ECONOMIC OUTLOOK

QUARTERLY REPORT

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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. In 2022, outlooks were added for the Minneapolis-St. Paul, MN-WI metropolitan area and the state of Minnesota. This report details the results of the model for the third quarter of 2022 (2022q3).

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

o The North Dakota outlook continues to show signs of economic growth. The model forecasts growth for wages and salaries, a growing labor force, declining unemployment, strong total tax collections, and an increase in gross state product.

o The economic outlooks for Fargo, Grand Forks, and Minneapolis are positive, while the outlook for Bismarck is neutral.

o The Minnesota economic outlook remains mixed with some signs of declining growth. The labor force is expected to increase amidst declines in wages and salaries and gross state product.

o The national economy has shrunk in the first two quarters of 2022. This trend is forecast to continue with additional signs pointing to a recession.

o This report represents forecasts based on the most recently available data when the model was run on August 11, 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
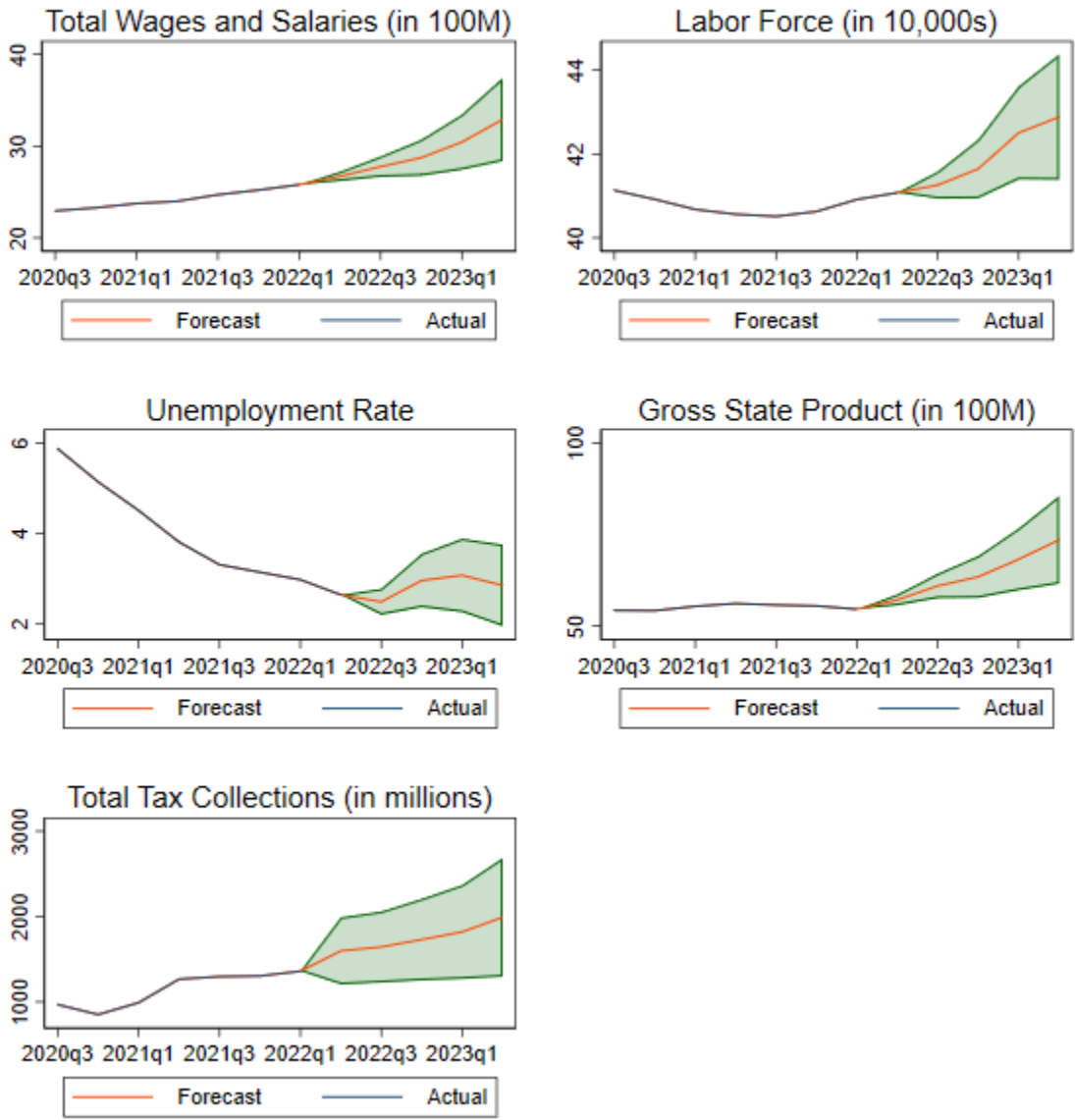
North Dakota Outlook

