

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.

Washington State Economic and Revenue Forecast

September 2018
Volume XLI, No. 3



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Washington State Economic and Revenue Forecast

Prepared by the
Economic and Revenue Forecast Council

September 2018
Volume XLI, No. 3

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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 October 5, 2018.

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Table of Contents

Preface	iii
List of Tables	vi
List of Figures	vii
Executive Summary	1
U.S. Economic Forecast.....	1
Washington Economic Forecast	2
Revenue Forecast.....	2
Chapter 1: U.S. Economy – Current Conditions and Forecast	5
Current Conditions	5
Forecast.....	10
Risks to the Forecast	15
Chapter 2: Washington Economy – Current Conditions and Forecast	21
Current Conditions	21
Washington State Forecast	25
Washington Payroll Employment	26
Washington Personal Income	27
Washington Building Permits	28
Seattle Consumer Price Index	29
Alternative Scenarios	29
Chapter 3: Washington State Revenue Forecast Summary	43
Overview.....	43
Recent Collection Experience	45
Non-Economic Changes to the Forecast.....	47
Revenue Forecasts by Source	47
Department of Revenue	47
Forecasted Revenue from Cannabis-Related Sales	51
The Office of Financial Management (Other Agencies)	52
State Treasurer.....	52
Insurance Commissioner	52
Liquor and Cannabis Board.....	53
Lottery Commission.....	53
Administrative Office of the Courts	54
Track Record for the 2017-19 Biennium	54
Track Record for the 2019-21 Biennium	54
The Relationship between the Cash and GAAP GF-S Revenue Forecasts	54
Budgetary Balance Sheet for the 2015-17 Biennium	55
Alternative Forecasts for the 2015-17 and 2017-19 Biennia.....	55
Near General Fund Forecasts for the 2015-17 - 2019-21 Biennia.....	56
Appendix	73
Glossary	111

List of Tables

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

Table 1.1	U.S. Economic Forecast Summary	17
Table 1.2	Forecast Analysis, Comparison of Forecasts for 2017-19	18
Table 1.3	Forecast Analysis, Comparison of Forecasts for 2019-21	19
Table 1.4	Forecast Comparison, 2019 to 2023	20

Chapter 2: Washington Economy – Current Conditions and Forecast

Table 2.1	Washington Economic Forecast Summary.....	32
Table 2.2	Comparison of Alternative Forecasts	33
Table 2.3	Governor’s Council of Economic Advisor’s Forecast	34
Table 2.4	Forecast Analysis, Comparison of Forecasts for 2017-19	35
Table 2.5	Forecast Analysis, Comparison of Forecasts for 2019-21	36
Table 2.6	Forecast Comparison, 2019 to 2023	37

Chapter 3: Washington State Revenue Forecast Summary

Table 3.1	Revisions to the General Fund-State Forecast	44
Table 3.2	Collection Variance of Major General Fund-State Taxes by Agency.....	45
Table 3.3	General Fund-State Collections	57
Table 3.4	Taxable Retail Sales	58
Table 3.5	General Fund-State forecast by agency, 2017-19 biennium, Cash	59
Table 3.6	General Fund-State forecast by agency, 2017-19 biennium, GAAP.....	60
Table 3.7	General Fund-State forecast by agency, 2019-21 biennium, Cash	61
Table 3.8	General Fund-State forecast by agency, 2019-21 biennium, GAAP.....	62
Table 3.9	September 2018 General Fund-State Forecast Detail	63
Table 3.10	Track Record for the 2017-19 General Fund-State Cash Forecast	64
Table 3.11	Track Record for the 2019-21 General Fund-State Cash Forecast	65
Table 3.12	2017-19 with Enacted Budget Balance Sheet	66
Table 3.13	Alternative Forecasts Compared to the Baseline Forecast, 2017-19	67
Table 3.14	Alternative Forecasts Compared to the Baseline Forecast, 2019-21	68
Table 3.15	Lottery Transfers by Fund, Cash.....	69
Table 3.16	Lottery Transfers by Fund, GAAP.....	69
Table 3.17	GF-S, ELTA and OPA (Near General Fund-State)	70
Table 3.18	Forecasted Distribution of Excise Tax & License Fees from Cannabis Sales..	71

Appendix: Detail Components of the State Economic and Revenue Forecast

Table A1.1	U.S. Economic Forecast Summary, Annual	75
Table A1.2	U.S. Economic Forecast Summary, Quarterly	76
Table A1.3	Washington Economic Forecast Summary, Annual	79
Table A1.4	Washington Economic Forecast Summary, Quarterly	80
Table A2.1	U.S. Nonagricultural Employment by Industry, Annual	83
Table A2.2	U.S. Nonagricultural Employment by Industry, Quarterly.....	84
Table A2.3	Washington Nonagricultural Employment by Industry, Annual.....	87
Table A2.4	Washington Nonagricultural Employment by Industry, Quarterly	88
Table A3.1	U.S. Personal Income by Component, Annual	91
Table A3.2	U.S. Personal Income by Component, Quarterly	92
Table A3.3	Washington Personal Income by Component, Annual	95
Table A3.4	Washington Personal Income by Component, Quarterly	96
Table A4.1	Selected Inflation Indicators	99
Table A4.2	Chain-Weighted Price Indices.....	100
Table A5.1	Washington Resident Population and Components of Change	101
Table A5.2	Washington Population.....	102
Table A6.1	Summary of National and State Indicators	103
Table A6.2	Washington Business Indicators	104

List of Figures

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

Figure 1.1	Real GDP Growth	6
Figure 1.2	Consumer Confidence and Sentiment.....	7
Figure 1.3	U.S. Oil Production, Barrels per Day	8
Figure 1.4	Average Price of Crude Oil	11
Figure 1.5	Unemployment Rate	12
Figure 1.6	Growth in Housing Starts	14

Chapter 2: Washington Economy – Current Conditions and Forecast

Figure 2.1	Unemployment Rates.....	22
Figure 2.2	Seattle Home Price Appreciation.....	23
Figure 2.3	Washington Personal Income Revision	25
Figure 2.4	Electronic Shopping and Mail Order Employment	27
Figure 2.5	Washington Average Annual Wage	28
Figure 2.6	Housing Units Authorized by Building Permits	29
Figure 2.7	Comparison of Washington and U.S. Economic Forecasts	38
Figure 2.8	Comparison of Alternative U.S. Economic Forecasts	41
Figure 2.9	Comparison of Alternative Washington Economic Forecasts	42

Chapter 3: Washington State Revenue Forecast Summary

Figure 3.1	GF-S Revenue as Percentage of State Personal Income.....	44
Figure 3.2	Revenue Act Collections	46
Figure 3.3	Taxable Real Estate Excise Activity	47
Figure 3.4	Taxable Sales as a Percentage of State Personal Income	48

Appendix:

Detail Components of the Washington State Economic and Revenue Forecast

Figure A7.1	Washington State Economic Indicators.....	105
Figure A7.2	Washington State Leading Indicators	106
Figure A7.3	Other State Economic Indicators	107
Figure A7.4	Other Economic Indicators	108



Executive Summary

- **The national economy is expanding at a solid pace. Real GDP rose 4.2% (SAAR) in the second quarter after growing 2.2% (SAAR) in the first quarter.**
- **The forecast for real GDP growth is unchanged since the June forecast. Real GDP growth in 2018 and 2019 is 2.9% and 2.6%. Growth remains at 1.9%, 1.9%, 2.1% and 2.1% in 2020 through 2023.**
- **Recent Washington employment and income data were revised higher since the June forecast.**
- **Washington's unemployment rate reached an all-time low in August.**
- **As in June, we expect the Washington economy to continue to outperform the U.S. economy.**
- **General Fund-State (GF-S) revenue collections since the June 2018 forecast have come in \$147 million over the forecasted amount.**
- **A U.S. Supreme Court decision on the taxability of online sales has increased expected revenue by \$38 million in the 2019-21 biennium and \$46 million in the 2021-23 biennium.**
- **Forecasted GF-S revenue has increased by \$275 million in the current biennium, \$355 million in the 2019-21 biennium and \$295 million in the 2021-23 biennium.**
- **Near GF-S revenue, which includes all state revenue subject to the budget outlook process, is forecasted to increase by \$348 million in the current biennium, \$443 million in the 2019-21 biennium and \$415 million in the 2021-23 biennium.**

U.S. Economic Forecast

The national economy is expanding at a solid pace

The national economy is expanding at a solid pace. Real GDP rose 4.2% (SAAR) in the second quarter after growing 2.2% in the first quarter. Job gains have remained solid even as the economy is at full employment. The unemployment rate has fallen to below 4%. Consumer and business confidence remain at cyclical highs. Oil prices have increased but remain well below pre-recession levels. Monetary policy has remained steady although there is uncertainty surrounding fiscal policy. The manufacturing sector is strong. Exports have rebounded, although they are expected to slow over the next two quarters.

On the downside, the housing market recovery remains slow. Geopolitical risks, while elevated, have had little impact on the U.S. economy.

The economic outlook is similar to June

The economic outlook is similar to the June forecast. Through the first half of the year, GDP rose at an average 3.2% annual rate, up from 2.5% averaged over the four quarters of 2017. As in June, the September Blue Chip forecast for real GDP growth in 2018 and 2019 is 2.9% and 2.6%. The Blue Chip long-range forecast has not been updated since June and remains at 1.9%, 1.9%, 2.1% and 2.1% in 2020 through 2023.

Washington Economic Forecast

The Washington economy is expanding at a rapid pace

The Washington economy is expanding at a rapid pace. Recent employment and income data were revised higher since the June forecast. Washington's unemployment rate reached an all-time low in August. The series extends back to 1976. Seattle home prices continue to rise but growth may be slowing and recent housing construction has been below the June forecast. Washington exports are rising and manufacturing is growing. Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.

The September economic forecast for Washington State is generally higher than the forecast adopted in June

The September economic forecast for Washington State is generally higher than the forecast adopted in June. We now expect Washington nonfarm payroll employment to grow 2.9% this year compared to 2.5% in the June forecast. We expect employment growth to average 1.2% per year in 2019 through 2023, which is slightly stronger than the 1.1% per year expected in the June forecast. Our forecast for nominal personal income growth this year is 6.6%, up from 5.8% in the June forecast. Our new forecast for nominal personal income growth in 2019 through 2023 averages 4.9% per year compared to 5.1% per year in the June forecast. We expect 43,800 housing units authorized by building permits this year, down from 45,400 in the June forecast. However, we expect permits to average 42,800 in 2019 through 2023, up from 42,400 in the June forecast. We expect the all-items Seattle CPI to rise 3.0% this year, down from 3.3% in the June forecast. We expect Seattle area inflation will average 2.2% per year in 2019 through 2023, down slightly from 2.3% in the June forecast.

Revenue Forecast

The revenue forecast has increased due to strong tax receipts and changes to the economic forecast

Since the June 2018 forecast, General Fund – State (GF-S) revenue collections have come in \$147 million higher than forecasted. Most of the surplus came from stronger than expected retail sales and business and occupation taxes. The collection surplus, coupled with increases in expected personal income and other changes to the economic forecast, has resulted in an increase in forecasted revenue. In addition, a U.S.

Supreme Court decision on the taxability of online sales has increased expected revenue in the 2019-21 and 2021-23 biennia.

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

17-19: +\$275
19-21: +\$355
21-23: +\$295

For the current biennium, revenue sources that are tracked monthly came in \$146.9 million higher than forecasted in June. Changes to the economic forecast resulted in a \$128.3 million increase in projected collections for the rest of the biennium, for a total GF-S forecast increase of \$275.2 million in the current 2017-19 biennium. Changes to the economic forecast resulted in a \$317.1 million increase to projected collections for the 2019-21 biennium. Non-economic changes (the Supreme Court decision) added \$37.8 million, for a net forecast increase of \$354.9 million. Economic forecast changes added \$248.7 million to projected collections for the 2021-23 biennium and non-economic changes added \$46.1 million, for a net forecast increase of \$294.8 million. The September 2018 forecast for GF-S revenue totals \$43,807.6 million in the 2017-19 biennium, \$48,874.8 million in the 2019-21 and \$52,576.6 million in the 2021-23 biennium.

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

- **The national economy is expanding at a solid pace. Real GDP rose 4.2% (SAAR) in the second quarter after growing 2.2% (SAAR) in the first quarter.**
- **Employment growth has been solid and the unemployment rate continues to fall.**
- **Consumer confidence remains high.**
- **The manufacturing sector is strong while the construction sector has hit a soft patch.**
- **U.S. oil production is at an all-time high as oil prices continue to rise.**
- **Inflation has leveled off.**
- **The forecast for real GDP growth is unchanged since the June forecast. Real GDP growth in 2018 and 2019 is 2.9% and 2.6%. Growth remains at 1.9%, 1.9%, 2.1% and 2.1% in 2020 through 2023.**
- **Higher business and consumer confidence leading to more hiring and spending is the most significant upside risk. A slowdown in global growth is the major downside risk.**

Current Conditions

The national economy is expanding at a solid pace

The national economy is expanding at a solid pace. Real GDP rose 4.2% (SAAR) in the second quarter after growing 2.2% in the first quarter. Job gains have remained solid even as the economy is at full employment. The unemployment rate has fallen to below 4%. Consumer and business confidence remain at cyclical highs. Oil prices have increased but remain well below pre-recession levels. Monetary policy has remained steady although there is uncertainty surrounding fiscal policy. The manufacturing sector is strong. Exports have rebounded, although they are expected to slow over the next two quarters. On the downside, the housing market recovery remains slow. Geopolitical risks, while elevated, have had little impact on the U.S. economy.

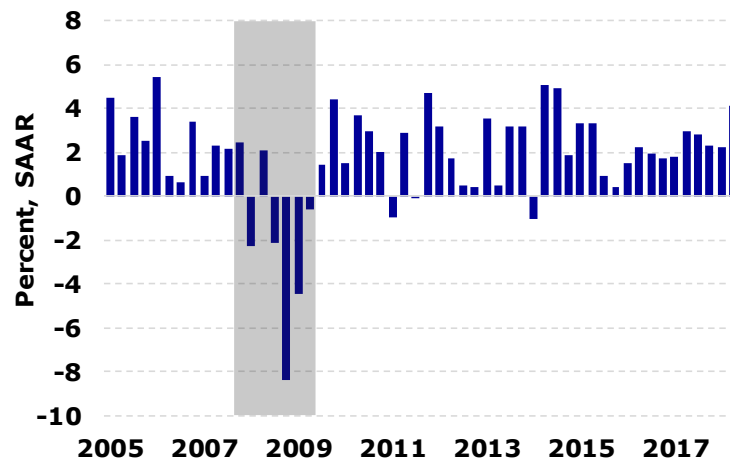
U.S. real GDP rose 4.2% (SAAR) in the second quarter

U.S. real GDP rose 4.2% (SAAR) in the second quarter of 2018 after growing 2.2% (SAAR) in the first quarter (see Figure 1.1). Through the first half of the year, GDP rose at an average 3.2%

annual rate, up from 2.5% averaged over the four quarters of 2017. Second quarter growth was widespread. Consumer spending was strong, growing 3.8% (SAAR) after weak first quarter growth of 0.5% (SAAR). The contribution from consumer spending to overall growth increased from 0.4 percentage points to 2.6. Fixed investment was again strong in the second quarter, growing 6.4% (SAAR) and adding 1.1 percentage points to GDP growth. Nonresidential investment was strong while residential investment declined. Final sales increased 5.4% (SAAR) as inventories were a significant drag on growth. Government spending was positive with growth at the national, state and local levels. Net exports rebounded in the second quarter adding 1.2 points to GDP growth. Real disposable income growth slowed to 2.5% from the tax-cut boosted gain of 4.4% in the first quarter.

Real GDP growth picked up in the second quarter

Figure 1.1: Real GDP Growth



Source: BEA; data through 2018 Q2

Employment growth has remained solid

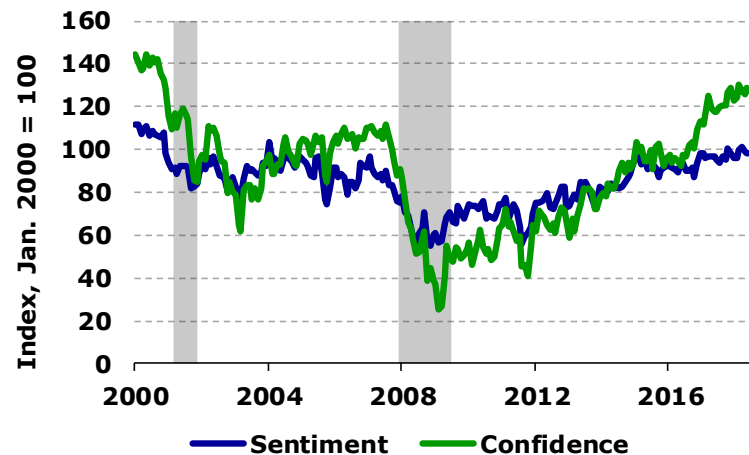
The trend in employment growth remains solid. Nonfarm payrolls increased 134,000 in September, weighed down by Hurricane Florence. Many residents fled the area and businesses were shut down, affecting data collection. August payroll gains were revised up to 270,000. In September, private employment rose by 121,000. The goods-producing sector remains strong, increasing by 46,000 jobs with large gains in construction (+23,000) and durable manufacturing (+17,000). Private service-providing industries increased by 75,000 jobs in September. Sectors with the highest job gains were transportation and warehousing (+23,800) and health care and social assistance (+29,800). Retail trade and leisure and hospitality each had a drop in employment likely due to the hurricane, declining 20,000 and 17,000 job respectively. The unemployment rate declined to 3.7% from 3.9% in August. Average hourly earnings increased by \$0.08 or 0.3%. Earnings were up 2.8% since last year.

Consumer attitudes remain strong

Consumer confidence is high and continues to improve. In September, the Conference Board measure of consumer confidence increased 3.7 points to 138.4. This is the highest reading in 18 years (see Figure 1.2). Confidence is up 17.8 points from a year ago. The present situation component rose slightly in September as consumers are confident about the economic climate and employment picture. The expectations index improved, bolstered by an increase in labor and business expectations. The University of Michigan Consumer Sentiment index rose 3.9 points in September. The index is up 5.0 points from a year ago. Improvements were broad based. Consumers had more favorable evaluations of household finances, business conditions, and purchasing conditions. Both the current conditions and expectation components improved in September.

Figure 1.2: Consumer Confidence and Sentiment

Consumer confidence continues to improve



Source: Conference Board, University of Michigan; data through September 2018

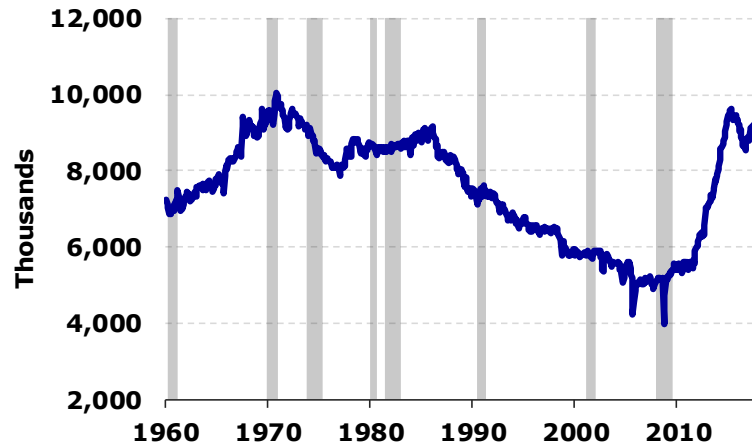
Oil prices have increased

Oil prices have increased in recent weeks. West Texas Intermediate (WTI) reached \$73 per barrel at the end of September, up from \$70 at the end of August. Brent crude oil has increased even more, rising to \$82 to end September from \$76 at the end of August. Both prices are up over \$22 per barrel from last year. U.S. production has ramped up sharply in response and is now at an all-time high (see Figure 1.3). Oil production in the U.S. rose 269,000 barrels per day (bpd) in July. Production is now just shy of 11 million bpd at 10.964 million bpd. The number of drilling structures has leveled off after expanding early in the year. The Baker Hughes rig count was at 1,054 at the end of September, an increase of 114 since last year but close to the average of the past five months. Internationally, OPEC has boosted oil output, but the impact is limited due to the decline in Iranian supply. Saudi Arabian and Russian oil output are both at record highs in an attempt to meet demand and make up for lost supply elsewhere. The Venezuelan military has taken over its country's state run oil production. The lack of expertise and corruption has led to a sharp drop in

output. In addition to declining production, Venezuela has had problems with its storage capacity and export terminals, causing oil output to decline faster than expected.

Figure 1.3: U.S. Oil Production, Barrels per Day

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



Source: U.S. Energy Information Administration; data through July 2018

Inflation has leveled off

Headline inflation has leveled off after increasing earlier in the year. The Consumer Price Index (CPI) was up 2.7% over the year in August, down from a 2.9% year-over-year increase in July. In August 2017, the over the year increase in the CPI was 2.0%. Much of the recent increase was due to an upturn in gasoline prices. Gasoline prices increased 3.0% in August, and are now up 20.3% since last year. Food price inflation remains tame. Prices were up 0.1% over the month and are up 1.4% from last year. Shelter costs continue to be a steady driver of overall price inflation as rents continue to rise. Shelter costs increased 0.3% in August and are now up 3.4% year over year. Core inflation, which excludes food and energy, increased 0.1% in August and is now up 2.2% over the year.

The housing market recovery remains slow

The housing market recovery remains slow. Housing starts increased 9.2% in August with gains in both the single-family and multi-family segments. Single-family starts increased 1.9% and multi-family starts increased 29.3%. Housing starts are up 9.4% from a year ago but remain down from the first half of 2018. Housing permits fell 4.1% in August and are down 3.9% from a year ago. Single-family permits are up 3.0% while multi-family permits are down 15.1% since last year. Despite the volatility, the multi-family segment has fully recovered from the housing downturn. New home sales increased 3.5% over the month in August. New home sales are up 12.7% since last year, but are lower than sales in the first half of 2018. The insufficient supply of new homes is constraining total sales. The inventory-to-sales ratio declined to 6.1 months, down from a 6.2-month supply in July. Homebuilder confidence appears to have peaked.

The National Association of Homebuilders (NAHB) Housing Market Index, which measures confidence of homebuilders, remained at a healthy 67 in September (readings above 50 indicate a positive view of conditions). Homebuilder confidence is higher than the reading last year of 64, but has trended down since reaching 74 in December 2017. The lack of traffic from prospective buyers is weighing down the index.

Home price appreciation remains strong despite slowing

Gains in home prices appear to have slowed, but still remain strong. The seasonally adjusted Case-Shiller 20-city Home Price Index increased 0.1% over the month in July. Home prices are now 6.0% higher than a year ago. Prices have increased 50.2% since the trough, and are now 2.4% above their previous peak. Rising prices encourage new construction, and contribute to homebuilder confidence. Home price appreciation also enables previously underwater homeowners to sell their homes and trade up for more expensive houses. The benefit of low mortgage rates for homebuyers is diminishing as rates are climbing. The average rate for a fixed 30-year mortgage has risen 76 basis points since the beginning of the year. The average rate on the 30 year fixed loan was 4.71% in the first week of October.

Strong growth in the manufacturing sector

The manufacturing sector is strong. The Institute of Supply Management (ISM) Report on Business again indicated expansion in the manufacturing sector in September. Although the index declined to 59.8 from 61.3, index levels above 50 indicate expansion. The new orders component decreased by 3.3 points, but remained strong at 61.8. Production increased 0.6 points to 63.9. The latest G-17 report from the Federal Reserve indicates manufacturing output increased 0.2% in August. Manufacturing output is now 3.1% higher than last year. The index for durables rose 1.0%, while the indexes for nondurables and for other manufacturing declined 0.5% and 0.9% respectively. New orders for core capital goods (nondefense capital goods excluding aircraft) declined 0.5% in August after increasing by 1.5% the month before. New orders are now 7.4% above year-ago levels.

U.S. exports are growing

U.S. exports are accelerating. Total exports in the second quarter increased 11.2% year over year. Aerospace exports increased 10.1% year over year. Rising energy prices are boosting the value of U.S. exports. Petroleum and coal exports increased 28.9% from a year ago. Oil and gas exports continue to surge, up 84.2% from last year. Global economic growth remains firm. The U.S. dollar has increased recently, but has not dampened demand for U.S. goods. Exports to the rest of North America remain strong. Exports in the second quarter to Canada increased 8.1% while exports to Mexico were up 11.9% from a year ago. Exports to Canada and Mexico should be boosted going forward due to the recently signed trade agreement. Exports to China and Japan, our third and fourth largest trading partners, increased 8.9% and 9.2% respectively.

Forecast

Our forecast was based on the September IHS Markit control forecast

The economic forecast was based on a modified version of the September IHS Markit (formerly Global Insight) control forecast for the U.S. economy. Consistent with our standard practice, the U.S. real GDP forecast was adjusted to match the Blue Chip Consensus GDP forecasts for 2018 and 2019. We also matched the latest long-term Blue Chip GDP forecast for 2020 through 2023. Our oil price forecast was adjusted to reflect futures prices for both Brent crude oil and for West Texas Intermediate crude oil.

The economic outlook is similar to June

The economic outlook is similar to the June forecast. As in June, the September Blue Chip forecast for real GDP growth in 2018 and 2019 is 2.9% and 2.6%. The Blue Chip long-range forecast has not been updated since June and remains at 1.9%, 1.9%, 2.1% and 2.1% in 2020 through 2023.

This recovery will be the longest on record

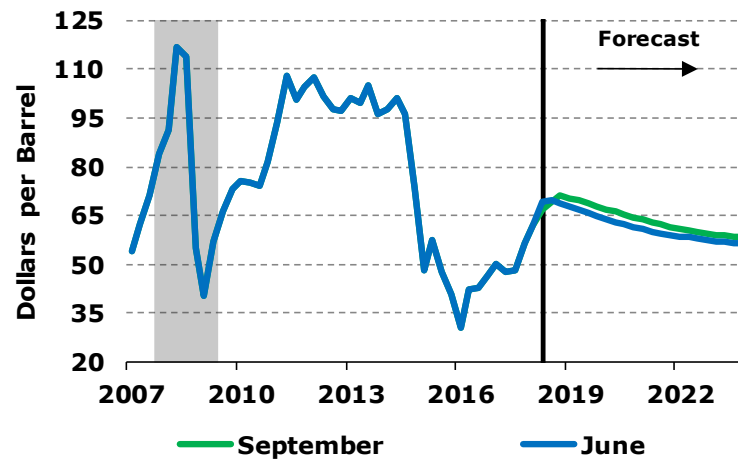
The positive GDP growth throughout the forecast will make the recovery from the 2007-09 recession the longest on record. From the second quarter of 2009 through the end of our forecast in 2023, the recovery will be at least 174 months. Through September, this recovery has already lasted 111 months. Prior to this, the longest recovery was from the 1990-91 recession and lasted 120 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 expansionary periods. 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 decline

Oil prices are higher than the prices used in the June forecast but follow the same pattern of decline. The refiner acquisition price of crude oil is expected to peak at \$71 per barrel in the fourth quarter of this year. The oil market continues to face challenges. Renewed Iran sanctions are starting to have an impact. Venezuelan oil production continues to fall. Other members of OPEC and U.S. shale drillers have more than made up for any reduction in global supply. In the U.S., pipeline constraints may limit supply over the next few years. Oil prices will remain well below the levels seen earlier in the recovery. The forecast calls for prices to decline throughout the forecast, reaching \$59 in 2023 (see Figure 1.4).

Figure 1.4: Average Price of Crude Oil

Oil prices are higher throughout the forecast



Source: DOE, September 2018 forecast; historical data through 2018Q2

Inflation will remain moderate

Inflation (as measured by the price index for personal consumption expenditures) has risen in recent years but remained low at 1.8% in 2017. Rising energy prices are adding to overall inflation. Rising housing costs and a tight labor market have put upward pressure on inflation as well. We expect low to moderate inflation throughout the forecast. We expect inflation to be 2.1% this year, unchanged since the June forecast. We then expect inflation to range from 1.9% to 2.0% each year from 2019 through 2023. Core inflation (minus food and energy) is expected to slightly surpass the Federal Reserve’s goal of 2% next year at 2.1%. The forecast calls for core inflation to remain in the 1.9% to 2.1% range throughout the forecast.

Consumer spending growth will continue

Real consumer spending was strong in the second quarter, growing 3.8% (SAAR) after growing just 0.5% (SAAR) in the first quarter. We expect real consumer spending to grow 2.5% this year, down from 2.6% in the previous forecast. Consumer optimism remains high. Rising home prices and a stronger stock market make consumers feel more confident in their financial situation. Wages are slowly increasing. Unemployment remains low and more part-time workers are finding full-time jobs. The forecast calls for real consumption growth of 2.5% in 2019. Consumer spending growth will then slow to 2.0% in 2020 and 2021 before improving slightly to 2.1% and 2.2% in 2022 and 2023. We expect consumer spending to contribute 1.5 percentage points to real GDP growth on average for each year of the forecast through 2023.

Disposable personal income growth will moderate

Real disposable personal income is expected to grow 2.8% this year, down slightly from the 2.9% growth expected in the June forecast. Growth in real disposable income is expected to moderate throughout the forecast, reaching 2.2% in 2023. Nominal disposable income is projected to grow 5.0% this year, led by strong growth in interest income. Interest income is

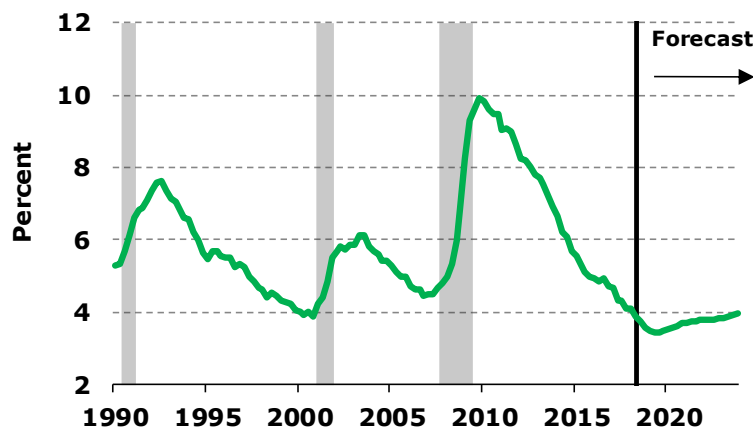
expected to grow 5.5% in each of the next two years as the Federal Reserve tightens monetary policy and interest rates rise. We then expect interest income growth to average 7.8% for the remainder of the forecast. Private sector wages and salaries are forecasted to grow 5.3%. Wage growth in the public sector will again lag, with growth of 2.2% in 2018. Total wages and salaries are forecasted to average 4.6% growth throughout the forecast. Rental income is expected to grow 4.4% this year and 4.8% in 2019. We then expect rental income growth to slow and average 1.3% for the remainder of the forecast. Dividend payments are projected to average 4.1% growth through 2023. Growth in government transfer payments is expected to be 4.0% this year. We expect growth to pick up and average 4.9% per year for the remainder of the forecast as an increasingly older population results in rising Medicare and Social Security payments.

The employment forecast has been revised slightly higher

The employment forecast is slightly higher than in the June forecast. Growth in payrolls is anticipated to be 1.7% this year compared to 1.6% in the previous forecast. We expect employment growth of 1.5% in 2019 compared to 1.3% growth expected in June. The forecast calls for growth of 0.9% in 2020 and then a decline to 0.5% by 2023 due to an aging population. By 2023, the forecast expects 530,000 more jobs than in June, a difference of 0.3%. Due to the steady job growth, we expect an unemployment rate of 3.8% in 2018, reaching a trough in 2020 of 3.6%. We expect the unemployment rate to increase slowly to 3.9% by 2023 (see Figure 1.5). The continued strengthening of the labor market will create an incentive for more and more marginally attached workers to begin looking for a job. We expect the labor force participation rate to grow from 61.5% this year to a peak of 61.7% in 2021 after which the participation rate will resume its long-term secular decline.

Figure 1.5: Unemployment Rate

The unemployment rate will reach a trough in 2020



Source: BLS, ERFC September 2018 forecast; historical data through 2018Q2

Private sector hiring will continue to outpace public sector hiring

Employment growth in nonfarm payrolls has been led by private sector hiring throughout the recovery as the public sector has been weighed down by budget concerns. While state and local governments have largely worked through their budgetary issues and have started hiring again, the pace of hiring has been slow. Federal government employment is expected to remain steady throughout the forecast except for the temporary hiring of census workers in 2020. The lack of growth in federal government jobs will be offset by modest gains in state and local government employment, keeping total government employment growth slightly positive throughout the forecast. We expect private sector job growth of 1.9% this year, after growing by 1.8% in 2017. The forecast calls for private sector job growth of 1.7% in 2019, slowly declining to 0.5% in 2023.

Business investment is expected to be strong

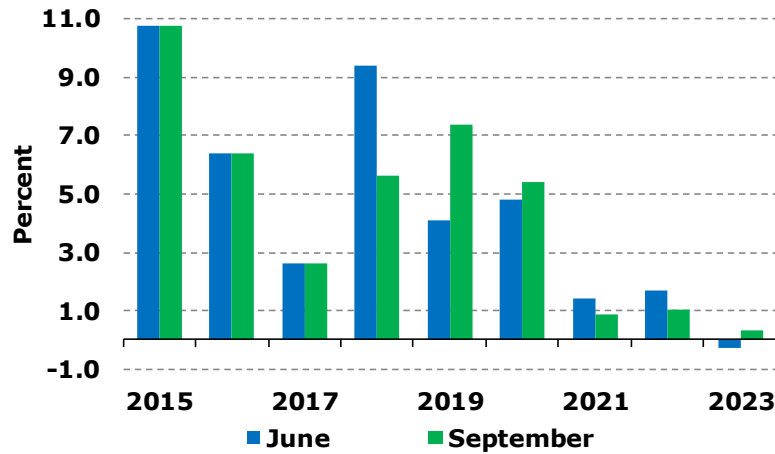
Real nonresidential fixed investment is expected to grow 7.2% this year after growing 5.3% in 2017. The recent increase in oil prices has increased the incentive for additional investment by energy companies. The capital-intensive manufacturing sector remains strong. Demand for new office space appears to be slowing. The office vacancy rate increased to 16.6% in the second quarter from 16.5% in the first quarter and 16.4% in the second quarter of last year. We expect real nonresidential construction to slow after this year. The forecast calls for growth to remain at 5.9% this year then gradually slow to 2.7% in 2023. Real equipment investment is anticipated to grow 7.3% this year. We expect moderate growth throughout the forecast as businesses expand and improve productivity. The forecast calls for growth to average 3.6% from 2019 through 2023. We expect real nonresidential fixed investment in structures to grow 4.7% in 2019 and then slowly trend down to 3.2% in 2023.

Growth in the housing market has slowed

Growth in the housing market has slowed. New home sales have declined in three of the past four months. Homebuilder confidence is slowly declining and is at the lowest level since September 2017. Mortgage rates have increased roughly 77 basis points since the beginning of the year, although they remain low by historical standards. We expect housing starts to grow 5.6% this year, compared to 9.4% in the previous forecast (see Figure 1.6). The forecast calls for growth of 7.4% in 2019 and 5.4% in 2020 before averaging less than 1% through 2023. The forecast calls for growth in single-family housing starts of 5.0% this year. The forecast expects the growth in single-family housing starts will follow a pattern similar to overall housing construction. We expect the multi-family segment to grow 7.1% this year after declining 9.2% in 2017. The forecast calls for growth of 8.9% in 2019 and 4.2% in 2020. We then expect multi-family housing starts to average 1.3% through the remainder of the forecast.

Figure 1.6: Growth in Housing Starts

Growth in housing will trend down



Source: U.S. Census Bureau, September 2018 forecast; historical data through 2018Q2

Foreign growth is improving at a moderate pace

Major foreign economies continue to expand at a moderate pace. The Canadian economy grew 2.9% (SAAR) in the second quarter after just 1.4% (SAAR) growth first quarter. A rebound in exports and stronger consumer spending helped to improve growth. The latest Blue Chip forecast expects growth of 2.1% in Canada for 2018 and 2.0% in 2019, down from 3.0% in 2017. GDP growth in Mexico accelerated to just 0.1% quarter over quarter (q/q) in the second quarter from 4.6% (q/q) in the first quarter. The Mexican economy grew 2.0% for all of 2017. The Blue Chip forecast called for 2.2% growth over the next two years. The recovery in the Eurozone is continuing with real GDP increasing 2.5% in 2017. The latest Blue Chip forecast calls for 2.1% growth this year and 1.8% in 2019. China, which is the largest U.S. export market outside of North America, continues to slow. The Chinese have had difficulty transitioning to a more domestic consumer driven economy. China reported 6.9% growth in 2017, well below the 2005-11 average of 11%. The most recent Blue Chip forecast calls for Chinese growth to slow further, with growth of 6.4% this year and 6.3% in 2019. Japan's economy rebounded in the second quarter with 1.9% growth after falling by 0.9% in the first quarter. Japan's long run potential GDP growth is roughly 0.7% due primarily to demographics. Japan's economy grew 1.7% in 2017. The most recent Blue Chip forecast expects slow growth of 1.1% over the next two years.

Economic growth of U.S. trading partners is expected to slow

Economic growth of major U.S. trading partners is expected to slow to 2.9% this year after growing 3.1% 2017. The forecast then expects growth of 2.8% per year through 2023. Despite a strengthening dollar and uncertainty regarding international trade, U.S. exports are improving. Real U.S. exports are forecasted to grow 4.5% this year after increasing 3.0% in 2017.

Export growth is forecasted to remain strong over the next two years at 4.3% and 5.4%. We then expect real export growth to slow and average 3.8% through 2023. Export growth is more than offset by increased imports through 2021. In 2022 and 2023, import growth slows and net exports become a slight positive to overall growth in 2023.

The federal budget deficit will increase this year

The federal budget deficit is expected to increase this federal fiscal year to \$856 billion from \$666 billion in 2017. Much of the increase in the deficit is due to the passage of the Tax Cuts and Jobs Act (TCJA). We expect the federal budget deficit to grow through 2022, reaching \$1,240 billion, then decline slightly to \$1,178 billion in 2023. The forecast calls for real defense spending to grow 3.7% this year, 4.6% in 2019, and 0.5% in 2020. We then expect reductions in real defense spending through 2023. Real nondefense spending is expected to increase 5.5% this year and 6.1% in 2019 then trend down throughout the rest of the forecast. Real state and local government spending growth is expected to range from 0.7% to 1.0% throughout the forecast.

