Texas Municipal League – PFIA Workshop

Understanding Economic Indicators

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PFIA Training

PFIA Section.2256.008. INVESTMENT TRAINING; LOCAL GOVERNMENTS

Investment training must include education in investment controls, security risks, strategy risks, market risks, diversification of investment portfolio, and compliance with this chapter.

Understanding Economic Indicators - can help provide us with insights to the various market risks impacting the U.S. economy and influencing the direction of interest rates.

Key Economic Issues Today

- Inflationary data continues to rise further above the Fed's target rate of 2%
- Energy prices have remained elevated since the War in Iran started at the end of February
- Employment remains steady but rising fears that AI may structurally impact future job growth
- Unemployment has risen since the post-Covid lows
- Record high U.S. gross national debt
- Inflation not going away anytime soon

Key Questions

- What investment returns can municipalities expect to earn over the next few years?
- Will interest rates rise or fall?
- What is the outlook for inflation?
- What is the state of the economy?

Federal Reserve's Dual Mandate

The Fed's dual mandate is established by Congress and guides its monetary policy

Price Stability – keep inflation low and stable	Maximum Employment without triggering inflation

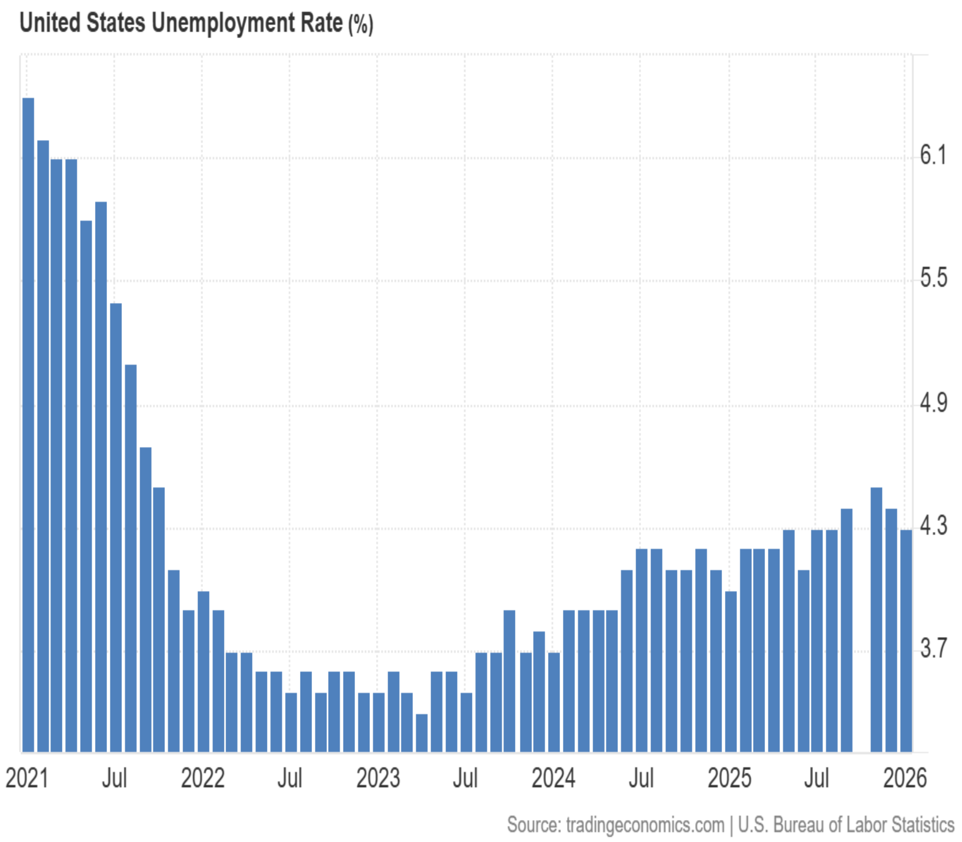
Fed's target is 2% annual inflation using the Core PCE Index

Price Stability helps reduce uncertainty for business and consumers

The Fed/FOMC tracks a broad range of economic indicators via reports on inflation, employment, wage growth, manufacturing, housing, economic activity and other financial conditions to determine the direction of U.S. monetary policy

What Is The Fed Looking At and For?

- US Economic conditions
- Unemployment rising or falling?
- Labor market weaker or stronger?
- GDP growth
- Wage growth outpacing inflation?
- Dual mandate set by Congress
  - Price stability – inflation
  - Maximum employment



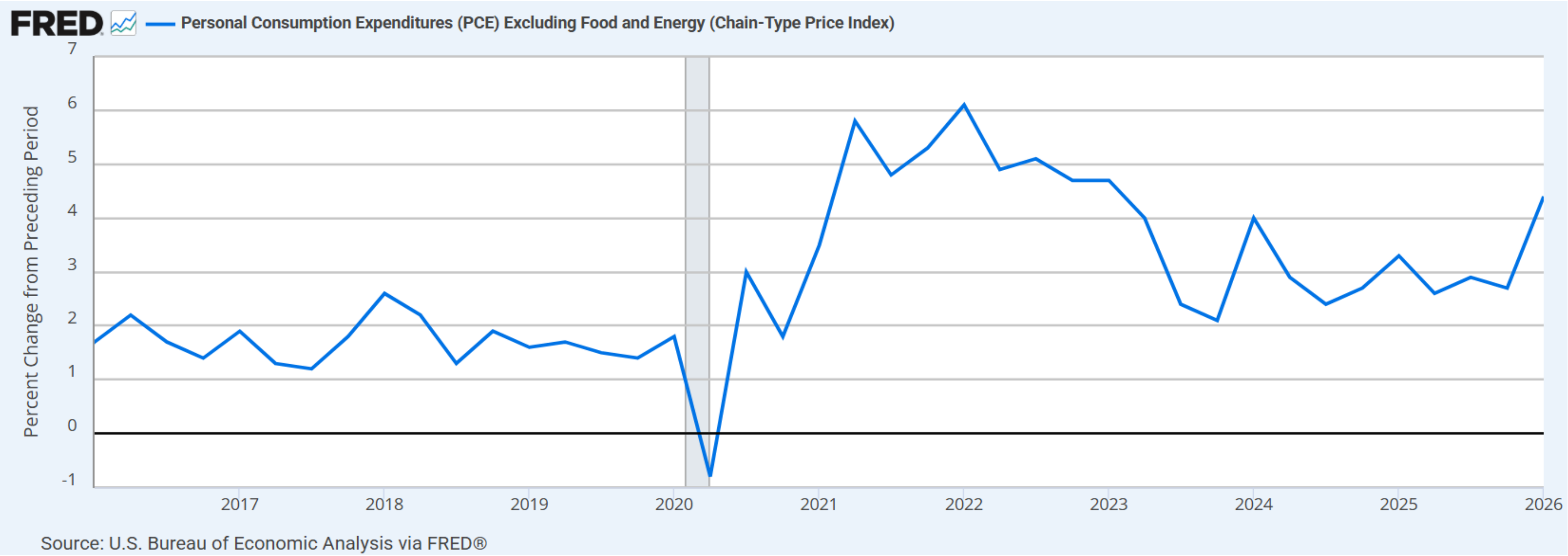
General Economics 101

- **Economics is the study of supply and demand**
- **Inflation vs. deflation is dependent on supply and demand**
- **If demand exceeds supply, prices will rise, and inflation is a risk.**
- **If supply (or capacity to provide supply) exceeds demand, prices will fall, and deflation is a risk.**

Major Economic Indicators

PCE - Personal Consumption Expenditures	CPI - Consumer Price Index	PPI – Producer Price Index
Nonfarm Payrolls	Unemployment Rate	GDP – Gross Domestic Product
Retail Sales	Consumer Confidence Index	ISM Manufacturing PMI (Purchasing Managers Index)
	Housing Starts	

Core PCE - Personal Consumption Expenditures



- Core PCE, which excludes volatile food and energy prices, is one of the Fed's preferred indicators to gauge inflation because it considers these additional factors:
  - Reflects broader underlying inflation trends
  - Adjusts for changes in consumer behavior (substitution effect)
  - Includes both urban and rural spending
- The Core PCE was 4.4% for Q1 2026 which was the highest quarterly increase since 2023
- The Core PCE rose 3.4% YOY in May versus a 3.3% YOY increase in April, continuing to climb further above the Fed's 2% Target rate

CPI - Consumer Price Index

U.S. consumer prices continued higher in May as global fuel and food costs are feeling the effects from the War in Iran with daily ship transits through the Strait of Hormuz plummeting about 83% from an average of 60 commercial ships per day down to 10 or less per day

Headline CPI for May was the highest in three years, jumping 4.2% year-over-year (YOY) and 0.5% month-over-month (MOM) versus a 3.8% YOY and 0.6% MOM increase for April

Core CPI rose 0.2% MOM and 2.9% YOY in May up from 2.8% reported in April and 2.6% reported in March

- The University of Michigan Consumer Sentiment Index hit a new record low of 44.8 in the May report, dropping 10% from the April final revised reading of 49.8 as consumer confidence is dragged lower by higher gas and food prices

