

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**

November 2017  
Volume XL, No. 4



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# **Washington State Economic and Revenue Forecast**

Prepared by the  
Economic and Revenue Forecast Council

November 2017  
Volume XL, No. 4

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# Preface

## **ERFC forecasting structure and schedule**

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

## **Forecast Procedure**

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

Data in this publication are accurate through November 29, 2017.

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## Executive Summary

- **The national economy continues to expand at a moderate pace. Real GDP rose 3.3% (SAAR) in the third quarter after growing 3.1% (SAAR) in the second quarter.**
- **The Blue Chip Consensus GDP forecast calls for real GDP growth of 2.5% in 2018, up from 2.4% in the prior forecast. The forecast calls for growth of 2.1%, 2.1%, and 2.0% from 2019 through 2021.**
- **Since the November 2016 presidential election, no major policy changes have been enacted. The November forecast no longer includes an increase in infrastructure spending and tax changes.**
- **Historical Washington personal income was revised significantly higher, raising the level throughout the forecast.**
- **Washington employment has also been revised higher and growth has exceeded expectations.**
- **As in September, we expect the Washington economy to continue to outperform the U.S. economy.**
- **Revenue collections since the September 2017 forecast have come in \$119 million over the forecasted amount.**
- **The final total of General Fund – State (GF-S) revenue for the 2015-17 biennium is \$6 million higher than the preliminary estimate in September.**
- **Forecast increases from changes to the economic forecast were relatively small. Total expected GF-S revenue increased \$304 million in the 2017-19 biennium and \$186 million in the 2019-21 biennium.**

## U.S. Economic Forecast

*The national economy continues to expand at a moderate pace*

The national economy continues to expand at a moderate pace. Real GDP rose 3.3% (SAAR) in the third quarter after growing 3.1% in the second quarter of the year. Job gains have remained solid even as the economy approaches full employment. The unemployment rate has dipped below pre-recession levels. Consumer and business confidence have improved and are now at cyclical highs. The housing market continues to improve at a slow pace. Oil prices have remained low, freeing up resources for consumers. There continue to be uncertainty around federal

fiscal policy. Monetary policy has remained steady, although the Federal Reserve is set to be under new leadership. The global economy has improved but the outlook remains relatively weak. Geopolitical risks, while elevated, have had little impact on the U.S. economy.

*The economic outlook is largely unchanged*

The economic outlook is largely unchanged from the September forecast. Our November forecast for real GDP growth is unchanged for 2017 at 2.2%. The forecast calls for real GDP growth of 2.5% in 2018, up from 2.4% in the September forecast. The forecast calls for growth of 2.1%, 2.1%, and 2.0% from 2019 through 2021, up slightly from the 2.1%, 2.0%, and 2.0% in the previous forecast. Our final economic forecast incorporates the impacts of Hurricane Harvey and Hurricane Irma.

*The fiscal policy outlook no longer includes potential policy changes*

Since the November 2016 presidential election, no major policy changes have been enacted. The September forecast included a \$22 billion annual increase in infrastructure spending beginning in 2018, personal and corporate tax cuts, and a boost from receipts on repatriated overseas profits. Tax cuts (see Figure 1.6) and other potential fiscal policy changes are no longer included in the forecast. While several proposals for healthcare reform are being discussed, no legislation has passed, so we have not incorporated any related changes to the forecast.

## **Washington Economic Forecast**

*The Washington economy is expanding at a rapid pace*

The Washington economy is expanding at a rapid pace. Historical estimates of personal income have been revised significantly higher. Employment has also been revised higher and growth has exceeded expectations. Seattle home prices continue to rise very rapidly and housing construction remains strong. Washington exports continue to decline due to transportation equipment and manufacturing continues to struggle. Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.

*Our November forecast for Washington State features higher personal income than in September*

The November forecast for Washington State is generally similar to the September forecast with the notable exception of higher personal income. Washington employment is expected to grow 3.0% this year, up from 2.9% in the September forecast. We expect employment growth to average 1.6% per year in 2018 through 2021, which is the same rate assumed in September. Our forecast for nominal personal income growth this year is 5.5%, down from 5.8% in the September forecast. While the growth rate is lower, the level of personal income in 2017 is 1.9% higher than in the September forecast because of the annual revision to the NIPAs. Our new forecast for nominal personal income growth in 2018 through 2021 averages 5.1% per year, the same rate as expected in the September forecast. The November housing construction forecast is very close to the

forecast adopted in September. We expect total housing units authorized by building permits to decline 2.2% this year to 43,100 units compared to 43,000 in the September forecast. We expect permits to average 42,200 during the next four years compared to 42,300 in September. As in September, we expect the all-items Seattle CPI to rise 2.9% this year. We expect Seattle area inflation will average 2.4% per year in 2018 through 2021, up slightly from an average rate of 2.2% per year in the September forecast.

## Revenue Forecast

*The revenue forecast has increased slightly*

Since the September forecast, General Fund – State (GF-S) revenue collections have come in \$119 million higher than forecasted. Almost a third of the surplus revenue, however, came from one-time non-economic factors: there were \$12 million in net one-time payments of past-due taxes and \$26 million in transfers of unclaimed property in to the GF-S that stemmed from an amnesty program and some early payments. The adjusted surplus was therefore closer to what had been forecasted. The new state economic forecast similarly produced a relatively small change in projected revenues, which was positive on net.

*GF-S forecast change by biennium (millions):*  
15-17: +\$6  
17-19: +\$304  
19-21: +\$186

For the 2015-17 biennium, which ended on June 30, 2017, the final tally of total collections was \$38,317.4 million, \$6.1 million more than estimated in September. For the current biennium, revenue sources that are tracked monthly came in \$119.1 million higher than forecasted in September. Changes to the economic forecast resulted in a \$185.0 million increase to projected collections for the rest of the biennium. The total of these components was a \$304.1 million increase in projected revenue for the current 2017-19 biennium. Changes to the economic forecast resulted in a \$185.8 million increase to projected collections for the 2019-21 biennium. GF-S revenue is now forecasted to total \$43,565.8 million in the 2017-19 biennium and \$47,582.2 million in the 2019-21 biennium.

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

- **The national economy continues to expand at a moderate pace. Real GDP rose 3.3% (SAAR) in the third quarter after growing 3.1% (SAAR) in the second quarter.**
- **Employment growth has been solid.**
- **Consumer and business confidence remain high.**
- **The manufacturing sector is strong and construction appears to be improving.**
- **Oil prices remain low and inflation is moderate.**
- **Exports are once again improving. Foreign growth has stabilized and the dollar remains weaker than a year ago.**
- **The Blue Chip Consensus GDP forecast calls for real GDP growth of 2.5% in 2018, up from 2.4% in the prior forecast. The forecast calls for growth of 2.1%, 2.1%, and 2.0% from 2019 through 2021.**
- **Since the November 2016 presidential election, no major policy changes have been enacted. The November forecast no longer includes an increase in infrastructure spending and tax changes.**
- **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 continues to expand at a moderate pace*

The national economy continues to expand at a moderate pace. Real GDP rose 3.3% (SAAR) in the third quarter after growing 3.1% in the second quarter of the year. Job gains have remained solid even as the economy approaches full employment. The unemployment rate has dipped below pre-recession levels. Consumer and business confidence have improved and are now at cyclical highs. The housing market continues to improve at a slow pace. Oil prices have remained low, freeing up resources for consumers. There continue to be uncertainty around federal fiscal policy. Monetary policy has remained steady, although the Federal Reserve is set to be under new leadership. The global economy has improved but the outlook remains relatively weak.

Geopolitical risks, while elevated, have had little impact on the U.S. economy.

*U.S. real GDP rose 3.3% (SAAR) in the third quarter*

U.S. real GDP rose 3.3% (SAAR) in the third quarter of 2017 after growing 3.1% (SAAR) in the second quarter. Growth in consumer spending slowed from the previous quarter. Spending increased at a 2.3% rate (SAAR) and added 1.6 points to GDP growth. Fixed investment also made a positive contribution to growth, increasing 2.4% (SAAR) and adding 0.4 points to GDP growth. Both nonresidential structures and residential investment declined. The gains came from investment in equipment and intellectual property. Inventory investment added 0.8 points to overall growth. Final sales, which exclude the impact from inventories, increased 2.5% (SAAR). Government spending was slightly positive with growth from national defense spending offsetting declines from nondefense and state and local governments. Net exports added 0.4 points to growth. Growth in real disposable income slowed to just 0.5% (SAAR) after a 2.7% increase in the second quarter.

*Personal income growth improved to 2.8% in the third quarter*

Personal income growth improved to 2.8% (SAAR) in the third quarter from 2.3% (SAAR) the quarter before. Personal income is now up 2.6% from a year ago. Private sector wages were strong, increasing 4.1% (SAAR). Public sector wages grew 2.6% (SAAR). Over the past few years, private sector wages have increased faster than wages in the public sector. Total wage and salary growth was 3.8% (SAAR). Growth in rental income slowed but was still strong at 3.7% (SAAR) in the second quarter. The tight rental market has enabled landlords to increase rent, boosting their income. Transfer payment growth picked up to 2.9% (SAAR), led by increases in Medicaid payments and veterans' benefits. Unemployment insurance benefits fell, consistent with a tightening labor market. Proprietors' income increased just 1.1% (SAAR) due to a sharp drop in farm income. Interest income fell 1.1% (SAAR) and dividend income increased 1.7% (SAAR).

*Employment growth has remained solid*

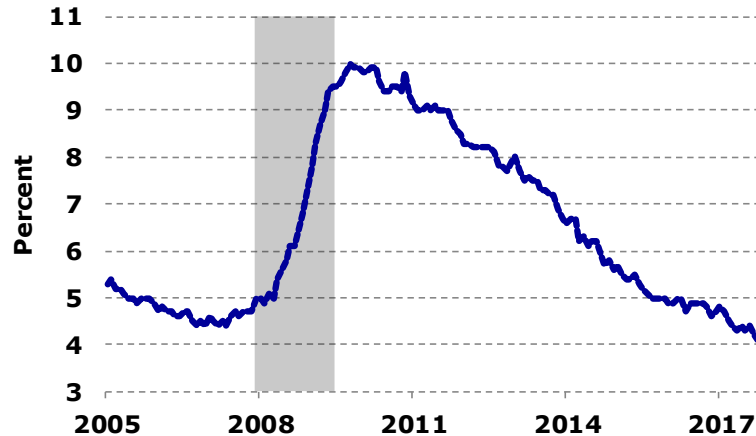
The trend in employment growth remains solid. Nonfarm payrolls rebounded from a storm depressed September gain of 18,000, increasing 261,000 in October. The three-month moving average of employment gains was 162,000, just below the 167,000 average gain over the past twelve months. The goods-producing sector increased 33,000 with gains in construction (+11,000) and manufacturing (+24,000), while mining and logging declined (-2,000). Private service-providing industries increased 219,000 in October. The leisure and hospitality sector led job gains (+106,000), as workers returned to work after being temporarily unemployed due to the hurricanes. Professional and business services were strong (+50,000) with a large gain from temporary help services (+18,300). Government employment added 9,000 jobs with gains in federal (+5,000), state (+2,000) and local (+2,000) government. Retail trade (-8,300) and information



(-1,000) both had employment declines in October. Continued job gains have fueled a steady decline in unemployment. The unemployment rate declined slightly to 4.1% in October and is at the lowest level since the end of 2000 (see Figure 1.1).

**Figure 1.1: Unemployment Rate**

*The unemployment rate continues to fall*



Source: U.S. Bureau of Labor Statistics; data through October 2017

*Consumer attitudes remain high*

Consumer attitudes have improved in recent months and remain high. In November, the Conference Board measure of consumer confidence increased 3.3 points to 129.5. Confidence is now at the highest level since December 2000. Respondents to the survey indicated they are more confident about present conditions and future expectations. Labor market confidence continued to rise with more people expecting job gains in the near future. The University of Michigan Consumer Sentiment Index fell by 2.2 points to 98.5 in October from September's post-recession high of 100.7. Sentiment remains up 4.7 points from a year ago.

*Small business confidence remains high*

Small business confidence remains high. The National Federation of Independent Business (NFIB) Index of Small Business Optimism increased 0.8 points to 103.8 in October. This is down slightly from the third quarter average of 104.5 but up 8.9 points from a year ago. In October, more small business owners said they expect higher sales and think that now is a good time to expand. Actual earnings have not tracked the improvement in expectations however. Sales improved again in October, although low sales volume is the number one cited reason for the decline in earnings. Employment changes have turned positive while openings and qualified applicants increased. Taxes remain the most cited concern for small businesses, just ahead of quality of labor.

*Oil prices remain low*

Oil prices have moved up recently but remain low. West Texas Intermediate (WTI) reached \$52 per barrel in October, up from \$50 in September. Brent crude oil was \$58 per barrel in October,

up from \$56 the prior month. Both prices are up from last year. U.S. crude production has increased 500,000 barrels per day since last year to 9.2 million barrels per day. The temporary impact in crude production from Hurricane Harvey is over. Internationally, the impact of Organization of Petroleum Exporting Countries' (OPEC) attempt to reduce supply appears limited. Previously, OPEC had hoped that some of the more expensive drilling techniques deployed in the U.S. would no longer be profitable and would be shut down. OPEC is expected to extend its deal with Russia and other oil producers to keep 1.8 million barrels a day off the market. Even if OPEC members can maintain the discipline of supply quotas, U.S. production is likely to ramp up, keeping prices in check. There is additional uncertainty surrounding oil markets as well. Saudi Arabia is undergoing leadership changes and the Venezuelan military has taken over its country's state run oil production.

*Inflation remains tame*

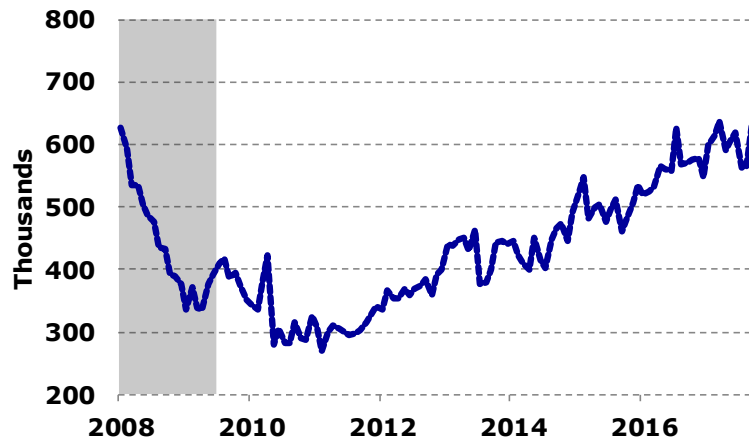
Headline inflation remains tame. The Consumer Price Index (CPI) increased 0.1% over the month in October, resulting in an increase of 2.0% since last year. Energy prices fell 1.0% in October, but remain up 6.4% since last year. Food price inflation is starting to pick up but remains low. Prices were flat over the month and are up 1.3% from last year. Shelter costs have been the primary driver of higher overall prices. Shelter costs increased 0.3% in October and are now up 3.2% year over year. Core inflation, which excludes food and energy, increased 0.2% in October. Year-over-year core inflation remains modest at 1.8%.

*The housing market is showing signs of improvement*

The housing market is showing signs of improvement after months of weakness. Housing starts increased 13.7% in October after declining for most of the year. The gain in starts was strong enough to reverse the losses so far this year. Single-family starts increased 5.3% while multi-family starts surged 36.8%. The multi-family segment, while somewhat sporadic, appears to have fully recovered from the housing downturn. Housing permits also increased in October. Total permits increased 7.4% and are up 2.4% from a year ago. Single-family permits are up 9.1% while multi-family permits are down 7.9% since last year. Much like housing starts, multi-family permits have essentially recovered from the housing downturn. New home sales increased 6.2% in September and are up 18.7% since last year (see Figure 1.2). Homes sold where construction had not started accounted for 36.1% of the sales in October, an increase from 28.5% in September. Homebuilder confidence declined in September but remains healthy. The National Association of Homebuilders (NAHB) Housing Market Index, which measures confidence of homebuilders, improved 2 points from last month to 70 (readings above 50 indicate a positive view of conditions). Current sales conditions rose two points to 77 and buyer traffic rose two points to hit the 50-point mark.

**Figure 1.2: New Home Sales**

*New home sales are picking up*



Source: U.S. Census Bureau; data through October 2017

*Home price appreciation remains strong*

Home price appreciation is strong. The seasonally adjusted Case-Shiller 20-city Home Price Index increased 0.5% over the month in September. Home prices are now 6.2% higher than a year ago. Home prices appear to be picking up steam. Prices have increased 47.0% since the trough in prices, and are now only 2.6% below their previous peak. Rising prices encourage new construction and are contributing to the high level of homebuilder confidence. Home price appreciation also enables previously underwater homeowners to sell their homes and trade up for more expensive houses. Despite the Federal Reserve's tightening of monetary policy, mortgage rates have remained low. The average rate for a fixed 30-year mortgage rose nine basis points from September to 3.90% in October. Freddie Mac and Fannie Mae have eased lending standards recently. Both debt-to-income ratios and minimum down payments have been made less stringent, making it easier for consumers to obtain a mortgage.

*The manufacturing sector remains strong*

The manufacturing sector remains strong. The Institute of Supply Management (ISM) Report on Business indicated a slowing in growth in the manufacturing sector as its index declined to 58.7 from 60.8 (index levels above 50 indicate expansion). This reading remains strong and pushed the three-month moving average to its highest level since 2004. The new orders component decreased by 1.2 points but remains strong at 63.4. Production fell 1.2 points to 61.0. The latest G-17 report from the Federal Reserve indicates a 1.3 percent increase in manufacturing output in October after a 0.4 percent increase the month before. The production of durable goods increased 0.4% while nondurable goods increased 2.3%. Manufacturing output is now 2.5% higher than last year. New orders for core capital goods (nondefense capital goods excluding aircraft) have been increasing since the beginning of the year (see Figure 1.3). New orders for core capital goods declined 0.5% in October after increasing by 2.1%

the month before. New orders are now 9.3% above year-ago levels.

**Figure 1.3: New Orders for Core Capital Goods**

*Manufacturing activity is improving*



Source: U.S. Census Bureau; data through October 2017

*U.S. exports are growing*

U.S. exports increased in the third quarter by 5.2% year over year. Aerospace exports rebounded, increasing 6.0% year over year. Oil and gas exports again increased dramatically, up 60.8% from a year ago. Global economic growth has picked up, increasing demand for U.S. products. The U.S. dollar remains weaker than last year, making U.S. exports affordable. Exports to the rest of North America picked up in the third quarter. Exports to Canada increased 5.6% while exports to Mexico were up 4.8%. Exports to China and Japan, our third and fourth largest trading partners, increased 13.5% and 5.2% respectively.

## Forecast

*Our forecast is based on the November Blue Chip Consensus forecast*

The economic forecast was based on a modified version of the November 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 November Blue Chip Consensus GDP forecasts for 2017 and 2018. We also matched the latest long-term Blue Chip GDP forecast for 2019 through 2021. Our oil price forecast was adjusted to reflect futures prices for both Brent crude oil and for West Texas Intermediate crude.

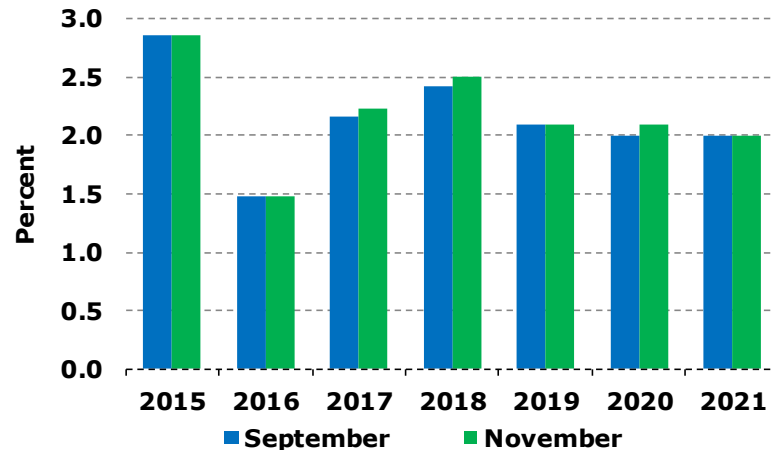
*The economic outlook is largely unchanged*

The economic outlook is largely unchanged from the September forecast. Our November forecast for real GDP growth is unchanged for 2017 at 2.2%. The forecast calls for real GDP growth of 2.5% in 2018, up from 2.4% in the September forecast. The forecast calls for growth of 2.1%, 2.1%, and 2.0% from 2019 through 2021, up slightly from the 2.1%, 2.0%, and

2.0% in the previous forecast (see Figure 1.4). Our final economic forecast incorporates the impacts of Hurricane Harvey and Hurricane Irma.

**Figure 1.4: Real GDP Growth**

*Real GDP growth is slightly higher*



Source: BEA, November 2017 ERFC forecast; historical data through 2016

*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 2021, the recovery will be at least 150 months. Through October, this recovery has already lasted 100 months. Prior to this, the longest recovery was from the 1990-91 recession and lasted 120 months. The primary 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 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 2021, which would result in 92 months of employment gains after reaching the previous employment peak.

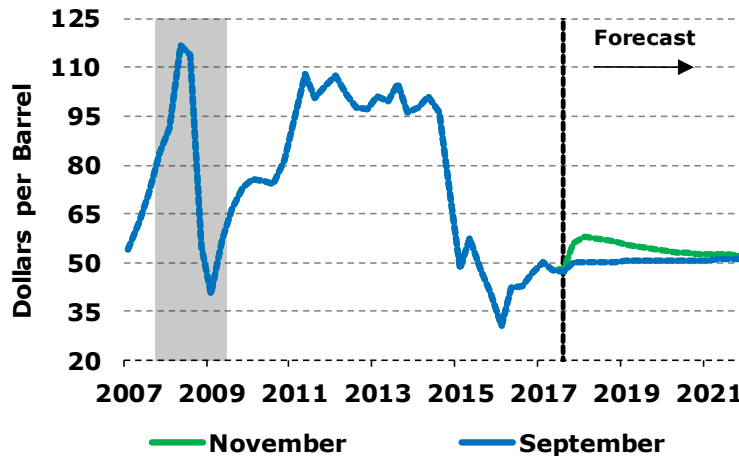
*Oil prices will remain low*

The oil price forecast changed by only a small amount since the September forecast. Comparatively, prices are slightly higher. The refiner acquisition price of crude oil is expected to increase to \$56 per barrel in the fourth quarter from \$48 per barrel in the second quarter. The forecast calls for \$57 to be the peak in 2018 before gradually declining throughout the forecast. We expect prices to decline to \$52 per barrel in 2021 (see Figure 1.5). Oil prices will remain well below the levels seen earlier in the recovery. The recent hurricanes have distorted oil price data temporarily, but will not have a lasting impact. Hurricane Harvey

caused only moderate damage to Gulf of Mexico oil production. Oil production in the U.S. has picked up over 9 million barrels per day in recent months. Production is just below the previous peak reached in the summer of 2015 when production hit 9.6 million barrels per day. The number of drilling structures has been increasing lately. The Baker Hughes rig count was at 915 in mid-November, an increase of 327 since last year.

**Figure 1.5: Average Price of Crude Oil**

*Oil prices are slightly higher in the near term*



Source: DOE, November 2017 forecast; historical data through 2017Q3

*Inflation will remain moderate*

Inflation (as measured by the price index for personal consumption expenditures) was just 1.2% in 2016, helped by a decline in energy prices. While energy prices will remain low, they are no longer declining and pulling inflation down. Rising housing costs have put upward pressure on inflation. Absent the downward pressure from energy prices, we expect low to moderate inflation throughout the forecast. We expect inflation to be 1.7% this year and then range from 1.8% to 2.0% each year from 2018 through 2021. Core inflation (minus food and energy) is expected to reach the Federal Reserve’s goal of 2%. The forecast calls for core inflation to be 1.5% this year and gradually increase to 2.1% in 2020 and 2021.

*The recent hurricanes affected consumer spending*

Real consumer spending was slightly stronger than expected in the third quarter of 2017, growing 2.4% (SAAR) compared to 2.2% (SAAR) expected in the previous forecast. The recent hurricanes will affect consumer spending in the short term. Third quarter growth was slowed as consumers curtailed purchases, although fourth quarter growth will be boosted due to rebuilding. We expect real consumer spending to grow 2.7% this year, unchanged from the September 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 continues to fall and more part-time workers are finding full-time jobs. The forecast calls for real consumption growth of 2.5% in 2018. Consumer

spending growth will then slow to 2.2% in 2019 and to 2.0% in 2020 and 2021. We expect consumer spending to contribute 1.6 percentage points to real GDP growth on average for each year of the forecast through 2021.

*Disposable personal income growth is expected to increase over the next few years*

Real disposable personal income growth is expected to slow this year to 1.3% from 1.4% in 2016. The boost to real incomes from falling energy prices has ended. Disposable income is lower than in September throughout the forecast due to the assumption of a tax cut no longer incorporated into the forecast. Growth will increase to 1.7% in 2018 and 2.6% in 2019. We expect growth to moderate to 2.2% in 2020 and 2.1% in 2021. Nominal disposable income is projected to grow 3.0% this year, led by strong growth in rental income of 5.2%. Interest income is expected to grow 3.8% in 2017 as the Federal Reserve slowly tightens monetary policy. Private sector wages and salaries are forecasted to grow 3.5%. Wage growth in the public sector will again lag, with growth of 2.6% in 2017. Total wages and salaries are expected to grow 3.4% this year after increasing 2.9% in 2016. The forecast then calls for growth in wages and salaries to average 4.1% in 2018 through 2021. Dividend payments are projected to grow 0.4% in 2017. Growth in government transfer payments is expected to be 2.9% this year. We expect growth to pick up an average of 5.5% per year in 2018 through 2021 as an increasingly older population results in rising Medicare and Social Security payments. Income will be boosted in the latter part of the forecast by rising interest income, as interest rates return to pre-recession levels, as well as by dividend income.

*The outlook for employment is only minimally changed*

The forecast for employment is changed minimally from the September forecast. As in the previous forecast, growth in payrolls is anticipated to be 1.5% this year following growth of 1.8% in 2016. We expect employment growth to slowly trend down to 0.5% by 2021. By 2021, the forecast expects 500,000 fewer jobs than in September, a difference of only 0.3%. Due to the steady job growth, we expect the unemployment rate to average 4.4% in 2017, down from 4.9% the year before. We expect the unemployment rate to average 4.1% from 2018 through 2021, down from the 4.3% assumed in September. The continued strengthening of the labor market and corresponding fall in the unemployment rate 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 be 61.5% in 2017. The labor force participation rate will grow, reaching a peak of 61.7% in 2019 after which the participation rate will resume its long-term secular decline.

*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 made up 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 1.7% this year, after growing by 1.9% in 2016. The forecast calls for private sector job growth of 1.3% in 2018 and then slowly declining to 0.6% in 2021.

*Business investment is expected to rebound this year*

Real nonresidential fixed investment is expected to grow 4.5% this year after falling 0.6% in 2016. The drop in oil prices, which is good for overall growth, lowered the incentive for additional investment by energy companies. The capital-intensive manufacturing sector is beginning to firm up after the strong U.S. dollar resulted in a drop in exports. Construction of new office space again slowed in the third quarter as office vacancy rates remain elevated at 16.1%. We expect real nonresidential construction to grow 5.5% this year before slowing to 2.4% in 2018. We then expect growth to average 2.9% per year through 2021. Real equipment investment is anticipated to grow 4.3% this year after declining 3.4% in 2016. We expect growth throughout the forecast as businesses expand and improve productivity. Although we do not expect to see the double-digit growth experienced early in the recovery, we do expect capital equipment to remain an important driver of GDP growth after this year. The forecast calls for growth to average 3.8% from 2018 through 2021. We expect overall real nonresidential fixed investment to average 3.4% growth from 2018 through 2021.

*The housing recovery will continue*

The forecast for housing starts is only minimally changed. The near-term forecast for housing starts is slightly lower, although by 2021 the number of housing starts is essentially the same as expected in September. The housing market stalled the past two quarters. Existing home sales have dropped and inventories continue to tighten. However, homebuilder confidence remains high and home prices continue to climb. Mortgage rates remain low by historical standards. We expect housing starts to grow 1.0% this year, compared to 3.0% in September. The forecast incorporates an additional 30,000 housing starts from rebuilding after the hurricanes over the next five years. The November forecast calls for growth of 4.2% in 2018 and 10.2% in 2019 before tapering to 6.2% in 2020 and 3.1% in 2021. The forecast calls for growth in single-family housing starts of 7.0% this year after growing by 10.1% in 2016. The forecast expects the growth in single-family housing starts to average 4.7% from 2018 through 2021. We expect the multi-family segment to decline 10.8% this year. The forecast calls for the multi-family housing segment to return to growth in 2018 at 2.2%. We then expect growth to average 11.1% through the remainder of the forecast.



*Foreign growth is improving*

Major foreign economies are improving. The Canadian economy grew 4.5% (SAAR) in the second quarter, the fastest since 2011. Exports and household spending were the main contributors to growth. The latest Blue Chip forecast expects growth of 2.9% in Canada for 2017 and 2.1% in 2018. GDP in Mexico declined 0.3% from the previous quarter due to temporary impacts from natural disasters in August and September. The Blue Chip forecast called for 2.1% growth this year followed by 2.2% growth in 2018. The recovery in the Eurozone is improving with real GDP increasing 2.5% (SAAR) in the third quarter, the highest rate since 2011. The latest Blue Chip forecast calls for 2.1% growth this year and 1.9% in 2018. China, which is the largest U.S. export market outside of North America, continues to slow. Export demand for Chinese goods has weakened and the Chinese have had difficulty transitioning to a more domestic consumer driven economy. China reported 6.8% year-over-year growth in the third quarter, well below the 2005-11 average of 11%. The most recent Blue Chip forecast calls for Chinese growth to slow further, with growth of 6.6% this year and 6.2% in 2018. Japan's economy expanded by 1.4% (SAAR) in the third quarter, the seventh consecutive quarter of growth. This marks the longest period of uninterrupted growth in more than a decade. Japan's long run potential GDP growth is roughly 0.7% due primarily to demographics. The most recent Blue Chip forecast expects slow growth of 1.7% this year followed by 1.2% in 2018.

*Economic growth of U.S. trading partners is expected to improve*

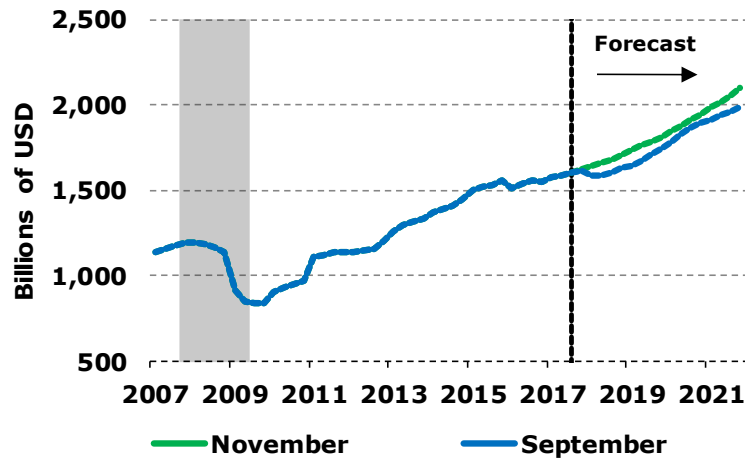
Economic growth of major U.S. trading partners is expected to accelerate this year. GDP growth of U.S. trading partners was the weakest since the recession in 2016, growing just 2.1%. The forecast calls for GDP of U.S. trading partners to grow 2.9% this year, up from 2.8% in the September forecast. The November forecast calls for GDP of U.S. trading partners to grow 2.7% in 2018 through 2020 and 2.8% in 2021. The dollar has declined recently and the drag on exports has diminished. Real U.S. exports are forecasted to grow 3.2% this year after declining 0.3% in 2016. Export growth is forecasted to pick up, averaging 4.3% from 2018 through 2021. Export growth is offset by increased imports in the forecast. Net exports are not expected to contribute to overall GDP growth during the forecast period.

*The fiscal policy outlook no longer includes potential policy changes*

Since the November 2016 presidential election, no major policy changes have been enacted. The September forecast included a \$22 billion annual increase in infrastructure spending beginning in 2018, personal and corporate tax cuts, and a boost from receipts on repatriated overseas profits. Tax cuts (see Figure 1.6) and other potential fiscal policy changes are no longer included in the forecast. While several proposals for healthcare reform are being discussed, no legislation has passed, so we have not incorporated any related changes to the forecast.

**Figure 1.6: Federal Personal Tax Receipts**

*The forecast no longer includes a tax cut*



Source: BEA, ERFC November 2017 forecast; historical data through 2016

*The federal budget deficit will increase after this year*

The federal budget deficit is expected to decline this year to \$632 billion from \$687 billion in 2016. However, we expect the federal budget deficit to grow starting in 2018 and reach \$802 billion in 2021. The September forecast had the deficit reaching \$900 billion in 2021 due to the tax cut package assumed in the forecast. The November forecast assumes the cuts in real defense spending that started in 2011 will end for the most part this year. The forecast calls for real defense spending to grow 0.1% on average from 2018 through 2021. Real nondefense spending is expected to slowly trend down throughout the forecast. State and local governments, having worked through the majority of their budget difficulties, will offset the decline in spending at the federal level. We expect total real government spending to contract 0.2% this year before averaging 0.8% growth through 2021.

*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 a more upbeat economic outlook but also a more uncertain policy environment. Jay Powell will lead the Federal Reserve next year assuming the Senate confirms him. We do not expect any major deviations from the approach taken by Janet Yellen. The forecast assumes one more 25 basis point rate hike in mid-December.

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

## Risks to the Forecast

*Downside risks outweigh upside risks*

Our view of the risks to the forecast is unchanged since the September forecast. The recovery is forecasted to be the longest on record. The outlook for U.S. trading partners, although

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

### **Downside Risks**

- Increasing geopolitical tensions negatively impact 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
- Failure to raise the debt ceiling and/or government shut down

### **Upside Risks**

- A major tax cut
- 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 2018 to 2021

Fiscal Years

	2014	2015	2016	2017	2018	2019	2020	2021
<b>Real National Income Accounts (Billions of Chained 2009 Dollars)</b>								
Real Gross Domestic Product	15,782.2	16,292.6	16,577.6	16,891.0	17,316.3	17,701.1	18,079.1	18,442.7
% Ch	2.2	3.2	1.7	1.9	2.5	2.2	2.1	2.0
Real Consumption	10,688.5	11,082.1	11,413.0	11,732.8	12,036.1	12,319.1	12,575.3	12,824.3
% Ch	2.0	3.7	3.0	2.8	2.6	2.4	2.1	2.0
Real Nonresidential Fixed Investment	2,094.8	2,215.7	2,210.4	2,253.3	2,359.3	2,422.1	2,500.2	2,600.3
% Ch	5.1	5.8	-0.2	1.9	4.7	2.7	3.2	4.0
Real Residential Fixed Investment	494.6	529.4	580.2	592.3	586.8	608.4	641.6	666.4
% Ch	6.2	7.0	9.6	2.1	-0.9	3.7	5.5	3.9
Real Personal Income	13,280.1	13,927.7	14,327.3	14,463.0	14,699.0	15,064.0	15,469.1	15,868.7
% Ch	1.2	4.9	2.9	0.9	1.6	2.5	2.7	2.6
Real Per Capita Income (\$/Person)	41,760	43,478	44,417	44,532	44,923	45,671	46,530	47,359
% Ch	0.5	4.1	2.2	0.3	0.9	1.7	1.9	1.8
<b>Price and Wage Indexes</b>								
PCE Price Index (2009=100)	108.4	109.3	110.0	111.8	113.6	115.6	117.8	120.2
% Ch	1.4	0.9	0.7	1.6	1.6	1.8	1.9	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.350	2.367	2.383	2.427	2.480	2.532	2.589	2.649
% Ch	1.6	0.7	0.7	1.9	2.2	2.1	2.2	2.3
Employment Cost Index (Dec. 2005=1.0)	1.193	1.221	1.248	1.278	1.315	1.360	1.408	1.459
% Ch	1.9	2.3	2.2	2.4	2.9	3.4	3.5	3.6
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	17,025.4	17,831.5	18,344.5	18,985.6	19,830.4	20,730.3	21,675.4	22,627.7
% Ch	3.9	4.7	2.9	3.5	4.4	4.5	4.6	4.4
Personal Income	14,393.2	15,222.7	15,764.0	16,165.8	16,699.4	17,416.9	18,226.2	19,079.3
% Ch	2.6	5.8	3.6	2.5	3.3	4.3	4.6	4.7
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	155.5	156.6	158.0	159.8	161.2	163.1	164.9	166.1
Total U.S. Employment	145.0	147.7	150.1	152.3	154.5	156.5	158.1	159.2
Unemployment Rate (%)	6.77	5.68	4.98	4.66	4.13	4.02	4.12	4.19
Nonfarm Payroll Employment	137.56	140.42	143.09	145.43	147.36	148.92	150.13	150.93
% Ch	1.7	2.1	1.9	1.6	1.3	1.1	0.8	0.5
Manufacturing	12.09	12.28	12.35	12.36	12.56	12.86	12.99	13.15
% Ch	0.9	1.6	0.6	0.1	1.6	2.4	1.0	1.2
Durable Manufacturing	7.60	7.74	7.75	7.72	7.87	8.11	8.18	8.33
% Ch	1.1	1.9	0.1	-0.4	2.0	3.0	0.9	1.8
Nondurable Manufacturing	4.49	4.54	4.61	4.65	4.69	4.76	4.81	4.82
% Ch	0.5	1.0	1.5	0.9	1.0	1.3	1.1	0.4
Construction	5.99	6.31	6.61	6.80	6.95	7.04	7.29	7.56
% Ch	4.3	5.4	4.7	3.0	2.1	1.3	3.6	3.6
Service-Providing	118.61	120.96	123.40	125.59	127.13	128.27	129.08	129.45
% Ch	1.7	2.0	2.0	1.8	1.2	0.9	0.6	0.3
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	101.3	69.3	41.7	48.6	54.4	55.3	52.8	51.7
Personal Saving/Disposable Income (%)	5.3	6.0	5.8	4.0	3.0	3.0	3.5	3.7
Auto Sales (Millions)	7.6	7.7	7.2	6.5	5.9	5.6	5.6	5.5
% Ch	2.3	0.8	-5.9	-10.4	-8.8	-4.3	-0.2	-1.6
Housing Starts (Millions)	0.955	1.056	1.149	1.201	1.196	1.294	1.425	1.475
% Ch	8.9	10.5	8.9	4.5	-0.4	8.3	10.1	3.5
Federal Budget Surplus (Billions)	-612.4	-597.2	-649.4	-669.8	-642.0	-704.3	-760.1	-795.0
Net Exports (Billions)	-490.7	-513.6	-519.7	-551.8	-538.0	-453.9	-385.3	-348.9
3-Month Treasury Bill Rate (%)	0.04	0.02	0.18	0.55	1.19	1.81	2.33	2.79
10-Year Treasury Note Yield (%)	2.71	2.23	2.02	2.10	2.54	3.17	3.47	3.51
Bond Index of 20 G.O. Munis. (%)	4.55	3.83	3.51	3.51	3.81	4.34	4.35	4.39
30-Year Fixed Mortgage Rate (%)	4.33	3.92	3.80	3.85	4.13	4.70	5.03	5.13

Table 1.2  
**Forecast Analysis**  
 Comparison of Forecasts for 2015-17

<b>U.S.</b>	Average Annual Rate of Growth (Percent) 2015:2-2017:2		Average Rate (Percent) 2015:3 to 2017:2	
	<b>Real GDP</b>	<b>PCE Price Index</b>	<b>3 Month T-Bill Rate</b>	<b>Mortgage Rate</b>
<b>2012</b>				
September	2.9	1.9	2.17	5.92
November	2.9	1.6	2.56	6.08
<b>2013</b>				
March	2.9	1.6	1.71	5.68
June	2.8	1.5	1.98	5.63
September	2.9	1.5	2.13	5.66
November	2.7	1.5	2.12	5.67
<b>2014</b>				
February	2.7	1.3	2.13	5.75
June	2.8	1.4	2.13	5.78
September	2.8	1.5	1.96	5.59
November	2.8	1.6	1.72	5.48
<b>2015</b>				
February	2.8	1.7	1.69	5.19
June	2.8	1.7	1.29	4.73
September	2.7	1.5	0.84	4.38
November	2.5	1.6	0.82	4.35
<b>2016</b>				
February	2.2	1.1	0.56	4.09
June	2.0	1.5	0.43	3.91
September	1.8	1.4	0.36	3.76
November	1.8	1.3	0.32	3.72
<b>2017</b>				
March	1.9	1.3	0.35	3.89
June	1.8	1.3	0.37	3.84
September	1.7	1.3	0.36	3.83
November	1.7	1.3	0.36	3.83

Table 1.3

**Forecast Analysis**

Comparison of Forecasts for 2017-19

<b>U.S.</b>	Average Annual Rate of Growth (Percent) 2017:2-2019:2		Average Rate (Percent) 2017:3 to 2019:2	
	<b>Real GDP</b>	<b>PCE Price Index</b>	<b>3 Month T-Bill Rate</b>	<b>Mortgage Rate</b>
<b>2014</b>				
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
<b>2015</b>				
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
<b>2016</b>				
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
<b>2017</b>				
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

Table 1.4

Fiscal Years

**Forecast Comparison**

Forecast 2018 to 2021

	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>U.S.</b>							
<b>Real GDP</b>							
November Baseline	16292.6	16577.6	16891.0	17316.3	17701.1	18079.1	18442.7
% Ch	3.2	1.7	1.9	2.5	2.2	2.1	2.0
September Baseline	16292.7	16577.6	16890.7	17292.9	17684.9	18033.1	18400.7
% Ch	3.2	1.7	1.9	2.4	2.3	2.0	2.0
<b>PCE Price Index</b>							
November Baseline	109.3	110.0	111.8	113.6	115.6	117.8	120.2
% Ch	0.9	0.7	1.6	1.6	1.8	1.9	2.0
September Baseline	109.3	110.0	111.8	113.5	115.3	117.4	119.7
% Ch	0.9	0.7	1.6	1.5	1.6	1.8	1.9
<b>Unemployment Rate</b>							
November Baseline	5.68	4.98	4.66	4.13	4.02	4.12	4.19
September Baseline	5.68	4.98	4.66	4.29	4.27	4.28	4.28
<b>Mortgage Rate</b>							
November Baseline	3.92	3.80	3.85	4.13	4.70	5.03	5.13
September Baseline	3.92	3.80	3.85	4.38	5.45	6.03	5.96
<b>3 Month T-Bill Rate</b>							
November Baseline	0.02	0.18	0.55	1.19	1.81	2.33	2.79
September Baseline	0.02	0.18	0.55	1.27	2.06	2.80	2.85

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## Chapter 2: Washington Economy – Current Conditions and Forecast

- **The Washington economy is expanding at a rapid pace.**
- **Historical Washington personal income was revised significantly higher, raising the level throughout the forecast.**
- **Washington employment has also been revised higher and growth has exceeded expectations.**
- **Seattle home prices continue to rise very rapidly and housing construction remains strong.**
- **Exports are down because of transportation equipment; manufacturing continues to struggle.**
- **Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.**
- **As in September, 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. Historical estimates of personal income have been revised significantly higher. Employment has also been revised higher and growth has exceeded expectations. Seattle home prices continue to rise very rapidly and housing construction remains strong. Washington exports continue to decline due to transportation equipment and manufacturing continues to struggle. Seattle area consumer price inflation is well above the national average due to higher shelter cost inflation.

