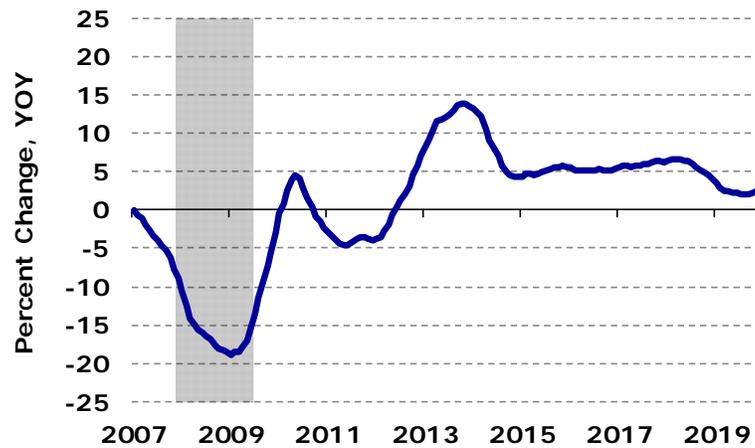
Home price appreciation picked up in December

Home price appreciation has been solid in recent months. The seasonally adjusted S&P CoreLogic Case-Shiller 20-city Home Price Index increased 0.4% in December. Home prices are now 2.8% higher than a year ago (see Figure 1.2). Prices have

increased 56.3% since the trough, and are now 6.5% above their previous peak. Homebuilder confidence remains strong. Confidence fell to 74 in February, just off the business cycle high of 76 reached in December. Index levels above 50 indicate positive sentiment. The recent decline in mortgage rates should also help home prices, as more potential buyers are able to afford a house. The average rate on the 30 year fixed rate loan was 3.49% in the third week of February, down from the recent peak of 4.94% in November 2018.

Figure 1.2: S&P CoreLogic Case-Shiller 20-city Home Price Index

Home price growth is starting to pick up



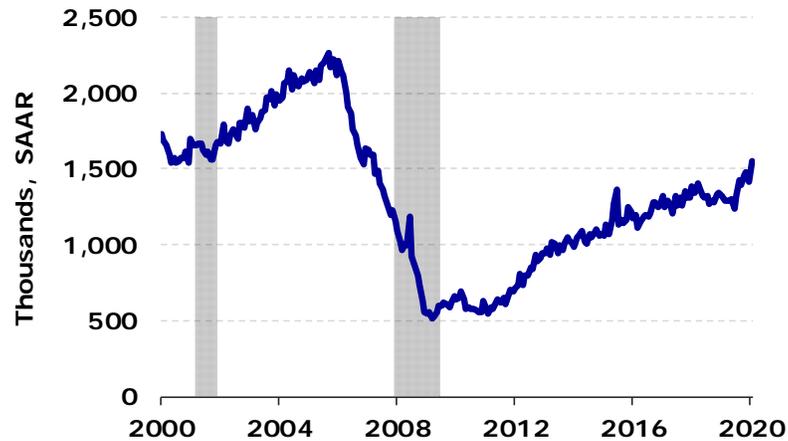
Source: S&P CoreLogic Case-Shiller; data through December 2019

The housing market is rebounding

The housing market is rebounding. The sharp decline in mortgage rates may be finally starting to help new construction. Housing starts fell 3.6% in January but are up 21.4% from a year ago. Single-family starts fell 4.6% but are up 4.9% from a year ago. Housing starts for the volatile multi-family sector increased 4.9% in January and are up 82.6% since January 2019. The mild winter throughout much of the country likely helped new construction. Housing permits increased 9.2% in January and are up 17.8% from a year ago and the highest since before the recession (see Figure 1.3). Single-family permits are up 20.2% while multi-family permits are up 13.7% since last year. New home sales jumped 7.9% over the month in January to 764,000, the highest level since 2007.

Figure 1.3: U.S. Housing Units Authorized by Building Permits

Housing permits have increased



Source: U.S. Census Bureau; data through January 2020

The manufacturing sector has been declining

The manufacturing sector returned to positive territory after five consecutive months of decline. The Institute for Supply Management (ISM) Report on Business index improved to 50.9 (index values below 50 indicate contraction) in January from 47.8 in December. The new orders and production components both improved to over 50. The employment component improved but still indicated declining activity. The halt in production of the Boeing 737 MAX and the probable export disruption because of the coronavirus are likely to keep downward pressure on the manufacturing sector in the coming months. The latest G-17 report from the Federal Reserve indicates manufacturing output declined 0.1% in January. Manufacturing output is now 0.8% lower than last year. Durable goods declined 0.5% in January as drops in aerospace and miscellaneous transportation equipment were partially offset by a gain in motor vehicles and parts. The production of nondurable goods rose 0.3% in January. New orders for core capital goods (nondefense capital goods excluding aircraft) declined 0.9% in December. New orders are now 0.8% above year-ago levels.

U.S. exports are declining

Ongoing trade tensions and the grounding of the 737 MAX are contributing to declining U.S. exports. Total exports in the fourth quarter fell 1.3% year over year. Transportation equipment exports declined 1.8% as the 19.2% increase from motor vehicles was not enough to offset the 5.5% drop in aerospace products. Exports excluding aerospace were down 0.9% in the fourth quarter. Petroleum and coal exports fell, declining 12.1% from last year. Oil and gas exports continue to surge, up 25.9% since last year. Global economic growth appears to be slowing. The value of the U.S. dollar has eased recently but remains strong, which limits exports by making them more expensive. The trade war with China is starting to thaw, as the recent

“phase-one” trade agreement includes China’s promise to purchase more U.S. products. In the fourth quarter, exports to China were up 3.6%. Exports in the fourth quarter to Canada declined 2.5% while exports to Mexico were down 7.2% from a year ago.

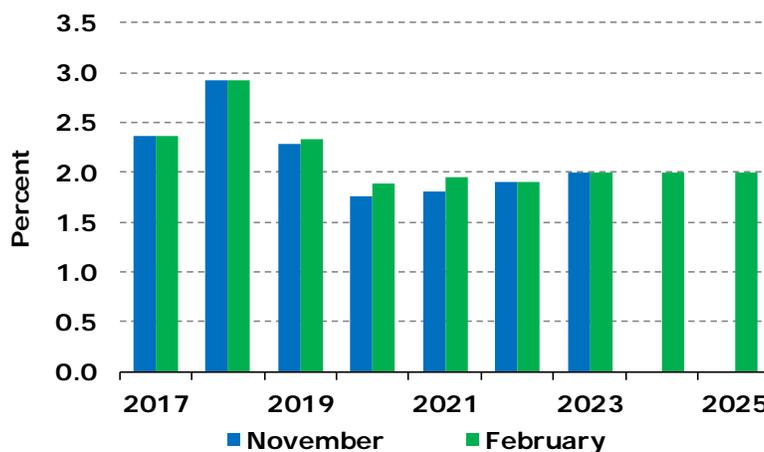
Forecast

Our forecast was based on the February IHS Markit forecast

The economic forecast is based on a modified version of IHS Markit's February 2020 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 forecast for GDP growth in 2020 is now 1.9%, up from 1.8% in the November forecast. For 2021, real GDP growth is now 2.0%, up from 1.8% in November. The Blue Chip long-range forecast has not changed since November and calls for growth rates of 1.9% in 2022 and 2.0% in 2023. The February 2020 forecast is the first to extend to 2024 and 2025. We assume real GDP will grow 2.0% in each year as in the latest Blue Chip long-range forecast (see Figure 1.4).

Figure 1.4: Real GDP Growth

This is our first forecast of 2024 and 2025



Source: BEA, February ERFC forecast; historical data through 2019

Minimal coronavirus impact in the forecast

Our forecast was produced in early February prior to much of the outbreak of the coronavirus. The forecast includes the financial conditions which reflected investors’ reaction to the coronavirus outbreak at the time the forecast was released. The economic forecast does not include adjustments for potential disruptions. At the time, we believed the impact on the US economy would be modest and temporary. Since the forecast was released, the situation has deteriorated.

The forecast includes previously enacted tariffs

The forecast includes tariffs enacted by the U.S. and China since 2017 which are still in effect. The forecast reflects the “phase-one” trade deal between the United States and China. This

includes the United States agreement to suspend new tariffs that were scheduled to go into effect on 15 December 2019 and reduces, from 15% to 7.5%, the tariff rate on \$112 billion of goods that went into effect on 1 September 2019. The partial deal also included a rollback in retaliatory tariffs on US goods, which is also reflected in the baseline forecast. This forecast does not include an increase in US exports reflecting China's promise to purchase more U.S. products as part of the recent, partial trade agreement.

The economic recovery is the longest on record

The current economic recovery is now the longest on record. This recovery has already lasted 126 months from the 2007-09 recession through January, surpassing the 120 months from the 1990 recession. From June 2009 through the end of our forecast in 2025, the recovery is expected to be at least 198 months. A major reason for the exceptional length of the current recovery was the depth of the recession. Despite positive GDP growth, the labor market remained weak for an extended period. It took 58 months of recovery just to reach the previous peak in employment. When comparing recoveries in terms of the duration since reaching the previous employment peak, this expansion appears more in line with other post-war expansions. The two longest post-war expansions had 96 and 95 months of additional employment growth after reaching the previous peak. We expect growth to continue through the end of the forecast in 2025, which would result in 139 months of employment gains after reaching the previous employment peak.

Oil prices are expected to be lower

Oil prices are lower compared to the November forecast. The refiner acquisition price of crude oil in 2020 is now expected to average \$52 per barrel before dropping to \$51 per barrel in 2021 and 2022. Going forward, oil prices are projected to increase to \$53 in 2025. The November forecast assumed prices would be \$55 per barrel in 2020 before dropping to \$52 in 2023. Oil prices have been under downward pressure since coronavirus started influencing trading in late January. The economic slowdown in China due to the virus has the potential to be a major downside risk to prices. OPEC is unlikely to have a rapid response to any fall in prices. The United States will soon be a consistent net exporter of oil as new pipelines continue to come online. Oil prices will remain well below the levels seen earlier in the recovery.

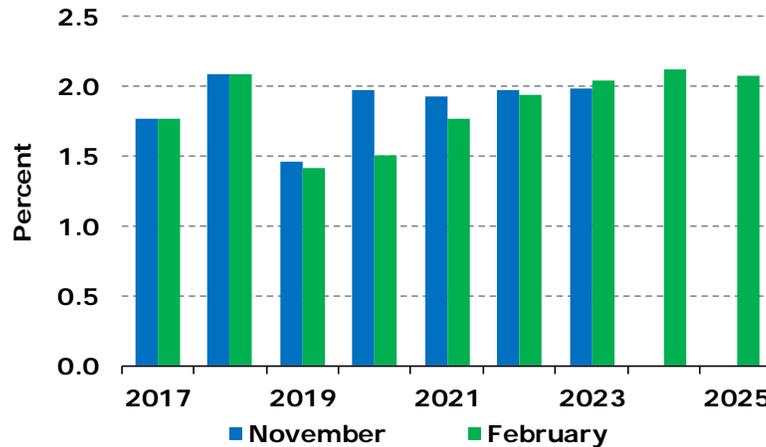
Inflation will remain moderate

Inflation (as measured by the price index for personal consumption expenditures) is expected to be lower than in the November forecast. We expect inflation to be 1.5% this year, down from 2.0% previous forecast. The lower inflation expected this year is primarily due to the drop in oil prices in 2020. Inflation is expected to increase to 1.8% in 2021 and reach 2.1% in 2024 and 2025. The November forecast had inflation reaching 2.0% in 2022 and 2023 (see Figure 1.5). Core inflation (minus food and energy) is expected to be 1.8% this year and 1.9%

next year. The forecast calls for core inflation to reach 2.1% in 2023 through 2025.

Figure 1.5: Price Index for Personal Consumption Expenditures

Inflation will remain near 2%



Source: BEA, ERFC February 2020 forecast; historical data through 2019

Consumer spending growth is expected to slow

Real consumer spending growth is likely to slow. We expect real consumer spending to grow 2.3% this year, down from 2.6% in 2019. The November forecast called for 2.2% growth this year. Consumer optimism remains high but has been trending downward. Job and income growth are expected to slow throughout the forecast, putting downward pressure on consumption growth. Real disposable personal income is anticipated to grow 2.1% this year, down from 3.0% growth in 2019. Growth in real disposable income is expected to average 2.0% for the remainder of the forecast. The forecast calls for real consumption growth to average 2.1% from 2021 through 2025.

The employment forecast is slightly higher

The employment forecast is slightly higher than the November forecast. We still expect slowing job gains. Growth in payrolls is anticipated to be 1.2% this year, up from 1.1% in the previous forecast. We then expect growth of 0.7% in 2021 and 2022, up from 0.6% and 0.5% expected in November. Employment growth is forecasted to be 0.3%, 0.2%, and 0.3% in 2023, 2024, and 2025. By 2025, the forecast expects the U.S. economy to average just 38,000 net new jobs per month. Due to the steady job growth to date, we expect the unemployment rate to decline to 3.5% this year from 3.7% in 2019. We expect the unemployment rate to increase slowly to 4.2% by 2025.

Business investment is expected to strengthen gradually

Real nonresidential fixed investment is expected to grow 1.1% this year after growing 2.1% in 2019. The softening of oil prices has led to a downshift in investment by energy companies. The capital-intensive manufacturing sector has been declining. Office vacancy is rising, limiting the demand for new office space. New

construction of office spaces declined to 12.5 million square feet in the fourth quarter from 14.7 million square feet the year before. We expect real nonresidential construction to decline 5.0% this year. The forecast then calls for a gradual ramp up to 3.9% growth in 2024 before moderating to 3.3% in 2025. Real equipment investment is expected to grow 7.2% this year. We expect growth to remain strong throughout the forecast as businesses expand and improve productivity. The forecast calls for growth to average 4.4% from 2021 through 2025. We expect real nonresidential fixed investment growth to slow to 1.1% in 2020, rebounding to 4.8% in 2021, then averaging 4.1% for the remainder of the forecast.

Growth in construction will be weak

The housing market recovery is expected to slow after this year. Construction activity has been stronger than anticipated in recent months. The forecast call for housing starts to increase 4.7% this year. We expect single-family housing starts to grow 5.9% and the multi-family segment to grow 2.1% this year. We expect growth to be uneven throughout the forecast, ranging from a decline of 4.9% in 2021 to 3.2% growth in 2023. In 2025, the forecast calls for 1.3 million new housing starts, just under the 1.4 million expected in 2020.

Economic growth of U.S. trading partners is expected to be weaker

Economic growth of major U.S. trading partners is expected to be weaker than in the November forecast. We expect U.S. major trading partner growth of 1.7% this year followed by 2.0% per year in 2021 and 2022 and 2.1% in 2023. The November forecast called for the same growth in 2020 and 2021, but growth of 2.2% and 2.4% in 2022 and 2023. The slowdown in foreign growth does not reflect any potential impacts of the coronavirus. Real U.S. exports are forecasted to increase 2.1% this year. Exports of aircraft are expected to be flat this year before the anticipated return of the Boeing 737 MAX in the third quarter. We expect real export growth of 4.2% in 2021 and for growth to then average 3.4% for the remainder of the forecast.

The federal budget deficit will increase this year

The federal budget deficit is expected to increase to more than \$1 trillion this federal fiscal year. Much of the increase in the deficit over the past two years is due to the passage of the Tax Cuts and Jobs Act (TCJA), which lowered federal tax receipts. We expect the federal budget deficit to reach \$1,149 billion in federal FY 2020. We expect the deficit to reach a high point of \$1,241 billion in federal FY 2022. The deficit is expected to remain over \$1 trillion through federal FY 2025. The forecast expects federal tax receipts to total \$3,491 billion this federal fiscal year, up 0.8% from the prior federal fiscal year. The forecast expects growth in tax receipts to average 4.8% each federal fiscal year from 2021 through 2025, reaching \$4,404 billion.

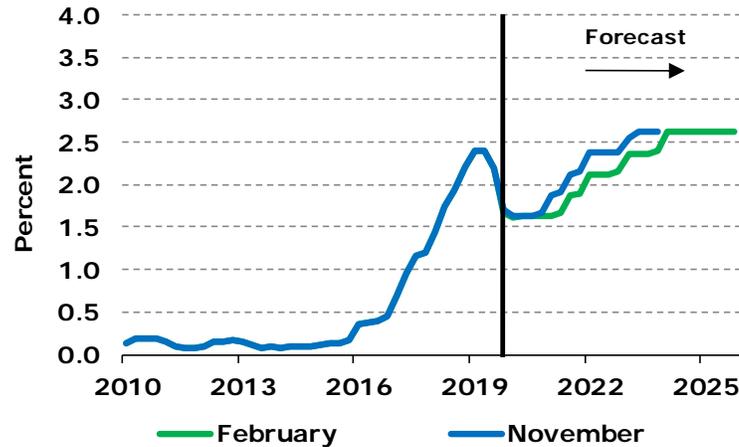
The Fed is lowering rates

The Federal Reserve made no change to the federal funds rate at the policy meeting in January. We do not expect any further rate cuts in the current easing cycle. The Federal Reserves description of economic conditions remains upbeat and it continued to note

that inflation was below target. Starting in mid-2021, the forecast calls for the Federal Reserve to increase the federal funds rate gradually (see Figure 1.6). The timing of the rate increases is slightly slower than anticipated in the previous forecast.

Figure 1.6: Federal Funds Rate

The increase in the Fed Funds rate will be slower



Source: U.S. Treasury, February 2020 ERFC forecast; historical data through 2019

Table 1.1 provides a fiscal year summary of the U.S. economic indicators. For calendar year tables, see the appendix.

Risks to the Forecast

The level of uncertainty in the baseline forecast remains elevated, and downside risks outweigh upside risks.

Downside Risks

- The coronavirus develops into a widespread pandemic
- Unexpected political fallout affects economic growth
- Increasing geopolitical tensions negatively affect consumer confidence
- An unexpected shift in monetary policy
- A breakdown in trade relations
- Unexpected fallout from Brexit
- Chinese economy experiences a “hard landing” (annual growth under 5%); growth is weaker in emerging market economies
- Weak employment growth continues
- Real wage growth stagnates, leading to slower consumer spending
- Slower household formation
- U.S. dollar appreciates against other currencies, limiting exports

- Weak global growth persists, further affecting exports

Upside Risks

- An infrastructure package passes
- Increased business confidence leads to more hiring
- Increased consumer confidence gives a boost to consumer spending
- The housing sector improves faster than anticipated
- Oil prices decline further as OPEC fails to impact prices
- Labor productivity growth returns to the higher rates seen in 1995-2005
- Employment growth expands faster than in the baseline
- China successfully transitions to a more consumption based economy
- European and emerging market economies grow faster than expected
- The U.S. dollar declines, making U.S. exports cheaper abroad
- Wage growth picks up faster than expected

Table 1.1
U.S. Economic Forecast Summary
 Forecast 2020 to 2023

Fiscal Years

	2018	2019	2020	2021	2022	2023	2024	2025
Real National Income Accounts (Billions of Chained 2012 Dollars)								
Real Gross Domestic Product	18,380.6	18,866.4	19,255.4	19,621.1	20,000.0	20,388.0	20,797.9	21,212.3
% Ch	2.8	2.6	2.1	1.9	1.9	1.9	2.0	2.0
Real Consumption	12,752.0	13,109.9	13,448.6	13,726.6	14,005.8	14,299.4	14,610.5	14,913.7
% Ch	2.8	2.8	2.6	2.1	2.0	2.1	2.2	2.1
Real Nonresidential Fixed Investment	2,611.6	2,741.0	2,741.3	2,848.9	2,969.5	3,095.3	3,233.9	3,363.6
% Ch	5.5	5.0	0.0	3.9	4.2	4.2	4.5	4.0
Real Residential Fixed Investment	611.2	592.9	603.9	604.7	598.2	601.6	608.5	617.4
% Ch	1.7	-3.0	1.9	0.1	-1.1	0.6	1.2	1.5
Real Personal Income	16,214.2	16,740.7	17,167.6	17,517.2	17,860.5	18,238.9	18,680.4	19,090.0
% Ch	3.4	3.2	2.6	2.0	2.0	2.1	2.4	2.2
Real Per Capita Income (\$/Person)	49,633	50,902	51,830	52,514	53,172	53,927	54,861	55,694
% Ch	2.8	2.6	1.8	1.3	1.3	1.4	1.7	1.5
Price and Wage Indexes								
PCE Price Index (2012=100)	107.0	108.9	110.5	112.3	114.4	116.6	119.1	121.6
% Ch	1.9	1.7	1.5	1.6	1.9	2.0	2.1	2.1
U.S. Consumer Price Index (1982-84=1.0)	2.481	2.533	2.580	2.619	2.673	2.731	2.795	2.861
% Ch	2.2	2.1	1.9	1.5	2.0	2.2	2.4	2.3
Employment Cost Index (Dec. 2005=1.0)	1.314	1.354	1.395	1.440	1.489	1.545	1.605	1.671
% Ch	2.8	3.0	3.1	3.2	3.4	3.7	3.9	4.2
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	20,051.0	21,021.7	21,810.2	22,645.6	23,587.9	24,609.5	25,717.3	26,852.7
% Ch	5.1	4.8	3.8	3.8	4.2	4.3	4.5	4.4
Personal Income	17,356.7	18,230.7	18,972.7	19,665.2	20,430.9	21,274.3	22,249.2	23,214.3
% Ch	5.4	5.0	4.1	3.6	3.9	4.1	4.6	4.3
Employment (Millions)								
U.S. Civilian Labor Force	161.2	162.7	164.6	165.9	167.2	168.4	169.4	170.2
Total U.S. Employment	154.5	156.5	158.8	160.2	161.2	162.1	162.7	163.2
Unemployment Rate (%)	4.11	3.77	3.53	3.47	3.59	3.75	3.97	4.14
Nonfarm Payroll Employment	147.77	150.31	152.43	153.68	154.83	155.52	155.83	156.20
% Ch	1.5	1.7	1.4	0.8	0.7	0.4	0.2	0.2
Manufacturing	12.55	12.79	12.82	12.63	12.53	12.56	12.56	12.46
% Ch	1.5	1.9	0.2	-1.5	-0.8	0.2	0.0	-0.8
Durable Manufacturing	7.83	8.03	8.03	7.91	7.86	7.92	7.97	7.94
% Ch	1.7	2.5	0.0	-1.4	-0.6	0.7	0.6	-0.4
Nondurable Manufacturing	4.72	4.77	4.80	4.72	4.67	4.64	4.59	4.53
% Ch	1.1	0.9	0.6	-1.5	-1.2	-0.6	-1.0	-1.4
Construction	7.12	7.41	7.56	7.63	7.72	7.83	7.97	8.13
% Ch	4.0	4.1	1.9	1.0	1.1	1.4	1.8	2.0
Service-Providing	127.39	129.36	131.32	132.69	133.84	134.39	134.54	134.84
% Ch	1.4	1.5	1.5	1.0	0.9	0.4	0.1	0.2
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	58.6	60.8	54.2	51.1	50.9	51.2	51.6	52.1
Personal Saving/Disposable Income (%)	7.3	7.9	7.8	7.8	7.7	7.5	7.3	7.1
Auto Sales (Millions)	5.7	5.1	4.5	4.2	4.1	4.1	4.1	4.1
% Ch	-11.6	-11.2	-11.6	-5.6	-2.7	-1.2	0.1	0.4
Housing Starts (Millions)	1.254	1.222	1.365	1.328	1.289	1.341	1.360	1.350
% Ch	4.4	-2.6	11.7	-2.7	-2.9	4.0	1.4	-0.7
Federal Budget Surplus (Billions)	-876.2	-1,090.0	-1,208.1	-1,202.9	-1,246.5	-1,259.1	-1,239.4	-1,260.7
Net Exports (Billions)	-586.0	-663.0	-627.7	-627.8	-601.0	-565.0	-525.0	-520.2
3-Month Treasury Bill Rate (%)	1.41	2.26	1.66	1.52	1.86	2.06	2.25	2.35
10-Year Treasury Note Yield (%)	2.57	2.74	1.75	2.24	2.84	2.98	2.96	2.96
Bond Index of 20 G.O. Munis. (%)	3.67	4.01	3.35	3.78	4.25	4.38	4.39	4.40
30-Year Fixed Mortgage Rate (%)	4.16	4.43	3.68	4.00	4.37	4.49	4.59	4.66

Table 1.2
Forecast Analysis
 Comparison of Forecasts for 2019-21

U.S.	Average Annual Rate of Growth (Percent) 2019:2-2021:2		Average Rate (Percent) 2019:3 to 2021:2	
	Real GDP	PCE Price Index	3 Month T-Bill Rate	Mortgage Rate
2016				
February	2.2	1.7	2.79	5.60
June	2.2	1.9	2.81	5.67
September	2.2	1.9	2.79	5.77
November	2.1	2.0	2.55	5.57
2017				
March	2.0	1.9	2.80	5.96
June	2.0	2.0	2.81	5.97
September	2.0	1.9	2.83	6.00
November	2.1	2.0	2.56	5.08
2018				
February	2.0	2.0	3.00	5.26
June	1.9	2.1	3.09	5.28
September	1.9	2.0	3.09	5.11
November	1.8	2.0	3.10	5.17
2019				
March	1.8	2.1	2.66	4.77
June	1.8	1.8	2.23	4.26
September	1.7	2.1	1.70	3.86
November	1.8	1.9	1.64	3.97
2020				
February	1.9	1.6	1.59	3.84

Table 1.3
Forecast Analysis
 Comparison of Forecasts for 2021-23

U.S.	Average Annual Rate of Growth (Percent) 2021:2-2023:2		Average Rate (Percent) 2021:3 to 2023:2	
	Real GDP	PCE Price Index	3 Month T-Bill Rate	Mortgage Rate
2018				
February	2.1	2.0	3.15	5.28
June	2.1	2.1	3.17	5.30
September	2.1	1.9	3.14	5.13
November	2.0	2.0	3.16	5.20
2019				
March	1.9	2.0	2.66	4.92
June	1.9	1.9	2.20	4.72
September	1.9	1.9	2.16	4.65
November	1.9	2.0	2.16	4.53
2020				
February	1.9	2.0	1.96	4.43

Table 1.4
Forecast Comparison
 Forecast 2020 to 2023

Fiscal Years

	2017	2018	2019	2020	2021	2022	2023
U.S.							
Real GDP							
February	17876.4	18380.6	18866.4	19255.4	19621.1	20000.0	20388.0
% Ch	2.0	2.8	2.6	2.1	1.9	1.9	1.9
November	17876.4	18380.6	18866.4	19232.6	19568.3	19927.9	20320.2
% Ch	2.0	2.8	2.6	1.9	1.7	1.8	2.0
PCE Price Index							
February	105.0	107.0	108.9	110.5	112.3	114.4	116.6
% Ch	1.5	1.9	1.7	1.5	1.6	1.9	2.0
November	105.0	107.0	108.9	110.8	113.0	115.2	117.4
% Ch	1.5	1.9	1.7	1.8	1.9	2.0	2.0
Unemployment Rate							
February	4.66	4.11	3.77	3.53	3.47	3.59	3.75
November	4.66	4.11	3.77	3.53	3.62	3.85	4.03
Mortgage Rate							
February	3.85	4.16	4.43	3.68	4.00	4.37	4.49
November	3.85	4.16	4.43	3.76	4.17	4.49	4.57
3 Month T-Bill Rate							
February	0.55	1.41	2.26	1.66	1.52	1.86	2.06
November	0.55	1.41	2.26	1.66	1.62	2.07	2.26

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Chapter 2: Washington Economy – Current Conditions and Forecast

- **The Washington economy is expanding at a rapid but slowing pace.**
- **Washington job growth remains strong and the unemployment rate is at an all-time low.**
- **Washington initial claims for unemployment insurance declined to an all-time low.**
- **Seattle-area home price appreciation and Washington housing construction have strengthened.**
- **Washington exports declined sharply over the year.**
- **Washington manufacturing activity continues to expand.**
- **Seattle consumer price inflation remains slightly above the national average.**
- **Compared to November, the Washington economic forecast features higher personal income and higher housing construction.**
- **As in November, we expect the Washington economy to continue to outperform the U.S. economy though by a smaller margin than in the past few years.**

Current Conditions

The Washington economy is expanding at a rapid but slowing pace

The Washington economy is expanding at a rapid but slowing pace. Washington job growth remains strong and the unemployment rate is at an all-time low. Washington initial claims for unemployment insurance declined to an all-time low. Seattle-area home price appreciation and Washington housing construction have strengthened. Washington exports declined sharply over the year. Washington manufacturing activity continues to expand. Seattle consumer price inflation remains slightly above the national average.

Job growth has been stronger than expected

We have three months of new Washington employment data since the November forecast was released. Total nonfarm payroll employment rose 26,800 (seasonally adjusted) in November, December, and January which was 14,800 more than expected in

the November forecast. Private services-providing sectors added 18,000 jobs in the three-month period. The manufacturing sector added 1,700 jobs of which 600 were aerospace jobs. Construction employment increased by 1,400 jobs and government employment rose by 5,800 jobs.

New QCEW data left estimated employment unchanged

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 did not significantly change the estimated level of total employment in October 2019. January employment is 15,900 (0.5%) higher than expected in the November forecast because of stronger growth from October to January.

The unemployment rate is at an all-time low

Washington's unemployment rate declined to 4.3% in December from 4.4% in November. The December unemployment rate was a new all-time low in the series that dates back to 1974.

Washington UI claims declined to an all-time low

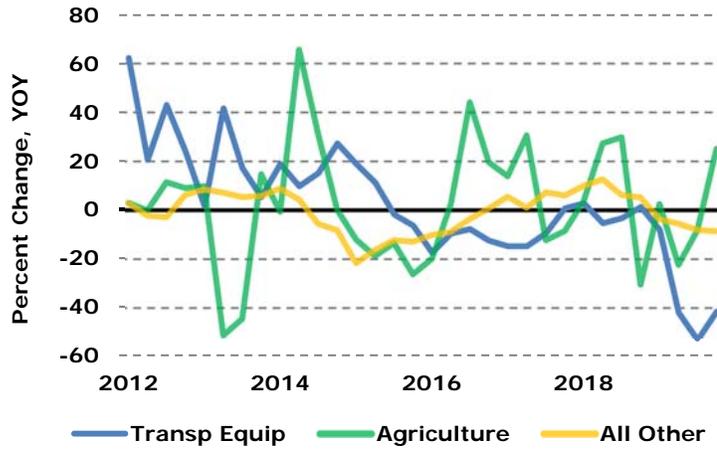
Washington initial claims for unemployment insurance declined to an all-time low. The four-week moving average of seasonally adjusted claims declined to 5,500 in the week ending November 23, 2019 from 5,800 in the previous week. The latest level of claims is the lowest in the series that dates back to 1987. Claims have fallen 67% since the peak in early 2009.

Washington exports declined sharply over the year

Washington exports declined sharply over the year for a third consecutive quarter. Year-over-year exports decreased 23.8% in the fourth quarter of 2019 following a 27.6% decline in the second quarter and a 33.4% decline in the third quarter. The large declines were mostly because of transportation equipment exports (mostly Boeing planes) which fell 41.9%, 53.1%, and 41.4% in the last three quarters. Boeing suspended deliveries of the 737 Max in March 2019, which clearly affected second, third, and fourth quarter exports (see Figure 2.1). Fourth quarter exports of agricultural products increased 25.0% over the year but exports of all other commodities (mostly manufacturing) declined 8.7% over the year.

Figure 2.1: Washington Exports

The large declines were mostly because of transportation equipment exports



Source: Wiser Trade; data through 2019Q4

Washington housing construction increased in the fourth quarter to its highest level since early 2007

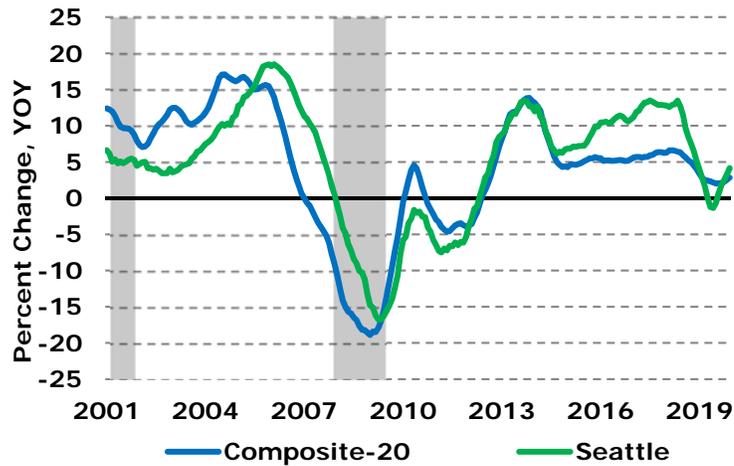
Washington housing permits increased from 48,000 units (SAAR) in the third quarter of 2019 to 54,300 units in the fourth quarter. This was the highest quarterly average since the first quarter of 2007. Fourth quarter permits consisted of 26,600 single-family units and 27,600 multi-family units. The November forecast assumed an average rate of 43,200 (SAAR) units for the fourth quarter as a whole consisting of 22,500 single-family units and 20,700 multi-family units. Washington housing construction got off to a very strong start in the first quarter of 2020, though mostly because of multi-family permits. In January, 54,100 units (SAAR) were permitted consisting of 25,400 single-family units and 28,700 multi-family units.

Seattle area home prices rose over the year

Seattle-area home prices rose over the year for a fifth consecutive month in December following year-over-year declines in the previous four months. According to the S&P/Case-Shiller Home Price Indices, seasonally adjusted Seattle home prices increased 0.8% in December, the eighth consecutive monthly increase. Because of the strong growth in the last several months, December Seattle home prices were up 4.1% over the year. In comparison, the composite-20 index was up 2.8% over the year. Seattle home prices are now up 96% since the December 2011 trough and exceed the May 2007 peak by 36%.

Figure 2.2: Home Price Indices

*December
Seattle home
prices were up
4.1% over the
year*



Source: S&P/Case-Shiller Home Price Indices; data through December 2019

*Manufac-
turing
continues to
expand*

The Institute of Supply Management - Western Washington Index (ISM-WW) increased slightly in January and remained in slightly positive territory. The index, which measures conditions in the manufacturing sector, increased from 52.5 in December to 53.0 in January (index values above 50 indicate growth while values below 50 indicate contraction). The orders and employment components indicated expansion in January while the inventory component indicated contraction. The production and deliveries components were neutral at 50 in January.

*Car and
truck sales
increased in
January*

Washington car and truck sales increased slightly in January following declines in November and December. Seasonally adjusted new vehicle registrations increased 2.1% in January following a 1.0% decline in November and a 1.5% decline in December. January sales were down 5.7% over the year and 16.9% since the November 2017 post-recession peak. Monthly sales are erratic but have been trending down since mid-2016.

*Washington
personal
income grew
4.2% (SAAR)
in the third
quarter*

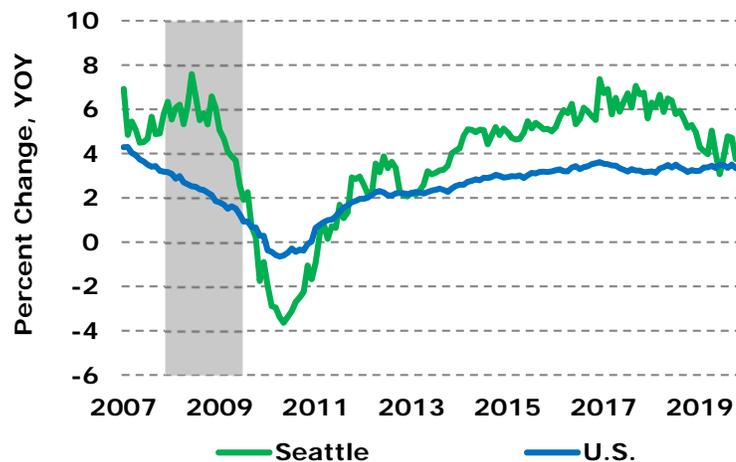
In December, the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) released state personal income estimates for the third quarter of 2019. According to these estimates, Washington personal income rose from \$493.1 billion (SAAR) in the second quarter to \$498.2 billion in the third quarter. The reported 4.2% growth rate (SAAR) in Washington personal income was the 16th largest among the states and District of Columbia and exceeded the 3.8% growth rate for the U.S. as a whole. Washington personal income growth was boosted by strong information earnings growth in the third quarter but was restrained by below average farm earnings growth.

Seattle area consumer price inflation slightly trailed the national average in December

Seattle-area consumer price inflation slightly trailed the national average in December despite slightly above average shelter cost inflation. From December 2018 to December 2019, the Seattle CPI rose 2.2% compared to a 2.3% increase in the U.S. City Average. Core prices, which exclude food and energy, increased 2.4% over the year in Seattle compared to 2.2% for the U.S. City Average. Over-the-year shelter-cost inflation in Seattle was 3.6% compared to the national rate of 3.2%. Seattle inflation excluding shelter trailed the national average at 1.3% compared to 1.8%. While Seattle shelter cost inflation remains above the national average, it is converging toward the national average (see Figure 2.3).

Figure 2.3: Shelter Cost Inflation

While Seattle shelter cost inflation remains above the national average, it is converging toward the national average



Source: Bureau of Labor Statistics; data through December 2019

Washington State Forecast

Compared to November, the Washington economic forecast features higher personal income and higher housing construction

Compared to November, the Washington economic forecast features higher personal income and higher housing construction. We expect 1.8% Washington employment growth this year, up slightly from the 1.6% rate in the November forecast. As in November, we expect growth to continue to decelerate. We expect employment growth to average 1.0% per year in 2021 through 2023, which is slightly faster than the 0.9% rate expected in November. Our forecast for nominal personal income growth this year is 4.7%, up from 3.9% in the November forecast. Our new forecast for nominal personal income growth in 2021 through 2023 averages 4.4% per year, which is down from the 4.7% rate expected in the November forecast. While personal income growth is lower than in November, the level is higher due to an upward revision to history. We expect 45,500 housing units authorized by building permits this year, up from 43,600 units in

the November forecast. We expect permits to average 43,500 in 2021 through 2023, up from 42,100 in the November forecast. We expect the Seattle CPI to rise 1.6% this year compared to 1.9% in the November forecast. As in November, we expect Seattle inflation to average 2.1% per year in 2021 through 2023.

Washington Payroll Employment

Washington employment growth is slightly faster than in the November forecast

Washington employment growth is slightly faster than in the November forecast. We expect 1.8% Washington employment growth this year, up slightly from the 1.6% rate in the November forecast. As in November, we expect growth to continue to decelerate. We expect employment growth to average 1.0% per year in 2021 through 2023, which is slightly faster than the 0.9% rate expected in November. On an annual basis, we expect 1.2% employment growth in 2021, 1.2% in 2022, 0.7% in 2023, 0.6% in 2024, and 0.6% in 2025.

The 737 Max shutdown is not expected to reduce aerospace employment

Boeing suspended production of the 737 MAX jet in January. We assume the suspension continues through the first half of 2020. The suspension is assumed to reduce first-quarter U.S. GDP growth by about 0.5 percentage points and second quarter growth by about 0.3 percentage points (SAAR). The eventual resumption of production is assumed to add a similar amount to growth in the third and fourth quarters. Boeing has indicated that affected employees will be reassigned and that there will be no layoffs or furloughs due to the shutdown. We still believe employment will be flat but the level will be 300 lower than in the November forecast based on actual data through January 2020. On an annual average basis, we expect aerospace employment to increase 0.5% in 2020, and then remain unchanged through the rest of the forecast.

The software employment forecast is lower than in November

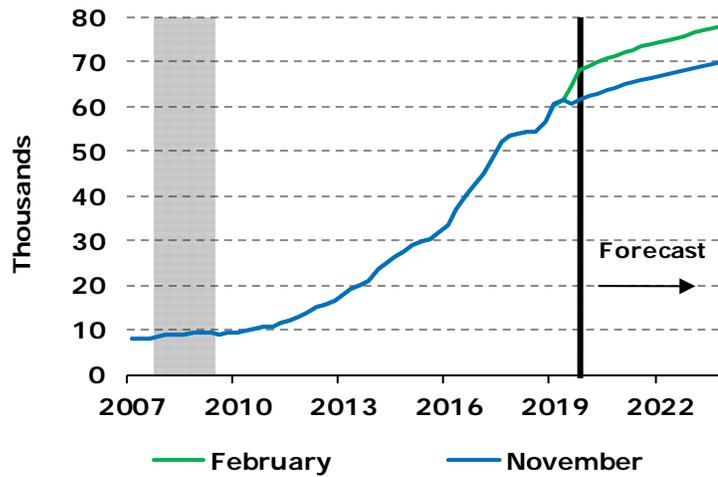
We have reduced the software employment growth forecast for 2020 from 4.0% to 3.0% based on a downward revision to historical estimates for late 2019. Growth during the remainder of the forecast is similar to the November assumption. On an annual average basis, we expect growth rates of 1.1% in 2021, 1.2% in 2022, 1.5% in 2023, 1.6% in 2024, and 1.5% in 2025.

Electronic shopping and mail order employment is higher than assumed in November

In Washington, the electronic shopping and mail order sector consists almost entirely of electronic shopping employment. We have increased our forecast for employment growth in 2020 based mainly on upward revisions to the historical data (see Figure 2.4). The forecast for growth during the remainder of the forecast is similar to the November forecast. On an annual basis, electronic shopping and mail order employment will grow 10.6% in 2020, 3.8% in 2021, 3.0% in 2022, 2.5% in 2023, 2.3% in 2024, and 2.2% in 2025.

Figure 2.4: Washington Electronic Shopping Employment

Historical data were revised higher



Source: Employment Security Department, ERFC; historical data through Q4 2019

We have raised our forecast for construction employment

We have raised our forecast for construction employment based on monthly data through January. We now believe the first quarter of 2020 will prove to be the cyclical peak in construction rather than the fourth quarter of 2019. This would put employment in the first quarter 12,500 (6.0%) higher than the pre-recession peak. As in November, we expect construction employment to trend down through 2023. On a calendar year basis, we expect employment to increase 1.2% this year before declining 1.7% in 2021, 1.0% in 2022, 1.0% in 2023, and 0.1% in 2024. We expect a 0.1% increase in 2015.

Washington Personal Income

Wages and salaries are higher than previously thought

In December, the Bureau of Economic Analysis released estimates for state personal income through the third quarter of 2019. 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 2019 is \$4.9 billion (1.0%) higher than in the November forecast due to higher than expected wages and salaries. Nonwage income was close to the forecast.

