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WEEKLY ECONOMIC COMMENTARY

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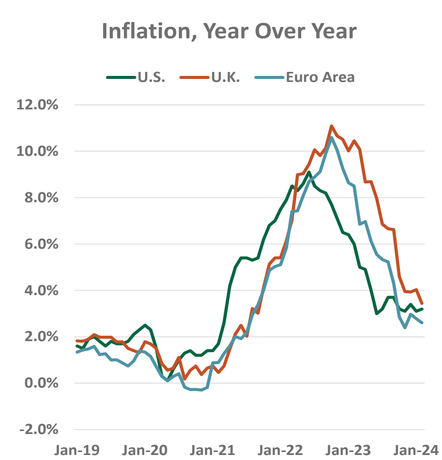
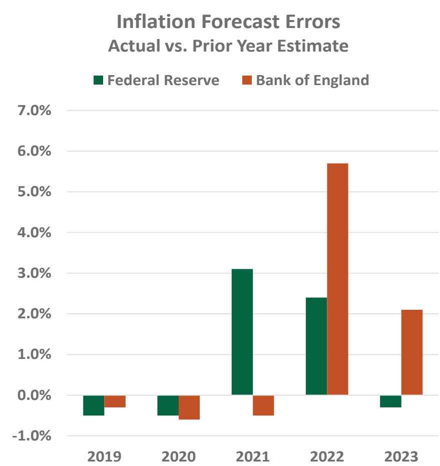
Even experienced performers can get nervous when a leading light is observing. Imagine hooping in front of Michael Jordan, singing in front of Taylor Swift, or acting in front of Meryl Streep. Trying to chin the high bars that they have set and fearing their subsequent judgments would be very stressful.

Imagine, then, the apprehension that must have filled the halls at the Bank of England (BoE) this month. Ben Bernanke, a Nobel Laureate with a place on the Mount Rushmore of central bankers, had been engaged to opine on the efficacy of the BoE's forecasting process. His critique was not kind, but the lessons he offered are worthy of reflection far beyond central London.

Forecasts are foundational to the conduct of monetary policy. Because changes in interest rates (or balance sheet strategy) work with a lag, projections of where growth and inflation will be in future quarters are essential.

It goes without saying that forecasting economic outcomes is hard. The underlying data used in this endeavor can suffer from imprecision; inflation is a particularly challenging concept to quantify. Relationships between variables are not completely stable, even in more settled times. Nonetheless, models using thousands of equations authored by armies of PhDs have been employed to anticipate the future.





Sources: Haver Analytics, Federal Reserve, Bank of England

When a tail event occurs, past patterns are a poor guide to future performance. Supply shocks produced by the pandemic stressed inflation far more than anticipated. An advancing myopia made it difficult to set effective monetary policy. British inflation ultimately exceeded 11%, the highest peak seen in a developed country.

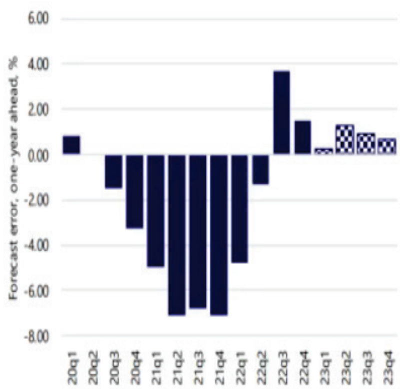
This cost British consumers dearly in purchasing power. The rapid rise in interest rates that was required to quell inflation brought economic growth to a virtual standstill. Problems in forecasting created very real costs for the country.

In response, the BoE commissioned a review of its forecasting process and engaged Dr. Bernanke for the exercise. Earlier this month, his team issued their findings. Among them:

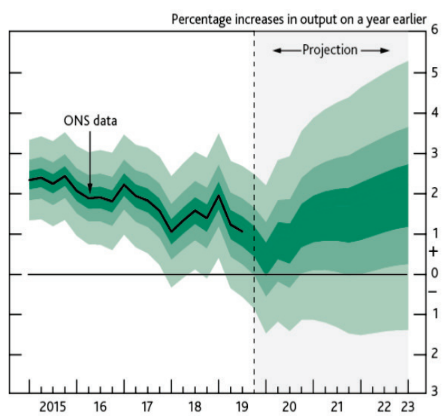
Central bank forecast errors can be costly to society.

- The infrastructure supporting the forecasting process must be current, so that more advanced techniques (like AI) can be employed. Special attention needs to be paid to the quality and organization of data needed to perform analysis.
- Active engagement between model operators and subject matter experts is essential to good results, especially during times of rapid change. Economic rules of thumb like the Phillips Curve can lose their effectiveness over time, threatening the accuracy of projections. Keen observers of conditions can initiate changes to code in an effort to keep algorithms current.
- Forecast errors should be studied transparently and should guide potential changes to models. Throughout 2020 and 2021, the BoE was underpredicting inflation, but projection approaches weren't adjusted sufficiently to correct variances.

