

The background of the cover is a photograph of the Washington State Capitol building. The building is a large, classical-style structure with a prominent central dome and a portico supported by several columns. The scene is framed by the branches of cherry blossom trees in full bloom, with white flowers and green leaves visible in the foreground and around the building. The sky is a clear, light blue. The title text is overlaid on the upper portion of the image.

Washington State Economic and Revenue Forecast

November 2019
Volume XLII, No. 4



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Washington State Economic and Revenue Forecast

Prepared by the
Economic and Revenue Forecast Council

November 2019
Volume XLII, No. 4

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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 November 27, 2019.

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Executive Summary

- The national economy is expanding at a moderate pace. Real GDP rose 2.1% (SAAR) in the third quarter after growing 2.0% (SAAR) in the second quarter.
- The forecast for real GDP growth is 2.3% in 2019 and 1.8% in 2020, unchanged from September. For 2021, the forecast of real GDP growth is 1.8%, up from 1.7% in the September forecast. For 2022 and 2023, real GDP growth remains unchanged at 1.9% and 2.0%.
- The November forecast includes tariffs on solar panels and metals throughout the world. Also included are tariffs on imports from China.
- The Washington economy is expanding at a rapid but slowing pace.
- Washington personal income growth was the highest in the U.S. in 2018.
- Compared to September, the Washington economic forecast has higher personal income but slower personal income and employment growth.
- General Fund-State (GF-S) revenue collections since the September 2019 forecast have come in \$135 million (3.9%) over the forecasted amount.
- The final tally of GF-S revenue for the recently ended 2017-19 biennium is \$1 million lower than estimated in September. The GF-S forecast was increased by \$274 million in the 2019-21 biennium and \$175 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.
- Final near GF-S revenue for the 2017-19 biennium, which includes all state revenue subject to the budget outlook process, is \$5 million lower than estimated in September. Forecasted near GF-S revenue has increased by \$299 million in the 2019-21 biennium and \$181 million in the 2021-23 biennium.

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 third quarter after growing 2.0% in the second quarter. Job gains remain strong. The unemployment rate has fallen to below 4%. Consumer and business confidence have fallen but 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 is now declining. Geopolitical risks, while elevated, have had little impact on the U.S. economy to date.

Our forecast was based on the November IHS Markit forecast

The economic forecast is based on a modified version of IHS Markit's November 2019 Control forecast for the U.S. economy. As usual, we have adjusted real gross domestic product (GDP) to match the Blue Chip "Consensus" GDP forecast. The November Blue Chip forecast for real GDP growth is 2.3% in 2019 and 1.8% in 2020, unchanged from September. For 2021, the forecast of real GDP growth is 1.8%, up from 1.7% in the September forecast. For 2022 and 2023, the forecast of real GDP growth remains unchanged at 1.9% and 2.0%.

The forecast includes recently enacted tariffs

The November forecast includes tariffs on solar panels and metals throughout the world. Also included are tariffs on imports from China; a 25% tariff on approximately 44% of goods imported from China and a 15% tariff on most of the rest of imports from China implemented in two steps on September 1st and December 15th. The forecast also includes all Chinese retaliatory tariffs on U.S. exports to China. The forecast does not include an increase from 25% to 30% scheduled for October 15th but subsequently delayed.

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 remains near its all-time low. Washington personal income growth was the highest in the U.S. in 2018. Seattle area home prices rose over the year for the second consecutive month. 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 September, the Washington economic forecast has higher personal income but slower personal income and employment growth

Compared to September, the Washington economic forecast has higher personal income but slower personal income and employment growth. We expect 1.9% Washington employment growth this year, which is the same rate expected in the September forecast. As in September, we expect growth to decelerate. We expect employment growth to average 1.1% per year in 2020 through 2023, which is slightly slower than the 1.2% rate expected in September. Our forecast for nominal personal income growth this year is 5.1%, down from 5.6% in the September forecast. Our new forecast for nominal personal income growth in 2020 through 2023 averages 4.5% per year, which is down from the 4.8% rate expected in the September forecast. While personal income growth is lower than in September, the level is higher throughout the forecast due to the upward revision to history. We expect 45,900 housing units authorized by building permits this year, up from 45,200 units in

the September forecast. The increase is due to higher than forecasted permits in the third quarter. As in September, we expect permits to average 42,500 in 2020 through 2023. The headline Seattle CPI forecast for 2019 is 2.5% compared to 2.6% in the September forecast based on actual data through October. We expect inflation to average of 2.1% per year in 2020 through 2023, down slightly from 2.2% in the September forecast.

Revenue Forecast

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

Since the September 2019 forecast, General Fund – State (GF-S) revenue collections have come in higher than forecasted. The November economic forecast was similar to the September forecast but resulted in slight increases in forecasted taxable 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 about half of the increase in forecasted revenue for the current biennium and most of the increase for the next biennium.

GF-S forecast change by biennium (millions):

17-19: -\$1
19-21: +\$274
21-23: +\$175

For the 2017-19 biennium, final revenue was \$1.0 million lower than estimated in September. For the current biennium, revenue collections that are tracked monthly came in \$135 million higher than forecasted. Forecasted growth from economic changes added \$139 million, resulting in a total forecast change of \$274 million. The forecast was increased by \$175 million in the 2021-23 biennium. The November 2019 forecast for GF-S revenue totals \$44,142.6 million in the 2017-19 biennium, \$50,304.5 million in the 2019-21 biennium and \$53,779.0 million in the 2021-23 biennium.

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

17-19: -\$5
19-21: +\$299
21-23: +\$181

The final tally of Near General Fund revenue for the 2017-19 biennium was \$46,080.9 million, \$4.7 million less than the September estimate. The forecast for the 2019-21 biennium is \$51,733.4 million, \$298.9 million more than the September forecast, and the forecast of Near General Fund revenue for the 2021-23 biennium is \$55,154.0 million, \$181.5 million more than the September forecast. The Near General Fund forecast and recent history by fiscal year are presented in Table 3.17.

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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 third quarter after growing 2.0% (SAAR) in the second quarter.**
- **Employment growth is strong and unemployment remains low.**
- **Consumer confidence is no longer improving but remains high.**
- **The construction sector is showing signs of life while manufacturing is now declining.**
- **U.S. oil production is at an all-time high; oil prices remain low.**
- **Inflation remains low.**
- **The forecast for real GDP growth is 2.3% in 2019 and 1.8% in 2020, unchanged from September. For 2021, the forecast of real GDP growth is 1.8%, up from 1.7% in the September forecast. For 2022 and 2023, real GDP growth remains unchanged at 1.9% and 2.0%.**
- **The November forecast includes tariffs on solar panels and metals throughout the world. Also included are tariffs on imports from China.**
- **Higher business and consumer confidence leading to more hiring and spending is the most significant upside risk. A further slowdown in global growth is the major 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 third quarter after growing 2.0% in the second quarter. Job gains remain strong. The unemployment rate has fallen to below 4%. Consumer and business confidence have fallen but 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 is now declining. Geopolitical risks, while elevated, have had little impact on the U.S. economy to date.

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

U.S. real GDP growth increased 2.1% (SAAR) in the third quarter after growing 2.0% (SAAR) in the second quarter. Final sales

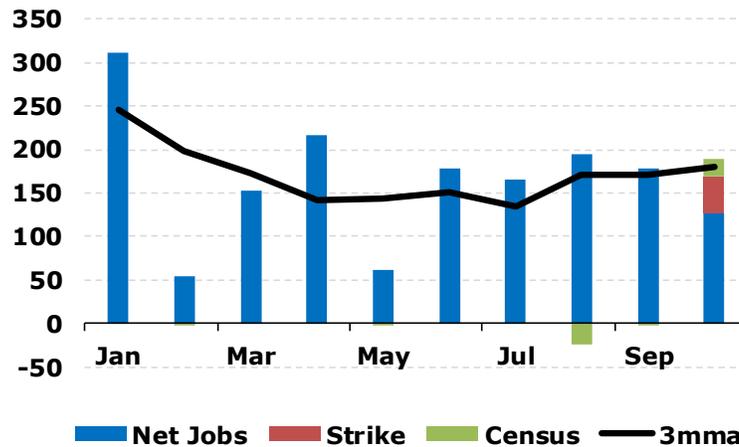
slowed to 2.0% (SAAR) after growing 3.0% (SAAR) in the second quarter. Consumer spending slowed, growing 2.9% (SAAR) after second quarter growth of 4.6% (SAAR). Growth in both goods and services spending slowed in the third quarter. Consumer spending contributed 2.0 points to top line GDP growth. Fixed investment declined 1.0% (SAAR) in the third quarter, due to a 12.0% drop in nonresidential construction. Nonresidential construction declined 11.1% (SAAR) in the second quarter. Government spending increased 1.6% (SAAR) led by federal nondefense spending. Exports increased 0.9% while imports increased 1.5% (SAAR) reducing top line GDP growth by 0.1 points.

Employment growth continues to be strong

Employment growth continues to be strong. Nonfarm payrolls increased 128,000 in October. However, employment in motor vehicles and parts manufacturing declined by 42,000 due to strike activity, which will reverse in next month's data with the conclusion of the strike. In addition, layoffs of temporary Census Bureau workers reduced employment by 20,000. Removing the negative impact of the strike and census worker layoff, employment growth would have been 190,000 in October. In the past three months, the U.S. economy averaged 180,000 net new jobs per month with these impacts removed (see Figure 1.1). In 2018, the U.S. economy averaged 221,000 net new jobs each month, up from 180,000 in 2017.

Figure 1.1: U.S. Total Nonfarm Employment Growth

Employment growth was impacted by temporary events



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

The unemployment rate remains at historic lows. The unemployment rate edged up to 3.6% in October from 3.5% in September. The last time the unemployment rate reached 3.5% was in 1969. The increase in the unemployment rate in October was due to more people looking for work. The labor force participation rate rose from 63.2% to 63.3% in October. Average

hourly earnings rose 0.2% in October while the average workweek was unchanged at 34.4 hours.

Consumer attitudes are no longer improving but remain high

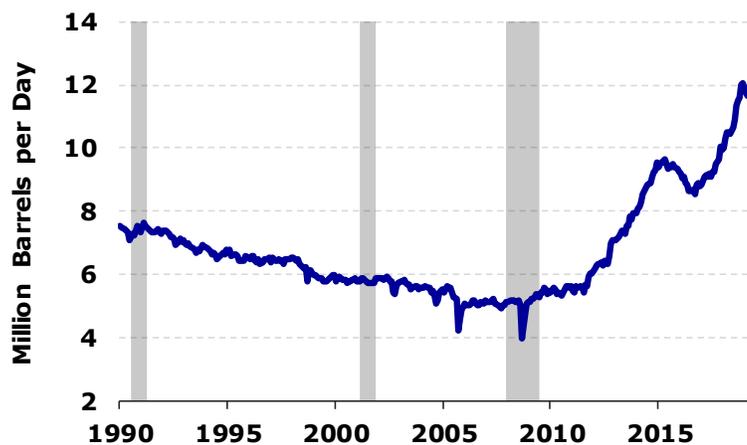
Consumer confidence is no longer improving but remains high compared to its level early in the recovery. The Conference Board measure of consumer confidence fell 0.6 points to 125.5 in November. Confidence is down 10.9 points from a year ago. The present situation component declined as assessments of the labor market deteriorated in November. The expectations index increased as respondents had a more upbeat view of their incomes going forward. The University of Michigan Consumer Sentiment index increased 1.3 points in November, but remains down 0.7 points from last year. The current conditions component fell while expectations improved.

Oil prices have remained stable

Oil prices have remained in the \$50 to \$60 per barrel range the past few months. The recent attack on Saudi Arabian oil production facilities had little impact on prices. This is in large part due to recent increases in the U.S. production. West Texas Intermediate (WTI) declined to \$54 per barrel in October, down from \$57 the month before. Brent crude oil has followed a similar path, declining to \$60 from \$63 the previous month. Oil production in the U.S. was at 12.365 million barrels per day (bpd), in August, a new all-time high (see Figure 1.2). A year ago, production was at 11.361 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 803 in the third week of November, a decline of 276 since last year.

Figure 1.2: U.S. Field Production of Crude Oil

U.S. oil production is at an all-time high



Source: U.S. Energy Information Administration; data through August 2019

Inflation remains tame

Headline inflation remains tame. The Consumer Price Index (CPI) was up 1.8% over the year in October, up from 1.7% year-over-

year growth in September. A year ago, headline inflation was 2.5%. Much of the recent decline was due to a drop in energy prices. Energy prices increased 2.7% in October but remain down 4.1% since last year. Food prices were up 0.2% and are now 2.1% 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 0.1% in October 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 September

Home price appreciation picked up in September after slowing in recent months. The seasonally adjusted Case-Shiller 20-city Home Price Index increased 0.4% in September. Home prices are now 2.1% higher than a year ago. Prices have increased 54.2% since the trough, and are now 5.1% above their previous peak. Homebuilder confidence has been strong the past two months. Confidence jumped to the highest level in two years in October to 71 points before declining slightly to 70 points in November. 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 3.66% in the third week of November 2019, down from the recent peak of 4.94% in November 2018.

The housing market is showing signs of life

The housing market is starting to show some signs of life. The sharp decline in mortgage rates may be finally starting to help new construction. Housing starts increased 3.8% in October. Starts are now up 8.5% since last year. Single-family starts increased 2.0% and are up 8.2% from a year ago. Housing starts for the volatile multi-family sector increased 8.6% in October and are up 9.2% since October 2018. Housing permits increased 5.0% in October and are up 14.1% from a year ago. Single-family permits are up 7.4% while multi-family permits are up 26.9% since last year. New home sales slipped 0.7% over the month in October, but are still up 31.6% from a year ago.

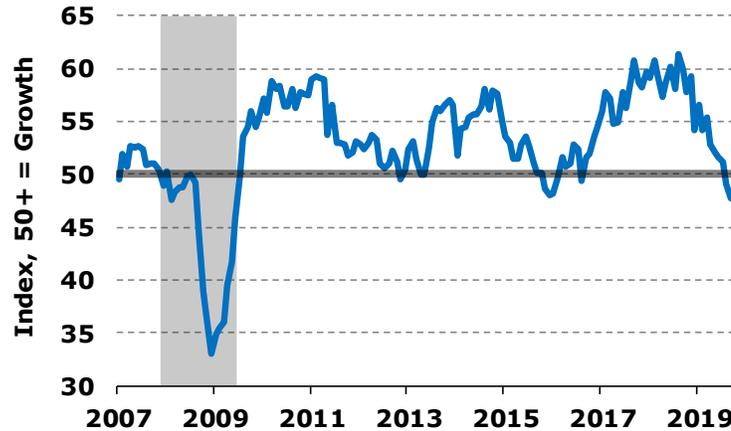
The manufacturing sector is declining

The manufacturing sector is now declining. The Institute for Supply Management (ISM) Report on Business indicates the manufacturing sector contracted in October for the third consecutive month (see Figure 1.3). The index improved to 48.3 (index values below 50 indicate contraction) in October from 47.8 in September. The new orders, production, and employment components all indicated declining activity. The new orders component increased 1.8 points to 49.1. Production declined 1.1 points to 46.2. Employment increased 1.4 points to 47.7. The latest G-17 report from the Federal Reserve indicates manufacturing output declined 0.6% in October after declining 0.5% in September. Manufacturing output is now 1.5% lower than last year. The strike in the motor vehicle industry contributed to a drop of 1.2% for durable goods. Excluding motor vehicles and parts, the output of durable good declined 0.2%. The production of nondurable goods was unchanged in October.

New orders for core capital goods (nondefense capital goods excluding aircraft) declined 0.5% in September. New orders are now 1.0% above year-ago levels.

Figure 1.3: The Institute for Supply Management (ISM) Report on Business

Manufacturing is declining



Source: Institute for Supply Management; data through October 2019

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 third quarter declined 1.7% year over year. Transportation equipment exports increased 4.0% after declining 5.5% in the second quarter. The increase in transportation exports was due to a 19.1% year-over-year gain in exports of motor vehicles. Aerospace product and parts exports declined 0.6% year-over-year in the third quarter. Exports excluding transportation equipment were down 2.8% in the third quarter. Petroleum and coal exports fell, declining 11.6% from last year. Oil and gas exports continue to surge, up 12.0% since last year. Global economic growth appears to be slowing. The value of the U.S. dollar has eased in October but remains strong, which limits exports by making them more expensive. The trade war with China has caused exports there to decline in five consecutive quarters. In the third quarter, exports to China were down another 8.2%. Exports to the rest of North America are declining as well. Exports in the third quarter to Canada declined 1.1% while exports to Mexico were down 3.1% from a year ago.

Forecast

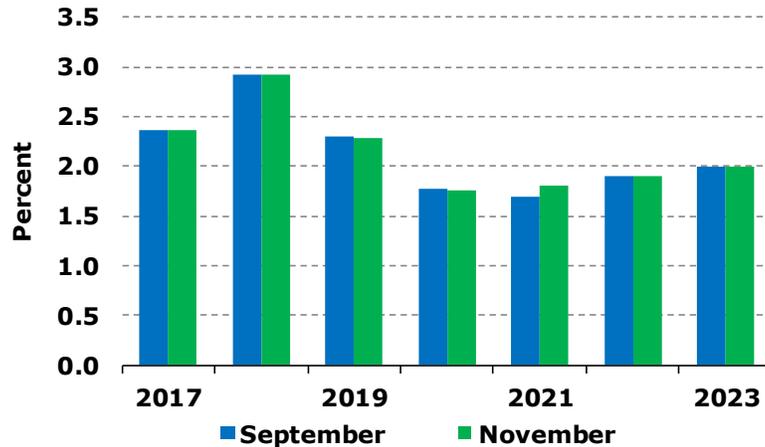
Our forecast was based on the November IHS Markit forecast

The economic forecast is based on a modified version of IHS Markit's November 2019 Control forecast for the U.S. economy. As usual, we have adjusted real gross domestic product (GDP) to match the Blue Chip "Consensus" GDP forecast. The November Blue Chip forecast for real GDP growth is 2.3% in 2019 and 1.8% in 2020, unchanged from September. For 2021, the forecast of

real GDP growth is 1.8%, up from 1.7% in the September forecast. For 2022 and 2023, the forecast of real GDP growth remains unchanged at 1.9% and 2.0% (see Figure 1.4).

Figure 1.4: Real GDP Growth

Real GDP growth is slightly higher in the near term



Source: BEA, November ERFC forecast; historical data through 2018

The forecast includes recently enacted tariffs

The November forecast includes tariffs on solar panels and metals throughout the world. Also included are tariffs on imports from China; a 25% tariff on approximately 44% of goods imported from China and a 15% tariff on most of the rest of imports from China implemented in two steps on September 1st and December 15th. The forecast also includes all Chinese retaliatory tariffs on U.S. exports to China. The forecast does not include an increase from 25% to 30% scheduled for October 15th but subsequently delayed.

The current economic recovery is the longest on record

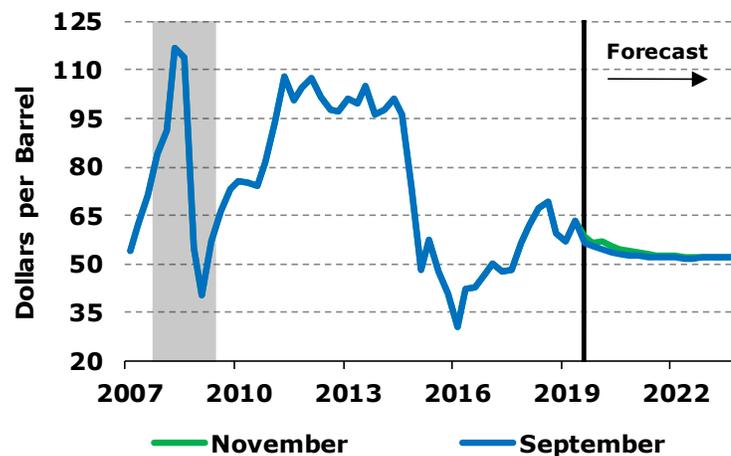
The current economic recovery is now the longest on record. This recovery has already lasted 124 months from the 2007-09 recession through November, surpassing the 120 months from the 1990 recession. From June 2009 through the end of our forecast in 2023, the recovery will be at least 174 months. A major 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 2023, which would result in 115 months of employment gains after reaching the previous employment peak.

Oil prices are expected to level off

Oil prices are slightly higher compared to the September forecast. The refiner acquisition price of crude oil in 2019 is now expected to average \$59 per barrel before dropping to \$55 per barrel next year. Going forward, oil prices are projected to decline to \$52 in 2022 – 2023. The September forecast assumed prices would be about \$1 per barrel lower through 2021 (see Figure 1.4). Oil prices have been resilient to recent turmoil. The September 14th attack on two Saudi Arabian oil facilities only had a small temporary impact on prices despite wiping out half of Saudi Arabia’s production capabilities. Venezuela’s oil industry has collapsed due to the failing economy. Iran’s oil output is also down due to renewed sanctions. However, other members of OPEC and U.S. shale drillers have more than made up for any reduction in global supply. 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.

Figure 1.5: Average Price of Crude Oil

The oil price forecast hasn’t been significantly changed



Source: DOE, ERFC November 2019 forecast; historical data through 2019Q3

Inflation will remain moderate

Inflation (as measured by the price index for personal consumption expenditures) is expected to be slightly lower than in the September forecast. We expect inflation to be 1.5% this year, unchanged from the previous forecast, before increasing to 2.0% in 2020. The September forecast called for inflation of 2.1% in 2020. Going forward, inflation will remain in check thanks to slowing global growth, restrained commodity prices, a strong dollar and steady inflation expectations. We expect inflation to range from 2.0% to 1.9% each year from 2021 through 2023. Core inflation (minus food and energy) is expected to be 1.7% this year and 2.1% next year. The forecast calls for core inflation to trend down to 2.0% by 2022 and 2023.

Consumer spending growth is expected to slow

Real consumer spending growth is likely to slow. We expect real consumer spending to grow 2.6% this year, down from 3.0% in

2018, unchanged from the previous forecast. 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 3.1% this year, down from 4.0% growth in 2018. Growth in real disposable income is expected to slow further next year and average 2.1% for the remainder of the forecast. The forecast calls for real consumption growth to average 2.1% from 2020 through 2023.

The employment forecast is mostly unchanged

The employment forecast is mostly unchanged from the September forecast. We still expect slowing job gains. Growth in payrolls is anticipated to be 1.6% this year, up from 1.5% in previous forecast. We then expect growth of 1.1% in 2020, the same rate assumed in September. Employment growth is expected to be 0.6%, 0.5%, and 0.4% in 2021, 2022, and 2023. By 2023, the forecast expects the U.S. economy to average just 46,000 net new jobs per month. Due to the steady job growth to date, we expect the unemployment rate to decline from 3.7% this year to 3.5% in 2020. We expect the unemployment rate to increase slowly to 4.1% by 2023.

Business investment is expected to strengthen gradually

Real nonresidential fixed investment is expected to grow 2.3% this year after growing 6.4% in 2018. The softening of oil prices has led to a downshift in investment by energy companies. The capital-intensive manufacturing sector is declining. Office vacancy is rising limiting the demand for new office space. New construction of office spaces declined to 4.4 million square feet in the third quarter from 9.4 million square feet the year before. We expect real nonresidential construction to decline 4.8% this year followed by a 4.2% decline in 2020. The forecast then calls for a gradual ramp up to 3.1% growth by 2023. Real equipment investment is expected to grow 1.7% this year. We expect growth to accelerate throughout the forecast as businesses expand and improve productivity. The forecast calls for growth to reach 4.7% in 2023. We expect real nonresidential fixed investment growth to slow to 1.8% in 2020 before steadily improving to 4.3% in 2023.

Growth in construction will be weak

The housing market recovery will remain weak. Construction activity has been stronger than anticipated in recent months, although we still expect growth of just 0.4% this year. The September forecast expected a decline of 1.6% this year. We expect single-family housing starts to grow 0.5% and the multi-family segment to grow 0.4% this year. We expect growth to be weak throughout the remainder of the forecast. The forecast calls for growth of 0.2% in 2020 before declining 3.1% in 2021. We then expect growth of 5.6%, and 1.8% in 2022 and 2023.

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 September forecast. After growing 2.5% in 2018, we expect U.S. major trading partner growth of 1.5% this year and 1.7% in 2020. In September, the forecast expected

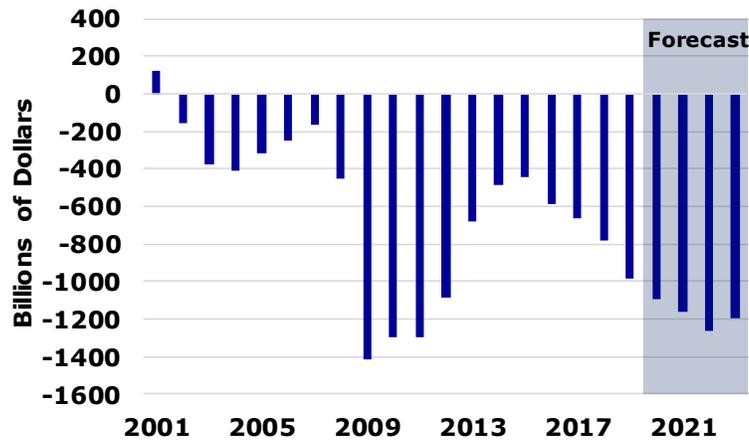
growth of 1.6% this year and 1.9% in 2020. The forecast then expects growth to accelerate throughout the forecast and to reach 2.4% in 2023. Weaker foreign growth, a strengthening dollar, and international trade wars have all caused U.S. exports to weaken. Real U.S. exports are forecasted to decline 0.1% this year after increasing 3.0% in 2018. We then expect real export growth to average 3.2% through 2023.

The federal budget deficit will increase this year

The federal budget deficit increased this past federal fiscal year to \$984 billion from \$779 billion in 2018. Much of the increase in the deficit 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 \$1,095 billion in federal FY 2020. We expect the deficit to remain over \$1 trillion throughout the forecast, reaching a high point of \$1,259 billion in federal FY 2022. The September forecast expected the deficit to reach \$1,234 billion in federal FY 2022. The November forecast expects federal tax receipts to total \$3,462 billion this federal fiscal year, up 4.0% from the prior federal fiscal year. The forecast expects growth in tax receipts to average 3.6% each federal fiscal year from 2020 through 2023, reaching \$3,994 billion.

Figure 1.6: Federal Budget Deficit

The budget deficit is increasing



Source: U.S. Treasury, ERFC November 2019 forecast; historical data FFY 2019

The Fed is lowering rates

The Federal Reserve lowered the federal funds rate by 0.25% in October after rate cuts in September and July. The September forecast expected the third rate cut of the year to occur in December. We do not expect any further rate cuts in the current easing cycle. The threat of escalating tariffs and broad worries over the fallout from trade policies have increased uncertainty. Growth appears to be slowing and financial markets have been turbulent. Federal Reserve chair Jerome Powell indicated that they would consider additional policy action as appropriate to help sustain the expansion. Starting in 2021, the forecast calls

for the Federal Reserve to increase the federal funds rate gradually.

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

Downside risks exceed upside risks

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

Downside Risks

- 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

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| Real National Income Accounts (Billions of Chained 2012 Dollars) | | | | | | | | |
| Real Gross Domestic Product | 17,532.1 | 17,876.4 | 18,380.6 | 18,866.4 | 19,232.6 | 19,568.3 | 19,927.9 | 20,320.2 |
| % Ch | 1.8 | 2.0 | 2.8 | 2.6 | 1.9 | 1.7 | 1.8 | 2.0 |
| Real Consumption | 12,085.6 | 12,401.5 | 12,752.0 | 13,109.9 | 13,445.1 | 13,699.5 | 13,967.5 | 14,260.3 |
| % Ch | 3.0 | 2.6 | 2.8 | 2.8 | 2.6 | 1.9 | 2.0 | 2.1 |
| Real Nonresidential Fixed Investment | 2,404.3 | 2,476.5 | 2,611.6 | 2,741.0 | 2,769.0 | 2,849.0 | 2,954.8 | 3,078.3 |
| % Ch | -0.2 | 3.0 | 5.5 | 5.0 | 1.0 | 2.9 | 3.7 | 4.2 |
| Real Residential Fixed Investment | 580.0 | 600.8 | 611.2 | 592.9 | 598.6 | 594.0 | 596.6 | 606.9 |
| % Ch | 9.6 | 3.6 | 1.7 | -3.0 | 1.0 | -0.8 | 0.4 | 1.7 |
| Real Personal Income | 15,387.6 | 15,679.1 | 16,214.2 | 16,750.7 | 17,177.2 | 17,457.0 | 17,849.7 | 18,282.0 |
| % Ch | 2.8 | 1.9 | 3.4 | 3.3 | 2.5 | 1.6 | 2.2 | 2.4 |
| Real Per Capita Income (\$/Person) | 47,717 | 48,295 | 49,633 | 50,933 | 51,859 | 52,333 | 53,139 | 54,054 |
| % Ch | 2.1 | 1.2 | 2.8 | 2.6 | 1.8 | 0.9 | 1.5 | 1.7 |
| Price and Wage Indexes | | | | | | | | |
| PCE Price Index (2012=100) | 103.4 | 105.0 | 107.0 | 108.9 | 110.8 | 113.0 | 115.2 | 117.4 |
| % Ch | 0.5 | 1.5 | 1.9 | 1.7 | 1.8 | 1.9 | 2.0 | 2.0 |
| U.S. Consumer Price Index (1982-84=1.0) | 2.382 | 2.427 | 2.481 | 2.533 | 2.586 | 2.635 | 2.691 | 2.751 |
| % Ch | 0.7 | 1.9 | 2.2 | 2.1 | 2.1 | 1.9 | 2.1 | 2.2 |
| Employment Cost Index (Dec. 2005=1.0) | 1.248 | 1.278 | 1.314 | 1.354 | 1.396 | 1.442 | 1.491 | 1.544 |
| % Ch | 2.2 | 2.4 | 2.8 | 3.0 | 3.1 | 3.3 | 3.4 | 3.6 |
| Current Dollar National Income (Billions of Dollars) | | | | | | | | |
| Gross Domestic Product | 18,439.3 | 19,086.4 | 20,051.0 | 21,021.7 | 21,848.4 | 22,741.4 | 23,696.1 | 24,729.5 |
| % Ch | 2.8 | 3.5 | 5.1 | 4.8 | 3.9 | 4.1 | 4.2 | 4.4 |
| Personal Income | 15,918.5 | 16,467.9 | 17,356.7 | 18,241.6 | 19,034.0 | 19,718.3 | 20,558.5 | 21,471.2 |
| % Ch | 3.4 | 3.5 | 5.4 | 5.1 | 4.3 | 3.6 | 4.3 | 4.4 |
| Employment (Millions) | | | | | | | | |
| U.S. Civilian Labor Force | 158.0 | 159.8 | 161.2 | 162.7 | 164.5 | 165.9 | 167.1 | 168.2 |
| Total U.S. Employment | 150.1 | 152.4 | 154.5 | 156.6 | 158.7 | 159.9 | 160.7 | 161.4 |
| Unemployment Rate (%) | 4.99 | 4.66 | 4.11 | 3.77 | 3.53 | 3.62 | 3.85 | 4.03 |
| Nonfarm Payroll Employment | 143.11 | 145.53 | 147.77 | 150.31 | 152.37 | 153.52 | 154.44 | 155.08 |
| % Ch | 1.9 | 1.7 | 1.5 | 1.7 | 1.4 | 0.8 | 0.6 | 0.4 |
| Manufacturing | 12.36 | 12.37 | 12.55 | 12.79 | 12.85 | 12.62 | 12.48 | 12.48 |
| % Ch | 0.6 | 0.1 | 1.5 | 1.9 | 0.5 | -1.8 | -1.1 | 0.0 |
| Durable Manufacturing | 7.75 | 7.70 | 7.83 | 8.03 | 8.07 | 7.95 | 7.86 | 7.89 |
| % Ch | 0.1 | -0.6 | 1.7 | 2.5 | 0.5 | -1.6 | -1.1 | 0.3 |
| Nondurable Manufacturing | 4.61 | 4.67 | 4.72 | 4.77 | 4.78 | 4.67 | 4.62 | 4.59 |
| % Ch | 1.6 | 1.4 | 1.1 | 0.9 | 0.3 | -2.3 | -1.1 | -0.6 |
| Construction | 6.61 | 6.84 | 7.12 | 7.41 | 7.54 | 7.58 | 7.70 | 7.86 |
| % Ch | 4.7 | 3.6 | 4.0 | 4.1 | 1.8 | 0.5 | 1.5 | 2.1 |
| Service-Providing | 123.42 | 125.66 | 127.39 | 129.36 | 131.23 | 132.58 | 133.52 | 133.99 |
| % Ch | 2.0 | 1.8 | 1.4 | 1.5 | 1.4 | 1.0 | 0.7 | 0.4 |
| Miscellaneous Indicators | | | | | | | | |
| Oil-WTI (\$ per barrel) | 41.7 | 48.6 | 58.6 | 60.8 | 56.4 | 53.6 | 51.9 | 51.4 |
| Personal Saving/Disposable Income (%) | 7.3 | 6.8 | 7.3 | 8.0 | 8.0 | 7.8 | 8.1 | 8.2 |
| Auto Sales (Millions) | 7.2 | 6.5 | 5.7 | 5.1 | 4.5 | 4.2 | 4.1 | 4.1 |
| % Ch | -5.8 | -10.7 | -11.6 | -11.2 | -11.4 | -5.8 | -2.8 | -1.3 |
| Housing Starts (Millions) | 1.149 | 1.201 | 1.254 | 1.222 | 1.270 | 1.231 | 1.253 | 1.302 |
| % Ch | 9.0 | 4.5 | 4.4 | -2.6 | 4.0 | -3.1 | 1.8 | 3.9 |
| Federal Budget Surplus (Billions) | -620.1 | -693.3 | -876.2 | -1,086.4 | -1,163.6 | -1,192.3 | -1,258.9 | -1,287.1 |
| Net Exports (Billions) | -516.3 | -553.1 | -586.0 | -663.0 | -644.3 | -636.1 | -593.2 | -540.4 |
| 3-Month Treasury Bill Rate (%) | 0.18 | 0.55 | 1.41 | 2.26 | 1.66 | 1.62 | 2.07 | 2.26 |
| 10-Year Treasury Note Yield (%) | 2.02 | 2.10 | 2.57 | 2.74 | 1.84 | 2.45 | 2.93 | 3.01 |
| Bond Index of 20 G.O. Munis. (%) | 3.51 | 3.51 | 3.67 | 4.01 | 3.42 | 4.02 | 4.41 | 4.53 |
| 30-Year Fixed Mortgage Rate (%) | 3.80 | 3.85 | 4.16 | 4.43 | 3.76 | 4.17 | 4.49 | 4.57 |

Table 1.2

Forecast Analysis

Comparison of Forecasts for 2017-19

| U.S. | Average Annual Rate of Growth (Percent) 2017:2-2019:2 | | Average Rate (Percent) 2017:3 to 2019:2 | |
|-------------|--|------------------------|--|----------------------|
| | Real GDP | PCE Price Index | 3 Month T-Bill Rate | Mortgage Rate |
| 2014 | | | | |
| February | 2.6 | 1.3 | 3.72 | 6.57 |
| June | 2.6 | 1.5 | 3.73 | 6.63 |
| September | 2.6 | 1.6 | 3.51 | 6.15 |
| November | 2.5 | 1.9 | 3.53 | 6.14 |
| 2015 | | | | |
| February | 2.5 | 1.8 | 3.53 | 5.71 |
| June | 2.5 | 1.8 | 3.48 | 5.75 |
| September | 2.5 | 1.8 | 2.66 | 5.16 |
| November | 2.3 | 1.8 | 2.67 | 5.23 |
| 2016 | | | | |
| February | 2.3 | 1.8 | 2.28 | 5.02 |
| June | 2.1 | 1.9 | 2.09 | 4.97 |
| September | 2.1 | 1.7 | 1.63 | 4.85 |
| November | 2.1 | 1.8 | 1.39 | 4.63 |
| 2017 | | | | |
| March | 2.3 | 1.6 | 1.66 | 5.07 |
| June | 2.3 | 1.6 | 1.67 | 4.98 |
| September | 2.3 | 1.7 | 1.67 | 4.91 |
| November | 2.3 | 1.8 | 1.50 | 4.41 |
| 2018 | | | | |
| February | 2.6 | 1.9 | 1.79 | 4.49 |
| June | 2.8 | 2.1 | 1.88 | 4.46 |
| September | 2.8 | 2.1 | 1.91 | 4.44 |
| November | 2.8 | 2.0 | 1.91 | 4.49 |
| 2019 | | | | |
| March | 2.7 | 1.9 | 1.87 | 4.36 |
| June | 2.7 | 1.8 | 1.85 | 4.30 |
| September | 2.7 | 1.8 | 1.84 | 4.29 |
| November | 2.7 | 1.8 | 1.84 | 4.29 |

Table 1.3

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 |

Table 1.4
Forecast Comparison
 Forecast 2019 to 2023

Fiscal Years

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| U.S. | | | | | | | |
| Real GDP | | | | | | | |
| 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 |
| September | 17876.4 | 18380.6 | 18866.6 | 19244.7 | 19568.8 | 19917.3 | 20312.3 |
| % Ch | 2.0 | 2.8 | 2.6 | 2.0 | 1.7 | 1.8 | 2.0 |
| PCE Price Index | | | | | | | |
| 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 |
| September | 105.0 | 107.0 | 108.9 | 110.9 | 113.2 | 115.4 | 117.7 |
| % Ch | 1.5 | 1.9 | 1.7 | 1.8 | 2.1 | 2.0 | 1.9 |
| Unemployment Rate | | | | | | | |
| November | 4.66 | 4.11 | 3.77 | 3.53 | 3.62 | 3.85 | 4.03 |
| September | 4.66 | 4.11 | 3.77 | 3.58 | 3.70 | 3.87 | 4.02 |
| Mortgage Rate | | | | | | | |
| November | 3.85 | 4.16 | 4.43 | 3.76 | 4.17 | 4.49 | 4.57 |
| September | 3.85 | 4.16 | 4.43 | 3.63 | 4.09 | 4.52 | 4.78 |
| 3 Month T-Bill Rate | | | | | | | |
| November | 0.55 | 1.41 | 2.26 | 1.66 | 1.62 | 2.07 | 2.26 |
| September | 0.55 | 1.41 | 2.26 | 1.76 | 1.64 | 2.05 | 2.27 |



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 remains near its all-time low.**
- **Washington personal income growth was the highest in the U.S. in 2018.**
- **Seattle area home prices rose over the year for the second consecutive month.**
- **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 September, the Washington economic forecast has higher personal income but slower personal income and employment growth.**
- **As in September, 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 remains near its all-time low. Washington personal income growth was the highest in the U.S. in 2018. Seattle area home prices rose over the year for the second consecutive month. 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 weaker than expected

We have two months of new Washington employment data since the September forecast was released. Total nonfarm payroll employment rose 2,600 (seasonally adjusted) in September and October, which was 6,600 less than expected in the September forecast. The difference was partly due to government employment which declined by 2,500 compared to an expected

increase of 1,400. We believe the drop in government was due to a seasonal adjustment problem with state government education, which artificially increased the level of employment in August. Private services-providing sectors added 3,800 jobs in September and October. The manufacturing sector lost 800 jobs of which 500 were aerospace jobs. The construction sector added 2,100 jobs in September and October.

New QCEW data raised the estimated level of employment

We have also incorporated another quarter of benchmark employment data from the Quarterly Census of Employment and Wages (QCEW). The new QCEW data and other revisions raised the estimated level of total employment in August 2019 by 4,300 jobs (0.1%). As a result of the upward revision to history and weaker-than-expected growth, the combined effect is 2,200 (0.1%) fewer jobs in October 2019 than expected in the September forecast.

The unemployment rate remains low

Washington's unemployment rate declined to 4.5% in October from 4.6% in September. The state's unemployment rate remains near its all-time low of 4.4% last reached in October 2018.

Washington UI claims remain near the post-recession low

Washington initial claims for unemployment insurance remain near the post-recession low. The four-week moving average of seasonally adjusted claims held steady at 6,400 in the week ending November 23, 2019. The current level of claims is close to the post-recession trough of 5,800 (see Figure 2.1). Claims have fallen 61% since the peak in early 2009.

Figure 2.1: Washington Initial Claims for U.I

The spike in February 2019 was due to unusually severe winter weather



Source: Washington Department of Employment Security; data through November 23, 2019

Washington exports declined sharply over the year

Washington exports declined sharply over the year for the second consecutive quarter. Year-over-year exports decreased

33.4% in the third quarter of 2019 following a 27.6% decline in the second quarter. The large declines were mostly because of transportation equipment exports (mostly Boeing planes) which fell 41.9% in the second quarter and 53.1% in the third quarter. Boeing suspended deliveries of the 737 Max in March, which clearly affected second and third quarter exports. However, third quarter exports of agricultural products also declined 8.3% over the year and exports of all other commodities (mostly manufacturing) declined 8.2% over the year.

Washington housing construction declined slightly in the third quarter of 2019 but exceeded the September forecast

Washington housing construction declined slightly in the third quarter of 2019 but exceeded the September forecast. The number of housing units authorized by building permits decreased to 48,000 (SAAR) in the third quarter from 48,600 units in the second quarter. Third quarter permits were made up of 23,700 single-family units and 24,300 multi-family units. The September forecast assumed 45,400 units (SAAR) in the third quarter, consisting of 22,600 single-family units and 22,800 multi-family units. Washington housing construction slowed early in the fourth quarter of 2019 because of a drop in multi-family permits. In October, 41,700 units (SAAR) were permitted consisting of 23,900 single-family units and 17,800 multi-family units. The September forecast assumed an average rate of 43,200 (SAAR) units for the fourth quarter as a whole.

Seattle area home prices rose over the year

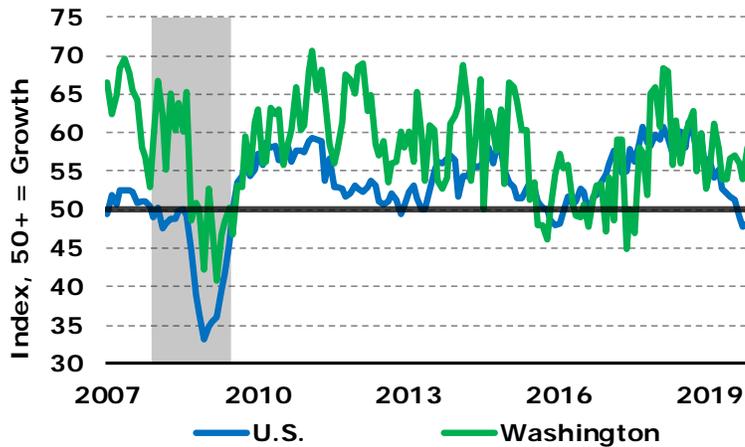
Seattle area home prices rose over the year for the second consecutive month in September following year-over-year declines in May, June, and July. According to the S&P/Case-Shiller Home Price Indices, seasonally adjusted Seattle area home prices increased 0.8% in September following monthly growth rates of 0.6% in both July and August. Because of the strong growth in the last three months, Seattle home prices are up 1.8% over the year. In comparison, the composite-20 index was up 2.1% over the year. Seattle home prices are up 92% since the December 2011 trough and exceed the May 2007 peak by 33%.

Manufacturing continues to expand

The Institute of Supply Management - Western Washington Index (ISM-WW) increased in October and remained in positive territory. The index, which measures conditions in the manufacturing sector, increased from 54.0 in September to 58.2 in October (index values above 50 indicate growth while values below 50 indicate contraction). The Washington index has exceeded 50 in each of the last 27 months (see Figure 2.2). The production, orders, and employment components indicated expansion in October while the deliveries component indicated contraction. The inventory component was neutral at 50 in October.

