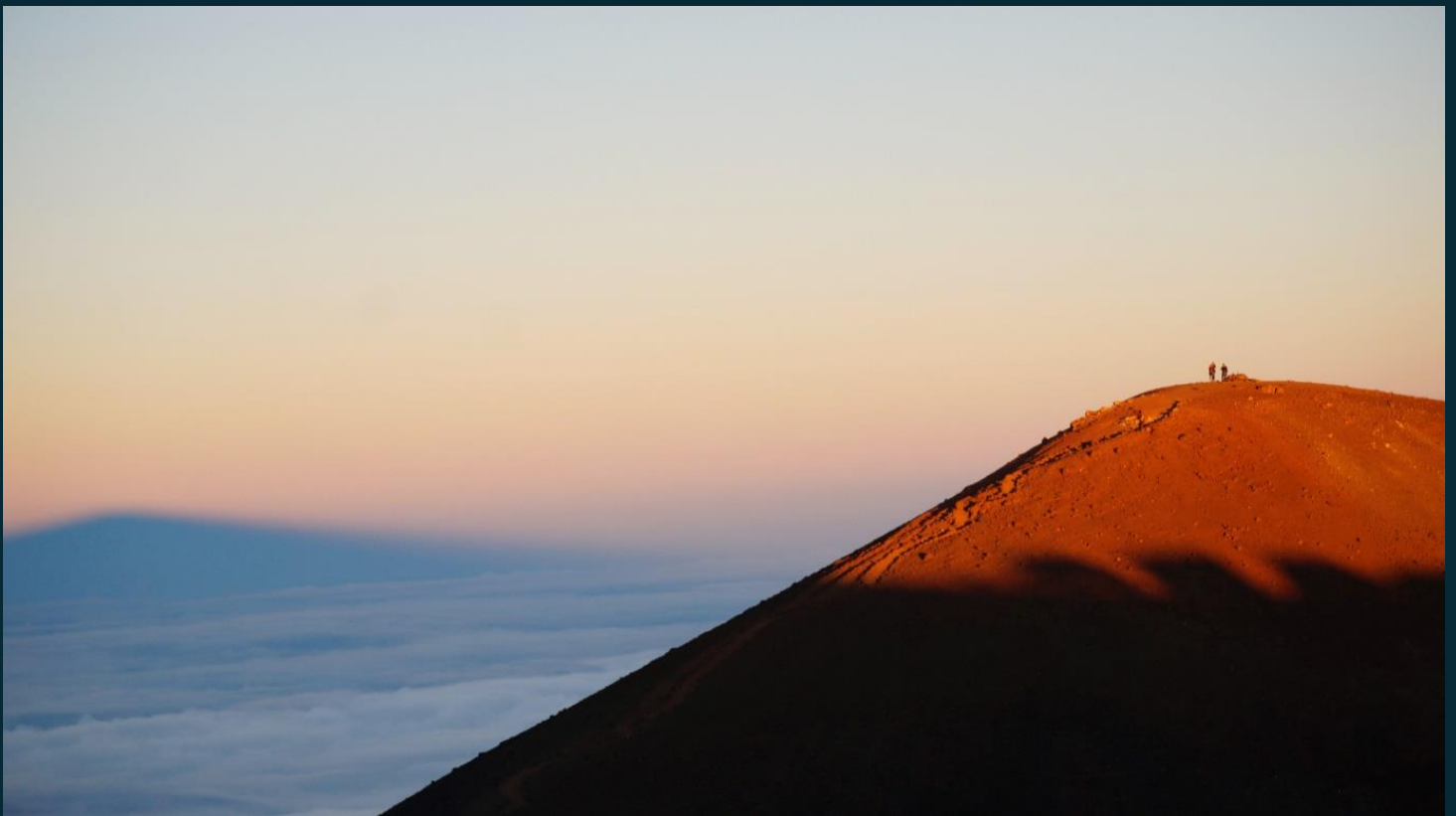


ROCKEFELLER
ASSET MANAGEMENT

Global Foresight

Q3 2022



Everest is Not the Tallest Mountain

Rethinking how we measure mountains, inflation, and economic growth

By David P. Harris, CFA

Introduction

With markets having their worst year since 2008, the subjects of inflation, interest rates, and recession have dominated financial headlines as they invariably do during downturns. Since each economic cycle has its own unique characteristics that make market timing so difficult, this edition of Global Foresight will review some of the shortcomings of traditional measures of economic activity. We'll also discuss some of the more forward-looking indicators that should become increasingly utilized by investors.

As with many trends since the pandemic, much of our economic data still appear a bit distorted, but encouragingly are finally beginning to normalize. While lingering uncertainty about inflation, interest rates and economic growth may keep a lid on overall market returns, more attractive valuations should provide some downside support.

Evolution of Measurement

The evolution of measurement has been critical to fostering trade and economic activity, something archaeologists date back at least 2,300 years when a grain of wheat became the default unit of mass for precious metals, simplifying the means of exchange and facilitating marketplaces. The earliest units of distance were based on arms, hands, and fingers. Measurement in "feet" is in fact credited to England's King Henry I, who had either exceptionally large feet for the 12th century or was including his shoe.

As measurement technology has evolved greatly from those early crude approximations, an explosion in availability of data is now enabling it to be gathered far more rapidly and with more customization. With many more choices of data, in theory we should be able to improve our insights on the economy. However framing data becomes more challenging once we move beyond traditional ways of measurement.

To illustrate, Mount Everest is considered the world's tallest mountain because of the one way we have historically measured mountain peaks, which is by their distance above sea level. By this frame of reference, Everest is unambiguously the tallest mountain. When we reframe the question, to define height from summit to base instead of sea level, then Mauna Kea in Hawaii is taller than Everest because Mauna Kea starts at the bottom of the ocean. The peak of Chimborazo in Ecuador is the farther from the center of the earth than is that of Everest. Some would even argue Alaska's Mount Denali to be the tallest in the world if measured by height above surrounding terrain, although this becomes subjective because there is no consistent way to select which surrounding terrain to use for measurement.

