

# ECONOMIC OUTLOOK

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## QUARTERLY REPORT

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**NDSU** PUBLIC CHOICE  
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### Abstract

The Economic Outlook quarterly report uses the North Dakota Forecast Model developed by the NDSU Center for the Study of Public Choice and Private Enterprise to predict economic trends for the state of North Dakota and its three largest metropolitan statistical areas: Fargo, ND-MN; Bismarck, ND; and Grand Forks, ND-MN. The model uses past trends and empirical relationships in data to predict (forecast) future trends. These forecasts focus on key economic indicators such as wage growth, labor force participation, unemployment, and the housing price index. Like all forecast models, this method faces limitations and the specific values in the forecast should not be direct cause for decision-making. Rather, forecasting provides information about what is possible and can help establish expectations. The Economic Outlook report is released each quarter with updated data from the forecast model.

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## Introduction

The Center for the Study of Public Choice and Private Enterprise has developed a forecast model to showcase the economic outlook for the state of North Dakota and its three largest metropolitan statistical areas: Fargo, ND-MN; Bismarck, ND; and Grand Forks, ND-MN. This report details the results of the model for the first quarter of 2022 (2022q1).

The forecast focuses on key economic indicators such as wage growth, labor force participation, unemployment, and the housing price index. The data used to create these forecasts come primarily from the St. Louis Federal Reserve. Each figure illustrates the model's projections with each panel showing both the actual forecast and the 90% confidence interval around the forecasted number. A 90% confidence interval shows the upper and lower limits of the projections with 90% certainty. This means that, statistically, we can be 90% confident that the value in the given quarter will fall between the upper and lower CI limits. Interconnected variables are incorporated into the model to demonstrate how state-level conditions impact predictions for metropolitan areas and how commodity price projections impact economic conditions. All projections are based on the trends of the past few quarters. As explained below, a forecast model does not and cannot account for unforeseen factors and changes that may affect economic performance. For more information about the North Dakota Forecast Model, see the accompanying technical appendix.

## Limitations

Forecasting has long been a mainstay in the field of economics. It conveys much needed information about the world and trends in economic variables that can be useful for public and private decision-makers. However, it is important to acknowledge the limitations of any forecast. There are many reasons a forecast model may not produce correct predictions. The model uses historical data and past trends to predict (forecast) future trends. As a result, unexpected changes in economic conditions, public policy, or other factors may disrupt the accuracy of the forecasts. Similarly, the model cannot incorporate all of the complexity and uncertainty surrounding an economic system.

## Key Points

- The North Dakota outlook shows signs of economic growth in 2022. This includes growth for wages and salaries in the state, as well as a growing labor force, decreasing unemployment rates, strong total tax collections, and rising gross state product.
- The economic outlook for North Dakota's metro areas is positive for Fargo, ND-MN and Bismarck, ND; but neutral for Grand Forks, ND-MN.
- The national economy shows signs of slowing down.
- This report represents forecasts based on the most recently available data when the model was run on February 25, 2022. These forecasts serve as a projection for how the economy will respond to current economic conditions based on historical data and trends.

# Quarterly Outlooks

Figure 1

## North Dakota Quarterly Outlook



## North Dakota Outlook

The overall economic outlook for the state has improved from the previous forecast in December 2021. The forecast is showing a reduced risk for decreases in the labor force despite small labor force declines in recent quarters.

Total wages and salaries are forecast to continue growing at about 2 percent per quarter. The labor force declined slightly in the fourth quarter of 2021 (2021q4), but this trend is forecast to reverse and turn to growth in 2022. The state unemployment rate is forecast to hold steady near its current level just above 3 percent. North Dakota's gross state product (GSP) is forecast to decline slightly and then grow as we move into 2022. Total tax collections are predicted to remain stable though 2021 with slight growth in 2022. The confidence intervals surrounding labor force participation and tax collections remain large, demonstrating continued uncertainty in the economic recovery.

## Alternative Scenarios for North Dakota

Because the North Dakota economy is heavily tied to petroleum extraction, we produced forecasts for the state under several different scenarios for the WTI price of crude oil to compare against the baseline path for crude oil as set by the forecast model. Scenarios for the path of the WTI crude price were: the upper bound of the 90% confidence interval, a 10% quarterly growth rate, a 10% quarterly decay, and the lower bound of the 90% confidence interval. With current trends in crude prices, the upper bound of the 90% confidence interval may be the most likely scenario.