*Employment growth has been above the forecast*

We have two months of new Washington employment data since the September forecast was released. Total nonfarm payroll employment rose 18,100 (seasonally adjusted) in September and October, which was 4,300 more than the 13,800 expected in the September forecast. Manufacturing added 300 jobs in the two-month period in spite of the loss of 1,500 aerospace jobs. Construction employment increased 2,200 in September and

October and government employment expanded by 1,700 jobs. As usual, the bulk of the net new jobs occurred in private, service-providing sectors, which added 14,000 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 August 2017 by 7,200 jobs (0.2%). The upward revision to history combined with the higher than expected growth since August results in 15,500 (0.3%) more jobs in October 2017 than expected in the September forecast.

*Washington unemployment remains low*

Washington's unemployment rate inched down to 4.5% in October from 4.6% in September. October's 4.5% unemployment rate was the lowest in the series that extends back to 1976. A year ago, in September 2016, the Washington unemployment rate stood at 5.3%.

*Washington UI claims remain near the post-recession low*

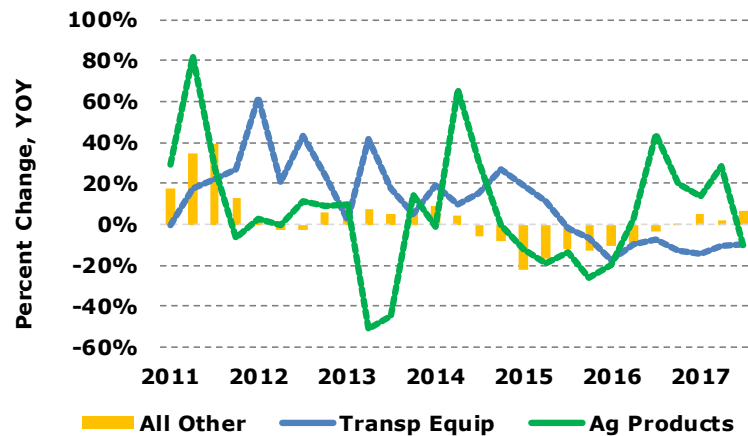
Washington initial claims for unemployment insurance remain near the post-recession low. The four-week moving average of seasonally adjusted claims increased to 6,000 in the week ending November 30, 2017 from the post-recession-low 5,800 reached in the previous week. The current level of claims is well below the previous trough of 7,200 reached during the last expansion. Claims have fallen 64% since the peak in early 2009.

*Exports are down because of transportation equipment*

Third quarter 2017 Washington exports were down 5.2% from the third quarter of 2016. The decline was mostly due to a 9.4% reduction in transportation equipment exports (mostly Boeing planes). Exports of agricultural products fell 11.4% over the year but agricultural exports were unusually strong in the third quarter last year. Exports of all other commodities (mostly manufacturing) increased 7.1% over the year (see Figure 2.1).

**Figure 2.1: Washington Exports**

*"Other" exports were up (YOY) for the fourth consecutive quarter*



Source: Wisier Trade; data through 2017Q3

*Washington housing construction held steady in the third quarter*

Washington housing construction held steady in the third quarter of 2017. The number of housing units authorized by building permits averaged 43,900 units (SAAR) in the third quarter of 2017, which was the same rate as in the second quarter and very close to the September forecast. Third quarter permits were made up of 24,000 single-family units and 19,900 multi-family units. The September forecast had assumed 43,600 units (SAAR) in the third quarter, consisting of 23,600 single-family units and 19,900 multi-family units. Washington housing construction in the fourth quarter to date was stronger than expected in the November forecast. In October, 51,600 units (SAAR) were permitted of which 24,600 were single family and 27,000 were multi-family. The November forecast assumed an average rate of 43,900 units for the third quarter as a whole (SAAR) consisting of 24,200 single-family units and 19,700 multi-family units.

*Seattle home prices continue to rise very rapidly*

Seattle area home prices continue to rise very rapidly. According to the S&P/Case-Shiller Home Price Indices, seasonally adjusted Seattle area home prices rose 0.5% in September which was the same as the rate of increase in the Composite-20 index. However, the over-the-month changes are problematic due to seasonal adjustment issues. A more reliable measure is the over-the-year growth, which shows a 13.0% increase in prices since the September 2016, more than double the 6.2% increase in the Composite-20 index. Seattle home prices are now up 73% since the December 2011 trough and now exceed the May 2007 peak by 20%.

*Washington light vehicle sales are growing again*

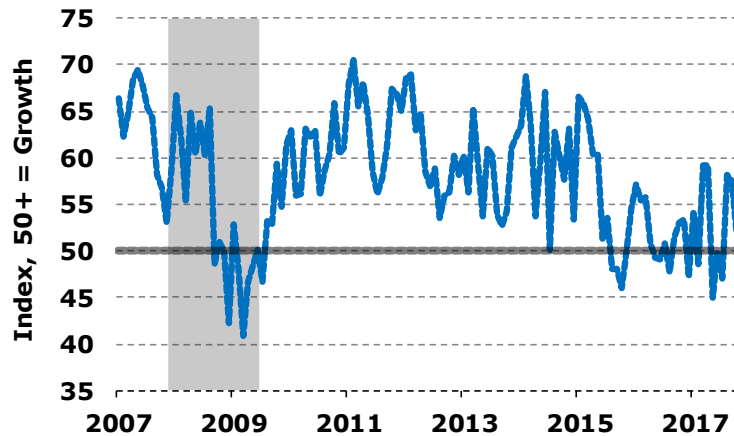
Washington car and truck sales increased for a fourth consecutive month in October following a slump in the first half of the year. Seasonally adjusted new vehicle registrations increased 3.5% in July, 8.6% in August, 3.5% in September, and 2.5% in October to 327,100 units (SAAR). Car and truck sales are up 4.6% over the year but down 2.3% since the post-recession peak in January 2016.

*Manufacturing slowed but remained slightly positive in October*

The Institute of Supply Management – Western Washington Index (ISM-WW) declined but remained positive in October (see Figure 2.2). The index, which measures conditions in the manufacturing sector, decreased from 58.2 in August and 57.5 in September to just 51.8 in October (index values above 50 indicate growth while values below 50 indicate contraction). Only the orders component was above 50 in October. The production and deliveries components were neutral at 50 while the employment and inventory components indicated contraction.

*The manufacturing index has struggled to remain above 50*

**Figure 2.2: ISM-Western Washington Index**



Source: The Institute of Supply Management; data through October 2017

*Washington personal income grew moderately in the second quarter of 2017*

After the September forecast was released, the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) released state personal income estimates for the second quarter of 2017. According to these estimates, Washington personal income rose to \$412.3 billion (SAAR) in the second quarter of 2017 from \$409.1 billion in the first quarter. The reported 3.2% growth rate (SAAR) in Washington personal income was the 18<sup>th</sup> largest among the states and District of Columbia and slightly exceeded the 2.9% growth rate for the U.S. as a whole. Over the last year, from the second quarter of 2016 to the second quarter of 2017, Washington personal income grew 4.1% which was well above the 2.9% for the nation and 3<sup>rd</sup> highest among the states and the District of Columbia.

*The September personal income release incorporated the annual NIPA revision*

The September personal income release also incorporated the impact of the annual revision to the national income and product accounts (NIPA). The revisions covered the period from 2014 through the first quarter of 2017. The estimate for 2016 annual personal income was revised up \$7.9 billion (2.0%) compared to the June BEA release. The increase in 2016 was mainly due to the estimate for property income (dividends, interest, and rent), which was revised up by \$8.4 billion. The revision to property income was the result of newly available IRS tabulations for 2015 and revised tabulations for 2014.

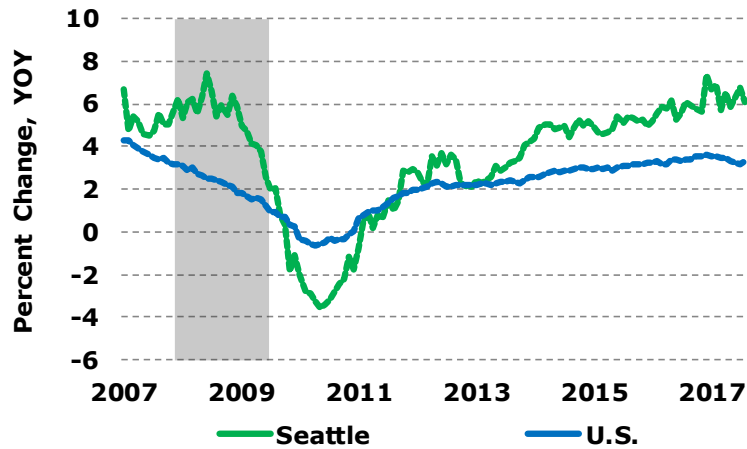
*Seattle area consumer price inflation remains above the national average*

Seattle area consumer price inflation remains above the national average. Over the last year, from October 2016 to October 2017, consumer prices in the Seattle area rose 3.0% compared to 2.0% for the U.S. city average. Core prices, which exclude food and energy, were up 3.0% in Seattle compared to 1.8% for the nation. The higher Seattle inflation is due to more rapid growth in shelter costs. During the year, shelter costs in Seattle rose 6.7% compared to 3.2% for the nation (see Figure 2.3). Excluding

shelter, Seattle inflation was below the national average at 1.0% compared to 1.4%.

*Shelter cost inflation is much higher in Seattle than U.S. city average*

**Figure 2.3: Shelter Cost Inflation**



Source: Bureau of Labor Statistics; data through August 2017

## Washington State Forecast

*Our November forecast for Washington State features higher personal income than in September*

The November forecast for Washington State is generally similar to the September forecast with the notable exception of higher personal income. Washington employment is expected to grow 3.0% this year, up from 2.9% in the September forecast. We expect employment growth to average 1.6% per year in 2018 through 2021, which is the same rate assumed in September. Our forecast for nominal personal income growth this year is 5.5%, down from 5.8% in the September forecast. While the growth rate is lower, the level of personal income in 2017 is 1.9% higher than in the September forecast because of the annual revision to the NIPAs. Our new forecast for nominal personal income growth in 2018 through 2021 averages 5.1% per year, the same rate as expected in the September forecast. The November housing construction forecast is very close to the forecast adopted in September. We expect total housing units authorized by building permits to decline 2.2% this year to 43,100 units compared to 43,000 in the September forecast. We expect permits to average 42,200 during the next four years compared to 42,300 in September. As in September, we expect the all-items Seattle CPI to rise 2.9% this year. We expect Seattle area inflation will average 2.4% per year in 2018 through 2021, up slightly from an average rate of 2.2% per year in the September forecast.

## Washington Payroll Employment

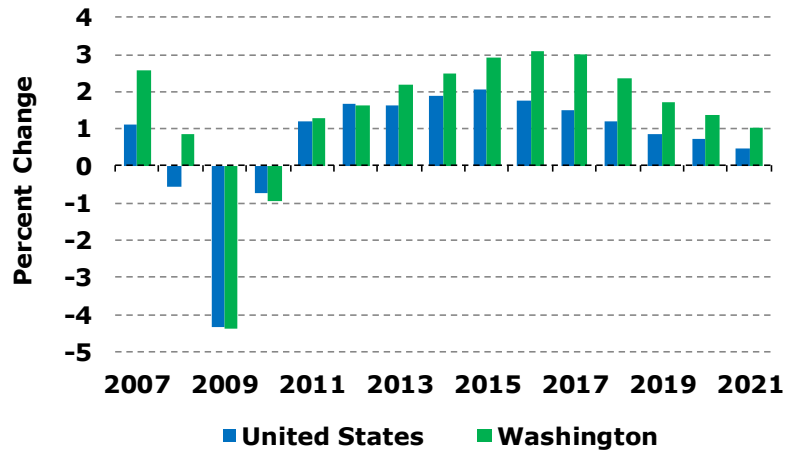
*Washington employment growth is very strong*

Washington employment growth in 2016 was 3.1%, the highest rate since 1998. Washington employment is expected to grow

3.0% this year, up from 2.9% in the September forecast. As in September, we expect growth to decelerate gradually as the economy reaches full employment and labor force growth slows due to demographics (see Figure 2.4). We expect employment growth to average 1.6% per year in 2018 through 2021, which is the same rate assumed in September. On an annual basis, we expect 2.4% employment growth in 2018, 1.7% in 2019, 1.4% growth in 2020, and 1.0% growth in 2021.

**Figure 2.4: Nonfarm Payroll Employment**

*Employment growth will gradually slow*



Source: Bureau of Economic Analysis, ERFC; historical data through 2016

*The aerospace forecast is virtually unchanged*

Boeing indicated that their 2017 job cuts will be similar to those experienced in 2016. In the current forecast, we assume a decline of 6,700 aerospace jobs from December 2016 through December 2017, which is slightly larger than the 6,100 decline experienced during 2016. The November aerospace employment forecast is about 250 lower than the September assumption from the end of this year through 2021. On an annual average basis, we expect aerospace employment to decline 7.9% in 2017, 4.7% in 2018, 2.0% in 2019, and 0.8% in 2020 with no change in 2021.

*The software employment forecast is higher*

Software employment grew only 0.5% in 2015 after absorbing a series of Microsoft layoffs during the latter part of 2014. Growth rebounded to 5.2% in 2016. The November software employment forecast is higher than in September because actual employment in recent months has been higher than expected. We now expect 4.7% growth this year on an annual average basis compared to 4.4% in the September forecast. As in September, we expect slower growth through the remainder of the forecast. Software employment is expected to grow 2.3% in 2018, 0.7% in 2019, 0.7% in 2020, and 0.9% in 2021.

*Washington electronic shopping and...*

After several surprises on the upside, Washington electronic shopping and mail order employment has been close to the forecast since September. In Washington, this sector consists

*... mail order employment has been close to the forecast*

almost entirely of electronic shopping employment. As of October, year-over year-electronic shopping and mail order employment grew by 12,100 jobs, a phenomenal 29.5% rate of growth. We expect employment growth to slow in this sector. The recent announcement by Amazon of a second headquarters lends support to this view. Still, the forecast expects employment growth of 29,500 jobs in the sector in calendar years 2017 through 2021. On an annual basis, electronic shopping and mail order employment is expected to grow 30.2% this year, 15.5% in 2018, 7.8% in 2019, 5.2% in 2020, and 3.8% in 2021.

*Construction employment has nearly reached its previous peak*

As of the third quarter of 2017, construction employment was 201,700, just 8,300 (4.0%) below the 210,000 peak in the second quarter of 2007. Put another way, the sector has now recovered nearly 90% of the 74,900 jobs lost in the recession. The forecast expects construction employment to peak at 209,500 in the fourth quarter of 2020. On an annual average basis, construction employment is expected to grow 8.0% this year, up slightly from 7.6% in 2016. Growth will slow to 2.3% in 2018, 0.5% in 2019, 0.8% in 2020, and 0.3% in 2021.

## **Washington Personal Income**

*Washington personal income is higher than believed in September*

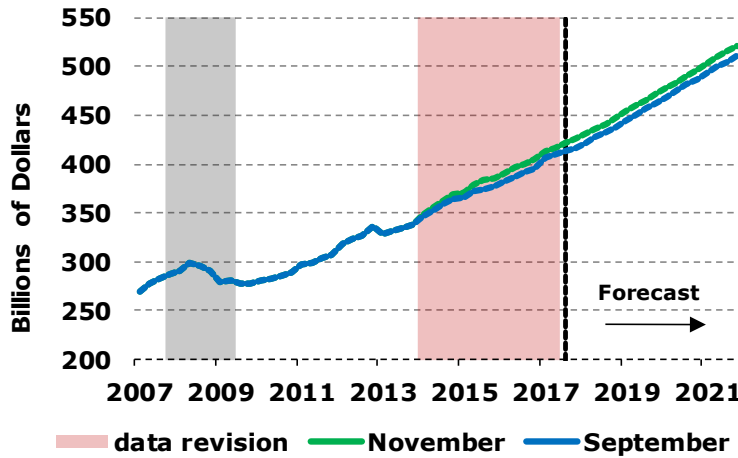
In September, after the forecast was complete, the Bureau of Economic Analysis released estimates for state personal income through the second quarter of 2017. We have incorporated the new BEA estimates as well as additional Washington wage data. The September release also incorporated the impact of the annual revision of the national income and product accounts (NIPA). Our current estimate of Washington personal income in the second quarter of 2017 is \$416.9 billion, which is \$6.8 billion (1.6%) higher than assumed in the September forecast. The new estimate of wage and salary income is \$0.7 billion lower than expected but nonwage income is \$7.5 billion higher. The much higher nonwage estimate is the result of the historical NIPA revisions, which raised the estimate for property income (dividends, interest, and rent) by \$8.4 billion in 2016.

*After this year, our forecast for nominal personal income growth is unchanged since September*

Our forecast for nominal personal income growth this year is 5.5%, down from 5.8% in the September forecast. While the growth rate is lower, the level of personal income in 2017 is 1.9% higher than in the September forecast because of the annual revision to the NIPAs (see Figure 2.5). Our new forecast for nominal personal income growth in 2018 through 2021 averages 5.1% per year which is the same rate as expected in the September forecast. On an annual basis, we expect personal income to grow 4.7% in 2018, 5.4% in 2019, 5.3% in 2020 and 2021.

**Figure 2.5: Washington Personal Income**

*The Washington personal income forecast is higher than in September*



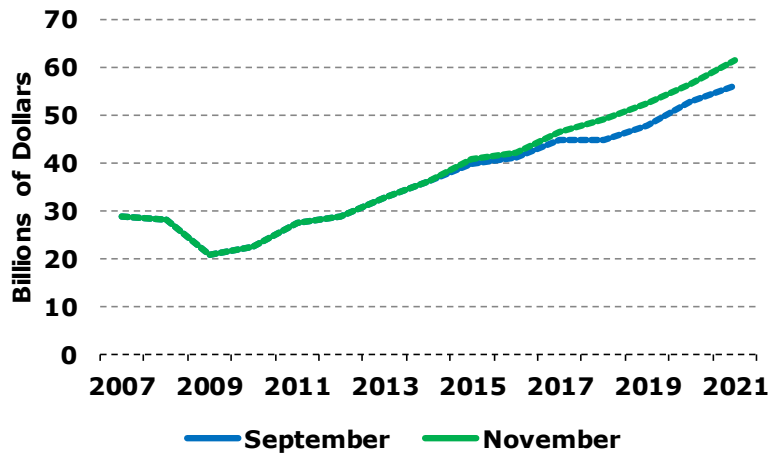
Source: Bureau of Economic Analysis, ERFC; historical data through Q3 2017

*The September forecast drops the assumption of fiscal stimulus*

In a significant change from earlier forecasts, the November forecast drops the assumption of federal fiscal stimulus beginning in 2018. Previous forecasts had assumed a reduction in personal and corporate federal tax rates as well as additional infrastructure spending. We expect Washington residents will pay an average of \$4.4 billion more per year in 2018-21 than assumed in September, which amounts to 0.9% of personal income (see Figure 2.6).

**Figure 2.6: Federal Personal Taxes, Washington**

*Washington residents will pay an average of \$4.4 billion more per year in 2018-21 than assumed in September*



Source: Bureau of Economic Analysis, ERFC; historical data through 2016

## 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 21,600 in 2016. We believe 2016 was the



peak in multi-family construction in this cycle and that permits will decline to 15,900 by 2021. The recovery in single-family construction has been less robust, from 13,000 units in 2009 to 22,500 in 2016. We expect single-family construction to continue to strengthen with the number of units rising to 26,400 by 2021. The November housing construction forecast is very close to the forecast adopted in September. We expect total housing units authorized by building permits to decline 2.2% this year to 43,100 units and 3.1% next year to 41,800. We expect little change in the final three years of the forecast with the number of units rising 1.0% in 2019 to 42,200 and 1.2% in 2020 to 42,700 then declining 1.0% in 2021 to 42,300.

## Seattle Consumer Price Index

*Rents are driving Seattle core inflation higher*

Core inflation (excluding food and energy) in Seattle was 3.0% in 2016 while national core inflation was 2.2%. 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 core inflation in Seattle to moderate as shelter costs stabilize. Our forecast for core Seattle inflation is 2.7% in 2017, 2.5% in 2018, 2.3% in 2019, and 2.4% in 2020, and 2.3% in 2021.

*Energy costs are expected to stabilize*

After working to reduce overall inflation considerably in 2015 and 2016, energy costs are leveling off in the forecast. As a result, they will not significantly affect headline inflation in the next few years. We expect the Seattle CPI to rise 2.9% this year, 2.5% in 2018, 2.2% in 2019, and 2.4% in 2020 and 2021.

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

*In the optimistic scenario, the housing market bounces back*

The housing market has struggled this year. In the optimistic scenario, young adults move to form households in greater numbers because of the improving economy, driving the level of housing starts above the 1.6-million-unit annual rate in 2019 and above the 1.7-million-unit rate in 2020. With higher productivity, wage and price pressures remain muted in 2018. Since inflation is not a problem, the Fed takes a slow approach to raising interest rates (no more hikes in 2017). Given the strengthening outlook, both consumer and business confidence improve and the

stock market sees strong gains. On the demand side, higher incomes combine with lower oil prices, inflation, and interest rates to support robust consumer spending. 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 much 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 declines less in 2017 then gradually rises through 2021 rather than continuing to fall 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. The recovery in construction employment is much stronger than in the baseline forecast with employment in the sector exceeding the previous peak in the second quarter of 2018. By the end of 2021, Washington nonfarm payroll employment is higher by 131,100 jobs (3.7%) than in the baseline forecast and Washington personal income is \$50.6 billion (9.7%) higher.

### **Pessimistic**

*The pessimistic alternative assumes a recession caused by setback in commercial real estate and declining confidence*

In the pessimistic scenario, a drop in confidence and a setback in the commercial real estate market combine to end the expansion. Rising prices have made the commercial real estate market vulnerable. Real estate prices correct and confidence sags in the pessimistic scenario. The drop in confidence weakens the dollar and drives long-term interest rates up above the baseline. Higher interest rates combined with lower confidence abruptly ends the seven-year-old the housing recovery, with housing starts declining continuously until early 2019. Meanwhile, the stock market plummets beginning in the second quarter of 2018, losing 15.1% between the first quarter 2018 peak and its early 2019 trough. Higher interest rates pummel consumer spending and capital expenditures as well. Taken together, the U.S. economy contracts at annual rates of 0.9% in the third quarter of 2018 and 2.0% in the fourth. Unemployment climbs through most of 2019, reaching an eventual peak of 5.5%.

*This scenario also assumes a weaker local economy*

In addition to reflecting the impact of the weaker U.S. forecast on the state economy, aerospace employment declines much more rapidly than assumed in the baseline forecast. 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 early 2018 then declines through 2021 rather than rising modestly as in the baseline. The relatively weak local economy puts downward pressure on

Washington wages and the Seattle CPI. By the end of 2021, Washington nonfarm payroll employment is 138,100 (3.9%) lower than in the baseline forecast and Washington personal income is \$32.5 billion (6.2%) 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 slightly weaker than the baseline*

At the national level, the GCEA forecast for real GDP growth is the same as the baseline forecast this year but lower in 2018, 2019, 2020, and 2021. The GCEA forecast averages 2.0% per year over the five-year interval compared to 2.2% per year in the baseline forecast. The GCEA forecast of real consumer spending growth is also lower than the baseline forecast. However, the GCEA inflation forecast is higher than the baseline forecast, largely offsetting the lower real growth. The Council members’ mortgage rate forecast is higher than the baseline forecast at 5.0% compared to 4.7% on average. The GCEA oil price forecast is slightly lower than the baseline forecast, averaging \$55 in 2017 through 2021 compared to \$59 in the baseline forecast.

*The GCEA members expect weaker Washington growth*

The GCEA scenario for Washington real personal income growth averages 3.0% per year in 2017 through 2021 compared to the baseline forecast of 3.3%. Their inflation forecast is higher, however, so their nominal personal income forecast is closer to ours at 5.0% versus 5.2%. At an average rate of 1.6% per year, the Council members’ forecast for total employment growth over the five-year period is also lower than the baseline forecast of 1.9% per year. The GCEA forecasts for manufacturing employment and construction employment are both weaker than in the baseline forecast. The Council members’ housing permit forecast is slightly higher than ours is, averaging 43,300 units per year through 2021 compared to 42,400 in the baseline forecast. At the end of 2021, the GCEA forecast for Washington nonfarm payroll employment is 46,100 (1.3%) lower than in the baseline forecast and Washington personal income is \$5.7 billion (1.1%) lower.

Table 2.3 compares the GCEA forecast with the baseline forecast.

Table 2.1  
**Washington Economic Forecast Summary**  
 Forecast 2018 to 2021

Fiscal Years

	2014	2015	2016	2017	2018	2019	2020	2021
<b>Real Income (Billions of Chained 2009 Dollars)</b>								
Real Personal Income	317.561	339.180	353.532	365.693	377.262	389.692	402.850	415.657
% Ch	2.6	6.8	4.2	3.4	3.2	3.3	3.4	3.2
Real Wage and Salary Disb.	162.030	170.815	180.187	188.958	198.006	204.177	210.350	215.964
% Ch	3.4	5.4	5.5	4.9	4.8	3.1	3.0	2.7
Real Nonwage Income	155.531	168.365	173.345	176.735	179.257	185.515	192.500	199.693
% Ch	1.8	8.3	3.0	2.0	1.4	3.5	3.8	3.7
Real Per Capita Income (\$/Person)	45,286	47,711	48,931	49,730	50,458	51,314	52,266	53,192
% Ch	1.5	5.4	2.6	1.6	1.5	1.7	1.9	1.8
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.084	1.093	1.100	1.118	1.136	1.156	1.178	1.202
% Ch	1.4	0.9	0.7	1.6	1.6	1.8	1.9	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.437	2.473	2.521	2.589	2.656	2.719	2.782	2.849
% Ch	1.4	1.5	1.9	2.7	2.6	2.4	2.3	2.4
Average Nonfarm Annual Wage	55,934	57,982	59,884	62,006	64,291	66,184	68,448	70,922
% Ch	2.9	3.7	3.3	3.5	3.7	2.9	3.4	3.6
Avg. Hourly Earnings-Mfg. (\$/Hour)	24.76	25.28	26.00	26.80	28.18	29.14	30.09	31.09
% Ch	2.3	2.1	2.8	3.1	5.1	3.4	3.3	3.3
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	344.184	370.709	388.979	408.744	428.606	450.564	474.655	499.758
% Ch	4.1	7.7	4.9	5.1	4.9	5.1	5.3	5.3
Disposable Personal Income	302.966	325.226	340.903	358.222	375.009	393.564	413.731	433.719
% Ch	3.4	7.3	4.8	5.1	4.7	4.9	5.1	4.8
Per Capita Income (\$/Person)	49,082	52,147	53,837	55,583	57,324	59,329	61,580	63,953
% Ch	2.9	6.2	3.2	3.2	3.1	3.5	3.8	3.9
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,465.7	3,517.0	3,589.6	3,677.0	3,779.6	3,867.3	3,942.1	4,004.2
Total Washington Employment	3,240.7	3,313.2	3,388.8	3,492.6	3,613.3	3,704.9	3,775.5	3,834.7
Unemployment Rate (%)	6.49	5.80	5.59	5.02	4.40	4.20	4.23	4.23
Nonfarm Payroll Employment	3,017.1	3,102.5	3,193.2	3,290.2	3,383.0	3,449.9	3,502.8	3,543.0
% Ch	2.3	2.8	2.9	3.0	2.8	2.0	1.5	1.1
Manufacturing	287.5	290.5	292.3	286.4	286.3	292.2	294.8	298.8
% Ch	0.9	1.0	0.6	-2.0	0.0	2.0	0.9	1.3
Durable Manufacturing	209.4	210.7	210.5	203.3	200.3	204.1	205.0	207.8
% Ch	0.4	0.6	-0.1	-3.4	-1.5	1.9	0.4	1.4
Aerospace	94.7	94.3	93.2	87.5	81.0	79.0	77.7	77.6
% Ch	-1.7	-0.5	-1.2	-6.1	-7.4	-2.5	-1.6	-0.1
Nondurable Manufacturing	78.0	79.8	81.8	83.1	86.0	88.0	89.8	90.9
% Ch	2.3	2.2	2.6	1.6	3.5	2.4	2.0	1.2
Construction	153.7	168.0	178.8	194.6	204.7	206.4	207.9	209.3
% Ch	6.8	9.3	6.4	8.8	5.2	0.8	0.8	0.7
Service-Providing	2,569.7	2,637.7	2,715.8	2,803.0	2,886.0	2,945.4	2,994.1	3,028.8
% Ch	2.2	2.6	3.0	3.2	3.0	2.1	1.7	1.2
Software Publishers	55.0	55.5	57.2	60.3	62.6	63.2	63.6	64.2
% Ch	3.9	1.0	3.1	5.3	3.9	0.9	0.8	0.8
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	33.222	38.703	40.103	44.154	42.959	41.599	42.643	42.558
% Ch	6.5	16.5	3.6	10.1	-2.7	-3.2	2.5	-0.2
Single-Family	17.383	18.652	21.822	22.155	23.895	24.875	26.145	26.234
% Ch	-6.3	7.3	17.0	1.5	7.9	4.1	5.1	0.3
Multi-Family	15.839	20.051	18.281	21.999	19.064	16.723	16.498	16.324
% Ch	25.2	26.6	-8.8	20.3	-13.3	-12.3	-1.4	-1.1
30-Year Fixed Mortgage Rate (%)	4.33	3.92	3.80	3.85	4.13	4.70	5.03	5.13

Table 2.2  
**Comparison of Alternative Forecasts**

Fiscal Years

	2016	2017	2018	2019	2020	2021
<b>U.S.</b>						
<b>Real GDP, Percent Change</b>						
Optimistic	1.7	1.9	3.0	3.7	2.8	2.5
Baseline	1.7	1.9	2.5	2.2	2.1	2.0
Pessimistic	1.7	1.9	1.9	0.0	2.5	2.5
<b>PCE Price Index, Percent Change</b>						
Optimistic	0.7	1.6	1.4	1.6	1.8	2.0
Baseline	0.7	1.6	1.6	1.8	1.9	2.0
Pessimistic	0.7	1.6	1.4	1.6	1.9	2.1
<b>Mortgage Rate, Percent</b>						
Optimistic	3.80	3.85	4.13	4.90	5.36	5.57
Baseline	3.80	3.85	4.13	4.70	5.03	5.13
Pessimistic	3.80	3.85	4.37	4.88	3.98	4.62
<b>3 Month T-Bill Rate, Percent</b>						
Optimistic	0.18	0.55	1.20	1.84	2.36	3.01
Baseline	0.18	0.55	1.19	1.81	2.33	2.79
Pessimistic	0.18	0.55	1.08	0.69	0.63	1.91
<b>Washington</b>						
<b>Real Personal Income, Percent Change</b>						
Optimistic	4.2	3.4	4.9	6.4	6.0	4.9
Baseline	4.2	3.4	3.2	3.3	3.4	3.2
Pessimistic	4.2	3.4	2.1	0.8	1.8	2.9
<b>Personal Income, Percent Change</b>						
Optimistic	4.9	5.1	6.4	8.1	7.9	7.0
Baseline	4.9	5.1	4.9	5.1	5.3	5.3
Pessimistic	4.9	5.1	3.5	2.4	3.7	5.0
<b>Employment, Percent Change</b>						
Optimistic	2.9	3.0	3.2	2.9	2.4	2.0
Baseline	2.9	3.0	2.8	2.0	1.5	1.1
Pessimistic	2.9	3.0	2.3	0.4	0.5	0.7
<b>Housing Permits, Thousands of Authorized Units</b>						
Optimistic	40.1	44.2	44.9	47.4	48.7	49.1
Baseline	40.1	44.2	43.0	41.6	42.6	42.6
Pessimistic	40.1	44.2	41.3	34.8	35.8	36.5

Table 2.3

Calendar Years

**Governor's Council of Economic Advisor's Forecast**

	2017	2018	2019	2020	2021
<b>U.S.</b>					
<b>Real GDP</b>					
<i>Growth</i>					
ERFC	2.2	2.5	2.1	2.1	2.0
GCEA Average	2.2	2.2	2.0	1.9	1.9
<b>Real Consumption</b>					
<i>Growth</i>					
ERFC	2.7	2.5	2.2	2.0	2.0
GCEA Average	2.6	2.2	2.0	2.0	2.0
<b>PCE Price Index</b>					
<i>Growth</i>					
ERFC	1.7	1.8	1.8	2.0	2.0
GCEA Average	1.7	1.9	2.0	2.0	2.0
<b>Mortgage Rate</b>					
<i>Percent</i>					
ERFC	4.0	4.4	4.9	5.1	5.1
GCEA Average	4.1	4.7	5.1	5.4	5.7
<b>Oil Price (Brent)</b>					
<i>Dollars per barrel</i>					
ERFC	54.8	62.5	59.9	58.4	57.8
GCEA Average	53.2	55.8	55.5	55.6	56.1
<b>Washington State</b>					
<b>Real Personal Income</b>					
<i>Growth</i>					
ERFC	3.7	2.8	3.6	3.2	3.1
GCEA Average	3.6	2.9	3.0	2.7	2.8
<b>Wage and Salary Employment</b>					
<i>Growth</i>					
ERFC	3.0	2.4	1.7	1.4	1.0
GCEA Average	2.7	1.9	1.3	1.2	1.1
<b>Manufacturing Employment</b>					
<i>Growth</i>					
ERFC	-1.6	1.5	1.4	1.1	1.5
GCEA Average	-1.8	-0.3	0.1	0.2	0.7
<b>Construction Employment</b>					
<i>Growth</i>					
ERFC	8.0	2.3	0.5	0.8	0.3
GCEA Average	5.8	1.6	1.0	0.9	-0.1
<b>Housing Permits</b>					
<i>Thousands of authorized units</i>					
ERFC	43.1	41.8	42.2	42.7	42.3
GCEA Average	43.1	43.1	43.0	43.8	43.6
<b>Washington Average Annual Wage</b>					
<i>Growth</i>					
ERFC	4.8	2.6	3.4	3.4	3.7
GCEA Average	3.7	2.9	3.3	3.4	3.4

Table 2.4

**Forecast Analysis**

Comparison of Forecasts for 2015-17

<b>Washington</b>	Average Annual Rate of Growth (Percent) 2015:2-2017:2			Average Annual Rate (Thousands) 2015:3 to 2017:2
	<b>Employment</b>	<b>Personal Income</b>	<b>Real Personal Income</b>	<b>Housing Units Authorized</b>
<b>2012</b>				
September	1.7	5.1	3.1	38.5
November	1.7	4.9	3.2	38.4
<b>2013</b>				
March	1.7	5.1	3.5	41.6
June	1.7	5.0	3.5	42.2
September	1.6	5.1	3.5	40.6
November	1.7	5.1	3.6	40.6
<b>2014</b>				
February	1.8	5.2	3.9	40.8
June	1.7	5.7	4.3	40.5
September	1.7	5.9	4.3	40.4
November	1.8	6.1	4.4	38.8
<b>2015</b>				
February	2.0	6.1	4.2	38.8
June	1.8	5.5	3.7	40.2
September	1.8	5.2	3.6	39.1
November	1.6	4.8	3.2	39.2
<b>2016</b>				
February	1.6	4.3	3.1	38.6
June	2.0	4.2	2.7	40.3
September	2.3	4.4	3.0	40.4
November	2.5	4.4	3.1	39.5
<b>2017</b>				
March	2.7	4.7	3.3	41.4
June	2.7	4.3	3.0	42.3
September	3.0	5.1	3.7	42.1
November	3.0	4.8	3.5	42.1

Table 2.5

**Forecast Analysis**

Comparison of Forecasts for 2017-19

<b>Washington</b>	Average Annual Rate of Growth (Percent) 2017:2-2019:2			Average Annual Rate (Thousands) 2017:3 to 2019:2
	<b>Employment</b>	<b>Personal Income</b>	<b>Real Personal Income</b>	<b>Housing Units Authorized</b>
<b>2014</b>				
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
<b>2015</b>				
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
<b>2016</b>				
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
<b>2017</b>				
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



Table 2.6  
**Forecast Comparison**  
 Forecast 2018 to 2021

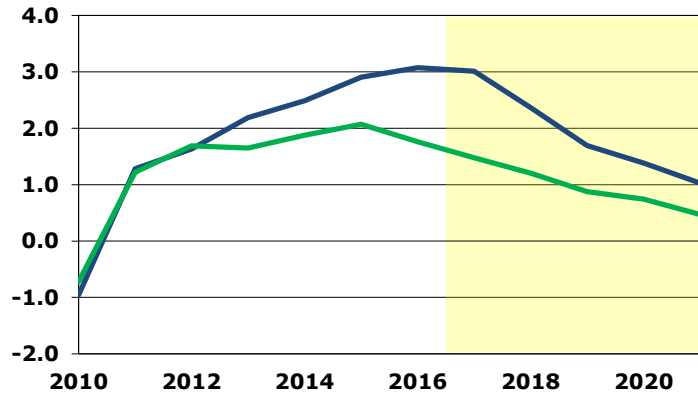
Fiscal Years

	2015	2016	2017	2018	2019	2020	2021
<b>Washington</b>							
<b>Real Personal Income</b>							
November	339.180	353.532	365.693	377.262	389.692	402.850	415.657
% Ch	6.8	4.2	3.4	3.2	3.3	3.4	3.2
September	333.926	345.403	358.784	369.825	382.883	396.898	409.677
% Ch	5.5	3.4	3.9	3.1	3.5	3.7	3.2
<b>Personal Income</b>							
November	370.709	388.979	408.744	428.606	450.564	474.655	499.758
% Ch	7.7	4.9	5.1	4.9	5.1	5.3	5.3
September	364.967	380.035	401.024	419.762	441.609	466.113	490.352
% Ch	6.4	4.1	5.5	4.7	5.2	5.5	5.2
<b>Employment</b>							
November	3102.5	3193.2	3290.2	3383.0	3449.9	3502.8	3543.0
% Ch	2.8	2.9	3.0	2.8	2.0	1.5	1.1
September	3102.5	3193.2	3290.0	3371.6	3435.5	3485.6	3528.5
% Ch	2.8	2.9	3.0	2.5	1.9	1.5	1.2
<b>Housing Permits</b>							
November	38.703	40.103	44.154	42.959	41.599	42.643	42.558
% Ch	16.5	3.6	10.1	-2.7	-3.2	2.5	-0.2
September	38.703	40.103	44.154	43.856	42.378	41.834	42.198
% Ch	16.5	3.6	10.1	-0.7	-3.4	-1.3	0.9

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

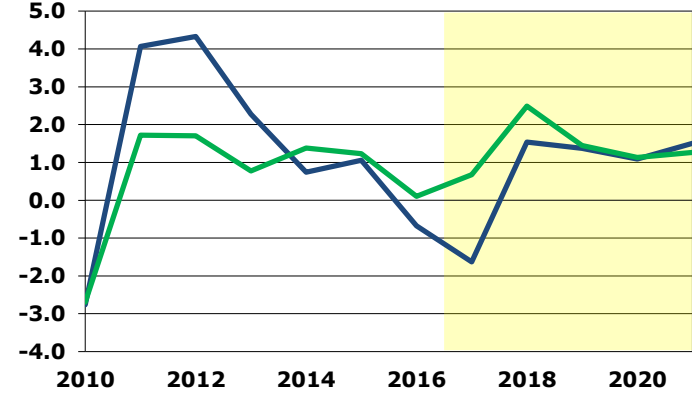
Forecast

Total Nonfarm Payroll Employment



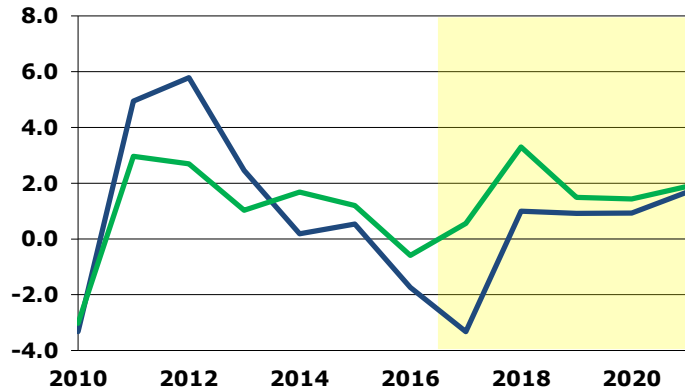
Source: WA State Employment Security Dept. 2016, ERFC 2021

Manufacturing Employment



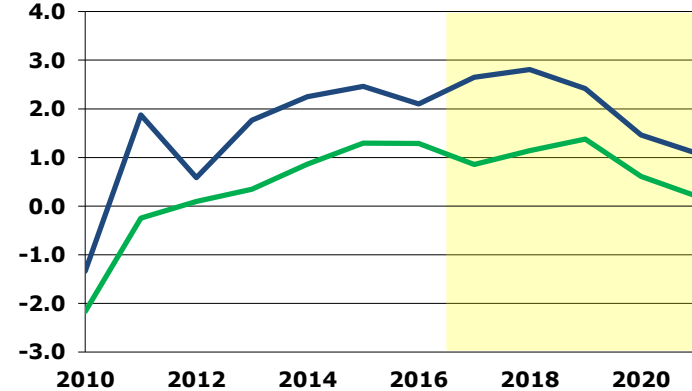
Source: WA State Employment Security Dept. 2016, ERFC 2021

Durable Manufacturing Employment



Source: WA State Employment Security Dept. 2016, ERFC 2021

Nondurable Manufacturing Employment



Source: WA State Employment Security Dept. 2016, ERFC 2021

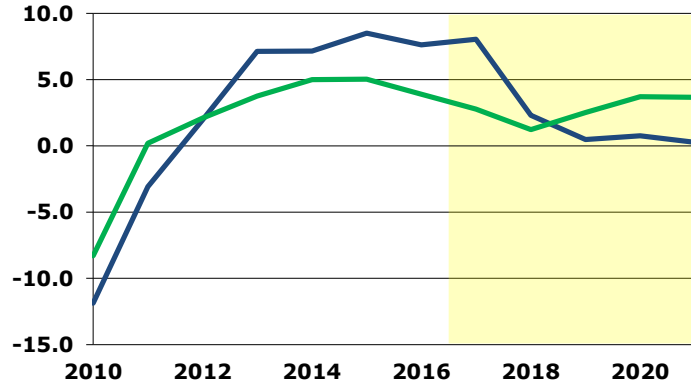
■ Washington

■ U.S.