The Fed is gradually tightening monetary policy

The Federal Reserve is gradually tightening monetary policy after years of measures aimed at supporting the economy. The Federal Reserve is facing an upbeat economic outlook but also an uncertain policy environment. The Federal Open Market Committee forecasts anticipate solid GDP growth and further declines in unemployment, along with a gradual rise of inflation to a little above 2%. The forecast assumes several rate hikes over the next few years.

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

Risks to the forecast are balanced

Our view of the risks to the forecast is balanced in the near term (2017-19 biennium) with a relatively high probability of the baseline scenario. In the outer years of the forecast (2019-21 and 2021-23 biennia), the level of uncertainty in the baseline remains elevated, and downside risks once again outweigh upside risks.

Downside Risks

- Increasing geopolitical tensions negatively affect consumer confidence
- An unexpected shift in monetary policy
- A breakdown in trade relations
- Chinese economy experiences a “hard landing” (annual growth under 5%); growth is weaker in emerging market economies
- Weaker than expected employment growth

- Real wage growth stagnates, leading to slower consumer spending
- Slower household formation
- Slowdown in economic growth and negative effects to financial markets due to Brexit
- U.S. dollar appreciates against other currencies, limiting exports
- Weak global growth persists, further impacting 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 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 2019 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	17,510.2	17,837.3	18,295.8	18,845.7	19,247.5	19,602.1	20,001.0	20,419.4
% Ch	1.8	1.9	2.6	3.0	2.1	1.8	2.0	2.1
Real Consumption	12,084.4	12,402.6	12,713.8	13,052.3	13,329.2	13,591.3	13,877.5	14,178.2
% Ch	3.0	2.6	2.5	2.7	2.1	2.0	2.1	2.2
Real Nonresidential Fixed Investment	2,396.1	2,469.5	2,624.5	2,790.6	2,907.2	3,028.7	3,152.4	3,265.8
% Ch	-0.1	3.1	6.3	6.3	4.2	4.2	4.1	3.6
Real Residential Fixed Investment	579.2	601.0	613.3	617.2	645.9	669.5	686.4	701.2
% Ch	9.4	3.8	2.1	0.6	4.7	3.6	2.5	2.2
Real Personal Income	15,377.9	15,650.0	16,055.8	16,437.2	16,877.6	17,271.4	17,698.7	18,127.6
% Ch	2.9	1.8	2.6	2.4	2.7	2.3	2.5	2.4
Real Per Capita Income (\$/Person)	47,639	48,136	49,035	49,838	50,811	51,632	52,543	53,450
% Ch	2.1	1.0	1.9	1.6	2.0	1.6	1.8	1.7
Price and Wage Indexes								
PCE Price Index (2012=100)	103.6	105.2	107.1	109.4	111.6	113.8	116.0	118.2
% Ch	0.6	1.6	1.9	2.1	2.0	2.0	1.9	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.383	2.427	2.481	2.544	2.599	2.653	2.707	2.762
% Ch	0.7	1.9	2.2	2.5	2.2	2.1	2.0	2.0
Employment Cost Index (Dec. 2005=1.0)	1.248	1.278	1.314	1.357	1.403	1.451	1.504	1.560
% Ch	2.2	2.4	2.8	3.3	3.4	3.5	3.6	3.7
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	18,433.8	19,075.1	19,968.2	21,035.8	21,985.6	22,908.1	23,895.4	24,921.8
% Ch	2.8	3.5	4.7	5.3	4.5	4.2	4.3	4.3
Personal Income	15,925.8	16,462.0	17,203.7	17,987.2	18,844.0	19,663.9	20,534.8	21,428.8
% Ch	3.5	3.4	4.5	4.6	4.8	4.4	4.4	4.4
Employment (Millions)								
U.S. Civilian Labor Force	158.0	159.8	161.1	162.9	164.5	165.9	167.0	167.9
Total U.S. Employment	150.1	152.4	154.5	157.0	158.8	159.7	160.7	161.5
Unemployment Rate (%)	4.98	4.67	4.10	3.57	3.49	3.69	3.78	3.85
Nonfarm Payroll Employment	143.10	145.54	147.78	150.28	152.04	153.05	154.02	154.94
% Ch	1.9	1.7	1.5	1.7	1.2	0.7	0.6	0.6
Manufacturing	12.36	12.37	12.57	12.88	12.90	12.77	12.70	12.67
% Ch	0.6	0.2	1.5	2.5	0.1	-0.9	-0.6	-0.2
Durable Manufacturing	7.75	7.70	7.83	8.09	8.11	8.02	7.97	7.95
% Ch	0.1	-0.6	1.7	3.3	0.3	-1.1	-0.7	-0.2
Nondurable Manufacturing	4.61	4.67	4.74	4.79	4.79	4.75	4.73	4.72
% Ch	1.5	1.4	1.4	1.2	-0.1	-0.7	-0.5	-0.3
Construction	6.61	6.84	7.08	7.34	7.62	7.95	8.24	8.51
% Ch	4.7	3.6	3.5	3.6	3.8	4.5	3.6	3.3
Service-Providing	123.41	125.66	127.42	129.32	130.77	131.54	132.30	132.98
% Ch	2.0	1.8	1.4	1.5	1.1	0.6	0.6	0.5
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	41.7	48.6	58.6	68.3	65.5	62.2	59.4	57.4
Personal Saving/Disposable Income (%)	7.3	6.6	6.8	6.7	7.2	7.5	7.7	7.8
Auto Sales (Millions)	7.2	6.5	5.7	5.0	4.9	4.8	4.9	4.9
% Ch	-5.8	-10.7	-11.6	-12.7	-2.0	-0.8	0.5	1.7
Housing Starts (Millions)	1.149	1.201	1.251	1.304	1.417	1.455	1.466	1.476
% Ch	9.1	4.5	4.1	4.3	8.6	2.7	0.7	0.7
Federal Budget Surplus (Billions)	-614.8	-667.7	-854.6	-1,025.8	-1,119.7	-1,203.3	-1,255.8	-1,276.5
Net Exports (Billions)	-518.7	-553.1	-589.1	-674.2	-709.0	-708.8	-682.1	-645.8
3-Month Treasury Bill Rate (%)	0.18	0.55	1.41	2.41	3.01	3.17	3.15	3.14
10-Year Treasury Note Yield (%)	2.02	2.10	2.57	3.07	3.38	3.48	3.47	3.43
Bond Index of 20 G.O. Munis. (%)	3.51	3.51	3.67	4.03	4.30	4.42	4.42	4.39
30-Year Fixed Mortgage Rate (%)	3.80	3.85	4.16	4.72	5.06	5.16	5.14	5.11

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

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

Table 1.4

Fiscal Years

Forecast Comparison

Forecast 2019 to 2023

	2017	2018	2019	2020	2021	2022	2023
U.S.							
Real GDP							
September Baseline	17837.3	18295.8	18845.7	19247.5	19602.1	20001.0	20419.4
% Ch	1.9	2.6	3.0	2.1	1.8	2.0	2.1
June Baseline	16891.0	17340.1	17831.0	18219.7	18555.6	18929.8	19324.3
% Ch	1.9	2.7	2.8	2.2	1.8	2.0	2.1
PCE Price Index							
September Baseline	105.2	107.1	109.4	111.6	113.8	116.0	118.2
% Ch	1.6	1.9	2.1	2.0	2.0	1.9	1.9
June Baseline	111.8	113.8	116.1	118.5	120.9	123.4	125.9
% Ch	1.6	1.8	2.1	2.0	2.1	2.0	2.1
Unemployment Rate							
September Baseline	4.67	4.10	3.57	3.49	3.69	3.78	3.85
June Baseline	4.67	4.09	3.63	3.62	3.75	3.91	4.05
Mortgage Rate							
September Baseline	3.85	4.16	4.72	5.06	5.16	5.14	5.11
June Baseline	3.85	4.14	4.78	5.21	5.34	5.33	5.27
3 Month T-Bill Rate							
September Baseline	0.55	1.41	2.41	3.01	3.17	3.15	3.14
June Baseline	0.55	1.42	2.34	3.00	3.19	3.18	3.16



Chapter 2: Washington Economy – Current Conditions and Forecast

- **The Washington economy is expanding at a rapid pace.**
- **Recent employment and income data were revised higher since the June forecast.**
- **Washington’s unemployment rate reached an all-time low in August.**
- **Seattle home prices continue to rise but growth may be slowing and recent housing construction has been below the June forecast.**
- **The personal income and employment forecasts are higher than in June based mainly on stronger recent experience.**
- **Washington housing and construction are at, or near, their cyclical peaks.**
- **As in June, we expect the Washington economy to continue to outperform the U.S. economy.**

Current Conditions

The Washington economy is expanding at a rapid pace

The Washington economy is expanding at a rapid pace. Recent employment and income data were revised higher since the June forecast. Washington’s unemployment rate reached an all-time low in August. The series extends back to 1976. Seattle home prices continue to rise but growth may be slowing and recent housing construction has been below the June forecast. Washington exports are rising and manufacturing is growing. Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.

Employment growth has been faster than expected

We have three months of new Washington employment data since the June forecast was released. Total nonfarm payroll employment rose 24,300 (seasonally adjusted) in June, July, and August, which was 6,300 more than the 17,900 expected in the June forecast. The variance in employment growth was mostly due to the private services-providing sectors, which added 18,600 jobs compared to 14,200 in the June forecast. Manufacturing employment increased 1,300 in June, July, and August, boosted by an increase of 1,100 aerospace employees.

Construction employment increased by 900 jobs and government payrolls expanded by 3,500 jobs.

Historical employment estimates were revised higher

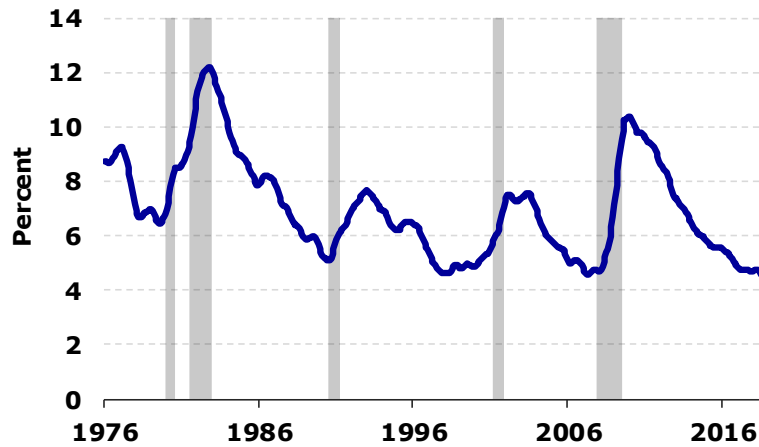
We have also incorporated another quarter of benchmark employment data from the Quarterly Census of Employment and Wages (QCEW). The new QCEW data and other revisions raised the estimated level of total employment in May 2018 by 12,100 jobs (0.4%). The upward revision to history combined with the higher than expected growth since May results in 18,400 (0.5%) more jobs in August 2018 than expected in the June forecast.

Unemployment continues to decline

Washington's unemployment rate declined to 4.5% in August from 4.6% in July. August's 4.5% rate was the lowest in the series that extends back to 1976 (See Figure 2.1). A year ago, in August 2017, the Washington unemployment rate stood at 4.8%.

Figure 2.1: Washington Unemployment Rate

The Washington unemployment rate is at an all-time low



Source: Bureau of Labor Statistics; data through August 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 declined to 6,400 in the week ending September 29, 2018 from 6,700 in the previous week. The current level of claims is well below the trough of 7,200 reached during the last expansion and is close to the post-recession trough of 5,800. Claims have fallen 62% since the peak in early 2009.

Washington exports continue to rise

Despite a decline in transportation equipment, Washington exports were up over the year for a third consecutive quarter. Exports increased 3.7% in the second quarter of 2018 compared to the second quarter of 2017. Transportation equipment exports (mostly Boeing planes) declined 5.3% over the year but exports of agricultural products rose 26.8% and exports of all other commodities (mostly manufacturing) increased 12.0%.

Washington housing construction has been weaker than expected

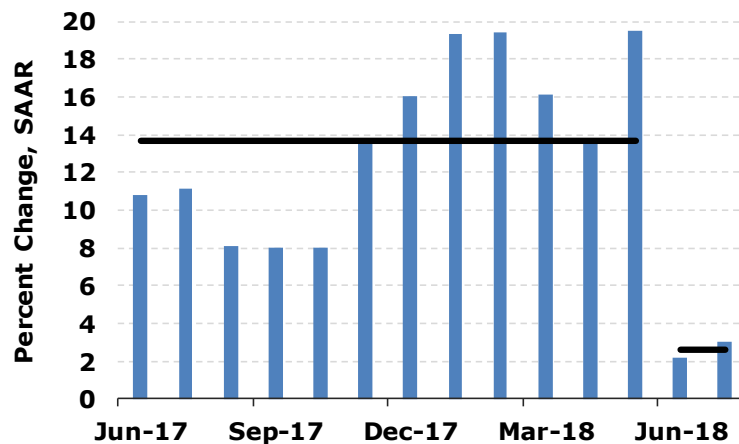
Washington housing construction declined in the second quarter of 2018 and fell short of the June forecast. The number of housing units authorized by building permits decreased to 43,200 units (SAAR) in the second quarter of 2018 from 49,200 units in the first quarter. Second quarter permits were made up of 23,000 single-family units and 20,200 multi-family units. The June forecast assumed 46,700 units (SAAR) in the second quarter, consisting of 24,400 single-family units and 22,300 multi-family units. Housing permits remained weak in July and August at an average of 38,800 units (SAAR) of which 23,300 were single-family units and 15,600 were multi-family units. The June forecast expected 42,800 units in the third quarter as a whole, consisting of 23,600 single-family units and 19,300 multi-family units.

Seattle home prices rose 0.2% in June and 0.3% in July

In a sign that the housing market may be cooling, seasonally adjusted Seattle area home prices rose just 0.2% in June and 0.3% in July according to the S&P/Case-Shiller Home Price Indices. This translates to an average annual growth rate of 2.6% in the last two months compared to an average annual rate of 13.6% during the previous twelve months (see Figure 2.2). In July, the over-the-year growth was 12.1% in Seattle, which was more than double the 6.0% increase in the Composite-20 index. Seattle home prices are now up 92% since the December 2011 trough and exceed the May 2007 peak by 33%.

Home price growth may to be slowing

Figure 2.2: Seattle Home Price Appreciation



Source: S&P/Case-Shiller Home Price Indices; data through July 2018

New vehicle registrations are down

Car and truck sales declined for a third consecutive month in August. Seasonally adjusted new vehicle registrations fell 2.0% in August following declines of 1.4% in July and 1.0% in June. Sales are down 7.1% over the year and 14.9% since the November 2017 post-recession peak.

Manufacturing growth remains positive

The Institute of Supply Management - Western Washington Index (ISM-WW) increased in August and remained solidly in positive territory. The index, which measures conditions in the manufacturing sector, increased from 60.0 in July to 61.1 in August (index values above 50 indicate growth while values below 50 indicate contraction). The index has exceeded 50 in each of the last 13 months. The production, orders, employment, and inventory components all indicated expansion in August while the deliveries component was neutral at 50.

Washington personal income growth remains strong

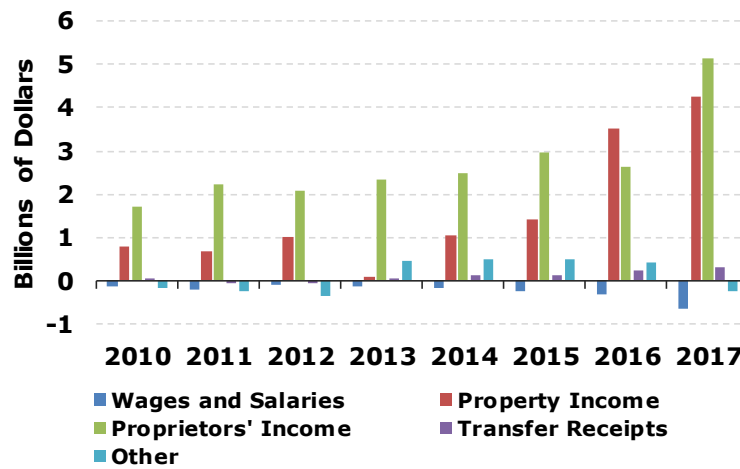
In September, after the forecast was released, the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) released preliminary state personal income estimates for the second quarter of 2018 and revised estimates from 1998 forward. According to these estimates, Washington personal income rose to \$451.1 billion (SAAR) in the second quarter of 2018 from \$449.3 billion in the first quarter. The reported 1.6% growth rate (SAAR) in Washington personal income was the lowest among the states and District of Columbia and significantly trailed the 4.2% growth rate for the U.S. as a whole. The weak Washington growth in the second quarter was due to one-time factors that temporarily boosted growth in the first quarter, when Washington led the nation. Over the last year, from the second quarter of 2017 to the second quarter of 2018, Washington personal income grew 6.1%, which was second highest among the states and the District of Columbia and was well above the 4.6% rate for the nation.

Historical Washington personal income was revised up

The September state personal income release also incorporated the results of the BEA's comprehensive update of state personal income. The update revised annual estimates of state personal income for 1998 to 2017. The update also incorporates the results of the July 2018 comprehensive update of the National Income and Product Accounts. The BEA revised its 2017 personal income estimate up \$11.6 billion (2.8%) for 2017. Our revision was less, \$8.8 billion (2.1%) because we had already benchmarked our estimate for wages and salaries to the Quarterly Census of Employment and Wages (QCEW). We use the published BEA estimates for all other components of personal income. The \$8.8 billion increase in **our** estimate was more than accounted for by proprietors' income which increased \$5.1 billion, and property income (dividends, interest, and rent), which increased \$4.2 billion (see Figure 2.3). We will reflect the personal income revision in the November Economic and Revenue Forecast.

The increase was due to proprietors' income and property income

Figure 2.3: Washington Personal Income Revision



Source: Bureau of Economic Analysis, ERFC; data through 2017

Seattle area consumer price inflation remains above the national average

Seattle area consumer price inflation remains well above the national average. Over the last year, from August 2017 to August 2018, consumer prices in the Seattle area rose 3.2% (seasonally adjusted) compared to 2.7% for the U.S. city average. Core prices, which exclude food and energy, increased 3.0% in Seattle compared to 2.2% for the nation. The higher Seattle inflation was due to more rapid growth in shelter costs. During the year, shelter costs in Seattle rose 6.0% compared to 3.4% for the nation. Excluding shelter costs, Seattle inflation was below the national average at 1.5% compared to 2.3%.

Washington State Forecast

The September economic forecast for Washington State is generally higher than the forecast adopted in June

The September economic forecast for Washington State is generally higher than the forecast adopted in June. We now expect Washington nonfarm payroll employment to grow 2.9% this year compared to 2.5% in the June forecast. We expect employment growth to average 1.2% per year in 2019 through 2023, which is slightly stronger than the 1.1% per year expected in the June forecast. Our forecast for nominal personal income growth this year is 6.6%, up from 5.8% in the June forecast. Our new forecast for nominal personal income growth in 2019 through 2023 averages 4.9% per year compared to 5.1% per year in the June forecast. We expect 43,800 housing units authorized by building permits this year, down from 45,400 in the June forecast. However, we expect permits to average 42,800 in 2019 through 2023, up from 42,400 in the June forecast. We expect the all-items Seattle CPI to rise 3.0% this year, down from 3.3% in the June forecast. We expect Seattle area inflation will average 2.2% per year in 2019 through 2023, down slightly from 2.3% in the June forecast.

Washington Payroll Employment

The employment forecast is higher than in June

We now expect Washington nonfarm payroll employment to grow 2.9% this year compared to 2.5% in the June forecast. As in June, we expect growth to decelerate gradually as the recovery matures. We expect employment growth to average 1.2% per year in 2019 through 2023, which is slightly stronger than the 1.1% per year expected in the June forecast. On an annual basis, we expect 1.9% employment growth in 2019, 1.4% in 2020, 1.0% in 2021, 0.8% in 2022, and 0.6% in 2023.

The aerospace employment forecast is higher than in June

Washington aerospace employment peaked in the first quarter of 2013. As of the fourth quarter of 2017, 15,400 jobs had been lost with most of the decline in 2016 and 2017. In June, we had assumed that aerospace employment would level off in 2018 however, employment increased in the first two quarters of 2018. We still believe employment will be flat in the forecast but the level will be 1,900 higher through 2023. On an annual average basis, we expect aerospace employment to decline 1.1% in 2018, increase 0.9% in 2019, and then remain unchanged through the rest of the forecast.

The software employment forecast is also higher than in June

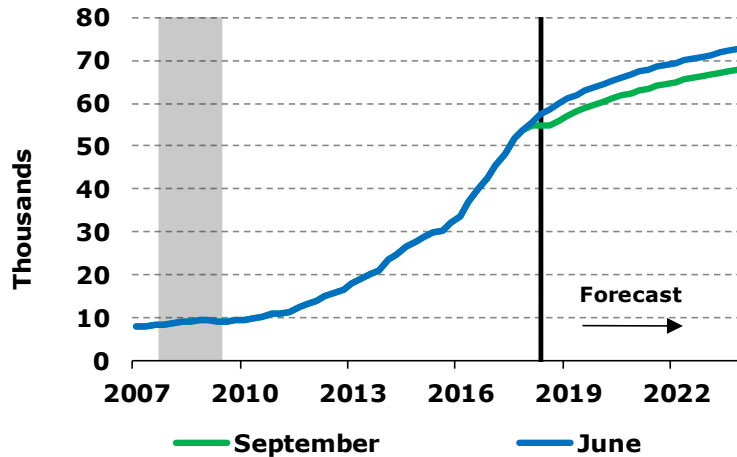
We have increased the software employment growth forecast in 2018 from 4.9% to 5.7% based on stronger-than-expected growth through August 2018. We also raised the forecasted growth rate for the next five years from an average of 1.7% per year to 1.8% per year. By the end of 2023, we now expect 800 more software jobs than we assumed in June. On an annual average basis, we expect growth rates of 2.4% in 2019, 1.4% in 2020, 1.6% in 2021, 1.7% in 2022, and 1.8% in 2023.

Washington electronic shopping and mail order employment growth will slow

In Washington, the electronic shopping and mail order sector consists almost entirely of electronic shopping employment. Our September forecast for this sector is lower than the forecast adopted in June based on slower than expected employment growth through August 2018 (see Figure 2.4). As in June, we expect employment growth to remain strong for some time but to continue to slow. The announcement by Amazon of a second headquarters lends support to this view. Our forecast calls for employment growth of 14,400 from the fourth quarter of 2017 through the fourth quarter of 2023, down from the 19,100 expected in the June forecast. On an annual basis, electronic shopping and mail order employment will grow 10.9% in 2018, 5.9% in 2019, 5.2% in 2020, 3.8%, 2021, 3.0% in 2022, and 2.5% in 2023.

Figure 2.4: Electronic Shopping and Mail Order Employment

We have reduced our forecast for electronic shopping and mail order employment



Source: Washington Employment Security Department, ERFC; historical data through Q2 2018

Construction employment has finally exceed its previous peak

With employment at 211,600, Washington construction employment finally exceeded its previous peak in the second quarter of 2018, exactly 10 years later. Washington construction employment has grown by 76,600 (56.7%) since the trough in the first quarter of 2012. The September forecast calls for construction employment to peak at 213,400 in the second quarter of 2020. On an annual average basis, we expect construction employment to grow 5.9% this year and 0.8% in 2019 with no change in 2020 before declining 0.5% in 2021, 0.3% in 2022, and 0.7% in 2023.

Washington Personal Income

Washington personal income is slightly higher than the June assumption

In June, after the forecast was adopted, the Bureau of Economic Analysis released estimates for state personal income through the first quarter of 2018. We have incorporated the new BEA estimates as well as additional Washington QCEW and other wage data. Our current estimate of Washington personal income in the first quarter of 2018 is \$441.8 billion, which is \$5.0 billion (1.1%) higher than assumed in the June forecast. The new estimate of wage and salary income is \$5.6 billion higher than expected and nonwage income is \$0.6 billion lower.

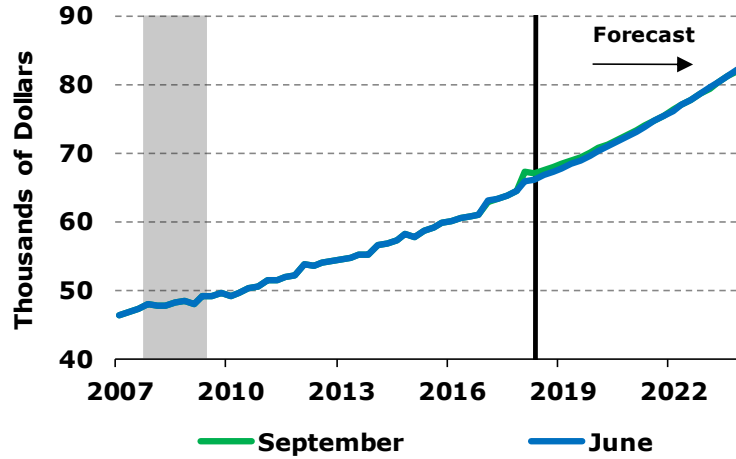
Our forecast for 2018 personal income is higher than in June

Our forecast for nominal personal income growth this year is 6.6%, up from 5.8% in the June forecast, due mainly to an upward revision to first quarter wage growth (see Figure 2.5). We believe much of the first quarter surge was transitory but wages remain above the June forecast through 2022. Our new forecast for nominal personal income growth in 2019 through 2023 averages 4.9% per year compared to 5.1% per year in the June forecast. On an annual basis, we expect personal income to

grow 5.2% in 2019, 5.1% in 2020, 4.8% per year in 2021 and 2022, and 4.7% in 2023.

Wage growth surged in the first quarter of 2018

Figure 2.5: Washington Average Annual Wage



Source: Washington Employment Security Department, Bureau of Economic Analysis, ERFC; historical data through Q1 2018

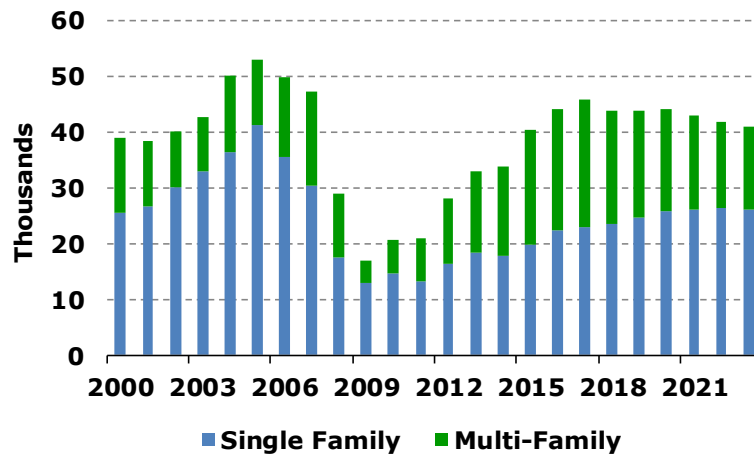
Washington Building Permits

The housing recovery in Washington is essentially complete

The housing recovery in Washington is essentially complete although the composition of new housing will change in coming years. Multi-family housing has recovered from a low of only 4,000 units in 2009 to 22,700 in 2017. We believe 2017 was the peak in multi-family construction in this cycle and that permits will decline to 14,900 by 2023. The recovery in single-family construction has been less robust, from 13,000 units in 2009 to 23,100 in 2017. We expect single-family construction to continue to strengthen with the number of units rising to 26,300 by 2022 (see Figure 2.6). Overall, the September housing construction forecast is very close to the forecast adopted in June. We expect 43,800 housing units authorized by building permits this year, down from 45,400 in the June forecast. However, we expect permits to average 42,800 in 2019 through 2023, up from 42,400 in the June forecast. On a calendar year basis, we expect 43,800 units in 2019, 44,200 in 2020, 43,000 in 2021, 42,000 in 2022, and 41,100 in 2023.

The forecast assumes that single-family permits will continue to strengthen while multi-family permits will decline

Figure 2.6: Housing Units Authorized by Building Permits



Source: Census Bureau, ERFC; historical data through 2017

Seattle Consumer Price Index

Rents are driving Seattle core inflation higher

Core inflation (excluding food and energy) in Seattle was 2.8% in 2017 while national core inflation was 1.8%. The reason for the difference was shelter costs, which were rising much faster in Seattle. Recent data show that shelter costs continue to rise faster in Seattle than in the U.S. city average. We expect a Seattle core inflation rate of 2.9% this year compared to 2.2% for the nation. We expect core inflation in Seattle to moderate as shelter costs stabilize. Our forecast for core Seattle inflation to average 2.4% in 2019 and 2020, and 2.3% per year in 2021 through 2023.

Headline inflation will exceed core inflation this year

After working to reduce overall inflation considerably in 2015 and 2016, rising energy costs added to headline inflation in 2017. Recent oil price increases indicate that headline inflation will exceed core inflation this year as well. We expect energy costs to trend down over the remainder of the forecast, lowering headline inflation relative to core inflation. We expect the Seattle CPI to rise 3.0% this year, 2.2% in 2019, 2.3% in 2020, and 2.2% per year in 2021, 2022, and 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.

Optimistic

The optimistic scenario assumes stronger productivity growth and less inflation.

The optimistic forecast assumes productivity rises at an annual average rate of 2.0% from 2018 to 2020 as business fixed investment expands rapidly. Higher incomes and low inflation spur consumer spending. Oversupply conditions in oil markets keep prices low, further contributing to a low-inflation environment. Amid a strengthening economy, consumer and business confidence climb, and the S&P 500 rises 19% in 2018. The uptick in equities bolsters household net worth, providing an additional boost to consumer spending. Thanks to a strong labor market and easing lending standards, household formation picks up, driving the level of housing starts above 1.4 million in 2019 and 1.5 million in 2020. Meanwhile, economic conditions in the rest of the world improve with the help of structural reforms and quantitative-easing programs.

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 gradually rises through 2023 rather than levelling 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. Washington population growth is higher in the optimistic scenario as the strong local economy attracts migrants from other states. Construction employment continues to rise throughout the forecast rather than peaking in the second quarter of 2019 as in the baseline. By the end of 2023, Washington nonfarm payroll employment is higher by 118,300 jobs (3.3%) than in the baseline forecast and Washington personal income is \$52.9 billion (9.1%) 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 leads to drops in investment and consumer spending to end the expansion in its 123rd month, a new record. Rising prices have left the real-estate market vulnerable, and this market's growth has been slowing. The slowdown turns into a decline, as real-estate prices correct and confidence plunges. A growing sense of unease marked by continuing declines in both consumer confidence and an inverted yield curve dovetails with capital markets initiating sharp drawbacks in business investment. Households heavily taper their spending at the end of 2019. Making matters worse, foreign growth slows. The result is a three-quarter recession starting in the fourth quarter of 2019. Over the course of the recession, real GDP declines 1.2%. The unemployment rate climbs through most of 2019 and 2020, reaching a high of 5.3% in the third quarter of 2020, before starting to taper down in the second half 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 resumes its decline rather than leveling off as in the baseline. Software employment also declines rather than growing moderately as in the baseline forecast. Population growth is also weaker than in the baseline forecast as migration into Washington drops. Construction employment peaks in the second quarter of 2018 rather than rising through the second quarter of 2019 as 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 179,500 (4.9%) lower than in the baseline forecast and Washington personal income is \$47.2 billion (8.2%) 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 Governor’s Council of Economic Advisors’ national forecast is very close to the baseline

At the national level, the GCEA forecast for real GDP growth is close to the baseline forecast in each year of the forecast. The GCEA forecast averages 2.2% per year over the six-year interval through 2023, which is the same rate as in the baseline forecast. The GCEA forecast of 2.2% average real consumer spending growth is also the same as the baseline forecast. The GCEA members have a slightly higher PCE inflation forecast at an average rate of 2.1% compared to 2.0% in the baseline. The Council members’ mortgage rate forecast is slightly higher than the baseline forecast in each year and their oil price forecast is slightly lower in each year.

The GCEA members expect slightly weaker Washington growth

The GCEA scenario for Washington real personal income growth averages 2.9% per year in 2018 through 2023 compared to the baseline forecast of 3.2%. Because the council members expect more inflation, though, their nominal personal income growth forecast is closer at 5.0% versus 5.2% in the baseline. At an average rate of 1.3% per year, the Council members’ forecast for total employment growth over the six-year period is also lower than the baseline forecast of 1.5% per year. The GCEA forecast for manufacturing employment growth is lower than the baseline forecast but their construction employment growth forecast is higher. The GCEA housing permit forecast is slightly lower than ours is, averaging 42,200 units per year through 2023 compared to 43,000 in the baseline forecast. At the end of 2023, the GCEA forecast for Washington nonfarm payroll employment is 30,500 (0.8%) lower than in the baseline forecast and Washington personal income is \$5.7 billion (1.0%) lower.

Table 2.3 compares the GCEA forecast with the baseline forecast.