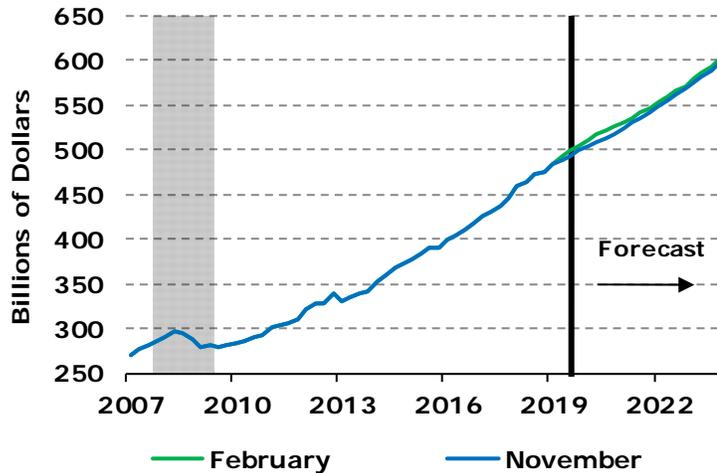
Washington personal income growth is slower

Our forecast for nominal personal income growth this year is 4.7%, up from 3.9% in the November forecast. Our new forecast for nominal personal income growth in 2021 through 2023 averages 4.4% per year, which is down from the 4.7% rate expected in the November forecast. While personal income growth is lower than in November, the level is higher due to an upward revision to history (see figure 2.5). On an annual basis,

we expect personal income to grow 4.0% in 2021, 4.4% in 2022, 5.0% in 2023, 5.0% in 2024, and 4.9% in 2025.

Figure 2.5: Washington Personal Income

The level of Washington personal income is higher than in the November forecast



Source: Bureau of Economic Analysis, ERFC; historical data through Q3 2019

Washington Building Permits

Washington housing construction has peaked

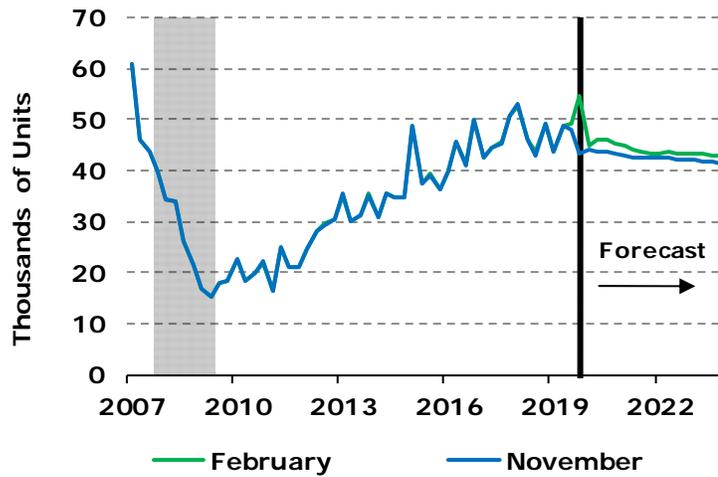
We believe Washington housing construction has peaked. The number of housing units authorized by building permits rose from just 17,000 in 2009 to 48,900 in 2019. We expect single-family construction to remain fairly steady but multi-family construction to trend down as population growth slows.

We expect 45,500 housing units authorized by building permits this year

The housing construction forecast is slightly higher than in the November forecast (see Figure 2.6). We expect 45,500 housing units authorized by building permits this year, up from 43,600 units in the November forecast. We expect permits to average 43,500 in 2021 through 2023, up from 42,100 in the November forecast. On a calendar year basis, we expect 44,000 units in 2021, 43,400 units in 2022, 43,000 units in 2023, 42,300 units in 2024, and 41,700 units in 2025.

Figure 2.6: Washington Housing Permits

The housing construction forecast is slightly higher than in the November forecast



Source: Census Bureau, ERFC; historical data through Q4 2019

Consumer Price Index

Seattle shelter cost inflation is cooling

Much higher shelter cost inflation has been the main reason Seattle inflation has exceeded the national average in recent years. Recent data indicate that Seattle shelter cost inflation is cooling while nationally it remains steady. As a result, we expect Seattle core inflation to move closer to the national average. Our forecast calls for core Seattle inflation to average 2.0% in 2020, 2.1% in 2021, 2.2% in 2022, 2.3% in 2023, 2.4% in 2024, and 2.3% in 2025.

We expect Seattle inflation to fall from 2.5% last year to 1.6% in 2020

Rising energy costs added to headline inflation in 2017 and 2018 however lower energy costs reduced headline inflation in 2019. Further declines in energy costs are expected to hold down headline inflation, particularly in 2020 and 2021. We expect the Seattle CPI to rise 1.6% this year compared to 1.9% in the November forecast. As in November, we expect Seattle inflation to average 2.1% per year in 2021 through 2023. On a calendar year basis, we expect inflation rates of 1.8% in 2021, 2.1% in 2022, 2.3% in 2023, 2.4% in 2024, and 2.3% in 2025.

Table 2.1 provides a fiscal year summary of the state economic indicators. For calendar year tables, see the appendix.

Alternative Scenarios

Alternative forecasts are required by law

In accordance with state law, the Washington State Economic and Revenue Forecast Council adopted a forecast based on optimistic assumptions and a forecast based on pessimistic assumptions in addition to the baseline forecast.

Optimistic

The optimistic scenario assumes stronger productivity growth and less inflation.

The optimistic forecast assumes productivity rises at an annual average rate of 2.8%, rebounding from a lackluster post-recession pace that averaged just 0.9% from 2011 through 2019. Wages grow more quickly as a result. With more real income to spend and brighter job prospects in a low-inflation environment, consumers pick up their spending. Thanks to improved finances and higher employment, household formation accelerates. This spurs a healthy rise in housing starts, which average 1.43 million units per year from 2020 through 2022. The rest of the world also experiences stronger economic growth due to faster productivity gains, although to a lesser extent than enjoyed in the U.S.

The optimistic scenario also assumes a stronger Washington economy

In addition to reflecting the impact of the stronger U.S. forecast on the state economy, the optimistic Washington forecast assumes that aerospace employment continues to grow through 2025 rather than level off as in the baseline. Software employment growth is also much stronger than in the baseline forecast. In the optimistic scenario, the stronger regional economy drives Seattle consumer price inflation above the baseline. Washington average wage growth is also higher in the optimistic scenario than in the baseline. Construction employment continues to rise throughout the forecast rather than peaking in the first quarter of 2020 as in the baseline. By the end of 2025, Washington nonfarm payroll employment is higher by 121,700 jobs (3.3%) than in the baseline forecast and Washington personal income is \$64.0 billion (9.7%) higher.

Pessimistic

The pessimistic scenario assumes a loss in confidence and a three-quarter recession

In the pessimistic scenario, a broad loss in confidence and growing aversion to risk lead to declines in a wide range of investment and consumer spending categories to end the expansion. Recent increases in real estate prices, along with the projected upturn in mortgage rates raise the cost of homeownership such that housing demand and home construction soften, followed by a downturn in nonresidential construction in the second quarter of 2021. A growing sense of unease marked by declines in consumer confidence results in sharp declines in asset values and business fixed investment. Negative wealth effects and employment declines lead to an easing in the growth in consumer spending. Foreign growth also slows. The result is a three-quarter recession starting in the second quarter of 2021 during which real GDP declines 1.8%. The unemployment rate climbs through 2020 and 2021, peaking at 5.8% in the third quarter of 2022.

Construction employment declines much more sharply than in the baseline. The relatively weak local economy also puts downward pressure on Washington wages and the Seattle CPI. By the end of 2025, Washington nonfarm payroll employment is 217,900 (5.9%) lower than in the baseline forecast and Washington personal income is \$72.8 billion (11.0%) lower.

Table 2.2 compares the optimistic and pessimistic forecasts with the baseline forecast.

Governor’s Council of Economic Advisors (GCEA)

In the GCEA scenario, the U.S. and state forecasts were adjusted to match the average view of the Council members.

The GCEA national forecast predicts slightly weaker real growth and lower inflation

The GCEA national forecast predicts slightly weaker real growth and lower inflation than does the baseline forecast. The Governor’s Council members forecast for real GDP growth averages 1.9% per year over the six-year interval through 2023, which is slightly lower than the 2.0% average rate in the baseline forecast. The GCEA forecast of 2.0% average real consumer spending growth is also slightly lower than the 2.1% rate in the baseline forecast. The GCEA members PCE inflation forecast averages 1.7% per year compared to 1.9% in the baseline forecast. The Council members’ mortgage rate forecast averages 4.3% over the forecast horizon, which is slightly lower than the 4.4% average mortgage rate in the baseline forecast but their oil price forecast averages \$60 per barrel compared to \$56 in the baseline forecast.

The Governor’s Council of Economic Advisors’ Washington forecast is close to the baseline forecast

The Governor’s Council of Economic Advisors’ Washington forecast is close to the baseline forecast. The GCEA scenario for Washington real personal income growth averages 2.6% per year in 2020 through 2025, which is slightly lower than the 2.7% average rate in the baseline forecast. The difference in nominal personal income growth is larger, 4.4% compared to 4.7%, due to the lower inflation in the GCEA forecast. The Council members’ forecast for total employment growth over the six-year period averages 1.1% per year compared to 1.0% in the baseline forecast. The GCEA forecasts for manufacturing employment growth and construction employment growth are both slightly higher than the baseline forecasts. The GCEA housing permit forecast is slightly lower, averaging 43,000 units per year compared to 43,300 in the baseline forecast. At the end of 2025, the GCEA forecast for Washington nonfarm payroll employment is 14,300 (0.4%) higher than in the baseline forecast but Washington personal income is \$9.7 billion (1.5%) lower.

Table 2.3 compares the GCEA forecast with the baseline forecast.

Table 2.1
Washington Economic Forecast Summary
 Forecast 2020 to 2023

Fiscal Years

	2018	2019	2020	2021	2022	2023	2024	2025
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	421.707	441.534	458.777	470.408	480.830	493.180	508.034	522.070
% Ch	5.3	4.7	3.9	2.5	2.2	2.6	3.0	2.8
Real Wage and Salary Disb.	213.178	225.054	236.733	243.282	248.211	254.347	261.807	267.304
% Ch	6.6	5.6	5.2	2.8	2.0	2.5	2.9	2.1
Real Nonwage Income	208.529	216.479	222.043	227.126	232.619	238.834	246.227	254.766
% Ch	3.9	3.8	2.6	2.3	2.4	2.7	3.1	3.5
Real Per Capita Income (\$/Person)	56,367	58,159	59,563	60,226	60,740	61,519	62,633	63,666
% Ch	3.6	3.2	2.4	1.1	0.9	1.3	1.8	1.6
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.070	1.089	1.105	1.123	1.144	1.166	1.191	1.216
% Ch	1.9	1.7	1.5	1.6	1.9	2.0	2.1	2.1
Seattle Cons. Price Index (1982-84=1.0)	2.671	2.745	2.804	2.846	2.904	2.967	3.038	3.109
% Ch	3.1	2.8	2.2	1.5	2.0	2.2	2.4	2.3
Average Nonfarm Annual Wage	65,743	69,220	72,474	74,630	76,658	79,373	82,907	85,925
% Ch	6.3	5.3	4.7	3.0	2.7	3.5	4.5	3.6
Avg. Hourly Earnings-Mfg. (\$/Hour)	27.93	28.91	29.68	30.58	31.58	32.72	33.93	35.30
% Ch	4.2	3.5	2.7	3.0	3.3	3.6	3.7	4.0
Current Dollar Income (Billions of Dollars)								
Personal Income	451.422	480.819	507.009	528.091	550.030	575.263	605.097	634.864
% Ch	7.3	6.5	5.4	4.2	4.2	4.6	5.2	4.9
Disposable Personal Income	397.381	424.633	447.534	466.016	485.489	506.655	530.882	555.329
% Ch	7.4	6.9	5.4	4.1	4.2	4.4	4.8	4.6
Per Capita Income (\$/Person)	60,337	63,332	65,824	67,610	69,480	71,756	74,597	77,419
% Ch	5.6	5.0	3.9	2.7	2.8	3.3	4.0	3.8
Employment (Thousands)								
Washington Civilian Labor Force	3,752.3	3,837.3	3,947.8	4,017.1	4,071.4	4,122.8	4,168.3	4,207.0
Total Washington Employment	3,579.5	3,664.0	3,774.7	3,844.4	3,889.6	3,931.4	3,965.7	3,995.3
Unemployment Rate (%)	4.61	4.52	4.39	4.30	4.46	4.64	4.86	5.03
Nonfarm Payroll Employment	3,364.0	3,436.1	3,505.7	3,554.5	3,597.6	3,631.0	3,654.6	3,676.4
% Ch	2.4	2.1	2.0	1.4	1.2	0.9	0.7	0.6
Manufacturing	284.0	291.6	293.8	291.6	292.2	294.5	296.4	296.5
% Ch	-1.1	2.7	0.8	-0.7	0.2	0.8	0.6	0.0
Durable Manufacturing	199.5	205.3	206.8	205.5	206.4	208.5	210.6	211.2
% Ch	-2.1	2.9	0.7	-0.6	0.4	1.0	1.0	0.3
Aerospace	82.5	86.6	88.8	88.8	88.8	88.8	88.8	88.8
% Ch	-5.9	4.9	2.6	-0.1	0.0	0.0	0.0	0.0
Nondurable Manufacturing	84.5	86.3	87.0	86.1	85.8	86.0	85.8	85.3
% Ch	1.4	2.1	0.8	-1.0	-0.4	0.2	-0.2	-0.6
Construction	206.6	216.6	221.6	219.9	216.5	214.4	213.2	213.4
% Ch	6.8	4.8	2.3	-0.8	-1.5	-1.0	-0.6	0.1
Service-Providing	2,867.1	2,921.7	2,984.6	3,037.3	3,083.4	3,116.7	3,139.7	3,161.1
% Ch	2.5	1.9	2.2	1.8	1.5	1.1	0.7	0.7
Software Publishers	63.1	67.7	71.3	72.4	73.2	74.2	75.4	76.6
% Ch	4.7	7.3	5.4	1.5	1.1	1.4	1.6	1.6
Electronic Shopping and Mail-Order	53.5	58.2	67.9	71.8	74.1	76.2	78.0	79.7
% Ch	21.7	8.7	16.8	5.6	3.3	2.7	2.4	2.2
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	48.753	46.203	48.545	45.015	43.498	43.260	42.632	42.018
% Ch	9.6	-5.2	5.1	-7.3	-3.4	-0.5	-1.5	-1.4
Single-Family	24.161	22.358	24.455	23.858	23.031	23.763	24.268	24.451
% Ch	9.5	-7.5	9.4	-2.4	-3.5	3.2	2.1	0.8
Multi-Family	24.593	23.845	24.090	21.157	20.467	19.497	18.364	17.567
% Ch	9.7	-3.0	1.0	-12.2	-3.3	-4.7	-5.8	-4.3
30-Year Fixed Mortgage Rate (%)	4.16	4.43	3.68	4.00	4.37	4.49	4.59	4.66

Table 2.2
Comparison of Alternative Forecasts

Fiscal Years

	2018	2019	2020	2021	2022	2023
U.S.						
Real GDP, Percent Change						
Optimistic	2.8	2.6	2.2	2.8	2.9	2.7
Baseline	2.8	2.6	2.1	1.9	1.9	1.9
Pessimistic	2.8	2.6	2.1	1.4	-1.0	2.0
PCE Price Index, Percent Change						
Optimistic	1.9	1.7	1.6	1.8	1.9	1.9
Baseline	1.9	1.7	1.5	1.6	1.9	2.0
Pessimistic	1.9	1.7	1.5	1.5	1.9	1.6
Mortgage Rate, Percent						
Optimistic	4.16	4.43	3.75	4.30	4.97	5.55
Baseline	4.16	4.43	3.68	4.00	4.37	4.49
Pessimistic	4.16	4.43	3.65	3.67	3.51	3.94
3 Month T-Bill Rate, Percent						
Optimistic	1.41	2.26	1.72	2.00	2.54	3.07
Baseline	1.41	2.26	1.66	1.52	1.86	2.06
Pessimistic	1.41	2.26	1.65	0.94	0.15	0.18
Washington						
Real Personal Income, Percent Change						
Optimistic	5.3	4.7	4.6	4.6	3.7	3.8
Baseline	5.3	4.7	3.9	2.5	2.2	2.6
Pessimistic	5.3	4.7	3.3	1.3	-1.9	0.7
Personal Income, Percent Change						
Optimistic	7.3	6.5	6.3	6.4	5.7	5.8
Baseline	7.3	6.5	5.4	4.2	4.2	4.6
Pessimistic	7.3	6.5	4.9	2.8	0.0	2.4
Employment, Percent Change						
Optimistic	2.4	2.1	2.1	2.1	1.7	1.2
Baseline	2.4	2.1	2.0	1.4	1.2	0.9
Pessimistic	2.4	2.1	1.9	1.0	-0.9	-0.8
Housing Permits, Thousands of Authorized Units						
Optimistic	48.8	46.2	48.8	47.8	48.2	47.0
Baseline	48.8	46.2	48.5	45.0	43.5	43.3
Pessimistic	48.8	46.2	47.9	41.0	35.4	33.5

Table 2.3
Governor's Council of Economic Advisor's Forecast

Calendar Years

	2020	2021	2022	2023	2024
<u>U.S.</u>					
Real GDP					
<i>Growth</i>					
ERFC	1.9	2.0	1.9	2.0	2.0
GCEA Average	1.8	1.9	1.8	1.9	1.9
Real Consumption					
<i>Growth</i>					
ERFC	2.3	2.1	2.0	2.2	2.1
GCEA Average	2.3	2.0	1.9	2.0	2.0
PCE Price Index					
<i>Growth</i>					
ERFC	1.5	1.8	1.9	2.0	2.1
GCEA Average	1.7	1.7	1.8	1.8	1.7
Mortgage Rate					
<i>Percent</i>					
ERFC	3.8	4.2	4.4	4.6	4.6
GCEA Average	3.9	4.1	4.2	4.4	4.5
Oil Price (Brent)					
<i>Dollars per barrel</i>					
ERFC	55.8	55.2	55.5	56.0	56.7
GCEA Average	59.6	58.5	58.8	60.2	60.8
<u>Washington State</u>					
Real Personal Income					
<i>Growth</i>					
ERFC	3.2	2.2	2.4	2.9	2.9
GCEA Average	2.8	2.5	2.4	2.5	2.7
Wage and Salary Employment					
<i>Growth</i>					
ERFC	1.8	1.2	1.2	0.7	0.6
GCEA Average	1.7	1.2	1.0	0.9	0.8
Manufacturing Employment					
<i>Growth</i>					
ERFC	-0.2	-0.6	0.7	0.8	0.3
GCEA Average	-0.1	-0.3	0.5	0.4	0.4
Construction Employment					
<i>Growth</i>					
ERFC	1.2	-1.7	-1.0	-1.0	-0.1
GCEA Average	1.1	-1.2	-0.6	-0.2	0.2
Housing Permits					
<i>Thousands of authorized units</i>					
ERFC	45.5	44.0	43.4	43.0	42.3
GCEA Average	44.6	43.4	43.2	42.7	42.4
Washington Average Annual Wage					
<i>Growth</i>					
ERFC	3.5	2.7	3.0	4.2	4.0
GCEA Average	3.4	3.1	3.0	3.1	3.3

Table 2.4
Forecast Analysis
 Comparison of Forecasts for 2019-21

Washington	Average Annual Rate of Growth (Percent) 2019:2-2021:2			Average Annual Rate (Thousands) 2019:3 to 2021:2
	Employment	Personal Income	Real Personal Income	Housing Units Authorized
2016				
February	1.1	4.7	3.0	44.3
June	1.1	5.0	3.1	44.3
September	1.1	5.1	3.0	44.3
November	1.2	5.0	3.0	41.5
2017				
March	1.1	4.9	2.9	40.7
June	1.2	5.1	3.0	42.0
September	1.2	5.3	3.3	42.0
November	1.2	5.3	3.2	42.6
2018				
February	1.4	5.2	3.1	42.8
June	1.2	5.0	2.9	43.2
September	1.2	5.0	2.9	44.0
November	1.3	4.9	2.8	43.5
2019				
March	1.3	4.8	2.7	42.1
June	1.4	4.9	3.0	41.8
September	1.5	4.7	2.6	43.3
November	1.3	4.0	2.1	43.8
February	1.5	4.3	2.7	46.8

Table 2.5
Forecast Analysis
 Comparison of Forecasts for 2021-23

Washington	Average Annual Rate of Growth (Percent) 2021:2-2023:2			Average Annual Rate (Thousands) 2021:3 to 2023:2
	Employment	Personal Income	Real Personal Income	Housing Units Authorized
2018				
February	1.0	5.0	2.9	42.4
June	0.7	5.0	2.9	41.9
September	0.8	4.8	2.9	42.0
November	1.0	4.8	2.8	41.4
2019				
March	1.0	4.7	2.7	42.5
June	1.1	4.9	2.9	42.0
September	1.0	4.9	2.9	42.3
November	0.9	4.8	2.8	42.2
2020				
February	1.0	4.6	2.6	43.4

Table 2.6
Forecast Comparison
 Forecast 2020 to 2023

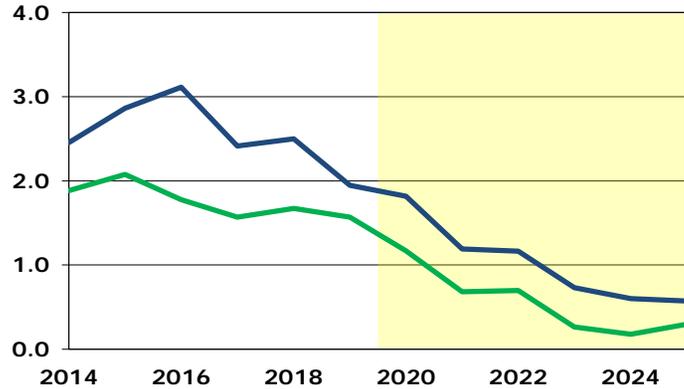
Fiscal Years

	2017	2018	2019	2020	2021	2022	2023
Washington							
Real Personal Income							
February	400.658	421.707	441.534	458.777	470.408	480.830	493.180
% Ch	4.7	5.3	4.7	3.9	2.5	2.2	2.6
November	400.658	421.707	440.745	452.070	461.133	472.947	486.378
% Ch	4.7	5.3	4.5	2.6	2.0	2.6	2.8
Personal Income							
February	420.807	451.422	480.819	507.009	528.091	550.030	575.263
% Ch	6.3	7.3	6.5	5.4	4.2	4.2	4.6
November	420.807	451.422	479.955	500.934	520.871	544.724	571.228
% Ch	6.3	7.3	6.3	4.4	4.0	4.6	4.9
Employment							
February	3283.8	3364.0	3436.1	3505.7	3554.5	3597.6	3631.0
% Ch	2.8	2.4	2.1	2.0	1.4	1.2	0.9
November	3283.8	3364.0	3436.3	3500.4	3542.6	3578.9	3609.0
% Ch	2.8	2.4	2.1	1.9	1.2	1.0	0.8
Housing Permits							
February	44.473	48.753	46.203	48.545	45.015	43.498	43.260
% Ch	10.8	9.6	-5.2	5.1	-7.3	-3.4	-0.5
November	44.515	48.801	46.048	44.703	42.977	42.402	41.945
% Ch	10.9	9.6	-5.6	-2.9	-3.9	-1.3	-1.1

Figure 2.7: Comparison of Washington and U.S. Economic Forecasts
(Percent change)

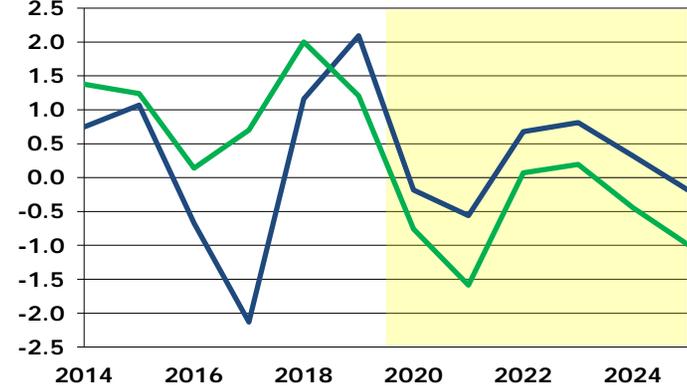
Forecast

Total Nonfarm Payroll Employment



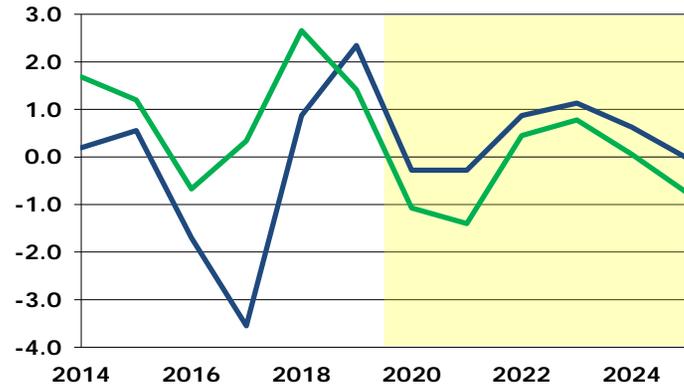
Source: WA State Employment Security Dept. 2019, ERFC 2025

Manufacturing Employment



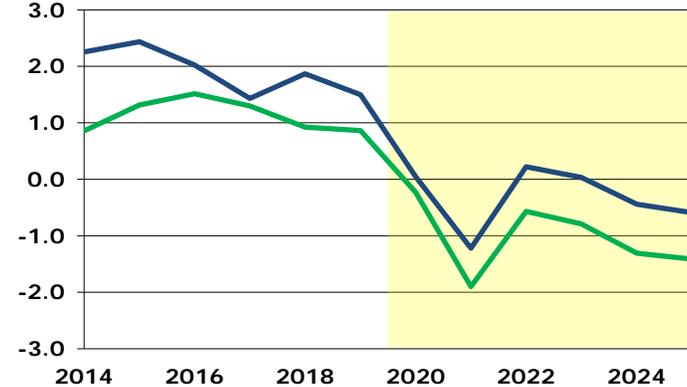
Source: WA State Employment Security Dept. 2019, ERFC 2025

Durable Manufacturing Employment



Source: WA State Employment Security Dept. 2019, ERFC 2025

Nondurable Manufacturing Employment



Source: WA State Employment Security Dept. 2019, ERFC 2025

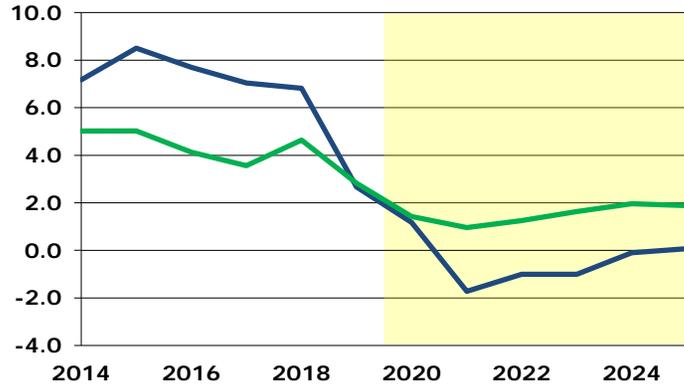
Washington

U.S.

Figure 2.7: Comparison of Washington and U.S. Economic Forecasts (continued)
 (Percent change)

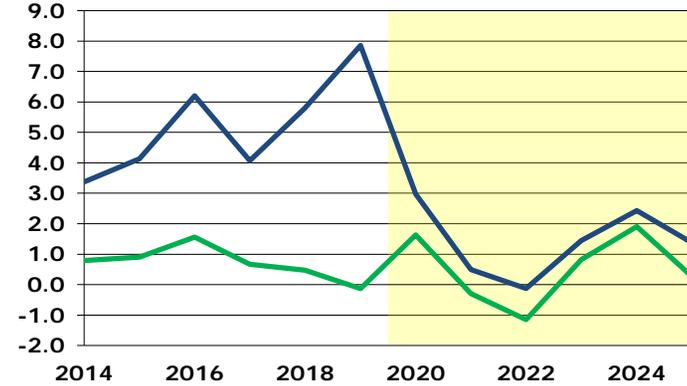
Forecast

Construction Employment



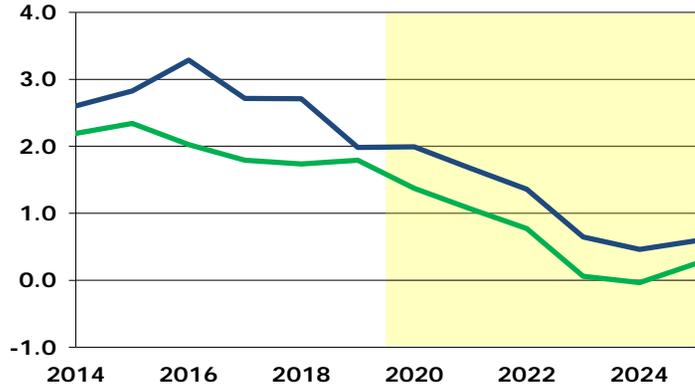
Source: WA State Employment Security Dept. 2019, ERFC 2025

Information Employment



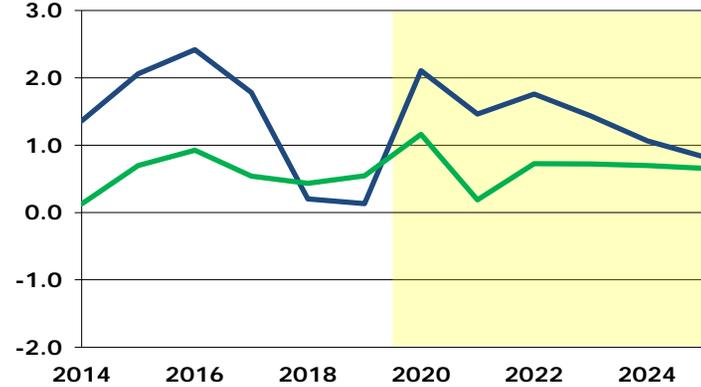
Source: WA State Employment Security Dept. 2019, ERFC 2025

Other Private Employment



Source: WA State Employment Security Dept. 2019, ERFC 2025

Government Employment



Source: WA State Employment Security Dept. 2019, ERFC 2025

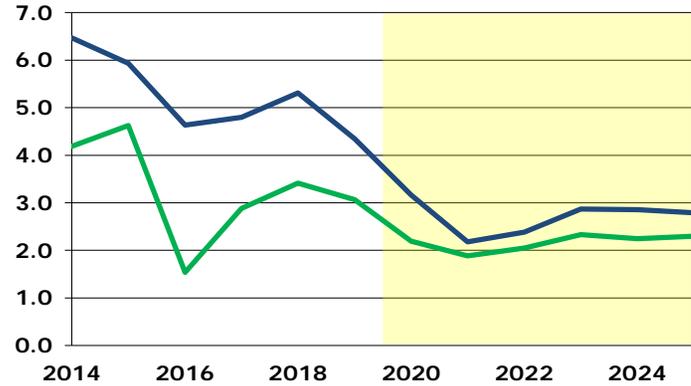
Washington

U.S.

Figure 2.7: Comparison of Washington and U.S. Economic Forecasts (continued)
(Percent change)

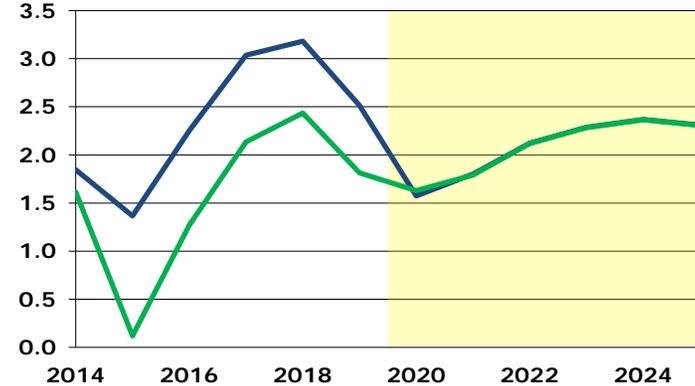
Forecast

Real Personal Income



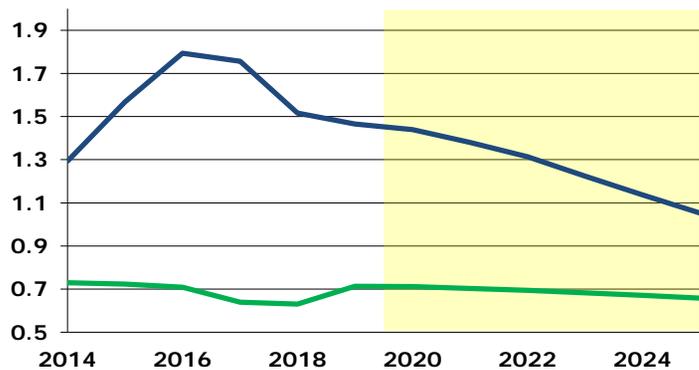
Source: Bureau of Economic Analysis 2018, ERFC 2025

Consumer Price Indices



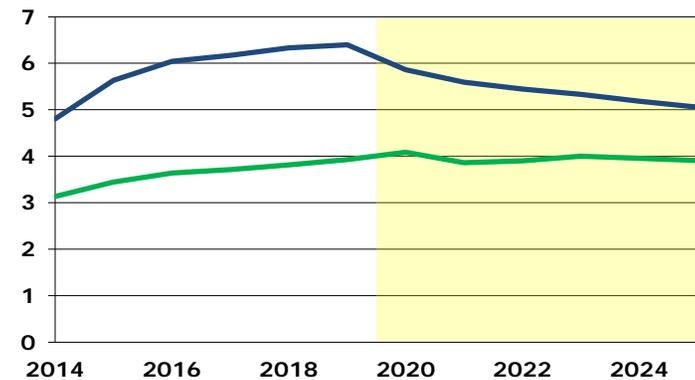
Source: Bureau of Labor Statistics 2019, ERFC 2025

Population



Source: Census Bureau 2019, ERFC 2025

New Housing Units Per 1,000 Population (Level)



Source: Census Bureau 2019, ERFC 2025

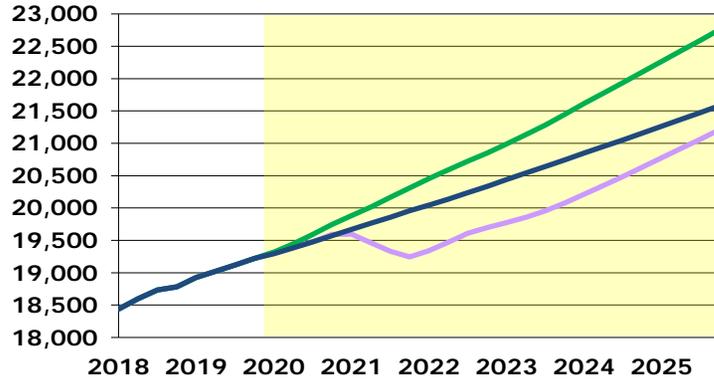
Washington

U.S.

Figure 2.8: Comparison of Alternative U.S. Economic Forecasts

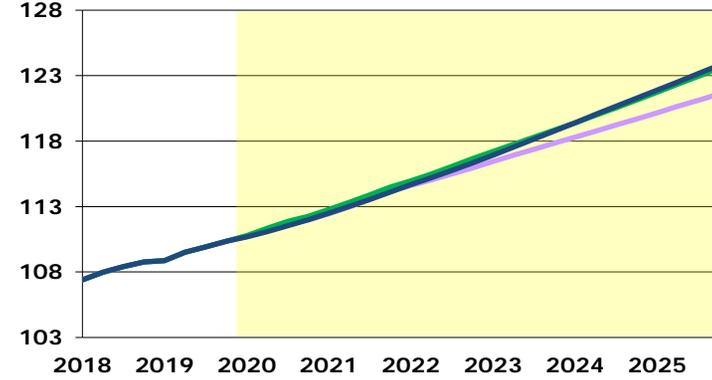
Forecast

Real GDP, Billions of 2012 Dollars



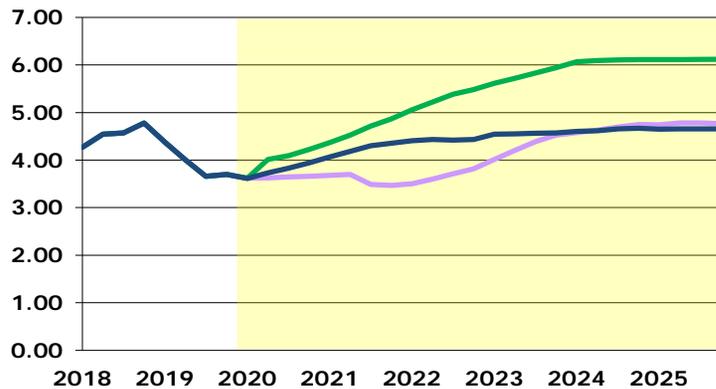
Source: Bureau of Economic Analysis 2019 Q4, ERFC 2025

PCE Price Index, 2012 = 100



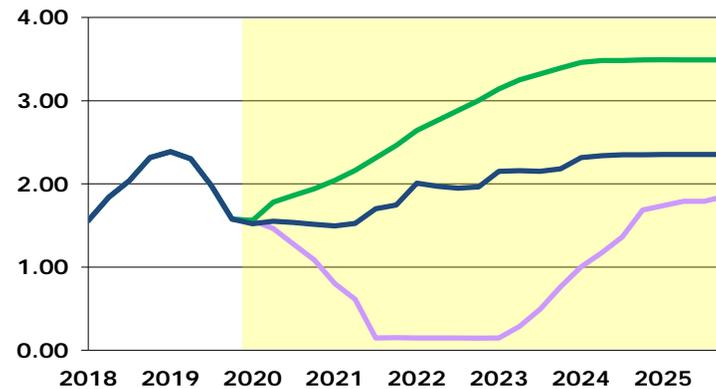
Source: Bureau of Economic Analysis 2019 Q4, ERFC 2025

Mortgage Rate, Percent



Source: Freddie Mac 2019 Q4, ERFC 2025

Three Month T-Bill Rate, Percent



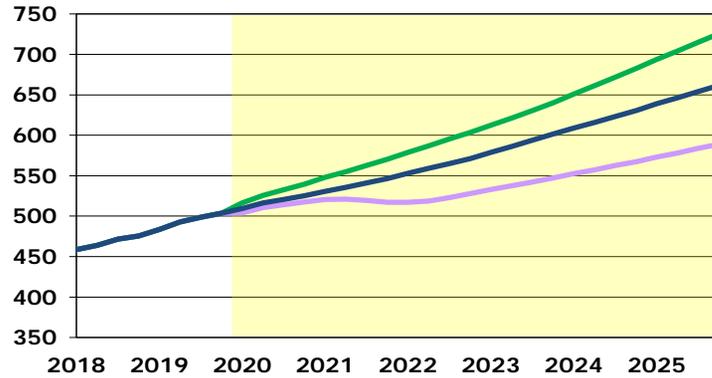
Source: Federal Reserve Board 2019 Q4, ERFC 2025

■ Baseline ■ Optimistic ■ Pessimistic

Figure 2.9: Comparison of Alternative Washington Economic Forecasts

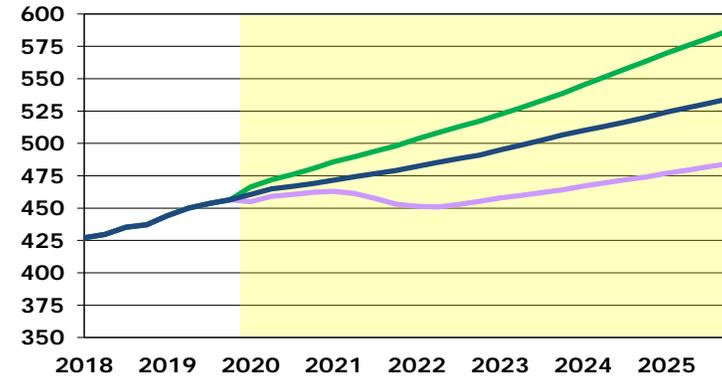
Forecast

Personal Income, Billions of Dollars



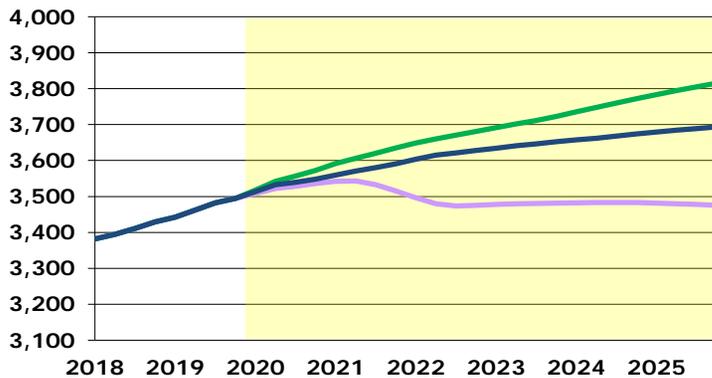
Source: Bureau of Economic Analysis 2018 Q4, ERFC 2025

Real Personal Income, Billions of 2012 Dollars



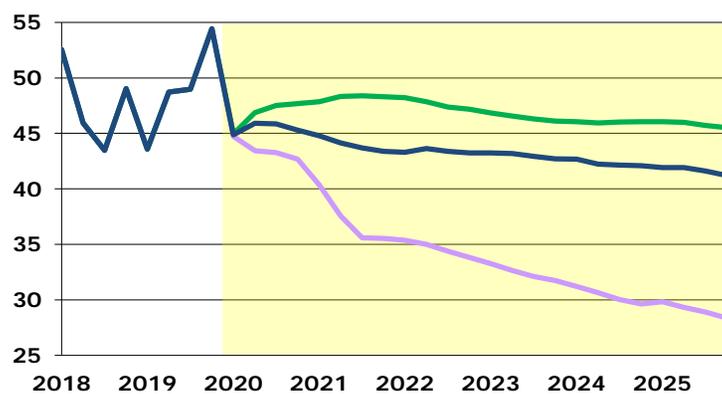
Source: Bureau of Economic Analysis 2018 Q4, ERFC 2025

Total Nonfarm Payroll Employment, Thousands



Source: WA State Employment Security 2019 Q4, ERFC 2023

Housing Permits, Thousands



Source: Census Bureau 2019 Q4, ERFC 2025

■ Baseline ■ Optimistic ■ Pessimistic



Chapter 3: Washington State Revenue Forecast Summary

- **General Fund-State (GF-S) revenue collections since the November 2019 forecast have come in \$162 million (2.5%) over the forecasted amount.**
- **Over half of the collection surplus came from a larger-than-expected rush of property sales ahead of an increase in real estate excise tax (REET) rates that took effect on January 1, 2020. These accelerated sales have decreased forecasted total REET receipts for the current biennium.**
- **The GF-S forecast was increased by \$307 million in the 2019-21 biennium and \$512 million in the 2021-23 biennium.**
- **Much of the forecast increase came from a higher-than-expected assessment of property values for next year's levy, which increased forecasted property tax collections.**
- **Forecasted Near General Fund revenue has increased by \$606 million in the 2019-21 biennium and \$536 million in the 2021-23 biennium.**
- **This forecast is the first that includes GF-S and Near General Fund revenue for the 2023-25 biennium.**

Overview

Much of the forecasted increase in GF-S revenue came from property taxes

Since the November 2019 forecast, General Fund – State (GF-S) revenue collections have come in higher than forecasted, but much of the extra revenue was due to accelerated property sales that will result in decreased sales in the future. The February economic forecast was similar to the November forecast but resulted in slight increases in forecasted taxable activity, particularly due to increased housing and construction activity. Forecasted revenue was also increased from an upward revision of the expected value of taxable property for the calendar year 2020 property tax levy. This increase, which carries forward into the expected assessment for future years as well, is responsible for almost half of the increase in forecasted GF-S revenue for the current biennium and over half of the increase for the next biennium.