Figure 2.2: ISM Manufacturing PMI

Unlike its national counterpart, the Washington index has exceeded 50 in each of the last 27 months



Source: ISM, ISM-WW; data through October 2019

Car and truck sales increased in October

Washington car and truck sales increased in October following a dip in September. Seasonally adjusted new vehicle registrations increased 1.6% in October after a 1.5% decrease in September. October sales were down 5.5% over the year and 15.6% since the November 2017 post-recession peak. Monthly sales are erratic but have been trending down since mid-2016.

Washington personal income grew 7.0% (SAAR) in the second quarter

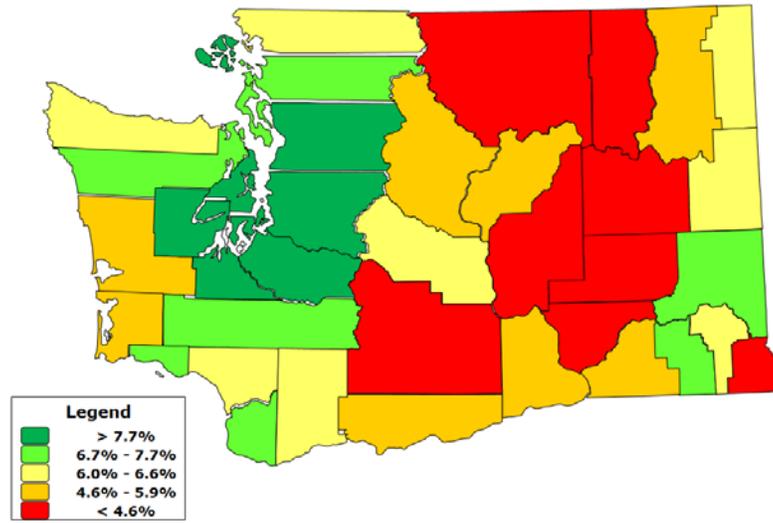
In September, after the forecast was complete, the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) released state personal income estimates for the second quarter of 2019. According to these estimates, Washington personal income rose from \$485.9 billion (SAAR) in the first quarter to \$494.2 billion in the second quarter. The reported 7.0% growth rate (SAAR) in Washington personal income was the third largest among the states and District of Columbia and exceeded the 5.4% growth rate for the U.S. as a whole.

The BEA released county personal income estimates in November

In November, the Bureau of Economic Analysis (BEA) released new county personal income estimates for 2018 and revised estimates for 1998-2017. These estimates incorporate the results of the July 2019 annual update of the National Income and Product Accounts and are consistent with the September 2019 annual update of state personal income. King County led the state in personal income growth with an 8.4% increase over 2017 (see Figure 2.3). The personal income growth rate for the state as a whole was 7.5%.

Figure 2.3: County Personal Income Growth

King County led the state in personal income growth in 2018



Source: BEA; data through 2018

Seattle area consumer price inflation slightly outpaced the national average in October

Seattle area consumer price inflation slightly outpaced the national average in October. From October 2018 to October 2019, the Seattle CPI rose 2.2% compared to a 1.8% increase in the U.S. City Average. Core prices, which exclude food and energy, increased 2.6% over the year in Seattle compared to 2.3% for the U.S. City Average. In part, the above-average Seattle inflation was due to shelter costs. Over-the-year shelter-cost inflation in Seattle was 3.8% compared to the national rate of 3.3%. However, Seattle inflation excluding shelter still exceeded the national average at 1.2% compared to 1.0%.

Washington State Forecast

Compared to September, the Washington economic forecast has higher personal income but slower personal income and employment growth

Compared to September, the Washington economic forecast has higher personal income but slower personal income and employment growth. We expect 1.9% Washington employment growth this year, which is the same rate expected in the September forecast. As in September, we expect growth to decelerate. We expect employment growth to average 1.1% per year in 2020 through 2023, which is slightly slower than the 1.2% rate expected in September. Our forecast for nominal personal income growth this year is 5.1%, down from 5.6% in the September forecast. Our new forecast for nominal personal income growth in 2020 through 2023 averages 4.5% per year, which is down from the 4.8% rate expected in the September forecast. While personal income growth is lower than in September, the level is higher throughout the forecast due to the upward revision to history. We expect 45,900 housing units authorized by building permits this year, up from 45,200 units in

the September forecast. The increase is due to higher than forecasted permits in the third quarter. As in September, we expect permits to average 42,500 in 2020 through 2023. The headline Seattle CPI forecast for 2019 is 2.5% compared to 2.6% in the September forecast based on actual data through October. We expect inflation to average of 2.1% per year in 2020 through 2023, down slightly from 2.2% in the September forecast.

Washington Payroll Employment

Washington employment growth is slightly slower than in the September forecast

Washington employment growth is slightly slower than in the September forecast (see Figure 2.4). We expect 1.9% Washington employment growth this year, which is the same rate expected in the September forecast. As in September, we expect growth to decelerate. We expect employment growth to average 1.1% per year in 2020 through 2023, which is slightly slower than the 1.2% rate expected in September. On an annual basis, we expect 1.6% employment growth in 2020, 1.1% in 2021, 1.0% in 2022, and 0.8% in 2023.

Figure 2.4: Washington Payroll Employment

As in September, we expect growth to decelerate



Source: Employment Security Department, ERFC; historical data through Q3 2019

The aerospace employment forecast is slightly lower than in September

After shedding 15,100 jobs from the first quarter of 2013 through the fourth quarter of 2017, the aerospace sector added 8,200 jobs through the third quarter of this year. We expect a decline of 900 jobs in the fourth quarter based on monthly data through October. While Boeing has suspended deliveries of the 737 Max, production continues though at a reduced rate. We assume deliveries will remain on hold through December and then jump early next year, when we assume Boeing is cleared to resume deliveries. We do not have any information on the impact on employment or hours worked but do not believe they are large at this point. Boeing has issued no worker adjustment and

retraining notifications (WARNs) since the grounding of the 737 Max and overall aerospace employment is slightly up. We still believe employment will be flat but the level will be 800 lower through 2023 than in the September forecast. On an annual average basis, we expect aerospace employment to increase 5.6% in 2019, 0.5% in 2020, and then remain unchanged through the rest of the forecast.

The software employment forecast is higher than in September

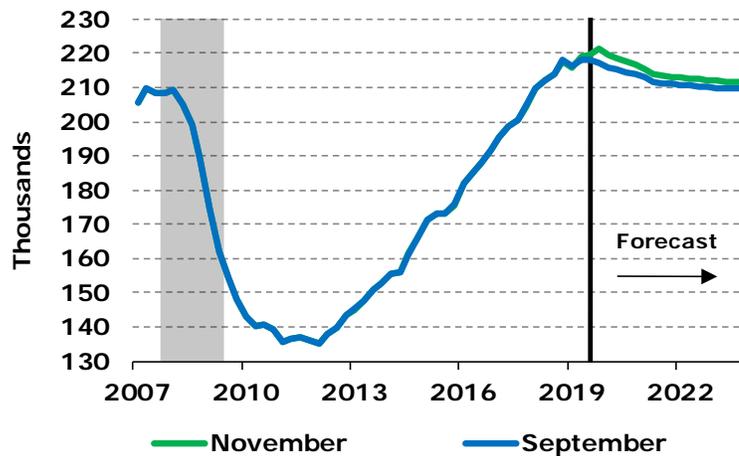
We have increased the software employment growth forecast for 2019 and 2020 from 7.3% and 2.3% to 7.6% and 4.0% based on stronger-than-expected job growth in recent months. Growth during the remainder of the forecast is similar to the September assumption. On an annual average basis, we expect growth rates 1.0% in 2021, 1.2% in 2022, and 1.5% in 2023.

Electronic shopping and mail order employment is almost unchanged

In Washington, the electronic shopping and mail order sector consists almost entirely of electronic shopping employment. We have increased our forecast for employment growth this year from 8.7% in the September forecast to 11.3% based on upward revisions to the historical data for the first half of this year. However, a decline in the third quarter leaves the level almost unchanged compared to the September forecast. On an annual basis, electronic shopping and mail order employment will grow 3.8% in 2020, 3.8%, 2021, 3.0% in 2022, and 2.5% in 2023.

Figure 2.5: Washington Construction Employment

We expect construction employment to peak in the fourth quarter



Source: Employment Security Department, ERFC; historical data through Q3 2019

We have raised our forecast for construction employment

We have raised our forecast for construction employment growth through the remainder of 2019 based on monthly data through October. We now believe the fourth quarter of 2019 will prove to be the cyclical peak in construction rather than the fourth quarter of 2018 (see Figure 2.5). This would put employment in the fourth quarter 11,400 (5.4%) higher than the pre-recession

peak. We expect construction employment to rise 2.6% this year, up from 1.9% in the September forecast. We expect construction employment to decline gradually through the remainder of the forecast. On a calendar year basis, we expect employment to decline 0.3% in 2020, 1.9% in 2021, 0.7% in 2022 and 0.3% in 2023.

Washington Personal Income

The annual revision raised historical Washington personal income

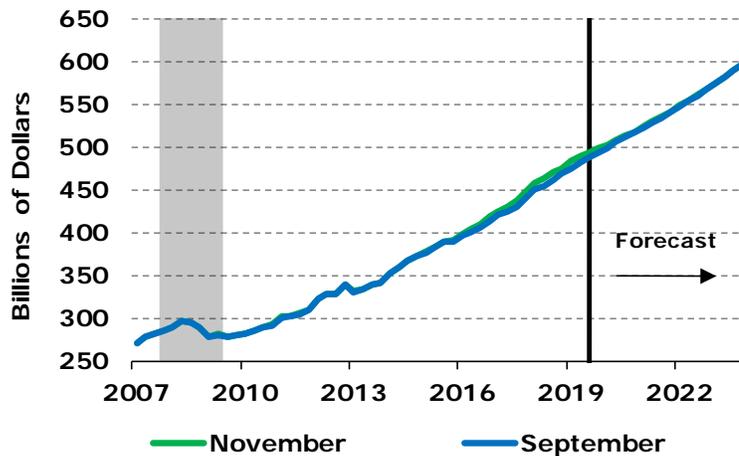
In September, the Bureau of Economic Analysis released estimates for state personal income through the second quarter of 2019. The September release also incorporated the results of the 2019 annual revision of the national income and product accounts (NIPA). We have incorporated the new BEA estimates as well as additional Washington Quarterly Census of Employment and Wages (QCEW) data. Our current estimate of Washington personal income in the second quarter of 2019 is \$7.1 billion (1.5%) higher than assumed in the September forecast. Wages were \$1.9 billion (0.8%) below the forecast and nonwage income was \$9.0 billion (3.9%) above the forecast. The large increase to the estimate for nonwage income was due to the annual revision of the NIPA.

Washington personal income growth is slower

Our forecast for nominal personal income growth this year is 5.1%, down from 5.6% in the September forecast. Our new forecast for nominal personal income growth in 2020 through 2023 averages 4.5% per year, which is down from the 4.8% rate expected in the September forecast. While personal income growth is lower than in September, the level is higher due to the upward revision to history (see Figure 2.6). On an annual basis, we expect personal income to grow 3.9% in 2020, 4.3% in 2021, 4.7% in 2022, and 5.0% in 2023.

Figure 2.6: Washington Personal Income

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



Source: Bureau of Economic Analysis, ERFC; historical data through Q2 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 47,700 in 2018. We expect single-family construction to remain fairly steady but multi-family construction to trend down as population growth slows.

The 2019 housing construction forecast is slightly higher than the forecast adopted in September

The 2019 housing construction forecast is slightly higher than the forecast adopted in September but the remainder of the forecast is very similar. We expect 45,900 housing units authorized by building permits this year, up from 45,200 units in the September forecast. The increase is due to higher than forecasted permits in the third quarter. As in September, we expect permits to average 42,500 in 2020 through 2023. On a calendar year basis, we expect 43,600 units in 2020, 42,500 in 2021, 42,200 in 2022, and 41,600 in 2023.

Seattle Consumer Price Index

Seattle shelter cost inflation is cooling

Core inflation (excluding food and energy) in Seattle was 2.9% in 2018 while national core inflation was 2.1%. The difference was mostly due to shelter costs, which were rising much faster in Seattle. 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 2.8% in 2019, 2.1% in 2020, 2.3% in 2021, 2.3% in 2022, and 2.2% in 2023.

We expect Seattle inflation to fall from 3.2% last year to 1.9% in 2020

Rising energy costs added to headline inflation in 2017 and 2018. However, lower energy costs will tend to reduce headline inflation in 2019 through 2022. The headline Seattle forecast for 2019 is 2.5% compared to 2.6% in the September forecast based on actual data through October. On a calendar year basis, we expect inflation rates of 1.9% in 2020, 1.9% in 2021, 2.2% in 2022, and 2.3% in 2023.

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 2.7%, rebounding from a lackluster post-recession pace that averaged just 0.8% over 2011–18. 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 rise to 1.43 million. 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 2023 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 fourth quarter of 2019 as in the baseline. By the end of 2023, Washington nonfarm payroll employment is higher by 79,700 jobs (2.2%) than in the baseline forecast and Washington personal income is \$40.2 billion (6.7%) 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 drops in a wide range of investment and consumer spending categories to end the expansion. The recent sharp increases in real estate prices, along with the projected upturn in mortgage rates raise the cost of homeownership such that housing demand and starts begin to decline in early 2020. 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 GDP growth also slows. The result is a three-quarter recession starting in the fourth quarter of 2020 during which real GDP declines 2.0%. The unemployment rate climbs throughout 2021, peaking at 5.8% in the fourth quarter of 2021.

This scenario also assumes a weaker local economy

In addition to reflecting the impact of the weaker U.S. forecast on the state economy, aerospace employment declines rather than leveling off as in the baseline. Software employment also declines rather than growing moderately as in the baseline forecast. 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 2023, Washington nonfarm payroll employment is 153,200 (4.2%) lower than in the baseline forecast and Washington personal income is \$56.7 billion (9.5%) 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 is very close to the baseline forecast

The Governor’s Council of Economic Advisors’ national forecast is very close to the baseline forecast. The GCEA forecast for real GDP growth averages 1.9% per year over the five-year interval through 2023, which is the same rate as in the baseline forecast. The GCEA forecast of 2.1% average real consumer spending growth is slightly lower than the 2.2% rate in the baseline forecast. The GCEA members PCE inflation forecast averages 1.8% compared to 1.9% in the baseline forecast. The Council members’ mortgage rate forecast averages 4.2% over the forecast horizon, which is slightly lower than the 4.3% average mortgage rate in the baseline forecast but their oil price forecast averages \$61 per barrel compared to \$59 in the baseline forecast.

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

The Governor’s Council of Economic Advisors’ Washington forecast is also very close to the baseline forecast. The GCEA scenario for Washington real personal income growth averages 2.9% per year in 2019 through 2023, which is slightly higher than the 2.7% average rate in the baseline forecast. Their average nominal personal income growth forecast is closer, 4.7% compared to 4.6% because of their slightly lower inflation forecast. The Council members’ forecast for total employment growth over the five-year period averages 1.3% per year, which is the same as 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 also slightly higher, averaging 43,900 units per year compared to 43,200 in the baseline forecast. At the end of 2023, the GCEA forecast for Washington nonfarm payroll employment is 10,900 (0.3%) higher than in the baseline forecast and Washington personal income is \$3.1 billion (0.5%) higher.

Table 2.3 compares the GCEA forecast with the baseline forecast.

Table 2.1
Washington Economic Forecast Summary
 Forecast 2020 to 2023

Fiscal Years

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|
| Real Income (Billions of Chained 2012 Dollars) | | | | | | | | |
| Real Personal Income | 382.791 | 400.658 | 421.707 | 440.745 | 452.070 | 461.133 | 472.947 | 486.378 |
| % Ch | 4.8 | 4.7 | 5.3 | 4.5 | 2.6 | 2.0 | 2.6 | 2.8 |
| Real Wage and Salary Disb. | 190.633 | 199.990 | 213.178 | 224.171 | 230.397 | 236.333 | 242.329 | 249.582 |
| % Ch | 5.0 | 4.9 | 6.6 | 5.2 | 2.8 | 2.6 | 2.5 | 3.0 |
| Real Nonwage Income | 192.158 | 200.668 | 208.529 | 216.575 | 221.673 | 224.800 | 230.618 | 236.796 |
| % Ch | 4.7 | 4.4 | 3.9 | 3.9 | 2.4 | 1.4 | 2.6 | 2.7 |
| Real Per Capita Income (\$/Person) | 52,943 | 54,426 | 56,367 | 58,055 | 58,707 | 59,077 | 59,826 | 60,796 |
| % Ch | 3.1 | 2.8 | 3.6 | 3.0 | 1.1 | 0.6 | 1.3 | 1.6 |
| Price and Wage Indexes | | | | | | | | |
| U.S. Implicit Price Deflator, PCE (2012=1.0) | 1.034 | 1.050 | 1.070 | 1.089 | 1.108 | 1.130 | 1.152 | 1.174 |
| % Ch | 0.5 | 1.5 | 1.9 | 1.7 | 1.8 | 1.9 | 2.0 | 2.0 |
| Seattle Cons. Price Index (1982-84=1.0) | 2.521 | 2.589 | 2.670 | 2.745 | 2.807 | 2.858 | 2.919 | 2.984 |
| % Ch | 1.9 | 2.7 | 3.1 | 2.8 | 2.3 | 1.8 | 2.1 | 2.2 |
| Average Nonfarm Annual Wage | 59,588 | 61,860 | 65,743 | 68,943 | 70,801 | 73,153 | 75,718 | 78,876 |
| % Ch | 2.5 | 3.8 | 6.3 | 4.9 | 2.7 | 3.3 | 3.5 | 4.2 |
| Avg. Hourly Earnings-Mfg. (\$/Hour) | 26.00 | 26.81 | 27.93 | 28.91 | 29.52 | 30.38 | 31.37 | 32.43 |
| % Ch | 2.8 | 3.1 | 4.2 | 3.5 | 2.1 | 2.9 | 3.3 | 3.4 |
| Current Dollar Income (Billions of Dollars) | | | | | | | | |
| Personal Income | 395.994 | 420.807 | 451.422 | 479.955 | 500.934 | 520.871 | 544.724 | 571.228 |
| % Ch | 5.4 | 6.3 | 7.3 | 6.3 | 4.4 | 4.0 | 4.6 | 4.9 |
| Disposable Personal Income | 347.654 | 369.864 | 397.381 | 423.852 | 442.374 | 460.159 | 481.456 | 504.243 |
| % Ch | 5.3 | 6.4 | 7.4 | 6.7 | 4.4 | 4.0 | 4.6 | 4.7 |
| Per Capita Income (\$/Person) | 54,768 | 57,162 | 60,337 | 63,219 | 65,052 | 66,728 | 68,904 | 71,400 |
| % Ch | 3.6 | 4.4 | 5.6 | 4.8 | 2.9 | 2.6 | 3.3 | 3.6 |
| Employment (Thousands) | | | | | | | | |
| Washington Civilian Labor Force | 3,594.4 | 3,683.2 | 3,752.3 | 3,837.3 | 3,932.1 | 3,991.4 | 4,043.0 | 4,089.3 |
| Total Washington Employment | 3,396.1 | 3,501.1 | 3,579.5 | 3,664.0 | 3,754.0 | 3,807.0 | 3,847.4 | 3,884.6 |
| Unemployment Rate (%) | 5.52 | 4.94 | 4.61 | 4.52 | 4.53 | 4.62 | 4.84 | 5.01 |
| Nonfarm Payroll Employment | 3,193.2 | 3,283.8 | 3,364.0 | 3,436.3 | 3,500.4 | 3,542.6 | 3,578.9 | 3,609.0 |
| % Ch | 3.0 | 2.8 | 2.4 | 2.1 | 1.9 | 1.2 | 1.0 | 0.8 |
| Manufacturing | 292.7 | 287.1 | 284.0 | 291.7 | 295.1 | 291.8 | 291.9 | 294.3 |
| % Ch | 0.6 | -1.9 | -1.1 | 2.7 | 1.2 | -1.1 | 0.1 | 0.8 |
| Durable Manufacturing | 210.6 | 203.8 | 199.5 | 205.4 | 208.0 | 206.0 | 206.5 | 208.7 |
| % Ch | -0.1 | -3.3 | -2.1 | 3.0 | 1.3 | -0.9 | 0.2 | 1.0 |
| Aerospace | 93.2 | 87.7 | 82.5 | 86.6 | 89.3 | 89.1 | 89.1 | 89.1 |
| % Ch | -1.1 | -5.9 | -5.9 | 4.9 | 3.2 | -0.2 | 0.0 | 0.0 |
| Nondurable Manufacturing | 82.0 | 83.3 | 84.5 | 86.3 | 87.1 | 85.7 | 85.4 | 85.6 |
| % Ch | 2.5 | 1.6 | 1.4 | 2.1 | 1.0 | -1.6 | -0.4 | 0.2 |
| Construction | 178.9 | 193.5 | 206.6 | 216.6 | 219.8 | 215.9 | 213.0 | 212.0 |
| % Ch | 6.5 | 8.2 | 6.8 | 4.8 | 1.5 | -1.8 | -1.3 | -0.5 |
| Service-Providing | 2,715.4 | 2,797.0 | 2,867.0 | 2,921.8 | 2,979.6 | 3,029.1 | 3,068.2 | 3,097.0 |
| % Ch | 3.0 | 3.0 | 2.5 | 1.9 | 2.0 | 1.7 | 1.3 | 0.9 |
| Software Publishers | 57.3 | 60.2 | 63.1 | 67.7 | 72.4 | 73.5 | 74.2 | 75.3 |
| % Ch | 3.2 | 5.1 | 4.7 | 7.3 | 6.9 | 1.6 | 1.0 | 1.4 |
| Electronic Shopping and Mail-Order | 33.2 | 43.9 | 53.5 | 58.2 | 61.8 | 64.5 | 66.6 | 68.5 |
| % Ch | 17.7 | 32.5 | 21.7 | 8.7 | 6.2 | 4.4 | 3.3 | 2.7 |
| Housing Indicators (Thousands) | | | | | | | | |
| Housing Units Authorized by Bldg. Permit | 40.153 | 44.515 | 48.801 | 46.048 | 44.703 | 42.977 | 42.402 | 41.945 |
| % Ch | 3.3 | 10.9 | 9.6 | -5.6 | -2.9 | -3.9 | -1.3 | -1.1 |
| Single-Family | 21.844 | 22.044 | 24.141 | 22.386 | 23.158 | 23.024 | 23.005 | 23.421 |
| % Ch | 17.0 | 0.9 | 9.5 | -7.3 | 3.5 | -0.6 | -0.1 | 1.8 |
| Multi-Family | 18.310 | 22.471 | 24.660 | 23.662 | 21.545 | 19.953 | 19.397 | 18.524 |
| % Ch | -9.4 | 22.7 | 9.7 | -4.0 | -8.9 | -7.4 | -2.8 | -4.5 |
| 30-Year Fixed Mortgage Rate (%) | 3.80 | 3.85 | 4.16 | 4.43 | 3.76 | 4.17 | 4.49 | 4.57 |

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 | 2.1 | 3.0 | 2.8 | 2.7 |
| Baseline | 2.8 | 2.6 | 1.9 | 1.7 | 1.8 | 2.0 |
| Pessimistic | 2.8 | 2.6 | 2.0 | -0.3 | 0.7 | 2.0 |
| PCE Price Index, Percent Change | | | | | | |
| Optimistic | 1.9 | 1.7 | 1.7 | 1.8 | 1.9 | 2.0 |
| Baseline | 1.9 | 1.7 | 1.8 | 1.9 | 2.0 | 2.0 |
| Pessimistic | 1.9 | 1.7 | 1.7 | 1.6 | 1.5 | 1.3 |
| Mortgage Rate, Percent | | | | | | |
| Optimistic | 4.16 | 4.43 | 3.87 | 4.30 | 4.70 | 5.10 |
| Baseline | 4.16 | 4.43 | 3.76 | 4.17 | 4.49 | 4.57 |
| Pessimistic | 4.16 | 4.43 | 3.71 | 3.58 | 3.67 | 4.31 |
| 3 Month T-Bill Rate, Percent | | | | | | |
| Optimistic | 1.41 | 2.26 | 1.76 | 2.01 | 2.36 | 2.67 |
| Baseline | 1.41 | 2.26 | 1.66 | 1.62 | 2.07 | 2.26 |
| Pessimistic | 1.41 | 2.26 | 1.61 | 0.53 | 0.15 | 0.40 |
| Washington | | | | | | |
| Real Personal Income, Percent Change | | | | | | |
| Optimistic | 5.3 | 4.5 | 3.9 | 4.1 | 3.9 | 4.0 |
| Baseline | 5.3 | 4.5 | 2.6 | 2.0 | 2.6 | 2.8 |
| Pessimistic | 5.3 | 4.5 | 1.6 | -0.4 | -0.7 | 2.3 |
| Personal Income, Percent Change | | | | | | |
| Optimistic | 7.3 | 6.3 | 5.7 | 6.0 | 5.8 | 6.0 |
| Baseline | 7.3 | 6.3 | 4.4 | 4.0 | 4.6 | 4.9 |
| Pessimistic | 7.3 | 6.3 | 3.3 | 1.2 | 0.7 | 3.6 |
| Employment, Percent Change | | | | | | |
| Optimistic | 2.4 | 2.1 | 2.1 | 1.9 | 1.4 | 1.2 |
| Baseline | 2.4 | 2.1 | 1.9 | 1.2 | 1.0 | 0.8 |
| Pessimistic | 2.4 | 2.1 | 1.7 | 0.2 | -1.2 | 0.2 |
| Housing Permits, Thousands of Authorized Units | | | | | | |
| Optimistic | 48.8 | 46.0 | 45.4 | 46.7 | 47.6 | 47.0 |
| Baseline | 48.8 | 46.0 | 44.7 | 43.0 | 42.4 | 41.9 |
| Pessimistic | 48.8 | 46.0 | 44.0 | 36.6 | 35.0 | 33.4 |

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

Calendar Years

| | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------------------------|------|------|------|------|------|
| U.S. | | | | | |
| Real GDP | | | | | |
| <i>Growth</i> | | | | | |
| ERFC | 2.3 | 1.8 | 1.8 | 1.9 | 2.0 |
| GCEA Average | 2.2 | 1.5 | 1.9 | 1.9 | 2.0 |
| Real Consumption | | | | | |
| <i>Growth</i> | | | | | |
| ERFC | 2.6 | 2.2 | 1.9 | 2.0 | 2.2 |
| GCEA Average | 2.6 | 2.1 | 1.9 | 2.0 | 2.0 |
| PCE Price Index | | | | | |
| <i>Growth</i> | | | | | |
| ERFC | 1.5 | 2.0 | 1.9 | 2.0 | 2.0 |
| GCEA Average | 1.7 | 1.8 | 1.8 | 1.8 | 1.8 |
| Mortgage Rate | | | | | |
| <i>Percent</i> | | | | | |
| ERFC | 3.9 | 3.9 | 4.4 | 4.5 | 4.6 |
| GCEA Average | 3.9 | 3.7 | 4.2 | 4.6 | 4.7 |
| Oil Price (Brent) | | | | | |
| <i>Dollars per barrel</i> | | | | | |
| ERFC | 63.9 | 59.8 | 57.6 | 56.9 | 57.1 |
| GCEA Average | 63.7 | 59.6 | 59.9 | 60.8 | 62.1 |
| | | | | | |
| Washington State | | | | | |
| Real Personal Income | | | | | |
| <i>Growth</i> | | | | | |
| ERFC | 3.6 | 1.9 | 2.3 | 2.7 | 3.0 |
| GCEA Average | 3.7 | 2.5 | 2.9 | 2.6 | 2.8 |
| Wage and Salary Employment | | | | | |
| <i>Growth</i> | | | | | |
| ERFC | 1.9 | 1.6 | 1.1 | 1.0 | 0.8 |
| GCEA Average | 1.9 | 1.4 | 1.2 | 1.1 | 1.0 |
| Manufacturing Employment | | | | | |
| <i>Growth</i> | | | | | |
| ERFC | 2.4 | -0.3 | -0.8 | 0.6 | 0.9 |
| GCEA Average | 2.5 | 0.2 | 0.3 | 0.7 | 0.9 |
| Construction Employment | | | | | |
| <i>Growth</i> | | | | | |
| ERFC | 2.6 | -0.3 | -1.9 | -0.7 | -0.3 |
| GCEA Average | 2.1 | -0.5 | -0.8 | -0.2 | 0.0 |
| Housing Permits | | | | | |
| <i>Thousands of authorized units</i> | | | | | |
| ERFC | 45.9 | 43.6 | 42.5 | 42.2 | 41.6 |
| GCEA Average | 45.9 | 43.9 | 43.2 | 43.3 | 42.9 |
| Washington Average Annual Wage | | | | | |
| <i>Growth</i> | | | | | |
| ERFC | 3.6 | 2.8 | 3.4 | 3.8 | 4.4 |
| GCEA Average | 3.7 | 3.5 | 3.6 | 3.7 | 3.9 |

Table 2.4

Forecast Analysis

Comparison of Forecasts for 2017-19

| Washington | Average Annual Rate of Growth (Percent) 2017:2-2019:2 | | | Average Annual Rate (Thousands) 2017:3 to 2019:2 |
|-------------------|--|------------------------|-----------------------------|---|
| | Employment | Personal Income | Real Personal Income | Housing Units Authorized |
| 2014 | | | | |
| February | 1.3 | 4.9 | 3.5 | 42.5 |
| June | 1.2 | 5.3 | 3.8 | 43.0 |
| September | 1.3 | 5.4 | 3.8 | 43.1 |
| November | 1.1 | 5.5 | 3.6 | 43.2 |
| 2015 | | | | |
| March | 1.3 | 5.4 | 3.6 | 43.1 |
| June | 1.4 | 5.6 | 3.8 | 44.2 |
| September | 1.3 | 5.4 | 3.6 | 43.9 |
| November | 1.4 | 5.4 | 3.5 | 44.0 |
| 2016 | | | | |
| February | 1.2 | 5.0 | 3.2 | 43.3 |
| June | 1.2 | 5.1 | 3.2 | 43.7 |
| September | 1.4 | 5.1 | 3.3 | 43.8 |
| November | 1.5 | 5.1 | 3.2 | 41.0 |
| 2017 | | | | |
| March | 1.7 | 5.3 | 3.6 | 41.0 |
| June | 1.6 | 5.2 | 3.6 | 42.7 |
| September | 1.9 | 4.8 | 3.1 | 43.1 |
| November | 2.1 | 5.0 | 3.2 | 42.3 |
| 2018 | | | | |
| February | 2.2 | 5.3 | 3.3 | 44.3 |
| June | 2.2 | 5.6 | 3.5 | 45.5 |
| September | 2.5 | 5.9 | 3.7 | 44.8 |
| November | 2.5 | 5.9 | 3.9 | 44.7 |
| 2019 | | | | |
| March | 2.3 | 5.9 | 3.9 | 46.4 |
| June | 2.4 | 6.1 | 4.2 | 47.2 |
| September | 2.2 | 6.5 | 4.6 | 47.4 |
| November | 2.2 | 6.6 | 4.7 | 47.4 |

Table 2.5

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 |

Table 2.6
Forecast Comparison
 Forecast 2019 to 2023

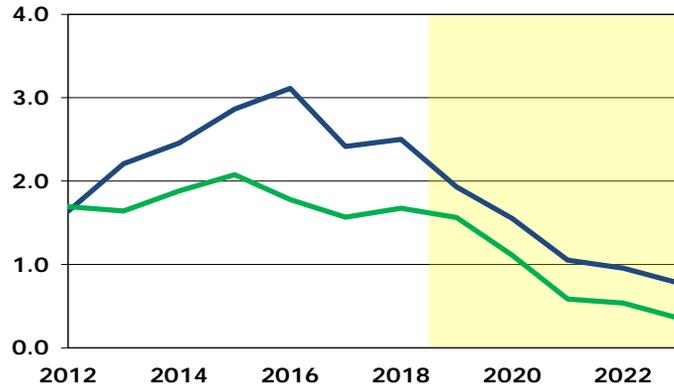
Fiscal Years

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Washington | | | | | | | |
| Real Personal Income | | | | | | | |
| 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 |
| September | 396.352 | 414.526 | 433.272 | 447.713 | 459.319 | 471.061 | 484.790 |
| % Ch | 4.1 | 4.6 | 4.5 | 3.3 | 2.6 | 2.6 | 2.9 |
| Personal Income | | | | | | | |
| 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 |
| September | 416.282 | 443.729 | 471.792 | 496.369 | 519.878 | 543.833 | 570.542 |
| % Ch | 5.7 | 6.6 | 6.3 | 5.2 | 4.7 | 4.6 | 4.9 |
| Employment | | | | | | | |
| 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 |
| September | 3283.8 | 3363.9 | 3435.7 | 3503.0 | 3550.0 | 3587.3 | 3623.2 |
| % Ch | 2.8 | 2.4 | 2.1 | 2.0 | 1.3 | 1.0 | 1.0 |
| Housing Permits | | | | | | | |
| 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 |
| September | 44.515 | 48.801 | 46.048 | 43.833 | 42.862 | 42.550 | 41.976 |
| % Ch | 10.9 | 9.6 | -5.6 | -4.8 | -2.2 | -0.7 | -1.3 |

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

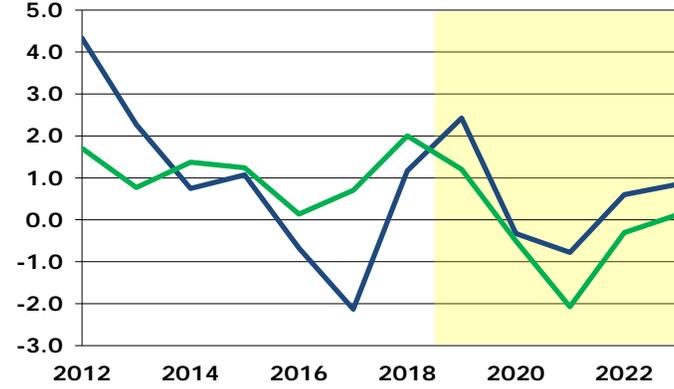
Forecast

Total Nonfarm Payroll Employment



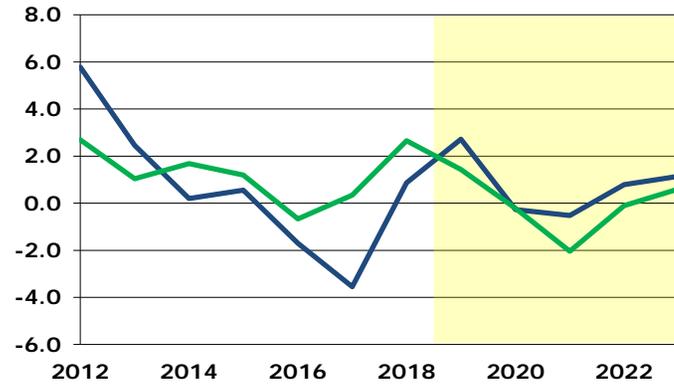
Source: WA State Employment Security Dept. 2018, ERFC 2023

Manufacturing Employment



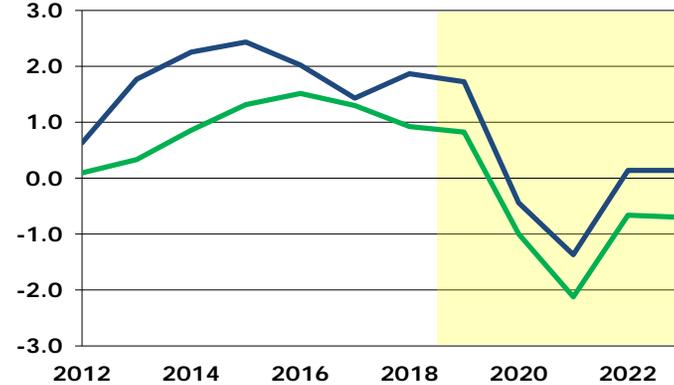
Source: WA State Employment Security Dept. 2018, ERFC 2023

Durable Manufacturing Employment



Source: WA State Employment Security Dept. 2018, ERFC 2023

Nondurable Manufacturing Employment



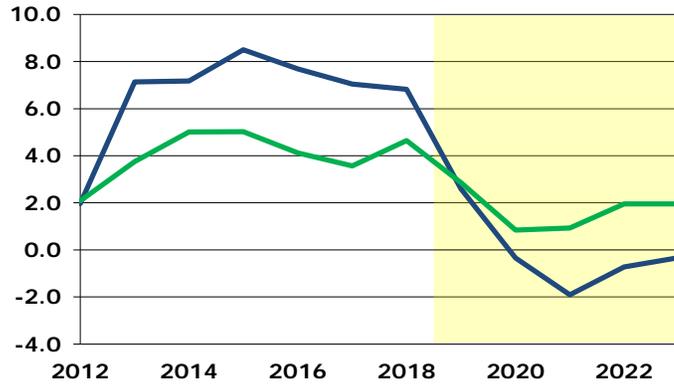
Source: WA State Employment Security Dept. 2018, ERFC 2023

■ Washington

■ U.S.

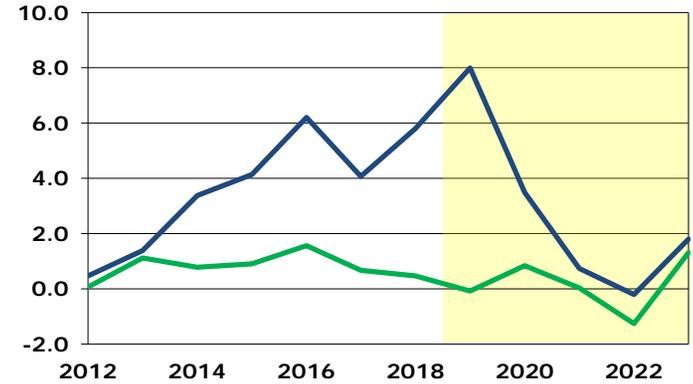
Figure 2.7: Comparison of Washington and U.S. Economic Forecasts (continued)
 (Percent change)

Construction Employment



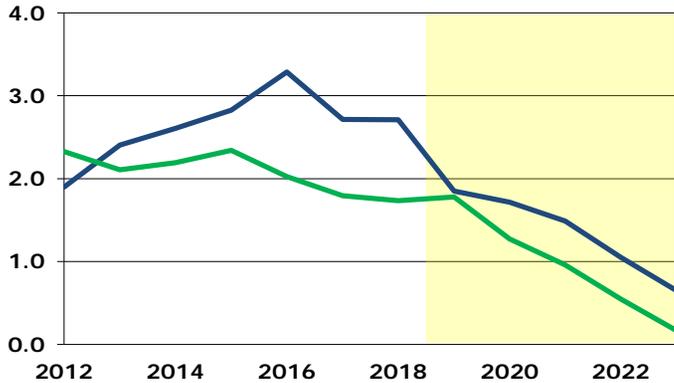
Source: WA State Employment Security Dept. 2018, ERFC 2023

Information Employment



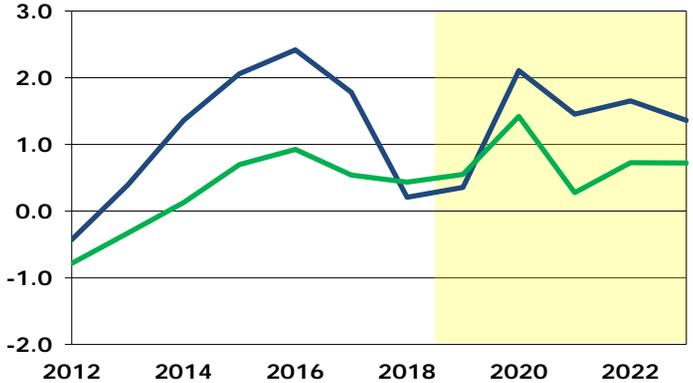
Source: WA State Employment Security Dept. 2018, ERFC 2023

Other Private Employment



Source: WA State Employment Security Dept. 2018, ERFC 2023

Government Employment



Source: WA State Employment Security Dept. 2018, ERFC 2023

■ Washington

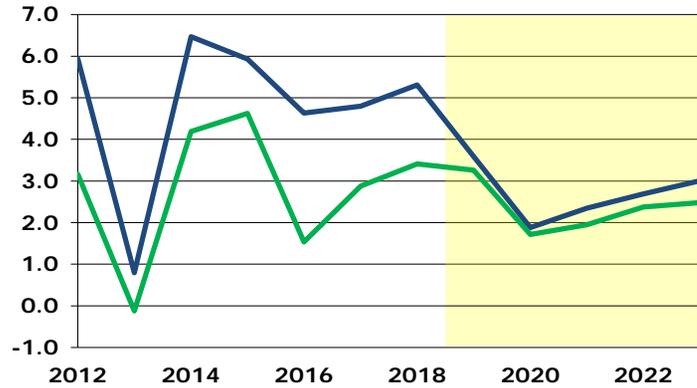
■ U.S.

□ Forecast

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

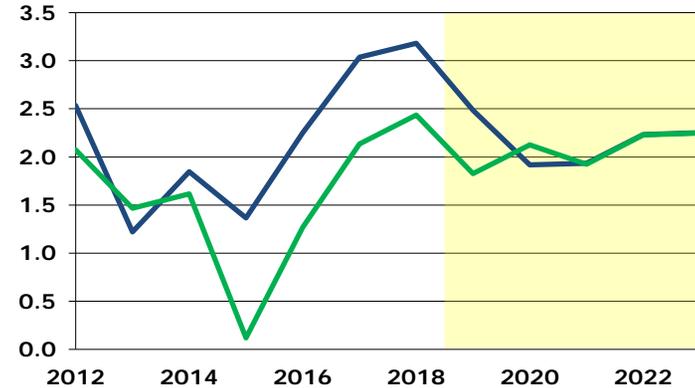
Forecast

Real Personal Income



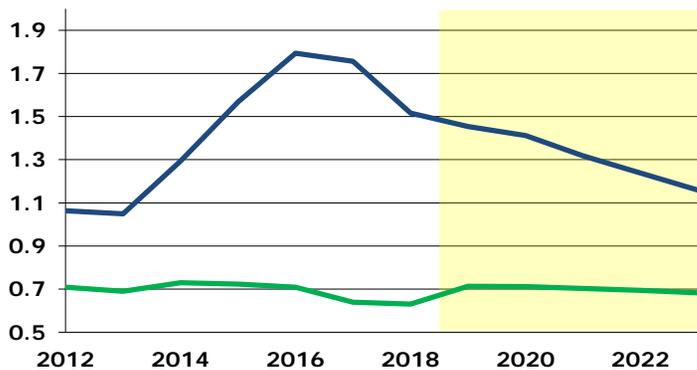
Source: Bureau of Economic Analysis 2017, ERFC 2023

Consumer Price Indices



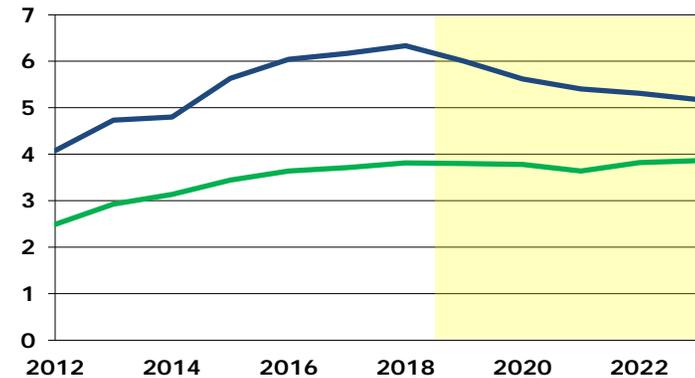
Source: Bureau of Labor Statistics 2018, ERFC 2023

Population



Source: Census Bureau 2018, ERFC 2023

New Housing Units Per 1,000 Population (Level)



Source: Census Bureau 2018, ERFC 2023

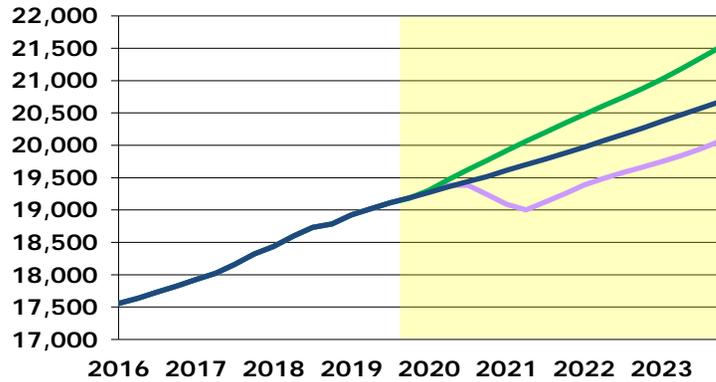
Washington

U.S.