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

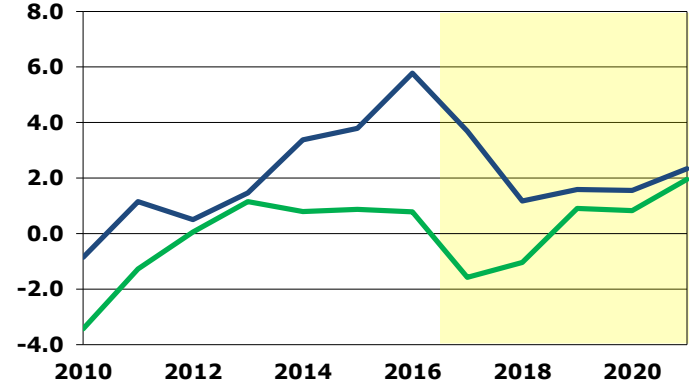
Forecast

Construction Employment



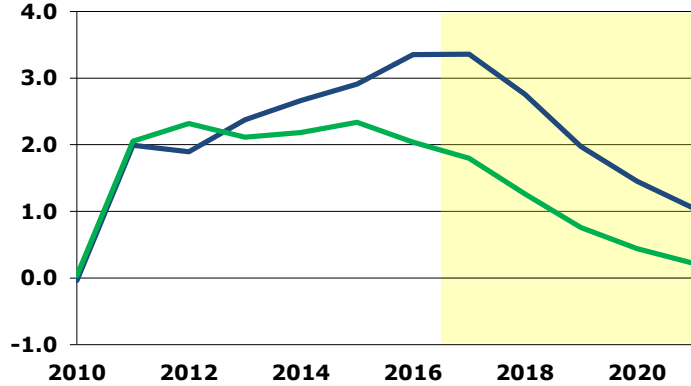
Source: WA State Employment Security Dept. 2016, ERFC 2021

Information Employment



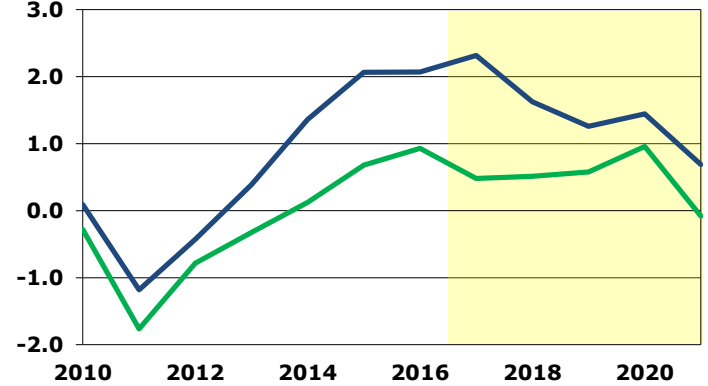
Source: WA State Employment Security Dept. 2016, ERFC 2021

Other Private Employment



Source: WA State Employment Security Dept. 2016, ERFC 2021

Government Employment



Source: WA State Employment Security Dept. 2016, ERFC 2021

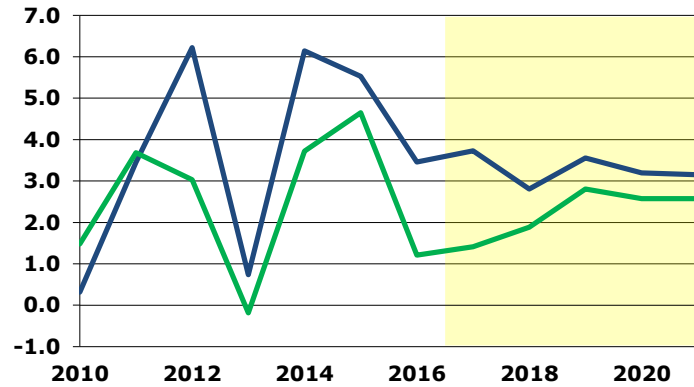
Washington

U.S.

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

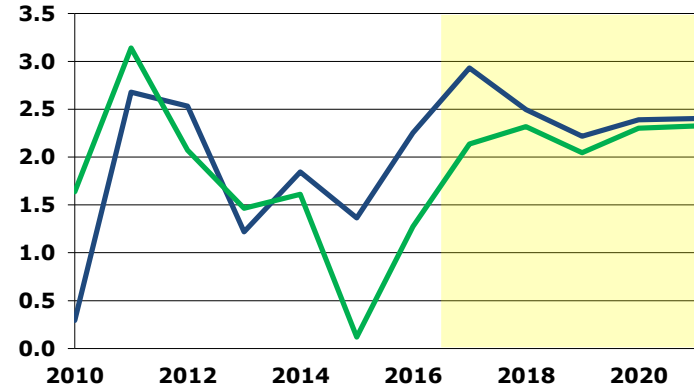
Forecast

Real Personal Income



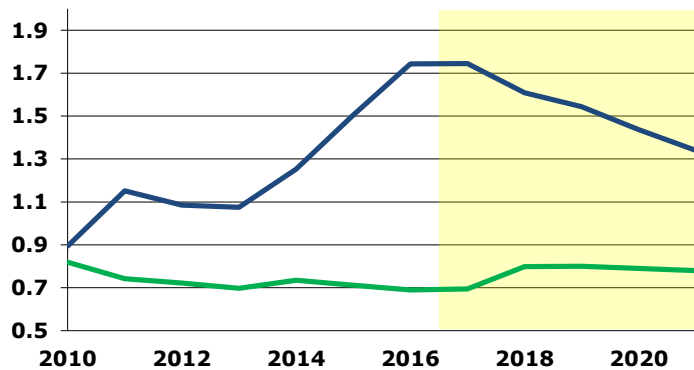
Source: Bureau of Economic Analysis 2015, ERFC 2021

Consumer Price Indices



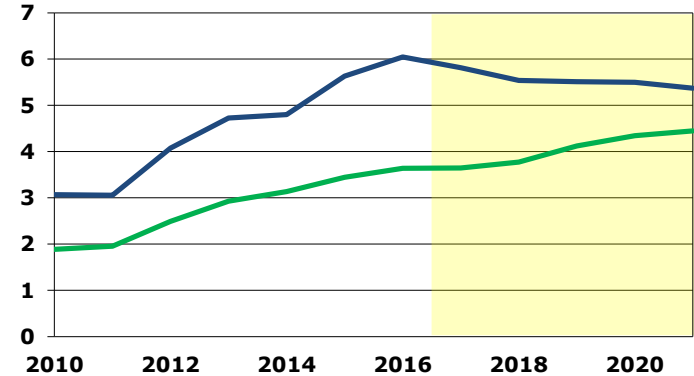
Source: Bureau of Labor Statistics 2016, ERFC 2021

Population



Source: Office of Financial Management/Census Bureau 2016, ERFC 2021

New Housing Units Per 1,000 Population (Level)



Source: Census Bureau 2016, ERFC 2021

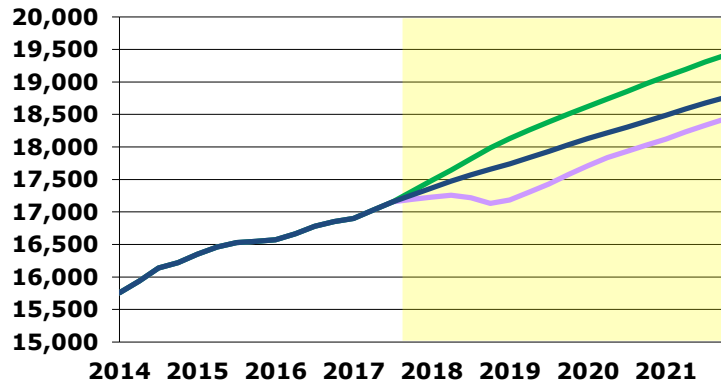
Washington

U.S.

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

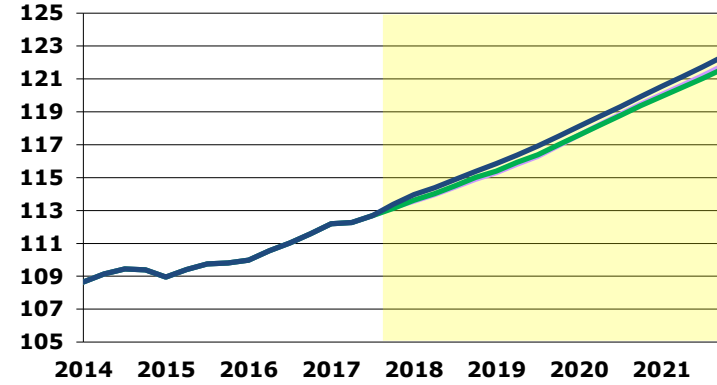
Forecast

Real GDP, Billions of 2009 Dollars



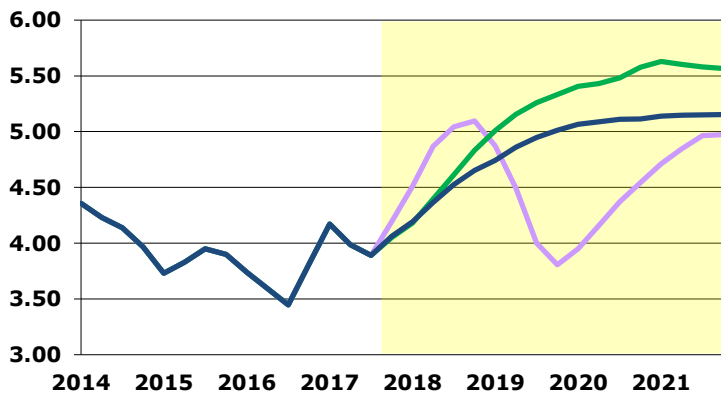
Source: Bureau of Economic Analysis 2017 Q3, ERFC 2021

PCE Price Index, 2009 = 100



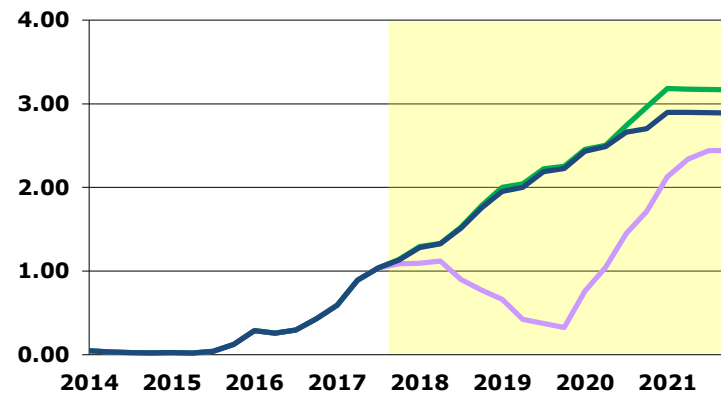
Source: Bureau of Economic Analysis 2017 Q3, ERFC 2021

Mortgage Rate, Percent



Source: Freddie Mac 2017 Q3, ERFC 2021

Three Month T-Bill Rate, Percent



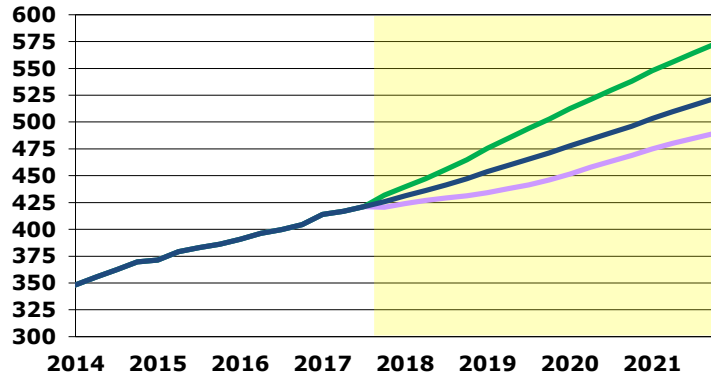
Source: Federal Reserve Board 2017 Q3, ERFC 2021

■ Baseline      ■ Optimistic      ■ Pessimistic

Figure 2.9: Comparison of Alternative Washington Economic Forecasts

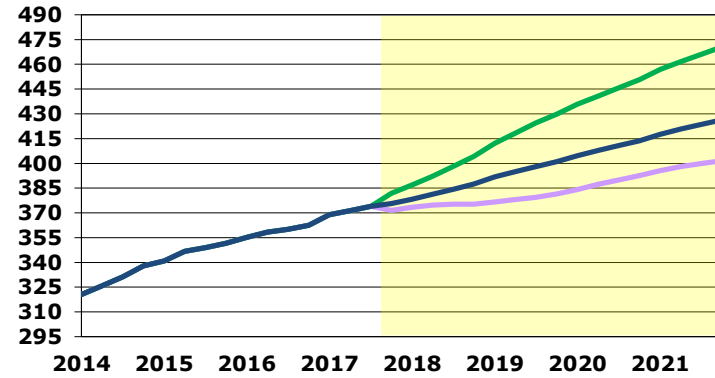
Forecast

Personal Income, Billions of Dollars



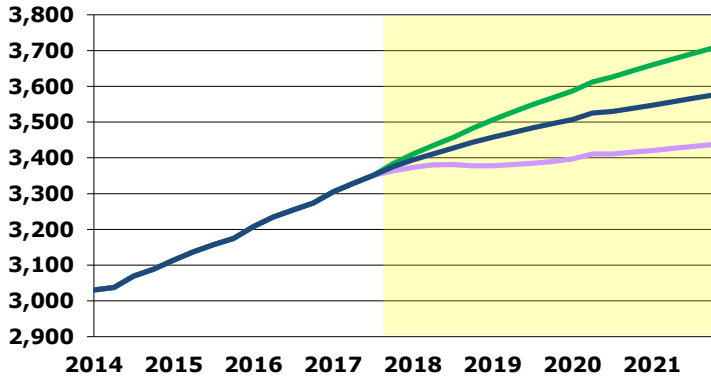
Source: Bureau of Economic Analysis 2016 Q4, ERFC 2021

Real Personal Income, Billions of 2009 Dollars



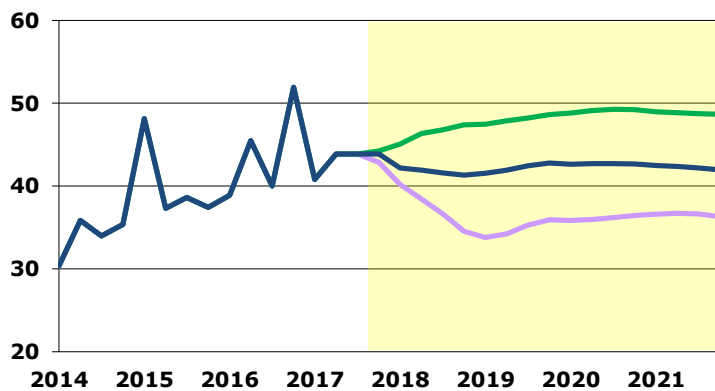
Source: Bureau of Economic Analysis 2016 Q4, ERFC 2021

Total Nonfarm Payroll Employment, Thousands



Source: WA State Employment Security 2017 Q3, ERFC 2021

Housing Permits, Thousands



Source: Census Bureau 2017 Q3, ERFC 2021

■ Baseline      ■ Optimistic      ■ Pessimistic



## Chapter 3: Washington State Revenue Forecast Summary

- **Revenue collections since the September 2017 forecast have come in \$119 million over the forecasted amount.**
- **The final total of General Fund – State (GF-S) revenue for the 2015-17 biennium is \$6 million higher than the preliminary estimate in September.**
- **Forecast increases from changes to the economic forecast were relatively small. Total expected GF-S revenue increased \$304 million in the 2017-19 biennium and \$186 million in the 2019-21 biennium.**

### Overview

*The revenue forecast has increased slightly*

Since the September forecast, General Fund – State (GF-S) revenue collections have come in \$119 million higher than forecasted. Almost a third of the surplus revenue, however, came from one-time non-economic factors: there were \$12 million in net one-time payments of past-due taxes and \$26 million in transfers of unclaimed property into the GF-S that stemmed from an amnesty program and some early payments. The adjusted surplus was therefore closer to what had been forecasted. The new state economic forecast similarly produced a relatively small change in projected revenues, which was positive on net.

*GF-S forecast change by biennium (millions):*  
15-17: +\$6  
17-19: +\$304  
19-21: +\$186

Table 3.1 summarizes the changes to the forecasts of GF-S revenue for the 2015-17 through 2019-21 biennia. For the 2015-17 biennium, which ended on June 30, 2017, the final tally of total collections was \$38,317.4 million, \$6.1 million more than estimated in September. For the current biennium, revenue sources that are tracked monthly came in \$119.1 million higher than forecasted in September. Changes to the economic forecast resulted in a \$185.0 million increase to projected collections for the rest of the biennium. The total of these components was a \$304.1 million increase in projected revenue for the current 2017-19 biennium. Changes to the economic forecast resulted in a \$185.8 million increase to projected collections for the 2019-21 biennium. The Forecast for GF-S revenue totals \$43,565.8

million in the 2017-19 biennium and \$47,582.2 million in the 2019-21 biennium.

GF-S forecast  
(\$millions):

2015-17:  
\$38,317

2017-19:  
\$43,566

2019-21:  
\$47,582

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

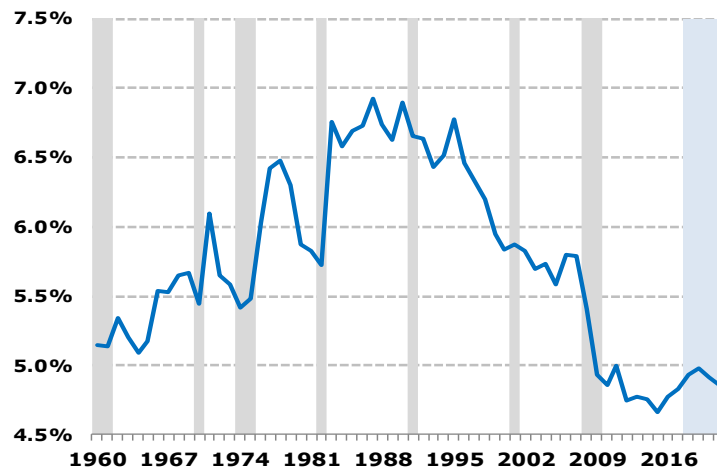
	<b>2015-17 Biennium</b>	<b>2017-19 Biennium</b>	<b>2019-21 Biennium</b>
Collection Experience	\$6.1	\$119.1	NA
Non-Economic Change	\$0.0	\$0.0	\$0.0
Forecast Change	\$0.0	\$185.0	\$185.8
<b>Total Change</b>	<b>\$6.1</b>	<b>\$304.1</b>	<b>\$185.8</b>

*Though the ratio of collections to income is expected to increase for several years, it will still be 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 for two years and is expected to increase for two more years. 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 will further boost the ratio through FY 2019, after which it will then continue its downward trend. Despite the increases, the ratio of revenue to income in FY 2019 will still be below that of any fiscal year on record prior to FY 2009.

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

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



Source: ERFC, data through fiscal year 2017



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 2015-17 biennium can be found in Table 3.5 (cash) and Table 3.6 (GAAP). Forecast changes for the 2017-19 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 2019 can be found in Table 3.9.

## Recent Collection Experience

Collections were \$119 million (3.9%) more than the September 2017 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 September 2017 forecast, total revenue from the above sources came in \$119.1 million (3.9%) higher than expected (see Table 3.2). Revenue Act collections reported by the DOR were \$63.2 million (2.4%) above the forecast. Revenue from other DOR tax sources was \$54.7 million (13.6%) above the forecast.

Much of the forecast variance was due to real estate excise taxes and unclaimed property

About half of the positive variance in non-Revenue Act collections was due to real estate excise taxes (REET) which came in \$26.3 million (16.1%) higher than forecasted. The other half was from transfers of unclaimed property into the GF-S, which came in \$26.8 million (60.5%) higher than forecasted due to a combination of early payments from businesses ahead of the November 1<sup>st</sup> annual deadline and the results of an amnesty program for past-due transfers. Cigarette tax receipts came in \$5.5 million (8.7%) lower than forecasted and liquor sales and liter tax receipts came in \$0.1 million (0.2%) lower than forecasted. Property tax receipts came in \$4.2 million (7.4%) lower than forecasted. All other DOR revenue sources came in \$11.4 million (39.1%) higher than forecasted, mainly due to a \$7.4 million payment for past due taxes on beverage syrup. Revenue from the Administrative Office of the Courts was \$1.2 million (10.5%) higher than forecasted.

**Table 3.2: Pre-Forecast Collection Variance of Major General Fund-State Taxes by Agency (relative to the September 2017 forecast, cash basis, millions of dollars)**

<u>Agency/Source</u>	<u>Collection Variance</u>	<u>Percent of Estimate</u>
Department of Revenue		
Revenue Act	\$63.2	2.4%
Non-Revenue Act	\$54.7	13.6%
Subtotal	\$117.9	3.9%
Administrative Office of the Courts		
	\$1.2	10.5%
<b>Total*</b>	<b>\$119.1</b>	<b>3.9%</b>

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

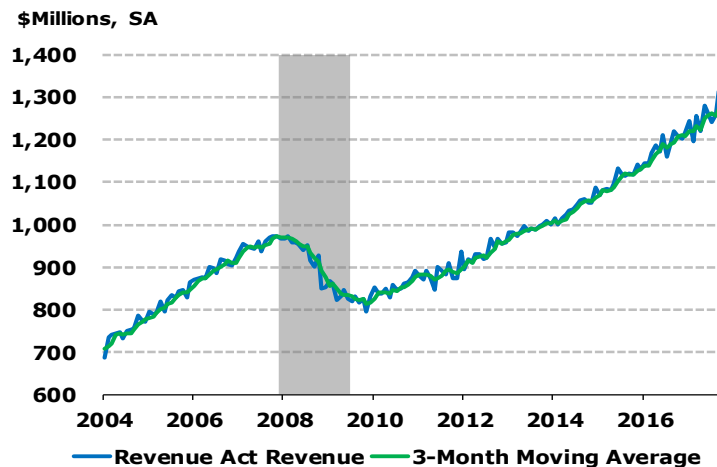
Source: ERFC; Period: September 11 - November 10, 2017

*Adjusted Revenue Act collections were up 6.7% year over year in both the most recent collection period and 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. Growth was aided by a temporary increase in the business and occupation tax rate paid by service industries that took effect in May 2010. This temporary increase expired on July 1, 2013. As can be seen in the figure, despite large swings in monthly collections the three-month moving average continues on an upward trend. Collections grew 6.7% year over year in the October 11 – November 10 collections period, the same as in the previous period. Growth on a quarterly basis shows improvement in the third quarter. Adjusted year-over-year growth in collections representing third quarter 2017 activity (August 11 – November 10, 2017 collections) was 6.4% after 5.6% growth for second quarter 2017 activity (May 11 – August 10, 2017 collections). Collections growth for first quarter 2017 activity was 6.3% and growth for fourth quarter 2016 activity was 6.4%.

**Figure 3.2: Revenue Act Collections\***

*Year-over-year growth in adjusted Revenue Act collections improved in the third quarter*



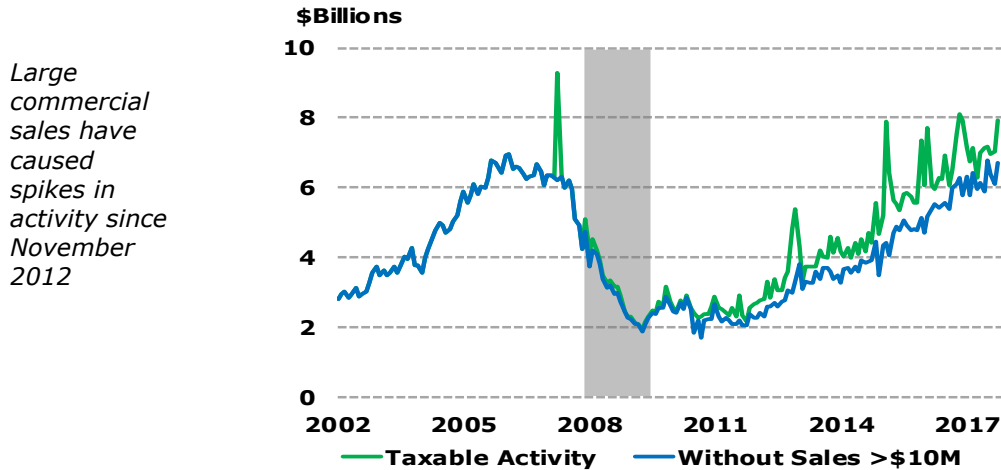
Source: ERFC; Data through November 10, 2017 preliminary allocation  
\*Adjusted for large payments/refunds and payment pattern change

*Sales of large commercial properties were stronger than expected*

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 \$2.3 billion in the two months since the last forecast, with most of the sales occurring in October. These sales had slowed from \$5.2 billion in the fourth quarter of 2016 to \$1.8 billion in the first quarter of 2017, but rebounded to \$2.9 billion in the second quarter before falling to \$2.2 billion in the third quarter. Large commercial sales have been responsible for much of the increase in taxable activity since November 2012, creating many spikes in activity, many representing transfers of controlling interest during corporate mergers (see Figure 3.3). Residential sales and

smaller commercial sales have also been stronger than expected since the September 2017 forecast. The increases in taxable activity have stemmed mostly from increased sale prices rather than an increased number of sales.

**Figure 3.3: Taxable Real Estate Excise Activity, SA**



Source: ERFC; data through October 2017

## 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 94.8% of total GF-S revenue in FY 2017. The largest tax sources administered by the DOR are the retail sales tax, business and occupation tax, property tax, use tax, cigarette tax and real estate excise tax. The revenue forecasts discussed below can be found in Tables 3.5-3.8.

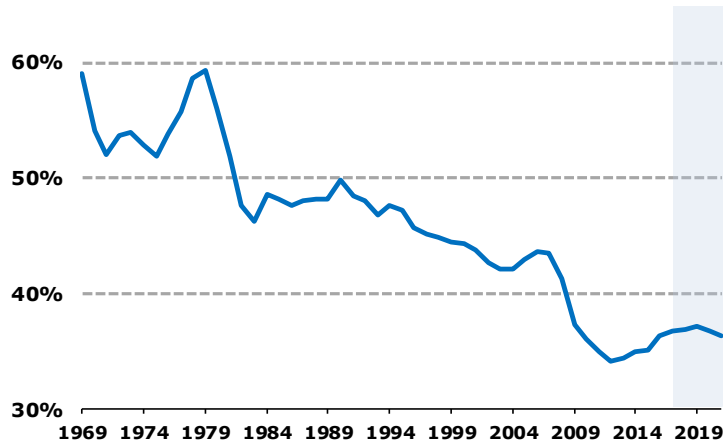
*Retail sales taxes are the largest source of GF-S revenue*

The retail sales tax is the largest source of GF-S revenue, accounting for 47.9% of GF-S revenue in FY 2017. 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 37.4% 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.

**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 2021

*Retail sales tax receipt growth forecast:*

FY18: 7.0%  
 FY19: 5.1%  
 FY20: 4.5%  
 FY21: 4.0%

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%. Forecasted growth then slows to 5.4% in FY 2018 due to a slowdown in auto sales growth. Growth then increases to 5.7% in FY 2019 as auto sales growth increases slightly and the legislative extension of the tax onto online sales nears its full reach. Growth then declines to 4.3% in FY 2020 and 3.9% in FY 2021 (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 2017 was 6.0%. Collections growth is forecasted at 7.0% in FY 2018, 5.1% in FY 2019, 4.5% in FY 2020 and 4.0% in FY 2021.

*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 19.4% of GF-S revenue in FY 2017. 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 2016, 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 45% of B&O taxes due. The next largest sector was retailing, which is taxed at 0.471% and represented an estimated 25% of taxes due, followed by the wholesaling sector, which is taxed at 0.484% and represented an estimated 20% of taxes due.

*B&O tax growth forecast:*

*FY18: 5.1%  
FY19: 4.9%  
FY20: 5.0%  
FY21: 5.0%*

In FY 2016, B&O tax receipts grew by 5.3%. Growth is forecasted to slow slightly to 5.1% in FY 2018, despite some legislative increases, due to the elevation of FY 2017 receipts from one-time remittance payments. Forecasted growth then slows further to 4.9% in FY 2019. Growth is forecasted at 5.0% in FY 2020 and FY 2021.

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

The state property tax levy is the third largest source of GF-S revenue, accounting for 10.6% of total revenue in FY 2017. 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:*

*FY18: 29.5%  
FY19: 23.3%  
FY20: 5.4%  
FY21: 4.7%*

Constrained by prior law to a levy growth rate of one percent on existing property (or the rate of inflation if less than one percent), property tax collections grew by 2.1% in FY 2016 and 1.9% in FY 2017. For fiscal years 2018 through 2021, however, the levy will grow at the rate of property price appreciation plus the value of new construction. The first payments under the additional state levy will be due in the latter half of FY 2018, bringing projected total GF-S property tax growth of 29.5% for the fiscal year. The new levy will be in effect for all of FY 2019, bringing projected growth of another 23.3% in that year. Growth is then expected to slow to 5.4% in FY 2020 and 4.7% in FY 2021.

*The property tax forecast increased in November due to higher expected property values*

The growth rates of GF-S property tax receipts for FY 2018 and 2019 are higher than those of the September forecast due to an increase in projected property values that was prompted by the preliminary total state appraisal for the calendar year 2018 levy. Coupled with other smaller forecast changes, this increased valuation, which carries forward to future years, resulted in an increase in expected revenue of \$95.3 million for the current biennium and \$133.7 million for the 2019-21 biennium.

*REET was the fourth largest GF-S source in FY 2017*

The real estate excise tax (REET) was the fourth largest DOR source of GF-S revenue in FY 2017, accounting for 5.1% 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, 2019, 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:*

*FY18: -4.8 %  
FY19: -8.9%  
FY20: -0.8%  
FY21: 4.0%*

Due to a high number of large sales of commercial property, REET receipts grew by 34.0% in FY 2013 and 15.2% in FY 2014. Even higher commercial sales coupled with strengthening residential sales boosted FY 2015 collections growth to 20.4% and FY 2016 growth to 19.4%. While large commercial sales slowed somewhat in FY 2017, the residential market accelerated, resulting in a further 13.6% increase. Large commercial sales are expected to decline in FY 2018 as residential sales grow more slowly, resulting in a 4.8% decrease in collections. Price moderation in residential sales coupled with continuing declines in commercial sales is forecasted to cause collections to continue to decrease by 8.9% in FY 2019 and 0.8% in FY 2020, with growth resuming at 4.0% in FY 2021.

*Use tax was the fifth largest GF-S source in FY 2017*

The state use tax was the fifth largest GF-S revenue source in FY 2017 at 3.4% of total receipts. The state portion of the tax is 6.5% of the purchase price for items used in the state that were not subject to the state retail sales tax. Examples of items subject to the state use tax are goods purchased out-of-state; online and mail-order purchases, where sales tax was not collected; or purchases of used vehicles from private individuals.

*Use tax growth forecast:*

*FY18: -0.6%  
FY19: 2.3%  
FY20: 4.2%  
FY21: 4.4%*

The legislated elimination of certain tax exemptions, along with several large one-time remittance payments, boosted use tax growth to 7.1% in FY 2016. Growth decreased to 6.0% in FY 2017. Lower used car sales and declines in expected used car prices are expected to cause collections to shrink by 0.6% in FY 2018 and grow at only 2.3% in FY 2019. Growth is then expected to resume at more normal levels of 4.2% in FY 2020 and 4.4% in FY 2021.

*Public utility taxes were the sixth largest GF-S source in FY 2017*

Public utility taxes were the sixth largest DOR source of GF-S revenue in FY 2017, bringing in 2.1% 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:*

*FY18: 7.9%  
FY19: 4.8%  
FY20: 2.9%  
FY21: 3.3%*

Public utility tax receipts grew by 4.5% in FY 2016. Lower natural gas prices brought growth in receipts to 1.4% in FY 2017. A recovery in projected natural gas prices and increased electricity prices bring expected growth of 7.9% in FY 2018. Growth then slows to 4.8% in FY 2019, 2.9% in FY 2020 and 3.3% in FY 2021.

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

The state tax on cigarettes was the seventh largest DOR GF-S revenue source in FY 2017 at 1.9% 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:*

*FY18: -3.0%*  
*FY19: -2.0%*  
*FY20: -2.2%*  
*FY21: -1.5%*

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. Despite an increase in tax enforcement established in the 2015 legislative session, collections decreased by 1.8% in FY 2016 and 3.5% in FY 2017. Collections are forecasted to decrease by 3.0% in FY 2018, 2.0% in FY 2019, 2.2% in FY 2020 and 1.5% in FY 2021.

## **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: \$4.4*  
*19-21: \$2.5*

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 \$250 million in the 2017-19 biennium, an increase of \$4.4 million from the September forecast, and \$270.1 million in the 2019-21 biennium, an increase of \$2.5 million. Details of the forecasted distributions from the account can be found in Table 3.18.

## **The Office of Financial Management (Other Agencies)**

*Forecast change by biennium...*

The Office of Financial Management (OFM) is responsible for preparing General Fund-State revenue and transfer forecasts for

...(millions):  
15-17: \$6.1  
17-19: \$1.6  
19-21: -\$0.2

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 final tally of revenue for the 2015-17 biennium was \$271.8 million, \$6.01 more than the preliminary estimate. The office's forecast for the 2017-19 biennium was increased \$1.6 million to \$327.5 million and the forecast for the 2019-21 biennium was decreased \$0.2 million to \$163.7 million.

## State Treasurer

*Forecast  
change by  
biennium  
(millions):*  
  
15-17: \$0.0  
17-19: \$0.1  
19-21: -\$0.1

The Office of the State Treasurer generates GF-S revenue by investing state short-term cash reserves. The office's final tally of total revenue for the 2015-17 biennium is \$22.0 million, unchanged from September's preliminary estimate. The office's forecast for the 2017-19 biennium has been increased \$0.1 million to \$25.5 million and the forecast for the 2019-21 biennium has been decreased \$0.1 million to \$48.7 million.

## Insurance Commissioner

*Forecast  
change by  
biennium  
(millions):*  
  
15-17: \$0.0  
17-19: -\$3.1  
19-21: -\$5.2

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 office's final tally of total revenue for the 2015-17 biennium is \$1,087.0 million, unchanged from September's preliminary estimate. The forecast for the 2017-19 biennium has been decreased \$3.1 million to \$1,166.9 million and the forecast for the 2019-21 biennium has been decreased \$5.2 million to \$1,273.4 million.