The Eyeball Test

In a world where we will see an ever-increasing amount of information to choose from, data should pass the "eyeball test": if data seem wrong, it is because they may be incorrectly framed, even if correctly measured. Consider that Mount Rainier is only the fifth tallest mountain in the continental U.S. but is the tallest measured from surrounding terrain. Those who have been to Seattle know that Rainier passes the eyeball test - it frankly looks much taller than do the peaks of the Rockies, because we view mountains from their surrounding areas which typically is from land, not sea level.

We should also apply the eyeball test to economic data, which are often taken out of context and not comparable. Some of this stems from our enormous data gathering and measuring infrastructure, which is deeply ingrained in our history, but now looks antiquated compared to newer, more nimble sources that more fully utilize today's technology.

Brief History of U.S. Economic Statistics

Arguably the most important economic data are interest rates, inflation, GDP, and employment. Of these data, we can exclude interest rates which are directly observed from markets. As such, investors can track them unlike the others that have been historically depended on statisticians to provide monthly or quarterly updates.

One might imagine inflation, GDP, and employment data to come from a centralized team that gathers and analyzes information in a consistent fashion in a complex somewhere in Washington D.C. In 1913, the U.S. Department of Labor and Commerce split into two, becoming the Department of Labor and the Department of Commerce, each producing their own economic statistics. The Department of Labor oversees the Bureau of Labor Statistics (BLS), while the Department of Commerce manages the Bureau of Economic Analysis (BEA).

Inflation Data

The most widely cited measure of inflation, the Consumer Price Index (CPI), is produced by the BLS. Since many wages and benefits are indexed to CPI, it gets outsized mindshare by politicians, the voting public, and the press. By comparison, the BEA produces GDP deflator and personal consumption expenditures price index (PCE), which is the primary inflation measure used by the U.S. Federal Reserve (The Fed) since 2012, making it the more critical indicator for investors to monitor.