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

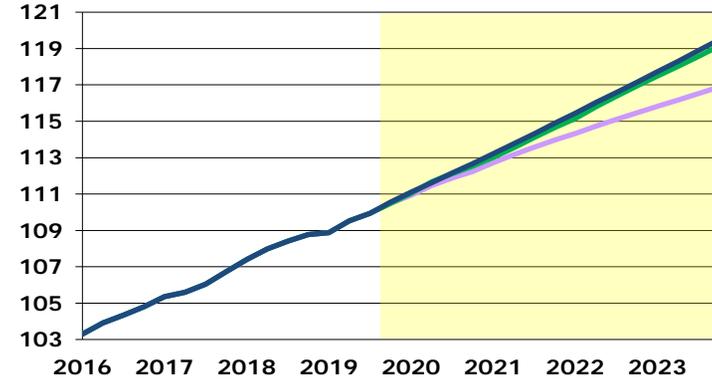
Forecast

Real GDP, Billions of 2012 Dollars



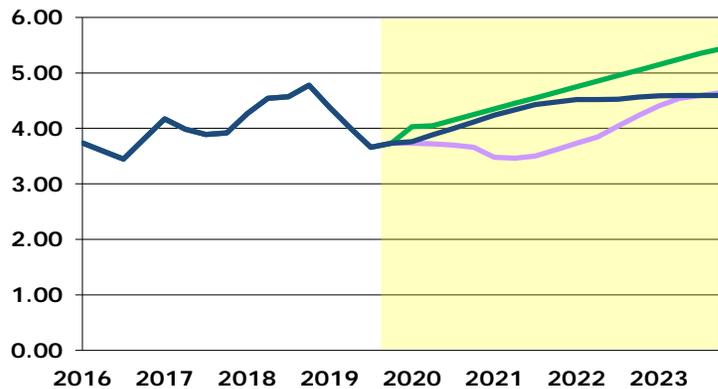
Source: Bureau of Economic Analysis 2018 Q3, ERFC 2023

PCE Price Index, 2012 = 100



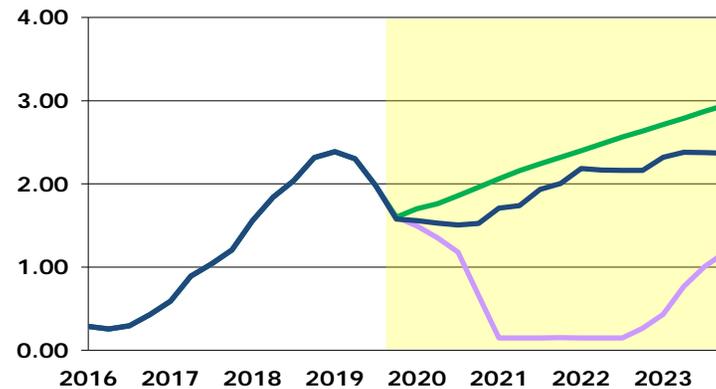
Source: Bureau of Economic Analysis 2018 Q3, ERFC 2023

Mortgage Rate, Percent



Source: Freddie Mac 2018 Q3, ERFC 2023

Three Month T-Bill Rate, Percent



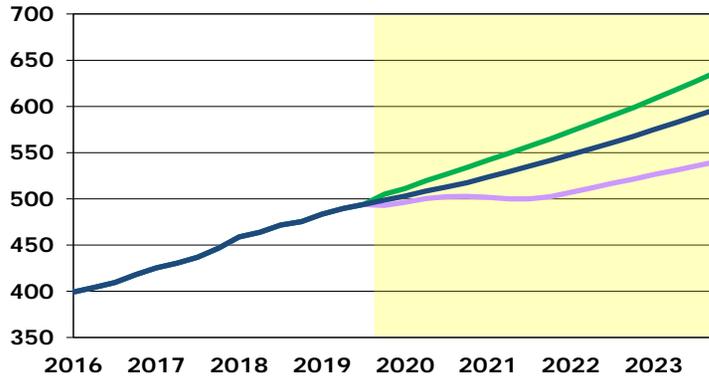
Source: Federal Reserve Board 2018 Q3, ERFC 2023

■ Baseline ■ Optimistic ■ Pessimistic

Figure 2.9: Comparison of Alternative Washington Economic Forecasts

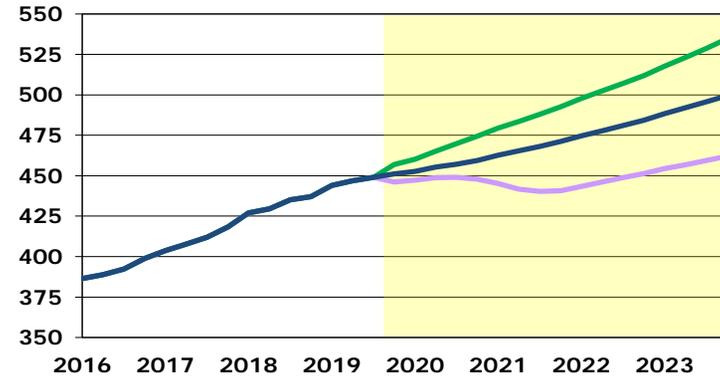
Forecast

Personal Income, Billions of Dollars



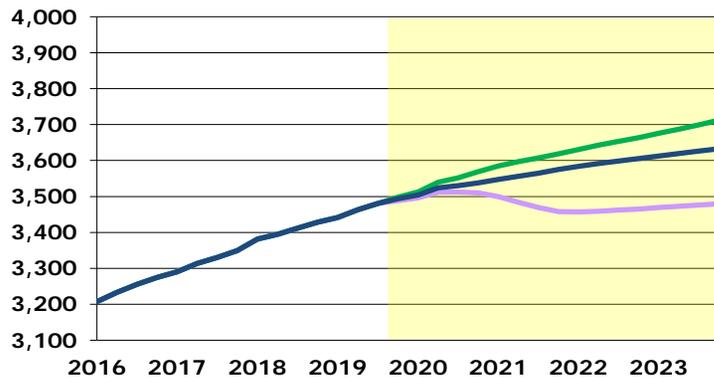
Source: Bureau of Economic Analysis 2017 Q4, ERFC 2023

Real Personal Income, Billions of 2012 Dollars



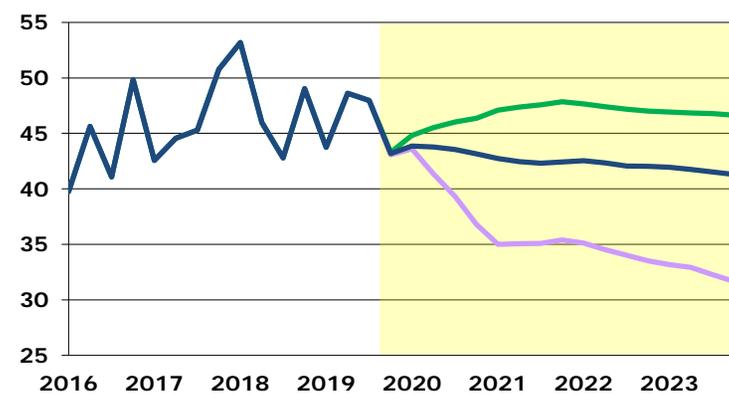
Source: Bureau of Economic Analysis 2017 Q4, ERFC 2023

Total Nonfarm Payroll Employment, Thousands



Source: WA State Employment Security 2018 Q4, ERFC 2023

Housing Permits, Thousands



Source: Census Bureau 2018 Q4, ERFC 2023

■ Baseline ■ Optimistic ■ Pessimistic



Chapter 3: Washington State Revenue Forecast Summary

- **General Fund-State (GF-S) revenue collections since the September 2019 forecast have come in \$135 million (3.9%) over the forecasted amount.**
- **The final tally of GF-S revenue for the recently ended 2017-19 biennium is \$1 million lower than estimated in September. The GF-S forecast was increased by \$274 million in the 2019-21 biennium and \$175 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.**
- **Final near GF-S revenue for the 2017-19 biennium, which includes all state revenue subject to the budget outlook process, is \$5 million lower than estimated in September. Forecasted near GF-S revenue has increased by \$299 million in the 2019-21 biennium and \$181 million in the 2021-23 biennium.**

Overview

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

Since the September 2019 forecast, General Fund – State (GF-S) revenue collections have come in higher than forecasted. The November economic forecast was similar to the September forecast but resulted in slight increases in forecasted taxable 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 about half of the increase in forecasted revenue for the current biennium and most of the increase for the next biennium.

GF-S forecast change by biennium (millions):

*17-19: -\$1
19-21: +\$274
21-23: +\$175*

Table 3.1 summarizes the changes to the forecasts of GF-S revenue for the 2017-19 through 2021-23 biennia. For the 2017-19 biennium, final revenue was \$1.0 million lower than estimated in September. For the current biennium, revenue collections that are tracked monthly came in \$135 million higher than forecasted. Forecasted growth from economic changes added \$139 million, resulting in a total forecast change of \$274 million. The forecast was increased by \$175 million in the 2021-23 biennium. The November 2019 forecast for GF-S revenue totals

\$44,142.6 million in the 2017-19 biennium, \$50,304.5 million in the 2019-21 biennium and \$53,779.0 million in the 2021-23 biennium.

GF-S forecast (\$millions):

2017-19:
\$44,143

2019-21:
\$50,304

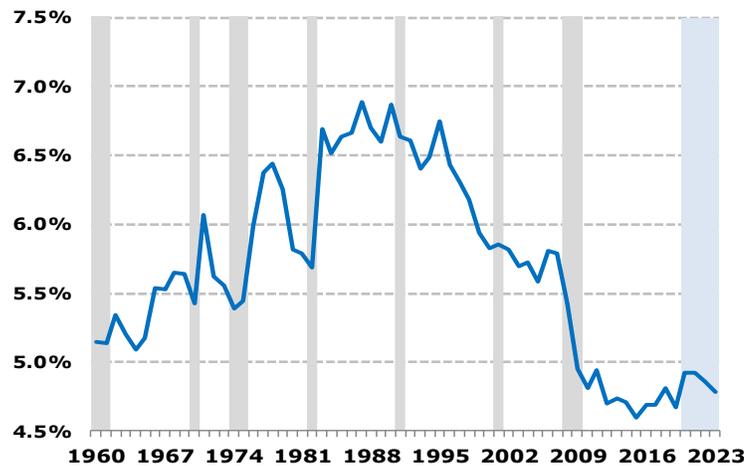
2021-23:
\$53,779

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

| | 2017-19 Biennium | 2019-21 Biennium | 2021-23 Biennium |
|-----------------------|-----------------------------|-----------------------------|-----------------------------|
| Collection Experience | (\$1.0) | \$135.2 | NA |
| Non-Economic Change | \$0.0 | \$0.0 | \$0.0 |
| Forecast Change | \$0.0 | \$139.0 | \$175.1 |
| Total Change | (\$1.0) | \$274.1 | \$175.1 |

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 2023 is forecasted to be below that of any fiscal year on record prior to FY 2012.

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 2017-19 biennium can be found in Table 3.5 (cash) and Table 3.6 (GAAP). Forecast changes for the 2019-21 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 \$135 million (3.9%) more than the September forecast

Revenue collections from the Department of Revenue (DOR) and Administrative Office of the Courts are tracked monthly. In the period since the September forecast, total revenue from the above sources came in \$135.2 million (3.9%) higher than expected (see Table 3.2). Revenue Act collections reported by the DOR were \$50.4 million (1.7%) higher than forecasted. Revenue from other DOR tax sources was \$85.5 million (19.5%) above the forecast.

Table 3.2: Pre-Forecast Collection Variance of Major General Fund-State Taxes by Agency (relative to the September 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 | \$50.4 | 1.7% |
| Non-Revenue Act | \$85.5 | 19.5% |
| Subtotal | \$135.8 | 3.9% |
| Administrative Office of the Courts | (\$0.6) | -5.2% |
| Total* | \$135.2 | 3.9% |

* Detail may not add to total due to rounding.

Source: ERF; Period: September 11 - November 10, 2019

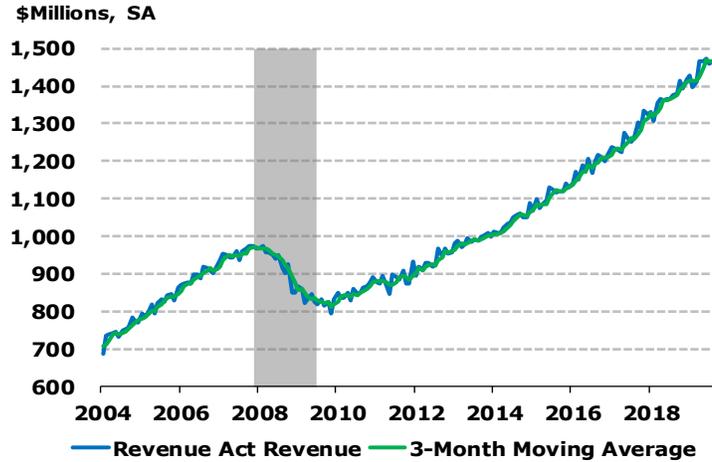
Most of the non-Revenue Act forecast variance came from unclaimed property transfers

Most of the positive variance in non-Revenue Act collections came from transfers of unclaimed property into the GF-S. October transfers were \$46.6 million higher than forecasted (due to the size of the October transfer, the forecast of transfers in November has been lowered.) Real estate excise taxes (REET) came in \$22.2 million (11.8%) higher than forecasted. Property tax collections came in \$16.5 million (25.8%) higher than forecasted. Cigarette tax receipts came in \$4.9 million (8.3%) higher than forecasted. Liquor sales and liter tax receipts came in \$1.4 million (3.1%) higher than forecasted. All other DOR

revenue sources came in \$5.6 million (19.8%) lower than forecasted. Revenue from the Administrative Office of the Courts was \$0.6 million (5.2%) lower than forecasted.

Figure 3.2: Revenue Act Collections*

Year-over-year growth in adjusted Revenue Act collections accelerated in the second quarter of 2019



Source: ERFC; Data through November 10, 2019

*Adjusted for large payments/refunds and payment pattern change

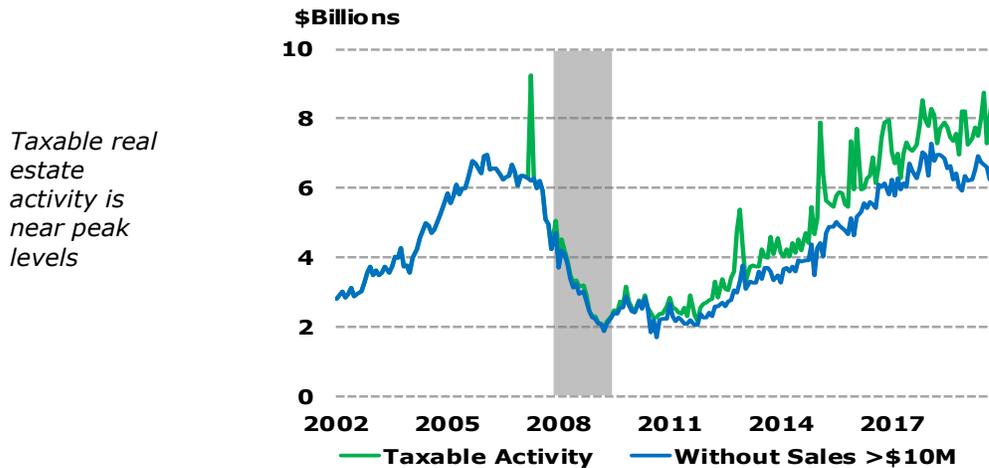
Adjusted Revenue Act collections were up 6.6% year over year for third quarter 2019 activity after 8.1% growth in the previous quarter

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 6.0% year over year in the September 11 – November 10, 2019 collections period after growth of 6.7% in the previous period. Adjusted year-over-year growth in collections representing third quarter activity (August 11 – November 10, 2019 collections) was 6.6%. Adjusted year-over-year growth in collections representing second quarter 2019 activity (May 11 – August 10, 2019 collections) was 8.1%. Collections growth for first quarter 2019 activity was 5.6% and growth for the fourth quarter of 2018 was 7.4%.

Sales of large commercial properties have increased ahead of a January 2020 increase in tax rates

Much of the positive variance in REET collections was due to stronger-than-expected sales of commercial property. Sales of property worth \$10 million or more totaled \$4.1 billion in the two months since the last forecast, up from \$2.7 billion in the prior two months (see Figure 3.3). The increase in large commercial sales since June is likely in response to a change in tax rates, effective January 1, 2020, that will increase the marginal tax rate on property sales greater than \$1.5 million.

Figure 3.3: Taxable Real Estate Excise Activity, SA



Source: ERFC; data through October 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.

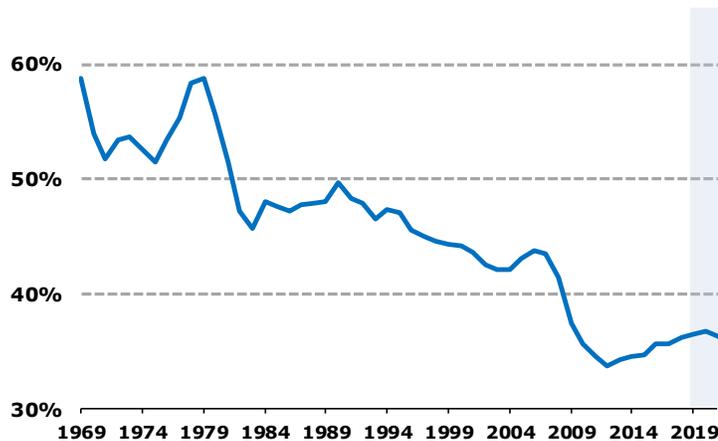
Retail sales tax receipt growth forecast:

FY20: 6.3%
 FY21: 2.7%
 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 is forecasted to decline to 5.2% in FY 2020, 2.7% in FY 2021, 3.1% in FY 2022 and 3.3% in FY 2023 as auto sales, construction and online sales growth slows (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 6.3% in FY 2020, 2.7% in FY 2021, 3.0% in FY 2022 and 3.3% in FY 2023.

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

The ratio of taxable sales to state personal income is on a declining trend



*Past tax base adjusted to represent current base. Shaded area indicates forecast
 Source: ERFC; Data through FY 2019, forecast through FY 2023

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 2018, 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:*

*FY20: 5.4%
FY21: 5.5%
FY22: 4.4%
FY23: 4.7%*

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 declines to 5.4% in FY 2020. Growth then increases to 5.5% in FY 2021, supported by a newly adopted tax on financial institutions that takes effect on January 1, 2020. Growth then continues at 4.4% in FY 2022 and 4.7% in FY 2023.

*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:*

*FY20: 51.3%
FY21: 13.2%
FY22: 3.3%
FY23: 2.7%*

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 2.1% in FY 2016 and 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 then rebound by 51.3% 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 13.2% in FY 2021, due to a full year at the unreduced levy rate, before falling to 3.3% in FY 2022 and 2.7% in FY 2023.

*REET rates
and
distributions
are changing
on January 1,
2020, which
will result in
additional
revenue*

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. Currently, the state portion of REET is 1.28% of the sales price and is 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%). These rates and distributions will be changed starting January 1, 2020 under Engrossed Substitute Senate Bill 5998, passed in the 2019 legislative session. Under the new law, 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 are forecasted to result in higher collections for both the GF-S and ELTA than the previous rates.

GF-S REET growth forecast:

*FY20: -3.5%
FY21: -7.7%
FY22: -1.0%
FY23: 1.8%*

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 3.5% in FY 2020, 7.7% in FY 2021 and 1.0% in FY 2022. Growth is forecasted to resume at 1.8% in FY 2023.

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: 0.1%
FY21: -3.0%
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 a further increase of 0.1% from FY 2019's elevated level, with collections declining 3.0% in FY 2021 as activity returns to a more normal level. Growth then resumes at 3.7% in FY 2022 and FY 2023.

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: 8.8%
FY21: 7.4%
FY22: 3.1%
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 8.8% growth in FY 2020. The expiration of a large tax credit boosts collections a further

7.4% in FY 2021. Growth is then forecasted at 3.1% in FY 2022 and 3.6% in FY 2023.

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: -3.9%
FY21: -2.8%
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 3.9% 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 2.8% in FY 2021, 2.6% in FY 2022 and 2.8% in FY 2023.

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: \$10.3
21-23: \$10.3*

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 \$289.8 million in the 2019-21 biennium, an increase of \$10.3 million from the previous forecast, and \$304.7 million in the 2021-23 biennium,

also an increase of \$10.3 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):*

17-19: *-\$1.0*
19-21: *-\$1.1*
21-23: *-\$1.7*

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 final tally of final revenue for the 2017-19 biennium was \$325.5 million, \$1.0 million less than the September estimate. The forecast for the 2019-21 biennium was decreased \$1.1 million to \$214.1 million and the forecast for the 2021-23 biennium was decreased \$1.7 million to \$185.8 million.

State Treasurer

*Forecast
change by
biennium
(millions):*

17-19: *\$0.0*
19-21: *-\$20.5*
21-23: *-\$0.3*

The Office of the State Treasurer generates GF-S revenue by investing state short-term cash reserves. The office's final tally of final revenue for the 2017-19 biennium was \$35.7 million, unchanged from September's estimate. The office's forecast for the 2019-21 biennium has been decreased \$20.5 million to \$18.6 million due to forecasted lower average balances in the funds that contribute their interest earnings to the GF-S. The office's forecast for the 2021-23 biennium has been decreased \$0.3 million to \$36.7 million.

Insurance Commissioner

*Forecast
change by
biennium
(millions):*

17-19: *\$0.0*
19-21: *\$5.3*
21-23: *\$6.5*

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 final tally of final GF-S revenue for the 2017-19 biennium was \$1,200.5 million, unchanged from September's estimate. The forecast for the 2019-21 biennium has been increased \$5.3 million to \$1,308.6 million and the forecast of revenue for the 2021-23 biennium has been increased \$6.5 million to \$1,421.7 million.

Liquor and Cannabis Board

*Forecast
change by
biennium
(millions):*

17-19: *\$0.0*
19-21: *\$9.7*
21-23: *\$7.9*

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 final tally of revenue for the 2017-19 biennium was \$486.1

million, unchanged from September’s estimate. The forecast for the 2019-21 biennium has been increased \$9.7 million to \$559.4 million and the forecast of revenue for the 2021-23 biennium has been increased \$7.9 million to \$600.2 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.

Lottery Commission

GF-S forecast change by biennium (millions):

17-19: \$0.0
19-21: \$1.5
21-23: -\$2.4

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. The final tally of transfers of lottery revenue into the GF-S for the 2017-19 biennium was \$77.3 million, unchanged from September’s estimate. Forecasted transfers for the 2019-21 biennium have been increased \$1.5 million to \$53.0 million and the forecast of GF-S transfers for the 2021-23 biennium has been decreased \$2.4 million to \$64.3 million.

OPA forecast change by biennium (millions):

17-19: -\$3.7
19-21: \$5.3
21-23: \$8.2

The OPA receives all profits (excluding statutory transfers) from Washington-only lottery games plus all profits from the Mega Millions game. The final tally of OPA revenue for the 2017-19 biennium was \$284.2 million, \$3.7 million less than the September estimate. The forecast for the 2019-21 biennium has been increased \$5.3 million to \$291.6 million and the forecast for the 2021-23 biennium has been increased \$8.2 million to \$313.4 million.

Administrative Office of the Courts

Forecast change by biennium (millions):

17-19: \$0.0
19-21: -\$3.3
21-23: -\$4.3

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 final tally of revenue for the 2017-19 biennium is \$149.1 million, unchanged from September’s estimate. The forecast of transfers for the 2019-21 biennium has been decreased \$3.3 million to \$134.5 million and the forecast of revenue for the 2021-23 biennium has been decreased \$4.3 million to \$133.7 million.

Track Record for the 2017-19 Biennium

The November 2019 forecast is \$1.2 billion (2.7%) higher than the forecasted revenue at the time of the initial 2017-19 budget

Table 3.10 summarizes the historical changes to the GF-S revenue forecast for the 2017-19 biennium. The February 2014 forecast was the initial forecast for the biennium. The November 2019 final tally is \$5.4 billion (14.0%) higher than the initial forecast. Non-economic changes have increased the forecast by \$1.2 billion (3.2%). Excluding non-economic changes, the current forecast is \$4.2 billion (10.9%) higher than the initial forecast. The September 2017 forecast, coupled with the \$2,079 million in legislative and budget-driven revenue changes passed in the 2017 special legislative sessions, was the basis for the initial budget for the 2017-19 biennium. The November forecast of biennial revenue is \$1.2 billion (2.7%) higher than that sum.

Track Record for the 2019-21 Biennium

The current forecast is \$587 million (1.2%) higher than the forecasted revenue at the time of the initial 2019-21 budget

Table 3.11 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 November 2019 forecast is \$6.9 billion (15.8%) 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 \$3.6 billion (8.3%) 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 November forecast of biennial revenue is \$587 million (1.2%) higher than that sum.

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 2017-19 and 2019-21 Biennia

The forecast implies total GF-S reserves of \$3.03 billion at the end of the 2019-21 biennium and \$3.49 billion in reserves for GF-S, ELTA and OPA

Table 3.12 shows the budgetary balance sheets for the 2017-19 and 2019-21 biennia 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 November 2019 revenue forecast and currently enacted budgets, unrestricted GF-S reserves are projected to be \$851.9 million at the end of the 2019-21 biennium and GF-S, ELTA and OPA reserves are projected to be \$1,319.6 million. In addition, the Budget Stabilization Account is projected to have a balance of \$2,174.9 million, bringing total projected GF-S reserves to \$3,026.7 million. Projected combined reserves for the ELTA and OPA are \$467.7 million, for total projected reserves of \$3,494.4 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: +\$1.56
21-23: +\$3.85*

*Pessimistic scenario:
19-21: -\$1.84
21-23: -\$4.78*

Chapter 2 outlines optimistic and pessimistic economic scenarios relative to the baseline economic forecast. The forecast assigns a probability of 50% to the baseline forecast, 15% to the optimistic scenario and 35% 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 \$51.865 billion in GF-S revenue, \$1.560 billion (3.1%) more than the baseline scenario, while the pessimistic forecast produces \$48.468 billion in revenue, \$1.836 billion (3.7%) less than the baseline. For the 2021-23 biennium, the optimistic forecast generates \$57.628 billion in GF-S revenue, \$3.849 billion (7.2%) more than the baseline scenario, while the pessimistic forecast produces \$49.001 billion in revenue, \$4.778 billion (8.9%) less than the baseline.

Near General Fund Forecasts for the 2017-19 and 2021-23 Biennia

*Near
General
Fund
Forecast
(billions):*

*2017-19:
\$46.081*

*2019-21:
\$51.733*

*2021-23:
\$55.154*

“Near General Fund” 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 final tally of Near General Fund revenue for the 2017-19 biennium was \$46,080.9 million, \$4.7 million less than the September estimate. The forecast for the 2019-21 biennium is \$51,733.4 million, \$298.9 million more than the September forecast, and the forecast of Near General Fund revenue for the 2021-23 biennium is \$55,154.0 million, \$181.5 million more than the September forecast. The Near General Fund forecast and recent history by fiscal year are presented in Table 3.17.

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

| <u>Biennium</u> | <u>Current Dollars</u> | <u>Percent Change</u> | 2012 | |
|----------------------|------------------------|-----------------------|------------------------|-----------------------|
| | | | <u>Chained Dollars</u> | <u>Percent Change</u> |
| 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 | 50,304.5 | 14.0% | 44,963.7 | 10.0% |
| 2021-23 ^F | 53,779.0 | 6.9% | 46,239.4 | 2.8% |

^F November 2019 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 November 2019 forecast.

Table 3.4
Taxable retail sales*
(millions of dollars)

| <u>Fiscal Year</u> | <u>Amount</u> | <u>Percent Change</u> |
|--------------------|---------------|-----------------------|
| 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 | 184,320 | 5.2% |
| 2021 ^F | 189,205 | 2.7% |
| 2022 ^F | 195,049 | 3.1% |
| 2023 ^F | 201,521 | 3.3% |

^F November 2019 forecast

Source: ERFC

* 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

2017-19 biennium; cash basis

(millions of dollars)

| Forecast by Agency | Sept 2019 Forecast¹ | Non- Economic Changes | Forecast Revision | Nov 2019 Forecast² | Total Change |
|--|---|--------------------------------------|------------------------------|--|-------------------------|
| Department of Revenue | | | | | |
| Retail Sales | \$21,339.1 | \$0.0 | \$0.0 | \$21,339.1 | \$0.0 |
| Business & Occupation Use | 8,586.8 | 0.0 | 0.0 | 8,586.8 | 0.0 |
| Public Utility | 1,449.4 | 0.0 | 0.0 | 1,449.4 | 0.0 |
| Liquor Sales/Liter | 802.1 | 0.0 | 0.0 | 802.1 | 0.0 |
| Cigarette | 561.9 | 0.0 | 0.0 | 561.9 | 0.0 |
| Property (State Levy) | 703.0 | 0.0 | 0.0 | 703.0 | 0.0 |
| Real Estate Excise | 5,142.5 | 0.0 | 0.0 | 5,142.5 | 0.0 |
| Timber Excise | 2,182.9 | 0.0 | 0.0 | 2,182.9 | 0.0 |
| Other | 4.2 | 0.0 | 0.0 | 4.2 | 0.0 |
| Subtotal | 1,096.6 | 0.0 | 0.0 | 1,096.6 | 0.0 |
| Subtotal | 41,868.4 | 0.0 | 0.0 | 41,868.4 | 0.0 |
| Insurance Commissioner | | | | | |
| Insurance Premiums | 1,200.5 | 0.0 | 0.0 | 1,200.5 | 0.0 |
| Liquor Control Board | | | | | |
| Fees, Cannabis Excise Tax | 428.2 | 0.0 | 0.0 | 428.2 | 0.0 |
| Beer & Wine Surtax | 57.9 | 0.0 | 0.0 | 57.9 | 0.0 |
| Lottery Commission | | | | | |
| Lottery Revenue | 77.3 | 0.0 | 0.0 | 77.3 | 0.0 |
| State Treasurer | | | | | |
| Interest Earnings | 35.7 | 0.0 | 0.0 | 35.7 | 0.0 |
| Office of Financial Management | | | | | |
| Other Agencies | 326.5 | 0.0 | (1.0) | 325.5 | (1.0) |
| Administrative Office of the Courts | | | | | |
| Fines and Forfeitures | 149.1 | 0.0 | (0.0) | 149.1 | (0.0) |
| Total General Fund-State* | \$44,143.6 | \$0.0 | (\$1.0) | \$44,142.6 | (\$1.0) |

¹ Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council September 25, 2019² Forecast for the 2017-19 biennium, adopted November 20, 2019

*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 3.6

Comparison of the General Fund-State forecast by agency

2017-19 biennium; GAAP basis

(millions of dollars)

| Forecast by Agency | Sept 2019 Forecast¹ | Non-Economic Changes | Forecast Revision | Nov 2019 Forecast² | Total Change |
|--|---------------------------------------|-----------------------------|--------------------------|--------------------------------------|---------------------|
| Department of Revenue | | | | | |
| Retail Sales | \$21,493.5 | \$0.0 | \$0.0 | \$21,493.5 | \$0.0 |
| Business & Occupation Use | 8,635.8 | 0.0 | 0.0 | 8,635.8 | 0.0 |
| Public Utility | 1,462.2 | 0.0 | 0.0 | 1,462.2 | 0.0 |
| Liquor Sales/Liter | 803.3 | 0.0 | 0.0 | 803.3 | 0.0 |
| Cigarette | 563.7 | 0.0 | 0.0 | 563.7 | 0.0 |
| Property (State Levy) | 694.8 | 0.0 | 0.0 | 694.8 | 0.0 |
| Real Estate Excise | 5,070.1 | 0.0 | 0.0 | 5,070.1 | 0.0 |
| Timber Excise | 2,183.5 | 0.0 | 0.0 | 2,183.5 | 0.0 |
| Other | 3.7 | 0.0 | 0.0 | 3.7 | 0.0 |
| Subtotal | 1,101.4 | 0.0 | 0.0 | 1,101.4 | 0.0 |
| | 42,012.1 | 0.0 | 0.0 | 42,012.1 | 0.0 |
| Insurance Commissioner | | | | | |
| Insurance Premiums | 1,200.5 | 0.0 | 0.0 | 1,200.5 | 0.0 |
| Liquor Control Board | | | | | |
| Fees, Cannabis Excise Tax | 428.2 | 0.0 | 0.0 | 428.2 | 0.0 |
| Beer & Wine Surtax | 57.9 | 0.0 | 0.0 | 57.9 | 0.0 |
| Lottery Commission | | | | | |
| Lottery Revenue | 62.1 | 0.0 | 0.0 | 62.1 | 0.0 |
| State Treasurer | | | | | |
| Interest Earnings | 36.4 | 0.0 | 0.0 | 36.4 | 0.0 |
| Office of Financial Management | | | | | |
| Other Agencies | 326.5 | 0.0 | (1.0) | 325.5 | (1.0) |
| Administrative Office of the Courts | | | | | |
| Fines and Forfeitures | 149.1 | 0.0 | (0.0) | 149.1 | (0.0) |
| Total General Fund-State * | \$44,272.8 | \$0.0 | (\$1.0) | \$44,271.8 | (\$1.0) |

¹ Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council September 25, 2019

² Forecast for the 2017-19 biennium, adopted November 20, 2019

*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 3.7

Comparison of the General Fund-State forecast by agency

2019-21 biennium; cash basis

(millions of dollars)

| Forecast by Agency | Sept 2019 Forecast¹ | Non- Economic Changes | Forecast Revision | Nov 2019 Forecast² | Total Change |
|--|---|--------------------------------------|------------------------------|--|-------------------------|
| Department of Revenue | | | | | |
| Retail Sales | \$23,889.7 | \$0.0 | \$49.8 | \$23,939.5 | \$49.8 |
| Business & Occupation Use | 9,580.3 | 0.0 | 28.2 | 9,608.5 | 28.2 |
| Public Utility | 1,484.5 | 0.0 | 6.4 | 1,490.8 | 6.4 |
| Liquor Sales/Liter | 911.6 | 0.0 | (8.4) | 903.2 | (8.4) |
| Cigarette | 591.6 | 0.0 | 3.7 | 595.2 | 3.7 |
| Property (State Levy) | 651.6 | 0.0 | 3.6 | 655.2 | 3.6 |
| Real Estate Excise | 7,603.6 | 0.0 | 147.4 | 7,751.0 | 147.4 |
| Timber Excise | 2,001.0 | 0.0 | 29.0 | 2,030.1 | 29.0 |
| Other | 4.4 | 0.0 | (0.0) | 4.4 | (0.0) |
| Subtotal | 1,015.4 | 0.0 | 23.0 | 1,038.4 | 23.0 |
| | 47,733.6 | 0.0 | 282.6 | 48,016.3 | 282.6 |
| Insurance Commissioner | | | | | |
| Insurance Premiums | 1,303.3 | 0.0 | 5.3 | 1,308.6 | 5.3 |
| Liquor Control Board | | | | | |
| Fees, Cannabis Excise Tax | 491.8 | 0.0 | 9.7 | 501.5 | 9.7 |
| Beer & Wine Surtax | 57.9 | 0.0 | 0.0 | 57.9 | 0.0 |
| Lottery Commission | | | | | |
| Lottery Revenue | 51.6 | 0.0 | 1.5 | 53.0 | 1.5 |
| State Treasurer | | | | | |
| Interest Earnings | 39.1 | 0.0 | (20.5) | 18.6 | (20.5) |
| Office of Financial Management | | | | | |
| Other Agencies | 215.2 | 0.0 | (1.1) | 214.1 | (1.1) |
| Administrative Office of the Courts | | | | | |
| Fines and Forfeitures | 137.8 | 0.0 | (3.3) | 134.5 | (3.3) |
| Total General Fund-State * | \$50,030.3 | \$0.0 | \$274.1 | \$50,304.5 | \$274.1 |

¹ Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council September 25, 2019² Forecast for the 2019-21 biennium, adopted November 20, 2019

*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 3.8

Comparison of the General Fund-State forecast by agency

2019-21 biennium; GAAP basis

(millions of dollars)

| Forecast by Agency | Sept 2019 Forecast¹ | Non- Economic Changes | Forecast Revision | Nov 2019 Forecast² | Total Change |
|--|---|--------------------------------------|------------------------------|--|-------------------------|
| Department of Revenue | | | | | |
| Retail Sales | \$23,889.7 | \$0.0 | \$49.8 | \$23,939.5 | \$49.8 |
| Business & Occupation Use | 9,580.3 | 0.0 | 28.2 | 9,608.5 | 28.2 |
| Public Utility | 1,484.5 | 0.0 | 6.4 | 1,490.8 | 6.4 |
| Liquor Sales/Liter | 911.6 | 0.0 | (8.4) | 903.2 | (8.4) |
| Cigarette | 591.6 | 0.0 | 3.7 | 595.2 | 3.7 |
| Property (State Levy) | 651.6 | 0.0 | 3.6 | 655.2 | 3.6 |
| Real Estate Excise | 7,689.3 | 0.0 | 145.5 | 7,834.8 | 145.5 |
| Timber Excise | 2,001.0 | 0.0 | 29.0 | 2,030.1 | 29.0 |
| Other | 4.6 | 0.0 | (0.0) | 4.5 | (0.0) |
| Subtotal | 1,015.4 | 0.0 | 23.0 | 1,038.4 | 23.0 |
| | 47,819.4 | 0.0 | 280.8 | 48,100.2 | 280.8 |
| Insurance Commissioner | | | | | |
| Insurance Premiums | 1,303.3 | 0.0 | 5.3 | 1,308.6 | 5.3 |
| Liquor Control Board | | | | | |
| Fees, Cannabis Excise Tax | 491.8 | 0.0 | 9.7 | 501.5 | 9.7 |
| Beer & Wine Surtax | 57.9 | 0.0 | 0.0 | 57.9 | 0.0 |
| Lottery Commission | | | | | |
| Lottery Revenue | 59.3 | 0.0 | (0.7) | 58.6 | (0.7) |
| State Treasurer | | | | | |
| Interest Earnings | 38.1 | 0.0 | (20.7) | 17.4 | (20.7) |
| Office of Financial Management | | | | | |
| Other Agencies | 215.2 | 0.0 | (1.1) | 214.1 | (1.1) |
| Administrative Office of the Courts | | | | | |
| Fines and Forfeitures | 137.8 | 0.0 | (3.3) | 134.5 | (3.3) |
| Total General Fund-State * | \$50,122.8 | \$0.0 | \$270.0 | \$50,392.8 | \$270.0 |

¹ Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council September 25, 2019² Forecast for the 2019-21 biennium, adopted November 20, 2019

*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 3.9

November 2019 General Fund-State forecast detail
2017-19 to 2021-23 biennia; cash basis
(Millions of Dollars)

| Forecast by Source | Fiscal 2018 | Fiscal 2019 | 2017-19 Biennium | Fiscal 2020 | Fiscal 2021 | 2019-21 Biennium | Fiscal 2022 | Fiscal 2023 | 2021-23 Biennium |
|--|------------------------|------------------------|-----------------------------|------------------------|------------------------|-----------------------------|------------------------|------------------------|-----------------------------|
| State Taxes | | | | | | | | | |
| Retail sales** | \$10,231.4 | \$11,107.7 | \$21,339.1 | \$11,812.9 | \$12,126.6 | \$23,939.5 | \$12,487.2 | \$12,900.7 | \$25,387.9 |
| Business & occupation | 4,151.0 | 4,435.8 | 8,586.8 | 4,676.6 | 4,931.9 | 9,608.5 | 5,149.8 | 5,392.3 | 10,542.2 |
| Use** | 693.4 | 756.0 | 1,449.4 | 756.9 | 733.9 | 1,490.8 | 761.3 | 789.8 | 1,551.1 |
| Public Utility | 401.7 | 400.4 | 802.1 | 435.5 | 467.8 | 903.2 | 482.3 | 499.7 | 982.1 |
| Liquor sales/liter | 273.8 | 288.1 | 561.9 | 295.5 | 299.8 | 595.2 | 305.2 | 311.1 | 616.3 |
| Beer & wine surtax | 28.9 | 29.0 | 57.9 | 28.9 | 29.0 | 57.9 | 29.2 | 29.2 | 58.4 |
| Cigarette | 366.7 | 354.4 | 721.1 | 341.1 | 332.0 | 673.1 | 323.9 | 315.4 | 639.3 |
| Tobacco products | 57.1 | 61.0 | 118.1 | 54.1 | 56.5 | 110.6 | 57.1 | 57.8 | 115.0 |
| Cannabis Excise Taxes | 112.0 | 126.5 | 238.5 | 139.9 | 139.6 | 279.4 | 143.3 | 150.7 | 294.0 |
| Property (state school levy) | 2,739.8 | 2,402.7 | 5,142.5 | 3,635.2 | 4,115.7 | 7,751.0 | 4,250.5 | 4,365.7 | 8,616.2 |
| Leasehold Excise Tax | 34.1 | 36.2 | 70.3 | 33.1 | 35.6 | 68.7 | 37.2 | 37.6 | 74.8 |
| Public utility district | 56.9 | 58.6 | 115.5 | 60.0 | 61.3 | 121.3 | 62.4 | 63.6 | 126.0 |
| Brokered Natural Gas | 19.3 | 30.1 | 49.4 | 22.4 | 22.7 | 45.1 | 23.1 | 23.5 | 46.6 |
| Real estate excise*** | 1,089.0 | 1,093.9 | 2,182.9 | 1,055.8 | 974.3 | 2,030.1 | 964.6 | 981.9 | 1,946.5 |
| Timber excise | 2.7 | 1.6 | 4.2 | 2.2 | 2.2 | 4.4 | 2.3 | 2.4 | 4.7 |
| Estate/inheritance | (5.6) | 0.2 | (5.4) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Boat excise | 15.8 | 16.0 | 31.8 | 16.0 | 15.4 | 31.4 | 15.3 | 15.2 | 30.5 |
| Insurance premiums | 600.6 | 599.9 | 1,200.5 | 639.5 | 669.2 | 1,308.6 | 696.7 | 725.1 | 1,421.7 |
| Penalties and interest on past due taxes | 224.8 | 93.3 | 318.1 | 160.1 | 164.8 | 324.9 | 170.1 | 179.2 | 349.3 |
| Other | 113.7 | 73.7 | 187.4 | 56.2 | 55.0 | 111.3 | 55.5 | 56.4 | 111.9 |
| Total Taxes | 21,206.8 | 21,965.2 | 43,172.0 | 24,221.8 | 25,233.2 | 49,455.0 | 26,017.2 | 26,897.2 | 52,914.4 |
| State Non-Tax Sources | | | | | | | | | |
| Licenses, permits, fees | 136.2 | 147.0 | 283.2 | 142.8 | 145.0 | 287.8 | 147.7 | 150.4 | 298.1 |
| Liquor & Cannabis fees | 89.1 | 100.6 | 189.7 | 107.2 | 114.9 | 222.1 | 122.0 | 125.8 | 247.9 |
| Earnings on investments | 10.6 | 25.1 | 35.7 | 6.4 | 12.2 | 18.6 | 16.9 | 19.8 | 36.7 |
| Administrative Office of the Courts | 75.6 | 73.5 | 149.1 | 67.7 | 66.8 | 134.5 | 66.8 | 66.9 | 133.7 |
| Transfers of unclaimed property | 98.8 | 77.4 | 176.2 | 98.7 | 80.1 | 178.7 | 80.9 | 81.8 | 162.8 |
| Other revenue & transfers | 95.2 | 41.5 | 136.6 | 6.4 | 1.4 | 7.8 | (4.1) | (10.4) | (14.5) |
| Total Non-Tax | 505.5 | 465.0 | 970.5 | 429.0 | 420.4 | 849.5 | 430.3 | 434.3 | 864.6 |
| Total General Fund-State * | \$21,712.3 | \$22,430.2 | \$44,142.6 | \$24,650.8 | \$25,653.6 | \$50,304.5 | \$26,447.5 | \$27,331.5 | \$53,779.0 |

* 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 2017-19 General Fund-State Cash Forecast

February 2014 through November 2019

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 2014## | \$36,887 | \$1,823 | | | | \$38,710 |
| Changes to Forecast | | | | | | |
| June 2014 | 265 | 50 | 315 | (1) #1 | 313 | 39,023 |
| September 2014 | 227 | (63) | 164 | 0 | 164 | 39,188 |
| November 2014 | 388 | 26 | 415 | 0 | 415 | 39,602 |
| February 2015 | 126 | 28 | 154 | 0 | 154 | 39,757 |
| June 2015 | 257 | 64 | 321 | 122 #2 | 443 | 40,200 |
| September 2015 | 4 | 47 | 52 | 286 #3 | 338 | 40,538 |
| November 2015 | 35 | (5) | 30 | 0 | 30 | 40,567 |
| February 2016 | (449) | 7 | (442) | 0 | (442) | 40,125 |
| June 2016 | 187 | (53) | 134 | (8) #4 | 126 | 40,252 |
| September 2016 | 135 | (10) | 125 | 0 | 125 | 40,377 |
| November 2016 | 131 | 6 | 137 | 0 | 137 | 40,514 |
| March 2017 | 281 | 22 | 303 | 0 | 303 | 40,817 |
| June 2017 | 84 | 3 | 87 | (1) #5 | 87 | 40,903 |
| September 2017 | 269 | 11 | 279 | 2,079 #6 | 2,359 | 43,262 |
| November 2017 | 297 | 7 | 304 | 0 | 304 | 43,566 |
| February 2018 | 631 | 16 | 647 | 0 | 647 | 44,213 |
| June 2018 | 447 | 46 | 493 | (1,173) #7 | (680) | 43,532 |
| September 2018 | 231 | 44 | 275 | 0 | 275 | 43,808 |
| November 2018 | 118 | 1 | 118 | 0 | 118 | 43,926 |
| March 2019 | 266 | (10) | 256 | 0 | 256 | 44,182 |
| June 2019 | 15 | 2 | 17 | (157) #8 | (140) | 44,042 |
| September 2019 | 22 | (4) | 18 | 84 #9 | 102 | 44,144 |
| November 2019 | 0 | (1) | (1) | 0 | (1) | 44,143 |
| Total change***: | | | | | | |
| From February 2014 | 3,968 | 233 | 4,201 | 1,231 | 5,433 | |
| Percent change | 10.8 | 12.8 | 10.9 | 3.2 | 14.0 | |

* 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 2017-19 biennium.

