NORTHERN TRUST

JANUARY 12, 2024

WEEKLY ECONOMIC COMMENTARY

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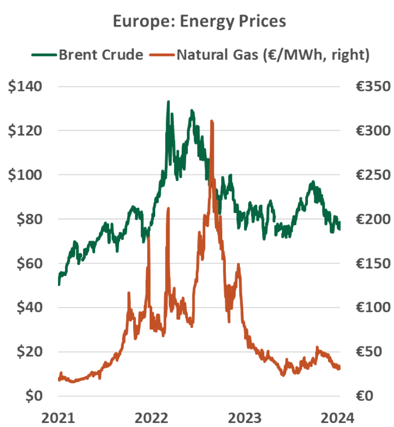
Walking through our house before we purchased it, the home inspector noticed that the hot water heater was showing its age. I asked how we would know if it was failing, and he shrugged. He said we'd know when one of us found ourselves taking an unexpectedly cold shower.

All was well, until it wasn't. The heater failed quietly and without warning, leaving me shivering for want of heat. At that moment, more than most moments, I appreciated the essential nature of heat and the energy that produces it. We take the availability of energy for granted, and disruptions can be a major shock.

The energy market has had significant ups and downs over the past four years, across regions and products. Pandemic stops and starts distorted consumption patterns. Russia's invasion of Ukraine, and the ensuing sanctions on Russian energy exports, caused rapid spikes to energy prices and contributed to high global inflation. Energy production and trade flows settled into a more normal state over the course of last year, but there remain many reasons to fear of a new round of volatility.



Top Oil Producing Nations, 2022

Country	Million Barrels per Day	Share of World Total
United States	20.30	21%
Saudi Arabia	12.44	13%
Russia	10.13	10%
Canada	5.83	6%
Iraq	4.61	5%
China	4.45	5%
United Arab Emirates	4.23	4%
Iran	3.67	4%
Brazil	3.17	3%
Kuwait	3.01	3%
Total top 10	71.83	74%
World total	**97.70**	

Sources: U.S. EIA, Bloomberg, Haver Analytics

Throughout 2023, the Organization of Petroleum Exporting Countries and their allied producers (OPEC+) incrementally reduced their output targets by a total of five million barrels per day, hoping to keep oil prices elevated. These announcements did move markets, but the impact was temporary. Global demand was muted, especially amid China's manufacturing slump. Non-OPEC nations, notably the United States, are producing more oil, blunting the cartel's control of prices. Frustrated, some OPEC+ members have quietly increased their exports.

The Israel-Hamas conflict has sparked fears of disrupted energy transit or stricter sanctions on producing nations. Thus far, prices and production have been stable.

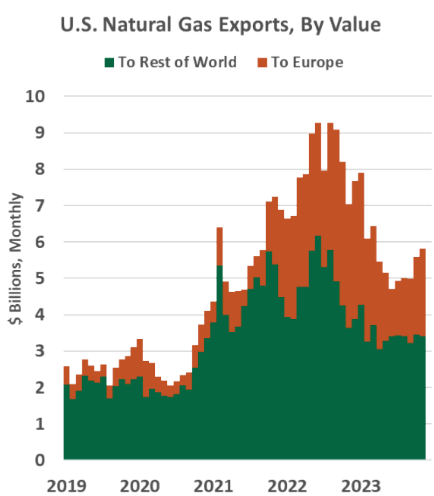
The surprising growth of oil extraction in the U.S. has done the most to keep markets calm. Prior to the pandemic, the rise of hydraulic fracturing (or *fracking*) made the U.S. a major growth market for oil production. However, the higher cost of fracking limited its profitability, and when demand plunged during the pandemic, many producers became insolvent. The environmental hazards of fracking and policy shift toward green energy set a base expectation that fracking's heyday was in the past.

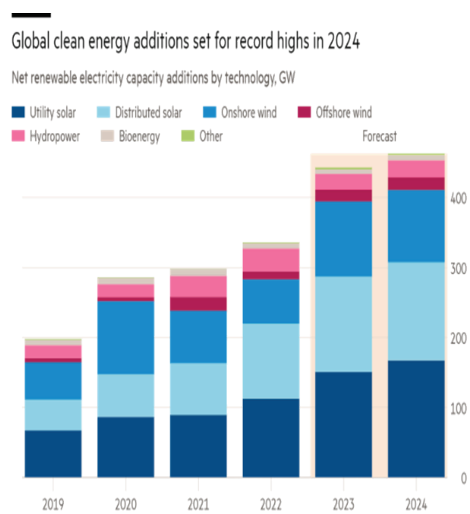
However, this form of production has rebounded, making the U.S. the highest-volume producer of both oil and liquified natural gas (LNG) in the world. While the quantity of drilling rigs has declined, operators have found ways to make existing wells more productive. And more projects are scheduled to come online in Texas and Louisiana this year to expand LNG capacity.

The higher level of U.S. output has pushed up the nation's energy exports, helping to keep global prices contained. This has been a particular benefit to Europe, the continent facing the most salient risks to energy supply. The dissolution of trade with Russia revealed the structural dependency that many European nations had upon Russian energy. Natural gas was the point of greatest concern, as the termination of pipeline flows sparked fears of energy rationing. Gas prices surged, forcing Europeans to find other sources of gas.