## Liquor and Cannabis Board

*Forecast  
change by  
biennium  
(millions):*  
  
15-17: \$0.0  
17-19: \$2.5  
19-21: \$1.2

The Liquor and Cannabis Board (LCB) collects fees from distributors and retailers on sales of spirits and surtaxes on sales of beer and wine (sales and liter taxes on sprits are collected by the DOR). The LCB is also responsible for the collection of excise taxes and fees associated with the legalized sale and use of recreational and medicinal cannabis discussed previously. The final tally of LCB GF-S revenue for the 2015-17 biennium is \$366.2 million, unchanged from September's preliminary estimate. The forecast of revenue for the 2017-19 biennium has been increased \$2.5 million to \$498.6 million and the forecast for the 2019-21 biennium has been increased \$1.2 million to \$538.3 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):*

15-17: \$0.0  
17-19: \$6.8  
19-21: \$5.3

While most of the proceeds from sales of lottery games go to the Washington Opportunity Pathways Account (OPA), distributions are also made to programs such as Problem Gambling, Economic Development and the Stadium/Exhibition Center. Details of the forecast of the distribution of Lottery earnings can be found in Table 3.15 on a cash basis and Table 3.16 on a GAAP basis. When total profits from all Washington-only games plus the Powerball game exceed \$102 million per year, the amount above \$102 million is transferred to the GF-S. The final tally of transfers into the GF-S for the 2015-17 biennium is unchanged at \$31.9 million. Forecasted transfers for the 2017-19 biennium have been increased \$6.8 million to \$41.6 million and forecasted transfers to the GF-S for the 2019-21 biennium have been increased \$5.3 million to \$48.4 million.

*OPA forecast  
change by  
biennium  
(millions):*

15-17: \$2.3  
17-19: -\$1.8  
19-21: \$0.1

The OPA receives all profits (excluding statutory transfers) from Washington-only lottery games plus all profits from the Mega Millions game. The final tally of OPA revenue for the 2015-17 biennium is \$263.5 million, \$2.3 million more than September's preliminary estimate. The forecast for the 2017-19 biennium has been decreased \$1.8 million to \$257.3 million and the forecast for the 2019-21 biennium has been increased \$0.1 million to \$257.5 million.

## Administrative Office of the Courts

*Forecast  
change by  
biennium  
(millions):*

15-17: \$0.0  
17-19: -\$1.1  
19-21: -\$3.6

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 final tally of transfers to the GF-S for the 2015-17 biennium is \$155.3 million, unchanged from September's preliminary estimate. The forecast for the 2017-19 biennium has been decreased \$1.1 million to \$137.6 million and the forecast of transfers for the 2019-21 biennium has been decreased \$3.6 million to \$137.1 million.

## Track Record for the 2015-17 Biennium

*The November  
2017 final total  
is \$1.37 billion  
(3.7%) higher  
than the  
forecast when  
the initial  
biennial budget  
in 2015 was  
adopted*

Table 3.10 summarizes the historical changes to the GF-S revenue forecast for the 2015-17 biennium. The September 2012 forecast was the initial forecast for the biennium. The November 2017 final estimate of total revenue for the biennium is \$2.80 billion (7.9%) higher than the initial forecast. Non-economic changes have increased the forecast by \$499 million (1.4%). Excluding non-economic changes, the final total is \$2.30 billion (6.5%) higher than the initial forecast. The June 2015 forecast, coupled with the \$193 million in legislative and budget-driven revenue changes passed in the 2015 special legislative sessions, was the basis for the initial budget for the 2015-17

biennium. The final total of biennial revenue is \$1.37 billion (3.7%) higher than that sum.

## Track Record for the 2017-19 Biennium

*The November 2017 forecast is \$4.55 billion (12.5%) higher than the initial February 2014 forecast, due largely to legislative changes*

Table 3.11 summarizes the historical changes to the GF-S revenue forecast for the 2017-19 biennium. The February 2014 forecast was the initial forecast for the biennium. The November 2017 forecast is \$4.86 billion (12.5%) higher than the initial forecast. Non-economic changes have increased the forecast by \$2.48 billion (6.4%). Excluding non-economic changes, the current forecast is \$2.38 billion (6.1%) 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 2015-17 and 2017-19 biennia are presented in Tables 3.6 and 3.8 and the GAAP forecast of Lottery revenue transfers for both 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 2015-17 and 2017-19 Biennia

*The forecast implies GF-S reserves of \$2.10 billion at the end of the 2015-17 biennium and \$2.13 billion in reserves for GF-S, ELTA and OPA*

Table 3.12 shows the budgetary balance sheets for the 2015-17 and 2017-19 biennia as prepared by the Office of Financial Management and the House and Senate fiscal committees. The balance sheet shows not only projected GF-S spending and resources but also total projected spending and resources for the GF-S plus the other main non-transportation state-funded accounts: the Education Legacy Trust Account (ELTA) and the Washington Opportunity Pathways Account (OPA). As shown in the table, the GF-S ending fund balance for the 2015-17

biennium is 737.1 million and the total preliminary ending balance for GF-S, ELTA and OPA is \$784.6 million. Based on the November 2017 revenue forecast and currently enacted budgets, unrestricted GF-S reserves are projected to be \$1,525.3 million at the end of the 2017-19 biennium and GF-S, ELTA and OPA reserves are projected to be \$1,574.6 million. In addition, the Budget Stabilization Account is projected to have a balance of \$1,182.3 million, bringing total projected GF-S reserves to \$2,707.6 million. Projected combined reserves for the ELTA and OPA are \$49.3 million, for total projected reserves of \$2,756.9 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: +\$1.4  
 19-21: +\$3.6

*Pessimistic scenario:*  
 17-19: -\$1.6  
 19-21: -\$3.8

Chapter 2 outlines optimistic and pessimistic economic scenarios relative to the baseline economic forecast. The forecast assigns a probability of 60% to the baseline forecast, 15% to a scenario based on the upside risks and 25% to a scenario based on the downside risks. 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 \$45,003.4 million in GF-S revenue, \$1,437.6 million (3.3%) more than the baseline scenario, while the pessimistic forecast produces \$41,930.2 million in revenue, \$1,635.6 million (3.8%) less than the baseline. For the 2019-21 biennium, the optimistic forecast generates \$51,168.5 million in GF-S revenue, \$3,586.3 million (7.5%) more than the baseline scenario, while the pessimistic forecast produces \$43,742.0 million in revenue, \$3,840.2 million (8.1%) less than the baseline.

### Near General Fund Forecasts for the 2015-17–2019-21 Biennia

*Near General Fund Forecast (millions):*

2015-17:  
 \$38,784.6

2017-19:  
 \$44,104.9

2019-21:  
 \$48,159.3

“Near General Fund” accounts are those included in the GF-S plus the Education Legacy Trust Account (ELTA). 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. All of these added revenue sources will cease to be transferred into the ELTA beginning in FY 2020. The final tally of Near General Fund revenue for the 2015-17 biennium is \$38,784.6 million, \$6.1 million more than the September 2017 preliminary estimate. The forecast of Near General Fund revenue for the 2017-19 biennium is \$44,104.9 million, \$320.3 million more than the September forecast, and the forecast for the 2019-21 biennium is \$48,159.3 million, \$195.8 million more than the September forecast. The Near General Fund forecast and recent history by fiscal year are presented in Table 3.17. The

table also includes projected revenue for the OPA and the sum of Near General Fund plus OPA revenues by fiscal year.

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

<b>Biennium</b>	<b>Current Dollars</b>	<b>Percent Change</b>	<b>2009</b>	
			<b>Chained Dollars</b>	<b>Percent Change</b>
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%	7,767.2	16.6%
1971-73	1,922.1	10.9%	7,971.8	2.6%
1973-75	2,372.4	23.4%	8,500.2	6.6%
1975-77	3,395.0	43.1%	10,580.8	24.5%
1977-79	4,490.0	32.3%	12,284.4	16.1%
1979-81	5,356.4	19.3%	12,197.3	-0.7%
1981-83	6,801.4	27.0%	13,492.7	10.6%
1983-85	8,202.4	20.6%	15,008.3	11.2%
1985-87	9,574.6	16.7%	16,528.2	10.1%
1987-89	10,934.1	14.2%	17,618.6	6.6%
1989-91	13,309.0	21.7%	19,772.8	12.2%
1991-93	14,862.2	11.7%	20,789.0	5.1%
1993-95	16,564.6	11.5%	22,140.3	6.5%
1995-97	17,637.7	6.5%	22,629.9	2.2%
1997-99	19,620.1	11.2%	24,520.4	8.4%
1999-01	21,262.1	8.4%	25,587.4	4.4%
2001-03	21,140.7	-0.6%	24,595.4	-3.9%
2003-05	23,388.5	10.6%	26,077.7	6.0%
2005-07	27,772.0	18.7%	29,316.2	12.4%
2007-09	27,703.0	-0.2%	27,888.3	-4.9%
2009-11	28,218.1	1.9%	27,704.7	-0.7%
2011-13	30,657.0	8.6%	28,906.9	4.3%
2013-15	33,666.0	9.8%	30,933.1	7.0%
2015-17	38,317.4	13.8%	34,552.9	11.7%
2017-19 <sup>F</sup>	43,565.8	13.7%	38,012.3	10.0%
2019-21 <sup>F</sup>	47,582.2	9.2%	39,977.4	5.2%

<sup>F</sup> November 2017 forecast

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

Source: Department of Revenue, the Office of Financial Management and the Economic and Revenue Forecast Council 's November 2017 forecast.

Table 3.4  
**Taxable retail sales\***  
(millions of dollars)

<b>Fiscal Year</b>	<b>Amount</b>	<b>Percent Change</b>
1979	22,309	5.6%
1980	24,057	7.8%
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 <sup>F</sup>	158,076	5.4%
2019 <sup>F</sup>	167,085	5.7%
2020 <sup>F</sup>	174,299	4.3%
2021 <sup>F</sup>	181,109	3.9%

<sup>F</sup> November 2017 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**

2015-17 biennium; cash basis

(millions of dollars)

<b>Forecast by Agency</b>	<b>Sep. 2017 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Nov. 2017 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$18,385.9	\$0.0	\$0.0	\$18,385.9	\$0.0
Business & Occupation Use	7,449.7	0.0	0.0	7,449.7	0.0
Public Utility	1,310.0	0.0	0.0	1,310.0	0.0
Liquor Sales/Liter	806.8	0.0	0.0	806.8	0.0
Cigarette	515.2	0.0	0.0	515.2	0.0
Property (State Levy)	769.3	0.0	0.0	769.3	0.0
Real Estate Excise	4,132.8	0.0	0.0	4,132.8	0.0
Timber Excise	1,891.0	0.0	0.0	1,891.0	0.0
Other	3.8	0.0	0.0	3.8	0.0
Subtotal	1,118.6	0.0	0.0	1,118.6	0.0
	36,383.1	0.0	0.0	36,383.1	0.0
<b>Insurance Commissioner</b>					
Insurance Premiums	1,087.0	0.0	0.0	1,087.0	0.0
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	309.5	0.0	0.0	309.5	0.0
Beer & Wine Surtax	56.7	0.0	0.0	56.7	0.0
<b>Lottery Commission</b>					
Lottery Revenue	31.9	0.0	(0.0)	31.9	(0.0)
<b>State Treasurer</b>					
Interest Earnings	22.0	0.0	0.0	22.0	0.0
<b>Office of Financial Management**</b>					
Other Agencies	265.7	0.0	6.1	271.8	6.1
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	155.3	0.0	0.0	155.3	0.0
<b>Total General Fund-State *</b>	<b>\$38,311.3</b>	<b>\$0.0</b>	<b>\$6.1</b>	<b>\$38,317.4</b>	<b>\$6.1</b>

<sup>1</sup> Preliminary estimate for the 2015-17 biennium adopted by the Economic and Revenue Forecast Council September 20, 2017<sup>2</sup> Final total for the 2015-17 biennium, adopted November 20, 2017

\*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 3.6

**Comparison of the General Fund-State forecast by agency**

2015-17 biennium; GAAP basis

(millions of dollars)

<b>Forecast by Agency</b>	<b>Sep. 2017 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Nov. 2017 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$18,380.6	\$0.0	\$149.6	\$18,530.2	\$149.6
Business & Occupation	7,450.6	0.0	65.8	7,516.4	65.8
Use	1,299.1	0.0	16.8	1,315.9	16.8
Public Utility	801.8	0.0	8.6	810.3	8.6
Liquor Sales/Liter	516.4	0.0	0.2	516.6	0.2
Cigarette	731.2	0.0	25.8	757.0	25.8
Property (State Levy)	4,113.8	0.0	(15.9)	4,098.0	(15.9)
Real Estate Excise	1,892.4	0.0	2.2	1,894.6	2.2
Timber Excise	4.0	0.0	0.0	4.0	0.0
Other	1,120.1	0.0	(1.7)	1,118.3	(1.7)
Subtotal	36,309.9	0.0	251.4	36,561.4	251.4
<b>Insurance Commissioner</b>					
Insurance Premiums	1,087.0	0.0	0.0	1,087.0	0.0
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	309.5	0.0	0.0	309.5	0.0
Beer & Wine Surtax	56.7	0.0	0.0	56.7	0.0
<b>Lottery Commission</b>					
Lottery Revenue	48.7	0.0	0.0	48.7	0.0
<b>State Treasurer</b>					
Interest Earnings	21.8	0.0	0.0	21.8	0.0
<b>Office of Financial Management**</b>					
Other Agencies	265.7	0.0	6.1	271.8	6.1
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	155.3	0.0	0.0	155.3	0.0
<b>Total General Fund-State *</b>	<b>\$38,254.7</b>	<b>\$0.0</b>	<b>\$257.6</b>	<b>\$38,512.2</b>	<b>\$257.6</b>

<sup>1</sup> Preliminary estimate for the 2015-17 biennium adopted by the Economic and Revenue Forecast Council September 20, 2017<sup>2</sup> Final total for the 2015-17 biennium, adopted November 20, 2017

\*Detail may not add to totals because of rounding.

\*\*OFM forecast now includes revenue from the C \*\*OFM forecast no \*\*OFM forecast r \*\*OFM forecast r \*\*OFM forecast nc \*\*OFM forecast i

Source: ERFC, Insurance Commissioner, Lottery Commission, Office of the

State Treasurer, Liquor and Cannabis Board, Office of Financial Management



Table 3.7

**Comparison of the General Fund-State forecast by agency**

2017-19 biennium; cash basis

(millions of dollars)

<b>Forecast by Agency</b>	<b>Sep. 2017 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Nov. 2017 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$20,651.5	\$0.0	\$102.0	\$20,753.5	\$102.0
Business & Occupation	8,201.8	0.0	23.0	8,224.8	23.0
Use	1,348.3	0.0	6.8	1,355.1	6.8
Public Utility	897.8	0.0	(0.2)	897.6	(0.2)
Liquor Sales/Liter	544.2	0.0	1.2	545.4	1.2
Cigarette	732.2	0.0	(6.1)	726.1	(6.1)
Property (State Levy)	5,939.0	0.0	95.3	6,034.3	95.3
Real Estate Excise	1,774.2	0.0	56.4	1,830.5	56.4
Timber Excise	4.2	0.0	(0.0)	4.2	(0.0)
Other	977.7	0.0	18.9	996.5	18.9
Subtotal	41,070.8	0.0	297.3	41,368.1	297.3
<b>Insurance Commissioner</b>					
Insurance Premiums	1,169.9	0.0	(3.1)	1,166.9	(3.1)
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	440.0	0.0	2.8	442.8	2.8
Beer & Wine Surtax	56.2	0.0	(0.3)	55.9	(0.3)
<b>Lottery Commission</b>					
Lottery Revenue	34.8	0.0	6.8	41.6	6.8
<b>State Treasurer</b>					
Interest Earnings	25.4	0.0	0.1	25.5	0.1
<b>Office of Financial Management**</b>					
Other Agencies	325.9	0.0	1.6	327.5	1.6
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	138.8	0.0	(1.1)	137.6	(1.1)
<b>Total General Fund-State *</b>	<b>\$43,261.7</b>	<b>\$0.0</b>	<b>\$304.1</b>	<b>\$43,565.8</b>	<b>\$304.1</b>

<sup>1</sup> Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council September 20, 2017<sup>2</sup> Forecast for the 2017-19 biennium, adopted November 20, 2017

\*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 3.8

**Comparison of the General Fund-State forecast by agency**

2017-19 biennium; GAAP basis

(millions of dollars)

<b>Forecast by Agency</b>	<b>Sep. 2017 Forecast<sup>1</sup></b>	<b>Non- Economic Changes</b>	<b>Forecast Revision</b>	<b>Nov. 2017 Forecast<sup>2</sup></b>	<b>Total Change</b>
<b>Department of Revenue</b>					
Retail Sales	\$20,651.5	\$0.0	\$102.0	\$20,753.5	\$102.0
Business & Occupation	8,201.8	0.0	23.0	8,224.8	23.0
Use	1,348.3	0.0	6.8	1,355.1	6.8
Public Utility	897.8	0.0	(0.2)	897.6	(0.2)
Liquor Sales/Liter	544.2	0.0	1.2	545.4	1.2
Cigarette	732.2	0.0	(6.1)	726.1	(6.1)
Property (State Levy)	5,937.6	0.0	96.7	6,034.3	96.7
Real Estate Excise	1,764.2	0.0	66.4	1,830.5	66.4
Timber Excise	3.7	0.0	(0.0)	3.7	(0.0)
Other	977.6	0.0	18.9	996.5	18.9
Subtotal	41,058.9	0.0	308.7	41,367.6	308.7
<b>Insurance Commissioner</b>					
Insurance Premiums	1,169.9	0.0	(3.1)	1,166.9	(3.1)
<b>Liquor Control Board</b>					
Fees, Cannabis Excise Tax	440.0	0.0	2.8	442.8	2.8
Beer & Wine Surtax	56.2	0.0	(0.3)	55.9	(0.3)
<b>Lottery Commission</b>					
Lottery Revenue	34.2	0.0	7.0	41.2	7.0
<b>State Treasurer</b>					
Interest Earnings	24.9	0.0	0.0	24.9	0.0
<b>Office of Financial Management**</b>					
Other Agencies	325.9	0.0	1.6	327.5	1.6
<b>Administrative Office of the Courts</b>					
Fines and Forfeitures	138.8	0.0	(1.1)	137.6	(1.1)
<b>Total General Fund-State *</b>	<b>\$43,248.6</b>	<b>\$0.0</b>	<b>\$315.7</b>	<b>\$43,564.3</b>	<b>\$315.7</b>

<sup>1</sup> Forecast for the 2017-19 biennium adopted by the Economic and Revenue Forecast Council September 20, 2017<sup>2</sup> Forecast for the 2017-19 biennium, adopted November 20, 2017

\*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 3.9

**November 2017 General Fund-State history and forecast****2015-17 to 2019-21 biennia; cash basis**

(Millions of Dollars)

<b>Forecast by Source</b>	<b>Fiscal 2016</b>	<b>Fiscal 2017</b>	<b>2015-17 Biennium</b>	<b>Fiscal 2018</b>	<b>Fiscal 2019</b>	<b>2017-19 Biennium</b>	<b>Fiscal 2020</b>	<b>Fiscal 2021</b>	<b>2019-21 Biennium</b>
<b>State Taxes</b>									
Retail sales**	\$8,927.3	\$9,458.6	\$18,385.9	\$10,116.9	\$10,636.6	\$20,753.5	\$11,116.9	\$11,559.1	\$22,676.0
Business & occupation	3,628.4	3,821.2	7,449.7	4,015.0	4,209.9	8,224.8	4,418.9	4,638.8	9,057.8
Use**	635.8	674.2	1,310.0	669.9	685.1	1,355.1	713.6	744.9	1,458.5
Public Utility	400.5	406.3	806.8	438.2	459.4	897.6	472.8	488.2	961.0
Liquor sales/liter	252.9	262.4	515.2	270.5	274.9	545.4	280.4	285.6	566.0
Beer & wine surtax	29.1	27.6	56.7	27.8	28.0	55.9	28.2	28.3	56.5
Cigarette	400.6	387.1	787.7	376.1	368.9	745.0	361.2	355.8	717.0
Tobacco products	51.6	52.4	104.1	56.6	56.2	112.8	56.9	57.6	114.5
Cannabis Excise Taxes	48.1	92.9	141.1	117.1	126.5	243.7	129.1	134.5	263.6
Property (state school levy)	2,047.1	2,085.7	4,132.8	2,701.7	3,332.6	6,034.3	3,511.6	3,676.1	7,187.7
Leasehold Excise Tax	32.9	33.0	65.9	32.7	32.8	65.4	32.9	33.1	66.0
Public utility district	51.2	53.9	105.1	54.9	55.7	110.5	56.4	57.2	113.6
Brokered Natural Gas	21.4	21.3	42.7	20.2	20.4	40.5	20.6	21.0	41.6
Real estate excise***	885.1	1,005.9	1,891.0	958.1	872.5	1,830.5	865.2	900.0	1,765.2
Timber excise	2.8	0.9	3.8	2.2	2.0	4.2	2.1	2.1	4.2
Estate/inheritance	0.3	2.2	2.6	0.1	0.0	0.1	0.0	0.0	0.0
Boat excise	13.8	14.6	28.4	14.3	13.6	27.9	13.6	13.6	27.3
Insurance premiums	510.1	576.9	1,087.0	569.0	597.8	1,166.9	623.6	649.8	1,273.4
Penalties and interest on past due taxes	178.9	283.8	462.7	153.4	164.0	317.4	169.9	175.9	345.8
Other	56.6	56.2	112.8	65.3	35.8	101.0	36.3	36.8	73.1
<b>Total Taxes</b>	<b>18,174.7</b>	<b>19,317.2</b>	<b>37,491.9</b>	<b>20,659.9</b>	<b>21,972.6</b>	<b>42,632.6</b>	<b>22,910.2</b>	<b>23,858.4</b>	<b>46,768.5</b>
<b>State Non-Tax Sources</b>									
Licenses, permits, fees	141.9	137.1	278.9	126.8	128.3	255.1	131.5	135.1	266.6
Liquor & Cannabis fees	81.7	86.8	168.5	95.9	103.2	199.1	107.0	111.2	218.2
Earnings on investments	7.3	14.7	22.0	10.3	15.2	25.5	22.6	26.0	48.7
Administrative Office of the Courts	80.8	74.5	155.3	70.1	67.5	137.6	68.0	69.1	137.1
Transfers of unclaimed property	70.7	63.2	133.9	81.7	69.6	151.2	70.9	72.2	143.1
Other revenue & transfers	21.7	45.2	66.9	85.9	78.7	164.6	0.2	(0.3)	(0.0)
<b>Total Non-Tax</b>	<b>404.0</b>	<b>421.5</b>	<b>825.5</b>	<b>470.8</b>	<b>462.4</b>	<b>933.2</b>	<b>400.3</b>	<b>413.4</b>	<b>813.7</b>
<b>Total General Fund-State *</b>	<b>\$18,578.7</b>	<b>\$19,738.7</b>	<b>\$38,317.4</b>	<b>\$21,130.7</b>	<b>\$22,435.1</b>	<b>\$43,565.8</b>	<b>\$23,310.4</b>	<b>\$24,271.8</b>	<b>\$47,582.2</b>

\* 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 2015-17 General Fund-State Cash Forecast**

September 2012 through November 2017

Cash Basis - Millions of Dollars

<b><u>Date of Forecast</u></b>	<b><u>Department of Revenue*</u></b>	<b><u>Other Agencies</u></b>	<b><u>Subtotal*</u></b>	<b><u>Non-Economic Changes**</u></b>	<b><u>Total Change</u></b>	<b><u>Total General Fund-State Cash Basis</u></b>
<b>September 2012<sup>#</sup></b>	\$34,102	\$1,416				\$35,518
<b>Changes to Forecast</b>						
November 2012	(196)	33	(163)	0	(163)	35,355
March 2013	(92)	44	(49)	0	(49)	35,306
June 2013	56	2	58	(7) <sup>#1</sup>	51	35,357
September 2013	95	(2)	93	249 <sup>#2</sup>	342	35,699
November 2013	(47)	3	(44)	(41) <sup>#3</sup>	(85)	35,615
February 2014	5	26	31	51 <sup>#4</sup>	82	35,697
June 2014	194	40	233	5 <sup>#5</sup>	238	35,935
September 2014	168	(25)	143	0	143	36,078
November 2014	239	3	241	0	241	36,319
February 2015	108	22	129	0	129	36,449
June 2015	201	70	270	39 <sup>#6</sup>	309	36,758
September 2015	80	60	139	193 <sup>#7</sup>	333	37,091
November 2015	107	(8)	99	15 <sup>#8</sup>	113	37,204
February 2016	(101)	33	(67)	0	(67)	37,137
June 2016	330	(32)	298	(5) <sup>#9</sup>	294	37,431
September 2016	327	8	334	0	334	37,765
November 2016	205	9	215	0	215	37,980
March 2017	210	38	247	0	247	38,227
June 2017	70	12	81	0	81	38,308
September 2017	7	(4)	3	0 <sup>#10</sup>	3	38,311
November 2017	0	6	6	0	6	38,317
<b>Total change***:</b>						
From September 2012	1,964	336	2,300	499	2,799	
Percent change	5.8	23.7	6.5	1.4	7.9	

\* 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.

<sup>#</sup> First official forecast for the 2015-17 biennium.<sup>#1</sup> Transfer of GF-S funds to Child and Family Reinvestment Account<sup>#2</sup> Legislative and budget-driven revenue changes from 2013 second special session<sup>#3</sup> Re-classification of prior period adjustments as non-revenue resources<sup>#4</sup> Cannabis excise taxes and fees plus retail sales and B&O taxes on cannabis production and sales resulting from Initiative 502<sup>#5</sup> Sum of legislative and budget-driven revenue changes from the 2014 regular legislative session<sup>#6</sup> Legislative revenue changes from 2015 regular legislative session<sup>#7</sup> Legislative and budget driven revenue changes from 2015 special legislative sessions<sup>#8</sup> Sum of large expected audit payments<sup>#9</sup> Legislative and budget-driven revenue changes from the 2016 regular and first special legislative sessions plus \$3.3 million AG settlement<sup>#10</sup> Legislative revenue changes from 2017 special legislative sessions since the June 2017 forecast

Table 3.11

**Track Record for the 2017-19 General Fund-State Cash Forecast**

February 2014 through November 2017

Cash Basis - Millions of Dollars

<b><u>Date of Forecast</u></b>	<b><u>Department of Revenue*</u></b>	<b><u>Other Agencies</u></b>	<b><u>Subtotal*</u></b>	<b><u>Non-Economic Changes**</u></b>	<b><u>Total Change</u></b>	<b><u>Total General Fund-State Cash Basis#</u></b>
<b>February 2014**</b>	\$36,887	\$1,823				\$38,710
<b>Changes to Forecast</b>						
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	2079 #6	2,359	43,262
November 2017	297	7	304	0	304	43,566
<b>Total change***:</b>						
From February 2014	2,239	139	2,378	2,478	4,856	
Percent change	6.1	7.6	6.1	6.4	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 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

Table 3.12

**2015-17 with Enacted Supplementals and 2017-19 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

	2015-17			2017-19		
	GFS	ELTA and OPA	TOTAL	GFS	ELTA and OPA	TOTAL
<b>RESOURCES</b>						
<b>Beginning Fund Balance</b>	<b>990.9</b>	<b>20.3</b>	<b>1,011.2</b>	<b>737.1</b>	<b>47.5</b>	<b>784.6</b>
September 2017 Revenue Forecast	38,311.3	730.7	39,041.9	43,261.7	782.1	44,043.8
November 2017 Revenue Forecast change	6.1	2.3	8.4	304.1	14.4	318.5
<b>Current Revenue Totals</b>	<b>38,317.4</b>	<b>732.9</b>	<b>39,050.3</b>	<b>43,565.8</b>	<b>796.5</b>	<b>44,362.3</b>
Transfer to Budget Stabilization Account (1% of GSR)	(383.2)		(383.2)	(431.9)		(431.9)
Transfer to Budget Stabilization Account (EORG)	(925.2)		(925.2)	(1,095.9)		(1,095.9)
Transfer from BSA (EORG)				1,078.0		1,078.0
CAFR Adjustment-	(8.3)	(10.0)	(18.3)	-	-	-
Enacted Fund Transfers	167.7		167.7	74.1	254.0	328.1
Actual/Assumed Prior Period Adjustments-	87.6		87.6	40.8		40.8
<b>Total Resources (including beginning fund balance)</b>	<b>38,246.9</b>	<b>743.2</b>	<b>38,990.2</b>	<b>43,968.1</b>	<b>1,098.0</b>	<b>45,066.1</b>
<b>EXPENDITURES</b>						
<b>Enacted Budgets</b>						
2015-17 Biennium	37,788.8	699.1	38,487.8			
2017-19 Biennium	-	-	-	42,659.6	1,048.8	43,708.4
Actual/Assumed Reversions-	(278.9)	(3.4)	(282.3)	(216.9)	-	(216.9)
<b>Total Expenditures</b>	<b>37,509.9</b>	<b>695.7</b>	<b>38,205.6</b>	<b>42,442.8</b>	<b>1,048.8</b>	<b>43,491.5</b>
<b>RESERVES</b>						
<b>Projected Ending Balance (GFS + ELTA + OPA)</b>	<b>737.1</b>	<b>47.5</b>	<b>784.6</b>	<b>1,525.3</b>	<b>49.3</b>	<b>1,574.6</b>
<b>Budget Stabilization Account</b>						
Budget Stabilization Account Beginning Balance	513.1		513.1	1,638.3		1,638.3
Plus Transfers from General Fund, Interest Earnings and Adjust	1,315.8		1,315.8	1,566.1		1,566.1
Less 2016 Appropriations and Reversions From BSA: Fires	(152.5)		(152.5)	-		-
Less 2017 Supplemental Appropriations and reversions	(38.1)		(38.1)	-		-
Less 17-19 Appropriations				(944.2)		(944.2)
Less Transfers out to GFS (EORG)	-		-	(1,078.0)		(1,078.0)
<b>Projected Budget Stabilization Account Ending Balance</b>	<b>1,638.3</b>		<b>1,638.3</b>	<b>1,182.3</b>		<b>1,182.3</b>
<b>Total Reserves (Near General Fund plus Budget Stabilization)</b>	<b>2,375.4</b>	<b>47.5</b>	<b>2,422.9</b>	<b>2,707.6</b>	<b>49.3</b>	<b>2,756.9</b>

Acronyms

GSR- General State Revenues

EORG- 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)

<b>Forecast by Source</b>	<b>Optimistic Forecast</b>	<b>Baseline Forecast</b>	<b>Pessimistic Forecast</b>
<b>Department of Revenue</b>			
Retail Sales	\$21,458.6	\$20,753.5	\$19,914.2
Business & Occupation Use	8,483.7	8,224.8	7,882.0
Public Utility	1,412.7	1,355.1	1,299.5
Property (school levy)	917.9	897.6	872.2
Real Estate Excise	6,062.4	6,034.3	6,030.9
Other	2,117.6	1,830.5	1,600.5
Subtotal	2,263.3	2,272.2	2,214.7
	42,716.3	41,368.1	39,814.0
<b>Insurance Commissioner<sup>1</sup></b>	1,196.0	1,166.9	1,137.7
<b>Lottery Commission</b>	43.6	41.6	39.5
<b>State Treasurer - Interest earnings</b>	49.9	25.5	7.5
<b>Liquor and Cannabis Surtaxes &amp; Fees<sup>2</sup></b>	518.5	498.6	479.7
<b>Office of Financial Management</b>			
Other agencies	337.4	327.5	317.7
<b>Administrative Office of the Courts</b>			
Fines and Forfeitures	141.6	137.6	134.1
<b>Total General Fund - State*</b>	<b>\$45,003.4</b>	<b>\$43,565.8</b>	<b>\$41,930.2</b>
<b>Difference from June 2017 Baseline</b>	<b>\$1,437.6</b>		<b>(\$1,635.6)</b>

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)

<b>Forecast by Source</b>	<b>Optimistic Forecast</b>	<b>Baseline Forecast</b>	<b>Pessimistic Forecast</b>
<b>Department of Revenue</b>			
Retail Sales	\$24,607.8	\$22,676.0	\$20,464.0
Business & Occupation Use	9,725.1	9,057.8	8,221.4
Public Utility	1,553.4	1,458.5	1,337.8
Property (school levy)	1,006.1	961.0	895.0
Real Estate Excise	7,317.2	7,187.7	7,109.5
Other	2,250.5	1,765.2	1,476.7
Subtotal	2,367.9	2,266.6	2,142.5
<b>Insurance Commissioner<sup>1</sup></b>	48,827.9	45,372.6	41,646.9
<b>Lottery Commission</b>	50.8	48.4	46.0
<b>State Treasurer - Interest earnings</b>	92.1	48.7	12.3
<b>Liquor and Cannabis Surtaxes &amp; Fees<sup>2</sup></b>	572.7	538.3	510.1
<b>Office of Financial Management</b>			
Other agencies	171.9	163.7	155.5
<b>Administrative Office of the Courts</b>			
Fines and Forfeitures	147.8	137.1	129.6
<b>Total General Fund - State*</b>	<b>\$51,168.5</b>	<b>\$47,582.2</b>	<b>\$43,742.0</b>
<b>Difference from June 2017 Baseline</b>	<b>\$3,586.3</b>		<b>(\$3,840.2)</b>

1 Insurance premiums, General Fund-State portion.

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

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

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



Table 3.15

**Lottery transfers by fund**November 2017 Forecast  
(cash basis, millions of dollars)

	<b>Lottery: Total Transfers:*</b>	<b>Mariners General Fund</b>	<b>Mariners Stadium</b>	<b>Exhibition Center &amp; Stadium</b>	<b>Student Achievement Account</b>	<b>School Construction Account</b>	<b>Problem Gambling Account</b>	<b>Economic Development Account</b>	<b>Opportunity Pathways Account</b>	<b>Veteran's VIP Account</b>	<b>Education Legacy Trust Account</b>
2010	126.4	12.9	5.1	9.2	0.0	95.6	0.3	3.3	0.0	0.0	0.0
2011	137.2	8.6	5.3	9.6	0.0	9.4	0.3	4.5	99.5	0.0	0.0
2009-11 Biennium	263.6	21.5	10.4	18.8	0.0	105.0	0.5	7.9	99.5	0.0	0.0
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	166.8	20.0	0.0	12.6	0.0	0.0	0.3	3.9	129.9	0.0	0.0
2019	166.4	21.5	0.0	13.1	0.0	0.0	0.3	4.0	127.5	0.0	0.0
2017-19 Biennium	333.3	41.6	0.0	25.8	0.0	0.0	0.7	7.9	257.3	0.0	0.0
2020	170.1	23.8	0.0	13.7	0.0	0.0	0.4	4.0	128.3	0.0	0.0
2021	172.3	24.6	0.0	14.2	0.0	0.0	0.4	4.0	129.2	0.0	0.0
2019-21 Biennium	342.5	48.4	0.0	27.9	0.0	0.0	0.7	8.0	257.5	0.0	0.0

Table 3.16

**Lottery transfers by fund**November 2017 Forecast  
(GAAP basis, millions of dollars)

	<b>Lottery: Total Transfers:*</b>	<b>Mariners General Fund</b>	<b>Mariners Stadium</b>	<b>Exhibition Center &amp; Stadium</b>	<b>Student Achievement Account</b>	<b>School Construction Account</b>	<b>Problem Gambling Account</b>	<b>Economic Development Account</b>	<b>Opportunity Pathways Account</b>	<b>Veteran's VIP Account</b>	<b>Education Legacy Trust Account</b>
2010	129.4	12.9	5.1	9.2	0.0	97.4	0.3	4.6	0.0	0.0	0.0
2011	138.2	7.0	5.3	9.6	0.0	0.0	0.3	3.7	112.3	0.0	0.0
2009-11 Biennium	267.6	19.9	10.4	18.8	0.0	97.4	0.5	8.3	112.3	0.0	0.0
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	164.1	19.8	0.0	12.6	0.0	0.0	0.3	4.0	127.3	0.0	0.0
2019	167.5	21.4	0.0	13.1	0.0	0.0	0.3	4.0	128.7	0.0	0.0
2017-19 Biennium	331.6	41.2	0.0	25.8	0.0	0.0	0.7	8.0	255.9	0.0	0.0
2020	170.4	23.6	0.0	13.7	0.0	0.0	0.4	4.0	128.7	0.0	0.0
2021	172.5	24.6	0.0	14.2	0.0	0.0	0.4	4.0	129.3	0.0	0.0
2019-21 Biennium	342.9	48.3	0.0	27.9	0.0	0.0	0.7	8.0	258.0	0.0	0.0

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

Source: Lottery Commission, ERFC

Table 3.17

**General Fund-State, Education Legacy Trust Account and Opportunity Pathways Account**

History and Forecast by Fiscal Year (Cash basis)

November 2017 - 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 1997	\$9,449	5.8%			\$9,449	5.8%			\$9,449	5.8%
FY 1998	\$10,057	6.4%			\$10,057	6.4%			\$10,057	6.4%
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%
Forecast:										
FY 2018	\$21,131	7.1%	\$259	2.6%	\$21,390	7.0%	\$130	2.6%	\$21,520	7.0%
FY 2019	\$22,435	6.2%	\$280	8.1%	\$22,715	6.2%	\$127	-1.9%	\$22,843	6.1%
FY 2020	\$23,310	3.9%	\$285	1.8%	\$23,596	3.9%	\$128	0.7%	\$23,724	3.9%
FY 2021	\$24,272	4.1%	\$292	2.4%	\$24,564	4.1%	\$129	0.7%	\$24,693	4.1%
<b>Biennial Totals</b>										
<b>05-07 Biennium</b>	<b>\$29,785</b>	<b>17.3%</b>	<b>\$381</b>	<b>NA</b>	<b>\$30,166</b>	<b>18.8%</b>	<b>\$0</b>	<b>NA</b>	<b>\$30,166</b>	<b>18.8%</b>
<b>07-09 Biennium</b>	<b>\$29,817</b>	<b>0.1%</b>	<b>\$437</b>	<b>14.8%</b>	<b>\$30,254</b>	<b>0.3%</b>	<b>\$0</b>	<b>NA</b>	<b>\$30,254</b>	<b>0.3%</b>
<b>09-11 Biennium</b>	<b>\$28,218</b>	<b>-5.4%</b>	<b>\$269</b>	<b>-38.5%</b>	<b>\$28,487</b>	<b>-5.8%</b>	<b>\$99</b>	<b>NA</b>	<b>\$28,586</b>	<b>-5.5%</b>
<b>11-13 Biennium</b>	<b>\$30,657</b>	<b>8.6%</b>	<b>\$215</b>	<b>-19.9%</b>	<b>\$30,872</b>	<b>8.4%</b>	<b>\$244</b>	<b>145.2%</b>	<b>\$31,116</b>	<b>8.8%</b>
<b>13-15 Biennium</b>	<b>\$33,666</b>	<b>9.8%</b>	<b>\$405</b>	<b>88.0%</b>	<b>\$34,071</b>	<b>10.4%</b>	<b>\$234</b>	<b>-4.1%</b>	<b>\$34,305</b>	<b>10.2%</b>
<b>15-17 Biennium</b>	<b>\$38,317</b>	<b>13.8%</b>	<b>\$467</b>	<b>15.4%</b>	<b>\$38,785</b>	<b>13.8%</b>	<b>\$266</b>	<b>13.6%</b>	<b>\$39,050</b>	<b>13.8%</b>
<b>17-19 Biennium</b>	<b>\$43,566</b>	<b>13.7%</b>	<b>\$539</b>	<b>15.4%</b>	<b>\$44,105</b>	<b>13.7%</b>	<b>\$257</b>	<b>-3.2%</b>	<b>\$44,362</b>	<b>13.6%</b>
<b>19-21 Biennium</b>	<b>\$47,582</b>	<b>9.2%</b>	<b>\$577</b>	<b>7.0%</b>	<b>\$48,159</b>	<b>9.2%</b>	<b>\$257</b>	<b>0.1%</b>	<b>\$48,417</b>	<b>9.1%</b>

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

Table 3.18  
**Forecasted distribution of excise tax and license fees from cannabis sales**  
 November 2017  
 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	\$361,918	\$17,288	\$344,630	\$27,786	\$9,761	\$365	\$170,000	\$16,205	\$513	\$120,000	
2019	\$378,796	\$13,324	\$365,472	\$27,786	\$9,766	\$365	\$180,000	\$17,039	\$516	\$130,000	
2020	\$390,233	\$10,668	\$379,565	\$27,786	\$9,766	\$365	\$189,783	\$18,978	\$516	\$132,371	
2021	\$402,104	\$10,668	\$391,436	\$27,786	\$9,766	\$365	\$195,718	\$19,572	\$516	\$137,713	
<b>Biennial totals</b>											
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	\$740,715	\$30,613	\$710,102	\$55,572	\$19,527	\$730	\$350,000	\$33,244	\$1,029	\$250,000	
2019-21	\$792,337	\$21,336	\$771,001	\$55,572	\$19,532	\$730	\$385,501	\$38,550	\$1,032	\$270,085	