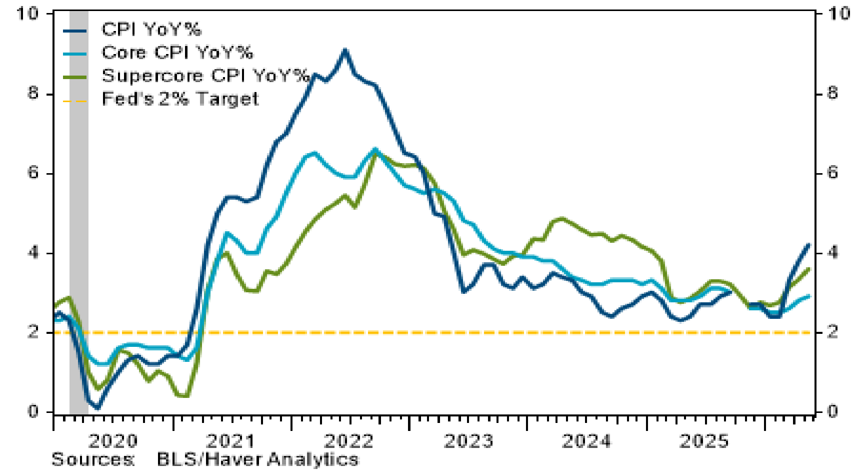
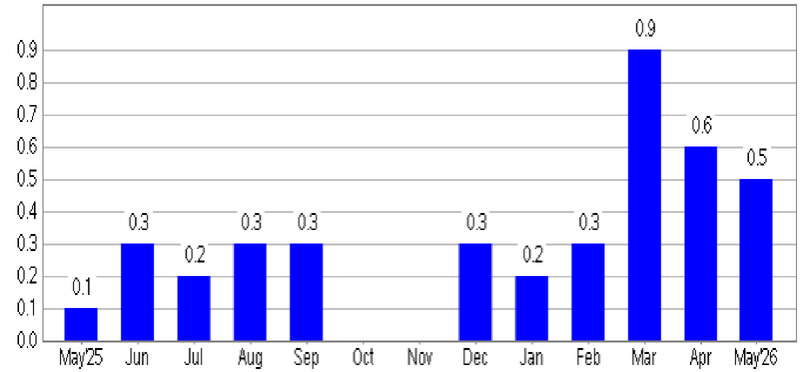
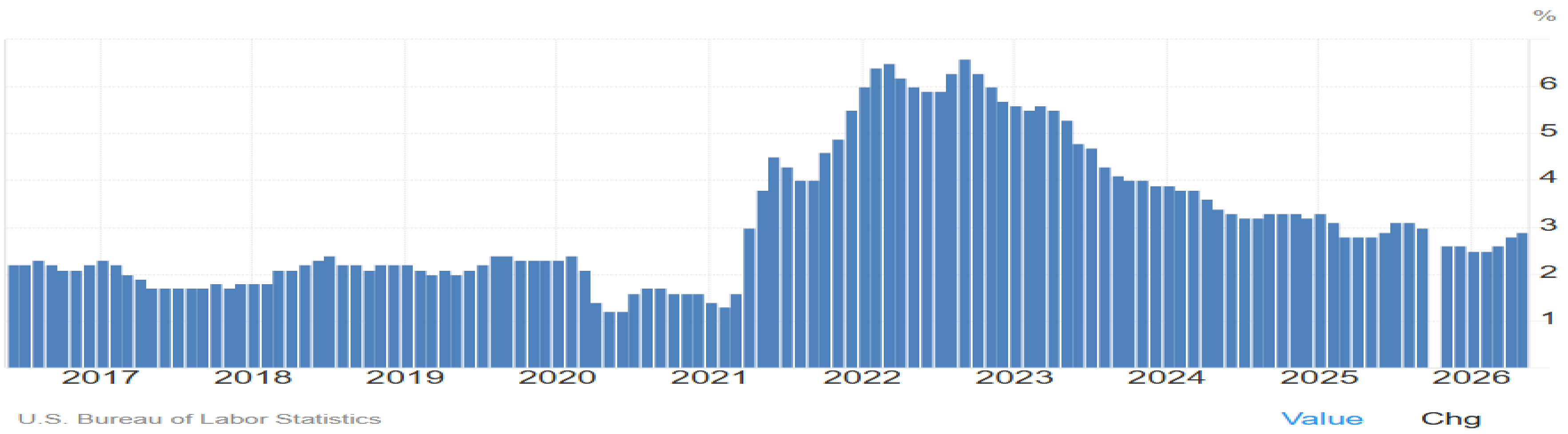


Chart 1. One-month percent change in CPI for All Urban Consumers (CPI-U), seasonally adjusted, May 2025 - May 2026
Percent change



NOTE: The Oct and Nov 2025 data values are not available due to the 2025 lapse in appropriations.

Core CPI - Consumer Price Index



- Core CPI is also a preferred inflation gauge of the Federal Reserve Bank
- Also excludes food and energy prices
  - Reduces commodities volatility & more stable indicator of price trends
  - Tracks changes for a fixed basket of goods and services (excludes substitution)
- Monetary Policy
  - Used as a gauge by Central Banks (including the Fed)
  - Used for setting interest rates and controlling inflation
- Economic Analysis
  - Economists use Core CPI to determine if inflation is driven by temporary factors or if it’s becoming entrenched
  - Core CPI offers clear view for economic forecasting, planning and developing investment strategies

PPI - Producer Price Index

The Producer Price Index measures the average change over time in the selling prices received by domestic producers for their goods and services

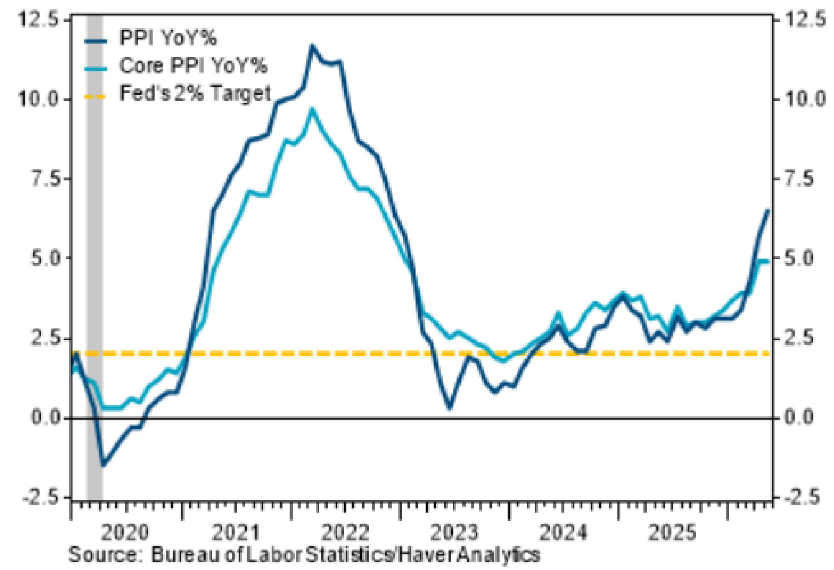
The PPI report is published monthly by the U.S. Bureau of Labor Statistics (BLS) and it acts a leading indicator for inflation by tracking wholesale price changes before they reach the consumer

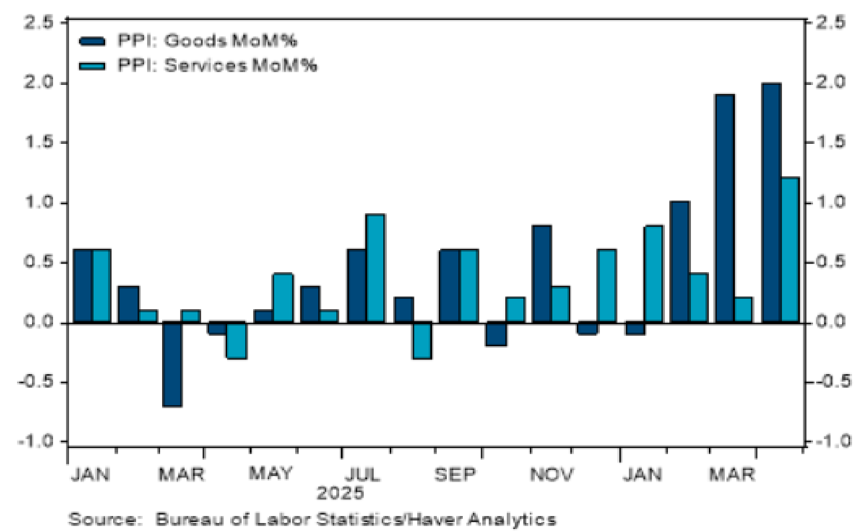
Year-over-year, the core PPI climbed 5.2% in April, again surpassing the expected 4.3% rise expected and marking the largest increase since December 2022

Producer prices climbed 6.0% YOY in April, more than the 4.8% gain expected and marking the largest increase since December 2022

Goods costs jumped 2.0% in April, marking the largest monthly gain since June 2022 and following a 1.9% increase in May

Services costs rose 1.2% at the start of the second quarter, the largest increase in more than four years





Nonfarm Payrolls – Job Growth

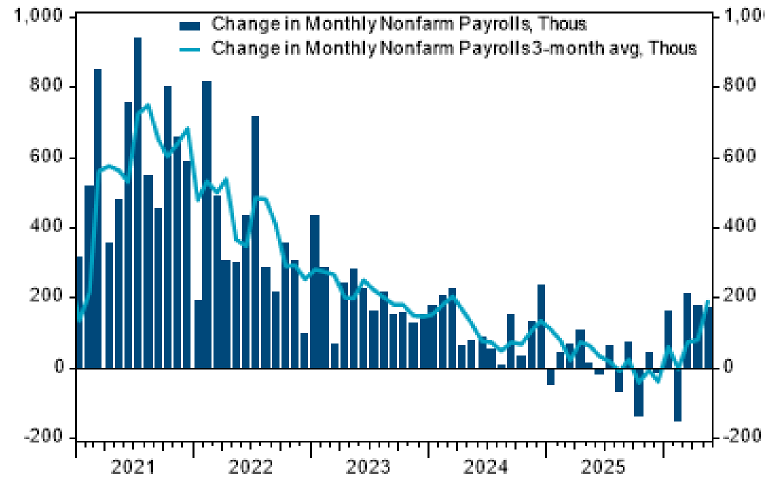
The Nonfarm Payrolls report in May increased by 172,000 easily beating the expectations for a gain of 88,000 new jobs marking the strongest pace of positive job creation since March 2024