GF-S forecast change by biennium (millions):

19-21: +\$307
21-23: +\$512

GF-S forecast (\$billions):

2019-21:
\$50.611

2021-23:
\$54.291

2023-25:
\$57.930

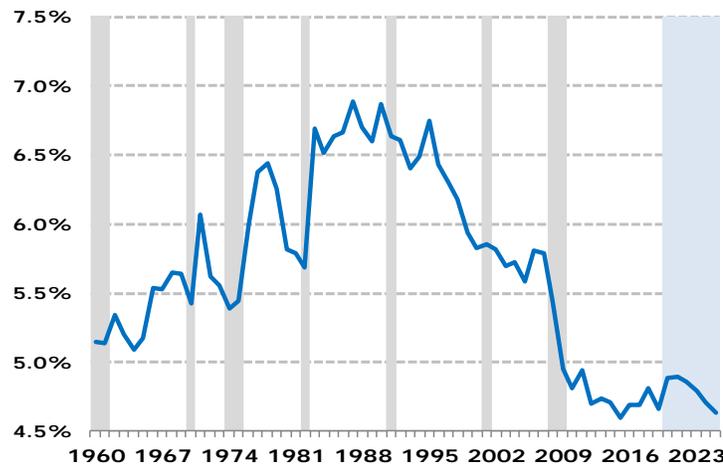
Table 3.1 summarizes the changes to the forecasts of GF-S revenue for the 2019-21 and 2021-23 biennia. For the current biennium, revenue collections that are tracked monthly came in \$162 million higher than forecasted. Forecasted growth from economic changes added \$144 million, resulting in a total forecast change of \$307 million. The forecast for the 2021-23 biennium was increased by \$512 million. The February 2020 forecast for GF-S revenue totals \$50,611.1 million in the 2019-21 biennium and \$54,291.3 million in the 2021-23 biennium. The initial forecast of GF-S revenue for the 2023-25 biennium is \$57,930.0 million.

Table 3.1: Revisions to the General Fund-State Forecast (cash basis, millions of dollars)

	2019-21 Biennium	2021-23 Biennium
Collection Experience	\$162.4	NA
Non-Economic Change	\$0.0	\$0.0
Forecast Change	\$144.2	\$512.3
Total Change	\$306.6	\$512.3

Figure 3.1: GF-S Revenue as a Percentage of State Personal Income (Fiscal Years)

GF-S revenue relative to state personal income has been on a declining trend since 1995



Source: ERFC, data through fiscal year 2019. Gray shaded area indicates recession; blue shaded area indicates forecast.

Though the ratio of collections to income has increased from the FY 2015 trough, it is still near historical lows

As can be seen in Figure 3.1, the ratio of GF-S revenue collected relative to state personal income has been increasing after reaching a trough in FY 2015. The ratio of revenue to income had been on a downward trend since 1995, broken only by the housing boom that raised the ratio from 2005 to mid-2008, and by temporary taxes and transfers of funds from non-GF-S

sources into the GF-S that again boosted the ratio in fiscal years 2011 and 2013. The ratio increased slightly in FY 2014 due to low personal income growth and then decreased slightly in FY 2015. The ratio then increased in FY 2016 and 2017, largely due to revenue increases stemming from legislative changes. Additional legislative changes enacted in June of 2017 boosted the FY 2018 ratio, but legislative changes from the 2018 session reduced the ratio in FY 2019. The ratio rebounds in FY 2020 and FY2021 but then continues its downward trend. Despite the recent increases, the ratio of revenue to income in FY 2025 is forecasted to be below that of any fiscal year on record prior to FY 2015.

Forecast details are at the end of the chapter

The history of nominal and real GF-S revenue by biennium can be found in Table 3.3. GF-S forecast changes by agency and major revenue classification for the 2019-21 biennium can be found in Table 3.5 (cash) and Table 3.6 (GAAP). Forecast changes for the 2021-23 biennium can be found in Table 3.7 (cash) and Table 3.8 (GAAP). The GF-S forecast by fiscal year and major source category through FY 2023 can be found in Table 3.9.

Recent Collection Experience

Collections were \$162 million (2.5%) more than the November forecast

Revenue collections from the Department of Revenue (DOR) and Administrative Office of the Courts are tracked monthly. In the period since the November forecast, total revenue from the above sources came in \$162.4 million (2.5%) higher than expected (see Table 3.2). Revenue Act collections reported by the DOR were \$64.2 million (1.4%) higher than forecasted. Revenue from other DOR tax sources was \$97.4 million (5.1%) above the forecast.

Table 3.2: Pre-Forecast Collection Variance of Major General Fund-State Taxes by Agency (relative to the November 2019 forecast, cash basis, millions of dollars)

<u>Agency/Source</u>	<u>Collection Variance</u>	<u>Percent of Estimate</u>
Department of Revenue		
Revenue Act	\$64.2	1.4%
Non-Revenue Act	\$97.4	5.1%
Subtotal	\$161.5	2.5%
Administrative Office of the Courts		
	\$0.9	5.3%
Total*	\$162.4	2.5%

* Detail may not add to total due to rounding.

Source: ERFC; Period: November 11, 2019 - February 10, 2020

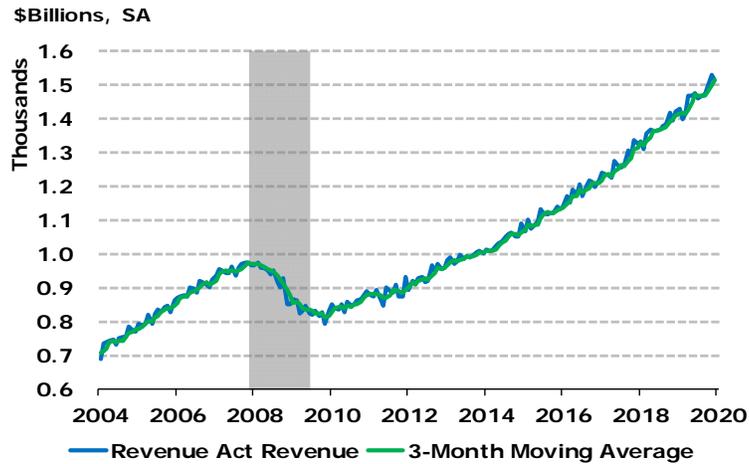
Most of the positive variance in non-Revenue Act collections came from real estate excise tax (REET), which came in \$91.5

Most of the forecast variance came from real estate excise tax

million (38.7%) higher than forecasted. Transfers of unclaimed property into the GF-S were \$13.5 million (92.0%) higher than forecasted. Cigarette tax receipts came in \$3.1 million (3.7%) higher than forecasted. Liquor sales and liter tax receipts came in \$1.0 million (1.2%) higher than forecasted. Property tax collections came in \$16.1 million (1.1%) lower than forecasted. All other DOR revenue sources came in \$4.4 million (11.6%) higher than forecasted. Revenue from the Administrative Office of the Courts was \$0.9 million (5.3%) higher than forecasted.

Figure 3.2: Revenue Act Collections*

Revenue Act collections have been on an upward trend since November 2009



Source: ERFC; Data through February 10, 2020

*Adjusted for large payments/refunds and payment pattern change

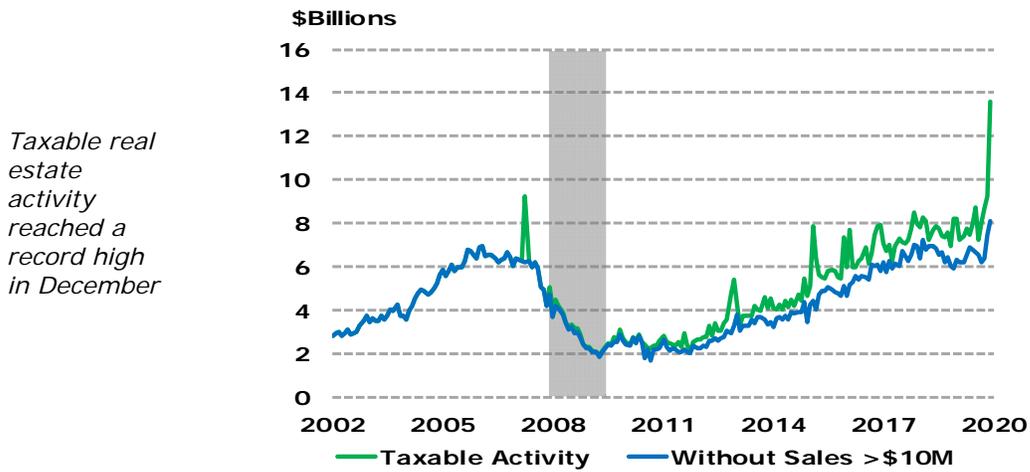
Adjusted Revenue Act collections were up 5.5% year over year for fourth quarter 2019 activity after 6.6% growth in the previous quarter

Figure 3.2 shows seasonally adjusted Revenue Act receipts excluding payments received under the tax amnesty program in early 2011 and other large payments. It is also adjusted for some changes in payment patterns. As shown in the figure, collections have been on an upward trend since November 2009. Despite large swings in monthly collections, the three-month moving average has maintained an upward trend. Adjusted for large one-time payments and refunds, collections grew 1.8% year over year in the January 11 – February 10, 2020 collections period after growth of 8.7% in the previous period. The lower growth in the most recent period was due to a change in the due date for annual filers from January 31 to April 15. Adjusted year-over-year growth in collections representing fourth quarter 2019 activity (November 11, 2019 – February 10, 2020 collections) was 5.5%. Adjusted year-over-year growth in collections representing third quarter activity (August 11 – November 10, 2019 collections) was 6.6%. Collections growth for second quarter 2019 activity was 8.1% and growth for the first quarter was 5.6%.

Sales of property worth more than \$1.56 million spiked ahead of a January 2020 increase in tax rates

The large positive variance in REET collections was due to a spike in sales of property worth more than \$1.56 million ahead of a January 1 increase in the effective excise tax rate for those properties. Total sales of property worth \$10 million or more jumped from \$1.8 billion in November to \$5.5 billion in December (see Figure 3.3). Total sales of property valued between \$1.56 and \$10 million jumped from \$780 million to \$1.5 billion. These accelerated sales have lowered the forecast of sales of properties valued above \$1.56 million for the rest of them biennium, resulting in a net decrease in forecasted revenue for the biennium.

Figure 3.3: Taxable Real Estate Excise Activity, SA



Source: ERFC; data through December 2019

Revenue Forecasts by Source

Department of Revenue

Taxes collected by DOR are most of GF-S taxes

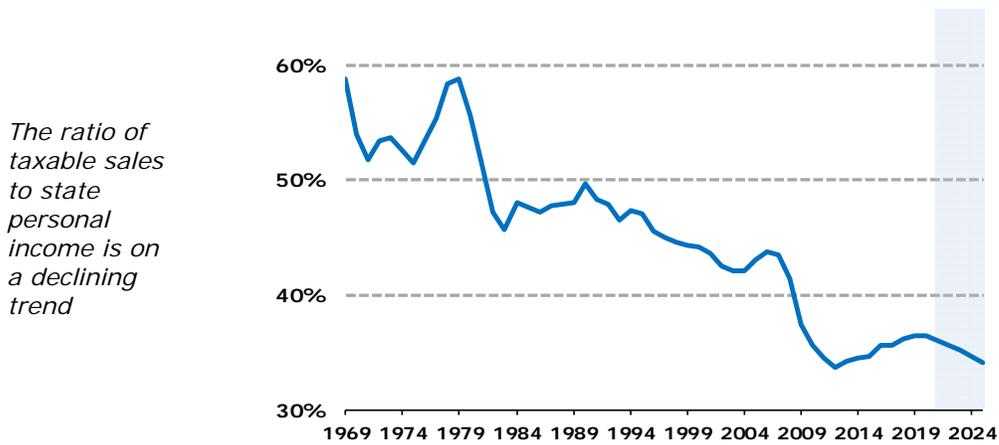
The Department of Revenue (DOR) collects and administers the majority of Washington’s GF-S revenue, accounting for 95.0% of total GF-S revenue in FY 2019. The largest tax sources administered by the DOR are the retail sales tax, business and occupation tax, property tax, use tax, cigarette tax and real estate excise tax. The revenue forecasts discussed below can be found in Tables 3.5-3.8.

Retail sales taxes are the largest source of GF-S revenue

The retail sales tax is the largest source of GF-S revenue, accounting for 49.5% of GF-S revenue in FY 2019. The state’s share of the tax is 6.5% of the sales price. While construction labor, repair services, and some other services are taxed, the tax does not apply to most services. Taxable sales as a share of personal income have been declining. Their share fell sharply during the recession and continued to fall through FY 2012. In

that year, 33.8% of personal income was spent on taxable items and services, the lowest percentage on record. Increased spending on construction and autos, along with legislative changes to services and companies deemed taxable, caused the share to grow through FY 2017, reaching 36.1% of personal income. Legislation passed in 2017, 2018 and March 2019 that extends the tax to bottled water and online sales has caused the share to continue to increase. After FY 2020, however, the additional revenue will not grow as quickly as personal income, causing the ratio of sales to income to continue its downward trend. The historical and forecasted relationship between taxable sales and income is illustrated in Figure 3.4. Taxable retail sales by fiscal year can be found in Table 3.4.

Figure 3.4: Taxable Sales* as Percentage of State Personal Income



*Past tax base adjusted to represent current base. Shaded area indicates forecast

Source: ERFC; Data through FY 2019, forecast through FY 2025

Retail sales tax receipt growth forecast:

- FY20: 6.8%
- FY21: 2.8%
- FY22: 3.0%
- FY23: 3.3%

Strong growth in construction and auto sales brought taxable retail sales growth of 8.1% in FY 2015. Legislative changes coupled with continued growth in construction and auto sales boosted growth in FY 2016 taxable activity to 8.4%. Slowing construction growth and flat auto sales lowered growth in FY 2017 activity to 6.3%. Growth increased to 8.6% in FY 2018, due largely to increased taxation of online sales. Growth in FY 2019 taxable activity stayed relatively strong at 7.6% despite slowing auto sales and construction because of continuing increases in the volume of taxable online sales. Growth in taxable activity is forecasted to decline to 5.3% in FY 2020, 3.1% in FY 2021, 3.0% in FY 2022 and 3.2% in FY 2023 (see Table 3.4). Due to the lag between taxable activity and collections and the presence of tax deferrals, credits, refunds, and payments of past due taxes, the growth in actual collections differs from the growth in taxable activity. Growth in collections for FY 2019 was 8.6%. Collections growth is forecasted at 6.8% in FY 2020, 2.8% in FY 2021, 3.0% in FY 2022 and 3.3% in FY

2023. Growth is forecasted at 3.3% for FY 2024 and 3.5% for FY 2025.

Business and Occupation taxes are the second largest source of GF-S revenue

The business and occupation (B&O) tax is the second largest source of GF-S revenue, accounting for 19.8% of GF-S revenue in FY 2019. It is a tax on the gross receipts of all businesses operating in Washington. The state portion of the tax applies ten different rates according to various classifications of business activities. In FY 2019, the largest contributor to total state B&O tax was the services sector, which had a gross tax rate of 1.5% and represented an estimated 43% of B&O taxes due. The next largest sector was retailing, which is taxed at 0.471% and represented an estimated 24% of taxes due, followed by the wholesaling sector, which is taxed at 0.484% and represented an estimated 19% of taxes due.

B&O tax growth forecast:

In FY 2018, B&O tax receipts grew by 8.6% due to several large one-time payments of past due taxes and legislative expansion of the tax base. Growth slowed to a still-strong 6.9% in FY 2019. Forecasted growth slows to 6.0% in FY 2020, 5.2% in FY 2021, 4.7% in FY 2022 and 4.6% in FY 2023. Growth is forecasted at 4.5% for FY 2024 and 4.4% for FY 2025.

*FY20: 6.0%
FY21: 5.2%
FY22: 4.7%
FY23: 4.6%*

State property taxes are the third largest source of GF-S revenue

The state property tax levy is the third largest source of GF-S revenue, accounting for 10.7% of total revenue in FY 2019. Although the tax goes into the GF-S, it is dedicated to the funding of basic education. As discussed in the [September 2017](#) forecast publication, the total amount of the state levy was increased by new legislation in June 2017, with the increases beginning in FY 2018.

Property tax growth forecast:

Constrained by prior law to a levy growth rate of one percent on existing property (or the rate of inflation if less than one percent), property tax collections grew by 1.9% in FY 2017. The first payments of the additional state levy began to arrive in the latter half of FY 2018, bringing total GF-S property tax growth of 31.4% for the fiscal year. Collections fell by 12.4% in FY 2019 due to a temporary reduction in the levy rate for calendar year 2019 and a \$936 million transfer of collections from the levy to the Education Legacy Trust Account (ELTA). Collections are then forecasted to rebound by 52.7% in FY 2020 with a smaller \$83.8 million transfer to ELTA and the end of the temporary levy reduction in the second half of the year. Growth remains high at 15.1% in FY 2021, due to a full year at the unreduced levy rate, before falling to 3.9% in FY 2022 and 2.7% in FY 2023. Growth is forecasted at 2.7% for FY 2024 and 2.6% for FY 2025.

*FY20: 52.7%
FY21: 15.1%
FY22: 3.9%
FY23: 2.7%*

REET rates and distributions changed on January 1, 2020

The real estate excise tax (REET) was the fourth largest DOR source of GF-S revenue in FY 2019, accounting for 4.9% of total revenue. The tax is applied to both residential and commercial real estate, including purchases of vacant land. Prior to January 1, 2020, the state portion of REET was 1.28% of the sales price

and was divided between the GF-S (92.3%), a fund for local public works (2.0%), a fund for assistance of cities and counties (1.6%) and ELTA (4.1%). As of January 1, rates are 1.1% for the portion of the selling price less than or equal to \$500 thousand, 1.28% for the portion greater than \$500 thousand and less than or equal to \$1.5 million, 2.75% for the portion greater than \$1.5 million and less than or equal to \$3.0 million and 3.0% for the portion greater than \$3.0 million. The distributions of the tax are also changed: 79.4% is deposited in the GF-S, 1.7% in the public works assistance account, 1.4% in the city-county assistance account and the remainder (17.5%) in ELTA. Beginning July 1, 2023, distributions to the city-county assistance account increase to 5.2% and distributions to the Education Legacy Trust Account decrease to 14%. The new rates and distributions were designed to result in increased collections for both the GF-S and ELTA.

GF-S REET growth forecast:

*FY20: -0.2%
FY21: -14.6%
FY22: 4.1%
FY23: 2.0%*

Due to a high number of large sales of commercial property, REET receipts grew by 34.0% in FY 2013 and 15.2% in FY 2014. Even higher commercial sales coupled with strengthening residential sales boosted FY 2015 collections growth to 20.4% and FY 2016 growth to 19.4%. While large commercial sales slowed somewhat in FY 2017, the residential market accelerated, resulting in a further 13.6% increase. The pattern continued into FY 2018, resulting in further growth of 8.3%. Large commercial sales declined in FY 2019 while residential sales increased, resulting in a 0.5% increase in collections in FY 2019. Both commercial and residential sales are now forecasted to retreat from the record high levels of FY 2019, resulting in reductions of 0.2% in FY 2020 and 14.6% in FY 2021 before growth resumes at 4.1% in FY 2022 and 2.0% in FY 2023. Growth is forecasted at 1.2% for FY 2024 and 3.0% for FY 2025.

Use tax was the fifth largest GF-S source in FY 2018

The state use tax was the fifth largest GF-S revenue source in FY 2018 at 3.4% of total receipts. The state portion of the tax is 6.5% of the purchase price for items used in the state that were not subject to the state retail sales tax. Examples of items subject to the state use tax are goods purchased out-of-state; online and mail-order purchases, where sales tax was not collected; or purchases of used vehicles from private individuals.

Use tax growth forecast:

*FY20: 0.5%
FY21: -2.1%
FY22: 3.7%
FY23: 3.7%*

Use tax collections grew 2.8% in FY 2018 after 6.0% growth in FY 2017. Growth then rebounded to 9.0% in FY 2019, boosted by several large one-time purchases. Strong collections so far for FY 2020 resulted in an expected further increase of 0.5% from FY 2019's elevated level, with collections declining 2.1% in FY 2021 as activity returns to a more normal level. Growth then resumes at 3.7% in FY 2022 and FY 2023, 4.1% in FY 2024 and 4.2% in FY 2025.

Public utility taxes were the sixth largest GF-S source in FY 2018

Public utility taxes were the sixth largest DOR source of GF-S revenue in FY 2018, bringing in 1.8% of total receipts. The tax applies to the gross income of sales to consumers by public and privately owned utilities and is in lieu of the B&O tax. The largest source of public utility taxes is the 3.873% tax on the distribution and generation of electrical power, followed by the 3.852% tax on the distribution of natural gas.

Growth forecast:

*FY20: 6.1%
FY21: 10.3%
FY22: 3.2%
FY23: 3.6%*

Public utility tax receipts shrank by 1.1% in FY 2018 after 1.4% growth in FY 2017. Growth shrank by a further 0.3% in FY 2019. The low level of FY 2019 collections, coupled with actual collections so far, result in forecasted 6.1% growth in FY 2020. The expiration of a large tax credit boosts collections growth to 10.3% in FY 2021. Growth is then forecasted at 3.2% in FY 2022, 3.6% in FY 2023, 3.5% for FY 2024 and 3.6% for FY 2025.

The cigarette tax was the seventh largest GF-S source in FY 2017

The state tax on cigarettes was the seventh largest DOR GF-S revenue source in FY 2018 at 1.5% of total receipts. Prior to FY 2010, the tax made up a much smaller portion of GF-S revenue because much of the tax was dedicated to non-GF-S accounts. In FY 2010, all of the tax except the portion dedicated to the Education Legacy Trust account was redirected to the GF-S, and in FY 2011 all of the cigarette tax was redirected to the GF-S. The current tax rate, which took effect May 1, 2010, is \$3.025 per pack of 20 cigarettes.

Cigarette tax growth forecast:

*FY20: -3.7%
FY21: -3.4%
FY22: -2.6%
FY23: -2.8%*

The total number of taxed cigarettes has been on a downward trend due to a continuing decline in the number of smokers. Recently, the rate of decline has been increasing further. Collections decreased by 3.3% in FY 2019 after decreasing by 5.4% in FY 2018. The decrease in collections is forecasted to accelerate to 3.7% in FY 2020, due to tax stamp sales so far plus a state increase in the legal age to buy cigarettes from 18 to 21 on January 1, 2020. The decline then continues at a rate of 3.4% in FY 2021, 2.6% in FY 2022, 2.8% in FY 2023 and FY 2024, and 3.2% in FY 2025.

Forecasted Revenue from Cannabis-Related Sales

Sales of cannabis products in state-licensed stores began in July 2014

Initiative 502, approved by voters in the November 2012 election, legalized the sale and use of recreational cannabis and cannabis products in Washington. The first legal sales of cannabis products in state-licensed stores occurred in July 2014. During the 2015 regular and special sessions, legislation was passed that substantially altered the market rules set up by the initiative. 2SSB 5052, passed during the regular session, brought previously unregulated medical marijuana dispensaries into the same regulatory regime as licensed recreational cannabis outlets. This legislation was outlined in our [June 2015](#) forecast publication. Subsequent to the June 2015 forecast, 2E2SHB 2136, passed in the second special session, changed the cannabis excise tax from a 25 percent tax collected from

growers, processors and retailers to a 37 percent tax on retail sales only. The law also made changes to the distribution of tax and fee revenue. Cannabis taxes and license fees are still collected by the Liquor and Cannabis Board and are placed into a dedicated fund with annual appropriations to various other accounts including the GF-S.

Change in GF-S forecast of total cannabis-related revenue by biennium (millions):

19-21: \$13.4
21-23: \$16.8

Distributions of cannabis excise taxes to the GF-S totaled \$15.3 million in the 2013-15 biennium and \$147.6 million in the 2015-17 biennium. GF-S distributions were \$248.9 million in the 2017-19 biennium. Distributions are forecasted at \$303.2 million in the 2019-21 biennium, an increase of \$13.4 million from the previous forecast, and \$321.5 million in the 2021-23 biennium, also an increase of \$16.8 million. The initial forecast of GF-S distributions for the 2023-25 biennium is \$350.7 million. Details of the forecasted distributions from the account can be found in Table 3.18.

The Office of Financial Management (Other Agencies)

Forecast change by biennium (millions):

19-21: -\$7.7
21-23: \$12.3

The Office of Financial Management (OFM) is responsible for preparing General Fund-State revenue and transfer forecasts for all agencies excluding the Department of Revenue, the Liquor and Cannabis Board, the Insurance Commissioner, the Washington State Lottery, and the State Treasurer. The office's forecast for the 2019-21 biennium was decreased \$7.7 million to \$206.4 million and the forecast for the 2021-23 biennium was increased \$12.3 million to \$198.2 million. The office's initial forecast of revenue for the 2023-25 biennium is \$168.8 million.

State Treasurer

Forecast change by biennium (millions):

19-21: -\$1.2
21-23: -\$5.6

The Office of the State Treasurer generates GF-S revenue by investing state short-term cash reserves. The office's forecast for the 2019-21 biennium has been decreased \$1.2 million to \$17.4 million and the office's forecast for the 2021-23 biennium has been decreased \$5.6 million to \$31.1 million due to forecasted lower interest rates. The office's initial forecast of revenue for the 2023-25 biennium is \$38.4 million.

Insurance Commissioner

Forecast change by biennium (millions):

19-21: \$4.0
21-23: \$4.6

The Office of the Insurance Commissioner collects premium taxes on most classes of insurance sold in Washington State. These taxes are distributed to the GF-S and various accounts in support of fire services. The forecast of GF-S revenue for the 2019-21 biennium has been increased \$4.0 million to \$1,312.7 million and the forecast of revenue for the 2021-23 biennium has been increased \$4.6 million to \$1,426.3 million. The initial forecast of revenue for the 2023-25 biennium is \$1,538.3 million.

Liquor and Cannabis Board

*Forecast
change by
biennium
(millions):*

19-21: \$4.2
21-23: \$12.7

The Liquor and Cannabis Board (LCB) collects fees from distributors and retailers on sales of spirits and surtaxes on sales of beer and wine (sales and liter taxes on sprits are collected by the DOR). The LCB is also responsible for the collection of excise taxes and fees associated with the legalized sale and use of recreational and medicinal cannabis discussed previously. The forecast of GF-S distributions for the 2019-21 biennium has been increased \$4.2 million to \$563.6 million and the forecast of revenue for the 2021-23 biennium has been increased \$12.7 million to \$613.0 million. The forecast changes were a combination of changes to expected fees and taxes associated with beer, wine, and liquor distribution and the changes in expected distributions of cannabis excise taxes to the GF-S discussed above. The initial forecast of GF-S distributions for the 2023-25 biennium is \$658.5 million.

Lottery Commission

*GF-S forecast
change by
biennium
(millions):*

19-21: -\$0.7
21-23: -\$10.3

While most of the proceeds from sales of lottery games go to the Washington Opportunity Pathways Account (OPA), distributions are also made to programs such as Problem Gambling, Economic Development and the Stadium/Exhibition Center. Details of the forecast of the distribution of Lottery earnings can be found in Table 3.15 on a cash basis and Table 3.16 on a GAAP basis. When total profits from all Washington-only games plus the Powerball game exceed \$102 million per year, the amount above \$102 million is transferred to the GF-S. Forecasted transfers for the 2019-21 biennium have been decreased \$0.7 million to \$52.3 million and the forecast of GF-S transfers for the 2021-23 biennium has been decreased \$10.3 million to \$54.0 million. The initial forecast of revenue for the 2023-25 biennium is \$55.5 million.

*OPA forecast
change by
biennium
(millions):*

19-21: -\$10.8
21-23: -\$1.1

The OPA receives all profits (excluding statutory transfers) from Washington-only lottery games plus all profits from the Mega Millions game. The forecast of OPA revenue for the 2019-21 biennium has been decreased \$10.8 million to \$280.9 million and the forecast for the 2021-23 biennium has been decreased \$1.1 million to \$312.3 million. The initial forecast of revenue for the 2023-25 biennium is \$321.1 million.

Administrative Office of the Courts

*Forecast
change by
biennium
(millions):*

19-21: -\$0.5
21-23: -\$2.2

The Administrative Office of the Courts collects surcharges on certain filing fees, fines, and infraction penalties and transfers this revenue to the GF-S on a monthly basis. The forecast of GF-S transfers for the 2019-21 biennium has been decreased \$0.5 million to \$134.0 million and the forecast of revenue for the 2021-23 biennium has been decreased \$2.2 million to \$131.6 million.

million. The initial forecast of transfers for the 2023-25 biennium is \$130.5 million.

Track Record for the 2019-21 Biennium

The current forecast is \$893 million (1.8%) higher than the forecasted revenue at the time of the initial 2019-21 budget

Table 3.10 summarizes the historical changes to the GF-S revenue forecast for the 2019-21 biennium. The February 2016 forecast was the initial forecast for the biennium. The February 2019 forecast is \$7.2 billion (16.5%) higher than the initial forecast. Non-economic changes have increased the forecast by \$3.3 billion (7.5%). Excluding non-economic changes, the current forecast is \$3.9 billion (9.0%) higher than the initial forecast. The March 2019 forecast, coupled with \$109 million in legislative and budget-driven revenue changes passed in the 2019 legislative session subsequent to the March forecast, was the basis for the initial budget for the 2019-21 biennium. The February forecast of biennial revenue is \$893 million (1.8%) higher than that sum.

Track Record for the 2021-23 Biennium

The current forecast is \$2.4 billion higher than the initial forecast in February 2018

Table 3.11 summarizes the historical changes to the GF-S revenue forecast for the 2021-23 biennium. The February 2018 forecast was the initial forecast for the biennium. The February 2019 forecast is \$2.4 billion (4.5%) higher than the initial forecast. Non-economic changes have increased the forecast by \$0.6 billion (1.1%). Excluding non-economic changes, the current forecast is \$1.8 billion (3.5%) higher than the initial forecast.

The Relationship between the Cash and GAAP General Fund-State Revenue Forecasts

GAAP forecasts are based on the period in which the revenue is earned rather than received

Legislation enacted in 1987 requires that the state's biennial budget be in conformance with Generally Accepted Accounting Principles (GAAP). It also requires a GF-S revenue forecast on both a cash and GAAP basis. The GAAP forecasts of GF-S revenue for the 2017-19 and 2019-21 biennia are presented in Tables 3.6 and 3.8 and the GAAP forecast of Lottery revenue transfers for those biennia is in Table 3.15. The primary difference between the cash and GAAP forecasts is the timing of the receipt of revenue. On a GAAP basis, revenue is credited to the biennium in which it is earned even though it may not have been received. The cash forecast, on the other hand, reflects expected cash receipts during a fiscal period. The forecast on a GAAP, or accrual, basis is primarily used for financial reporting. The cash forecast is used for cash flow management and revenue tracking. The cash forecast is also the forecast used in the state's budgetary balance sheet, which is the principal tool for assessing the General Fund's current surplus or deficit position. References

to the GF-S forecast in the text of this chapter refer to the cash forecast unless otherwise noted. Likewise, figures from revenue tables other than Tables 3.6, 3.8 and 3.16 are projected on a cash basis.

Budgetary Balance Sheet for the 2019-21 Biennium

The forecast implies total GF-S reserves of \$3.3 billion at the end of the 2019-21 biennium and \$4.1 billion in reserves for GF-S, ELTA and OPA

Table 3.12 shows the budgetary balance sheets for the 2019-21 biennium as prepared by the Office of Financial Management and the House and Senate fiscal committees. The balance sheet shows not only projected GF-S spending and resources but also total projected spending and resources for the GF-S plus the other main non-transportation state-funded accounts: the Education Legacy Trust Account (ELTA) and the Washington Opportunity Pathways Account (OPA). As shown in the table, the GF-S beginning fund balance for the 2019-21 biennium is \$999.3 million and the total beginning balance for GF-S, ELTA and OPA is \$1,981.2 million. Based on the February 2020 revenue forecast and currently enacted budgets, unrestricted GF-S reserves are projected to be \$1,155.9 million at the end of the 2019-21 biennium and GF-S, ELTA and OPA reserves are projected to be \$1,922.9 million. In addition, the Budget Stabilization Account is projected to have a balance of \$2,177.5 million, bringing total projected GF-S reserves to \$3,333.4 million. Projected combined reserves for the ELTA and OPA are \$767.1 million, for total projected reserves of \$4,100.5 million for GF-S, ELTA and OPA at the end of the 2019-21 biennium.

Alternative Forecasts for the 2019-21 and 2021-23 Biennia

*Optimistic scenario (billions):
19-21: +\$1.43
21-23: +\$3.70*

*Pessimistic scenario:
19-21: -\$1.78
21-23: -\$4.63*

Chapter 2 outlines optimistic and pessimistic economic scenarios relative to the baseline economic forecast. The forecast assigns a probability of 55% to the baseline forecast, 15% to the optimistic scenario and 30% to the pessimistic scenario. The revenue implications of these alternative scenarios for the 2019-21 biennium are shown in Table 3.13 and those of the 2021-23 biennium are shown in Table 3.14. For the 2019-21 biennium, the optimistic forecast generates \$52.043 billion in GF-S revenue, \$1.432 billion (2.8%) more than the baseline scenario, while the pessimistic forecast produces \$48.832 billion in revenue, \$1.780 billion (3.5%) less than the baseline. For the 2021-23 biennium, the optimistic forecast generates \$57.990 billion in GF-S revenue, \$3.699 billion (6.8%) more than the baseline scenario, while the pessimistic forecast produces \$49.665 billion in revenue, \$4.627 billion (8.5%) less than the baseline.

Near General Fund Forecast

*Near
General
Fund
Forecast
(billions):*

*2019-21:
\$52.339*

*2021-23:
\$55.690*

*2021-23:
\$59.176*

"Near General Fund" (NGF) accounts are those included in the GF-S plus the Education Legacy Trust Account (ELTA) and the Washington Opportunity Pathways Account (OPA). The ELTA is primarily funded by a tax on estates of over \$2 million. Legislation from the 2013 special session, however, added revenue from public utility and real estate excise taxes, which had previously gone into non-GF-S accounts. Subsequent legislation also added revenue from solid waste taxes beginning in FY 2016 and a transfer of \$935 million from the additional property tax levy to the account in FY 2019. The OPA is funded by lottery revenue as discussed above. The forecast of NGF revenue for the 2019-21 biennium is \$52,339.5 million, \$606.0 million more than the November forecast. The large change in the NGF forecast relative to the change in forecasted GF-S revenue was due to a large increase in estate tax receipts between the November and February forecasts. The forecast of Near General Fund revenue for the 2021-23 biennium is \$55,689.8 million, \$535.7 million more than the November forecast. The initial forecast for the 2023-25 biennium is \$59,175.8 million. The Near General Fund forecast and recent history by fiscal year are presented in Table 3.17.

Workforce Education Investment Account

*The WEIA
was created
in 2019 to
help fund
the state's
higher
education
system and
student
loans*

The Workforce Education Investment Account (WEIA) was created in the 2019 legislative session. The account, the purpose of which is to help fund the state's higher education system and student loans, was originally funded by a surcharge on specific industries that benefitted from an educated workforce. This tax was scheduled to take effect on January 1, 2020, and the Economic and Revenue Forecast Council was later tasked with forecasting revenue generated for the account. ESSB 6492, passed in early February of the 2020 legislative session, retroactively eliminated the existing surcharge and replaced it with a simplified version that is effective April 1, 2020. The simplified surcharge applies to businesses with gross taxable activity under the "services and other activities" category of \$1 million or more (with some nonprofit and other businesses exempt). In addition to this surcharge, which equals 0.25% of gross taxable income, another surcharge is applied to a group of "select advanced computing businesses," and is paid quarterly. Due to the delayed effective date of the tax, the bill lowered forecasted revenue for the current biennium by \$29.6 million, but due to the broader and less ambiguous application of the surcharge the bill increased forecasted revenue by \$234.3 million in the 2021-23 biennium and \$216.0 million in the 2023-25 biennium. WEIA revenue is now forecasted at \$350.4 million in the 2019-21 biennium, \$627.4 million in the 2021-23 biennium and \$667.3 million in the 2023-25 biennium. The WEIA forecast by fiscal year is presented in Table 3.19.

Table 3.3
General Fund-State collections*
(millions of dollars, cash basis)

Biennium	Current Dollars	Percent Change	2012	
			Chained Dollars	Percent Change
1961-63	\$817.1		\$4,300.0	
1963-65	866.2	6.0%	4,439.3	3.2%
1965-67	1,128.6	30.3%	5,565.5	25.4%
1967-69	1,440.5	27.6%	6,658.6	19.6%
1969-71	1,732.7	20.3%	8,271.5	24.2%
1971-73	1,922.1	10.9%	8,490.3	2.6%
1973-75	2,372.4	23.4%	9,054.3	6.6%
1975-77	3,395.0	43.1%	11,271.8	24.5%
1977-79	4,490.0	32.3%	13,091.7	16.1%
1979-81	5,356.4	19.3%	12,990.7	-0.8%
1981-83	6,801.4	27.0%	14,354.4	10.5%
1983-85	8,202.4	20.6%	15,975.3	11.3%
1985-87	9,574.6	16.7%	17,604.4	10.2%
1987-89	10,934.1	14.2%	18,775.3	6.7%
1989-91	13,309.0	21.7%	21,047.1	12.1%
1991-93	14,862.2	11.7%	22,112.5	5.1%
1993-95	16,564.6	11.5%	23,547.7	6.5%
1995-97	17,637.7	6.5%	24,059.4	2.2%
1997-99	19,620.1	11.2%	26,059.1	8.3%
1999-01	21,262.1	8.4%	27,187.8	4.3%
2001-03	21,140.7	-0.6%	26,144.9	-3.8%
2003-05	23,388.5	10.6%	27,714.8	6.0%
2005-07	27,772.0	18.7%	31,145.3	12.4%
2007-09	27,703.0	-0.2%	29,633.3	-4.9%
2009-11	28,218.1	1.9%	29,418.7	-0.7%
2011-13	30,657.0	8.6%	30,679.6	4.3%
2013-15	33,666.0	9.8%	32,835.5	7.0%
2015-17	38,317.4	13.8%	36,760.8	12.0%
2017-19	44,142.6	15.2%	40,886.6	11.2%
2019-21 ^F	50,611.1	14.7%	45,438.3	11.1%
2021-23 ^F	54,291.3	7.3%	47,000.2	3.4%
2023-25 ^F	57,930.0	6.7%	48,134.7	2.4%

^F February 2020 forecast

*Total General Fund-State revenue and transfers. Cash basis; includes rate base and administrative changes. Modified cash basis: 1985-87 and prior; pure cash basis: 1987-89 and after. May not be comparable because the collection totals include the impact of rate, base and administrative changes.

Source: Department of Revenue, the Office of Financial Management and the Economic and Revenue Forecast Council 's February 2020 forecast.

Table 3.4
Taxable retail sales*
(millions of dollars)

Fiscal Year	Amount	Percent Change
1981	25,197	4.7%
1982	26,097	3.6%
1983	29,368	12.5%
1984	29,156	-0.7%
1985	30,687	5.3%
1986	32,158	4.8%
1987	34,647	7.7%
1988	37,452	8.1%
1989	41,429	10.6%
1990	47,183	13.9%
1991	49,812	5.6%
1992	53,189	6.8%
1993	55,319	4.0%
1994	59,009	6.7%
1995	61,927	4.9%
1996	62,817	1.4%
1997	66,748	6.3%
1998	72,059	8.0%
1999	77,197	7.1%
2000	83,335	8.0%
2001	85,633	2.8%
2002	84,418	-1.4%
2003	86,165	2.1%
2004	90,139	4.6%
2005	97,253	7.9%
2006	107,071	10.1%
2007	115,527	7.9%
2008	118,676	2.7%
2009	106,379	-10.4%
2010	99,983	-6.0%
2011	101,825	1.8%
2012	106,036	4.1%
2013	113,173	6.7%
2014	120,453	6.4%
2015	130,168	8.1%
2016	141,103	8.4%
2017	149,992	6.3%
2018	162,958	8.6%
2019	175,266	7.6%
2020 ^F	184,499	5.3%
2021 ^F	190,224	3.1%
2022 ^F	196,015	3.0%
2023 ^F	202,383	3.2%
2024 ^F	209,368	3.5%
2025 ^F	216,609	3.5%

^F February 2020 forecast

Source: ERFRC

* Actual Base. Includes statutory and administrative changes to the tax base. Historical fiscal year data are from quarterly taxable sales reported by taxpayers on the state's Combined Excise tax return. Reported totals affected by enacted legislation. Major base changes include: exemption of off-premises food, beginning 1978:3 (fiscal 1979); extension of the sales tax base to off premises food (1982:2 to 1983:2); food again exempt 1983:3 (fiscal 1984); extension of the sales tax base to candy, gum and bottled water (June 1 - December 2, 2010); elimination of sales tax exemption for residential phone service (July 1, 2013); elimination of sales tax exemption for bottled water (July 1, 2017); extension of economic nexus to certain remote sellers (January 1, 2018).

Table 3.5

Comparison of the General Fund-State forecast by agency

2019-21 biennium; cash basis

(millions of dollars)

Forecast by Agency	Nov 2019 Forecast¹	Non- Economic Changes	Forecast Revision	Feb 2020 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$23,939.5	\$0.0	\$108.4	\$24,047.9	\$108.4
Business & Occupation Use	9,608.5	0.0	34.1	9,642.6	34.1
Public Utility	1,490.8	0.0	13.1	1,503.9	13.1
Liquor Sales/Liter	903.2	0.0	(10.3)	892.9	(10.3)
Cigarette	595.2	0.0	3.7	598.9	3.7
Property (State Levy)	655.2	0.0	(1.0)	654.2	(1.0)
Real Estate Excise	7,751.0	0.0	137.2	7,888.2	137.2
Timber Excise	2,030.1	0.0	(5.3)	2,024.8	(5.3)
Other	4.4	0.0	(0.4)	4.0	(0.4)
Subtotal	1,038.4	0.0	28.9	1,067.3	28.9
	48,016.3	0.0	308.5	48,324.8	308.5
Insurance Commissioner					
Insurance Premiums	1,308.6	0.0	4.0	1,312.7	4.0
Liquor Control Board					
Fees, Cannabis Excise Tax	501.5	0.0	4.9	506.4	4.9
Beer & Wine Surtax	57.9	0.0	(0.7)	57.2	(0.7)
Lottery Commission					
Lottery Revenue	53.0	0.0	(0.7)	52.3	(0.7)
State Treasurer					
Interest Earnings	18.6	0.0	(1.2)	17.4	(1.2)
Office of Financial Management					
Other Agencies	214.1	0.0	(7.7)	206.4	(7.7)
Administrative Office of the Courts					
Fines and Forfeitures	134.5	0.0	(0.5)	134.0	(0.5)
Total General Fund-State *	\$50,304.5	\$0.0	\$306.6	\$50,611.1	\$306.6

¹ Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council November 20, 2019² Forecast for the 2019-21 biennium, adopted February 19, 2020

*Detail may not add to totals because of rounding.