Figure 2 replicates the panels in Figure 1 with the addition of a graph for the different WTI price scenarios. Each line represents the path of forecasted variables under the different price scenarios.

## Alternative Outlooks

These graphs demonstrate that North Dakota's current economic path is not highly dependent on crude oil price fluctuations. The greatest impact of oil price trends is on total tax collections and gross state product. Each of these have continued forecast growth except under worse-case crude price scenarios. Other forecast indicators are less influenced by potential crude price trends. The red lines in Figure 2 represent the worst-case scenario with the WTI price falling to the 90% lower bound of its projected confidence interval (a near zero price). The green line represents the 90% upper bound of its projected confidence interval. The maroon line represents a 10% rate of decay for the WTI price, and the dark blue line represents a 10% growth rate.

Figure 2

### North Dakota Quarterly Outlook - Alternate Scenarios

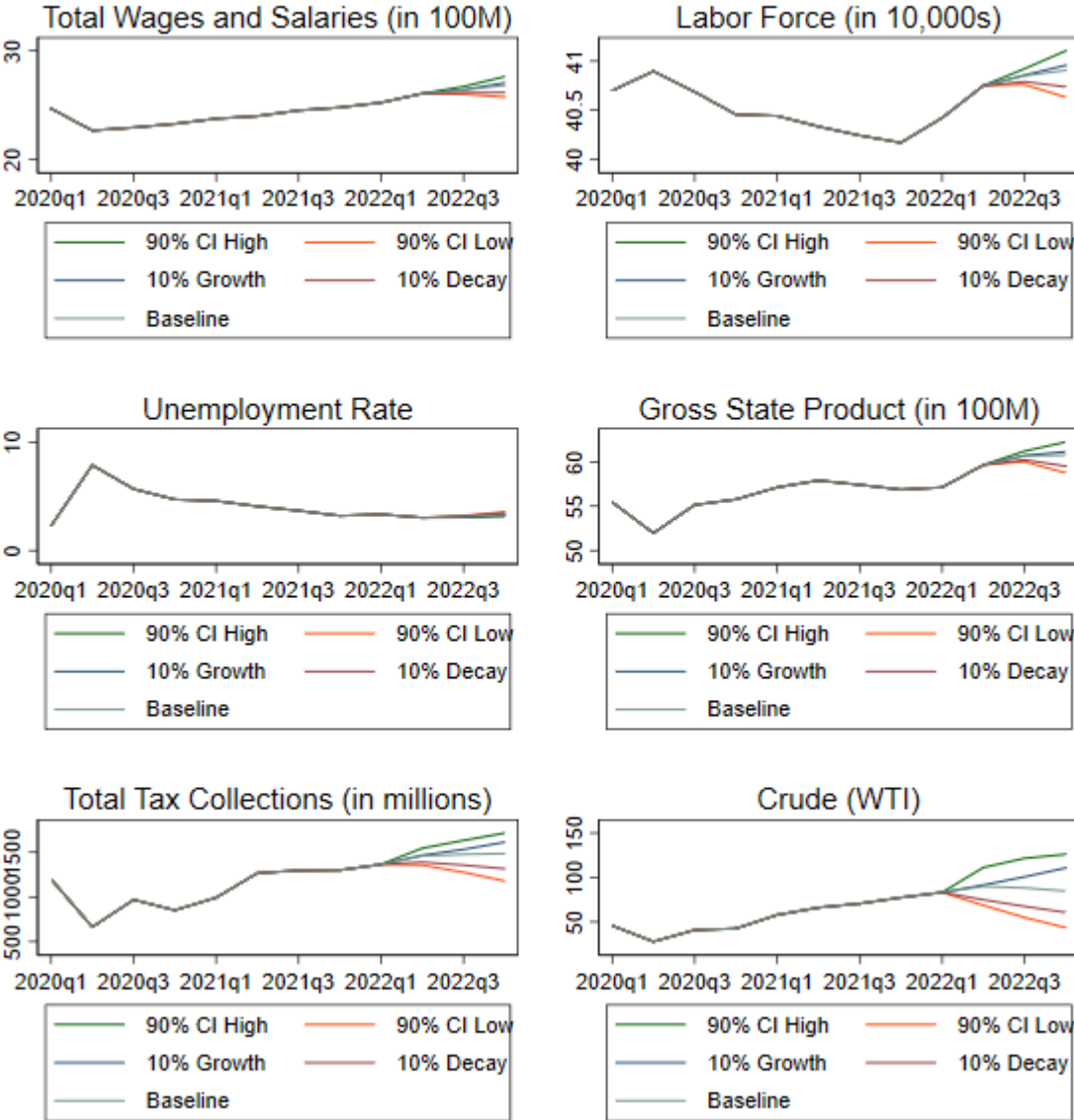
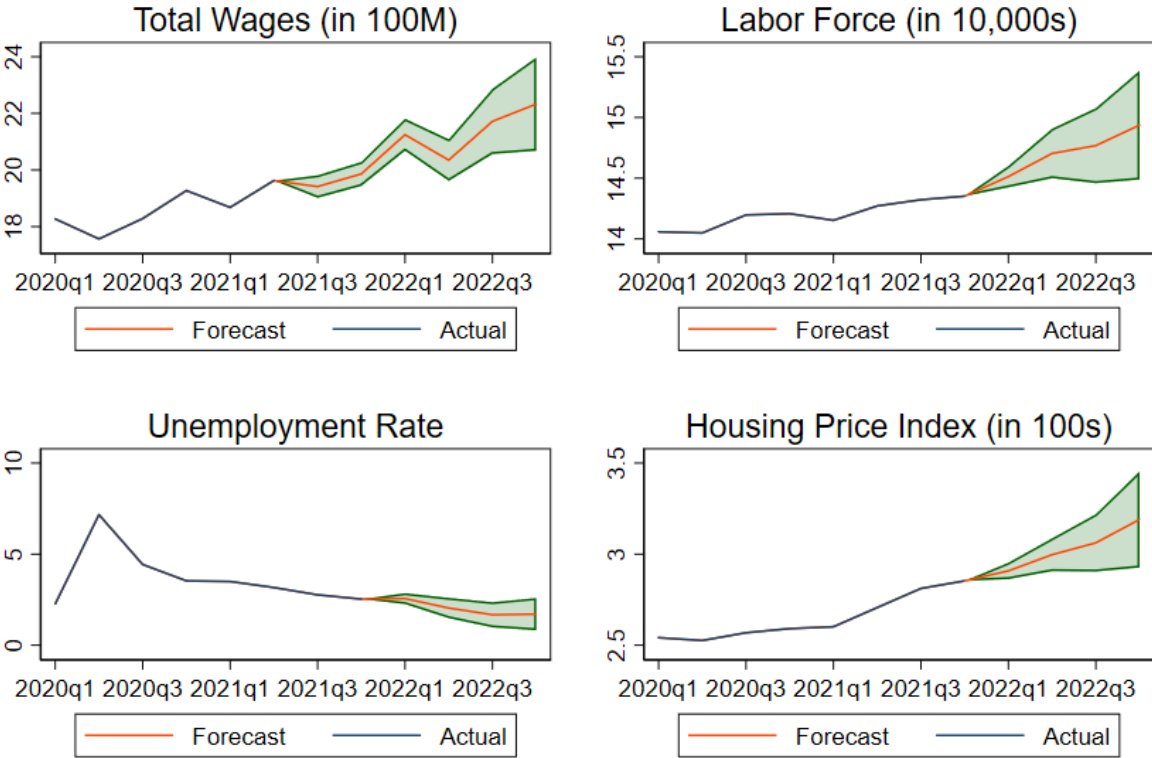