North Dakota's economic outlook continues to be positive, despite a national outlook that is turning toward a recession. Total wages and salaries are forecast to continue growing in the near term. The labor force has increased, and this trend is expected to continue over the next year. The state unemployment rate has continued to fall and was just over 2.5 percent in the second quarter. Expect the unemployment rate to hold steady in the near term. North Dakota's gross state product (GSP) has now fallen in each in of the previous three quarters, with a year-over-year loss of 1.44 percent. While the model is predicting a return to GSP growth in the upcoming quarters, the previous forecast for growth in 2022q1 did not transpire. In fact, the decrease in GSP accelerated. This is cause for concern despite the strong predictions of the model. Along with strong wages and salaries and an increase in GSP, the forecast is projecting strong tax collections for 2022.

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 mild dependence by North Dakota's economy on crude oil 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. The greatest impact of oil price trends is on total tax collections. Tax collections are projected to grow except under the worst-case scenario, where tax collections remain flat. Wages and salaries, labor force, and gross state product show growth under all scenarios.
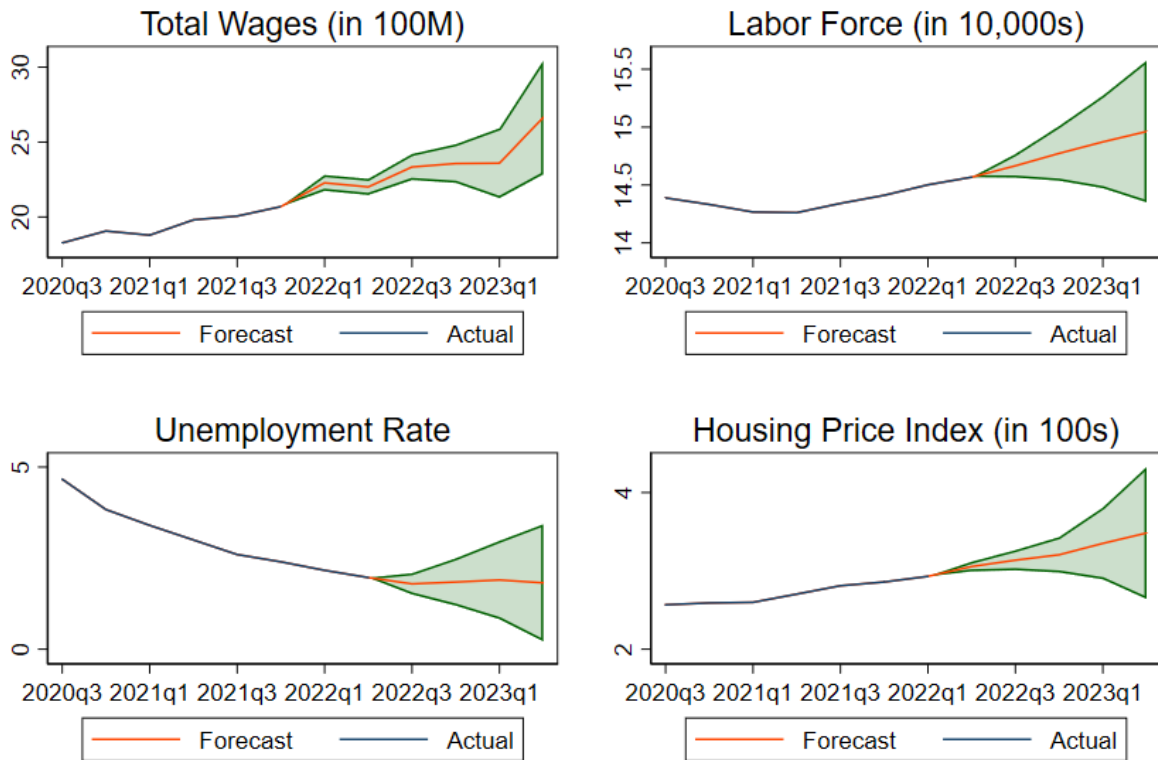
Figure 2