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the State Treasurer, Liquor and Cannabis Board, Office of Financial Management

Table 3.6

Comparison of the General Fund-State forecast by agency

2019-21 biennium; GAAP basis

(millions of dollars)

Forecast by Agency	Nov 2019 Forecast¹	Non-Economic Changes	Forecast Revision	Nov 2019 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$23,939.5	\$0.0	\$108.4	\$24,047.9	\$108.4
Business & Occupation Use	9,608.5	0.0	34.1	9,642.6	34.1
Public Utility	1,490.8	0.0	13.1	1,503.9	13.1
Liquor Sales/Liter	903.2	0.0	(10.3)	892.9	(10.3)
Cigarette	595.2	0.0	17.6	612.8	17.6
Property (State Levy)	655.2	0.0	(1.0)	654.2	(1.0)
Real Estate Excise	7,834.8	0.0	137.2	7,972.0	137.2
Timber Excise	2,030.1	0.0	(5.3)	2,024.8	(5.3)
Other	4.5	0.0	(0.4)	4.1	(0.4)
Subtotal	1,038.4	0.0	28.6	1,067.0	28.6
Insurance Commissioner	48,100.2	0.0	322.1	48,422.3	322.1
Insurance Commissioner					
Insurance Premiums	1,308.6	0.0	4.0	1,312.7	4.0
Liquor Control Board					
Fees, Cannabis Excise Tax	501.5	0.0	4.9	506.4	4.9
Beer & Wine Surtax	57.9	0.0	(0.7)	57.2	(0.7)
Lottery Commission					
Lottery Revenue	58.6	0.0	(6.9)	51.7	(6.9)
State Treasurer					
Interest Earnings	17.4	0.0	(1.3)	16.1	(1.3)
Office of Financial Management					
Other Agencies	214.1	0.0	(7.7)	206.4	(7.7)
Administrative Office of the Courts					
Fines and Forfeitures	134.5	0.0	(0.5)	134.0	(0.5)
Total General Fund-State *	\$50,392.8	\$0.0	\$313.9	\$50,706.7	\$313.9

¹ Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council November 20, 2019

² Forecast for the 2019-21 biennium, adopted February 19, 2020

*Detail may not add to totals because of rounding.

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the State Treasurer, Liquor and Cannabis Board, Office of Financial Management

Table 3.7

Comparison of the General Fund-State forecast by agency
 2021-23 biennium; cash basis
 (millions of dollars)

Forecast by Agency	Nov 2019 Forecast¹	Non-Economic Changes	Forecast Revision	Feb 2020 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$25,387.9	\$0.0	\$120.9	\$25,508.8	\$120.9
Business & Occupation Use	10,542.2	0.0	48.6	10,590.8	48.6
Public Utility	1,551.1	0.0	20.2	1,571.3	20.2
Liquor Sales/Liter	982.1	0.0	2.0	984.1	2.0
Cigarette	616.3	0.0	5.5	621.8	5.5
Property (State Levy)	620.7	0.0	(3.2)	617.5	(3.2)
Real Estate Excise	8,616.2	0.0	276.6	8,892.8	276.6
Timber Excise	1,946.5	0.0	13.5	1,960.0	13.5
Other	4.7	0.0	(0.2)	4.5	(0.2)
Subtotal	1,069.0	0.0	16.6	1,085.6	16.6
Insurance Commissioner	51,336.5	0.0	500.6	51,837.1	500.6
Insurance Premiums	1,421.7	0.0	4.6	1,426.3	4.6
Liquor Control Board					
Fees, Cannabis Excise Tax	541.8	0.0	13.0	554.9	13.0
Beer & Wine Surtax	58.4	0.0	(0.3)	58.1	(0.3)
Lottery Commission					
Lottery Revenue	64.3	0.0	(10.3)	54.0	(10.3)
State Treasurer					
Interest Earnings	36.7	0.0	(5.6)	31.1	(5.6)
Office of Financial Management					
Other Agencies	185.8	0.0	12.3	198.2	12.3
Administrative Office of the Courts					
Fines and Forfeitures	133.7	0.0	(2.2)	131.6	(2.2)
Total General Fund-State *	\$53,779.0	\$0.0	\$512.3	\$54,291.3	\$512.3

¹ Forecast for the 2021-23 biennium adopted by the Economic and Revenue Forecast Council November 20, 2019

² Forecast for the 2021-23 biennium, adopted February 19, 2020

*Detail may not add to totals because of rounding.

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the State Treasurer, Liquor Control Board, Office of Financial Management

Table 3.8

Comparison of the General Fund-State forecast by agency
 2021-23 biennium; GAAP basis
 (millions of dollars)

Forecast by Agency	Nov 2019 Forecast¹	Non-Economic Changes	Forecast Revision	Feb 2020 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$25,387.9	\$0.0	\$120.9	\$25,508.8	\$120.9
Business & Occupation Use	10,542.2	0.0	48.6	10,590.8	48.6
Public Utility	982.1	0.0	2.0	984.1	2.0
Liquor Sales/Liter	616.3	0.0	5.5	621.8	5.5
Cigarette	620.7	0.0	(3.2)	617.5	(3.2)
Property (State Levy)	8,616.2	0.0	276.6	8,892.8	276.6
Real Estate Excise	1,946.5	0.0	13.5	1,960.0	13.5
Timber Excise	4.6	0.0	(0.1)	4.5	(0.1)
Other	1,069.0	0.0	16.6	1,085.6	16.6
Subtotal	51,336.5	0.0	500.7	51,837.1	500.7
Insurance Commissioner					
Insurance Premiums	1,421.7	0.0	4.6	1,426.3	4.6
Liquor Control Board					
Fees, Cannabis Excise Tax	541.8	0.0	13.0	554.9	13.0
Beer & Wine Surtax	58.4	0.0	(0.3)	58.1	(0.3)
Lottery Commission					
Lottery Revenue	59.3	0.0	(3.9)	55.4	(3.9)
State Treasurer					
Interest Earnings	37.3	0.0	(5.8)	31.4	(5.8)
Office of Financial Management					
Other Agencies	185.8	0.0	12.3	198.2	12.3
Administrative Office of the Courts					
Fines and Forfeitures	133.7	0.0	(2.2)	131.6	(2.2)
Total General Fund-State *	\$53,774.6	\$0.0	\$518.4	\$54,293.0	\$518.4

¹ Forecast for the 2021-23 biennium adopted by the Economic and Revenue Forecast Council November 20, 2019

² Forecast for the 2021-23 biennium, adopted February 19, 2020

*Detail may not add to totals because of rounding.

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the State Treasurer, Liquor Control Board, Office of Financial Management

Table 3.9
February 2020 General Fund-State forecast detail
2019-21 to 2023-25 biennia; cash basis
(Millions of Dollars)

Forecast by Source	Fiscal 2020	Fiscal 2021	2019-21 Biennium	Fiscal 2022	Fiscal 2023	2021-23 Biennium	Fiscal 2024	Fiscal 2025	2023-25 Biennium
State Taxes									
Retail sales**	\$11,858.7	\$12,189.2	\$25,508.8	\$12,549.9	\$12,958.9	\$27,237.3	\$13,386.8	\$13,850.4	\$27,237.3
Business & occupation Use**	4,699.8	4,942.8	10,590.8	5,175.3	5,415.5	11,569.9	5,659.9	5,910.0	11,569.9
Public Utility	760.1	743.8	1,571.3	771.5	799.8	1,700.3	832.7	867.6	1,700.3
Liquor sales/liter	424.7	468.3	984.1	483.4	500.7	1,054.7	518.1	536.6	1,054.7
Beer & wine surtax	297.3	301.6	621.8	307.8	314.0	647.4	320.4	327.0	647.4
Cigarette	28.4	28.9	58.1	29.0	29.1	58.5	29.2	29.3	58.5
Tobacco products	341.6	330.5	635.8	322.2	313.6	600.7	305.1	295.6	600.7
Cannabis Excise Taxes	57.3	58.1	118.2	58.8	59.5	120.9	60.1	60.8	120.9
Property (state school levy)	145.9	147.1	311.2	152.0	159.2	340.3	166.5	173.8	340.3
Leasehold Excise Tax	3,667.1	4,221.1	8,892.8	4,386.3	4,506.4	9,379.2	4,628.4	4,750.8	9,379.2
Public utility district	35.7	36.3	74.9	37.2	37.7	77.1	38.3	38.8	77.1
Brokered Natural Gas	60.0	61.3	126.1	62.5	63.6	130.5	64.7	65.8	130.5
Real estate excise***	23.7	23.8	48.2	24.0	24.3	49.4	24.6	24.9	49.4
Timber excise	1,092.3	932.5	1,960.0	970.5	989.5	2,033.1	1,001.5	1,031.6	2,033.1
Estate/inheritance	1.9	2.1	4.5	2.2	2.3	4.8	2.3	2.4	4.8
Boat excise	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Insurance premiums	15.3	15.2	30.4	15.2	15.2	31.4	16.0	15.4	31.4
Penalties and interest on past due taxes	641.5	671.1	1,426.3	698.9	727.5	1,538.3	756.0	782.2	1,538.3
Other	155.8	163.6	346.7	168.9	177.9	371.9	183.1	188.8	371.9
Total Taxes	24,367.0	25,392.5	49,759.5	26,271.0	27,150.8	53,421.8	28,050.2	29,009.1	57,059.3
State Non-Tax Sources									
Licenses, permits, fees	142.1	143.9	295.2	146.5	148.7	299.4	150.5	148.9	299.4
Liquor & Cannabis fees	101.1	112.3	243.7	119.8	123.9	259.7	127.9	131.9	259.7
Earnings on investments	5.1	12.3	31.1	14.6	16.5	38.4	18.4	20.1	38.4
Administrative Office of the Courts	67.6	66.4	131.6	65.9	65.6	130.5	65.4	65.1	130.5
Transfers of unclaimed property	112.2	86.8	176.4	87.7	88.7	180.0	89.6	90.4	180.0
Other revenue & transfers	(13.6)	15.5	(8.5)	(4.8)	(3.6)	(37.5)	(18.4)	(19.1)	(37.5)
Total Non-Tax	414.5	437.1	851.6	429.7	439.7	869.5	433.3	437.4	870.6
Total General Fund-State *	\$24,781.4	\$25,829.7	\$50,611.1	\$26,700.8	\$27,590.5	\$54,291.3	\$28,483.5	\$29,446.5	\$57,930.0

* Detail may not add to totals due to rounding
**GFS portion after Initiative 900 transfer
***Includes penalties and interest

Table 3.10

Track Record for the 2019-21 General Fund-State Cash Forecast

February 2016 through February 2020

Cash Basis - Millions of Dollars

<u>Date of Forecast</u>	<u>Department of Revenue*</u>	<u>Other Agencies</u>	<u>Subtotal*</u>	<u>Non-Economic Changes**</u>	<u>Total Change</u>	<u>Total General Fund-State Cash Basis</u>
February 2016 #	\$36,887	\$1,823				\$43,441
Changes to Forecast						
June 2016	172	(31)	141	(7) #1	134	43,575
September 2016	86	(31)	55	0	55	43,630
November 2016	21	4	26	0	26	43,656
March 2017	241	(55)	186	0	186	43,842
June 2017	47	(13)	34	(1) #2	34	43,875
September 2017	245	(3)	243	3,278 #3	3,521	47,396
November 2017	188	(2)	186	0	186	47,582
February 2018	655	16	671	0	671	48,253
June 2018	426	22	448	(181) #4	267	48,520
September 2018	295	22	317	38 #5	355	48,875
November 2018	186	3	189	0	189	49,064
March 2019	465	(35)	430	115 #6	545	49,609
June 2019	57	29	86	109 #7	195	49,804
September 2019	307	3	310	(84) #8	226	50,030
November 2019	283	(8)	274	0	274	50,304
February 2020	309	(2)	307	0	307	50,611
Total change***:						
From February 2016	3,984	(82)	3,902	3,268	7,170	
Percent change	10.8	(4.5)	9.0	7.5	16.5	

* Excludes legislative, judicial, statutorily required or other major non-economic changes.

** Includes legislative, judicial, statutorily required or other major non-economic changes.

*** Detail may not add to total due to rounding.

First official forecast for the 2019-21 biennium.

#1 Legislative revenue changes from the 2016 regular and first special legislative sessions

#2 Sum of legislative revenue changes from 2017 legislative sessions through June 20, 2017

#3 Sum of legislative and budget driven revenue changes from 2017 special legislative sessions since the June 2017 forecast

#4 Sum of legislative and budget driven revenue changes from the 2018 legislative session

#5 Estimated increase in sales tax collections due US Supreme Court ruling of June 21, 2018.

#6 Effects of SSB 5581, passed in March of 2019 legislative session

#7 Sum of legislative and budget driven revenue changes from the 2018 legislative session subsequent to the March 2019 forecast

#8 Later-than-forecasted cash transfer of Property Tax out of GF-S into ELTA

Table 3.11

Track Record for the 2021-23 General Fund-State Cash Forecast

February 2018 through February 2020

Cash Basis - Millions of Dollars

<u>Date of Forecast</u>	<u>Department of Revenue*</u>	<u>Other Agencies</u>	<u>Subtotal*</u>	<u>Non-Economic Changes**</u>	<u>Total Change</u>	<u>Total General Fund-State Cash Basis</u>
February 2018[#]	\$49,551	\$2,381				\$51,932
Changes to Forecast						
June 2018	324	33	357	(7) ^{#1}	350	52,282
September 2018	248	1	249	46 ^{#2}	295	52,577
November 2018	228	(27)	201	0	201	52,778
March 2019	402	(33)	369	190 ^{#3}	559	53,337
June 2019	17	8	24	322 ^{#4}	347	53,683
September 2019	(89)	10	(79)	0	(79)	53,604
November 2019	169	6	175	0	175	53,779
February 2020	501	12	512	0	512	54,291
Total change***:						
From February 2016	1,799	9	1,808	551	2,359	
Percent change	3.6	0.4	3.5	1.1	4.5	

* Excludes legislative, judicial, statutorily required or other major non-economic changes.

** Includes legislative, judicial, statutorily required or other major non-economic changes.

*** Detail may not add to total due to rounding.

[#] First official forecast for the 2021-23 biennium.^{#1} Sum of legislative and budget driven revenue changes from the 2018 legislative session^{#2} Estimated increase in sales tax collections due US Supreme Court ruling of June 21, 2018.^{#3} Effects of SSB 5581, passed in March of 2019 legislative session^{#4} Sum of legislative and budget driven revenue changes from the 2018 legislative session subsequent to the March 2019 forecast

Table 3.12

2019-21 Enacted Budget Balance Sheet

General Fund-State (GFS), Education Legacy Trust Account (ELTA),
Washington Opportunity Pathways Account (OPA) and Budget Stabilization Account (BSA)
Dollars in Millions

	2019-21		
	GFS	ELTA and OPA	TOTAL
RESOURCES			
Beginning Fund Balance	999.3	981.9	1,981.2
November 2019 Revenue Forecast change	50,304.5	1,429.0	51,733.4
February 2020 Revenue Forecast change	306.6	299.4	606.0
Current Revenue Totals	50,611.1	1,728.4	52,339.5
Transfer to Budget Stabilization Account (1% of GSR)	(502.6)		(502.6)
Transfer to Budget Stabilization Account (EGSR)	-		-
Enacted Fund Transfers	49.0	160.0	209.0
Assumed Prior Period Adjustments	40.8		40.8
Total Resources (including beginning fund balance)	51,197.6	2,870.2	54,067.9
EXPENDITURES			
Enacted Budgets	50,395.5	2,103.2	52,498.6
Assumed Reversions	(353.7)	-	(353.7)
Total Expenditures	50,041.8	2,103.2	52,144.9
RESERVES			
Projected Ending Balance (GFS + ELTA + OPA)	1,155.9	767.1	1,922.9
Budget Stabilization Account			
Budget Stabilization Account Beginning Balance	1,618.4		1,618.4
Transfers from General Fund (1% of GSR)	502.6		502.6
Transfers from GFS (EGSR)	-		-
Assumed Interest Earnings	56.5		56.5
Projected Budget Stabilization Account Ending Balance	2,177.5		2,177.5
Total Reserves (Near General Fund plus Budget Stabilization)	3,333.4	767.1	4,100.5

Acronyms

GSR- General State Revenues

EGSR- Extraordinary General State Revenues

CAFR- Comprehensive Annual Financial Report

Table 3.13

**Alternative forecasts compared to the baseline forecast
2019-21 biennium**

(cash basis, millions of dollars)

Forecast by Source	Optimistic Forecast	Baseline Forecast	Pessimistic Forecast
Department of Revenue			
Retail Sales	\$24,755.9	\$24,047.9	\$22,995.6
Business & Occupation Use	9,920.9	9,642.6	9,254.4
Public Utility	1,550.8	1,503.9	1,441.0
Property (school levy)	914.7	892.9	849.8
Real Estate Excise	7,953.1	7,888.2	7,822.8
Other	2,181.7	2,024.8	1,988.5
Subtotal	2,367.7	2,324.5	2,296.7
	49,644.9	48,324.8	46,648.8
Insurance Commissioner¹	1,378.3	1,312.7	1,247.0
Lottery Commission	54.0	52.3	50.6
State Treasurer - Interest earnings	39.3	17.4	1.6
Liquor and Cannabis Surtaxes & Fees²	579.0	563.6	550.4
Office of Financial Management			
Other agencies	210.5	206.4	202.3
Administrative Office of the Courts			
Fines and Forfeitures	137.0	134.0	130.9
Total General Fund - State*	\$52,043.0	\$50,611.1	\$48,831.5
Difference from February 2020 Baseline	\$1,431.9		(\$1,779.6)

1 Insurance premiums, General Fund-State portion.

2 Includes beer and wine surtax, cannabis excise tax, distributor fees, retailer fees, licensing fees.

* Detail may not add to total due to rounding.

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the
State Treasurer, Liquor Control Board, Office of Financial Management

Table 3.14

**Alternative forecasts compared to the baseline forecast
2021-23 biennium**

(cash basis, millions of dollars)

Forecast by Source	Optimistic Forecast	Baseline Forecast	Pessimistic Forecast
Department of Revenue			
Retail Sales	\$27,556.2	\$25,508.8	\$22,771.2
Business & Occupation Use	11,361.3	10,590.8	9,638.2
Public Utility	1,693.9	1,571.3	1,418.3
Property (school levy)	1,033.7	984.1	913.2
Real Estate Excise	8,991.2	8,892.8	8,804.2
Other	2,297.7	1,960.0	1,648.4
Subtotal	2,448.2	2,329.4	2,171.1
	55,382.2	51,837.1	47,364.6
Insurance Commissioner¹	1,497.7	1,426.3	1,355.0
Lottery Commission	56.7	54.0	51.3
State Treasurer - Interest earnings	65.4	31.1	5.8
Liquor and Cannabis Surtaxes & Fees²	644.0	613.0	576.5
Office of Financial Management			
Other agencies	206.1	198.2	190.2
Administrative Office of the Courts			
Fines and Forfeitures	138.2	131.6	121.3
Total General Fund - State*	\$57,990.3	\$54,291.3	\$49,664.8
Difference from February 2020 Baseline	\$3,699.0		(\$4,626.5)

1 Insurance premiums, General Fund-State portion.

2 Includes beer and wine surtax, cannabis excise tax, distributor fees, retailer fees, licensing fees.

* Detail may not add to total due to rounding.

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the
State Treasurer, Liquor Control Board, Office of Financial Management

Table 3.15

Lottery transfers by fund

February 2020 Forecast

(cash basis, millions of dollars)

	Lottery: Total Transfers:*	Mariners General Fund	Mariners Stadium	Exhibition Center & Stadium	Student Achievement Account	School Construction Account	Problem Gambling Account	Economic Development Account	Opportunity Pathways Account	Veteran's VIP Account	Education Legacy Trust Account
2014	147.9	9.3	0.0	10.8	0.0	0.0	0.3	3.7	113.7	0.0	10.1
2015	143.1	0.6	0.0	11.2	0.0	0.0	0.3	4.7	120.2	0.0	6.1
2013-15 Biennium	291.0	9.9	0.0	22.0	0.0	0.0	0.6	8.4	233.9	0.0	16.1
2016	171.6	17.1	0.0	11.7	0.0	0.0	0.3	3.3	139.1	0.0	0.0
2017	159.7	14.8	0.0	12.2	0.0	0.0	0.3	4.8	126.6	0.0	0.0
2015-17 Biennium	331.2	31.9	0.0	23.8	0.0	0.0	0.7	8.0	265.7	0.0	0.0
2018	183.6	38.5	0.0	12.6	0.0	0.0	0.3	3.5	128.5	0.0	0.0
2019	213.8	38.7	0.0	13.1	0.0	0.0	0.4	5.8	155.7	0.0	0.0
2017-19 Biennium	397.3	77.3	0.0	25.8	0.0	0.0	0.8	9.3	284.2	0.0	0.0
2020	186.9	15.9	0.0	13.7	0.0	0.0	0.4	4.0	152.9	0.0	0.0
2021	183.3	36.4	0.0	14.2	0.0	0.0	0.4	4.3	127.9	0.0	0.0
2019-21 Biennium	370.2	52.3	0.0	27.9	0.0	0.0	0.8	8.4	280.9	0.0	0.0
2022	186.2	26.1	0.0	0.0	0.0	0.0	0.4	4.3	155.4	0.0	0.0
2023	189.4	27.8	0.0	0.0	0.0	0.0	0.4	4.3	156.9	0.0	0.0
2021-23 Biennium	375.6	54.0	0.0	0.0	0.0	0.0	0.8	8.6	312.3	0.0	0.0
2024	191.8	27.9	0.0	0.0	0.0	0.0	0.4	4.3	159.2	0.0	0.0
2025	194.1	27.5	0.0	0.0	0.0	0.0	0.4	4.3	161.8	0.0	0.0
2023-25 Biennium	385.9	55.5	0.0	0.0	0.0	0.0	0.8	8.6	321.1	0.0	0.0

Table 3.16

Lottery transfers by fund

February 2020 Forecast

(GAAP basis, millions of dollars)

	Lottery: Total Transfers:*	Mariners General Fund	Mariners Stadium	Exhibition Center & Stadium	Student Achievement Account	School Construction Account	Problem Gambling Account	Economic Development Account	Opportunity Pathways Account	Veteran's VIP Account	Education Legacy Trust Account
2014	147.7	0.6	0.0	10.8	0.0	0.0	0.3	4.0	121.9	0.0	10.1
2015	141.3	0.0	0.0	11.2	0.0	0.0	0.3	4.7	119.0	0.0	6.1
2013-15 Biennium	288.9	0.6	0.0	22.0	0.0	0.0	0.6	8.7	240.9	0.0	16.1
2016	175.5	31.9	0.0	11.7	0.0	0.0	0.3	2.8	128.7	0.0	0.0
2017	161.9	16.8	0.0	12.2	0.0	0.0	0.3	4.9	126.8	0.0	0.0
2015-17 Biennium	337.4	48.7	0.0	23.8	0.0	0.0	0.7	7.7	255.5	0.0	0.0
2018	183.0	31.2	0.0	12.6	0.0	0.0	0.4	4.6	134.2	0.0	0.0
2019	215.8	30.9	0.0	13.1	0.0	0.0	0.4	4.6	166.7	0.0	0.0
2017-19 Biennium	398.8	62.1	0.0	25.8	0.0	0.0	0.8	9.2	300.9	0.0	0.0
2020	180.4	25.2	0.0	13.7	0.0	0.0	0.4	4.3	136.9	0.0	0.0
2021	182.9	26.5	0.0	14.2	0.0	0.0	0.4	4.3	137.5	0.0	0.0
2019-21 Biennium	363.4	51.7	0.0	27.9	0.0	0.0	0.8	8.6	274.4	0.0	0.0
2022	186.5	27.5	0.0	0.0	0.0	0.0	0.4	4.3	154.3	0.0	0.0
2023	189.7	27.9	0.0	0.0	0.0	0.0	0.4	4.3	157.1	0.0	0.0
2021-23 Biennium	376.2	55.4	0.0	0.0	0.0	0.0	0.8	8.6	311.5	0.0	0.0
2024	192.0	27.9	0.0	0.0	0.0	0.0	0.4	4.3	159.4	0.0	0.0
2025	194.3	28.0	0.0	0.0	0.0	0.0	0.4	4.3	161.6	0.0	0.0
2023-25 Biennium	386.3	55.9	0.0	0.0	0.0	0.0	0.8	8.6	321.0	0.0	0.0

* Total Transfers are equal to total sales less total expenses (prizes, cost of sales, administration etc.)

Source: Lottery Commission, ERFC

Table 3.17

General Fund-State, Education Legacy Trust Account and Opportunity Pathways Account (Near General Fund-State)

History and Forecast by Fiscal Year (Cash basis)

February 2020 - Millions of Dollars

	General Fund-State (GF-S) (current definition)		Education Legacy Trust Fund* (ELTA)		Total GF-S plus ELTA		WA Opportunity Pathways Account (OPA)		Total GF-S plus ELTA and OPA	
	Level	% Chg.	Level	% Chg.	Level	% Chg.	Level	% Chg.	Level	% Chg.
History:										
FY 2001	\$11,560	4.4%			\$11,560	4.4%			\$11,560	4.4%
FY 2002	\$11,632	0.6%			\$11,632	0.6%			\$11,632	0.6%
FY 2003	\$11,721	0.8%			\$11,721	0.8%			\$11,721	0.8%
FY 2004	\$12,358	5.4%			\$12,358	5.4%			\$12,358	5.4%
FY 2005	\$13,036	5.5%			\$13,036	5.5%			\$13,036	5.5%
FY 2006	\$14,318	9.8%	\$115		\$14,432	10.7%			\$14,432	10.7%
FY 2007	\$15,467	8.0%	\$266	132.2%	\$15,734	9.0%			\$15,734	9.0%
FY 2008	\$15,659	1.2%	\$213	-20.1%	\$15,872	0.9%			\$15,872	0.9%
FY 2009	\$14,158	-9.6%	\$224	5.4%	\$14,382	-9.4%			\$14,382	-9.4%
FY 2010	\$13,571	-4.1%	\$157	-29.9%	\$13,728	-4.6%			\$13,728	-4.6%
FY 2011	\$14,648	7.9%	\$112	-29.0%	\$14,759	7.5%	\$99		\$14,859	8.2%
FY 2012	\$14,874	1.5%	\$114	2.3%	\$14,988	1.6%	\$118	19.1%	\$15,107	1.7%
FY 2013	\$15,783	6.1%	\$101	-11.5%	\$15,884	6.0%	\$126	5.9%	\$16,009	6.0%
FY 2014	\$16,383	3.8%	\$197	95.3%	\$16,580	4.4%	\$114	-9.4%	\$16,694	4.3%
FY 2015	\$17,283	5.5%	\$207	5.0%	\$17,491	5.5%	\$120	5.7%	\$17,611	5.5%
FY 2016	\$18,579	7.5%	\$215	3.6%	\$18,793	7.4%	\$139	15.7%	\$18,933	7.5%
FY 2017	\$19,739	6.2%	\$252	17.5%	\$19,991	6.4%	\$127	-9.0%	\$20,118	6.3%
FY 2018	\$21,712	10.0%	\$302	19.6%	\$22,014	10.1%	\$129	1.5%	\$22,143	10.1%
FY 2019	\$22,430	3.3%	\$1,352	348.1%	\$23,783	8.0%	\$156	21.1%	\$23,938	8.1%
Forecast:										
FY 2020	\$24,781	10.5%	\$940	-30.5%	\$25,721	8.2%	\$153	-1.8%	\$25,874	8.1%
FY 2021	\$25,830	4.2%	\$508	-45.9%	\$26,338	2.4%	\$128	-16.4%	\$26,466	2.3%
FY 2022	\$26,701	3.4%	\$532	4.8%	\$27,233	3.4%	\$155	21.5%	\$27,388	3.5%
FY 2023	\$27,591	3.3%	\$554	4.1%	\$28,145	3.3%	\$157	1.0%	\$28,301	3.3%
FY 2024	\$28,484	3.2%	\$451	-18.5%	\$28,935	2.8%	\$159	1.5%	\$29,094	2.8%
FY 2025	\$29,446	3.4%	\$473	4.9%	\$29,920	3.4%	\$162	1.6%	\$30,082	3.4%
Biennial Totals										
07-09 Biennium	\$29,817	0.1%	\$437	14.8%	\$30,254	0.3%	\$0	NA	\$30,254	0.3%
09-11 Biennium	\$28,218	-5.4%	\$269	-38.5%	\$28,487	-5.8%	\$99	NA	\$28,586	-5.5%
11-13 Biennium	\$30,657	8.6%	\$215	-19.9%	\$30,872	8.4%	\$244	145.2%	\$31,116	8.8%
13-15 Biennium	\$33,666	9.8%	\$405	88.0%	\$34,071	10.4%	\$234	-4.1%	\$34,305	10.2%
15-17 Biennium	\$38,317	13.8%	\$467	15.4%	\$38,785	13.8%	\$266	13.6%	\$39,050	13.8%
17-19 Biennium	\$44,143	15.2%	\$1,654	254.1%	\$45,797	18.1%	\$284	6.9%	\$46,081	18.0%
19-21 Biennium	\$50,611	14.7%	\$1,447	-12.5%	\$52,059	13.7%	\$281	-1.2%	\$52,339	13.6%
21-23 Biennium	\$54,291	7.3%	\$1,086	-25.0%	\$55,377	6.4%	\$312	11.2%	\$55,690	6.4%
23-25 Biennium	\$57,930	6.7%	\$925	-14.9%	\$58,855	6.3%	\$321	2.8%	\$59,176	6.3%

*Education legacy trust fund excluding FY 14 and FY 15 lottery fund transfers. Includes pension stabilization fund interest in FY 08 and FY 09.

Table 3.18

Forecasted distribution of excise tax and license fees from cannabis sales

February 2020

Thousands of dollars

Fiscal year	Total of cannabis excise taxes plus license fees	LCB administration and pre- distribution allotments	Total to distribute	Distribution of remaining funds						
				DSHS substance abuse program	Dept. of Health cannabis education program	UW/WSU research	Basic Health Plan Trust Account	Health Care Authority community health centers	OSPI dropout prevention	General Fund-State*
2015	\$67,486	\$22,074	\$45,412	\$5,166	\$0	\$0	\$22,706	\$2,271	\$0	\$15,269
2016	\$168,051	\$8,551	\$159,500	\$12,814	\$7,500	\$345	\$79,750	\$7,791	\$251	\$51,049
2017	\$300,635	\$9,201	\$291,434	\$27,786	\$7,500	\$345	\$145,717	\$12,979	\$511	\$96,596
2018	\$360,608	\$13,772	\$346,836	\$27,786	\$9,761	\$365	\$173,418	\$17,616	\$513	\$117,377
2019	\$391,191	\$14,558	\$376,633	\$0	\$9,764	\$365	\$188,317	\$46,191	\$515	\$131,482
2020	\$435,639	\$16,906	\$418,733	\$0	\$10,786	\$377	\$209,366	\$46,741	\$522	\$150,940
2021	\$437,730	\$15,967	\$421,763	\$0	\$10,616	\$387	\$210,881	\$47,134	\$530	\$152,214
2022	\$447,231	\$15,695	\$431,536	\$0	\$10,616	\$387	\$215,768	\$47,134	\$530	\$157,101
2023	\$461,793	\$15,696	\$446,097	\$0	\$10,616	\$387	\$223,049	\$47,134	\$530	\$164,382
2024	\$476,394	\$15,695	\$460,699	\$0	\$10,616	\$387	\$230,349	\$47,134	\$530	\$171,682
2025	\$491,119	\$15,696	\$475,423	\$0	\$10,616	\$387	\$237,712	\$47,134	\$530	\$179,045
Biennial totals										
2013-15	\$67,486	\$22,074	\$45,412	\$5,166	\$0	\$0	\$22,706	\$2,271	\$0	\$15,269
2015-17	\$468,686	\$17,752	\$450,934	\$40,600	\$15,000	\$690	\$225,467	\$20,770	\$762	\$147,645
2017-19	\$751,799	\$28,330	\$723,469	\$27,786	\$19,525	\$730	\$361,735	\$63,807	\$1,028	\$248,859
2019-21	\$873,368	\$32,873	\$840,495	\$0	\$21,402	\$764	\$420,248	\$93,875	\$1,052	\$303,155
2021-23	\$909,024	\$31,391	\$877,633	\$0	\$21,232	\$774	\$438,817	\$94,268	\$1,060	\$321,483
2023-25	\$967,513	\$31,391	\$936,122	\$0	\$21,232	\$774	\$468,061	\$94,268	\$1,060	\$350,727

*Before distributions to local governments

Table 3.19

Workforce Education Investment Account

February 2020

Thousands of dollars

	FY20	FY21	2019-21 Biennium	FY22	FY23	2021-23 Biennium	FY24	FY25	2023-25 Biennium
November 2019 forecast	113,100	266,900	380,000	192,200	200,900	393,100	211,100	240,200	451,300
Legislative change	(68,000)	38,400	(29,600)	115,300	119,000	234,300	117,800	98,200	216,000
February 2020 forecast	45,100	305,300	350,400	307,500	319,900	627,400	328,900	338,400	667,300

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Chapter 4: Comparing Washington and U.S. Employment Before, During, and After Recession

- **A recession is defined as a widespread decline in economic activity, visible in real GDP, employment and retail sales among other economic measures.**
- **This chapter focuses on changes in employment around and during recessions to look for similarities or differences between Washington and the U.S. as a whole.**
- **In general, the pattern of employment change in Washington and the U.S. before, during and after recessions is quite similar.**

Overview

The start and end of recessions are typically determined by the National Bureau of Economic Research

The start and end date of recessions in the U.S. are typically determined by the Business Cycle Dating Committee of the National Bureau of Economic Research (NBER), a private, non-profit, non-partisan organization dedicated to conducting economic research and to disseminating research findings among academics, public policy makers, and business professionals. The Committee defines a recession as a period of falling economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales. Table 1 shows the start and end dates for U.S. recessions for the seven most recent recessions.

Analysis compares changes in employment around and during recessions in Washington and the U.S.

However, the start or end of recessions in individual states or cities may or may not coincide exactly with the those dates for the U.S. In what follows, we will look at changes in one aspect of recessions, employment, and compare Washington and the U.S. We will use quarterly employment data and look at employment changes during recessions as well as one to 4 quarters before and after each recession. Because the 1980 and 1981-82 recessions are separated by only three quarters, the analysis will exclude the period after the 1980 recession and the period before the 1981-82 recession.

Table 1 - NBER Recession and Expansion Dates

Business Cycle		Recession	Expansion
Reference Dates	Reference Dates		
<i>Peak month</i>	<i>Trough month</i>	<i>Duration, peak to trough</i>	<i>Duration, trough to peak</i>
December 1969 (Q4)	November 1970 (Q4)	11	106
November 1973 (Q4)	March 1975 (Q1)	16	36
January 1980 (Q1)	July 1980 (Q3)	6	58
July 1981 (Q3)	November 1982 (Q4)	16	12
July 1990 (Q3)	March 1991 (Q1)	8	92
March 2001 (Q1)	November 2001 (Q4)	8	120
December 2007 (Q4)	June 2009 (Q2)	18	128*

Quarterly dates are in parentheses

* as of February 29, 2020

Source: National Bureau of Economic Research (<http://www.nber.org/cycles/sept2010.html>)

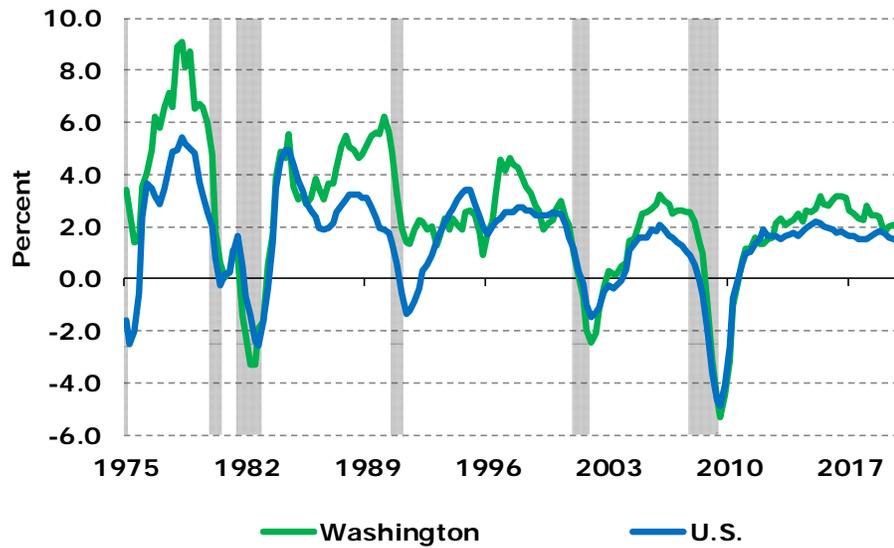
Employment changes are measured on a year-over-year and quarter-over-quarter basis.

We can measure the percentage change in employment over the year by comparing employment for a quarter to employment in the same quarter one year prior; we will refer to this as the year-over-year change in employment. We can also measure the percentage change in employment by comparing employment for a quarter to employment in the previous quarter; we will refer to this as quarter-over-quarter change in employment.

Figure 1 provides a graphical representation of the percentage change in year-over-year employment for Washington and the U.S. starting in the first quarter of 1969 while Figure 2 does the same for the percentage change in quarter-over-quarter employment. The Washington and U.S employment changes follow the same general pattern but there are differences. Tables 2 and 3 break these data out by recession for year-over-year and quarter-over-quarter employment.

Year-over-year employment growth for Washington and the U.S.

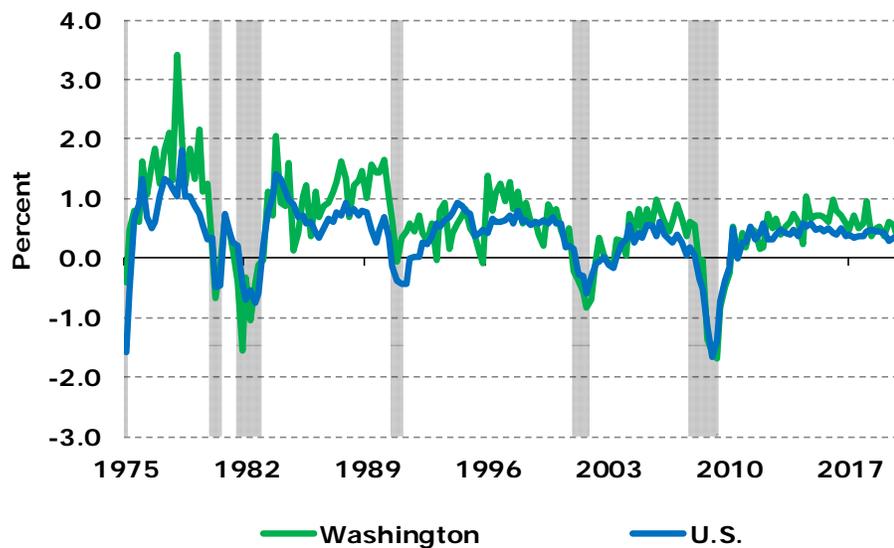
Figure 4.1: Year-Over-Year Employment Change



Source: Quarterly Washington and U.S. employment data: U.S. Bureau of Labor Statistics, Washington Employment Security Department, ERFC; data through 2019.

Quarter-over-quarter employment growth for Washington and the U.S.

Figure 4.2: Quarter-Over-Quarter Employment Change



Source: Quarterly Washington and U.S. employment data: U.S. Bureau of Labor Statistics, Washington Employment Security Department, ERFC; data through 2019.

Before recession

Pre-recession employment data do not generally indicate a pending recession

Looking at year-over-year employment growth in the four quarters prior to the start of the last seven recessions, we see no indication of pending recession in either Washington or the U.S. In all cases, employment growth is positive; year-over-year employment growth is not a leading indicator of recession. The average year-over-year employment change in the four quarters prior to the start of a recession is a robust 4.0% for Washington and 2.8% for the U.S.; for the quarter immediately prior to the recession it is 3.5% for Washington and 2.4% for the U.S.

Washington quarter-over-quarter employment data prior to the 1970 recession is an exception.

The same is true for quarter-over-quarter employment changes with one exception. In the two quarters before the 1970 recession, quarter-over-quarter employment in Washington declined. However, for the U.S. and for all other recessions for Washington, employment was growing in the four quarters prior to recession.

During recession

Year-over-year employment change during recession is more extreme in Washington.

Year-over-year employment growth slows considerably during recessions but we see greater extremes in Washington than the U.S. On average over the seven recessions, year-over-year employment growth fell to 0.9% in Washington and 0.4% in the U.S. Despite the higher average year-over-year employment growth in Washington, employment declined in four of the seven recessions compared to only two for the U.S.

Quarter-over-quarter employment change fell during all recessions analyzed.

For quarter-over-quarter employment change, on average employment fell in both Washington and the U.S. in every quarter during the seven recessions. While on average the changes are similar for Washington and the U.S., Washington actually saw average employment growth during both the 1973-75 and 1990-91 recessions. For the U.S., average employment declined in each of the seven recessions.

After recession

Year-over-year employment changes are most dramatic after the end of recessions.

Year-over-year declines in employment are most dramatic after the end of recessions. On average, for both the Washington and the U.S., we see declining year-over-year employment for the four quarters following the end of the last seven recessions. While the average post-recession employment declines in Washington are somewhat smaller than the U.S. there is wide variability across the seven recessions.

Washington and U.S. employment experience differed after the 1970 recession.

In the quarter following the 1970 recession, Washington saw a 4.6% year-over-year employment decline while nationally year-over-year employment fell by 0.7%. Averaging over the four quarters after the 1970 recession, the U.S. experienced a 1.3%

year-over-year employment increase while year-over-year employment in Washington fell by 1.4%.

Washington employment grew after the 1973-75 and 1990-91 recessions.

On the other hand, year-over-year employment in Washington grew in each of the four quarters following the 1973-75 and 1990-91 recessions while U.S. year-over-year employment declined in three of the four quarters following the 1973-75 recession and in all four quarters following the 1990-91 recession.

Post-recession quarter-over-quarter employment changes were similar for Washington and

Examining the quarter-over-quarter employment changes, we see that on average both Washington and the U.S. saw an employment decline in the first quarter after a recession. After that, the average employment change for the first and second quarters and for the first four quarters after recession were flat to positive.

Conclusion

The pattern of employment change in Washington and the U.S. before, during and after recessions is quite similar.