\*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 2017 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
<b>Real National Income Accounts (Billions of Chained 2009 Dollars)</b>								
Real Gross Domestic Product	16,013.3	16,471.5	16,716.2	17,089.0	17,518.1	17,886.0	18,261.6	18,626.8
% Ch	2.6	2.9	1.5	2.2	2.5	2.1	2.1	2.0
Real Consumption	10,868.4	11,264.3	11,572.1	11,883.7	12,181.7	12,449.7	12,698.7	12,952.6
% Ch	2.9	3.6	2.7	2.7	2.5	2.2	2.0	2.0
Real Nonresidential Fixed Investment	2,172.7	2,223.5	2,210.4	2,309.7	2,392.9	2,458.7	2,548.5	2,645.1
% Ch	6.9	2.3	-0.6	4.5	3.6	2.8	3.7	3.8
Real Residential Fixed Investment	505.2	556.9	587.4	592.2	596.1	624.2	654.4	678.1
% Ch	3.5	10.2	5.5	0.8	0.7	4.7	4.8	3.6
Real Personal Income	13,574.6	14,205.7	14,377.4	14,580.7	14,855.6	15,272.7	15,666.4	16,069.5
% Ch	3.7	4.6	1.2	1.4	1.9	2.8	2.6	2.6
Real Per Capita Income (\$/Person)	42,529	44,192	44,420	44,737	45,220	46,120	46,938	47,773
% Ch	3.0	3.9	0.5	0.7	1.1	2.0	1.8	1.8
<b>Price and Wage Indexes</b>								
PCE Price Index (2009=100)	109.2	109.5	110.8	112.6	114.7	116.7	119.0	121.4
% Ch	1.5	0.3	1.2	1.7	1.8	1.8	2.0	2.0
U.S. Consumer Price Index (1982-84=1.0)	2.367	2.370	2.400	2.451	2.508	2.560	2.618	2.679
% Ch	1.6	0.1	1.3	2.1	2.3	2.0	2.3	2.3
Employment Cost Index (Dec. 2005=1.0)	1.206	1.233	1.262	1.295	1.337	1.384	1.433	1.484
% Ch	2.0	2.3	2.4	2.6	3.2	3.5	3.6	3.6
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	17,427.6	18,120.7	18,624.5	19,379.3	20,281.7	21,191.1	22,152.9	23,105.0
% Ch	4.4	4.0	2.8	4.1	4.7	4.5	4.5	4.3
Personal Income	14,818.2	15,553.0	15,928.7	16,423.0	17,032.7	17,818.4	18,646.5	19,517.1
% Ch	5.3	5.0	2.4	3.1	3.7	4.6	4.6	4.7
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	155.9	157.1	159.2	160.4	162.1	164.0	165.6	166.6
Total U.S. Employment	146.3	148.8	151.4	153.4	155.6	157.3	158.7	159.6
Unemployment Rate (%)	6.17	5.26	4.85	4.38	4.01	4.08	4.16	4.21
Nonfarm Payroll Employment	138.94	141.81	144.31	146.44	148.21	149.50	150.62	151.32
% Ch	1.9	2.1	1.8	1.5	1.2	0.9	0.7	0.5
Manufacturing	12.19	12.34	12.35	12.43	12.74	12.93	13.07	13.24
% Ch	1.4	1.2	0.1	0.7	2.5	1.4	1.1	1.3
Durable Manufacturing	7.67	7.77	7.72	7.76	8.02	8.14	8.26	8.41
% Ch	1.7	1.2	-0.6	0.6	3.3	1.5	1.4	1.9
Nondurable Manufacturing	4.51	4.57	4.63	4.67	4.72	4.79	4.82	4.83
% Ch	0.9	1.3	1.3	0.9	1.1	1.4	0.6	0.2
Construction	6.15	6.46	6.71	6.90	6.98	7.16	7.42	7.69
% Ch	5.0	5.0	3.9	2.8	1.2	2.5	3.7	3.7
Service-Providing	119.71	122.21	124.57	126.41	127.75	128.67	129.35	129.62
% Ch	1.8	2.1	1.9	1.5	1.1	0.7	0.5	0.2
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	93.3	48.7	43.2	50.8	56.7	53.8	52.2	51.4
Personal Saving/Disposable Income (%)	5.7	6.1	4.9	3.5	2.8	3.3	3.6	3.7
Auto Sales (Millions)	7.7	7.5	6.9	6.1	5.7	5.6	5.6	5.4
% Ch	1.6	-2.5	-8.6	-11.6	-5.9	-1.7	0.3	-3.8
Housing Starts (Millions)	1.001	1.107	1.177	1.190	1.240	1.366	1.451	1.496
% Ch	7.8	10.6	6.3	1.0	4.2	10.2	6.2	3.1
Federal Budget Surplus (Billions)	-610.2	-586.7	-697.3	-631.6	-674.2	-729.0	-784.9	-802.8
Net Exports (Billions)	-509.5	-524.0	-521.2	-557.5	-505.5	-415.7	-364.5	-331.9
3-Month Treasury Bill Rate (%)	0.03	0.05	0.32	0.91	1.47	2.09	2.57	2.89
10-Year Treasury Note Yield (%)	2.54	2.14	1.84	2.35	2.90	3.35	3.51	3.50
Bond Index of 20 G.O. Munis. (%)	4.24	3.66	3.27	3.72	4.13	4.36	4.39	4.37
30-Year Fixed Mortgage Rate (%)	4.17	3.85	3.65	4.03	4.43	4.89	5.09	5.15

Table A1.2  
**U.S. Economic Forecast Summary**  
 Forecast 2017 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
<b>Real National Income Accounts (Billions of Chained 2009 Dollars)</b>								
Real Gross Domestic Product	16,571.6	16,663.5	16,778.1	16,851.4	16,903.2	17,031.1	17,156.9	17,264.6
% Ch , Annual Rate	0.6	2.2	2.8	1.8	1.2	3.1	3.0	2.5
Real Consumption	11,430.5	11,537.7	11,618.1	11,702.1	11,758.0	11,853.0	11,922.1	12,001.7
% Ch , Annual Rate	1.8	3.8	2.8	2.9	1.9	3.3	2.4	2.7
Real Nonresidential Fixed Investment	2,187.5	2,205.3	2,224.0	2,224.9	2,263.6	2,300.6	2,322.7	2,351.7
% Ch , Annual Rate	-4.0	3.3	3.4	0.2	7.2	6.7	3.9	5.1
Real Residential Fixed Investment	593.7	586.5	579.8	589.8	605.5	594.1	585.0	584.4
% Ch , Annual Rate	13.4	-4.7	-4.5	7.1	11.1	-7.3	-6.0	-0.4
Real Personal Income	14,321.1	14,391.1	14,435.2	14,362.1	14,479.1	14,575.5	14,622.1	14,646.1
% Ch , Annual Rate	-1.1	2.0	1.2	-2.0	3.3	2.7	1.3	0.7
Real Per Capita Income (\$/Person)	44,366	44,507	44,553	44,255	44,550	44,770	44,823	44,807
% Ch , Annual Rate	-1.7	1.3	0.4	-2.7	2.7	2.0	0.5	-0.2
<b>Price and Wage Indexes</b>								
PCE Price Index (2009=100)	110.0	110.6	111.0	111.6	112.2	112.3	112.7	113.4
% Ch , Annual Rate	0.6	2.1	1.7	2.0	2.2	0.3	1.5	2.4
U.S. Consumer Price Index (1982-84=1.0)	2.380	2.394	2.404	2.422	2.441	2.439	2.452	2.474
% Ch , Annual Rate	0.1	2.3	1.8	3.0	3.1	-0.3	2.0	3.7
Employment Cost Index (Dec. 2005=1.0)	1.251	1.260	1.266	1.272	1.283	1.290	1.299	1.309
% Ch , Annual Rate	2.6	2.9	1.9	1.9	3.5	2.2	2.8	3.0
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	18,325.2	18,538.0	18,729.1	18,905.5	19,057.7	19,250.0	19,495.5	19,713.9
% Ch , Annual Rate	0.8	4.7	4.2	3.8	3.3	4.1	5.2	4.6
Personal Income	15,751.0	15,910.1	16,028.0	16,025.7	16,245.2	16,364.4	16,478.1	16,604.3
% Ch , Annual Rate	-0.5	4.1	3.0	-0.1	5.6	3.0	2.8	3.1
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	158.8	158.8	159.5	159.6	160.0	160.0	160.7	160.8
Total U.S. Employment	151.0	151.1	151.7	152.0	152.5	153.1	153.8	154.1
Unemployment Rate (%)	4.93	4.87	4.90	4.70	4.67	4.37	4.30	4.17
Nonfarm Payroll Employment	143.44	143.95	144.66	145.17	145.71	146.20	146.67	147.18
% Ch , Annual Rate	1.7	1.4	2.0	1.4	1.5	1.3	1.3	1.4
Manufacturing	12.37	12.35	12.34	12.33	12.37	12.40	12.44	12.51
% Ch , Annual Rate	0.6	-0.8	-0.1	-0.4	1.4	1.0	1.1	2.3
Durable Manufacturing	7.75	7.72	7.71	7.70	7.72	7.74	7.76	7.82
% Ch , Annual Rate	-0.1	-1.6	-0.7	-0.4	1.3	1.0	1.1	3.1
Nondurable Manufacturing	4.62	4.63	4.64	4.63	4.65	4.66	4.68	4.69
% Ch , Annual Rate	1.9	0.4	1.0	-0.4	1.6	1.0	1.1	1.0
Construction	6.67	6.69	6.71	6.77	6.85	6.88	6.90	6.95
% Ch , Annual Rate	5.3	1.6	1.1	3.2	5.3	1.6	1.3	2.6
Service-Providing	123.69	124.24	124.94	125.41	125.80	126.21	126.61	127.01
% Ch , Annual Rate	1.8	1.8	2.3	1.5	1.3	1.3	1.3	1.3
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	33.2	45.4	44.9	49.3	51.9	48.3	48.2	54.9
Personal Saving/Disposable Income (%)	5.7	5.3	4.8	3.6	3.9	3.8	3.4	2.9
Auto Sales (Millions)	7.1	6.8	6.8	6.8	6.2	6.0	6.1	6.0
% Ch , Annual Rate	-16.0	-14.2	0.5	-1.5	-28.6	-14.6	4.9	-6.4
Housing Starts (Millions)	1.153	1.158	1.150	1.248	1.238	1.167	1.165	1.189
% Ch , Annual Rate	10.7	1.5	-2.7	39.0	-3.4	-21.0	-0.6	8.4
Federal Budget Surplus (Billions)	-707.5	-688.5	-679.1	-714.0	-652.8	-633.4	-607.7	-632.7
Net Exports (Billions)	-526.2	-501.6	-492.8	-564.3	-582.8	-567.2	-531.7	-548.4
3-Month Treasury Bill Rate (%)	0.29	0.26	0.30	0.43	0.59	0.89	1.04	1.13
10-Year Treasury Note Yield (%)	1.92	1.75	1.56	2.13	2.44	2.26	2.24	2.46
Bond Index of 20 G.O. Munis. (%)	3.36	3.26	2.90	3.57	3.88	3.70	3.55	3.74
30-Year Fixed Mortgage Rate (%)	3.74	3.59	3.45	3.81	4.17	3.99	3.89	4.06



Table A1.2 (continued)  
**U.S. Economic Forecast Summary**  
 Forecast 2017 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
<b>Real National Income Accounts (Billions of Chained 2009 Dollars)</b>								
Real Gross Domestic Product	17,369.3	17,474.2	17,570.6	17,658.5	17,739.4	17,835.9	17,934.1	18,034.6
% Ch , Annual Rate	2.4	2.4	2.2	2.0	1.8	2.2	2.2	2.3
Real Consumption	12,072.6	12,148.1	12,219.5	12,286.6	12,350.0	12,420.3	12,482.2	12,546.4
% Ch , Annual Rate	2.4	2.5	2.4	2.2	2.1	2.3	2.0	2.1
Real Nonresidential Fixed Investment	2,379.1	2,383.7	2,396.3	2,412.4	2,430.1	2,449.6	2,467.4	2,487.8
% Ch , Annual Rate	4.7	0.8	2.1	2.7	3.0	3.2	2.9	3.4
Real Residential Fixed Investment	586.1	591.9	600.1	606.3	610.3	616.8	630.1	639.4
% Ch , Annual Rate	1.2	4.0	5.7	4.2	2.7	4.3	8.9	6.0
Real Personal Income	14,721.3	14,806.3	14,898.5	14,996.5	15,131.5	15,229.6	15,319.1	15,410.5
% Ch , Annual Rate	2.1	2.3	2.5	2.7	3.7	2.6	2.4	2.4
Real Per Capita Income (\$/Person)	44,946	45,115	45,305	45,512	45,831	46,036	46,215	46,399
% Ch , Annual Rate	1.3	1.5	1.7	1.8	2.8	1.8	1.6	1.6
<b>Price and Wage Indexes</b>								
PCE Price Index (2009=100)	114.0	114.4	114.9	115.4	115.8	116.4	116.9	117.5
% Ch , Annual Rate	2.1	1.5	1.7	1.7	1.7	1.8	1.9	2.1
U.S. Consumer Price Index (1982-84=1.0)	2.493	2.501	2.513	2.526	2.538	2.552	2.566	2.582
% Ch , Annual Rate	3.1	1.3	2.0	2.1	1.9	2.1	2.3	2.4
Employment Cost Index (Dec. 2005=1.0)	1.320	1.331	1.342	1.354	1.366	1.378	1.390	1.402
% Ch , Annual Rate	3.5	3.4	3.4	3.5	3.5	3.5	3.5	3.6
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	19,944.1	20,168.3	20,397.3	20,617.1	20,837.6	21,069.1	21,306.4	21,551.4
% Ch , Annual Rate	4.8	4.6	4.6	4.4	4.3	4.5	4.6	4.7
Personal Income	16,778.3	16,936.9	17,114.3	17,301.4	17,529.7	17,722.3	17,911.4	18,110.3
% Ch , Annual Rate	4.3	3.8	4.3	4.4	5.4	4.5	4.3	4.5
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	161.4	161.9	162.4	162.8	163.3	163.8	164.2	164.6
Total U.S. Employment	154.9	155.3	155.9	156.4	156.7	157.1	157.5	157.9
Unemployment Rate (%)	4.02	4.04	4.00	3.98	4.03	4.07	4.10	4.11
Nonfarm Payroll Employment	147.59	148.02	148.41	148.80	149.09	149.36	149.65	149.91
% Ch , Annual Rate	1.1	1.2	1.1	1.1	0.8	0.7	0.8	0.7
Manufacturing	12.57	12.73	12.83	12.83	12.89	12.91	12.93	12.97
% Ch , Annual Rate	2.0	5.2	3.0	0.2	1.7	0.7	0.8	1.2
Durable Manufacturing	7.88	8.01	8.10	8.09	8.12	8.13	8.14	8.17
% Ch , Annual Rate	2.9	7.0	4.3	-0.3	1.5	0.5	0.5	1.4
Nondurable Manufacturing	4.69	4.72	4.73	4.74	4.77	4.78	4.79	4.80
% Ch , Annual Rate	0.7	2.2	0.8	1.0	2.2	1.0	1.2	0.9
Construction	6.97	6.97	6.98	7.00	7.06	7.12	7.19	7.26
% Ch , Annual Rate	1.4	-0.2	0.4	1.5	3.1	3.5	4.0	4.0
Service-Providing	127.33	127.58	127.87	128.23	128.40	128.58	128.77	128.92
% Ch , Annual Rate	1.0	0.8	0.9	1.1	0.5	0.6	0.6	0.5
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	57.1	57.2	56.6	55.7	54.8	54.1	53.4	53.0
Personal Saving/Disposable Income (%)	2.8	2.8	2.8	2.8	3.2	3.3	3.4	3.4
Auto Sales (Millions)	5.8	5.7	5.7	5.6	5.6	5.6	5.6	5.6
% Ch , Annual Rate	-9.8	-7.4	-2.0	-3.0	0.1	-2.6	0.6	-0.5
Housing Starts (Millions)	1.202	1.226	1.255	1.276	1.304	1.342	1.390	1.429
% Ch , Annual Rate	4.6	8.2	9.8	6.9	8.9	12.2	15.2	11.5
Federal Budget Surplus (Billions)	-657.6	-670.1	-679.2	-689.9	-721.3	-726.7	-730.8	-737.4
Net Exports (Billions)	-554.8	-517.2	-487.1	-462.9	-440.8	-424.9	-406.4	-390.6
3-Month Treasury Bill Rate (%)	1.28	1.32	1.51	1.76	1.95	2.00	2.19	2.23
10-Year Treasury Note Yield (%)	2.62	2.83	3.01	3.13	3.21	3.33	3.41	3.46
Bond Index of 20 G.O. Munis. (%)	3.89	4.06	4.25	4.34	4.39	4.39	4.32	4.33
30-Year Fixed Mortgage Rate (%)	4.19	4.37	4.53	4.65	4.74	4.86	4.95	5.01

Table A1.2 (continued)  
**U.S. Economic Forecast Summary**  
 Forecast 2017 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
<b>Real National Income Accounts (Billions of Chained 2009 Dollars)</b>								
Real Gross Domestic Product	18,128.5	18,219.1	18,304.4	18,394.4	18,487.3	18,584.6	18,677.4	18,758.1
% Ch , Annual Rate	2.1	2.0	1.9	2.0	2.0	2.1	2.0	1.7
Real Consumption	12,606.0	12,666.5	12,729.6	12,792.7	12,854.8	12,919.9	12,986.1	13,049.4
% Ch , Annual Rate	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.0
Real Nonresidential Fixed Investment	2,511.0	2,534.7	2,560.8	2,587.7	2,614.1	2,638.5	2,656.8	2,671.2
% Ch , Annual Rate	3.8	3.8	4.2	4.3	4.1	3.8	2.8	2.2
Real Residential Fixed Investment	646.0	651.0	656.3	664.2	669.5	675.6	682.0	685.5
% Ch , Annual Rate	4.2	3.2	3.3	4.9	3.2	3.7	3.8	2.1
Real Personal Income	15,524.4	15,622.5	15,716.0	15,802.7	15,927.9	16,028.1	16,118.3	16,203.6
% Ch , Annual Rate	3.0	2.6	2.4	2.2	3.2	2.5	2.3	2.1
Real Per Capita Income (\$/Person)	46,650	46,853	47,041	47,209	47,491	47,697	47,873	48,034
% Ch , Annual Rate	2.2	1.7	1.6	1.4	2.4	1.7	1.5	1.4
<b>Price and Wage Indexes</b>								
PCE Price Index (2009=100)	118.1	118.7	119.3	119.9	120.5	121.1	121.7	122.4
% Ch , Annual Rate	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.1
U.S. Consumer Price Index (1982-84=1.0)	2.596	2.611	2.626	2.641	2.657	2.671	2.687	2.703
% Ch , Annual Rate	2.3	2.2	2.3	2.4	2.4	2.2	2.3	2.4
Employment Cost Index (Dec. 2005=1.0)	1.414	1.427	1.439	1.452	1.465	1.478	1.491	1.504
% Ch , Annual Rate	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
<b>Current Dollar National Income (Billions of Dollars)</b>								
Gross Domestic Product	21,805.0	22,038.8	22,265.6	22,502.2	22,752.2	22,990.7	23,226.5	23,450.5
% Ch , Annual Rate	4.8	4.4	4.2	4.3	4.5	4.3	4.2	3.9
Personal Income	18,337.7	18,545.5	18,751.1	18,951.6	19,199.0	19,415.4	19,623.5	19,830.4
% Ch , Annual Rate	5.1	4.6	4.5	4.3	5.3	4.6	4.4	4.3
<b>Employment (Millions)</b>								
U.S. Civilian Labor Force	165.0	165.6	165.8	166.0	166.2	166.5	166.7	166.9
Total U.S. Employment	158.2	158.7	158.9	159.1	159.3	159.5	159.7	159.8
Unemployment Rate (%)	4.13	4.15	4.17	4.19	4.20	4.20	4.21	4.24
Nonfarm Payroll Employment	150.21	150.74	150.71	150.81	150.99	151.22	151.44	151.63
% Ch, Annual Rate	0.8	1.4	-0.1	0.3	0.5	0.6	0.6	0.5
Manufacturing	13.01	13.05	13.09	13.14	13.17	13.21	13.26	13.31
% Ch, Annual Rate	1.0	1.4	1.3	1.3	0.9	1.3	1.6	1.4
Durable Manufacturing	8.20	8.24	8.27	8.31	8.34	8.38	8.44	8.48
% Ch, Annual Rate	1.5	1.9	1.8	2.0	1.3	2.1	2.5	2.2
Nondurable Manufacturing	4.81	4.81	4.82	4.82	4.83	4.83	4.83	4.83
% Ch, Annual Rate	0.3	0.5	0.5	0.3	0.1	0.1	0.0	0.0
Construction	7.33	7.39	7.45	7.52	7.59	7.66	7.73	7.80
% Ch, Annual Rate	3.8	3.4	3.5	3.8	3.6	3.8	3.8	3.3
Service-Providing	129.12	129.53	129.39	129.38	129.46	129.58	129.67	129.75
% Ch, Annual Rate	0.6	1.3	-0.4	0.0	0.3	0.4	0.3	0.2
<b>Miscellaneous Indicators</b>								
Oil-WTI (\$ per barrel)	52.7	52.3	52.0	51.8	51.6	51.5	51.3	51.3
Personal Saving/Disposable Income (%)	3.6	3.7	3.6	3.6	3.7	3.8	3.7	3.6
Auto Sales (Millions)	5.7	5.6	5.6	5.6	5.5	5.4	5.4	5.4
% Ch, Annual Rate	3.7	-0.6	-0.9	-3.6	-5.4	-5.4	-3.8	-1.5
Housing Starts (Millions)	1.431	1.448	1.457	1.467	1.481	1.495	1.504	1.507
% Ch, Annual Rate	0.6	4.7	2.6	2.9	3.7	3.7	2.4	0.8
Federal Budget Surplus (Billions)	-775.1	-797.2	-788.5	-778.9	-804.4	-808.3	-807.1	-791.2
Net Exports (Billions)	-376.8	-367.3	-359.0	-355.0	-346.1	-335.5	-327.0	-318.9
3-Month Treasury Bill Rate (%)	2.43	2.49	2.66	2.70	2.90	2.90	2.89	2.89
10-Year Treasury Note Yield (%)	3.50	3.52	3.52	3.51	3.51	3.50	3.50	3.48
Bond Index of 20 G.O. Munis. (%)	4.37	4.39	4.39	4.39	4.39	4.38	4.37	4.35
30-Year Fixed Mortgage Rate (%)	5.07	5.09	5.11	5.11	5.14	5.15	5.15	5.15

Table A1.3  
**Washington Economic Forecast Summary**  
Forecast 2017 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
<b>Real Income (Billions of Chained 2009 Dollars)</b>								
Real Personal Income	328.865	347.043	359.037	372.412	382.878	396.499	409.164	422.053
% Ch	6.1	5.5	3.5	3.7	2.8	3.6	3.2	3.1
Real Wage and Salary Disb.	166.477	175.257	183.785	194.789	200.868	207.448	213.158	218.785
% Ch	4.9	5.3	4.9	6.0	3.1	3.3	2.8	2.6
Real Nonwage Income	162.388	171.786	175.252	177.623	182.010	189.051	196.006	203.268
% Ch	7.5	5.8	2.0	1.4	2.5	3.9	3.7	3.7
Real Per Capita Income (\$/Person)	46,592	48,441	49,257	50,216	50,810	51,818	52,716	53,657
% Ch	4.8	4.0	1.7	1.9	1.2	2.0	1.7	1.8
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.092	1.095	1.108	1.126	1.147	1.167	1.190	1.214
% Ch	1.5	0.3	1.2	1.7	1.8	1.8	2.0	2.0
Seattle Cons. Price Index (1982-84=1.0)	2.460	2.494	2.550	2.625	2.690	2.750	2.815	2.883
% Ch	1.8	1.4	2.3	2.9	2.5	2.2	2.4	2.4
Average Nonfarm Annual Wage	57,228	58,812	60,597	63,502	65,140	67,338	69,634	72,216
% Ch	4.3	2.8	3.0	4.8	2.6	3.4	3.4	3.7
Avg. Hourly Earnings-Mfg. (\$/Hour)	25.16	25.52	26.42	27.44	28.68	29.61	30.59	31.60
% Ch	3.4	1.4	3.5	3.9	4.5	3.2	3.3	3.3
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	358.988	379.951	397.772	419.456	438.993	462.595	487.001	512.606
% Ch	7.7	5.8	4.7	5.5	4.7	5.4	5.3	5.3
Disposable Personal Income	315.729	332.608	348.823	367.345	383.798	403.748	423.647	443.766
% Ch	7.6	5.3	4.9	5.3	4.5	5.2	4.9	4.7
Per Capita Income (\$/Person)	50,860	53,033	54,570	56,559	58,255	60,455	62,743	65,168
% Ch	6.4	4.3	2.9	3.6	3.0	3.8	3.8	3.9
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,487.9	3,544.8	3,641.6	3,720.7	3,827.1	3,905.7	3,975.3	4,030.9
Total Washington Employment	3,275.3	3,345.5	3,443.4	3,548.7	3,664.9	3,741.2	3,807.0	3,860.2
Unemployment Rate (%)	6.10	5.62	5.44	4.62	4.24	4.21	4.23	4.24
Nonfarm Payroll Employment	3,056.8	3,145.7	3,242.3	3,339.9	3,419.0	3,477.0	3,525.0	3,561.3
% Ch	2.5	2.9	3.1	3.0	2.4	1.7	1.4	1.0
Manufacturing	288.8	291.8	289.9	285.1	289.5	293.5	296.7	301.1
% Ch	0.7	1.1	-0.7	-1.6	1.5	1.4	1.1	1.5
Durable Manufacturing	210.0	211.1	207.4	200.5	202.5	204.4	206.3	209.7
% Ch	0.2	0.5	-1.7	-3.3	1.0	0.9	0.9	1.7
Aerospace	94.2	94.0	90.9	83.7	79.8	78.2	77.6	77.6
% Ch	-1.9	-0.2	-3.3	-7.9	-4.7	-2.0	-0.8	0.0
Nondurable Manufacturing	78.8	80.8	82.4	84.6	87.0	89.1	90.4	91.4
% Ch	2.3	2.5	2.1	2.6	2.8	2.4	1.5	1.1
Construction	159.7	173.3	186.5	201.5	206.1	207.2	208.7	209.3
% Ch	7.2	8.5	7.6	8.0	2.3	0.5	0.8	0.3
Service-Providing	2,602.1	2,674.2	2,759.7	2,847.2	2,917.4	2,970.3	3,013.6	3,044.8
% Ch	2.4	2.8	3.2	3.2	2.5	1.8	1.5	1.0
Software Publishers	55.6	55.9	58.8	61.6	63.0	63.4	63.9	64.5
% Ch	3.3	0.5	5.2	4.7	2.3	0.7	0.7	0.9
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	33.898	40.374	44.077	43.101	41.756	42.174	42.681	42.254
% Ch	2.8	19.1	9.2	-2.2	-3.1	1.0	1.2	-1.0
Single-Family	17.905	19.797	22.463	23.150	24.105	25.714	26.143	26.351
% Ch	-2.7	10.6	13.5	3.1	4.1	6.7	1.7	0.8
Multi-Family	15.993	20.577	21.614	19.951	17.651	16.460	16.537	15.903
% Ch	9.8	28.7	5.0	-7.7	-11.5	-6.7	0.5	-3.8
30-Year Fixed Mortgage Rate (%)	4.17	3.85	3.65	4.03	4.43	4.89	5.09	5.15

Table A1.4  
**Washington Economic Forecast Summary**  
Forecast 2017 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
<b>Real Income (Billions of Chained 2009 Dollars)</b>								
Real Personal Income	355.222	358.365	360.101	362.460	368.904	371.308	373.865	375.573
% Ch, Annual Rate	4.2	3.6	2.0	2.6	7.3	2.6	2.8	1.8
Real Wage and Salary Disb.	181.461	183.813	184.750	185.116	192.192	193.774	196.041	197.150
% Ch, Annual Rate	4.8	5.3	2.1	0.8	16.2	3.3	4.8	2.3
Real Nonwage Income	173.761	174.552	175.351	177.344	176.712	177.534	177.824	178.423
% Ch, Annual Rate	3.6	1.8	1.8	4.6	-1.4	1.9	0.7	1.4
Real Per Capita Income (\$/Person)	49,061	49,282	49,294	49,393	50,061	50,173	50,300	50,332
% Ch, Annual Rate	2.5	1.8	0.1	0.8	5.5	0.9	1.0	0.3
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.100	1.106	1.110	1.116	1.122	1.123	1.127	1.134
% Ch, Annual Rate	0.6	2.1	1.7	2.0	2.2	0.3	1.5	2.4
Seattle Cons. Price Index (1982-84=1.0)	2.527	2.541	2.557	2.575	2.608	2.617	2.624	2.649
% Ch, Annual Rate	2.3	2.3	2.5	3.0	5.1	1.5	1.0	3.8
Average Nonfarm Annual Wage	59,992	60,617	60,847	60,933	63,068	63,175	63,729	64,035
% Ch, Annual Rate	0.8	4.2	1.5	0.6	14.8	0.7	3.6	1.9
Avg. Hourly Earnings-Mfg. (\$/Hour)	26.06	26.39	26.71	26.53	26.93	27.05	27.66	28.13
% Ch, Annual Rate	3.4	5.1	5.0	-2.7	6.2	1.8	9.3	6.9
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	390.678	396.173	399.815	404.423	413.880	416.859	421.298	425.788
% Ch, Annual Rate	4.9	5.7	3.7	4.7	9.7	2.9	4.3	4.3
Disposable Personal Income	342.834	347.599	350.331	354.527	362.447	365.584	368.808	372.543
% Ch, Annual Rate	6.3	5.7	3.2	4.9	9.2	3.5	3.6	4.1
Per Capita Income (\$/Person)	53,958	54,481	54,730	55,111	56,164	56,328	56,682	57,061
% Ch, Annual Rate	3.2	3.9	1.8	2.8	7.9	1.2	2.5	2.7
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,605.2	3,631.1	3,656.5	3,673.8	3,685.9	3,692.0	3,729.6	3,775.1
Total Washington Employment	3,403.1	3,429.6	3,458.6	3,482.5	3,505.4	3,523.8	3,559.8	3,605.9
Unemployment Rate (%)	5.61	5.55	5.41	5.21	4.90	4.56	4.55	4.48
Nonfarm Payroll Employment	3,207.3	3,234.2	3,254.3	3,273.5	3,304.8	3,328.2	3,351.2	3,375.5
% Ch, Annual Rate	4.2	3.4	2.5	2.4	3.9	2.9	2.8	2.9
Manufacturing	292.5	291.8	289.1	286.0	285.8	284.8	285.0	285.0
% Ch, Annual Rate	0.5	-0.9	-3.6	-4.3	-0.3	-1.4	0.3	0.0
Durable Manufacturing	210.3	209.0	206.9	203.4	202.4	200.6	200.0	199.1
% Ch, Annual Rate	-1.0	-2.4	-4.0	-6.7	-1.9	-3.6	-1.0	-1.9
Aerospace	93.0	92.0	90.7	88.0	86.6	84.7	82.8	80.8
% Ch, Annual Rate	-2.0	-4.1	-5.5	-11.5	-6.0	-8.6	-8.6	-9.2
Nondurable Manufacturing	82.2	82.8	82.2	82.6	83.4	84.2	85.0	85.9
% Ch, Annual Rate	4.4	2.7	-2.7	1.8	3.9	4.1	3.6	4.6
Construction	182.3	184.9	187.3	191.5	198.0	201.6	201.7	204.8
% Ch, Annual Rate	16.5	5.9	5.4	9.2	14.2	7.5	0.2	6.3
Service-Providing	2,726.2	2,751.2	2,771.6	2,789.9	2,814.9	2,835.6	2,858.5	2,879.9
% Ch, Annual Rate	3.8	3.7	3.0	2.7	3.6	3.0	3.3	3.0
Software Publishers	57.5	58.4	59.3	60.0	60.7	61.0	62.1	62.5
% Ch, Annual Rate	4.8	6.4	6.6	4.2	5.1	1.9	7.4	2.7
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	38.878	45.489	40.012	51.929	40.797	43.879	43.858	43.869
% Ch, Annual Rate	16.4	87.4	-40.1	183.7	-61.9	33.8	-0.2	0.1
Single-Family	22.671	23.001	21.495	22.685	21.976	22.467	23.971	24.186
% Ch, Annual Rate	25.5	5.9	-23.7	24.1	-11.9	9.2	29.6	3.6
Multi-Family	16.206	22.488	18.517	29.245	18.821	21.413	19.888	19.683
% Ch, Annual Rate	5.0	270.7	-54.0	522.1	-82.8	67.5	-25.6	-4.1
30-Year Fixed Mortgage Rate (%)	3.74	3.59	3.45	3.81	4.17	3.99	3.89	4.06

Table A1.4 (continued)  
**Washington Economic Forecast Summary**  
Forecast 2017 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
<b>Real Income (Billions of Chained 2009 Dollars)</b>								
Real Personal Income	378.358	381.254	384.353	387.549	391.762	395.104	398.065	401.066
% Ch, Annual Rate	3.0	3.1	3.3	3.4	4.4	3.5	3.0	3.0
Real Wage and Salary Disb.	198.615	200.218	201.619	203.021	205.127	206.943	208.259	209.465
% Ch, Annual Rate	3.0	3.3	2.8	2.8	4.2	3.6	2.6	2.3
Real Nonwage Income	179.743	181.036	182.733	184.528	186.635	188.161	189.806	191.601
% Ch, Annual Rate	3.0	2.9	3.8	4.0	4.6	3.3	3.5	3.8
Real Per Capita Income (\$/Person)	50,507	50,694	50,907	51,131	51,488	51,731	51,926	52,126
% Ch, Annual Rate	1.4	1.5	1.7	1.8	2.8	1.9	1.5	1.6
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.140	1.144	1.149	1.154	1.158	1.164	1.169	1.175
% Ch, Annual Rate	2.1	1.5	1.7	1.7	1.7	1.8	1.9	2.1
Seattle Cons. Price Index (1982-84=1.0)	2.670	2.682	2.697	2.712	2.726	2.741	2.757	2.774
% Ch, Annual Rate	3.2	1.8	2.2	2.3	2.1	2.3	2.4	2.5
Average Nonfarm Annual Wage	64,477	64,923	65,356	65,803	66,465	67,111	67,628	68,149
% Ch, Annual Rate	2.8	2.8	2.7	2.8	4.1	3.9	3.1	3.1
Avg. Hourly Earnings-Mfg. (\$/Hour)	28.35	28.57	28.79	29.02	29.26	29.49	29.73	29.97
% Ch, Annual Rate	3.3	3.1	3.2	3.3	3.3	3.2	3.2	3.3
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	431.224	436.115	441.518	447.114	453.853	459.772	465.427	471.329
% Ch, Annual Rate	5.2	4.6	5.0	5.2	6.2	5.3	5.0	5.2
Disposable Personal Income	377.250	381.435	385.984	390.522	396.394	401.357	406.138	411.103
% Ch, Annual Rate	5.2	4.5	4.9	4.8	6.2	5.1	4.8	5.0
Per Capita Income (\$/Person)	57,564	57,989	58,479	58,990	59,649	60,198	60,713	61,259
% Ch, Annual Rate	3.6	3.0	3.4	3.5	4.5	3.7	3.5	3.6
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,796.7	3,816.9	3,837.3	3,857.5	3,877.4	3,896.8	3,915.3	3,933.4
Total Washington Employment	3,633.8	3,653.5	3,675.6	3,696.6	3,714.8	3,732.6	3,750.0	3,767.3
Unemployment Rate (%)	4.29	4.28	4.21	4.17	4.19	4.21	4.22	4.22
Nonfarm Payroll Employment	3,394.0	3,411.1	3,427.3	3,443.5	3,457.6	3,471.0	3,483.6	3,495.7
% Ch, Annual Rate	2.2	2.0	1.9	1.9	1.6	1.6	1.5	1.4
Manufacturing	286.0	289.3	291.2	291.6	292.7	293.3	293.7	294.3
% Ch, Annual Rate	1.5	4.6	2.6	0.5	1.6	0.8	0.6	0.8
Durable Manufacturing	199.8	202.4	203.9	203.9	204.3	204.4	204.3	204.6
% Ch, Annual Rate	1.5	5.2	3.1	0.0	0.7	0.1	-0.1	0.4
Aerospace	80.4	80.0	79.6	79.2	78.8	78.4	78.0	77.6
% Ch, Annual Rate	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Nondurable Manufacturing	86.2	86.9	87.2	87.6	88.4	88.9	89.4	89.7
% Ch, Annual Rate	1.3	3.3	1.5	1.8	3.6	2.2	2.1	1.7
Construction	206.4	206.1	206.1	206.0	206.4	206.9	207.2	208.0
% Ch, Annual Rate	3.1	-0.4	-0.1	-0.2	0.9	1.0	0.6	1.6
Service-Providing	2,895.7	2,909.7	2,924.1	2,940.0	2,952.5	2,964.8	2,976.7	2,987.3
% Ch, Annual Rate	2.2	2.0	2.0	2.2	1.7	1.7	1.6	1.4
Software Publishers	62.9	62.9	62.9	63.1	63.2	63.4	63.5	63.6
% Ch, Annual Rate	2.4	0.2	0.3	1.1	0.8	0.7	0.7	0.7
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	42.203	41.906	41.595	41.321	41.552	41.927	42.431	42.787
% Ch, Annual Rate	-14.4	-2.8	-2.9	-2.6	2.3	3.7	4.9	3.4
Single-Family	23.514	23.911	24.369	24.625	25.011	25.496	26.009	26.341
% Ch, Annual Rate	-10.7	6.9	7.9	4.3	6.4	8.0	8.3	5.2
Multi-Family	18.689	17.995	17.225	16.697	16.541	16.431	16.423	16.447
% Ch, Annual Rate	-18.7	-14.1	-16.0	-11.7	-3.7	-2.6	-0.2	0.6
30-Year Fixed Mortgage Rate (%)	4.19	4.37	4.53	4.65	4.74	4.86	4.95	5.01