Table 2.1
Washington Economic Forecast Summary
 Forecast 2019 to 2023

Fiscal Years

	2016	2017	2018	2019	2020	2021	2022	2023
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	375.602	388.473	404.960	419.254	432.719	444.876	457.831	470.819
% Ch	4.3	3.4	4.2	3.5	3.2	2.8	2.9	2.8
Real Wage and Salary Disb.	191.436	200.349	213.466	222.719	228.974	235.399	242.352	249.671
% Ch	5.6	4.7	6.5	4.3	2.8	2.8	3.0	3.0
Real Nonwage Income	184.166	188.124	191.494	196.535	203.745	209.476	215.478	221.148
% Ch	3.1	2.1	1.8	2.6	3.7	2.8	2.9	2.6
Real Per Capita Income (\$/Person)	52,037	52,894	54,215	55,230	56,151	56,946	57,891	58,866
% Ch	2.7	1.6	2.5	1.9	1.7	1.4	1.7	1.7
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.036	1.052	1.071	1.094	1.116	1.138	1.160	1.182
% Ch	0.6	1.6	1.9	2.1	2.0	2.0	1.9	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.521	2.589	2.671	2.734	2.799	2.862	2.925	2.988
% Ch	1.9	2.7	3.1	2.4	2.4	2.3	2.2	2.2
Average Nonfarm Annual Wage	59,850	61,962	65,657	68,196	70,366	73,008	75,902	79,055
% Ch	3.3	3.5	6.0	3.9	3.2	3.8	4.0	4.2
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.00	26.81	27.93	28.82	29.70	30.65	31.68	32.79
% Ch	2.8	3.1	4.2	3.2	3.1	3.2	3.4	3.5
Current Dollar Income (Billions of Dollars)								
Personal Income	388.979	408.618	433.922	458.794	483.140	506.506	531.198	556.562
% Ch	4.9	5.0	6.2	5.7	5.3	4.8	4.9	4.8
Disposable Personal Income	341.569	359.148	382.275	405.330	426.964	447.699	468.994	490.529
% Ch	4.9	5.1	6.4	6.0	5.3	4.9	4.8	4.6
Per Capita Income (\$/Person)	53,890	55,636	58,090	60,437	62,692	64,834	67,167	69,586
% Ch	3.2	3.2	4.4	4.0	3.7	3.4	3.6	3.6
Employment (Thousands)								
Washington Civilian Labor Force	3,588.0	3,676.4	3,754.6	3,798.8	3,872.5	3,934.9	3,987.9	4,034.6
Total Washington Employment	3,390.1	3,494.7	3,577.0	3,634.3	3,711.5	3,766.6	3,816.2	3,859.3
Unemployment Rate (%)	5.52	4.94	4.73	4.33	4.16	4.28	4.31	4.34
Nonfarm Payroll Employment	3,195.1	3,285.1	3,368.9	3,459.8	3,518.0	3,555.6	3,589.2	3,618.2
% Ch	2.9	2.8	2.6	2.7	1.7	1.1	0.9	0.8
Manufacturing	292.3	286.7	283.5	289.4	290.8	290.3	291.2	293.7
% Ch	0.6	-1.9	-1.1	2.1	0.5	-0.2	0.3	0.9
Durable Manufacturing	210.6	203.7	198.9	202.8	203.9	203.4	204.0	205.9
% Ch	-0.1	-3.3	-2.4	2.0	0.5	-0.2	0.3	0.9
Aerospace	93.2	87.7	82.3	83.9	83.9	83.9	83.9	83.9
% Ch	-1.1	-5.9	-6.2	2.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	81.7	83.0	84.6	86.5	86.9	86.9	87.2	87.8
% Ch	2.5	1.6	1.9	2.3	0.5	-0.1	0.4	0.7
Construction	178.9	193.5	206.2	212.9	213.1	212.6	211.8	210.7
% Ch	6.5	8.2	6.5	3.3	0.1	-0.3	-0.4	-0.5
Service-Providing	2,717.6	2,798.6	2,873.0	2,951.0	3,007.5	3,046.0	3,079.5	3,107.0
% Ch	3.0	3.0	2.7	2.7	1.9	1.3	1.1	0.9
Software Publishers	57.3	60.2	62.9	65.9	66.8	67.8	68.9	70.2
% Ch	3.2	5.1	4.4	4.8	1.4	1.5	1.7	1.8
Electronic Shopping and Mail-Order	33.2	44.0	53.8	56.5	60.0	62.7	64.7	66.5
% Ch	17.7	32.5	22.3	5.0	6.3	4.4	3.3	2.7
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	40.116	44.526	47.144	42.510	44.253	43.682	42.486	41.583
% Ch	3.3	11.0	5.9	-9.8	4.1	-1.3	-2.7	-2.1
Single-Family	21.823	22.025	24.108	23.735	25.481	26.149	26.268	26.296
% Ch	17.0	0.9	9.5	-1.5	7.4	2.6	0.5	0.1
Multi-Family	18.294	22.501	23.036	18.775	18.772	17.533	16.218	15.287
% Ch	-9.3	23.0	2.4	-18.5	0.0	-6.6	-7.5	-5.7
30-Year Fixed Mortgage Rate (%)	3.80	3.85	4.16	4.72	5.06	5.16	5.14	5.11

Table 2.2
Comparison of Alternative Forecasts

Fiscal Years

	2018	2019	2020	2021	2022	2023
U.S.						
Real GDP, Percent Change						
Optimistic	2.6	3.9	3.6	2.6	2.1	2.1
Baseline	2.6	3.0	2.1	1.8	2.0	2.1
Pessimistic	2.6	3.1	1.0	0.3	2.1	1.5
PCE Price Index, Percent Change						
Optimistic	1.9	1.9	1.8	2.0	2.0	2.0
Baseline	1.9	2.1	2.0	2.0	1.9	1.9
Pessimistic	1.9	2.0	1.9	2.3	2.4	2.4
Mortgage Rate, Percent						
Optimistic	4.16	5.07	5.72	6.12	6.41	6.42
Baseline	4.16	4.72	5.06	5.16	5.14	5.11
Pessimistic	4.16	4.47	3.48	3.62	4.23	4.84
3 Month T-Bill Rate, Percent						
Optimistic	1.41	2.35	3.02	3.44	3.87	3.88
Baseline	1.41	2.41	3.01	3.17	3.15	3.14
Pessimistic	1.41	2.35	1.08	0.31	1.02	1.82
Washington						
Real Personal Income, Percent Change						
Optimistic	4.2	5.5	5.6	4.8	4.0	3.6
Baseline	4.2	3.5	3.2	2.8	2.9	2.8
Pessimistic	4.2	1.9	1.4	0.1	1.5	1.5
Personal Income, Percent Change						
Optimistic	6.2	7.6	7.5	6.9	6.1	5.7
Baseline	6.2	5.7	5.3	4.8	4.9	4.8
Pessimistic	6.2	3.9	3.3	2.4	4.0	4.0
Employment, Percent Change						
Optimistic	2.6	3.0	2.6	1.9	1.4	1.1
Baseline	2.6	2.7	1.7	1.1	0.9	0.8
Pessimistic	2.6	2.4	0.7	-0.3	0.1	0.0
Housing Permits, Thousands of Authorized Units						
Optimistic	47.1	43.1	46.2	47.2	45.7	44.8
Baseline	47.1	42.5	44.3	43.7	42.5	41.6
Pessimistic	47.1	42.6	39.9	34.6	34.1	32.8

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

Calendar Years

	2018	2019	2020	2021	2022	2023
U.S.						
Real GDP						
<i>Growth</i>						
ERFC	2.9	2.6	1.9	1.9	2.1	2.1
GCEA Average	2.8	2.5	2.0	1.9	2.0	2.0
Real Consumption						
<i>Growth</i>						
ERFC	2.5	2.5	2.0	2.0	2.1	2.2
GCEA Average	2.7	2.5	2.0	1.9	2.0	2.0
PCE Price Index						
<i>Growth</i>						
ERFC	2.1	2.0	2.0	1.9	1.9	1.9
GCEA Average	2.3	2.3	2.1	2.0	1.9	1.9
Mortgage Rate						
<i>Percent</i>						
ERFC	4.5	4.9	5.1	5.2	5.1	5.1
GCEA Average	4.7	5.3	5.4	5.5	5.6	5.5
Oil Price (Brent)						
<i>Dollars per barrel</i>						
ERFC	73.5	75.8	72.1	68.8	66.4	64.9
GCEA Average	71.4	70.8	66.1	63.4	63.2	62.9
Washington State						
Real Personal Income						
<i>Growth</i>						
ERFC	4.4	3.1	3.0	2.8	2.9	2.8
GCEA Average	3.6	3.2	2.6	2.3	2.6	2.8
Wage and Salary Employment						
<i>Growth</i>						
ERFC	2.9	2.1	1.4	0.9	0.9	0.7
GCEA Average	2.7	1.7	1.1	0.9	0.8	0.9
Manufacturing Employment						
<i>Growth</i>						
ERFC	1.0	1.4	0.0	-0.1	0.6	0.9
GCEA Average	0.3	0.3	-0.2	0.0	-0.2	-0.2
Construction Employment						
<i>Growth</i>						
ERFC	5.9	0.8	0.0	-0.5	-0.3	-0.7
GCEA Average	4.3	0.3	0.8	0.8	0.8	1.0
Housing Permits						
<i>Thousands of authorized units</i>						
ERFC	43.8	43.8	44.2	43.0	42.0	41.1
GCEA Average	43.6	42.0	41.5	41.5	42.0	42.5
Washington Average Annual Wage						
<i>Growth</i>						
ERFC	6.0	2.6	3.5	3.9	4.1	4.2
GCEA Average	3.7	3.6	3.8	3.8	3.8	3.6

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

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

Table 2.6
Forecast Comparison
 Forecast 2019 to 2023

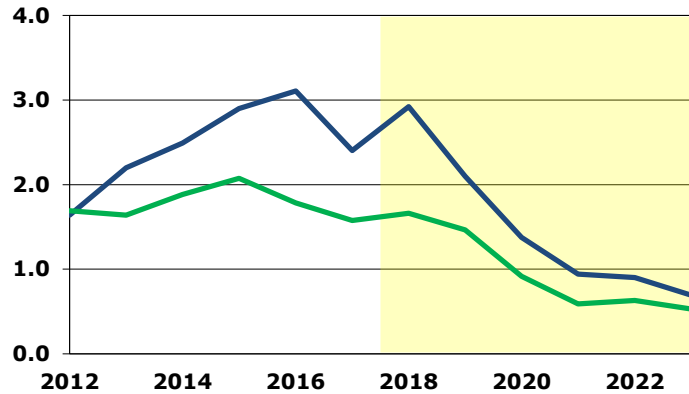
Fiscal Years

	2017	2018	2019	2020	2021	2022	2023
Washington							
Real Personal Income							
September	388.473	404.960	419.254	432.719	444.876	457.831	470.819
% Ch	3.4	4.2	3.5	3.2	2.8	2.9	2.8
June	365.661	379.788	392.661	404.679	416.404	428.651	441.048
% Ch	3.4	3.9	3.4	3.1	2.9	2.9	2.9
Personal Income							
September	408.618	433.922	458.794	483.140	506.506	531.198	556.562
% Ch	5.0	6.2	5.7	5.3	4.8	4.9	4.8
June	408.708	432.090	455.993	479.445	503.480	528.879	555.397
% Ch	5.1	5.7	5.5	5.1	5.0	5.0	5.0
Employment							
September	3285.1	3368.9	3459.8	3518.0	3555.6	3589.2	3618.2
% Ch	2.8	2.6	2.7	1.7	1.1	0.9	0.8
June	3285.1	3364.1	3439.4	3495.4	3534.3	3564.7	3590.2
% Ch	2.8	2.4	2.2	1.6	1.1	0.9	0.7
Housing Permits							
September	44.526	47.144	42.510	44.253	43.682	42.486	41.583
% Ch	11.0	5.9	-9.8	4.1	-1.3	-2.7	-2.1
June	44.526	48.009	42.997	43.067	43.249	42.359	41.481
% Ch	11.0	7.8	-10.4	0.2	0.4	-2.1	-2.1

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

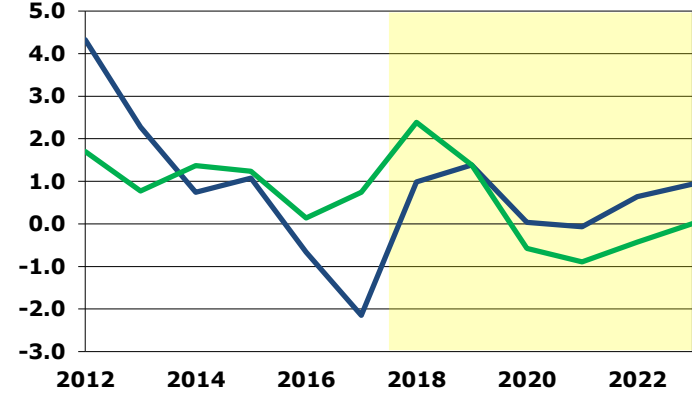
Forecast

Total Nonfarm Payroll Employment



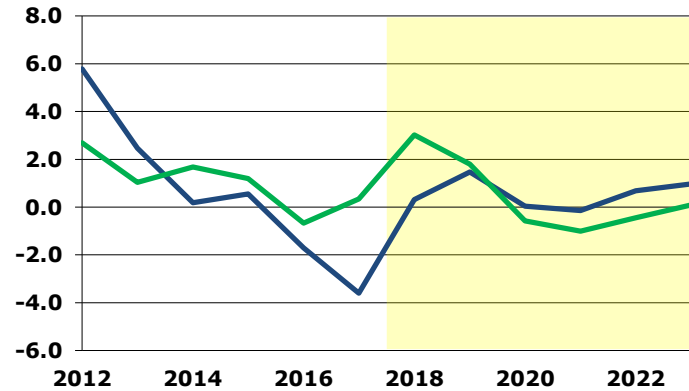
Source: WA State Employment Security Dept. 2017, ERFC 2023

Manufacturing Employment



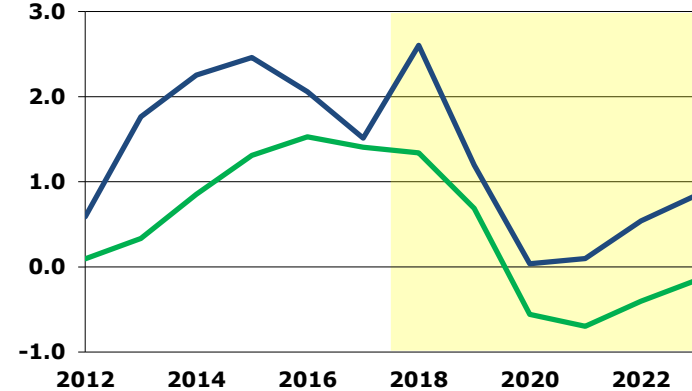
Source: WA State Employment Security Dept. 2017, ERFC 2023

Durable Manufacturing Employment



Source: WA State Employment Security Dept. 2017, ERFC 2023

Nondurable Manufacturing Employment



Source: WA State Employment Security Dept. 2017, ERFC 2023

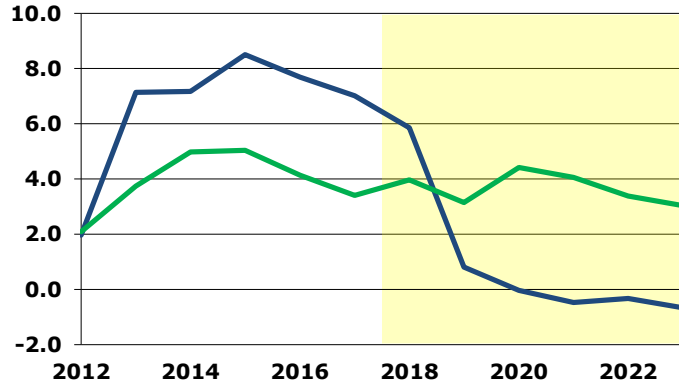
Washington

U.S.

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

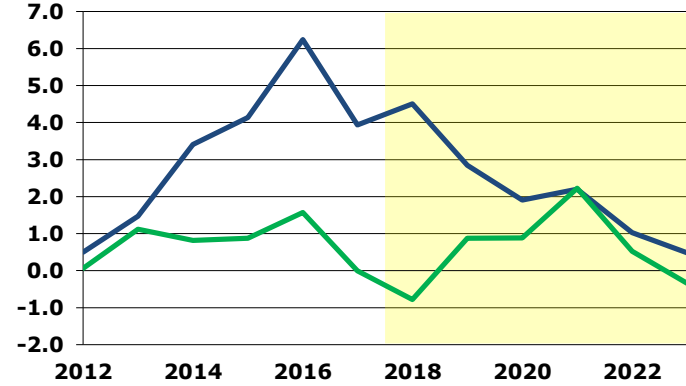
Forecast

Construction Employment



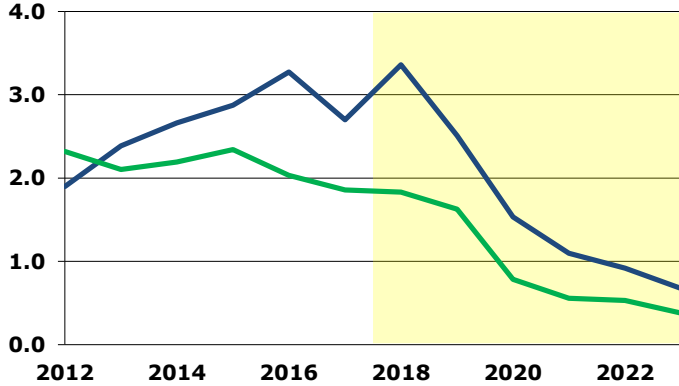
Source: WA State Employment Security Dept. 2017, ERFC 2023

Information Employment



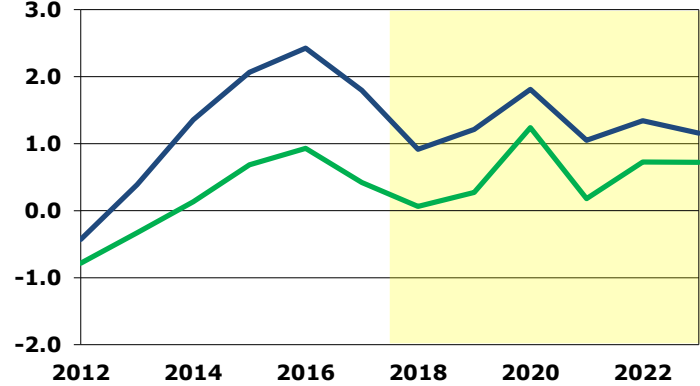
Source: WA State Employment Security Dept. 2017, ERFC 2023

Other Private Employment



Source: WA State Employment Security Dept. 2017, ERFC 2023

Government Employment



Source: WA State Employment Security Dept. 2017, ERFC 2023

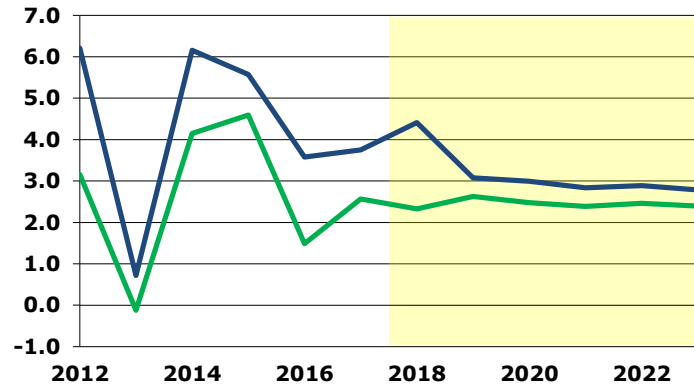
■ Washington

■ U.S.

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

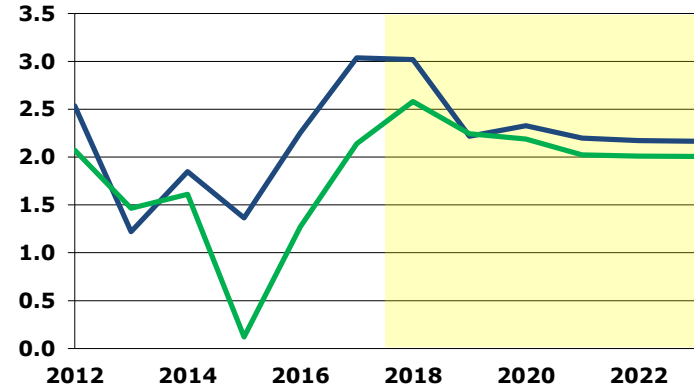
Forecast

Real Personal Income



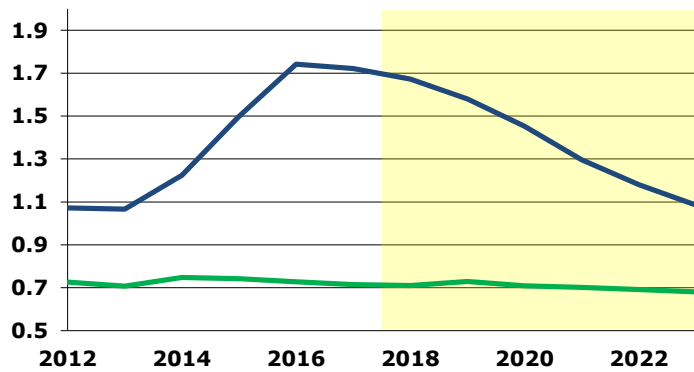
Source: Bureau of Economic Analysis 2016, ERFC 2023

Consumer Price Indices



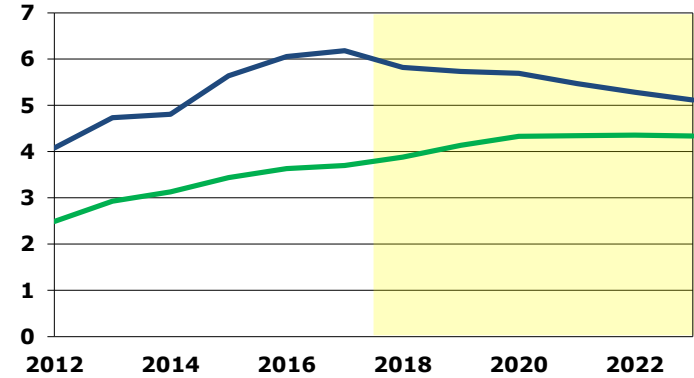
Source: Bureau of Labor Statistics 2017, ERFC 2023

Population



Source: Census Bureau 2016, ERFC 2023

New Housing Units Per 1,000 Population (Level)



Source: Census Bureau 2016, ERFC 2023

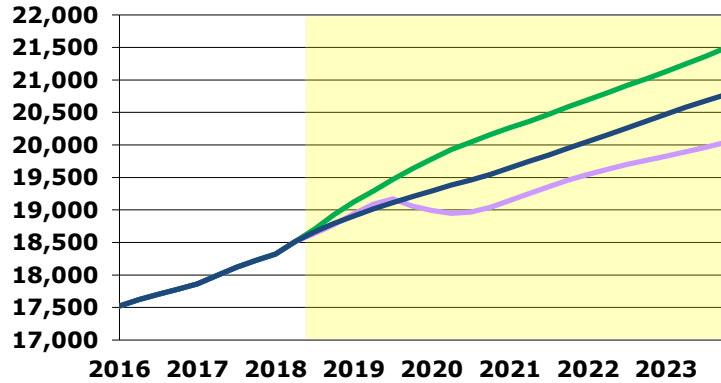
Washington

U.S.

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

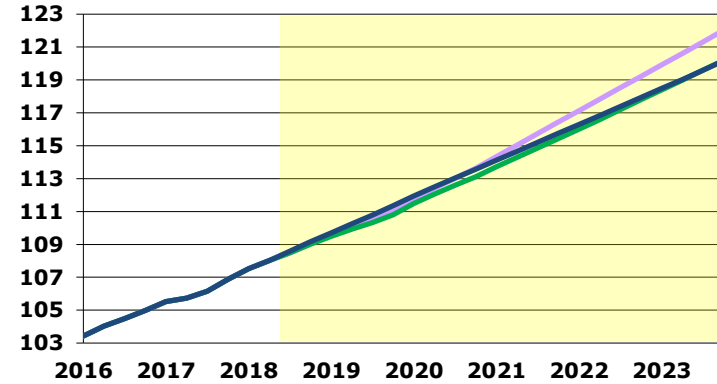
Forecast

Real GDP, Billions of 2012 Dollars



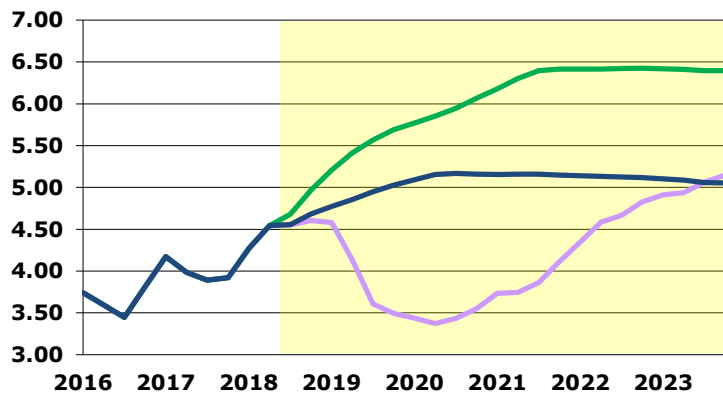
Source: Bureau of Economic Analysis 2018 Q1, ERFC 2023

PCE Price Index, 2012 = 100



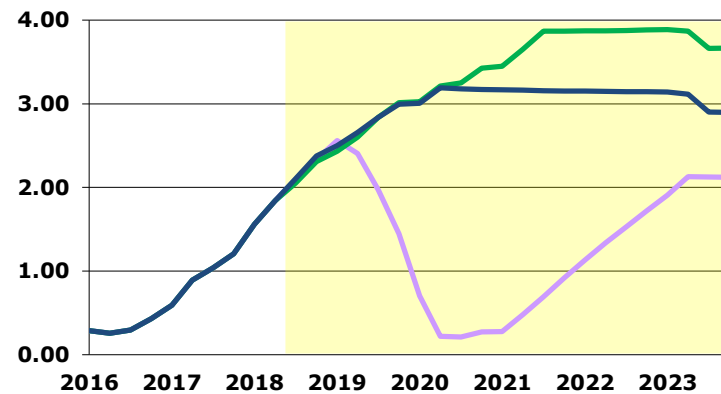
Source: Bureau of Economic Analysis 2018 Q1, ERFC 2023

Mortgage Rate, Percent



Source: Freddie Mac 2018 Q1, ERFC 2023

Three Month T-Bill Rate, Percent



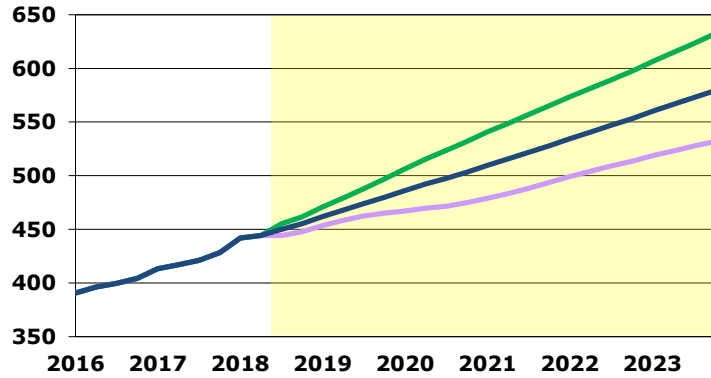
Source: Federal Reserve Board 2018 Q1, ERFC 2023

■ Baseline ■ Optimistic ■ Pessimistic

Figure 2.9: Comparison of Alternative Washington Economic Forecasts

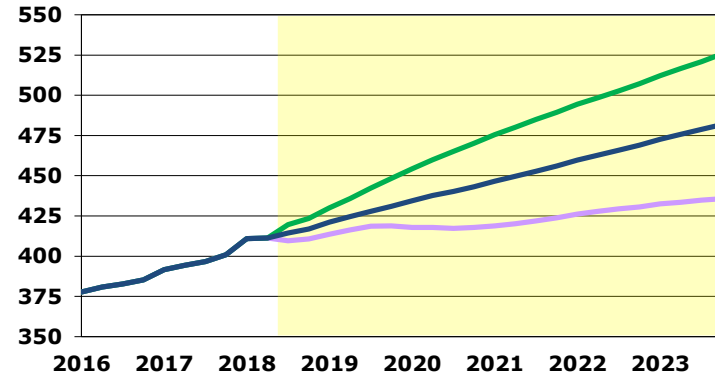
Forecast

Personal Income, Billions of Dollars



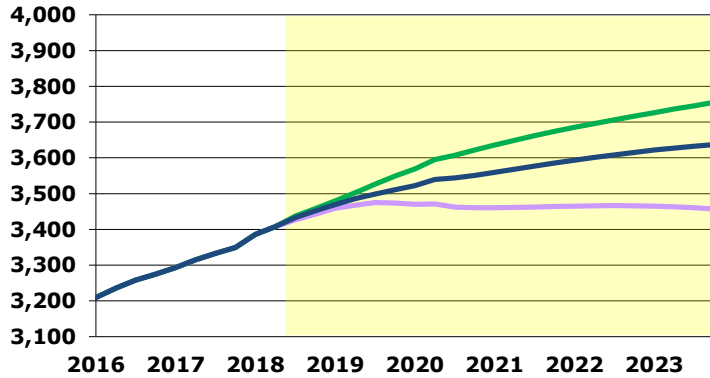
Source: Bureau of Economic Analysis 2016 Q4, ERFC 2023

Real Personal Income, Billions of 2012 Dollars



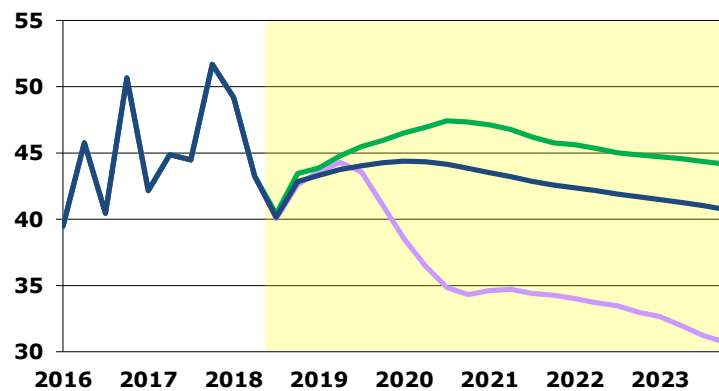
Source: Bureau of Economic Analysis 2016 Q4, ERFC 2023

Total Nonfarm Payroll Employment, Thousands



Source: WA State Employment Security 2018 Q2, ERFC 2023

Housing Permits, Thousands



Source: Census Bureau 2018 Q2, ERFC 2023

■ Baseline ■ Optimistic ■ Pessimistic



Chapter 3: Washington State Revenue Forecast Summary

- **General Fund-State (GF-S) revenue collections since the June 2018 forecast have come in \$147 million over the forecasted amount.**
- **A U.S. Supreme Court decision on the taxability of online sales has increased expected revenue by \$38 million in the 2019-21 biennium and \$46 million in the 2021-23 biennium.**
- **Forecasted GF-S revenue has increased by \$275 million in the current biennium, \$355 million in the 2019-21 biennium and \$295 million in the 2021-23 biennium.**
- **Near GF-S revenue, which includes all state revenue subject to the budget outlook process, is forecasted to increase by \$348 million in the current biennium, \$443 million in the 2019-21 biennium and \$415 million in the 2021-23 biennium.**

Overview

The revenue forecast has increased due to strong tax receipts and changes to the economic forecast

Since the June 2018 forecast, General Fund – State (GF-S) revenue collections have come in \$147 million higher than forecasted. Most of the surplus came from stronger than expected retail sales and business and occupation taxes. The collection surplus, coupled with increases in expected personal income and other changes to the economic forecast, has resulted in an increase in forecasted revenue. In addition, a U.S. Supreme Court decision on the taxability of online sales has increased expected revenue in the 2019-21 and 2021-23 biennia.

GF-S forecast change by biennium (millions):

17-19: +\$275
19-21: +\$355
21-23: +\$295

Table 3.1 summarizes the changes to the forecasts of GF-S revenue for the 2017-19 through 2021-23 biennia. For the current biennium, revenue sources that are tracked monthly came in \$146.9 million higher than forecasted in June. Changes to the economic forecast resulted in a \$128.3 million increase in projected collections for the rest of the biennium, for a total GF-S forecast increase of \$275.2 million in the current 2017-19 biennium. Changes to the economic forecast resulted in a \$317.1 million increase to projected collections for the 2019-21 biennium. Non-economic changes added \$37.8 million, for a net forecast increase of \$354.9 million. Economic forecast changes

added \$248.7 million to projected collections for the 2021-23 biennium and non-economic changes added \$46.1 million, for a net forecast increase of \$294.8 million. The September 2018 forecast for GF-S revenue totals \$43,807.6 million in the 2017-19 biennium, \$48,874.8 million in the 2019-21 and \$52,576.6 million in the 2021-23 biennium.

GF-S forecast (\$millions):

2017-19:
\$43,808

2019-21:
\$48,875

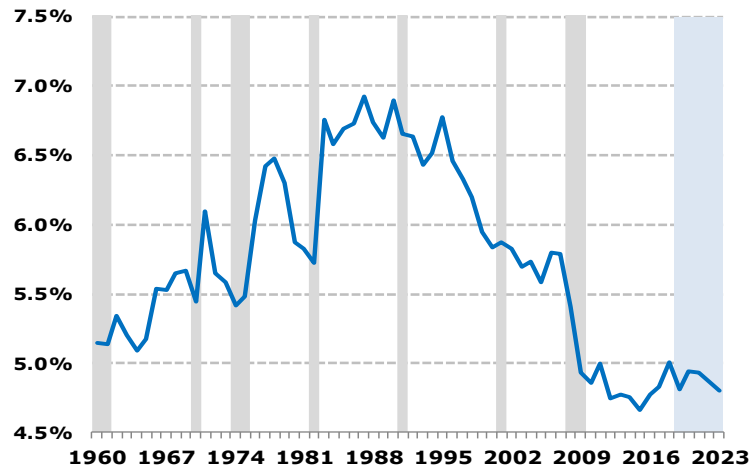
2021-23:
\$52,577

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	\$146.9	NA	NA
Non-Economic Change	\$0.0	\$37.8	\$46.1
Forecast Change	\$128.3	\$317.1	\$248.7
Total Change	\$275.2	\$354.9	\$294.8

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

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



Source: ERFC, data through fiscal year 2018. 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 has 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 forecasted FY2018 ratio, but legislative changes from the 2018 session reduced the expected ratio in FY 2019. The ratio rebounds in FY 2020 but then continues its downward trend. Despite the recent increases, the ratio of revenue to income in FY 2020 will still be below that of any fiscal year on record prior to FY 2008.

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 \$147 million (3.0%) more than the June 2018 forecast

Revenue collections from the Department of Revenue (DOR), Department of Licensing, and Administrative Office of the Courts are tracked monthly. In the period since the June 2018 forecast, total revenue from the above sources came in \$146.9 million (3.0%) higher than expected (see Table 3.2). Revenue Act collections reported by the DOR were \$137.4 million (3.3%) above the forecast. Revenue from other DOR tax sources was \$7.8 million (1.0%) above the forecast.

Table 3.2: Pre-Forecast Collection Variance of Major General Fund-State Taxes by Agency (relative to the June 2018 forecast, cash basis, millions of dollars)

<u>Agency/Source</u>	<u>Collection Variance</u>	<u>Percent of Estimate</u>
Department of Revenue		
Revenue Act	\$137.4	3.3%
Non-Revenue Act	\$7.8	1.0%
Subtotal	\$145.2	2.9%
Administrative Office of the Courts		
	\$1.7	9.5%
Total*	\$146.9	3.0%

* Detail may not add to total due to rounding.

Source: ERFC; Period: June 11, 2018 - September 10, 2018

Much of the non-Revenue Act forecast variance was due to real estate excise taxes

Much of the positive variance in non-Revenue Act collections was due to real estate excise taxes (REET), which came in \$12.3 million (3.8%) higher than forecasted. Property tax receipts came in \$3.5 million (1.3%) higher than forecasted. Cigarette tax receipts came in \$0.7 million (0.7%) higher than forecasted. Liquor sales and liter tax receipts came in \$0.6 million (0.9%) higher than forecasted. Refunds of unclaimed property from the

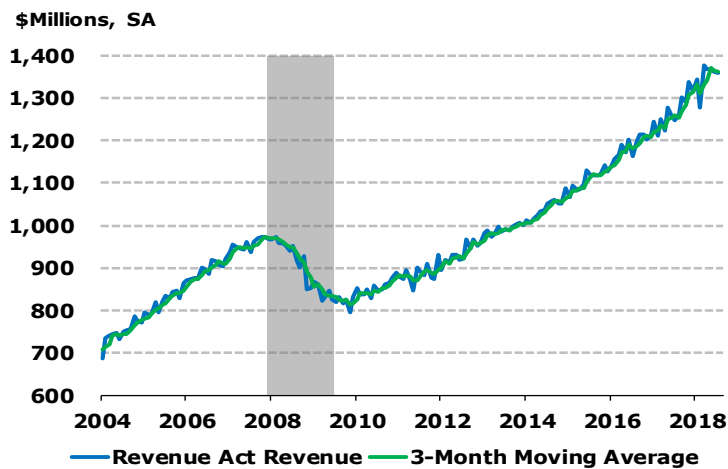
GF-S came in \$6.1 million higher than forecasted. All other DOR revenue sources came in \$3.2 million (6.0%) lower than forecasted. Revenue from the Administrative Office of the Courts was \$1.7 million (9.5%) higher than forecasted.

Adjusted Revenue Act collections were up 10.0% year over year in the most recent collection period and 7.6% in the previous period

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 maintains a mostly upward trend, with growth increasing since the beginning of the year. Adjusted for large one-time payments and refunds, collections grew 10.0% year over year in the August 11 – September 10 collections period and 7.6% in the previous period. Adjusted year-over-year growth in collections representing second quarter 2018 activity (May 11 – August 10, 2018 collections) was 8.8% after 8.2% growth for first quarter activity (February 11 – May 10, 2018 collections). Collections growth for fourth quarter 2017 activity was 8.3% and third quarter growth was 6.4%.

Figure 3.2: Revenue Act Collections*

Year-over-year growth in adjusted Revenue Act collections began to increase in the fourth quarter of 2017



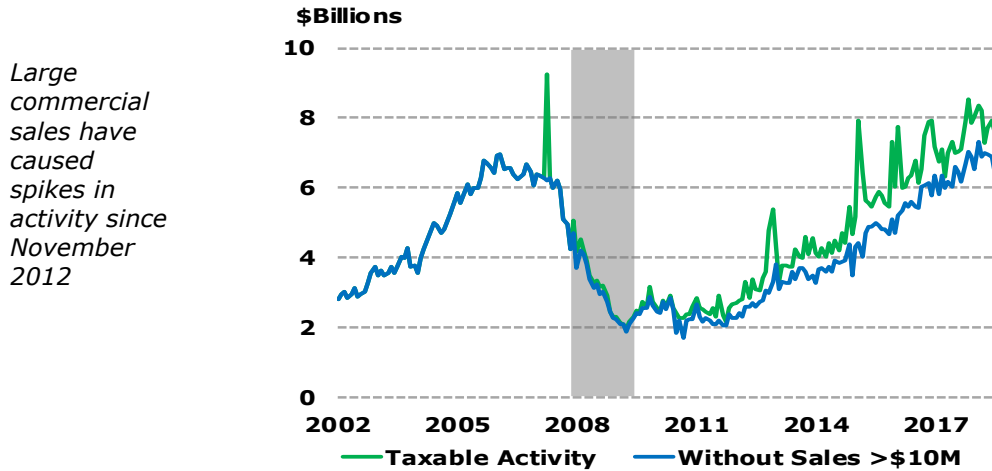
Source: ERFC; Data through September 10, 2018 preliminary allocation
*Adjusted for large payments/refunds and payment pattern change

Sales of large commercial properties remain strong but residential taxable activity has slowed

Much of the large positive variance in REET collections was once again due to stronger-than-expected sales of large commercial property. Sales of property worth \$10 million or more totaled \$3.6 billion in the three months since the last forecast. These sales totaled \$2.9 billion in the first quarter of 2018 and \$2.4 billion in the second quarter. Large commercial sales and transfers of controlling interest during corporate mergers have been responsible for much of the increase in taxable activity since November 2012, creating many spikes in activity (see Figure 3.3). Residential activity has been slightly weaker than

expected since the June 2018 forecast due to a decrease in the number of transactions and moderating prices.

Figure 3.3: Taxable Real Estate Excise Activity, SA



Source: ERFC; data through August 2018

Non-Economic Changes to the Forecast

A Supreme Court decision will increase sales tax collections from online sales

On June 21, 2018, the U.S. Supreme Court handed down a decision on *South Dakota v. Wayfair, Inc.* that upheld South Dakota’s right to collect sales taxes on certain online sales from out-of-state vendors. Washington had already passed similar legislation that became effective on January 1, 2018. The *Wayfair* decision is likely to increase the scope of taxes that the Washington can collect and increase compliance. These effects are expected to increase state sales tax collections starting in FY 2020. The forecasted GF-S biennial increases from the enhanced sales tax collections are \$37.8 million for the 2019-21 biennium and \$46.1 million for the 2021-23 biennium.

Revenue Forecasts by Source

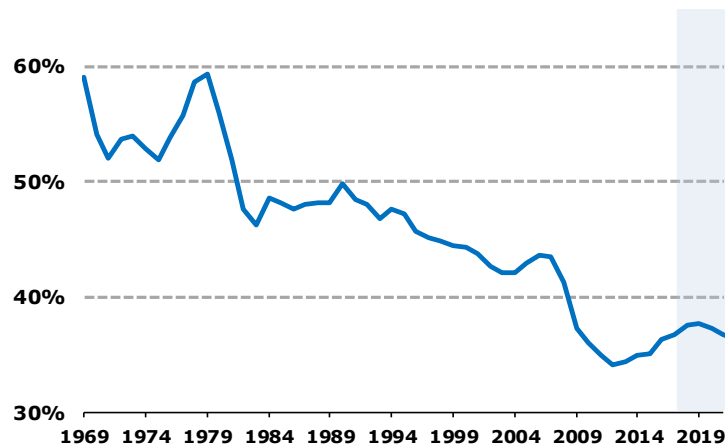
Department of Revenue

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 94.7% of total GF-S revenue in FY 2018. 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.

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 2017, forecast through FY 2023

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 47.1% of GF-S revenue in FY 2018. 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, 34.1% 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 36.7% of personal income. Legislation passed in June 2017 that extends the tax to bottled water and certain online sales is forecasted to cause the share to continue to increase through FY 2019. From FY 2019 on, 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:

FY19: 7.9%
 FY20: 4.3%
 FY21: 3.5%
 FY22: 3.3%
 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%. Estimated growth increased to 8.6% in FY 2018 (final second quarter taxable activity data was not available at the time of the forecast). Growth in FY 2019 stays relatively strong at 6.0% despite slowing auto sales and construction because of increases in the number of online sales that are taxed due to legislation passed in 2017. Growth then declines through

the end of the forecast period (see Table 3.4) as auto sales, construction and online sales growth settles down to lower levels. 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 2018 was 8.2%. Collections growth is forecasted at 7.9% in FY 2019, 4.3% in FY 2020, 3.5% in FY 2021, 3.3% in FY 2022 and 3.3% in 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 19.1% of GF-S revenue in FY 2018. 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 23% of taxes due, followed by the wholesaling sector, which is taxed at 0.484% and represented an estimated 19% of taxes due.

B&O tax growth forecast:

In FY 2018, B&O tax receipts grew by 8.6% due to several large one-time payments of past due taxes and legislative expansion of the tax base. Forecasted growth slows to 4.0% in FY 2019 due to the elevated level of FY 2018 collections. Growth is forecasted at 4.4% in FY 2020, 4.6% in FY 2021 and FY 2022 and 4.8% in FY 2023.

