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How are Interest Rates Influenced?

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Overview

This fact sheet details economic indicators that influence interest rates. While there is a wealth of economic data used, indicators such as the Consumer Price Index (CPI) and unemployment are discussed detailing their impact on the Federal Reserve's (Fed) decision to adjust the federal funds rate. In March of 2022, the Federal Open Market Committee (FOMC) began raising interest rates to curb inflation. Since then, the FOMC has enacted 11 interest rate hikes accounting for a 525 basis point (5.25%) increase since 2022 with the possibility for more hikes in 2023. We discuss how these factors influence monetary policy decisions and what current economic conditions imply for agricultural lending in the latter half of 2023.

The Federal Funds Rate

The effective federal funds rate, also referred to as the central U.S. interest rate, is the cost of borrowing money between financial institutions (FRED, 2023). This rate indirectly influences the cost of other interest rates such as agricultural lending and mortgage rates. The FOMC meets eight times a year to update the target federal funds rate, which is a rate the Fed wants the effective federal funds rate to reach depending on the current economic climate (FRB, 2023). The FOMC influences the effective rate by manipulating available liquidity in the financial sector. Liquidity in this case refers to a bank's cash surplus (FRED, 2023). In terms of supply and demand, if excess cash is limited, then the cost to borrow available cash increases and borrowing is deterred. The Fed utilizes these tools to slow the economy in times of rising inflation or to reinvigorate economic activity by lowering interest rates. The FOMC met on July 26, 2023, and raised the effective federal funds rate again by 25 basis points for a target rate of 5.25% - 5.50%.

Consumer Price Index (CPI), Inflation, and the Unemployment Rate

Based on the latest reports released by the Bureau of Labor Statistics, the consumer price index (CPI) rose only 0.2% in June 2023. The current CPI, or the measure of the change in prices in the marketplace by

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consumers, is at 3% before a seasonal adjustment – the smallest 12-month increase since March 2021. In other words, the CPI is also a popular measure of inflation ; when seeing headlines about inflation, the CPI is often the referenced rate. Food[1], energy, vehicle, medical, and shelter costs are some of the measures included in the estimation of CPI, or the rate of inflation. The low rise in the CPI for June could give the Fed some breathing room as it aims to slow the economy and stop inflation; however, core inflation is still above the Fed's target of 2% (FRB, 2023).

Another implication to the future of FOMC decisions is the unemployment rate. The unemployment rate represents the number of unemployed as a percentage of the available labor force (FRED, 2023). Similarly, the Fed utilizes this rate as an indicator for the direction of FOMC operations. The unique situation of the current U.S. economy is the current unemployment rate. June 2023 reports indicated an unemployment rate of 3.6% which has been steady since February 2022 (FRED, 2023). Comparing this rate to the recession of 2008 when unemployment rose to 9% could indicate the U.S. economy is still growing even with interest rates hikes. Based on the unemployment and wage rates alone, the Fed would continue to raise rates to slow economic growth in the employment sector. Essentially, it boils down to indicators (CPI and unemployment) providing opposite insight to the economy; where conventionally interest rate hikes would cool the labor market, the opposite has occurred in 2023. This leaves the Fed conflicted on what steps they should take to prevent a recession that has been looming over the U.S. economy.

Agricultural Lending in 2023

So, what do interest rates mean to an Arkansas producer? According to the Kansas City Fed (2023), operating loan rates are typically higher than the effective federal funds rate. A survey of lending terms to farmers for the tenth financial district showed that, on

[1] As a sidenote, energy and food costs are historically volatile and can be excluded from the CPI for a different estimation but is not discussed here.

Table 1. Example Corn Production Costs

Cost Category	Dollar Per Acre ($)
Seed	$104.00
Fertilizer	$303.00
Pesticides	$87.85
Fuel (Irrigation & Equipment)	$24.59
Q2 2023 Interest (8.03%)	$41.74
Q2 2022 Interest (3.66%)	$19.02

Note: This is a simplified corn budget. 2023 and 2022 rates are based on fixed operating loan rates.

average, a producer paid an 8.03% fixed interest rate for operating loans in Q2 2023; compare that to the current effective federal funds rate of 5.08% (Fred, 2023). Agricultural lending has become increasingly expensive, combined with historically high production costs creating an even more financially stressed agricultural sector. Table 1 shows a simplified corn budget and is used to give context to the current economic conditions faced by a corn producer in the Midsouth.

Special attention should be given to the interest costs of Q2 2022 and 2023 (see Table 1). Interest per acre is estimated by totaling all per acre production costs and multiplying it by the prevailing interest rate ($519.74*0.0803 = $41.74). In just a year's time, the interest rate on operating loans has more than doubled. A producer is now faced with paying $22.72 per acre more in interest alone in 2023 than if they had taken out the exact same loan in 2022.

Is There Light at the End of the Tunnel?

There soon could be an end to the seemingly never-ending interest rate hikes. Currently the Fed is balancing slowing the economy just enough to curb inflation and not easing the slowing too much and forcing a hard-landing recession as was the case in 1980 where monetary policy was loosened prematurely and forced two back-to-back recessions (Greenspan, 2004). The July 26, 2023, FOMC meeting raised the effective rate again. However, this increase did not have a tumultuous impact on the economy as many analysts and traders expected the

hike to incur. Economic growth under these conditions is above the Fed's trend rate of 1.8%. With this information, Jerome Powell, chair of the Federal Reserve, has insinuated more rate hikes at the September 2023 FOMC meeting. Decisions made at the September meeting will impact the Fed's future choices to raise rates through 2023. If inflation continues to decrease and underlying economic activity slows, then there is evidence that interest rate hikes will halt at the end of 2023.

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