

Executive Summary

Wars, pandemics, and global recessions have occurred frequently throughout history, and have had major impacts on commodity markets. In the early 2020s, the COVID-19 pandemic and the war in Ukraine caused extensive disruptions to commodity markets and the global economy. In 2020, the pandemic triggered a sharp fall in global demand for commodities, especially crude oil, however, commodity prices rapidly recovered as demand rebounded and supply was slow to respond due to capacity constraints and supply bottlenecks. In 2022, the war in Ukraine disrupted the production and trade of commodities in which Russia and Ukraine are key players, leading to further price increases, especially for energy and food. These developments exacerbated inflationary pressures, weighed on economic growth, and contributed to food and energy insecurity.

Climate change and the transition from fossil fuels to zero-carbon sources of energy add another dimension to the uncertainties that roil commodity markets. Extreme weather events will become increasingly common and can affect the production of many commodities. The energy transition—intended to minimize the worst effects of climate change—is altering patterns of commodity production and consumption. Demand for fossil fuels is expected to be flat or decline over the next few decades, while demand for metals is likely to rise due to the higher metals content of renewable energy infrastructure. On the policy front, COVID-19-related supply disruptions and the war in Ukraine could lead to increased protectionism on energy-security and food self-sufficiency grounds, as well as fragmentation of trade, investment, and financial networks.

This study examines the factors that determine developments in commodity markets and analyzes how changes in these markets can affect the economies of commodity exporters and importers. The analysis is based on four broad approaches. First, it studies the evolution of commodity markets over the past century and identifies key drivers of supply, demand, and price movements across commodity groups. The drivers include income and population growth, industrialization and urbanization, technological innovations, and policy changes. Second, it quantifies the relative importance of these drivers for different commodity groups and concludes that income plays a crucial role in driving demand for industrial commodities over the long term, while agriculture is chiefly driven by population growth. Third, it takes a detailed look at the nature and drivers of commodity price fluctuations. Fourth, it assesses the impact of commodity price fluctuations on commodity exporters and importers.

The book offers a range of analytical findings, which can be grouped under four categories:

First, *commodity markets are going through a major transformation, with large shifts in the magnitude and location of production and consumption.* The relative importance

of commodities has also evolved over time, as technological innovation has led to new uses for some materials, as well as substitution among commodities. Commodity markets will continue to see large transformations in coming years. Demand from China, the largest consumer of many commodities, is likely to slow as its economy matures and shifts toward consumption and services. At the same time, the energy transition is likely to trigger substantial changes in patterns of demand, with a bigger role for the metals needed for low-carbon technologies, and a smaller role for fossil fuels. Fragmentation of global value chains and reshoring could also alter patterns of commodity trade.

Second, the study establishes that *commodity markets are highly heterogeneous in terms of their drivers and price behavior*. Over the past century, agricultural prices have declined in real terms, energy prices have risen, and the performance of metal prices has been mixed. Further, the cyclical components of energy and metal prices follow the business and investment cycles more closely than do most agricultural prices. In part, this reflects differences in the drivers of demand for these commodities—demand for energy and metals is much more closely related to economic growth than is agricultural demand. The relationship between economic growth and commodity demand also varies widely across countries, depending on the country's stage of economic development. At low levels of income, commodity demand, especially for industrial commodities, rises rapidly with economic growth. As incomes rise, however, growth in demand for commodities starts to slow.

Third, *commodity price shocks have asymmetric effects on commodity exporters, in part a reflection of the structure of their economies*. Oil exporters tend to be less diversified and rely more on petroleum for export and fiscal revenues than metal and agricultural exporters do on their commodities. As a result, oil-exporting economies may be more vulnerable to fluctuations in oil prices than other commodity producers are to changes in the prices of the foods or metals they export. There are also significant variations in the size, duration, and impact of price fluctuations across commodities. Further, price shocks have asymmetric effects: large price declines hurt growth in commodity exporters much more, and in a more lasting manner, than large price increases benefit their growth. This asymmetric impact requires policy responses that, in the midst of upturns, carefully prepare for downturns.

Fourth, the study confirms that *the heterogeneous nature of commodity markets requires policy tools tailored to the type of commodity produced (or consumed) and to the origin of the shock*. A variety of tools have been used by policymakers to address the challenges originating from commodity markets and especially those posed by commodity price fluctuations. For policymakers, these tools can be grouped into three categories: macroeconomic frameworks; measures to moderate boom-bust cycles in commodity prices; and structural policies to reduce vulnerabilities to price volatility, mostly relevant in the longer term.

Macroeconomic policy frameworks oriented toward longer-term sustainability offer the best protection against commodity price volatility. Key ingredients of this approach are:

- strong fiscal frameworks that encourage counter-cyclical fiscal policy, notably by building fiscal space during booms to support spending during slumps;
- exchange-rate flexibility linked to a monetary policy with credible low-inflation objectives;
- a regulatory system for the financial sector that deters the accumulation of excessive risks, especially with respect to capital inflows and foreign currency debt.

In addition, policymakers can make use of risk management like futures and options contracts.

At the same time, commodity price booms and busts frequently lead to calls for additional actions to protect consumers or producers. Price spikes for food and energy can have a disproportionate effect on the poorest households and have often led to subsidies or trade measures. For example, the war in Ukraine led to significant energy price spikes and resulted in many governments reducing fuel taxes or increasing other energy subsidies, as well as releasing strategic oil inventories. At the international level, attempts to mitigate market volatility can take the form of coordinated supply measures to achieve price goals. While such policies may be necessary as a short-term transitional tool, their use should be temporary. History suggests that the prolonged use of these policy instruments has generally led to undesirable consequences.

Exposure to commodity-market risks is most pronounced for countries that depend on a narrow range of resource-based exports. The underlying vulnerability can be addressed through structural changes in the economy and well-designed macroeconomic policy frameworks. For example, while economic diversification is expected to reduce the risks of terms-of-trade shocks, direct government intervention to achieve diversification is not only seldom successful but also goes against the comparative advantage that countries may possess. A more promising approach is to create a business climate that favors innovation and investment throughout the economy. The establishment of sovereign wealth funds can enable wealth diversification, thus reducing vulnerability to commodity price volatility. Commodity exporters also face environmental risks, and for their future prosperity, they must ensure that their resources are extracted in a sustainable way.