Table A1.4 (continued)  
**Washington Economic Forecast Summary**  
Forecast 2017 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
<b>Real Income (Billions of Chained 2009 Dollars)</b>								
Real Personal Income	404.535	407.734	410.738	413.650	417.525	420.712	423.606	426.368
% Ch, Annual Rate	3.5	3.2	3.0	2.9	3.8	3.1	2.8	2.6
Real Wage and Salary Disb.	211.087	212.589	213.830	215.125	216.756	218.143	219.489	220.753
% Ch, Annual Rate	3.1	2.9	2.4	2.4	3.1	2.6	2.5	2.3
Real Nonwage Income	193.448	195.145	196.907	198.525	200.769	202.570	204.117	205.615
% Ch, Annual Rate	3.9	3.6	3.7	3.3	4.6	3.6	3.1	3.0
Real Per Capita Income (\$/Person)	52,390	52,621	52,828	53,024	53,343	53,574	53,767	53,945
% Ch, Annual Rate	2.0	1.8	1.6	1.5	2.4	1.7	1.5	1.3
<b>Price and Wage Indexes</b>								
U.S. Implicit Price Deflator, PCE (2009=1.0)	1.181	1.187	1.193	1.199	1.205	1.211	1.217	1.224
% Ch, Annual Rate	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.1
Seattle Cons. Price Index (1982-84=1.0)	2.791	2.807	2.823	2.841	2.858	2.874	2.891	2.909
% Ch, Annual Rate	2.4	2.3	2.4	2.5	2.4	2.3	2.4	2.4
Average Nonfarm Annual Wage	68,771	69,245	69,936	70,585	71,269	71,897	72,532	73,166
% Ch, Annual Rate	3.7	2.8	4.1	3.8	3.9	3.6	3.6	3.5
Avg. Hourly Earnings-Mfg. (\$/Hour)	30.22	30.46	30.71	30.96	31.21	31.47	31.73	31.99
% Ch, Annual Rate	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.4
<b>Current Dollar Income (Billions of Dollars)</b>								
Personal Income	477.843	484.021	490.062	496.077	503.271	509.621	515.728	521.802
% Ch, Annual Rate	5.6	5.3	5.1	5.0	5.9	5.1	4.9	4.8
Disposable Personal Income	416.306	421.379	426.073	430.830	436.466	441.507	446.327	450.764
% Ch, Annual Rate	5.2	5.0	4.5	4.5	5.3	4.7	4.4	4.0
Per Capita Income (\$/Person)	61,884	62,466	63,030	63,589	64,298	64,896	65,460	66,019
% Ch, Annual Rate	4.1	3.8	3.7	3.6	4.5	3.8	3.5	3.5
<b>Employment (Thousands)</b>								
Washington Civilian Labor Force	3,949.7	3,970.1	3,983.8	3,997.7	4,011.0	4,024.4	4,037.5	4,050.6
Total Washington Employment	3,782.5	3,802.1	3,814.9	3,828.4	3,841.2	3,854.2	3,866.7	3,878.5
Unemployment Rate (%)	4.23	4.23	4.24	4.24	4.23	4.23	4.23	4.25
Nonfarm Payroll Employment	3,506.9	3,525.2	3,530.0	3,538.1	3,547.1	3,556.8	3,566.2	3,575.1
% Ch, Annual Rate	1.3	2.1	0.5	0.9	1.0	1.1	1.1	1.0
Manufacturing	295.2	296.1	297.2	298.3	299.2	300.4	301.8	303.1
% Ch, Annual Rate	1.2	1.3	1.4	1.5	1.3	1.6	1.8	1.8
Durable Manufacturing	205.2	205.9	206.6	207.4	208.2	209.1	210.3	211.4
% Ch, Annual Rate	1.3	1.3	1.4	1.6	1.4	1.9	2.2	2.2
Aerospace	77.6	77.6	77.6	77.6	77.6	77.6	77.6	77.6
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nondurable Manufacturing	90.0	90.2	90.6	90.8	91.1	91.3	91.5	91.7
% Ch, Annual Rate	1.0	1.3	1.4	1.2	1.0	1.0	0.9	0.9
Construction	207.9	208.5	209.1	209.5	209.4	209.4	209.3	209.2
% Ch, Annual Rate	-0.4	1.3	1.0	0.9	-0.2	-0.1	-0.1	-0.2
Service-Providing	2,997.9	3,014.5	3,017.7	3,024.3	3,032.4	3,041.0	3,049.0	3,056.7
% Ch, Annual Rate	1.4	2.2	0.4	0.9	1.1	1.1	1.1	1.0
Software Publishers	63.7	63.8	63.9	64.1	64.2	64.4	64.5	64.7
% Ch, Annual Rate	0.8	0.8	0.8	0.8	1.0	0.9	1.0	1.1
<b>Housing Indicators (Thousands)</b>								
Housing Units Authorized by Bldg. Permit	42.625	42.727	42.708	42.661	42.491	42.370	42.196	41.960
% Ch, Annual Rate	-1.5	1.0	-0.2	-0.4	-1.6	-1.1	-1.6	-2.2
Single-Family	26.127	26.105	26.153	26.188	26.239	26.355	26.404	26.404
% Ch, Annual Rate	-3.2	-0.3	0.7	0.5	0.8	1.8	0.7	0.0
Multi-Family	16.499	16.623	16.555	16.473	16.252	16.015	15.791	15.556
% Ch, Annual Rate	1.3	3.0	-1.6	-2.0	-5.3	-5.7	-5.5	-5.8
30-Year Fixed Mortgage Rate (%)	5.07	5.09	5.11	5.11	5.14	5.15	5.15	5.15

Table A2.1

**U.S. Nonagricultural Employment by Industry (Millions)**

Forecast 2017 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
Nonfarm Payroll Employment	138.94	141.81	144.31	146.44	148.21	149.50	150.62	151.32
% Ch	1.9	2.1	1.8	1.5	1.2	0.9	0.7	0.5
Manufacturing	12.19	12.34	12.35	12.43	12.74	12.93	13.07	13.24
% Ch	1.4	1.2	0.1	0.7	2.5	1.4	1.1	1.3
Durable Manufacturing	7.67	7.77	7.72	7.76	8.02	8.14	8.26	8.41
% Ch	1.7	1.2	-0.6	0.6	3.3	1.5	1.4	1.9
Wood Products	0.37	0.38	0.39	0.40	0.43	0.45	0.47	0.50
% Ch	5.2	2.9	2.5	1.0	7.8	5.2	3.7	6.6
Primary and Fabricated Metals	1.85	1.85	1.80	1.82	1.90	1.95	2.00	2.06
% Ch	1.4	0.0	-2.7	1.2	4.1	2.7	2.8	2.9
Computer and Electronic Products	1.05	1.05	1.05	1.04	1.09	1.11	1.11	1.12
% Ch	-1.5	0.4	-0.5	-0.6	4.3	2.0	0.3	0.4
Machinery and Electrical Equipment	1.50	1.50	1.46	1.48	1.54	1.57	1.58	1.61
% Ch	1.8	0.0	-2.7	1.2	4.1	1.8	0.9	1.5
Transportation Equipment	1.56	1.60	1.62	1.62	1.62	1.61	1.64	1.67
% Ch	3.3	2.9	1.3	-0.4	0.2	-0.7	1.8	1.7
Other Durables	1.34	1.37	1.39	1.40	1.44	1.45	1.45	1.46
% Ch	1.7	2.4	1.4	0.9	2.9	0.7	-0.1	0.7
Nondurable Manufacturing	4.51	4.57	4.63	4.67	4.72	4.79	4.82	4.83
% Ch	0.9	1.3	1.3	0.9	1.1	1.4	0.6	0.2
Food Manufacturing	1.48	1.51	1.55	1.60	1.63	1.68	1.71	1.73
% Ch	0.7	1.8	2.8	2.7	2.4	3.0	1.5	1.2
Paper and Paper Products	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.38
% Ch	-1.2	-0.2	-0.5	-0.5	0.3	0.5	0.5	0.4
Other Nondurables	2.65	2.69	2.70	2.70	2.72	2.73	2.73	2.72
% Ch	1.3	1.2	0.7	0.0	0.5	0.5	0.1	-0.4
Natural Resources and Mining	0.89	0.81	0.68	0.71	0.73	0.75	0.77	0.77
% Ch	3.2	-8.7	-16.6	4.1	3.8	2.8	2.0	0.6
Construction	6.15	6.46	6.71	6.90	6.98	7.16	7.42	7.69
% Ch	5.0	5.0	3.9	2.8	1.2	2.5	3.7	3.7
Trade, Transportation, and Utilities	26.38	26.88	27.24	27.40	27.43	27.33	27.14	26.86
% Ch	2.0	1.9	1.3	0.6	0.1	-0.4	-0.7	-1.1
Wholesale Trade	5.81	5.85	5.87	5.92	5.97	5.99	5.99	5.99
% Ch	1.4	0.7	0.2	1.0	0.7	0.4	0.1	0.0
Retail Trade	15.35	15.60	15.83	15.84	15.75	15.63	15.47	15.22
% Ch	1.9	1.6	1.4	0.1	-0.6	-0.8	-1.0	-1.6
Trans., Warehousing, and Utilities	5.21	5.43	5.54	5.64	5.72	5.71	5.68	5.64
% Ch	3.2	4.1	2.2	1.7	1.4	-0.1	-0.6	-0.7
Information	2.73	2.75	2.77	2.73	2.70	2.72	2.75	2.80
% Ch	0.8	0.9	0.8	-1.6	-1.0	0.9	0.8	2.0
Publishing Industries	0.73	0.73	0.73	0.72	0.71	0.69	0.67	0.66
% Ch	-0.8	0.0	0.5	-1.1	-1.5	-2.8	-2.7	-2.1
Other Information	2.00	2.02	2.04	2.01	1.99	2.03	2.07	2.14
% Ch	1.4	1.2	0.9	-1.7	-0.9	2.2	2.0	3.3
Financial Activities	7.98	8.12	8.28	8.44	8.54	8.63	8.64	8.64
% Ch	1.1	1.8	2.0	1.9	1.2	1.0	0.0	0.1
Professional and Business Services	19.06	19.63	20.13	20.72	21.36	22.15	22.93	23.47
% Ch	2.9	3.0	2.6	2.9	3.1	3.7	3.5	2.4
Education and Health Services	21.44	22.02	22.62	23.11	23.49	23.64	23.67	23.71
% Ch	1.7	2.7	2.7	2.2	1.6	0.6	0.1	0.1
Leisure and Hospitality	14.69	15.15	15.61	15.90	16.04	15.97	15.90	15.90
% Ch	3.1	3.1	3.0	1.9	0.9	-0.4	-0.4	0.0
Other Services	5.57	5.62	5.69	5.76	5.73	5.64	5.53	5.46
% Ch	1.5	1.0	1.1	1.3	-0.5	-1.6	-1.9	-1.3
Federal Government	2.73	2.76	2.80	2.81	2.81	2.81	2.93	2.81
% Ch	-1.4	0.8	1.5	0.5	-0.2	0.0	4.4	-4.3
State and Local Government	19.14	19.27	19.43	19.52	19.64	19.77	19.87	19.97
% Ch	0.3	0.7	0.8	0.5	0.6	0.7	0.5	0.5

Table A2.2

**U.S. Nonagricultural Employment by Industry (Millions)**

Forecast 2017 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
Nonfarm Payroll Employment	143.44	143.95	144.66	145.17	145.71	146.20	146.67	147.18
% Ch, Annual Rate	1.7	1.4	2.0	1.4	1.5	1.3	1.3	1.4
Manufacturing	12.37	12.35	12.34	12.33	12.37	12.40	12.44	12.51
% Ch, Annual Rate	0.6	-0.8	-0.1	-0.4	1.4	1.0	1.1	2.3
Durable Manufacturing	7.75	7.72	7.71	7.70	7.72	7.74	7.76	7.82
% Ch, Annual Rate	-0.1	-1.6	-0.7	-0.4	1.3	1.0	1.1	3.1
Wood Products	0.39	0.39	0.39	0.39	0.40	0.39	0.39	0.40
% Ch, Annual Rate	1.6	0.6	0.3	2.2	2.8	-2.0	-0.4	3.7
Primary and Fabricated Metals	1.82	1.80	1.80	1.80	1.80	1.82	1.83	1.85
% Ch, Annual Rate	-2.7	-2.8	-1.7	-0.3	1.8	3.2	3.3	3.3
Computer and Electronic Products	1.05	1.05	1.05	1.04	1.04	1.04	1.04	1.05
% Ch, Annual Rate	1.6	-1.0	-2.3	-1.7	-1.6	0.4	1.7	4.1
Machinery and Electrical Equipment	1.48	1.46	1.46	1.46	1.47	1.48	1.49	1.50
% Ch, Annual Rate	-2.3	-3.7	-1.4	-0.6	2.7	2.8	3.0	2.6
Transportation Equipment	1.62	1.63	1.63	1.62	1.62	1.62	1.61	1.62
% Ch, Annual Rate	1.7	0.4	0.7	-2.0	-0.2	-0.6	-1.7	3.5
Other Durables	1.39	1.38	1.39	1.39	1.40	1.40	1.40	1.40
% Ch, Annual Rate	2.1	-1.3	0.6	1.9	2.5	-0.4	-0.5	1.9
Nondurable Manufacturing	4.62	4.63	4.64	4.63	4.65	4.66	4.68	4.69
% Ch, Annual Rate	1.9	0.4	1.0	-0.4	1.6	1.0	1.1	1.0
Food Manufacturing	1.54	1.55	1.56	1.57	1.58	1.59	1.60	1.61
% Ch, Annual Rate	4.2	2.3	3.7	0.4	4.1	2.8	2.8	1.6
Paper and Paper Products	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
% Ch, Annual Rate	-0.1	-1.5	-2.0	-1.8	1.6	-0.8	-0.6	0.6
Other Nondurables	2.71	2.70	2.70	2.70	2.70	2.70	2.70	2.71
% Ch, Annual Rate	0.9	-0.3	-0.1	-0.6	0.1	0.2	0.4	0.7
Natural Resources and Mining	0.71	0.68	0.66	0.66	0.68	0.71	0.72	0.72
% Ch, Annual Rate	-21.8	-18.3	-7.5	1.4	11.7	14.8	5.6	-0.1
Construction	6.67	6.69	6.71	6.77	6.85	6.88	6.90	6.95
% Ch, Annual Rate	5.3	1.6	1.1	3.2	5.3	1.6	1.3	2.6
Trade, Transportation, and Utilities	27.12	27.19	27.28	27.35	27.38	27.37	27.40	27.46
% Ch, Annual Rate	1.6	1.0	1.4	1.0	0.5	-0.2	0.4	1.0
Wholesale Trade	5.86	5.86	5.87	5.89	5.90	5.91	5.93	5.95
% Ch, Annual Rate	0.3	0.2	0.6	1.2	1.1	0.8	1.2	1.3
Retail Trade	15.76	15.81	15.86	15.88	15.88	15.84	15.82	15.83
% Ch, Annual Rate	2.3	1.1	1.5	0.3	0.2	-1.2	-0.4	0.3
Trans., Warehousing, and Utilities	5.50	5.53	5.55	5.59	5.60	5.62	5.65	5.68
% Ch, Annual Rate	1.0	1.6	1.8	2.7	0.6	1.5	2.0	2.7
Information	2.77	2.77	2.78	2.77	2.75	2.73	2.72	2.72
% Ch, Annual Rate	1.4	-0.7	2.0	-1.5	-3.2	-3.2	-0.9	0.5
Publishing Industries	0.73	0.73	0.73	0.73	0.73	0.72	0.72	0.72
% Ch, Annual Rate	1.8	-0.2	1.1	-1.2	-0.1	-3.1	-2.4	-1.4
Other Information	2.04	2.04	2.05	2.04	2.02	2.00	2.00	2.01
% Ch, Annual Rate	1.3	-0.9	2.4	-1.6	-4.3	-3.2	-0.4	1.1
Financial Activities	8.22	8.26	8.31	8.35	8.40	8.43	8.47	8.48
% Ch, Annual Rate	2.0	2.3	2.4	1.6	2.6	1.5	1.7	0.9
Professional and Business Services	19.90	20.03	20.21	20.38	20.52	20.66	20.79	20.92
% Ch, Annual Rate	1.4	2.6	3.7	3.3	2.8	2.8	2.5	2.5
Education and Health Services	22.40	22.55	22.70	22.83	22.94	23.06	23.18	23.28
% Ch, Annual Rate	2.3	2.7	2.7	2.3	2.0	2.0	2.2	1.6
Leisure and Hospitality	15.49	15.57	15.67	15.73	15.78	15.90	15.94	15.99
% Ch, Annual Rate	3.1	2.2	2.5	1.4	1.5	2.9	1.2	1.2
Other Services	5.66	5.67	5.70	5.71	5.72	5.75	5.77	5.79
% Ch, Annual Rate	1.4	1.0	1.5	1.0	0.7	1.9	1.5	1.6
Federal Government	2.78	2.79	2.81	2.82	2.82	2.81	2.81	2.81
% Ch, Annual Rate	1.5	1.4	2.9	1.4	-0.1	-0.8	-0.1	0.2
State and Local Government	19.36	19.40	19.48	19.48	19.50	19.51	19.53	19.55
% Ch, Annual Rate	1.0	0.9	1.7	0.1	0.3	0.2	0.5	0.4



Table A2.2 (continued)

**U.S. Nonagricultural Employment by Industry (Millions)**

Forecast 2017 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	147.59	148.02	148.41	148.80	149.09	149.36	149.65	149.91
% Ch, Annual Rate	1.1	1.2	1.1	1.1	0.8	0.7	0.8	0.7
Manufacturing	12.57	12.73	12.83	12.83	12.89	12.91	12.93	12.97
% Ch, Annual Rate	2.0	5.2	3.0	0.2	1.7	0.7	0.8	1.2
Durable Manufacturing	7.88	8.01	8.10	8.09	8.12	8.13	8.14	8.17
% Ch, Annual Rate	2.9	7.0	4.3	-0.3	1.5	0.5	0.5	1.4
Wood Products	0.41	0.42	0.44	0.44	0.45	0.45	0.45	0.45
% Ch, Annual Rate	8.4	18.0	12.9	4.8	4.5	1.6	0.9	3.4
Primary and Fabricated Metals	1.87	1.90	1.92	1.92	1.93	1.95	1.96	1.97
% Ch, Annual Rate	4.5	7.0	3.8	0.2	3.2	2.5	2.0	3.0
Computer and Electronic Products	1.06	1.08	1.10	1.11	1.11	1.11	1.11	1.11
% Ch, Annual Rate	1.5	10.8	6.1	3.6	-0.4	0.1	-0.3	0.5
Machinery and Electrical Equipment	1.50	1.54	1.56	1.56	1.56	1.57	1.57	1.58
% Ch, Annual Rate	2.3	9.9	6.3	-1.9	1.8	1.0	0.7	1.4
Transportation Equipment	1.62	1.62	1.62	1.61	1.61	1.61	1.61	1.61
% Ch, Annual Rate	0.0	-0.4	0.4	-2.9	0.0	-1.4	0.2	0.9
Other Durables	1.42	1.44	1.45	1.45	1.46	1.45	1.45	1.45
% Ch, Annual Rate	4.1	6.9	3.4	-0.8	0.9	-0.6	-0.9	-0.3
Nondurable Manufacturing	4.69	4.72	4.73	4.74	4.77	4.78	4.79	4.80
% Ch, Annual Rate	0.7	2.2	0.8	1.0	2.2	1.0	1.2	0.9
Food Manufacturing	1.62	1.63	1.64	1.65	1.67	1.68	1.69	1.70
% Ch, Annual Rate	1.8	3.9	2.0	2.4	4.6	2.6	2.4	1.8
Paper and Paper Products	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
% Ch, Annual Rate	0.1	1.8	0.2	-0.3	0.8	0.3	0.6	0.7
Other Nondurables	2.71	2.72	2.72	2.72	2.73	2.73	2.73	2.74
% Ch, Annual Rate	0.1	1.3	0.2	0.4	1.0	0.2	0.5	0.3
Natural Resources and Mining	0.72	0.73	0.74	0.74	0.75	0.75	0.75	0.76
% Ch, Annual Rate	2.3	5.8	3.7	2.7	2.9	1.3	2.6	3.7
Construction	6.97	6.97	6.98	7.00	7.06	7.12	7.19	7.26
% Ch, Annual Rate	1.4	-0.2	0.4	1.5	3.1	3.5	4.0	4.0
Trade, Transportation, and Utilities	27.49	27.42	27.40	27.43	27.42	27.34	27.31	27.26
% Ch, Annual Rate	0.4	-1.1	-0.3	0.5	-0.2	-1.1	-0.4	-0.7
Wholesale Trade	5.96	5.96	5.97	5.98	5.98	5.99	5.99	6.00
% Ch, Annual Rate	0.9	-0.2	0.5	1.0	0.2	0.2	0.5	0.3
Retail Trade	15.82	15.74	15.71	15.73	15.71	15.64	15.61	15.56
% Ch, Annual Rate	-0.3	-2.0	-0.6	0.3	-0.3	-1.8	-0.8	-1.3
Trans., Warehousing, and Utilities	5.71	5.72	5.72	5.72	5.72	5.71	5.71	5.70
% Ch, Annual Rate	1.8	0.8	-0.3	0.5	-0.4	-0.6	-0.2	-0.3
Information	2.72	2.71	2.68	2.69	2.71	2.74	2.73	2.72
% Ch, Annual Rate	0.2	-2.6	-3.4	1.1	3.3	4.0	-0.7	-2.6
Publishing Industries	0.72	0.71	0.71	0.70	0.70	0.69	0.69	0.68
% Ch, Annual Rate	3.3	-4.6	-4.4	-1.3	-2.5	-2.9	-2.7	-3.0
Other Information	2.00	1.99	1.98	1.99	2.01	2.04	2.04	2.03
% Ch, Annual Rate	-0.9	-1.9	-3.0	2.0	5.5	6.4	0.0	-2.4
Financial Activities	8.50	8.53	8.56	8.59	8.61	8.62	8.64	8.66
% Ch, Annual Rate	0.7	1.4	1.3	1.7	0.9	0.4	1.0	0.5
Professional and Business Services	21.04	21.27	21.47	21.66	21.85	22.04	22.26	22.46
% Ch, Annual Rate	2.4	4.3	4.0	3.6	3.4	3.6	4.0	3.6
Education and Health Services	23.38	23.47	23.52	23.59	23.58	23.63	23.66	23.70
% Ch, Annual Rate	1.8	1.6	0.9	1.2	-0.2	0.9	0.5	0.7
Leisure and Hospitality	16.04	16.03	16.04	16.06	16.04	16.00	15.94	15.90
% Ch, Annual Rate	1.1	-0.2	0.4	0.3	-0.5	-0.9	-1.4	-1.0
Other Services	5.77	5.74	5.71	5.69	5.67	5.65	5.63	5.60
% Ch, Annual Rate	-1.5	-1.9	-1.9	-1.5	-1.4	-1.4	-1.8	-2.3
Federal Government	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81
% Ch, Annual Rate	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State and Local Government	19.58	19.62	19.67	19.70	19.72	19.75	19.79	19.83
% Ch, Annual Rate	0.6	0.8	1.1	0.6	0.4	0.6	0.8	0.9

Table A2.2 (continued)

**U.S. Nonagricultural Employment by Industry (Millions)**

Forecast 2017 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	150.21	150.74	150.71	150.81	150.99	151.22	151.44	151.63
% Ch, Annual Rate	0.8	1.4	-0.1	0.3	0.5	0.6	0.6	0.5
Manufacturing	13.01	13.05	13.09	13.14	13.17	13.21	13.26	13.31
% Ch, Annual Rate	1.0	1.4	1.3	1.3	0.9	1.3	1.6	1.4
Durable Manufacturing	8.20	8.24	8.27	8.31	8.34	8.38	8.44	8.48
% Ch, Annual Rate	1.5	1.9	1.8	2.0	1.3	2.1	2.5	2.2
Wood Products	0.46	0.46	0.47	0.48	0.48	0.49	0.50	0.51
% Ch, Annual Rate	3.0	5.5	5.5	6.3	6.4	7.4	7.8	7.3
Primary and Fabricated Metals	1.98	2.00	2.01	2.03	2.04	2.05	2.07	2.09
% Ch, Annual Rate	2.5	3.1	2.9	3.1	2.3	2.9	3.6	3.7
Computer and Electronic Products	1.11	1.11	1.11	1.11	1.11	1.11	1.12	1.12
% Ch, Annual Rate	1.9	-0.8	-0.3	0.2	0.3	0.8	1.1	1.1
Machinery and Electrical Equipment	1.58	1.58	1.59	1.59	1.59	1.60	1.61	1.62
% Ch, Annual Rate	0.5	1.2	0.8	1.0	1.0	1.9	2.6	2.6
Transportation Equipment	1.62	1.63	1.65	1.66	1.66	1.66	1.67	1.67
% Ch, Annual Rate	2.0	3.8	3.1	2.3	0.6	1.5	1.5	0.4
Other Durables	1.45	1.45	1.45	1.45	1.46	1.46	1.46	1.47
% Ch, Annual Rate	-0.2	0.2	0.4	1.0	0.4	1.0	1.1	1.0
Nondurable Manufacturing	4.81	4.81	4.82	4.82	4.83	4.83	4.83	4.83
% Ch, Annual Rate	0.3	0.5	0.5	0.3	0.1	0.1	0.0	0.0
Food Manufacturing	1.70	1.71	1.71	1.72	1.72	1.73	1.73	1.73
% Ch, Annual Rate	0.9	1.2	1.4	1.2	1.1	1.1	1.0	1.0
Paper and Paper Products	0.37	0.37	0.37	0.37	0.37	0.38	0.38	0.38
% Ch, Annual Rate	0.3	0.5	0.6	0.4	0.3	0.4	0.5	0.6
Other Nondurables	2.73	2.73	2.73	2.73	2.73	2.72	2.72	2.72
% Ch, Annual Rate	-0.1	0.0	0.0	-0.3	-0.5	-0.6	-0.6	-0.7
Natural Resources and Mining	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.78
% Ch, Annual Rate	2.5	0.9	0.4	0.6	0.7	0.4	0.5	0.9
Construction	7.33	7.39	7.45	7.52	7.59	7.66	7.73	7.80
% Ch, Annual Rate	3.8	3.4	3.5	3.8	3.6	3.8	3.8	3.3
Trade, Transportation, and Utilities	27.22	27.19	27.13	27.03	26.95	26.89	26.82	26.77
% Ch, Annual Rate	-0.5	-0.5	-0.9	-1.3	-1.2	-0.9	-1.0	-0.8
Wholesale Trade	6.00	6.00	5.99	5.99	5.99	5.99	5.99	5.99
% Ch, Annual Rate	0.0	-0.1	-0.1	-0.3	0.2	0.1	-0.1	-0.1
Retail Trade	15.53	15.51	15.46	15.39	15.30	15.25	15.19	15.15
% Ch, Annual Rate	-0.7	-0.7	-1.2	-1.9	-2.1	-1.4	-1.5	-1.1
Trans., Warehousing, and Utilities	5.69	5.68	5.67	5.66	5.65	5.64	5.63	5.63
% Ch, Annual Rate	-0.6	-0.7	-0.9	-1.0	-0.4	-0.6	-0.7	-0.6
Information	2.73	2.74	2.76	2.76	2.78	2.79	2.81	2.82
% Ch, Annual Rate	1.5	2.6	1.8	1.2	2.2	2.1	2.0	2.3
Publishing Industries	0.68	0.67	0.67	0.67	0.66	0.66	0.66	0.65
% Ch, Annual Rate	-2.7	-2.6	-2.6	-2.5	-1.9	-2.1	-1.8	-1.4
Other Information	2.05	2.07	2.09	2.10	2.12	2.13	2.15	2.17
% Ch, Annual Rate	2.9	4.4	3.3	2.4	3.5	3.4	3.2	3.5
Financial Activities	8.64	8.63	8.63	8.63	8.64	8.65	8.65	8.64
% Ch, Annual Rate	-0.6	-0.5	-0.1	0.2	0.4	0.2	-0.1	-0.3
Professional and Business Services	22.67	22.86	23.02	23.17	23.31	23.43	23.54	23.62
% Ch, Annual Rate	3.8	3.5	2.7	2.8	2.3	2.0	1.9	1.4
Education and Health Services	23.68	23.67	23.67	23.67	23.69	23.70	23.71	23.72
% Ch, Annual Rate	-0.3	-0.3	0.1	0.0	0.4	0.2	0.2	0.1
Leisure and Hospitality	15.89	15.89	15.91	15.91	15.89	15.90	15.91	15.91
% Ch, Annual Rate	-0.2	-0.1	0.4	0.1	-0.6	0.2	0.2	0.1
Other Services	5.57	5.54	5.52	5.49	5.48	5.47	5.45	5.43
% Ch, Annual Rate	-1.9	-2.0	-1.8	-1.7	-0.9	-1.1	-1.3	-1.3
Federal Government	2.86	3.16	2.90	2.81	2.81	2.81	2.81	2.81
% Ch, Annual Rate	7.8	49.1	-29.1	-12.2	0.0	0.0	0.0	0.0
State and Local Government	19.85	19.85	19.87	19.89	19.91	19.95	19.99	20.03
% Ch, Annual Rate	0.4	-0.1	0.5	0.3	0.5	0.8	0.8	0.9

Table A2.3

**Washington Nonagricultural Employment by Industry (Thousands)**

Forecast 2017 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
Nonfarm Payroll Employment	3,056.8	3,145.7	3,242.3	3,339.9	3,419.0	3,477.0	3,525.0	3,561.3
% Ch	2.5	2.9	3.1	3.0	2.4	1.7	1.4	1.0
Manufacturing	288.8	291.8	289.9	285.1	289.5	293.5	296.7	301.1
% Ch	0.7	1.1	-0.7	-1.6	1.5	1.4	1.1	1.5
Durable Manufacturing	210.0	211.1	207.4	200.5	202.5	204.4	206.3	209.7
% Ch	0.2	0.5	-1.7	-3.3	1.0	0.9	0.9	1.7
Wood Products	13.4	13.3	13.1	12.9	13.7	14.1	14.3	14.8
% Ch	3.0	-1.0	-1.5	-1.5	6.1	2.8	1.4	4.0
Primary and Fabricated Metals	25.6	25.7	25.2	25.6	27.1	28.0	28.9	30.0
% Ch	2.5	0.5	-2.1	1.4	5.9	3.4	3.4	3.7
Computer and Electronic Products	20.0	19.9	20.1	19.7	21.2	22.0	22.3	22.7
% Ch	-1.0	-0.3	0.7	-1.9	7.5	3.9	1.5	1.6
Machinery and Electrical Equipment	20.8	20.8	20.4	20.9	22.7	24.1	25.3	26.8
% Ch	4.9	-0.3	-1.5	2.1	8.8	6.2	5.0	5.9
Aerospace	94.2	94.0	90.9	83.7	79.8	78.2	77.6	77.6
% Ch	-1.9	-0.2	-3.3	-7.9	-4.7	-2.0	-0.8	0.0
Other Transportation Equip.	9.7	10.1	10.1	10.1	9.7	9.4	9.2	9.0
% Ch	-0.7	4.7	-0.8	0.8	-4.2	-2.7	-2.6	-2.2
Other Durables	26.2	27.3	27.6	27.6	28.3	28.5	28.6	28.7
% Ch	2.1	3.9	1.4	0.0	2.6	0.7	0.1	0.6
Nondurable Manufacturing	78.8	80.8	82.4	84.6	87.0	89.1	90.4	91.4
% Ch	2.3	2.5	2.1	2.6	2.8	2.4	1.5	1.1
Food Manufacturing	36.4	36.8	37.5	38.4	39.3	40.5	41.0	41.2
% Ch	2.0	1.2	1.9	2.5	2.1	3.2	1.1	0.6
Paper and Paper Products	8.0	8.0	7.8	7.7	7.6	7.6	7.6	7.5
% Ch	-1.2	0.0	-3.5	-0.2	-1.2	-0.5	-0.4	-0.5
Other Nondurables	34.4	35.9	37.2	38.4	40.1	41.0	41.9	42.7
% Ch	3.4	4.4	3.6	3.4	4.3	2.2	2.2	1.9
Natural Resources and Mining	6.2	6.3	6.3	6.1	5.9	6.0	6.0	6.1
% Ch	1.7	1.8	-1.1	-2.9	-2.3	1.2	0.6	0.5
Construction	159.7	173.3	186.5	201.5	206.1	207.2	208.7	209.3
% Ch	7.2	8.5	7.6	8.0	2.3	0.5	0.8	0.3
Trade, Transportation, and Utilities	569.3	587.9	607.2	631.5	646.1	653.2	656.3	655.7
% Ch	3.4	3.3	3.3	4.0	2.3	1.1	0.5	-0.1
Wholesale Trade	129.9	132.0	133.1	136.0	138.8	140.7	141.7	142.3
% Ch	2.4	1.6	0.9	2.1	2.1	1.4	0.7	0.4
Retail Trade	342.1	355.0	369.8	387.0	395.5	400.2	402.3	401.3
% Ch	3.6	3.8	4.2	4.7	2.2	1.2	0.5	-0.3
Trans., Warehousing, and Utilities	97.3	100.9	104.3	108.5	111.8	112.3	112.2	112.1
% Ch	4.0	3.8	3.3	4.0	3.1	0.4	0.0	-0.1
Information	109.8	114.0	120.6	125.0	126.5	128.5	130.5	133.6
% Ch	3.4	3.8	5.8	3.7	1.2	1.6	1.6	2.3
Software Publishers	55.6	55.9	58.8	61.6	63.0	63.4	63.9	64.5
% Ch	3.3	0.5	5.2	4.7	2.3	0.7	0.7	0.9
Other Publishing Industries	6.6	6.2	5.9	5.6	5.4	4.9	4.5	4.1
% Ch	-4.9	-6.6	-4.0	-5.3	-4.0	-8.4	-8.8	-8.3
Other Information	47.6	51.9	55.9	57.9	58.2	60.2	62.1	65.0
% Ch	4.8	9.1	7.5	3.6	0.5	3.5	3.3	4.6
Financial Activities	145.3	147.6	150.6	154.9	157.8	159.3	158.7	158.0
% Ch	1.1	1.6	2.0	2.9	1.9	1.0	-0.4	-0.4
Professional and Business Services	372.3	389.2	403.1	417.2	434.5	452.2	475.2	490.4
% Ch	3.0	4.5	3.6	3.5	4.1	4.8	4.4	3.2
Education and Health Services	444.0	448.5	463.6	477.3	492.6	502.3	508.9	514.9
% Ch	1.6	1.0	3.4	2.9	3.2	2.0	1.3	1.2
Leisure and Hospitality	297.0	309.9	323.4	333.5	340.8	344.1	346.8	350.0
% Ch	3.4	4.4	4.4	3.1	2.2	0.9	0.8	0.9
Other Services	113.9	115.1	117.7	121.0	122.7	123.8	124.5	125.2
% Ch	2.3	1.1	2.3	2.8	1.4	0.9	0.6	0.6
Federal Government	71.3	73.2	74.5	74.8	74.8	75.3	78.2	76.1
% Ch	-0.5	2.6	1.9	0.3	0.1	0.7	3.8	-2.7
State and Local Government	479.3	488.8	499.1	512.1	521.6	528.6	534.4	540.7
% Ch	1.6	2.0	2.1	2.6	1.8	1.3	1.1	1.2

Table A2.4

**Washington Nonagricultural Employment by Industry (Thousands)**

Forecast 2017 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
Nonfarm Payroll Employment	3,207.3	3,234.2	3,254.3	3,273.5	3,304.8	3,328.2	3,351.2	3,375.5
% Ch, Annual Rate	4.2	3.4	2.5	2.4	3.9	2.9	2.8	2.9
Manufacturing	292.5	291.8	289.1	286.0	285.8	284.8	285.0	285.0
% Ch, Annual Rate	0.5	-0.9	-3.6	-4.3	-0.3	-1.4	0.3	0.0
Durable Manufacturing	210.3	209.0	206.9	203.4	202.4	200.6	200.0	199.1
% Ch, Annual Rate	-1.0	-2.4	-4.0	-6.7	-1.9	-3.6	-1.0	-1.9
Wood Products	13.2	13.1	13.2	13.0	12.9	12.8	12.9	13.0
% Ch, Annual Rate	-1.6	-0.9	0.5	-5.4	-0.6	-4.3	2.4	4.3
Primary and Fabricated Metals	25.5	25.3	25.1	24.9	25.2	25.1	25.8	26.0
% Ch, Annual Rate	-2.8	-4.5	-2.6	-2.3	4.7	-1.7	12.0	2.5
Computer and Electronic Products	20.1	20.1	20.2	19.9	19.5	19.4	19.8	20.0
% Ch, Annual Rate	1.3	0.8	0.7	-5.3	-7.5	-1.7	7.4	5.0
Machinery and Electrical Equipment	20.5	20.5	20.4	20.4	20.5	20.6	21.0	21.3
% Ch, Annual Rate	-1.1	-0.6	-1.8	-0.8	3.6	1.5	8.0	5.4
Aerospace	93.0	92.0	90.7	88.0	86.6	84.7	82.8	80.8
% Ch, Annual Rate	-2.0	-4.1	-5.5	-11.5	-6.0	-8.6	-8.6	-9.2
Other Transportation Equip.	10.2	10.2	9.9	9.9	9.9	10.2	10.3	10.1
% Ch, Annual Rate	-3.2	-1.6	-8.1	-2.4	1.7	12.8	1.7	-7.1
Other Durables	27.8	27.9	27.5	27.4	27.6	27.7	27.4	27.8
% Ch, Annual Rate	3.6	1.0	-5.6	-1.7	3.8	0.7	-3.4	5.5
Nondurable Manufacturing	82.2	82.8	82.2	82.6	83.4	84.2	85.0	85.9
% Ch, Annual Rate	4.4	2.7	-2.7	1.8	3.9	4.1	3.6	4.6
Food Manufacturing	37.7	37.9	37.0	37.5	38.1	38.5	38.6	38.7
% Ch, Annual Rate	7.7	2.3	-9.2	6.0	5.7	4.5	1.2	0.9
Paper and Paper Products	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.7
% Ch, Annual Rate	-8.4	1.2	-1.5	-1.8	4.7	-2.3	-2.6	-2.5
Other Nondurables	36.8	37.1	37.5	37.3	37.5	38.0	38.7	39.6
% Ch, Annual Rate	3.9	3.5	4.1	-1.5	2.0	5.1	7.5	9.9
Natural Resources and Mining	6.3	6.3	6.3	6.1	6.2	6.2	6.0	5.9
% Ch, Annual Rate	1.1	2.0	-5.2	-10.4	4.9	5.0	-13.7	-8.9
Construction	182.3	184.9	187.3	191.5	198.0	201.6	201.7	204.8
% Ch, Annual Rate	16.5	5.9	5.4	9.2	14.2	7.5	0.2	6.3
Trade, Transportation, and Utilities	598.0	605.6	610.7	614.5	623.5	628.0	634.5	639.8
% Ch, Annual Rate	3.7	5.2	3.5	2.5	6.0	2.9	4.2	3.4
Wholesale Trade	132.5	133.1	133.2	133.7	135.2	135.6	135.9	137.0
% Ch, Annual Rate	0.8	1.6	0.5	1.4	4.6	1.2	0.9	3.3
Retail Trade	363.0	368.6	372.5	375.1	381.8	384.6	389.9	391.8
% Ch, Annual Rate	6.1	6.3	4.3	2.9	7.3	3.0	5.6	2.0
Trans., Warehousing, and Utilities	102.5	103.9	105.1	105.7	106.5	107.8	108.7	111.0
% Ch, Annual Rate	-0.9	5.8	4.3	2.4	3.1	5.0	3.4	8.7
Information	118.0	119.8	121.6	123.0	123.7	124.7	125.4	126.4
% Ch, Annual Rate	3.6	6.4	6.1	4.6	2.4	3.3	2.1	3.3
Software Publishers	57.5	58.4	59.3	60.0	60.7	61.0	62.1	62.5
% Ch, Annual Rate	4.8	6.4	6.6	4.2	5.1	1.9	7.4	2.7
Other Publishing Industries	6.0	6.0	5.9	5.8	5.8	5.6	5.5	5.6
% Ch, Annual Rate	-2.5	-4.3	-3.9	-3.3	-3.0	-14.1	-6.6	5.8
Other Information	54.4	55.5	56.4	57.2	57.2	58.1	57.8	58.3
% Ch, Annual Rate	3.1	7.8	6.7	6.0	0.1	6.8	-2.4	3.6
Financial Activities	148.9	150.0	151.5	151.9	153.7	154.3	155.2	156.4
% Ch, Annual Rate	2.3	2.8	4.1	1.0	4.9	1.4	2.5	3.1
Professional and Business Services	399.2	402.9	404.5	405.6	411.7	415.7	419.1	422.4
% Ch, Annual Rate	4.3	3.7	1.6	1.2	6.1	4.0	3.3	3.2
Education and Health Services	458.6	462.0	465.5	468.3	471.0	474.1	479.9	484.0
% Ch, Annual Rate	5.1	2.9	3.1	2.5	2.3	2.6	5.0	3.4
Leisure and Hospitality	319.4	322.3	324.6	327.4	330.1	332.6	333.8	337.5
% Ch, Annual Rate	4.8	3.6	2.9	3.5	3.2	3.1	1.5	4.6
Other Services	116.6	117.8	117.6	118.7	120.1	120.6	121.2	122.0
% Ch, Annual Rate	4.4	4.2	-0.9	4.0	4.7	1.6	2.2	2.5
Federal Government	74.2	74.5	74.5	75.0	75.2	74.8	74.4	74.6
% Ch, Annual Rate	1.4	1.6	0.3	2.5	1.2	-2.4	-1.7	1.1
State and Local Government	493.3	496.5	501.0	505.4	506.0	510.9	514.9	516.7
% Ch, Annual Rate	2.7	2.6	3.7	3.6	0.4	3.9	3.2	1.4

Table A2.4 (continued)