**Bank of England:
Quarterly Forecast Errors**



The Bank of England "Fan Chart"



Sources: Bank of England, Rabobank

- The BoE was encouraged to drop their "fan chart" which illustrates the uncertainty of outcomes. The range in the chart is so wide that it makes almost any outcome seem possible.

  Instead, the Bank was encouraged to consider alternative scenarios when setting policy, as opposed to focusing on a central case. Monetary decisions may be informed by a desire to manage the risk of an impactful outcome that may be less likely.

In a statement, the Bank of England said that it "is committed to action on all…of the Review's recommendations." In the meantime, it behooves all of us who run models to read the report and consider whether its observations might be worth following up on. In particular, the dynamics that drove economic outcomes through 2019 have changed considerably since then; models must adapt to the new reality.

I couldn't imagine what it would be like to have Ben Bernanke review the models we run here at Northern Trust. You talk about intimidating…I would much rather warble "Shake It Off" on stage during the Eras Tour.

Copper Climbing

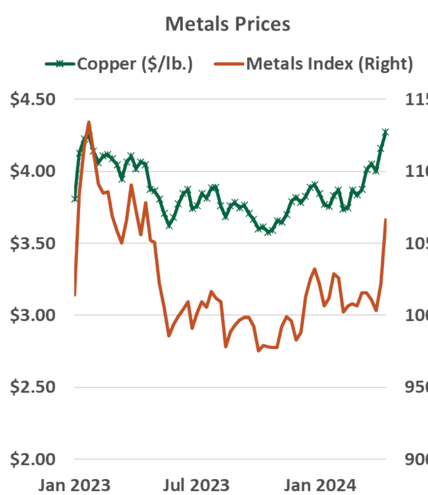
Forecasts of disinflation in 2024 have thus far missed the mark. Some of the disappointment has lingered from last year: housing costs have been stubbornly high, while services remain an inflationary risk. Outright price declines of many goods provided a helpful offset.

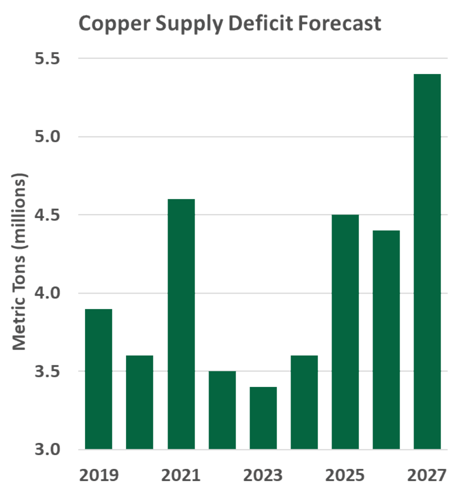
Deflation for goods is unlikely to last. Supply chains are being realigned with an eye toward resilience rather than only low cost, while investment is concentrated in specific sectors that require particular inputs. No commodity tells the story more clearly than copper.

Demand for copper is elevated, and poised to grow. The metal is crucial to electronic components that are in high demand. The boom in artificial intelligence is pushing up the need for both microprocessors and power-hungry data centers. As market share shifts toward electric vehicles, the batteries and wiring of EVs require more copper than conventional powertrains do.

Infrastructure investments in the electric grid and power components like solar panels and EV charging stations will add to copper demand. Homebuilding also continues apace, and more residential construction means more copper purchases for home plumbing and wiring.

Copper is a critical component of both old and new technologies.





Sources: WSJ, Commodity Research Bureau, Haver Analytics, BloombergNEF

Given its wide range of uses, copper is often considered a proxy for global industrial activity. China's policy priority of "new productive forces" suggests a renewed emphasis on exports. Copper's price chart has a positive correlation with China's economic prospects; the metal cooled along with China's output last year, and is now picking up in tandem with China's forecasts. Futures prices are ascending, reflecting forecasts of growing needs for copper in years to come.

But worries are also on the rise: can supply keep up? The majority of copper ore is mined in South America. Chile and Peru together account for 43.2% of copper exports, nearly all of which are bound for Asia. Operational issues and legal disputes have impaired mining output this year. New deposits are proving more difficult to find, and mining activity in general is facing greater scrutiny and environmental backlash. Chinese smelters have tapered their production to protect margins, rather than bidding up the limited supply of ore.

These forces are amplifying the supply deficit for copper. Objectives to reduce emissions and reinforce electricity supplies cannot be met without a large quantity of this particular ingredient. Higher prices for the metal will make those projects more costly, but may help to spur more investment in production. Supply will not come online overnight, setting the stage for a prolonged interval of higher prices.

Other industrial inputs like steel and aluminum are exhibiting firm price trends, but not surging in quite the same manner. Copper stands out in its performance and stands alone for its critical need in so many in-demand products.

Copper also serves as an illustration of the challenge of controlling inflation. More costly raw materials will either eat into profits or flow through to final prices. In prior economic cycles, goods were often a disinflationary force. Higher input prices raise the risk that goods will add to a difficult inflation dynamic.