Year-over-year employment growth slows considerably during recessions but we see greater extremes in Washington than the U.S. On average over the seven recessions, year-over-year employment growth fell to 0.9% in Washington and 0.4% in the U.S. Despite the higher average year-over-year employment growth in Washington, employment declined in four of the seven recessions compared to only two for the U.S.

Quarter-over-quarter employment change fell during all recessions analyzed.

For quarter-over-quarter employment change, on average employment fell in both Washington and the U.S. in every quarter during the seven recessions. While on average the changes are similar for Washington and the U.S., Washington actually saw average employment growth during both the 1973-75 and 1990-91 recessions. For the U.S., average employment declined in each of the seven recessions.

Table 2 - Year-over-year average employment change

1970 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	1.9%	0.9%	0.4%	-3.6%	-4.6%	-3.3%	-1.4%
US	3.7%	3.5%	3.1%	0.7%	-0.7%	-0.3%	1.3%
1973-75 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	4.6%	4.7%	4.5%	4.0%	2.6%	2.0%	2.2%
US	4.3%	4.3%	4.2%	1.7%	-2.5%	-2.3%	-0.7%
1980 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	6.4%	6.3%	6.0%	2.4%	n/a	n/a	n/a
US	3.6%	2.9%	2.5%	0.8%	n/a	n/a	n/a
1981-82 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	n/a	n/a	n/a	-1.9%	-1.6%	-0.6%	1.1%
US	n/a	n/a	n/a	-0.8%	-1.7%	-1.0%	0.7%
1990-91 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	5.7%	5.9%	5.6%	3.3%	1.4%	1.3%	1.7%
US	2.0%	1.8%	1.7%	0.4%	-1.3%	-1.3%	-1.0%
2001 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	2.5%	2.2%	2.0%	-0.4%	-2.5%	-2.3%	-1.5%
US	2.2%	1.8%	1.6%	0.1%	-1.5%	-1.4%	-1.1%
2007-09 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	2.6%	2.6%	2.5%	-0.2%	-5.3%	-4.9%	-3.5%
US	1.3%	1.1%	1.0%	-1.4%	-4.9%	-4.5%	-3.1%
Average, all recessions:							
WA	4.0%	3.8%	3.5%	0.9%	-1.7%	-1.3%	-0.2%
US	2.8%	2.6%	2.4%	0.4%	-2.1%	-1.8%	-0.6%

Table 3 - Quarter-over-quarter average employment change

1970 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	0.1%	-0.3%	-0.1%	-1.4%	-0.1%	0.1%	0.3%
US	0.8%	0.6%	0.4%	-0.2%	0.4%	0.4%	0.5%
1973-75 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	1.1%	0.9%	0.5%	0.8%	0.5%	0.6%	0.9%
US	1.0%	0.8%	0.6%	0.0%	-0.5%	0.1%	0.6%
1980 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	1.5%	1.2%	1.2%	-0.2%	n/a	n/a	n/a
US	0.6%	0.4%	0.3%	-0.2%	n/a	n/a	n/a
1981-82 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	n/a	n/a	n/a	-0.6%	0.0%	0.5%	1.0%
US	n/a	n/a	n/a	-0.5%	0.2%	0.5%	0.8%
1990-91 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	1.4%	1.3%	1.0%	0.3%	0.5%	0.5%	0.6%
US	0.4%	0.5%	0.3%	-0.3%	-0.4%	-0.2%	-0.1%
2001 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	0.5%	0.4%	0.5%	-0.5%	-0.7%	-0.4%	-0.1%
US	0.4%	0.2%	0.2%	-0.3%	-0.3%	-0.2%	-0.1%
2007-09 recession							
	1-4 Q before	1&2 Q before	1 Q before	during	1 Q after	1&2 Q after	1-4 Q after
WA	0.6%	0.5%	0.4%	-0.5%	-0.8%	-0.7%	-0.3%
US	0.2%	0.2%	0.1%	-0.7%	-0.7%	-0.6%	-0.2%
Average, all recessions:							
WA	0.9%	0.7%	0.6%	-0.2%	-0.1%	0.1%	0.4%
US	0.6%	0.4%	0.3%	-0.3%	-0.2%	0.0%	0.2%

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Detail Components of the Washington State Economic and Revenue Forecast

Calendar Years

Note: The economic data discussed in these tables were current at the time the forecast was prepared. Many concepts have changed since then due to new releases and data revisions.

Table A1.1
U.S. Economic Forecast Summary
Forecast 2020 to 2025

	2018	2019	2020	2021	2022	2023	2024	2025
Real National Income Accounts (Billions of Chained 2012 Dollars)								
Real Gross Domestic Product	18,638.2	19,072.5	19,433.0	19,812.3	20,188.8	20,592.6	21,004.4	21,424.5
% Ch	2.9	2.3	1.9	2.0	1.9	2.0	2.0	2.0
Real Consumption	12,944.5	13,279.6	13,584.8	13,868.7	14,146.1	14,457.3	14,760.9	15,070.9
% Ch	3.0	2.6	2.3	2.1	2.0	2.2	2.1	2.1
Real Nonresidential Fixed Investment	2,692.3	2,749.8	2,779.9	2,912.7	3,028.6	3,164.3	3,301.4	3,422.7
% Ch	6.4	2.1	1.1	4.8	4.0	4.5	4.3	3.7
Real Residential Fixed Investment	602.9	593.5	608.4	600.5	599.0	604.6	613.0	621.5
% Ch	-1.5	-1.5	2.5	-1.3	-0.2	0.9	1.4	1.4
Real Personal Income	16,476.8	16,981.6	17,353.6	17,681.0	18,043.5	18,464.3	18,878.4	19,311.7
% Ch	3.4	3.1	2.2	1.9	2.0	2.3	2.2	2.3
Real Per Capita Income (\$/Person)	50,277	51,451	52,207	52,820	53,532	54,408	55,258	56,157
% Ch	2.8	2.3	1.5	1.2	1.3	1.6	1.6	1.6
Price and Wage Indexes								
PCE Price Index (2012=100)	108.1	109.7	111.3	113.3	115.5	117.9	120.4	122.9
% Ch	2.1	1.4	1.5	1.8	1.9	2.0	2.1	2.1
U.S. Consumer Price Index (1982-84=1.0)	2.511	2.557	2.598	2.645	2.701	2.762	2.828	2.893
% Ch	2.4	1.8	1.6	1.8	2.1	2.3	2.4	2.3
Employment Cost Index (Dec. 2005=1.0)	1.334	1.374	1.417	1.463	1.517	1.574	1.637	1.706
% Ch	3.0	3.0	3.2	3.2	3.7	3.8	4.0	4.2
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	20,580.2	21,429.0	22,197.7	23,111.2	24,085.7	25,155.9	26,284.9	27,427.2
% Ch	5.4	4.1	3.6	4.1	4.2	4.4	4.5	4.3
Personal Income	17,819.2	18,624.2	19,319.3	20,031.7	20,839.8	21,761.3	22,721.4	23,725.6
% Ch	5.6	4.5	3.7	3.7	4.0	4.4	4.4	4.4
Employment (Millions)								
U.S. Civilian Labor Force	162.1	163.5	165.4	166.5	167.8	168.9	169.8	170.6
Total U.S. Employment	155.8	157.5	159.7	160.7	161.6	162.4	162.9	163.4
Unemployment Rate (%)	3.89	3.66	3.47	3.52	3.67	3.86	4.07	4.17
Nonfarm Payroll Employment	149.06	151.40	153.17	154.22	155.30	155.70	155.98	156.44
% Ch	1.7	1.6	1.2	0.7	0.7	0.3	0.2	0.3
Manufacturing	12.69	12.84	12.74	12.54	12.55	12.57	12.52	12.39
% Ch	2.0	1.2	-0.8	-1.6	0.1	0.2	-0.4	-1.0
Durable Manufacturing	7.94	8.06	7.97	7.86	7.89	7.96	7.96	7.90
% Ch	2.7	1.4	-1.1	-1.4	0.4	0.8	0.1	-0.8
Nondurable Manufacturing	4.74	4.78	4.77	4.68	4.66	4.62	4.56	4.49
% Ch	0.9	0.9	-0.2	-1.9	-0.6	-0.8	-1.3	-1.4
Construction	7.29	7.49	7.60	7.67	7.77	7.90	8.05	8.20
% Ch	4.6	2.8	1.4	1.0	1.3	1.6	2.0	1.9
Service-Providing	128.36	130.32	132.11	133.28	134.24	134.49	134.65	135.07
% Ch	1.4	1.5	1.4	0.9	0.7	0.2	0.1	0.3
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	64.9	57.0	51.5	51.0	51.0	51.4	51.9	52.3
Personal Saving/Disposable Income (%)	7.7	8.0	7.8	7.7	7.7	7.4	7.2	7.2
Auto Sales (Millions)	5.3	4.7	4.3	4.2	4.1	4.1	4.1	4.1
% Ch	-12.8	-11.0	-7.9	-4.3	-2.0	-0.6	0.5	0.2
Housing Starts (Millions)	1.250	1.298	1.359	1.292	1.315	1.358	1.352	1.345
% Ch	3.4	3.9	4.7	-4.9	1.8	3.2	-0.4	-0.5
Federal Budget Surplus (Billions)	-1,009.8	-1,184.3	-1,197.7	-1,223.2	-1,262.1	-1,243.2	-1,244.2	-1,291.5
Net Exports (Billions)	-638.2	-632.0	-638.7	-613.3	-584.8	-542.9	-516.7	-529.1
3-Month Treasury Bill Rate (%)	1.94	2.06	1.53	1.62	1.97	2.16	2.34	2.35
10-Year Treasury Note Yield (%)	2.91	2.14	1.87	2.58	2.96	2.98	2.95	2.96
Bond Index of 20 G.O. Munis. (%)	3.96	3.60	3.53	4.04	4.35	4.40	4.39	4.41
30-Year Fixed Mortgage Rate (%)	4.54	3.94	3.78	4.23	4.42	4.56	4.64	4.65

Table A1.2
U.S. Economic Forecast Summary
Forecast 2020 to 2025

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Real National Income Accounts (Billions of Chained 2012 Dollars)								
Real Gross Domestic Product	19,295.2	19,385.6	19,477.1	19,574.2	19,667.5	19,765.7	19,859.0	19,957.2
% Ch , Annual Rate	1.6	1.9	1.9	2.0	1.9	2.0	1.9	2.0
Real Consumption	13,478.9	13,550.3	13,619.7	13,690.2	13,761.9	13,834.7	13,905.1	13,973.1
% Ch , Annual Rate	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0
Real Nonresidential Fixed Investment	2,737.1	2,752.9	2,791.7	2,837.9	2,866.7	2,899.1	2,926.9	2,957.9
% Ch , Annual Rate	0.7	2.3	5.8	6.8	4.1	4.6	3.9	4.3
Real Residential Fixed Investment	609.3	610.5	607.7	606.3	603.7	601.0	598.5	598.7
% Ch , Annual Rate	4.9	0.7	-1.8	-0.9	-1.7	-1.7	-1.7	0.1
Real Personal Income	17,213.8	17,331.7	17,398.6	17,470.5	17,558.6	17,641.2	17,724.1	17,800.2
% Ch , Annual Rate	2.8	2.8	1.6	1.7	2.0	1.9	1.9	1.7
Real Per Capita Income (\$/Person)	51,924	52,187	52,296	52,420	52,592	52,747	52,903	53,038
% Ch , Annual Rate	2.0	2.0	0.8	1.0	1.3	1.2	1.2	1.0
Price and Wage Indexes								
PCE Price Index (2012=100)	110.7	111.1	111.5	112.0	112.5	113.0	113.5	114.1
% Ch , Annual Rate	1.2	1.5	1.7	1.6	1.8	1.9	1.9	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.584	2.593	2.604	2.612	2.624	2.637	2.651	2.667
% Ch , Annual Rate	0.8	1.4	1.7	1.4	1.8	1.9	2.2	2.4
Employment Cost Index (Dec. 2005=1.0)	1.401	1.412	1.423	1.434	1.445	1.457	1.469	1.482
% Ch , Annual Rate	3.4	3.4	3.0	3.1	3.2	3.3	3.4	3.4
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	21,882.1	22,082.0	22,297.7	22,529.2	22,760.1	22,995.4	23,224.2	23,465.2
% Ch , Annual Rate	2.7	3.7	4.0	4.2	4.2	4.2	4.0	4.2
Personal Income	19,052.3	19,253.0	19,407.5	19,564.4	19,752.0	19,936.8	20,125.4	20,312.4
% Ch , Annual Rate	4.0	4.3	3.2	3.3	3.9	3.8	3.8	3.8
Employment (Millions)								
U.S. Civilian Labor Force	164.8	165.5	165.5	165.7	166.1	166.4	166.7	167.0
Total U.S. Employment	159.1	159.7	159.8	160.0	160.3	160.6	160.8	161.0
Unemployment Rate (%)	3.47	3.49	3.46	3.46	3.47	3.49	3.53	3.57
Nonfarm Payroll Employment	152.67	153.21	153.31	153.50	153.79	154.11	154.37	154.61
% Ch , Annual Rate	1.2	1.4	0.3	0.5	0.8	0.8	0.7	0.6
Manufacturing	12.83	12.76	12.70	12.68	12.61	12.55	12.51	12.50
% Ch , Annual Rate	-0.4	-2.1	-1.8	-0.8	-2.2	-1.9	-1.2	-0.2
Durable Manufacturing	8.02	7.97	7.94	7.95	7.90	7.86	7.84	7.84
% Ch , Annual Rate	-1.0	-2.8	-1.4	0.4	-2.3	-2.2	-1.1	0.1
Nondurable Manufacturing	4.81	4.79	4.76	4.73	4.70	4.69	4.67	4.66
% Ch , Annual Rate	0.5	-0.9	-2.5	-2.8	-2.1	-1.4	-1.4	-0.6
Construction	7.58	7.60	7.60	7.62	7.64	7.67	7.68	7.71
% Ch , Annual Rate	2.5	1.0	0.0	0.9	1.2	1.2	1.0	1.2
Service-Providing	131.54	132.14	132.29	132.49	132.82	133.17	133.45	133.66
% Ch , Annual Rate	1.4	1.8	0.5	0.6	1.0	1.1	0.8	0.6
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	52.7	50.8	51.3	51.3	51.1	51.0	50.9	50.9
Personal Saving/Disposable Income (%)	7.8	7.9	7.8	7.8	7.8	7.7	7.7	7.6
Auto Sales (Millions)	4.4	4.4	4.3	4.2	4.2	4.2	4.1	4.1
% Ch , Annual Rate	-0.4	-3.3	-10.3	-4.4	-3.2	-3.6	-2.2	-2.4
Housing Starts (Millions)	1.361	1.375	1.359	1.339	1.319	1.294	1.282	1.273
% Ch , Annual Rate	-20.5	4.4	-4.5	-5.9	-6.0	-7.3	-3.6	-2.7
Federal Budget Surplus (Billions)	-1,209.5	-1,196.7	-1,190.3	-1,194.2	-1,212.2	-1,214.7	-1,225.5	-1,240.3
Net Exports (Billions)	-630.5	-648.8	-648.2	-627.2	-621.3	-614.6	-611.4	-606.1
3-Month Treasury Bill Rate (%)	1.52	1.55	1.54	1.51	1.50	1.53	1.70	1.74
10-Year Treasury Note Yield (%)	1.65	1.75	1.94	2.14	2.34	2.53	2.68	2.77
Bond Index of 20 G.O. Munis. (%)	3.40	3.44	3.57	3.71	3.86	3.98	4.11	4.19
30-Year Fixed Mortgage Rate (%)	3.61	3.73	3.83	3.94	4.06	4.18	4.30	4.35

Table A1.2 (continued)
U.S. Economic Forecast Summary
Forecast 2020 to 2025

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Real National Income Accounts (Billions of Chained 2012 Dollars)								
Real Gross Domestic Product	20,045.0	20,138.8	20,238.7	20,332.6	20,439.6	20,541.2	20,643.0	20,746.4
% Ch , Annual Rate	1.8	1.9	2.0	1.9	2.1	2.0	2.0	2.0
Real Consumption	14,037.0	14,107.9	14,181.8	14,257.6	14,339.2	14,418.9	14,496.9	14,574.2
% Ch , Annual Rate	1.8	2.0	2.1	2.2	2.3	2.2	2.2	2.2
Real Nonresidential Fixed Investment	2,981.5	3,011.6	3,044.2	3,077.0	3,112.9	3,147.1	3,181.3	3,216.1
% Ch , Annual Rate	3.2	4.1	4.4	4.4	4.7	4.5	4.4	4.4
Real Residential Fixed Investment	597.6	598.0	599.7	600.9	602.2	603.6	605.1	607.4
% Ch , Annual Rate	-0.7	0.3	1.1	0.8	0.9	1.0	1.0	1.5
Real Personal Income	17,909.6	18,008.2	18,089.8	18,166.4	18,293.7	18,405.7	18,519.3	18,638.4
% Ch , Annual Rate	2.5	2.2	1.8	1.7	2.8	2.5	2.5	2.6
Real Per Capita Income (\$/Person)	53,272	53,473	53,623	53,758	54,043	54,282	54,525	54,784
% Ch , Annual Rate	1.8	1.5	1.1	1.0	2.1	1.8	1.8	1.9
Price and Wage Indexes								
PCE Price Index (2012=100)	114.7	115.2	115.8	116.3	116.9	117.5	118.2	118.8
% Ch , Annual Rate	2.0	1.8	1.9	2.0	2.1	2.1	2.1	2.2
U.S. Consumer Price Index (1982-84=1.0)	2.680	2.693	2.707	2.722	2.738	2.754	2.771	2.787
% Ch , Annual Rate	2.0	2.0	2.1	2.2	2.3	2.4	2.4	2.4
Employment Cost Index (Dec. 2005=1.0)	1.496	1.510	1.524	1.538	1.552	1.566	1.581	1.596
% Ch , Annual Rate	3.9	3.9	3.7	3.7	3.7	3.7	3.9	3.9
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	23,708.9	23,953.6	24,212.5	24,467.7	24,743.0	25,014.9	25,291.3	25,574.5
% Ch , Annual Rate	4.2	4.2	4.4	4.3	4.6	4.5	4.5	4.6
Personal Income	20,539.1	20,746.6	20,940.3	21,133.3	21,390.5	21,633.1	21,881.5	22,140.0
% Ch , Annual Rate	4.5	4.1	3.8	3.7	5.0	4.6	4.7	4.8
Employment (Millions)								
U.S. Civilian Labor Force	167.3	167.6	168.0	168.2	168.5	168.8	169.0	169.3
Total U.S. Employment	161.3	161.5	161.8	162.0	162.2	162.3	162.5	162.6
Unemployment Rate (%)	3.62	3.65	3.68	3.72	3.77	3.83	3.89	3.95
Nonfarm Payroll Employment	155.01	155.32	155.38	155.47	155.58	155.66	155.74	155.82
% Ch , Annual Rate	1.1	0.8	0.2	0.2	0.3	0.2	0.2	0.2
Manufacturing	12.55	12.56	12.54	12.55	12.56	12.58	12.58	12.58
% Ch , Annual Rate	1.5	0.3	-0.6	0.2	0.5	0.5	0.0	-0.1
Durable Manufacturing	7.89	7.90	7.89	7.90	7.93	7.95	7.97	7.98
% Ch , Annual Rate	2.4	0.7	-0.4	0.6	1.3	1.3	0.6	0.5
Nondurable Manufacturing	4.67	4.66	4.65	4.64	4.64	4.63	4.61	4.60
% Ch , Annual Rate	0.1	-0.3	-1.0	-0.6	-0.8	-0.8	-1.1	-1.2
Construction	7.73	7.75	7.78	7.81	7.84	7.88	7.91	7.95
% Ch , Annual Rate	1.2	1.3	1.6	1.5	1.6	1.7	1.8	1.9
Service-Providing	134.00	134.27	134.31	134.37	134.43	134.46	134.50	134.55
% Ch , Annual Rate	1.0	0.8	0.1	0.2	0.2	0.1	0.1	0.1
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	51.0	51.0	51.0	51.2	51.2	51.3	51.4	51.6
Personal Saving/Disposable Income (%)	7.8	7.8	7.7	7.5	7.5	7.4	7.4	7.4
Auto Sales (Millions)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
% Ch , Annual Rate	-2.0	-2.1	-0.5	-0.8	-1.3	0.0	0.5	0.4
Housing Starts (Millions)	1.277	1.323	1.332	1.328	1.345	1.359	1.362	1.366
% Ch , Annual Rate	1.4	15.1	2.7	-1.1	5.2	4.2	1.0	1.0
Federal Budget Surplus (Billions)	-1,257.5	-1,262.8	-1,264.9	-1,263.3	-1,260.5	-1,247.8	-1,235.7	-1,229.0
Net Exports (Billions)	-597.1	-589.5	-579.8	-572.9	-559.7	-547.6	-536.0	-528.2
3-Month Treasury Bill Rate (%)	2.01	1.97	1.95	1.96	2.15	2.16	2.15	2.18
10-Year Treasury Note Yield (%)	2.97	2.94	2.96	2.97	2.99	2.99	2.98	2.98
Bond Index of 20 G.O. Munis. (%)	4.35	4.33	4.34	4.37	4.39	4.40	4.41	4.41
30-Year Fixed Mortgage Rate (%)	4.41	4.44	4.42	4.43	4.55	4.55	4.56	4.57

Table A1.2 (continued)
U.S. Economic Forecast Summary
Forecast 2020 to 2025

	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4
Real National Income Accounts (Billions of Chained 2012 Dollars)								
Real Gross Domestic Product	20,850.0	20,952.1	21,054.2	21,161.4	21,264.2	21,369.5	21,477.8	21,586.5
% Ch , Annual Rate	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0
Real Consumption	14,648.3	14,722.8	14,797.9	14,874.6	14,951.8	15,030.5	15,110.3	15,190.9
% Ch , Annual Rate	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2
Real Nonresidential Fixed Investment	3,252.1	3,285.9	3,317.9	3,349.5	3,379.0	3,408.0	3,437.4	3,466.6
% Ch , Annual Rate	4.6	4.2	4.0	3.9	3.6	3.5	3.5	3.4
Real Residential Fixed Investment	609.8	611.8	613.7	616.9	618.9	620.3	622.7	624.0
% Ch , Annual Rate	1.6	1.3	1.2	2.1	1.3	0.9	1.5	0.9
Real Personal Income	18,739.2	18,824.9	18,922.9	19,026.8	19,152.4	19,258.0	19,364.9	19,471.5
% Ch , Annual Rate	2.2	1.8	2.1	2.2	2.7	2.2	2.2	2.2
Real Per Capita Income (\$/Person)	54,988	55,147	55,343	55,555	55,830	56,046	56,266	56,484
% Ch , Annual Rate	1.5	1.2	1.4	1.5	2.0	1.6	1.6	1.6
Price and Wage Indexes								
PCE Price Index (2012=100)	119.4	120.0	120.7	121.3	121.9	122.5	123.2	123.8
% Ch , Annual Rate	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1
U.S. Consumer Price Index (1982-84=1.0)	2.803	2.820	2.836	2.852	2.869	2.885	2.901	2.917
% Ch , Annual Rate	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.2
Employment Cost Index (Dec. 2005=1.0)	1.612	1.628	1.645	1.662	1.680	1.697	1.715	1.733
% Ch , Annual Rate	4.0	4.1	4.2	4.3	4.3	4.3	4.3	4.3
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	25,859.3	26,144.2	26,424.7	26,711.4	26,994.3	27,280.3	27,570.8	27,863.6
% Ch , Annual Rate	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.3
Personal Income	22,376.5	22,598.9	22,833.6	23,076.5	23,348.9	23,598.0	23,850.7	24,104.7
% Ch , Annual Rate	4.3	4.0	4.2	4.3	4.8	4.3	4.4	4.3
Employment (Millions)								
U.S. Civilian Labor Force	169.5	169.8	170.0	170.1	170.3	170.5	170.6	170.8
Total U.S. Employment	162.8	162.9	163.0	163.1	163.2	163.4	163.5	163.7
Unemployment Rate (%)	3.99	4.05	4.10	4.13	4.16	4.17	4.18	4.19
Nonfarm Payroll Employment	155.85	155.89	156.02	156.15	156.25	156.38	156.50	156.63
% Ch, Annual Rate	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3
Manufacturing	12.55	12.53	12.51	12.48	12.45	12.41	12.38	12.34
% Ch, Annual Rate	-0.8	-0.7	-0.5	-1.0	-1.1	-1.2	-1.1	-1.1
Durable Manufacturing	7.97	7.96	7.96	7.95	7.93	7.91	7.89	7.87
% Ch, Annual Rate	-0.4	-0.2	-0.1	-0.6	-0.9	-1.1	-0.9	-1.0
Nondurable Manufacturing	4.58	4.57	4.55	4.53	4.52	4.50	4.49	4.47
% Ch, Annual Rate	-1.5	-1.5	-1.3	-1.5	-1.4	-1.4	-1.3	-1.4
Construction	7.99	8.03	8.07	8.11	8.15	8.19	8.22	8.26
% Ch, Annual Rate	2.0	2.1	1.9	2.0	1.9	1.8	1.8	1.7
Service-Providing	134.55	134.57	134.68	134.79	134.89	135.01	135.13	135.26
% Ch, Annual Rate	0.0	0.1	0.3	0.3	0.3	0.4	0.4	0.4
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	51.7	51.8	51.9	52.1	52.2	52.2	52.3	52.4
Personal Saving/Disposable Income (%)	7.3	7.2	7.1	7.1	7.2	7.2	7.2	7.2
Auto Sales (Millions)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
% Ch, Annual Rate	1.0	0.3	0.4	0.3	0.0	0.1	0.0	0.1
Housing Starts (Millions)	1.367	1.345	1.346	1.351	1.348	1.356	1.346	1.331
% Ch, Annual Rate	0.5	-6.3	0.4	1.4	-1.0	2.5	-2.9	-4.4
Federal Budget Surplus (Billions)	-1,248.6	-1,244.4	-1,241.1	-1,242.7	-1,274.5	-1,284.4	-1,295.3	-1,311.9
Net Exports (Billions)	-520.2	-515.7	-515.1	-515.8	-522.4	-527.4	-531.7	-535.0
3-Month Treasury Bill Rate (%)	2.32	2.34	2.35	2.35	2.35	2.35	2.35	2.35
10-Year Treasury Note Yield (%)	2.92	2.95	2.96	2.96	2.96	2.96	2.96	2.96
Bond Index of 20 G.O. Munis. (%)	4.37	4.38	4.40	4.40	4.41	4.41	4.41	4.41
30-Year Fixed Mortgage Rate (%)	4.60	4.62	4.65	4.67	4.65	4.65	4.66	4.66

Table A1.3
Washington Economic Forecast Summary
Forecast 2020 to 2025

	2018	2019	2020	2021	2022	2023	2024	2025
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	432.202	450.969	465.236	475.373	486.686	500.653	514.946	529.301
% Ch	5.3	4.3	3.2	2.2	2.4	2.9	2.9	2.8
Real Wage and Salary Disb.	219.298	231.653	240.504	245.602	251.118	258.286	264.540	270.183
% Ch	6.5	5.6	3.8	2.1	2.2	2.9	2.4	2.1
Real Nonwage Income	212.904	219.316	224.732	229.771	235.568	242.367	250.406	259.118
% Ch	4.1	3.0	2.5	2.2	2.5	2.9	3.3	3.5
Real Per Capita Income (\$/Person)	57,348	58,974	59,977	60,450	61,086	62,079	63,133	64,217
% Ch	3.7	2.8	1.7	0.8	1.1	1.6	1.7	1.7
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.081	1.097	1.113	1.133	1.155	1.179	1.204	1.229
% Ch	2.1	1.4	1.5	1.8	1.9	2.0	2.1	2.1
Seattle Cons. Price Index (1982-84=1.0)	2.711	2.779	2.823	2.874	2.935	3.002	3.073	3.144
% Ch	3.2	2.5	1.6	1.8	2.1	2.3	2.4	2.3
Average Nonfarm Annual Wage	67,580	71,083	73,598	75,589	77,889	81,173	84,409	87,513
% Ch	6.3	5.2	3.5	2.7	3.0	4.2	4.0	3.7
Avg. Hourly Earnings-Mfg. (\$/Hour)	28.42	29.29	30.14	31.06	32.15	33.31	34.60	36.02
% Ch	3.8	3.1	2.9	3.1	3.5	3.6	3.9	4.1
Current Dollar Income (Billions of Dollars)								
Personal Income	467.399	494.585	517.936	538.574	562.116	590.056	619.775	650.282
% Ch	7.5	5.8	4.7	4.0	4.4	5.0	5.0	4.9
Disposable Personal Income	412.904	436.530	456.904	475.436	495.823	518.610	542.847	568.488
% Ch	8.1	5.7	4.7	4.1	4.3	4.6	4.7	4.7
Per Capita Income (\$/Person)	62,017	64,676	66,770	68,486	70,552	73,163	75,984	78,894
% Ch	5.9	4.3	3.2	2.6	3.0	3.7	3.9	3.8
Employment (Thousands)								
Washington Civilian Labor Force	3,790.5	3,889.8	3,990.7	4,044.3	4,097.9	4,146.2	4,188.7	4,223.7
Total Washington Employment	3,620.3	3,712.7	3,820.2	3,867.6	3,911.4	3,949.1	3,981.1	4,009.1
Unemployment Rate (%)	4.49	4.56	4.27	4.37	4.55	4.75	4.95	5.08
Nonfarm Payroll Employment	3,404.1	3,470.3	3,533.4	3,575.4	3,617.1	3,643.5	3,665.5	3,686.4
% Ch	2.5	1.9	1.8	1.2	1.2	0.7	0.6	0.6
Manufacturing	287.5	293.5	293.0	291.4	293.3	295.7	296.7	296.1
% Ch	1.2	2.1	-0.2	-0.6	0.7	0.8	0.3	-0.2
Durable Manufacturing	202.1	206.8	206.2	205.6	207.4	209.8	211.1	211.1
% Ch	0.9	2.3	-0.3	-0.3	0.9	1.1	0.6	0.0
Aerospace	84.0	88.4	88.8	88.8	88.8	88.8	88.8	88.8
% Ch	-0.3	5.2	0.5	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	85.5	86.7	86.8	85.7	85.9	85.9	85.6	85.1
% Ch	1.9	1.5	0.0	-1.2	0.2	0.0	-0.4	-0.6
Construction	213.4	219.1	221.6	217.8	215.6	213.5	213.3	213.4
% Ch	6.8	2.7	1.2	-1.7	-1.0	-1.0	-0.1	0.1
Service-Providing	2,896.9	2,951.8	3,013.1	3,060.7	3,102.6	3,128.9	3,150.1	3,171.5
% Ch	2.3	1.9	2.1	1.6	1.4	0.8	0.7	0.7
Software Publishers	65.3	69.9	72.0	72.8	73.7	74.8	76.0	77.1
% Ch	6.4	7.0	3.0	1.1	1.2	1.5	1.6	1.5
Electronic Shopping and Mail-Order	54.8	63.6	70.4	73.0	75.2	77.1	78.8	80.5
% Ch	10.2	16.1	10.6	3.8	3.0	2.5	2.3	2.2
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	47.746	48.925	45.480	43.999	43.387	43.014	42.278	41.667
% Ch	4.3	2.5	-7.0	-3.3	-1.4	-0.9	-1.7	-1.4
Single-Family	23.676	23.287	24.070	23.313	23.280	24.070	24.404	24.399
% Ch	2.4	-1.6	3.4	-3.1	-0.1	3.4	1.4	0.0
Multi-Family	24.070	25.638	21.410	20.686	20.107	18.944	17.875	17.267
% Ch	6.1	6.5	-16.5	-3.4	-2.8	-5.8	-5.6	-3.4
30-Year Fixed Mortgage Rate (%)	4.54	3.94	3.78	4.23	4.42	4.56	4.64	4.65

Table A1.4
Washington Economic Forecast Summary
Forecast 2020 to 2025

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	460.394	464.758	466.791	469.001	471.704	474.138	476.648	479.001
% Ch, Annual Rate	3.4	3.8	1.8	1.9	2.3	2.1	2.1	2.0
Real Wage and Salary Disb.	237.606	240.300	241.417	242.694	243.966	245.052	246.159	247.232
% Ch, Annual Rate	3.1	4.6	1.9	2.1	2.1	1.8	1.8	1.8
Real Nonwage Income	222.788	224.458	225.374	226.307	227.738	229.086	230.489	231.770
% Ch, Annual Rate	3.8	3.0	1.6	1.7	2.6	2.4	2.5	2.2
Real Per Capita Income (\$/Person)	59,667	60,021	60,073	60,149	60,288	60,394	60,510	60,607
% Ch, Annual Rate	2.0	2.4	0.3	0.5	0.9	0.7	0.8	0.6
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.107	1.111	1.115	1.120	1.125	1.130	1.135	1.141
% Ch, Annual Rate	1.2	1.5	1.7	1.6	1.8	1.9	1.9	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.807	2.817	2.829	2.839	2.852	2.865	2.881	2.898
% Ch, Annual Rate	1.0	1.5	1.7	1.4	1.8	1.9	2.2	2.4
Average Nonfarm Annual Wage	72,697	73,392	73,905	74,400	74,882	75,334	75,820	76,321
% Ch, Annual Rate	2.2	3.9	2.8	2.7	2.6	2.4	2.6	2.7
Avg. Hourly Earnings-Mfg. (\$/Hour)	29.80	30.04	30.25	30.46	30.70	30.93	31.18	31.43
% Ch, Annual Rate	2.5	3.2	2.8	2.9	3.1	3.1	3.2	3.2
Current Dollar Income (Billions of Dollars)								
Personal Income	509.567	516.278	520.687	525.213	530.627	535.837	541.226	546.604
% Ch, Annual Rate	4.7	5.4	3.5	3.5	4.2	4.0	4.1	4.0
Disposable Personal Income	449.633	455.304	459.289	463.392	468.396	472.986	477.802	482.560
% Ch, Annual Rate	4.3	5.1	3.5	3.6	4.4	4.0	4.1	4.0
Per Capita Income (\$/Person)	66,040	66,674	67,009	67,358	67,819	68,253	68,708	69,161
% Ch, Annual Rate	3.2	3.9	2.0	2.1	2.8	2.6	2.7	2.7
Employment (Thousands)								
Washington Civilian Labor Force	3,967.2	3,988.6	3,997.2	4,009.7	4,023.9	4,037.7	4,051.2	4,064.5
Total Washington Employment	3,798.3	3,818.1	3,826.6	3,837.9	3,850.6	3,862.4	3,873.3	3,883.9
Unemployment Rate (%)	4.26	4.27	4.27	4.28	4.31	4.34	4.39	4.44
Nonfarm Payroll Employment	3,513.3	3,532.7	3,539.2	3,548.4	3,559.8	3,570.7	3,580.7	3,590.6
% Ch, Annual Rate	2.1	2.2	0.7	1.0	1.3	1.2	1.1	1.1
Manufacturing	294.3	293.6	292.3	291.8	291.4	291.1	291.2	291.8
% Ch, Annual Rate	1.6	-1.0	-1.7	-0.8	-0.6	-0.3	0.0	0.8
Durable Manufacturing	207.1	206.5	205.7	205.6	205.5	205.4	205.6	206.1
% Ch, Annual Rate	1.6	-1.3	-1.5	-0.1	-0.3	-0.2	0.3	1.0
Aerospace	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8
% Ch, Annual Rate	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	87.2	87.1	86.7	86.1	85.9	85.7	85.6	85.7
% Ch, Annual Rate	1.5	-0.4	-2.1	-2.3	-1.3	-0.6	-0.6	0.3
Construction	222.5	222.3	221.3	220.5	219.5	218.2	217.0	216.6
% Ch, Annual Rate	1.1	-0.3	-1.8	-1.5	-1.7	-2.4	-2.1	-0.8
Service-Providing	2,990.8	3,011.2	3,019.9	3,030.5	3,043.2	3,055.7	3,066.9	3,076.8
% Ch, Annual Rate	2.3	2.8	1.2	1.4	1.7	1.7	1.5	1.3
Software Publishers	71.7	71.9	72.1	72.3	72.5	72.7	72.9	73.1
% Ch, Annual Rate	2.6	0.9	1.2	1.2	0.9	1.1	1.1	1.2
Electronic Shopping and Mail-Order	69.2	70.0	70.8	71.5	72.1	72.7	73.3	73.9
% Ch, Annual Rate	6.6	4.7	4.3	4.0	3.7	3.5	3.3	3.1
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	44.868	45.920	45.844	45.288	44.778	44.150	43.687	43.382
% Ch, Annual Rate	-53.8	9.7	-0.7	-4.8	-4.4	-5.5	-4.1	-2.8
Single-Family	23.718	24.280	24.283	24.000	23.758	23.391	23.140	22.962
% Ch, Annual Rate	-34.0	9.8	0.1	-4.6	-4.0	-6.0	-4.2	-3.1
Multi-Family	21.150	21.640	21.561	21.288	21.020	20.758	20.547	20.421
% Ch, Annual Rate	-68.0	9.6	-1.5	-5.0	-4.9	-4.9	-4.0	-2.4
30-Year Fixed Mortgage Rate (%)	3.61	3.73	3.83	3.94	4.06	4.18	4.30	4.35

Table A1.4 (continued)
Washington Economic Forecast Summary
Forecast 2020 to 2025

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	482.276	485.393	488.171	490.904	494.952	498.695	502.493	506.472
% Ch, Annual Rate	2.8	2.6	2.3	2.3	3.3	3.1	3.1	3.2
Real Wage and Salary Disb.	248.877	250.574	251.887	253.133	255.158	257.208	259.299	261.478
% Ch, Annual Rate	2.7	2.8	2.1	2.0	3.2	3.3	3.3	3.4
Real Nonwage Income	233.399	234.819	236.283	237.771	239.794	241.488	243.194	244.994
% Ch, Annual Rate	2.8	2.5	2.5	2.5	3.4	2.9	2.9	3.0
Real Per Capita Income (\$/Person)	60,823	61,019	61,175	61,328	61,645	61,926	62,215	62,528
% Ch, Annual Rate	1.4	1.3	1.0	1.0	2.1	1.8	1.9	2.0
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.147	1.152	1.158	1.163	1.169	1.175	1.182	1.188
% Ch, Annual Rate	2.0	1.8	1.9	2.0	2.1	2.1	2.1	2.2
Seattle Cons. Price Index (1982-84=1.0)	2.912	2.927	2.942	2.959	2.976	2.993	3.011	3.029
% Ch, Annual Rate	2.0	2.0	2.1	2.2	2.3	2.4	2.4	2.4
Average Nonfarm Annual Wage	76,927	77,563	78,215	78,853	79,751	80,674	81,636	82,633
% Ch, Annual Rate	3.2	3.3	3.4	3.3	4.6	4.7	4.9	5.0
Avg. Hourly Earnings-Mfg. (\$/Hour)	31.72	32.01	32.29	32.57	32.86	33.15	33.45	33.77
% Ch, Annual Rate	3.7	3.8	3.5	3.5	3.6	3.6	3.7	3.8
Current Dollar Income (Billions of Dollars)								
Personal Income	553.084	559.206	565.095	571.080	578.738	586.141	593.720	601.625
% Ch, Annual Rate	4.8	4.5	4.3	4.3	5.5	5.2	5.3	5.4
Disposable Personal Income	488.162	493.431	498.385	503.313	509.483	515.441	521.549	527.969
% Ch, Annual Rate	4.7	4.4	4.1	4.0	5.0	4.8	4.8	5.0
Per Capita Income (\$/Person)	69,753	70,298	70,815	71,344	72,080	72,785	73,511	74,275
% Ch, Annual Rate	3.5	3.2	3.0	3.0	4.2	4.0	4.0	4.2
Employment (Thousands)								
Washington Civilian Labor Force	4,078.3	4,091.7	4,104.5	4,117.0	4,128.9	4,140.7	4,151.9	4,163.2
Total Washington Employment	3,895.0	3,906.3	3,917.1	3,927.1	3,936.3	3,945.1	3,953.3	3,961.7
Unemployment Rate (%)	4.49	4.53	4.57	4.61	4.66	4.72	4.78	4.84
Nonfarm Payroll Employment	3,603.8	3,615.3	3,621.3	3,627.9	3,634.3	3,640.7	3,646.5	3,652.6
% Ch, Annual Rate	1.5	1.3	0.7	0.7	0.7	0.7	0.6	0.7
Manufacturing	292.6	293.2	293.5	294.1	294.8	295.6	296.0	296.4
% Ch, Annual Rate	1.2	0.8	0.3	0.8	1.1	1.0	0.6	0.5
Durable Manufacturing	206.8	207.3	207.5	208.1	208.9	209.6	210.1	210.5
% Ch, Annual Rate	1.3	1.0	0.6	1.1	1.5	1.4	0.9	0.8
Aerospace	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	85.8	85.9	85.9	86.0	86.0	86.0	85.9	85.9
% Ch, Annual Rate	0.8	0.5	-0.2	0.2	0.0	0.1	-0.2	-0.3
Construction	216.2	216.1	215.4	214.8	213.9	213.6	213.1	213.2
% Ch, Annual Rate	-0.7	-0.1	-1.4	-1.0	-1.7	-0.6	-0.8	0.2
Service-Providing	3,089.6	3,100.5	3,107.0	3,113.6	3,120.1	3,126.1	3,131.9	3,137.6
% Ch, Annual Rate	1.7	1.4	0.8	0.9	0.8	0.8	0.7	0.7
Software Publishers	73.3	73.6	73.8	74.1	74.4	74.6	74.9	75.2
% Ch, Annual Rate	1.0	1.5	1.4	1.4	1.5	1.5	1.5	1.6
Electronic Shopping and Mail-Order	74.4	74.9	75.4	75.9	76.4	76.9	77.3	77.8
% Ch, Annual Rate	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	43.294	43.628	43.395	43.230	43.242	43.174	42.929	42.710
% Ch, Annual Rate	-0.8	3.1	-2.1	-1.5	0.1	-0.6	-2.3	-2.0
Single-Family	22.919	23.101	23.407	23.692	23.906	24.046	24.108	24.218
% Ch, Annual Rate	-0.7	3.2	5.4	5.0	3.7	2.4	1.0	1.8
Multi-Family	20.375	20.526	19.989	19.538	19.335	19.128	18.821	18.491
% Ch, Annual Rate	-0.9	3.0	-10.1	-8.7	-4.1	-4.2	-6.3	-6.8
30-Year Fixed Mortgage Rate (%)	4.41	4.44	4.42	4.43	4.55	4.55	4.56	4.57

Table A1.4 (continued)
Washington Economic Forecast Summary
Forecast 2020 to 2025