#1 Sum of legislative and budget-driven revenue changes from the 2014 regular legislative session

#2 Legislative revenue changes from 2015 regular legislative session

#3 Legislative and budget driven revenue changes from 2015 special legislative sessions

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

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

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

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

#8 Sum of legislative and budget driven revenue changes from the 2019 legislative session plus large expected refund

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

Table 3.11

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

February 2016 through November 2019

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 |
| Total change***: | | | | | | |
| From February 2016 | 3,676 | (80) | 3,596 | 3,268 | 6,863 | |
| Percent change | 10.0 | (4.4) | 8.3 | 7.5 | 15.8 | |

* 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

2017-19 with Enacted Supplementals and 2019-21 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

| | 2017-19 | | | 2019-21 | | |
|---|-----------------|----------------|-----------------|-----------------|----------------|-----------------|
| | GFS | ELTA and OPA | TOTAL | GFS | ELTA and OPA | TOTAL |
| RESOURCES | | | | | | |
| Beginning Fund Balance | 1,100.6 | 48.0 | 1,148.5 | 999.3 | 981.9 | 1,981.2 |
| September 2019 Revenue Forecast | 44,143.6 | 1,942.1 | 46,085.6 | 50,030.3 | 1,404.2 | 51,434.6 |
| November 2019 Revenue Forecast change | (1.0) | (3.7) | (4.7) | 274.1 | 24.7 | 298.9 |
| Current Revenue Totals | 44,142.6 | 1,938.3 | 46,080.9 | 50,304.5 | 1,429.0 | 51,733.4 |
| Transfer to Budget Stabilization Account (1% of GSR) | (439.1) | | (439.1) | (500.0) | | (500.0) |
| Transfer to Budget Stabilization Account (EGSR) | (1,648.1) | | (1,648.1) | - | | - |
| Transfer from BSA (EGSR) | 1,136.4 | | 1,136.4 | - | | - |
| Enacted Fund Transfers | (57.3) | 254.0 | 196.7 | 49.0 | 160.0 | 209.0 |
| CAFR Adjustment | (41.2) | 40.0 | (1.3) | - | - | - |
| Actual/Assumed Prior Period Adjustments | 190.7 | | 190.7 | 40.8 | | 40.8 |
| Total Resources (including beginning fund balance) | 44,384.5 | 2,280.3 | 46,664.8 | 50,893.6 | 2,570.9 | 53,464.5 |
| EXPENDITURES | | | | | | |
| Enacted Budgets | 43,550.9 | 1,299.8 | 44,850.7 | 50,395.5 | 2,103.2 | 52,498.6 |
| Actual/Assumed Reversions | (165.7) | (1.3) | (167.1) | (353.7) | - | (353.7) |
| Total Expenditures | 43,385.2 | 1,298.4 | 44,683.6 | 50,041.8 | 2,103.2 | 52,144.9 |
| RESERVES | | | | | | |
| Projected Ending Balance (GFS + ELTA + OPA) | 999.3 | 981.9 | 1,981.2 | 851.9 | 467.7 | 1,319.6 |
| Budget Stabilization Account | | | | | | |
| Budget Stabilization Account Beginning Balance | 1,638.3 | | 1,638.3 | 1,618.4 | | 1,618.4 |
| Transfers from General Fund (1% of GSR) | 439.1 | | 439.1 | 500.0 | | 500.0 |
| Transfers from GFS (EGSR) | 1,648.1 | | 1,648.1 | - | | - |
| Actual/Assumed Interest Earnings and other | 38.3 | | 38.3 | 56.4 | | 56.4 |
| Less 17-19 Appropriations from BSA | (83.8) | | (83.8) | - | | - |
| Less 17-19 Transfers to Pension Stabilization Account | (925.2) | | (925.2) | - | | - |
| Less Transfers out to GFS (EGSR) | (1,136.4) | | (1,136.4) | - | | - |
| Projected Budget Stabilization Account Ending Balance | 1,618.4 | | 1,618.4 | 2,174.9 | | 2,174.9 |
| Total Reserves (Near General Fund plus Budget Stabilization) | 2,617.8 | 981.9 | 3,599.7 | 3,026.7 | 467.7 | 3,494.4 |

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 | \$24,803.6 | \$23,939.5 | \$22,876.1 |
| Business & Occupation | 9,949.9 | 9,608.5 | 9,218.5 |
| Use | 1,539.8 | 1,490.8 | 1,419.0 |
| Public Utility | 929.1 | 903.2 | 864.4 |
| Property (school levy) | 7,848.7 | 7,751.0 | 7,656.9 |
| Real Estate Excise | 2,065.1 | 2,030.1 | 1,990.5 |
| Other | 2,345.0 | 2,293.2 | 2,239.3 |
| Subtotal | 49,481.1 | 48,016.3 | 46,264.7 |
| Insurance Commissioner¹ | 1,341.3 | 1,308.6 | 1,275.9 |
| Lottery Commission | 55.7 | 53.0 | 50.4 |
| State Treasurer - Interest earnings | 49.0 | 18.6 | (0.6) |
| Liquor and Cannabis Surtaxes & Fees² | 579.5 | 559.4 | 539.1 |
| Office of Financial Management | | | |
| Other agencies | 220.5 | 214.1 | 207.6 |
| Administrative Office of the Courts | | | |
| Fines and Forfeitures | 137.5 | 134.5 | 131.3 |
| Total General Fund - State* | \$51,864.6 | \$50,304.5 | \$48,468.5 |
| Difference from November 2019 Baseline | \$1,560.1 | | (\$1,836.0) |

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 | \$27,721.6 | \$25,387.9 | \$22,598.5 |
| Business & Occupation Use | 11,436.7 | 10,542.2 | 9,540.1 |
| Public Utility | 1,684.4 | 1,551.1 | 1,389.6 |
| Property (school levy) | 1,037.6 | 982.1 | 901.0 |
| Real Estate Excise | 8,733.5 | 8,616.2 | 8,496.0 |
| Other | 2,020.5 | 1,946.5 | 1,628.3 |
| Subtotal | 2,428.0 | 2,310.7 | 2,131.0 |
| | 55,062.4 | 51,336.5 | 46,684.5 |
| Insurance Commissioner¹ | 1,457.3 | 1,421.7 | 1,386.2 |
| Lottery Commission | 67.5 | 64.3 | 61.1 |
| State Treasurer - Interest earnings | 74.4 | 36.7 | 7.9 |
| Liquor and Cannabis Surtaxes & Fees² | 630.5 | 600.2 | 561.7 |
| Office of Financial Management | | | |
| Other agencies | 195.1 | 185.8 | 176.5 |
| Administrative Office of the Courts | | | |
| Fines and Forfeitures | 140.5 | 133.7 | 123.3 |
| Total General Fund - State* | \$57,627.7 | \$53,779.0 | \$49,001.3 |
| Difference from November 2019 Baseline | \$3,848.7 | | (\$4,777.7) |

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
November 2019 Forecast
(cash basis, millions of dollars)

| | Lottery: Total Transfers:* | 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 |
|------------------|---------------------------------------|---------------------|-----------------------------|--|--|--|---|---|---|--------------------------------------|---|
| 2012 | 135.1 | 0.0 | 2.7 | 10.0 | 0.0 | 0.0 | 0.3 | 3.3 | 118.5 | 0.2 | 0.0 |
| 2013 | 139.7 | 0.0 | 0.0 | 10.4 | 0.0 | 0.0 | 0.3 | 3.5 | 125.5 | 0.0 | 0.0 |
| 2011-13 Biennium | 274.8 | 0.0 | 2.7 | 20.4 | 0.0 | 0.0 | 0.6 | 6.9 | 244.0 | 0.2 | 0.0 |
| 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 | 191.7 | 20.5 | 0.0 | 13.7 | 0.0 | 0.0 | 0.4 | 4.1 | 153.1 | 0.0 | 0.0 |
| 2021 | 190.0 | 32.5 | 0.0 | 14.2 | 0.0 | 0.0 | 0.4 | 4.3 | 138.6 | 0.0 | 0.0 |
| 2019-21 Biennium | 381.7 | 53.0 | 0.0 | 27.9 | 0.0 | 0.0 | 0.8 | 8.4 | 291.6 | 0.0 | 0.0 |
| 2022 | 192.3 | 34.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 4.3 | 153.3 | 0.0 | 0.0 |
| 2023 | 194.8 | 30.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 4.3 | 160.1 | 0.0 | 0.0 |
| 2021-23 Biennium | 387.1 | 64.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 8.6 | 313.4 | 0.0 | 0.0 |

Table 3.16

Lottery transfers by fund
November 2019 Forecast
(GAAP basis, millions of dollars)

| | Lottery: Total Transfers:* | 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 |
|------------------|---------------------------------------|---------------------|-----------------------------|--|--|--|---|---|---|--------------------------------------|---|
| 2012 | 138.0 | 0.0 | 2.7 | 10.0 | 0.0 | 0.0 | 0.3 | 3.0 | 121.8 | 0.2 | 0.0 |
| 2013 | 139.2 | 9.3 | 0.0 | 10.4 | 0.0 | 0.0 | 0.3 | 3.6 | 115.5 | 0.0 | 0.0 |
| 2011-13 Biennium | 277.2 | 9.3 | 2.7 | 20.4 | 0.0 | 0.0 | 0.6 | 6.6 | 237.4 | 0.2 | 0.0 |
| 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 | 185.4 | 29.1 | 0.0 | 13.7 | 0.0 | 0.0 | 0.4 | 4.3 | 138.0 | 0.0 | 0.0 |
| 2021 | 190.1 | 29.6 | 0.0 | 14.2 | 0.0 | 0.0 | 0.4 | 4.3 | 141.6 | 0.0 | 0.0 |
| 2019-21 Biennium | 375.4 | 58.6 | 0.0 | 27.9 | 0.0 | 0.0 | 0.8 | 8.6 | 279.6 | 0.0 | 0.0 |
| 2022 | 192.5 | 29.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 4.3 | 158.2 | 0.0 | 0.0 |
| 2023 | 195.0 | 29.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 4.3 | 160.6 | 0.0 | 0.0 |
| 2021-23 Biennium | 387.5 | 59.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 8.6 | 318.8 | 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)

November 2019 - 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 1999 | \$10,414 | 3.6% | | | \$10,414 | 3.6% | | | \$10,414 | 3.6% |
| FY 2000 | \$11,068 | 6.3% | | | \$11,068 | 6.3% | | | \$11,068 | 6.3% |
| 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 | \$24,651 | 9.9% | \$621 | -54.1% | \$25,272 | 6.3% | \$153 | -1.7% | \$25,425 | 6.2% |
| FY 2021 | \$25,654 | 4.1% | \$517 | -16.8% | \$26,170 | 3.6% | \$139 | -9.5% | \$26,309 | 3.5% |
| FY 2022 | \$26,448 | 3.1% | \$524 | 1.4% | \$26,971 | 3.1% | \$153 | 10.6% | \$27,125 | 3.1% |
| FY 2023 | \$27,332 | 3.3% | \$538 | 2.7% | \$27,869 | 3.3% | \$160 | 4.4% | \$28,029 | 3.3% |
| Biennial Totals | | | | | | | | | | |
| 05-07 Biennium | \$29,785 | 17.3% | \$381 | NA | \$30,166 | 18.8% | \$0 | NA | \$30,166 | 18.8% |
| 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 | \$50,304 | 14.0% | \$1,137 | -31.2% | \$51,442 | 12.3% | \$292 | 2.6% | \$51,733 | 12.3% |
| 21-23 Biennium | \$53,779 | 6.9% | \$1,062 | -6.7% | \$54,841 | 6.6% | \$313 | 7.5% | \$55,154 | 6.6% |

*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

November 2019

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 | \$423,888 | \$16,906 | \$406,982 | \$0 | \$10,786 | \$377 | \$203,491 | \$46,741 | \$522 | \$145,065 |
| 2021 | \$422,679 | \$15,967 | \$406,712 | \$0 | \$10,616 | \$387 | \$203,356 | \$47,134 | \$530 | \$144,689 |
| 2022 | \$431,761 | \$15,695 | \$416,066 | \$0 | \$10,616 | \$387 | \$208,033 | \$47,834 | \$530 | \$148,666 |
| 2023 | \$446,464 | \$15,696 | \$430,768 | \$0 | \$10,616 | \$387 | \$215,384 | \$47,834 | \$530 | \$156,017 |
| 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 | \$846,567 | \$32,873 | \$813,694 | \$0 | \$21,402 | \$764 | \$406,847 | \$93,875 | \$1,052 | \$289,754 |
| 2021-23 | \$878,225 | \$31,391 | \$846,834 | \$0 | \$21,232 | \$774 | \$423,417 | \$95,668 | \$1,060 | \$304,683 |

*Before distributions to local governments

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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.

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Table A1.1
U.S. Economic Forecast Summary
Forecast 2019 to 2023

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| Real National Income Accounts (Billions of Chained 2012 Dollars) | | | | | | | | |
| Real Gross Domestic Product | 17,688.9 | 18,108.1 | 18,638.2 | 19,062.5 | 19,396.5 | 19,745.6 | 20,120.8 | 20,523.2 |
| % Ch | 1.6 | 2.4 | 2.9 | 2.3 | 1.8 | 1.8 | 1.9 | 2.0 |
| Real Consumption | 12,247.5 | 12,566.9 | 12,944.5 | 13,276.9 | 13,573.8 | 13,831.7 | 14,108.4 | 14,418.7 |
| % Ch | 2.7 | 2.6 | 3.0 | 2.6 | 2.2 | 1.9 | 2.0 | 2.2 |
| Real Nonresidential Fixed Investment | 2,425.3 | 2,531.2 | 2,692.3 | 2,755.5 | 2,805.6 | 2,901.2 | 3,014.5 | 3,142.9 |
| % Ch | 0.7 | 4.4 | 6.4 | 2.3 | 1.8 | 3.4 | 3.9 | 4.3 |
| Real Residential Fixed Investment | 591.2 | 611.9 | 602.9 | 593.6 | 597.3 | 592.9 | 602.6 | 610.2 |
| % Ch | 6.5 | 3.5 | -1.5 | -1.5 | 0.6 | -0.7 | 1.6 | 1.2 |
| Real Personal Income | 15,487.3 | 15,933.3 | 16,476.8 | 17,013.9 | 17,306.1 | 17,643.7 | 18,063.2 | 18,511.1 |
| % Ch | 1.5 | 2.9 | 3.4 | 3.3 | 1.7 | 2.0 | 2.4 | 2.5 |
| Real Per Capita Income (\$/Person) | 47,860 | 48,925 | 50,277 | 51,549 | 52,064 | 52,709 | 53,590 | 54,546 |
| % Ch | 0.8 | 2.2 | 2.8 | 2.5 | 1.0 | 1.2 | 1.7 | 1.8 |
| Price and Wage Indexes | | | | | | | | |
| PCE Price Index (2012=100) | 104.1 | 105.9 | 108.1 | 109.7 | 111.9 | 114.0 | 116.3 | 118.6 |
| % Ch | 1.0 | 1.8 | 2.1 | 1.5 | 2.0 | 1.9 | 2.0 | 2.0 |
| U.S. Consumer Price Index (1982-84=1.0) | 2.400 | 2.451 | 2.511 | 2.557 | 2.611 | 2.661 | 2.721 | 2.782 |
| % Ch | 1.3 | 2.1 | 2.4 | 1.8 | 2.1 | 1.9 | 2.2 | 2.2 |
| Employment Cost Index (Dec. 2005=1.0) | 1.263 | 1.295 | 1.334 | 1.374 | 1.419 | 1.466 | 1.518 | 1.572 |
| % Ch | 2.4 | 2.6 | 3.0 | 3.0 | 3.3 | 3.3 | 3.5 | 3.6 |
| Current Dollar National Income (Billions of Dollars) | | | | | | | | |
| Gross Domestic Product | 18,715.0 | 19,519.4 | 20,580.2 | 21,427.0 | 22,282.5 | 23,212.7 | 24,205.2 | 25,264.4 |
| % Ch | 2.7 | 4.3 | 5.4 | 4.1 | 4.0 | 4.2 | 4.3 | 4.4 |
| Personal Income | 16,121.2 | 16,878.8 | 17,819.2 | 18,668.8 | 19,364.4 | 20,122.8 | 21,008.1 | 21,955.3 |
| % Ch | 2.6 | 4.7 | 5.6 | 4.8 | 3.7 | 3.9 | 4.4 | 4.5 |
| Employment (Millions) | | | | | | | | |
| U.S. Civilian Labor Force | 159.2 | 160.3 | 162.1 | 163.5 | 165.2 | 166.5 | 167.7 | 168.7 |
| Total U.S. Employment | 151.4 | 153.3 | 155.8 | 157.5 | 159.4 | 160.3 | 161.1 | 161.7 |
| Unemployment Rate (%) | 4.87 | 4.35 | 3.89 | 3.67 | 3.52 | 3.74 | 3.94 | 4.14 |
| Nonfarm Payroll Employment | 144.35 | 146.61 | 149.06 | 151.39 | 153.08 | 153.97 | 154.80 | 155.35 |
| % Ch | 1.8 | 1.6 | 1.7 | 1.6 | 1.1 | 0.6 | 0.5 | 0.4 |
| Manufacturing | 12.35 | 12.44 | 12.69 | 12.84 | 12.78 | 12.51 | 12.47 | 12.49 |
| % Ch | 0.1 | 0.7 | 2.0 | 1.2 | -0.5 | -2.1 | -0.3 | 0.1 |
| Durable Manufacturing | 7.71 | 7.74 | 7.94 | 8.06 | 8.04 | 7.88 | 7.87 | 7.92 |
| % Ch | -0.7 | 0.3 | 2.7 | 1.4 | -0.2 | -2.0 | -0.1 | 0.6 |
| Nondurable Manufacturing | 4.64 | 4.70 | 4.74 | 4.78 | 4.73 | 4.63 | 4.60 | 4.57 |
| % Ch | 1.5 | 1.3 | 0.9 | 0.8 | -1.0 | -2.1 | -0.7 | -0.7 |
| Construction | 6.73 | 6.97 | 7.29 | 7.50 | 7.56 | 7.63 | 7.78 | 7.93 |
| % Ch | 4.1 | 3.6 | 4.6 | 2.9 | 0.8 | 0.9 | 1.9 | 2.0 |
| Service-Providing | 124.60 | 126.53 | 128.36 | 130.30 | 132.00 | 133.09 | 133.80 | 134.17 |
| % Ch | 1.9 | 1.5 | 1.4 | 1.5 | 1.3 | 0.8 | 0.5 | 0.3 |
| Miscellaneous Indicators | | | | | | | | |
| Oil-WTI (\$ per barrel) | 43.2 | 51.0 | 64.9 | 56.8 | 55.4 | 52.5 | 51.6 | 51.5 |
| Personal Saving/Disposable Income (%) | 6.8 | 7.0 | 7.7 | 8.2 | 7.8 | 7.9 | 8.2 | 8.2 |
| Auto Sales (Millions) | 6.9 | 6.1 | 5.3 | 4.7 | 4.3 | 4.2 | 4.1 | 4.0 |
| % Ch | -8.6 | -11.5 | -12.8 | -10.6 | -8.5 | -4.1 | -1.9 | -0.8 |
| Housing Starts (Millions) | 1.178 | 1.209 | 1.250 | 1.255 | 1.258 | 1.219 | 1.287 | 1.311 |
| % Ch | 6.4 | 2.6 | 3.4 | 0.4 | 0.2 | -3.1 | 5.6 | 1.8 |
| Federal Budget Surplus (Billions) | -677.0 | -724.7 | -1,009.8 | -1,159.2 | -1,164.2 | -1,227.3 | -1,279.9 | -1,287.7 |
| Net Exports (Billions) | -518.8 | -575.3 | -638.2 | -650.5 | -644.5 | -612.7 | -566.8 | -518.1 |
| 3-Month Treasury Bill Rate (%) | 0.32 | 0.93 | 1.94 | 2.06 | 1.53 | 1.85 | 2.17 | 2.36 |
| 10-Year Treasury Note Yield (%) | 1.84 | 2.33 | 2.91 | 2.13 | 2.10 | 2.74 | 3.00 | 2.99 |
| Bond Index of 20 G.O. Munis. (%) | 3.27 | 3.67 | 3.96 | 3.57 | 3.76 | 4.25 | 4.49 | 4.54 |
| 30-Year Fixed Mortgage Rate (%) | 3.65 | 3.99 | 4.54 | 3.95 | 3.94 | 4.37 | 4.53 | 4.59 |

Table A1.2
U.S. Economic Forecast Summary
 Forecast 2019 to 2023

| | 2018:1 | 2018:2 | 2018:3 | 2018:4 | 2019:1 | 2019:2 | 2019:3 | 2019:4 |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| Real National Income Accounts (Billions of Chained 2012 Dollars) | | | | | | | | |
| Real Gross Domestic Product | 18,438.3 | 18,598.1 | 18,732.7 | 18,783.5 | 18,927.3 | 19,021.9 | 19,112.5 | 19,188.5 |
| % Ch , Annual Rate | 2.6 | 3.5 | 2.9 | 1.1 | 3.1 | 2.0 | 1.9 | 1.6 |
| Real Consumption | 12,782.9 | 12,909.2 | 13,019.8 | 13,066.3 | 13,103.3 | 13,250.0 | 13,343.7 | 13,410.5 |
| % Ch , Annual Rate | 1.7 | 4.0 | 3.5 | 1.4 | 1.1 | 4.6 | 2.9 | 2.0 |
| Real Nonresidential Fixed Investment | 2,639.5 | 2,689.9 | 2,703.9 | 2,735.8 | 2,765.6 | 2,758.5 | 2,737.8 | 2,759.9 |
| % Ch , Annual Rate | 8.8 | 7.9 | 2.1 | 4.8 | 4.4 | -1.0 | -3.0 | 3.3 |
| Real Residential Fixed Investment | 612.1 | 606.3 | 600.1 | 593.0 | 591.4 | 587.0 | 594.3 | 601.6 |
| % Ch , Annual Rate | -5.3 | -3.7 | -4.0 | -4.7 | -1.0 | -3.0 | 5.1 | 5.0 |
| Real Personal Income | 16,331.6 | 16,413.8 | 16,537.2 | 16,624.5 | 16,858.6 | 16,982.5 | 17,075.3 | 17,139.2 |
| % Ch , Annual Rate | 4.7 | 2.0 | 3.0 | 2.1 | 5.8 | 3.0 | 2.2 | 1.5 |
| Real Per Capita Income (\$/Person) | 49,961 | 50,133 | 50,420 | 50,595 | 51,216 | 51,500 | 51,689 | 51,790 |
| % Ch , Annual Rate | 4.2 | 1.4 | 2.3 | 1.4 | 5.0 | 2.2 | 1.5 | 0.8 |
| Price and Wage Indexes | | | | | | | | |
| PCE Price Index (2012=100) | 107.4 | 108.0 | 108.4 | 108.8 | 108.9 | 109.5 | 109.9 | 110.6 |
| % Ch , Annual Rate | 2.5 | 2.2 | 1.6 | 1.3 | 0.4 | 2.4 | 1.5 | 2.2 |
| U.S. Consumer Price Index (1982-84=1.0) | 2.493 | 2.506 | 2.518 | 2.528 | 2.533 | 2.551 | 2.563 | 2.581 |
| % Ch , Annual Rate | 3.2 | 2.1 | 2.0 | 1.5 | 0.9 | 2.9 | 1.8 | 2.8 |
| Employment Cost Index (Dec. 2005=1.0) | 1.320 | 1.328 | 1.339 | 1.349 | 1.359 | 1.367 | 1.379 | 1.390 |
| % Ch , Annual Rate | 3.7 | 2.4 | 3.4 | 3.0 | 3.0 | 2.4 | 3.6 | 3.2 |
| Current Dollar National Income (Billions of Dollars) | | | | | | | | |
| Gross Domestic Product | 20,163.2 | 20,510.2 | 20,749.8 | 20,897.8 | 21,098.8 | 21,340.3 | 21,525.8 | 21,743.1 |
| % Ch , Annual Rate | 5.0 | 7.1 | 4.8 | 2.9 | 3.9 | 4.7 | 3.5 | 4.1 |
| Personal Income | 17,540.3 | 17,725.0 | 17,928.5 | 18,082.8 | 18,355.4 | 18,599.6 | 18,772.4 | 18,947.7 |
| % Ch , Annual Rate | 7.4 | 4.3 | 4.7 | 3.5 | 6.2 | 5.4 | 3.8 | 3.8 |
| Employment (Millions) | | | | | | | | |
| U.S. Civilian Labor Force | 161.6 | 161.8 | 162.0 | 162.9 | 163.1 | 162.7 | 163.8 | 164.4 |
| Total U.S. Employment | 155.0 | 155.4 | 155.9 | 156.8 | 156.8 | 156.8 | 157.8 | 158.6 |
| Unemployment Rate (%) | 4.09 | 3.91 | 3.79 | 3.77 | 3.88 | 3.62 | 3.64 | 3.53 |
| Nonfarm Payroll Employment | 148.05 | 148.74 | 149.41 | 150.06 | 150.68 | 151.11 | 151.62 | 152.16 |
| % Ch , Annual Rate | 1.8 | 1.9 | 1.8 | 1.7 | 1.7 | 1.2 | 1.4 | 1.4 |
| Manufacturing | 12.59 | 12.66 | 12.72 | 12.79 | 12.83 | 12.84 | 12.85 | 12.84 |
| % Ch , Annual Rate | 2.3 | 2.3 | 1.9 | 2.2 | 1.4 | 0.3 | 0.3 | -0.2 |
| Durable Manufacturing | 7.86 | 7.92 | 7.97 | 8.02 | 8.06 | 8.06 | 8.07 | 8.05 |
| % Ch , Annual Rate | 3.4 | 3.0 | 2.7 | 2.4 | 1.8 | 0.2 | 0.3 | -0.8 |
| Nondurable Manufacturing | 4.73 | 4.74 | 4.74 | 4.77 | 4.77 | 4.78 | 4.78 | 4.79 |
| % Ch , Annual Rate | 0.5 | 1.0 | 0.6 | 1.8 | 0.7 | 0.4 | 0.4 | 0.7 |
| Construction | 7.18 | 7.26 | 7.33 | 7.39 | 7.45 | 7.49 | 7.51 | 7.55 |
| % Ch , Annual Rate | 6.7 | 4.8 | 4.0 | 3.1 | 3.2 | 2.3 | 1.0 | 2.1 |
| Service-Providing | 127.58 | 128.09 | 128.62 | 129.13 | 129.64 | 130.03 | 130.52 | 131.02 |
| % Ch , Annual Rate | 1.4 | 1.6 | 1.6 | 1.6 | 1.6 | 1.2 | 1.5 | 1.5 |
| Miscellaneous Indicators | | | | | | | | |
| Oil-WTI (\$ per barrel) | 62.9 | 68.0 | 69.8 | 58.9 | 54.8 | 59.8 | 56.4 | 56.1 |
| Personal Saving/Disposable Income (%) | 7.9 | 7.6 | 7.5 | 7.8 | 8.5 | 8.0 | 8.1 | 8.0 |
| Auto Sales (Millions) | 5.4 | 5.3 | 5.2 | 5.3 | 5.0 | 4.8 | 4.6 | 4.5 |
| % Ch , Annual Rate | -30.3 | -8.1 | -11.7 | 9.9 | -20.8 | -12.0 | -17.5 | -5.3 |
| Housing Starts (Millions) | 1.321 | 1.260 | 1.233 | 1.185 | 1.213 | 1.256 | 1.282 | 1.270 |
| % Ch , Annual Rate | 20.8 | -17.2 | -8.2 | -14.7 | 9.8 | 14.8 | 8.7 | -3.8 |
| Federal Budget Surplus (Billions) | -976.3 | -1,013.8 | -981.3 | -1,067.6 | -1,122.9 | -1,173.5 | -1,180.6 | -1,159.6 |
| Net Exports (Billions) | -629.0 | -568.4 | -671.4 | -684.1 | -633.8 | -662.7 | -655.4 | -650.0 |
| 3-Month Treasury Bill Rate (%) | 1.56 | 1.84 | 2.04 | 2.32 | 2.39 | 2.30 | 1.98 | 1.58 |
| 10-Year Treasury Note Yield (%) | 2.76 | 2.92 | 2.93 | 3.03 | 2.65 | 2.33 | 1.80 | 1.74 |
| Bond Index of 20 G.O. Munis. (%) | 3.73 | 3.89 | 3.97 | 4.25 | 4.13 | 3.70 | 3.41 | 3.06 |
| 30-Year Fixed Mortgage Rate (%) | 4.27 | 4.54 | 4.57 | 4.78 | 4.38 | 4.01 | 3.66 | 3.73 |

Table A1.2 (continued)
U.S. Economic Forecast Summary
 Forecast 2019 to 2023

| | 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 | 19,271.1 | 19,358.1 | 19,440.0 | 19,516.7 | 19,613.2 | 19,703.2 | 19,787.0 | 19,879.2 |
| % Ch , Annual Rate | 1.7 | 1.8 | 1.7 | 1.6 | 2.0 | 1.8 | 1.7 | 1.9 |
| Real Consumption | 13,479.4 | 13,547.0 | 13,606.8 | 13,662.1 | 13,730.7 | 13,798.4 | 13,865.2 | 13,932.6 |
| % Ch , Annual Rate | 2.1 | 2.0 | 1.8 | 1.6 | 2.0 | 2.0 | 1.9 | 2.0 |
| Real Nonresidential Fixed Investment | 2,788.3 | 2,790.1 | 2,809.3 | 2,834.7 | 2,862.8 | 2,889.2 | 2,913.6 | 2,939.2 |
| % Ch , Annual Rate | 4.2 | 0.3 | 2.8 | 3.7 | 4.0 | 3.7 | 3.4 | 3.6 |
| Real Residential Fixed Investment | 601.3 | 597.4 | 594.8 | 595.6 | 594.3 | 591.2 | 591.5 | 594.7 |
| % Ch , Annual Rate | -0.2 | -2.5 | -1.8 | 0.6 | -0.9 | -2.1 | 0.2 | 2.2 |
| Real Personal Income | 17,219.5 | 17,275.0 | 17,330.6 | 17,399.5 | 17,503.0 | 17,594.8 | 17,686.1 | 17,790.9 |
| % Ch , Annual Rate | 1.9 | 1.3 | 1.3 | 1.6 | 2.4 | 2.1 | 2.1 | 2.4 |
| Real Per Capita Income (\$/Person) | 51,941 | 52,016 | 52,092 | 52,207 | 52,426 | 52,609 | 52,790 | 53,010 |
| % Ch , Annual Rate | 1.2 | 0.6 | 0.6 | 0.9 | 1.7 | 1.4 | 1.4 | 1.7 |
| Price and Wage Indexes | | | | | | | | |
| PCE Price Index (2012=100) | 111.1 | 111.6 | 112.2 | 112.7 | 113.2 | 113.8 | 114.3 | 114.9 |
| % Ch , Annual Rate | 2.0 | 1.9 | 1.9 | 1.8 | 1.9 | 2.0 | 2.0 | 2.0 |
| U.S. Consumer Price Index (1982-84=1.0) | 2.593 | 2.606 | 2.618 | 2.628 | 2.640 | 2.654 | 2.669 | 2.684 |
| % Ch , Annual Rate | 2.0 | 2.0 | 1.8 | 1.5 | 1.9 | 2.1 | 2.3 | 2.3 |
| Employment Cost Index (Dec. 2005=1.0) | 1.402 | 1.414 | 1.425 | 1.436 | 1.448 | 1.460 | 1.472 | 1.485 |
| % Ch , Annual Rate | 3.5 | 3.5 | 3.1 | 3.2 | 3.3 | 3.3 | 3.4 | 3.5 |
| Current Dollar National Income (Billions of Dollars) | | | | | | | | |
| Gross Domestic Product | 21,957.7 | 22,167.0 | 22,389.1 | 22,616.1 | 22,862.0 | 23,098.4 | 23,324.9 | 23,565.7 |
| % Ch , Annual Rate | 4.0 | 3.9 | 4.1 | 4.1 | 4.4 | 4.2 | 4.0 | 4.2 |
| Personal Income | 19,132.3 | 19,283.7 | 19,437.3 | 19,604.2 | 19,815.4 | 20,016.3 | 20,219.1 | 20,440.4 |
| % Ch , Annual Rate | 4.0 | 3.2 | 3.2 | 3.5 | 4.4 | 4.1 | 4.1 | 4.5 |
| Employment (Millions) | | | | | | | | |
| U.S. Civilian Labor Force | 164.7 | 165.3 | 165.4 | 165.7 | 166.0 | 166.4 | 166.7 | 167.0 |
| Total U.S. Employment | 158.9 | 159.5 | 159.6 | 159.7 | 160.0 | 160.2 | 160.4 | 160.6 |
| Unemployment Rate (%) | 3.50 | 3.47 | 3.52 | 3.59 | 3.65 | 3.71 | 3.78 | 3.83 |
| Nonfarm Payroll Employment | 152.56 | 153.14 | 153.24 | 153.38 | 153.61 | 153.85 | 154.07 | 154.36 |
| % Ch , Annual Rate | 1.1 | 1.5 | 0.3 | 0.4 | 0.6 | 0.6 | 0.6 | 0.8 |
| Manufacturing | 12.88 | 12.83 | 12.73 | 12.66 | 12.57 | 12.51 | 12.48 | 12.49 |
| % Ch , Annual Rate | 1.3 | -1.7 | -3.2 | -2.0 | -3.0 | -1.7 | -1.1 | 0.3 |
| Durable Manufacturing | 8.09 | 8.08 | 8.01 | 7.98 | 7.91 | 7.88 | 7.85 | 7.87 |
| % Ch , Annual Rate | 2.0 | -0.7 | -3.1 | -1.6 | -3.4 | -1.8 | -1.2 | 0.7 |
| Nondurable Manufacturing | 4.79 | 4.75 | 4.71 | 4.68 | 4.65 | 4.64 | 4.63 | 4.62 |
| % Ch , Annual Rate | 0.1 | -3.5 | -3.3 | -2.7 | -2.2 | -1.5 | -0.8 | -0.4 |
| Construction | 7.57 | 7.55 | 7.55 | 7.57 | 7.59 | 7.61 | 7.64 | 7.68 |
| % Ch , Annual Rate | 1.0 | -0.6 | -0.1 | 0.9 | 1.3 | 1.0 | 1.4 | 1.9 |
| Service-Providing | 131.36 | 132.01 | 132.22 | 132.41 | 132.71 | 132.98 | 133.21 | 133.46 |
| % Ch , Annual Rate | 1.1 | 2.0 | 0.6 | 0.6 | 0.9 | 0.8 | 0.7 | 0.7 |
| Miscellaneous Indicators | | | | | | | | |
| Oil-WTI (\$ per barrel) | 57.0 | 56.0 | 54.7 | 53.8 | 53.2 | 52.7 | 52.3 | 52.0 |
| Personal Saving/Disposable Income (%) | 8.0 | 7.9 | 7.7 | 7.7 | 7.9 | 7.9 | 7.9 | 8.0 |
| Auto Sales (Millions) | 4.5 | 4.4 | 4.3 | 4.2 | 4.2 | 4.2 | 4.1 | 4.1 |
| % Ch , Annual Rate | -6.9 | -9.2 | -5.5 | -4.5 | -3.1 | -4.0 | -2.2 | -2.7 |
| Housing Starts (Millions) | 1.268 | 1.260 | 1.254 | 1.248 | 1.212 | 1.211 | 1.218 | 1.235 |
| % Ch , Annual Rate | -0.6 | -2.3 | -1.9 | -2.0 | -11.2 | -0.3 | 2.6 | 5.5 |
| Federal Budget Surplus (Billions) | -1,151.2 | -1,163.0 | -1,166.8 | -1,175.8 | -1,206.9 | -1,219.8 | -1,233.6 | -1,248.8 |
| Net Exports (Billions) | -618.5 | -653.3 | -664.0 | -642.0 | -624.9 | -613.4 | -610.7 | -601.6 |
| 3-Month Treasury Bill Rate (%) | 1.56 | 1.53 | 1.51 | 1.52 | 1.71 | 1.74 | 1.93 | 2.00 |
| 10-Year Treasury Note Yield (%) | 1.81 | 2.01 | 2.20 | 2.37 | 2.53 | 2.68 | 2.80 | 2.94 |
| Bond Index of 20 G.O. Munis. (%) | 3.54 | 3.69 | 3.84 | 3.97 | 4.08 | 4.21 | 4.30 | 4.42 |
| 30-Year Fixed Mortgage Rate (%) | 3.76 | 3.89 | 4.00 | 4.11 | 4.24 | 4.34 | 4.43 | 4.48 |

Table A1.2 (continued)
U.S. Economic Forecast Summary
 Forecast 2019 to 2023

| | 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 | 19,974.0 | 20,071.6 | 20,170.7 | 20,266.9 | 20,370.9 | 20,472.3 | 20,573.7 | 20,676.1 |
| % Ch , Annual Rate | 1.9 | 2.0 | 2.0 | 1.9 | 2.1 | 2.0 | 2.0 | 2.0 |
| Real Consumption | 14,000.8 | 14,071.2 | 14,142.8 | 14,218.6 | 14,299.7 | 14,380.0 | 14,459.4 | 14,535.9 |
| % Ch , Annual Rate | 2.0 | 2.0 | 2.1 | 2.2 | 2.3 | 2.3 | 2.2 | 2.1 |
| Real Nonresidential Fixed Investment | 2,967.8 | 2,998.5 | 3,030.1 | 3,061.8 | 3,094.5 | 3,126.6 | 3,158.9 | 3,191.5 |
| % Ch , Annual Rate | 3.9 | 4.2 | 4.3 | 4.3 | 4.3 | 4.2 | 4.2 | 4.2 |
| Real Residential Fixed Investment | 598.7 | 601.5 | 604.2 | 606.2 | 607.9 | 609.4 | 610.6 | 612.7 |
| % Ch , Annual Rate | 2.7 | 1.9 | 1.8 | 1.3 | 1.2 | 1.0 | 0.8 | 1.4 |
| Real Personal Income | 17,910.6 | 18,011.1 | 18,114.8 | 18,216.3 | 18,343.1 | 18,453.9 | 18,565.9 | 18,681.4 |
| % Ch , Annual Rate | 2.7 | 2.3 | 2.3 | 2.3 | 2.8 | 2.4 | 2.5 | 2.5 |
| Real Per Capita Income (\$/Person) | 53,275 | 53,482 | 53,697 | 53,906 | 54,189 | 54,424 | 54,662 | 54,910 |
| % Ch , Annual Rate | 2.0 | 1.6 | 1.6 | 1.6 | 2.1 | 1.7 | 1.8 | 1.8 |
| Price and Wage Indexes | | | | | | | | |
| PCE Price Index (2012=100) | 115.5 | 116.0 | 116.6 | 117.1 | 117.7 | 118.3 | 118.9 | 119.5 |
| % Ch , Annual Rate | 2.0 | 2.0 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| U.S. Consumer Price Index (1982-84=1.0) | 2.698 | 2.713 | 2.728 | 2.743 | 2.759 | 2.774 | 2.790 | 2.805 |
| % Ch , Annual Rate | 2.1 | 2.3 | 2.2 | 2.3 | 2.3 | 2.2 | 2.3 | 2.3 |
| Employment Cost Index (Dec. 2005=1.0) | 1.498 | 1.511 | 1.524 | 1.537 | 1.551 | 1.565 | 1.579 | 1.594 |
| % Ch , Annual Rate | 3.7 | 3.6 | 3.4 | 3.5 | 3.6 | 3.6 | 3.7 | 3.8 |
| Current Dollar National Income (Billions of Dollars) | | | | | | | | |
| Gross Domestic Product | 23,818.1 | 24,075.8 | 24,333.9 | 24,593.2 | 24,862.5 | 25,128.6 | 25,397.3 | 25,669.0 |
| % Ch , Annual Rate | 4.4 | 4.4 | 4.4 | 4.3 | 4.5 | 4.3 | 4.3 | 4.3 |
| Personal Income | 20,677.9 | 20,896.8 | 21,117.6 | 21,340.2 | 21,595.2 | 21,831.7 | 22,073.2 | 22,321.3 |
| % Ch , Annual Rate | 4.7 | 4.3 | 4.3 | 4.3 | 4.9 | 4.5 | 4.5 | 4.6 |
| Employment (Millions) | | | | | | | | |
| U.S. Civilian Labor Force | 167.3 | 167.6 | 167.8 | 168.1 | 168.3 | 168.6 | 168.8 | 169.0 |
| Total U.S. Employment | 160.8 | 161.0 | 161.2 | 161.4 | 161.5 | 161.6 | 161.8 | 161.9 |
| Unemployment Rate (%) | 3.87 | 3.91 | 3.96 | 4.01 | 4.06 | 4.11 | 4.16 | 4.21 |
| Nonfarm Payroll Employment | 154.60 | 154.73 | 154.87 | 155.01 | 155.16 | 155.29 | 155.42 | 155.55 |
| % Ch, Annual Rate | 0.6 | 0.3 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 |
| Manufacturing | 12.49 | 12.47 | 12.46 | 12.47 | 12.48 | 12.49 | 12.49 | 12.49 |
| % Ch, Annual Rate | 0.0 | -0.5 | -0.2 | 0.3 | 0.3 | 0.3 | 0.1 | -0.2 |
| Durable Manufacturing | 7.87 | 7.86 | 7.86 | 7.88 | 7.90 | 7.91 | 7.93 | 7.93 |
| % Ch, Annual Rate | 0.2 | -0.4 | 0.1 | 0.7 | 0.9 | 0.9 | 0.6 | 0.3 |
| Nondurable Manufacturing | 4.62 | 4.61 | 4.60 | 4.59 | 4.59 | 4.58 | 4.57 | 4.55 |
| % Ch, Annual Rate | -0.5 | -0.8 | -0.7 | -0.5 | -0.6 | -0.8 | -0.9 | -1.0 |
| Construction | 7.72 | 7.76 | 7.80 | 7.84 | 7.88 | 7.91 | 7.95 | 7.99 |
| % Ch, Annual Rate | 2.2 | 2.2 | 2.1 | 2.0 | 2.0 | 1.9 | 1.8 | 1.8 |
| Service-Providing | 133.65 | 133.75 | 133.85 | 133.95 | 134.04 | 134.12 | 134.21 | 134.31 |
| % Ch, Annual Rate | 0.6 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 |
| Miscellaneous Indicators | | | | | | | | |
| Oil-WTI (\$ per barrel) | 51.8 | 51.6 | 51.5 | 51.5 | 51.4 | 51.4 | 51.4 | 51.6 |
| Personal Saving/Disposable Income (%) | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 |
| Auto Sales (Millions) | 4.1 | 4.1 | 4.1 | 4.1 | 4.0 | 4.0 | 4.0 | 4.0 |
| % Ch, Annual Rate | -1.5 | -1.9 | -0.5 | -1.0 | -1.7 | -0.3 | 0.2 | 0.1 |
| Housing Starts (Millions) | 1.277 | 1.284 | 1.288 | 1.301 | 1.309 | 1.311 | 1.312 | 1.312 |
| % Ch, Annual Rate | 14.3 | 2.3 | 1.2 | 4.3 | 2.4 | 0.7 | 0.3 | 0.0 |
| Federal Budget Surplus (Billions) | -1,273.5 | -1,279.8 | -1,284.1 | -1,282.3 | -1,292.5 | -1,289.4 | -1,284.1 | -1,284.8 |
| Net Exports (Billions) | -587.3 | -573.2 | -560.0 | -546.7 | -533.5 | -521.3 | -511.7 | -506.0 |
| 3-Month Treasury Bill Rate (%) | 2.18 | 2.17 | 2.16 | 2.16 | 2.32 | 2.38 | 2.37 | 2.37 |
| 10-Year Treasury Note Yield (%) | 2.96 | 2.99 | 3.01 | 3.01 | 3.01 | 3.00 | 2.99 | 2.98 |
| Bond Index of 20 G.O. Munis. (%) | 4.45 | 4.48 | 4.51 | 4.52 | 4.54 | 4.54 | 4.54 | 4.54 |
| 30-Year Fixed Mortgage Rate (%) | 4.52 | 4.52 | 4.52 | 4.57 | 4.59 | 4.59 | 4.59 | 4.59 |