Payroll reports for April were revised higher to 172,000 from 115,000 versus the 65,000 forecast and March payrolls were revised again up to 214,000 from the previous higher revision of 185,000 new jobs

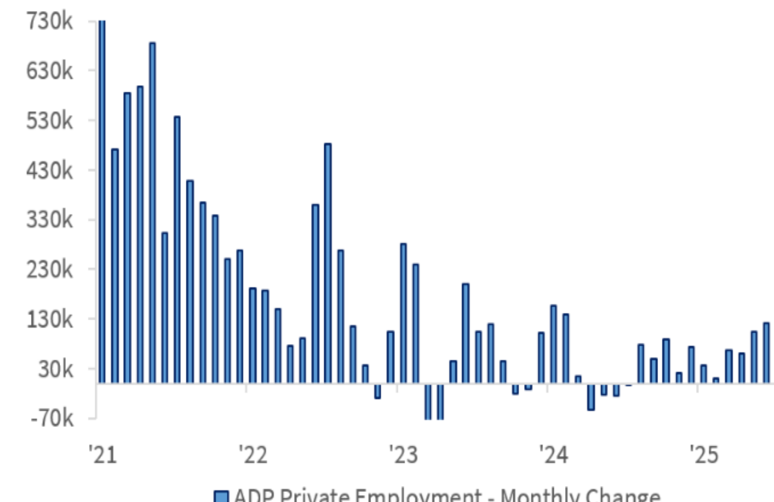
The continued positive job growth during the past three months indicates the U.S economy is doing better than expected, which is shifting the Fed's focus towards the rising inflationary data caused by the War in Iran, as crude oil and gas prices remain elevated

The ADP Employment survey showed that private employment increased by a less than expected 98,000 during the month of June after increasing by 122,000 in May

Private job creation in June remained strong and was broad based by type of industry as well as by establishment size, although private employment came below expectations, the pace of job creation in the private sector remained above last year's pace

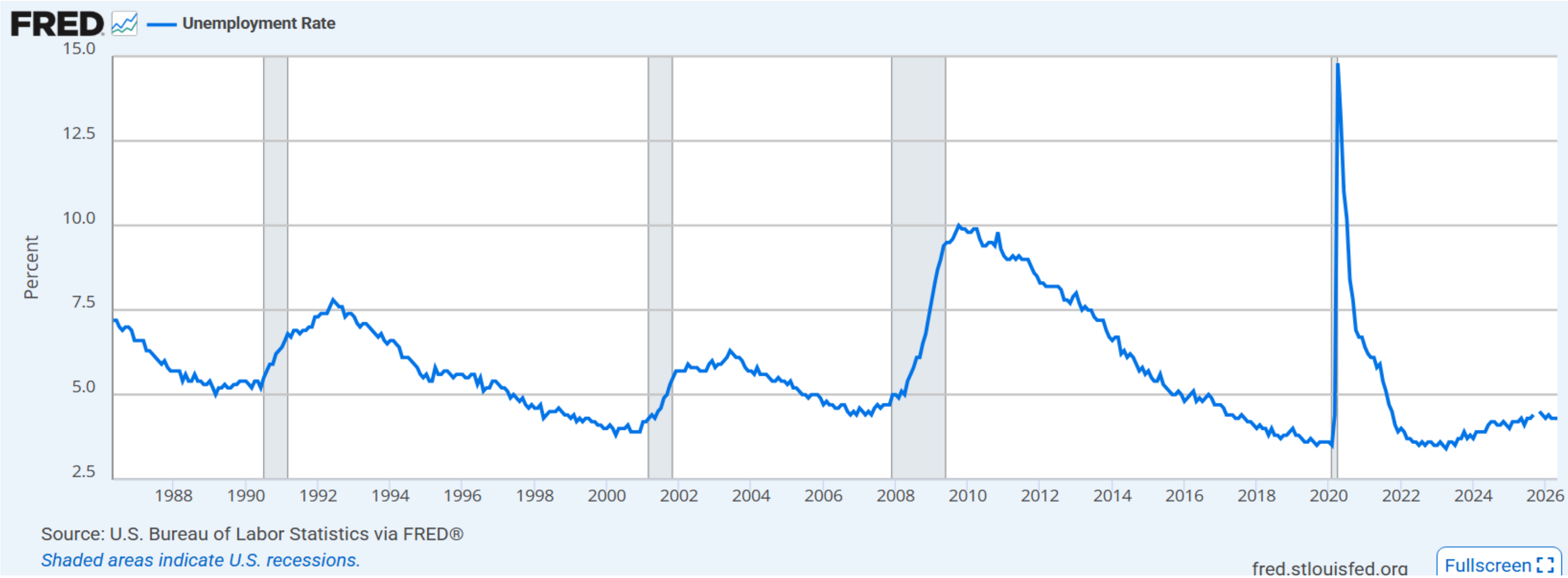


Source: Bureau of Labor Statistics/Haver Analytics



Source: FactSet

Unemployment Rates



- Unemployment rates have been creeping higher since 2023 but remain low by historical measures
- The unemployment rate has been steady at 4.3% for May, April and March, down from 4.4% in February and 4.3% in January, down from 4.4% in December and 4.5% in November which are the highest levels since October 2021
- Unemployment rates stayed below 4% for 27 consecutive months from January 2022 to April 2024 reaching a low of 3.4%
- According to the FRB of St. Louis, the FOMC expects a highly stable labor market and predicts that the unemployment rate will average 4.3% through the end of year

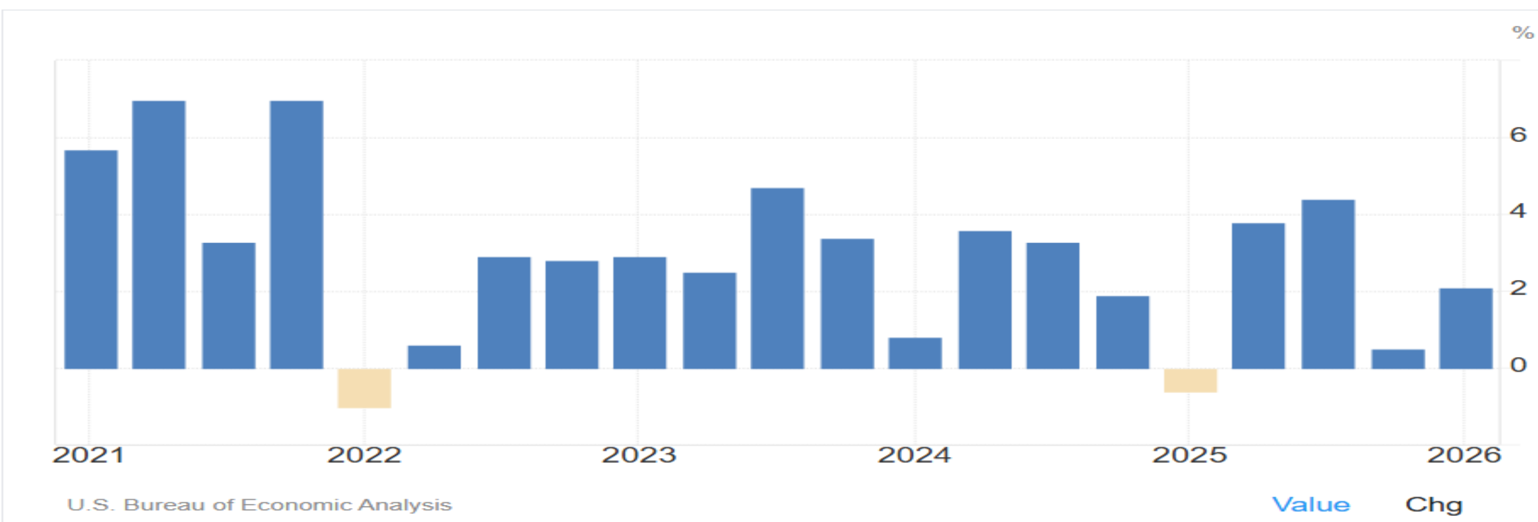
GDP Growth Remains Solid

U.S. real GDP (Gross Domestic Product) grew 2.1% in Q1 2026 reflecting steady consumer spending, exports and investment

