June 30, 2022

THE COMMODITY SHOCK

Inflation has been a problem for the U.S. economy for more than a year. In the past six months or so, that problem has become obvious to everyone because it has been particularly focused on food and energy. In mid-June, the Federal Reserve lifted overnight interest rates by 0.75% in an effort to crimp demand and slow the inflation rate. This was the largest rate increase since 1994 and Chairman Powell cited the shock from rising commodity prices as a reason for the Fed's decision. In this *Investment Strategy Update*, we look at the major components of the commodity index and assess the factors that created the current inflation shock to try to determine how long they may last. How we invest will hinge on that determination.

Overview of Commodities

Like stocks, many important commodities are traded daily on an exchange. Their prices are therefore well known to those in the market. However, much of the trading in the stock market revolves around changing expectations of each stock's future earnings. Commodities do not generate any earnings and their prices are set purely on expectations of supply and demand.

The major commodities are to a large degree fungible. They are traded globally, and their prices are therefore determined by the latest transactions anywhere in the world. That is why economic conditions in China, a huge buyer of commodities, can affect the price of gasoline at your local Exxon station.

The S&P Goldman Sachs Commodity Index is the most common measure of the commodity markets and is weighted by the value of production. The three largest categories in the index are Energy (54%), Agricultural Products (21%) and Industrial Metals (13%). However, the amount of production does not necessarily indicate a commodity's importance in the global economy. A relatively rare metal such as lithium, which is produced in much smaller amounts than copper, can impact supply chains due to its importance in making batteries.

Energy

All forms of energy are currently in short supply and have seen rapid escalation of prices since the economic recovery in 2020. The cost of fuels for transportation are jumping, yes, but also those for electrical generation, heating and cooling, direct industrial applications, as well as feedstock for chemicals. Fuel commodities such as oil, natural gas, coal, and uranium have all seen decades-high prices and are, in many cases, at multiples of long-term norms. Coal, for example, has traded between $50 and $150 per ton for most of the last decade and has recently traded at around $390 a ton. Natural gas traded at around $3.50 per million cubic feet (mcf) over that time and now trades from $7 to $9 per mcf. Gasoline at the pump here in California has routinely seen $6.50 a gallon.

These high energy prices impact many facets of the economy, so inflation in energy translates into inflation across the board. As with all other commodities, the way to drive down energy prices is either to decrease demand or increase supply. Usually, high energy prices by themselves accomplish both goals as consumers and businesses find ways to get by with less, while suppliers increase investment in exploration and drilling to capture the higher profits. In recent years, however, energy investment has been well below average due to both the Covid recession driving down demand and to environmental policies around the world that have discouraged the production of hydrocarbons. In more normal times, the scale might already have tipped back to oversupply and lower prices.

The forces driving up energy prices were further compounded by the Russia-Ukraine war, which has dramatically affected European and worldwide energy prices as both countries were major exporters of energy in the forms of oil, natural gas, coal, and electricity. Some of the combined productive capacity has been damaged in the fighting and it will take many years to recover after the end of hostilities. We expect that overall energy prices will stay elevated.

Fertilizer and Food

While fertilizers are a small portion of total agricultural commodities, they are the driver of crop yields and are at the heart of modern farming. The development of synthetic fertilizers in the early 1900s allowed food production to keep up with population growth for the past 100 years. It is estimated that farmers would only be able to grow half of their current crops without fertilizer. The most common is nitrogen, which accounts for 60% of fertilizer used worldwide. Potash and phosphates account for 20% each. Energy inputs, primarily natural gas, account for 80% of the cost of producing nitrogen fertilizer and its prices have tripled. Potash and phosphate prices have doubled on higher transportation costs and supply chain issues.

The current shortage of fertilizers is expected to get worse. Russia is the world's largest exporter and its growing isolation from world trade has contributed to the increasing prices. While the U.S. has attempted to exempt Russian fertilizers from the economic embargo, there are other barriers to exports: Shippers are unable to insure vessels carrying goods from Russia, and banks are afraid to facilitate payments to Russian suppliers. These hurdles have reduced Russian fertilizer exports by 24% so far this year.

In normal circumstances, fertilizers account for 35% of the cost of producing major crops such as corn and wheat. Skyrocketing prices drive up the costs to farmers who then must either charge more for their crops or plant less acreage. By one estimate, approximately one third of the world's farmers can no longer afford fertilizer, which will sharply reduce their crop yields. This price shock to farmers affects most large crops and, if there is no relief, will continue to drive up food prices in future planting cycles as lower yields produce less food while demand continues to grow with the population. Many of these crops are also feedstock for animals so the shortage of fertilizer will spread to food prices beyond the crops themselves.