Europe narrowly avoided a winter recession last year, supported by stockpiling, conservation efforts and the luck of mild weather. European nations have invested in their capacity to receive and store oil and gas imports. The resilience seen in the wake of Ukraine has bolstered hopes that energy markets can withstand any disruption stemming from the latest conflict in the Middle East.

The U.S. has resumed its place as a major energy producer.





Sources: Census Bureau, Haver Analytics, IEA, FT

Steadily low prices have also given the U.S. an opportunity to replenish the Strategic Petroleum Reserve (SPR). To combat inflation, nearly half the stock of the SPR was drawn down from July 2021 through December 2022. While still depleted, recent weeks show a very small increase in the stock. While price arbitrage was never an intended use of the SPR, as long as oil prices stay low, the U.S. may have succeeded in selling high and buying low.

The current focus on petroleum-based energy sources may feel out of tune with the buzz around clean energy. The transition toward renewables will be a long-running project, and the need for oil will not subside anytime soon. But make no mistake, the transition is underway. Both public policy and private investments are supporting the growth of renewables. Geopolitical conflict and a year of record-breaking heat have only added to the case for transitioning away from fossil fuels.

The move to alternative sources of energy will not be a panacea. Sources like wind, solar and tidal energy each have their limitations and tradeoffs—but so do hydrocarbons. A wider array of energy will reduce the role of unreliable actors and hedge the exposure to volatile supplies and prices.

The years ahead are poised to be an inflection point in the green transition. Governments have made major commitments to support sustainable energy, from the $369 billion of clean energy programs in the U.S. Inflation Reduction Act to the European Commission's €300 billion REPowerEU program. Projects of that scale take years to plan and implement. Global clean energy investments in 2024 are forecast to reach a record high of 460 gigawatts of output, led by solar energy infrastructure.

The growth of alternative energy sources should reduce vulnerability to oil and gas shocks.

A plumber replaced our hot water heater without much fuss. But the cold shower made me regret not taking action before the tank failed. The shocks of the past two years have awakened many nations to the need to be prepared for thermal deficits. Unlike the mistake I made, they are heeding the warnings.

Tapering

It is said that if someone had only a limited time to live, they should spend it with an economist; the experience would seem like an eternity. We are not known as the most vivacious people.

It will therefore come as no surprise that economists are anxious for holiday celebrations to end. The American Economic Association (AEA) holds its annual meeting right after new year's, and the event draws thousands. Many of the sessions are of somewhat academic interest, but a handful are more mainstream.

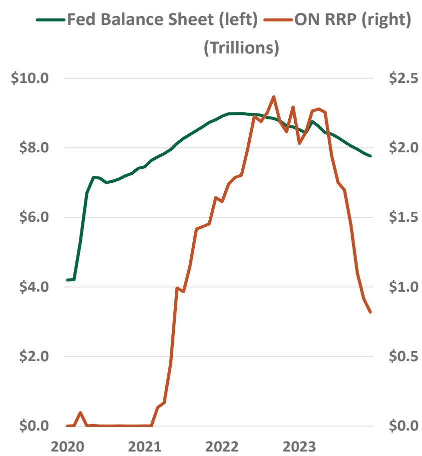
Such was the case last week, when Lorie Logan, the President of the Federal Reserve Bank of Dallas, offered her thoughts on monetary policy at the AEA meeting in San Antonio. There has been a lot said and written about how central banks might manage interest rates in 2024, but relatively little has been offered on how they might steer their balance sheets. Logan ventured into the latter territory, offering a potential roadmap for the year ahead.

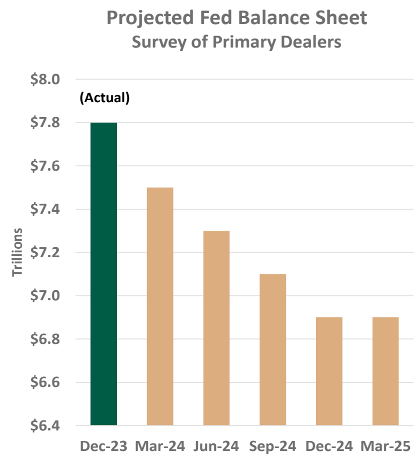
As background, the Fed (among other central banks) built its investment portfolio amid the crises of 2008 and 2020. The process, known as quantitative easing (QE), was designed to continue providing stimulus when overnight interest rates were at zero. The Fed's balance sheet went from about $900 billion in early 2008 to $4.5 trillion in 2015 and nearly $9 trillion in early 2022.

The Fed has been reducing its portfolio for nearly two years now, to tighten financial conditions. (Hence the term "quantitative tightening," or QT.) Holdings have fallen by more than $1 trillion. Excess liquidity invested in the Fed's overnight reverse repurchase program (ON RRP) has dropped from well over $2 trillion to less than $700 billion.