**Washington Nonagricultural Employment by Industry (Thousands)**

Forecast 2017 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Nonfarm Payroll Employment	3,394.0	3,411.1	3,427.3	3,443.5	3,457.6	3,471.0	3,483.6	3,495.7
% Ch, Annual Rate	2.2	2.0	1.9	1.9	1.6	1.6	1.5	1.4
Manufacturing	286.0	289.3	291.2	291.6	292.7	293.3	293.7	294.3
% Ch, Annual Rate	1.5	4.6	2.6	0.5	1.6	0.8	0.6	0.8
Durable Manufacturing	199.8	202.4	203.9	203.9	204.3	204.4	204.3	204.6
% Ch, Annual Rate	1.5	5.2	3.1	0.0	0.7	0.1	-0.1	0.4
Wood Products	13.2	13.6	13.9	14.0	14.1	14.1	14.0	14.1
% Ch, Annual Rate	5.5	13.9	9.4	2.3	2.1	-0.4	-1.0	1.1
Primary and Fabricated Metals	26.4	27.1	27.4	27.4	27.7	27.9	28.0	28.3
% Ch, Annual Rate	6.7	9.9	4.9	0.0	4.1	3.1	2.3	3.9
Computer and Electronic Products	20.2	21.0	21.5	21.9	21.9	22.0	22.0	22.1
% Ch, Annual Rate	3.1	18.0	10.4	6.6	0.3	1.0	0.5	1.7
Machinery and Electrical Equipment	21.7	22.6	23.3	23.3	23.7	24.0	24.2	24.6
% Ch, Annual Rate	7.0	18.4	12.8	0.7	6.2	5.0	4.6	5.7
Aerospace	80.4	80.0	79.6	79.2	78.8	78.4	78.0	77.6
% Ch, Annual Rate	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Other Transportation Equip.	9.9	9.7	9.7	9.6	9.6	9.5	9.4	9.3
% Ch, Annual Rate	-8.0	-7.0	-2.0	-2.4	-1.2	-3.5	-2.0	-5.7
Other Durables	28.1	28.3	28.5	28.5	28.5	28.5	28.5	28.5
% Ch, Annual Rate	3.7	4.2	2.2	-0.1	0.6	0.2	-0.2	0.2
Nondurable Manufacturing	86.2	86.9	87.2	87.6	88.4	88.9	89.4	89.7
% Ch, Annual Rate	1.3	3.3	1.5	1.8	3.6	2.2	2.1	1.7
Food Manufacturing	38.8	39.2	39.4	39.6	40.2	40.4	40.7	40.8
% Ch, Annual Rate	1.3	4.5	1.7	2.3	5.5	2.7	2.4	1.5
Paper and Paper Products	7.6	7.7	7.7	7.6	7.6	7.6	7.6	7.6
% Ch, Annual Rate	-0.9	1.0	-0.7	-1.4	-0.1	-0.6	-0.3	-0.2
Other Nondurables	39.8	40.0	40.2	40.4	40.6	40.9	41.1	41.3
% Ch, Annual Rate	1.7	2.6	1.7	1.8	2.5	2.1	2.3	2.3
Natural Resources and Mining	5.9	5.9	5.9	5.9	6.0	6.0	6.0	6.0
% Ch, Annual Rate	3.8	0.6	-0.2	-0.8	3.0	1.9	1.3	0.9
Construction	206.4	206.1	206.1	206.0	206.4	206.9	207.2	208.0
% Ch, Annual Rate	3.1	-0.4	-0.1	-0.2	0.9	1.0	0.6	1.6
Trade, Transportation, and Utilities	643.3	644.5	646.8	649.9	651.9	652.5	653.8	654.6
% Ch, Annual Rate	2.2	0.7	1.4	2.0	1.2	0.3	0.8	0.5
Wholesale Trade	137.9	138.4	139.0	139.7	140.1	140.5	140.9	141.3
% Ch, Annual Rate	2.6	1.4	1.8	2.0	1.2	1.1	1.1	1.1
Retail Trade	393.9	394.3	395.8	398.1	399.6	399.7	400.6	401.0
% Ch, Annual Rate	2.2	0.4	1.6	2.3	1.6	0.1	0.9	0.4
Trans., Warehousing, and Utilities	111.5	111.8	111.9	112.1	112.2	112.2	112.3	112.4
% Ch, Annual Rate	2.0	1.1	0.3	0.9	0.3	0.1	0.3	0.2
Information	126.8	126.5	126.1	126.7	127.7	128.8	129.0	128.7
% Ch, Annual Rate	1.3	-0.9	-1.4	1.8	3.2	3.6	0.5	-0.8
Software Publishers	62.9	62.9	62.9	63.1	63.2	63.4	63.5	63.6
% Ch, Annual Rate	2.4	0.2	0.3	1.1	0.8	0.7	0.7	0.7
Other Publishing Industries	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8
% Ch, Annual Rate	2.9	-11.1	-11.0	-5.5	-7.9	-8.7	-8.6	-9.2
Other Information	58.3	58.2	57.9	58.3	59.3	60.4	60.6	60.4
% Ch, Annual Rate	0.1	-0.9	-2.2	3.2	6.9	8.0	1.1	-1.5
Financial Activities	156.9	157.5	158.1	158.8	159.1	159.2	159.4	159.6
% Ch, Annual Rate	1.2	1.7	1.5	1.8	0.8	0.2	0.7	0.3
Professional and Business Services	426.3	431.9	437.3	442.4	447.3	452.5	458.0	463.0
% Ch, Annual Rate	3.7	5.4	5.1	4.7	4.5	4.7	5.0	4.5
Education and Health Services	487.8	491.3	494.1	497.1	498.6	501.3	503.5	505.9
% Ch, Annual Rate	3.1	2.9	2.2	2.5	1.2	2.2	1.8	1.9
Leisure and Hospitality	339.2	340.1	341.4	342.6	343.4	344.0	344.2	344.6
% Ch, Annual Rate	2.0	1.1	1.5	1.4	0.9	0.7	0.3	0.5
Other Services	122.3	122.5	122.8	123.1	123.4	123.7	123.9	124.1
% Ch, Annual Rate	1.0	0.9	0.8	1.0	1.0	1.0	0.7	0.5
Federal Government	74.7	74.8	74.9	75.0	75.2	75.3	75.4	75.5
% Ch, Annual Rate	0.1	0.7	0.7	0.7	0.7	0.6	0.6	0.6
State and Local Government	518.5	520.5	522.7	524.5	526.0	527.6	529.4	531.3
% Ch, Annual Rate	1.4	1.5	1.7	1.4	1.1	1.3	1.4	1.4

Table A2.4 (continued)

**Washington Nonagricultural Employment by Industry (Thousands)**

Forecast 2017 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Nonfarm Payroll Employment	3,506.9	3,525.2	3,530.0	3,538.1	3,547.1	3,556.8	3,566.2	3,575.1
% Ch, Annual Rate	1.3	2.1	0.5	0.9	1.0	1.1	1.1	1.0
Manufacturing	295.2	296.1	297.2	298.3	299.2	300.4	301.8	303.1
% Ch, Annual Rate	1.2	1.3	1.4	1.5	1.3	1.6	1.8	1.8
Durable Manufacturing	205.2	205.9	206.6	207.4	208.2	209.1	210.3	211.4
% Ch, Annual Rate	1.3	1.3	1.4	1.6	1.4	1.9	2.2	2.2
Wood Products	14.1	14.2	14.3	14.5	14.6	14.8	14.9	15.1
% Ch, Annual Rate	0.8	3.0	3.0	3.7	3.8	4.7	5.0	4.7
Primary and Fabricated Metals	28.5	28.8	29.1	29.4	29.6	29.8	30.2	30.5
% Ch, Annual Rate	3.0	4.0	3.8	4.0	2.7	3.7	4.6	4.8
Computer and Electronic Products	22.3	22.3	22.3	22.4	22.5	22.6	22.7	22.9
% Ch, Annual Rate	4.0	-0.4	0.5	1.3	1.5	2.3	2.8	2.8
Machinery and Electrical Equipment	24.8	25.2	25.5	25.8	26.1	26.5	27.0	27.5
% Ch, Annual Rate	4.4	5.4	4.9	5.1	5.2	6.6	7.6	7.7
Aerospace	77.6	77.6	77.6	77.6	77.6	77.6	77.6	77.6
% Ch, Annual Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation Equip.	9.3	9.2	9.2	9.1	9.1	9.0	9.0	8.9
% Ch, Annual Rate	-1.7	-1.9	-1.6	-1.4	-1.7	-2.7	-3.4	-4.0
Other Durables	28.5	28.5	28.6	28.6	28.7	28.7	28.8	28.8
% Ch, Annual Rate	-0.2	0.1	0.5	0.8	0.5	0.7	0.7	0.5
Nondurable Manufacturing	90.0	90.2	90.6	90.8	91.1	91.3	91.5	91.7
% Ch, Annual Rate	1.0	1.3	1.4	1.2	1.0	1.0	0.9	0.9
Food Manufacturing	40.8	40.9	41.0	41.1	41.1	41.2	41.2	41.2
% Ch, Annual Rate	0.2	0.6	1.0	0.7	0.5	0.5	0.4	0.3
Paper and Paper Products	7.6	7.6	7.6	7.6	7.6	7.5	7.5	7.5
% Ch, Annual Rate	-0.7	-0.4	-0.3	-0.5	-0.6	-0.6	-0.4	-0.3
Other Nondurables	41.5	41.8	42.0	42.2	42.4	42.6	42.7	42.9
% Ch, Annual Rate	2.1	2.2	2.2	2.0	1.8	1.7	1.7	1.7
Natural Resources and Mining	6.0	6.0	6.0	6.0	6.0	6.1	6.1	6.1
% Ch, Annual Rate	0.6	0.0	-0.1	0.1	0.8	0.7	0.7	1.0
Construction	207.9	208.5	209.1	209.5	209.4	209.4	209.3	209.2
% Ch, Annual Rate	-0.4	1.3	1.0	0.9	-0.2	-0.1	-0.1	-0.2
Trade, Transportation, and Utilities	655.5	656.5	656.8	656.4	655.9	655.8	655.6	655.7
% Ch, Annual Rate	0.6	0.6	0.2	-0.3	-0.3	0.0	-0.1	0.1
Wholesale Trade	141.4	141.6	141.8	141.9	142.2	142.3	142.4	142.5
% Ch, Annual Rate	0.4	0.7	0.5	0.4	0.6	0.4	0.2	0.3
Retail Trade	401.8	402.5	402.7	402.3	401.5	401.4	401.1	401.2
% Ch, Annual Rate	0.8	0.7	0.2	-0.5	-0.7	-0.2	-0.3	0.1
Trans., Warehousing, and Utilities	112.3	112.3	112.2	112.1	112.2	112.1	112.1	112.0
% Ch, Annual Rate	-0.2	-0.1	-0.3	-0.3	0.1	-0.1	-0.2	-0.2
Information	129.4	130.2	131.0	131.5	132.4	133.2	134.0	134.8
% Ch, Annual Rate	2.0	2.7	2.2	1.8	2.5	2.4	2.4	2.6
Software Publishers	63.7	63.8	63.9	64.1	64.2	64.4	64.5	64.7
% Ch, Annual Rate	0.8	0.8	0.8	0.8	1.0	0.9	1.0	1.1
Other Publishing Industries	4.7	4.6	4.4	4.3	4.3	4.2	4.1	4.0
% Ch, Annual Rate	-8.8	-8.7	-9.0	-8.9	-7.9	-8.3	-8.0	-7.2
Other Information	61.0	61.9	62.6	63.1	63.9	64.6	65.3	66.1
% Ch, Annual Rate	4.2	5.7	4.6	3.7	4.8	4.8	4.5	4.8
Financial Activities	159.1	158.7	158.6	158.5	158.4	158.2	157.9	157.6
% Ch, Annual Rate	-1.2	-0.8	-0.5	-0.3	-0.2	-0.4	-0.8	-0.9
Professional and Business Services	468.4	473.3	477.5	481.7	485.5	488.9	492.3	495.0
% Ch, Annual Rate	4.7	4.3	3.5	3.6	3.2	2.9	2.7	2.2
Education and Health Services	507.0	508.1	509.6	511.0	512.8	514.3	515.7	517.0
% Ch, Annual Rate	0.9	0.9	1.2	1.1	1.4	1.2	1.1	1.0
Leisure and Hospitality	345.4	346.2	347.3	348.2	348.7	349.6	350.4	351.2
% Ch, Annual Rate	0.9	1.0	1.2	1.0	0.6	1.0	1.0	0.9
Other Services	124.2	124.4	124.5	124.7	125.0	125.2	125.3	125.5
% Ch, Annual Rate	0.6	0.5	0.5	0.5	0.8	0.7	0.6	0.6
Federal Government	76.2	83.4	77.4	75.9	76.0	76.1	76.2	76.3
% Ch, Annual Rate	3.9	43.2	-25.9	-7.4	0.5	0.5	0.5	0.5
State and Local Government	532.6	533.5	535.1	536.4	537.9	539.7	541.6	543.6
% Ch, Annual Rate	1.0	0.7	1.2	1.0	1.1	1.4	1.4	1.5

Table A3.1

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

Forecast 2017 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
Personal Income	14,818.2	15,553.0	15,928.7	16,423.0	17,032.7	17,818.4	18,646.5	19,517.1
% Ch	5.3	5.0	2.4	3.1	3.7	4.6	4.6	4.7
Total Wage and Salary Disbursements	7,476.8	7,858.9	8,085.2	8,358.7	8,672.0	9,036.6	9,409.3	9,799.6
% Ch	5.1	5.1	2.9	3.4	3.7	4.2	4.1	4.1
Nonwage Personal Income	7,341.4	7,694.1	7,843.5	8,064.3	8,360.7	8,781.9	9,237.2	9,717.4
% Ch	5.5	4.8	1.9	2.8	3.7	5.0	5.2	5.2
Supplements to Wages and Salaries	1,779.7	1,849.4	1,893.4	1,956.8	2,001.6	2,042.9	2,082.6	2,113.7
% Ch	3.1	3.9	2.4	3.3	2.3	2.1	1.9	1.5
Proprietor's Income	1,315.8	1,318.8	1,341.9	1,383.9	1,431.3	1,484.0	1,539.0	1,602.2
% Ch	2.4	0.2	1.8	3.1	3.4	3.7	3.7	4.1
Farm	68.1	53.7	43.2	35.3	29.8	30.6	34.6	38.0
% Ch	...	...	...	...	...	...	...	...
Nonfarm	1,247.7	1,265.1	1,298.7	1,348.6	1,401.4	1,453.4	1,504.3	1,564.3
% Ch	4.2	1.4	2.7	3.8	3.9	3.7	3.5	4.0
Less: Contribution For Govt. Soc. Ins.	1,155.3	1,208.0	1,245.3	1,303.2	1,341.2	1,388.9	1,441.1	1,497.8
% Ch	4.6	4.6	3.1	4.7	2.9	3.6	3.8	3.9
Dividends/Int./Rent	2,856.9	3,049.6	3,085.1	3,179.1	3,303.6	3,497.5	3,713.0	3,970.1
% Ch	8.9	6.7	1.2	3.0	3.9	5.9	6.2	6.9
Transfer Payments	2,544.4	2,684.4	2,768.4	2,847.7	2,965.4	3,146.3	3,343.8	3,529.2
% Ch	4.8	5.5	3.1	2.9	4.1	6.1	6.3	5.5

Table A3.2

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

Forecast 2017 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
Personal Income	15,751.0	15,910.1	16,028.0	16,025.7	16,245.2	16,364.4	16,478.1	16,604.3
% Ch, Annual Rate	-0.5	4.1	3.0	-0.1	5.6	3.0	2.8	3.1
Total Wage and Salary Disbursements	7,964.9	8,090.2	8,178.1	8,107.8	8,232.1	8,321.7	8,408.6	8,472.3
% Ch, Annual Rate	-3.2	6.4	4.4	-3.4	6.3	4.4	4.2	3.1
Nonwage Personal Income	7,786.2	7,819.9	7,850.0	7,917.9	8,013.1	8,042.7	8,069.5	8,132.0
% Ch, Annual Rate	2.4	1.7	1.5	3.5	4.9	1.5	1.3	3.1
Supplements to Wages and Salaries	1,873.7	1,889.4	1,903.4	1,907.1	1,934.2	1,949.7	1,964.6	1,978.6
% Ch, Annual Rate	-0.4	3.4	3.0	0.8	5.8	3.2	3.1	2.9
Proprietor's Income	1,327.6	1,339.5	1,346.1	1,354.6	1,380.2	1,378.6	1,381.8	1,395.1
% Ch, Annual Rate	0.7	3.6	2.0	2.5	7.8	-0.5	0.9	3.9
Farm	46.8	46.7	41.4	37.8	41.9	37.0	32.3	30.2
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,280.8	1,292.8	1,304.6	1,316.7	1,338.4	1,341.6	1,349.5	1,365.0
% Ch, Annual Rate	2.1	3.8	3.7	3.8	6.7	1.0	2.4	4.7
Less: Contribution For Govt. Soc. Ins.	1,227.5	1,245.4	1,258.2	1,250.2	1,284.1	1,297.4	1,310.7	1,320.8
% Ch, Annual Rate	-1.4	5.9	4.2	-2.5	11.3	4.2	4.1	3.1
Dividends/Int./Rent	3,072.5	3,076.1	3,081.3	3,110.5	3,150.9	3,174.8	3,181.8	3,209.0
% Ch, Annual Rate	1.8	0.5	0.7	3.8	5.3	3.1	0.9	3.5
Transfer Payments	2,739.9	2,760.2	2,777.4	2,795.9	2,831.9	2,836.9	2,852.0	2,870.0
% Ch, Annual Rate	4.3	3.0	2.5	2.7	5.2	0.7	2.1	2.6



Table A3.2 (continued)

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

Forecast 2017 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	16,778.3	16,936.9	17,114.3	17,301.4	17,529.7	17,722.3	17,911.4	18,110.3
% Ch, Annual Rate	4.3	3.8	4.3	4.4	5.4	4.5	4.3	4.5
Total Wage and Salary Disbursements	8,552.5	8,631.2	8,710.6	8,793.8	8,900.4	8,997.5	9,081.9	9,166.4
% Ch, Annual Rate	3.8	3.7	3.7	3.9	4.9	4.4	3.8	3.8
Nonwage Personal Income	8,225.7	8,305.7	8,403.7	8,507.6	8,629.3	8,724.8	8,829.6	8,943.9
% Ch, Annual Rate	4.7	3.9	4.8	5.0	5.8	4.5	4.9	5.3
Supplements to Wages and Salaries	1,987.9	1,997.8	2,005.6	2,015.1	2,027.5	2,039.1	2,048.5	2,056.5
% Ch, Annual Rate	1.9	2.0	1.6	1.9	2.5	2.3	1.9	1.6
Proprietor's Income	1,410.2	1,426.8	1,438.4	1,449.7	1,464.0	1,477.5	1,490.3	1,504.3
% Ch, Annual Rate	4.4	4.8	3.3	3.2	4.0	3.8	3.5	3.8
Farm	30.0	30.7	29.3	29.3	29.9	29.8	30.9	31.9
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,380.1	1,396.1	1,409.1	1,420.4	1,434.1	1,447.7	1,459.4	1,472.4
% Ch, Annual Rate	4.5	4.7	3.8	3.2	3.9	3.9	3.3	3.6
Less: Contribution For Govt. Soc. Ins.	1,329.5	1,336.8	1,344.8	1,353.7	1,372.4	1,384.2	1,394.3	1,404.5
% Ch, Annual Rate	2.7	2.2	2.4	2.7	5.6	3.5	2.9	3.0
Dividends/Int./Rent	3,244.2	3,272.1	3,322.0	3,376.2	3,424.7	3,467.5	3,518.6	3,579.1
% Ch, Annual Rate	4.5	3.5	6.2	6.7	5.9	5.1	6.0	7.1
Transfer Payments	2,913.0	2,945.8	2,982.6	3,020.3	3,085.6	3,124.9	3,166.5	3,208.5
% Ch, Annual Rate	6.1	4.6	5.1	5.2	8.9	5.2	5.4	5.4

Table A3.2 (continued)

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

Forecast 2017 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	18,337.7	18,545.5	18,751.1	18,951.6	19,199.0	19,415.4	19,623.5	19,830.4
% Ch, Annual Rate	5.1	4.6	4.5	4.3	5.3	4.6	4.4	4.3
Total Wage and Salary Disbursements	9,270.4	9,366.1	9,454.6	9,546.0	9,651.5	9,750.3	9,849.4	9,947.4
% Ch, Annual Rate	4.6	4.2	3.8	3.9	4.5	4.2	4.1	4.0
Nonwage Personal Income	9,067.3	9,179.3	9,296.5	9,405.6	9,547.5	9,665.1	9,774.1	9,883.0
% Ch, Annual Rate	5.6	5.0	5.2	4.8	6.2	5.0	4.6	4.5
Supplements to Wages and Salaries	2,069.1	2,078.6	2,087.9	2,094.7	2,105.3	2,110.7	2,116.3	2,122.4
% Ch, Annual Rate	2.5	1.8	1.8	1.3	2.0	1.0	1.1	1.2
Proprietor's Income	1,515.1	1,530.7	1,547.6	1,562.5	1,576.9	1,594.0	1,610.7	1,627.4
% Ch, Annual Rate	2.9	4.2	4.5	3.9	3.7	4.4	4.3	4.2
Farm	32.8	34.4	35.7	35.7	36.3	37.6	38.7	39.3
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	1,482.3	1,496.3	1,511.9	1,526.8	1,540.5	1,556.4	1,572.0	1,588.2
% Ch, Annual Rate	2.7	3.8	4.2	4.0	3.7	4.2	4.1	4.2
Less: Contribution For Govt. Soc. Ins.	1,423.6	1,435.4	1,446.8	1,458.6	1,478.5	1,491.3	1,504.2	1,517.0
% Ch, Annual Rate	5.5	3.4	3.2	3.3	5.6	3.5	3.5	3.4
Dividends/Int./Rent	3,626.9	3,682.4	3,740.7	3,801.9	3,871.5	3,941.8	4,003.1	4,063.7
% Ch, Annual Rate	5.4	6.3	6.5	6.7	7.5	7.5	6.4	6.2
Transfer Payments	3,279.8	3,323.0	3,367.2	3,405.1	3,472.3	3,509.9	3,548.2	3,586.5
% Ch, Annual Rate	9.2	5.4	5.4	4.6	8.1	4.4	4.4	4.4

Table A3.3

**Washington Personal Income by Component (Billions of Dollars)**

Forecast 2017 to 2021

	2014	2015	2016	2017	2018	2019	2020	2021
Personal Income	358.988	379.951	397.772	419.456	438.993	462.595	487.001	512.606
% Ch	7.7	5.8	4.7	5.5	4.7	5.4	5.3	5.3
Total Wage and Salary Disbursements	181.723	191.879	203.613	219.398	230.306	242.028	253.706	265.725
% Ch	6.5	5.6	6.1	7.8	5.0	5.1	4.8	4.7
Manufacturing	21.774	21.801	21.735	21.713	22.190	23.079	24.016	25.172
% Ch	5.9	0.1	-0.3	-0.1	2.2	4.0	4.1	4.8
Durable Manufacturing	17.668	17.591	17.318	17.070	17.305	17.914	18.603	19.510
% Ch	6.5	-0.4	-1.6	-1.4	1.4	3.5	3.8	4.9
Nondurable Manufacturing	4.106	4.210	4.417	4.643	4.884	5.165	5.412	5.663
% Ch	3.7	2.5	4.9	5.1	5.2	5.7	4.8	4.6
Nonmanufacturing	153.177	163.218	174.750	190.389	200.532	211.062	221.455	232.018
% Ch	7.0	6.6	7.1	8.9	5.3	5.3	4.9	4.8
Other Private Wages	1.113	1.151	1.197	1.246	1.306	1.357	1.405	1.453
% Ch	3.2	3.3	4.0	4.1	4.8	3.9	3.5	3.4
Farm Wages	1.534	1.602	1.813	1.885	1.974	2.077	2.179	2.283
% Ch	-2.5	4.4	13.2	4.0	4.7	5.2	4.9	4.8
Military Wages	4.125	4.108	4.118	4.164	4.305	4.453	4.651	4.798
% Ch	-4.3	-0.4	0.2	1.1	3.4	3.4	4.5	3.1
Nonwage Personal Income	177.265	188.072	194.159	200.058	208.686	220.567	233.295	246.881
% Ch	9.1	6.1	3.2	3.0	4.3	5.7	5.8	5.8
Supplements to Wages and Salaries	42.827	43.864	46.494	49.038	50.743	52.309	53.752	54.966
% Ch	3.3	2.4	6.0	5.5	3.5	3.1	2.8	2.3
Proprietor's Income	27.102	29.525	29.803	30.328	31.131	32.070	33.080	34.315
% Ch	1.4	8.9	0.9	1.8	2.6	3.0	3.1	3.7
Farm	1.285	2.727	2.496	1.655	1.244	1.081	1.022	1.002
% Ch	...	...	...	...	...	...	...	...
Nonfarm	25.817	26.797	27.307	28.673	29.887	30.989	32.057	33.313
% Ch	2.7	3.8	1.9	5.0	4.2	3.7	3.4	3.9
Less: Contribution For Govt. Soc. Ins.	30.509	32.171	33.536	35.615	37.020	38.599	40.260	42.023
% Ch	5.2	5.5	4.2	6.2	3.9	4.3	4.3	4.4
Plus: Residence Adjustment	3.203	3.536	3.717	3.794	3.945	4.117	4.297	4.486
% Ch	-2.1	10.4	5.1	2.1	4.0	4.4	4.4	4.4
Dividends/Int./Rent	79.127	86.816	88.021	91.800	96.125	102.517	109.533	117.769
% Ch	14.6	9.7	1.4	4.3	4.7	6.6	6.8	7.5
Transfer Payments	55.514	56.503	59.662	60.714	63.762	68.152	72.894	77.368
% Ch	9.0	1.8	5.6	1.8	5.0	6.9	7.0	6.1
State U.I. Benefits	1.052	0.971	0.982	1.007	0.884	0.867	0.880	0.879
% Ch	-39.0	-7.7	1.2	2.5	-12.2	-2.0	1.5	0.0
Other Transfers	54.463	55.532	58.679	59.707	62.878	67.285	72.015	76.488
% Ch	10.7	2.0	5.7	1.8	5.3	7.0	7.0	6.2

Table A3.4

**Washington Personal Income by Component (Billions of Dollars)**

Forecast 2017 to 2021

	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4
Personal Income	390.678	396.173	399.815	404.423	413.880	416.859	421.298	425.788
% Ch, Annual Rate	4.9	5.7	3.7	4.7	9.7	2.9	4.3	4.3
Total Wage and Salary Disbursements	199.573	203.206	205.126	206.547	215.624	217.545	220.913	223.509
% Ch, Annual Rate	5.5	7.5	3.8	2.8	18.8	3.6	6.3	4.8
Manufacturing	21.603	22.211	21.541	21.584	22.086	21.543	21.620	21.604
% Ch, Annual Rate	-5.4	11.8	-11.5	0.8	9.6	-9.5	1.4	-0.3
Durable Manufacturing	17.234	17.808	17.097	17.132	17.538	16.943	16.944	16.855
% Ch, Annual Rate	-8.2	14.0	-15.1	0.8	9.8	-12.9	0.0	-2.1
Nondurable Manufacturing	4.368	4.403	4.444	4.452	4.548	4.601	4.676	4.749
% Ch, Annual Rate	6.9	3.2	3.8	0.7	9.0	4.7	6.7	6.4
Nonmanufacturing	170.808	173.840	176.472	177.880	186.344	188.716	191.950	194.547
% Ch, Annual Rate	6.5	7.3	6.2	3.2	20.4	5.2	7.0	5.5
Other Private Wages	1.238	1.215	1.175	1.160	1.183	1.258	1.267	1.277
% Ch, Annual Rate	53.4	-7.2	-12.5	-5.2	8.2	27.8	3.0	3.3
Farm Wages	1.762	1.806	1.835	1.850	1.861	1.873	1.893	1.914
% Ch, Annual Rate	38.0	10.3	6.7	3.2	2.3	2.7	4.3	4.6
Military Wages	4.162	4.133	4.101	4.073	4.150	4.155	4.183	4.166
% Ch, Annual Rate	2.8	-2.8	-3.0	-2.7	7.8	0.4	2.7	-1.6
Nonwage Personal Income	191.104	192.968	194.690	197.876	198.256	199.313	200.385	202.279
% Ch, Annual Rate	4.3	4.0	3.6	6.7	0.8	2.2	2.2	3.8
Supplements to Wages and Salaries	45.634	46.319	46.611	47.412	48.318	48.731	49.283	49.819
% Ch, Annual Rate	10.0	6.1	2.5	7.1	7.9	3.5	4.6	4.4
Proprietor's Income	29.348	29.719	30.005	30.138	30.371	30.163	30.251	30.526
% Ch, Annual Rate	-6.2	5.1	3.9	1.8	3.1	-2.7	1.2	3.7
Farm	2.540	2.579	2.488	2.377	1.993	1.676	1.531	1.420
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	26.808	27.140	27.517	27.761	28.379	28.487	28.720	29.106
% Ch, Annual Rate	-3.2	5.1	5.7	3.6	9.2	1.5	3.3	5.5
Less: Contribution For Govt. Soc. Ins.	33.113	33.493	33.653	33.886	34.998	35.356	35.847	36.259
% Ch, Annual Rate	4.3	4.7	1.9	2.8	13.8	4.2	5.7	4.7
Plus: Residence Adjustment	3.684	3.730	3.738	3.715	3.718	3.780	3.825	3.853
% Ch, Annual Rate	4.4	5.1	0.8	-2.4	0.3	6.9	4.9	2.9
Dividends/Int./Rent	87.572	87.667	87.847	88.998	90.768	91.545	91.960	92.925
% Ch, Annual Rate	2.3	0.4	0.8	5.3	8.2	3.5	1.8	4.3
Transfer Payments	57.979	59.026	60.142	61.499	60.079	60.450	60.912	61.416
% Ch, Annual Rate	8.8	7.4	7.8	9.3	-8.9	2.5	3.1	3.3
State U.I. Benefits	1.002	0.977	0.994	0.956	0.953	0.999	1.038	1.038
% Ch, Annual Rate	10.5	-9.4	7.3	-14.7	-0.9	20.5	16.6	0.0
Other Transfers	56.978	58.048	59.148	60.544	59.125	59.451	59.874	60.378
% Ch, Annual Rate	8.7	7.7	7.8	9.8	-9.0	2.2	2.9	3.4

Table A3.4 (continued)

**Washington Personal Income by Component (Billions of Dollars)**

Forecast 2017 to 2021

	2018:1	2018:2	2018:3	2018:4	2019:1	2019:2	2019:3	2019:4
Personal Income	431.224	436.115	441.518	447.114	453.853	459.772	465.427	471.329
% Ch, Annual Rate	5.2	4.6	5.0	5.2	6.2	5.3	5.0	5.2
Total Wage and Salary Disbursements	226.367	229.029	231.607	234.224	237.637	240.814	243.501	246.161
% Ch, Annual Rate	5.2	4.8	4.6	4.6	6.0	5.5	4.5	4.4
Manufacturing	21.778	22.108	22.358	22.514	22.773	22.999	23.175	23.370
% Ch, Annual Rate	3.3	6.2	4.6	2.8	4.7	4.0	3.1	3.4
Durable Manufacturing	16.986	17.245	17.444	17.545	17.712	17.863	17.974	18.106
% Ch, Annual Rate	3.1	6.3	4.7	2.3	3.9	3.5	2.5	3.0
Nondurable Manufacturing	4.792	4.863	4.914	4.969	5.061	5.136	5.201	5.263
% Ch, Annual Rate	3.7	6.0	4.2	4.6	7.6	6.1	5.2	4.9
Nonmanufacturing	197.058	199.351	201.640	204.079	207.038	209.941	212.413	214.856
% Ch, Annual Rate	5.3	4.7	4.7	4.9	5.9	5.7	4.8	4.7
Other Private Wages	1.290	1.301	1.312	1.323	1.338	1.352	1.363	1.374
% Ch, Annual Rate	3.9	3.6	3.4	3.4	4.8	4.2	3.3	3.1
Farm Wages	1.939	1.962	1.985	2.008	2.039	2.067	2.090	2.113
% Ch, Annual Rate	5.2	4.9	4.7	4.8	6.2	5.6	4.6	4.5
Military Wages	4.302	4.307	4.312	4.300	4.450	4.454	4.460	4.448
% Ch, Annual Rate	13.7	0.4	0.5	-1.1	14.7	0.4	0.5	-1.0
Nonwage Personal Income	204.858	207.087	209.912	212.889	216.215	218.958	221.925	225.168
% Ch, Annual Rate	5.2	4.4	5.6	5.8	6.4	5.2	5.5	6.0
Supplements to Wages and Salaries	50.216	50.595	50.908	51.252	51.735	52.172	52.515	52.814
% Ch, Annual Rate	3.2	3.1	2.5	2.7	3.8	3.4	2.7	2.3
Proprietor's Income	30.773	31.047	31.256	31.448	31.703	31.959	32.181	32.438
% Ch, Annual Rate	3.3	3.6	2.7	2.5	3.3	3.3	2.8	3.2
Farm	1.338	1.274	1.207	1.159	1.122	1.088	1.066	1.048
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	29.435	29.774	30.049	30.289	30.581	30.871	31.115	31.390
% Ch, Annual Rate	4.6	4.7	3.8	3.2	3.9	3.9	3.2	3.6
Less: Contribution For Govt. Soc. Ins.	36.597	36.874	37.155	37.453	38.047	38.449	38.784	39.116
% Ch, Annual Rate	3.8	3.1	3.1	3.3	6.5	4.3	3.5	3.5
Plus: Residence Adjustment	3.889	3.925	3.962	4.002	4.052	4.098	4.138	4.179
% Ch, Annual Rate	3.8	3.8	3.9	4.1	5.1	4.6	4.0	4.0
Dividends/Int./Rent	94.123	95.115	96.749	98.515	100.115	101.551	103.226	105.177
% Ch, Annual Rate	5.3	4.3	7.0	7.5	6.7	5.9	6.8	7.8
Transfer Payments	62.454	63.278	64.191	65.126	66.657	67.628	68.648	69.675
% Ch, Annual Rate	6.9	5.4	5.9	6.0	9.7	6.0	6.2	6.1
State U.I. Benefits	0.917	0.912	0.868	0.840	0.855	0.867	0.873	0.872
% Ch, Annual Rate	-39.0	-2.3	-17.9	-12.4	7.3	6.0	2.8	-0.5
Other Transfers	61.536	62.366	63.323	64.286	65.802	66.760	67.775	68.803
% Ch, Annual Rate	7.9	5.5	6.3	6.2	9.8	6.0	6.2	6.2

Table A3.4 (continued)

**Washington Personal Income by Component (Billions of Dollars)**

Forecast 2017 to 2021

	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4
Personal Income	477.843	484.021	490.062	496.077	503.271	509.621	515.728	521.802
% Ch, Annual Rate	5.6	5.3	5.1	5.0	5.9	5.1	4.9	4.8
Total Wage and Salary Disbursements	249.339	252.364	255.127	257.992	261.271	264.243	267.222	270.164
% Ch, Annual Rate	5.3	4.9	4.5	4.6	5.2	4.6	4.6	4.5
Manufacturing	23.622	23.868	24.144	24.429	24.709	25.009	25.325	25.646
% Ch, Annual Rate	4.4	4.2	4.7	4.8	4.7	4.9	5.2	5.2
Durable Manufacturing	18.302	18.490	18.700	18.922	19.140	19.378	19.632	19.889
% Ch, Annual Rate	4.4	4.2	4.6	4.8	4.7	5.1	5.3	5.3
Nondurable Manufacturing	5.320	5.378	5.444	5.507	5.569	5.631	5.694	5.757
% Ch, Annual Rate	4.4	4.4	5.0	4.7	4.6	4.6	4.5	4.5
Nonmanufacturing	217.554	220.232	222.729	225.306	228.087	230.717	233.337	235.933
% Ch, Annual Rate	5.1	5.0	4.6	4.7	5.0	4.7	4.6	4.5
Other Private Wages	1.387	1.400	1.411	1.422	1.436	1.448	1.459	1.471
% Ch, Annual Rate	4.0	3.6	3.1	3.3	3.9	3.3	3.3	3.2
Farm Wages	2.141	2.167	2.191	2.216	2.244	2.270	2.296	2.322
% Ch, Annual Rate	5.3	5.0	4.5	4.6	5.3	4.7	4.7	4.5
Military Wages	4.636	4.697	4.653	4.619	4.795	4.799	4.804	4.793
% Ch, Annual Rate	18.0	5.4	-3.7	-2.9	16.0	0.4	0.5	-1.0
Nonwage Personal Income	228.503	231.657	234.936	238.084	242.001	245.379	248.506	251.638
% Ch, Annual Rate	6.1	5.6	5.8	5.5	6.7	5.7	5.2	5.1
Supplements to Wages and Salaries	53.254	53.606	53.936	54.212	54.618	54.845	55.079	55.321
% Ch, Annual Rate	3.4	2.7	2.5	2.1	3.0	1.7	1.7	1.8
Proprietor's Income	32.626	32.916	33.237	33.540	33.822	34.151	34.475	34.811
% Ch, Annual Rate	2.3	3.6	4.0	3.7	3.4	4.0	3.8	4.0
Farm	1.033	1.027	1.021	1.009	1.003	1.002	1.002	1.000
% Ch, Annual Rate	...	...	...	...	...	...	...	...
Nonfarm	31.592	31.889	32.217	32.532	32.819	33.149	33.473	33.812
% Ch, Annual Rate	2.6	3.8	4.2	4.0	3.6	4.1	4.0	4.1
Less: Contribution For Govt. Soc. Ins.	39.695	40.080	40.445	40.820	41.432	41.826	42.222	42.612
% Ch, Annual Rate	6.1	3.9	3.7	3.8	6.1	3.9	3.8	3.7
Plus: Residence Adjustment	4.230	4.276	4.318	4.363	4.413	4.462	4.511	4.559
% Ch, Annual Rate	4.9	4.4	4.1	4.1	4.7	4.5	4.4	4.3
Dividends/Int./Rent	106.751	108.551	110.430	112.398	114.615	116.853	118.828	120.781
% Ch, Annual Rate	6.1	6.9	7.1	7.3	8.1	8.0	6.9	6.7
Transfer Payments	71.338	72.388	73.458	74.392	75.964	76.893	77.836	78.778
% Ch, Annual Rate	9.9	6.0	6.0	5.2	8.7	5.0	5.0	4.9
State U.I. Benefits	0.878	0.878	0.883	0.880	0.878	0.875	0.875	0.889
% Ch, Annual Rate	2.7	-0.3	2.3	-1.2	-1.0	-1.2	0.3	6.3
Other Transfers	70.460	71.511	72.576	73.512	75.087	76.018	76.960	77.889
% Ch, Annual Rate	10.0	6.1	6.1	5.3	8.8	5.1	5.0	4.9

Table A4.1

**Selected Inflation Indicators**

(PCE Price Index 2009=100; CPI 1982-84=1)