Table A1.3
Washington Economic Forecast Summary
Forecast 2019 to 2023

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|
| Real Income (Billions of Chained 2012 Dollars) | | | | | | | | |
| Real Personal Income | 391.625 | 410.415 | 432.202 | 447.731 | 456.147 | 466.857 | 479.425 | 493.848 |
| % Ch | 4.6 | 4.8 | 5.3 | 3.6 | 1.9 | 2.3 | 2.7 | 3.0 |
| Real Wage and Salary Disb. | 195.358 | 205.871 | 219.298 | 228.041 | 233.336 | 239.164 | 245.831 | 253.613 |
| % Ch | 5.0 | 5.4 | 6.5 | 4.0 | 2.3 | 2.5 | 2.8 | 3.2 |
| Real Nonwage Income | 196.267 | 204.544 | 212.904 | 219.690 | 222.812 | 227.693 | 233.594 | 240.234 |
| % Ch | 4.2 | 4.2 | 4.1 | 3.2 | 1.4 | 2.2 | 2.6 | 2.8 |
| Real Per Capita Income (\$/Person) | 53,678 | 55,282 | 57,348 | 58,558 | 58,828 | 59,426 | 60,279 | 61,381 |
| % Ch | 2.8 | 3.0 | 3.7 | 2.1 | 0.5 | 1.0 | 1.4 | 1.8 |
| Price and Wage Indexes | | | | | | | | |
| U.S. Implicit Price Deflator, PCE (2012=1.0) | 1.041 | 1.059 | 1.081 | 1.097 | 1.119 | 1.140 | 1.163 | 1.186 |
| % Ch | 1.0 | 1.8 | 2.1 | 1.5 | 2.0 | 1.9 | 2.0 | 2.0 |
| Seattle Cons. Price Index (1982-84=1.0) | 2.550 | 2.628 | 2.711 | 2.778 | 2.832 | 2.886 | 2.951 | 3.017 |
| % Ch | 2.3 | 3.0 | 3.2 | 2.5 | 1.9 | 1.9 | 2.2 | 2.3 |
| Average Nonfarm Annual Wage | 60,548 | 63,581 | 67,580 | 70,004 | 71,931 | 74,370 | 77,229 | 80,647 |
| % Ch | 3.0 | 5.0 | 6.3 | 3.6 | 2.8 | 3.4 | 3.8 | 4.4 |
| Avg. Hourly Earnings-Mfg. (\$/Hour) | 26.42 | 27.37 | 28.42 | 29.25 | 29.92 | 30.85 | 31.89 | 32.99 |
| % Ch | 3.5 | 3.6 | 3.8 | 2.9 | 2.3 | 3.1 | 3.4 | 3.4 |
| Current Dollar Income (Billions of Dollars) | | | | | | | | |
| Personal Income | 407.654 | 434.759 | 467.399 | 491.266 | 510.401 | 532.457 | 557.592 | 585.742 |
| % Ch | 5.7 | 6.6 | 7.5 | 5.1 | 3.9 | 4.3 | 4.7 | 5.0 |
| Disposable Personal Income | 358.190 | 382.063 | 412.904 | 433.523 | 450.778 | 470.562 | 492.673 | 516.401 |
| % Ch | 5.9 | 6.7 | 8.1 | 5.0 | 4.0 | 4.4 | 4.7 | 4.8 |
| Per Capita Income (\$/Person) | 55,873 | 58,560 | 62,017 | 64,250 | 65,824 | 67,775 | 70,106 | 72,801 |
| % Ch | 3.8 | 4.8 | 5.9 | 3.6 | 2.4 | 3.0 | 3.4 | 3.8 |
| Employment (Thousands) | | | | | | | | |
| Washington Civilian Labor Force | 3,643.9 | 3,719.3 | 3,790.5 | 3,887.3 | 3,964.8 | 4,017.8 | 4,066.8 | 4,110.7 |
| Total Washington Employment | 3,451.3 | 3,543.9 | 3,620.3 | 3,709.1 | 3,785.3 | 3,827.5 | 3,866.6 | 3,901.2 |
| Unemployment Rate (%) | 5.29 | 4.72 | 4.49 | 4.58 | 4.53 | 4.74 | 4.92 | 5.10 |
| Nonfarm Payroll Employment | 3,242.7 | 3,321.1 | 3,404.1 | 3,469.8 | 3,523.7 | 3,560.7 | 3,594.8 | 3,622.8 |
| % Ch | 3.1 | 2.4 | 2.5 | 1.9 | 1.6 | 1.1 | 1.0 | 0.8 |
| Manufacturing | 290.4 | 284.2 | 287.5 | 294.5 | 293.5 | 291.3 | 293.0 | 295.5 |
| % Ch | -0.7 | -2.1 | 1.2 | 2.4 | -0.3 | -0.8 | 0.6 | 0.9 |
| Durable Manufacturing | 207.7 | 200.3 | 202.1 | 207.6 | 207.0 | 205.9 | 207.5 | 209.9 |
| % Ch | -1.7 | -3.5 | 0.9 | 2.7 | -0.3 | -0.5 | 0.8 | 1.1 |
| Aerospace | 91.0 | 84.2 | 84.0 | 88.7 | 89.1 | 89.1 | 89.1 | 89.1 |
| % Ch | -3.2 | -7.5 | -0.3 | 5.6 | 0.5 | 0.0 | 0.0 | 0.0 |
| Nondurable Manufacturing | 82.7 | 83.9 | 85.5 | 86.9 | 86.6 | 85.4 | 85.5 | 85.6 |
| % Ch | 2.0 | 1.4 | 1.9 | 1.7 | -0.4 | -1.4 | 0.1 | 0.1 |
| Construction | 186.6 | 199.8 | 213.4 | 218.9 | 218.2 | 214.0 | 212.5 | 211.8 |
| % Ch | 7.7 | 7.0 | 6.8 | 2.6 | -0.3 | -1.9 | -0.7 | -0.3 |
| Service-Providing | 2,759.5 | 2,830.9 | 2,896.9 | 2,950.4 | 3,006.1 | 3,049.7 | 3,083.6 | 3,109.8 |
| % Ch | 3.2 | 2.6 | 2.3 | 1.8 | 1.9 | 1.5 | 1.1 | 0.8 |
| Software Publishers | 58.9 | 61.4 | 65.3 | 70.3 | 73.1 | 73.8 | 74.7 | 75.9 |
| % Ch | 5.3 | 4.2 | 6.4 | 7.6 | 4.0 | 1.0 | 1.2 | 1.5 |
| Electronic Shopping and Mail-Order | 38.2 | 49.7 | 54.8 | 61.0 | 63.3 | 65.6 | 67.6 | 69.3 |
| % Ch | 26.6 | 30.1 | 10.2 | 11.3 | 3.8 | 3.8 | 3.0 | 2.5 |
| Housing Indicators (Thousands) | | | | | | | | |
| Housing Units Authorized by Bldg. Permit | 44.077 | 45.794 | 47.746 | 45.881 | 43.588 | 42.490 | 42.237 | 41.631 |
| % Ch | 9.2 | 3.9 | 4.3 | -3.9 | -5.0 | -2.5 | -0.6 | -1.4 |
| Single-Family | 22.463 | 23.115 | 23.676 | 22.344 | 23.155 | 22.995 | 23.150 | 23.592 |
| % Ch | 13.5 | 2.9 | 2.4 | -5.6 | 3.6 | -0.7 | 0.7 | 1.9 |
| Multi-Family | 21.614 | 22.679 | 24.070 | 23.537 | 20.433 | 19.495 | 19.087 | 18.040 |
| % Ch | 5.0 | 4.9 | 6.1 | -2.2 | -13.2 | -4.6 | -2.1 | -5.5 |
| 30-Year Fixed Mortgage Rate (%) | 3.65 | 3.99 | 4.54 | 3.95 | 3.94 | 4.37 | 4.53 | 4.59 |

Table A1.4
Washington Economic Forecast Summary
Forecast 2019 to 2023

| | 2018:1 | 2018:2 | 2018:3 | 2018:4 | 2019:1 | 2019:2 | 2019:3 | 2019:4 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|
| Real Income (Billions of Chained 2012 Dollars) | | | | | | | | |
| Real Personal Income | 427.055 | 429.537 | 435.092 | 437.123 | 443.970 | 446.797 | 449.105 | 451.054 |
| % Ch, Annual Rate | 8.6 | 2.3 | 5.3 | 1.9 | 6.4 | 2.6 | 2.1 | 1.7 |
| Real Wage and Salary Disb. | 216.923 | 217.635 | 221.347 | 221.287 | 226.974 | 227.074 | 228.533 | 229.583 |
| % Ch, Annual Rate | 12.7 | 1.3 | 7.0 | -0.1 | 10.7 | 0.2 | 2.6 | 1.9 |
| Real Nonwage Income | 210.132 | 211.901 | 213.745 | 215.836 | 216.995 | 219.723 | 220.571 | 221.471 |
| % Ch, Annual Rate | 4.6 | 3.4 | 3.5 | 4.0 | 2.2 | 5.1 | 1.6 | 1.6 |
| Real Per Capita Income (\$/Person) | 56,982 | 57,108 | 57,625 | 57,676 | 58,377 | 58,543 | 58,634 | 58,678 |
| % Ch, Annual Rate | 7.1 | 0.9 | 3.7 | 0.4 | 5.0 | 1.1 | 0.6 | 0.3 |
| Price and Wage Indexes | | | | | | | | |
| U.S. Implicit Price Deflator, PCE (2012=1.0) | 1.074 | 1.080 | 1.084 | 1.088 | 1.089 | 1.095 | 1.099 | 1.106 |
| % Ch, Annual Rate | 2.5 | 2.2 | 1.6 | 1.3 | 0.4 | 2.4 | 1.5 | 2.3 |
| Seattle Cons. Price Index (1982-84=1.0) | 2.687 | 2.703 | 2.715 | 2.740 | 2.758 | 2.766 | 2.794 | 2.796 |
| % Ch, Annual Rate | 3.8 | 2.4 | 1.9 | 3.6 | 2.7 | 1.2 | 4.1 | 0.3 |
| Average Nonfarm Annual Wage | 66,821 | 67,147 | 68,239 | 68,114 | 69,716 | 69,704 | 70,066 | 70,530 |
| % Ch, Annual Rate | 11.7 | 2.0 | 6.7 | -0.7 | 9.7 | -0.1 | 2.1 | 2.7 |
| Avg. Hourly Earnings-Mfg. (\$/Hour) | 27.95 | 28.36 | 28.52 | 28.84 | 29.19 | 29.10 | 29.36 | 29.33 |
| % Ch, Annual Rate | 1.8 | 5.9 | 2.3 | 4.6 | 5.0 | -1.3 | 3.7 | -0.4 |
| Current Dollar Income (Billions of Dollars) | | | | | | | | |
| Personal Income | 458.641 | 463.830 | 471.677 | 475.449 | 483.372 | 489.323 | 493.720 | 498.649 |
| % Ch, Annual Rate | 11.3 | 4.6 | 6.9 | 3.2 | 6.8 | 5.0 | 3.6 | 4.1 |
| Disposable Personal Income | 404.386 | 409.617 | 416.784 | 420.828 | 426.572 | 431.222 | 435.871 | 440.425 |
| % Ch, Annual Rate | 13.6 | 5.3 | 7.2 | 3.9 | 5.6 | 4.4 | 4.4 | 4.2 |
| Per Capita Income (\$/Person) | 61,196 | 61,668 | 62,471 | 62,733 | 63,558 | 64,115 | 64,459 | 64,869 |
| % Ch, Annual Rate | 9.8 | 3.1 | 5.3 | 1.7 | 5.4 | 3.5 | 2.2 | 2.6 |
| Employment (Thousands) | | | | | | | | |
| Washington Civilian Labor Force | 3,759.0 | 3,777.4 | 3,802.5 | 3,823.0 | 3,849.0 | 3,874.8 | 3,896.1 | 3,929.2 |
| Total Washington Employment | 3,585.7 | 3,607.7 | 3,634.8 | 3,652.9 | 3,673.8 | 3,694.6 | 3,716.6 | 3,751.5 |
| Unemployment Rate (%) | 4.61 | 4.49 | 4.41 | 4.45 | 4.55 | 4.65 | 4.61 | 4.52 |
| Nonfarm Payroll Employment | 3,381.4 | 3,394.7 | 3,411.6 | 3,428.7 | 3,441.4 | 3,463.4 | 3,480.8 | 3,493.5 |
| % Ch, Annual Rate | 3.9 | 1.6 | 2.0 | 2.0 | 1.5 | 2.6 | 2.0 | 1.5 |
| Manufacturing | 284.4 | 286.0 | 288.4 | 291.3 | 293.2 | 293.8 | 296.0 | 295.0 |
| % Ch, Annual Rate | 2.7 | 2.3 | 3.3 | 4.1 | 2.6 | 0.8 | 3.0 | -1.3 |
| Durable Manufacturing | 199.4 | 200.9 | 202.9 | 205.0 | 206.4 | 207.1 | 209.0 | 207.7 |
| % Ch, Annual Rate | 2.2 | 3.0 | 4.1 | 4.2 | 2.7 | 1.4 | 3.7 | -2.4 |
| Aerospace | 82.3 | 83.0 | 84.6 | 86.0 | 87.2 | 88.4 | 90.0 | 89.1 |
| % Ch, Annual Rate | 2.3 | 3.6 | 8.0 | 7.0 | 5.5 | 5.9 | 7.2 | -3.9 |
| Nondurable Manufacturing | 85.0 | 85.1 | 85.4 | 86.3 | 86.8 | 86.7 | 87.0 | 87.3 |
| % Ch, Annual Rate | 4.0 | 0.6 | 1.4 | 4.1 | 2.3 | -0.4 | 1.3 | 1.4 |
| Construction | 209.8 | 212.1 | 213.9 | 217.6 | 215.7 | 219.1 | 219.5 | 221.4 |
| % Ch, Annual Rate | 11.8 | 4.6 | 3.5 | 7.0 | -3.4 | 6.3 | 0.8 | 3.5 |
| Service-Providing | 2,880.9 | 2,890.2 | 2,903.0 | 2,913.6 | 2,926.3 | 2,944.5 | 2,959.5 | 2,971.3 |
| % Ch, Annual Rate | 3.5 | 1.3 | 1.8 | 1.5 | 1.8 | 2.5 | 2.0 | 1.6 |
| Software Publishers | 63.5 | 64.7 | 66.0 | 67.0 | 68.3 | 69.4 | 70.8 | 72.7 |
| % Ch, Annual Rate | 6.8 | 8.1 | 8.1 | 6.4 | 7.6 | 6.7 | 8.6 | 11.1 |
| Electronic Shopping and Mail-Order | 54.1 | 54.3 | 54.4 | 56.4 | 60.3 | 61.5 | 60.5 | 61.4 |
| % Ch, Annual Rate | 3.7 | 1.8 | 0.8 | 15.2 | 31.3 | 8.0 | -6.3 | 6.3 |
| Housing Indicators (Thousands) | | | | | | | | |
| Housing Units Authorized by Bldg. Permit | 53.183 | 45.970 | 42.801 | 49.030 | 43.753 | 48.607 | 47.978 | 43.186 |
| % Ch, Annual Rate | 20.4 | -44.2 | -24.9 | 72.2 | -36.6 | 52.3 | -5.1 | -34.4 |
| Single-Family | 25.018 | 23.344 | 23.607 | 22.734 | 21.060 | 22.141 | 23.667 | 22.508 |
| % Ch, Annual Rate | 7.6 | -24.2 | 4.6 | -14.0 | -26.4 | 22.2 | 30.6 | -18.2 |
| Multi-Family | 28.165 | 22.626 | 19.193 | 26.296 | 22.693 | 26.466 | 24.312 | 20.678 |
| % Ch, Annual Rate | 33.5 | -58.4 | -48.2 | 252.3 | -44.5 | 85.0 | -28.8 | -47.7 |
| 30-Year Fixed Mortgage Rate (%) | 4.27 | 4.54 | 4.57 | 4.78 | 4.38 | 4.01 | 3.66 | 3.73 |

Table A1.4 (continued)
Washington Economic Forecast Summary
Forecast 2019 to 2023

| | 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 | 452.757 | 455.364 | 457.088 | 459.380 | 462.630 | 465.435 | 468.195 | 471.168 |
| % Ch, Annual Rate | 1.5 | 2.3 | 1.5 | 2.0 | 2.9 | 2.4 | 2.4 | 2.6 |
| Real Wage and Salary Disb. | 230.363 | 233.108 | 234.285 | 235.586 | 237.060 | 238.402 | 239.796 | 241.398 |
| % Ch, Annual Rate | 1.4 | 4.9 | 2.0 | 2.2 | 2.5 | 2.3 | 2.4 | 2.7 |
| Real Nonwage Income | 222.394 | 222.256 | 222.803 | 223.794 | 225.569 | 227.034 | 228.398 | 229.770 |
| % Ch, Annual Rate | 1.7 | -0.2 | 1.0 | 1.8 | 3.2 | 2.6 | 2.4 | 2.4 |
| Real Per Capita Income (\$/Person) | 58,692 | 58,826 | 58,849 | 58,947 | 59,171 | 59,339 | 59,502 | 59,693 |
| % Ch, Annual Rate | 0.1 | 0.9 | 0.2 | 0.7 | 1.5 | 1.1 | 1.1 | 1.3 |
| Price and Wage Indexes | | | | | | | | |
| U.S. Implicit Price Deflator, PCE (2012=1.0) | 1.111 | 1.116 | 1.122 | 1.127 | 1.132 | 1.138 | 1.143 | 1.149 |
| % Ch, Annual Rate | 2.0 | 1.9 | 1.9 | 1.8 | 1.9 | 2.0 | 2.0 | 2.0 |
| Seattle Cons. Price Index (1982-84=1.0) | 2.812 | 2.826 | 2.839 | 2.850 | 2.863 | 2.878 | 2.894 | 2.911 |
| % Ch, Annual Rate | 2.2 | 2.1 | 1.8 | 1.5 | 1.9 | 2.1 | 2.3 | 2.3 |
| Average Nonfarm Annual Wage | 70,918 | 71,691 | 72,269 | 72,845 | 73,454 | 74,043 | 74,658 | 75,326 |
| % Ch, Annual Rate | 2.2 | 4.4 | 3.3 | 3.2 | 3.4 | 3.2 | 3.4 | 3.6 |
| Avg. Hourly Earnings-Mfg. (\$/Hour) | 29.57 | 29.81 | 30.03 | 30.26 | 30.49 | 30.73 | 30.97 | 31.23 |
| % Ch, Annual Rate | 3.3 | 3.3 | 3.0 | 3.0 | 3.1 | 3.1 | 3.2 | 3.4 |
| Current Dollar Income (Billions of Dollars) | | | | | | | | |
| Personal Income | 503.053 | 508.313 | 512.653 | 517.587 | 523.751 | 529.491 | 535.249 | 541.337 |
| % Ch, Annual Rate | 3.6 | 4.2 | 3.5 | 3.9 | 4.8 | 4.5 | 4.4 | 4.6 |
| Disposable Personal Income | 444.315 | 448.885 | 452.747 | 457.164 | 462.796 | 467.929 | 473.063 | 478.461 |
| % Ch, Annual Rate | 3.6 | 4.2 | 3.5 | 4.0 | 5.0 | 4.5 | 4.5 | 4.6 |
| Per Capita Income (\$/Person) | 65,212 | 65,666 | 66,002 | 66,417 | 66,989 | 67,506 | 68,024 | 68,582 |
| % Ch, Annual Rate | 2.1 | 2.8 | 2.1 | 2.5 | 3.5 | 3.1 | 3.1 | 3.3 |
| Employment (Thousands) | | | | | | | | |
| Washington Civilian Labor Force | 3,941.7 | 3,961.7 | 3,971.5 | 3,984.4 | 3,998.3 | 4,011.6 | 4,024.4 | 4,037.0 |
| Total Washington Employment | 3,763.9 | 3,784.1 | 3,791.6 | 3,801.5 | 3,812.3 | 3,822.7 | 3,832.5 | 3,842.4 |
| Unemployment Rate (%) | 4.51 | 4.48 | 4.53 | 4.59 | 4.65 | 4.71 | 4.77 | 4.82 |
| Nonfarm Payroll Employment | 3,503.8 | 3,523.6 | 3,529.7 | 3,537.6 | 3,547.0 | 3,556.0 | 3,564.9 | 3,575.0 |
| % Ch, Annual Rate | 1.2 | 2.3 | 0.7 | 0.9 | 1.1 | 1.0 | 1.0 | 1.1 |
| Manufacturing | 295.2 | 294.1 | 292.8 | 292.0 | 291.2 | 291.0 | 291.1 | 291.7 |
| % Ch, Annual Rate | 0.2 | -1.4 | -1.9 | -1.0 | -1.1 | -0.3 | 0.1 | 0.8 |
| Durable Manufacturing | 207.8 | 207.3 | 206.5 | 206.2 | 205.7 | 205.7 | 205.8 | 206.3 |
| % Ch, Annual Rate | 0.1 | -0.9 | -1.5 | -0.6 | -1.0 | 0.0 | 0.2 | 1.0 |
| Aerospace | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 |
| % Ch, Annual Rate | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Nondurable Manufacturing | 87.4 | 86.8 | 86.2 | 85.8 | 85.5 | 85.3 | 85.3 | 85.4 |
| % Ch, Annual Rate | 0.6 | -2.7 | -2.7 | -2.0 | -1.3 | -0.9 | -0.1 | 0.4 |
| Construction | 219.7 | 218.8 | 217.6 | 216.5 | 215.3 | 214.1 | 213.4 | 213.2 |
| % Ch, Annual Rate | -3.0 | -1.7 | -2.0 | -2.0 | -2.2 | -2.2 | -1.3 | -0.4 |
| Service-Providing | 2,983.0 | 3,004.8 | 3,013.4 | 3,023.2 | 3,034.7 | 3,045.2 | 3,054.7 | 3,064.4 |
| % Ch, Annual Rate | 1.6 | 2.9 | 1.2 | 1.3 | 1.5 | 1.4 | 1.3 | 1.3 |
| Software Publishers | 72.9 | 73.0 | 73.2 | 73.4 | 73.6 | 73.7 | 73.9 | 74.1 |
| % Ch, Annual Rate | 0.7 | 0.9 | 1.2 | 1.1 | 0.8 | 0.9 | 1.0 | 0.9 |
| Electronic Shopping and Mail-Order | 62.2 | 62.9 | 63.6 | 64.2 | 64.8 | 65.4 | 65.9 | 66.4 |
| % Ch, Annual Rate | 5.1 | 4.7 | 4.3 | 4.0 | 3.7 | 3.5 | 3.3 | 3.1 |
| Housing Indicators (Thousands) | | | | | | | | |
| Housing Units Authorized by Bldg. Permit | 43.868 | 43.780 | 43.540 | 43.165 | 42.743 | 42.462 | 42.318 | 42.436 |
| % Ch, Annual Rate | 6.5 | -0.8 | -2.2 | -3.4 | -3.9 | -2.6 | -1.4 | 1.1 |
| Single-Family | 23.218 | 23.239 | 23.120 | 23.044 | 23.026 | 22.907 | 22.961 | 23.086 |
| % Ch, Annual Rate | 13.2 | 0.4 | -2.0 | -1.3 | -0.3 | -2.0 | 0.9 | 2.2 |
| Multi-Family | 20.650 | 20.541 | 20.419 | 20.121 | 19.717 | 19.555 | 19.356 | 19.350 |
| % Ch, Annual Rate | -0.5 | -2.1 | -2.4 | -5.7 | -7.8 | -3.2 | -4.0 | -0.1 |
| 30-Year Fixed Mortgage Rate (%) | 3.76 | 3.89 | 4.00 | 4.11 | 4.24 | 4.34 | 4.43 | 4.48 |

Table A1.4 (continued)
Washington Economic Forecast Summary
Forecast 2019 to 2023

| | 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 | 474.671 | 477.754 | 481.008 | 484.268 | 488.282 | 491.953 | 495.682 | 499.475 |
| % Ch, Annual Rate | 3.0 | 2.6 | 2.8 | 2.7 | 3.4 | 3.0 | 3.1 | 3.1 |
| Real Wage and Salary Disb. | 243.223 | 244.897 | 246.695 | 248.509 | 250.542 | 252.582 | 254.639 | 256.692 |
| % Ch, Annual Rate | 3.1 | 2.8 | 3.0 | 3.0 | 3.3 | 3.3 | 3.3 | 3.3 |
| Real Nonwage Income | 231.447 | 232.857 | 234.313 | 235.759 | 237.741 | 239.371 | 241.043 | 242.783 |
| % Ch, Annual Rate | 3.0 | 2.5 | 2.5 | 2.5 | 3.4 | 2.8 | 2.8 | 2.9 |
| Real Per Capita Income (\$/Person) | 59,951 | 60,158 | 60,388 | 60,619 | 60,946 | 61,230 | 61,523 | 61,824 |
| % Ch, Annual Rate | 1.7 | 1.4 | 1.5 | 1.5 | 2.2 | 1.9 | 1.9 | 2.0 |
| Price and Wage Indexes | | | | | | | | |
| U.S. Implicit Price Deflator, PCE (2012=1.0) | 1.155 | 1.160 | 1.166 | 1.171 | 1.177 | 1.183 | 1.189 | 1.195 |
| % Ch, Annual Rate | 2.0 | 2.0 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Seattle Cons. Price Index (1982-84=1.0) | 2.926 | 2.943 | 2.959 | 2.976 | 2.992 | 3.009 | 3.026 | 3.043 |
| % Ch, Annual Rate | 2.1 | 2.3 | 2.2 | 2.3 | 2.3 | 2.2 | 2.3 | 2.3 |
| Average Nonfarm Annual Wage | 76,069 | 76,820 | 77,609 | 78,419 | 79,293 | 80,183 | 81,093 | 82,018 |
| % Ch, Annual Rate | 4.0 | 4.0 | 4.2 | 4.2 | 4.5 | 4.6 | 4.6 | 4.6 |
| Avg. Hourly Earnings-Mfg. (\$/Hour) | 31.50 | 31.77 | 32.02 | 32.29 | 32.57 | 32.84 | 33.13 | 33.42 |
| % Ch, Annual Rate | 3.5 | 3.4 | 3.3 | 3.4 | 3.5 | 3.4 | 3.5 | 3.6 |
| Current Dollar Income (Billions of Dollars) | | | | | | | | |
| Personal Income | 548.010 | 554.298 | 560.741 | 567.317 | 574.852 | 582.000 | 589.321 | 596.792 |
| % Ch, Annual Rate | 5.0 | 4.7 | 4.7 | 4.8 | 5.4 | 5.1 | 5.1 | 5.2 |
| Disposable Personal Income | 484.428 | 489.870 | 495.414 | 500.980 | 507.298 | 513.279 | 519.381 | 525.647 |
| % Ch, Annual Rate | 5.1 | 4.6 | 4.6 | 4.6 | 5.1 | 4.8 | 4.8 | 4.9 |
| Per Capita Income (\$/Person) | 69,214 | 69,796 | 70,398 | 71,015 | 71,751 | 72,438 | 73,145 | 73,870 |
| % Ch, Annual Rate | 3.7 | 3.4 | 3.5 | 3.6 | 4.2 | 3.9 | 4.0 | 4.0 |
| Employment (Thousands) | | | | | | | | |
| Washington Civilian Labor Force | 4,049.3 | 4,061.2 | 4,072.7 | 4,083.9 | 4,094.9 | 4,105.7 | 4,116.1 | 4,126.3 |
| Total Washington Employment | 3,852.3 | 3,862.3 | 3,871.6 | 3,880.3 | 3,889.0 | 3,897.2 | 3,905.3 | 3,913.3 |
| Unemployment Rate (%) | 4.86 | 4.90 | 4.94 | 4.99 | 5.03 | 5.08 | 5.12 | 5.16 |
| Nonfarm Payroll Employment | 3,584.1 | 3,591.4 | 3,598.4 | 3,605.4 | 3,612.7 | 3,619.5 | 3,626.2 | 3,632.7 |
| % Ch, Annual Rate | 1.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 |
| Manufacturing | 292.3 | 292.6 | 293.2 | 293.9 | 294.7 | 295.3 | 295.8 | 296.2 |
| % Ch, Annual Rate | 0.8 | 0.5 | 0.8 | 1.0 | 1.0 | 0.9 | 0.7 | 0.5 |
| Durable Manufacturing | 206.8 | 207.2 | 207.7 | 208.4 | 209.0 | 209.7 | 210.2 | 210.6 |
| % Ch, Annual Rate | 1.0 | 0.7 | 1.0 | 1.3 | 1.3 | 1.2 | 1.0 | 0.9 |
| Aerospace | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 |
| % Ch, Annual Rate | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Nondurable Manufacturing | 85.4 | 85.5 | 85.5 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 |
| % Ch, Annual Rate | 0.3 | 0.1 | 0.2 | 0.3 | 0.2 | 0.1 | -0.1 | -0.2 |
| Construction | 212.8 | 212.7 | 212.4 | 212.0 | 211.9 | 211.8 | 211.7 | 211.7 |
| % Ch, Annual Rate | -0.8 | -0.1 | -0.7 | -0.7 | -0.2 | -0.2 | -0.2 | -0.1 |
| Service-Providing | 3,073.4 | 3,080.3 | 3,087.1 | 3,093.8 | 3,100.4 | 3,106.7 | 3,113.0 | 3,119.1 |
| % Ch, Annual Rate | 1.2 | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 | 0.8 | 0.8 |
| Software Publishers | 74.3 | 74.6 | 74.8 | 75.1 | 75.4 | 75.7 | 76.0 | 76.3 |
| % Ch, Annual Rate | 1.3 | 1.3 | 1.4 | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 |
| Electronic Shopping and Mail-Order | 66.9 | 67.4 | 67.8 | 68.3 | 68.7 | 69.1 | 69.5 | 69.9 |
| % 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 | 42.525 | 42.329 | 42.065 | 42.028 | 41.939 | 41.748 | 41.538 | 41.300 |
| % Ch, Annual Rate | 0.8 | -1.8 | -2.5 | -0.4 | -0.8 | -1.8 | -2.0 | -2.3 |
| Single-Family | 22.903 | 23.070 | 23.227 | 23.399 | 23.508 | 23.549 | 23.620 | 23.689 |
| % Ch, Annual Rate | -3.1 | 2.9 | 2.8 | 3.0 | 1.9 | 0.7 | 1.2 | 1.2 |
| Multi-Family | 19.622 | 19.259 | 18.838 | 18.629 | 18.431 | 18.198 | 17.918 | 17.611 |
| % Ch, Annual Rate | 5.7 | -7.2 | -8.5 | -4.4 | -4.2 | -5.0 | -6.0 | -6.7 |
| 30-Year Fixed Mortgage Rate (%) | 4.52 | 4.52 | 4.52 | 4.57 | 4.59 | 4.59 | 4.59 | 4.59 |

Table A2.1

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2019 to 2023

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Nonfarm Payroll Employment | 144.35 | 146.61 | 149.06 | 151.39 | 153.08 | 153.97 | 154.80 | 155.35 |
| % Ch | 1.8 | 1.6 | 1.7 | 1.6 | 1.1 | 0.6 | 0.5 | 0.4 |
| Manufacturing | 12.35 | 12.44 | 12.69 | 12.84 | 12.78 | 12.51 | 12.47 | 12.49 |
| % Ch | 0.1 | 0.7 | 2.0 | 1.2 | -0.5 | -2.1 | -0.3 | 0.1 |
| Durable Manufacturing | 7.71 | 7.74 | 7.94 | 8.06 | 8.04 | 7.88 | 7.87 | 7.92 |
| % Ch | -0.7 | 0.3 | 2.7 | 1.4 | -0.2 | -2.0 | -0.1 | 0.6 |
| Wood Products | 0.39 | 0.40 | 0.41 | 0.41 | 0.41 | 0.42 | 0.44 | 0.46 |
| % Ch | 2.7 | 1.1 | 2.4 | 0.9 | 0.4 | 1.5 | 4.8 | 3.9 |
| Primary and Fabricated Metals | 1.80 | 1.80 | 1.84 | 1.86 | 1.84 | 1.78 | 1.79 | 1.83 |
| % Ch | -3.0 | 0.0 | 2.7 | 1.0 | -1.3 | -3.4 | 0.5 | 2.7 |
| Computer and Electronic Products | 1.05 | 1.04 | 1.06 | 1.08 | 1.09 | 1.09 | 1.10 | 1.10 |
| % Ch | -0.5 | -0.9 | 1.6 | 2.7 | 0.7 | -0.3 | 0.7 | 0.3 |
| Machinery and Electrical Equipment | 1.46 | 1.47 | 1.52 | 1.54 | 1.52 | 1.52 | 1.53 | 1.55 |
| % Ch | -3.0 | 0.4 | 3.7 | 1.4 | -1.0 | -0.6 | 0.9 | 1.4 |
| Transportation Equipment | 1.63 | 1.64 | 1.70 | 1.73 | 1.76 | 1.70 | 1.64 | 1.59 |
| % Ch | 1.6 | 0.8 | 3.6 | 1.9 | 1.6 | -3.8 | -3.4 | -3.0 |
| Other Durables | 1.39 | 1.40 | 1.42 | 1.43 | 1.41 | 1.38 | 1.38 | 1.39 |
| % Ch | 1.3 | 0.9 | 1.3 | 0.6 | -1.1 | -2.1 | -0.1 | 0.6 |
| Nondurable Manufacturing | 4.64 | 4.70 | 4.74 | 4.78 | 4.73 | 4.63 | 4.60 | 4.57 |
| % Ch | 1.5 | 1.3 | 0.9 | 0.8 | -1.0 | -2.1 | -0.7 | -0.7 |
| Food Manufacturing | 1.56 | 1.60 | 1.62 | 1.64 | 1.64 | 1.64 | 1.65 | 1.66 |
| % Ch | 3.0 | 2.7 | 1.3 | 1.1 | 0.3 | -0.4 | 0.7 | 0.5 |
| Paper and Paper Products | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.36 | 0.35 | 0.35 |
| % Ch | -0.5 | -1.2 | 0.2 | 1.0 | 0.2 | -3.9 | -1.5 | -0.8 |
| Other Nondurables | 2.71 | 2.73 | 2.76 | 2.77 | 2.72 | 2.64 | 2.60 | 2.57 |
| % Ch | 1.0 | 0.9 | 0.8 | 0.6 | -1.9 | -2.9 | -1.4 | -1.4 |
| Natural Resources and Mining | 0.67 | 0.68 | 0.73 | 0.75 | 0.74 | 0.74 | 0.75 | 0.77 |
| % Ch | -17.8 | 1.1 | 8.3 | 2.9 | -1.6 | 0.5 | 1.1 | 2.0 |
| Construction | 6.73 | 6.97 | 7.29 | 7.50 | 7.56 | 7.63 | 7.78 | 7.93 |
| % Ch | 4.1 | 3.6 | 4.6 | 2.9 | 0.8 | 0.9 | 1.9 | 2.0 |
| Trade, Transportation, and Utilities | 27.20 | 27.40 | 27.65 | 27.83 | 27.86 | 27.72 | 27.53 | 27.21 |
| % Ch | 1.4 | 0.7 | 0.9 | 0.7 | 0.1 | -0.5 | -0.7 | -1.2 |
| Wholesale Trade | 5.79 | 5.81 | 5.85 | 5.94 | 5.98 | 6.00 | 5.99 | 5.98 |
| % Ch | 0.1 | 0.5 | 0.7 | 1.5 | 0.6 | 0.4 | -0.3 | -0.1 |
| Retail Trade | 15.84 | 15.84 | 15.82 | 15.78 | 15.74 | 15.60 | 15.49 | 15.23 |
| % Ch | 1.4 | 0.0 | -0.1 | -0.3 | -0.3 | -0.9 | -0.7 | -1.7 |
| Trans., Warehousing, and Utilities | 5.57 | 5.75 | 5.97 | 6.11 | 6.14 | 6.12 | 6.05 | 6.00 |
| % Ch | 2.6 | 3.1 | 3.9 | 2.3 | 0.6 | -0.4 | -1.1 | -0.9 |
| Information | 2.79 | 2.81 | 2.83 | 2.82 | 2.85 | 2.85 | 2.81 | 2.85 |
| % Ch | 1.6 | 0.7 | 0.5 | -0.1 | 0.8 | 0.0 | -1.3 | 1.3 |
| Publishing Industries | 0.73 | 0.73 | 0.73 | 0.74 | 0.73 | 0.70 | 0.67 | 0.66 |
| % Ch | 0.5 | -0.2 | 0.5 | 1.1 | -2.0 | -4.1 | -3.3 | -1.8 |
| Other Information | 2.06 | 2.08 | 2.09 | 2.08 | 2.12 | 2.15 | 2.14 | 2.19 |
| % Ch | 1.9 | 1.0 | 0.5 | -0.5 | 1.9 | 1.4 | -0.6 | 2.3 |
| Financial Activities | 8.29 | 8.45 | 8.57 | 8.67 | 8.77 | 8.77 | 8.75 | 8.73 |
| % Ch | 2.0 | 2.0 | 1.4 | 1.2 | 1.1 | 0.0 | -0.2 | -0.2 |
| Professional and Business Services | 20.11 | 20.51 | 21.00 | 21.48 | 22.01 | 22.94 | 23.66 | 24.14 |
| % Ch | 2.1 | 2.0 | 2.4 | 2.3 | 2.5 | 4.2 | 3.1 | 2.0 |
| Education and Health Services | 22.64 | 23.19 | 23.67 | 24.26 | 24.61 | 24.78 | 24.78 | 24.79 |
| % Ch | 2.8 | 2.4 | 2.1 | 2.5 | 1.4 | 0.7 | 0.0 | 0.0 |
| Leisure and Hospitality | 15.66 | 16.05 | 16.35 | 16.74 | 17.08 | 17.18 | 17.32 | 17.38 |
| % Ch | 3.3 | 2.5 | 1.9 | 2.4 | 2.0 | 0.6 | 0.8 | 0.4 |
| Other Services | 5.69 | 5.77 | 5.84 | 5.93 | 5.94 | 5.89 | 5.83 | 5.77 |
| % Ch | 1.2 | 1.4 | 1.3 | 1.5 | 0.1 | -0.7 | -1.1 | -0.9 |
| Federal Government | 2.79 | 2.80 | 2.80 | 2.82 | 2.98 | 2.87 | 2.87 | 2.87 |
| % Ch | 1.4 | 0.4 | -0.3 | 0.8 | 5.7 | -3.5 | 0.0 | 0.0 |
| State and Local Government | 19.44 | 19.55 | 19.65 | 19.75 | 19.91 | 20.08 | 20.25 | 20.41 |
| % Ch | 0.9 | 0.6 | 0.5 | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 |