With inflation and recession concerns currently top of mind among investors, it is worth highlighting that CPI and GDP are measured off two different base periods. Normally this is not a significant issue, but it is material

coming out of the pandemic and the distortions it created in economic activity.

The BLS measures CPI by comparing the cost of a basket of goods compared to its cost one year earlier. Recent trends in inflation are barely captured in headline numbers. When CPI was reported at 8.5% in July 2022, it was in comparison to July 2021.

Growth Data

Conversely, GDP is measured sequentially. When U.S. first quarter 2022 GDP was reported as -1.6%, that was compared to the fourth quarter of 2021 not the first quarter of 2021; GDP would have been up 3.5% on that basis. Frankly, there is no perfect way to frame economic growth - using year-over-year comparisons reduce the impact of seasonal adjustments, while using sequential data is more current.

Usually seasonal adjustments work well, but they have been problematic during the pandemic. Consider that most of the economic impact of the spread of Omicron was in January and February 2022, as it only just began to gain traction in the U.S. in mid-December 2021. Since the pandemic had a very similar seasonal pattern in January 2021, comparing first quarter 2022 GDP to first quarter 2021 would probably have presented a more accurate picture of how economic activity was trending.

Second quarter GDP was also negative, spurring headlines that the U.S. was in recession by the incorrect belief that one is defined by two consecutive negative quarters of GDP growth. Second quarter GDP was negative due primarily to inventory destocking, likely another distortion from the pandemic, as many companies over-ordered merchandise based on exaggerated demand for goods in 2021. During this period, most consumers shifted discretionary spending from "experiences," like travel and dining out, to "things," like home furnishings.

Compared to the second quarter of 2021, second quarter 2022 GDP grew 1.7% - not robust growth, but far from contraction. In normal times we should focus on sequential GDP growth, but in times when seasonality is massively distorted, comparing versus the prior year is a helpful frame of reference.

Employment Data

Arguably the most closely monitored statistic on the economy is the nonfarm payrolls data produced the first Friday of each month by the BLS. This release often drives large movements in interest rates and markets. At the same time, the U.S. unemployment rate known as U-3 is also released. The Department of Labor produces weekly data on initial jobless claims and continuing claims, which are helpful for monitoring trends in employment.

Alternative Data

There are increasingly better ways for investors to monitor the health and prospects of the economy. The burgeoning field of alternative data attempts to gather more timely insights on statistics than those produced by the BLS, BEA, and numerous other agencies.

Since 2010, ADP, the large publicly traded payroll processor, has produced its own monthly employment report that is published two days before the nonfarm payrolls are released. In addition, executive outplacement firm Challenger, Gray & Christmas has produced a monthly job cut report since 1993. There are also several new websites producing data on layoffs in the tech sector that are reported real-time.

Employment data is far easier to define, measure, and track than that of GDP growth and inflation, each of which are measuring many variables. The Atlanta Fed produces a forecast on GDP using a methodology comparable to the BEA's to provide a frequently updated estimate of current GDP. Meanwhile, the BEA typically produces an advanced estimate a month after the end of a quarter. As of September 1, the GDPNow model is estimating 2.6% growth for the third quarter of 2022. Their model is not perfect, but it is useful and current and should improve over time. In our view, it is the right approach and investors are increasingly taking stock of this measure.

Not to be outdone, the Cleveland Fed produce its own "Nowcast" of inflation for both CPI and PCE, including "core" versions of each where volatile food and energy prices are excluded. Its core PCE forecast 2022 as of September 1 is 4.77%, lower than the backward-looking CPI, but still higher than where it needs to be for some relief from Fed rate hikes.

The private sector is now producing its own real-time estimates of inflation. For example, the website truflation.com gathers 30 data sources to construct its estimate of inflation. Their inflation data last fall seemed prescient, as it signaled an upturn before the BLS did. I expect more websites like this which will provide increased ways for investors to assess inflation trends.