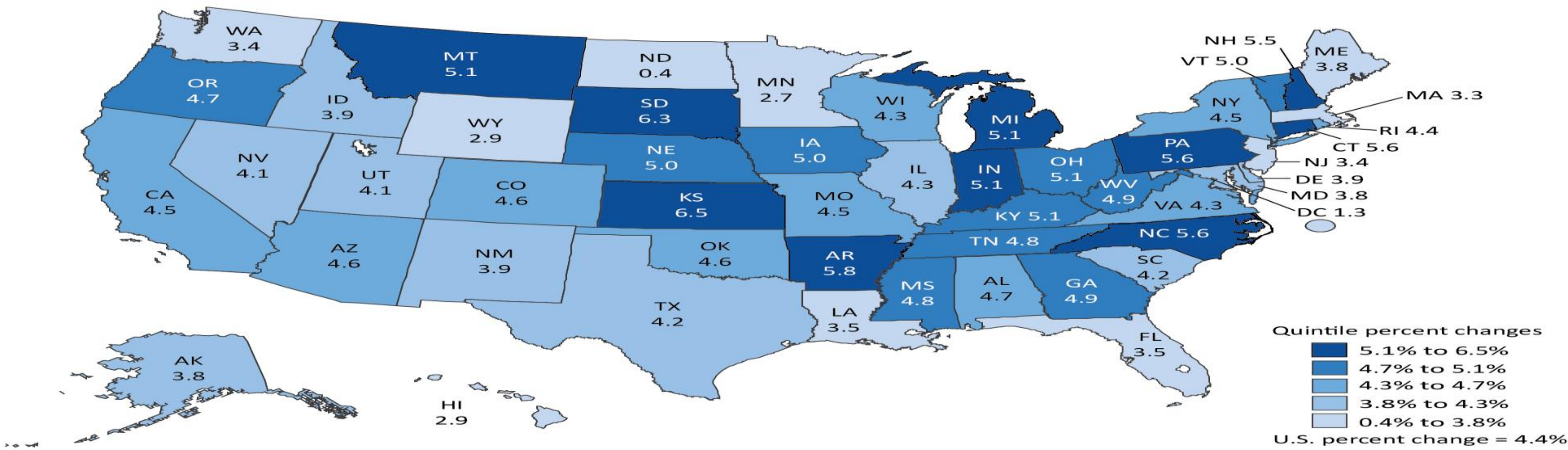
GDP is a measure reflecting total goods and services produced by the U.S.

GDP has been positive for the past 4 quarters

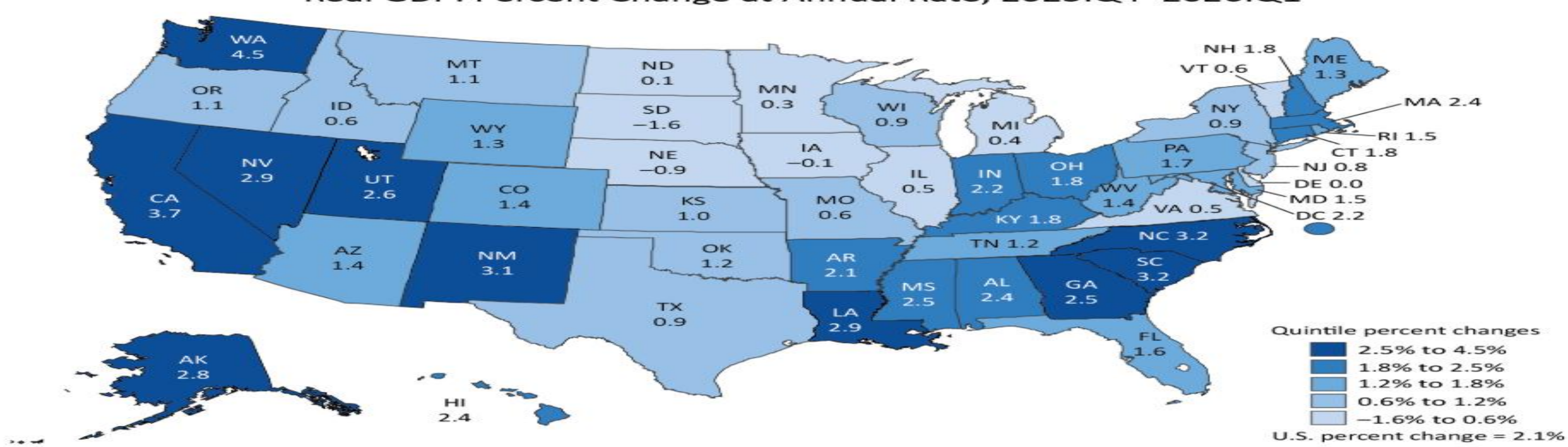
GDP growth is forecasted to be in the 2.0% to 2.5% range in 2026



GDP Growth by State



GDP Gross domestic product
U.S. Bureau of Economic Analysis



GDP Gross domestic product
U.S. Bureau of Economic Analysis

Retail Sales - Showing Strength

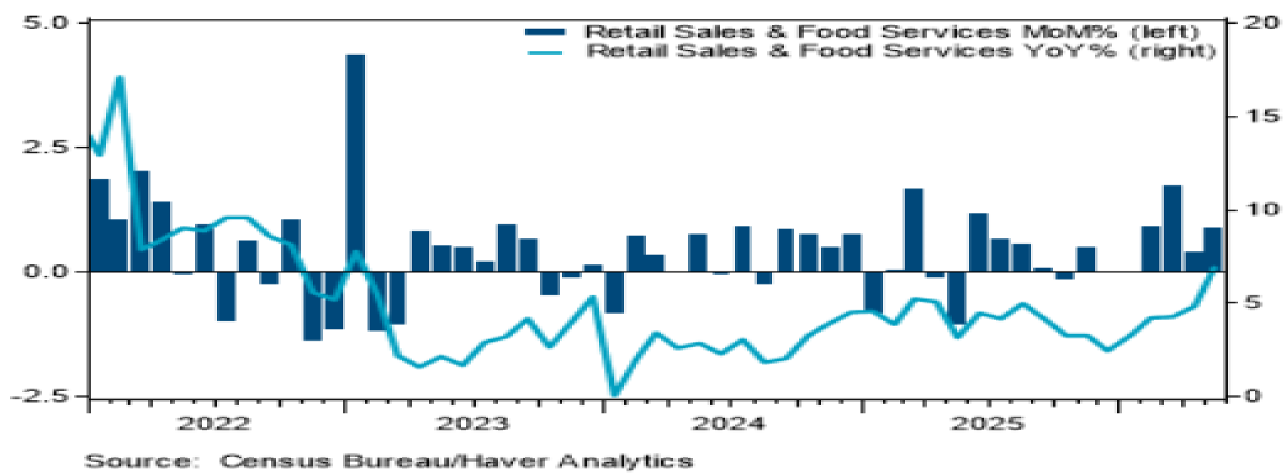
U.S. retail sales rose 0.9% in May, surpassing the 0.6% rise expected and marking the largest monthly gain since March

Year-over-year (YOY) retail sales jumped 6.9% in May, marking the strongest pace since January 2023

Car sales rose 1.2% in May following a 0.9% decrease the month prior, while gasoline station sales jumped 3.4% following a 2.4% gain in April

Excluding autos, retail sales climbed 0.8% in May and rose 7.5% over the past 12 months

Excluding autos *and* gasoline, retail sales increased 0.5% in May and rose 5.6% year-over-year.



ISM Manufacturing Index (PMI)

The ISM Manufacturing Index is released monthly by the Institute For Supply Management and it's also known as the PMI (Purchasing Managers Index) which measures the economic health of the U.S. manufacturing sector

A reading above 50% indicates expansion in the economy and below 50% indicates contraction

The PMI rose 53.3% in June versus 54% in May and up from 52.7% in April

It was the sixth consecutive ISM Manufacturing Index report greater than 50% indicating the U.S. economy is back in expansion mode with the strongest readings in 4 years

Source: FactSet

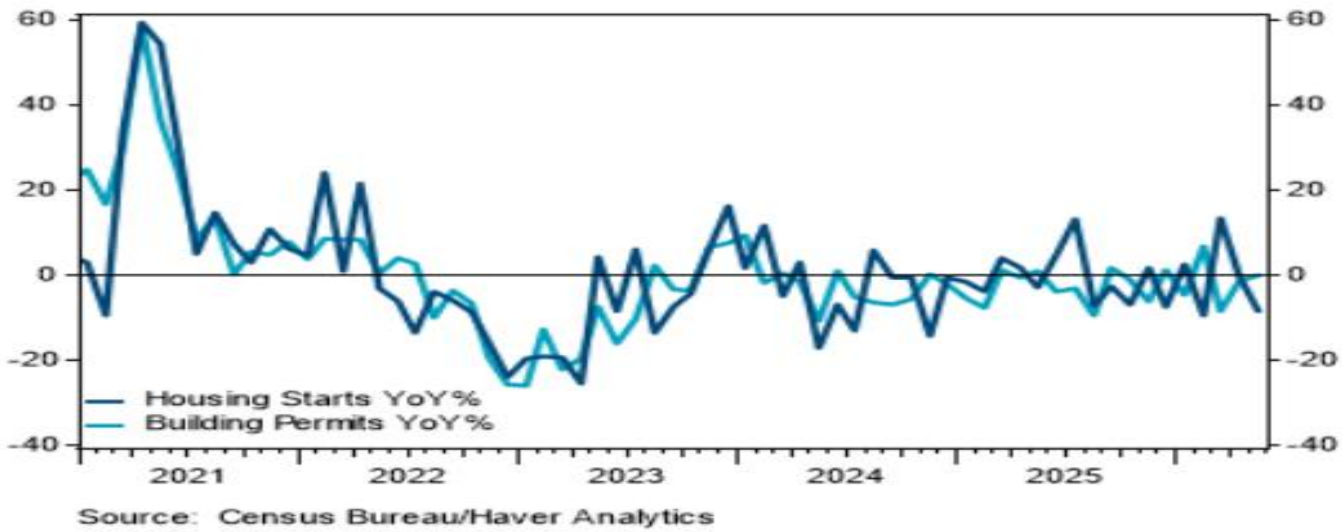
Housing Starts Dropping Sharply

Housing starts plunged 15.4% in May, well surpassing the 2.0% decline expected and following a downwardly revised 8.5% drop in April