North Dakota Quarterly Outlook - Alternate Scenarios

Figure 3

Fargo Quarterly Outlook

Fargo, ND-MN Outlook

Figure 3 shows a continued positive economic outlook for Fargo, ND-MN. Total wages grew by more than 3 percent in the final quarter of 2021 (2021q4). This general growth trend is projected to continue through 2022 into 2023. The Fargo labor force (the total number of people employed plus those seeking employment) is forecast to continue its steady growth trend. The unemployment rate fell below 2 percent in the second quarter of 2022 (2022q2) and is expected to remain steady through 2022 into 2023. The Fargo housing price index is forecast to continue its trend of growth.

Figure 4

Bismarck Quarterly Outlook
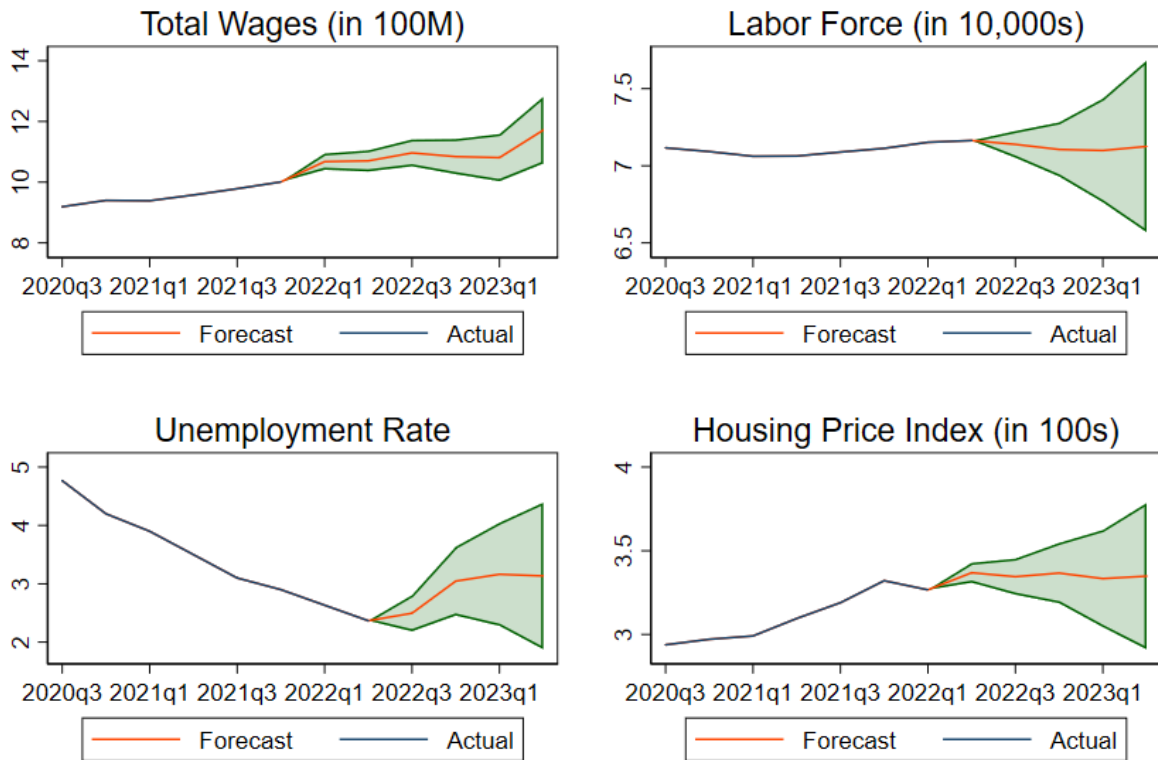
Bismarck, ND Outlook

The Bismarck, ND, metro area has a neutral economic outlook. Total wages are expected to grow in the first quarter of 2022 but then remain flat for the rest of the year. Labor force growth appears to have peaked in the second quarter of 2022 (2022q2) with a slight decline predicted through the rest of 2022. Accompanying a shrinking labor force is a forecast increase in the unemployment rate. The unemployment rate was 2.37 percent in 2022q2, which is down from 2.63 percent in 2022q1. The forecast increases in the unemployment rate are small. The Bismarck housing price index fell by more than 1.5 percent in the second quarter of 2022 (2022q2), reversing what had been a growth trend. The housing price index is expected to hold constant over the coming year.