One other way to measure inflation expectations is to directly observe them in the bond market by the difference in yields between conventional Treasuries and inflation-protected Treasuries (TIPs). On an encouraging note, this so-called "breakeven" inflation rate is now only 2.4% annualized for the next two years. This is well below the 4.9% level reached in March 2022, and suggests inflation will be declining significantly over the next two years. That said, the breakeven inflation rate is probably best framed as a useful signal on the direction of inflation as opposed to a precise forecast.

In stark contrast to declining U.S. inflation trends, German two-year breakeven inflation, which started the year at roughly 2%, moved up to 5% in March 2022 (about the same level where the U.S. was) and is now at

an elevated 7%. Inflation trends for Europe have significantly worsened because of the massive increase in electricity costs from: 1) Russia throttling back natural gas shipments which is causing prices to soar far higher than those of oil and 2) record heat and drought conditions that have curtailed hydropower production, as well as curbed nuclear capacity due to insufficient cooling water.

Rate Outlook

Fed Chair Jerome Powell has called out tight labor conditions contributing to inflation and the need to raise rates sufficiently to slow the economy enough to soften the jobs market. Comparisons have been made to the 1970's when we last had high inflation, but that decade, unlike today, had high unemployment.

Paul Volcker became Fed Chair in August 1979 and raised short-term rates from 11% to 20%. This ultimately subdued CPI inflation which went from 15% in 1980 to just below 4% by the mid-1980's. During that time, high interest rates slowed the economy, driving unemployment from 6% in 1980 to 11% in 1982 and back to 7% by the mid-1980s.

The experience of the 1970s contrasted with today highlights an age-old debate amongst economists on the tradeoff between labor and inflation. This is known as the Phillips Curve, named for New Zealand economist William Phillips. On the other side of the debate from Phillips was leading monetarist, Milton Friedman, a noted critic of Fed policy. Friedman believed the Fed should keep money supply growing at a slow, steady pace to curb inflation and not target raising the unemployment rate.

Importantly, we have never entered an economic cycle with the employment picture so positive. Therefore, this period may finally settle the decades-long debate on the Phillips curve, with the optimistic stance that inflation can soften without a material increase in unemployment.

Markets Outlook

One unique challenge of this cycle is the almost universal tightening of central banks, with Japan being the exception. High European and British inflation have forced both the European Central Bank (ECB) and the Bank of England (BoE) to raise rates to their highest levels since before the global financial crisis. By contrast, the ECB did not hike once while the BoE barely moved rates during the Fed's tightening cycle that lasted from late 2015 to 2019.

Pandemic-era inflation seems fixable, as the Fed is no longer massively expanding the monetary base as it did from 2020 to 2021. What seems more intractable is inflation stemming from the costs of climate change that became especially notable this summer. Record heat and droughts have wreaked havoc globally, from

electricity costs to food prices to shipping and transport issues related to drying rivers.

Given the stresses on the environment, the industries with the best growth prospects over the years and even decades ahead will likely be those contributing to energy efficiency, decarbonization, electric vehicles, transition fuels, and electrical infrastructure.

Many of these companies are based in Europe, which emphasized energy efficiency and decarbonization long before other geographies. This is likely the most interesting segment of which to invest in Europe, as companies dependent upon discretionary European consumer spending may feel a pinch as rising energy and electricity costs take an increasing share of household budgets. It certainly represents a change from most long-term trends where consumers have gotten wealthier over time. There will be real costs to bear during the energy transition, especially if climate increasingly impacts food production.

Despite the Fed's tightening, unemployment should stay low because of retiring baby boomers exiting the workforce. This trend is not a bullish outlook for U.S. consumer spending but also not a dire one. The pullback in markets this year has improved valuations as earnings have held up quite well. One subsector that looks particularly interesting is insurers, most of whom do not need robust economic growth to generate earnings growth.