Figure 3

### Fargo Quarterly Outlook

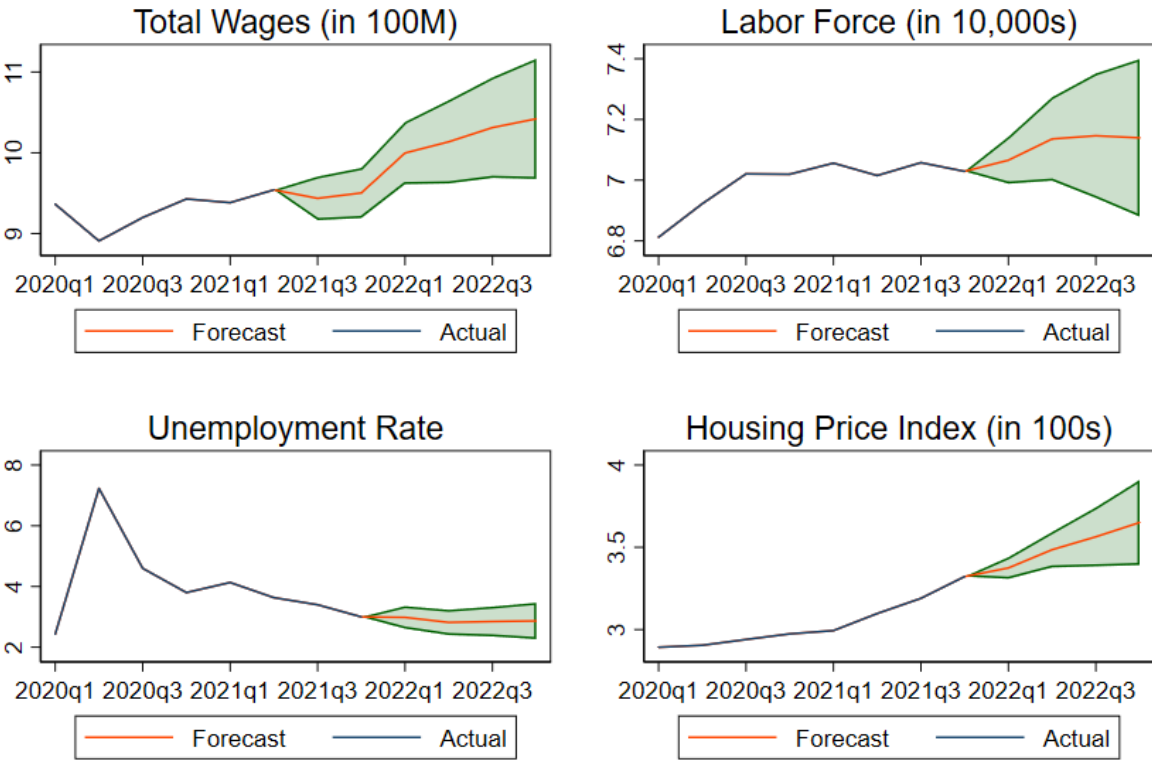


### Fargo, ND-MN Outlook

Figure 3 shows a positive economic outlook for Fargo, ND-MN. Total wages are forecast to follow a general growth trend through 2022. The Fargo labor force (the total number of people employed plus those seeking employment) is forecast to grow at around 1 percent per quarter through 2022. While the labor force is growing, the unemployment rate is expected to fall through 2022. The unemployment rate for 2021q4 was 2.53 percent. The Fargo unemployment rate may soon be back to pre-pandemic levels. The Fargo housing price index has experienced growth in 2021 compared to a flat trend in 2020. This growth in housing prices is forecast to continue in 2022.