Figure 5

## Grand Forks Quarterly Outlook
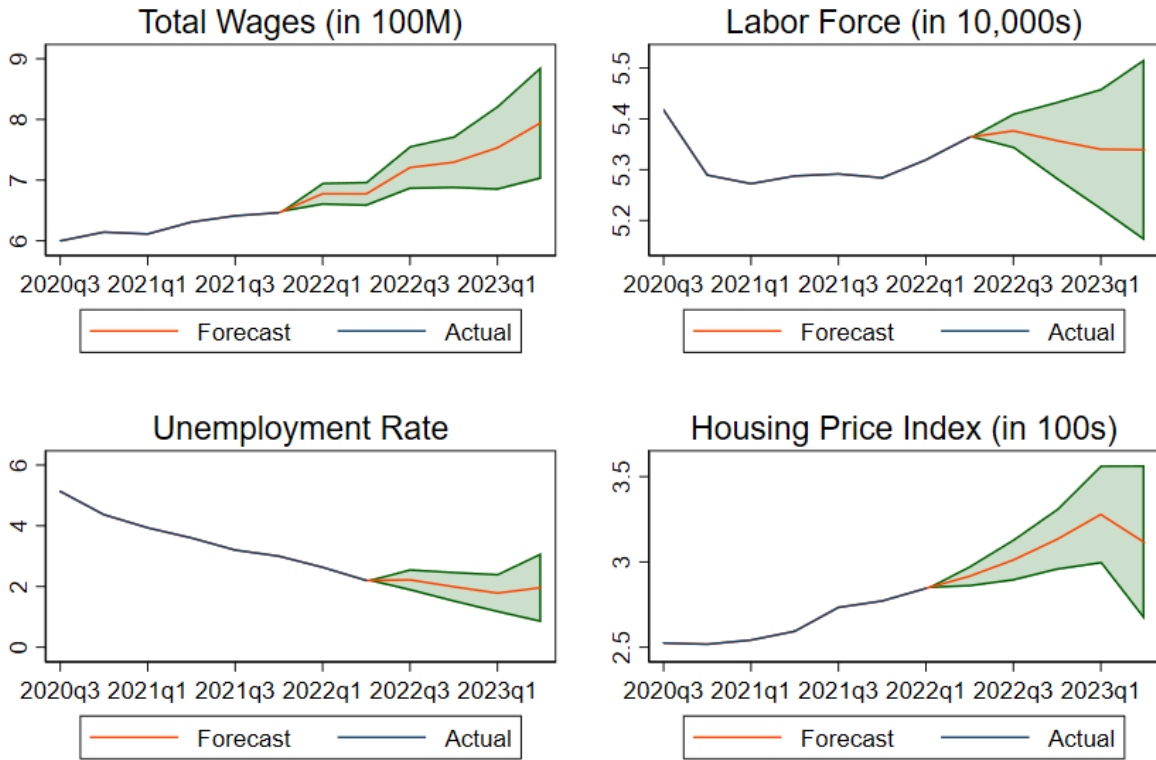
Grand Forks, ND-MN Outlook

The Grand Forks, ND-MN, metro area has a positive economic outlook. Total wages have been growing, and that trend is expected to continue through 2022. The Grand Forks, ND-MN, labor force grew by almost 1 percent in the second quarter of 2022 (2022q2) as predicted. However, the labor force is expected to hold steady at the current level and may shrink slightly heading into 2023. The unemployment rate in 2022q2 was 2.2 percent, down from 2.63 percent in the previous quarter. The unemployment rate is expected to hold steady through 2022. The Grand Forks housing price index experienced strong growth in recent quarters, including growth of 2.66 percent in the first quarter of 2022 (2022q1). This growth is expected to continue through the remainder of 2022.