The annual pace fell from 1.39M to 1.18M, the lowest level in six years

Single family starts fell 1.9% and multi-family starts plunged 40.2% in May following a 2.4% decline the month prior

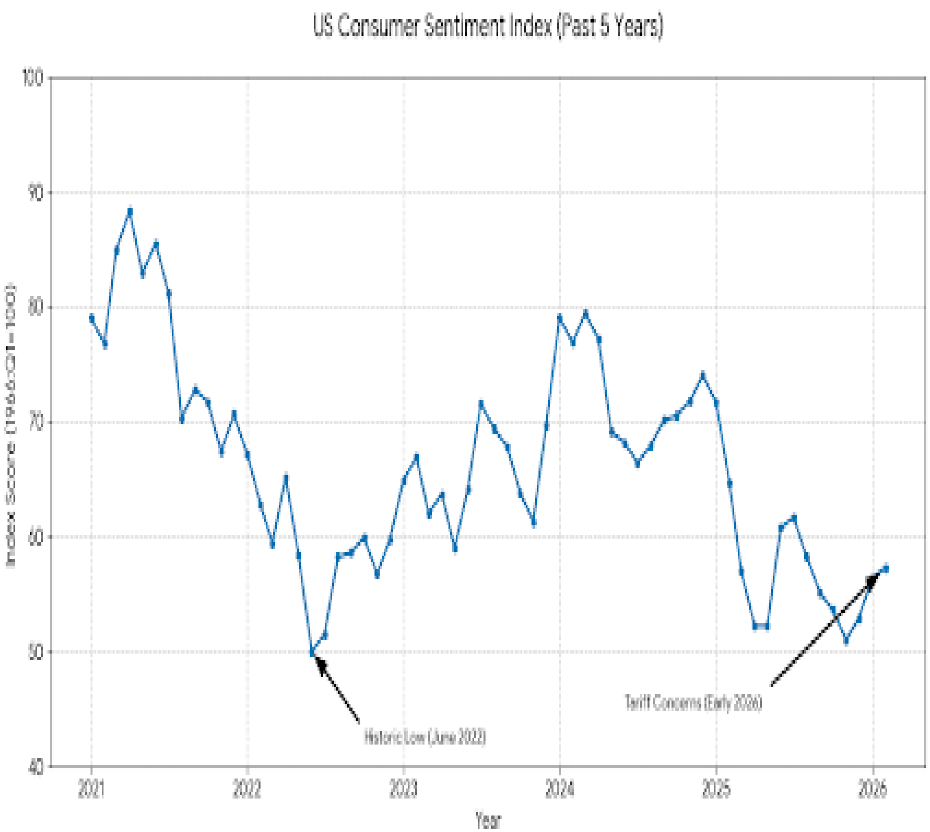
Housing starts fell 8.7% YOY in May, marking the second consecutive annual decline

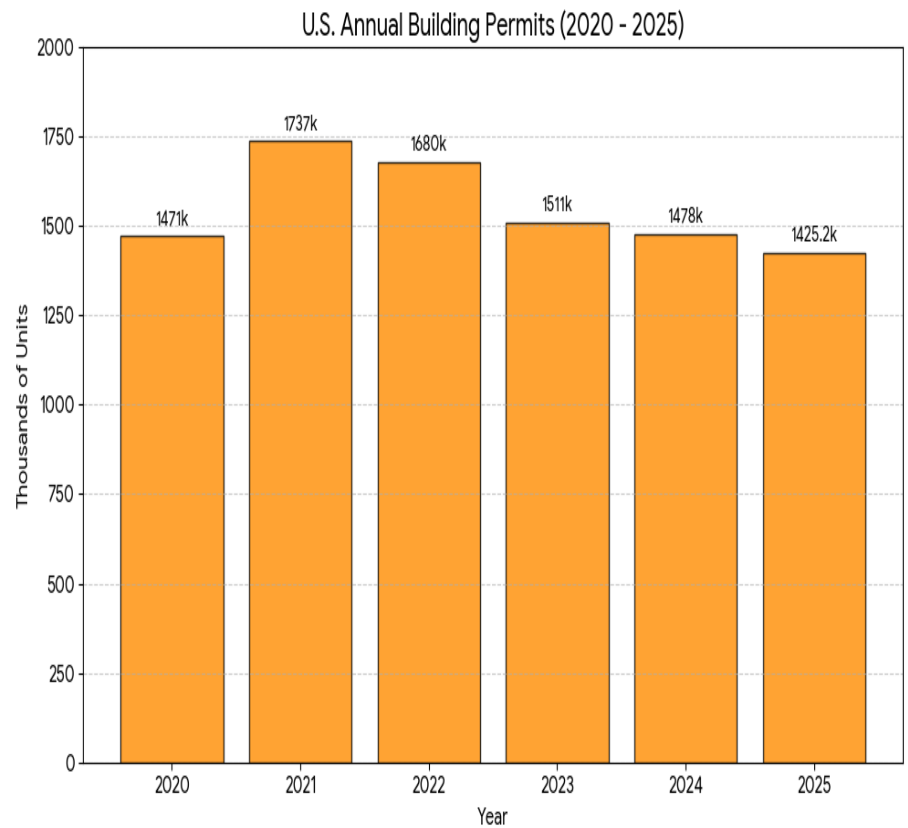


Other Economic Indicators

- EXISTING HOME SALES
- CONSUMER CONFIDENCE
- PERSONAL INCOME DATA
- WAGE GROWTH

- CONSTRUCTION SPENDING
- INDUSTRIAL PRODUCTION
- PURCHASING MANAGERS' INDEX
- BUILDING PERMITS





Economic Uncertainty Abounds

- The U.S. imposed new trade tariffs on dozens of countries early in 2025 which contributed to inflation remaining above the Fed target of 2%
- The longest US government shutdown in history occurred October 1st through November 12th (43 days) stemming from Republicans and Democrats in Congress failing to agree on a budget
- China & US trade tensions continue to abound
- Political tensions are rising in the US and abroad
- Russia – Ukraine conflict continues
- Federal debt continues to grow - exceeding $39 trillion
- The War in Iran raised oil prices pushing inflationary data higher

Inflation Under Control?

- What is happening? Why?
  - U.S. inflation as measured by the Consumer Price Index (CPI) dropped from June 2022 high of 9.1% to a low rate of 2.3% in April 2025 which has now reaccelerated to hit 4.2% in May 2026 due to higher oil and gas prices from the War in Iran

- The Federal Reserve (Fed) raised the federal funds rate at total of 5.25% from March 2022 - July 2023 to help fight inflation caused by the Covid pandemic

- This was the largest Fed rate increase in more than 40 years - taking only 16 months by raising rates at 11 consecutive Fed meetings

- The higher interest rates helped to push inflation down to the 2.5% range which prompted the Fed to start lowering rates

- The Fed reversed course and started to cut rates -0.50% in September 2024 and cut rates -0.25% at each of the last 2 meetings in 2024

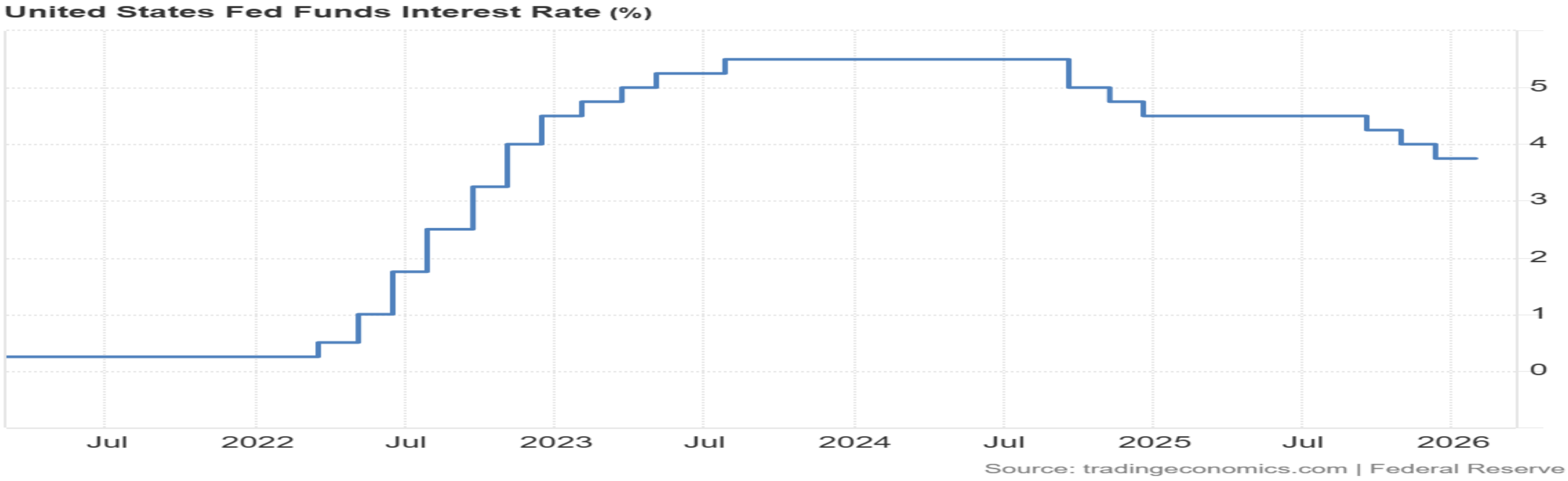
- The Fed paused for the first 5 meetings in 2025 before cutting rates -0.25% at each of the final 3 meetings in 2025