Table A2.2

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2019 to 2023

| | 2018:1 | 2018:2 | 2018:3 | 2018:4 | 2019:1 | 2019:2 | 2019:3 | 2019:4 |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Nonfarm Payroll Employment | 148.05 | 148.74 | 149.41 | 150.06 | 150.68 | 151.11 | 151.62 | 152.16 |
| % Ch, Annual Rate | 1.8 | 1.9 | 1.8 | 1.7 | 1.7 | 1.2 | 1.4 | 1.4 |
| Manufacturing | 12.59 | 12.66 | 12.72 | 12.79 | 12.83 | 12.84 | 12.85 | 12.84 |
| % Ch, Annual Rate | 2.3 | 2.3 | 1.9 | 2.2 | 1.4 | 0.3 | 0.3 | -0.2 |
| Durable Manufacturing | 7.86 | 7.92 | 7.97 | 8.02 | 8.06 | 8.06 | 8.07 | 8.05 |
| % Ch, Annual Rate | 3.4 | 3.0 | 2.7 | 2.4 | 1.8 | 0.2 | 0.3 | -0.8 |
| Wood Products | 0.40 | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 |
| % Ch, Annual Rate | 6.1 | 2.4 | 1.6 | 0.2 | 1.2 | 0.1 | 0.9 | 1.7 |
| Primary and Fabricated Metals | 1.83 | 1.84 | 1.85 | 1.86 | 1.87 | 1.86 | 1.86 | 1.86 |
| % Ch, Annual Rate | 3.5 | 3.1 | 2.7 | 1.2 | 2.0 | -0.7 | -0.8 | -0.5 |
| Computer and Electronic Products | 1.05 | 1.05 | 1.06 | 1.06 | 1.07 | 1.08 | 1.09 | 1.09 |
| % Ch, Annual Rate | 1.2 | 1.9 | 1.9 | 2.2 | 3.6 | 2.4 | 3.6 | 2.1 |
| Machinery and Electrical Equipment | 1.49 | 1.51 | 1.53 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 |
| % Ch, Annual Rate | 3.8 | 5.3 | 3.6 | 2.8 | 1.6 | -0.4 | -1.1 | -0.5 |
| Transportation Equipment | 1.68 | 1.69 | 1.71 | 1.73 | 1.74 | 1.74 | 1.74 | 1.72 |
| % Ch, Annual Rate | 4.9 | 3.3 | 4.0 | 4.5 | 1.9 | 0.5 | 0.1 | -4.0 |
| Other Durables | 1.41 | 1.41 | 1.42 | 1.42 | 1.43 | 1.43 | 1.43 | 1.43 |
| % Ch, Annual Rate | 2.2 | 1.1 | 1.0 | 1.8 | 0.3 | -0.2 | 0.7 | -0.3 |
| Nondurable Manufacturing | 4.73 | 4.74 | 4.74 | 4.77 | 4.77 | 4.78 | 4.78 | 4.79 |
| % Ch, Annual Rate | 0.5 | 1.0 | 0.6 | 1.8 | 0.7 | 0.4 | 0.4 | 0.7 |
| Food Manufacturing | 1.61 | 1.62 | 1.62 | 1.63 | 1.63 | 1.63 | 1.64 | 1.65 |
| % Ch, Annual Rate | 1.1 | 1.5 | 0.6 | 2.5 | 0.7 | 0.2 | 0.9 | 2.2 |
| Paper and Paper Products | 0.36 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| % Ch, Annual Rate | -0.1 | 1.8 | 2.5 | 1.8 | 0.4 | -0.2 | 0.0 | 3.3 |
| Other Nondurables | 2.75 | 2.75 | 2.76 | 2.77 | 2.77 | 2.77 | 2.78 | 2.77 |
| % Ch, Annual Rate | 0.3 | 0.7 | 0.3 | 1.3 | 0.7 | 0.6 | 0.3 | -0.5 |
| Natural Resources and Mining | 0.71 | 0.73 | 0.74 | 0.75 | 0.76 | 0.76 | 0.75 | 0.75 |
| % Ch, Annual Rate | 9.6 | 13.3 | 6.6 | 5.5 | 3.4 | 0.0 | -4.5 | 0.0 |
| Construction | 7.18 | 7.26 | 7.33 | 7.39 | 7.45 | 7.49 | 7.51 | 7.55 |
| % Ch, Annual Rate | 6.7 | 4.8 | 4.0 | 3.1 | 3.2 | 2.3 | 1.0 | 2.1 |
| Trade, Transportation, and Utilities | 27.55 | 27.61 | 27.68 | 27.76 | 27.82 | 27.81 | 27.82 | 27.87 |
| % Ch, Annual Rate | 1.2 | 0.9 | 0.9 | 1.2 | 0.9 | -0.2 | 0.1 | 0.8 |
| Wholesale Trade | 5.83 | 5.83 | 5.86 | 5.89 | 5.92 | 5.93 | 5.94 | 5.97 |
| % Ch, Annual Rate | 0.5 | -0.1 | 2.4 | 1.8 | 1.9 | 1.1 | 0.7 | 1.9 |
| Retail Trade | 15.83 | 15.84 | 15.82 | 15.81 | 15.82 | 15.77 | 15.76 | 15.77 |
| % Ch, Annual Rate | 0.2 | 0.3 | -0.5 | -0.1 | 0.1 | -1.0 | -0.3 | 0.1 |
| Trans., Warehousing, and Utilities | 5.90 | 5.95 | 5.99 | 6.06 | 6.09 | 6.10 | 6.11 | 6.14 |
| % Ch, Annual Rate | 4.4 | 3.5 | 3.2 | 4.4 | 2.1 | 0.8 | 0.7 | 1.5 |
| Information | 2.82 | 2.83 | 2.83 | 2.83 | 2.81 | 2.82 | 2.82 | 2.84 |
| % Ch, Annual Rate | -0.1 | 2.1 | -0.5 | 0.4 | -2.5 | 0.7 | 1.2 | 2.2 |
| Publishing Industries | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.74 | 0.74 | 0.75 |
| % Ch, Annual Rate | 0.8 | 0.4 | 0.6 | 0.1 | 0.2 | 2.9 | 2.4 | 1.2 |
| Other Information | 2.08 | 2.10 | 2.09 | 2.10 | 2.08 | 2.08 | 2.08 | 2.09 |
| % Ch, Annual Rate | -0.4 | 2.6 | -0.9 | 0.5 | -3.4 | -0.1 | 0.8 | 2.6 |
| Financial Activities | 8.52 | 8.55 | 8.58 | 8.61 | 8.63 | 8.66 | 8.69 | 8.72 |
| % Ch, Annual Rate | 1.4 | 1.5 | 1.4 | 1.4 | 0.7 | 1.3 | 1.7 | 1.5 |
| Professional and Business Services | 20.77 | 20.93 | 21.07 | 21.22 | 21.30 | 21.42 | 21.53 | 21.66 |
| % Ch, Annual Rate | 2.2 | 3.0 | 2.8 | 2.8 | 1.6 | 2.2 | 2.1 | 2.5 |
| Education and Health Services | 23.48 | 23.59 | 23.74 | 23.86 | 24.02 | 24.18 | 24.36 | 24.47 |
| % Ch, Annual Rate | 2.3 | 1.9 | 2.6 | 2.0 | 2.7 | 2.8 | 3.0 | 1.8 |
| Leisure and Hospitality | 16.23 | 16.30 | 16.38 | 16.50 | 16.66 | 16.70 | 16.74 | 16.87 |
| % Ch, Annual Rate | 1.5 | 1.8 | 2.0 | 2.9 | 3.9 | 0.9 | 1.0 | 3.2 |
| Other Services | 5.81 | 5.84 | 5.85 | 5.87 | 5.90 | 5.93 | 5.95 | 5.94 |
| % Ch, Annual Rate | 0.8 | 2.2 | 0.8 | 1.2 | 1.8 | 2.3 | 1.3 | -0.3 |
| Federal Government | 2.79 | 2.79 | 2.80 | 2.80 | 2.80 | 2.81 | 2.84 | 2.82 |
| % Ch, Annual Rate | -0.8 | 0.1 | 0.4 | 0.5 | 0.2 | 1.8 | 3.0 | -2.1 |
| State and Local Government | 19.60 | 19.64 | 19.69 | 19.68 | 19.71 | 19.71 | 19.78 | 19.82 |
| % Ch, Annual Rate | 0.4 | 0.8 | 0.9 | 0.0 | 0.4 | 0.1 | 1.4 | 0.9 |

Table A2.2 (continued)

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2019 to 2023

| | 2020:1 | 2020:2 | 2020:3 | 2020:4 | 2021:1 | 2021:2 | 2021:3 | 2021:4 |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Nonfarm Payroll Employment | 152.56 | 153.14 | 153.24 | 153.38 | 153.61 | 153.85 | 154.07 | 154.36 |
| % Ch, Annual Rate | 1.1 | 1.5 | 0.3 | 0.4 | 0.6 | 0.6 | 0.6 | 0.8 |
| Manufacturing | 12.88 | 12.83 | 12.73 | 12.66 | 12.57 | 12.51 | 12.48 | 12.49 |
| % Ch, Annual Rate | 1.3 | -1.7 | -3.2 | -2.0 | -3.0 | -1.7 | -1.1 | 0.3 |
| Durable Manufacturing | 8.09 | 8.08 | 8.01 | 7.98 | 7.91 | 7.88 | 7.85 | 7.87 |
| % Ch, Annual Rate | 2.0 | -0.7 | -3.1 | -1.6 | -3.4 | -1.8 | -1.2 | 0.7 |
| Wood Products | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 | 0.42 | 0.42 | 0.42 |
| % Ch, Annual Rate | -2.5 | 3.3 | -1.1 | 2.0 | 0.3 | 2.5 | 1.5 | 4.5 |
| Primary and Fabricated Metals | 1.86 | 1.85 | 1.83 | 1.81 | 1.79 | 1.78 | 1.77 | 1.77 |
| % Ch, Annual Rate | 1.3 | -2.5 | -5.4 | -3.5 | -4.5 | -2.8 | -1.9 | 0.2 |
| Computer and Electronic Products | 1.10 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 |
| % Ch, Annual Rate | 1.6 | -2.0 | -1.6 | -1.1 | -0.4 | 0.7 | 1.2 | 1.3 |
| Machinery and Electrical Equipment | 1.54 | 1.53 | 1.52 | 1.52 | 1.51 | 1.51 | 1.52 | 1.52 |
| % Ch, Annual Rate | 0.3 | -2.2 | -3.4 | -0.1 | -0.7 | 0.5 | 0.4 | 1.3 |
| Transportation Equipment | 1.76 | 1.77 | 1.77 | 1.76 | 1.72 | 1.70 | 1.68 | 1.68 |
| % Ch, Annual Rate | 8.5 | 3.2 | -1.1 | -2.1 | -7.7 | -5.3 | -4.0 | -0.1 |
| Other Durables | 1.42 | 1.42 | 1.40 | 1.40 | 1.39 | 1.38 | 1.38 | 1.38 |
| % Ch, Annual Rate | -1.0 | -1.3 | -3.9 | -1.8 | -2.8 | -1.6 | -1.6 | -0.1 |
| Nondurable Manufacturing | 4.79 | 4.75 | 4.71 | 4.68 | 4.65 | 4.64 | 4.63 | 4.62 |
| % Ch, Annual Rate | 0.1 | -3.5 | -3.3 | -2.7 | -2.2 | -1.5 | -0.8 | -0.4 |
| Food Manufacturing | 1.65 | 1.65 | 1.64 | 1.64 | 1.64 | 1.63 | 1.64 | 1.64 |
| % Ch, Annual Rate | 1.3 | -1.3 | -1.6 | -1.2 | 0.1 | -0.3 | 0.5 | 1.2 |
| Paper and Paper Products | 0.38 | 0.37 | 0.37 | 0.36 | 0.36 | 0.36 | 0.36 | 0.35 |
| % Ch, Annual Rate | 7.1 | -5.6 | -5.6 | -5.2 | -4.3 | -2.3 | -1.9 | -1.6 |
| Other Nondurables | 2.76 | 2.73 | 2.70 | 2.68 | 2.66 | 2.64 | 2.63 | 2.63 |
| % Ch, Annual Rate | -1.4 | -4.4 | -4.0 | -3.3 | -3.4 | -2.2 | -1.5 | -1.3 |
| Natural Resources and Mining | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.75 | 0.75 |
| % Ch, Annual Rate | -2.4 | -2.6 | 0.7 | -0.4 | 0.4 | 1.6 | 1.5 | 0.4 |
| Construction | 7.57 | 7.55 | 7.55 | 7.57 | 7.59 | 7.61 | 7.64 | 7.68 |
| % Ch, Annual Rate | 1.0 | -0.6 | -0.1 | 0.9 | 1.3 | 1.0 | 1.4 | 1.9 |
| Trade, Transportation, and Utilities | 27.90 | 27.86 | 27.87 | 27.82 | 27.77 | 27.74 | 27.68 | 27.68 |
| % Ch, Annual Rate | 0.4 | -0.6 | 0.2 | -0.8 | -0.6 | -0.5 | -0.9 | 0.1 |
| Wholesale Trade | 5.98 | 5.97 | 5.98 | 5.99 | 6.00 | 6.01 | 6.01 | 6.00 |
| % Ch, Annual Rate | 0.3 | -0.3 | 0.8 | 0.3 | 0.8 | 0.5 | 0.2 | -0.7 |
| Retail Trade | 15.77 | 15.74 | 15.75 | 15.70 | 15.64 | 15.60 | 15.55 | 15.59 |
| % Ch, Annual Rate | 0.0 | -0.6 | 0.1 | -1.3 | -1.3 | -1.0 | -1.4 | 1.0 |
| Trans., Warehousing, and Utilities | 6.16 | 6.14 | 6.14 | 6.13 | 6.13 | 6.13 | 6.12 | 6.09 |
| % Ch, Annual Rate | 1.4 | -0.9 | -0.1 | -0.6 | -0.1 | -0.2 | -0.6 | -1.6 |
| Information | 2.84 | 2.85 | 2.85 | 2.85 | 2.86 | 2.86 | 2.85 | 2.82 |
| % Ch, Annual Rate | -0.1 | 0.9 | 0.7 | 0.2 | 1.4 | -0.7 | -1.4 | -3.3 |
| Publishing Industries | 0.74 | 0.73 | 0.72 | 0.72 | 0.71 | 0.70 | 0.69 | 0.68 |
| % Ch, Annual Rate | -5.0 | -4.4 | -3.2 | -3.5 | -4.8 | -4.4 | -4.0 | -4.4 |
| Other Information | 2.10 | 2.12 | 2.13 | 2.14 | 2.16 | 2.16 | 2.16 | 2.14 |
| % Ch, Annual Rate | 1.6 | 2.8 | 2.1 | 1.5 | 3.6 | 0.6 | -0.6 | -3.0 |
| Financial Activities | 8.75 | 8.76 | 8.79 | 8.78 | 8.78 | 8.77 | 8.78 | 8.76 |
| % Ch, Annual Rate | 1.0 | 0.8 | 1.3 | -0.4 | -0.3 | -0.2 | 0.2 | -0.8 |
| Professional and Business Services | 21.73 | 21.87 | 22.09 | 22.34 | 22.63 | 22.85 | 23.01 | 23.27 |
| % Ch, Annual Rate | 1.4 | 2.5 | 4.1 | 4.6 | 5.3 | 3.9 | 2.9 | 4.4 |
| Education and Health Services | 24.56 | 24.57 | 24.63 | 24.67 | 24.75 | 24.78 | 24.81 | 24.79 |
| % Ch, Annual Rate | 1.5 | 0.1 | 0.9 | 0.7 | 1.3 | 0.5 | 0.5 | -0.4 |
| Leisure and Hospitality | 16.93 | 17.05 | 17.16 | 17.18 | 17.11 | 17.15 | 17.21 | 17.25 |
| % Ch, Annual Rate | 1.4 | 2.8 | 2.6 | 0.5 | -1.6 | 0.9 | 1.5 | 0.9 |
| Other Services | 5.96 | 5.94 | 5.93 | 5.91 | 5.91 | 5.90 | 5.89 | 5.87 |
| % Ch, Annual Rate | 1.0 | -1.1 | -0.7 | -1.2 | -0.3 | -0.5 | -0.7 | -1.7 |
| Federal Government | 2.84 | 3.23 | 2.97 | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| % Ch, Annual Rate | 3.1 | 66.5 | -28.5 | -12.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| State and Local Government | 19.85 | 19.89 | 19.94 | 19.98 | 20.02 | 20.06 | 20.10 | 20.14 |
| % Ch, Annual Rate | 0.6 | 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 2019 to 2023

| | 2022:1 | 2022:2 | 2022:3 | 2022:4 | 2023:1 | 2023:2 | 2023:3 | 2023:4 |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Nonfarm Payroll Employment | 154.60 | 154.73 | 154.87 | 155.01 | 155.16 | 155.29 | 155.42 | 155.55 |
| % Ch, Annual Rate | 0.6 | 0.3 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 |
| Manufacturing | 12.49 | 12.47 | 12.46 | 12.47 | 12.48 | 12.49 | 12.49 | 12.49 |
| % Ch, Annual Rate | 0.0 | -0.5 | -0.2 | 0.3 | 0.3 | 0.3 | 0.1 | -0.2 |
| Durable Manufacturing | 7.87 | 7.86 | 7.86 | 7.88 | 7.90 | 7.91 | 7.93 | 7.93 |
| % Ch, Annual Rate | 0.2 | -0.4 | 0.1 | 0.7 | 0.9 | 0.9 | 0.6 | 0.3 |
| Wood Products | 0.43 | 0.43 | 0.44 | 0.45 | 0.45 | 0.45 | 0.46 | 0.46 |
| % Ch, Annual Rate | 5.8 | 5.7 | 6.0 | 5.6 | 3.8 | 2.7 | 1.7 | 1.8 |
| Primary and Fabricated Metals | 1.77 | 1.78 | 1.79 | 1.80 | 1.81 | 1.83 | 1.84 | 1.85 |
| % Ch, Annual Rate | 1.1 | 1.1 | 1.8 | 2.8 | 3.2 | 3.2 | 2.5 | 2.2 |
| Computer and Electronic Products | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| % Ch, Annual Rate | 1.0 | -0.2 | -0.1 | 0.3 | 0.6 | 0.5 | 0.4 | 0.2 |
| Machinery and Electrical Equipment | 1.52 | 1.53 | 1.53 | 1.54 | 1.54 | 1.55 | 1.55 | 1.56 |
| % Ch, Annual Rate | 0.8 | 0.9 | 1.3 | 1.5 | 1.8 | 1.5 | 0.9 | 0.7 |
| Transportation Equipment | 1.67 | 1.65 | 1.63 | 1.61 | 1.60 | 1.59 | 1.59 | 1.58 |
| % Ch, Annual Rate | -3.1 | -5.0 | -4.5 | -3.5 | -2.9 | -2.6 | -1.3 | -1.9 |
| Other Durables | 1.38 | 1.38 | 1.38 | 1.38 | 1.39 | 1.39 | 1.39 | 1.39 |
| % Ch, Annual Rate | 0.3 | -0.2 | 0.5 | 1.1 | 0.9 | 0.8 | 0.0 | -0.2 |
| Nondurable Manufacturing | 4.62 | 4.61 | 4.60 | 4.59 | 4.59 | 4.58 | 4.57 | 4.55 |
| % Ch, Annual Rate | -0.5 | -0.8 | -0.7 | -0.5 | -0.6 | -0.8 | -0.9 | -1.0 |
| Food Manufacturing | 1.65 | 1.65 | 1.65 | 1.65 | 1.65 | 1.66 | 1.66 | 1.66 |
| % Ch, Annual Rate | 1.0 | 0.5 | 0.5 | 0.7 | 0.6 | 0.4 | 0.2 | 0.0 |
| Paper and Paper Products | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 |
| % Ch, Annual Rate | -1.5 | -1.5 | -1.1 | -0.7 | -0.5 | -0.7 | -0.7 | -0.9 |
| Other Nondurables | 2.62 | 2.61 | 2.60 | 2.59 | 2.58 | 2.57 | 2.56 | 2.55 |
| % Ch, Annual Rate | -1.3 | -1.5 | -1.3 | -1.3 | -1.4 | -1.5 | -1.6 | -1.7 |
| Natural Resources and Mining | 0.75 | 0.75 | 0.75 | 0.76 | 0.76 | 0.76 | 0.77 | 0.77 |
| % Ch, Annual Rate | -0.2 | 2.2 | 2.4 | 1.9 | 1.7 | 1.7 | 2.5 | 1.9 |
| Construction | 7.72 | 7.76 | 7.80 | 7.84 | 7.88 | 7.91 | 7.95 | 7.99 |
| % Ch, Annual Rate | 2.2 | 2.2 | 2.1 | 2.0 | 2.0 | 1.9 | 1.8 | 1.8 |
| Trade, Transportation, and Utilities | 27.65 | 27.57 | 27.48 | 27.41 | 27.32 | 27.24 | 27.17 | 27.09 |
| % Ch, Annual Rate | -0.5 | -1.1 | -1.2 | -1.1 | -1.3 | -1.2 | -1.1 | -1.1 |
| Wholesale Trade | 6.00 | 5.99 | 5.98 | 5.98 | 5.98 | 5.98 | 5.98 | 5.98 |
| % Ch, Annual Rate | 0.0 | -0.6 | -0.4 | -0.3 | 0.2 | -0.1 | 0.0 | 0.0 |
| Retail Trade | 15.57 | 15.52 | 15.46 | 15.40 | 15.32 | 15.26 | 15.19 | 15.13 |
| % Ch, Annual Rate | -0.6 | -1.3 | -1.6 | -1.4 | -2.0 | -1.7 | -1.7 | -1.7 |
| Trans., Warehousing, and Utilities | 6.08 | 6.06 | 6.04 | 6.03 | 6.02 | 6.00 | 5.99 | 5.98 |
| % Ch, Annual Rate | -0.8 | -1.3 | -1.1 | -1.1 | -0.7 | -0.9 | -0.8 | -0.7 |
| Information | 2.82 | 2.81 | 2.81 | 2.81 | 2.82 | 2.84 | 2.86 | 2.88 |
| % Ch, Annual Rate | -0.6 | -1.4 | -0.1 | 0.3 | 1.3 | 2.4 | 3.3 | 2.7 |
| Publishing Industries | 0.68 | 0.67 | 0.67 | 0.67 | 0.66 | 0.66 | 0.66 | 0.66 |
| % Ch, Annual Rate | -3.1 | -2.8 | -2.4 | -2.1 | -1.5 | -1.7 | -1.5 | -1.4 |
| Other Information | 2.14 | 2.14 | 2.14 | 2.14 | 2.16 | 2.18 | 2.20 | 2.22 |
| % Ch, Annual Rate | 0.2 | -1.0 | 0.7 | 1.1 | 2.2 | 3.7 | 4.8 | 3.9 |
| Financial Activities | 8.76 | 8.75 | 8.75 | 8.75 | 8.75 | 8.73 | 8.72 | 8.72 |
| % Ch, Annual Rate | -0.1 | -0.3 | -0.2 | -0.1 | -0.1 | -0.6 | -0.4 | -0.2 |
| Professional and Business Services | 23.46 | 23.60 | 23.73 | 23.85 | 23.99 | 24.09 | 24.19 | 24.30 |
| % Ch, Annual Rate | 3.4 | 2.4 | 2.3 | 2.1 | 2.3 | 1.8 | 1.7 | 1.8 |
| Education and Health Services | 24.81 | 24.78 | 24.77 | 24.76 | 24.79 | 24.79 | 24.79 | 24.80 |
| % Ch, Annual Rate | 0.3 | -0.4 | -0.2 | -0.1 | 0.3 | 0.0 | 0.1 | 0.1 |
| Leisure and Hospitality | 17.25 | 17.30 | 17.34 | 17.37 | 17.36 | 17.38 | 17.39 | 17.40 |
| % Ch, Annual Rate | -0.1 | 1.2 | 1.0 | 0.7 | -0.3 | 0.4 | 0.3 | 0.3 |
| Other Services | 5.85 | 5.83 | 5.82 | 5.80 | 5.79 | 5.78 | 5.77 | 5.76 |
| % Ch, Annual Rate | -1.0 | -1.2 | -1.1 | -1.2 | -0.7 | -0.9 | -0.7 | -0.6 |
| Federal Government | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| % Ch, Annual Rate | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| State and Local Government | 20.18 | 20.23 | 20.27 | 20.31 | 20.35 | 20.39 | 20.44 | 20.48 |
| % Ch, Annual Rate | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |

Table A2.3

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2019 to 2023

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Nonfarm Payroll Employment | 3,242.7 | 3,321.1 | 3,404.1 | 3,469.8 | 3,523.7 | 3,560.7 | 3,594.8 | 3,622.8 |
| % Ch | 3.1 | 2.4 | 2.5 | 1.9 | 1.6 | 1.1 | 1.0 | 0.8 |
| Manufacturing | 290.4 | 284.2 | 287.5 | 294.5 | 293.5 | 291.3 | 293.0 | 295.5 |
| % Ch | -0.7 | -2.1 | 1.2 | 2.4 | -0.3 | -0.8 | 0.6 | 0.9 |
| Durable Manufacturing | 207.7 | 200.3 | 202.1 | 207.6 | 207.0 | 205.9 | 207.5 | 209.9 |
| % Ch | -1.7 | -3.5 | 0.9 | 2.7 | -0.3 | -0.5 | 0.8 | 1.1 |
| Wood Products | 13.1 | 12.9 | 13.0 | 13.0 | 12.8 | 12.7 | 12.9 | 13.1 |
| % Ch | -1.6 | -1.7 | 0.9 | 0.4 | -1.8 | -0.9 | 2.0 | 1.2 |
| Primary and Fabricated Metals | 25.2 | 25.1 | 26.1 | 26.8 | 26.5 | 25.6 | 25.7 | 26.5 |
| % Ch | -2.0 | -0.6 | 4.0 | 2.8 | -0.9 | -3.6 | 0.5 | 2.9 |
| Computer and Electronic Products | 20.1 | 19.6 | 19.8 | 19.7 | 19.6 | 19.7 | 20.2 | 20.6 |
| % Ch | 0.7 | -2.3 | 0.8 | -0.7 | -0.4 | 0.8 | 2.4 | 1.8 |
| Machinery and Electrical Equipment | 20.5 | 20.7 | 21.3 | 21.3 | 21.1 | 21.6 | 22.5 | 23.6 |
| % Ch | -1.2 | 1.0 | 2.8 | -0.1 | -0.6 | 2.1 | 4.2 | 4.8 |
| Aerospace | 91.0 | 84.2 | 84.0 | 88.7 | 89.1 | 89.1 | 89.1 | 89.1 |
| % Ch | -3.2 | -7.5 | -0.3 | 5.6 | 0.5 | 0.0 | 0.0 | 0.0 |
| Other Transportation Equip. | 10.2 | 10.2 | 9.9 | 9.9 | 9.5 | 9.1 | 8.9 | 8.7 |
| % Ch | -0.9 | 0.1 | -3.1 | 0.4 | -3.6 | -4.6 | -2.4 | -2.5 |
| Other Durables | 27.6 | 27.7 | 28.1 | 28.2 | 28.3 | 28.1 | 28.1 | 28.4 |
| % Ch | 1.2 | 0.2 | 1.6 | 0.4 | 0.2 | -0.6 | 0.3 | 0.9 |
| Nondurable Manufacturing | 82.7 | 83.9 | 85.5 | 86.9 | 86.6 | 85.4 | 85.5 | 85.6 |
| % Ch | 2.0 | 1.4 | 1.9 | 1.7 | -0.4 | -1.4 | 0.1 | 0.1 |
| Food Manufacturing | 37.6 | 38.0 | 38.9 | 39.3 | 38.7 | 38.3 | 38.2 | 38.1 |
| % Ch | 1.9 | 1.3 | 2.3 | 1.0 | -1.5 | -1.2 | -0.1 | -0.4 |
| Paper and Paper Products | 7.8 | 7.7 | 7.6 | 7.6 | 7.5 | 7.1 | 6.9 | 6.8 |
| % Ch | -3.4 | -0.2 | -1.8 | -0.2 | -1.3 | -5.4 | -2.7 | -1.8 |
| Other Nondurables | 37.4 | 38.1 | 39.0 | 40.0 | 40.3 | 40.0 | 40.4 | 40.8 |
| % Ch | 3.4 | 1.9 | 2.2 | 2.8 | 0.7 | -0.8 | 0.9 | 0.9 |
| Natural Resources and Mining | 6.3 | 6.2 | 6.3 | 6.0 | 5.9 | 5.8 | 5.7 | 5.7 |
| % Ch | -0.8 | -1.0 | 1.5 | -5.3 | -1.6 | -2.0 | -0.8 | 0.0 |
| Construction | 186.6 | 199.8 | 213.4 | 218.9 | 218.2 | 214.0 | 212.5 | 211.8 |
| % Ch | 7.7 | 7.0 | 6.8 | 2.6 | -0.3 | -1.9 | -0.7 | -0.3 |
| Trade, Transportation, and Utilities | 605.7 | 624.6 | 637.3 | 642.8 | 647.9 | 649.8 | 650.1 | 647.1 |
| % Ch | 3.1 | 3.1 | 2.0 | 0.9 | 0.8 | 0.3 | 0.0 | -0.5 |
| Wholesale Trade | 132.1 | 133.3 | 136.4 | 137.9 | 138.7 | 139.6 | 139.7 | 139.9 |
| % Ch | 0.6 | 0.9 | 2.3 | 1.1 | 0.6 | 0.7 | 0.0 | 0.2 |
| Retail Trade | 365.2 | 378.7 | 386.2 | 389.5 | 393.7 | 394.9 | 396.0 | 393.4 |
| % Ch | 3.2 | 3.7 | 2.0 | 0.9 | 1.1 | 0.3 | 0.3 | -0.7 |
| Electronic Shopping and Mail-Order | 38.2 | 49.7 | 54.8 | 61.0 | 63.3 | 65.6 | 67.6 | 69.3 |
| % Ch | 26.6 | 30.1 | 10.2 | 11.3 | 3.8 | 3.8 | 3.0 | 2.5 |
| Other Retail Trade | 327.0 | 329.0 | 331.4 | 328.6 | 330.4 | 329.3 | 328.4 | 324.1 |
| % Ch | 1.0 | 0.6 | 0.7 | -0.9 | 0.6 | -0.4 | -0.3 | -1.3 |
| Trans., Warehousing, and Utilities | 108.4 | 112.6 | 114.7 | 115.4 | 115.5 | 115.3 | 114.5 | 113.8 |
| % Ch | 6.0 | 3.8 | 1.9 | 0.6 | 0.1 | -0.2 | -0.7 | -0.6 |
| Information | 121.4 | 126.3 | 133.6 | 144.3 | 149.3 | 150.4 | 150.1 | 152.8 |
| % Ch | 6.2 | 4.1 | 5.8 | 8.0 | 3.5 | 0.7 | -0.2 | 1.8 |
| Software Publishers | 58.9 | 61.4 | 65.3 | 70.3 | 73.1 | 73.8 | 74.7 | 75.9 |
| % Ch | 5.3 | 4.2 | 6.4 | 7.6 | 4.0 | 1.0 | 1.2 | 1.5 |
| Other Publishing Industries | 5.9 | 5.5 | 5.1 | 4.6 | 3.9 | 3.3 | 2.8 | 2.4 |
| % Ch | -4.0 | -6.8 | -7.7 | -8.8 | -15.7 | -15.6 | -15.9 | -14.0 |
| Other Information | 56.5 | 59.4 | 63.2 | 69.3 | 72.3 | 73.3 | 72.6 | 74.6 |
| % Ch | 8.4 | 5.0 | 6.4 | 9.7 | 4.2 | 1.4 | -0.9 | 2.7 |
| Financial Activities | 151.0 | 154.0 | 157.5 | 160.2 | 162.3 | 161.3 | 159.9 | 158.5 |
| % Ch | 2.1 | 2.0 | 2.3 | 1.7 | 1.3 | -0.6 | -0.9 | -0.9 |
| Professional and Business Services | 401.5 | 413.4 | 426.1 | 436.3 | 449.5 | 469.2 | 485.1 | 496.9 |
| % Ch | 3.5 | 3.0 | 3.1 | 2.4 | 3.0 | 4.4 | 3.4 | 2.4 |
| Education and Health Services | 463.5 | 475.6 | 491.3 | 501.8 | 509.7 | 517.2 | 521.3 | 525.3 |
| % Ch | 3.4 | 2.6 | 3.3 | 2.1 | 1.6 | 1.5 | 0.8 | 0.8 |
| Leisure and Hospitality | 323.3 | 331.5 | 342.3 | 347.8 | 355.6 | 359.5 | 363.4 | 365.8 |
| % Ch | 4.2 | 2.6 | 3.3 | 1.6 | 2.3 | 1.1 | 1.1 | 0.7 |
| Other Services | 117.6 | 119.7 | 121.7 | 128.1 | 130.3 | 132.0 | 133.3 | 134.6 |
| % Ch | 2.3 | 1.8 | 1.7 | 5.3 | 1.7 | 1.3 | 1.0 | 0.9 |
| Federal Government | 74.5 | 74.8 | 74.7 | 75.9 | 80.0 | 78.4 | 78.8 | 79.0 |
| % Ch | 1.9 | 0.4 | -0.2 | 1.6 | 5.3 | -1.9 | 0.4 | 0.4 |
| State and Local Government | 501.0 | 511.0 | 512.3 | 513.2 | 521.5 | 531.8 | 541.6 | 549.7 |
| % Ch | 2.5 | 2.0 | 0.3 | 0.2 | 1.6 | 2.0 | 1.8 | 1.5 |

Table A2.4

Washington Nonagricultural Employment by Industry (Thousands)
 Forecast 2019 to 2023

| | 2018:1 | 2018:2 | 2018:3 | 2018:4 | 2019:1 | 2019:2 | 2019:3 | 2019:4 |
|--------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Nonfarm Payroll Employment | 3,381.4 | 3,394.7 | 3,411.6 | 3,428.7 | 3,441.4 | 3,463.4 | 3,480.8 | 3,493.5 |
| % Ch, Annual Rate | 3.9 | 1.6 | 2.0 | 2.0 | 1.5 | 2.6 | 2.0 | 1.5 |
| Manufacturing | 284.4 | 286.0 | 288.4 | 291.3 | 293.2 | 293.8 | 296.0 | 295.0 |
| % Ch, Annual Rate | 2.7 | 2.3 | 3.3 | 4.1 | 2.6 | 0.8 | 3.0 | -1.3 |
| Durable Manufacturing | 199.4 | 200.9 | 202.9 | 205.0 | 206.4 | 207.1 | 209.0 | 207.7 |
| % Ch, Annual Rate | 2.2 | 3.0 | 4.1 | 4.2 | 2.7 | 1.4 | 3.7 | -2.4 |
| Wood Products | 13.0 | 13.0 | 12.9 | 13.0 | 13.1 | 13.1 | 13.0 | 13.0 |
| % Ch, Annual Rate | 2.2 | 0.1 | -2.7 | 0.7 | 4.5 | -1.1 | -1.9 | -0.9 |
| Primary and Fabricated Metals | 25.7 | 26.0 | 26.2 | 26.4 | 26.7 | 26.7 | 26.9 | 26.9 |
| % Ch, Annual Rate | 8.4 | 5.7 | 2.5 | 2.6 | 4.7 | 1.0 | 2.7 | -1.0 |
| Computer and Electronic Products | 19.7 | 19.7 | 19.9 | 19.9 | 19.7 | 19.7 | 19.8 | 19.5 |
| % Ch, Annual Rate | 1.7 | 0.0 | 2.5 | 0.0 | -3.9 | -0.2 | 3.5 | -6.1 |
| Machinery and Electrical Equipment | 21.0 | 21.2 | 21.4 | 21.5 | 21.6 | 21.3 | 21.2 | 21.0 |
| % Ch, Annual Rate | -0.4 | 4.1 | 2.3 | 3.7 | 0.7 | -5.3 | -2.2 | -2.9 |
| Aerospace | 82.3 | 83.0 | 84.6 | 86.0 | 87.2 | 88.4 | 90.0 | 89.1 |
| % Ch, Annual Rate | 2.3 | 3.6 | 8.0 | 7.0 | 5.5 | 5.9 | 7.2 | -3.9 |
| Other Transportation Equip. | 9.8 | 9.8 | 9.9 | 10.0 | 9.9 | 9.8 | 9.9 | 10.0 |
| % Ch, Annual Rate | -6.5 | 0.2 | 2.7 | 5.9 | -5.8 | -1.2 | 1.8 | 7.4 |
| Other Durables | 27.9 | 28.1 | 28.1 | 28.2 | 28.3 | 28.1 | 28.2 | 28.2 |
| % Ch, Annual Rate | 1.7 | 2.5 | 0.9 | 1.6 | 1.3 | -3.6 | 1.7 | 0.4 |
| Nondurable Manufacturing | 85.0 | 85.1 | 85.4 | 86.3 | 86.8 | 86.7 | 87.0 | 87.3 |
| % Ch, Annual Rate | 4.0 | 0.6 | 1.4 | 4.1 | 2.3 | -0.4 | 1.3 | 1.4 |
| Food Manufacturing | 38.8 | 38.7 | 38.8 | 39.3 | 39.6 | 39.4 | 39.2 | 39.0 |
| % Ch, Annual Rate | 7.9 | -1.5 | 0.9 | 5.4 | 3.3 | -1.9 | -2.4 | -1.9 |
| Paper and Paper Products | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.5 | 7.6 |
| % Ch, Annual Rate | -2.8 | 0.2 | -1.9 | -0.6 | 3.0 | -0.3 | -5.2 | 1.9 |
| Other Nondurables | 38.5 | 38.8 | 39.1 | 39.4 | 39.5 | 39.7 | 40.3 | 40.7 |
| % Ch, Annual Rate | 1.7 | 2.9 | 2.5 | 3.6 | 1.3 | 1.2 | 6.5 | 4.5 |
| Natural Resources and Mining | 6.3 | 6.3 | 6.3 | 6.3 | 6.2 | 6.0 | 5.9 | 5.8 |
| % Ch, Annual Rate | 4.6 | 0.6 | -0.7 | -3.8 | -5.9 | -7.3 | -10.4 | -5.6 |
| Construction | 209.8 | 212.1 | 213.9 | 217.6 | 215.7 | 219.1 | 219.5 | 221.4 |
| % Ch, Annual Rate | 11.8 | 4.6 | 3.5 | 7.0 | -3.4 | 6.3 | 0.8 | 3.5 |
| Trade, Transportation, and Utilities | 636.3 | 636.2 | 638.0 | 638.5 | 641.1 | 642.7 | 642.9 | 644.6 |
| % Ch, Annual Rate | 3.6 | -0.1 | 1.1 | 0.3 | 1.7 | 1.0 | 0.2 | 1.1 |
| Wholesale Trade | 135.5 | 136.2 | 136.7 | 137.1 | 137.5 | 138.1 | 137.9 | 138.2 |
| % Ch, Annual Rate | 4.6 | 2.1 | 1.5 | 1.3 | 0.9 | 2.0 | -0.7 | 0.9 |
| Retail Trade | 386.3 | 385.3 | 386.6 | 386.7 | 388.9 | 389.0 | 389.0 | 391.2 |
| % Ch, Annual Rate | 4.0 | -1.1 | 1.4 | 0.2 | 2.3 | 0.1 | 0.0 | 2.2 |
| Electronic Shopping and Mail-Order | 54.1 | 54.3 | 54.4 | 56.4 | 60.3 | 61.5 | 60.5 | 61.4 |
| % Ch | 3.7 | 1.8 | 0.8 | 15.2 | 31.3 | 8.0 | -6.3 | 6.3 |
| Other Retail Trade | 332.2 | 330.9 | 332.1 | 330.3 | 328.6 | 327.5 | 328.5 | 329.7 |
| % Ch | 4.0 | -1.5 | 1.5 | -2.2 | -2.1 | -1.3 | 1.2 | 1.5 |
| Trans., Warehousing, and Utilities | 114.5 | 114.8 | 114.8 | 114.6 | 114.7 | 115.5 | 116.0 | 115.3 |
| % Ch, Annual Rate | 1.2 | 0.8 | 0.0 | -0.6 | 0.5 | 2.6 | 1.8 | -2.4 |
| Information | 129.9 | 132.5 | 135.0 | 137.0 | 140.9 | 142.8 | 145.6 | 147.9 |
| % Ch, Annual Rate | 5.7 | 8.2 | 8.0 | 6.1 | 11.8 | 5.4 | 8.1 | 6.4 |
| Software Publishers | 63.5 | 64.7 | 66.0 | 67.0 | 68.3 | 69.4 | 70.8 | 72.7 |
| % Ch, Annual Rate | 6.8 | 8.1 | 8.1 | 6.4 | 7.6 | 6.7 | 8.6 | 11.1 |
| Other Publishing Industries | 5.2 | 5.2 | 5.1 | 4.9 | 4.9 | 4.7 | 4.7 | 4.3 |
| % Ch, Annual Rate | -8.0 | -3.7 | -7.6 | -9.2 | -6.7 | -14.3 | 5.3 | -30.8 |
| Other Information | 61.2 | 62.6 | 64.0 | 65.1 | 67.8 | 68.7 | 70.0 | 70.8 |
| % Ch, Annual Rate | 5.8 | 9.4 | 9.2 | 7.0 | 17.9 | 5.7 | 7.7 | 4.7 |
| Financial Activities | 156.9 | 157.6 | 157.9 | 157.6 | 158.5 | 159.5 | 160.9 | 161.8 |
| % Ch, Annual Rate | 4.5 | 1.9 | 0.7 | -0.9 | 2.4 | 2.6 | 3.6 | 2.1 |
| Professional and Business Services | 421.8 | 423.9 | 427.9 | 430.8 | 430.8 | 435.2 | 438.3 | 440.8 |
| % Ch, Annual Rate | 5.3 | 2.0 | 3.8 | 2.7 | 0.1 | 4.1 | 2.8 | 2.3 |
| Education and Health Services | 486.8 | 489.4 | 492.7 | 496.4 | 497.6 | 501.6 | 503.7 | 504.4 |
| % Ch, Annual Rate | 3.9 | 2.1 | 2.7 | 3.0 | 1.0 | 3.2 | 1.7 | 0.5 |
| Leisure and Hospitality | 339.4 | 341.5 | 342.7 | 345.6 | 344.9 | 347.4 | 348.0 | 350.8 |
| % Ch, Annual Rate | 6.1 | 2.5 | 1.4 | 3.5 | -0.9 | 3.0 | 0.7 | 3.2 |
| Other Services | 120.7 | 121.1 | 122.3 | 122.8 | 127.0 | 127.9 | 128.6 | 129.0 |
| % Ch, Annual Rate | 0.2 | 1.2 | 3.9 | 1.8 | 14.5 | 2.6 | 2.3 | 1.2 |
| Federal Government | 74.6 | 74.6 | 74.6 | 75.0 | 75.4 | 75.5 | 76.3 | 76.5 |
| % Ch, Annual Rate | -1.1 | -0.1 | -0.3 | 2.4 | 2.0 | 0.7 | 4.2 | 1.1 |
| State and Local Government | 514.3 | 513.3 | 511.8 | 509.9 | 510.0 | 511.9 | 515.1 | 515.6 |
| % Ch, Annual Rate | 0.3 | -0.8 | -1.2 | -1.5 | 0.1 | 1.5 | 2.5 | 0.4 |

Table A2.4 (continued)