*FY19: 4.0%
FY20: 4.4%
FY21: 4.6%
FY22: 4.6%
FY23: 4.8%*

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 12.6% of total revenue in FY 2018. Although the tax goes into the GF-S, it is dedicated to the funding of basic education. As discussed in the [September 2017](#) forecast publication, the total amount of the state levy was increased by new legislation in June 2017, with the increases beginning in FY 2018.

Property tax growth forecast:

Constrained by prior law to a levy growth rate of one percent on existing property (or the rate of inflation if less than one percent), property tax collections grew by 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. Legislation from the 2018 session discussed above then decreases collections for FY 2019 by 16.2% via a temporary reduction in the levy rate for calendar year 2019 and a \$935 million transfer of collections from the new levy to ELTA. Growth rebounds to 51.2% in FY 2020 with the absence of a transfer and the end of the temporary levy reduction in the second half of the year. Growth remains high at 10.0% in FY 2021, due to a full year at the

*FY19: -16.2%
FY20: 51.2%
FY21: 10.0%
FY22: 3.5%
FY23: 2.7%*

unreduced levy rate, before falling to 3.5% in FY 2022 and 2.7% in FY 2023.

REET was the fourth largest GF-S source in FY 2018

The real estate excise tax (REET) was the fourth largest DOR source of GF-S revenue in FY 2018, accounting for 5.0% of total revenue. The state portion of REET is 1.28% of the sales price. The tax 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, from July 1, 2013 – June 30, 2023, the Education Legacy Trust Account (4.1%). The tax is applied to both residential and commercial real estate, including purchases of vacant land.

REET growth forecast:

*FY19: -8.7%
FY20: -5.4%
FY21: 2.4%
FY22: 1.5%
FY23: 2.5%*

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 are expected to decline further in FY 2019 while residential sales also decrease, resulting in a 8.7% reduction in collections in FY 2019 and a 5.4% reduction in FY 2020. Growth then resumes slowly at 2.4% in FY 2021, 1.5% in FY 2022 and 2.5% 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 3.2% 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:

*FY19: 6.0%
FY20: 0.0%
FY21: 3.5%
FY22: 4.0%
FY23: 4.0%*

Use tax collections grew 2.8% in FY 2018 after 6.0% growth in FY 2017. The low level of 2018 collections, coupled with high actual collections in the current year, boost expected growth to 6.0% in FY 2019. Collections for FY 2020 are expected to remain flat at 0% growth before resuming at more normal growth levels of 3.5% in FY 2021 and 4.0% 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 1.9% 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:*

*FY19: 13.2%
FY20: -0.3%
FY21: 6.3%
FY22: 4.8%
FY23: 3.6%*

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

Public utility tax receipts shrank by 1.1% in FY 2018 after 1.4% growth in FY 2017. The low level of FY2018 collections, high actual collections in the year so far and projected increases in natural gas and increased electricity prices bring expected growth of 13.2% in FY 2019. Collections are then forecasted to decrease by 0.3% in FY 2020 before growing at 6.3% in FY 2021, 4.8% in FY 2022 and 3.6% in FY 2023.

The state tax on cigarettes was the seventh largest DOR GF-S revenue source in FY 2018 at 1.6% 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:*

*FY19: 1.9%
FY20: -3.2%
FY21: -1.5%
FY22: -2.3%
FY23: -2.5%*

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 due to increased consumption of e-cigarettes, which are not subject to the cigarette tax but are subject to retail sales taxes. Collections decreased by 5.4% in FY 2018 after decreasing by 3.5% in FY2017 due to the timing of some collections from tax stamp sales that shifted collections from FY 2018 to FY 2019. Because of the shifted funds, collections are forecasted to increase by 1.9% in FY 2019 before continuing to decline at 3.2% in FY 2020, 1.5% in FY 2021, 2.3% in FY 2022 and 2.5% 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):

17-19: \$0.1
19-21: -\$0.2
21-23: -\$4.0

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 are forecasted at \$247.3 million in the 2017-19 biennium, an increase of \$0.1 million from the June forecast, and \$268.0 million in the 2019-21 biennium, a decrease of \$0.2 million. The forecast of GF-S distributions for the 2021-23 biennium is \$317.1 million, a decrease of \$4.0 million from the previous forecast. 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: \$29.8
19-21: \$1.6
21-23: -\$1.9

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. Starting with the September 2017 forecast cycle, the office also added the Department of Licensing to its list of covered agencies. The office's forecast for the 2017-19 biennium was increased \$29.8 million to \$336.8 million, due mainly to a large recovery of FY 2018 expenditures from the Department of Natural Resources. The office's forecast for the 2019-21 biennium was increased \$1.6 million to \$170.0 million and the forecast for the 2021-23 biennium was decreased \$1.9 million to \$159.5 million.

State Treasurer

Forecast change by biennium (millions):

17-19: \$8.7
19-21: \$9.0
21-23: -\$2.6

The Office of the State Treasurer generates GF-S revenue by investing state short-term cash reserves. The office's forecast for the 2017-19 biennium has been increased \$8.7 million to \$28.0 million and the forecast for the 2019-21 biennium has been increased \$9.0 million to \$49.8 million due to expected increases in the balances of funds that contribute interest earnings to the GF-S. The office's forecast of revenue for the 2021-23 biennium has been decreased \$2.6 million to \$51.6 million.

Insurance Commissioner

Forecast change by biennium (millions):

17-19: \$5.4
19-21: \$10.5
21-23: \$5.4

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 GF-S revenue forecast for the 2017-19 biennium has been increased \$5.4 million to \$1,223.8 million and the forecast for the 2019-21 biennium has been increased \$10.5 million to \$1,320.8 million. The forecast of revenue for the 2021-23 biennium has been increased \$5.4 million to \$1,426.4 million.

Liquor and Cannabis Board

*Forecast
change by
biennium
(millions):*

17-19: *-\$8.4*
19-21: *-\$2.1*
21-23: *-\$5.6*

The Liquor and Cannabis Board (LCB) collects fees from distributors and retailers on sales of spirits and surtaxes on sales of beer and wine (sales and liter taxes on sprits are collected by the DOR). The LCB is also responsible for the collection of excise taxes and fees associated with the legalized sale and use of recreational and medicinal cannabis discussed previously. The forecast of revenue for the 2017-19 biennium has been decreased \$8.4 million to \$488.4 million and the forecast for the 2019-21 biennium has been decreased \$2.1 million to \$541.9 million. The forecast of revenue for the 2021-23 biennium has been decreased \$5.6 million to \$607.3 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: *\$6.7*
19-21: *\$1.0*
21-23: *\$4.2*

While most of the proceeds from sales of lottery games go to the Washington Opportunity Pathways Account (OPA), distributions are also made to programs such as Problem Gambling, Economic Development and the Stadium/Exhibition Center. Details of the forecast of the distribution of Lottery earnings can be found in Table 3.15 on a cash basis and Table 3.16 on a GAAP basis. When total profits from all Washington-only games plus the Powerball game exceed \$102 million per year, the amount above \$102 million is transferred to the GF-S. Forecasted transfers of lottery revenue into the GF-S for the 2017-19 biennium have been increased \$6.7 million to \$62.5 million and forecasted transfers for the 2019-21 biennium have been increased \$1.0 million to \$59.3 million. The forecast of GF-S transfers for the 2021-23 biennium has been increased \$4.2 million to \$64.1 million.

*OPA forecast
change by
biennium
(millions):*

17-19: *\$7.7*
19-21: *\$1.1*
21-23: *\$26.6*

The OPA receives all profits (excluding statutory transfers) from Washington-only lottery games plus all profits from the Mega Millions game. The forecast of OPA revenue for the 2017-19 biennium has been increased \$7.7 million to \$265.7 million and the forecast for the 2019-21 biennium has been increased \$1.1 million to \$262.0 million. The forecast of OPA revenue for the 2021-23 biennium has been increased \$26.6 million to \$295.9 million due to a correction to the expected payments of lottery proceeds to the Seattle stadium and exhibition center.

Administrative Office of the Courts

Forecast change by biennium (millions):

17-19: \$2.1
19-21: \$1.9
21-23: \$1.6

The Administrative Office of the Courts collects surcharges on certain filing fees, fines, and infraction penalties and transfers this revenue to the GF-S on a monthly basis. The forecast for the 2017-19 biennium has been increased \$2.1 million to \$146.6 million. The forecast of transfers for the 2019-21 biennium has been increased \$1.9 million to \$137.1 million and the forecast of revenue for the 2021-23 biennium has been increased \$1.6 million to \$139.4 million.

Track Record for the 2017-19 Biennium

The September 2018 forecast is \$825 million (1.9%) 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 September 2018 forecast is \$3.8 billion (9.8%) higher than the initial forecast. Non-economic changes have increased the forecast by \$1.3 billion (3.4%). Excluding non-economic changes, the current forecast is \$5.1 billion (13.2%) higher than the initial forecast. The June 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 September forecast of biennial revenue is \$825 million (1.9%) higher than that sum.

Track Record for the 2019-21 Biennium

This forecast is \$5.4 billion (12.5%) higher than the initial February 2016 forecast, due mainly to legislative changes

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 September 2018 forecast is \$5.4 billion (12.5%) higher than the initial forecast. Non-economic changes have increased the forecast by \$3.1 billion (7.2%). Excluding non-economic changes, the current forecast is \$2.3 billion (5.3%) higher than the initial forecast.

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

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

Legislation enacted in 1987 requires that the state's biennial budget be in conformance with Generally Accepted Accounting Principles (GAAP). It also requires a GF-S revenue forecast on both a cash and GAAP basis. The GAAP forecasts of GF-S revenue for the 2017-19 and 2019-21 biennia are presented in Tables 3.6 and 3.8 and the GAAP forecast of Lottery revenue transfers for those biennia is in Table 3.15. The primary difference between the cash and GAAP forecasts is the timing of the receipt of revenue. On a GAAP basis, revenue is credited to the biennium in which it is earned even though it may not have

been received. The cash forecast, on the other hand, reflects expected cash receipts during a fiscal period. The forecast on a GAAP, or accrual, basis is primarily used for financial reporting. The cash forecast is used for cash flow management and revenue tracking. The cash forecast is also the forecast used in the state's budgetary balance sheet, which is the principal tool for assessing the General Fund's current surplus or deficit position. References to the GF-S forecast in the text of this chapter refer to the cash forecast unless otherwise noted. Likewise, figures from revenue tables other than Tables 3.6, 3.8 and 3.16 are projected on a cash basis.

Budgetary Balance Sheet for the 2017-19 Biennium

The forecast implies total GF-S reserves of \$2.42 billion at the end of the 2017-19 biennium and \$3.25 billion in reserves for GF-S, ELTA and OPA

Table 3.12 shows the budgetary balance sheets for the 2017-19 biennium as prepared by the Office of Financial Management and the House and Senate fiscal committees. The balance sheet shows not only projected GF-S spending and resources but also total projected spending and resources for the GF-S plus the other main non-transportation state-funded accounts: the Education Legacy Trust Account (ELTA) and the Washington Opportunity Pathways Account (OPA). As shown in the table, the GF-S beginning fund balance for the 2017-19 biennium is \$1,100.6 million and the total beginning balance for GF-S, ELTA and OPA is \$1,148.5 million. Based on the September 2018 revenue forecast and currently enacted budgets, unrestricted GF-S reserves are projected to be \$1,069.3 million at the end of the 2017-19 biennium and GF-S, ELTA and OPA reserves are projected to be \$1,899.2 million. In addition, the Budget Stabilization Account is projected to have a balance of \$1,352.3 million, bringing total projected GF-S reserves to \$2,421.6 million. Projected combined reserves for the ELTA and OPA are \$829.8 million, for total projected reserves of \$3,251.4 million for GF-S, ELTA and OPA at the end of the 2017-19 biennium.

Alternative Forecasts for the 2017-19 and 2019-21 Biennia

*Optimistic scenario (billions):
17-19: +\$0.5
19-21: +\$2.7*

*Pessimistic scenario:
17-19: -\$0.5
19-21: -\$3.0*

Chapter 2 outlines optimistic and pessimistic economic scenarios relative to the baseline economic forecast. The forecast assigns a probability of 70% to the baseline forecast, 15% to a scenario based on the upside risks and 15% to a scenario based on the downside risks for the 2017-19 biennium. The probabilities for the 2019-21 biennium are 60% to the baseline forecast, 15% to the optimistic scenario and 25% to the pessimistic scenario. The revenue implications of these alternative scenarios for the 2017-19 biennium are shown in Table 3.13 and those of the 2019-21 biennium are shown in Table 3.14. For the 2017-19 biennium, the optimistic forecast generates \$44,332.0 million in GF-S revenue, \$524.4 million (1.2%) more than the baseline scenario, while the pessimistic forecast produces \$43,258.1 million in revenue, \$549.5 million (1.3%) less than the baseline. For the

2019-21 biennium, the optimistic forecast generates \$51,598.6 million in GF-S revenue, \$2,723.7 million (5.6%) more than the baseline scenario, while the pessimistic forecast produces \$45,913.5 million in revenue, \$2,961.4 million (6.1%) less than the baseline.

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

*Near
General
Fund
Forecast
(millions):*

*2017-19:
\$45,635.9*

*2019-21:
\$49,806.3*

*2021-23:
\$53,585.3*

“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 forecast of Near General Fund revenue for the 2017-19 biennium is \$45,635.9 million, \$347.9 million more than the June 2018 forecast, and the forecast for the 2019-21 biennium is \$49,806.3 million, \$443.0 million more than the June forecast. The forecast of Near General Fund revenue for the 2021-23 biennium is \$53,585.3 million, \$415.2 million more than the June 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)

Biennium	Current Dollars	Percent Change	2009	
			Chained Dollars	Percent Change
1961-63	\$817.1		\$4,300.0	
1963-65	866.2	6.0%	4,439.3	3.2%
1965-67	1,128.6	30.3%	5,565.5	25.4%
1967-69	1,440.5	27.6%	6,658.6	19.6%
1969-71	1,732.7	20.3%	8,271.5	24.2%
1971-73	1,922.1	10.9%	8,490.3	2.6%
1973-75	2,372.4	23.4%	9,054.3	6.6%
1975-77	3,395.0	43.1%	11,271.8	24.5%
1977-79	4,490.0	32.3%	13,091.7	16.1%
1979-81	5,356.4	19.3%	12,990.7	-0.8%
1981-83	6,801.4	27.0%	14,354.4	10.5%
1983-85	8,202.4	20.6%	15,975.3	11.3%
1985-87	9,574.6	16.7%	17,604.4	10.2%
1987-89	10,934.1	14.2%	18,775.3	6.7%
1989-91	13,309.0	21.7%	21,047.1	12.1%
1991-93	14,862.2	11.7%	22,112.5	5.1%
1993-95	16,564.6	11.5%	23,547.7	6.5%
1995-97	17,637.7	6.5%	24,059.4	2.2%
1997-99	19,620.1	11.2%	26,059.1	8.3%
1999-01	21,262.1	8.4%	27,187.8	4.3%
2001-03	21,140.7	-0.6%	26,144.9	-3.8%
2003-05	23,388.5	10.6%	27,714.8	6.0%
2005-07	27,772.0	18.7%	31,145.3	12.4%
2007-09	27,703.0	-0.2%	29,633.3	-4.9%
2009-11	28,218.1	1.9%	29,418.7	-0.7%
2011-13	30,657.0	8.6%	30,679.6	4.3%
2013-15	33,666.0	9.8%	32,824.3	7.0%
2015-17	38,317.4	13.8%	36,713.2	11.8%
2017-19 ^F	43,807.6	14.3%	40,456.5	10.2%
2019-21 ^F	48,874.8	11.6%	43,348.9	7.1%
2021-23 ^F	52,576.6	7.6%	44,893.8	3.6%

^F September 2018 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 September 2018 forecast.

Table 3.4
Taxable retail sales*
(millions of dollars)

Fiscal Year	Amount	Percent Change
1981	25,197	4.7%
1982	26,097	3.6%
1983	29,368	12.5%
1984	29,156	-0.7%
1985	30,687	5.3%
1986	32,158	4.8%
1987	34,647	7.7%
1988	37,452	8.1%
1989	41,429	10.6%
1990	47,183	13.9%
1991	49,812	5.6%
1992	53,189	6.8%
1993	55,319	4.0%
1994	59,009	6.7%
1995	61,927	4.9%
1996	62,817	1.4%
1997	66,748	6.3%
1998	72,059	8.0%
1999	77,197	7.1%
2000	83,335	8.0%
2001	85,633	2.8%
2002	84,418	-1.4%
2003	86,165	2.1%
2004	90,139	4.6%
2005	97,253	7.9%
2006	107,071	10.1%
2007	115,527	7.9%
2008	118,676	2.7%
2009	106,379	-10.4%
2010	99,983	-6.0%
2011	101,825	1.8%
2012	106,036	4.1%
2013	113,173	6.7%
2014	120,453	6.4%
2015	130,168	8.1%
2016	141,103	8.4%
2017	149,992	6.3%
2018 ^F	162,855	8.6%
2019 ^F	172,600	6.0%
2020 ^F	180,165	4.4%
2021 ^F	186,299	3.4%
2022 ^F	192,572	3.4%
2023 ^F	198,900	3.3%

^F September 2018 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	June 2018 Forecast¹	Non- Economic Changes	Forecast Revision	Sept 2018 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$21,086.6	\$0.0	\$181.9	\$21,268.4	\$181.9
Business & Occupation Use	8,409.0	0.0	60.0	8,469.0	60.0
Public Utility	1,424.5	0.0	5.9	1,430.4	5.9
Liquor Sales/Liter	869.6	0.0	(13.1)	856.5	(13.1)
Cigarette	548.7	0.0	1.7	550.4	1.7
Property (State Levy)	722.8	0.0	(1.3)	721.5	(1.3)
Real Estate Excise	5,043.9	0.0	(7.5)	5,036.4	(7.5)
Timber Excise	2,062.0	0.0	20.7	2,082.7	20.7
Other	4.9	0.0	(0.4)	4.5	(0.4)
Subtotal	1,118.6	0.0	(16.9)	1,101.8	(16.9)
Insurance Commissioner	41,290.6	0.0	230.9	41,521.5	230.9
Insurance Premiums	1,218.5	0.0	5.4	1,223.8	5.4
Liquor Control Board					
Fees, Cannabis Excise Tax	439.7	0.0	(8.6)	431.0	(8.6)
Beer & Wine Surtax	57.1	0.0	0.3	57.4	0.3
Lottery Commission					
Lottery Revenue	55.8	0.0	6.7	62.5	6.7
State Treasurer					
Interest Earnings	19.3	0.0	8.7	28.0	8.7
Office of Financial Management**					
Other Agencies	307.0	0.0	29.8	336.8	29.8
Administrative Office of the Courts					
Fines and Forfeitures	144.5	0.0	2.1	146.6	2.1
Total General Fund-State *	\$43,532.4	\$0.0	\$275.2	\$43,807.6	\$275.2

¹ Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council June 19, 2018² Forecast for the 2017-19 biennium, adopted September 26, 2018

*Detail may not add to totals because of rounding.

**OFM forecast now includes revenue from the Department of Licensing.

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	June 2018 Forecast¹	Non- Economic Changes	Forecast Revision	Sept 2018 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$21,086.6	\$0.0	\$255.3	\$21,341.8	\$255.3
Business & Occupation Use	8,409.0	0.0	103.4	8,512.4	103.4
Public Utility	1,424.5	0.0	14.8	1,439.3	14.8
Liquor Sales/Liter	869.6	0.0	(13.5)	856.1	(13.5)
Cigarette	548.7	0.0	2.3	551.0	2.3
Property (State Levy)	722.8	0.0	7.6	730.4	7.6
Real Estate Excise	5,043.9	0.0	3.8	5,047.7	3.8
Timber Excise	2,062.0	0.0	21.3	2,083.4	21.3
Other	4.6	0.0	(0.4)	4.1	(0.4)
Subtotal	1,118.6	0.0	42.5	1,161.1	42.5
	41,290.3	0.0	437.0	41,727.3	437.0
Insurance Commissioner					
Insurance Premiums	1,218.5	0.0	5.4	1,223.8	5.4
Liquor Control Board					
Fees, Cannabis Excise Tax	439.7	0.0	(8.6)	431.0	(8.6)
Beer & Wine Surtax	57.1	0.0	0.3	57.4	0.3
Lottery Commission					
Lottery Revenue	55.9	0.0	1.7	57.6	1.7
State Treasurer					
Interest Earnings	20.1	0.0	7.0	27.1	7.0
Office of Financial Management**					
Other Agencies	307.0	0.0	29.8	336.8	29.8
Administrative Office of the Courts					
Fines and Forfeitures	144.5	0.0	2.1	146.6	2.1
Total General Fund-State *	\$43,533.0	\$0.0	\$474.5	\$44,007.5	\$474.5

¹ Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council June 19, 2018² Forecast for the 2017-19 biennium, adopted September 26, 2018

*Detail may not add to totals because of rounding.

**OFM forecast now includes revenue from the Department of Licensing.

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	June 2018 Forecast¹	Non- Economic Changes	Forecast Revision	Sept 2018 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$23,116.2	\$37.8	\$275.9	\$23,430.0	\$313.7
Business & Occupation Use	9,159.2	0.0	62.5	9,221.7	62.5
Public Utility	1,495.3	0.0	3.9	1,499.2	3.9
Liquor Sales/Liter	957.7	0.0	(22.4)	935.3	(22.4)
Cigarette	572.7	0.0	3.8	576.5	3.8
Property (State Levy)	697.5	0.0	1.9	699.4	1.9
Real Estate Excise	7,323.5	0.0	(29.1)	7,294.4	(29.1)
Timber Excise	1,897.0	0.0	6.1	1,903.1	6.1
Other	4.6	0.0	0.1	4.7	0.1
Subtotal	1,039.3	0.0	(7.7)	1,031.6	(7.7)
	46,262.9	37.8	295.1	46,595.8	332.9
Insurance Commissioner					
Insurance Premiums	1,310.3	0.0	10.5	1,320.8	10.5
Liquor Control Board					
Fees, Cannabis Excise Tax	486.9	0.0	(2.4)	484.5	(2.4)
Beer & Wine Surtax	57.1	0.0	0.3	57.4	0.3
Lottery Commission					
Lottery Revenue	58.3	0.0	1.0	59.3	1.0
State Treasurer					
Interest Earnings	40.8	0.0	9.0	49.8	9.0
Office of Financial Management**					
Other Agencies	168.4	0.0	1.6	170.0	1.6
Administrative Office of the Courts					
Fines and Forfeitures	135.2	0.0	1.9	137.1	1.9
Total General Fund-State *	\$48,519.9	\$37.8	\$317.1	\$48,874.8	\$354.9

¹ Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council June 19, 2018² Forecast for the 2019-21 biennium, adopted September 26, 2018

*Detail may not add to totals because of rounding.

**OFM forecast now includes revenue from the Department of Licensing.

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	June 2018 Forecast¹	Non- Economic Changes	Forecast Revision	Sept 2018 Forecast²	Total Change
Department of Revenue					
Retail Sales	\$23,116.2	\$37.8	\$275.9	\$23,430.0	\$313.7
Business & Occupation Use	9,159.2	0.0	62.5	9,221.7	62.5
Public Utility	1,495.3	0.0	3.9	1,499.2	3.9
Liquor Sales/Liter	957.7	0.0	(22.4)	935.3	(22.4)
Cigarette	572.7	0.0	3.8	576.5	3.8
Property (State Levy)	697.5	0.0	1.9	699.4	1.9
Real Estate Excise	7,323.5	0.0	(29.1)	7,294.4	(29.1)
Timber Excise	1,897.0	0.0	6.1	1,903.1	6.1
Other	4.6	0.0	0.1	4.7	0.1
Subtotal	1,039.3	0.0	(7.7)	1,031.6	(7.7)
	46,262.9	37.8	295.1	46,595.8	332.9
Insurance Commissioner					
Insurance Premiums	1,310.3	0.0	10.5	1,320.8	10.5
Liquor Control Board					
Fees, Cannabis Excise Tax	486.9	0.0	(2.4)	484.5	(2.4)
Beer & Wine Surtax	57.1	0.0	0.3	57.4	0.3
Lottery Commission					
Lottery Revenue	54.9	0.0	1.4	56.4	1.4
State Treasurer					
Interest Earnings	42.4	0.0	8.4	50.8	8.4
Office of Financial Management**					
Other Agencies	168.4	0.0	1.6	170.0	1.6
Administrative Office of the Courts					
Fines and Forfeitures	135.2	0.0	1.9	137.1	1.9
Total General Fund-State *	\$48,518.2	\$37.8	\$316.9	\$48,872.9	\$354.7

¹ Forecast for the 2019-21 biennium adopted by the Economic and Revenue Forecast Council June 19, 2018² Forecast for the 2019-21 biennium, adopted September 26, 2018

*Detail may not add to totals because of rounding.

**OFM forecast now includes revenue from the Department of Licensing.

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

Table 3.9

**September 2018 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	\$11,037.1	\$21,268.4	\$11,514.0	\$11,915.9	\$23,430.0	\$12,312.1	\$12,722.6	\$25,034.7
Business & occupation	4,151.0	4,318.0	8,469.0	4,506.8	4,714.9	9,221.7	4,933.0	5,168.5	10,101.6
Use**	693.4	737.0	1,430.4	736.7	762.5	1,499.2	792.8	824.6	1,617.4
Public Utility	401.7	454.8	856.5	453.4	481.9	935.3	505.3	523.2	1,028.5
Liquor sales/liter	273.8	276.6	550.4	285.0	291.5	576.5	297.7	303.3	601.1
Beer & wine surtax	28.9	28.5	57.4	28.6	28.8	57.4	28.8	28.9	57.7
Cigarette	366.7	373.4	740.1	361.7	356.6	718.3	348.8	340.3	689.1
Tobacco products	57.1	58.3	115.4	57.7	58.4	116.2	59.1	59.8	118.9
Cannabis Excise Taxes	112.0	125.8	237.7	125.4	133.9	259.3	147.3	160.8	308.2
Property (state school levy)	2,739.8	2,296.6	5,036.4	3,473.5	3,820.8	7,294.4	3,954.4	4,061.1	8,015.5
Leasehold Excise Tax	34.1	34.9	69.0	34.9	35.0	69.9	35.1	35.2	70.3
Public utility district	56.9	58.4	115.4	59.6	60.6	120.3	61.6	62.6	124.2
Brokered Natural Gas	19.3	19.5	38.7	20.0	20.5	40.5	21.0	21.4	42.4
Real estate excise***	1,089.0	993.8	2,082.7	940.5	962.6	1,903.1	977.1	1,001.7	1,978.8
Timber excise	2.7	1.8	4.5	2.3	2.4	4.7	2.4	2.5	4.9
Estate/inheritance	(5.6)	0.2	(5.4)	0.0	0.0	0.0	0.0	0.0	0.0
Boat excise	15.7	15.4	31.1	15.4	15.4	30.8	15.4	16.0	31.4
Insurance premiums	600.3	623.5	1,223.8	647.9	673.0	1,320.8	699.0	727.4	1,426.4
Penalties and interest on past due taxes	224.8	169.4	394.2	176.5	182.8	359.3	188.7	194.9	383.6
Other	113.7	27.6	141.4	54.1	54.6	108.7	55.2	56.2	111.4
Total Taxes	21,206.5	21,650.5	42,856.9	23,494.0	24,572.2	48,066.2	25,434.9	26,311.0	51,745.9
State Non-Tax Sources									
Licenses, permits, fees	136.3	133.3	269.5	135.6	137.9	273.5	140.1	141.9	282.0
Liquor & Cannabis fees	89.1	104.2	193.3	110.2	115.0	225.2	119.0	122.5	241.4
Earnings on investments	10.6	17.4	28.0	22.8	27.0	49.8	25.8	25.8	51.6
Administrative Office of the Courts	75.6	71.0	146.6	68.5	68.6	137.1	69.3	70.1	139.4
Transfers of unclaimed property	98.8	69.9	168.7	71.4	72.7	144.1	73.8	74.9	148.7
Other revenue & transfers	95.2	49.4	144.5	(10.4)	(10.8)	(21.1)	(11.0)	(21.4)	(32.4)
Total Non-Tax	505.6	445.1	950.7	398.1	410.5	808.6	417.0	413.7	830.7
Total General Fund-State *	\$21,712.1	\$22,095.5	\$43,807.6	\$23,892.1	\$24,982.8	\$48,874.8	\$25,851.9	\$26,724.7	\$52,576.6

* 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 September 2018

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
Total change***:						
From February 2014	3,548	245	3,793	1,304	5,098	
Percent change	9.6	13.5	9.8	3.4	13.2	

* 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

Table 3.11

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

February 2016 through September 2018

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
Total change***:						
From February 2016	2,378	(72)	2,306	3,127	5,434	
Percent change	6.4	(3.9)	5.3	7.2	12.5	

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

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

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

First official forecast for the 2019-21 biennium.

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

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

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

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

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

Table 3.12

2017-19 Enacted Budget Balance Sheet
General Fund-State (GFS), Education Legacy Trust Account (ELTA),
Washington Opportunity Pathways Account (OPA) and Budget Stabilization Account (BSA)
Dollars in Millions

	2017-19		
	GFS	ELTA and OPA	TOTAL
RESOURCES			
Beginning Fund Balance	1,100.6	48.0	1,148.5
June 2018 Revenue Forecast	43,532.4	1,755.6	45,288.0
September 2018 Revenue Forecast change	275.2	72.7	347.9
Current Revenue Totals	43,807.6	1,828.3	45,635.9
Transfer to Budget Stabilization Account (1% of GSR)	(434.5)		(434.5)
Transfer to Budget Stabilization Account (EGSR)	(1,286.0)		(1,286.0)
Transfer from BSA (EGSR)	1,078.0		1,078.0
Enacted Fund Transfers	12.9	254.0	266.9
McCleary Penalty Account Transfer	(105.2)		(105.2)
Assumed Prior Period Adjustments	40.8		40.8
Total Resources (including beginning fund balance)	44,214.1	2,130.3	46,344.4
EXPENDITURES			
Enacted Budgets			
2017-19 Biennium	42,659.6	1,048.8	43,708.4
2018 Supplemental-updated	701.1	251.7	952.8
Assumed Reversions	(216.0)	-	(216.0)
Total Expenditures	43,144.7	1,300.5	44,445.2
RESERVES			
Projected Ending Balance (GFS + ELTA + OPA)	1,069.3	829.8	1,899.2
Budget Stabilization Account			
Budget Stabilization Account Beginning Balance	1,638.3		1,638.3
Transfers from General Fund (1% of GSR)	434.5		434.5
Assumed Interest Earnings	38.0		38.0
Transfers from GFS (EGSR)	1,286.0		1,286.0
Less 17-19 Appropriations from BSA	(41.5)		(41.5)
Less 17-19 Transfers to Pension Stabilization Account	(925.2)		(925.2)
Less Transfers out to GFS (EGSR)	(1,078.0)		(1,078.0)
Projected Budget Stabilization Account Ending Balance	1,352.3		1,352.3
Total Reserves (Near General Fund plus Budget Stabilization)	2,421.6	829.8	3,251.4

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
2017-19 biennium**

(cash basis, millions of dollars)

Forecast by Source	Optimistic Forecast	Baseline Forecast	Pessimistic Forecast
Department of Revenue			
Retail Sales	\$21,539.0	\$21,268.4	\$20,964.8
Business & Occupation Use	8,577.0	8,469.0	8,347.6
Public Utility	1,449.5	1,430.4	1,409.1
Property (school levy)	865.3	856.5	844.7
Real Estate Excise	5,039.6	5,036.4	5,033.2
Other	2,184.0	2,082.7	2,072.0
Subtotal	2,322.8	2,378.1	2,358.9
	41,977.3	41,521.5	41,030.3
Insurance Commissioner¹	1,255.3	1,223.8	1,192.3
Lottery Commission	65.7	62.5	59.4
State Treasurer - Interest earnings	45.0	28.0	21.3
Liquor and Cannabis Surtaxes & Fees²	502.7	488.4	474.1
Office of Financial Management			
Other agencies	338.2	336.8	335.3
Administrative Office of the Courts			
Fines and Forfeitures	147.8	146.6	145.4
Total General Fund - State*	\$44,332.0	\$43,807.6	\$43,258.1
Difference from September 2018 Baseline	\$524.4		(\$549.5)

1 Insurance premiums, General Fund-State portion.

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

* Detail may not add to total due to rounding.

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

Table 3.14

**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	\$25,022.5	\$23,430.0	\$21,799.1
Business & Occupation Use	9,833.0	9,221.7	8,628.9
Public Utility	1,580.5	1,499.2	1,400.9
Property (school levy)	970.5	935.3	890.0
Real Estate Excise	7,317.5	7,294.4	7,271.6
Other	2,092.6	1,903.1	1,585.9
Subtotal	2,349.4	2,312.2	2,204.5
	49,166.0	46,595.8	43,781.0
Insurance Commissioner¹	1,387.5	1,320.8	1,254.2
Lottery Commission	62.3	59.3	56.4
State Treasurer - Interest earnings	95.1	49.8	10.7
Liquor and Cannabis Surtaxes & Fees²	568.7	541.9	515.7
Office of Financial Management			
Other agencies	175.1	170.0	164.9
Administrative Office of the Courts			
Fines and Forfeitures	143.8	137.1	130.7
Total General Fund - State*	\$51,598.6	\$48,874.8	\$45,913.5
Difference from September 2018 Baseline	\$2,723.7		(\$2,961.4)

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

September 2018 Forecast

(cash basis, millions of dollars)

	Lottery: Total Transfers:*	Mariners General Fund	Mariners Stadium	Exhibition Center & Stadium	Student Achievement Account	School Construction Account	Problem Gambling Account	Economic Development Account	Opportunity Pathways Account	Veteran's VIP Account	Education Legacy Trust Account
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	179.9	24.0	0.0	13.1	0.0	0.0	0.4	5.2	137.2	0.0	0.0
2017-19 Biennium	363.5	62.5	0.0	25.8	0.0	0.0	0.7	8.7	265.7	0.0	0.0
2020	177.7	29.2	0.0	13.7	0.0	0.0	0.4	4.2	130.2	0.0	0.0
2021	180.7	30.1	0.0	14.2	0.0	0.0	0.4	4.2	131.8	0.0	0.0
2019-21 Biennium	358.3	59.3	0.0	27.9	0.0	0.0	0.7	8.4	262.0	0.0	0.0
2022	183.3	34.7	0.0	0.0	0.0	0.0	0.4	4.2	143.9	0.0	0.0
2023	185.9	29.3	0.0	0.0	0.0	0.0	0.4	4.2	152.0	0.0	0.0
2021-23 Biennium	369.2	64.1	0.0	0.0	0.0	0.0	0.8	8.4	295.9	0.0	0.0

Table 3.16

Lottery transfers by fund

September 2018 Forecast

(GAAP basis, millions of dollars)

	Lottery: Total Transfers:*	Mariners General Fund	Mariners Stadium	Exhibition Center & Stadium	Student Achievement Account	School Construction Account	Problem Gambling Account	Economic Development Account	Opportunity Pathways Account	Veteran's VIP Account	Education Legacy Trust Account
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	174.3	26.4	0.0	13.1	0.0	0.0	0.4	4.2	130.2	0.0	0.0
2017-19 Biennium	357.2	57.6	0.0	25.8	0.0	0.0	0.7	8.8	264.3	0.0	0.0
2020	178.1	28.1	0.0	13.7	0.0	0.0	0.4	4.2	131.7	0.0	0.0
2021	180.9	28.2	0.0	14.2	0.0	0.0	0.4	4.2	133.9	0.0	0.0
2019-21 Biennium	359.0	56.4	0.0	27.9	0.0	0.0	0.7	8.4	265.6	0.0	0.0
2022	183.5	28.3	0.0	0.0	0.0	0.0	0.4	4.2	150.6	0.0	0.0
2023	186.1	28.3	0.0	0.0	0.0	0.0	0.4	4.2	153.2	0.0	0.0
2021-23 Biennium	369.6	56.6	0.0	0.0	0.0	0.0	0.8	8.4	303.8	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)

September 2018 - 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%	\$22,142	10.1%
Forecast:										
FY 2019	\$22,096	1.8%	\$1,261	317.8%	\$23,356	6.1%	\$137	6.7%	\$23,494	6.1%
FY 2020	\$23,892	8.1%	\$329	-73.9%	\$24,221	3.7%	\$130	-5.1%	\$24,351	3.7%
FY 2021	\$24,983	4.6%	\$340	3.4%	\$25,323	4.5%	\$132	1.2%	\$25,455	4.5%
FY 2022	\$25,852	3.5%	\$351	3.1%	\$26,203	3.5%	\$144	9.2%	\$26,347	3.5%
FY 2023	\$26,725	3.4%	\$362	3.1%	\$27,086	3.4%	\$152	5.6%	\$27,238	3.4%
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	\$43,808	14.3%	\$1,563	234.5%	\$45,370	17.0%	\$266	0.0%	\$45,636	16.9%
19-21 Biennium	\$48,875	11.6%	\$669	-57.2%	\$49,544	9.2%	\$262	-1.4%	\$49,806	9.1%
21-23 Biennium	\$52,577	7.6%	\$713	6.5%	\$53,289	7.6%	\$296	13.0%	\$53,585	7.6%

*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
 September 2018
 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							General Fund-State*
				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		
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	\$388,149	\$14,558	\$373,591	\$0	\$9,764	\$365	\$186,795	\$46,191	\$515	\$129,960	
2020	\$394,699	\$13,548	\$381,151	\$0	\$9,764	\$365	\$194,000	\$46,891	\$515	\$129,616	
2021	\$403,508	\$13,548	\$389,960	\$0	\$9,764	\$365	\$194,000	\$46,891	\$515	\$138,425	
2022	\$416,900	\$13,548	\$403,352	\$0	\$9,764	\$365	\$194,000	\$46,891	\$515	\$151,817	
2023	\$430,403	\$13,548	\$416,855	\$0	\$9,764	\$365	\$194,000	\$46,891	\$515	\$165,320	
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	\$748,757	\$28,330	\$720,427	\$27,786	\$19,525	\$730	\$360,213	\$63,807	\$1,028	\$247,337	
2019-21	\$798,207	\$27,096	\$771,111	\$0	\$19,528	\$730	\$388,000	\$93,782	\$1,030	\$268,041	
2021-23	\$847,303	\$27,096	\$820,207	\$0	\$19,528	\$730	\$388,000	\$93,782	\$1,030	\$317,137	