Figure 4

### Bismarck Quarterly Outlook



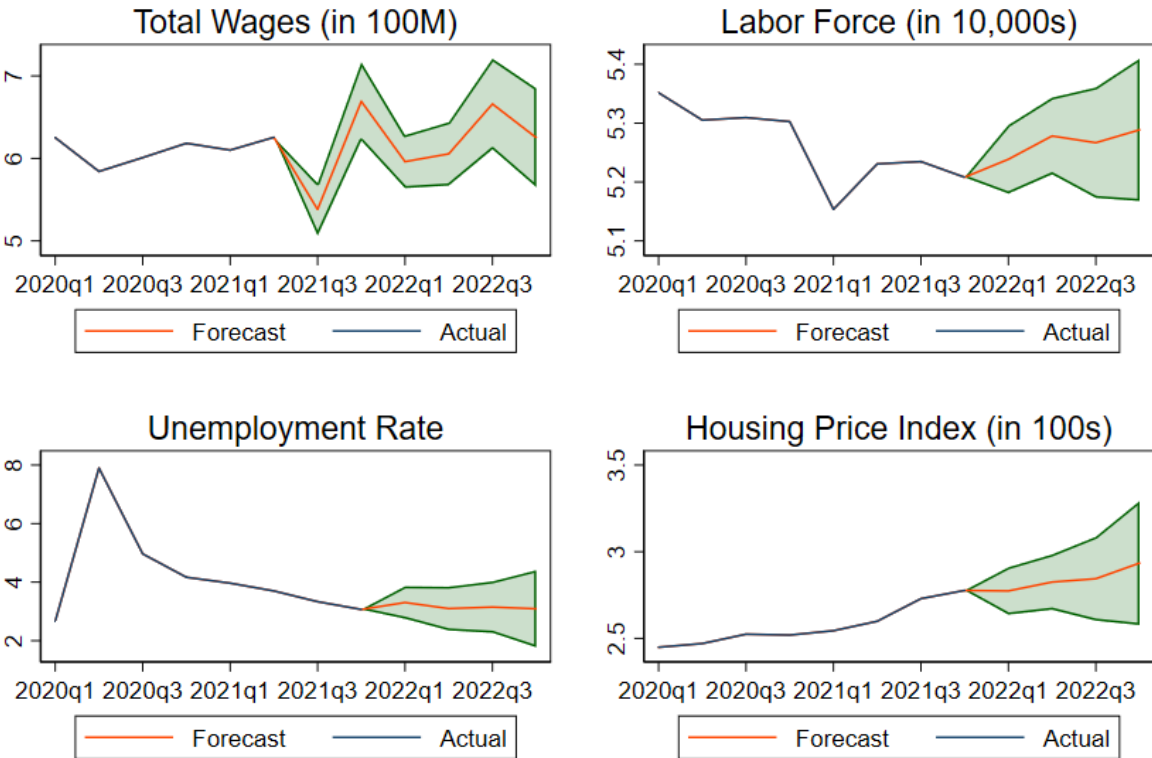
### Bismarck, ND Outlook

The Bismarck, ND, metro area continues to have a positive economic outlook. Total wages are expected to grow throughout 2022. The size of the labor force is forecast to experience mild growth in 2022 after holding steady in 2021. The unemployment rate was 3 percent in 2021q4, which is down from 3.4 percent and 3.63 percent in 2021q3 and 2021q2, respectively. The unemployment rate is forecast to continue this decreasing trend. The Bismarck housing price index continues to grow at a rate near 3 percent per quarter. This growth is expected to continue over the coming year but may be at a lower rate.