- The FOMC paused at their first 4 meetings in 2026 with the consensus expectation of at least 1-2 more rate cuts reversing to the expectation of a possible rate increase before year end

Recent FOMC Meetings

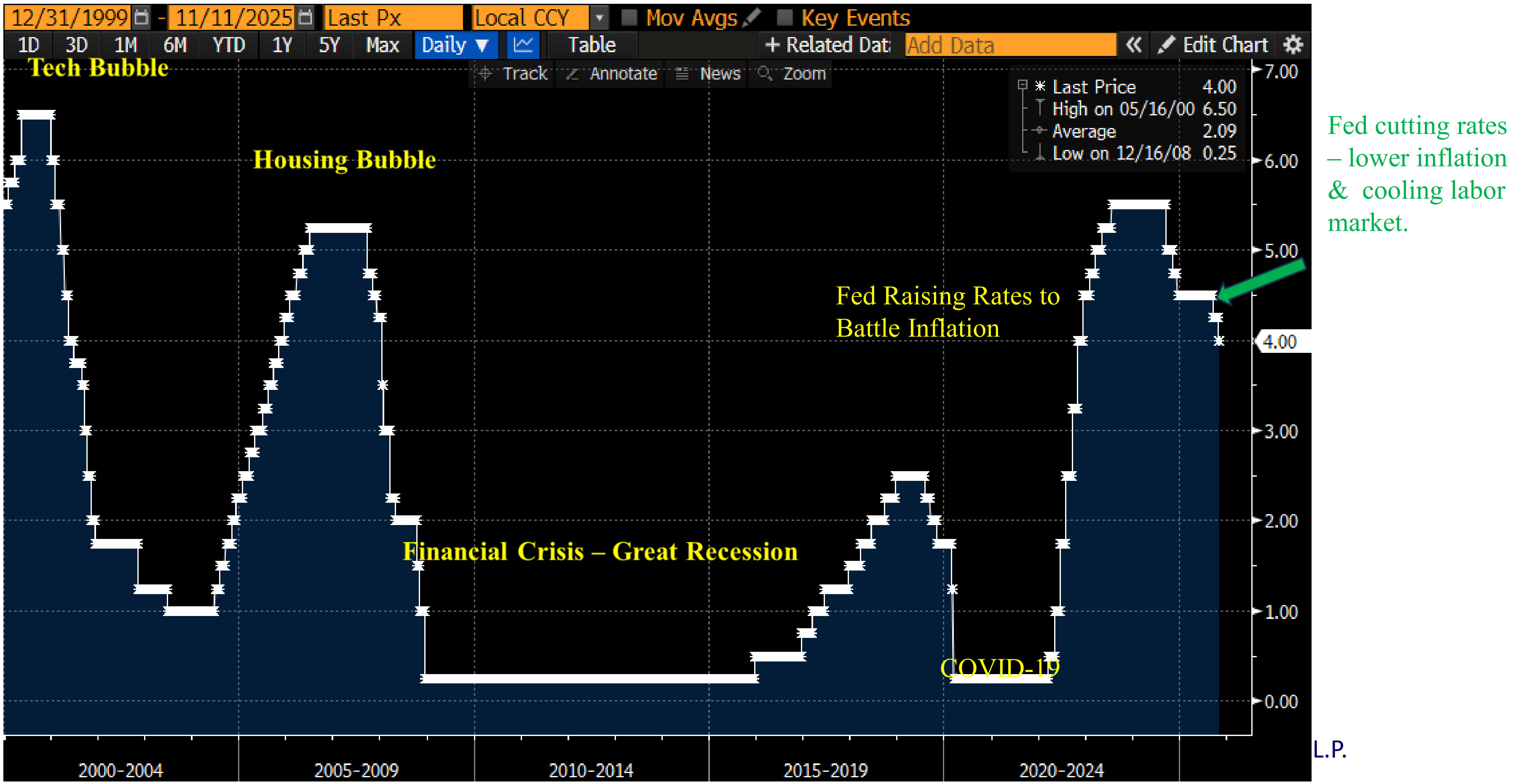
- The FOMC meets 8 times each year with a 12-person voting committee determining the federal funds rate
- The Fed voted unanimously to cut rates -0.25% at each of their final 3 meetings in 2025 after keeping rates unchanged at their first 5 meetings to start the year
- January 28, 2026 – unanimous vote to keep rates unchanged with 2 dissents from Stephen Miran and Chris Waller who each voted to cut rates -0.25%
- March 18, 2026 - unanimous vote to keep rates unchanged with 1 dissent from Stephen Miran who voted to cut rates -0.25%
- April 29, 2026 - unanimous vote to keep rates unchanged with the highest level of dissents since 1992 with four voting FOMC members casting dissenting votes - Fed Governor Miran voting for a -0.25% cut and three Fed Presidents wishing to remove "the inclusion of an easing bias in the policy statement" opening the door for a policy shift to address rising inflation pressures
- June 17, 2026 – First meeting under the new Fed Chair, Kevin Warsh, with 12-0 unanimous vote to keep rates unchanged with 9 FOMC members now expecting one or more rate hikes this year and 8 seeing rates on hold, one saw a rate cut, with Warsh not submitting a forecast and declaring the Fed dot plot having little value

Fed Funds 5 Yrs Vs. 10 Yrs



Fed Funds - Last 25 Yrs

A short-term interest rate used by the Federal Open Market Committee (FOMC) to control monetary policy .



The FOMC impacts economic growth by changing the Fed Funds Rate (short-term interest rates). Rates were near zero for over eight years after the Financial Crisis – Great Recession. The FED raised the Fed Funds Rate by over 5.0% in 2022-23. The FED is in the process of reducing rates due to lower inflation and a moderating labor market. The government shut-down has delayed release of key economic data.

A Changing Landscape

- Rates move in relation to <u>what else </u>is changing
- Economic outlooks
- Geo-political conditions
- Fed rate cycles
- Consumer confidence
- Business conditions
- Trade and tariff shifts

Changes Are Everywhere

- Mixed Signals in Job Markets
  - New jobs were below trend to begin 2026 last & last 3 months strong
  - Unemployment currently 4.3% which is highest since 2021
- Inflation and Interest Rate Volatility
  - Headline inflation (CPI) rose 4.2% in May
  - Core CPI at 2.9% remains above the 2% target
- Stock Market Continues Hitting New Highs
- Record setting rally in precious metals hedging weaker dollar
- The U.S dollar depreciated 7-9% in 2025
- The dollar reached a 4-year low early in 2025 driven by concerns over U.S. economic policy, rising national debt and trade tariffs but it is now exhibiting strong upward momentum and back at a 15-month high
- Record High National Debt at $39.3 Trillion
  - Up from $18.1 Trillion in 2015

New Trends Appearing

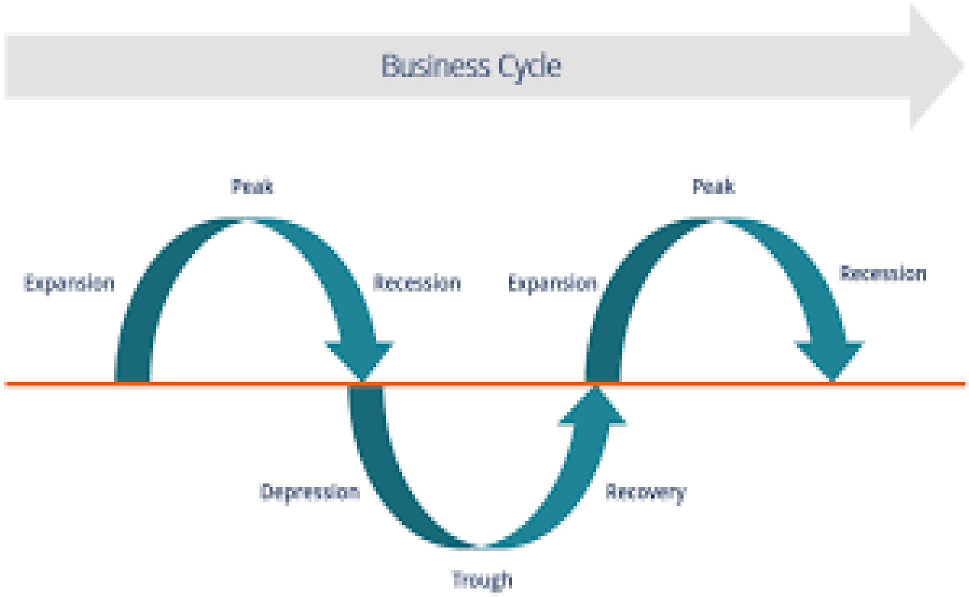
- AI is driving innovations and productivity
- Global outlook shaken by the U.S. tariffs
- Tariff uncertainty impacting global trade and corporate profit margins
- Some sectors thriving while others suffering
- Strong optimism for technology, AI, and healthcare investments along with job displacement fears from the widespread implementation of AI
- U.S. government shutdown delayed economic data for 6 weeks
- Rising inflation and major geopolitical tensions in Venezuela, the Middle East, China, Russia-Ukraine conflict and War in Iran

Uncertainty Reigns

- Markets always react to situations and fears
- The War in Iran caused oil prices to surge over $100 per barrel from the $60 range
- Trade tariffs in 10-35% range
- China & US trade tensions
- Political tensions rising in US
- Federal debt grows larger each week