*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 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Real National Income Accounts (Billions of Chained 2012 Dollars)								
Real Gross Domestic Product	17,659.2	18,050.7	18,574.9	19,059.9	19,420.9	19,798.8	20,208.0	20,623.4
% Ch	1.6	2.2	2.9	2.6	1.9	1.9	2.1	2.1
Real Consumption	12,248.2	12,558.7	12,877.7	13,198.9	13,457.1	13,732.2	14,025.4	14,328.7
% Ch	2.7	2.5	2.5	2.5	2.0	2.0	2.1	2.2
Real Nonresidential Fixed Investment	2,411.2	2,538.1	2,721.0	2,850.1	2,965.8	3,091.6	3,211.1	3,313.9
% Ch	0.5	5.3	7.2	4.7	4.1	4.2	3.9	3.2
Real Residential Fixed Investment	591.3	611.1	613.8	629.8	658.7	678.2	694.7	705.2
% Ch	6.5	3.3	0.5	2.6	4.6	2.9	2.4	1.5
Real Personal Income	15,469.7	15,866.8	16,235.8	16,661.9	17,075.2	17,482.7	17,912.6	18,341.9
% Ch	1.5	2.6	2.3	2.6	2.5	2.4	2.5	2.4
Real Per Capita Income (\$/Person)	47,752	48,630	49,410	50,340	51,225	52,082	52,996	53,899
% Ch	0.8	1.8	1.6	1.9	1.8	1.7	1.8	1.7
Price and Wage Indexes								
PCE Price Index (2012=100)	104.2	106.1	108.3	110.5	112.8	114.9	117.1	119.3
% Ch	1.1	1.8	2.1	2.0	2.0	1.9	1.9	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.400	2.451	2.515	2.571	2.627	2.680	2.734	2.789
% Ch	1.3	2.1	2.6	2.2	2.2	2.0	2.0	2.0
Employment Cost Index (Dec. 2005=1.0)	1.262	1.295	1.335	1.380	1.427	1.477	1.532	1.589
% Ch	2.4	2.6	3.1	3.4	3.4	3.6	3.7	3.7
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	18,707.2	19,485.4	20,509.4	21,520.1	22,438.6	23,396.9	24,403.9	25,435.6
% Ch	2.7	4.2	5.3	4.9	4.3	4.3	4.3	4.2
Personal Income	16,125.1	16,830.9	17,588.0	18,416.2	19,255.2	20,094.8	20,977.5	21,886.4
% Ch	2.6	4.4	4.5	4.7	4.6	4.4	4.4	4.3
Employment (Millions)								
U.S. Civilian Labor Force	159.2	160.3	162.1	163.6	165.3	166.4	167.5	168.4
Total U.S. Employment	151.4	153.3	155.8	158.0	159.3	160.2	161.1	161.8
Unemployment Rate (%)	4.87	4.35	3.84	3.46	3.60	3.74	3.81	3.91
Nonfarm Payroll Employment	144.35	146.62	149.06	151.24	152.63	153.53	154.50	155.31
% Ch	1.8	1.6	1.7	1.5	0.9	0.6	0.6	0.5
Manufacturing	12.35	12.44	12.74	12.92	12.84	12.73	12.67	12.67
% Ch	0.1	0.7	2.4	1.4	-0.6	-0.9	-0.4	0.0
Durable Manufacturing	7.71	7.74	7.97	8.12	8.07	7.99	7.95	7.96
% Ch	-0.7	0.3	3.0	1.8	-0.6	-1.0	-0.4	0.1
Nondurable Manufacturing	4.64	4.71	4.77	4.80	4.77	4.74	4.72	4.71
% Ch	1.5	1.4	1.3	0.7	-0.6	-0.7	-0.4	-0.2
Construction	6.73	6.95	7.23	7.46	7.79	8.10	8.38	8.63
% Ch	4.1	3.4	4.0	3.2	4.4	4.1	3.4	3.0
Service-Providing	124.60	126.55	128.36	130.11	131.22	131.91	132.66	133.22
% Ch	2.0	1.6	1.4	1.4	0.9	0.5	0.6	0.4
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	43.2	51.0	67.1	67.1	63.8	60.7	58.3	56.7
Personal Saving/Disposable Income (%)	6.7	6.7	6.8	6.9	7.4	7.6	7.8	7.8
Auto Sales (Millions)	6.9	6.1	5.2	4.9	4.8	4.8	4.9	5.0
% Ch	-8.6	-11.5	-14.5	-5.4	-1.4	-0.1	1.0	2.5
Housing Starts (Millions)	1.177	1.208	1.276	1.370	1.445	1.458	1.473	1.477
% Ch	6.4	2.6	5.6	7.4	5.4	0.9	1.0	0.3
Federal Budget Surplus (Billions)	-665.1	-695.4	-986.4	-1,071.8	-1,167.6	-1,232.8	-1,270.2	-1,281.6
Net Exports (Billions)	-520.6	-578.4	-622.3	-699.2	-717.6	-694.3	-668.3	-619.3
3-Month Treasury Bill Rate (%)	0.32	0.93	1.97	2.75	3.14	3.16	3.15	3.01
10-Year Treasury Note Yield (%)	1.84	2.33	2.90	3.24	3.46	3.48	3.45	3.41
Bond Index of 20 G.O. Munis. (%)	3.27	3.67	3.87	4.19	4.39	4.43	4.41	4.36
30-Year Fixed Mortgage Rate (%)	3.65	3.99	4.51	4.90	5.14	5.15	5.13	5.08

Table A1.2
U.S. Economic Forecast Summary
Forecast 2018 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	18,324.0	18,514.6	18,664.6	18,796.3	18,904.8	19,017.3	19,115.1	19,202.6
% Ch , Annual Rate	2.2	4.2	3.3	2.9	2.3	2.4	2.1	1.8
Real Consumption	12,722.8	12,841.2	12,930.9	13,016.0	13,093.3	13,169.0	13,236.8	13,296.7
% Ch , Annual Rate	0.5	3.8	2.8	2.7	2.4	2.3	2.1	1.8
Real Nonresidential Fixed Investment	2,654.0	2,708.9	2,739.4	2,781.7	2,805.8	2,835.5	2,865.1	2,894.0
% Ch , Annual Rate	11.5	8.5	4.6	6.3	3.5	4.3	4.2	4.1
Real Residential Fixed Investment	615.3	612.8	612.4	614.9	617.5	624.0	633.9	643.9
% Ch , Annual Rate	-3.4	-1.6	-0.3	1.6	1.7	4.3	6.5	6.5
Real Personal Income	16,107.2	16,197.3	16,280.7	16,358.1	16,500.8	16,609.3	16,717.3	16,820.3
% Ch , Annual Rate	2.6	2.3	2.1	1.9	3.5	2.7	2.6	2.5
Real Per Capita Income (\$/Person)	49,157	49,344	49,497	49,643	49,986	50,226	50,463	50,684
% Ch , Annual Rate	2.0	1.5	1.2	1.2	2.8	1.9	1.9	1.8
Price and Wage Indexes								
PCE Price Index (2012=100)	107.5	108.0	108.6	109.2	109.7	110.2	110.8	111.4
% Ch , Annual Rate	2.5	1.9	2.1	2.2	2.0	2.0	2.0	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.494	2.505	2.522	2.538	2.552	2.565	2.577	2.591
% Ch , Annual Rate	3.5	1.7	2.7	2.6	2.2	2.0	1.9	2.2
Employment Cost Index (Dec. 2005=1.0)	1.320	1.328	1.340	1.352	1.363	1.374	1.385	1.397
% Ch , Annual Rate	4.0	2.4	3.7	3.6	3.3	3.3	3.3	3.4
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	20,041.0	20,411.9	20,658.0	20,926.5	21,155.4	21,403.3	21,646.2	21,875.6
% Ch , Annual Rate	4.3	7.6	4.9	5.3	4.4	4.8	4.6	4.3
Personal Income	17,319.2	17,497.6	17,678.1	17,857.1	18,102.3	18,311.4	18,521.4	18,729.7
% Ch , Annual Rate	5.2	4.2	4.2	4.1	5.6	4.7	4.7	4.6
Employment (Millions)								
U.S. Civilian Labor Force	161.6	161.7	162.3	162.6	163.0	163.4	163.8	164.2
Total U.S. Employment	154.9	155.4	156.2	156.8	157.3	157.8	158.2	158.5
Unemployment Rate (%)	4.10	3.90	3.77	3.58	3.49	3.44	3.43	3.46
Nonfarm Payroll Employment	148.07	148.72	149.40	150.05	150.58	151.07	151.49	151.82
% Ch , Annual Rate	1.7	1.8	1.9	1.7	1.4	1.3	1.1	0.9
Manufacturing	12.61	12.68	12.79	12.89	12.92	12.93	12.89	12.93
% Ch , Annual Rate	2.7	2.5	3.2	3.3	1.0	0.2	-1.0	1.1
Durable Manufacturing	7.86	7.92	8.01	8.10	8.11	8.12	8.10	8.13
% Ch , Annual Rate	3.6	3.2	4.5	4.2	0.8	0.6	-1.3	1.7
Nondurable Manufacturing	4.74	4.76	4.77	4.79	4.81	4.80	4.80	4.80
% Ch , Annual Rate	1.2	1.4	1.2	1.6	1.3	-0.6	-0.5	0.0
Construction	7.14	7.20	7.26	7.31	7.36	7.42	7.48	7.57
% Ch , Annual Rate	6.6	3.4	3.2	2.8	2.8	2.9	3.8	4.7
Service-Providing	127.61	128.09	128.62	129.11	129.56	129.98	130.35	130.56
% Ch , Annual Rate	1.3	1.5	1.7	1.5	1.4	1.3	1.1	0.6
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	62.9	68.0	69.2	68.5	68.1	67.5	66.7	65.9
Personal Saving/Disposable Income (%)	7.2	6.8	6.7	6.5	6.8	6.9	7.0	7.1
Auto Sales (Millions)	5.4	5.3	5.0	5.0	5.0	4.9	4.9	4.9
% Ch , Annual Rate	-32.0	-8.8	-20.6	0.1	-5.2	-2.4	-1.8	-0.9
Housing Starts (Millions)	1.317	1.254	1.239	1.294	1.326	1.357	1.385	1.412
% Ch , Annual Rate	19.6	-17.7	-4.8	18.8	10.5	9.6	8.7	8.0
Federal Budget Surplus (Billions)	-969.9	-984.5	-993.3	-997.8	-1,049.2	-1,062.8	-1,077.4	-1,098.0
Net Exports (Billions)	-639.2	-551.9	-630.7	-667.3	-695.6	-703.3	-699.6	-698.4
3-Month Treasury Bill Rate (%)	1.56	1.84	2.11	2.37	2.50	2.66	2.84	3.00
10-Year Treasury Note Yield (%)	2.76	2.92	2.91	3.02	3.12	3.21	3.29	3.35
Bond Index of 20 G.O. Munis. (%)	3.73	3.89	3.87	4.00	4.09	4.17	4.22	4.28
30-Year Fixed Mortgage Rate (%)	4.27	4.54	4.56	4.68	4.77	4.86	4.95	5.03

Table A1.2 (continued)
U.S. Economic Forecast Summary
Forecast 2018 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	19,289.9	19,382.3	19,462.1	19,549.2	19,649.8	19,747.4	19,847.2	19,950.8
% Ch , Annual Rate	1.8	1.9	1.7	1.8	2.1	2.0	2.0	2.1
Real Consumption	13,360.0	13,423.5	13,489.2	13,555.6	13,625.3	13,695.0	13,766.9	13,841.7
% Ch , Annual Rate	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.2
Real Nonresidential Fixed Investment	2,922.0	2,947.8	2,981.2	3,012.2	3,045.1	3,076.5	3,107.1	3,137.8
% Ch , Annual Rate	3.9	3.6	4.6	4.2	4.4	4.2	4.0	4.0
Real Residential Fixed Investment	650.5	655.5	660.7	668.2	673.3	675.8	679.0	684.5
% Ch , Annual Rate	4.2	3.1	3.2	4.6	3.1	1.5	1.9	3.3
Real Personal Income	16,935.7	17,036.9	17,118.8	17,209.4	17,327.7	17,429.6	17,533.4	17,640.1
% Ch , Annual Rate	2.8	2.4	1.9	2.1	2.8	2.4	2.4	2.5
Real Per Capita Income (\$/Person)	50,941	51,155	51,311	51,492	51,756	51,969	52,188	52,415
% Ch , Annual Rate	2.0	1.7	1.2	1.4	2.1	1.7	1.7	1.7
Price and Wage Indexes								
PCE Price Index (2012=100)	112.0	112.5	113.0	113.6	114.1	114.7	115.2	115.8
% Ch , Annual Rate	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.608	2.621	2.634	2.646	2.660	2.674	2.687	2.701
% Ch , Annual Rate	2.7	2.0	2.0	1.9	2.1	2.0	2.0	2.0
Employment Cost Index (Dec. 2005=1.0)	1.408	1.420	1.433	1.445	1.458	1.471	1.484	1.497
% Ch , Annual Rate	3.4	3.5	3.5	3.5	3.6	3.6	3.6	3.6
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	22,095.7	22,324.9	22,549.4	22,784.2	23,028.3	23,270.5	23,518.2	23,770.7
% Ch , Annual Rate	4.1	4.2	4.1	4.2	4.4	4.3	4.3	4.4
Personal Income	18,959.5	19,165.3	19,351.0	19,544.8	19,774.3	19,985.5	20,200.1	20,419.2
% Ch , Annual Rate	5.0	4.4	3.9	4.1	4.8	4.3	4.4	4.4
Employment (Millions)								
U.S. Civilian Labor Force	164.7	165.3	165.4	165.7	166.0	166.3	166.6	166.8
Total U.S. Employment	158.9	159.4	159.4	159.6	159.8	160.1	160.3	160.5
Unemployment Rate (%)	3.51	3.57	3.63	3.68	3.71	3.73	3.75	3.77
Nonfarm Payroll Employment	152.17	152.69	152.75	152.89	153.15	153.41	153.65	153.90
% Ch , Annual Rate	0.9	1.4	0.2	0.4	0.7	0.7	0.6	0.6
Manufacturing	12.90	12.86	12.82	12.79	12.76	12.73	12.72	12.70
% Ch , Annual Rate	-0.8	-1.4	-1.1	-1.2	-1.0	-0.7	-0.3	-0.6
Durable Manufacturing	8.11	8.08	8.06	8.03	8.01	7.99	7.98	7.97
% Ch , Annual Rate	-1.0	-1.6	-1.2	-1.3	-1.2	-0.8	-0.2	-0.6
Nondurable Manufacturing	4.79	4.78	4.77	4.76	4.75	4.74	4.74	4.73
% Ch , Annual Rate	-0.5	-0.9	-0.9	-0.9	-0.7	-0.5	-0.4	-0.6
Construction	7.66	7.74	7.83	7.92	8.00	8.07	8.14	8.21
% Ch , Annual Rate	4.8	4.4	4.4	4.6	4.3	3.6	3.3	3.5
Service-Providing	130.84	131.32	131.32	131.41	131.61	131.83	132.01	132.21
% Ch , Annual Rate	0.9	1.5	0.0	0.3	0.6	0.6	0.6	0.6
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	65.0	64.2	63.4	62.6	61.8	61.0	60.3	59.6
Personal Saving/Disposable Income (%)	7.3	7.4	7.4	7.4	7.6	7.6	7.6	7.7
Auto Sales (Millions)	4.9	4.9	4.8	4.8	4.8	4.8	4.8	4.9
% Ch , Annual Rate	-1.8	-1.1	-0.7	-1.1	0.1	0.4	0.8	0.8
Housing Starts (Millions)	1.430	1.438	1.453	1.457	1.456	1.453	1.458	1.463
% Ch , Annual Rate	5.1	2.3	4.0	1.3	-0.3	-0.7	1.2	1.4
Federal Budget Surplus (Billions)	-1,136.9	-1,166.3	-1,177.5	-1,189.6	-1,217.7	-1,228.4	-1,237.8	-1,247.3
Net Exports (Billions)	-716.2	-721.7	-720.0	-712.4	-705.2	-697.5	-690.0	-684.4
3-Month Treasury Bill Rate (%)	3.00	3.19	3.18	3.17	3.17	3.16	3.16	3.15
10-Year Treasury Note Yield (%)	3.41	3.46	3.48	3.48	3.48	3.49	3.49	3.48
Bond Index of 20 G.O. Munis. (%)	4.33	4.39	4.41	4.42	4.42	4.44	4.44	4.43
30-Year Fixed Mortgage Rate (%)	5.09	5.16	5.17	5.16	5.16	5.16	5.16	5.15

Table A1.2 (continued)
U.S. Economic Forecast Summary
 Forecast 2018 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	20,051.2	20,154.7	20,261.4	20,364.8	20,474.1	20,577.3	20,673.7	20,768.6
% Ch , Annual Rate	2.0	2.1	2.1	2.1	2.2	2.0	1.9	1.8
Real Consumption	13,914.3	13,987.3	14,061.8	14,138.3	14,218.2	14,294.4	14,366.6	14,435.8
% Ch , Annual Rate	2.1	2.1	2.1	2.2	2.3	2.2	2.0	1.9
Real Nonresidential Fixed Investment	3,167.5	3,197.1	3,226.5	3,253.5	3,279.6	3,303.6	3,325.7	3,346.8
% Ch , Annual Rate	3.8	3.8	3.7	3.4	3.3	3.0	2.7	2.6
Real Residential Fixed Investment	688.9	693.0	697.0	699.9	702.8	705.2	705.9	706.9
% Ch , Annual Rate	2.6	2.4	2.3	1.7	1.6	1.4	0.4	0.6
Real Personal Income	17,759.1	17,862.4	17,964.2	18,064.7	18,188.0	18,293.6	18,393.1	18,493.1
% Ch , Annual Rate	2.7	2.3	2.3	2.3	2.8	2.3	2.2	2.2
Real Per Capita Income (\$/Person)	52,677	52,893	53,104	53,310	53,583	53,803	54,005	54,207
% Ch , Annual Rate	2.0	1.6	1.6	1.6	2.1	1.7	1.5	1.5
Price and Wage Indexes								
PCE Price Index (2012=100)	116.3	116.8	117.4	117.9	118.5	119.0	119.6	120.2
% Ch , Annual Rate	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9
U.S. Consumer Price Index (1982-84=1.0)	2.714	2.727	2.741	2.755	2.769	2.782	2.796	2.810
% Ch , Annual Rate	2.0	1.9	2.1	2.0	2.0	1.9	2.0	2.0
Employment Cost Index (Dec. 2005=1.0)	1.511	1.525	1.539	1.553	1.568	1.582	1.596	1.611
% Ch , Annual Rate	3.8	3.7	3.7	3.8	3.8	3.7	3.7	3.7
Current Dollar National Income (Billions of Dollars)								
Gross Domestic Product	24,019.8	24,273.1	24,533.6	24,789.3	25,053.5	25,310.8	25,563.2	25,815.1
% Ch , Annual Rate	4.3	4.3	4.4	4.2	4.3	4.2	4.0	4.0
Personal Income	20,652.6	20,867.5	21,086.4	21,303.5	21,550.1	21,775.2	21,997.9	22,222.3
% Ch , Annual Rate	4.7	4.2	4.3	4.2	4.7	4.2	4.2	4.1
Employment (Millions)								
U.S. Civilian Labor Force	167.1	167.3	167.6	167.8	168.1	168.3	168.5	168.7
Total U.S. Employment	160.8	161.0	161.2	161.4	161.6	161.8	161.9	162.0
Unemployment Rate (%)	3.78	3.80	3.81	3.83	3.86	3.89	3.93	3.98
Nonfarm Payroll Employment	154.14	154.38	154.62	154.84	155.06	155.25	155.41	155.54
% Ch, Annual Rate	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4
Manufacturing	12.69	12.67	12.67	12.67	12.67	12.67	12.68	12.68
% Ch, Annual Rate	-0.5	-0.5	-0.1	0.0	0.0	0.1	0.3	-0.1
Durable Manufacturing	7.96	7.95	7.95	7.95	7.95	7.96	7.97	7.97
% Ch, Annual Rate	-0.6	-0.6	-0.1	0.1	0.1	0.3	0.5	0.0
Nondurable Manufacturing	4.73	4.72	4.72	4.72	4.72	4.72	4.71	4.71
% Ch, Annual Rate	-0.4	-0.4	-0.2	-0.1	-0.2	-0.1	-0.1	-0.3
Construction	8.28	8.34	8.41	8.48	8.54	8.61	8.66	8.72
% Ch, Annual Rate	3.4	3.3	3.3	3.1	3.1	3.0	2.7	2.5
Service-Providing	132.40	132.58	132.75	132.91	133.06	133.19	133.28	133.36
% Ch, Annual Rate	0.6	0.5	0.5	0.5	0.5	0.4	0.3	0.3
Miscellaneous Indicators								
Oil-WTI (\$ per barrel)	59.0	58.5	58.0	57.6	57.2	56.8	56.5	56.3
Personal Saving/Disposable Income (%)	7.8	7.8	7.8	7.7	7.8	7.8	7.8	7.8
Auto Sales (Millions)	4.9	4.9	4.9	4.9	5.0	5.0	5.0	5.1
% Ch, Annual Rate	0.8	0.8	1.3	3.1	3.0	2.5	3.3	2.2
Housing Starts (Millions)	1.469	1.473	1.474	1.475	1.477	1.479	1.478	1.476
% Ch, Annual Rate	1.6	1.2	0.2	0.4	0.4	0.5	-0.1	-0.6
Federal Budget Surplus (Billions)	-1,267.7	-1,270.4	-1,271.9	-1,270.9	-1,282.3	-1,281.0	-1,279.3	-1,283.8
Net Exports (Billions)	-680.2	-673.7	-665.4	-653.9	-639.1	-624.8	-612.0	-601.4
3-Month Treasury Bill Rate (%)	3.15	3.15	3.15	3.14	3.14	3.12	2.90	2.90
10-Year Treasury Note Yield (%)	3.47	3.46	3.45	3.44	3.43	3.42	3.40	3.39
Bond Index of 20 G.O. Munis. (%)	4.41	4.41	4.41	4.40	4.37	4.37	4.35	4.34
30-Year Fixed Mortgage Rate (%)	5.14	5.13	5.13	5.12	5.10	5.09	5.06	5.05

Table A1.3
Washington Economic Forecast Summary
Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Real Income (Billions of Chained 2012 Dollars)								
Real Personal Income	381.614	395.916	413.391	426.096	438.844	451.278	464.332	477.250
% Ch	3.6	3.7	4.4	3.1	3.0	2.8	2.9	2.8
Real Wage and Salary Disb.	195.342	206.200	219.944	225.763	232.203	238.787	246.004	253.292
% Ch	5.0	5.6	6.7	2.6	2.9	2.8	3.0	3.0
Real Nonwage Income	186.272	189.717	193.447	200.332	206.642	212.491	218.328	223.957
% Ch	2.1	1.8	2.0	3.6	3.1	2.8	2.7	2.6
Real Per Capita Income (\$/Person)	52,409	53,453	54,895	55,702	56,547	57,405	58,377	59,356
% Ch	1.8	2.0	2.7	1.5	1.5	1.5	1.7	1.7
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.042	1.061	1.083	1.105	1.128	1.149	1.171	1.193
% Ch	1.1	1.8	2.1	2.0	2.0	1.9	1.9	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.550	2.627	2.707	2.767	2.831	2.893	2.956	3.020
% Ch	2.3	3.0	3.0	2.2	2.3	2.2	2.2	2.2
Average Nonfarm Annual Wage	60,556	63,619	67,443	69,202	71,652	74,424	77,447	80,715
% Ch	3.0	5.1	6.0	2.6	3.5	3.9	4.1	4.2
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.42	27.38	28.36	29.26	30.17	31.15	32.23	33.35
% Ch	3.5	3.6	3.6	3.2	3.1	3.3	3.4	3.5
Current Dollar Income (Billions of Dollars)								
Personal Income	397.772	419.962	447.811	470.962	494.875	518.707	543.784	569.477
% Ch	4.7	5.6	6.6	5.2	5.1	4.8	4.8	4.7
Disposable Personal Income	349.564	369.195	395.510	416.137	437.431	458.289	479.687	501.456
% Ch	4.9	5.6	7.1	5.2	5.1	4.8	4.7	4.5
Per Capita Income (\$/Person)	54,627	56,698	59,464	61,565	63,766	65,981	68,364	70,826
% Ch	2.9	3.8	4.9	3.5	3.6	3.5	3.6	3.6
Employment (Thousands)								
Washington Civilian Labor Force	3,635.7	3,723.3	3,770.2	3,835.4	3,906.1	3,962.2	4,011.9	4,055.8
Total Washington Employment	3,444.0	3,546.3	3,596.8	3,675.7	3,741.2	3,791.9	3,838.8	3,877.5
Unemployment Rate (%)	5.28	4.76	4.60	4.17	4.22	4.30	4.32	4.40
Nonfarm Payroll Employment	3,244.5	3,322.4	3,419.4	3,491.2	3,539.2	3,572.5	3,604.6	3,629.6
% Ch	3.1	2.4	2.9	2.1	1.4	0.9	0.9	0.7
Manufacturing	290.0	283.8	286.6	290.5	290.7	290.5	292.3	295.1
% Ch	-0.7	-2.1	1.0	1.4	0.0	-0.1	0.6	0.9
Durable Manufacturing	207.6	200.1	200.7	203.7	203.8	203.5	204.9	206.9
% Ch	-1.7	-3.6	0.3	1.5	0.0	-0.1	0.7	1.0
Aerospace	91.0	84.1	83.1	83.9	83.9	83.9	83.9	83.9
% Ch	-3.2	-7.6	-1.1	0.9	0.0	0.0	0.0	0.0
Nondurable Manufacturing	82.4	83.7	85.8	86.9	86.9	87.0	87.5	88.2
% Ch	2.1	1.5	2.6	1.2	0.0	0.1	0.5	0.8
Construction	186.6	199.7	211.4	213.1	213.1	212.1	211.4	210.0
% Ch	7.7	7.0	5.9	0.8	0.0	-0.5	-0.3	-0.7
Service-Providing	2,761.6	2,832.8	2,915.1	2,980.9	3,028.8	3,063.2	3,094.2	3,117.8
% Ch	3.2	2.6	2.9	2.3	1.6	1.1	1.0	0.8
Software Publishers	58.9	61.3	64.8	66.3	67.3	68.4	69.5	70.8
% Ch	5.3	4.1	5.7	2.4	1.4	1.6	1.7	1.8
Electronic Shopping and Mail-Order	38.2	49.7	55.1	58.4	61.4	63.8	65.7	67.3
% Ch	26.6	30.1	10.9	5.9	5.2	3.8	3.0	2.5
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	44.077	45.794	43.848	43.843	44.177	43.040	42.023	41.136
% Ch	9.2	3.9	-4.2	0.0	0.8	-2.6	-2.4	-2.1
Single-Family	22.463	23.115	23.623	24.675	25.990	26.174	26.324	26.234
% Ch	13.5	2.9	2.2	4.5	5.3	0.7	0.6	-0.3
Multi-Family	21.614	22.679	20.225	19.168	18.187	16.866	15.698	14.902
% Ch	5.0	4.9	-10.8	-5.2	-5.1	-7.3	-6.9	-5.1
30-Year Fixed Mortgage Rate (%)	3.65	3.99	4.51	4.90	5.14	5.15	5.13	5.08

Table A1.4
Washington Economic Forecast Summary
Forecast 2018 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	410.933	411.240	414.447	416.945	421.094	424.532	427.810	430.948
% Ch, Annual Rate	10.4	0.3	3.2	2.4	4.0	3.3	3.1	3.0
Real Wage and Salary Disb.	219.133	218.258	220.417	221.967	223.439	225.054	226.542	228.018
% Ch, Annual Rate	20.1	-1.6	4.0	2.8	2.7	2.9	2.7	2.6
Real Nonwage Income	191.799	192.982	194.030	194.978	197.654	199.478	201.268	202.930
% Ch, Annual Rate	0.4	2.5	2.2	2.0	5.6	3.7	3.6	3.3
Real Per Capita Income (\$/Person)	54,900	54,727	54,920	55,034	55,364	55,602	55,820	56,021
% Ch, Annual Rate	8.6	-1.3	1.4	0.8	2.4	1.7	1.6	1.5
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.075	1.080	1.086	1.092	1.097	1.102	1.108	1.114
% Ch, Annual Rate	2.5	1.9	2.1	2.2	2.0	2.0	2.0	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.689	2.703	2.708	2.727	2.744	2.759	2.774	2.790
% Ch, Annual Rate	4.2	2.1	0.7	2.8	2.5	2.3	2.2	2.3
Average Nonfarm Annual Wage	67,346	66,969	67,490	67,966	68,405	68,921	69,452	70,028
% Ch, Annual Rate	18.4	-2.2	3.1	2.9	2.6	3.0	3.1	3.4
Avg. Hourly Earnings-Mfg. (\$/Hour)	27.90	28.35	28.49	28.72	28.93	29.15	29.36	29.59
% Ch, Annual Rate	0.5	6.5	2.0	3.3	3.0	3.0	3.0	3.1
Current Dollar Income (Billions of Dollars)								
Personal Income	441.835	444.239	450.018	455.152	461.965	468.039	473.979	479.866
% Ch, Annual Rate	13.1	2.2	5.3	4.6	6.1	5.4	5.2	5.1
Disposable Personal Income	390.047	392.381	397.592	402.018	408.170	413.542	418.794	424.042
% Ch, Annual Rate	15.1	2.4	5.4	4.5	6.3	5.4	5.2	5.1
Per Capita Income (\$/Person)	59,029	59,118	59,634	60,077	60,738	61,300	61,843	62,380
% Ch, Annual Rate	11.3	0.6	3.5	3.0	4.5	3.8	3.6	3.5
Employment (Thousands)								
Washington Civilian Labor Force	3,759.5	3,760.4	3,771.4	3,789.3	3,807.8	3,826.5	3,844.7	3,862.5
Total Washington Employment	3,581.6	3,582.6	3,598.9	3,624.2	3,646.5	3,667.4	3,686.0	3,702.8
Unemployment Rate (%)	4.73	4.73	4.57	4.36	4.24	4.16	4.13	4.14
Nonfarm Payroll Employment	3,385.9	3,407.3	3,432.8	3,451.8	3,469.0	3,485.4	3,499.1	3,511.1
% Ch, Annual Rate	4.4	2.5	3.0	2.2	2.0	1.9	1.6	1.4
Manufacturing	284.1	285.5	287.4	289.3	290.3	290.5	290.3	291.0
% Ch, Annual Rate	2.8	2.0	2.7	2.7	1.4	0.4	-0.3	1.0
Durable Manufacturing	198.8	199.9	201.4	202.8	203.4	203.7	203.5	204.1
% Ch, Annual Rate	1.6	2.3	2.9	2.9	1.2	0.6	-0.5	1.2
Aerospace	81.9	82.7	83.9	83.9	83.9	83.9	83.9	83.9
% Ch, Annual Rate	2.2	3.9	5.8	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	85.3	85.6	86.0	86.5	86.8	86.8	86.8	87.0
% Ch, Annual Rate	5.6	1.1	2.1	2.2	1.8	-0.1	0.0	0.7
Construction	208.8	211.6	212.4	212.8	213.0	213.3	213.0	213.2
% Ch, Annual Rate	8.7	5.6	1.5	0.7	0.5	0.4	-0.5	0.4
Service-Providing	2,886.8	2,903.7	2,926.5	2,943.2	2,959.2	2,975.1	2,989.2	3,000.2
% Ch, Annual Rate	4.3	2.4	3.2	2.3	2.2	2.2	1.9	1.5
Software Publishers	63.2	64.6	65.6	65.8	66.0	66.2	66.5	66.7
% Ch, Annual Rate	6.1	9.1	6.5	1.1	1.0	1.5	1.4	1.5
Electronic Shopping and Mail-Order	54.8	54.9	54.8	56.0	57.0	58.0	58.9	59.7
% Ch, Annual Rate	10.0	0.3	-0.2	8.6	7.7	6.9	6.2	5.6
Housing Indicators (Thousands)								
Housing Units Authorized by Bldg. Permit	49.173	43.245	40.131	42.845	43.310	43.755	44.042	44.265
% Ch, Annual Rate	-18.1	-40.2	-25.8	29.9	4.4	4.2	2.6	2.0
Single-Family	24.952	23.013	22.952	23.577	23.964	24.448	24.913	25.375
% Ch, Annual Rate	4.2	-27.6	-1.0	11.3	6.7	8.3	7.8	7.6
Multi-Family	24.221	20.233	17.178	19.269	19.346	19.307	19.129	18.889
% Ch, Annual Rate	-35.2	-51.3	-48.0	58.3	1.6	-0.8	-3.6	-4.9
30-Year Fixed Mortgage Rate (%)	4.27	4.54	4.56	4.68	4.77	4.86	4.95	5.03

Table A1.4 (continued)
Washington Economic Forecast Summary
Forecast 2018 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	434.392	437.728	440.207	443.051	446.573	449.671	452.829	456.038
% Ch, Annual Rate	3.2	3.1	2.3	2.6	3.2	2.8	2.8	2.9
Real Wage and Salary Disb.	229.652	231.686	232.963	234.510	236.223	237.901	239.635	241.390
% Ch, Annual Rate	2.9	3.6	2.2	2.7	3.0	2.9	2.9	3.0
Real Nonwage Income	204.740	206.042	207.244	208.541	210.351	211.770	213.194	214.649
% Ch, Annual Rate	3.6	2.6	2.4	2.5	3.5	2.7	2.7	2.8
Real Per Capita Income (\$/Person)	56,265	56,498	56,625	56,802	57,070	57,287	57,514	57,749
% Ch, Annual Rate	1.8	1.7	0.9	1.3	1.9	1.5	1.6	1.6
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.120	1.125	1.130	1.136	1.141	1.147	1.152	1.158
% Ch, Annual Rate	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.808	2.824	2.839	2.854	2.870	2.886	2.901	2.917
% Ch, Annual Rate	2.6	2.2	2.2	2.1	2.3	2.2	2.2	2.2
Average Nonfarm Annual Wage	70,678	71,307	71,969	72,655	73,354	74,053	74,775	75,512
% Ch, Annual Rate	3.8	3.6	3.8	3.9	3.9	3.9	4.0	4.0
Avg. Hourly Earnings-Mfg. (\$/Hour)	29.81	30.05	30.28	30.52	30.77	31.02	31.28	31.54
% Ch, Annual Rate	3.1	3.2	3.2	3.2	3.3	3.3	3.3	3.4
Current Dollar Income (Billions of Dollars)								
Personal Income	486.302	492.412	497.610	503.176	509.628	515.612	521.702	527.885
% Ch, Annual Rate	5.5	5.1	4.3	4.6	5.2	4.8	4.8	4.8
Disposable Personal Income	429.789	435.230	439.893	444.813	450.442	455.649	460.897	466.167
% Ch, Annual Rate	5.5	5.2	4.4	4.5	5.2	4.7	4.7	4.7
Per Capita Income (\$/Person)	62,988	63,556	64,008	64,511	65,128	65,688	66,262	66,847
% Ch, Annual Rate	4.0	3.7	2.9	3.2	3.9	3.5	3.5	3.6
Employment (Thousands)								
Washington Civilian Labor Force	3,880.3	3,902.3	3,913.9	3,927.9	3,942.1	3,955.9	3,969.1	3,981.9
Total Washington Employment	3,718.8	3,738.3	3,747.6	3,759.9	3,773.1	3,785.8	3,798.3	3,810.5
Unemployment Rate (%)	4.16	4.20	4.25	4.28	4.29	4.30	4.30	4.30
Nonfarm Payroll Employment	3,522.3	3,539.7	3,543.9	3,550.9	3,559.5	3,568.3	3,576.8	3,585.3
% Ch, Annual Rate	1.3	2.0	0.5	0.8	1.0	1.0	1.0	1.0
Manufacturing	291.0	290.8	290.6	290.3	290.2	290.2	290.5	290.9
% Ch, Annual Rate	0.0	-0.4	-0.3	-0.4	-0.1	0.1	0.4	0.5
Durable Manufacturing	204.0	203.8	203.7	203.5	203.3	203.3	203.5	203.8
% Ch, Annual Rate	-0.1	-0.4	-0.2	-0.5	-0.3	0.0	0.4	0.5
Aerospace	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	87.0	86.9	86.9	86.8	86.9	86.9	87.0	87.1
% Ch, Annual Rate	0.1	-0.3	-0.3	-0.2	0.2	0.3	0.5	0.3
Construction	212.9	213.4	213.1	212.8	212.3	212.0	211.9	212.0
% Ch, Annual Rate	-0.6	0.9	-0.5	-0.6	-0.9	-0.6	-0.2	0.0
Service-Providing	3,011.7	3,028.9	3,033.5	3,041.1	3,050.3	3,059.3	3,067.6	3,075.7
% Ch, Annual Rate	1.5	2.3	0.6	1.0	1.2	1.2	1.1	1.1
Software Publishers	66.9	67.2	67.4	67.7	67.9	68.2	68.5	68.8
% Ch, Annual Rate	1.4	1.4	1.5	1.5	1.6	1.6	1.6	1.7
Electronic Shopping and Mail-Order	60.4	61.1	61.8	62.4	63.0	63.5	64.0	64.5
% 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	44.379	44.327	44.157	43.844	43.526	43.201	42.854	42.579
% Ch, Annual Rate	1.0	-0.5	-1.5	-2.8	-2.9	-2.9	-3.2	-2.5
Single-Family	25.701	25.934	26.119	26.205	26.154	26.118	26.185	26.241
% Ch, Annual Rate	5.2	3.7	2.9	1.3	-0.8	-0.5	1.0	0.9
Multi-Family	18.678	18.393	18.038	17.639	17.372	17.083	16.669	16.339
% Ch, Annual Rate	-4.4	-6.0	-7.5	-8.6	-5.9	-6.5	-9.3	-7.7
30-Year Fixed Mortgage Rate (%)	5.09	5.16	5.17	5.16	5.16	5.16	5.16	5.15

