DIAMOND HILL

INVESTED IN THE LONG RUN

Yield Curves, GDP and the Sahm Rule: Navigating Recession Signals for Fixed Income Investors

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When predicting recessions, everyone has their crystal ball that they believe will inform them when a recession is coming and how long it may last. There are the well-known indicators, such as consecutive quarters of negative GDP or an inverted yield curve, as well as the lesser-known (and quite humorous) indicators, such as a surge in lipstick sales (buy more lipstick instead of more expensive beauty products) or men's underwear sales stagnation (former Federal Reserve Chair Alan Greenspan hypothesized that when times are hard, people wait longer to replace worn-out items, especially those hidden from everyday view). It seems you can't peruse a financial news website without seeing headlines such as:

- *This recession indicator is flashing red, but the 'Sahm Rule' creator says 'this time really could be different' (Fortune.com)*
- *Does the recent stock market dive indicate a recession in 2024? (Forbes)*
- *Is the US headed for a recession? Here's what the experts say. (US News & World Report)*

While talking heads and news outlets will debate the arrival of a recession and its duration, the official declaration of a recession comes from the National Bureau of Economic Research (NBER). But first, let's examine some of the measurements traditionally used to predict a recession.

What is the Sahm Rule, and what does it tell us?

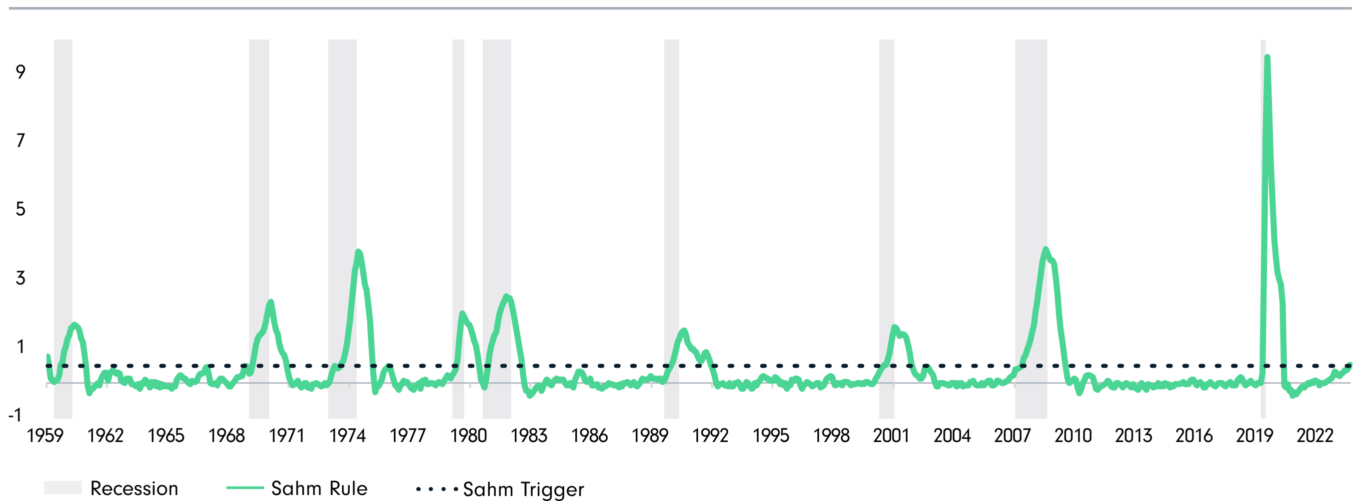
Created by former Federal Reserve economist Claudia Sahm, the Sahm Rule was initially intended to provide a policy tool to help the government determine when to send out stimulus checks. However, Sahm herself has noted that the rule has taken on a life of its own, drawing attention from noted economists and the media. In a 2022 post, Sahm wrote, "I created a monster. The rule is a historical pattern, not a rule of nature."

The rule itself is relatively simple: A recession is underway when the three-month average US unemployment rate rises by 0.50% or more relative to the minimum of the three-month averages from the previous 12 months. Since the Sahm Rule was triggered with the most recent non-farm payroll, Sahm herself has underscored, "Indicators of economic downturns like the Sahm rule are empirical regularities from the past, not laws of nature."

Jerome Powell responded similarly when asked about the triggering of the Sahm rule, stating, "A statistical regularity is what I call it. It's not an economic rule, where it's telling you something must happen." Sahm has continually argued that her indicator could be a false positive due to pandemic-related economic distortions, such as the impact of shifts in the labor supply caused by immigration and the pandemic.