	<b>PCE Price Index*</b>		<b>U.S. CPI#</b>		<b>Seattle CPI+</b>	
	<u>Index</u>	<u>Percent Change</u>	<u>Index</u>	<u>Percent Change</u>	<u>Index</u>	<u>Percent Change</u>
1971	23.3	4.3	0.405	4.2	0.382	2.1
1972	24.1	3.4	0.418	3.3	0.393	2.9
1973	25.4	5.4	0.444	6.3	0.418	6.4
1974	28.0	10.4	0.493	11.0	0.464	11.0
1975	30.3	8.4	0.538	9.1	0.511	10.2
1976	32.0	5.5	0.569	5.8	0.540	5.5
1977	34.1	6.5	0.606	6.5	0.583	8.0
1978	36.5	7.0	0.652	7.6	0.640	9.9
1979	39.7	8.9	0.726	11.3	0.709	10.8
1980	44.0	10.7	0.824	13.5	0.827	16.7
1981	47.9	8.9	0.909	10.4	0.916	10.8
1982	50.6	5.5	0.965	6.2	0.978	6.7
1983	52.7	4.3	0.996	3.2	0.993	1.5
1984	54.7	3.8	1.039	4.4	1.030	3.8
1985	56.7	3.5	1.076	3.5	1.056	2.5
1986	57.9	2.2	1.097	1.9	1.066	1.0
1987	59.7	3.0	1.136	3.6	1.092	2.4
1988	62.0	3.9	1.183	4.1	1.128	3.3
1989	64.6	4.3	1.239	4.8	1.181	4.7
1990	67.4	4.3	1.307	5.4	1.268	7.3
1991	69.7	3.3	1.362	4.2	1.341	5.8
1992	71.5	2.6	1.403	3.0	1.390	3.7
1993	73.3	2.5	1.445	3.0	1.429	2.8
1994	74.8	2.1	1.482	2.6	1.478	3.4
1995	76.4	2.1	1.524	2.8	1.522	3.0
1996	78.0	2.1	1.569	2.9	1.575	3.4
1997	79.3	1.7	1.605	2.3	1.630	3.5
1998	79.9	0.8	1.630	1.5	1.677	2.9
1999	81.1	1.5	1.666	2.2	1.728	3.0
2000	83.1	2.5	1.722	3.4	1.792	3.7
2001	84.7	1.9	1.770	2.8	1.857	3.6
2002	85.9	1.3	1.799	1.6	1.893	2.0
2003	87.6	2.0	1.840	2.3	1.924	1.6
2004	89.7	2.4	1.889	2.7	1.947	1.2
2005	92.3	2.9	1.953	3.4	2.002	2.8
2006	94.7	2.7	2.016	3.2	2.076	3.7
2007	97.1	2.5	2.073	2.9	2.157	3.9
2008	100.1	3.1	2.153	3.8	2.247	4.2
2009	100.0	-0.1	2.146	-0.3	2.260	0.6
2010	101.7	1.7	2.181	1.6	2.267	0.3
2011	104.1	2.5	2.249	3.1	2.327	2.7
2012	106.1	1.9	2.296	2.1	2.386	2.5
2013	107.5	1.3	2.329	1.5	2.416	1.2
2014	109.2	1.5	2.367	1.6	2.460	1.8
2015	109.5	0.3	2.370	0.1	2.494	1.4
2016	110.8	1.2	2.400	1.3	2.550	2.3
Forecast						
2017	112.6	1.7	2.451	2.1	2.625	2.9
2018	114.7	1.8	2.508	2.3	2.690	2.5
2019	116.7	1.8	2.560	2.0	2.750	2.2
2020	119.0	2.0	2.618	2.3	2.815	2.4
2021	121.4	2.0	2.679	2.3	2.883	2.4

\* 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**  
(2009=100)

	Services		Food		Fuels		Gasoline	
	Index	Percent Change	Index	Percent Change	Index	Percent Change	Index	Percent Change
1971	17.9	5.5	22.8	2.3	7.4	6.4	14.0	0.7
1972	18.7	4.2	23.9	4.8	7.5	0.6	14.2	1.3
1973	19.6	4.8	26.9	12.7	8.6	14.6	15.5	9.6
1974	21.3	8.5	31.0	15.2	13.6	58.9	21.0	35.1
1975	23.1	8.6	33.3	7.5	14.8	8.5	22.4	6.7
1976	24.7	6.9	34.0	1.9	15.9	7.3	23.3	4.2
1977	26.6	7.5	36.0	5.9	17.9	13.2	24.7	5.8
1978	28.6	7.8	39.4	9.6	19.0	5.7	25.8	4.3
1979	31.0	8.4	43.3	9.8	26.2	37.9	34.5	34.0
1980	34.2	10.3	46.9	8.4	36.7	40.4	47.9	38.8
1981	37.7	10.2	50.3	7.1	44.9	22.3	53.3	11.3
1982	40.6	7.8	51.6	2.6	44.1	-1.9	50.6	-5.1
1983	43.2	6.2	52.2	1.1	40.6	-7.8	48.9	-3.3
1984	45.4	5.2	53.7	3.0	41.5	2.2	48.2	-1.5
1985	47.7	5.0	54.3	1.1	39.9	-3.9	48.6	0.8
1986	49.6	4.1	55.6	2.4	31.2	-21.7	38.2	-21.5
1987	51.1	2.9	57.4	3.2	32.1	2.6	39.6	3.8
1988	53.5	4.8	59.1	3.0	32.0	0.0	40.0	0.8
1989	56.0	4.6	62.2	5.3	34.0	6.0	43.7	9.2
1990	58.5	4.5	65.2	4.9	40.9	20.4	49.7	13.8
1991	60.7	3.8	67.3	3.1	38.9	-4.8	49.1	-1.3
1992	62.8	3.5	67.8	0.8	37.3	-4.1	48.9	-0.4
1993	65.0	3.5	68.7	1.4	37.1	-0.7	48.4	-1.0
1994	66.8	2.7	69.9	1.7	36.4	-1.8	48.6	0.5
1995	68.6	2.7	71.4	2.2	36.1	-0.9	49.4	1.6
1996	70.5	2.7	73.6	3.1	40.9	13.3	52.4	6.1
1997	72.4	2.8	75.0	1.9	41.0	0.2	52.4	0.0
1998	73.9	2.1	75.9	1.3	36.3	-11.4	45.6	-12.9
1999	75.4	2.0	77.2	1.6	36.9	1.7	49.6	8.9
2000	77.5	2.8	79.0	2.3	54.1	46.6	63.4	27.8
2001	79.9	3.1	81.3	2.9	53.1	-2.0	61.2	-3.6
2002	82.0	2.6	82.5	1.5	47.3	-10.8	57.5	-6.0
2003	84.5	3.1	84.1	1.9	57.2	20.9	67.0	16.5
2004	87.1	3.0	86.7	3.1	66.6	16.4	78.8	17.6
2005	89.9	3.3	88.2	1.7	88.6	33.0	95.8	21.6
2006	93.0	3.4	89.7	1.7	100.7	13.7	108.0	12.8
2007	96.0	3.2	93.2	3.9	107.7	6.9	117.1	8.4
2008	98.9	3.1	98.9	6.1	146.0	35.6	136.6	16.6
2009	100.0	1.1	100.0	1.2	100.0	-31.5	100.0	-26.8
2010	101.7	1.7	100.3	0.3	117.0	17.0	118.2	18.2
2011	103.5	1.8	104.3	4.0	148.8	27.2	149.3	26.3
2012	105.8	2.2	106.7	2.3	150.7	1.3	154.7	3.6
2013	108.3	2.3	107.8	1.1	148.9	-1.2	149.7	-3.2
2014	110.9	2.5	109.8	1.8	148.2	-0.5	145.5	-2.8
2015	113.1	1.9	111.0	1.1	105.3	-29.0	107.0	-26.5
2016	115.9	2.5	109.9	-0.9	87.7	-16.7	95.3	-10.9

Forecast

2017	118.5	2.3	109.8	-0.1	100.2	14.2	107.1	12.4
2018	121.3	2.3	111.2	1.3	110.4	10.2	115.6	8.0
2019	124.3	2.5	113.1	1.7	112.0	1.5	110.8	-4.2
2020	127.6	2.7	115.3	2.0	114.4	2.2	110.6	-0.1
2021	131.0	2.6	117.6	2.0	117.8	2.9	111.5	0.8



Table A5.1

**Washington Resident Population and Components of Change\***  
(Thousands)

	<b>Population</b>	<b>Change</b>	<b>Percent Change</b>	<b>Births</b>	<b>Deaths</b>	<b>Net Migration</b>
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
<b>Forecast</b>						
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

\* As of April 1 of Each Year

Source: Office of Financial Management

Table A5.2  
**Washington Population\***  
 (Thousands)

	<b>2012</b>	<b>2013</b>	<b>Actual 2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>Forecast</b>		<b>2020</b>	<b>2021</b>
							<b>2018</b>	<b>2019</b>		
Total Population	6817.8	6882.4	6968.2	7061.4	7183.7	7310.3	7426.3	7535.5	7638.4	7736.2
Percent Change	0.7	0.9	1.2	1.3	1.7	1.8	1.6	1.5	1.4	1.3
Age 17 and Under	1572.6	1577.2	1588.4	1602.8	1625.6	1649.6	1671.0	1691.4	1713.0	1733.4
Percent of Total	23.1	22.9	22.8	22.7	22.6	22.6	22.5	22.4	22.4	22.4
Age 6-18	1137.5	1141.1	1151.0	1162.2	1178.6	1194.9	1210.1	1223.5	1235.6	1250.1
Percent of Total	16.7	16.6	16.5	16.5	16.4	16.3	16.3	16.2	16.2	16.2
Age 18 and Over	5245.2	5305.2	5379.8	5458.7	5558.1	5660.7	5755.4	5844.1	5925.4	6002.8
Percent of Total	76.9	77.1	77.2	77.3	77.4	77.4	77.5	77.6	77.6	77.6
Age 21 and Over	4965.3	5029.2	5107.4	5187.1	5284.0	5382.7	5473.8	5560.3	5642.3	5721.1
Percent of Total	72.8	73.1	73.3	73.5	73.6	73.6	73.7	73.8	73.9	74.0
Age 20-34	1413.1	1426.9	1445.8	1458.8	1482.6	1506.7	1525.9	1543.7	1557.3	1568.7
Percent of Total	20.7	20.7	20.7	20.7	20.6	20.6	20.5	20.5	20.4	20.3
Age 18-64	4349.5	4365.7	4396.9	4431.0	4484.7	4539.0	4581.8	4618.8	4646.2	4671.2
Percent of Total	63.8	63.4	63.1	62.7	62.4	62.1	61.7	61.3	60.8	60.4
Age 65 and Over	895.6	939.5	982.8	1027.7	1073.4	1121.8	1173.6	1225.3	1279.2	1331.6
Percent of Total	13.1	13.7	14.1	14.6	14.9	15.3	15.8	16.3	16.7	17.2

\* As of April 1 of Each Year

Source: Office of Financial Management

Table A6.1

**Summary of National and State Indicators**

<b>Indicator</b>	<b>Latest Data</b>	<b>Indication*</b>
U.S. Leading Index	October 2017	+
U.S. Real GDP Growth	3rd quarter 2017	+
U.S. ISM Index	October 2017	-
U.S. Employment YOY%Δ	October 2017	+
U.S. Unemployment Rate	October 2017	+
U.S. Consumer Confidence	November 2017	+
U.S. Consumer Sentiment	November 2017	-
U.S. Light Vehicle Sales	October 2017	-
U.S. CPI YOY%Δ	October 2017	+
U.S. Home Prices YOY%Δ	September 2017	+
S&P 500 Index	November 2017	+
WA Leading Index	October 2017	+
WA ISM-WW Index	October 2017	-
WA Employment YOY%Δ	October 2017	+
WA Aerospace Empl. YOY%Δ	October 2017	-
WA Unemployment Rate	October 2017	+
WA Help Wanted Index	October 2017	-
WA Business Cycle Indicator	October 2017	+
WA Initial Unemploy. Claims	October 2017	+
WA Housing Permits	October 2017	+
WA Weekly Hours in Mfg.	October 2017	+
WA New Vehicle Registration	October 2017	+
WA In-Migration	October 2017	-
WA Exports-Total YOY%Δ	3rd quarter 2017	-
WA Exports- w/o Trans. Equip. YOY%Δ	3rd quarter 2017	-
Seattle CPI YOY%Δ	October 2017	-
Seattle Home Prices YOY%Δ	September 2017	-
WA Construction Activity Index	October 2017	+

\*Change from the previous reading

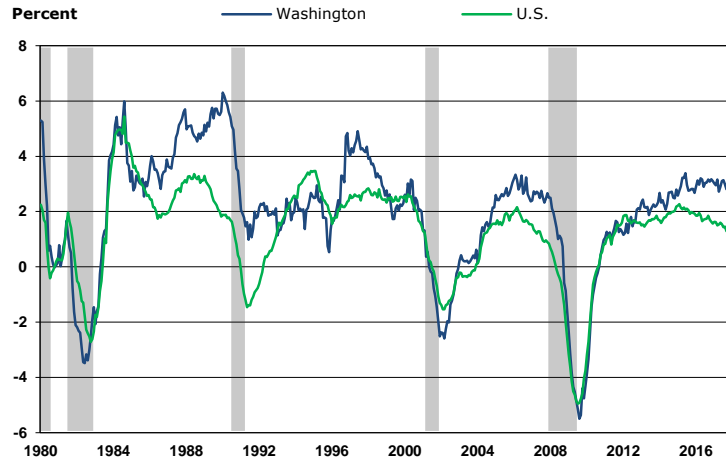
Table A6.2  
**Washington Business Indicators**  
 Historical Data

	<b>WA Index of Leading Indicators</b>	<b>U.S. Index of Leading Indicators</b>	<b>WA State Business Cycle Indicator</b>	<b>WA State Construction Index</b>	<b>WA State Help Wanted Index</b>	<b>WA Purchasing Management Index</b>	<b>U.S. Purchasing Management Index</b>
<b>2014:01</b>	115.8	113.7	44.4	94.8	118.2	63.5	51.8
<b>2014:02</b>	115.6	114.3	43.0	93.1	118.5	68.7	54.3
<b>2014:03</b>	116.4	115.4	43.8	93.8	118.6	63.6	54.4
<b>2014:04</b>	117.1	115.8	45.9	97.1	120.6	53.7	55.3
<b>2014:05</b>	117.3	116.5	46.7	95.8	118.7	59.6	55.6
<b>2014:06</b>	118.5	117.2	47.0	97.3	121.0	67.0	55.7
<b>2014:07</b>	118.7	118.4	48.7	97.3	121.3	50.1	56.4
<b>2014:08</b>	118.8	118.5	49.0	98.0	121.6	62.9	58.1
<b>2014:09</b>	118.5	119.2	49.1	98.6	114.3	60.3	56.1
<b>2014:10</b>	119.2	119.9	49.1	101.0	119.0	57.6	57.9
<b>2014:11</b>	119.9	120.5	51.4	101.7	128.0	63.1	57.6
<b>2014:12</b>	119.6	121.0	51.8	102.8	122.0	53.3	55.1
<b>2015:01</b>	119.3	121.2	53.0	98.5	127.6	66.6	53.5
<b>2015:02</b>	120.4	120.9	57.7	108.6	137.2	65.9	52.9
<b>2015:03</b>	119.9	121.5	57.7	100.4	138.8	64.1	51.5
<b>2015:04</b>	120.2	122.2	58.3	99.5	135.7	60.4	51.5
<b>2015:05</b>	120.5	122.8	58.5	98.1	139.0	60.3	52.8
<b>2015:06</b>	120.8	122.9	58.8	99.6	136.0	51.4	53.5
<b>2015:07</b>	120.5	122.8	59.9	99.8	141.0	53.6	52.7
<b>2015:08</b>	120.2	122.8	59.2	99.5	139.1	48.0	51.1
<b>2015:09</b>	118.8	122.6	58.3	94.9	126.6	48.0	50.2
<b>2015:10</b>	120.0	123.2	59.9	99.8	132.4	46.1	50.1
<b>2015:11</b>	120.2	123.7	60.4	100.4	134.3	50.0	48.6
<b>2015:12</b>	119.7	123.3	63.0	98.5	130.7	54.5	48.0
<b>2016:01</b>	119.4	123.0	64.6	100.5	128.7	57.2	48.2
<b>2016:02</b>	119.7	123.0	66.0	101.8	124.9	55.4	49.7
<b>2016:03</b>	120.7	123.0	64.3	104.7	128.9	55.7	51.7
<b>2016:04</b>	121.4	123.6	64.5	103.4	130.9	50.8	50.7
<b>2016:05</b>	122.4	123.4	67.2	106.3	148.2	49.2	51.0
<b>2016:06</b>	122.2	122.9	67.6	104.1	151.3	49.1	52.8
<b>2016:07</b>	122.4	123.5	68.5	102.9	156.3	50.8	52.3
<b>2016:08</b>	122.4	123.4	67.3	102.5	153.1	47.7	49.4
<b>2016:09</b>	122.6	123.7	67.8	106.7	143.4	51.4	51.7
<b>2016:10</b>	122.5	123.9	69.6	102.7	152.3	53.1	52.0
<b>2016:11</b>	122.1	124.1	71.1	102.0	148.8	53.3	53.5
<b>2016:12</b>	121.7	124.7	72.0	102.2	149.2	47.3	54.5
<b>2017:01</b>	122.4	125.4	71.3	100.3	152.5	54.2	56.0
<b>2017:02</b>	121.7	125.9	70.1	100.0	140.1	48.6	57.7
<b>2017:03</b>	122.8	126.4	72.9	101.1	143.4	59.2	57.2
<b>2017:04</b>	123.7	126.7	71.4	107.3	143.3	59.2	54.8
<b>2017:05</b>	123.7	127.1	73.4	100.6	149.2	45.0	54.9
<b>2017:06</b>	124.4	128.0	72.6	103.3	145.4	50.0	57.8
<b>2017:07</b>	124.5	128.3	72.4	104.5	139.5	47.0	56.3
<b>2017:08</b>	124.9	128.8	73.4	105.6	135.1	58.2	58.8
<b>2017:09</b>	125.0	128.9	74.5	100.8	140.4	57.5	60.8
<b>2017:10</b>	125.7	130.4	75.7	107.1	132.7	51.8	58.7

# Figure A7.1: Washington State Economic Indicators

## Year-over-Year Employment Growth

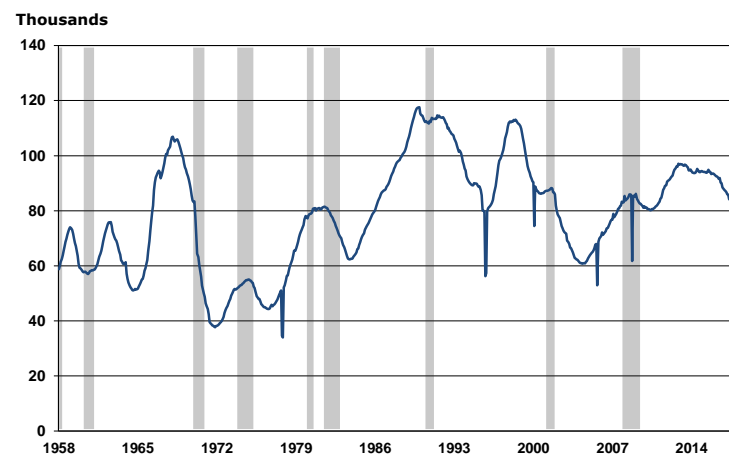
January 1980 to October 2017



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

## Washington Aircraft and Parts Employment

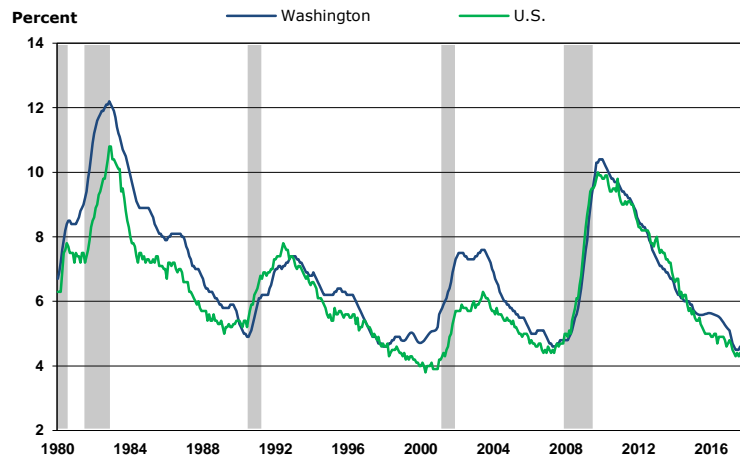
January 1958 to October 2017



\* Source: Bureau of Labor Statistics, ERFC

## Unemployment Rate, S.A.

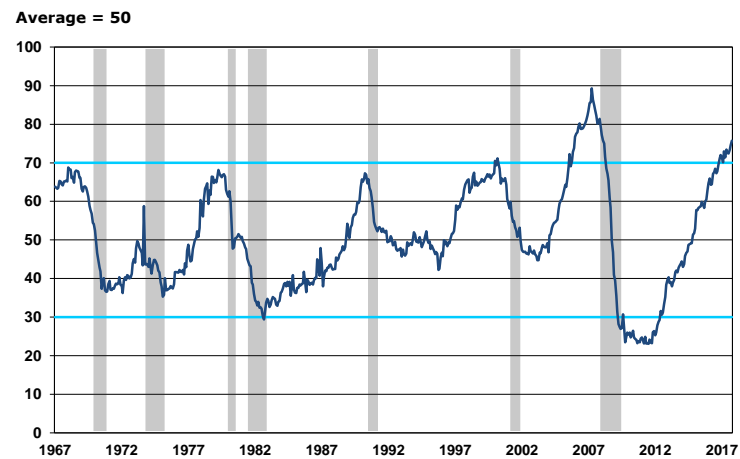
January 1980 to October 2017



\* Source: Bureau of Labor Statistics

## Washington Business Cycle Indicator

January 1968 to October 2017



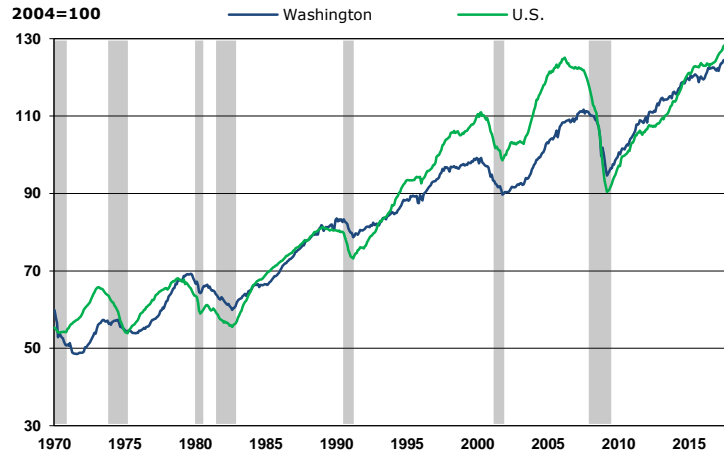
\* Source: ERFC

\* Shaded areas correspond with national recessions.  
Appendix

# Figure A7.2: Washington State Leading Indicators

## The Washington and U.S. Indexes of Leading Indicators

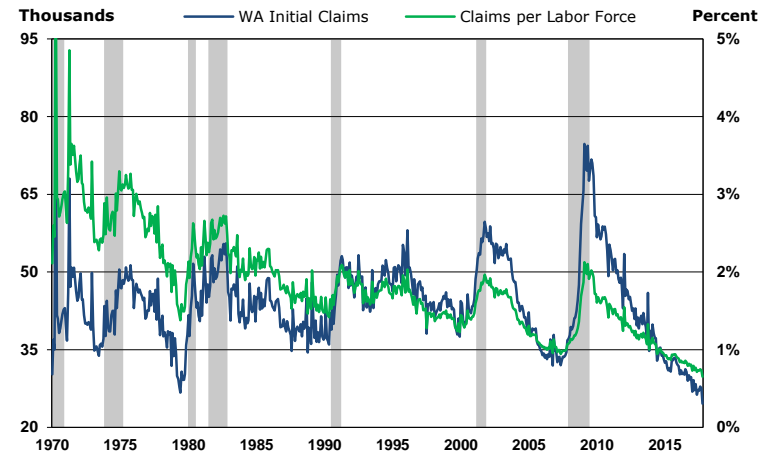
January 1970 to October 2017



\* The Conference Board, ERFC

## Washington Initial Claims for Unemployment Insurance

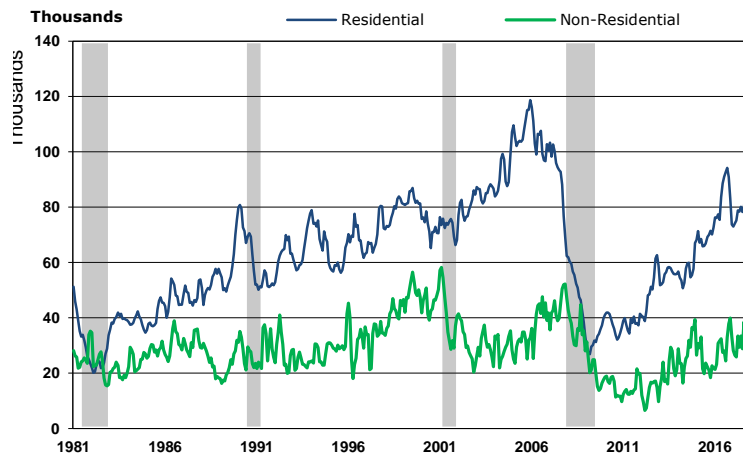
January 1970 to October 2017, S.A.



\* Source: WA State Employment Security, ERFC

## Square Footage of Construction Projects in WA State

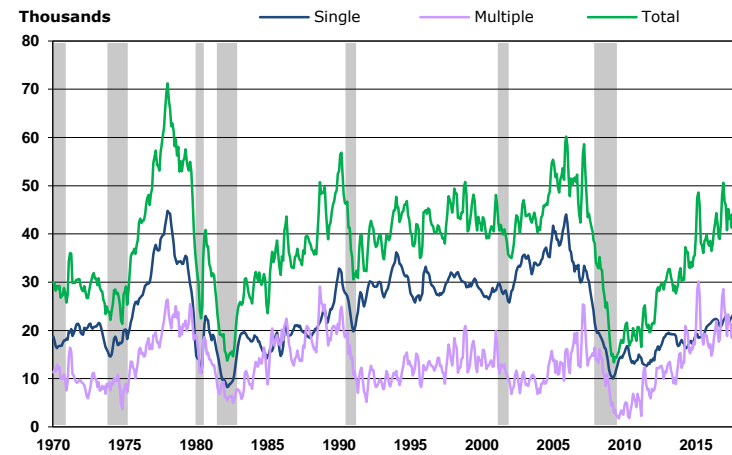
January 1981 to October 2017, 3mma, SAAR



\* Source: McGraw-Hill Construction, ERFC

## Housing Units Authorized in Washington State

January 1970 to October 2017, 3mma, SAAR



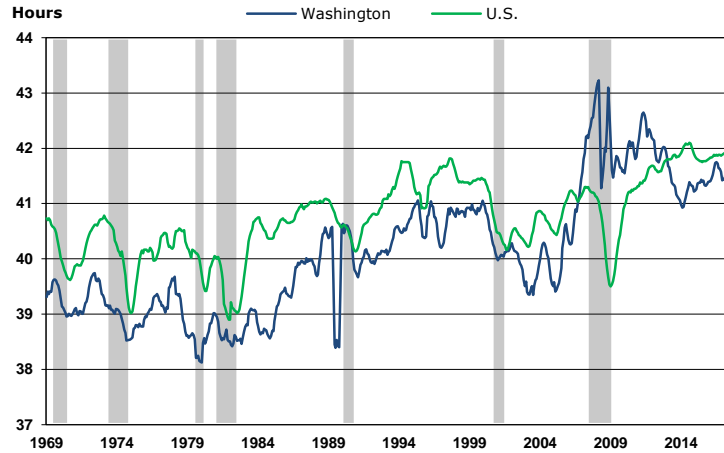
\* Source: Census Bureau, ERFC

\* Shaded areas correspond with national recessions.

# Figure A7.3: Other State Economic Indicators

## Average Weekly Hours in Manufacturing

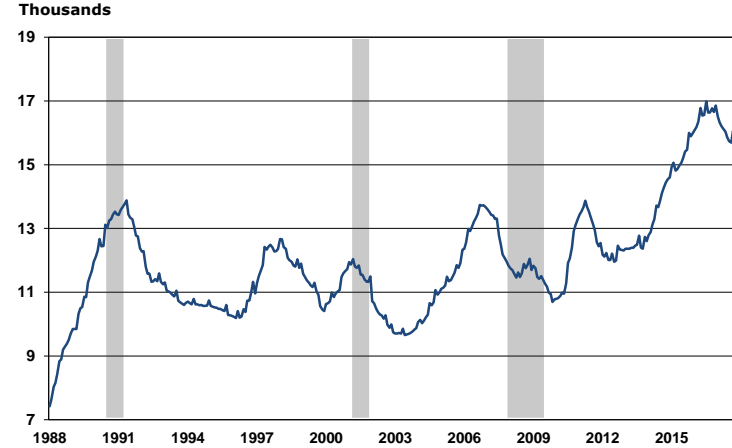
June 1969 to October 2017, 6-Mo. Moving Average, S.A.



\* Bureau of Labor Statistics, ERFC

## Washington Driver's License In-Migration

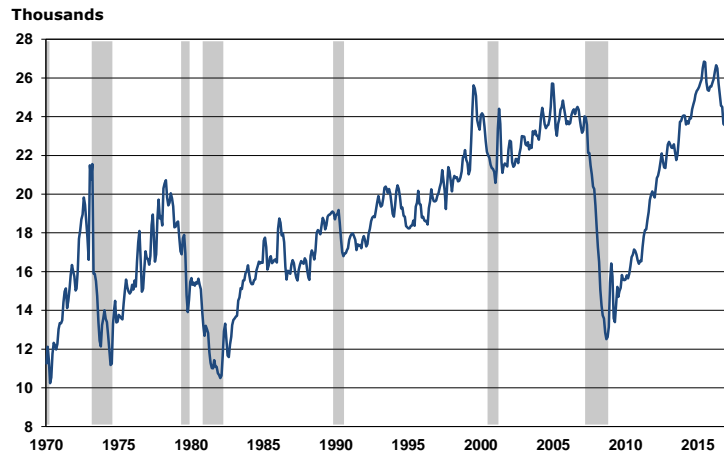
January 1988 to October 2017, 12-Month Moving Average



\* Source: WA State Department of Licensing, ERFC

## New Car and Truck Registrations in Washington

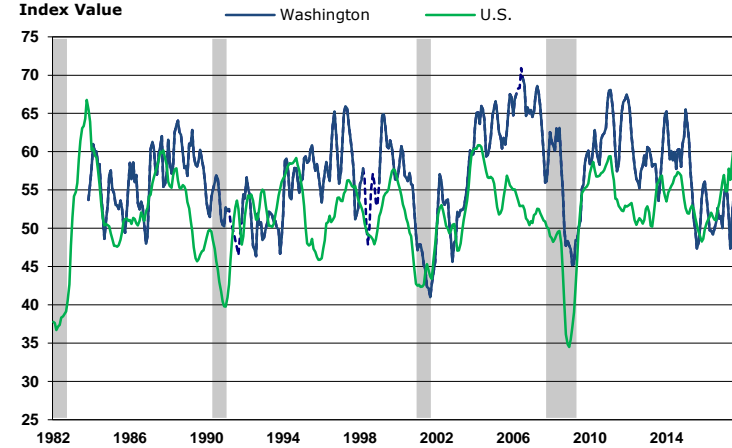
September 1970 to October 2017, 3-Month Moving Average, S.A.



\* Source: WA State Department of Licensing, ERFC

## Institute for Supply Management Index

March 1982 to October 2017, 3-Month Moving Average, S.A.



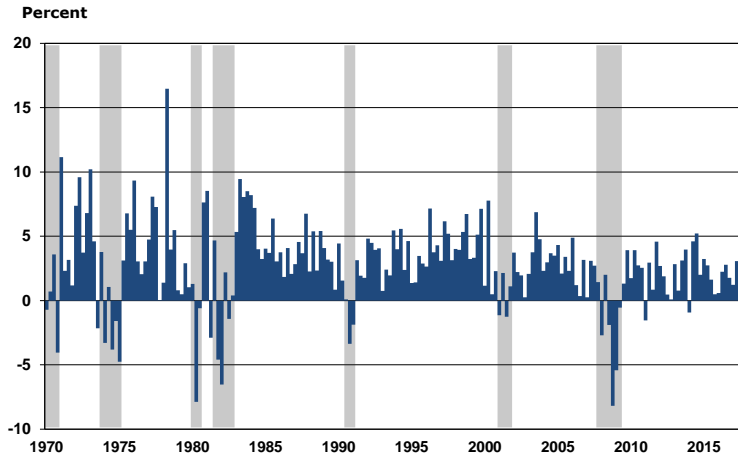
\* Source: Institute for Supply Management, ISM-WW, ERFC

\* Shaded areas correspond with national recessions.  
Appendix

# Figure A7.4: Other Economic Indicators

## Quarterly U.S. Real GDP Growth

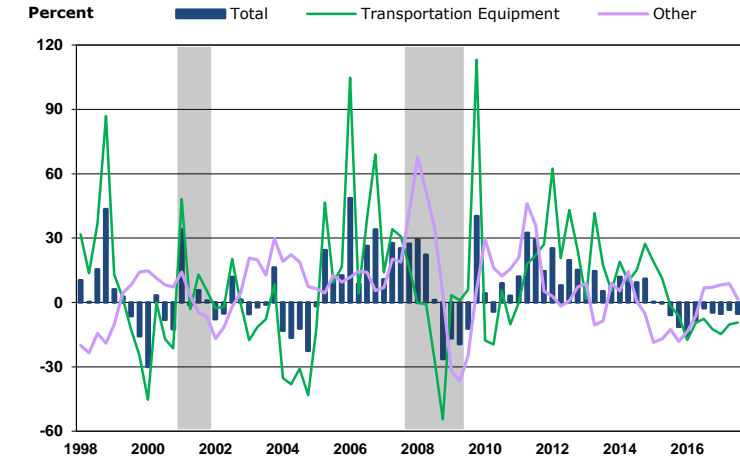
1970Q1 to 2017Q3, SAAR



\* Source: Bureau of Economic Analysis

## Washington State Export Composition

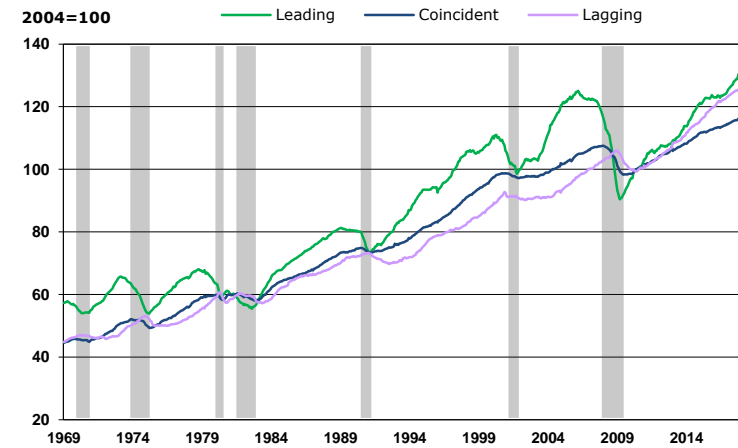
1998Q1 to 2017Q3, Year-over-year percent change



\* Source: WISER

## U.S. Economic Indicators

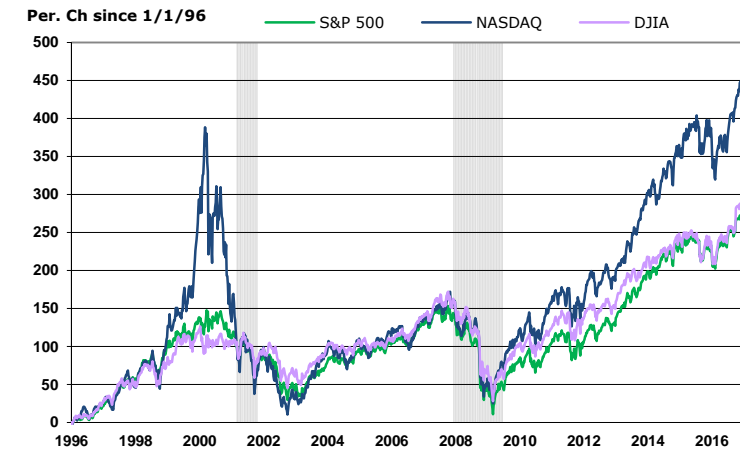
January 1969 to October 2017



\* Source: The Conference Board

## National Stock Indexes

January 1, 1996 to November 24, 2017



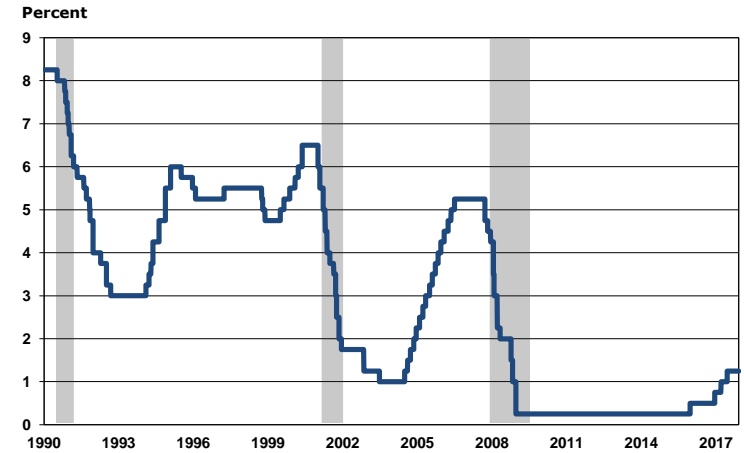
\* Source: ERFC

\* Shaded areas correspond with national recessions.  
Appendix



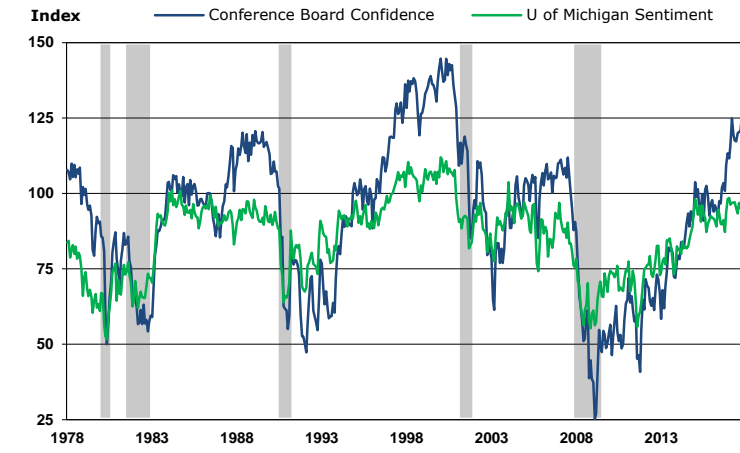
# Figure A7.4: Other Economic Indicators (continued...)

**Federal Funds Target Rate**  
January 1, 1990 to November 30, 2017



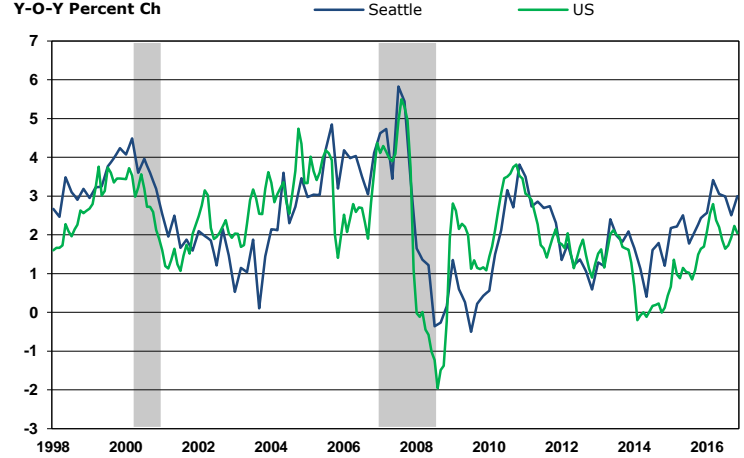
\* Federal Reserve

**Consumer Confidence**  
March 1978 to November 2017



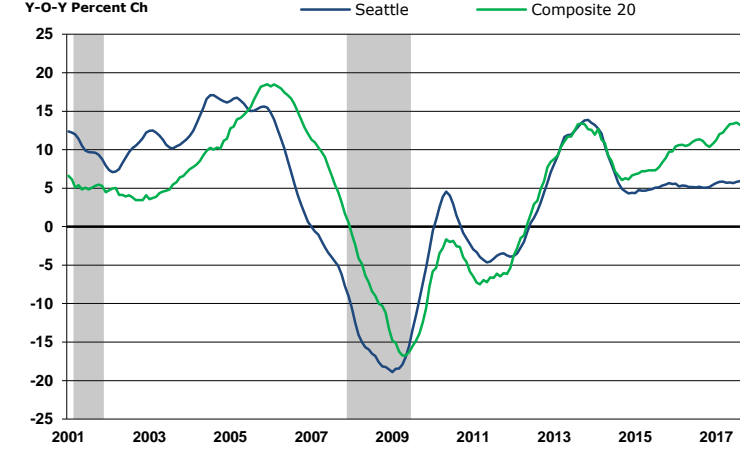
\* Source: The Conference Board, University of Michigan

**Seattle vs U.S. CPI (All Urban Consumers)**  
December 1998 to October 2017



\* Source: Bureau of Labor Statistics

**Case Shiller Home Price Index**  
January 2001 to September 2017, 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 2016, for example, ran from July 1, 2015 through June 30, 2016.

**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.