Table A1.4 (continued)
Washington Economic Forecast Summary
Forecast 2018 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	459.647	462.809	465.911	468.961	472.630	475.775	478.803	481.790
% Ch, Annual Rate	3.2	2.8	2.7	2.6	3.2	2.7	2.6	2.5
Real Wage and Salary Disb.	243.280	245.105	246.913	248.717	250.626	252.429	254.205	255.910
% Ch, Annual Rate	3.2	3.0	3.0	3.0	3.1	2.9	2.8	2.7
Real Nonwage Income	216.367	217.703	218.998	220.244	222.004	223.346	224.598	225.880
% Ch, Annual Rate	3.2	2.5	2.4	2.3	3.2	2.4	2.3	2.3
Real Per Capita Income (\$/Person)	58,035	58,267	58,492	58,713	59,012	59,248	59,472	59,693
% Ch, Annual Rate	2.0	1.6	1.6	1.5	2.1	1.6	1.5	1.5
Price and Wage Indexes								
U.S. Implicit Price Deflator, PCE (2012=1.0)	1.163	1.168	1.174	1.179	1.185	1.190	1.196	1.202
% Ch, Annual Rate	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9
Seattle Cons. Price Index (1982-84=1.0)	2.933	2.948	2.964	2.980	2.996	3.012	3.028	3.045
% Ch, Annual Rate	2.2	2.1	2.2	2.2	2.2	2.1	2.2	2.2
Average Nonfarm Annual Wage	76,277	77,044	77,834	78,632	79,464	80,288	81,133	81,975
% Ch, Annual Rate	4.1	4.1	4.2	4.2	4.3	4.2	4.3	4.2
Avg. Hourly Earnings-Mfg. (\$/Hour)	31.82	32.09	32.36	32.64	32.93	33.21	33.49	33.77
% Ch, Annual Rate	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4
Current Dollar Income (Billions of Dollars)								
Personal Income	534.539	540.668	546.889	553.039	559.997	566.325	572.640	578.945
% Ch, Annual Rate	5.1	4.7	4.7	4.6	5.1	4.6	4.5	4.5
Disposable Personal Income	471.867	477.044	482.315	487.521	493.472	498.808	504.111	509.432
% Ch, Annual Rate	5.0	4.5	4.5	4.4	5.0	4.4	4.3	4.3
Per Capita Income (\$/Person)	67,491	68,069	68,658	69,239	69,921	70,525	71,128	71,730
% Ch, Annual Rate	3.9	3.5	3.5	3.4	4.0	3.5	3.5	3.4
Employment (Thousands)								
Washington Civilian Labor Force	3,994.3	4,006.3	4,018.0	4,029.3	4,040.2	4,050.8	4,061.1	4,071.1
Total Washington Employment	3,822.4	3,833.6	3,844.5	3,854.7	3,864.5	3,873.6	3,881.9	3,889.8
Unemployment Rate (%)	4.30	4.31	4.32	4.33	4.35	4.38	4.41	4.45
Nonfarm Payroll Employment	3,593.6	3,601.2	3,608.5	3,615.3	3,621.7	3,627.4	3,632.5	3,637.0
% Ch, Annual Rate	0.9	0.9	0.8	0.8	0.7	0.6	0.6	0.5
Manufacturing	291.4	291.9	292.6	293.3	294.1	294.8	295.4	295.9
% Ch, Annual Rate	0.7	0.7	0.9	1.0	1.0	1.0	0.9	0.7
Durable Manufacturing	204.2	204.6	205.1	205.6	206.2	206.7	207.1	207.5
% Ch, Annual Rate	0.8	0.8	1.0	1.1	1.0	1.0	0.9	0.7
Aerospace	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	87.2	87.4	87.5	87.7	87.9	88.1	88.3	88.5
% Ch, Annual Rate	0.5	0.6	0.8	0.9	0.8	0.9	0.9	0.7
Construction	211.8	211.5	211.2	210.9	210.6	210.2	209.8	209.3
% Ch, Annual Rate	-0.4	-0.4	-0.5	-0.6	-0.7	-0.7	-0.8	-0.9
Service-Providing	3,083.6	3,091.0	3,097.8	3,104.3	3,110.3	3,115.6	3,120.5	3,125.0
% Ch, Annual Rate	1.0	1.0	0.9	0.8	0.8	0.7	0.6	0.6
Software Publishers	69.1	69.4	69.7	70.0	70.3	70.6	71.0	71.3
% Ch, Annual Rate	1.8	1.7	1.7	1.8	1.8	1.8	1.9	1.9
Electronic Shopping and Mail-Order	65.0	65.4	65.9	66.3	66.7	67.1	67.5	67.9
% 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	42.357	42.153	41.900	41.681	41.475	41.275	41.039	40.755
% Ch, Annual Rate	-2.1	-1.9	-2.4	-2.1	-2.0	-1.9	-2.3	-2.7
Single-Family	26.295	26.353	26.335	26.314	26.282	26.252	26.222	26.179
% Ch, Annual Rate	0.8	0.9	-0.3	-0.3	-0.5	-0.5	-0.5	-0.7
Multi-Family	16.061	15.800	15.565	15.366	15.192	15.024	14.817	14.576
% Ch, Annual Rate	-6.6	-6.3	-5.8	-5.0	-4.5	-4.4	-5.4	-6.3
30-Year Fixed Mortgage Rate (%)	5.14	5.13	5.13	5.12	5.10	5.09	5.06	5.05

Table A2.1

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Nonfarm Payroll Employment	144.35	146.62	149.06	151.24	152.63	153.53	154.50	155.31
% Ch	1.8	1.6	1.7	1.5	0.9	0.6	0.6	0.5
Manufacturing	12.35	12.44	12.74	12.92	12.84	12.73	12.67	12.67
% Ch	0.1	0.7	2.4	1.4	-0.6	-0.9	-0.4	0.0
Durable Manufacturing	7.71	7.74	7.97	8.12	8.07	7.99	7.95	7.96
% Ch	-0.7	0.3	3.0	1.8	-0.6	-1.0	-0.4	0.1
Wood Products	0.39	0.40	0.41	0.41	0.42	0.43	0.45	0.46
% Ch	2.7	1.1	2.4	1.8	2.3	2.6	3.1	2.8
Primary and Fabricated Metals	1.80	1.80	1.88	1.95	1.94	1.89	1.89	1.92
% Ch	-3.0	0.4	4.3	3.8	-0.5	-2.7	-0.2	2.0
Computer and Electronic Products	1.05	1.04	1.07	1.08	1.07	1.08	1.09	1.10
% Ch	-0.5	-0.5	2.8	0.7	-1.1	0.7	1.3	0.7
Machinery and Electrical Equipment	1.46	1.47	1.53	1.57	1.57	1.56	1.57	1.58
% Ch	-3.0	0.6	4.4	2.2	0.3	-0.7	0.6	0.8
Transportation Equipment	1.63	1.63	1.67	1.69	1.66	1.64	1.58	1.51
% Ch	1.6	0.1	2.5	1.1	-1.7	-1.2	-4.0	-4.5
Other Durables	1.39	1.40	1.41	1.42	1.40	1.39	1.38	1.39
% Ch	1.3	0.7	1.0	0.4	-0.8	-1.2	-0.2	0.5
Nondurable Manufacturing	4.64	4.71	4.77	4.80	4.77	4.74	4.72	4.71
% Ch	1.5	1.4	1.3	0.7	-0.6	-0.7	-0.4	-0.2
Food Manufacturing	1.56	1.60	1.64	1.68	1.69	1.69	1.71	1.73
% Ch	3.0	3.0	2.3	2.3	0.6	0.4	0.9	1.3
Paper and Paper Products	0.37	0.37	0.37	0.37	0.36	0.36	0.35	0.35
% Ch	-0.6	-0.5	1.2	-1.2	-1.8	-1.5	-0.8	-0.3
Other Nondurables	2.71	2.73	2.75	2.75	2.72	2.69	2.66	2.63
% Ch	1.0	0.8	0.8	0.0	-1.1	-1.2	-1.2	-1.0
Natural Resources and Mining	0.67	0.68	0.73	0.75	0.77	0.78	0.78	0.79
% Ch	-17.8	1.5	7.5	3.3	2.9	0.8	0.4	0.4
Construction	6.73	6.95	7.23	7.46	7.79	8.10	8.38	8.63
% Ch	4.1	3.4	4.0	3.2	4.4	4.1	3.4	3.0
Trade, Transportation, and Utilities	27.26	27.49	27.80	28.02	27.89	27.72	27.53	27.34
% Ch	1.4	0.8	1.1	0.8	-0.5	-0.6	-0.7	-0.7
Wholesale Trade	5.86	5.90	5.98	6.06	6.08	6.08	6.08	6.08
% Ch	0.1	0.7	1.3	1.3	0.4	0.0	0.0	0.0
Retail Trade	15.83	15.86	15.95	16.02	15.89	15.76	15.61	15.45
% Ch	1.4	0.2	0.5	0.4	-0.8	-0.8	-0.9	-1.0
Trans., Warehousing, and Utilities	5.57	5.72	5.87	5.94	5.92	5.88	5.84	5.80
% Ch	2.7	2.8	2.6	1.2	-0.4	-0.7	-0.7	-0.7
Information	2.79	2.79	2.77	2.80	2.82	2.88	2.90	2.89
% Ch	1.6	0.0	-0.8	0.9	0.9	2.2	0.5	-0.3
Publishing Industries	0.73	0.72	0.71	0.69	0.67	0.65	0.64	0.63
% Ch	0.5	-1.0	-1.6	-3.1	-2.9	-2.4	-1.7	-1.2
Other Information	2.06	2.07	2.06	2.11	2.15	2.23	2.26	2.25
% Ch	1.9	0.3	-0.5	2.2	2.1	3.7	1.2	-0.1
Financial Activities	8.29	8.45	8.57	8.70	8.77	8.77	8.76	8.75
% Ch	2.0	2.0	1.3	1.6	0.8	-0.1	-0.1	-0.1
Professional and Business Services	20.05	20.47	21.02	21.90	22.66	23.26	23.93	24.51
% Ch	2.1	2.1	2.7	4.2	3.5	2.7	2.9	2.4
Education and Health Services	22.64	23.19	23.64	23.96	23.98	24.04	24.11	24.18
% Ch	2.8	2.4	2.0	1.4	0.1	0.2	0.3	0.3
Leisure and Hospitality	15.66	16.06	16.36	16.49	16.65	16.82	16.87	16.88
% Ch	3.3	2.6	1.9	0.8	1.0	1.0	0.3	0.0
Other Services	5.69	5.78	5.87	5.85	5.77	5.71	5.67	5.64
% Ch	1.2	1.5	1.6	-0.2	-1.4	-1.0	-0.7	-0.7
Federal Government	2.79	2.81	2.80	2.80	2.92	2.80	2.80	2.80
% Ch	1.4	0.4	-0.4	0.1	4.5	-4.3	0.0	0.0
State and Local Government	19.44	19.52	19.54	19.60	19.75	19.92	20.08	20.25
% Ch	0.9	0.4	0.1	0.3	0.8	0.8	0.8	0.8

Table A2.2

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	148.07	148.72	149.40	150.05	150.58	151.07	151.49	151.82
% Ch, Annual Rate	1.7	1.8	1.9	1.7	1.4	1.3	1.1	0.9
Manufacturing	12.61	12.68	12.79	12.89	12.92	12.93	12.89	12.93
% Ch, Annual Rate	2.7	2.5	3.2	3.3	1.0	0.2	-1.0	1.1
Durable Manufacturing	7.86	7.92	8.01	8.10	8.11	8.12	8.10	8.13
% Ch, Annual Rate	3.6	3.2	4.5	4.2	0.8	0.6	-1.3	1.7
Wood Products	0.40	0.41	0.41	0.41	0.41	0.41	0.41	0.42
% Ch, Annual Rate	5.3	2.8	1.2	5.5	0.1	0.0	0.2	6.3
Primary and Fabricated Metals	1.85	1.86	1.88	1.93	1.94	1.95	1.95	1.96
% Ch, Annual Rate	4.7	3.9	4.2	9.3	3.0	2.2	-0.3	3.1
Computer and Electronic Products	1.06	1.06	1.08	1.09	1.09	1.08	1.08	1.07
% Ch, Annual Rate	2.3	2.5	4.1	5.1	0.1	-2.0	-3.0	-1.5
Machinery and Electrical Equipment	1.50	1.52	1.55	1.56	1.56	1.56	1.56	1.58
% Ch, Annual Rate	4.7	5.9	6.3	2.1	1.9	0.5	-0.6	3.4
Transportation Equipment	1.65	1.66	1.69	1.70	1.69	1.70	1.69	1.69
% Ch, Annual Rate	2.8	2.9	6.7	3.0	-1.6	1.4	-2.0	-0.4
Other Durables	1.41	1.41	1.41	1.42	1.42	1.42	1.41	1.42
% Ch, Annual Rate	2.4	0.6	1.6	0.6	0.4	0.0	-1.6	1.6
Nondurable Manufacturing	4.74	4.76	4.77	4.79	4.81	4.80	4.80	4.80
% Ch, Annual Rate	1.2	1.4	1.2	1.6	1.3	-0.6	-0.5	0.0
Food Manufacturing	1.63	1.64	1.64	1.65	1.67	1.68	1.68	1.69
% Ch, Annual Rate	2.4	2.0	1.4	3.1	3.8	1.3	1.1	1.5
Paper and Paper Products	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
% Ch, Annual Rate	2.5	2.3	-0.3	-1.0	-1.2	-2.5	-2.3	-1.1
Other Nondurables	2.74	2.75	2.76	2.77	2.77	2.76	2.75	2.74
% Ch, Annual Rate	0.5	0.8	1.4	1.1	0.1	-1.5	-1.1	-0.7
Natural Resources and Mining	0.71	0.73	0.73	0.73	0.74	0.75	0.76	0.76
% Ch, Annual Rate	11.0	11.9	-0.5	0.5	4.4	3.7	4.5	2.6
Construction	7.14	7.20	7.26	7.31	7.36	7.42	7.48	7.57
% Ch, Annual Rate	6.6	3.4	3.2	2.8	2.8	2.9	3.8	4.7
Trade, Transportation, and Utilities	27.69	27.76	27.83	27.92	27.99	28.00	28.04	28.03
% Ch, Annual Rate	1.5	1.1	1.0	1.3	1.0	0.2	0.6	-0.2
Wholesale Trade	5.95	5.96	5.99	6.00	6.03	6.05	6.07	6.08
% Ch, Annual Rate	1.5	0.4	2.1	0.9	1.5	1.4	1.5	0.8
Retail Trade	15.91	15.94	15.95	16.00	16.03	16.02	16.03	16.00
% Ch, Annual Rate	1.0	0.8	0.3	1.1	0.8	-0.3	0.2	-0.6
Trans., Warehousing, and Utilities	5.82	5.86	5.88	5.92	5.93	5.94	5.95	5.95
% Ch, Annual Rate	3.0	2.7	1.5	2.2	1.2	0.3	0.6	0.1
Information	2.76	2.77	2.77	2.78	2.78	2.80	2.80	2.80
% Ch, Annual Rate	-2.7	1.3	0.6	1.1	-0.3	3.5	0.1	-1.1
Publishing Industries	0.72	0.71	0.71	0.70	0.70	0.69	0.69	0.68
% Ch, Annual Rate	-1.7	-0.5	-1.1	-4.0	-4.4	-2.6	-2.9	-2.8
Other Information	2.05	2.06	2.06	2.08	2.08	2.11	2.12	2.11
% Ch, Annual Rate	-3.0	2.0	1.2	2.9	1.1	5.6	1.0	-0.5
Financial Activities	8.54	8.56	8.57	8.59	8.65	8.68	8.72	8.74
% Ch, Annual Rate	1.5	1.3	0.4	1.0	2.9	1.3	1.7	1.1
Professional and Business Services	20.77	20.92	21.11	21.28	21.49	21.80	22.07	22.25
% Ch, Annual Rate	2.3	3.0	3.6	3.3	4.0	5.8	5.1	3.4
Education and Health Services	23.46	23.58	23.71	23.81	23.87	23.98	24.00	24.00
% Ch, Annual Rate	2.0	2.0	2.3	1.6	1.1	1.8	0.4	0.0
Leisure and Hospitality	16.24	16.30	16.40	16.49	16.53	16.48	16.47	16.47
% Ch, Annual Rate	1.5	1.4	2.6	2.2	0.9	-1.3	-0.3	0.1
Other Services	5.83	5.86	5.88	5.89	5.88	5.86	5.84	5.82
% Ch, Annual Rate	1.1	2.2	1.2	0.7	-0.6	-1.4	-1.0	-1.7
Federal Government	2.79	2.79	2.80	2.80	2.80	2.80	2.80	2.80
% Ch, Annual Rate	-1.2	0.0	0.6	0.0	0.0	0.0	0.0	0.0
State and Local Government	19.53	19.54	19.54	19.55	19.56	19.58	19.61	19.65
% Ch, Annual Rate	0.0	0.3	0.0	0.2	0.2	0.4	0.6	0.8

Table A2.2 (continued)

U.S. Nonagricultural Employment by Industry (Millions)

Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	152.17	152.69	152.75	152.89	153.15	153.41	153.65	153.90
% Ch, Annual Rate	0.9	1.4	0.2	0.4	0.7	0.7	0.6	0.6
Manufacturing	12.90	12.86	12.82	12.79	12.76	12.73	12.72	12.70
% Ch, Annual Rate	-0.8	-1.4	-1.1	-1.2	-1.0	-0.7	-0.3	-0.6
Durable Manufacturing	8.11	8.08	8.06	8.03	8.01	7.99	7.98	7.97
% Ch, Annual Rate	-1.0	-1.6	-1.2	-1.3	-1.2	-0.8	-0.2	-0.6
Wood Products	0.42	0.42	0.42	0.43	0.43	0.43	0.44	0.44
% Ch, Annual Rate	2.1	1.2	2.1	1.9	2.6	3.1	3.7	2.7
Primary and Fabricated Metals	1.96	1.95	1.94	1.92	1.91	1.89	1.88	1.88
% Ch, Annual Rate	-0.5	-2.5	-2.6	-3.3	-3.0	-2.8	-1.8	-1.0
Computer and Electronic Products	1.07	1.07	1.07	1.07	1.07	1.07	1.08	1.08
% Ch, Annual Rate	-1.1	-0.9	0.4	0.6	0.8	1.0	1.3	1.3
Machinery and Electrical Equipment	1.58	1.57	1.57	1.57	1.56	1.56	1.56	1.56
% Ch, Annual Rate	0.4	-1.0	-0.7	-1.1	-1.0	-0.9	0.1	0.6
Transportation Equipment	1.67	1.66	1.66	1.65	1.65	1.65	1.64	1.63
% Ch, Annual Rate	-3.3	-1.9	-1.5	-1.1	-1.5	-0.2	-0.7	-3.4
Other Durables	1.41	1.41	1.40	1.40	1.39	1.39	1.39	1.38
% Ch, Annual Rate	-1.1	-2.1	-1.3	-1.5	-1.2	-1.1	-0.4	-0.4
Nondurable Manufacturing	4.79	4.78	4.77	4.76	4.75	4.74	4.74	4.73
% Ch, Annual Rate	-0.5	-0.9	-0.9	-0.9	-0.7	-0.5	-0.4	-0.6
Food Manufacturing	1.69	1.69	1.69	1.69	1.69	1.69	1.70	1.70
% Ch, Annual Rate	0.7	-0.1	-0.2	0.0	0.4	0.7	0.9	0.6
Paper and Paper Products	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
% Ch, Annual Rate	-1.8	-2.1	-1.9	-1.8	-1.4	-1.3	-1.1	-1.1
Other Nondurables	2.74	2.73	2.72	2.71	2.70	2.69	2.69	2.68
% Ch, Annual Rate	-1.1	-1.2	-1.3	-1.3	-1.2	-1.2	-1.2	-1.3
Natural Resources and Mining	0.77	0.77	0.78	0.78	0.78	0.78	0.78	0.78
% Ch, Annual Rate	2.1	4.0	1.8	1.3	1.4	-1.9	0.5	0.7
Construction	7.66	7.74	7.83	7.92	8.00	8.07	8.14	8.21
% Ch, Annual Rate	4.8	4.4	4.4	4.6	4.3	3.6	3.3	3.5
Trade, Transportation, and Utilities	27.98	27.91	27.86	27.79	27.77	27.74	27.70	27.65
% Ch, Annual Rate	-0.7	-1.1	-0.6	-1.0	-0.4	-0.4	-0.6	-0.6
Wholesale Trade	6.08	6.08	6.08	6.08	6.08	6.08	6.08	6.08
% Ch, Annual Rate	0.0	-0.1	0.0	-0.2	0.2	0.0	-0.1	-0.1
Retail Trade	15.96	15.90	15.87	15.81	15.79	15.77	15.74	15.71
% Ch, Annual Rate	-1.0	-1.5	-0.8	-1.4	-0.6	-0.4	-0.8	-0.8
Trans., Warehousing, and Utilities	5.94	5.93	5.91	5.90	5.89	5.89	5.87	5.86
% Ch, Annual Rate	-0.7	-0.8	-0.8	-0.9	-0.5	-0.6	-0.7	-0.7
Information	2.80	2.81	2.83	2.85	2.87	2.88	2.89	2.90
% Ch, Annual Rate	0.9	0.5	2.9	3.0	2.8	2.2	1.2	0.6
Publishing Industries	0.68	0.67	0.67	0.66	0.66	0.66	0.65	0.65
% Ch, Annual Rate	-3.1	-3.1	-2.6	-2.8	-2.3	-2.2	-2.1	-1.9
Other Information	2.13	2.13	2.16	2.18	2.21	2.23	2.24	2.25
% Ch, Annual Rate	2.2	1.7	4.7	4.8	4.3	3.5	2.2	1.4
Financial Activities	8.77	8.77	8.78	8.78	8.78	8.77	8.76	8.76
% Ch, Annual Rate	1.0	0.2	0.3	0.2	-0.2	-0.6	-0.2	0.0
Professional and Business Services	22.46	22.60	22.73	22.86	23.03	23.19	23.34	23.50
% Ch, Annual Rate	3.7	2.6	2.2	2.3	3.0	2.8	2.7	2.7
Education and Health Services	23.98	23.98	23.98	23.98	24.02	24.03	24.04	24.06
% Ch, Annual Rate	-0.2	-0.1	0.1	0.0	0.5	0.2	0.2	0.3
Leisure and Hospitality	16.50	16.59	16.72	16.79	16.77	16.80	16.84	16.86
% Ch, Annual Rate	0.8	2.0	3.2	1.7	-0.5	0.8	0.8	0.7
Other Services	5.80	5.78	5.76	5.74	5.73	5.72	5.71	5.70
% Ch, Annual Rate	-1.3	-1.4	-1.2	-1.3	-0.7	-0.9	-0.9	-0.8
Federal Government	2.85	3.15	2.89	2.80	2.80	2.80	2.80	2.80
% Ch, Annual Rate	7.8	49.2	-29.1	-12.3	0.0	0.0	0.0	0.0
State and Local Government	19.69	19.73	19.77	19.82	19.86	19.90	19.94	19.98
% Ch, Annual Rate	0.9	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 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Nonfarm Payroll Employment	154.14	154.38	154.62	154.84	155.06	155.25	155.41	155.54
% Ch, Annual Rate	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4
Manufacturing	12.69	12.67	12.67	12.67	12.67	12.67	12.68	12.68
% Ch, Annual Rate	-0.5	-0.5	-0.1	0.0	0.0	0.1	0.3	-0.1
Durable Manufacturing	7.96	7.95	7.95	7.95	7.95	7.96	7.97	7.97
% Ch, Annual Rate	-0.6	-0.6	-0.1	0.1	0.1	0.3	0.5	0.0
Wood Products	0.44	0.45	0.45	0.45	0.46	0.46	0.46	0.46
% Ch, Annual Rate	3.3	2.7	3.1	3.4	3.0	3.0	2.1	1.1
Primary and Fabricated Metals	1.88	1.88	1.89	1.90	1.91	1.92	1.93	1.94
% Ch, Annual Rate	-0.1	0.6	1.6	2.0	2.3	2.4	2.1	1.5
Computer and Electronic Products	1.08	1.09	1.09	1.09	1.10	1.10	1.10	1.10
% Ch, Annual Rate	1.5	1.2	1.2	0.9	0.7	0.5	0.3	0.2
Machinery and Electrical Equipment	1.56	1.57	1.57	1.57	1.58	1.58	1.58	1.58
% Ch, Annual Rate	0.8	0.8	0.8	0.9	0.8	0.9	0.6	0.4
Transportation Equipment	1.61	1.59	1.56	1.54	1.53	1.51	1.50	1.49
% Ch, Annual Rate	-5.0	-5.7	-5.2	-4.8	-5.0	-4.3	-2.2	-2.9
Other Durables	1.38	1.38	1.39	1.39	1.39	1.39	1.39	1.39
% Ch, Annual Rate	-0.5	-0.1	0.6	0.7	0.5	0.7	0.5	0.0
Nondurable Manufacturing	4.73	4.72	4.72	4.72	4.72	4.72	4.71	4.71
% Ch, Annual Rate	-0.4	-0.4	-0.2	-0.1	-0.2	-0.1	-0.1	-0.3
Food Manufacturing	1.70	1.71	1.71	1.72	1.72	1.73	1.73	1.74
% Ch, Annual Rate	0.8	1.0	1.2	1.3	1.3	1.4	1.4	1.1
Paper and Paper Products	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
% Ch, Annual Rate	-0.8	-0.7	-0.5	-0.3	-0.3	-0.1	-0.1	-0.4
Other Nondurables	2.67	2.66	2.66	2.65	2.64	2.63	2.63	2.62
% Ch, Annual Rate	-1.1	-1.2	-1.0	-1.0	-1.1	-1.0	-1.0	-1.2
Natural Resources and Mining	0.78	0.78	0.78	0.78	0.79	0.78	0.79	0.79
% Ch, Annual Rate	0.4	0.3	0.8	0.3	0.5	-0.2	0.7	1.2
Construction	8.28	8.34	8.41	8.48	8.54	8.61	8.66	8.72
% Ch, Annual Rate	3.4	3.3	3.3	3.1	3.1	3.0	2.7	2.5
Trade, Transportation, and Utilities	27.60	27.55	27.51	27.46	27.40	27.36	27.31	27.27
% Ch, Annual Rate	-0.8	-0.7	-0.7	-0.6	-0.9	-0.6	-0.7	-0.6
Wholesale Trade	6.08	6.08	6.08	6.08	6.08	6.08	6.08	6.08
% Ch, Annual Rate	0.2	-0.1	0.0	0.0	0.2	-0.1	-0.1	-0.1
Retail Trade	15.66	15.63	15.59	15.55	15.50	15.47	15.44	15.40
% Ch, Annual Rate	-1.3	-0.9	-1.0	-0.9	-1.4	-0.8	-0.9	-0.8
Trans., Warehousing, and Utilities	5.86	5.85	5.84	5.82	5.82	5.81	5.80	5.79
% Ch, Annual Rate	-0.4	-0.8	-0.7	-0.7	-0.5	-0.7	-0.7	-0.7
Information	2.90	2.90	2.90	2.89	2.89	2.88	2.89	2.89
% Ch, Annual Rate	0.8	0.0	-0.3	-0.5	-0.7	-1.1	1.1	0.7
Publishing Industries	0.65	0.64	0.64	0.64	0.64	0.64	0.63	0.63
% Ch, Annual Rate	-1.4	-1.6	-1.5	-1.4	-1.1	-1.1	-0.9	-0.8
Other Information	2.25	2.26	2.26	2.26	2.25	2.25	2.26	2.26
% Ch, Annual Rate	1.4	0.4	0.0	-0.2	-0.6	-1.1	1.7	1.1
Financial Activities	8.76	8.76	8.76	8.75	8.76	8.75	8.75	8.75
% Ch, Annual Rate	0.2	-0.1	-0.2	-0.2	0.2	-0.2	-0.2	-0.1
Professional and Business Services	23.68	23.85	24.02	24.18	24.36	24.48	24.56	24.64
% Ch, Annual Rate	3.2	2.9	2.8	2.7	3.0	2.0	1.4	1.2
Education and Health Services	24.09	24.10	24.12	24.13	24.16	24.17	24.18	24.19
% Ch, Annual Rate	0.5	0.2	0.3	0.2	0.5	0.2	0.2	0.2
Leisure and Hospitality	16.85	16.87	16.88	16.89	16.86	16.88	16.89	16.89
% Ch, Annual Rate	-0.3	0.4	0.3	0.2	-0.7	0.3	0.2	0.2
Other Services	5.69	5.68	5.67	5.66	5.65	5.64	5.63	5.62
% Ch, Annual Rate	-0.4	-0.7	-0.7	-0.8	-0.5	-0.7	-0.7	-0.7
Federal Government	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State and Local Government	20.02	20.06	20.10	20.15	20.19	20.23	20.27	20.31
% 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 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Nonfarm Payroll Employment	3,244.5	3,322.4	3,419.4	3,491.2	3,539.2	3,572.5	3,604.6	3,629.6
% Ch	3.1	2.4	2.9	2.1	1.4	0.9	0.9	0.7
Manufacturing	290.0	283.8	286.6	290.5	290.7	290.5	292.3	295.1
% Ch	-0.7	-2.1	1.0	1.4	0.0	-0.1	0.6	0.9
Durable Manufacturing	207.6	200.1	200.7	203.7	203.8	203.5	204.9	206.9
% Ch	-1.7	-3.6	0.3	1.5	0.0	-0.1	0.7	1.0
Wood Products	13.1	12.9	13.1	13.0	12.9	12.9	13.0	13.1
% Ch	-1.6	-1.1	1.5	-1.4	-0.1	0.1	0.5	0.3
Primary and Fabricated Metals	25.2	25.0	25.6	26.4	26.2	25.4	25.3	25.8
% Ch	-2.0	-0.7	2.4	2.9	-0.7	-3.1	-0.3	2.0
Computer and Electronic Products	20.1	19.6	20.0	20.4	20.3	20.7	21.4	21.9
% Ch	0.7	-2.5	2.5	1.7	-0.7	2.3	3.2	2.3
Machinery and Electrical Equipment	20.5	20.6	20.9	21.8	22.5	22.9	23.7	24.7
% Ch	-1.2	0.7	1.1	4.4	3.2	1.8	3.6	3.9
Aerospace	91.0	84.1	83.1	83.9	83.9	83.9	83.9	83.9
% Ch	-3.2	-7.6	-1.1	0.9	0.0	0.0	0.0	0.0
Other Transportation Equip.	10.1	10.2	9.8	9.6	9.3	8.9	8.7	8.5
% Ch	-0.9	0.2	-3.9	-1.2	-4.1	-3.6	-2.5	-2.2
Other Durables	27.6	27.7	28.1	28.6	28.7	28.7	28.8	29.1
% Ch	1.2	0.5	1.5	1.6	0.4	-0.1	0.6	0.8
Nondurable Manufacturing	82.4	83.7	85.8	86.9	86.9	87.0	87.5	88.2
% Ch	2.1	1.5	2.6	1.2	0.0	0.1	0.5	0.8
Food Manufacturing	37.5	38.0	39.3	40.0	39.9	39.8	39.8	40.0
% Ch	1.9	1.3	3.5	1.7	-0.2	-0.4	0.1	0.5
Paper and Paper Products	7.8	7.7	7.7	7.6	7.4	7.2	7.1	7.0
% Ch	-3.4	-0.2	0.0	-1.7	-2.9	-2.6	-1.8	-1.2
Other Nondurables	37.1	37.9	38.8	39.2	39.6	40.0	40.6	41.2
% Ch	3.4	2.1	2.3	1.3	0.8	1.1	1.4	1.6
Natural Resources and Mining	6.3	6.2	6.4	6.6	6.7	6.8	6.8	6.8
% Ch	-0.8	-1.6	3.5	2.9	1.9	0.7	0.5	0.0
Construction	186.6	199.7	211.4	213.1	213.1	212.1	211.4	210.0
% Ch	7.7	7.0	5.9	0.8	0.0	-0.5	-0.3	-0.7
Trade, Transportation, and Utilities	606.3	626.0	640.8	652.0	655.4	656.3	655.9	654.5
% Ch	3.1	3.2	2.4	1.8	0.5	0.1	-0.1	-0.2
Wholesale Trade	132.8	134.5	138.4	141.1	142.0	142.1	142.2	142.1
% Ch	0.6	1.3	2.9	1.9	0.6	0.1	0.1	0.0
Retail Trade	369.1	384.7	395.0	402.3	405.0	406.3	406.3	405.6
% Ch	4.0	4.2	2.7	1.9	0.7	0.3	0.0	-0.2
Electronic Shopping and Mail-Order	38.2	49.7	55.1	58.4	61.4	63.8	65.7	67.3
% Ch	26.6	30.1	10.9	5.9	5.2	3.8	3.0	2.5
Other Retail Trade	330.9	335.0	339.9	343.9	343.5	342.5	340.7	338.3
% Ch	1.9	1.2	1.5	1.2	-0.1	-0.3	-0.5	-0.7
Trans., Warehousing, and Utilities	104.4	106.9	107.4	108.6	108.4	107.9	107.4	106.8
% Ch	3.4	2.4	0.5	1.1	-0.1	-0.5	-0.5	-0.6
Information	121.6	126.3	132.0	135.8	138.4	141.4	142.9	143.6
% Ch	6.2	3.9	4.5	2.8	1.9	2.2	1.0	0.5
Software Publishers	58.9	61.3	64.8	66.3	67.3	68.4	69.5	70.8
% Ch	5.3	4.1	5.7	2.4	1.4	1.6	1.7	1.8
Other Publishing Industries	5.9	5.5	4.9	4.3	3.8	3.3	3.0	2.6
% Ch	-4.0	-7.0	-11.8	-12.4	-11.4	-11.6	-11.1	-11.1
Other Information	56.7	59.5	62.3	65.2	67.3	69.7	70.4	70.1
% Ch	8.4	4.9	4.8	4.5	3.2	3.6	0.9	-0.3
Financial Activities	150.3	153.1	157.6	160.3	160.7	159.1	157.7	156.1
% Ch	1.8	1.9	2.9	1.7	0.2	-1.0	-0.9	-1.0
Professional and Business Services	403.5	414.1	433.2	454.4	471.9	486.1	500.8	513.3
% Ch	3.5	2.6	4.6	4.9	3.9	3.0	3.0	2.5
Education and Health Services	463.5	476.0	495.6	507.0	512.8	518.0	522.9	527.1
% Ch	3.4	2.7	4.1	2.3	1.1	1.0	0.9	0.8
Leisure and Hospitality	323.3	331.4	342.1	347.9	353.6	358.3	360.5	361.4
% Ch	4.3	2.5	3.2	1.7	1.6	1.3	0.6	0.2
Other Services	117.6	119.9	122.5	124.9	126.8	128.3	129.6	130.7
% Ch	2.3	2.0	2.2	2.0	1.5	1.2	1.0	0.8
Federal Government	74.5	74.9	75.8	76.7	79.6	77.5	77.8	78.0
% Ch	1.9	0.4	1.2	1.3	3.7	-2.6	0.4	0.3
State and Local Government	501.0	511.1	515.6	521.7	529.7	538.2	546.1	553.1
% Ch	2.5	2.0	0.9	1.2	1.5	1.6	1.5	1.3

Table A2.4

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	3,385.9	3,407.3	3,432.8	3,451.8	3,469.0	3,485.4	3,499.1	3,511.1
% Ch, Annual Rate	4.4	2.5	3.0	2.2	2.0	1.9	1.6	1.4
Manufacturing	284.1	285.5	287.4	289.3	290.3	290.5	290.3	291.0
% Ch, Annual Rate	2.8	2.0	2.7	2.7	1.4	0.4	-0.3	1.0
Durable Manufacturing	198.8	199.9	201.4	202.8	203.4	203.7	203.5	204.1
% Ch, Annual Rate	1.6	2.3	2.9	2.9	1.2	0.6	-0.5	1.2
Wood Products	13.3	13.2	13.0	13.1	13.0	12.9	12.9	13.0
% Ch, Annual Rate	8.2	-2.3	-6.6	2.6	-2.0	-2.1	-1.9	3.2
Primary and Fabricated Metals	25.6	25.4	25.4	26.0	26.2	26.4	26.4	26.6
% Ch, Annual Rate	9.4	-3.1	0.0	9.9	3.1	2.3	-0.5	3.0
Computer and Electronic Products	19.7	19.9	20.1	20.5	20.6	20.5	20.3	20.2
% Ch, Annual Rate	2.0	2.8	4.2	9.0	1.2	-2.0	-3.6	-1.2
Machinery and Electrical Equipment	20.5	20.8	21.0	21.3	21.5	21.7	21.8	22.2
% Ch, Annual Rate	-6.4	5.2	3.3	5.7	5.3	3.3	1.9	7.5
Aerospace	81.9	82.7	83.9	83.9	83.9	83.9	83.9	83.9
% Ch, Annual Rate	2.2	3.9	5.8	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	9.8	9.7	9.8	9.7	9.7	9.7	9.7	9.5
% Ch, Annual Rate	-7.4	-0.5	3.7	-4.5	-1.0	1.7	-3.2	-6.7
Other Durables	27.9	28.2	28.2	28.3	28.5	28.6	28.6	28.7
% Ch, Annual Rate	-0.3	3.8	0.2	1.9	2.2	1.4	0.3	1.7
Nondurable Manufacturing	85.3	85.6	86.0	86.5	86.8	86.8	86.8	87.0
% Ch, Annual Rate	5.6	1.1	2.1	2.2	1.8	-0.1	0.0	0.7
Food Manufacturing	39.2	39.0	39.4	39.7	39.9	40.0	40.0	40.1
% Ch, Annual Rate	11.0	-1.7	4.2	2.1	2.9	0.5	0.3	0.7
Paper and Paper Products	7.6	7.8	7.8	7.8	7.7	7.6	7.6	7.5
% Ch, Annual Rate	-1.4	9.2	-0.3	-2.0	-2.2	-3.6	-3.5	-2.1
Other Nondurables	38.5	38.7	38.8	39.1	39.2	39.2	39.2	39.4
% Ch, Annual Rate	1.7	2.4	0.5	3.0	1.4	0.1	0.4	1.2
Natural Resources and Mining	6.3	6.4	6.4	6.5	6.5	6.6	6.6	6.6
% Ch, Annual Rate	3.7	10.4	1.2	1.2	3.1	3.2	3.6	1.8
Construction	208.8	211.6	212.4	212.8	213.0	213.3	213.0	213.2
% Ch, Annual Rate	8.7	5.6	1.5	0.7	0.5	0.4	-0.5	0.4
Trade, Transportation, and Utilities	638.3	638.0	641.6	645.4	648.8	651.0	653.5	654.8
% Ch, Annual Rate	4.4	-0.2	2.3	2.4	2.1	1.4	1.5	0.8
Wholesale Trade	137.0	138.0	139.1	139.6	140.3	140.9	141.5	141.8
% Ch, Annual Rate	5.2	2.8	3.4	1.5	1.9	1.8	1.5	1.0
Retail Trade	393.8	393.5	395.0	397.7	400.2	401.6	403.3	404.2
% Ch, Annual Rate	5.1	-0.3	1.5	2.8	2.5	1.4	1.7	0.9
Electronic Shopping and Mail-Order	54.8	54.9	54.8	56.0	57.0	58.0	58.9	59.7
% Ch	10.0	0.3	-0.2	8.6	7.7	6.9	6.2	5.6
Other Retail Trade	338.9	338.6	340.1	341.8	343.1	343.6	344.4	344.6
% Ch	4.3	-0.4	1.8	1.9	1.6	0.5	1.0	0.1
Trans., Warehousing, and Utilities	107.5	106.5	107.5	108.0	108.4	108.5	108.7	108.8
% Ch, Annual Rate	0.9	-3.5	3.7	2.0	1.2	0.6	0.6	0.2
Information	129.3	131.2	133.5	134.1	134.5	135.8	136.3	136.5
% Ch, Annual Rate	3.8	6.2	7.0	2.1	1.1	4.0	1.4	0.6
Software Publishers	63.2	64.6	65.6	65.8	66.0	66.2	66.5	66.7
% Ch, Annual Rate	6.1	9.1	6.5	1.1	1.0	1.5	1.4	1.5
Other Publishing Industries	5.3	4.8	4.7	4.6	4.4	4.3	4.2	4.1
% Ch, Annual Rate	-4.6	-27.3	-8.3	-12.1	-13.1	-10.1	-10.8	-11.0
Other Information	60.8	61.8	63.1	63.7	64.1	65.3	65.6	65.7
% Ch, Annual Rate	2.1	6.5	8.8	4.2	2.2	7.6	2.3	0.6
Financial Activities	156.1	157.6	158.1	158.5	159.6	160.1	160.6	160.8
% Ch, Annual Rate	4.9	3.8	1.5	0.8	3.0	1.1	1.3	0.6
Professional and Business Services	424.7	430.4	436.6	440.9	445.7	452.0	457.8	462.2
% Ch, Annual Rate	7.7	5.5	5.9	3.9	4.5	5.8	5.2	3.8
Education and Health Services	489.2	494.4	497.8	500.8	503.4	506.6	508.4	509.8
% Ch, Annual Rate	5.1	4.3	2.8	2.5	2.0	2.6	1.4	1.1
Leisure and Hospitality	338.7	340.6	343.4	345.8	347.3	347.4	348.1	349.0
% Ch, Annual Rate	5.4	2.1	3.4	2.8	1.8	0.1	0.8	1.0
Other Services	121.6	122.0	122.9	123.6	124.2	124.7	125.2	125.7
% Ch, Annual Rate	0.5	1.2	2.8	2.3	1.9	1.7	1.7	1.5
Federal Government	74.7	75.5	76.3	76.5	76.6	76.7	76.8	76.9
% Ch, Annual Rate	-0.6	4.3	4.5	0.6	0.6	0.6	0.6	0.6
State and Local Government	514.1	514.1	516.3	517.7	519.1	520.7	522.5	524.5
% Ch, Annual Rate	1.4	0.0	1.8	1.1	1.1	1.2	1.4	1.5