The bottom line is that, like many other rules attempting to predict recessions, the Sahm rule must be taken with a large grain of salt.

Exhibit 1 — Sahm Rule and Recessions (%)



Source: Federal Reserve Economic Data (FRED).

But what about two consecutive quarters of negative GDP, the old standard rule?

Two quarters of declining GDP is a rule of thumb that does not officially define a recession. The National Bureau of Economic Research (NBER) Business-Cycle Dating Committee, which certifies and dates US business cycles, defines a recession as "a significant decline in economic activity that is spread across the economy and that lasts more than a few months."

The committee has used a range of monthly indicators to determine the peaks and subsequent troughs in economic activity. A recession is the period between the peak and the bottom of a subsequent downturn. There is no fixed rule for weighting these indicators, and it often takes the committee several months or years to determine a business-cycle peak or trough.

Considering that the NBER is the final determinant of whether the US economy has experienced or is amid a recession, how does the GDP rule measure up?

Recessions without consecutive negative quarterly GDP?

In 2001, the NBER-designated recession did not include two consecutive quarters of decline in real GDP. However, it did include two out of three quarters reporting negative GDP as Q1 and Q3 printed negative growth (-1.3% and -1.6%, respectively) that year with Q2 growth of 2.5%. In late 2007 and early 2008, the NBER noted that the global financial crisis-fueled recession began in Q4 2007, despite positive GDP (2.5%) in that quarter, negative GDP in Q1 2008 (-1.7%) and positive GDP in Q2 2008 (2.4%).

Are there times when NBER has not declared two consecutive quarters of negative GDP a recession?

- In 1947, GDP was down in Q2 and Q3 of that year (-1.1% and -0.8%, respectively). Still, the NBER didn't declare a recession had occurred, most likely due to technical issues regarding inventory adjustment and post-war runaway inflation (peaked at 19% in April 1947), as a shortage in production capacity led to a surge in inflation (sound familiar?). *Historical note: The NBER declared a recession beginning in Q4 1948 and lasting until Q3 1949.*

- The early days of the COVID pandemic resulted in back-to-back negative GDP prints (-5.3% Q1 2020, -28.0% Q2 2020), and the NBER declared the unique instance of a single quarter of recession in Q2 2020.

- More recently, Q1 and Q2 of 2022 printed negative GDP numbers (-2.0% and -0.6%, respectively), and, as of yet, the NBER has not reported a recession over that period or any time since the early days of COVID.

So, much like the Sahm rule, consecutive quarters of negative GDP is not perfect in determining a recession, but it can provide some historical context.

And doesn't the inversion of the yield curve portend recessions?

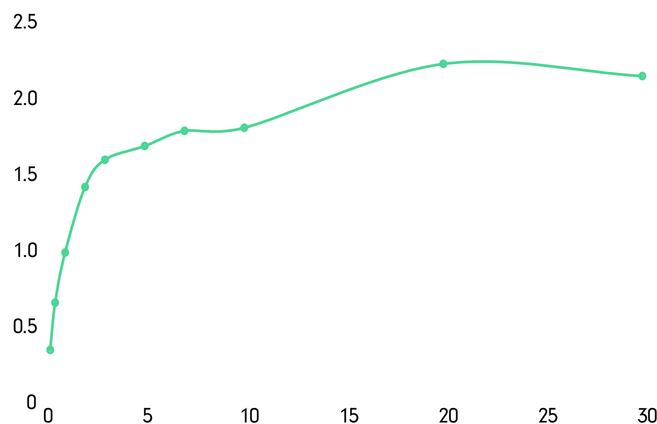
The yield curve represents the interest rate on US Treasury debt at various times. It traditionally slopes upward as investors demand extra compensation for making long-term loans. Three main inputs can impact the slope of the curve: Federal Reserve policy expectations, inflation expectations, and the term premium.

The Federal Reserve influences short-term interest rates by managing the rate banks lend to each other overnight. This rate serves as a significant benchmark for interest rates across the economy. The yield curve reflects market expectations about where the Fed may be taking rates in the future. Most recently, uncertainty about the future path of rates from the Federal Reserve (Will they cut? When will they cut? How much will they cut?) has resulted in substantial volatility as the market has tried to determine the Fed's next actions and when it will occur.