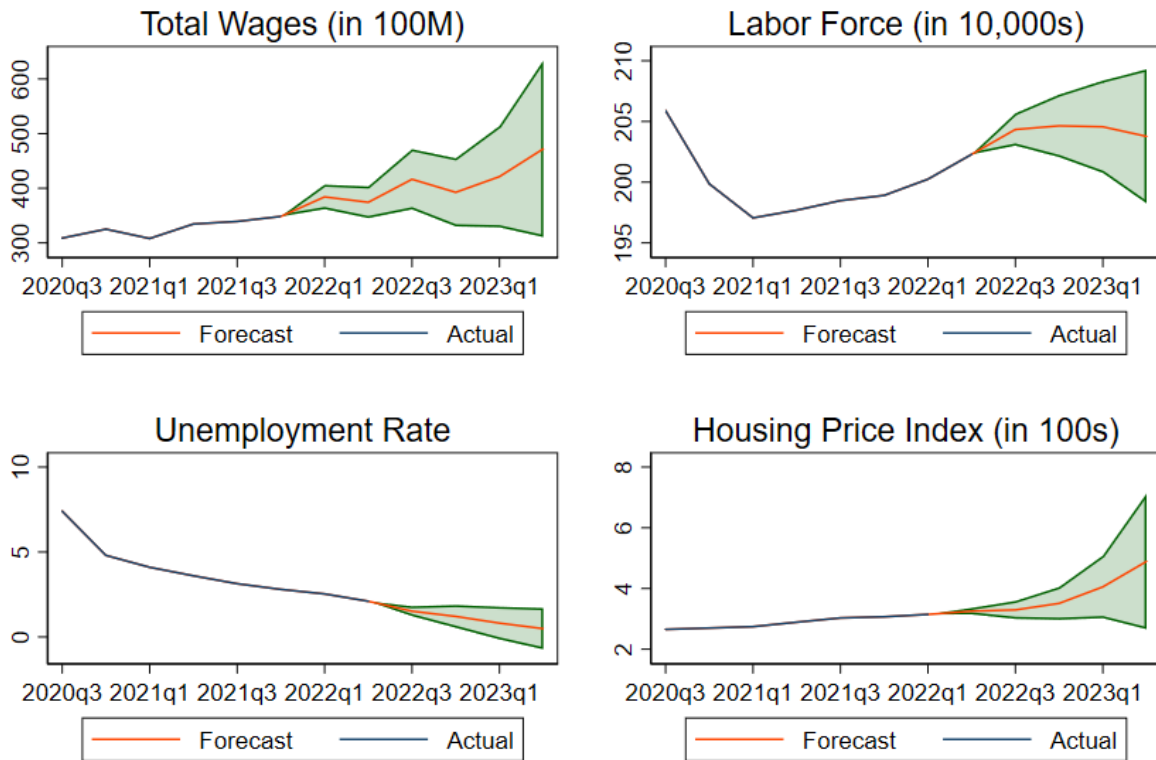*Figure 6*

Minnesota Quarterly Outlook
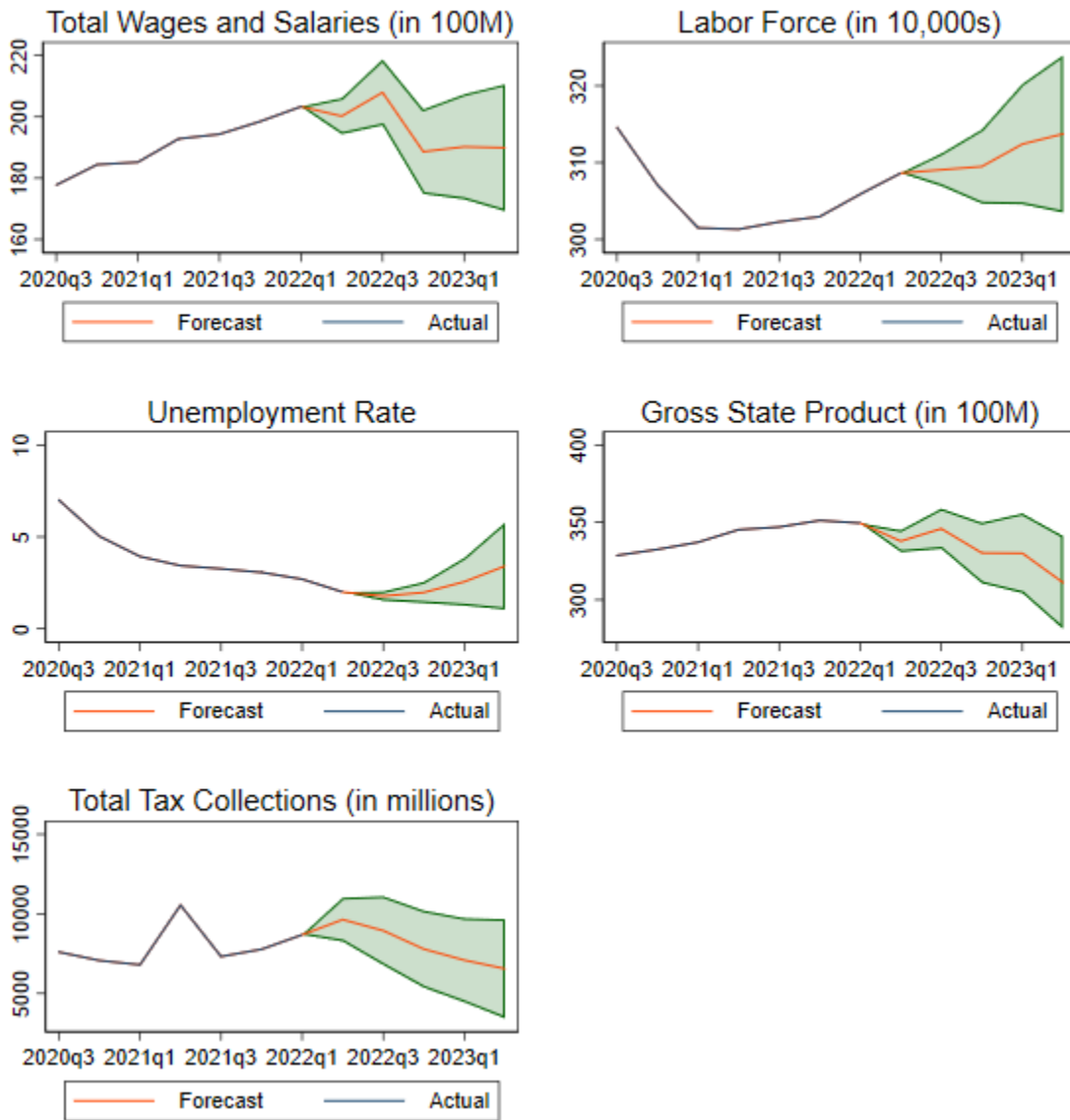
Minnesota Outlook