Table A2.4 (continued)

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	3,522.3	3,539.7	3,543.9	3,550.9	3,559.5	3,568.3	3,576.8	3,585.3
% Ch, Annual Rate	1.3	2.0	0.5	0.8	1.0	1.0	1.0	1.0
Manufacturing	291.0	290.8	290.6	290.3	290.2	290.2	290.5	290.9
% Ch, Annual Rate	0.0	-0.4	-0.3	-0.4	-0.1	0.1	0.4	0.5
Durable Manufacturing	204.0	203.8	203.7	203.5	203.3	203.3	203.5	203.8
% Ch, Annual Rate	-0.1	-0.4	-0.2	-0.5	-0.3	0.0	0.4	0.5
Wood Products	13.0	12.9	12.9	12.9	12.9	12.9	13.0	13.0
% Ch, Annual Rate	-0.3	-1.1	-0.3	-0.5	0.1	0.5	1.1	0.2
Primary and Fabricated Metals	26.5	26.3	26.1	25.9	25.6	25.4	25.3	25.2
% Ch, Annual Rate	-0.9	-2.8	-3.0	-3.8	-3.4	-3.2	-2.1	-1.2
Computer and Electronic Products	20.2	20.2	20.3	20.4	20.5	20.6	20.8	21.0
% Ch, Annual Rate	-0.6	-0.2	1.7	2.0	2.4	2.6	3.2	3.2
Machinery and Electrical Equipment	22.4	22.5	22.6	22.6	22.7	22.8	23.0	23.2
% Ch, Annual Rate	3.3	1.4	1.8	1.2	1.5	1.6	2.9	3.5
Aerospace	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	9.3	9.3	9.2	9.1	9.0	8.9	8.9	8.8
% Ch, Annual Rate	-6.2	-1.2	-3.6	-4.6	-5.0	-2.4	-2.8	-2.7
Other Durables	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7
% Ch, Annual Rate	0.2	-0.3	-0.2	-0.3	-0.2	0.0	0.4	0.5
Nondurable Manufacturing	87.0	86.9	86.9	86.8	86.9	86.9	87.0	87.1
% Ch, Annual Rate	0.1	-0.3	-0.3	-0.2	0.2	0.3	0.5	0.3
Food Manufacturing	40.1	40.0	39.9	39.8	39.8	39.8	39.8	39.7
% Ch, Annual Rate	-0.1	-0.9	-1.0	-0.8	-0.4	-0.1	0.1	-0.2
Paper and Paper Products	7.5	7.4	7.4	7.3	7.3	7.2	7.2	7.1
% Ch, Annual Rate	-2.9	-3.3	-3.0	-3.0	-2.5	-2.4	-2.2	-2.1
Other Nondurables	39.4	39.5	39.6	39.7	39.8	40.0	40.1	40.2
% Ch, Annual Rate	0.9	0.9	0.9	1.0	1.2	1.3	1.3	1.3
Natural Resources and Mining	6.7	6.7	6.7	6.7	6.7	6.7	6.8	6.8
% Ch, Annual Rate	1.5	2.3	0.9	0.5	0.5	0.6	0.6	0.5
Construction	212.9	213.4	213.1	212.8	212.3	212.0	211.9	212.0
% Ch, Annual Rate	-0.6	0.9	-0.5	-0.6	-0.9	-0.6	-0.2	0.0
Trade, Transportation, and Utilities	655.3	655.3	655.6	655.4	655.8	656.3	656.4	656.5
% Ch, Annual Rate	0.3	0.0	0.2	-0.2	0.3	0.3	0.1	0.0
Wholesale Trade	141.9	142.0	142.0	142.0	142.0	142.1	142.1	142.1
% Ch, Annual Rate	0.2	0.3	0.1	-0.1	0.1	0.1	0.0	0.1
Retail Trade	404.8	404.8	405.2	405.2	405.7	406.3	406.5	406.7
% Ch, Annual Rate	0.5	0.0	0.5	-0.1	0.5	0.6	0.2	0.2
Electronic Shopping and Mail-Order	60.4	61.1	61.8	62.4	63.0	63.5	64.0	64.5
% Ch	5.1	4.7	4.3	4.0	3.7	3.5	3.3	3.1
Other Retail Trade	344.4	343.6	343.4	342.8	342.7	342.7	342.5	342.1
% Ch	-0.2	-0.8	-0.2	-0.8	0.0	0.0	-0.3	-0.4
Trans., Warehousing, and Utilities	108.6	108.5	108.4	108.2	108.1	108.0	107.9	107.7
% Ch, Annual Rate	-0.5	-0.4	-0.6	-0.6	-0.4	-0.4	-0.5	-0.5
Information	137.2	137.9	138.7	139.6	140.5	141.2	141.8	142.1
% Ch, Annual Rate	2.1	1.9	2.5	2.6	2.5	2.1	1.5	1.1
Software Publishers	66.9	67.2	67.4	67.7	67.9	68.2	68.5	68.8
% Ch, Annual Rate	1.4	1.4	1.5	1.5	1.6	1.6	1.6	1.7
Other Publishing Industries	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.2
% Ch, Annual Rate	-11.7	-12.0	-11.5	-12.0	-11.3	-11.5	-11.4	-11.4
Other Information	66.3	66.9	67.6	68.4	69.1	69.6	70.0	70.2
% Ch, Annual Rate	3.8	3.3	4.4	4.6	4.2	3.4	2.0	1.1
Financial Activities	161.0	160.8	160.6	160.3	159.8	159.2	158.9	158.5
% Ch, Annual Rate	0.3	-0.4	-0.5	-0.7	-1.2	-1.5	-1.0	-0.8
Professional and Business Services	466.8	470.4	473.6	476.9	480.8	484.4	487.9	491.4
% Ch, Annual Rate	4.1	3.2	2.8	2.8	3.3	3.1	2.9	2.9
Education and Health Services	510.9	512.1	513.4	514.6	516.2	517.5	518.6	519.9
% Ch, Annual Rate	0.9	1.0	1.0	0.9	1.3	1.0	0.9	0.9
Leisure and Hospitality	350.3	352.3	355.0	356.7	356.9	357.8	358.8	359.6
% Ch, Annual Rate	1.5	2.3	3.1	1.9	0.2	1.1	1.0	0.9
Other Services	126.2	126.6	127.0	127.4	127.8	128.2	128.5	128.9
% Ch, Annual Rate	1.5	1.4	1.3	1.2	1.3	1.1	1.1	1.0
Federal Government	77.5	84.8	78.7	77.3	77.4	77.5	77.5	77.6
% Ch, Annual Rate	3.2	43.0	-25.8	-6.8	0.4	0.4	0.4	0.4
State and Local Government	526.5	528.6	530.8	532.9	535.0	537.1	539.2	541.3
% Ch, Annual Rate	1.5	1.6	1.7	1.6	1.6	1.6	1.6	1.5

Table A2.4 (continued)

Washington Nonagricultural Employment by Industry (Thousands)

Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Nonfarm Payroll Employment	3,593.6	3,601.2	3,608.5	3,615.3	3,621.7	3,627.4	3,632.5	3,637.0
% Ch, Annual Rate	0.9	0.9	0.8	0.8	0.7	0.6	0.6	0.5
Manufacturing	291.4	291.9	292.6	293.3	294.1	294.8	295.4	295.9
% Ch, Annual Rate	0.7	0.7	0.9	1.0	1.0	1.0	0.9	0.7
Durable Manufacturing	204.2	204.6	205.1	205.6	206.2	206.7	207.1	207.5
% Ch, Annual Rate	0.8	0.8	1.0	1.1	1.0	1.0	0.9	0.7
Wood Products	13.0	13.0	13.0	13.0	13.1	13.1	13.1	13.0
% Ch, Annual Rate	0.7	0.2	0.5	0.8	0.5	0.5	-0.3	-1.1
Primary and Fabricated Metals	25.2	25.2	25.3	25.5	25.6	25.8	25.9	26.0
% Ch, Annual Rate	-0.3	0.5	1.5	2.0	2.3	2.4	2.2	1.5
Computer and Electronic Products	21.1	21.3	21.5	21.6	21.7	21.8	21.9	22.0
% Ch, Annual Rate	3.6	3.0	3.1	2.6	2.3	1.9	1.7	1.6
Machinery and Electrical Equipment	23.4	23.6	23.8	24.1	24.3	24.6	24.8	25.0
% Ch, Annual Rate	3.9	3.9	3.9	4.0	4.0	4.0	3.7	3.4
Aerospace	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	8.8	8.7	8.7	8.6	8.6	8.5	8.5	8.4
% Ch, Annual Rate	-2.6	-2.5	-2.3	-2.1	-2.1	-1.9	-2.7	-2.8
Other Durables	28.8	28.8	28.9	28.9	29.0	29.0	29.1	29.2
% Ch, Annual Rate	0.6	0.6	0.8	0.8	0.8	0.9	0.9	0.7
Nondurable Manufacturing	87.2	87.4	87.5	87.7	87.9	88.1	88.3	88.5
% Ch, Annual Rate	0.5	0.6	0.8	0.9	0.8	0.9	0.9	0.7
Food Manufacturing	39.8	39.8	39.8	39.9	39.9	40.0	40.0	40.0
% Ch, Annual Rate	0.0	0.1	0.4	0.5	0.5	0.6	0.6	0.3
Paper and Paper Products	7.1	7.1	7.0	7.0	7.0	7.0	7.0	6.9
% Ch, Annual Rate	-1.8	-1.7	-1.4	-1.2	-1.3	-1.0	-1.0	-1.3
Other Nondurables	40.4	40.5	40.7	40.8	41.0	41.2	41.3	41.5
% Ch, Annual Rate	1.4	1.4	1.6	1.6	1.5	1.6	1.6	1.4
Natural Resources and Mining	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
% Ch, Annual Rate	0.7	0.2	0.2	0.2	0.0	-0.1	-0.5	-0.3
Construction	211.8	211.5	211.2	210.9	210.6	210.2	209.8	209.3
% Ch, Annual Rate	-0.4	-0.4	-0.5	-0.6	-0.7	-0.7	-0.8	-0.9
Trade, Transportation, and Utilities	656.1	656.0	655.7	655.5	654.9	654.7	654.3	653.9
% Ch, Annual Rate	-0.2	-0.1	-0.2	-0.1	-0.4	-0.2	-0.2	-0.2
Wholesale Trade	142.2	142.1	142.2	142.1	142.2	142.1	142.1	142.0
% Ch, Annual Rate	0.2	-0.1	0.0	-0.1	0.1	-0.1	-0.2	-0.2
Retail Trade	406.4	406.4	406.3	406.3	405.7	405.7	405.5	405.4
% Ch, Annual Rate	-0.3	0.0	-0.1	0.0	-0.5	0.0	-0.1	-0.1
Electronic Shopping and Mail-Order	65.0	65.4	65.9	66.3	66.7	67.1	67.5	67.9
% Ch	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3
Other Retail Trade	341.4	341.0	340.4	340.0	339.0	338.6	338.0	337.5
% Ch	-0.9	-0.5	-0.6	-0.5	-1.1	-0.5	-0.6	-0.6
Trans., Warehousing, and Utilities	107.6	107.5	107.3	107.1	107.0	106.8	106.7	106.5
% Ch, Annual Rate	-0.3	-0.6	-0.6	-0.6	-0.5	-0.6	-0.6	-0.7
Information	142.6	142.8	143.0	143.1	143.2	143.2	143.7	144.2
% Ch, Annual Rate	1.2	0.6	0.4	0.4	0.2	0.0	1.6	1.3
Software Publishers	69.1	69.4	69.7	70.0	70.3	70.6	71.0	71.3
% Ch, Annual Rate	1.8	1.7	1.7	1.8	1.8	1.8	1.9	1.9
Other Publishing Industries	3.1	3.0	2.9	2.8	2.8	2.7	2.6	2.5
% Ch, Annual Rate	-10.4	-11.3	-11.4	-11.4	-10.8	-11.1	-11.0	-11.1
Other Information	70.4	70.4	70.4	70.3	70.1	69.8	70.2	70.4
% Ch, Annual Rate	1.2	0.1	-0.3	-0.5	-1.0	-1.4	1.8	1.2
Financial Activities	158.3	157.9	157.5	157.1	156.8	156.3	155.9	155.5
% Ch, Annual Rate	-0.6	-1.0	-1.1	-1.1	-0.7	-1.2	-1.1	-1.0
Professional and Business Services	495.4	499.0	502.6	506.1	509.8	512.5	514.6	516.5
% Ch, Annual Rate	3.3	3.0	2.9	2.8	3.0	2.2	1.6	1.5
Education and Health Services	521.3	522.4	523.5	524.5	525.8	526.7	527.6	528.4
% Ch, Annual Rate	1.1	0.8	0.8	0.8	1.0	0.7	0.6	0.7
Leisure and Hospitality	359.7	360.3	360.8	361.2	360.9	361.3	361.6	361.8
% Ch, Annual Rate	0.2	0.7	0.5	0.4	-0.3	0.4	0.3	0.2
Other Services	129.2	129.5	129.8	130.1	130.4	130.6	130.8	131.1
% Ch, Annual Rate	1.1	1.0	0.9	0.8	0.9	0.8	0.7	0.7
Federal Government	77.7	77.8	77.8	77.9	77.9	78.0	78.0	78.1
% Ch, Annual Rate	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2
State and Local Government	543.3	545.2	547.1	548.9	550.7	552.4	554.0	555.5
% Ch, Annual Rate	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.1

Table A3.1

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

Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Personal Income	16,125.1	16,830.9	17,588.0	18,416.2	19,255.2	20,094.8	20,977.5	21,886.4
% Ch	2.6	4.4	4.5	4.7	4.6	4.4	4.4	4.3
Total Wage and Salary Disbursements	8,080.7	8,453.8	8,858.0	9,250.7	9,668.2	10,107.4	10,585.8	11,080.5
% Ch	2.9	4.6	4.8	4.4	4.5	4.5	4.7	4.7
Nonwage Personal Income	8,044.5	8,377.1	8,730.0	9,165.5	9,587.0	9,987.3	10,391.7	10,805.9
% Ch	2.3	4.1	4.2	5.0	4.6	4.2	4.0	4.0
Supplements to Wages and Salaries	1,875.6	1,953.4	2,022.3	2,099.8	2,195.2	2,292.9	2,393.1	2,493.0
% Ch	1.8	4.1	3.5	3.8	4.5	4.5	4.4	4.2
Proprietor's Income	1,419.3	1,500.9	1,581.7	1,642.4	1,656.4	1,662.8	1,672.5	1,689.2
% Ch	-0.2	5.8	5.4	3.8	0.9	0.4	0.6	1.0
Farm	37.5	38.9	40.2	50.5	70.3	77.0	75.1	74.8
% Ch	...	...	...	...	...	...	...	...
Nonfarm	1,381.8	1,462.0	1,541.5	1,591.9	1,586.1	1,585.7	1,597.4	1,614.4
% Ch	1.2	5.8	5.4	3.3	-0.4	0.0	0.7	1.1
Less: Contribution For Govt. Soc. Ins.	1,239.9	1,298.6	1,365.4	1,421.9	1,478.2	1,540.7	1,610.3	1,683.2
% Ch	2.9	4.7	5.1	4.1	4.0	4.2	4.5	4.5
Dividends/Int./Rent	3,211.4	3,361.8	3,518.1	3,723.5	3,935.2	4,131.5	4,336.1	4,529.7
% Ch	2.8	4.7	4.6	5.8	5.7	5.0	5.0	4.5
Transfer Payments	2,778.1	2,859.7	2,973.4	3,121.7	3,278.4	3,440.8	3,600.2	3,777.2
% Ch	3.5	2.9	4.0	5.0	5.0	5.0	4.6	4.9

Table A3.2

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

Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	17,319.2	17,497.6	17,678.1	17,857.1	18,102.3	18,311.4	18,521.4	18,729.7
% Ch, Annual Rate	5.2	4.2	4.2	4.1	5.6	4.7	4.7	4.6
Total Wage and Salary Disbursements	8,710.6	8,805.8	8,907.6	9,007.9	9,101.9	9,200.6	9,300.0	9,400.3
% Ch, Annual Rate	5.8	4.4	4.7	4.6	4.2	4.4	4.4	4.4
Nonwage Personal Income	8,608.5	8,691.9	8,770.5	8,849.2	9,000.4	9,110.8	9,221.4	9,329.4
% Ch, Annual Rate	4.5	3.9	3.7	3.6	7.0	5.0	4.9	4.8
Supplements to Wages and Salaries	1,999.4	2,014.5	2,029.9	2,045.3	2,067.8	2,088.7	2,110.3	2,132.4
% Ch, Annual Rate	3.9	3.0	3.1	3.1	4.5	4.1	4.2	4.3
Proprietor's Income	1,549.9	1,573.5	1,590.6	1,612.9	1,630.8	1,639.3	1,646.4	1,653.1
% Ch, Annual Rate	6.4	6.2	4.4	5.7	4.5	2.1	1.8	1.6
Farm	35.2	42.1	41.7	41.9	45.1	48.2	51.8	56.8
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,514.7	1,531.4	1,548.9	1,571.0	1,585.7	1,591.1	1,594.7	1,596.2
% Ch, Annual Rate	6.6	4.5	4.7	5.8	3.8	1.4	0.9	0.4
Less: Contribution For Govt. Soc. Ins.	1,343.6	1,357.1	1,372.3	1,388.7	1,405.0	1,416.1	1,427.5	1,439.2
% Ch, Annual Rate	8.2	4.1	4.5	4.9	4.8	3.2	3.3	3.3
Dividends/Int./Rent	3,468.8	3,497.4	3,536.0	3,570.0	3,633.2	3,694.3	3,754.3	3,812.4
% Ch, Annual Rate	3.6	3.3	4.5	3.9	7.3	6.9	6.7	6.3
Transfer Payments	2,933.9	2,963.6	2,986.3	3,009.6	3,073.6	3,104.6	3,137.8	3,170.7
% Ch, Annual Rate	6.6	4.1	3.1	3.2	8.8	4.1	4.3	4.3

Table A3.2 (continued)

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

Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	18,959.5	19,165.3	19,351.0	19,544.8	19,774.3	19,985.5	20,200.1	20,419.2
% Ch, Annual Rate	5.0	4.4	3.9	4.1	4.8	4.3	4.4	4.4
Total Wage and Salary Disbursements	9,508.1	9,622.5	9,719.5	9,822.6	9,934.3	10,047.9	10,164.3	10,283.2
% Ch, Annual Rate	4.7	4.9	4.1	4.3	4.6	4.7	4.7	4.8
Nonwage Personal Income	9,451.5	9,542.8	9,631.6	9,722.2	9,840.0	9,937.6	10,035.8	10,136.0
% Ch, Annual Rate	5.3	3.9	3.8	3.8	4.9	4.0	4.0	4.1
Supplements to Wages and Salaries	2,159.4	2,184.9	2,206.8	2,229.6	2,256.8	2,280.7	2,304.9	2,329.3
% Ch, Annual Rate	5.2	4.8	4.1	4.2	5.0	4.3	4.3	4.3
Proprietor's Income	1,658.0	1,656.2	1,655.6	1,656.0	1,658.9	1,661.1	1,663.7	1,667.5
% Ch, Annual Rate	1.2	-0.4	-0.1	0.1	0.7	0.5	0.6	0.9
Farm	64.1	69.4	72.9	74.8	76.7	77.4	77.3	76.8
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,593.9	1,586.8	1,582.7	1,581.2	1,582.2	1,583.7	1,586.4	1,590.7
% Ch, Annual Rate	-0.6	-1.8	-1.0	-0.4	0.3	0.4	0.7	1.1
Less: Contribution For Govt. Soc. Ins.	1,458.6	1,472.5	1,484.4	1,497.3	1,518.3	1,532.9	1,548.0	1,563.5
% Ch, Annual Rate	5.5	3.9	3.3	3.5	5.7	3.9	4.0	4.1
Dividends/Int./Rent	3,866.1	3,913.4	3,957.9	4,003.2	4,053.7	4,105.5	4,157.1	4,209.7
% Ch, Annual Rate	5.8	5.0	4.6	4.7	5.1	5.2	5.1	5.2
Transfer Payments	3,226.5	3,260.8	3,295.7	3,330.7	3,388.9	3,423.2	3,458.1	3,493.0
% Ch, Annual Rate	7.2	4.3	4.4	4.3	7.2	4.1	4.1	4.1

Table A3.2 (continued)

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

Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Personal Income	20,652.6	20,867.5	21,086.4	21,303.5	21,550.1	21,775.2	21,997.9	22,222.3
% Ch, Annual Rate	4.7	4.2	4.3	4.2	4.7	4.2	4.2	4.1
Total Wage and Salary Disbursements	10,403.2	10,523.6	10,646.6	10,770.0	10,895.1	11,019.5	11,142.6	11,264.8
% Ch, Annual Rate	4.8	4.7	4.8	4.7	4.7	4.6	4.5	4.5
Nonwage Personal Income	10,249.4	10,343.9	10,439.9	10,533.5	10,654.9	10,755.7	10,855.3	10,957.6
% Ch, Annual Rate	4.6	3.7	3.8	3.6	4.7	3.8	3.8	3.8
Supplements to Wages and Salaries	2,357.0	2,381.1	2,405.3	2,429.2	2,456.8	2,480.9	2,505.0	2,529.5
% Ch, Annual Rate	4.8	4.2	4.1	4.0	4.6	4.0	4.0	4.0
Proprietor's Income	1,667.7	1,670.2	1,674.5	1,677.6	1,680.6	1,685.4	1,691.6	1,699.2
% Ch, Annual Rate	0.1	0.6	1.0	0.7	0.7	1.1	1.5	1.8
Farm	76.0	75.3	74.8	74.4	74.3	74.5	75.0	75.6
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,591.7	1,594.8	1,599.7	1,603.2	1,606.4	1,610.9	1,616.6	1,623.6
% Ch, Annual Rate	0.2	0.8	1.2	0.9	0.8	1.1	1.4	1.8
Less: Contribution For Govt. Soc. Ins.	1,586.3	1,602.1	1,618.3	1,634.6	1,658.6	1,675.2	1,691.5	1,707.6
% Ch, Annual Rate	6.0	4.1	4.1	4.1	6.0	4.0	4.0	3.9
Dividends/Int./Rent	4,260.7	4,311.3	4,361.6	4,410.7	4,459.9	4,507.8	4,552.8	4,598.2
% Ch, Annual Rate	4.9	4.8	4.8	4.6	4.5	4.4	4.1	4.0
Transfer Payments	3,550.2	3,583.4	3,616.8	3,650.5	3,716.2	3,756.8	3,797.4	3,838.3
% Ch, Annual Rate	6.7	3.8	3.8	3.8	7.4	4.4	4.4	4.4

Table A3.3

Washington Personal Income by Component (Billions of Dollars)

Forecast 2018 to 2023

	2016	2017	2018	2019	2020	2021	2022	2023
Personal Income	397.772	419.962	447.811	470.962	494.875	518.707	543.784	569.477
% Ch	4.7	5.6	6.6	5.2	5.1	4.8	4.8	4.7
Total Wage and Salary Disbursements	203.613	218.726	238.257	249.534	261.850	274.466	288.099	302.242
% Ch	6.1	7.4	8.9	4.7	4.9	4.8	5.0	4.9
Manufacturing	21.735	21.714	22.812	23.379	24.204	25.110	26.263	27.553
% Ch	-0.3	-0.1	5.1	2.5	3.5	3.7	4.6	4.9
Durable Manufacturing	17.318	17.098	17.906	18.273	18.917	19.617	20.517	21.521
% Ch	-1.6	-1.3	4.7	2.0	3.5	3.7	4.6	4.9
Nondurable Manufacturing	4.417	4.616	4.906	5.106	5.287	5.493	5.746	6.032
% Ch	4.9	4.5	6.3	4.1	3.5	3.9	4.6	5.0
Nonmanufacturing	174.750	189.669	207.812	218.225	229.394	240.776	252.913	265.419
% Ch	7.1	8.5	9.6	5.0	5.1	5.0	5.0	4.9
Other Private Wages	1.197	1.285	1.355	1.402	1.454	1.505	1.559	1.612
% Ch	4.0	7.4	5.4	3.5	3.7	3.5	3.6	3.4
Farm Wages	1.813	1.880	1.932	2.032	2.139	2.249	2.367	2.486
% Ch	13.2	3.6	2.8	5.2	5.3	5.1	5.2	5.0
Military Wages	4.118	4.178	4.347	4.495	4.660	4.827	4.997	5.172
% Ch	0.2	1.5	4.0	3.4	3.7	3.6	3.5	3.5
Nonwage Personal Income	194.159	201.236	209.555	221.428	233.025	244.240	255.685	267.235
% Ch	3.2	3.6	4.1	5.7	5.2	4.8	4.7	4.5
Supplements to Wages and Salaries	46.494	49.258	52.098	54.457	57.132	59.808	62.544	65.242
% Ch	6.0	5.9	5.8	4.5	4.9	4.7	4.6	4.3
Proprietor's Income	29.803	30.444	31.654	32.529	32.389	32.342	32.520	32.828
% Ch	0.9	2.2	4.0	2.8	-0.4	-0.1	0.6	0.9
Farm	2.496	1.784	1.477	1.290	1.290	1.271	1.228	1.210
% Ch	...	...	...	...	...	...	...	...
Nonfarm	27.307	28.659	30.177	31.239	31.099	31.072	31.293	31.618
% Ch	1.9	5.0	5.3	3.5	-0.4	-0.1	0.7	1.0
Less: Contribution For Govt. Soc. Ins.	33.536	35.833	38.849	40.649	42.380	44.241	46.298	48.448
% Ch	4.2	6.8	8.4	4.6	4.3	4.4	4.6	4.6
Plus: Residence Adjustment	3.717	3.814	3.972	4.158	4.354	4.564	4.795	5.037
% Ch	5.1	2.6	4.1	4.7	4.7	4.8	5.1	5.0
Dividends/Int./Rent	88.021	91.884	95.805	102.259	108.867	114.977	121.259	127.186
% Ch	1.4	4.4	4.3	6.7	6.5	5.6	5.5	4.9
Transfer Payments	59.662	61.669	64.875	68.673	72.662	76.790	80.863	85.389
% Ch	5.6	3.4	5.2	5.9	5.8	5.7	5.3	5.6
State U.I. Benefits	0.982	0.964	0.872	0.531	0.606	0.708	0.751	0.876
% Ch	1.2	-1.9	-9.6	-39.1	14.2	16.9	6.1	16.6
Other Transfers	58.679	60.705	64.003	68.143	72.056	76.082	80.112	84.513
% Ch	5.7	3.5	5.4	6.5	5.7	5.6	5.3	5.5

Table A3.4

Washington Personal Income by Component (Billions of Dollars)

Forecast 2018 to 2023

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	441.835	444.239	450.018	455.152	461.965	468.039	473.979	479.866
% Ch, Annual Rate	13.1	2.2	5.3	4.6	6.1	5.4	5.2	5.1
Total Wage and Salary Disbursements	235.612	235.772	239.335	242.307	245.126	248.118	250.990	253.901
% Ch, Annual Rate	23.0	0.3	6.2	5.1	4.7	5.0	4.7	4.7
Manufacturing	23.505	22.266	22.598	22.877	23.093	23.283	23.447	23.693
% Ch, Annual Rate	27.6	-19.5	6.1	5.0	3.8	3.3	2.9	4.3
Durable Manufacturing	18.677	17.394	17.667	17.886	18.047	18.200	18.325	18.519
% Ch, Annual Rate	31.4	-24.8	6.4	5.1	3.6	3.4	2.8	4.3
Nondurable Manufacturing	4.827	4.872	4.932	4.992	5.047	5.083	5.122	5.173
% Ch, Annual Rate	14.2	3.8	5.0	5.0	4.5	2.9	3.1	4.1
Nonmanufacturing	204.524	205.918	209.080	211.725	214.207	216.937	219.573	222.185
% Ch, Annual Rate	23.1	2.8	6.3	5.2	4.8	5.2	4.9	4.8
Other Private Wages	1.347	1.343	1.358	1.371	1.383	1.397	1.409	1.421
% Ch, Annual Rate	-0.7	-1.2	4.5	3.7	3.7	4.0	3.6	3.5
Farm Wages	1.911	1.911	1.940	1.966	1.991	2.019	2.045	2.071
% Ch, Annual Rate	2.7	0.0	6.2	5.4	5.3	5.7	5.3	5.1
Military Wages	4.325	4.334	4.358	4.369	4.452	4.483	4.516	4.532
% Ch, Annual Rate	12.1	0.8	2.2	1.0	7.8	2.9	3.0	1.4
Nonwage Personal Income	206.223	208.467	210.684	212.845	216.838	219.921	222.989	225.965
% Ch, Annual Rate	2.9	4.4	4.3	4.2	7.7	5.8	5.7	5.4
Supplements to Wages and Salaries	51.323	51.822	52.384	52.863	53.531	54.158	54.765	55.376
% Ch, Annual Rate	8.4	3.9	4.4	3.7	5.2	4.8	4.6	4.5
Proprietor's Income	31.150	31.481	31.802	32.181	32.442	32.519	32.566	32.590
% Ch, Annual Rate	4.3	4.3	4.1	4.9	3.3	1.0	0.6	0.3
Farm	1.583	1.524	1.435	1.364	1.324	1.293	1.273	1.269
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	29.567	29.957	30.366	30.817	31.117	31.226	31.293	31.321
% Ch, Annual Rate	4.6	5.4	5.6	6.1	4.0	1.4	0.9	0.4
Less: Contribution For Govt. Soc. Ins.	38.109	38.568	39.110	39.611	40.116	40.475	40.823	41.181
% Ch, Annual Rate	15.1	4.9	5.7	5.2	5.2	3.6	3.5	3.6
Plus: Residence Adjustment	3.883	3.957	4.001	4.048	4.091	4.135	4.181	4.228
% Ch, Annual Rate	-1.3	7.9	4.6	4.8	4.3	4.3	4.5	4.6
Dividends/Int./Rent	94.155	95.134	96.397	97.534	99.470	101.352	103.207	105.006
% Ch, Annual Rate	2.9	4.2	5.4	4.8	8.2	7.8	7.5	7.2
Transfer Payments	63.821	64.640	65.209	65.829	67.421	68.233	69.093	69.946
% Ch, Annual Rate	5.0	5.2	3.6	3.9	10.0	4.9	5.1	5.0
State U.I. Benefits	0.944	0.917	0.917	0.710	0.597	0.523	0.496	0.506
% Ch, Annual Rate	-9.5	-10.9	0.0	-64.1	-49.8	-41.2	-19.1	8.6
Other Transfers	62.877	63.723	64.292	65.120	66.823	67.710	68.598	69.440
% Ch, Annual Rate	5.3	5.5	3.6	5.3	10.9	5.4	5.3	5.0

Table A3.4 (continued)

Washington Personal Income by Component (Billions of Dollars)

Forecast 2018 to 2023

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	486.302	492.412	497.610	503.176	509.628	515.612	521.702	527.885
% Ch, Annual Rate	5.5	5.1	4.3	4.6	5.2	4.8	4.8	4.8
Total Wage and Salary Disbursements	257.095	260.630	263.341	266.335	269.576	272.788	276.082	279.419
% Ch, Annual Rate	5.1	5.6	4.2	4.6	5.0	4.9	4.9	4.9
Manufacturing	23.904	24.108	24.300	24.504	24.727	24.967	25.234	25.511
% Ch, Annual Rate	3.6	3.5	3.2	3.4	3.7	3.9	4.4	4.5
Durable Manufacturing	18.682	18.842	18.993	19.151	19.321	19.505	19.711	19.929
% Ch, Annual Rate	3.6	3.5	3.3	3.4	3.6	3.8	4.3	4.5
Nondurable Manufacturing	5.221	5.266	5.306	5.353	5.406	5.462	5.523	5.582
% Ch, Annual Rate	3.8	3.5	3.1	3.5	4.0	4.2	4.5	4.4
Nonmanufacturing	225.043	228.297	230.749	233.485	236.377	239.275	242.225	245.226
% Ch, Annual Rate	5.2	5.9	4.4	4.8	5.0	5.0	5.0	5.0
Other Private Wages	1.435	1.450	1.460	1.472	1.485	1.498	1.511	1.525
% Ch, Annual Rate	3.8	4.2	2.9	3.3	3.7	3.6	3.6	3.6
Farm Wages	2.098	2.129	2.152	2.178	2.206	2.234	2.263	2.292
% Ch, Annual Rate	5.4	5.9	4.4	4.9	5.3	5.2	5.3	5.2
Military Wages	4.615	4.647	4.681	4.697	4.781	4.814	4.848	4.865
% Ch, Annual Rate	7.6	2.8	2.9	1.4	7.4	2.8	2.9	1.4
Nonwage Personal Income	229.206	231.782	234.269	236.841	240.052	242.824	245.619	248.466
% Ch, Annual Rate	5.9	4.6	4.4	4.5	5.5	4.7	4.7	4.7
Supplements to Wages and Salaries	56.140	56.878	57.444	58.067	58.831	59.479	60.134	60.789
% Ch, Annual Rate	5.6	5.4	4.0	4.4	5.4	4.5	4.5	4.4
Proprietor's Income	32.548	32.411	32.319	32.279	32.290	32.308	32.350	32.422
% Ch, Annual Rate	-0.5	-1.7	-1.1	-0.5	0.1	0.2	0.5	0.9
Farm	1.285	1.294	1.294	1.288	1.286	1.277	1.266	1.254
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	31.263	31.117	31.025	30.990	31.004	31.030	31.084	31.169
% Ch, Annual Rate	-0.7	-1.9	-1.2	-0.4	0.2	0.3	0.7	1.1
Less: Contribution For Govt. Soc. Ins.	41.771	42.222	42.568	42.958	43.584	44.014	44.458	44.909
% Ch, Annual Rate	5.9	4.4	3.3	3.7	6.0	4.0	4.1	4.1
Plus: Residence Adjustment	4.278	4.331	4.379	4.428	4.481	4.535	4.592	4.649
% Ch, Annual Rate	4.9	5.0	4.5	4.6	4.9	5.0	5.0	5.1
Dividends/Int./Rent	106.684	108.179	109.590	111.017	112.583	114.180	115.767	117.379
% Ch, Annual Rate	6.5	5.7	5.3	5.3	5.8	5.8	5.7	5.7
Transfer Payments	71.328	72.206	73.106	74.008	75.452	76.337	77.236	78.135
% Ch, Annual Rate	8.1	5.0	5.1	5.0	8.0	4.8	4.8	4.7
State U.I. Benefits	0.536	0.583	0.635	0.670	0.688	0.705	0.716	0.723
% Ch, Annual Rate	25.8	39.6	41.2	23.8	11.2	10.2	6.5	4.0
Other Transfers	70.792	71.624	72.470	73.338	74.764	75.632	76.520	77.412
% Ch, Annual Rate	8.0	4.8	4.8	4.9	8.0	4.7	4.8	4.7

Table A3.4 (continued)

Washington Personal Income by Component (Billions of Dollars)