The yield curve shifted higher in 2022 as the Fed began to lift interest rates from zero in the most aggressive tightening cycle in history. The first step was in March 2022, and things quickly ramped up as inflation remained red hot.

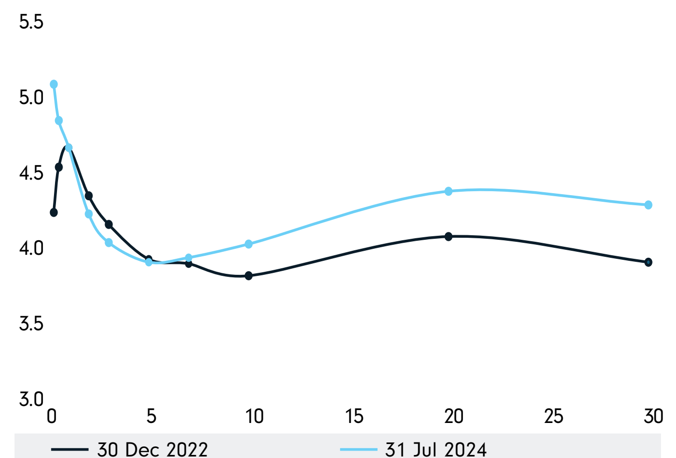
As illustrated in Exhibit 2, the yield curve before the Fed lift-off was pretty standard. Exhibit 3 illustrates the massive shift that occurred during and after the most recent tightening cycle, which includes a prolonged period of inversion. Does this prolonged (and current) inversion between the 10-year US Treasury and the 2-year US Treasury imply that we are in a recession? Not yet, according to the NBER, despite some market participants' insistence that an inverted curve predicts a recession.

Exhibit 2 — Yield Curve Prior to Tightening Cycle (28 Feb 2022)



Source: FRED.

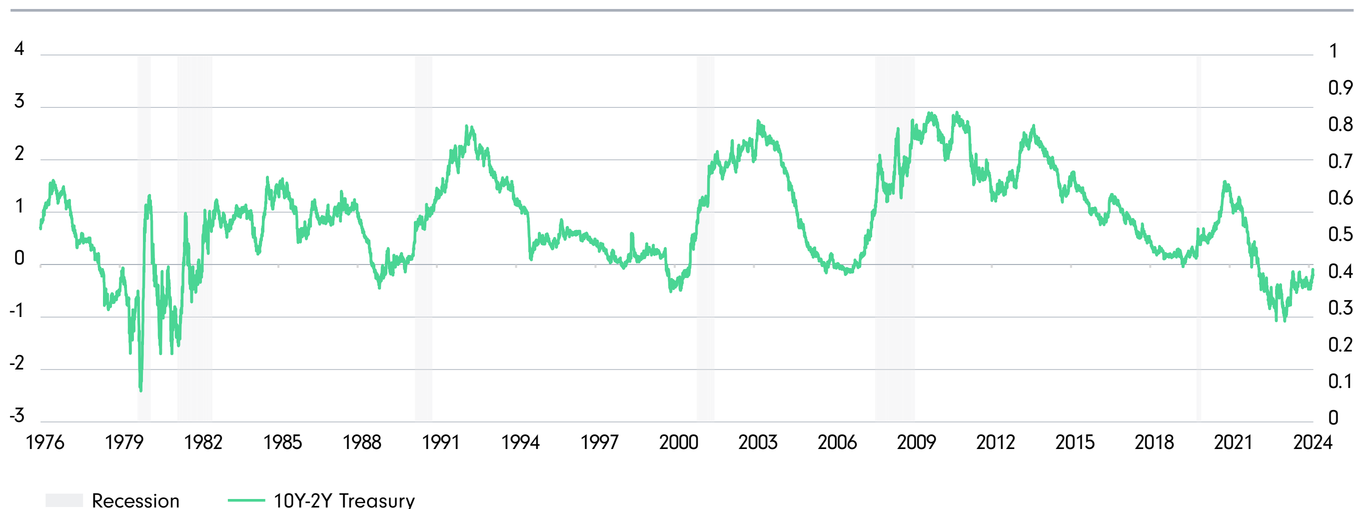
Exhibit 3 — Yield Curve During and After Tightening Cycle



Source: FRED.

Exhibit 4 illustrates the relationship of yield curve inversions between the 10-year US Treasury and the 2-year US Treasury and recessions. Do inversions precede recessions? In most cases, yes, but not always. The timing between an inversion's beginning and the identification of a recession varies throughout history. This most recent curve inversion began on 2 July 2022*, and a recession has yet to be declared.