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2019 to 2023

| | 2020:1 | 2020:2 | 2020:3 | 2020:4 | 2021:1 | 2021:2 | 2021:3 | 2021:4 |
|--------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Nonfarm Payroll Employment | 3,503.8 | 3,523.6 | 3,529.7 | 3,537.6 | 3,547.0 | 3,556.0 | 3,564.9 | 3,575.0 |
| % Ch, Annual Rate | 1.2 | 2.3 | 0.7 | 0.9 | 1.1 | 1.0 | 1.0 | 1.1 |
| Manufacturing | 295.2 | 294.1 | 292.8 | 292.0 | 291.2 | 291.0 | 291.1 | 291.7 |
| % Ch, Annual Rate | 0.2 | -1.4 | -1.9 | -1.0 | -1.1 | -0.3 | 0.1 | 0.8 |
| Durable Manufacturing | 207.8 | 207.3 | 206.5 | 206.2 | 205.7 | 205.7 | 205.8 | 206.3 |
| % Ch, Annual Rate | 0.1 | -0.9 | -1.5 | -0.6 | -1.0 | 0.0 | 0.2 | 1.0 |
| Wood Products | 12.8 | 12.9 | 12.8 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 |
| % Ch, Annual Rate | -4.3 | 0.7 | -3.0 | -0.5 | -1.8 | 0.1 | -0.8 | 1.7 |
| Primary and Fabricated Metals | 26.9 | 26.8 | 26.4 | 26.1 | 25.8 | 25.6 | 25.5 | 25.5 |
| % Ch, Annual Rate | 1.1 | -2.5 | -5.6 | -3.7 | -4.8 | -3.0 | -2.0 | 0.3 |
| Computer and Electronic Products | 19.7 | 19.6 | 19.5 | 19.5 | 19.5 | 19.7 | 19.8 | 20.0 |
| % Ch, Annual Rate | 3.9 | -2.1 | -1.5 | -0.6 | 0.5 | 2.5 | 3.3 | 3.4 |
| Machinery and Electrical Equipment | 21.2 | 21.2 | 21.1 | 21.2 | 21.3 | 21.5 | 21.7 | 21.9 |
| % Ch, Annual Rate | 3.2 | -0.6 | -1.9 | 2.7 | 1.9 | 3.6 | 3.5 | 4.6 |
| Aerospace | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 |
| % Ch, Annual Rate | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other Transportation Equip. | 9.8 | 9.6 | 9.5 | 9.3 | 9.2 | 9.1 | 9.1 | 9.1 |
| % Ch, Annual Rate | -10.3 | -8.1 | -3.4 | -5.7 | -6.9 | -3.2 | -1.5 | -0.4 |
| Other Durables | 28.3 | 28.3 | 28.2 | 28.2 | 28.1 | 28.1 | 28.0 | 28.0 |
| % Ch, Annual Rate | 0.6 | 0.4 | -0.9 | -0.3 | -1.2 | -0.8 | -0.6 | 0.3 |
| Nondurable Manufacturing | 87.4 | 86.8 | 86.2 | 85.8 | 85.5 | 85.3 | 85.3 | 85.4 |
| % Ch, Annual Rate | 0.6 | -2.7 | -2.7 | -2.0 | -1.3 | -0.9 | -0.1 | 0.4 |
| Food Manufacturing | 39.0 | 38.8 | 38.6 | 38.4 | 38.3 | 38.2 | 38.2 | 38.2 |
| % Ch, Annual Rate | 0.5 | -2.1 | -2.4 | -1.9 | -0.7 | -1.1 | -0.3 | 0.4 |
| Paper and Paper Products | 7.7 | 7.6 | 7.4 | 7.3 | 7.2 | 7.1 | 7.0 | 7.0 |
| % Ch, Annual Rate | 7.5 | -7.3 | -7.4 | -6.9 | -5.9 | -3.6 | -3.2 | -2.8 |
| Other Nondurables | 40.7 | 40.4 | 40.2 | 40.1 | 40.0 | 40.0 | 40.0 | 40.1 |
| % Ch, Annual Rate | -0.6 | -2.4 | -2.0 | -1.2 | -1.0 | -0.2 | 0.6 | 1.0 |
| Natural Resources and Mining | 5.9 | 5.9 | 5.9 | 5.8 | 5.8 | 5.8 | 5.7 | 5.7 |
| % Ch, Annual Rate | 5.0 | 3.1 | -1.8 | -3.3 | -3.0 | -1.9 | -1.4 | -1.5 |
| Construction | 219.7 | 218.8 | 217.6 | 216.5 | 215.3 | 214.1 | 213.4 | 213.2 |
| % Ch, Annual Rate | -3.0 | -1.7 | -2.0 | -2.0 | -2.2 | -2.2 | -1.3 | -0.4 |
| Trade, Transportation, and Utilities | 646.4 | 647.2 | 648.8 | 649.0 | 649.3 | 649.7 | 649.5 | 650.8 |
| % Ch, Annual Rate | 1.1 | 0.5 | 1.0 | 0.1 | 0.2 | 0.2 | -0.1 | 0.8 |
| Wholesale Trade | 138.3 | 138.5 | 138.9 | 139.1 | 139.4 | 139.6 | 139.8 | 139.7 |
| % Ch, Annual Rate | 0.5 | 0.4 | 1.1 | 0.6 | 0.9 | 0.7 | 0.5 | -0.4 |
| Retail Trade | 392.5 | 393.2 | 394.5 | 394.5 | 394.5 | 394.6 | 394.4 | 396.1 |
| % Ch, Annual Rate | 1.4 | 0.7 | 1.3 | 0.1 | -0.1 | 0.1 | -0.2 | 1.8 |
| Electronic Shopping and Mail-Order | 62.2 | 62.9 | 63.6 | 64.2 | 64.8 | 65.4 | 65.9 | 66.4 |
| % Ch | 5.1 | 4.7 | 4.3 | 4.0 | 3.7 | 3.5 | 3.3 | 3.1 |
| Other Retail Trade | 330.3 | 330.3 | 330.8 | 330.3 | 329.6 | 329.2 | 328.5 | 329.7 |
| % Ch | 0.7 | 0.0 | 0.7 | -0.7 | -0.8 | -0.5 | -0.9 | 1.5 |
| Trans., Warehousing, and Utilities | 115.6 | 115.5 | 115.5 | 115.4 | 115.5 | 115.4 | 115.3 | 115.0 |
| % Ch, Annual Rate | 1.0 | -0.3 | 0.0 | -0.3 | 0.1 | -0.1 | -0.3 | -1.3 |
| Information | 148.4 | 149.3 | 149.7 | 150.0 | 150.6 | 150.7 | 150.6 | 149.9 |
| % Ch, Annual Rate | 1.5 | 2.3 | 1.1 | 0.8 | 1.7 | 0.2 | -0.3 | -1.8 |
| Software Publishers | 72.9 | 73.0 | 73.2 | 73.4 | 73.6 | 73.7 | 73.9 | 74.1 |
| % Ch, Annual Rate | 0.7 | 0.9 | 1.2 | 1.1 | 0.8 | 0.9 | 1.0 | 0.9 |
| Other Publishing Industries | 4.1 | 4.0 | 3.8 | 3.7 | 3.5 | 3.4 | 3.2 | 3.1 |
| % Ch, Annual Rate | -15.6 | -14.9 | -12.8 | -13.7 | -17.0 | -16.7 | -16.3 | -18.0 |
| Other Information | 71.4 | 72.3 | 72.6 | 72.8 | 73.5 | 73.6 | 73.4 | 72.7 |
| % Ch, Annual Rate | 3.4 | 4.9 | 1.8 | 1.2 | 3.7 | 0.4 | -0.9 | -3.7 |
| Financial Activities | 162.0 | 162.2 | 162.7 | 162.3 | 161.8 | 161.5 | 161.3 | 160.7 |
| % Ch, Annual Rate | 0.4 | 0.7 | 1.1 | -1.0 | -1.0 | -0.9 | -0.3 | -1.5 |
| Professional and Business Services | 443.2 | 446.6 | 451.4 | 456.6 | 462.5 | 467.2 | 470.9 | 476.1 |
| % Ch, Annual Rate | 2.2 | 3.2 | 4.3 | 4.7 | 5.2 | 4.1 | 3.3 | 4.5 |
| Education and Health Services | 507.1 | 508.5 | 510.7 | 512.6 | 515.1 | 516.7 | 518.3 | 518.9 |
| % Ch, Annual Rate | 2.2 | 1.1 | 1.7 | 1.5 | 1.9 | 1.2 | 1.3 | 0.5 |
| Leisure and Hospitality | 352.3 | 354.9 | 357.2 | 358.2 | 357.7 | 358.8 | 360.3 | 361.3 |
| % Ch, Annual Rate | 1.7 | 3.0 | 2.6 | 1.1 | -0.6 | 1.2 | 1.6 | 1.2 |
| Other Services | 129.6 | 130.1 | 130.5 | 130.9 | 131.4 | 131.8 | 132.2 | 132.5 |
| % Ch, Annual Rate | 1.9 | 1.4 | 1.4 | 1.2 | 1.4 | 1.3 | 1.2 | 1.0 |
| Federal Government | 76.4 | 85.7 | 79.6 | 78.2 | 78.3 | 78.4 | 78.5 | 78.6 |
| % Ch, Annual Rate | -0.8 | 58.5 | -25.6 | -6.6 | 0.5 | 0.4 | 0.4 | 0.4 |
| State and Local Government | 517.7 | 520.2 | 522.8 | 525.4 | 528.0 | 530.5 | 533.1 | 535.6 |
| % Ch, Annual Rate | 1.7 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 |

Table A2.4 (continued)

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2019 to 2023

| | 2022:1 | 2022:2 | 2022:3 | 2022:4 | 2023:1 | 2023:2 | 2023:3 | 2023:4 |
|--------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Nonfarm Payroll Employment | 3,584.1 | 3,591.4 | 3,598.4 | 3,605.4 | 3,612.7 | 3,619.5 | 3,626.2 | 3,632.7 |
| % Ch, Annual Rate | 1.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 |
| Manufacturing | 292.3 | 292.6 | 293.2 | 293.9 | 294.7 | 295.3 | 295.8 | 296.2 |
| % Ch, Annual Rate | 0.8 | 0.5 | 0.8 | 1.0 | 1.0 | 0.9 | 0.7 | 0.5 |
| Durable Manufacturing | 206.8 | 207.2 | 207.7 | 208.4 | 209.0 | 209.7 | 210.2 | 210.6 |
| % Ch, Annual Rate | 1.0 | 0.7 | 1.0 | 1.3 | 1.3 | 1.2 | 1.0 | 0.9 |
| Wood Products | 12.8 | 12.9 | 13.0 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 |
| % Ch, Annual Rate | 2.8 | 2.7 | 3.0 | 2.7 | 1.1 | 0.2 | -0.7 | -0.5 |
| Primary and Fabricated Metals | 25.6 | 25.6 | 25.8 | 26.0 | 26.2 | 26.4 | 26.6 | 26.7 |
| % Ch, Annual Rate | 1.2 | 1.2 | 1.9 | 2.9 | 3.4 | 3.5 | 2.7 | 2.3 |
| Computer and Electronic Products | 20.1 | 20.2 | 20.2 | 20.3 | 20.4 | 20.5 | 20.7 | 20.7 |
| % Ch, Annual Rate | 2.9 | 0.9 | 1.2 | 1.8 | 2.2 | 2.1 | 2.0 | 1.6 |
| Machinery and Electrical Equipment | 22.1 | 22.4 | 22.6 | 22.9 | 23.2 | 23.5 | 23.7 | 23.9 |
| % Ch, Annual Rate | 4.0 | 4.2 | 4.8 | 5.0 | 5.4 | 5.0 | 4.2 | 3.8 |
| Aerospace | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 |
| % Ch, Annual Rate | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other Transportation Equip. | 9.0 | 8.9 | 8.8 | 8.8 | 8.7 | 8.7 | 8.6 | 8.6 |
| % Ch, Annual Rate | -2.3 | -4.5 | -2.7 | -2.0 | -2.3 | -2.5 | -2.6 | -2.5 |
| Other Durables | 28.1 | 28.1 | 28.2 | 28.2 | 28.3 | 28.4 | 28.4 | 28.5 |
| % Ch, Annual Rate | 0.5 | 0.4 | 0.7 | 0.9 | 1.0 | 1.1 | 0.9 | 0.9 |
| Nondurable Manufacturing | 85.4 | 85.5 | 85.5 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 |
| % Ch, Annual Rate | 0.3 | 0.1 | 0.2 | 0.3 | 0.2 | 0.1 | -0.1 | -0.2 |
| Food Manufacturing | 38.3 | 38.2 | 38.2 | 38.2 | 38.2 | 38.1 | 38.1 | 38.0 |
| % Ch, Annual Rate | 0.2 | -0.3 | -0.3 | -0.1 | -0.2 | -0.5 | -0.6 | -0.8 |
| Paper and Paper Products | 6.9 | 6.9 | 6.9 | 6.8 | 6.8 | 6.8 | 6.7 | 6.7 |
| % Ch, Annual Rate | -2.7 | -2.7 | -2.2 | -1.7 | -1.5 | -1.7 | -1.8 | -1.9 |
| Other Nondurables | 40.2 | 40.3 | 40.4 | 40.5 | 40.6 | 40.7 | 40.8 | 40.9 |
| % Ch, Annual Rate | 1.0 | 0.9 | 1.0 | 1.1 | 1.0 | 0.9 | 0.8 | 0.7 |
| Natural Resources and Mining | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 |
| % Ch, Annual Rate | -0.4 | -0.3 | -0.2 | -0.2 | 0.3 | 0.1 | 0.1 | 0.3 |
| Construction | 212.8 | 212.7 | 212.4 | 212.0 | 211.9 | 211.8 | 211.7 | 211.7 |
| % Ch, Annual Rate | -0.8 | -0.1 | -0.7 | -0.7 | -0.2 | -0.2 | -0.2 | -0.1 |
| Trade, Transportation, and Utilities | 651.1 | 650.5 | 649.8 | 649.2 | 648.3 | 647.5 | 646.8 | 646.0 |
| % Ch, Annual Rate | 0.2 | -0.3 | -0.5 | -0.4 | -0.5 | -0.5 | -0.4 | -0.5 |
| Wholesale Trade | 139.7 | 139.7 | 139.7 | 139.7 | 139.8 | 139.9 | 140.0 | 140.1 |
| % Ch, Annual Rate | 0.2 | -0.1 | -0.1 | 0.0 | 0.5 | 0.2 | 0.3 | 0.3 |
| Retail Trade | 396.5 | 396.3 | 395.8 | 395.4 | 394.4 | 393.8 | 393.1 | 392.3 |
| % Ch, Annual Rate | 0.4 | -0.2 | -0.5 | -0.4 | -1.0 | -0.7 | -0.7 | -0.8 |
| Electronic Shopping and Mail-Order | 66.9 | 67.4 | 67.8 | 68.3 | 68.7 | 69.1 | 69.5 | 69.9 |
| % Ch | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.4 | 2.4 | 2.3 |
| Other Retail Trade | 329.6 | 328.9 | 327.9 | 327.1 | 325.8 | 324.7 | 323.6 | 322.4 |
| % Ch | -0.1 | -0.8 | -1.2 | -1.0 | -1.7 | -1.3 | -1.3 | -1.4 |
| Trans., Warehousing, and Utilities | 114.8 | 114.6 | 114.3 | 114.1 | 114.0 | 113.9 | 113.7 | 113.6 |
| % Ch, Annual Rate | -0.6 | -0.9 | -0.8 | -0.7 | -0.4 | -0.5 | -0.5 | -0.5 |
| Information | 150.0 | 149.9 | 150.1 | 150.5 | 151.2 | 152.2 | 153.4 | 154.5 |
| % Ch, Annual Rate | 0.3 | -0.3 | 0.7 | 1.0 | 1.8 | 2.6 | 3.4 | 2.9 |
| Software Publishers | 74.3 | 74.6 | 74.8 | 75.1 | 75.4 | 75.7 | 76.0 | 76.3 |
| % Ch, Annual Rate | 1.3 | 1.3 | 1.4 | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 |
| Other Publishing Industries | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.4 | 2.3 | 2.3 |
| % Ch, Annual Rate | -15.3 | -15.1 | -14.5 | -14.2 | -13.1 | -14.1 | -13.9 | -14.0 |
| Other Information | 72.7 | 72.5 | 72.6 | 72.8 | 73.2 | 74.0 | 75.1 | 76.0 |
| % Ch, Annual Rate | 0.0 | -1.3 | 0.6 | 1.1 | 2.5 | 4.4 | 5.8 | 4.8 |
| Financial Activities | 160.4 | 160.1 | 159.7 | 159.4 | 159.2 | 158.7 | 158.3 | 157.9 |
| % Ch, Annual Rate | -0.7 | -0.9 | -0.9 | -0.8 | -0.6 | -1.2 | -1.0 | -0.8 |
| Professional and Business Services | 480.3 | 483.6 | 486.8 | 489.7 | 492.9 | 495.6 | 498.2 | 500.8 |
| % Ch, Annual Rate | 3.6 | 2.8 | 2.7 | 2.5 | 2.6 | 2.2 | 2.1 | 2.1 |
| Education and Health Services | 520.3 | 520.9 | 521.7 | 522.5 | 523.8 | 524.8 | 525.8 | 526.8 |
| % Ch, Annual Rate | 1.1 | 0.5 | 0.6 | 0.7 | 1.0 | 0.7 | 0.8 | 0.8 |
| Leisure and Hospitality | 361.7 | 363.0 | 364.0 | 364.9 | 365.0 | 365.6 | 366.1 | 366.6 |
| % Ch, Annual Rate | 0.4 | 1.4 | 1.2 | 0.9 | 0.1 | 0.7 | 0.6 | 0.5 |
| Other Services | 132.9 | 133.2 | 133.5 | 133.8 | 134.1 | 134.4 | 134.7 | 135.0 |
| % Ch, Annual Rate | 1.1 | 1.0 | 1.0 | 0.9 | 1.0 | 0.9 | 0.9 | 0.9 |
| Federal Government | 78.7 | 78.7 | 78.8 | 78.9 | 78.9 | 79.0 | 79.1 | 79.1 |
| % Ch, Annual Rate | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 |
| State and Local Government | 538.1 | 540.5 | 542.7 | 544.9 | 547.0 | 548.9 | 550.6 | 552.3 |
| % Ch, Annual Rate | 1.9 | 1.8 | 1.7 | 1.6 | 1.6 | 1.4 | 1.2 | 1.2 |

Table A3.1

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

Forecast 2019 to 2023

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|
| Personal Income | 16,121.2 | 16,878.8 | 17,819.2 | 18,668.8 | 19,364.4 | 20,122.8 | 21,008.1 | 21,955.3 |
| % Ch | 2.6 | 4.7 | 5.6 | 4.8 | 3.7 | 3.9 | 4.4 | 4.5 |
| Total Wage and Salary Disbursements | 8,083.5 | 8,462.1 | 8,888.5 | 9,362.2 | 9,756.0 | 10,155.8 | 10,627.9 | 11,133.5 |
| % Ch | 2.9 | 4.7 | 5.0 | 5.3 | 4.2 | 4.1 | 4.6 | 4.8 |
| Nonwage Personal Income | 8,037.7 | 8,416.7 | 8,930.7 | 9,306.6 | 9,608.4 | 9,967.0 | 10,380.2 | 10,821.9 |
| % Ch | 2.2 | 4.7 | 6.1 | 4.2 | 3.2 | 3.7 | 4.1 | 4.3 |
| Supplements to Wages and Salaries | 1,876.8 | 1,949.5 | 2,040.0 | 2,127.5 | 2,214.6 | 2,306.6 | 2,409.7 | 2,510.6 |
| % Ch | 1.9 | 3.9 | 4.6 | 4.3 | 4.1 | 4.2 | 4.5 | 4.2 |
| Proprietor's Income | 1,423.7 | 1,518.2 | 1,588.8 | 1,655.5 | 1,672.5 | 1,695.4 | 1,731.7 | 1,742.0 |
| % Ch | 0.1 | 6.6 | 4.6 | 4.2 | 1.0 | 1.4 | 2.1 | 0.6 |
| Farm | 35.6 | 38.1 | 27.2 | 30.5 | 15.5 | 28.3 | 71.2 | 70.3 |
| % Ch | ... | ... | ... | ... | ... | ... | ... | ... |
| Nonfarm | 1,388.1 | 1,480.1 | 1,561.6 | 1,625.0 | 1,657.0 | 1,667.1 | 1,660.4 | 1,671.7 |
| % Ch | 1.6 | 6.6 | 5.5 | 4.1 | 2.0 | 0.6 | -0.4 | 0.7 |
| Less: Contribution For Govt. Soc. Ins. | 1,239.9 | 1,299.6 | 1,356.5 | 1,429.3 | 1,484.7 | 1,537.4 | 1,603.6 | 1,676.1 |
| % Ch | 2.9 | 4.8 | 4.4 | 5.4 | 3.9 | 3.5 | 4.3 | 4.5 |
| Dividends/Int./Rent | 3,202.8 | 3,400.4 | 3,686.9 | 3,778.8 | 3,872.3 | 4,000.8 | 4,175.7 | 4,391.7 |
| % Ch | 2.7 | 6.2 | 8.4 | 2.5 | 2.5 | 3.3 | 4.4 | 5.2 |
| Transfer Payments | 2,774.2 | 2,848.1 | 2,971.5 | 3,174.1 | 3,333.6 | 3,501.6 | 3,666.7 | 3,853.7 |
| % Ch | 3.4 | 2.7 | 4.3 | 6.8 | 5.0 | 5.0 | 4.7 | 5.1 |

Table A3.2

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

Forecast 2019 to 2023

| | 2018:1 | 2018:2 | 2018:3 | 2018:4 | 2019:1 | 2019:2 | 2019:3 | 2019:4 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|
| Personal Income | 17,540.3 | 17,725.0 | 17,928.5 | 18,082.8 | 18,355.4 | 18,599.6 | 18,772.4 | 18,947.7 |
| % Ch, Annual Rate | 7.4 | 4.3 | 4.7 | 3.5 | 6.2 | 5.4 | 3.8 | 3.8 |
| Total Wage and Salary Disbursements | 8,776.7 | 8,845.0 | 8,942.2 | 8,990.0 | 9,211.5 | 9,320.3 | 9,411.2 | 9,505.7 |
| % Ch, Annual Rate | 6.4 | 3.2 | 4.5 | 2.2 | 10.2 | 4.8 | 4.0 | 4.1 |
| Nonwage Personal Income | 8,763.7 | 8,879.9 | 8,986.3 | 9,092.8 | 9,143.9 | 9,279.3 | 9,361.3 | 9,442.0 |
| % Ch, Annual Rate | 8.4 | 5.4 | 4.9 | 4.8 | 2.3 | 6.1 | 3.6 | 3.5 |
| Supplements to Wages and Salaries | 2,009.4 | 2,031.1 | 2,052.0 | 2,067.4 | 2,095.1 | 2,116.5 | 2,138.4 | 2,159.9 |
| % Ch, Annual Rate | 4.8 | 4.4 | 4.2 | 3.0 | 5.5 | 4.2 | 4.2 | 4.1 |
| Proprietor's Income | 1,567.5 | 1,573.3 | 1,590.0 | 1,624.4 | 1,621.2 | 1,632.9 | 1,680.6 | 1,687.4 |
| % Ch, Annual Rate | 6.5 | 1.5 | 4.3 | 8.9 | -0.8 | 2.9 | 12.2 | 1.6 |
| Farm | 28.1 | 27.5 | 17.4 | 35.9 | 24.8 | 19.2 | 41.4 | 36.5 |
| % Ch, Annual Rate | ... | ... | ... | ... | ... | ... | ... | ... |
| Nonfarm | 1,539.4 | 1,545.8 | 1,572.6 | 1,588.4 | 1,596.3 | 1,613.7 | 1,639.2 | 1,650.9 |
| % Ch, Annual Rate | 7.7 | 1.7 | 7.1 | 4.1 | 2.0 | 4.4 | 6.5 | 2.9 |
| Less: Contribution For Govt. Soc. Ins. | 1,344.0 | 1,350.9 | 1,362.4 | 1,368.7 | 1,407.6 | 1,422.5 | 1,434.8 | 1,452.5 |
| % Ch, Annual Rate | 6.9 | 2.1 | 3.5 | 1.9 | 11.9 | 4.3 | 3.5 | 5.0 |
| Dividends/Int./Rent | 3,595.4 | 3,663.3 | 3,722.9 | 3,766.1 | 3,722.2 | 3,793.7 | 3,782.2 | 3,817.1 |
| % Ch, Annual Rate | 10.9 | 7.8 | 6.7 | 4.7 | -4.6 | 7.9 | -1.2 | 3.7 |
| Transfer Payments | 2,935.4 | 2,963.1 | 2,983.8 | 3,003.7 | 3,113.1 | 3,158.6 | 3,194.9 | 3,230.0 |
| % Ch, Annual Rate | 8.1 | 3.8 | 2.8 | 2.7 | 15.4 | 6.0 | 4.7 | 4.5 |

Table A3.2 (continued)

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

Forecast 2019 to 2023

| | 2020:1 | 2020:2 | 2020:3 | 2020:4 | 2021:1 | 2021:2 | 2021:3 | 2021:4 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|
| Personal Income | 19,132.3 | 19,283.7 | 19,437.3 | 19,604.2 | 19,815.4 | 20,016.3 | 20,219.1 | 20,440.4 |
| % Ch, Annual Rate | 4.0 | 3.2 | 3.2 | 3.5 | 4.4 | 4.1 | 4.1 | 4.5 |
| Total Wage and Salary Disbursements | 9,598.2 | 9,717.4 | 9,809.3 | 9,899.0 | 9,995.8 | 10,097.6 | 10,204.0 | 10,325.6 |
| % Ch, Annual Rate | 3.9 | 5.1 | 3.8 | 3.7 | 4.0 | 4.1 | 4.3 | 4.9 |
| Nonwage Personal Income | 9,534.1 | 9,566.2 | 9,628.0 | 9,705.2 | 9,819.6 | 9,918.7 | 10,015.1 | 10,114.8 |
| % Ch, Annual Rate | 4.0 | 1.4 | 2.6 | 3.2 | 4.8 | 4.1 | 3.9 | 4.0 |
| Supplements to Wages and Salaries | 2,179.7 | 2,205.7 | 2,226.2 | 2,246.9 | 2,271.8 | 2,294.4 | 2,317.6 | 2,342.6 |
| % Ch, Annual Rate | 3.7 | 4.9 | 3.8 | 3.8 | 4.5 | 4.0 | 4.1 | 4.4 |
| Proprietor's Income | 1,686.1 | 1,664.6 | 1,666.6 | 1,672.8 | 1,682.6 | 1,691.3 | 1,697.9 | 1,709.7 |
| % Ch, Annual Rate | -0.3 | -5.0 | 0.5 | 1.5 | 2.4 | 2.1 | 1.6 | 2.8 |
| Farm | 22.2 | 15.2 | 12.4 | 12.0 | 15.0 | 21.5 | 31.8 | 44.9 |
| % Ch, Annual Rate | ... | ... | ... | ... | ... | ... | ... | ... |
| Nonfarm | 1,663.9 | 1,649.3 | 1,654.1 | 1,660.8 | 1,667.6 | 1,669.7 | 1,666.1 | 1,664.8 |
| % Ch, Annual Rate | 3.2 | -3.4 | 1.2 | 1.6 | 1.6 | 0.5 | -0.9 | -0.3 |
| Less: Contribution For Govt. Soc. Ins. | 1,467.6 | 1,480.6 | 1,490.4 | 1,500.2 | 1,518.1 | 1,530.2 | 1,543.0 | 1,558.2 |
| % Ch, Annual Rate | 4.2 | 3.6 | 2.7 | 2.6 | 4.9 | 3.2 | 3.4 | 4.0 |
| Dividends/Int./Rent | 3,854.0 | 3,861.4 | 3,875.2 | 3,898.6 | 3,936.0 | 3,980.0 | 4,022.9 | 4,064.2 |
| % Ch, Annual Rate | 3.9 | 0.8 | 1.4 | 2.4 | 3.9 | 4.5 | 4.4 | 4.2 |
| Transfer Payments | 3,281.9 | 3,315.1 | 3,350.5 | 3,387.0 | 3,447.2 | 3,483.1 | 3,519.7 | 3,556.5 |
| % Ch, Annual Rate | 6.6 | 4.1 | 4.3 | 4.4 | 7.3 | 4.2 | 4.3 | 4.2 |

Table A3.2 (continued)

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

Forecast 2019 to 2023

| | 2022:1 | 2022:2 | 2022:3 | 2022:4 | 2023:1 | 2023:2 | 2023:3 | 2023:4 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|
| Personal Income | 20,677.9 | 20,896.8 | 21,117.6 | 21,340.2 | 21,595.2 | 21,831.7 | 22,073.2 | 22,321.3 |
| % Ch, Annual Rate | 4.7 | 4.3 | 4.3 | 4.3 | 4.9 | 4.5 | 4.5 | 4.6 |
| Total Wage and Salary Disbursements | 10,448.8 | 10,566.3 | 10,686.9 | 10,809.7 | 10,937.8 | 11,067.0 | 11,197.9 | 11,331.1 |
| % Ch, Annual Rate | 4.9 | 4.6 | 4.6 | 4.7 | 4.8 | 4.8 | 4.8 | 4.8 |
| Nonwage Personal Income | 10,229.2 | 10,330.5 | 10,430.7 | 10,530.5 | 10,657.3 | 10,764.7 | 10,875.3 | 10,990.2 |
| % Ch, Annual Rate | 4.6 | 4.0 | 3.9 | 3.9 | 4.9 | 4.1 | 4.2 | 4.3 |
| Supplements to Wages and Salaries | 2,372.2 | 2,397.7 | 2,422.4 | 2,446.6 | 2,474.1 | 2,498.1 | 2,522.5 | 2,547.5 |
| % Ch, Annual Rate | 5.1 | 4.4 | 4.2 | 4.0 | 4.6 | 3.9 | 4.0 | 4.0 |
| Proprietor's Income | 1,718.5 | 1,729.7 | 1,737.1 | 1,741.3 | 1,741.4 | 1,741.3 | 1,741.8 | 1,743.4 |
| % Ch, Annual Rate | 2.1 | 2.6 | 1.7 | 1.0 | 0.0 | 0.0 | 0.1 | 0.4 |
| Farm | 58.0 | 69.8 | 77.4 | 79.8 | 77.8 | 73.2 | 67.7 | 62.5 |
| % Ch, Annual Rate | ... | ... | ... | ... | ... | ... | ... | ... |
| Nonfarm | 1,660.5 | 1,659.9 | 1,659.7 | 1,661.5 | 1,663.6 | 1,668.1 | 1,674.1 | 1,680.9 |
| % Ch, Annual Rate | -1.0 | -0.1 | -0.1 | 0.4 | 0.5 | 1.1 | 1.5 | 1.6 |
| Less: Contribution For Govt. Soc. Ins. | 1,580.9 | 1,595.7 | 1,611.0 | 1,626.7 | 1,650.7 | 1,667.4 | 1,684.5 | 1,701.8 |
| % Ch, Annual Rate | 6.0 | 3.8 | 3.9 | 3.9 | 6.0 | 4.1 | 4.1 | 4.2 |
| Dividends/Int./Rent | 4,105.0 | 4,149.5 | 4,198.2 | 4,250.0 | 4,303.1 | 4,360.5 | 4,420.4 | 4,482.8 |
| % Ch, Annual Rate | 4.1 | 4.4 | 4.8 | 5.0 | 5.1 | 5.5 | 5.6 | 5.8 |
| Transfer Payments | 3,614.3 | 3,649.2 | 3,684.0 | 3,719.3 | 3,789.5 | 3,832.1 | 3,875.1 | 3,918.3 |
| % Ch, Annual Rate | 6.7 | 3.9 | 3.9 | 3.9 | 7.8 | 4.6 | 4.6 | 4.5 |

Table A3.3

Washington Personal Income by Component (Billions of Dollars)

Forecast 2019 to 2023

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| Personal Income | 407.654 | 434.759 | 467.399 | 491.266 | 510.401 | 532.457 | 557.592 | 585.742 |
| % Ch | 5.7 | 6.6 | 7.5 | 5.1 | 3.9 | 4.3 | 4.7 | 5.0 |
| Total Wage and Salary Disbursements | 203.354 | 218.086 | 237.156 | 250.213 | 261.092 | 272.770 | 285.913 | 300.806 |
| % Ch | 6.1 | 7.2 | 8.7 | 5.5 | 4.3 | 4.5 | 4.8 | 5.2 |
| Manufacturing | 21.729 | 21.680 | 22.833 | 23.606 | 23.748 | 24.540 | 25.667 | 26.976 |
| % Ch | -0.3 | -0.2 | 5.3 | 3.4 | 0.6 | 3.3 | 4.6 | 5.1 |
| Durable Manufacturing | 17.316 | 17.077 | 17.976 | 18.546 | 18.554 | 19.240 | 20.144 | 21.205 |
| % Ch | -1.6 | -1.4 | 5.3 | 3.2 | 0.0 | 3.7 | 4.7 | 5.3 |
| Nondurable Manufacturing | 4.413 | 4.603 | 4.857 | 5.060 | 5.194 | 5.300 | 5.523 | 5.771 |
| % Ch | 4.8 | 4.3 | 5.5 | 4.2 | 2.7 | 2.0 | 4.2 | 4.5 |
| Nonmanufacturing | 174.627 | 189.499 | 207.226 | 219.298 | 229.720 | 240.281 | 251.966 | 265.198 |
| % Ch | 7.1 | 8.5 | 9.4 | 5.8 | 4.8 | 4.6 | 4.9 | 5.3 |
| Other Private Wages | 1.193 | 1.240 | 1.339 | 1.321 | 1.375 | 1.434 | 1.499 | 1.569 |
| % Ch | 4.1 | 4.0 | 8.0 | -1.4 | 4.1 | 4.2 | 4.5 | 4.7 |
| Farm Wages | 1.700 | 1.481 | 1.490 | 1.572 | 1.664 | 1.768 | 1.883 | 2.009 |
| % Ch | 11.5 | -12.9 | 0.6 | 5.5 | 5.9 | 6.2 | 6.5 | 6.7 |
| Military Wages | 4.104 | 4.185 | 4.269 | 4.414 | 4.584 | 4.747 | 4.898 | 5.053 |
| % Ch | 0.3 | 2.0 | 2.0 | 3.4 | 3.9 | 3.5 | 3.2 | 3.2 |
| Nonwage Personal Income | 204.300 | 216.673 | 230.243 | 241.053 | 249.309 | 259.687 | 271.679 | 284.935 |
| % Ch | 5.3 | 6.1 | 6.3 | 4.7 | 3.4 | 4.2 | 4.6 | 4.9 |
| Supplements to Wages and Salaries | 46.406 | 49.532 | 52.360 | 55.526 | 57.997 | 60.546 | 63.342 | 66.255 |
| % Ch | 5.7 | 6.7 | 5.7 | 6.0 | 4.5 | 4.4 | 4.6 | 4.6 |
| Proprietor's Income | 32.473 | 35.351 | 36.045 | 37.593 | 37.152 | 37.375 | 37.919 | 38.148 |
| % Ch | 0.1 | 8.9 | 2.0 | 4.3 | -1.2 | 0.6 | 1.5 | 0.6 |
| Farm | 1.998 | 2.408 | 1.902 | 2.110 | 0.928 | 0.954 | 1.671 | 1.655 |
| % Ch | ... | ... | ... | ... | ... | ... | ... | ... |
| Nonfarm | 30.475 | 32.943 | 34.143 | 35.483 | 36.224 | 36.420 | 36.248 | 36.493 |
| % Ch | 3.4 | 8.1 | 3.6 | 3.9 | 2.1 | 0.5 | -0.5 | 0.7 |
| Less: Contribution For Govt. Soc. Ins. | 33.582 | 36.151 | 38.088 | 40.630 | 42.300 | 43.825 | 45.670 | 47.816 |
| % Ch | 4.7 | 7.7 | 5.4 | 6.7 | 4.1 | 3.6 | 4.2 | 4.7 |
| Plus: Residence Adjustment | 4.188 | 4.235 | 4.324 | 4.501 | 4.727 | 4.960 | 5.237 | 5.533 |
| % Ch | 7.7 | 1.1 | 2.1 | 4.1 | 5.0 | 4.9 | 5.6 | 5.7 |
| Dividends/Int./Rent | 93.964 | 100.977 | 109.752 | 113.046 | 116.734 | 121.345 | 127.339 | 134.567 |
| % Ch | 5.9 | 7.5 | 8.7 | 3.0 | 3.3 | 4.0 | 4.9 | 5.7 |
| Transfer Payments | 60.851 | 62.730 | 65.849 | 71.017 | 74.999 | 79.285 | 83.512 | 88.248 |
| % Ch | 6.5 | 3.1 | 5.0 | 7.8 | 5.6 | 5.7 | 5.3 | 5.7 |
| State U.I. Benefits | 0.982 | 0.999 | 0.978 | 0.995 | 1.021 | 1.276 | 1.528 | 1.795 |
| % Ch | 1.1 | 1.8 | -2.2 | 1.7 | 2.6 | 24.9 | 19.7 | 17.5 |
| Other Transfers | 59.869 | 61.730 | 64.871 | 70.022 | 73.978 | 78.009 | 81.985 | 86.453 |
| % Ch | 6.6 | 3.1 | 5.1 | 7.9 | 5.6 | 5.4 | 5.1 | 5.5 |

Table A3.4

Washington Personal Income by Component (Billions of Dollars)

Forecast 2019 to 2023

| | 2018:1 | 2018:2 | 2018:3 | 2018:4 | 2019:1 | 2019:2 | 2019:3 | 2019:4 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| Personal Income | 458.641 | 463.830 | 471.677 | 475.449 | 483.372 | 489.323 | 493.720 | 498.649 |
| % Ch, Annual Rate | 11.3 | 4.6 | 6.9 | 3.2 | 6.8 | 5.0 | 3.6 | 4.1 |
| Total Wage and Salary Disbursements | 232.967 | 235.011 | 239.959 | 240.689 | 247.118 | 248.687 | 251.237 | 253.808 |
| % Ch, Annual Rate | 15.5 | 3.6 | 8.7 | 1.2 | 11.1 | 2.6 | 4.2 | 4.2 |
| Manufacturing | 23.267 | 22.353 | 22.587 | 23.122 | 24.095 | 23.401 | 23.440 | 23.489 |
| % Ch, Annual Rate | 26.5 | -14.8 | 4.3 | 9.8 | 17.9 | -11.0 | 0.7 | 0.8 |
| Durable Manufacturing | 18.430 | 17.563 | 17.725 | 18.184 | 19.101 | 18.369 | 18.358 | 18.356 |
| % Ch, Annual Rate | 29.4 | -17.5 | 3.7 | 10.8 | 21.7 | -14.5 | -0.3 | 0.0 |
| Nondurable Manufacturing | 4.837 | 4.790 | 4.862 | 4.938 | 4.994 | 5.032 | 5.082 | 5.133 |
| % Ch, Annual Rate | 16.3 | -3.8 | 6.2 | 6.4 | 4.7 | 3.0 | 4.1 | 4.1 |
| Nonmanufacturing | 202.677 | 205.589 | 210.217 | 210.420 | 215.822 | 218.013 | 220.446 | 222.912 |
| % Ch, Annual Rate | 14.9 | 5.9 | 9.3 | 0.4 | 10.7 | 4.1 | 4.5 | 4.5 |
| Other Private Wages | 1.324 | 1.367 | 1.346 | 1.321 | 1.297 | 1.319 | 1.329 | 1.340 |
| % Ch, Annual Rate | 5.3 | 13.5 | -5.8 | -7.3 | -7.1 | 7.0 | 3.0 | 3.5 |
| Farm Wages | 1.475 | 1.479 | 1.491 | 1.514 | 1.543 | 1.563 | 1.581 | 1.602 |
| % Ch, Annual Rate | 0.8 | 1.0 | 3.5 | 6.2 | 7.8 | 5.3 | 4.8 | 5.4 |
| Military Wages | 4.224 | 4.224 | 4.317 | 4.312 | 4.361 | 4.391 | 4.441 | 4.465 |
| % Ch, Annual Rate | -0.3 | 0.1 | 9.1 | -0.5 | 4.7 | 2.8 | 4.6 | 2.2 |
| Nonwage Personal Income | 225.674 | 228.819 | 231.718 | 234.759 | 236.254 | 240.636 | 242.484 | 244.840 |
| % Ch, Annual Rate | 7.2 | 5.7 | 5.2 | 5.4 | 2.6 | 7.6 | 3.1 | 3.9 |
| Supplements to Wages and Salaries | 51.644 | 51.997 | 52.727 | 53.075 | 54.491 | 55.241 | 55.894 | 56.478 |
| % Ch, Annual Rate | 7.7 | 2.8 | 5.7 | 2.7 | 11.1 | 5.6 | 4.8 | 4.2 |
| Proprietor's Income | 35.562 | 35.768 | 36.193 | 36.659 | 36.861 | 37.258 | 38.082 | 38.171 |
| % Ch, Annual Rate | -0.8 | 2.3 | 4.8 | 5.3 | 2.2 | 4.4 | 9.1 | 0.9 |
| Farm | 1.918 | 1.987 | 1.779 | 1.925 | 2.035 | 2.077 | 2.280 | 2.048 |
| % Ch, Annual Rate | ... | ... | ... | ... | ... | ... | ... | ... |
| Nonfarm | 33.644 | 33.781 | 34.414 | 34.734 | 34.826 | 35.182 | 35.802 | 36.124 |
| % Ch, Annual Rate | 2.4 | 1.6 | 7.7 | 3.8 | 1.1 | 4.1 | 7.2 | 3.6 |
| Less: Contribution For Govt. Soc. Ins. | 37.868 | 37.831 | 38.288 | 38.366 | 39.861 | 40.439 | 40.855 | 41.367 |
| % Ch, Annual Rate | 10.5 | -0.4 | 4.9 | 0.8 | 16.5 | 5.9 | 4.2 | 5.1 |
| Plus: Residence Adjustment | 4.264 | 4.301 | 4.326 | 4.405 | 4.429 | 4.471 | 4.525 | 4.580 |
| % Ch, Annual Rate | -5.0 | 3.5 | 2.3 | 7.5 | 2.2 | 3.9 | 4.9 | 5.0 |
| Dividends/Int./Rent | 106.900 | 108.996 | 110.916 | 112.196 | 110.803 | 113.470 | 113.329 | 114.583 |
| % Ch, Annual Rate | 11.0 | 8.1 | 7.2 | 4.7 | -4.9 | 10.0 | -0.5 | 4.5 |
| Transfer Payments | 65.172 | 65.587 | 65.844 | 66.791 | 69.531 | 70.634 | 71.509 | 72.395 |
| % Ch, Annual Rate | 8.1 | 2.6 | 1.6 | 5.9 | 17.4 | 6.5 | 5.0 | 5.0 |
| State U.I. Benefits | 1.024 | 0.968 | 0.961 | 0.958 | 0.990 | 0.994 | 0.998 | 0.998 |
| % Ch, Annual Rate | 3.7 | -19.9 | -3.0 | -1.1 | 13.8 | 1.6 | 1.8 | 0.0 |
| Other Transfers | 64.148 | 64.619 | 64.883 | 65.833 | 68.541 | 69.640 | 70.511 | 71.397 |
| % Ch, Annual Rate | 8.1 | 3.0 | 1.6 | 6.0 | 17.5 | 6.6 | 5.1 | 5.1 |

Table A3.4 (continued)

Washington Personal Income by Component (Billions of Dollars)

Forecast 2019 to 2023

| | 2020:1 | 2020:2 | 2020:3 | 2020:4 | 2021:1 | 2021:2 | 2021:3 | 2021:4 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| Personal Income | 503.053 | 508.313 | 512.653 | 517.587 | 523.751 | 529.491 | 535.249 | 541.337 |
| % Ch, Annual Rate | 3.6 | 4.2 | 3.5 | 3.9 | 4.8 | 4.5 | 4.4 | 4.6 |
| Total Wage and Salary Disbursements | 255.953 | 260.213 | 262.765 | 265.437 | 268.380 | 271.212 | 274.140 | 277.348 |
| % Ch, Annual Rate | 3.4 | 6.8 | 4.0 | 4.1 | 4.5 | 4.3 | 4.4 | 4.8 |
| Manufacturing | 23.191 | 23.822 | 23.918 | 24.062 | 24.208 | 24.403 | 24.631 | 24.918 |
| % Ch, Annual Rate | -5.0 | 11.3 | 1.6 | 2.4 | 2.4 | 3.3 | 3.8 | 4.7 |
| Durable Manufacturing | 18.012 | 18.631 | 18.722 | 18.850 | 18.970 | 19.132 | 19.314 | 19.542 |
| % Ch, Annual Rate | -7.3 | 14.5 | 2.0 | 2.8 | 2.6 | 3.5 | 3.9 | 4.8 |
| Nondurable Manufacturing | 5.179 | 5.191 | 5.197 | 5.212 | 5.238 | 5.271 | 5.317 | 5.376 |
| % Ch, Annual Rate | 3.6 | 1.0 | 0.4 | 1.2 | 2.0 | 2.6 | 3.5 | 4.5 |
| Nonmanufacturing | 225.291 | 228.786 | 231.167 | 233.634 | 236.334 | 238.897 | 241.520 | 244.373 |
| % Ch, Annual Rate | 4.3 | 6.4 | 4.2 | 4.3 | 4.7 | 4.4 | 4.5 | 4.8 |
| Other Private Wages | 1.349 | 1.372 | 1.384 | 1.397 | 1.412 | 1.426 | 1.441 | 1.457 |
| % Ch, Annual Rate | 2.8 | 6.8 | 3.6 | 3.8 | 4.3 | 4.1 | 4.2 | 4.5 |
| Farm Wages | 1.620 | 1.657 | 1.679 | 1.703 | 1.729 | 1.754 | 1.780 | 1.809 |
| % Ch, Annual Rate | 4.5 | 9.4 | 5.5 | 5.8 | 6.3 | 6.0 | 6.1 | 6.5 |
| Military Wages | 4.502 | 4.577 | 4.617 | 4.642 | 4.697 | 4.731 | 4.767 | 4.791 |
| % Ch, Annual Rate | 3.4 | 6.8 | 3.6 | 2.2 | 4.9 | 2.9 | 3.1 | 2.0 |
| Nonwage Personal Income | 247.099 | 248.100 | 249.888 | 252.150 | 255.371 | 258.279 | 261.109 | 263.989 |
| % Ch, Annual Rate | 3.7 | 1.6 | 2.9 | 3.7 | 5.2 | 4.6 | 4.5 | 4.5 |
| Supplements to Wages and Salaries | 56.950 | 57.796 | 58.335 | 58.907 | 59.625 | 60.226 | 60.842 | 61.491 |
| % Ch, Annual Rate | 3.4 | 6.1 | 3.8 | 4.0 | 5.0 | 4.1 | 4.2 | 4.3 |
| Proprietor's Income | 37.671 | 36.992 | 36.929 | 37.016 | 37.188 | 37.324 | 37.403 | 37.584 |
| % Ch, Annual Rate | -5.1 | -7.0 | -0.7 | 0.9 | 1.9 | 1.5 | 0.9 | 2.0 |
| Farm | 1.291 | 0.933 | 0.774 | 0.715 | 0.741 | 0.840 | 1.009 | 1.227 |
| % Ch, Annual Rate | ... | ... | ... | ... | ... | ... | ... | ... |
| Nonfarm | 36.380 | 36.059 | 36.155 | 36.302 | 36.447 | 36.483 | 36.394 | 36.357 |
| % Ch, Annual Rate | 2.9 | -3.5 | 1.1 | 1.6 | 1.6 | 0.4 | -1.0 | -0.4 |
| Less: Contribution For Govt. Soc. Ins. | 41.713 | 42.227 | 42.487 | 42.772 | 43.307 | 43.634 | 43.979 | 44.378 |
| % Ch, Annual Rate | 3.4 | 5.0 | 2.5 | 2.7 | 5.1 | 3.1 | 3.2 | 3.7 |
| Plus: Residence Adjustment | 4.634 | 4.704 | 4.758 | 4.810 | 4.867 | 4.926 | 4.989 | 5.060 |
| % Ch, Annual Rate | 4.8 | 6.1 | 4.7 | 4.5 | 4.8 | 5.0 | 5.2 | 5.8 |
| Dividends/Int./Rent | 115.894 | 116.314 | 116.918 | 117.811 | 119.121 | 120.628 | 122.102 | 123.530 |
| % Ch, Annual Rate | 4.7 | 1.5 | 2.1 | 3.1 | 4.5 | 5.2 | 5.0 | 4.8 |
| Transfer Payments | 73.662 | 74.521 | 75.436 | 76.378 | 77.878 | 78.810 | 79.753 | 80.701 |
| % Ch, Annual Rate | 7.2 | 4.7 | 5.0 | 5.1 | 8.1 | 4.9 | 4.9 | 4.8 |
| State U.I. Benefits | 0.992 | 0.971 | 1.026 | 1.096 | 1.169 | 1.238 | 1.315 | 1.382 |
| % Ch, Annual Rate | -2.4 | -8.2 | 24.6 | 30.2 | 29.5 | 25.7 | 27.4 | 21.8 |
| Other Transfers | 72.670 | 73.550 | 74.410 | 75.282 | 76.709 | 77.572 | 78.438 | 79.320 |
| % Ch, Annual Rate | 7.3 | 4.9 | 4.8 | 4.8 | 7.8 | 4.6 | 4.5 | 4.6 |