Stages of Economic Cycles

1. Expansion
2. Peak
3. Recession or contractions
4. Depression, trough
5. Recovery



Key Issues Now

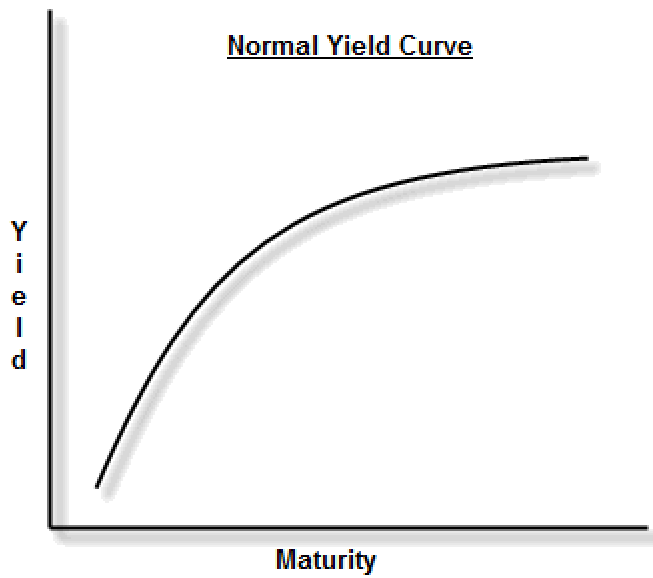
- Rising inflation is conflicting with Fed's 2% target rate
- War in Iran threatens to keep oil prices
- Job growth better than expected
- Unemployment rising modestly
- Central Banks easing
- Inflation not going away

Yield Curve

- Markets prices generate a ‘yield curve’ of yields
- Long and short-term rates generally behave independently
- Short-term rates are primarily driven by Federal Reserve policy and the Federal Funds rate – but also market flows
- Long-term rates are driven by longer run growth and inflation expectations – but also supply
- Yield curve is a reliable indicator of economic trends and potential future growth
  - A “compilation of expectations” and expectations drive investors

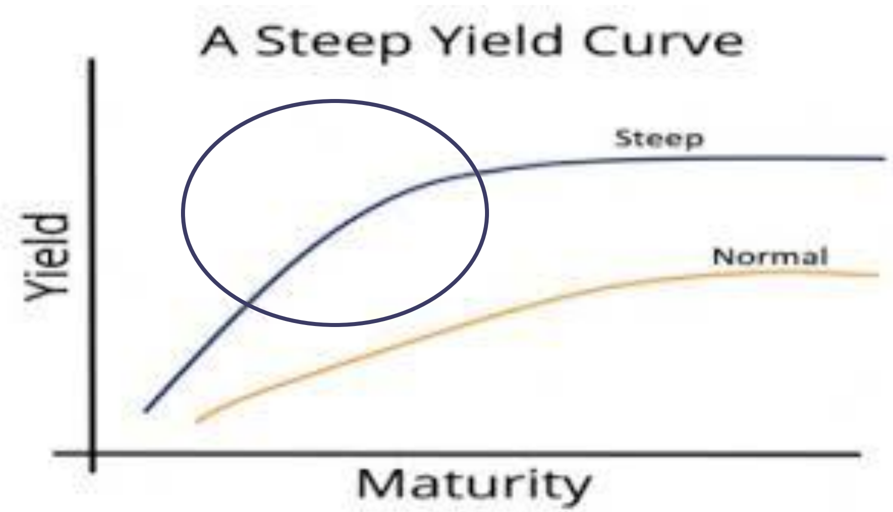
A Normal Yield Curve

- Long-term rates higher than short-term
  - Produces an upwardly sloping curve
- Indicates expectation of normal positive economic growth
- We measure the ‘spread’ of the rates at certain key points



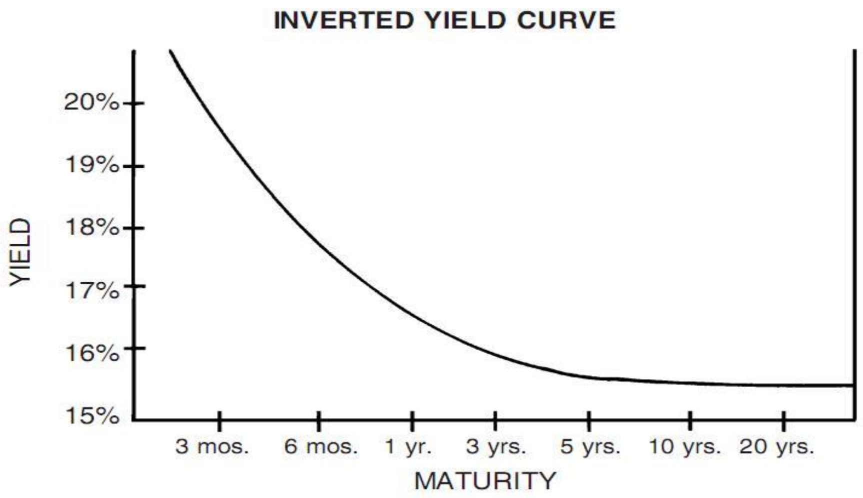
Steep Yield Curve

- Long-term rates are at least 1% or more higher than short-term
- Indicates expectation of economic expansion and growth or potentially higher inflation



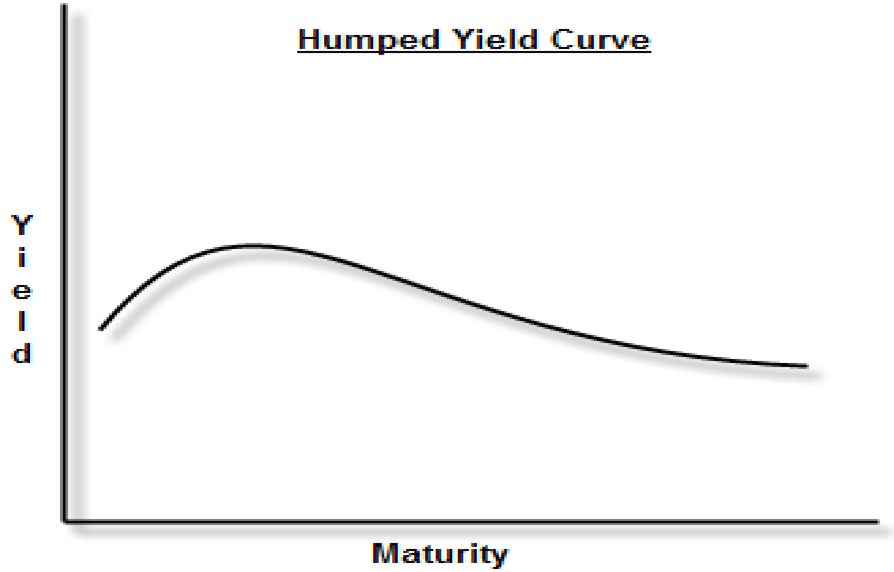
Inverted Yield Curve

- Short-term rates higher than long-term
- Indicates expectation of economic slowdown
- Market is betting interest rates will be falling

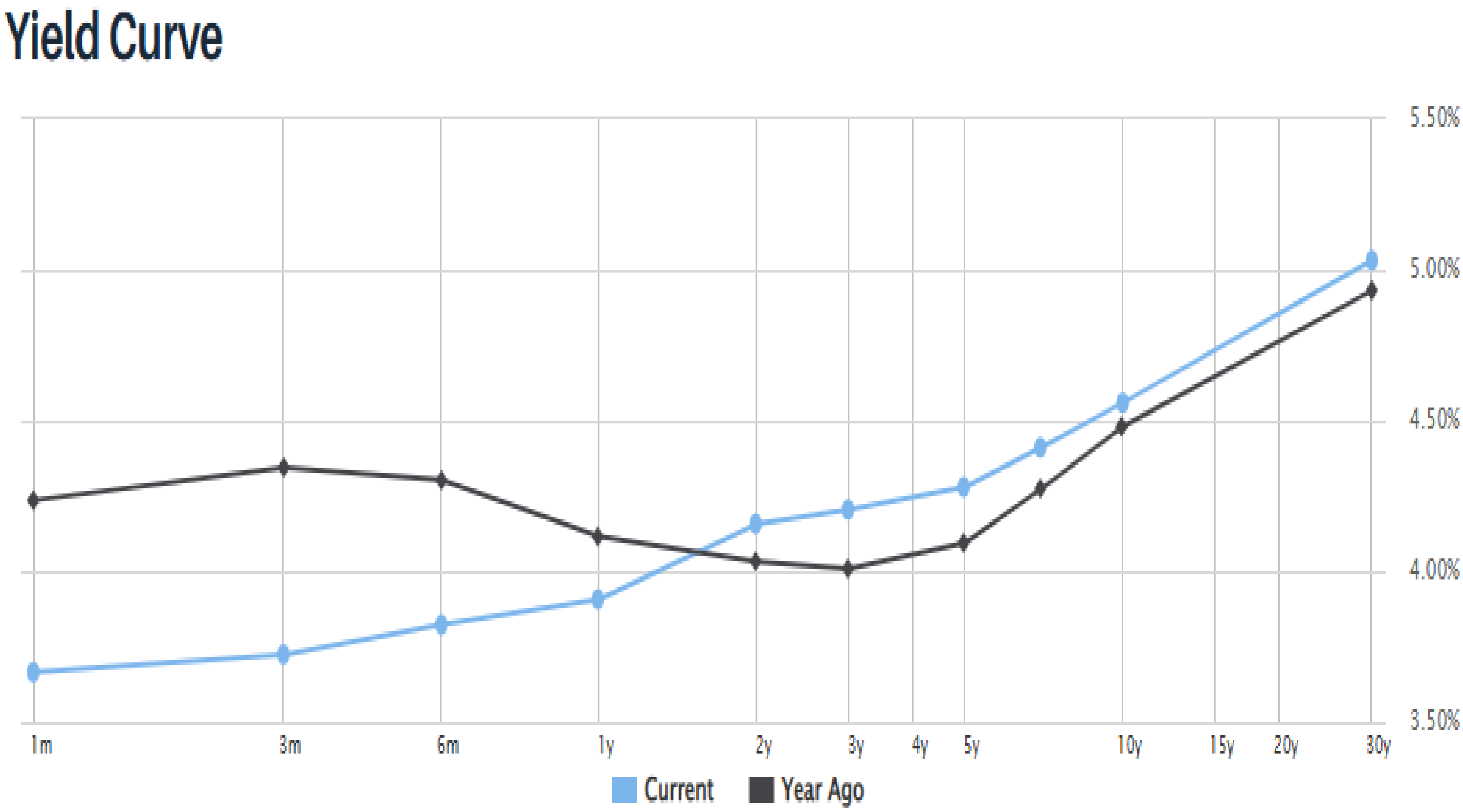


A Humped Curve

- A rare occurrence experienced in the past year
- Usually represents expectation that short end rates will rise then fall