Figure 5

### Grand Forks Quarterly Outlook

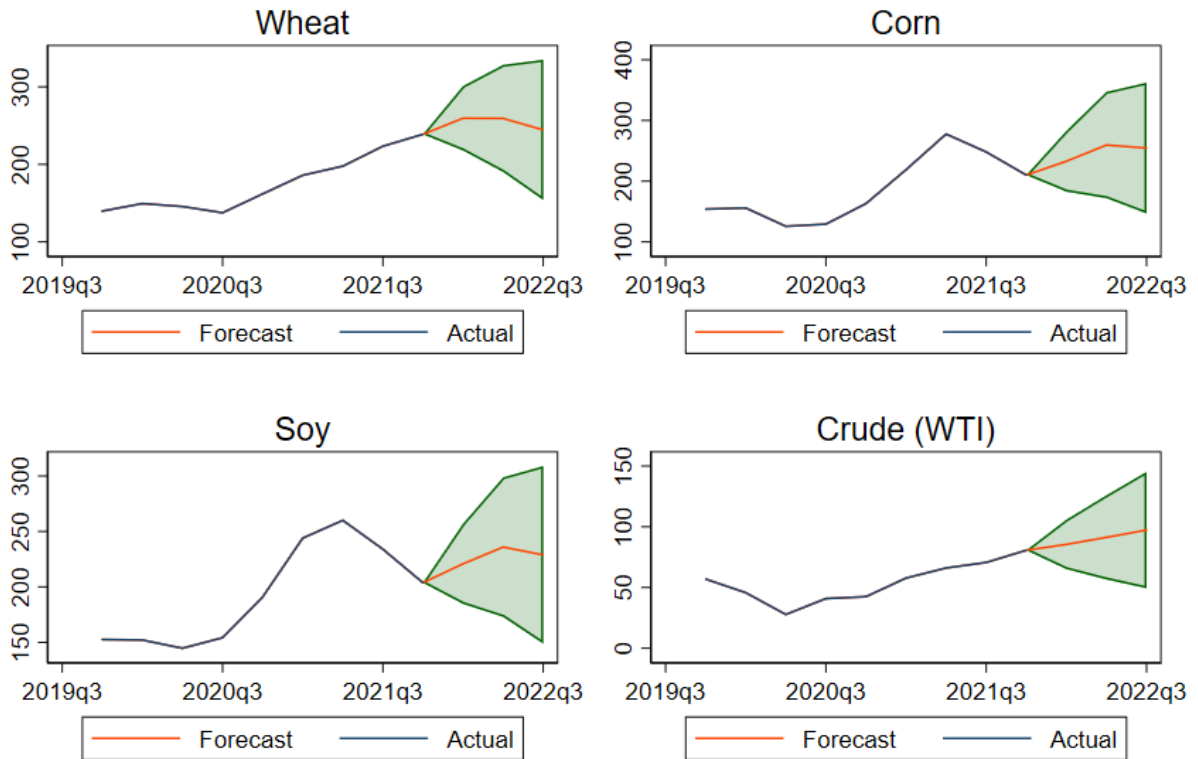


### Grand Forks, ND-MN Outlook

The Grand Forks, ND-MN, metro area has a relatively neutral outlook. Total wages are expected to hold steady through 2022. The Grand Forks, ND-MN, labor force declined during 2021q4, but this trend is expected to reverse throughout 2022. The unemployment rate in 2021q4 was 3 percent. Unemployment is expected to remain stable at that level for 2022. The Grand Forks housing price index experienced strong growth in recent quarters. This growth trend is expected to continue throughout 2022.