The economic outlook for Minnesota remains mixed. Positive trends for the labor force are coupled with lackluster outlooks for gross state product and total wages and salaries. Total wages and salaries grew by nearly 2.5 percent in 2022q1. However, this trend is expected to reverse course as we move into 2023. The labor force grew by almost 1 percent in 2022q2, continuing a recent growing trend. This growth rate is expected to flatten in coming quarters. The state unemployment rate fell to 2 percent in 2022q2 from its previous value of 2.7. This is a decrease of 26 percent. The unemployment rate is expected to rise as we move into 2023. Minnesota's gross state product (GSP) fell by half a percent in the first quarter of (2022q1). The decline in GSP is forecast to continue through the beginning of 2023. As GSP is forecast to decline, so are total tax collections. Total tax collection grew by 11 percent in 2022q1 and are forecast to grow again in 2022q2 before reversing trend.

Figure 7

Minneapolis Quarterly Outlook

Total Wages (in 100M)

Legend: Forecast — Actual

Labor Force (in 10,000s)

Legend: Forecast — Actual

Unemployment Rate

Legend: Forecast — Actual

Housing Price Index (in 100s)


Legend: Forecast — Actual

Minneapolis, MN Outlook

While the Minnesota outlook is mixed, the outlook for Minneapolis remains promising. Total wages are forecast to follow a general growth trend through 2022 into 2023. The Minneapolis labor force grew by 1 percent in 2022q2. Additional labor force growth is expected in 2022q3 but will likely taper off in following quarters. The unemployment rate fell again in 2022q2 to just over 2 percent and may continue declining in the third quarter. The Minneapolis housing price index rose 2.5 percent in 2022q1. Look for the housing price index to continue growing through 2022 into 2023.