	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	510.037	513.136	516.556	520.056	524.095	527.573	531.033	534.505
% Ch, Annual Rate	2.8	2.5	2.7	2.7	3.1	2.7	2.6	2.6
Real Wage and Salary Disb.	262.662	263.790	265.155	266.554	268.036	269.471	270.881	272.345
% Ch, Annual Rate	1.8	1.7	2.1	2.1	2.2	2.2	2.1	2.2
Real Nonwage Income	247.375	249.346	251.401	253.502	256.058	258.102	260.151	262.160
% Ch, Annual Rate	3.9	3.2	3.3	3.4	4.1	3.2	3.2	3.1
Real Per Capita Income (\$/Person)	62,790	62,997	63,244	63,503	63,828	64,087	64,346	64,608
% Ch, Annual Rate	1.7	1.3	1.6	1.6	2.1	1.6	1.6	1.6
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.194	1.200	1.207	1.213	1.219	1.225	1.232	1.238
% Ch, Annual Rate	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1
Seattle Cons. Price Index (1982-84=1.0)	3.046	3.064	3.082	3.100	3.118	3.135	3.153	3.171
% Ch, Annual Rate	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.2
Average Nonfarm Annual Wage	83,329	84,031	84,761	85,516	86,318	87,106	87,903	88,724
% Ch, Annual Rate	3.4	3.4	3.5	3.6	3.8	3.7	3.7	3.8
Avg. Hourly Earnings-Mfg. (\$/Hour)	34.09	34.42	34.77	35.12	35.48	35.84	36.20	36.57
% Ch, Annual Rate	3.9	4.0	4.0	4.1	4.1	4.1	4.1	4.1
Current Dollar Income (Billions of Dollars)								
Personal Income	609.034	616.009	623.311	630.747	638.928	646.469	654.045	661.688
% Ch, Annual Rate	5.0	4.7	4.8	4.9	5.3	4.8	4.8	4.8
Disposable Personal Income	534.196	539.813	545.688	551.689	558.758	565.179	571.690	578.322
% Ch, Annual Rate	4.8	4.3	4.4	4.5	5.2	4.7	4.7	4.7
Per Capita Income (\$/Person)	74,978	75,626	76,315	77,019	77,814	78,530	79,252	79,981
% Ch, Annual Rate	3.8	3.5	3.7	3.7	4.2	3.7	3.7	3.7
Employment (Thousands)								
Washington Civilian Labor Force	4,173.9	4,184.2	4,193.7	4,202.8	4,211.5	4,219.8	4,227.8	4,235.7
Total Washington Employment	3,970.2	3,977.7	3,984.8	3,991.9	3,998.7	4,005.8	4,012.6	4,019.5
Unemployment Rate (%)	4.88	4.94	4.98	5.02	5.05	5.07	5.09	5.10
Nonfarm Payroll Employment	3,657.4	3,662.1	3,668.2	3,674.1	3,679.0	3,684.2	3,688.9	3,693.6
% Ch, Annual Rate	0.5	0.5	0.7	0.6	0.5	0.6	0.5	0.5
Manufacturing	296.5	296.6	296.8	296.7	296.5	296.2	296.0	295.7
% Ch, Annual Rate	0.2	0.1	0.2	-0.1	-0.3	-0.4	-0.3	-0.3
Durable Manufacturing	210.8	211.0	211.2	211.3	211.2	211.1	211.0	210.9
% Ch, Annual Rate	0.5	0.4	0.4	0.1	-0.1	-0.3	-0.2	-0.3
Aerospace	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	85.7	85.6	85.5	85.4	85.2	85.1	85.0	84.9
% Ch, Annual Rate	-0.6	-0.6	-0.4	-0.7	-0.7	-0.6	-0.5	-0.5
Construction	213.2	213.2	213.3	213.4	213.4	213.5	213.4	213.4
% Ch, Annual Rate	0.0	-0.1	0.2	0.2	0.0	0.1	-0.1	-0.1
Service-Providing	3,142.3	3,146.9	3,152.8	3,158.6	3,163.7	3,169.2	3,174.1	3,179.1
% Ch, Annual Rate	0.6	0.6	0.8	0.7	0.7	0.7	0.6	0.6
Software Publishers	75.5	75.8	76.1	76.4	76.7	77.0	77.3	77.5
% Ch, Annual Rate	1.8	1.6	1.6	1.5	1.6	1.5	1.3	1.3
Electronic Shopping and Mail-Order	78.2	78.6	79.1	79.5	79.9	80.3	80.8	81.2
% Ch, Annual Rate	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	42.670	42.221	42.131	42.090	41.919	41.931	41.614	41.204
% Ch, Annual Rate	-0.4	-4.1	-0.8	-0.4	-1.6	0.1	-3.0	-3.9
Single-Family	24.371	24.376	24.426	24.441	24.450	24.488	24.385	24.275
% Ch, Annual Rate	2.5	0.1	0.8	0.3	0.2	0.6	-1.7	-1.8
Multi-Family	18.299	17.845	17.706	17.649	17.469	17.443	17.229	16.929
% Ch, Annual Rate	-4.1	-9.6	-3.1	-1.3	-4.0	-0.6	-4.8	-6.8
30-Year Fixed Mortgage Rate (%)	4.60	4.62	4.65	4.67	4.65	4.65	4.66	4.66

Table A2.1

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2020 to 2025

	2018	2019	2020	2021	2022	2023	2024	2025
Nonfarm Payroll Employment	149.06	151.40	153.17	154.22	155.30	155.70	155.98	156.44
% Ch	1.7	1.6	1.2	0.7	0.7	0.3	0.2	0.3
Manufacturing	12.69	12.84	12.74	12.54	12.55	12.57	12.52	12.39
% Ch	2.0	1.2	-0.8	-1.6	0.1	0.2	-0.4	-1.0
Durable Manufacturing	7.94	8.06	7.97	7.86	7.89	7.96	7.96	7.90
% Ch	2.7	1.4	-1.1	-1.4	0.4	0.8	0.1	-0.8
Wood Products	0.41	0.41	0.42	0.43	0.44	0.46	0.47	0.47
% Ch	2.4	0.9	1.7	2.3	3.5	3.6	2.1	1.0
Primary and Fabricated Metals	1.84	1.86	1.82	1.78	1.81	1.85	1.88	1.86
% Ch	2.7	0.9	-2.3	-1.8	1.2	2.7	1.3	-1.2
Computer and Electronic Products	1.06	1.08	1.08	1.08	1.09	1.09	1.09	1.09
% Ch	1.6	2.7	-0.2	-0.5	0.8	0.6	0.1	-0.2
Machinery and Electrical Equipment	1.52	1.54	1.51	1.50	1.51	1.53	1.54	1.52
% Ch	3.7	1.4	-2.0	-0.6	1.0	1.3	0.1	-0.9
Transportation Equipment	1.70	1.74	1.72	1.67	1.64	1.61	1.59	1.58
% Ch	3.6	1.9	-0.6	-3.1	-1.7	-2.1	-1.4	-0.7
Other Durables	1.42	1.43	1.42	1.40	1.40	1.41	1.40	1.38
% Ch	1.3	0.7	-0.4	-1.4	0.1	0.4	-0.7	-1.0
Nondurable Manufacturing	4.74	4.78	4.77	4.68	4.66	4.62	4.56	4.49
% Ch	0.9	0.9	-0.2	-1.9	-0.6	-0.8	-1.3	-1.4
Food Manufacturing	1.62	1.64	1.66	1.66	1.67	1.68	1.68	1.67
% Ch	1.3	1.2	1.0	0.1	1.0	0.4	-0.2	-0.1
Paper and Paper Products	0.37	0.37	0.38	0.37	0.36	0.36	0.35	0.35
% Ch	0.2	0.8	1.6	-2.8	-1.5	-0.8	-1.1	-1.6
Other Nondurables	2.76	2.77	2.74	2.66	2.62	2.58	2.53	2.47
% Ch	0.8	0.7	-1.2	-3.0	-1.4	-1.5	-2.0	-2.2
Natural Resources and Mining	0.73	0.75	0.71	0.73	0.74	0.75	0.76	0.77
% Ch	8.3	2.6	-4.7	2.2	1.1	0.9	2.1	1.5
Construction	7.29	7.49	7.60	7.67	7.77	7.90	8.05	8.20
% Ch	4.6	2.8	1.4	1.0	1.3	1.6	2.0	1.9
Trade, Transportation, and Utilities	27.65	27.84	27.92	27.89	27.76	27.35	26.90	26.64
% Ch	0.9	0.7	0.3	-0.1	-0.5	-1.5	-1.6	-1.0
Wholesale Trade	5.85	5.94	6.00	6.03	6.01	5.98	5.98	5.97
% Ch	0.7	1.5	1.0	0.6	-0.3	-0.4	-0.1	-0.2
Retail Trade	15.82	15.79	15.82	15.76	15.72	15.41	15.01	14.77
% Ch	-0.1	-0.2	0.2	-0.3	-0.3	-2.0	-2.5	-1.6
Trans., Warehousing, and Utilities	5.97	6.11	6.11	6.10	6.03	5.96	5.91	5.90
% Ch	3.9	2.2	0.1	-0.2	-1.1	-1.2	-0.8	-0.2
Information	2.83	2.82	2.87	2.86	2.83	2.85	2.90	2.91
% Ch	0.5	-0.1	1.6	-0.3	-1.2	0.8	1.9	0.3
Publishing Industries	0.73	0.74	0.73	0.70	0.68	0.67	0.66	0.64
% Ch	0.5	1.0	-1.3	-3.7	-3.2	-2.1	-1.5	-1.9
Other Information	2.09	2.08	2.14	2.16	2.15	2.18	2.25	2.27
% Ch	0.5	-0.5	2.7	0.9	-0.5	1.8	2.9	0.9
Financial Activities	8.57	8.68	8.79	8.81	8.75	8.69	8.65	8.61
% Ch	1.4	1.3	1.3	0.2	-0.7	-0.6	-0.5	-0.5
Professional and Business Services	21.00	21.47	21.84	22.65	23.70	24.26	24.74	25.32
% Ch	2.4	2.2	1.7	3.7	4.6	2.4	2.0	2.3
Education and Health Services	23.67	24.27	24.75	24.92	24.88	24.80	24.80	24.83
% Ch	2.1	2.5	2.0	0.7	-0.2	-0.3	0.0	0.1
Leisure and Hospitality	16.35	16.75	17.15	17.35	17.43	17.55	17.54	17.50
% Ch	1.9	2.4	2.4	1.1	0.5	0.7	-0.1	-0.2
Other Services	5.84	5.93	5.97	5.92	5.85	5.78	5.75	5.74
% Ch	1.3	1.5	0.6	-0.7	-1.3	-1.1	-0.5	-0.2
Federal Government	2.80	2.82	2.94	2.82	2.82	2.82	2.82	2.82
% Ch	-0.3	0.8	4.2	-4.1	0.0	0.0	0.0	0.0
State and Local Government	19.65	19.75	19.89	20.06	20.22	20.39	20.55	20.71
% Ch	0.5	0.5	0.7	0.8	0.8	0.8	0.8	0.7

Table A2.2

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2020 to 2025

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	152.67	153.21	153.31	153.50	153.79	154.11	154.37	154.61
% Ch, Annual Rate	1.2	1.4	0.3	0.5	0.8	0.8	0.7	0.6
Manufacturing	12.83	12.76	12.70	12.68	12.61	12.55	12.51	12.50
% Ch, Annual Rate	-0.4	-2.1	-1.8	-0.8	-2.2	-1.9	-1.2	-0.2
Durable Manufacturing	8.02	7.97	7.94	7.95	7.90	7.86	7.84	7.84
% Ch, Annual Rate	-1.0	-2.8	-1.4	0.4	-2.3	-2.2	-1.1	0.1
Wood Products	0.41	0.42	0.42	0.42	0.42	0.43	0.43	0.43
% Ch, Annual Rate	-1.2	6.0	1.0	3.8	2.3	1.4	0.6	2.5
Primary and Fabricated Metals	1.84	1.82	1.80	1.80	1.79	1.78	1.78	1.78
% Ch, Annual Rate	-2.0	-3.7	-3.9	-0.7	-1.7	-2.3	-0.9	0.6
Computer and Electronic Products	1.09	1.09	1.08	1.07	1.07	1.07	1.08	1.08
% Ch, Annual Rate	-1.3	-2.5	-2.5	-1.5	-0.7	0.8	1.5	1.8
Machinery and Electrical Equipment	1.53	1.51	1.49	1.49	1.50	1.50	1.50	1.50
% Ch, Annual Rate	-0.5	-4.6	-4.8	0.1	0.3	0.0	0.7	1.6
Transportation Equipment	1.72	1.71	1.73	1.74	1.71	1.68	1.66	1.64
% Ch, Annual Rate	-2.3	-2.4	6.1	2.9	-8.0	-6.9	-5.2	-3.1
Other Durables	1.43	1.42	1.41	1.41	1.41	1.40	1.40	1.40
% Ch, Annual Rate	1.7	-2.6	-3.1	-0.4	-1.3	-1.7	-1.1	-0.3
Nondurable Manufacturing	4.81	4.79	4.76	4.73	4.70	4.69	4.67	4.66
% Ch, Annual Rate	0.5	-0.9	-2.5	-2.8	-2.1	-1.4	-1.4	-0.6
Food Manufacturing	1.65	1.66	1.66	1.65	1.66	1.66	1.66	1.66
% Ch, Annual Rate	-0.3	1.9	-0.4	-0.6	0.2	0.3	-0.1	1.4
Paper and Paper Products	0.38	0.38	0.38	0.37	0.37	0.37	0.36	0.36
% Ch, Annual Rate	6.5	4.2	-4.2	-4.4	-3.9	-1.7	-2.3	-2.1
Other Nondurables	2.78	2.75	2.73	2.70	2.68	2.67	2.65	2.64
% Ch, Annual Rate	0.3	-3.3	-3.6	-3.8	-3.3	-2.3	-2.1	-1.6
Natural Resources and Mining	0.71	0.71	0.71	0.72	0.72	0.73	0.73	0.74
% Ch, Annual Rate	-12.8	-1.2	1.3	0.9	3.1	4.0	2.5	1.9
Construction	7.58	7.60	7.60	7.62	7.64	7.67	7.68	7.71
% Ch, Annual Rate	2.5	1.0	0.0	0.9	1.2	1.2	1.0	1.2
Trade, Transportation, and Utilities	27.90	27.90	27.96	27.94	27.94	27.93	27.87	27.83
% Ch, Annual Rate	0.1	0.0	0.9	-0.2	0.0	-0.2	-0.9	-0.5
Wholesale Trade	5.98	5.99	6.00	6.01	6.02	6.03	6.03	6.04
% Ch, Annual Rate	1.2	1.0	0.9	0.5	0.7	0.6	0.3	0.2
Retail Trade	15.81	15.79	15.84	15.83	15.82	15.80	15.74	15.71
% Ch, Annual Rate	0.0	-0.4	1.2	-0.3	-0.3	-0.5	-1.4	-0.8
Trans., Warehousing, and Utilities	6.12	6.12	6.11	6.10	6.10	6.10	6.10	6.09
% Ch, Annual Rate	-0.4	0.0	-0.2	-0.6	0.0	0.0	-0.5	-0.6
Information	2.86	2.88	2.87	2.86	2.87	2.87	2.86	2.84
% Ch, Annual Rate	4.0	1.9	-0.7	-0.9	0.9	-0.4	-0.7	-3.0
Publishing Industries	0.74	0.73	0.73	0.72	0.71	0.71	0.70	0.69
% Ch, Annual Rate	-1.4	-4.2	-3.2	-3.3	-4.3	-3.7	-3.6	-3.3
Other Information	2.12	2.14	2.14	2.14	2.16	2.16	2.16	2.15
% Ch, Annual Rate	6.0	4.0	0.1	-0.1	2.6	0.7	0.2	-2.9
Financial Activities	8.75	8.78	8.81	8.82	8.81	8.81	8.80	8.80
% Ch, Annual Rate	1.0	1.4	1.4	0.1	-0.2	-0.2	-0.1	-0.3
Professional and Business Services	21.70	21.78	21.85	22.01	22.29	22.53	22.78	23.02
% Ch, Annual Rate	1.4	1.4	1.4	3.0	5.1	4.4	4.4	4.2
Education and Health Services	24.63	24.75	24.79	24.82	24.87	24.91	24.94	24.96
% Ch, Annual Rate	2.0	1.9	0.6	0.6	0.8	0.6	0.5	0.3
Leisure and Hospitality	17.01	17.08	17.21	17.31	17.29	17.34	17.38	17.37
% Ch, Annual Rate	2.6	1.7	3.0	2.4	-0.4	1.2	0.8	-0.2
Other Services	5.97	5.98	5.97	5.94	5.94	5.93	5.92	5.91
% Ch, Annual Rate	1.5	0.1	-0.5	-1.8	-0.4	-0.5	-0.7	-0.5
Federal Government	2.87	3.13	2.93	2.83	2.82	2.82	2.82	2.82
% Ch, Annual Rate	6.4	41.2	-23.4	-13.1	-1.2	0.0	0.0	0.0
State and Local Government	19.84	19.87	19.91	19.95	19.99	20.04	20.08	20.12
% Ch, Annual Rate	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8

Table A2.2 (continued)

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2020 to 2025

	2022Q1	2022Q2	2022Q3	2022Q4	2023Q1	2023Q2	2023Q3	2023Q4
Nonfarm Payroll Employment	155.01	155.32	155.38	155.47	155.58	155.66	155.74	155.82
% Ch, Annual Rate	1.1	0.8	0.2	0.2	0.3	0.2	0.2	0.2
Manufacturing	12.55	12.56	12.54	12.55	12.56	12.58	12.58	12.58
% Ch, Annual Rate	1.5	0.3	-0.6	0.2	0.5	0.5	0.0	-0.1
Durable Manufacturing	7.89	7.90	7.89	7.90	7.93	7.95	7.97	7.98
% Ch, Annual Rate	2.4	0.7	-0.4	0.6	1.3	1.3	0.6	0.5
Wood Products	0.43	0.44	0.44	0.45	0.45	0.46	0.46	0.46
% Ch, Annual Rate	4.7	5.3	3.4	4.3	4.2	3.5	1.9	2.3
Primary and Fabricated Metals	1.79	1.80	1.81	1.82	1.83	1.85	1.86	1.87
% Ch, Annual Rate	2.5	2.6	1.2	2.1	3.3	3.5	2.6	2.3
Computer and Electronic Products	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
% Ch, Annual Rate	1.0	-0.1	-0.2	0.5	1.0	0.9	0.6	0.1
Machinery and Electrical Equipment	1.51	1.51	1.51	1.52	1.53	1.53	1.54	1.54
% Ch, Annual Rate	1.2	1.0	0.4	1.5	2.3	1.4	0.4	0.2
Transportation Equipment	1.66	1.65	1.63	1.62	1.62	1.61	1.61	1.60
% Ch, Annual Rate	5.2	-2.8	-4.0	-2.8	-2.0	-1.3	-0.8	-0.8
Other Durables	1.40	1.40	1.40	1.40	1.41	1.41	1.41	1.41
% Ch, Annual Rate	0.8	1.3	-0.4	0.5	0.9	0.8	-0.3	-0.3
Nondurable Manufacturing	4.67	4.66	4.65	4.64	4.64	4.63	4.61	4.60
% Ch, Annual Rate	0.1	-0.3	-1.0	-0.6	-0.8	-0.8	-1.1	-1.2
Food Manufacturing	1.67	1.67	1.67	1.68	1.68	1.68	1.68	1.68
% Ch, Annual Rate	1.6	1.3	0.2	0.7	0.3	0.3	-0.1	-0.2
Paper and Paper Products	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
% Ch, Annual Rate	-1.0	-1.1	-1.4	-0.7	-0.6	-0.5	-0.8	-1.0
Other Nondurables	2.64	2.63	2.62	2.61	2.60	2.59	2.58	2.57
% Ch, Annual Rate	-0.7	-1.2	-1.6	-1.4	-1.5	-1.5	-1.7	-1.9
Natural Resources and Mining	0.74	0.74	0.74	0.74	0.74	0.74	0.75	0.75
% Ch, Annual Rate	-0.7	1.1	1.1	0.9	0.5	0.6	1.7	1.5
Construction	7.73	7.75	7.78	7.81	7.84	7.88	7.91	7.95
% Ch, Annual Rate	1.2	1.3	1.6	1.5	1.6	1.7	1.8	1.9
Trade, Transportation, and Utilities	27.90	27.84	27.71	27.61	27.50	27.40	27.30	27.20
% Ch, Annual Rate	1.0	-0.8	-1.9	-1.5	-1.5	-1.4	-1.4	-1.5
Wholesale Trade	6.02	6.02	6.01	6.00	5.99	5.99	5.98	5.98
% Ch, Annual Rate	-1.3	-0.1	-0.6	-0.6	-0.3	-0.5	-0.4	-0.3
Retail Trade	15.82	15.78	15.68	15.61	15.52	15.45	15.37	15.29
% Ch, Annual Rate	3.0	-0.9	-2.6	-1.9	-2.2	-1.9	-1.9	-2.1
Trans., Warehousing, and Utilities	6.06	6.04	6.02	6.00	5.99	5.97	5.95	5.93
% Ch, Annual Rate	-1.9	-0.9	-1.4	-1.4	-1.1	-1.2	-1.1	-1.0
Information	2.83	2.83	2.82	2.82	2.83	2.84	2.86	2.87
% Ch, Annual Rate	-1.3	-0.4	-0.5	-0.1	0.6	1.6	2.7	2.5
Publishing Industries	0.69	0.68	0.68	0.67	0.67	0.67	0.66	0.66
% Ch, Annual Rate	-4.2	-2.2	-2.5	-2.3	-2.0	-2.2	-1.8	-1.7
Other Information	2.14	2.15	2.15	2.15	2.16	2.17	2.19	2.21
% Ch, Annual Rate	-0.4	0.2	0.1	0.6	1.4	2.7	4.1	3.8
Financial Activities	8.75	8.75	8.74	8.73	8.72	8.70	8.68	8.66
% Ch, Annual Rate	-2.0	-0.1	-0.5	-0.4	-0.5	-1.1	-0.9	-0.6
Professional and Business Services	23.44	23.66	23.79	23.92	24.08	24.21	24.33	24.44
% Ch, Annual Rate	7.6	3.7	2.3	2.2	2.7	2.2	2.0	2.0
Education and Health Services	24.89	24.91	24.88	24.84	24.83	24.80	24.78	24.76
% Ch, Annual Rate	-1.1	0.3	-0.5	-0.6	-0.1	-0.4	-0.4	-0.3
Leisure and Hospitality	17.33	17.40	17.47	17.52	17.52	17.54	17.56	17.57
% Ch, Annual Rate	-0.8	1.5	1.7	1.2	0.0	0.5	0.4	0.2
Other Services	5.87	5.86	5.84	5.82	5.80	5.79	5.77	5.76
% Ch, Annual Rate	-2.6	-1.1	-1.2	-1.4	-0.9	-1.2	-1.0	-0.9
Federal Government	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State and Local Government	20.16	20.20	20.24	20.29	20.33	20.37	20.41	20.45
% Ch, Annual Rate	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

Table A2.2 (continued)

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2020 to 2025

	2024Q1	2024Q2	2024Q3	2024Q4	2025Q1	2025Q2	2025Q3	2025Q4
Nonfarm Payroll Employment	155.85	155.89	156.02	156.15	156.25	156.38	156.50	156.63
% Ch, Annual Rate	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3
Manufacturing	12.55	12.53	12.51	12.48	12.45	12.41	12.38	12.34
% Ch, Annual Rate	-0.8	-0.7	-0.5	-1.0	-1.1	-1.2	-1.1	-1.1
Durable Manufacturing	7.97	7.96	7.96	7.95	7.93	7.91	7.89	7.87
% Ch, Annual Rate	-0.4	-0.2	-0.1	-0.6	-0.9	-1.1	-0.9	-1.0
Wood Products	0.46	0.47	0.47	0.47	0.47	0.47	0.47	0.47
% Ch, Annual Rate	2.4	1.9	1.8	0.7	0.7	0.7	1.2	0.9
Primary and Fabricated Metals	1.88	1.88	1.88	1.88	1.87	1.86	1.85	1.84
% Ch, Annual Rate	1.1	0.4	0.2	-0.7	-1.6	-2.1	-1.8	-2.0
Computer and Electronic Products	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
% Ch, Annual Rate	-0.2	-0.1	0.0	0.0	-0.2	-0.3	-0.5	-0.7
Machinery and Electrical Equipment	1.54	1.54	1.54	1.53	1.53	1.52	1.52	1.51
% Ch, Annual Rate	-0.2	0.0	0.0	-0.8	-1.0	-1.3	-1.3	-1.3
Transportation Equipment	1.59	1.59	1.59	1.58	1.58	1.58	1.57	1.57
% Ch, Annual Rate	-3.0	-0.9	-0.5	-0.7	-0.7	-0.8	-0.6	-0.7
Other Durables	1.40	1.40	1.40	1.39	1.39	1.39	1.38	1.38
% Ch, Annual Rate	-0.7	-1.3	-0.8	-1.3	-1.0	-1.1	-0.8	-0.8
Nondurable Manufacturing	4.58	4.57	4.55	4.53	4.52	4.50	4.49	4.47
% Ch, Annual Rate	-1.5	-1.5	-1.3	-1.5	-1.4	-1.4	-1.3	-1.4
Food Manufacturing	1.68	1.68	1.68	1.67	1.67	1.67	1.67	1.67
% Ch, Annual Rate	-0.5	-0.4	0.0	-0.2	-0.2	-0.1	0.0	-0.1
Paper and Paper Products	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
% Ch, Annual Rate	-1.2	-1.2	-1.1	-1.4	-1.7	-1.8	-1.7	-1.8
Other Nondurables	2.55	2.54	2.52	2.51	2.49	2.48	2.47	2.45
% Ch, Annual Rate	-2.2	-2.2	-2.2	-2.4	-2.2	-2.2	-2.1	-2.2
Natural Resources and Mining	0.75	0.76	0.76	0.77	0.77	0.77	0.77	0.77
% Ch, Annual Rate	2.2	2.8	2.7	2.3	1.0	0.7	0.9	0.1
Construction	7.99	8.03	8.07	8.11	8.15	8.19	8.22	8.26
% Ch, Annual Rate	2.0	2.1	1.9	2.0	1.9	1.8	1.8	1.7
Trade, Transportation, and Utilities	27.05	26.94	26.85	26.77	26.71	26.66	26.62	26.58
% Ch, Annual Rate	-2.2	-1.6	-1.3	-1.2	-1.0	-0.7	-0.7	-0.6
Wholesale Trade	5.99	5.98	5.98	5.97	5.97	5.97	5.97	5.96
% Ch, Annual Rate	0.6	-0.3	-0.2	-0.1	0.0	-0.3	-0.3	-0.4
Retail Trade	15.13	15.04	14.97	14.91	14.84	14.79	14.75	14.71
% Ch, Annual Rate	-4.0	-2.3	-1.9	-1.7	-1.9	-1.1	-1.1	-1.0
Trans., Warehousing, and Utilities	5.93	5.92	5.90	5.89	5.90	5.90	5.90	5.90
% Ch, Annual Rate	-0.1	-1.0	-0.9	-0.9	0.4	0.2	0.1	0.1
Information	2.89	2.90	2.91	2.91	2.92	2.91	2.91	2.91
% Ch, Annual Rate	2.5	0.8	1.6	0.6	0.3	-0.3	-0.8	0.1
Publishing Industries	0.66	0.66	0.65	0.65	0.65	0.65	0.64	0.64
% Ch, Annual Rate	-0.7	-1.7	-1.7	-1.8	-1.6	-1.8	-3.0	-3.1
Other Information	2.23	2.24	2.26	2.26	2.27	2.27	2.27	2.27
% Ch, Annual Rate	3.5	1.6	2.6	1.2	0.8	0.1	-0.2	1.0
Financial Activities	8.67	8.65	8.64	8.63	8.61	8.61	8.61	8.60
% Ch, Annual Rate	0.3	-0.8	-0.6	-0.6	-0.6	-0.1	-0.3	-0.4
Professional and Business Services	24.53	24.66	24.81	24.96	25.12	25.25	25.39	25.53
% Ch, Annual Rate	1.4	2.1	2.5	2.5	2.5	2.1	2.2	2.4
Education and Health Services	24.81	24.79	24.79	24.80	24.82	24.83	24.84	24.84
% Ch, Annual Rate	0.7	-0.2	0.1	0.1	0.3	0.2	0.1	0.0
Leisure and Hospitality	17.53	17.53	17.54	17.55	17.51	17.50	17.50	17.49
% Ch, Annual Rate	-0.9	0.0	0.2	0.2	-0.9	-0.1	-0.1	-0.2
Other Services	5.76	5.75	5.74	5.74	5.74	5.74	5.74	5.73
% Ch, Annual Rate	0.2	-0.6	-0.5	-0.4	-0.1	0.0	-0.1	-0.1
Federal Government	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State and Local Government	20.49	20.53	20.57	20.61	20.65	20.69	20.72	20.76
% Ch, Annual Rate	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7

Table A2.3

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2020 to 2025

	2018	2019	2020	2021	2022	2023	2024	2025
Nonfarm Payroll Employment	3,404.1	3,470.3	3,533.4	3,575.4	3,617.1	3,643.5	3,665.5	3,686.4
% Ch	2.5	1.9	1.8	1.2	1.2	0.7	0.6	0.6
Manufacturing	287.5	293.5	293.0	291.4	293.3	295.7	296.7	296.1
% Ch	1.2	2.1	-0.2	-0.6	0.7	0.8	0.3	-0.2
Durable Manufacturing	202.1	206.8	206.2	205.6	207.4	209.8	211.1	211.1
% Ch	0.9	2.3	-0.3	-0.3	0.9	1.1	0.6	0.0
Wood Products	13.0	13.0	12.9	12.8	12.9	13.1	13.0	12.9
% Ch	0.9	-0.1	-0.9	-0.2	0.9	1.0	-0.3	-1.2
Primary and Fabricated Metals	26.1	26.8	27.0	26.5	26.9	27.6	28.0	27.7
% Ch	4.0	2.9	0.6	-1.8	1.4	2.8	1.4	-1.2
Computer and Electronic Products	19.8	19.6	19.2	19.3	19.8	20.3	20.5	20.7
% Ch	0.8	-1.2	-1.8	0.4	2.7	2.3	1.4	1.0
Machinery and Electrical Equipment	21.3	21.2	20.6	21.0	21.9	22.9	23.6	24.1
% Ch	2.8	-0.6	-2.8	2.0	4.3	4.8	3.0	1.8
Aerospace	84.0	88.4	88.8	88.8	88.8	88.8	88.8	88.8
% Ch	-0.3	5.2	0.5	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	9.9	9.9	10.1	9.7	9.4	9.2	9.0	8.8
% Ch	-3.1	0.2	2.2	-4.3	-2.5	-2.6	-2.1	-2.5
Other Durables	28.1	28.0	27.7	27.6	27.7	27.9	28.1	28.2
% Ch	1.6	-0.2	-1.1	-0.5	0.4	0.8	0.6	0.3
Nondurable Manufacturing	85.5	86.7	86.8	85.7	85.9	85.9	85.6	85.1
% Ch	1.9	1.5	0.0	-1.2	0.2	0.0	-0.4	-0.6
Food Manufacturing	38.9	39.5	39.3	39.1	39.1	39.0	38.6	38.2
% Ch	2.3	1.5	-0.3	-0.7	0.1	-0.5	-1.0	-1.0
Paper and Paper Products	7.6	7.6	7.7	7.4	7.2	7.1	6.9	6.7
% Ch	-1.8	0.6	0.6	-4.1	-2.5	-1.8	-2.1	-2.8
Other Nondurables	39.0	39.6	39.7	39.3	39.6	39.9	40.1	40.2
% Ch	2.2	1.7	0.3	-1.2	0.8	0.8	0.4	0.1
Natural Resources and Mining	6.3	5.9	5.7	5.6	5.5	5.4	5.4	5.4
% Ch	1.5	-6.1	-4.2	-1.3	-2.2	-1.2	0.0	0.1
Construction	213.4	219.1	221.6	217.8	215.6	213.5	213.3	213.4
% Ch	6.8	2.7	1.2	-1.7	-1.0	-1.0	-0.1	0.1
Trade, Transportation, and Utilities	637.3	644.2	652.7	657.6	660.0	655.7	650.1	647.6
% Ch	2.0	1.1	1.3	0.7	0.4	-0.6	-0.8	-0.4
Wholesale Trade	136.4	138.2	139.4	140.7	140.8	140.7	141.2	141.3
% Ch	2.3	1.3	0.9	0.9	0.1	0.0	0.3	0.1
Retail Trade	386.2	389.9	395.9	399.5	402.7	399.4	393.9	391.3
% Ch	2.0	1.0	1.5	0.9	0.8	-0.8	-1.4	-0.7
Electronic Shopping and Mail-Order	54.8	63.6	70.4	73.0	75.2	77.1	78.8	80.5
% Ch	10.2	16.1	10.6	3.8	3.0	2.5	2.3	2.2
Other Retail Trade	331.4	326.3	325.6	326.5	327.5	322.3	315.1	310.8
% Ch	0.7	-1.5	-0.2	0.3	0.3	-1.6	-2.2	-1.4
Trans., Warehousing, and Utilities	114.7	116.1	117.4	117.4	116.5	115.6	115.0	114.9
% Ch	1.9	1.3	1.1	0.0	-0.7	-0.8	-0.5	-0.1
Information	133.6	144.1	148.4	149.1	148.9	151.1	154.8	156.9
% Ch	5.8	7.9	3.0	0.5	-0.1	1.4	2.4	1.4
Software Publishers	65.3	69.9	72.0	72.8	73.7	74.8	76.0	77.1
% Ch	6.4	7.0	3.0	1.1	1.2	1.5	1.6	1.5
Other Publishing Industries	5.1	4.6	3.6	3.1	2.5	2.1	1.8	1.4
% Ch	-7.7	-9.9	-20.6	-15.8	-17.0	-16.3	-16.8	-22.2
Other Information	63.2	69.6	72.7	73.3	72.7	74.2	77.0	78.4
% Ch	6.4	10.2	4.5	0.7	-0.8	2.0	3.8	1.8
Financial Activities	157.5	160.2	162.5	162.0	160.0	157.9	156.1	154.3
% Ch	2.3	1.7	1.5	-0.3	-1.3	-1.3	-1.1	-1.1
Professional and Business Services	426.1	437.5	449.0	467.3	489.2	502.8	514.7	527.7
% Ch	3.1	2.7	2.6	4.1	4.7	2.8	2.3	2.5
Education and Health Services	491.3	502.6	513.9	521.8	525.8	528.7	532.5	536.3
% Ch	3.3	2.3	2.2	1.5	0.8	0.6	0.7	0.7
Leisure and Hospitality	342.3	347.7	356.6	362.2	365.8	369.6	370.8	371.0
% Ch	3.3	1.6	2.6	1.6	1.0	1.0	0.3	0.1
Other Services	121.7	127.7	129.8	131.7	133.2	134.6	136.0	137.2
% Ch	1.7	4.9	1.6	1.5	1.2	1.0	1.0	0.9
Federal Government	74.7	75.7	78.8	76.9	77.2	77.5	77.8	78.1
% Ch	-0.2	1.3	4.1	-2.4	0.5	0.4	0.4	0.3
State and Local Government	512.3	512.1	521.4	532.1	542.4	551.0	557.4	562.4
% Ch	0.3	0.0	1.8	2.1	1.9	1.6	1.2	0.9

Table A2.4

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2020 to 2025

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	3,513.3	3,532.7	3,539.2	3,548.4	3,559.8	3,570.7	3,580.7	3,590.6
% Ch, Annual Rate	2.1	2.2	0.7	1.0	1.3	1.2	1.1	1.1
Manufacturing	294.3	293.6	292.3	291.8	291.4	291.1	291.2	291.8
% Ch, Annual Rate	1.6	-1.0	-1.7	-0.8	-0.6	-0.3	0.0	0.8
Durable Manufacturing	207.1	206.5	205.7	205.6	205.5	205.4	205.6	206.1
% Ch, Annual Rate	1.6	-1.3	-1.5	-0.1	-0.3	-0.2	0.3	1.0
Wood Products	12.8	12.9	12.8	12.9	12.9	12.8	12.8	12.8
% Ch, Annual Rate	-1.5	3.0	-1.3	1.1	-0.2	-0.9	-1.6	0.1
Primary and Fabricated Metals	27.3	27.1	26.8	26.8	26.6	26.5	26.4	26.5
% Ch, Annual Rate	4.1	-3.7	-4.0	-0.7	-1.8	-2.5	-0.9	0.8
Computer and Electronic Products	19.4	19.3	19.1	19.1	19.1	19.2	19.4	19.6
% Ch, Annual Rate	3.0	-3.0	-2.9	-1.3	0.0	2.6	3.8	4.4
Machinery and Electrical Equipment	20.8	20.6	20.4	20.5	20.7	20.9	21.1	21.3
% Ch, Annual Rate	-0.2	-3.8	-4.1	3.0	3.4	3.0	3.9	5.2
Aerospace	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8
% Ch, Annual Rate	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	10.2	10.1	10.1	9.9	9.8	9.7	9.6	9.6
% Ch, Annual Rate	-2.1	-4.9	-1.9	-5.2	-6.4	-4.2	-2.4	-0.3
Other Durables	27.8	27.8	27.7	27.7	27.7	27.6	27.6	27.6
% Ch, Annual Rate	0.4	-0.5	-1.0	0.1	-0.3	-0.9	-0.6	0.0
Nondurable Manufacturing	87.2	87.1	86.7	86.1	85.9	85.7	85.6	85.7
% Ch, Annual Rate	1.5	-0.4	-2.1	-2.3	-1.3	-0.6	-0.6	0.3
Food Manufacturing	39.4	39.5	39.4	39.2	39.2	39.1	39.0	39.1
% Ch, Annual Rate	-1.6	1.1	-1.2	-1.4	-0.6	-0.6	-0.9	0.6
Paper and Paper Products	7.7	7.8	7.7	7.6	7.5	7.4	7.3	7.3
% Ch, Annual Rate	0.9	4.1	-5.6	-5.8	-5.4	-2.8	-3.5	-3.3
Other Nondurables	40.1	39.9	39.6	39.4	39.3	39.2	39.3	39.3
% Ch, Annual Rate	4.8	-2.6	-2.3	-2.6	-1.1	-0.2	0.2	0.7
Natural Resources and Mining	5.6	5.7	5.7	5.7	5.7	5.6	5.6	5.5
% Ch, Annual Rate	-3.6	4.4	0.9	-0.8	0.5	-5.9	-3.2	-2.0
Construction	222.5	222.3	221.3	220.5	219.5	218.2	217.0	216.6
% Ch, Annual Rate	1.1	-0.3	-1.8	-1.5	-1.7	-2.4	-2.1	-0.8
Trade, Transportation, and Utilities	649.7	651.5	654.2	655.4	656.7	657.7	657.7	658.2
% Ch, Annual Rate	1.2	1.1	1.7	0.7	0.8	0.6	0.0	0.3
Wholesale Trade	138.7	139.3	139.7	140.0	140.3	140.6	140.8	141.0
% Ch, Annual Rate	0.9	1.5	1.3	0.9	0.9	0.7	0.6	0.6
Retail Trade	393.7	394.8	397.1	398.1	399.0	399.7	399.6	399.9
% Ch, Annual Rate	1.5	1.1	2.4	1.0	0.9	0.7	-0.1	0.4
Electronic Shopping and Mail-Order	69.2	70.0	70.8	71.5	72.1	72.7	73.3	73.9
% Ch	6.6	4.7	4.3	4.0	3.7	3.5	3.3	3.1
Other Retail Trade	324.5	324.8	326.3	326.6	326.9	327.0	326.3	326.1
% Ch	0.4	0.3	1.9	0.3	0.3	0.1	-0.9	-0.2
Trans., Warehousing, and Utilities	117.3	117.4	117.4	117.3	117.4	117.4	117.3	117.3
% Ch, Annual Rate	0.7	0.5	0.0	-0.3	0.2	0.1	-0.3	-0.3
Information	147.6	148.7	148.7	148.7	149.1	149.3	149.3	148.8
% Ch, Annual Rate	2.6	3.1	0.0	-0.1	1.3	0.4	0.2	-1.5
Software Publishers	71.7	71.9	72.1	72.3	72.5	72.7	72.9	73.1
% Ch, Annual Rate	2.6	0.9	1.2	1.2	0.9	1.1	1.1	1.2
Other Publishing Industries	3.9	3.7	3.6	3.4	3.3	3.1	3.0	2.9
% Ch, Annual Rate	-25.5	-15.4	-13.6	-14.3	-17.1	-16.4	-16.8	-16.4
Other Information	72.0	73.1	73.0	72.9	73.4	73.5	73.5	72.8
% Ch, Annual Rate	4.4	6.3	-0.4	-0.6	2.6	0.5	0.0	-3.6
Financial Activities	161.9	162.5	163.0	162.8	162.5	162.2	161.9	161.5
% Ch, Annual Rate	1.2	1.3	1.2	-0.3	-0.8	-0.9	-0.7	-0.8
Professional and Business Services	444.9	447.5	449.9	453.8	459.5	464.7	469.9	475.0
% Ch, Annual Rate	2.3	2.3	2.2	3.5	5.2	4.6	4.6	4.4
Education and Health Services	510.0	513.3	515.2	517.1	519.1	521.0	522.7	524.2
% Ch, Annual Rate	2.4	2.6	1.5	1.5	1.6	1.4	1.3	1.2
Leisure and Hospitality	353.2	355.2	357.8	360.0	360.5	361.9	363.0	363.5
% Ch, Annual Rate	3.1	2.2	3.0	2.5	0.5	1.6	1.3	0.5
Other Services	129.0	129.6	130.1	130.5	131.0	131.5	131.9	132.4
% Ch, Annual Rate	2.2	1.7	1.6	1.2	1.5	1.5	1.4	1.4
Federal Government	76.8	83.1	78.4	76.9	76.7	76.8	76.9	77.0
% Ch, Annual Rate	4.8	37.0	-20.8	-7.7	-0.6	0.5	0.5	0.5
State and Local Government	517.6	519.9	522.6	525.3	528.0	530.7	533.4	536.1
% Ch, Annual Rate	2.9	1.8	2.1	2.1	2.1	2.1	2.0	2.0

Table A2.4 (continued)