I continue to see a reasonable floor to the market, albeit with limited upside, as it is unrealistic to expect price/earnings multiple expansion during a period of rising short-term rates. Since the last issue of *Global Foresight*, rates on the U.S. 10-year Treasury have remained in a range between 2.75% to 3.5%, expectations of tighter Fed policy have increased roughly 125 basis points, and real yields have increased about 75 basis points. While short-term inflation issues seem to be improving in the U.S., long-term growth challenges of an aging planet remain.

Summary & Conclusion

Headline inflation and Fed rate increases have spooked investors, but some inflation trends are improving, and economic growth appears better than that being reported in official statistics. There are emerging new tools for monitoring economic trends that should gain traction as they are far timelier than the historic ways inflation and growth have been measured.

Concerns about U.S. inflation and growth based on recent data seem overdone, while not enough attention is being paid to inflation trends in Europe. We may continue to have a sideways market around a trading range, supported by valuations and capped by economic uncertainty.

There is not much on the horizon to get enthusiastic about, so I encourage investors to keep an intermediate- to long-term focus. There are numerous

stocks of companies that should produce good returns over the next few years, even if the next few months remain choppy. While GDP, CPI, and rates may weigh on the minds of investors, the stark images of droughts, floods, and fires are painful reminders that one measurement that needs to be prioritized is the health of the planet.

rockco.com/RAM

This information has been prepared by Rockefeller Asset Management, a division of Rockefeller Capital Management and provided solely for informational and educational purposes only. The information and opinions herein should not be construed as a recommendation to buy or sell any securities, to adopt any particular investment strategy, or to constitute accounting, tax, investment or legal advice. The views expressed are those of Rockefeller Asset Management's senior investment professionals as of a particular point in time and are subject to change without notice. The views of Rockefeller Asset Management's senior investment professionals may differ from or conflict with those of other divisions in Rockefeller Capital Management. The information herein does not constitute an offer to sell or a solicitation of an offer to buy interests in any Rockefeller Capital Management investment vehicle or product or service. Although the information and opinions presented herein have been obtained from, or are based on, sources believed to be accurate and reliable, they have not been verified. This material is based on financial, economic, market and other conditions prevailing as of the date of these materials and are subject to change. Forward-looking statements, including those presented here, are inherently uncertain, as future events may differ materially from those contemplated, and past performance is not a guarantee of future performance. Investing involves risk, including risk of loss. No investment strategy can guarantee a profit or avoidance of loss. Although the information provided is carefully reviewed, Rockefeller Capital Management is not responsible for any direct or incidental loss resulting from applying any of the information provided. This material may not be copied, reproduced, or distributed without Rockefeller Capital Management's prior written consent and is not valid without a consultation with a representative of Rockefeller Capital Management.

Any information presented is general in nature and is not intended to provide personal investment advice. The information does not take into account the specific investment objectives, financial situation and particular needs of any specific person who may receive it. Investment decisions should be made based on an investor's individual objectives and circumstances and in consultation with his or her advisors.

Rockefeller Capital Management is the marketing name of Rockefeller Capital Management L.P. and its affiliates. Investment advisory, asset management and fiduciary activities are performed by the following affiliates of Rockefeller Capital Management: Rockefeller & Co. LLC, Rockefeller Trust Company, N.A., The Rockefeller Trust Company (Delaware) and Rockefeller Financial LLC, as the case may be. Rockefeller Asset Management is a division of Rockefeller & Co. LLC. Rockefeller Financial LLC is a broker-dealer and investment adviser dually registered with the U.S. Securities and Exchange Commission (SEC), Member Financial Industry Regulatory Authority (FINRA), Securities Investor Protection Corporation (SIPC). The registrations and memberships above in no way imply that the SEC has endorsed the entities, products or services discussed herein. Additional information is available upon request.

© 2022 Rockefeller Capital Management. All rights reserved. Does not apply to sourced material. Products and services may be provided by various affiliates of Rockefeller Capital Management.