

ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Key Trends and Economic Factors Affecting Ford and the Automotive Industry

COVID-19 and Supplier Disruptions. The impact of COVID-19, including changes in consumer behavior, pandemic fears and market downturns, and restrictions on business and individual activities, has created significant volatility in the global economy. Outbreaks in certain regions continue to cause intermittent COVID-19-related disruptions in our supply chain and local manufacturing operations. We also continue to face supplier disruptions due to labor shortages and other production issues, in addition to the continuing semiconductor shortage. Our inconsistent production schedule has been disruptive to our suppliers' operations, which, in turn, has led to higher costs and production shortfalls. Further, actions taken by Russia in Ukraine have impacted and could further impact our suppliers, particularly our lower tier suppliers, as well as our operations in Europe. For additional information on the impact of supplier disruptions, see the Outlook section on page 73.

Currency Exchange Rate Volatility. After aggressively easing monetary policy in response to the COVID-19 pandemic, the Federal Reserve, and other central banks around the world, in 2022 began to withdraw monetary stimulus by raising interest rates. Periods of monetary policy tightening are often associated with heightened financial market and currency volatility, especially for those markets that are outliers in terms of their economic or monetary policy backdrop. This is notable for many emerging markets, which may also face increased exposure to commodity prices and political instability, contributing to unpredictable movements in the value of their exchange rates. In addition to direct impacts on the financial flows of global automotive companies, currency movements can also impact pricing of vehicles exported to overseas markets. In most markets, exchange rates are market-determined, and all are impacted by many different macroeconomic and policy factors, and thus likely to remain volatile. However, in some markets, exchange rates are heavily influenced or controlled by governments.

Pricing Pressure. Over the last year, prices of both new and used vehicles have increased substantially due to strong demand, supply shortages, and inflationary costs. We have already observed some moderation in the rate of price increases as auto production slowly recovers from the semiconductor shortage, but it is unclear whether prices will decline fully to pre-COVID-19 pandemic levels. Over the long term, intense competition and excess capacity are likely to put downward pressure on inflation-adjusted prices for similarly-contented vehicles and contribute to a challenging pricing environment for the automotive industry in most major markets.

Commodity and Energy Prices. Prices for commodities remain volatile. In some cases, spot prices for various commodities have recently diverged somewhat, as anticipated weakening in global industrial activity mitigates price increases for base metals such as steel and aluminum, while precious metals (e.g., palladium), and raw materials that are used in batteries for electric vehicles (e.g., lithium, cobalt, nickel, graphite, and manganese, among other materials, for batteries) remain high. The net impact on us and our suppliers has been higher material costs overall. To help ensure supply of raw materials for critical components (e.g., batteries), we, like others in the industry, have entered into multi-year sourcing agreements and may enter into additional agreements. Similar dynamics are impacting energy markets, with Europe particularly exposed to the risk of both higher prices and constraints on supply of natural gas due to the ongoing conflict in Ukraine. Such shortages may impact facilities operated by us or our suppliers, which could have an impact on us in Europe and other regions. In the long term, the outcome of de-carbonization and electrification of the vehicle fleet may depress oil demand, but the global energy transition will also contribute to ongoing volatility of oil and other energy prices. For additional information on commodity costs, see the Outlook section on page 73.

Vehicle Profitability. Our financial results depend on the profitability of the vehicles we sell, which may vary significantly by vehicle line. In general, larger vehicles tend to command higher prices and be more profitable than smaller vehicles, both across and within vehicle segments. For example, in North America, our larger, more profitable vehicles had an average contribution margin that was 120% of our total average contribution margin across all vehicles, whereas our smaller vehicles had significantly lower contribution margins. In addition, government regulations aimed at reducing emissions and increasing fuel efficiency (e.g., ZEV mandates and low emission zones), and other factors that accelerate the transition to electrified vehicles, may increase the cost of vehicles by more than the perceived benefit to consumers and dampen margins.