Figure 8

## Commodity Quarterly Outlook
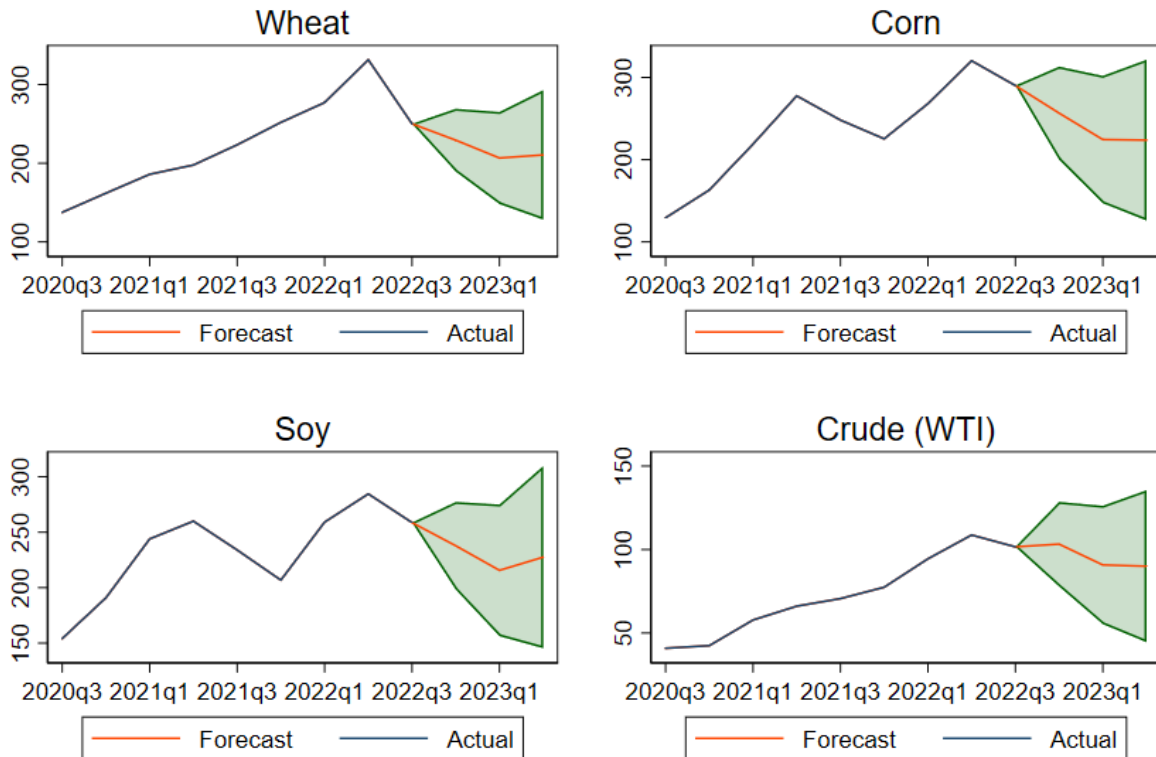
Commodity Outlook

The commodity outlook has changed significantly. Wheat, corn, soy, and crude prices seem to have peaked in the second quarter of 2022. Wheat, corn, and soy are predicted to continue the downward price trend that started in the third quarter (2022q3), while crude prices look to come down slightly in future quarters. While high commodity prices contribute to North Dakota's income and GSP, they have also contributed to record inflation.

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 9

National Quarterly Outlook
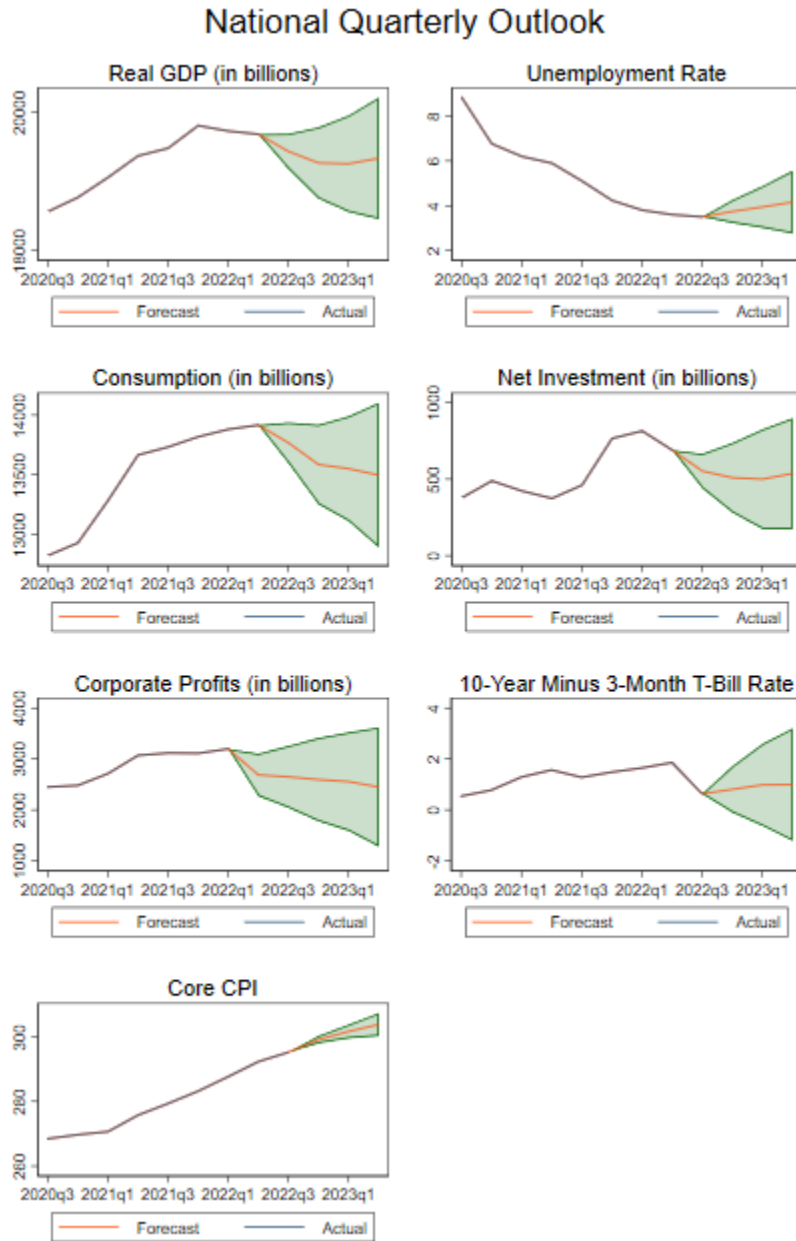
National Outlook