There is no set level or formula for how large a central bank's balance sheet should be. The size of its underlying economy, the demand for reserves from the banking system and the depth of its local markets are all important considerations. And while we have decades of history to study how interest rates affect economic activity, the Fed's QE program is only fifteen years old. (And several of those fifteen years were consumed by crisis.) So central banks have little to guide strategy on this front.

As we discussed last year, the Fed's first attempt at QT in 2019 ended prematurely. Reserves in the financial system became thin, challenging the liquidity of certain markets. The program concluded far earlier than anticipated and created a minor dent in the Fed's credibility. One take away from that experience was the need to provide early guidance on when balance sheet management efforts were near an end.





Sources: Federal Reserve, Haver Analytics

Fed officials are discussing when and how to stabilize their balance sheet.

Logan, who managed the Fed's investments before moving to Dallas, is especially well placed to begin providing that perspective. In her remarks to the AEA meeting, Logan hinted that QT may be in its final stages, saying "(W)e should slow the pace of runoff as ON RRP balances approach a low level."

Exactly what a "low level" of balances is will be the subject of considerable discussion. John Williams, the President of the Federal Reserve Bank of New York, said later last week that "we don't seem close to that point." Nonetheless, the fact that the topic is being discussed by Fed officials publicly and privately suggests that the Fed's balance sheet could stabilize within the next twelve months.

The Treasury markets will be watching developments closely, as the tapering of the Fed's holdings requires other investors to step forward. Having a sense of what the Fed's long-term demand looks like may help reduce volatility in fixed income markets.

To the layperson, this somewhat wonky discussion may not seem overly exciting. But to economists, it really got the new year off to roaring start.

No Smooth Sailing

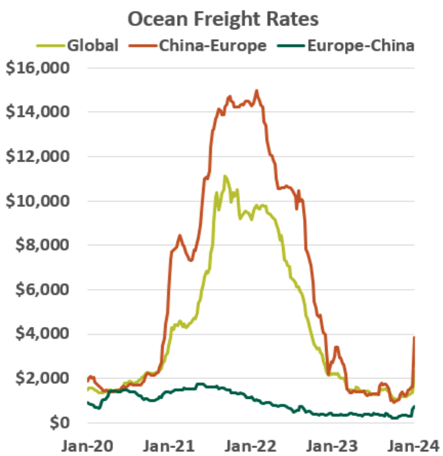
The Red Sea is one of the saltiest and warmest seas on the planet. In recent weeks, current events are catching up with oceanography, as temperatures and tensions are on the rise.

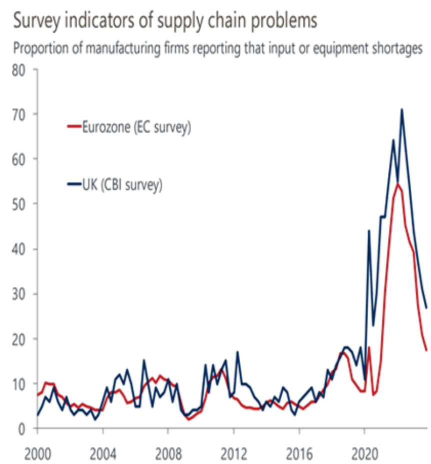
Recent attacks on commercial vessels in the Red Sea by Iran-linked rebels amid the Israel-Gaza war have sparked concerns of a rise in broader regional tensions, with shipping lanes in the center.

The Red Sea is a critical channel for trade between Asia and Europe. Though recent attacks are occurring at a time when trade volumes tend to be lower, violence is causing delays, diversions and soaring shipping costs. Freight rates from China to Europe have more than doubled to around $4,000 per 40-foot container in just two weeks. Multiple major shipping companies have paused transit through the Red Sea and the Gulf of Aden until further notice. Several carriers are rerouting from the Red Sea to the Cape of Good Hope, adding to costs and delays of up to four weeks.

The COVID experience brings inflation risks to mind, but the likelihood of another severe bout of inflation on the back of shipping costs is low. While rates have spiked, they are still far below the pandemic peaks of $15,000 per 40-foot container from China to Europe. Large retailers tend to lock in freight costs ahead of time and hedge their exposure, which limits the impact of temporary swings in shipping rates. Since ports and ships are operating without any restrictions, the current shock is unlikely to become as bad or as prolonged as what was endured during the pandemic.

The current wave of disruptions is unlikely to materially alter the path of inflation.





Sources: Bloomberg, Freightos, Oxford Economics

According to European Central Bank research, international shipping costs make up only 1% of final consumer goods prices, implying a limited impact on inflation from higher shipping costs. According to an International Monetary Fund study covering 143 nations, "when freight rates double, inflation picks up by about 0.7 percentage point" and the peak impact occurs around a year later. A more extended period of disruption will add to inflation, but not enough to prevent European central banks from pivoting later this year.

An escalation in conflict, involving more regional or global powers, could be a bigger threat to progress on inflation than the disruptions caused by sporadic maritime attacks on commercial vessels. Calmer geopolitics will be needed to prevent a further rise in temperatures surrounding transit through the Red Sea. Unfortunately, a warm wind is blowing through the region, which could result in additional heat on Europe's inflation rates.

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