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2020 to 2025

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Nonfarm Payroll Employment	3,603.8	3,615.3	3,621.3	3,627.9	3,634.3	3,640.7	3,646.5	3,652.6
% Ch, Annual Rate	1.5	1.3	0.7	0.7	0.7	0.7	0.6	0.7
Manufacturing	292.6	293.2	293.5	294.1	294.8	295.6	296.0	296.4
% Ch, Annual Rate	1.2	0.8	0.3	0.8	1.1	1.0	0.6	0.5
Durable Manufacturing	206.8	207.3	207.5	208.1	208.9	209.6	210.1	210.5
% Ch, Annual Rate	1.3	1.0	0.6	1.1	1.5	1.4	0.9	0.8
Wood Products	12.9	12.9	13.0	13.0	13.1	13.1	13.1	13.1
% Ch, Annual Rate	1.9	2.4	0.8	1.6	1.4	0.9	-0.5	-0.1
Primary and Fabricated Metals	26.7	26.8	26.9	27.1	27.3	27.6	27.7	27.9
% Ch, Annual Rate	2.7	3.0	1.2	2.3	3.4	3.8	2.7	2.5
Computer and Electronic Products	19.7	19.8	19.8	19.9	20.1	20.2	20.3	20.4
% Ch, Annual Rate	3.0	1.1	1.0	2.1	3.1	2.9	2.3	1.5
Machinery and Electrical Equipment	21.6	21.8	22.0	22.3	22.6	22.9	23.1	23.3
% Ch, Annual Rate	4.5	4.2	3.6	5.2	6.3	5.0	3.4	3.2
Aerospace	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	9.6	9.4	9.4	9.3	9.2	9.2	9.2	9.1
% Ch, Annual Rate	-0.4	-6.1	-3.6	-3.0	-2.1	-1.7	-1.5	-1.8
Other Durables	27.6	27.7	27.8	27.8	27.9	27.9	28.0	28.0
% Ch, Annual Rate	1.0	1.3	0.4	0.6	0.8	0.9	0.7	0.8
Nondurable Manufacturing	85.8	85.9	85.9	86.0	86.0	86.0	85.9	85.9
% Ch, Annual Rate	0.8	0.5	-0.2	0.2	0.0	0.1	-0.2	-0.3
Food Manufacturing	39.1	39.2	39.1	39.1	39.1	39.0	38.9	38.8
% Ch, Annual Rate	0.7	0.5	-0.6	-0.1	-0.5	-0.5	-0.9	-1.0
Paper and Paper Products	7.3	7.2	7.2	7.1	7.1	7.1	7.1	7.0
% Ch, Annual Rate	-2.0	-2.1	-2.5	-1.6	-1.5	-1.5	-1.8	-2.0
Other Nondurables	39.5	39.6	39.6	39.7	39.8	39.9	40.0	40.0
% Ch, Annual Rate	1.4	1.1	0.7	0.9	0.8	0.9	0.8	0.6
Natural Resources and Mining	5.5	5.5	5.5	5.4	5.4	5.4	5.4	5.4
% Ch, Annual Rate	-2.4	-0.9	-1.6	-1.5	-1.4	-1.0	-1.0	0.1
Construction	216.2	216.1	215.4	214.8	213.9	213.6	213.1	213.2
% Ch, Annual Rate	-0.7	-0.1	-1.4	-1.0	-1.7	-0.6	-0.8	0.2
Trade, Transportation, and Utilities	660.9	661.1	659.5	658.4	657.2	656.2	655.2	654.1
% Ch, Annual Rate	1.7	0.1	-1.0	-0.6	-0.7	-0.6	-0.6	-0.7
Wholesale Trade	140.7	140.9	140.8	140.8	140.8	140.7	140.7	140.8
% Ch, Annual Rate	-0.8	0.4	-0.1	-0.2	0.0	-0.1	0.0	0.2
Retail Trade	403.4	403.5	402.3	401.6	400.6	399.8	399.0	398.0
% Ch, Annual Rate	3.5	0.2	-1.3	-0.7	-1.0	-0.7	-0.8	-1.0
Electronic Shopping and Mail-Order	74.4	74.9	75.4	75.9	76.4	76.9	77.3	77.8
% Ch	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3
Other Retail Trade	329.0	328.6	326.8	325.6	324.2	323.0	321.7	320.2
% Ch	3.6	-0.4	-2.2	-1.4	-1.8	-1.5	-1.6	-1.8
Trans., Warehousing, and Utilities	116.8	116.7	116.4	116.1	115.9	115.7	115.5	115.3
% Ch, Annual Rate	-1.5	-0.5	-0.9	-0.9	-0.8	-0.8	-0.7	-0.6
Information	148.7	148.8	149.0	149.3	149.7	150.5	151.6	152.6
% Ch, Annual Rate	-0.2	0.5	0.4	0.7	1.3	2.0	2.9	2.8
Software Publishers	73.3	73.6	73.8	74.1	74.4	74.6	74.9	75.2
% Ch, Annual Rate	1.0	1.5	1.4	1.4	1.5	1.5	1.5	1.6
Other Publishing Industries	2.7	2.6	2.5	2.4	2.3	2.2	2.1	2.0
% Ch, Annual Rate	-19.6	-14.7	-16.3	-16.3	-15.9	-17.1	-16.7	-16.8
Other Information	72.7	72.7	72.7	72.8	73.1	73.7	74.6	75.4
% Ch, Annual Rate	-0.6	0.1	0.0	0.6	1.6	3.2	4.9	4.7
Financial Activities	160.5	160.3	159.8	159.4	158.9	158.1	157.5	157.0
% Ch, Annual Rate	-2.7	-0.5	-1.2	-1.0	-1.3	-1.9	-1.7	-1.2
Professional and Business Services	483.2	487.9	491.3	494.5	498.2	501.4	504.4	507.4
% Ch, Annual Rate	7.1	3.9	2.7	2.7	3.0	2.6	2.4	2.4
Education and Health Services	524.2	525.7	526.3	526.8	527.7	528.3	529.0	529.6
% Ch, Annual Rate	0.0	1.2	0.4	0.4	0.7	0.4	0.5	0.5
Leisure and Hospitality	363.5	365.1	366.7	368.1	368.5	369.3	370.0	370.5
% Ch, Annual Rate	0.0	1.7	1.8	1.4	0.5	0.8	0.7	0.6
Other Services	132.7	133.1	133.4	133.8	134.1	134.5	134.8	135.1
% Ch, Annual Rate	0.9	1.2	1.1	1.0	1.1	1.0	1.0	1.0
Federal Government	77.1	77.2	77.3	77.4	77.4	77.5	77.6	77.7
% Ch, Annual Rate	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
State and Local Government	538.8	541.3	543.6	546.0	548.2	550.2	552.0	553.6
% Ch, Annual Rate	2.0	1.9	1.8	1.7	1.7	1.5	1.3	1.2

Table A2.4 (continued)

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2020 to 2025

	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4
Nonfarm Payroll Employment	3,657.4	3,662.1	3,668.2	3,674.1	3,679.0	3,684.2	3,688.9	3,693.6
% Ch, Annual Rate	0.5	0.5	0.7	0.6	0.5	0.6	0.5	0.5
Manufacturing	296.5	296.6	296.8	296.7	296.5	296.2	296.0	295.7
% Ch, Annual Rate	0.2	0.1	0.2	-0.1	-0.3	-0.4	-0.3	-0.3
Durable Manufacturing	210.8	211.0	211.2	211.3	211.2	211.1	211.0	210.9
% Ch, Annual Rate	0.5	0.4	0.4	0.1	-0.1	-0.3	-0.2	-0.3
Wood Products	13.1	13.0	13.0	13.0	12.9	12.9	12.8	12.8
% Ch, Annual Rate	-0.1	-0.5	-0.5	-1.4	-1.5	-1.5	-1.1	-1.4
Primary and Fabricated Metals	28.0	28.0	28.1	28.0	27.9	27.7	27.6	27.5
% Ch, Annual Rate	1.2	0.4	0.3	-0.7	-1.7	-2.1	-1.9	-2.0
Computer and Electronic Products	20.5	20.5	20.6	20.7	20.7	20.7	20.8	20.8
% Ch, Annual Rate	0.9	1.1	1.4	1.4	1.0	0.8	0.5	0.2
Machinery and Electrical Equipment	23.4	23.6	23.7	23.9	23.9	24.0	24.1	24.2
% Ch, Annual Rate	2.6	2.9	3.0	1.8	1.6	1.2	1.3	1.3
Aerospace	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	9.1	9.0	9.0	8.9	8.8	8.8	8.7	8.7
% Ch, Annual Rate	-2.2	-2.3	-2.7	-2.7	-2.4	-2.5	-2.4	-2.5
Other Durables	28.1	28.1	28.1	28.2	28.2	28.2	28.2	28.2
% Ch, Annual Rate	0.7	0.4	0.6	0.3	0.2	0.1	0.2	0.1
Nondurable Manufacturing	85.7	85.6	85.5	85.4	85.2	85.1	85.0	84.9
% Ch, Annual Rate	-0.6	-0.6	-0.4	-0.7	-0.7	-0.6	-0.5	-0.5
Food Manufacturing	38.7	38.6	38.5	38.4	38.3	38.2	38.1	38.1
% Ch, Annual Rate	-1.3	-1.2	-0.8	-1.0	-1.0	-1.0	-0.8	-0.9
Paper and Paper Products	7.0	6.9	6.9	6.9	6.8	6.7	6.7	6.6
% Ch, Annual Rate	-2.3	-2.3	-2.2	-2.6	-2.9	-3.1	-3.0	-3.1
Other Nondurables	40.1	40.1	40.1	40.1	40.1	40.1	40.2	40.2
% Ch, Annual Rate	0.4	0.3	0.3	0.0	0.1	0.1	0.2	0.3
Natural Resources and Mining	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
% Ch, Annual Rate	0.8	-0.3	0.0	0.2	0.6	0.3	-0.5	-0.9
Construction	213.2	213.2	213.3	213.4	213.4	213.5	213.4	213.4
% Ch, Annual Rate	0.0	-0.1	0.2	0.2	0.0	0.1	-0.1	-0.1
Trade, Transportation, and Utilities	651.8	650.5	649.5	648.6	648.0	647.7	647.4	647.2
% Ch, Annual Rate	-1.3	-0.8	-0.6	-0.5	-0.4	-0.1	-0.2	-0.2
Wholesale Trade	141.1	141.1	141.2	141.2	141.3	141.3	141.3	141.3
% Ch, Annual Rate	1.0	0.0	0.2	0.2	0.2	0.0	0.0	-0.1
Retail Trade	395.4	394.2	393.4	392.6	391.7	391.5	391.2	390.9
% Ch, Annual Rate	-2.6	-1.2	-0.9	-0.7	-0.9	-0.3	-0.3	-0.3
Electronic Shopping and Mail-Order	78.2	78.6	79.1	79.5	79.9	80.3	80.8	81.2
% Ch	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1
Other Retail Trade	317.2	315.6	314.3	313.2	311.8	311.1	310.4	309.7
% Ch	-3.7	-2.0	-1.6	-1.5	-1.7	-0.9	-0.9	-0.9
Trans., Warehousing, and Utilities	115.3	115.1	114.9	114.8	114.9	114.9	115.0	115.0
% Ch, Annual Rate	0.1	-0.7	-0.6	-0.6	0.5	0.2	0.1	0.1
Information	153.7	154.3	155.2	155.8	156.3	156.7	157.0	157.5
% Ch, Annual Rate	2.9	1.7	2.3	1.6	1.4	1.0	0.6	1.4
Software Publishers	75.5	75.8	76.1	76.4	76.7	77.0	77.3	77.5
% Ch, Annual Rate	1.8	1.6	1.6	1.5	1.6	1.5	1.3	1.3
Other Publishing Industries	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2
% Ch, Annual Rate	-14.0	-18.1	-18.9	-20.2	-20.5	-22.6	-29.3	-31.7
Other Information	76.2	76.7	77.4	77.8	78.1	78.3	78.4	78.8
% Ch, Annual Rate	4.4	2.3	3.6	2.1	1.7	1.0	0.6	2.1
Financial Activities	156.9	156.3	155.8	155.3	154.8	154.5	154.2	153.8
% Ch, Annual Rate	-0.3	-1.5	-1.3	-1.3	-1.2	-0.7	-0.9	-1.1
Professional and Business Services	509.8	512.8	516.3	519.7	523.1	526.1	529.2	532.4
% Ch, Annual Rate	1.9	2.4	2.7	2.7	2.6	2.3	2.4	2.4
Education and Health Services	531.3	531.9	532.9	533.9	535.0	536.0	536.8	537.5
% Ch, Annual Rate	1.3	0.5	0.7	0.7	0.8	0.7	0.6	0.5
Leisure and Hospitality	370.3	370.6	371.0	371.4	371.0	371.0	371.1	371.1
% Ch, Annual Rate	-0.3	0.3	0.4	0.4	-0.5	0.1	0.0	0.0
Other Services	135.5	135.8	136.1	136.4	136.7	137.1	137.3	137.6
% Ch, Annual Rate	1.2	0.9	0.9	0.9	0.9	0.9	0.8	0.8
Federal Government	77.7	77.8	77.9	77.9	78.0	78.0	78.1	78.1
% Ch, Annual Rate	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
State and Local Government	555.3	556.8	558.1	559.5	560.8	562.0	563.0	564.0
% Ch, Annual Rate	1.2	1.1	1.0	1.0	0.9	0.8	0.7	0.7

Table A3.1

U.S. Personal Income by Component (Billions of Dollars)

Forecast 2020 to 2025

	2018	2019	2020	2021	2022	2023	2024	2025
Personal Income	17,819.2	18,624.2	19,319.3	20,031.7	20,839.8	21,761.3	22,721.4	23,725.6
% Ch	5.6	4.5	3.7	3.7	4.0	4.4	4.4	4.4
Total Wage and Salary Disbursements	8,888.5	9,323.0	9,671.7	10,029.2	10,441.2	10,917.3	11,357.2	11,797.4
% Ch	5.0	4.9	3.7	3.7	4.1	4.6	4.0	3.9
Nonwage Personal Income	8,930.7	9,301.2	9,647.6	10,002.5	10,398.6	10,843.9	11,364.1	11,928.2
% Ch	6.1	4.1	3.7	3.7	4.0	4.3	4.8	5.0
Supplements to Wages and Salaries	2,040.0	2,124.8	2,205.8	2,290.3	2,379.8	2,466.3	2,550.6	2,640.4
% Ch	4.6	4.2	3.8	3.8	3.9	3.6	3.4	3.5
Proprietor's Income	1,588.8	1,656.2	1,705.3	1,744.9	1,780.2	1,795.3	1,805.2	1,814.8
% Ch	4.6	4.2	3.0	2.3	2.0	0.8	0.5	0.5
Farm	27.2	31.1	26.8	50.6	72.1	63.2	57.5	61.9
% Ch	...	...	...	...	...	...	...	...
Nonfarm	1,561.6	1,625.1	1,678.5	1,694.3	1,708.2	1,732.2	1,747.7	1,752.8
% Ch	5.5	4.1	3.3	0.9	0.8	1.4	0.9	0.3
Less: Contribution For Govt. Soc. Ins.	1,356.5	1,422.8	1,472.9	1,520.6	1,578.4	1,646.8	1,710.7	1,774.8
% Ch	4.4	4.9	3.5	3.2	3.8	4.3	3.9	3.7
Dividends/Int./Rent	3,686.9	3,770.8	3,897.4	4,019.8	4,187.9	4,416.3	4,701.4	5,018.3
% Ch	8.4	2.3	3.4	3.1	4.2	5.5	6.5	6.7
Transfer Payments	2,971.5	3,172.2	3,311.9	3,468.1	3,629.1	3,812.8	4,017.7	4,229.5
% Ch	4.3	6.8	4.4	4.7	4.6	5.1	5.4	5.3

Table A3.2

U.S. Personal Income by Component (Billions of Dollars)

Forecast 2020 to 2025

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	19,052.3	19,253.0	19,407.5	19,564.4	19,752.0	19,936.8	20,125.4	20,312.4
% Ch, Annual Rate	4.0	4.3	3.2	3.3	3.9	3.8	3.8	3.8
Total Wage and Salary Disbursements	9,538.4	9,634.0	9,714.4	9,800.1	9,890.1	9,982.7	10,075.2	10,168.8
% Ch, Annual Rate	3.7	4.1	3.4	3.6	3.7	3.8	3.8	3.8
Nonwage Personal Income	9,513.9	9,618.9	9,693.1	9,764.4	9,861.9	9,954.2	10,050.2	10,143.6
% Ch, Annual Rate	4.3	4.5	3.1	3.0	4.1	3.8	3.9	3.8
Supplements to Wages and Salaries	2,178.4	2,195.3	2,214.7	2,234.9	2,259.0	2,279.9	2,300.8	2,321.6
% Ch, Annual Rate	4.2	3.1	3.6	3.7	4.4	3.7	3.7	3.7
Proprietor's Income	1,688.6	1,701.8	1,710.0	1,720.7	1,730.5	1,739.9	1,749.9	1,759.4
% Ch, Annual Rate	0.2	3.2	1.9	2.5	2.3	2.2	2.3	2.2
Farm	24.6	25.5	26.8	30.1	36.7	45.5	55.6	64.6
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,664.0	1,676.3	1,683.2	1,690.6	1,693.8	1,694.4	1,694.3	1,694.8
% Ch, Annual Rate	3.7	3.0	1.7	1.8	0.8	0.2	0.0	0.1
Less: Contribution For Govt. Soc. Ins.	1,458.7	1,468.6	1,477.2	1,486.9	1,504.1	1,515.1	1,526.1	1,537.3
% Ch, Annual Rate	5.2	2.7	2.4	2.7	4.7	3.0	2.9	3.0
Dividends/Int./Rent	3,844.5	3,895.3	3,917.1	3,932.6	3,961.5	3,999.5	4,039.8	4,078.3
% Ch, Annual Rate	5.9	5.4	2.3	1.6	3.0	3.9	4.1	3.9
Transfer Payments	3,261.0	3,295.1	3,328.5	3,363.1	3,415.0	3,450.0	3,485.7	3,521.6
% Ch, Annual Rate	5.0	4.2	4.1	4.2	6.3	4.2	4.2	4.2

Table A3.2 (continued)

U.S. Personal Income by Component (Billions of Dollars)

Forecast 2020 to 2025

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Personal Income	20,539.1	20,746.6	20,940.3	21,133.3	21,390.5	21,633.1	21,881.5	22,140.0
% Ch, Annual Rate	4.5	4.1	3.8	3.7	5.0	4.6	4.7	4.8
Total Wage and Salary Disbursements	10,285.1	10,398.0	10,493.9	10,587.8	10,717.6	10,848.5	10,982.5	11,120.7
% Ch, Annual Rate	4.7	4.5	3.7	3.6	5.0	5.0	5.0	5.1
Nonwage Personal Income	10,253.9	10,348.6	10,446.4	10,545.6	10,672.9	10,784.6	10,898.9	11,019.3
% Ch, Annual Rate	4.4	3.7	3.8	3.9	4.9	4.3	4.3	4.5
Supplements to Wages and Salaries	2,347.1	2,370.3	2,391.6	2,410.3	2,433.9	2,455.2	2,476.6	2,499.3
% Ch, Annual Rate	4.5	4.0	3.6	3.2	4.0	3.5	3.5	3.7
Proprietor's Income	1,768.3	1,778.7	1,785.4	1,788.4	1,790.2	1,792.6	1,796.7	1,801.9
% Ch, Annual Rate	2.0	2.4	1.5	0.7	0.4	0.6	0.9	1.2
Farm	70.4	73.5	73.3	71.0	67.7	64.4	61.4	59.2
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,697.9	1,705.2	1,712.1	1,717.4	1,722.4	1,728.3	1,735.2	1,742.7
% Ch, Annual Rate	0.8	1.7	1.6	1.2	1.2	1.4	1.6	1.7
Less: Contribution For Govt. Soc. Ins.	1,558.9	1,573.2	1,585.0	1,596.4	1,620.6	1,637.8	1,655.4	1,673.6
% Ch, Annual Rate	5.8	3.7	3.0	2.9	6.2	4.3	4.4	4.5
Dividends/Int./Rent	4,118.8	4,161.2	4,208.6	4,262.9	4,321.7	4,383.6	4,446.8	4,513.2
% Ch, Annual Rate	4.0	4.2	4.6	5.3	5.6	5.9	5.9	6.1
Transfer Payments	3,578.6	3,611.6	3,645.8	3,680.4	3,747.7	3,790.9	3,834.2	3,878.5
% Ch, Annual Rate	6.6	3.7	3.8	3.8	7.5	4.7	4.7	4.7

Table A3.2 (continued)

U.S. Personal Income by Component (Billions of Dollars)

Forecast 2020 to 2025

	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4
Personal Income	22,376.5	22,598.9	22,833.6	23,076.5	23,348.9	23,598.0	23,850.7	24,104.7
% Ch, Annual Rate	4.3	4.0	4.2	4.3	4.8	4.3	4.4	4.3
Total Wage and Salary Disbursements	11,208.2	11,301.9	11,405.3	11,513.5	11,625.1	11,738.8	11,854.3	11,971.5
% Ch, Annual Rate	3.2	3.4	3.7	3.8	3.9	4.0	4.0	4.0
Nonwage Personal Income	11,168.2	11,297.0	11,428.3	11,563.1	11,723.8	11,859.2	11,996.4	12,133.2
% Ch, Annual Rate	5.5	4.7	4.7	4.8	5.7	4.7	4.7	4.6
Supplements to Wages and Salaries	2,522.8	2,540.3	2,559.2	2,579.9	2,605.8	2,628.5	2,652.0	2,675.5
% Ch, Annual Rate	3.8	2.8	3.0	3.3	4.1	3.5	3.6	3.6
Proprietor's Income	1,802.4	1,804.1	1,805.4	1,808.9	1,809.0	1,812.2	1,816.5	1,821.5
% Ch, Annual Rate	0.1	0.4	0.3	0.8	0.0	0.7	1.0	1.1
Farm	57.6	57.0	57.3	58.2	59.6	61.2	62.8	64.2
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,744.8	1,747.1	1,748.1	1,750.6	1,749.4	1,751.0	1,753.7	1,757.3
% Ch, Annual Rate	0.5	0.5	0.2	0.6	-0.3	0.4	0.6	0.8
Less: Contribution For Govt. Soc. Ins.	1,692.0	1,703.6	1,716.7	1,730.5	1,752.6	1,767.3	1,782.2	1,797.3
% Ch, Annual Rate	4.5	2.8	3.1	3.2	5.2	3.4	3.4	3.4
Dividends/Int./Rent	4,583.4	4,660.7	4,740.7	4,820.8	4,899.5	4,978.9	5,058.4	5,136.5
% Ch, Annual Rate	6.4	6.9	7.0	6.9	6.7	6.6	6.5	6.3
Transfer Payments	3,951.6	3,995.5	4,039.6	4,084.0	4,162.3	4,207.0	4,251.7	4,297.0
% Ch, Annual Rate	7.8	4.5	4.5	4.5	7.9	4.4	4.3	4.3

Table A3.3
Washington Personal Income by Component (Billions of Dollars)
Forecast 2020 to 2025

	2018	2019	2020	2021	2022	2023	2024	2025
Personal Income	467.399	494.585	517.936	538.574	562.116	590.056	619.775	650.282
% Ch	7.5	5.8	4.7	4.0	4.4	5.0	5.0	4.9
Total Wage and Salary Disbursements	237.156	254.062	267.749	278.254	290.037	304.410	318.390	331.936
% Ch	8.7	7.1	5.4	3.9	4.2	5.0	4.6	4.3
Manufacturing	22.833	23.848	24.376	25.117	26.108	27.401	28.516	29.467
% Ch	5.3	4.4	2.2	3.0	3.9	5.0	4.1	3.3
Durable Manufacturing	17.976	18.779	19.174	19.825	20.626	21.686	22.611	23.393
% Ch	5.3	4.5	2.1	3.4	4.0	5.1	4.3	3.5
Nondurable Manufacturing	4.857	5.069	5.202	5.292	5.482	5.715	5.905	6.074
% Ch	5.5	4.4	2.6	1.7	3.6	4.3	3.3	2.9
Nonmanufacturing	207.226	222.853	235.684	245.154	255.631	268.362	280.888	293.148
% Ch	9.4	7.5	5.8	4.0	4.3	5.0	4.7	4.4
Other Private Wages	1.339	1.363	1.433	1.486	1.545	1.614	1.678	1.737
% Ch	8.0	1.7	5.1	3.7	4.0	4.5	4.0	3.5
Farm Wages	1.490	1.582	1.683	1.779	1.886	2.009	2.127	2.240
% Ch	0.6	6.2	6.4	5.7	6.0	6.6	5.9	5.3
Military Wages	4.269	4.416	4.573	4.718	4.868	5.023	5.182	5.344
% Ch	2.0	3.4	3.6	3.2	3.2	3.2	3.2	3.1
Nonwage Personal Income	230.243	240.523	250.187	260.320	272.079	285.646	301.385	318.347
% Ch	6.3	4.5	4.0	4.0	4.5	5.0	5.5	5.6
Supplements to Wages and Salaries	52.360	55.393	57.973	60.271	62.701	65.244	67.800	70.410
% Ch	5.7	5.8	4.7	4.0	4.0	4.1	3.9	3.8
Proprietor's Income	36.045	37.483	38.061	38.475	39.097	39.468	39.712	39.874
% Ch	2.0	4.0	1.5	1.1	1.6	0.9	0.6	0.4
Farm	1.902	1.958	1.234	1.337	1.685	1.534	1.439	1.513
% Ch	...	...	...	...	...	...	...	...
Nonfarm	34.143	35.525	36.828	37.138	37.412	37.934	38.273	38.361
% Ch	3.6	4.0	3.7	0.8	0.7	1.4	0.9	0.2
Less: Contribution For Govt. Soc. Ins.	38.088	40.498	42.309	43.636	45.219	47.229	49.165	51.021
% Ch	5.4	6.3	4.5	3.1	3.6	4.4	4.1	3.8
Plus: Residence Adjustment	4.324	4.464	4.645	4.854	5.095	5.374	5.631	5.889
% Ch	2.1	3.2	4.1	4.5	5.0	5.5	4.8	4.6
Dividends/Int./Rent	109.752	112.752	117.424	121.927	127.811	135.517	144.945	155.339
% Ch	8.7	2.7	4.1	3.8	4.8	6.0	7.0	7.2
Transfer Payments	65.849	70.929	74.393	78.429	82.592	87.272	92.462	97.856
% Ch	5.0	7.7	4.9	5.4	5.3	5.7	5.9	5.8
State U.I. Benefits	0.978	1.016	1.088	1.212	1.441	1.720	2.021	2.239
% Ch	-2.2	3.9	7.1	11.4	18.9	19.3	17.5	10.8
Other Transfers	64.871	69.913	73.305	77.217	81.151	85.552	90.441	95.616
% Ch	5.1	7.8	4.9	5.3	5.1	5.4	5.7	5.7

Table A3.4

Washington Personal Income by Component (Billions of Dollars)

Forecast 2020 to 2025

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	509.567	516.278	520.687	525.213	530.627	535.837	541.226	546.604
% Ch, Annual Rate	4.7	5.4	3.5	3.5	4.2	4.0	4.1	4.0
Total Wage and Salary Disbursements	262.983	266.938	269.291	271.782	274.442	276.940	279.509	282.124
% Ch, Annual Rate	4.4	6.2	3.6	3.8	4.0	3.7	3.8	3.8
Manufacturing	23.840	24.448	24.536	24.681	24.836	25.003	25.196	25.433
% Ch, Annual Rate	-3.7	10.6	1.5	2.4	2.5	2.7	3.1	3.8
Durable Manufacturing	18.670	19.243	19.322	19.460	19.593	19.730	19.892	20.084
% Ch, Annual Rate	-5.8	12.9	1.7	2.9	2.8	2.8	3.3	3.9
Nondurable Manufacturing	5.170	5.205	5.214	5.221	5.242	5.273	5.304	5.349
% Ch, Annual Rate	4.1	2.7	0.7	0.5	1.7	2.4	2.4	3.4
Nonmanufacturing	231.563	234.827	237.027	239.317	241.728	243.989	246.291	248.608
% Ch, Annual Rate	5.2	5.8	3.8	3.9	4.1	3.8	3.8	3.8
Other Private Wages	1.410	1.429	1.440	1.452	1.466	1.479	1.492	1.506
% Ch, Annual Rate	3.3	5.6	2.9	3.4	3.9	3.6	3.7	3.6
Farm Wages	1.643	1.675	1.695	1.717	1.743	1.767	1.791	1.815
% Ch, Annual Rate	5.3	8.2	4.8	5.4	6.0	5.6	5.7	5.5
Military Wages	4.527	4.559	4.593	4.614	4.669	4.702	4.739	4.762
% Ch, Annual Rate	4.8	2.8	3.0	1.9	4.9	2.9	3.1	2.0
Nonwage Personal Income	246.583	249.340	251.396	253.431	256.186	258.897	261.716	264.480
% Ch, Annual Rate	5.1	4.5	3.3	3.3	4.4	4.3	4.4	4.3
Supplements to Wages and Salaries	57.093	57.746	58.259	58.795	59.464	59.995	60.541	61.084
% Ch, Annual Rate	5.3	4.7	3.6	3.7	4.6	3.6	3.7	3.6
Proprietor's Income	38.097	38.015	38.002	38.132	38.268	38.396	38.544	38.695
% Ch, Annual Rate	0.5	-0.9	-0.1	1.4	1.4	1.3	1.5	1.6
Farm	1.587	1.227	1.073	1.047	1.121	1.251	1.414	1.562
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	36.509	36.788	36.929	37.085	37.147	37.145	37.130	37.132
% Ch, Annual Rate	4.4	3.1	1.5	1.7	0.7	0.0	-0.2	0.0
Less: Contribution For Govt. Soc. Ins.	41.792	42.243	42.471	42.731	43.218	43.490	43.773	44.063
% Ch, Annual Rate	6.1	4.4	2.2	2.5	4.6	2.5	2.6	2.7
Plus: Residence Adjustment	4.567	4.623	4.670	4.720	4.773	4.827	4.881	4.936
% Ch, Annual Rate	4.5	5.0	4.1	4.4	4.5	4.6	4.6	4.6
Dividends/Int./Rent	115.527	117.260	118.120	118.789	119.862	121.212	122.633	123.999
% Ch, Annual Rate	6.7	6.1	3.0	2.3	3.7	4.6	4.8	4.5
Transfer Payments	73.092	73.939	74.816	75.725	77.037	77.958	78.891	79.829
% Ch, Annual Rate	5.5	4.7	4.8	4.9	7.1	4.9	4.9	4.8
State U.I. Benefits	1.068	1.090	1.088	1.105	1.135	1.176	1.236	1.299
% Ch, Annual Rate	0.0	8.4	-0.8	6.7	11.3	15.2	22.0	22.0
Other Transfers	72.024	72.849	73.728	74.620	75.902	76.781	77.654	78.530
% Ch, Annual Rate	5.6	4.7	4.9	4.9	7.1	4.7	4.6	4.6

Table A3.4 (continued)

Washington Personal Income by Component (Billions of Dollars)

Forecast 2020 to 2025

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Personal Income	553.084	559.206	565.095	571.080	578.738	586.141	593.720	601.625
% Ch, Annual Rate	4.8	4.5	4.3	4.3	5.5	5.2	5.3	5.4
Total Wage and Salary Disbursements	285.417	288.678	291.579	294.475	298.352	302.309	306.375	310.603
% Ch, Annual Rate	4.8	4.6	4.1	4.0	5.4	5.4	5.5	5.6
Manufacturing	25.715	25.988	26.233	26.495	26.857	27.226	27.581	27.941
% Ch, Annual Rate	4.5	4.3	3.8	4.1	5.6	5.6	5.3	5.3
Durable Manufacturing	20.309	20.527	20.727	20.941	21.239	21.542	21.833	22.130
% Ch, Annual Rate	4.6	4.3	4.0	4.2	5.8	5.8	5.5	5.6
Nondurable Manufacturing	5.406	5.461	5.506	5.554	5.618	5.684	5.748	5.812
% Ch, Annual Rate	4.3	4.1	3.3	3.6	4.7	4.8	4.5	4.5
Nonmanufacturing	251.517	254.426	257.005	259.577	262.981	266.482	270.100	273.885
% Ch, Annual Rate	4.8	4.7	4.1	4.1	5.4	5.4	5.5	5.7
Other Private Wages	1.522	1.539	1.552	1.565	1.584	1.604	1.623	1.644
% Ch, Annual Rate	4.5	4.3	3.6	3.5	4.9	4.9	5.0	5.1
Farm Wages	1.845	1.874	1.899	1.924	1.957	1.991	2.026	2.062
% Ch, Annual Rate	6.7	6.4	5.5	5.3	7.1	7.1	7.2	7.3
Military Wages	4.818	4.852	4.890	4.914	4.971	5.006	5.045	5.071
% Ch, Annual Rate	4.8	2.9	3.1	2.0	4.7	2.9	3.1	2.1
Nonwage Personal Income	267.666	270.527	273.516	276.605	280.386	283.832	287.345	291.022
% Ch, Annual Rate	4.9	4.3	4.5	4.6	5.6	5.0	5.0	5.2
Supplements to Wages and Salaries	61.794	62.428	63.021	63.561	64.273	64.910	65.555	66.239
% Ch, Annual Rate	4.7	4.2	3.9	3.5	4.6	4.0	4.0	4.2
Proprietor's Income	38.850	39.057	39.203	39.280	39.330	39.402	39.505	39.636
% Ch, Annual Rate	1.6	2.1	1.5	0.8	0.5	0.7	1.0	1.3
Farm	1.658	1.710	1.705	1.667	1.612	1.554	1.505	1.467
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	37.192	37.346	37.497	37.613	37.719	37.848	38.000	38.168
% Ch, Annual Rate	0.6	1.7	1.6	1.2	1.1	1.4	1.6	1.8
Less: Contribution For Govt. Soc. Ins.	44.670	45.069	45.403	45.734	46.444	46.955	47.483	48.036
% Ch, Annual Rate	5.6	3.6	3.0	2.9	6.4	4.5	4.6	4.7
Plus: Residence Adjustment	5.004	5.070	5.126	5.181	5.257	5.334	5.412	5.493
% Ch, Annual Rate	5.6	5.4	4.5	4.4	6.0	6.0	6.0	6.1
Dividends/Int./Rent	125.424	126.906	128.537	130.378	132.356	134.428	136.538	138.746
% Ch, Annual Rate	4.7	4.8	5.2	5.9	6.2	6.4	6.4	6.6
Transfer Payments	81.264	82.135	83.032	83.938	85.613	86.713	87.819	88.944
% Ch, Annual Rate	7.4	4.4	4.4	4.4	8.2	5.2	5.2	5.2
State U.I. Benefits	1.365	1.413	1.462	1.524	1.595	1.677	1.762	1.846
% Ch, Annual Rate	21.9	14.9	14.4	18.2	19.8	22.4	21.9	20.4
Other Transfers	79.899	80.722	81.570	82.414	84.019	85.036	86.057	87.098
% Ch, Annual Rate	7.2	4.2	4.3	4.2	8.0	4.9	4.9	4.9

Table A3.4 (continued)

Washington Personal Income by Component (Billions of Dollars)

Forecast 2020 to 2025

	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4
Personal Income	609.034	616.009	623.311	630.747	638.928	646.469	654.045	661.688
% Ch, Annual Rate	5.0	4.7	4.8	4.9	5.3	4.8	4.8	4.8
Total Wage and Salary Disbursements	313.643	316.675	319.954	323.289	326.765	330.200	333.630	337.148
% Ch, Annual Rate	4.0	3.9	4.2	4.2	4.4	4.3	4.2	4.3
Manufacturing	28.163	28.393	28.635	28.871	29.110	29.344	29.586	29.828
% Ch, Annual Rate	3.2	3.3	3.5	3.3	3.4	3.3	3.3	3.3
Durable Manufacturing	22.317	22.510	22.711	22.907	23.103	23.294	23.490	23.686
% Ch, Annual Rate	3.4	3.5	3.6	3.5	3.5	3.4	3.4	3.4
Nondurable Manufacturing	5.846	5.883	5.925	5.965	6.007	6.050	6.096	6.142
% Ch, Annual Rate	2.4	2.6	2.8	2.7	2.9	2.9	3.1	3.0
Nonmanufacturing	276.607	279.334	282.290	285.320	288.455	291.575	294.680	297.884
% Ch, Annual Rate	4.0	4.0	4.3	4.4	4.5	4.4	4.3	4.4
Other Private Wages	1.657	1.670	1.684	1.699	1.714	1.729	1.744	1.760
% Ch, Annual Rate	3.3	3.2	3.5	3.5	3.7	3.6	3.5	3.6
Farm Wages	2.087	2.113	2.140	2.168	2.197	2.225	2.254	2.283
% Ch, Annual Rate	5.0	4.9	5.3	5.3	5.5	5.3	5.2	5.3
Military Wages	5.129	5.165	5.204	5.230	5.289	5.326	5.366	5.393
% Ch, Annual Rate	4.7	2.8	3.1	2.0	4.6	2.8	3.0	2.0
Nonwage Personal Income	295.390	299.335	303.358	307.458	312.163	316.269	320.414	324.540
% Ch, Annual Rate	6.1	5.4	5.5	5.5	6.3	5.4	5.3	5.3
Supplements to Wages and Salaries	66.966	67.498	68.067	68.669	69.433	70.077	70.732	71.396
% Ch, Annual Rate	4.5	3.2	3.4	3.6	4.5	3.8	3.8	3.8
Proprietor's Income	39.655	39.694	39.717	39.782	39.771	39.826	39.903	39.998
% Ch, Annual Rate	0.2	0.4	0.2	0.7	-0.1	0.6	0.8	1.0
Farm	1.441	1.430	1.435	1.451	1.474	1.500	1.527	1.552
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	38.215	38.264	38.282	38.331	38.297	38.325	38.375	38.446
% Ch, Annual Rate	0.5	0.5	0.2	0.5	-0.4	0.3	0.5	0.7
Less: Contribution For Govt. Soc. Ins.	48.609	48.958	49.348	49.746	50.397	50.812	51.225	51.650
% Ch, Annual Rate	4.9	2.9	3.2	3.3	5.3	3.3	3.3	3.4
Plus: Residence Adjustment	5.544	5.599	5.659	5.723	5.788	5.854	5.922	5.991
% Ch, Annual Rate	3.8	4.0	4.4	4.5	4.6	4.7	4.7	4.7
Dividends/Int./Rent	141.071	143.611	146.236	148.864	151.445	154.049	156.653	159.208
% Ch, Annual Rate	6.9	7.4	7.5	7.4	7.1	7.1	6.9	6.7
Transfer Payments	90.763	91.891	93.026	94.167	96.123	97.275	98.429	99.596
% Ch, Annual Rate	8.4	5.1	5.0	5.0	8.6	4.9	4.8	4.8
State U.I. Benefits	1.909	1.989	2.062	2.123	2.181	2.221	2.261	2.294
% Ch, Annual Rate	14.4	17.8	15.5	12.3	11.5	7.5	7.4	6.0
Other Transfers	88.854	89.902	90.963	92.044	93.942	95.054	96.168	97.302
% Ch, Annual Rate	8.3	4.8	4.8	4.8	8.5	4.8	4.8	4.8

Table A4.1
Selected Inflation Indicators
(PCE Price Index 2012=100; CPI 1982-84=1)

	PCE Price Index*		U.S. CPI#		Seattle CPI+	
	Index	Percent Change	Index	Percent Change	Index	Percent Change
1971	21.8	4.2	0.405	4.2	0.382	2.1
1972	22.6	3.4	0.418	3.3	0.393	2.9
1973	23.8	5.4	0.444	6.3	0.418	6.4
1974	26.3	10.4	0.493	11.0	0.464	11.0
1975	28.5	8.3	0.538	9.1	0.511	10.2
1976	30.0	5.5	0.569	5.8	0.540	5.5
1977	32.0	6.5	0.606	6.5	0.583	8.0
1978	34.2	7.0	0.652	7.6	0.640	9.9
1979	37.3	8.9	0.726	11.3	0.709	10.8
1980	41.3	10.8	0.824	13.5	0.827	16.7
1981	45.0	9.0	0.909	10.4	0.916	10.8
1982	47.5	5.6	0.965	6.2	0.978	6.7
1983	49.5	4.3	0.996	3.2	0.993	1.5
1984	51.3	3.8	1.039	4.4	1.030	3.8
1985	53.1	3.5	1.076	3.5	1.056	2.5
1986	54.3	2.2	1.097	1.9	1.066	1.0
1987	56.0	3.1	1.136	3.6	1.092	2.4
1988	58.2	3.9	1.183	4.1	1.128	3.3
1989	60.7	4.4	1.239	4.8	1.181	4.7
1990	63.4	4.4	1.307	5.4	1.268	7.3
1991	65.5	3.3	1.362	4.2	1.341	5.8
1992	67.2	2.7	1.403	3.0	1.390	3.7
1993	68.9	2.5	1.445	3.0	1.429	2.8
1994	70.3	2.1	1.482	2.6	1.478	3.4
1995	71.8	2.1	1.524	2.8	1.522	3.0
1996	73.3	2.1	1.569	2.9	1.575	3.4
1997	74.6	1.7	1.605	2.3	1.630	3.5
1998	75.2	0.8	1.630	1.5	1.677	2.9
1999	76.3	1.5	1.666	2.2	1.728	3.0
2000	78.2	2.5	1.722	3.4	1.792	3.7
2001	79.7	1.9	1.770	2.8	1.857	3.6
2002	80.8	1.3	1.799	1.6	1.893	2.0
2003	82.4	1.9	1.840	2.3	1.924	1.6
2004	84.4	2.5	1.889	2.7	1.947	1.2
2005	86.8	2.8	1.953	3.4	2.002	2.8
2006	89.2	2.7	2.016	3.2	2.076	3.7
2007	91.4	2.5	2.073	2.9	2.157	3.9
2008	94.2	3.0	2.153	3.8	2.247	4.2
2009	94.1	-0.1	2.146	-0.3	2.260	0.6
2010	95.7	1.7	2.181	1.6	2.267	0.3
2011	98.1	2.5	2.249	3.1	2.328	2.7
2012	100.0	1.9	2.296	2.1	2.387	2.5
2013	101.3	1.3	2.330	1.5	2.416	1.2
2014	102.8	1.5	2.367	1.6	2.460	1.8
2015	103.0	0.2	2.370	0.1	2.494	1.4
2016	104.1	1.0	2.400	1.3	2.550	2.3
2017	105.9	1.8	2.451	2.1	2.628	3.0
2018	108.1	2.1	2.511	2.4	2.711	3.2
2019	109.7	1.4	2.557	1.8	2.779	2.5
Forecast						
2020	111.3	1.5	2.598	1.6	2.823	1.6
2021	113.3	1.8	2.645	1.8	2.874	1.8
2022	115.5	1.9	2.701	2.1	2.935	2.1
2023	117.9	2.0	2.762	2.3	3.002	2.3
2024	120.4	2.1	2.828	2.4	3.073	2.4
2025	122.9	2.1	2.893	2.3	3.144	2.3

* GDP Price Index for Personal Consumption Expenditures

Consumer Price Index for all Urban Consumers

+ Consumer Price Index for the Seattle-Tacoma-Bremerton, WA CMSA

Consumer Price Index and PCE Price Index values shown here are annual averages of seasonally adjusted quarterly data and may differ slightly from the annual values published by the Bureau of Labor Statistics and Bureau of Economic Analysis.