The national economic outlook is bleak as inflation and recession fears continue to loom. 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 decreased by 0.23 percent in the second quarter of 2022 (2022q2) after falling 0.4 percent in 2022q1. The model is predicting further declines in GDP for the next three quarters. The unemployment rate fell to 3.5 percent in 2022q3. The unemployment rate is forecast to grow throughout 2022 into 2023. Consumption grew by 0.26 percent in 2022q2 and is forecast to decline throughout 2022 into 2023.

Net investment (the total amount of investment in capital by the business sector used to expand the capital stock) fell by 15 percent in 2022q2. This trend is forecast to continue over the remainder of 2022. Corporate profits grew by 2.8 percent in 2022q1 but are forecast to decline significantly in 2022q2 and then fall throughout 2022 and 2023. While falling commodity prices are a good sign for inflation in general, Core CPI is expected to continue growing. Core CPI is different from the standard CPI because it doesn't include food and energy prices.

The 10-year to 3-month treasury bill spread fell significantly in 2022q3. 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. While this spread is still positive, the yield on 6-month and 12-month treasury bills now exceed the yield on 10-year treasury bills, indicating that inversion of the yield curve is taking place. This is a further indicator that we may be heading toward a 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 August 11, 2022.

North Dakota

Despite recent declines in gross state product, economic forecasts for North Dakota show a state with the potential to grow. Forecasts show increasing wages and salaries, a low unemployment rate, and increases in the labor force. The outlook for gross state product and tax collections remains strong.

Fargo, ND-MN

The Fargo, ND-MN, metro area is continuing to show signs of economic growth. Wages, labor force, and housing prices are forecast to continue following their recent growth trends.

Bismarck, ND

The Bismarck, ND, metro area has a neutral economic outlook. Wages, labor force, and housing prices are forecast to remain stable at current levels. The unemployment rate is forecast to increase.

Grand Forks, ND-MN

The Grand Forks, ND-MN, metro area has a positive economic outlook. Wages and housing prices are forecast to continue following their recent growth trend. The recent growth in the labor force is expected to taper off.

Minnesota

The Minnesota economic outlook is mixed. The unemployment rate has continued its decline, but that trend is expected to reverse. The labor force is forecast to see mild growth. Total wages, gross state product, and total tax collections all show signs of decline in the coming quarters.

Minneapolis, MN

The outlook for the Minneapolis, MN, metro area is promising despite poor trends in the state and national outlooks. Wages, labor force, and housing prices are forecast to follow a growth trend, while the unemployment rate is forecast to decline.

National

The national economy has experienced two quarters of negative GDP growth. This trend is expected to continue through the remainder of 2022. Consumption, net investment, and corporate profits are expected to decline. Increases in the unemployment rate and price level are projected. Inversion of the treasury yield curve is a further signal that a recession may be coming.