Forecast 2018 to 2023

	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2023:4
Personal Income	534.539	540.668	546.889	553.039	559.997	566.325	572.640	578.945
% Ch, Annual Rate	5.1	4.7	4.7	4.6	5.1	4.6	4.5	4.5
Total Wage and Salary Disbursements	282.918	286.340	289.828	293.308	296.955	300.471	304.025	307.515
% Ch, Annual Rate	5.1	4.9	5.0	4.9	5.1	4.8	4.8	4.7
Manufacturing	25.803	26.100	26.414	26.735	27.062	27.393	27.720	28.037
% Ch, Annual Rate	4.7	4.7	4.9	5.0	5.0	5.0	4.9	4.7
Durable Manufacturing	20.157	20.390	20.635	20.886	21.140	21.398	21.650	21.896
% Ch, Annual Rate	4.7	4.7	4.9	4.9	5.0	5.0	4.8	4.6
Nondurable Manufacturing	5.645	5.710	5.779	5.850	5.921	5.995	6.070	6.141
% Ch, Annual Rate	4.6	4.7	4.9	5.0	5.0	5.1	5.1	4.8
Nonmanufacturing	248.304	251.353	254.448	257.547	260.736	263.844	266.992	270.104
% Ch, Annual Rate	5.1	5.0	5.0	5.0	5.0	4.9	4.9	4.7
Other Private Wages	1.539	1.552	1.566	1.579	1.593	1.606	1.619	1.631
% Ch, Annual Rate	3.7	3.5	3.5	3.4	3.6	3.3	3.3	3.1
Farm Wages	2.322	2.352	2.381	2.411	2.442	2.471	2.501	2.530
% Ch, Annual Rate	5.4	5.1	5.1	5.0	5.2	4.9	4.9	4.7
Military Wages	4.950	4.984	5.019	5.037	5.123	5.158	5.194	5.213
% Ch, Annual Rate	7.2	2.7	2.8	1.5	7.0	2.7	2.8	1.5
Nonwage Personal Income	251.621	254.328	257.061	259.731	263.043	265.853	268.616	271.430
% Ch, Annual Rate	5.2	4.4	4.4	4.2	5.2	4.3	4.2	4.3
Supplements to Wages and Salaries	61.574	62.224	62.872	63.507	64.278	64.914	65.565	66.213
% Ch, Annual Rate	5.3	4.3	4.2	4.1	4.9	4.0	4.1	4.0
Proprietor's Income	32.426	32.475	32.561	32.619	32.673	32.758	32.870	33.013
% Ch, Annual Rate	0.0	0.6	1.1	0.7	0.7	1.0	1.4	1.7
Farm	1.242	1.231	1.222	1.215	1.211	1.209	1.209	1.211
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	31.184	31.245	31.339	31.404	31.462	31.549	31.661	31.801
% Ch, Annual Rate	0.2	0.8	1.2	0.8	0.7	1.1	1.4	1.8
Less: Contribution For Govt. Soc. Ins.	45.591	46.058	46.534	47.008	47.724	48.206	48.692	49.168
% Ch, Annual Rate	6.2	4.2	4.2	4.1	6.2	4.1	4.1	4.0
Plus: Residence Adjustment	4.706	4.765	4.825	4.886	4.946	5.008	5.068	5.128
% Ch, Annual Rate	5.0	5.1	5.1	5.1	5.0	5.1	4.9	4.8
Dividends/Int./Rent	118.947	120.499	122.042	123.548	125.053	126.517	127.895	129.279
% Ch, Annual Rate	5.5	5.3	5.2	5.0	5.0	4.8	4.4	4.4
Transfer Payments	79.558	80.423	81.295	82.178	83.817	84.863	85.910	86.966
% Ch, Annual Rate	7.5	4.4	4.4	4.4	8.2	5.1	5.0	5.0
State U.I. Benefits	0.729	0.741	0.756	0.779	0.806	0.845	0.897	0.955
% Ch, Annual Rate	3.1	6.9	8.4	12.5	14.9	20.6	27.2	28.1
Other Transfers	78.829	79.681	80.539	81.400	83.011	84.018	85.013	86.011
% Ch, Annual Rate	7.5	4.4	4.4	4.3	8.2	4.9	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	2.386	2.5
2013	101.3	1.3	2.330	1.5	2.416	1.2
2014	102.9	1.5	2.367	1.6	2.460	1.8
2015	103.1	0.3	2.370	0.1	2.494	1.4
2016	104.2	1.1	2.400	1.3	2.550	2.3
2017	106.1	1.8	2.451	2.1	2.627	3.0
Forecast						
2018	108.3	2.1	2.515	2.6	2.707	3.0
2019	110.5	2.0	2.571	2.2	2.767	2.2
2020	112.8	2.0	2.627	2.2	2.831	2.3
2021	114.9	1.9	2.680	2.0	2.893	2.2
2022	117.1	1.9	2.734	2.0	2.956	2.2
2023	119.3	1.9	2.789	2.0	3.020	2.2

* 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	104.9	2.5	102.9	1.9	98.3	-0.6	93.5	-3.8
2015	106.8	1.9	104.1	1.1	69.8	-29.0	68.7	-26.6
2016	109.3	2.3	103.0	-1.0	58.0	-16.9	61.0	-11.1
2017	112.0	2.4	102.9	-0.1	66.9	15.3	68.9	12.9
Forecast								
2018	114.9	2.6	103.4	0.6	77.8	16.3	80.0	16.1
2019	118.1	2.8	104.6	1.1	84.2	8.2	83.1	3.9
2020	121.4	2.7	106.2	1.5	86.6	2.9	83.0	-0.1
2021	124.5	2.6	107.9	1.7	87.2	0.7	81.2	-2.2
2022	127.7	2.5	109.5	1.5	88.2	1.1	80.0	-1.4
2023	130.8	2.5	111.2	1.5	89.2	1.1	78.9	-1.4

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	54.6	87.1
2017	7310.3	126.6	1.8	91.2	55.4	90.8
Forecast						
2018	7426.3	116.0	1.6	93.5	56.5	79.1
2019	7535.5	109.2	1.5	94.8	57.5	71.8
2020	7638.4	102.9	1.4	96.0	58.4	65.3
2021	7736.2	97.8	1.3	96.9	59.5	60.5
2022	7827.9	91.6	1.2	97.3	60.6	54.9
2023	7916.0	88.2	1.1	98.0	61.8	52.0

* As of April 1 of Each Year

Source: Office of Financial Management

Table A5.2
Washington Population*
 (Thousands)

	Actual					Forecast				
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Population	6968.2	7061.4	7183.7	7310.3	7426.3	7535.5	7638.4	7736.2	7827.9	7916.0
Percent Change	1.2	1.3	1.7	1.8	1.6	1.5	1.4	1.3	1.2	1.1
Age 17 and Under	1588.4	1602.8	1625.6	1649.6	1671.0	1691.4	1713.0	1733.4	1750.8	1766.4
Percent of Total	22.8	22.7	22.6	22.6	22.5	22.4	22.4	22.4	22.4	22.3
Age 6-18	1151.0	1162.2	1178.6	1194.9	1210.1	1223.5	1235.6	1250.1	1263.7	1275.4
Percent of Total	16.5	16.5	16.4	16.3	16.3	16.2	16.2	16.2	16.1	16.1
Age 18 and Over	5379.8	5458.7	5558.1	5660.7	5755.4	5844.1	5925.4	6002.8	6077.1	6149.6
Percent of Total	77.2	77.3	77.4	77.4	77.5	77.6	77.6	77.6	77.6	77.7
Age 21 and Over	5107.4	5187.1	5284.0	5382.7	5473.8	5560.3	5642.3	5721.1	5795.0	5863.5
Percent of Total	73.3	73.5	73.6	73.6	73.7	73.8	73.9	74.0	74.0	74.1
Age 20-34	1445.8	1458.8	1482.6	1506.7	1525.9	1543.7	1557.3	1568.7	1577.6	1584.1
Percent of Total	20.7	20.7	20.6	20.6	20.5	20.5	20.4	20.3	20.2	20.0
Age 18-64	4396.9	4431.0	4484.7	4539.0	4581.8	4618.8	4646.2	4671.2	4693.6	4714.2
Percent of Total	63.1	62.7	62.4	62.1	61.7	61.3	60.8	60.4	60.0	59.6
Age 65 and Over	982.8	1027.7	1073.4	1121.8	1173.6	1225.3	1279.2	1331.6	1383.4	1435.4
Percent of Total	14.1	14.6	14.9	15.3	15.8	16.3	16.7	17.2	17.7	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	August 2018	+
U.S. Real GDP Growth	2nd quarter 2018	+
U.S. ISM Index	September 2018	-
U.S. Employment YOY%Δ	September 2018	+
U.S. Unemployment Rate	September 2018	+
U.S. Consumer Confidence	September 2018	+
U.S. Consumer Sentiment	September 2018	+
U.S. Light Vehicle Sales	August 2018	-
U.S. CPI YOY%Δ	August 2018	+
U.S. Home Prices YOY%Δ	July 2018	-
S&P 500 Index	October 2018	-
WA Leading Index	August 2018	-
WA ISM-WW Index	August 2018	+
WA Employment YOY%Δ	August 2018	+
WA Aerospace Empl. YOY%Δ	August 2018	-
WA Unemployment Rate	August 2018	+
WA Help Wanted Index	September 2018	+
WA Business Cycle Indicator	August 2018	+
WA Initial Unemploy. Claims	August 2018	-
WA Housing Permits	August 2018	+
WA Weekly Hours in Mfg.	August 2018	+
WA New Vehicle Registration	August 2018	-
WA In-Migration	August 2018	+
WA Exports-Total YOY%Δ	2nd quarter 2018	-
WA Exports- w/o Trans. Equip. YOY%Δ	2nd quarter 2018	+
Seattle CPI YOY%Δ	August 2018	+
Seattle Home Prices YOY%Δ	July 2018	-
WA Construction Activity Index	August 2018	-

*Change from the previous reading

Table A6.2

Washington Business Indicators

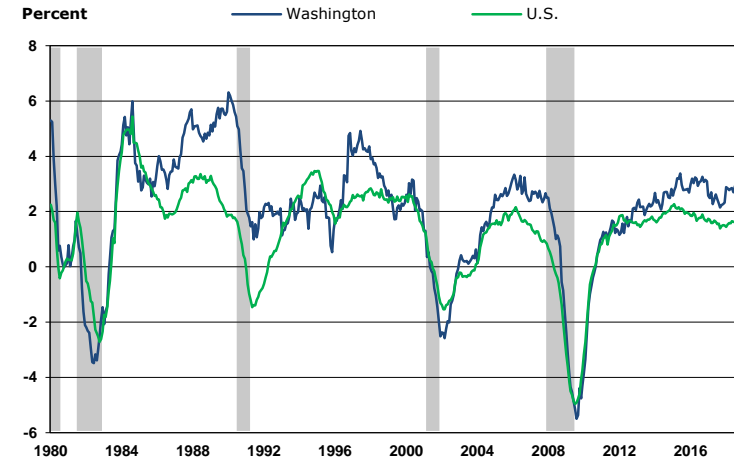
Historical Data

	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	114.4	92.0	44.2	95.3	118.2	63.5	51.8
2014:02	114.2	92.5	42.9	93.0	118.5	68.7	54.3
2014:03	114.8	93.4	43.5	94.0	118.6	63.6	54.4
2014:04	115.5	93.5	46.1	96.8	120.6	53.7	55.3
2014:05	115.7	94.0	46.6	95.8	118.7	59.6	55.6
2014:06	116.8	94.7	47.2	97.2	121.0	67.0	55.7
2014:07	116.9	95.2	48.6	97.0	121.3	50.1	56.4
2014:08	117.1	95.5	49.0	97.5	121.6	62.9	58.1
2014:09	116.9	96.1	49.0	99.0	114.3	60.3	56.1
2014:10	117.4	96.4	48.9	100.6	119.0	57.6	57.9
2014:11	118.1	96.8	51.2	101.9	128.0	63.1	57.6
2014:12	117.8	97.3	51.8	103.2	122.0	53.3	55.1
2015:01	117.5	97.4	52.7	99.4	127.6	66.6	53.5
2015:02	118.7	97.4	57.8	108.6	137.2	65.9	52.9
2015:03	118.1	97.9	57.5	100.6	138.8	64.1	51.5
2015:04	118.3	98.4	58.4	99.0	135.7	60.4	51.5
2015:05	118.6	98.8	58.7	98.0	139.0	60.3	52.8
2015:06	118.9	99.3	59.0	99.5	136.0	51.4	53.5
2015:07	118.7	99.1	59.9	99.6	141.0	53.6	52.7
2015:08	118.3	99.1	59.1	99.0	139.1	48.0	51.1
2015:09	117.1	99.0	58.2	95.4	126.6	48.0	50.2
2015:10	118.2	99.4	59.6	99.4	132.4	46.1	50.1
2015:11	118.5	99.8	60.2	100.9	134.3	50.0	48.6
2015:12	118.0	99.6	62.9	98.7	130.7	54.5	48.0
2016:01	117.7	99.3	64.6	101.5	128.7	57.2	48.2
2016:02	117.9	99.2	66.4	101.7	124.9	55.4	49.7
2016:03	118.7	99.2	64.3	105.1	128.9	55.7	51.7
2016:04	119.3	99.7	65.2	102.5	130.9	50.8	50.7
2016:05	120.4	99.5	67.7	106.1	148.2	49.2	51.0
2016:06	120.4	99.8	68.3	104.0	151.3	49.1	52.8
2016:07	120.7	100.2	69.0	102.6	156.3	50.8	52.3
2016:08	120.6	100.2	67.8	102.1	153.1	47.7	49.4
2016:09	121.0	100.4	68.2	107.3	143.4	51.4	51.7
2016:10	120.8	100.5	69.4	102.2	152.3	53.1	52.0
2016:11	120.6	100.7	71.1	104.4	148.8	53.3	53.5
2016:12	120.1	101.2	72.3	103.1	149.2	47.3	54.5
2017:01	120.8	101.8	71.2	103.1	152.5	54.2	56.0
2017:02	120.2	102.1	70.2	103.6	140.1	48.6	57.7
2017:03	121.0	102.6	72.4	102.5	143.4	59.2	57.2
2017:04	121.8	102.8	71.5	108.2	143.3	59.2	54.8
2017:05	121.9	103.2	73.5	102.8	149.2	45.0	54.9
2017:06	122.6	103.8	73.4	106.1	145.4	50.0	57.8
2017:07	122.8	104.1	73.6	105.7	139.5	47.0	56.3
2017:08	123.0	104.5	75.2	106.0	135.1	58.2	58.8
2017:09	123.1	104.5	77.1	101.3	140.4	57.5	60.8
2017:10	124.0	105.9	78.3	106.8	132.7	51.8	58.7
2017:11	123.2	106.3	81.1	98.1	134.7	65.0	58.2
2017:12	124.8	107.1	80.5	106.3	138.6	65.8	59.7
2018:01	124.2	107.8	79.5	101.4	136.8	60.8	59.1
2018:02	124.8	108.5	80.4	102.9	133.3	68.3	60.8
2018:03	125.9	108.8	82.1	110.5	137.4	68.0	59.3
2018:04	126.0	109.3	81.2	106.9	133.7	55.8	57.3
2018:05	124.9	109.4	82.6	104.6	128.0	61.7	58.7
2018:06	124.5	110.0	82.9	104.7	123.1	56.0	60.2
2018:07	125.0	110.8	83.1	104.8	124.8	60.0	58.1
2018:08	124.4	111.2	83.2	102.7	123.4	61.1	61.3
2018:09					131.5		59.8

Figure A7.1: Washington State Economic Indicators

Year-over-Year Employment Growth

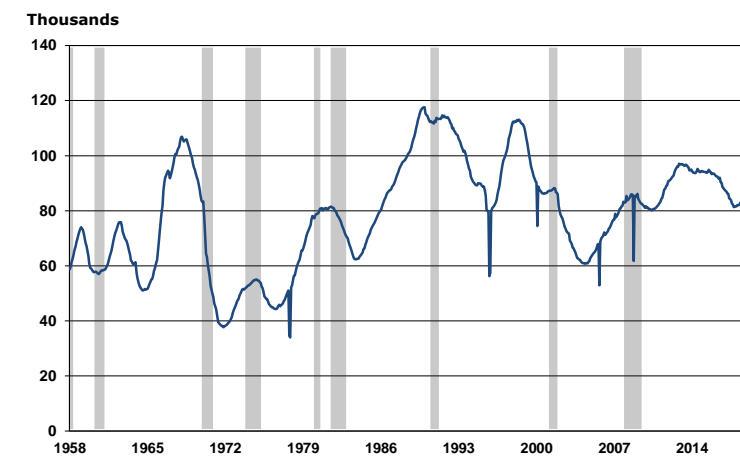
January 1980 to September 2018



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

Washington Aircraft and Parts Employment

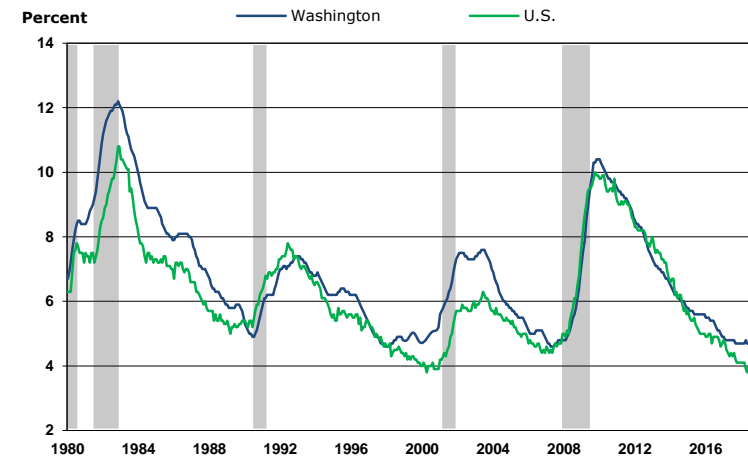
January 1958 to August 2018



* Source: Bureau of Labor Statistics, ERFC

Unemployment Rate, S.A.

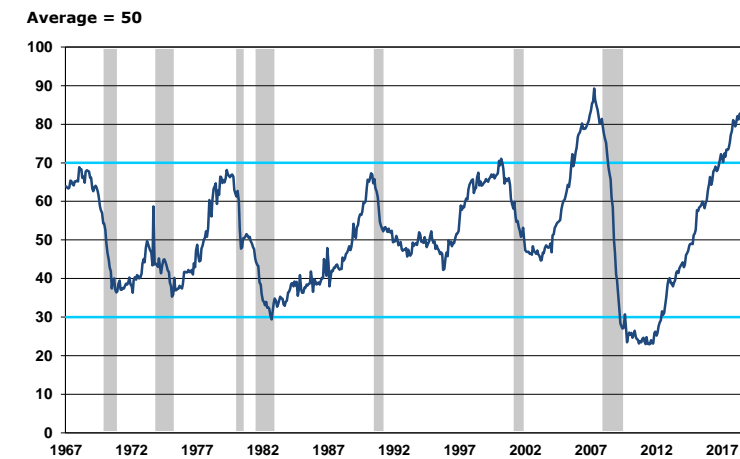
January 1980 to September 2018



* Source: Bureau of Labor Statistics

Washington Business Cycle Indicator

January 1968 to August 2018



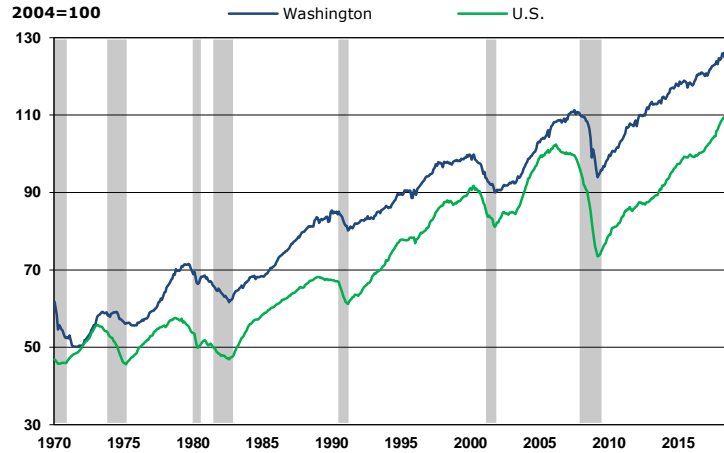
* Source: ERFC

* Shaded areas correspond with national recessions.
Appendix

Figure A7.2: Washington State Leading Indicators

The Washington and U.S. Indexes of Leading Indicators

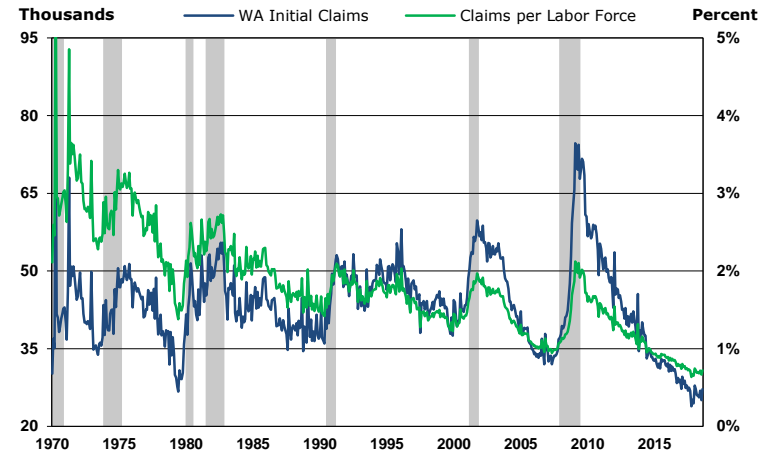
January 1970 to August 2018



* The Conference Board, ERFC

Washington Initial Claims for Unemployment Insurance

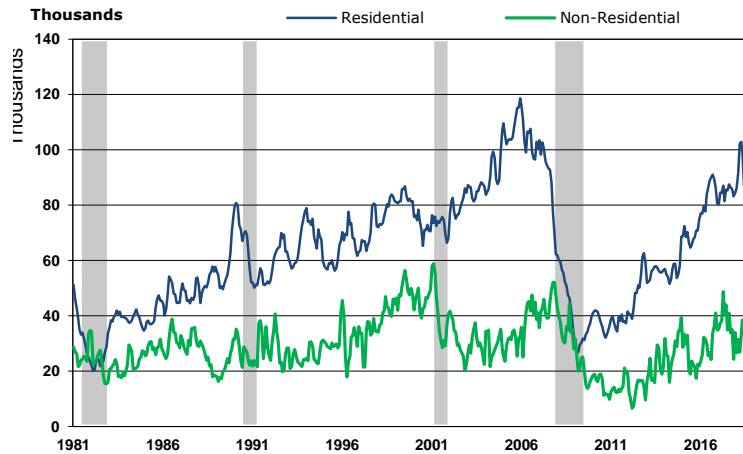
January 1970 to August 2018, S.A.



* Source: WA State Employment Security, ERFC

Square Footage of Construction Projects in WA State

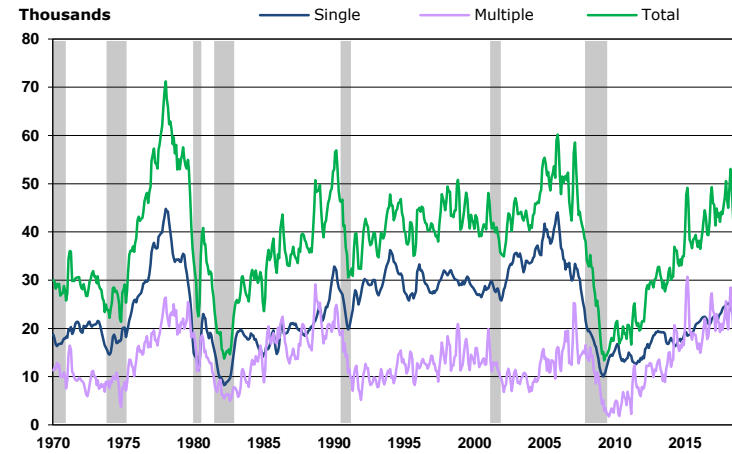
January 1981 to August 2018, 3mma, SAAR



* Source: McGraw-Hill Construction, ERFC

Housing Units Authorized in Washington State

January 1970 to August 2018, 3mma, SAAR



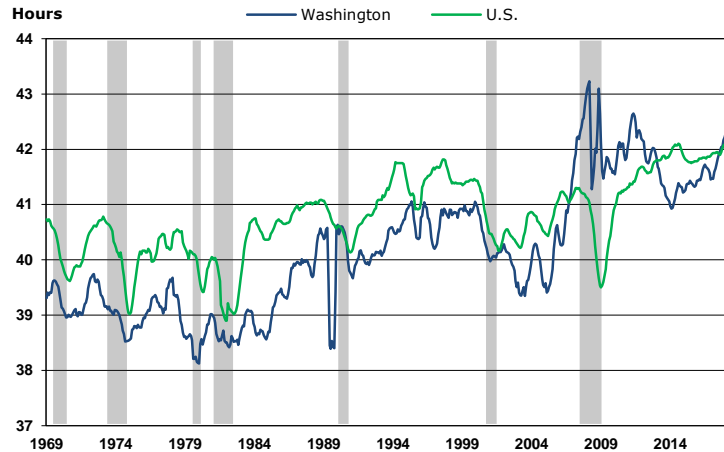
* Source: Census Bureau, ERFC

* Shaded areas correspond with national recessions.
Appendix

Figure A7.3: Other State Economic Indicators

Average Weekly Hours in Manufacturing

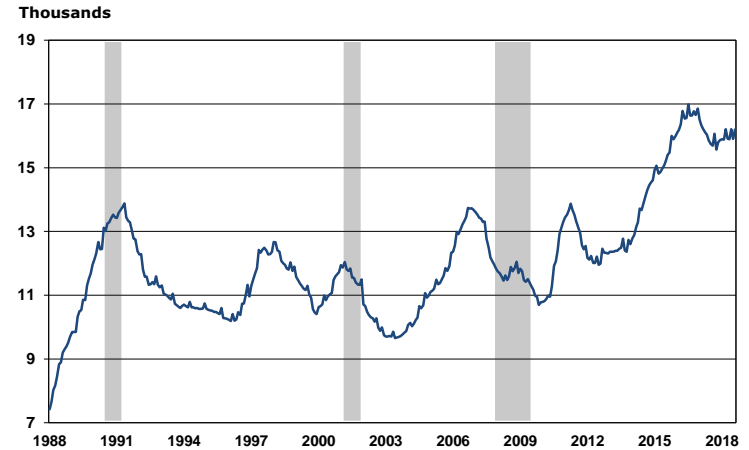
June 1969 to August 2018, 6-Mo. Moving Average, S.A.



* Bureau of Labor Statistics, ERFC

Washington Driver's License In-Migration

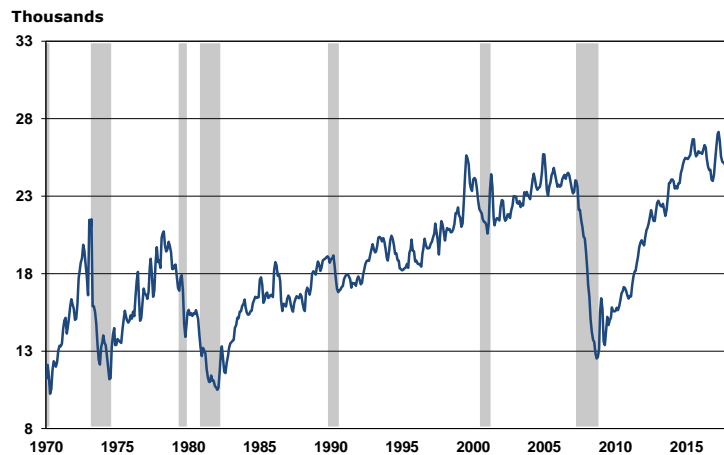
January 1988 to August 2018, 12-Month Moving Average



* Source: WA State Department of Licensing, ERFC

New Car and Truck Registrations in Washington

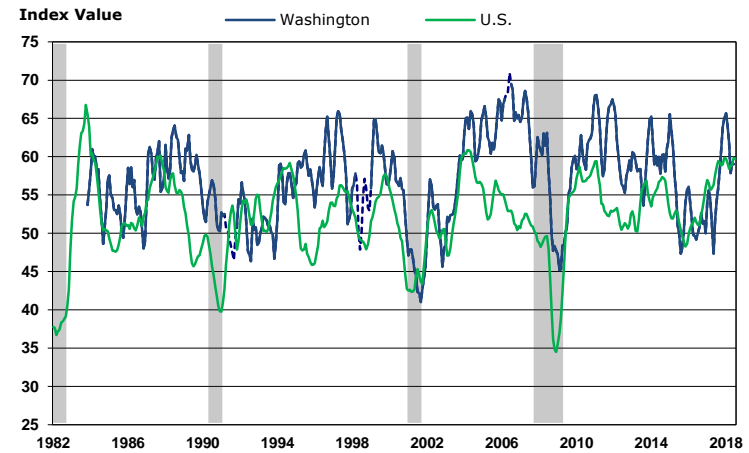
September 1970 to August 2018, 3-Month Moving Average, S.A.



* Source: WA State Department of Licensing, ERFC

Institute for Supply Management Index

March 1982 to September 2018, 3-Month Moving Average, S.A.



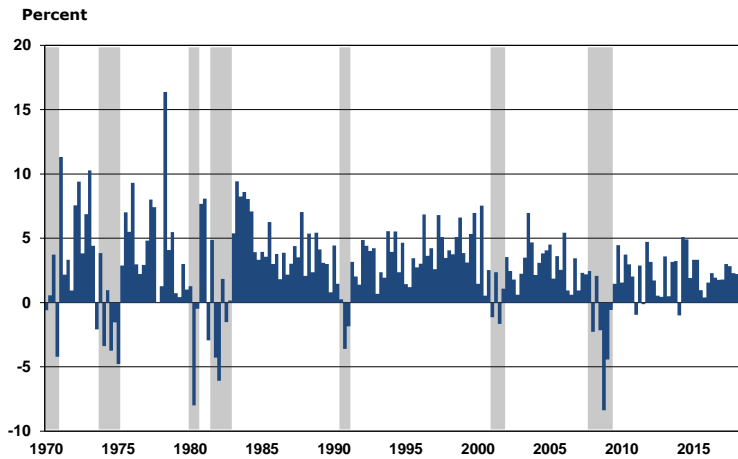
* Source: Institute for Supply Management, ISM-WW, ERFC

* Shaded areas correspond with national recessions.
Appendix

Figure A7.4: Other Economic Indicators

Quarterly U.S. Real GDP Growth

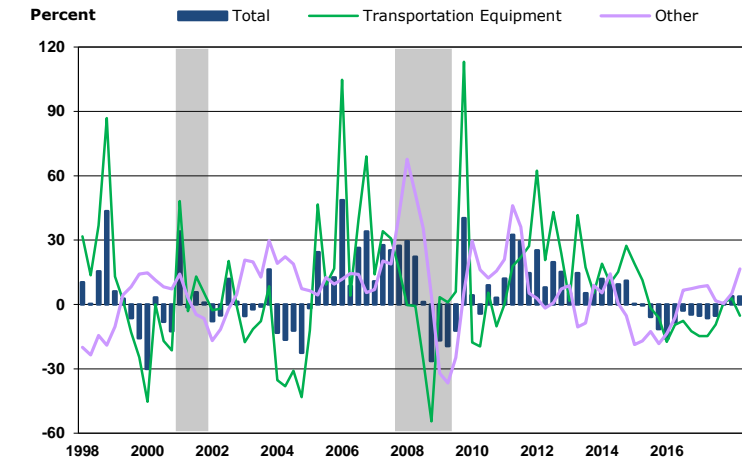
1970Q1 to 2018Q2, SAAR



* Source: Bureau of Economic Analysis

Washington State Export Composition

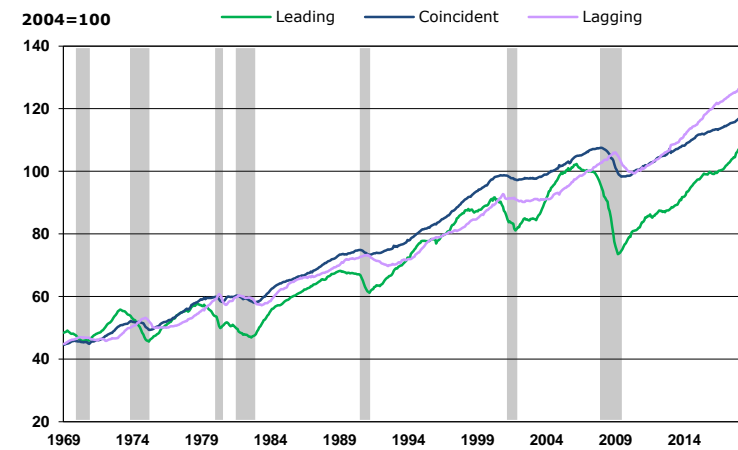
1998Q1 to 2018Q2, Year-over-year percent change



* Source: WISER

U.S. Economic Indicators

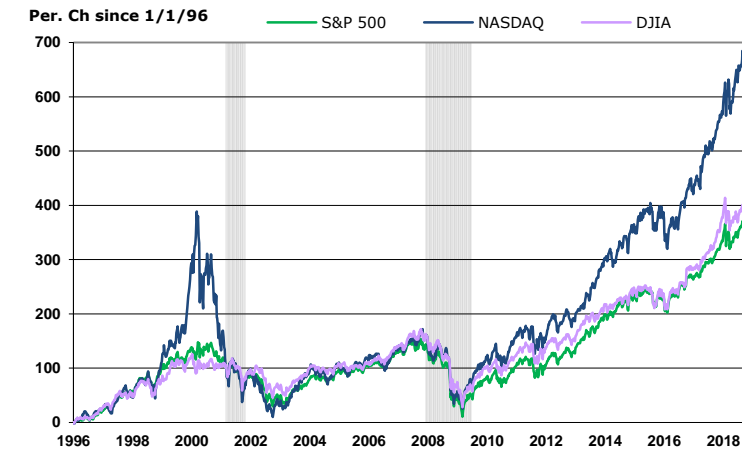
January 1969 to December 2017



* Source: The Conference Board

National Stock Indexes

January 1, 1996 to October 5, 2018



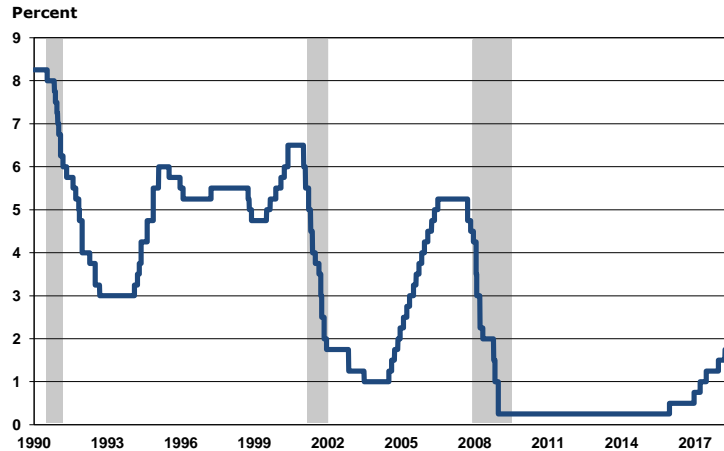
* Source: ERFC

* Shaded areas correspond with national recessions.
Appendix

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

Federal Funds Target Rate

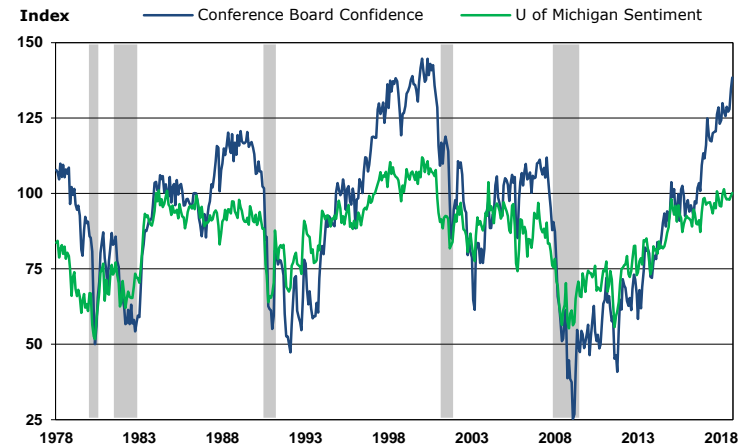
January 1, 1990 to October 5, 2018



* Federal Reserve

Consumer Confidence

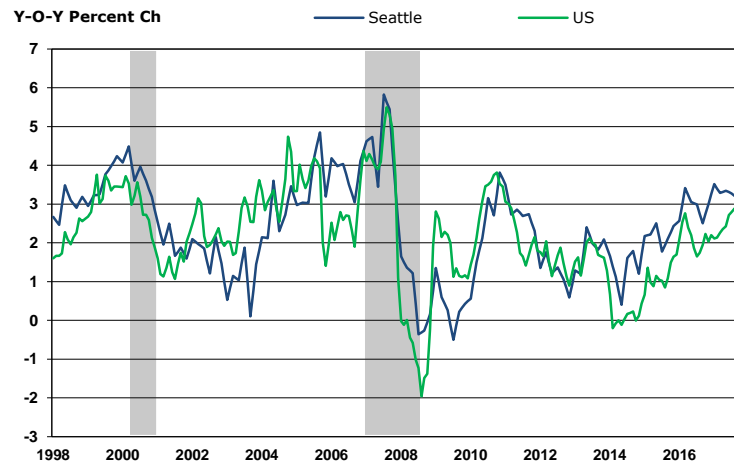
March 1978 to September 2018



* Source: The Conference Board, University of Michigan

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

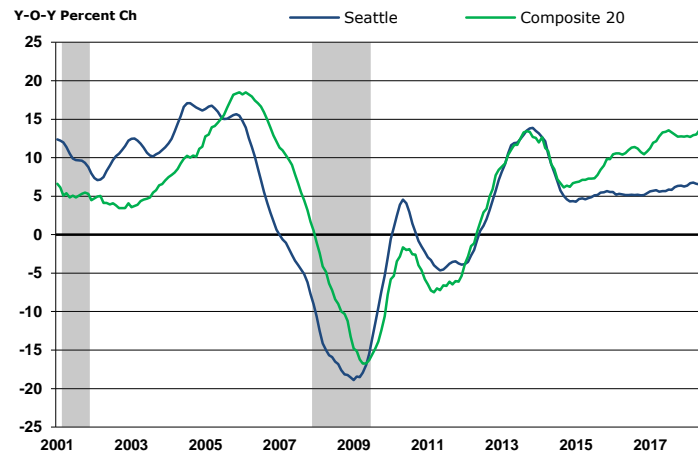
December 1998 to August 2018



* Source: Bureau of Labor Statistics

Case Shiller Home Price Index

January 2001 to July 2018, 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.

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.