The crop most directly affected by the war is wheat. Wheat prices had been rising steadily since the fall of 2021 as dry weather in Brazil and Argentina reduced harvests. However, the Russian invasion of Ukraine disrupted exports from the two countries, which together account for about a quarter of the global wheat trade. Wheat prices rose immediately and are now 34% higher than at the beginning of the war. In addition to Russia's struggles with exporting commodities, Ukraine is unable to ship wheat from its beleaguered Black Sea ports and is struggling to plant this year's crop. Ukrainian farmers face labor shortages, land mines in their fields, and possible confiscation of their equipment in the areas of conflict. Current estimates are that they will only be able to plant half the normal acreage this season, which means higher prices this fall.

Industrial Metals

Copper is the largest industrial metal in terms of production. The metal's price generally moves with the global economy and has earned the nickname of "Doctor Copper" as its price trends can be a leading indicator of the direction of the economy. Energy is a significant component of mining cost, and the price of copper is also highly correlated to oil prices. The supply of copper is relatively stable. It is difficult to open new mines due to environmental concerns and copper production has increased an average of only 1.7% a year over the past three decades.

Increased demand from the economic recovery and rising energy prices drove the price of copper up 80% from its pre-pandemic level to an all-time high in April of this year. However, China buys almost half of copper production and, with its economy slowing, demand for copper has softened. The wild card for copper prices is the shift to alternative energy and Electric Vehicles (EVs). More than 60% of copper goes to electrical uses so any shift to electric power will drive up the demand for copper. Wind and solar power plants need four to six times more copper than a conventional power plant, while EVs need two to three times more copper than a gasoline-powered car. If spending for alternative energy continues and EV sales accelerate, this new demand may offset the slower economic growth in China and keep copper prices high.

While silver is a precious metal, more than half of its production goes to industrial uses, with 10% used in solar panels alone. The supply of silver can fluctuate but has been stable lately. The economic recovery saw a pick-up in demand for silver in industrial use that drove prices up over 50% to a peak in May of 2021. Like copper, silver's industrial demand is leveraged to China and its use in solar panels makes the price sensitive to investments in alternative energy. However, with almost half of silver going to investors and retail products, it is difficult to predict demand from year to year.

Investment Implications

The overriding theme in this discussion about high commodity prices is the importance of energy costs. They drove much of the recent price increases in fertilizers and copper as well as being a source of inflationary pressure to a broad spectrum of the economy. A decline in energy prices is key to easing commodity price inflation, and therefore, overall inflation. Unfortunately, with the war in Ukraine showing no sign of resolution and the ongoing lack of investment in new production, energy supply will likely remain constrained for the foreseeable future. Therefore, the most likely way energy prices drop will be due to a recession that will ease demand. As such, we expect to continue to target overweight positions in energy stocks.

Perhaps the most important aspect of the commodity price shock is how it will affect Federal Reserve monetary policy. Chairman Powell has stated clearly that the Fed's path to reducing inflation without triggering a recession is now much harder due to higher commodity prices. Until there are signs of relief in prices, stock market investors should be positioned for continued rising interest rates and their impact on expensive or unprofitable companies. There is also the possibility of a recession in the coming year or two. We therefore believe it is wise to emphasize positions in non-cyclical sectors such as Health Care and Consumer Staples.

Persistent high commodity prices will also pressure the profit margins of companies whose products or services are heavily impacted by expensive commodities. Businesses are already raising prices (or selling less for the same price -- an industry trick known as “shrinkflation”) to offset the rising cost of their raw materials. However, these steps can only be taken so far and, if prices stay high, companies will see their margins erode. We will be looking to invest in companies whose costs of goods sold are not unduly influenced by commodities, or who simply have pricing power that can sustain.

Market Outlook

The U.S stock market recently declined far enough to qualify as a bear market by some measures. This is despite an economy that remains fairly strong and where unemployment remains low, although growth has slowed from the pace of last year and recent economic data point to further slowing. Lower stock prices have reduced the high valuations seen late last year, but investor sentiment overall has likely not yet reached “capitulation.” Many investors particularly fear that the Federal Reserve will need to tighten monetary policy more than previously expected, as inflation remains elevated -- perhaps enough to drag our economy into a recession.

We expect higher market volatility to continue as investors deal with tighter monetary conditions. We don’t think the economy is headed into a recession just yet, although the risk of one has increased. The worst of the inflation headlines have likely been seen and should gradually begin to abate before year-end, albeit to still elevated levels. The Fed’s goal is to raise interest rates enough to slow economic growth and dampen inflation without causing a recession. Whether it can accomplish this remains to be seen. The upshot is that we continue to be cautious on stocks, although we believe we are not too far from a level we would consider more broadly buyable.

Finally, interest rates have been rising all year, since before the Fed actually increased overnight rates for the first time. The rise in bond market yields has begun to make bonds more attractive as investments. That said, we respect the potential for still higher rates and will proceed gradually with any additional bond buying. At some point, the market will determine when rates have peaked. That could occur before the Fed is done, if the market decides the Fed has gone so far that a recession is imminent. We would then consider locking in higher rates by buying longer term bonds than we have been. We’re not there yet, but that is the next critical decision we will need to make on bonds.