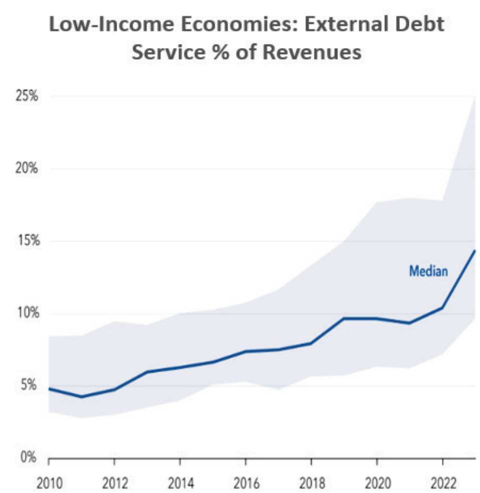
As Fed Chair Jerome Powell sought to reset expectations of imminent rate cuts at the January Federal Open Market Committee press conference, he noted that inflation's improvement was led by goods. For the Fed to be ready to cut, the composition of inflation needs to be more broad-based and balanced. We agree; our forecast of eventual rate cuts assumes continual moderation of inflation, but slow disinflationary progress led us to reassess the timing of cuts. Commodities like copper have compounded the case for cautious cutting.

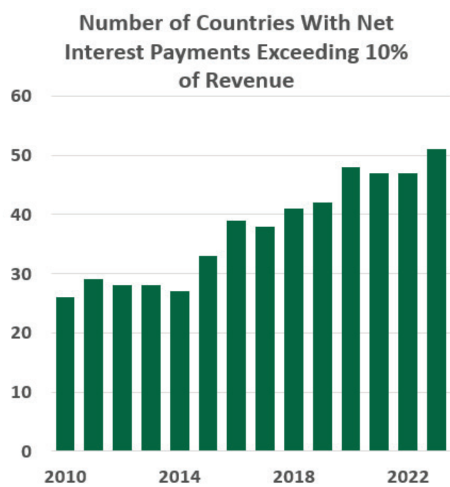
Indebted

This week, delegates and policymakers from different parts of the world gathered for the International Monetary Fund (IMF) spring meetings in Washington to discuss the state of the global economy and lay out plans to strengthen it.

During her curtain-raiser speech, the IMF director Kristalina Georgieva told the audience to "fasten your seatbelts." The reference suggested that the soft landing might not be so soft in certain parts of the world. Georgieva's advice is especially relevant for nations sitting on a large pile of debt.

Debt sustainability and the Fund's capacity/ability to support countries under strain were a topic of conversation this week. Developing economies, in particular, are suffocating under high interest rates which are hindering their economic recoveries. According to the IMF, nine countries are already in debt distress with another 25 nations at a high risk of joining them.





Sources: IMF, Bloomberg, UN DESA

Some low-income economies are spending as much as 13% of their gross domestic product (GDP) on servicing debt, four times the fraction that interest contributes to U.S. government outlays. Low-income economies are expected to pay over $185 billion in interest on combined external and domestic debt in 2024. Defaults have been avoided at the cost of development goals: the United Nations estimates that over 3 billion people live in nations where administrations spend more on interest payments than on education or health. The imbalance explains why progress in reducing poverty has not merely stalled in some places, but started to reverse. Persistent economic underperformance can give rise to political instability, which makes it difficult for a country to attract capital of any kind.

In addition to the burden of interest rates, countries under distress are also forced to comply with fiscal austerity, an important condition that the IMF attaches to most of its financial assistance. With western economies and multilateral agencies failing to provide swift and coordinated relief, poorer nations have been increasingly looking for bailouts from private creditors.

Debt distress is rising fast, but restructuring is becoming more complex, leading to delays.

According to research by economists Lawrence Summers and N.K. Singh, the private sector reaped $68 billion more in interest and principal repayments than it loaned to developing economies in 2023. Instead of providing comprehensive debt relief to struggling economies, the lenders of last resort collected $40 billion in repayments of non-concessional loans from these nations.

The sovereign debt restructuring process has become much more difficult, owing to the wide variety of creditors and much larger debt involved. The Sri Lankan government is struggling to reach an agreement with its bondholders for restructuring of around $12 billion of debt. It took Zambia three years after its default to agree to a debt restructuring with private bondholders. The true extent of liabilities is often not wholly known to creditors or international institutions.

The issue of emerging market debt distress has garnered attention for a long time, but solutions have proven elusive. New rules announced by the IMF this week aim to speed debt restructuring by easing the requirement that nations reach a debt agreement with one or more of its bilateral creditors.

The size, scope and nature of 21st century fiscal problems have grown, but the resources of multilateral bodies like the IMF have not progressed at the same rate. The Biden administration is proposing to inject $21 billion to shore up the Fund's ability to deliver financial aid. Considering the debt and case load, other members will have to chip in. More and more governments are living on borrowed time.