Table A3.4 (continued)

Washington Personal Income by Component (Billions of Dollars)

Forecast 2019 to 2023

| | 2022:1 | 2022:2 | 2022:3 | 2022:4 | 2023:1 | 2023:2 | 2023:3 | 2023:4 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| Personal Income | 548.010 | 554.298 | 560.741 | 567.317 | 574.852 | 582.000 | 589.321 | 596.792 |
| % Ch, Annual Rate | 5.0 | 4.7 | 4.7 | 4.8 | 5.4 | 5.1 | 5.1 | 5.2 |
| Total Wage and Salary Disbursements | 280.803 | 284.133 | 287.588 | 291.126 | 294.961 | 298.814 | 302.743 | 306.706 |
| % Ch, Annual Rate | 5.1 | 4.8 | 5.0 | 5.0 | 5.4 | 5.3 | 5.4 | 5.3 |
| Manufacturing | 25.216 | 25.505 | 25.812 | 26.136 | 26.474 | 26.813 | 27.144 | 27.474 |
| % Ch, Annual Rate | 4.9 | 4.7 | 4.9 | 5.1 | 5.3 | 5.2 | 5.0 | 5.0 |
| Durable Manufacturing | 19.780 | 20.012 | 20.260 | 20.522 | 20.796 | 21.072 | 21.341 | 21.611 |
| % Ch, Annual Rate | 5.0 | 4.8 | 5.0 | 5.3 | 5.5 | 5.4 | 5.2 | 5.2 |
| Nondurable Manufacturing | 5.435 | 5.492 | 5.552 | 5.614 | 5.678 | 5.741 | 5.803 | 5.863 |
| % Ch, Annual Rate | 4.5 | 4.3 | 4.4 | 4.6 | 4.6 | 4.5 | 4.4 | 4.2 |
| Nonmanufacturing | 247.426 | 250.389 | 253.452 | 256.595 | 259.984 | 263.413 | 266.921 | 270.475 |
| % Ch, Annual Rate | 5.1 | 4.9 | 5.0 | 5.1 | 5.4 | 5.4 | 5.4 | 5.4 |
| Other Private Wages | 1.474 | 1.490 | 1.507 | 1.523 | 1.542 | 1.560 | 1.579 | 1.597 |
| % Ch, Annual Rate | 4.8 | 4.5 | 4.5 | 4.5 | 4.9 | 4.8 | 4.8 | 4.8 |
| Farm Wages | 1.839 | 1.868 | 1.897 | 1.927 | 1.960 | 1.992 | 2.025 | 2.058 |
| % Ch, Annual Rate | 6.9 | 6.4 | 6.5 | 6.5 | 6.9 | 6.8 | 6.8 | 6.7 |
| Military Wages | 4.848 | 4.882 | 4.920 | 4.944 | 5.001 | 5.036 | 5.075 | 5.100 |
| % Ch, Annual Rate | 4.8 | 2.9 | 3.1 | 2.0 | 4.7 | 2.8 | 3.1 | 2.0 |
| Nonwage Personal Income | 267.207 | 270.165 | 273.153 | 276.191 | 279.891 | 283.186 | 286.578 | 290.087 |
| % Ch, Annual Rate | 5.0 | 4.5 | 4.5 | 4.5 | 5.5 | 4.8 | 4.9 | 5.0 |
| Supplements to Wages and Salaries | 62.308 | 63.002 | 63.689 | 64.367 | 65.185 | 65.889 | 66.608 | 67.338 |
| % Ch, Annual Rate | 5.4 | 4.5 | 4.4 | 4.3 | 5.2 | 4.4 | 4.4 | 4.5 |
| Proprietor's Income | 37.702 | 37.887 | 38.005 | 38.084 | 38.095 | 38.118 | 38.158 | 38.220 |
| % Ch, Annual Rate | 1.3 | 2.0 | 1.3 | 0.8 | 0.1 | 0.2 | 0.4 | 0.7 |
| Farm | 1.448 | 1.647 | 1.775 | 1.816 | 1.782 | 1.704 | 1.611 | 1.523 |
| % Ch, Annual Rate | ... | ... | ... | ... | ... | ... | ... | ... |
| Nonfarm | 36.253 | 36.240 | 36.231 | 36.268 | 36.313 | 36.414 | 36.548 | 36.697 |
| % Ch, Annual Rate | -1.1 | -0.1 | -0.1 | 0.4 | 0.5 | 1.1 | 1.5 | 1.6 |
| Less: Contribution For Govt. Soc. Ins. | 45.024 | 45.442 | 45.881 | 46.333 | 47.051 | 47.554 | 48.070 | 48.590 |
| % Ch, Annual Rate | 6.0 | 3.8 | 3.9 | 4.0 | 6.3 | 4.3 | 4.4 | 4.4 |
| Plus: Residence Adjustment | 5.132 | 5.201 | 5.271 | 5.343 | 5.418 | 5.494 | 5.571 | 5.649 |
| % Ch, Annual Rate | 5.8 | 5.5 | 5.5 | 5.6 | 5.7 | 5.7 | 5.7 | 5.7 |
| Dividends/Int./Rent | 124.940 | 126.462 | 128.107 | 129.847 | 131.626 | 133.539 | 135.522 | 137.583 |
| % Ch, Annual Rate | 4.6 | 5.0 | 5.3 | 5.5 | 5.6 | 5.9 | 6.1 | 6.2 |
| Transfer Payments | 82.150 | 83.055 | 83.962 | 84.882 | 86.617 | 87.700 | 88.789 | 89.887 |
| % Ch, Annual Rate | 7.4 | 4.5 | 4.4 | 4.5 | 8.4 | 5.1 | 5.1 | 5.0 |
| State U.I. Benefits | 1.444 | 1.493 | 1.553 | 1.621 | 1.687 | 1.761 | 1.831 | 1.901 |
| % Ch, Annual Rate | 19.3 | 14.2 | 17.0 | 18.9 | 17.3 | 18.8 | 16.7 | 16.2 |
| Other Transfers | 80.706 | 81.563 | 82.409 | 83.260 | 84.930 | 85.939 | 86.959 | 87.986 |
| % Ch, Annual Rate | 7.2 | 4.3 | 4.2 | 4.2 | 8.3 | 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 |
| Forecast | | | | | | |
| 2019 | 109.7 | 1.5 | 2.557 | 1.8 | 2.778 | 2.5 |
| 2020 | 111.9 | 2.0 | 2.611 | 2.1 | 2.832 | 1.9 |
| 2021 | 114.0 | 1.9 | 2.661 | 1.9 | 2.886 | 1.9 |
| 2022 | 116.3 | 2.0 | 2.721 | 2.2 | 2.951 | 2.2 |
| 2023 | 118.6 | 2.0 | 2.782 | 2.2 | 3.017 | 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 |

Forecast

| | | | | | | | | |
|------|-------|-----|-------|-----|------|------|------|------|
| 2019 | 117.5 | 2.3 | 104.5 | 1.1 | 76.3 | -5.6 | 75.6 | -3.1 |
| 2020 | 120.5 | 2.6 | 106.0 | 1.5 | 74.6 | -2.3 | 75.5 | -0.1 |
| 2021 | 123.7 | 2.6 | 107.8 | 1.7 | 73.9 | -1.0 | 73.2 | -3.1 |
| 2022 | 126.9 | 2.6 | 109.5 | 1.5 | 75.3 | 1.9 | 74.0 | 1.1 |
| 2023 | 130.3 | 2.6 | 111.4 | 1.8 | 77.2 | 2.6 | 75.5 | 2.1 |

Table A5.1
Washington Resident Population and Components of Change*
(Thousands)

| | <u>Population</u> | <u>Change</u> | <u>Percent Change</u> | <u>Births</u> | <u>Deaths</u> | <u>Net Migration</u> |
|-----------------|-------------------|---------------|-----------------------|---------------|---------------|----------------------|
| 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 |

* As of April 1 of Each Year

Source: Office of Financial Management

Table A5.2
Washington Population*
 (Thousands)

| | <u>2014</u> | <u>2015</u> | <u>Actual</u> | | | | <u>Forecast</u> | | | |
|------------------|-------------|-------------|---------------|-------------|-------------|-------------|-----------------|-------------|-------------|-------------|
| | | | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>2023</u> |
| Total Population | 6968.2 | 7061.4 | 7183.7 | 7310.3 | 7427.6 | 7546.4 | 7659.4 | 7767.5 | 7871.7 | 7972.4 |
| Percent Change | 1.2 | 1.3 | 1.7 | 1.8 | 1.6 | 1.6 | 1.5 | 1.4 | 1.3 | 1.3 |
| Age 17 and Under | 1588.4 | 1602.8 | 1625.6 | 1648.7 | 1665.9 | 1682.6 | 1700.3 | 1717.5 | 1733.9 | 1749.8 |
| Percent of Total | 22.8 | 22.7 | 22.6 | 22.6 | 22.4 | 22.3 | 22.2 | 22.1 | 22.0 | 21.9 |
| Age 6-18 | 1151.0 | 1162.2 | 1178.7 | 1195.4 | 1211.9 | 1228.8 | 1244.6 | 1262.7 | 1280.1 | 1293.7 |
| Percent of Total | 16.5 | 16.5 | 16.4 | 16.4 | 16.3 | 16.3 | 16.2 | 16.3 | 16.3 | 16.2 |
| Age 18 and Over | 5379.8 | 5458.7 | 5558.1 | 5661.6 | 5761.7 | 5863.8 | 5959.1 | 6050.0 | 6137.8 | 6222.6 |
| Percent of Total | 77.2 | 77.3 | 77.4 | 77.4 | 77.6 | 77.7 | 77.8 | 77.9 | 78.0 | 78.1 |
| Age 21 and Over | 5107.4 | 5187.1 | 5284.0 | 5383.5 | 5479.6 | 5578.4 | 5673.5 | 5765.2 | 5852.1 | 5932.3 |
| Percent of Total | 73.3 | 73.5 | 73.6 | 73.6 | 73.8 | 73.9 | 74.1 | 74.2 | 74.3 | 74.4 |
| Age 20-34 | 1445.8 | 1458.8 | 1482.7 | 1507.6 | 1529.6 | 1554.8 | 1575.7 | 1594.0 | 1609.7 | 1621.9 |
| Percent of Total | 20.7 | 20.7 | 20.6 | 20.6 | 20.6 | 20.6 | 20.6 | 20.5 | 20.4 | 20.3 |
| Age 18-64 | 4396.9 | 4431.0 | 4484.7 | 4540.3 | 4588.0 | 4637.4 | 4677.4 | 4714.4 | 4748.9 | 4780.2 |
| Percent of Total | 63.1 | 62.7 | 62.4 | 62.1 | 61.8 | 61.5 | 61.1 | 60.7 | 60.3 | 60.0 |
| Age 65 and Over | 982.8 | 1027.7 | 1073.3 | 1121.3 | 1173.7 | 1226.4 | 1281.7 | 1335.6 | 1389.0 | 1442.4 |
| Percent of Total | 14.1 | 14.6 | 14.9 | 15.3 | 15.8 | 16.3 | 16.7 | 17.2 | 17.6 | 18.1 |

* 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 | October 2019 | - |
| U.S. Real GDP Growth | 3rd quarter 2019 | + |
| U.S. ISM Index | October 2019 | + |
| U.S. Employment YOY%Δ | October 2019 | - |
| U.S. Unemployment Rate | October 2019 | - |
| U.S. Consumer Confidence | November 2019 | - |
| U.S. Consumer Sentiment | November 2019 | + |
| U.S. Light Vehicle Sales | October 2019 | - |
| U.S. CPI YOY%Δ | October 2019 | - |
| U.S. Home Prices YOY%Δ | September 2019 | + |
| S&P 500 Index | November 2019 | + |
| WA Leading Index | October 2019 | - |
| WA ISM-WW Index | October 2019 | + |
| WA Employment YOY%Δ | October 2019 | - |
| WA Aerospace Empl. YOY%Δ | October 2019 | - |
| WA Unemployment Rate | October 2019 | + |
| WA Help Wanted Index | October 2019 | - |
| WA Business Cycle Indicator | October 2019 | + |
| WA Initial Unemploy. Claims | October 2019 | + |
| WA Housing Permits | October 2019 | - |
| WA Weekly Hours in Mfg. | October 2019 | - |
| WA New Vehicle Registration | October 2019 | + |
| WA In-Migration | October 2019 | - |
| WA Exports-Total YOY%Δ | 3rd quarter 2019 | - |
| WA Exports- w/o Trans. Equip. YOY%Δ | 3rd quarter 2019 | + |
| Seattle CPI YOY%Δ | October 2019 | + |
| Seattle Home Prices YOY%Δ | September 2019 | + |
| WA Construction Activity Index | October 2019 | + |

*Change from the previous reading

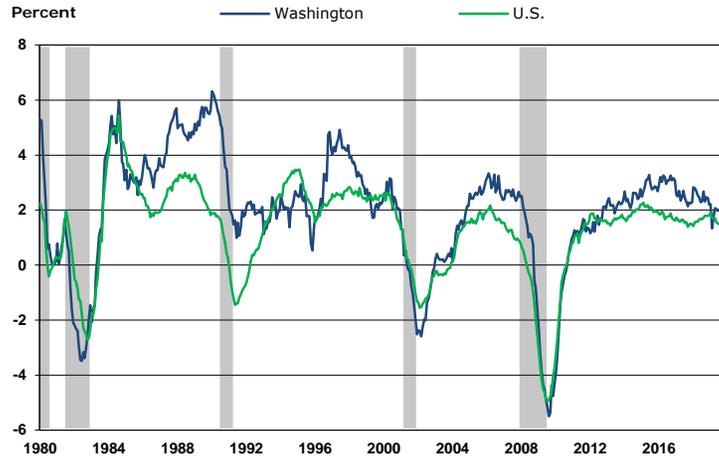
Table A6.2
Washington Business Indicators
 Historical Data

| | 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 | 113.6 | 92.0 | 48.3 | 93.8 | 118.2 | 63.5 | 51.8 |
| 2014:02 | 113.9 | 92.5 | 47.0 | 94.8 | 118.5 | 68.7 | 54.3 |
| 2014:03 | 114.5 | 93.4 | 47.4 | 95.1 | 118.6 | 63.6 | 54.4 |
| 2014:04 | 115.1 | 93.5 | 49.9 | 96.3 | 120.6 | 53.7 | 55.3 |
| 2014:05 | 115.3 | 94.0 | 50.3 | 95.9 | 118.7 | 59.6 | 55.6 |
| 2014:06 | 116.2 | 94.7 | 50.7 | 95.4 | 121.0 | 67.0 | 55.7 |
| 2014:07 | 116.9 | 95.2 | 51.9 | 97.9 | 121.3 | 50.1 | 56.4 |
| 2014:08 | 116.7 | 95.5 | 52.1 | 96.5 | 121.6 | 62.9 | 58.1 |
| 2014:09 | 116.8 | 96.1 | 52.1 | 99.0 | 114.3 | 60.3 | 56.1 |
| 2014:10 | 117.1 | 96.4 | 52.1 | 98.4 | 119.0 | 57.6 | 57.9 |
| 2014:11 | 118.0 | 96.8 | 54.2 | 100.1 | 128.0 | 63.1 | 57.6 |
| 2014:12 | 117.8 | 97.3 | 54.7 | 101.2 | 122.0 | 53.3 | 55.1 |
| 2015:01 | 118.4 | 97.4 | 55.4 | 103.8 | 127.6 | 66.6 | 53.5 |
| 2015:02 | 119.4 | 97.4 | 60.3 | 107.7 | 137.2 | 65.9 | 52.9 |
| 2015:03 | 118.8 | 97.9 | 59.4 | 104.0 | 138.8 | 64.1 | 51.5 |
| 2015:04 | 118.9 | 98.4 | 59.4 | 102.5 | 135.7 | 60.4 | 51.5 |
| 2015:05 | 119.4 | 98.8 | 59.3 | 102.8 | 139.0 | 60.3 | 52.8 |
| 2015:06 | 119.7 | 99.3 | 59.5 | 103.1 | 136.0 | 51.4 | 53.5 |
| 2015:07 | 119.5 | 99.1 | 61.2 | 103.2 | 141.0 | 53.6 | 52.7 |
| 2015:08 | 119.4 | 99.1 | 60.4 | 104.8 | 139.1 | 48.0 | 51.1 |
| 2015:09 | 118.5 | 99.0 | 59.5 | 104.5 | 126.6 | 48.0 | 50.2 |
| 2015:10 | 118.9 | 99.4 | 60.7 | 103.2 | 132.4 | 46.1 | 50.1 |
| 2015:11 | 119.1 | 99.8 | 60.9 | 103.5 | 134.3 | 50.0 | 48.6 |
| 2015:12 | 119.3 | 99.6 | 63.2 | 105.9 | 130.7 | 54.5 | 48.0 |
| 2016:01 | 118.9 | 99.3 | 64.3 | 105.9 | 128.7 | 57.2 | 48.2 |
| 2016:02 | 119.3 | 99.2 | 66.0 | 107.3 | 124.9 | 55.4 | 49.7 |
| 2016:03 | 119.7 | 99.2 | 63.3 | 106.9 | 128.9 | 55.7 | 51.7 |
| 2016:04 | 120.8 | 99.7 | 63.9 | 108.0 | 130.9 | 50.8 | 50.7 |
| 2016:05 | 121.5 | 99.5 | 66.2 | 108.2 | 148.2 | 49.2 | 51.0 |
| 2016:06 | 121.9 | 99.8 | 66.9 | 109.2 | 151.3 | 49.1 | 52.8 |
| 2016:07 | 122.2 | 100.2 | 68.2 | 108.8 | 156.3 | 50.8 | 52.3 |
| 2016:08 | 121.8 | 100.2 | 67.3 | 106.3 | 153.1 | 47.7 | 49.4 |
| 2016:09 | 122.5 | 100.4 | 67.6 | 110.9 | 143.4 | 51.4 | 51.7 |
| 2016:10 | 122.7 | 100.5 | 69.1 | 111.5 | 152.3 | 53.1 | 52.0 |
| 2016:11 | 122.4 | 100.7 | 70.6 | 111.9 | 148.8 | 53.3 | 53.5 |
| 2016:12 | 122.2 | 101.2 | 71.6 | 113.0 | 149.2 | 47.3 | 54.5 |
| 2017:01 | 122.9 | 101.8 | 70.3 | 111.1 | 152.5 | 54.2 | 56.0 |
| 2017:02 | 122.4 | 102.1 | 69.3 | 112.1 | 140.1 | 48.6 | 57.7 |
| 2017:03 | 123.2 | 102.6 | 70.7 | 111.6 | 143.4 | 59.2 | 57.2 |
| 2017:04 | 123.5 | 102.8 | 69.8 | 112.0 | 143.3 | 59.2 | 54.8 |
| 2017:05 | 124.3 | 103.2 | 71.2 | 112.8 | 149.2 | 45.0 | 54.9 |
| 2017:06 | 124.8 | 103.8 | 70.6 | 113.3 | 145.4 | 50.0 | 57.8 |
| 2017:07 | 125.1 | 104.1 | 70.9 | 113.8 | 139.5 | 47.0 | 56.3 |
| 2017:08 | 125.4 | 104.5 | 72.2 | 114.2 | 135.1 | 58.2 | 58.8 |
| 2017:09 | 125.8 | 104.5 | 73.7 | 113.5 | 140.4 | 57.5 | 60.8 |
| 2017:10 | 126.6 | 105.9 | 74.2 | 116.9 | 132.7 | 51.8 | 58.7 |
| 2017:11 | 126.7 | 106.3 | 76.9 | 117.0 | 134.7 | 65.0 | 58.2 |
| 2017:12 | 127.3 | 107.1 | 76.0 | 116.3 | 138.6 | 65.8 | 59.7 |
| 2018:01 | 127.6 | 107.8 | 75.7 | 115.9 | 136.8 | 60.8 | 59.1 |
| 2018:02 | 128.3 | 108.5 | 76.9 | 118.0 | 133.3 | 68.3 | 60.8 |
| 2018:03 | 129.1 | 108.8 | 77.7 | 119.9 | 137.4 | 68.0 | 59.3 |
| 2018:04 | 129.0 | 109.3 | 76.9 | 116.9 | 133.7 | 55.8 | 57.3 |
| 2018:05 | 127.8 | 109.4 | 77.5 | 115.7 | 128.0 | 61.7 | 58.7 |
| 2018:06 | 127.7 | 110.0 | 77.2 | 117.3 | 123.1 | 56.0 | 60.2 |
| 2018:07 | 127.8 | 110.4 | 76.9 | 116.0 | 124.8 | 60.0 | 58.1 |
| 2018:08 | 127.8 | 110.9 | 76.0 | 117.5 | 123.4 | 61.1 | 61.3 |
| 2018:09 | 128.5 | 111.5 | 76.9 | 116.4 | 131.5 | 62.7 | 59.8 |
| 2018:10 | 128.8 | 111.4 | 77.6 | 117.8 | 129.3 | 55.0 | 57.7 |
| 2018:11 | 128.7 | 111.5 | 78.6 | 118.7 | 127.8 | 60.0 | 59.3 |
| 2018:12 | 129.1 | 111.3 | 78.6 | 119.4 | 131.2 | 52.7 | 54.1 |
| 2019:01 | 129.5 | 111.3 | 78.5 | 118.9 | 133.0 | 54.5 | 56.6 |
| 2019:02 | 126.7 | 111.5 | 74.1 | 114.5 | 131.9 | 61.1 | 54.2 |
| 2019:03 | 129.4 | 111.7 | 76.2 | 119.8 | 125.6 | 57.8 | 55.3 |
| 2019:04 | 129.9 | 111.8 | 76.7 | 121.0 | 125.5 | 54.0 | 52.8 |
| 2019:05 | 129.3 | 111.8 | 76.1 | 119.8 | 124.0 | 54.0 | 52.1 |
| 2019:06 | 129.6 | 111.8 | 75.8 | 119.0 | 122.8 | 56.7 | 51.7 |
| 2019:07 | 130.8 | 112.2 | 76.0 | 121.7 | 123.0 | 57.0 | 51.2 |
| 2019:08 | 129.7 | 112.0 | 75.3 | 119.0 | 123.3 | 56.0 | 49.1 |
| 2019:09 | 129.9 | 111.8 | 75.8 | 120.2 | 122.9 | 54.0 | 47.8 |
| 2019:10 | 129.7 | 111.7 | 76.3 | 120.7 | 115.9 | 58.2 | 48.3 |

Figure A7.1: Washington State Economic Indicators

Year-over-Year Employment Growth

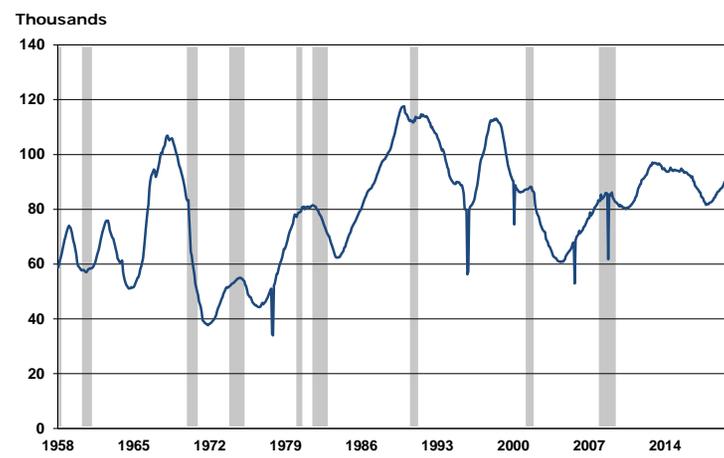
January 1980 to October 2019



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

Washington Aircraft and Parts Employment

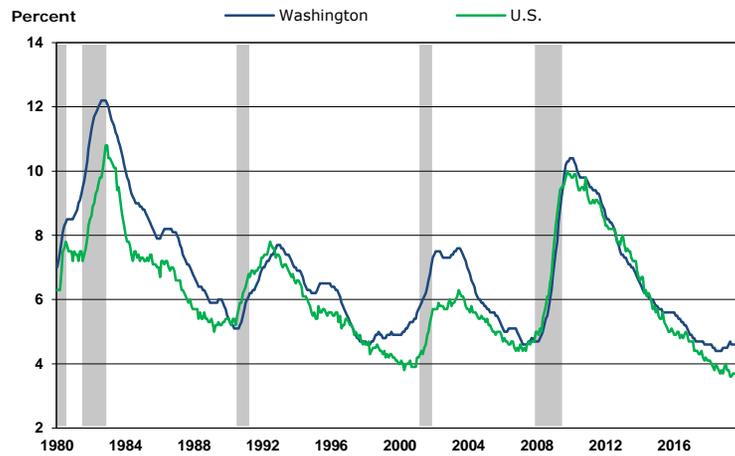
January 1958 to November 2019



* Source: Bureau of Labor Statistics, ERFC

Unemployment Rate, S.A.

January 1980 to October 2019



* Source: Bureau of Labor Statistics

Washington Business Cycle Indicator

January 1968 to October 2019



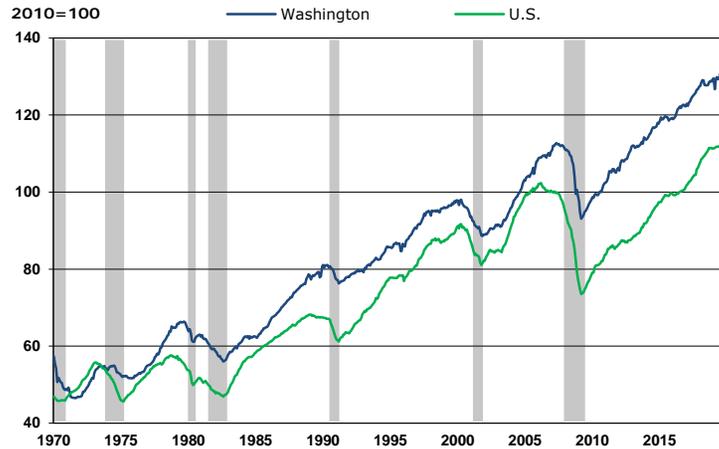
* Source: ERFC

* Shaded areas correspond with national recessions.
Appendix

Figure A7.2: Washington State Leading Indicators

The Washington and U.S. Indexes of Leading Indicators

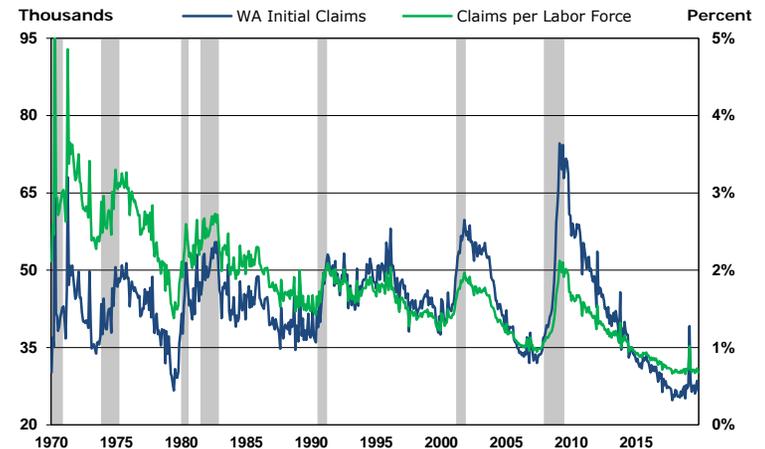
January 1970 to October 2019



* The Conference Board, ERFC

Washington Initial Claims for Unemployment Insurance

January 1970 to October 2019, S.A.



* Source: WA State Employment Security, ERFC

Washington State Help Wanted Index

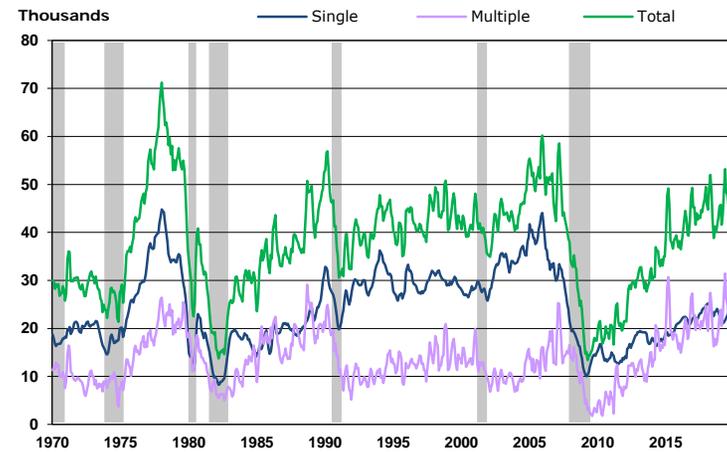
January 1964 to October 2019



* Source: The Conference Board, ERFC

Housing Units Authorized in Washington State

January 1970 to October 2019, 3mma, SAAR



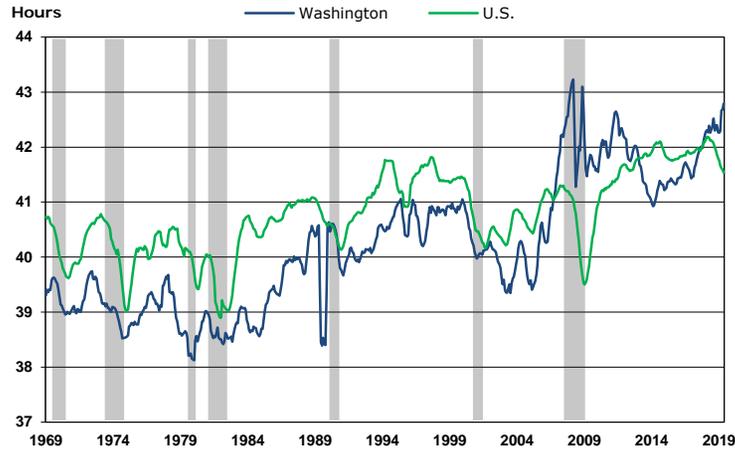
* Source: Census Bureau, ERFC

* Shaded areas correspond with national recessions.
Appendix

Figure A7.3: Other State Economic Indicators

Average Weekly Hours in Manufacturing

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



* Bureau of Labor Statistics, ERFC

Washington Driver's License In-Migration

January 1988 to October 2019, 12-Month Moving Average



* Source: WA State Department of Licensing, ERFC

New Car and Truck Registrations in Washington

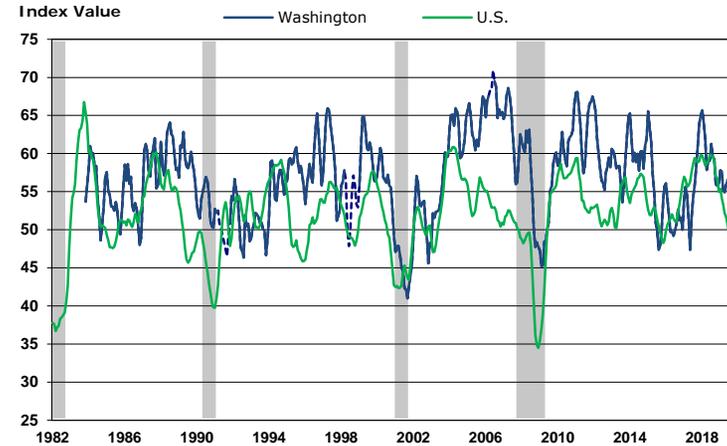
September 1970 to October 2019, 3-Month Moving Average, S.A.



* Source: WA State Department of Licensing, ERFC

Institute for Supply Management Index

March 1982 to October 2019, 3-Month Moving Average, S.A.



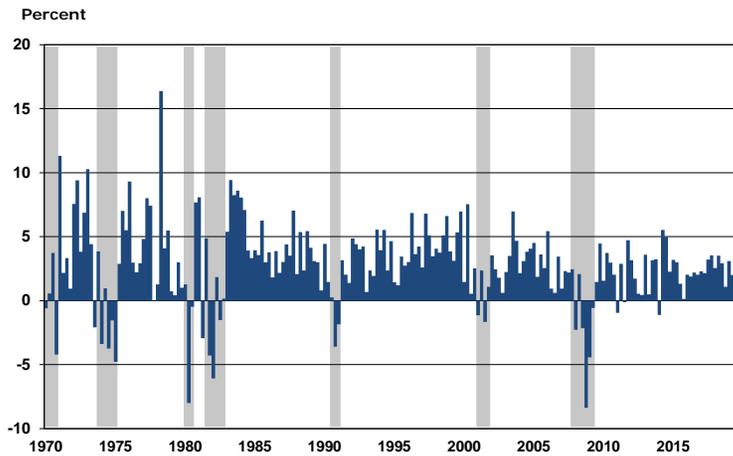
* Source: Institute for Supply Management, ISM-WW, ERFC

* Shaded areas correspond with national recessions.
Appendix

Figure A7.4: Other Economic Indicators

Quarterly U.S. Real GDP Growth

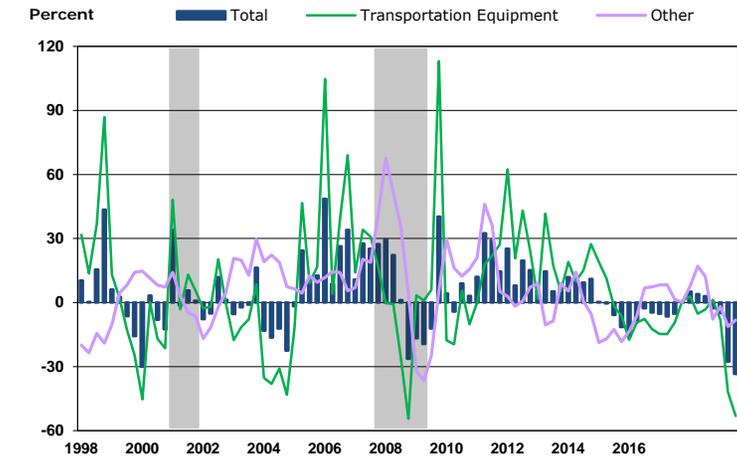
1970Q1 to 2019Q3, SAAR



* Source: Bureau of Economic Analysis

Washington State Export Composition

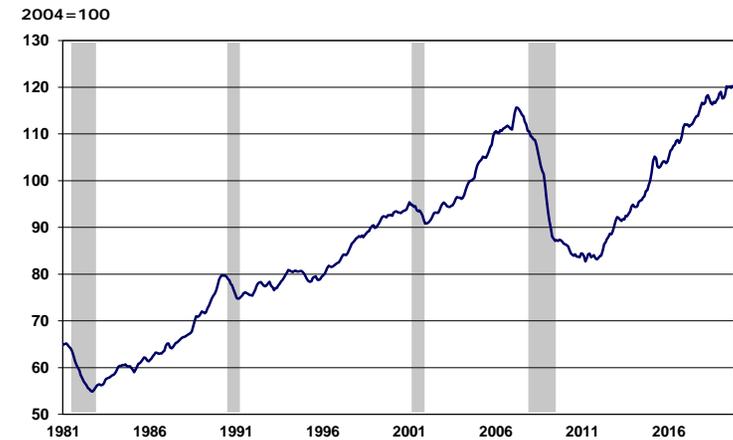
1998Q1 to 2019Q3, Year-over-year percent change



* Source: WISER

Washington State Construction Index

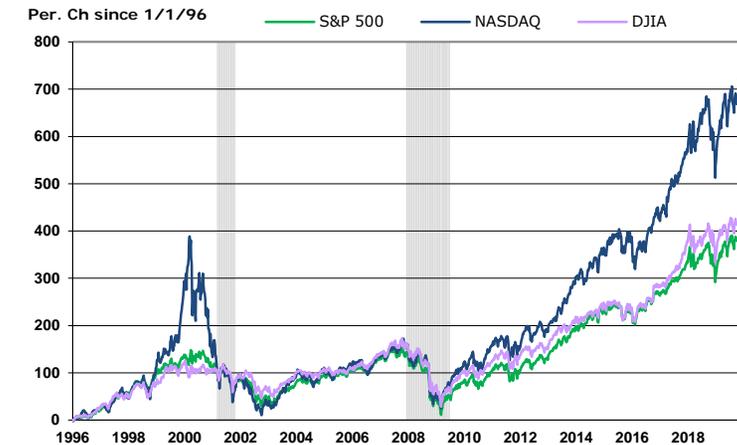
January 1981 to October 2019, 3mma



* Source: ERFC

National Stock Indexes

January 1, 1996 to November 22, 2019



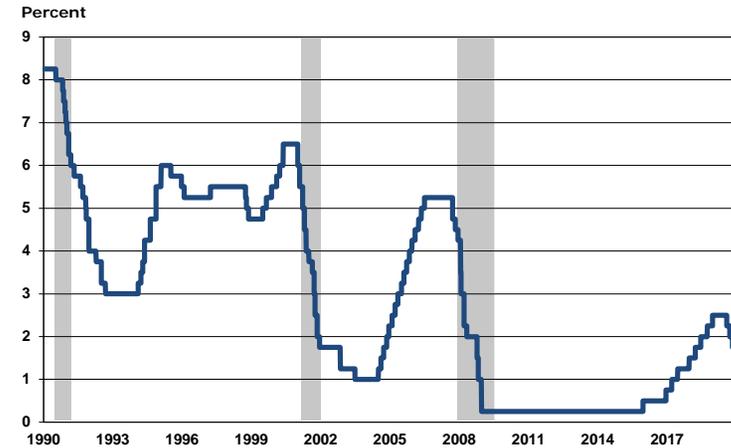
* Source: ERFC

* Shaded areas correspond with national recessions.
Appendix

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

Federal Funds Target Rate

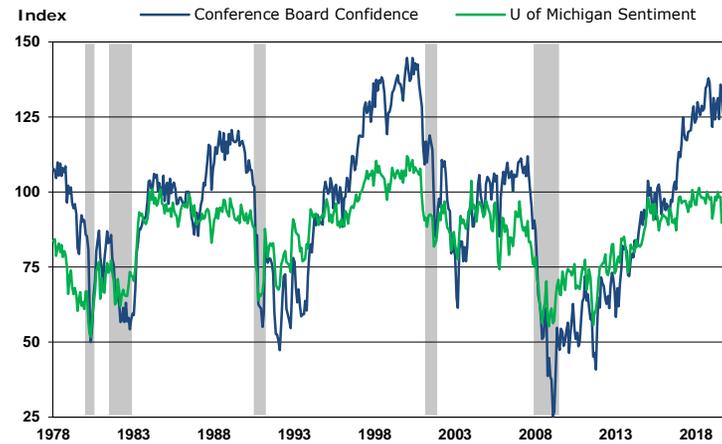
January 1, 1990 to November 27, 2019



* Federal Reserve

Consumer Confidence

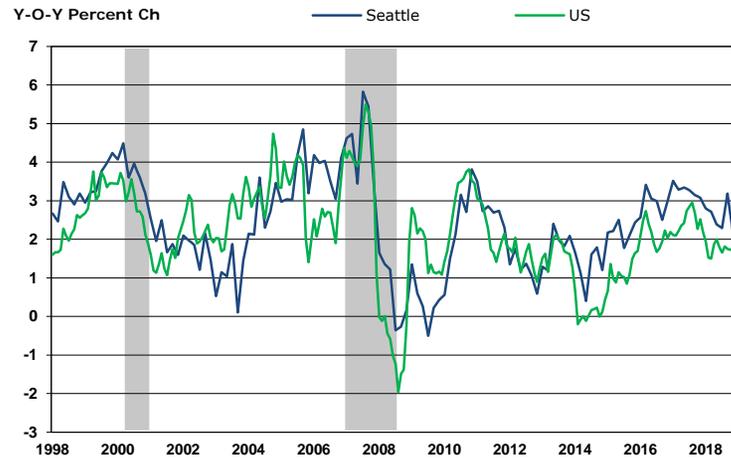
March 1978 to November 2019



* Source: The Conference Board, University of Michigan

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

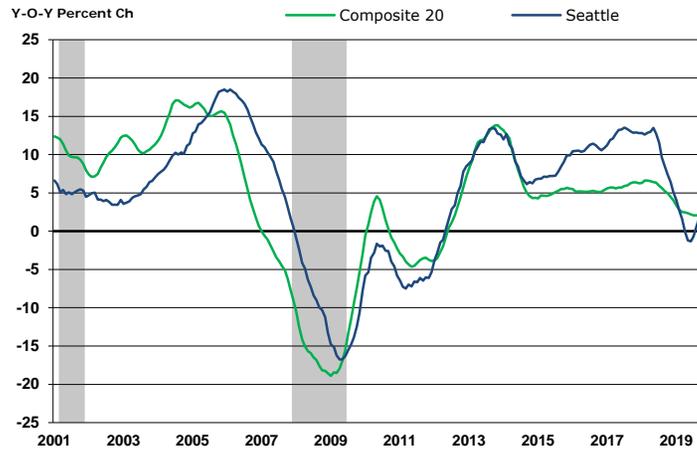
December 1998 to October 2019



* Source: Bureau of Labor Statistics

Case Shiller Home Price Index

January 2001 to September 2019, SA



* Source: Case Shiller, ERFC

* Shaded areas correspond with national recessions.
Appendix

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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.