Exhibit 4 — Yield Curve Inversions and Recessions



Source: FRED. *Technically, the 10Y/2Y inversion first occurred on 1 April 2022 but only lasted for two days, so we are using 2 July 2022 as the starting point.

A glance at the time lapse between inversion and recession in Exhibit 5 provides some context for the rarity of the current situation. As with the Sahm Rule and two consecutive periods of negative GDP growth, the yield curve inversion indication, while somewhat reliable in a backward-looking manner, is not an end-all-be-all recession indicator. Only the NBER can declare a recession and remains the official arbiter of recession declaration.

Exhibit 5 — Time Lapse

	Initial Inversion to Recession	
Recession	**Market Days**	**Calendar Days**
1990	102	146
2001	293	425
2008	167	244
2020	127	188
Average	**172**	**251**
Current Period*	**519**	**756**

Source: FRED. *2 July 2022 to Present.

What exactly is the NBER, and what do they do?

The National Bureau of Economic Research (NBER) was founded in 1920 in response to heated Progressive-era controversies over income distribution. With the support of a group of business and labor leaders and university-based economists committed to uncovering and disseminating essential facts about the economy of the United States, the NBER was created to address this information gap. To this day, NBER research is bound by a restriction that the founders imposed: studies may present data and research findings but may not make policy recommendations or normative statements about policy.

The NBER's Business Cycle Dating Committee determines whether the economy has slipped into recession. It is made up of eight economists selected by the NBER president. The committee is run by a private non-profit group (not the federal government and, thus, hopefully, not susceptible to political manipulation) and meets on an irregular, non-publicized basis. In fact, the committee can spend long periods without a meeting if there is nothing pertinent to address.

The Business Cycle Dating Committee looks at some key economic variables, none of which is GDP. Specifically, nonfarm payrolls, real personal income less payments to governments, donations or fees/fines, real personal consumption, real manufacturing and trade sales, household employment (captures in-home employees), and the Index of Industrial Production, all statistics that are readily available at the Federal Reserve Economic Data (FRED) website, an invaluable tool. It should be noted that the committee stresses on its website that "*there is no fixed rule about what measures contribute information to the process or how they are weighted in our decisions.*"

Unlike financial news outlets or talking heads, the NBER has the luxury of labeling a recession (or expansion) well after it has begun, sometimes even after it has concluded. Their determination of the trough date (economic activity reaches a low point and begins to rise again for a sustained period) in April 2020 occurred 15 months after that in July 2021. Earlier determinations of a shift in economic cycles have taken between 4 and 21 months. There is no fixed timing rule. They wait long enough so that the existence of a peak or trough is not in doubt and they can assign an accurate peak or trough date.

So, are we in a recession or not?

Rather than looking to various methods of measurement that can be somewhat nebulous, a better measure of the current economic situation is awareness. My father worked in commercial real estate, focused on building malls. He always told me it's not just the crowds at the malls but whether or not those people have any shopping bags indicating purchases. A modern take on that viewpoint would be to consider the number of Amazon/UPS/Fed Ex trucks crisscrossing your neighborhood to get a feel for how the average consumer is doing.

And one must consider various socioeconomic factors as well. For lower-income families that have navigated through the post-pandemic economy with the assistance of stimulus checks, the impact of higher inflation can make it feel like one is already knee-deep in a recession. In contrast, some tough choices may have to be made for middle- to upper-income families, but nothing that interrupts the day-to-day life. Look around you while you're out and about. Restaurants are packed, airports are crowded, and financial markets are getting quiet, per usual, in the back half of August as summer vacations ramp up.

Most importantly, as investors, it's not our job to determine whether the economy is officially in a recession. We must analyze securities and the underlying loans associated with those securities to understand the risks and opportunities they present. Key to the underwriting process is putting the securities through stress testing scenarios that replicate prior recessions to determine how we believe the underlying borrowers will hold up if we experience something like 2008-2009's double-digit unemployment and subsequent economic pressures. Having a deep understanding of what we own on behalf of our clients and how those securities should perform in a variety of environments is more important than being able to report that either a recession has begun or ended.

The views expressed are those of Diamond Hill as of August 2024 and are subject to change without notice. These opinions are not intended to be a forecast of future events, a guarantee of future results or investment advice. Investing involves risk, including the possible loss of principal. Past performance is not a guarantee of future results.