Table A4.2
Price Indexes for Gross Domestic Product
(2012=100)

	Services		Food		Fuels		Gasoline	
	Index	Percent Change	Index	Percent Change	Index	Percent Change	Index	Percent Change
1971	16.8	5.5	21.4	2.3	4.9	6.4	9.1	0.7
1972	17.5	4.2	22.4	4.8	5.0	0.6	9.2	1.3
1973	18.3	4.8	25.2	12.7	5.7	14.6	10.1	9.6
1974	19.9	8.5	29.0	15.2	9.0	58.9	13.6	35.1
1975	21.6	8.6	31.2	7.5	9.8	8.5	14.6	6.7
1976	23.1	6.9	31.8	1.9	10.5	7.3	15.2	4.2
1977	24.8	7.6	33.7	5.9	11.9	13.2	16.1	5.8
1978	26.8	7.7	36.9	9.6	12.6	5.7	16.8	4.3
1979	29.0	8.4	40.5	9.8	17.3	37.9	22.5	34.0
1980	32.0	10.4	43.9	8.4	24.3	40.4	31.2	38.8
1981	35.3	10.2	47.1	7.1	29.8	22.3	34.7	11.3
1982	38.1	7.8	48.3	2.6	29.2	-1.9	32.9	-5.1
1983	40.4	6.1	48.8	1.1	26.9	-7.8	31.9	-3.3
1984	42.5	5.2	50.3	3.0	27.5	2.2	31.4	-1.5
1985	44.6	4.9	50.9	1.1	26.4	-3.9	31.6	0.8
1986	46.4	4.1	52.1	2.4	20.7	-21.7	24.8	-21.5
1987	47.8	3.0	53.7	3.2	21.2	2.6	25.8	3.8
1988	50.1	4.8	55.3	3.0	21.2	0.0	26.0	0.8
1989	52.4	4.7	58.2	5.3	22.5	5.9	28.4	9.2
1990	54.8	4.6	61.1	4.9	27.1	20.4	32.3	13.8
1991	57.0	3.9	63.0	3.1	25.8	-4.8	31.9	-1.3
1992	59.0	3.6	63.5	0.8	24.7	-4.1	31.8	-0.4
1993	61.1	3.5	64.3	1.4	24.6	-0.7	31.5	-1.0
1994	62.7	2.7	65.4	1.7	24.1	-1.8	31.6	0.5
1995	64.5	2.8	66.8	2.2	23.9	-0.9	32.1	1.6
1996	66.2	2.7	68.9	3.1	27.1	13.3	34.1	6.1
1997	68.1	2.8	70.2	1.9	27.1	0.2	34.1	0.0
1998	69.5	2.1	71.1	1.3	24.0	-11.4	29.7	-12.9
1999	71.0	2.0	72.2	1.6	24.4	1.7	32.3	8.9
2000	72.9	2.8	73.9	2.3	35.8	46.6	41.3	27.8
2001	75.2	3.1	76.1	2.9	35.1	-2.0	39.8	-3.6
2002	77.1	2.6	77.2	1.5	31.3	-10.8	37.4	-6.0
2003	79.5	3.1	78.7	1.9	37.9	20.9	43.6	16.5
2004	82.0	3.1	81.2	3.1	44.1	16.4	51.3	17.6
2005	84.7	3.3	82.6	1.7	58.7	33.0	62.3	21.6
2006	87.6	3.5	84.0	1.7	66.7	13.7	70.3	12.9
2007	90.5	3.3	87.2	3.9	71.3	6.9	76.3	8.4
2008	93.2	3.0	92.6	6.1	96.8	35.7	88.8	16.5
2009	94.2	1.1	93.7	1.2	66.2	-31.6	65.2	-26.6
2010	96.0	1.8	93.9	0.3	77.5	16.9	76.9	18.0
2011	97.8	1.9	97.7	4.0	98.6	27.3	96.6	25.7
2012	100.0	2.2	100.0	2.4	100.0	1.4	100.0	3.5
2013	102.3	2.3	101.0	1.0	98.8	-1.2	97.2	-2.8
2014	104.8	2.4	102.9	1.9	98.3	-0.5	93.5	-3.8
2015	106.7	1.8	104.1	1.1	69.8	-29.0	68.7	-26.6
2016	109.1	2.3	103.0	-1.0	58.0	-17.0	61.0	-11.1
2017	111.8	2.4	102.9	-0.1	66.9	15.3	68.9	12.8
2018	114.9	2.7	103.4	0.5	80.8	20.9	78.0	13.3
2019	117.5	2.3	104.4	1.0	77.1	-4.6	75.3	-3.4

Forecast

2020	120.4	2.5	105.1	0.7	70.4	-8.8	70.2	-6.7
2021	123.3	2.4	106.6	1.4	67.6	-3.9	68.7	-2.2
2022	126.5	2.6	108.3	1.6	68.7	1.7	69.3	0.8
2023	129.9	2.7	110.3	1.8	70.7	2.9	70.7	2.1

Table A5.1

Washington Resident Population and Components of Change*

(Thousands)

	Population	Change	Percent Change	Births	Deaths	Net Migration
1970	3413.2	16.2	0.5	59.9	30.0	-13.7
1971	3436.3	23.1	0.7	60.0	29.8	-7.1
1972	3430.3	-6.0	-0.2	53.1	30.4	-28.7
1973	3444.3	14.0	0.4	47.7	30.4	-3.3
1974	3508.7	64.4	1.9	48.2	29.9	46.1
1975	3567.9	59.2	1.7	50.1	30.3	39.4
1976	3634.9	67.0	1.9	51.4	30.2	45.8
1977	3715.4	80.5	2.2	54.2	29.1	55.4
1978	3836.2	120.8	3.3	57.3	30.4	93.9
1979	3979.2	143.0	3.7	60.2	30.2	113.0
1980	4132.2	153.0	3.8	65.4	31.3	118.9
1981	4229.3	97.1	2.4	68.2	31.8	60.8
1982	4276.5	47.3	1.1	70.1	31.7	8.9
1983	4307.2	30.7	0.7	69.5	32.5	-6.2
1984	4354.1	46.8	1.1	68.5	33.2	11.6
1985	4415.8	61.7	1.4	69.1	34.0	26.6
1986	4462.2	46.4	1.1	70.2	34.0	10.2
1987	4527.1	64.9	1.5	69.3	34.4	30.0
1988	4616.9	89.8	2.0	71.0	36.0	54.8
1989	4728.1	111.2	2.4	73.0	36.0	74.2
1990	4866.7	138.6	2.9	76.4	36.2	98.5
1991	5000.4	133.7	2.7	79.1	36.6	91.2
1992	5091.1	90.8	1.8	80.2	37.2	47.7
1993	5188.0	96.9	1.9	79.1	39.4	57.1
1994	5291.6	103.6	2.0	78.2	39.5	64.9
1995	5396.6	105.0	2.0	77.5	40.0	67.5
1996	5483.1	86.5	1.6	77.0	41.2	50.7
1997	5579.1	96.0	1.8	78.0	42.6	60.6
1998	5685.5	106.3	1.9	78.8	41.6	69.1
1999	5792.2	106.8	1.9	79.8	43.1	70.1
2000	5894.1	101.9	1.8	79.9	43.7	65.8
2001	5970.5	76.3	1.3	80.7	43.9	39.5
2002	6059.7	89.2	1.5	79.3	44.9	54.9
2003	6126.9	67.2	1.1	79.1	44.7	32.9
2004	6208.5	81.6	1.3	81.0	46.0	46.7
2005	6298.8	90.3	1.5	81.8	45.6	54.0
2006	6420.2	121.4	1.9	83.2	45.3	83.5
2007	6525.1	104.9	1.6	87.8	46.2	63.3
2008	6608.2	83.1	1.3	89.6	47.9	41.5
2009	6672.3	64.0	1.0	89.8	48.1	22.3
2010	6724.5	52.3	0.8	88.4	47.7	11.5
2011	6767.9	43.4	0.6	86.4	48.8	5.8
2012	6817.8	49.9	0.7	87.1	49.2	12.0
2013	6882.4	64.6	0.9	87.3	51.1	28.5
2014	6968.2	85.8	1.2	87.0	50.7	49.5
2015	7061.4	93.2	1.3	88.5	52.8	57.6
2016	7183.7	122.3	1.7	89.8	54.7	87.1
2017	7310.3	126.6	1.8	89.7	56.1	93.0
2018	7427.6	117.3	1.6	87.3	56.4	86.3
2019	7546.4	118.8	1.6	86.3	57.7	90.2
Forecast						
2020	7659.4	113.0	1.5	87.6	58.3	83.8
2021	7767.5	108.0	1.4	89.7	59.5	77.8
2022	7871.7	104.3	1.3	92.7	60.7	72.3
2023	7972.4	100.7	1.3	95.6	62.0	67.1
2024	8070.5	98.1	1.2	96.4	63.3	65.0
2025	8166.0	95.4	1.2	97.2	64.7	63.0

* As of April 1 of Each Year

Source: Office of Financial Management

Table A5.2
Washington Population*
 (Thousands)

	2016	Actual			2020	2021	Forecast			2025
		2017	2018	2019			2022	2023	2024	
Total Population	7183.7	7310.3	7427.6	7546.4	7659.4	7767.5	7871.7	7972.4	8070.5	8166.0
Percent Change	1.7	1.8	1.6	1.6	1.5	1.4	1.3	1.3	1.2	1.2
Age 17 and Under	1625.6	1648.7	1665.9	1682.6	1700.3	1717.5	1733.9	1749.8	1764.9	1775.9
Percent of Total	22.6	22.6	22.4	22.3	22.2	22.1	22.0	21.9	21.9	21.7
Age 6-18	1178.7	1195.4	1211.9	1228.8	1244.6	1262.7	1280.1	1293.7	1302.1	1307.1
Percent of Total	16.4	16.4	16.3	16.3	16.2	16.3	16.3	16.2	16.1	16.0
Age 18 and Over	5558.1	5661.6	5761.7	5863.8	5959.1	6050.0	6137.8	6222.6	6305.7	6390.1
Percent of Total	77.4	77.4	77.6	77.7	77.8	77.9	78.0	78.1	78.1	78.3
Age 21 and Over	5284.0	5383.5	5479.6	5578.4	5673.5	5765.2	5852.1	5932.3	6010.4	6087.7
Percent of Total	73.6	73.6	73.8	73.9	74.1	74.2	74.3	74.4	74.5	74.5
Age 20-34	1482.7	1507.6	1529.6	1554.8	1575.7	1594.0	1609.7	1621.9	1631.6	1637.3
Percent of Total	20.6	20.6	20.6	20.6	20.6	20.5	20.4	20.3	20.2	20.0
Age 18-64	4484.7	4540.3	4588.0	4637.4	4677.4	4714.4	4748.9	4780.2	4812.8	4845.1
Percent of Total	62.4	62.1	61.8	61.5	61.1	60.7	60.3	60.0	59.6	59.3
Age 65 and Over	1073.3	1121.3	1173.7	1226.4	1281.7	1335.6	1389.0	1442.4	1492.9	1545.0
Percent of Total	14.9	15.3	15.8	16.3	16.7	17.2	17.6	18.1	18.5	18.9

* As of April 1 of Each Year

Source: Office of Financial Management

Table A6.1

Summary of National and State Indicators

Indicator	Latest Data	Indication*
U.S. Leading Index	January 2020	+
U.S. Real GDP Growth	4th quarter 2019	=
U.S. ISM Index	January 2020	+
U.S. Employment YOY%Δ	January 2020	=
U.S. Unemployment Rate	January 2020	-
U.S. Consumer Confidence	February 2020	+
U.S. Consumer Sentiment	February 2020	+
U.S. Light Vehicle Sales	January 2020	+
U.S. CPI YOY%Δ	January 2020	-
U.S. Home Prices YOY%Δ	December 2019	+
S&P 500 Index	February 2020	+
WA Leading Index	December 2019	+
WA ISM-WW Index	January 2020	+
WA Employment YOY%Δ	January 2020	-
WA Aerospace Empl. YOY%Δ	January 2020	-
WA Unemployment Rate	December 2019	+
WA Help Wanted Index	December 2019	+
WA Business Cycle Indicator	December 2019	+
WA Initial Unemploy. Claims	January 2020	-
WA Housing Permits	December 2019	-
WA Weekly Hours in Mfg.	December 2019	+
WA New Vehicle Registration	January 2020	+
WA In-Migration	January 2020	+
WA Exports-Total YOY%Δ	4th quarter 2019	+
WA Exports- w/o Trans. Equip. YOY%Δ	4th quarter 2019	+
Seattle CPI YOY%Δ	December 2019	=
Seattle Home Prices YOY%Δ	December 2019	+
WA Construction Activity Index	December 2019	+

*Change from the previous reading

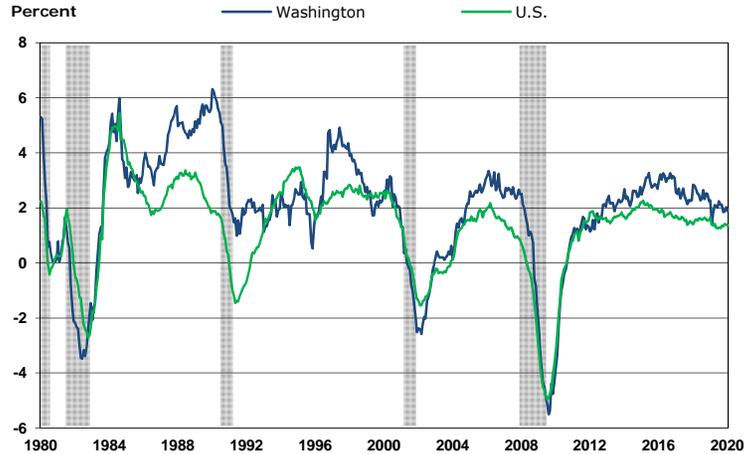
Table A6.2
Washington Business Indicators
 Historical Data

	WA Index of Leading Indicators	U.S. Index of Leading Indicators	WA State Business Cycle Indicator	WA State Construction Index	WA State Help Wanted Index	WA Purchasing Management Index	U.S. Purchasing Management Index
2014:01	113.1	92.0	48.4	93.9	118.2	63.5	51.8
2014:02	113.6	92.5	47.1	94.8	118.5	68.7	54.3
2014:03	114.2	93.4	47.3	95.1	118.6	63.6	54.4
2014:04	114.6	93.5	50.0	96.2	120.6	53.7	55.3
2014:05	115.0	94.0	50.2	95.8	118.7	59.6	55.6
2014:06	115.6	94.7	50.6	95.4	121.0	67.0	55.7
2014:07	116.3	95.2	52.0	97.9	121.3	50.1	56.4
2014:08	116.3	95.5	52.0	96.5	121.6	62.9	58.1
2014:09	116.2	96.1	52.2	99.0	114.3	60.3	56.1
2014:10	116.5	96.4	52.2	98.4	119.0	57.6	57.9
2014:11	117.6	96.8	54.1	100.1	128.0	63.1	57.6
2014:12	117.1	97.3	54.7	101.2	122.0	53.3	55.1
2015:01	117.8	97.4	55.3	103.8	127.6	66.6	53.5
2015:02	118.8	97.4	60.4	107.7	137.2	65.9	52.9
2015:03	118.2	97.9	59.4	104.0	138.8	64.1	51.5
2015:04	118.3	98.4	59.5	102.4	135.7	60.4	51.5
2015:05	119.0	98.8	59.1	102.8	139.0	60.3	52.8
2015:06	118.9	99.3	59.6	103.1	136.0	51.4	53.5
2015:07	118.8	99.1	61.4	103.2	141.0	53.6	52.7
2015:08	119.0	99.1	60.3	104.8	139.1	48.0	51.1
2015:09	117.9	99.0	59.6	104.5	126.6	48.0	50.2
2015:10	118.5	99.4	60.7	103.3	132.4	46.1	50.1
2015:11	118.5	99.8	60.9	103.5	134.3	50.0	48.6
2015:12	118.7	99.6	63.4	105.9	130.7	54.5	48.0
2016:01	118.4	99.3	63.8	106.0	128.7	57.2	48.2
2016:02	118.6	99.2	66.2	107.3	124.9	55.4	49.7
2016:03	119.0	99.2	63.4	106.8	128.9	55.7	51.7
2016:04	120.2	99.7	63.8	107.9	130.9	50.8	50.7
2016:05	120.8	99.5	66.0	108.2	148.2	49.2	51.0
2016:06	121.1	99.8	67.1	109.2	151.3	49.1	52.8
2016:07	121.8	100.2	68.2	108.7	156.3	50.8	52.3
2016:08	121.0	100.2	67.4	106.4	153.1	47.7	49.4
2016:09	121.7	100.4	67.7	111.0	143.4	51.4	51.7
2016:10	122.2	100.5	68.9	111.6	152.3	53.1	52.0
2016:11	121.6	100.7	70.7	111.8	148.8	53.3	53.5
2016:12	121.7	101.2	71.5	113.0	149.2	47.3	54.5
2017:01	122.0	101.8	69.9	111.2	152.5	54.2	56.0
2017:02	121.8	102.1	69.4	112.1	140.1	48.6	57.7
2017:03	122.4	102.6	70.8	111.5	143.4	59.2	57.2
2017:04	122.9	102.8	69.6	111.9	143.3	59.2	54.8
2017:05	123.4	103.2	71.2	112.7	149.2	45.0	54.9
2017:06	124.0	103.8	70.7	113.3	145.4	50.0	57.8
2017:07	124.4	104.1	71.1	113.7	139.5	47.0	56.3
2017:08	124.6	104.5	72.4	114.3	135.1	58.2	58.8
2017:09	125.1	104.5	73.7	113.6	140.4	57.5	60.8
2017:10	125.6	105.9	74.1	117.0	132.7	51.8	58.7
2017:11	125.8	106.3	77.0	116.9	134.7	65.0	58.2
2017:12	126.7	107.1	75.8	116.3	138.6	65.8	59.7
2018:01	126.5	107.8	75.4	116.0	136.8	60.8	59.1
2018:02	127.6	108.5	77.0	118.0	133.3	68.3	60.8
2018:03	128.3	108.8	77.6	119.8	137.4	68.0	59.3
2018:04	128.0	109.3	76.9	116.8	133.7	55.8	57.3
2018:05	126.9	109.4	77.5	115.6	128.0	61.7	58.7
2018:06	127.0	110.0	77.3	117.3	123.1	56.0	60.2
2018:07	126.8	110.4	77.3	115.9	124.8	60.0	58.1
2018:08	127.1	110.9	76.1	117.6	123.4	61.1	61.3
2018:09	127.9	111.5	76.8	116.6	131.5	62.7	59.8
2018:10	127.8	111.4	77.5	117.9	129.3	55.0	57.7
2018:11	127.5	111.5	78.1	118.6	121.9	60.0	59.3
2018:12	128.0	111.3	77.6	119.4	121.8	52.7	54.1
2019:01	127.9	111.3	77.4	119.0	123.5	54.5	56.6
2019:02	125.8	111.5	73.5	114.5	122.5	61.1	54.2
2019:03	128.8	111.7	76.1	119.6	125.6	57.8	55.3
2019:04	128.8	111.8	76.7	120.8	125.5	54.0	52.8
2019:05	128.5	111.8	76.1	119.8	124.0	54.0	52.1
2019:06	128.9	111.6	75.9	119.1	122.8	56.7	51.7
2019:07	129.6	112.0	76.5	121.6	123.0	57.0	51.2
2019:08	129.1	111.8	75.3	119.2	123.3	56.0	49.1
2019:09	129.3	111.6	76.1	120.4	127.6	54.0	47.8
2019:10	129.1	111.4	76.6	120.9	122.9	58.2	48.3
2019:11	129.7	111.5	76.9	123.4	122.5	47.0	48.1
2019:12	130.1	111.2	79.7	125.1	123.5	52.5	47.2
2020:01		112.1				53.0	50.9

Figure A7.1: Washington State Economic Indicators

Year-over-Year Employment Growth

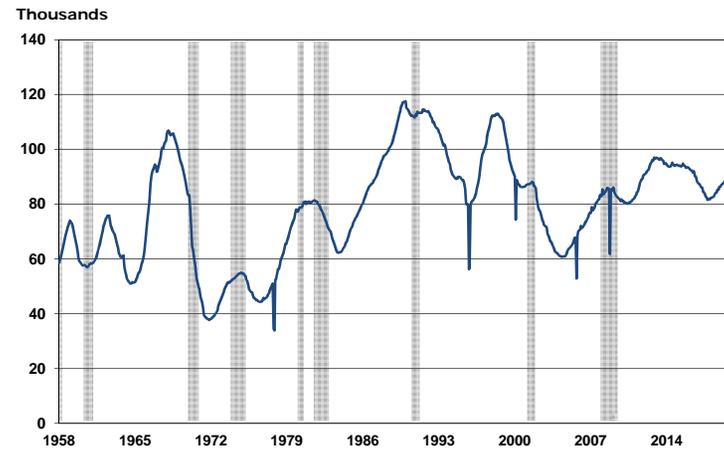
January 1980 to January 2020



* Bureau of Labor Statistics, WA State Employment Security, ERFC Kalman Filtered Data

Washington Aircraft and Parts Employment

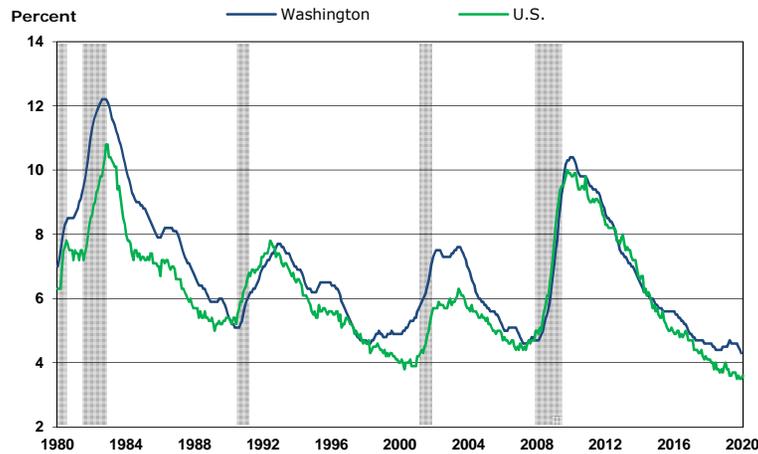
January 1958 to January 2020



* Source: Bureau of Labor Statistics, ERFC

Unemployment Rate, S.A.

January 1980 to January 2020



* Source: Bureau of Labor Statistics

Washington Business Cycle Indicator

January 1968 to December 2019



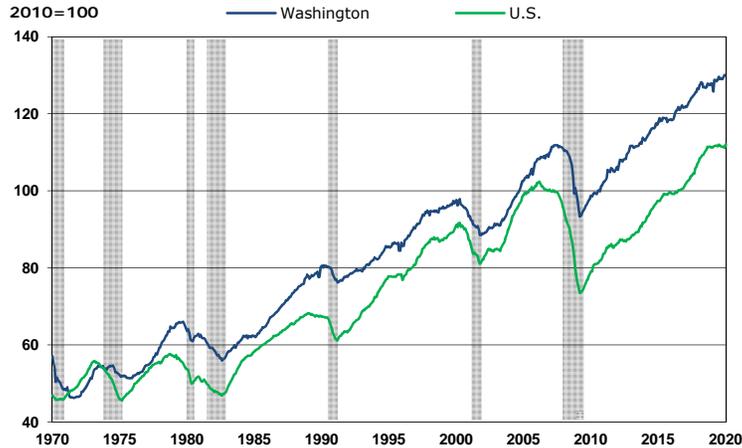
* Source: ERFC

* Shaded areas correspond with national recessions.

Figure A7.2: Washington State Leading Indicators

The Washington and U.S. Indexes of Leading Indicators

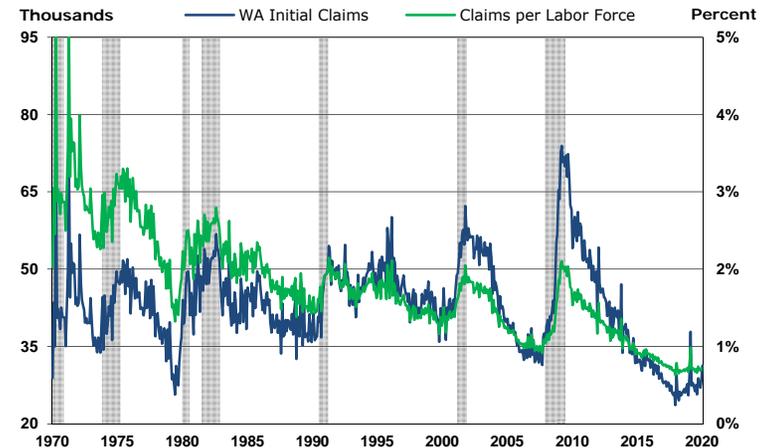
January 1970 to January 2020



* The Conference Board, ERFC

Washington Initial Claims for Unemployment Insurance

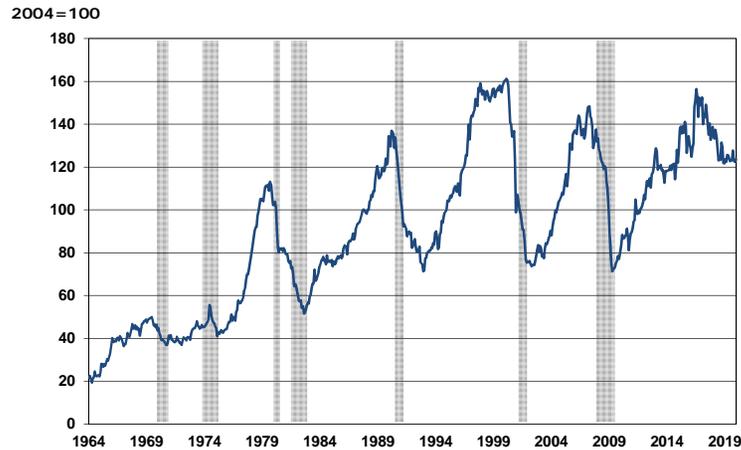
January 1970 to January 2020, S.A.



* Source: WA State Employment Security, ERFC

Washington State Help Wanted Index

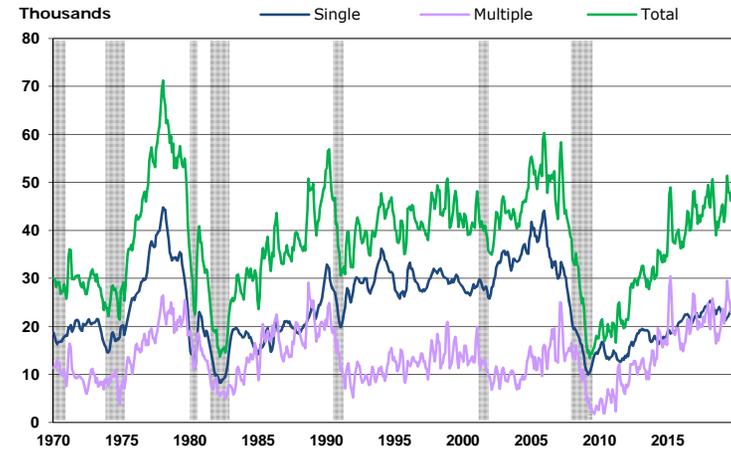
January 1964 to December 2019



* Source: The Conference Board, ERFC

Housing Units Authorized in Washington State

January 1970 to December 2019, 3mma, SAAR



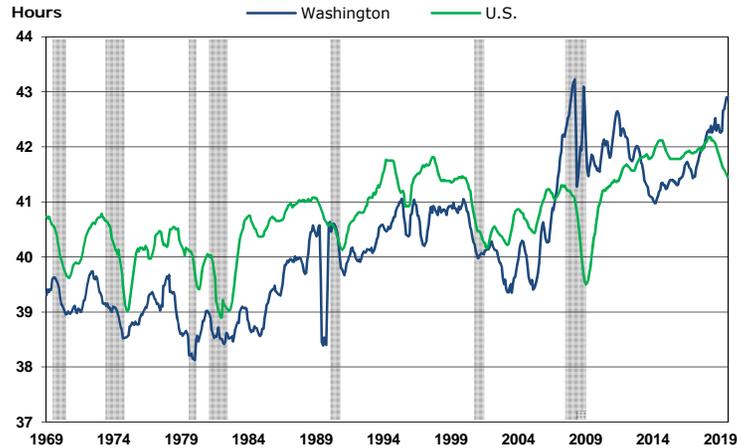
* Source: Census Bureau, ERFC

* Shaded areas correspond with national recessions.

Figure A7.3: Other State Economic Indicators

Average Weekly Hours in Manufacturing

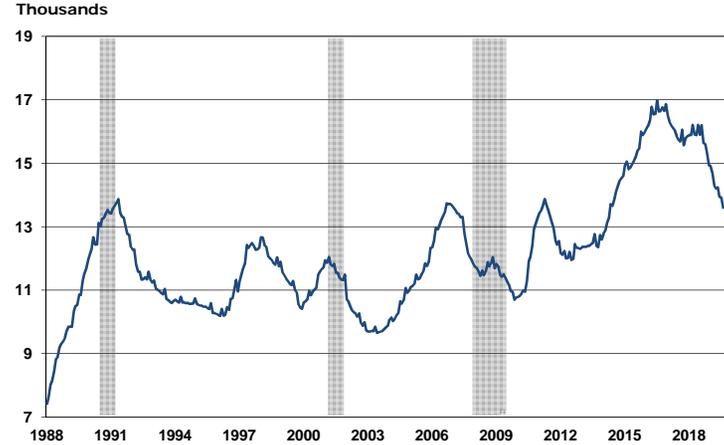
June 1969 to December 2019, 6-Mo. Moving Average, S.A.



* Bureau of Labor Statistics, ERFC

Washington Driver's License In-Migration

January 1988 to January 2020, 12-Month Moving Average



* Source: WA State Department of Licensing, ERFC

New Car and Truck Registrations in Washington

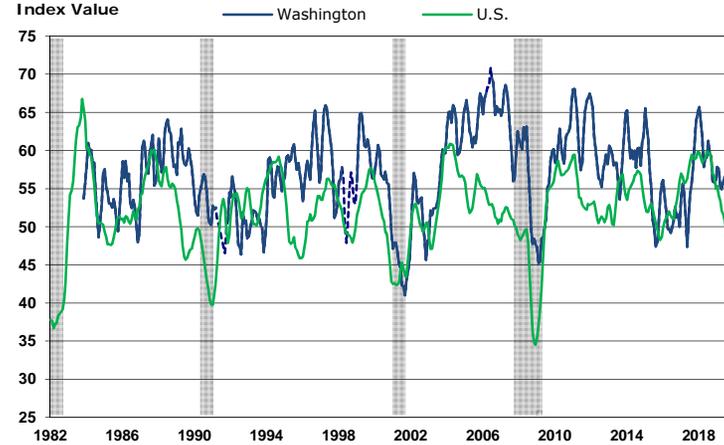
September 1970 to January 2020, 3-Month Moving Average, S.A.



* Source: WA State Department of Licensing, ERFC

Institute for Supply Management Index

March 1982 to January 2020, 3-Month Moving Average, S.A.



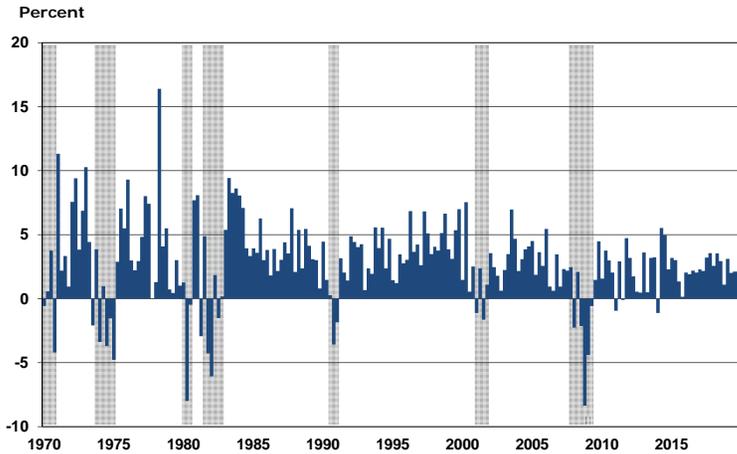
* Source: Institute for Supply Management, ISM-WW, ERFC

* Shaded areas correspond with national recessions.

Figure A7.4: Other Economic Indicators

Quarterly U.S. Real GDP Growth

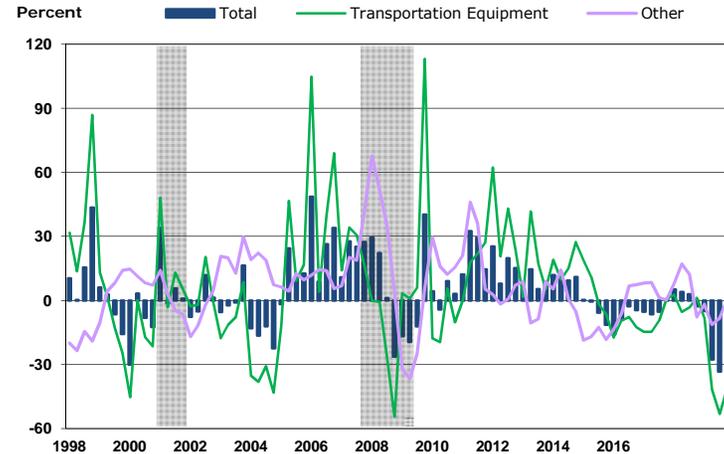
1970Q1 to 2019Q4, SAAR



* Source: Bureau of Economic Analysis

Washington State Export Composition

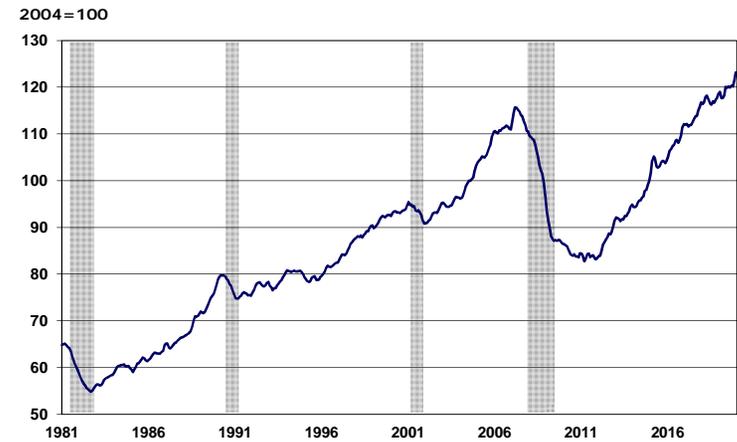
1998Q1 to 2019Q4, Year-over-year percent change



* Source: WISER

Washington State Construction Index

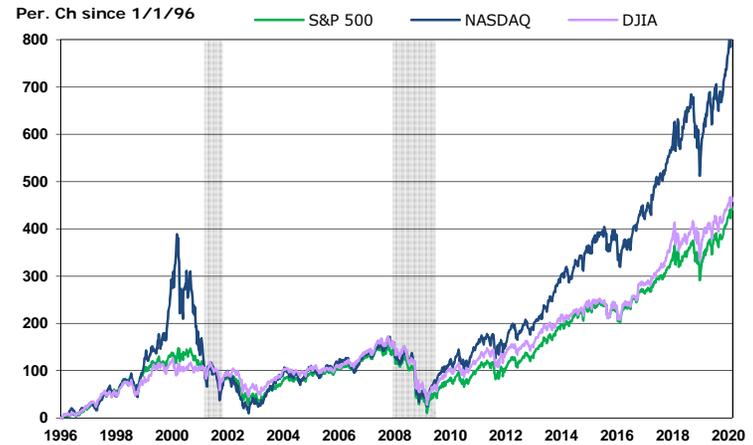
January 1981 to December 2019, 3mma



* Source: ERFC

National Stock Indexes

January 1, 1996 to February 21, 2020



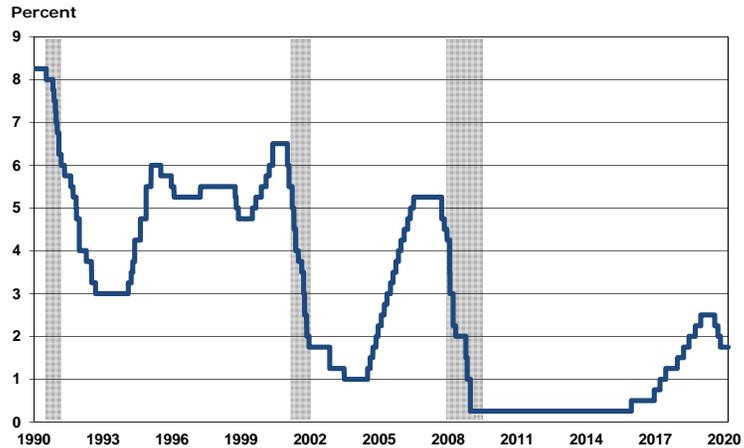
* Source: ERFC

* Shaded areas correspond with national recessions.

Figure A7.4: Other Economic Indicators (continued...)

Federal Funds Target Rate

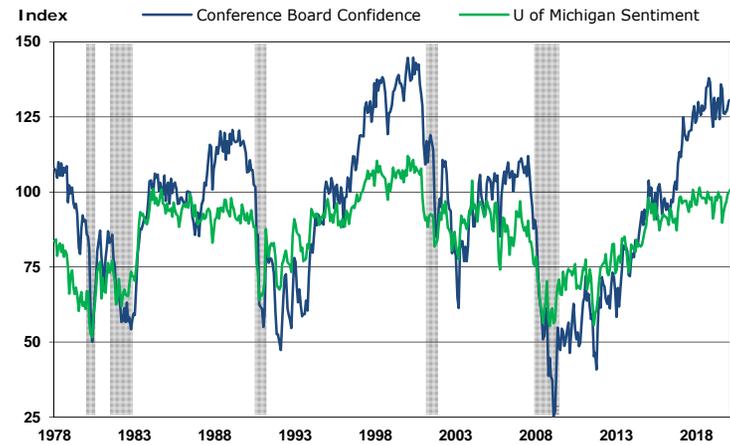
January 1, 1990 to February 27, 2020



* Federal Reserve

Consumer Confidence

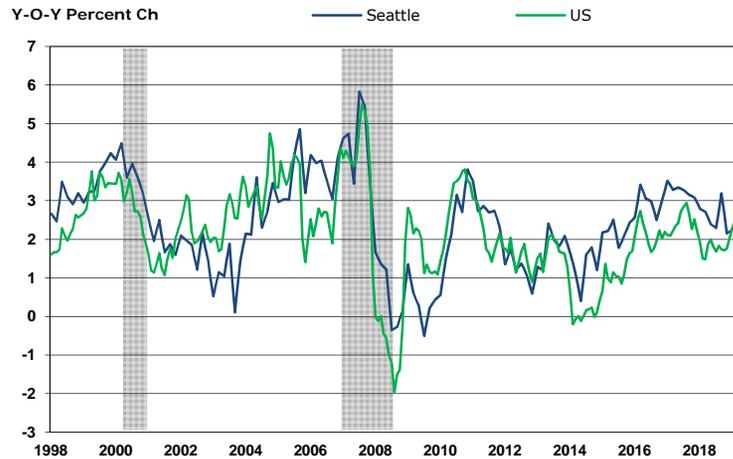
March 1978 to February 2020



* Source: The Conference Board, University of Michigan

Seattle vs U.S. CPI (All Urban Consumers)

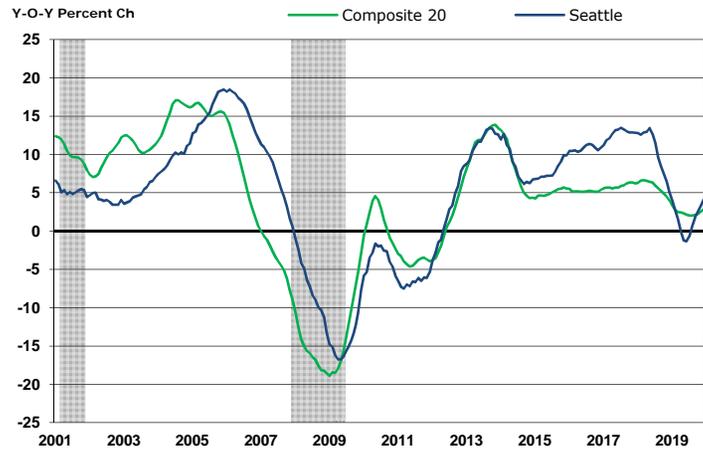
December 1998 to January 2020



* Source: Bureau of Labor Statistics

Case Shiller Home Price Index

January 2001 to December 2019, SA



* Source: Case Shiller, ERFC

* Shaded areas correspond with national recessions.



Glossary

Biennium: The state's two years budget cycle.

Cash Basis: Cash receipts received during a period. The Forecast Council forecasts revenues on a Cash and GAAP (Generally Accepted Accounting Principles) basis.

CPI: The Consumer Price Index for All Urban Consumers. The Bureau of Labor Statistics (BLS) updates the CPI monthly, surveying over 60,000 goods in 85 urban areas.

Tax Elasticity: A measure of how tax revenues respond to changes in personal income. If tax revenue elasticity is greater than one, a one percent change in personal income will be associated with more than a one percent increase in tax revenues. If elasticity is less than one, a one percent increase in personal income will be associated with less than a one percent increase in tax revenues.

Fiscal Year: The state's budget year. Washington State's fiscal year runs from July 1 through June 30. Fiscal year 2018, for example, ran from July 1, 2017 through June 30, 2018.

GAAP Basis: Generally Accepted Accounting Principles measure revenue in the period during which they accrue rather than the period in which they are received.
General Fund: Accounts for all financial resources and transactions not accounted for in another fund.

General Fund-State (GF-S) Revenue: Resources from state sources only, excludes federal monies. The general fund is the principal state fund supporting the operation of the state.

Implicit Price Deflator, PCE (IPD): The IPD for consumption is a by-product of the National Income and Product Accounts. It is derived by dividing current dollar (nominal) consumer expenditures by constant dollar (real) consumer expenditures.

Mortgage Rate: The average interest rate on 30-year conventional loan (as reported by Freddie Mac).

Near General Fund: All accounts included in the General Fund - State plus the Education Legacy Trust Account and the Washington Opportunity Pathways Account.

Non-Wage Income: Personal income other than from wages and salaries. The major components are: proprietor's income, transfer payments, and dividends, interest and rent.

Real GDP: Gross Domestic Production adjusted for the price level.

Revenue Act: Revenue Act taxes consist of the retail sales tax, use tax, business and occupation tax, public utility tax and tobacco products tax, plus penalty and interest payments associated with those taxes.

Personal Income: Income from wages and salaries; other labor income; proprietor's income; dividends, interest and rent; transfer payments; and a residence adjustment. It is reduced by employee contributions for social insurance.

Seasonally Adjusted: Adjusted for normal seasonal variations. Monthly statistics, such as the unemployment rate, are seasonally adjusted to make month-to-month comparisons possible.

Seasonally Adjusted Annual Rate: A rate for a given period that is typically less than one year, but that is computed as if the rate were for a full year and seasonally adjusted.

Nonfarm Payroll Employment: Civilian non-farm payroll employees. The self-employed, farm workers, members of the armed forces, private household employees, and workers on strike are excluded.