Figure 6

### Commodity Quarterly Outlook

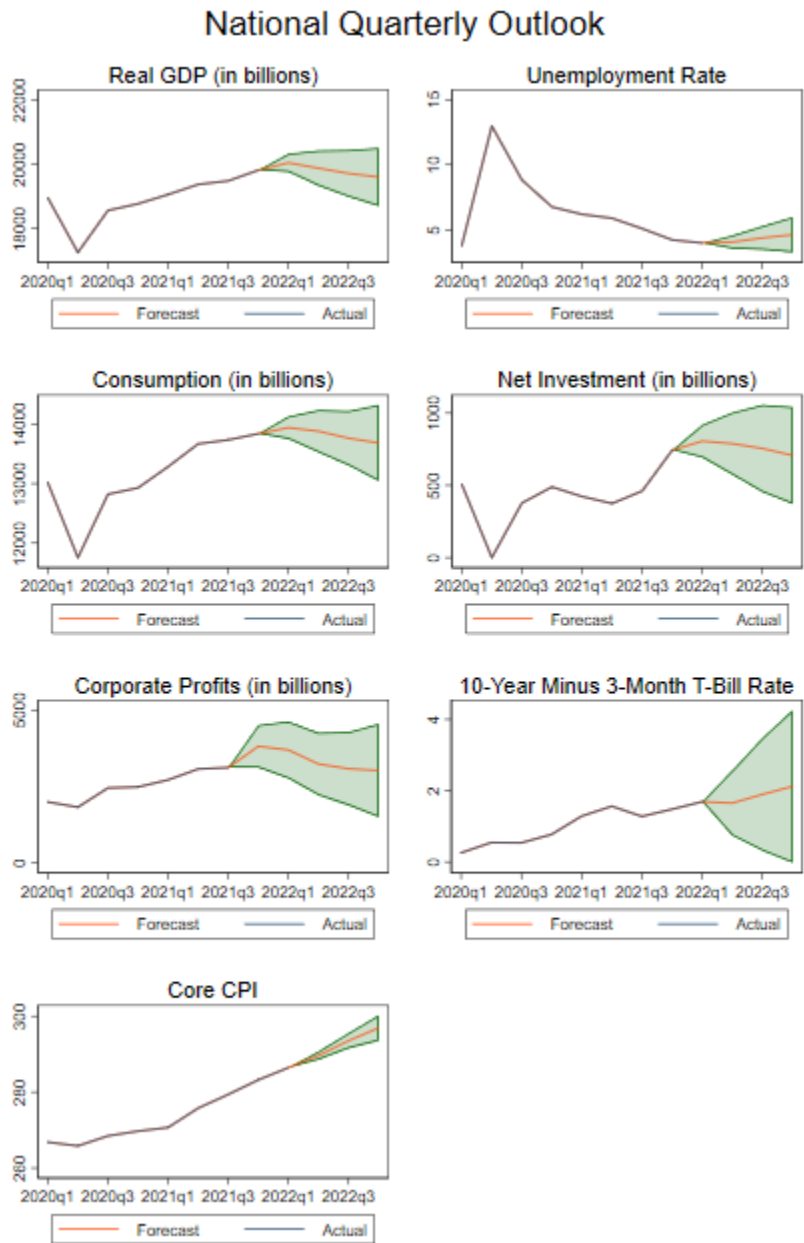


### Commodity Outlook

Comparing last quarter’s commodity outlook to this quarter reveals wheat and corn prices are plateauing as predicted. Likewise, the previous forecast predicted an increase in the soy price, which was realized in the first quarter of 2021. Soy prices are now expected to stabilize. The interesting market for the moment is crude. The data used in this analysis predates the conflict in Ukraine. Because of this, current trends in the WTI crude price are not reflected in the model. Because crude prices are being driven by geopolitical uncertainty, their prediction is outside of the scope of the model. We can expect oil prices to remain elevated as the ongoing conflict in Ukraine limits the flow of crude and creates uncertainty.

The model uses a producer price index for wheat, corn, and soy prices. A producer price index measures the average changes in prices received by domestic producers for their output. The price of crude is the average daily price of West Texas Intermediate (WTI) futures contracts. The confidence intervals surrounding all commodity price trends are large, reflecting a high level of uncertainty in pricing trends.

Figure 7



### National Outlook

The national economic outlook is lackluster. The first chart shows Real GDP, the inflation-adjusted value of the goods and services produced by all labor and assets in the United States. Real GDP increased by 1.7 percent in the fourth quarter of 2021 (2021q4). A slightly lower rate of growth is forecast for 2022q1 followed by a drop in GDP for the remaining quarters of 2022. The unemployment rate is currently 4 percent and forecast to grow throughout 2022. Consumption grew by 0.76 percent in 2021q4. This growth is expected to continue in 2022q1 but then fall over the remainder of 2022.

Net investment (the total amount of investment in capital by the business sector used to expand the capital stock) grew sharply in the fourth quarter of 2021 (2021q4). This growth rate is forecast to slow in 2022q1 before declining over the remainder of 2022. Corporate profits are forecast to grow for 2021q4 and then fall throughout 2022. These trends are forecast to be accompanied by continued historic increases in the CPI (inflation).

On a positive note, the 10-year to 3-month treasury bill spread is forecast to remain positive. This spread is a commonly used leading indicator for the national economy. The spread historically goes negative (higher short-term bond yields compared to long-term) just before the economy transitions to recession.

## Summary

The forecasts in this report use historical data to predict future trends. The model used to generate the forecasts was run using data available on February 25, 2022.

### **North Dakota**

Economic forecasts for North Dakota continue to show potential for economic growth. Forecasts show increasing wages and salaries, a low unemployment rate, and an expected increase in the labor force. The outlook for tax collections remains strong, especially with recent trends in oil markets.

### **Fargo, ND-MN**

The Fargo, ND-MN, metro area is showing signs of economic growth. Wages, labor force, and housing prices are forecast to follow a growth trend, while the unemployment rate is forecast to decline.

### **Bismarck, ND**

The Bismarck, ND, metro area is showing signs of economic growth. Wages, labor force, and housing prices are forecast to follow a growth trend. The unemployment rate looks to hold steady.

### **Grand Forks, ND-MN**

The Grand Forks, ND-MN, metro area has a neutral outlook with wages and unemployment forecast to remain the same. Labor force and housing prices are forecast to follow a growth trend.

### **National**

The national economy continues to show signs of slowing down. GDP is forecast to grow early in 2022 before falling. Growth in consumption, net investment, and corporate profits are expected to plateau along with further trends of increased price levels.