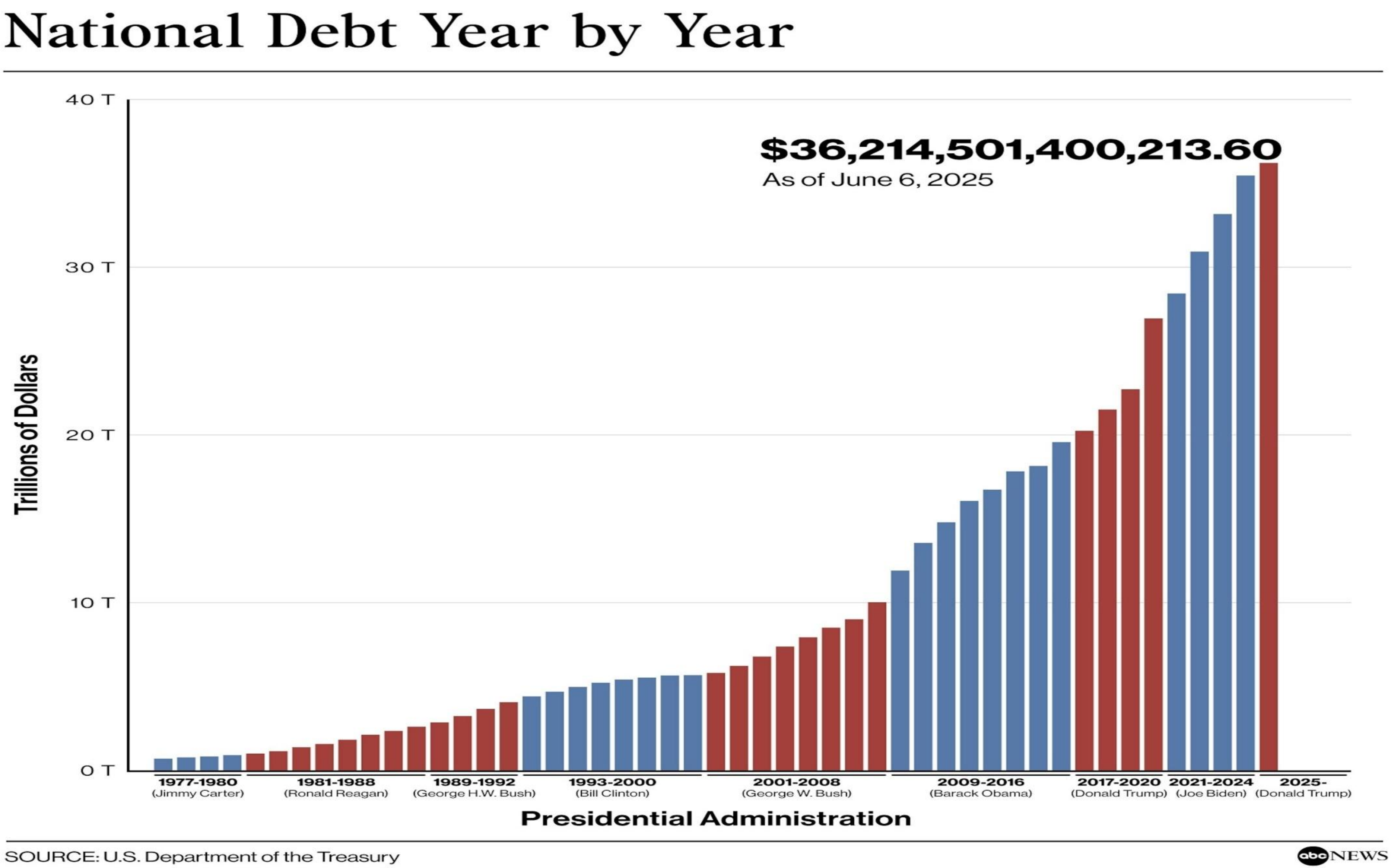
Current Yield Curve vs. 1 Year Ago



Yields Moving Higher

- Interest rates climbed higher during May due to the increased inflationary pressures caused by higher oil and gas prices
- During the past year, the Yield Curve has transitioned from being inverted from 1 month out to 3 years and it now has positive slope across the entire curve
- The 2-year Treasury yield bounced between 3.80% up to the 4.12% range, closing May at 4.03% with the 5-year trading from 4.00% up towards the 4.32% range closing the month at 4.16%
- The Fed's "dot plot" projection has now shifted to a possible rate increase during the next year due to the increasing inflationary data coupled with the shifting language of the three Fed Presidents wanting to exclude the "easing bias language from the policy statement" – a noteworthy development
- Many economists at most Wall Street firms have shifted to no rate cut expectations for at least one year or the possibility of a Fed rate increase late this year or early next year
- Rising inflation is firmly back in the Fed's crosshairs with a potential shift in the FOMC policy language based on rising inflation coupled with the economic data showing strength and stability

Federal Debt Keeps Rising



Tools of Monetary Policy

- **Discount Rate**
  - Interest rate charged by the Federal Reserve to banks that borrow on short-term (usually overnight) basis
- **Fed Funds**
  - Overnight trading rate between banks on excess cash from reserves
- **Reserve Requirements**
  - Amount of money banks must keep on reserve at the Fed
- **Open Market Operations**
  - Buying and selling Treasury securities between the Fed and selected financial institutions in the open market
  - The most important tool; directed by the FOMC
  - Functions through the NY Fed
  - Creates the flow of funds in the system

Monetary Policy

Economic Expansion

Fed Lowers Interest Rates

↓

Cost of Borrowing Money Fall

↓

Demand/Buying Increases

↓

Companies Increase Production & Employment

↓

Prices for Goods Rise

↓

Inflation Premium Rises

↓

Interest Rates Rise

↓

Bond Prices Fall

Monetary Policy

Economic Contraction

Fed Raises Interest Rates
↓
Cost of Borrowing Money Rise
↓
Demand/Buying Decreases
↓
Companies Reduce Production & Employment
↓
Prices for Goods Fall
↓
Inflation Premium Falls
↓
Interest Rates Fall
↓
Bond Prices Rise

Fiscal Policy

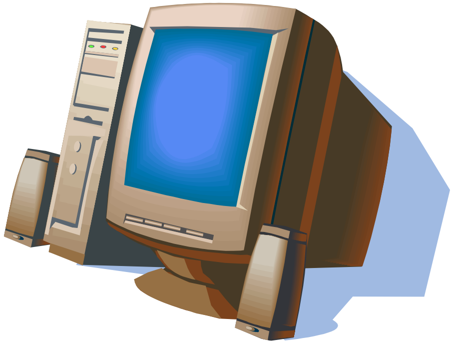
Economic Expansion

Government Lowers Taxes
↓
Increase Disposable Income
↓
Demand for Goods Rise
↓
Companies Increase Production
↓
Prices Rise
↓
Inflation Premium Rises
↓
Interest Rates Rise
↓
Bond Prices Fall

Recessions of the past 50 Years

- 1970s
  - Oil prices skyrocketed due to restricted output leading to the energy crisis
- 1980s
  - S & L crisis, out-of-control inflation, stock market correction of 1987
- 1999-2000
  - Technology sector crash, 9/11, accounting scandals
- 2007-2009
  - U.S. financial crisis "Great Recession" included bankruptcy of Lehman Brothers, government bailout of AIG, and subprime mortgage crisis leading to collapse of the housing bubble

Tech Bubble (1999-2000)



- Tech Bubble
  - Internet
  - Y2K
- Over investment in the late Nineties
- Beginning in 2000, low demand and over capacity
- No pricing power and deflation

Housing Bubble (2000-2005)

Fed Lowers Interest Rates

- To increase housing demand
- To battle overcapacity

Demand for housing soars

Economic activity increases

Loan demand rises and quality of mortgages fall

Credit Crisis (2007-2009)

Banks lose money on mortgages

- Lehman, Bear Stearns go down
- American International Group (AIG) lost $99.2 billion in 2008. The Federal Reserve stepped in with a $85 billion loan.
- Government takes over Fannie & Freddie

The world financial system cracks

Worst recession since the Great Depression

Government bails out banks, industries

Great Recession (2007-2009)

- **Housing goes into depression**
  - **Oversupply of homes, foreclosures**
  - **Home prices fall, many below mortgage level**
- **Unemployment soars, millions lose jobs**
- **More Government intervention**
- **Housing and employment remain weak today**

You Made It!

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