

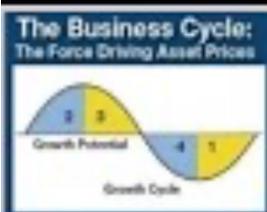
The background is a complex, abstract geometric pattern composed of numerous overlapping triangles and polygons. The colors are diverse, including shades of red, orange, yellow, green, blue, purple, and pink, creating a vibrant and textured effect. The shapes are arranged in a way that suggests a map or a network of interconnected nodes.

# Recession Indicators

# What is a recession?

- Popular definition vs. economic reality
  - “Two consecutive quarters of negative GDP” (rule of thumb)
  - **NBER definition:** a significant decline in economic activity spread across the economy, lasting more than a few months
- Why recessions are often identified *after* they begin
- Key tension: **real-time uncertainty vs. retrospective clarity**





*Peter Dag's*  
Business Cycle Academy



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# Spotting A Recession And Protecting Yourself

-  
**Key Signs**



4-22-25

## SECTION 1

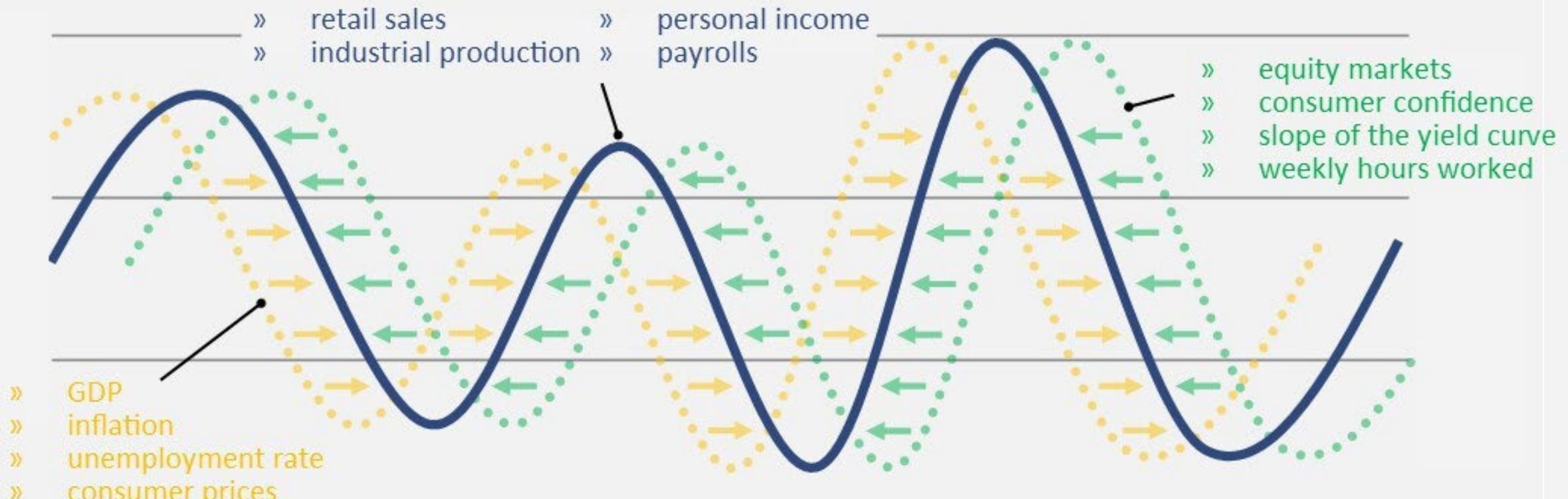
# Categories of Recession Indicators

## EXHIBIT 1: ECONOMIC INDICATORS OVERVIEW

**lagging indicators** tell us **today** about what previously occurred so that we may extrapolate that to current and future data.

**coincident indicators** give us insight into what is happening right now and may occur in the future.

**leading indicators** tells us **today** about what we can expect in the future.





# Recession Indicators

- Leading
  - Equity Markets
  - Consumer Confidence
  - Slope of Yield Curve
  - Interest Rate
  - *Auto sales*

# Recession Indicators

## Leading Indicators Types

Momentum-based indicator, the predictions of which depend on the volume



An RSI of more than 70 indicates an overbought market

If its value is 80 or more, it indicates an overbought market, while anything below 20 symbolizes an oversold market.

If the value is -20, the market is considered overbought and if it is around -80, the market is oversold.

# Early Warning Signs

- **A. Financial Market Indicators**
- **Yield curve inversion**
  - Difference between long-term and short-term Treasury rates
  - Historical reliability and false positives
- Stock market trends and volatility
- Credit spreads (corporate bonds vs Treasuries)
- **B. Business & Consumer Expectations**
- Consumer confidence indices
- Business sentiment surveys (PMIs, ISM)
- New orders and capital investment intentions
- **C. Housing Market Signals**
- Housing starts and building permits
- Home sales and price slowdowns
- Why housing is especially sensitive to interest rates

# Recession Indicators

- Co-Incident
  - Personal Income
  - Retail Sales
  - Industrial Production

Think about the way you would look to spend your money in times of uncertainty



# Recession Indicators

- Lagging
  - 1. Inventories

- 1 Inventories to sales ratio, manufacturing and trade
- 2 Average duration of unemployment
- 3 Consumer installment credit outstanding to personal income ratio
- 4 Commercial and industrial loans
- 5 Average prime rate
- 6 Labor cost per unit of output, manufacturing
- 7 Consumer price index for services

## REMEMBER: PRIME RATE

- The interest rate banks charge their most creditworthy customers.
- A base rate for many variable-rate loans, including home equity lines of credit (HELOCs) and some mortgages



## **SECTION 2**

# Composite Indices and Models



CONFERENCE BOARD'S  
LEADING ECONOMIC  
INDEX (LEI)



RECESSION PROBABILITY  
MODELS (E.G., FED-BASED  
MODELS)



STRENGTHS AND  
WEAKNESSES OF  
COMPOSITE INDICATORS



MODEL RISK AND  
OVERFITTING

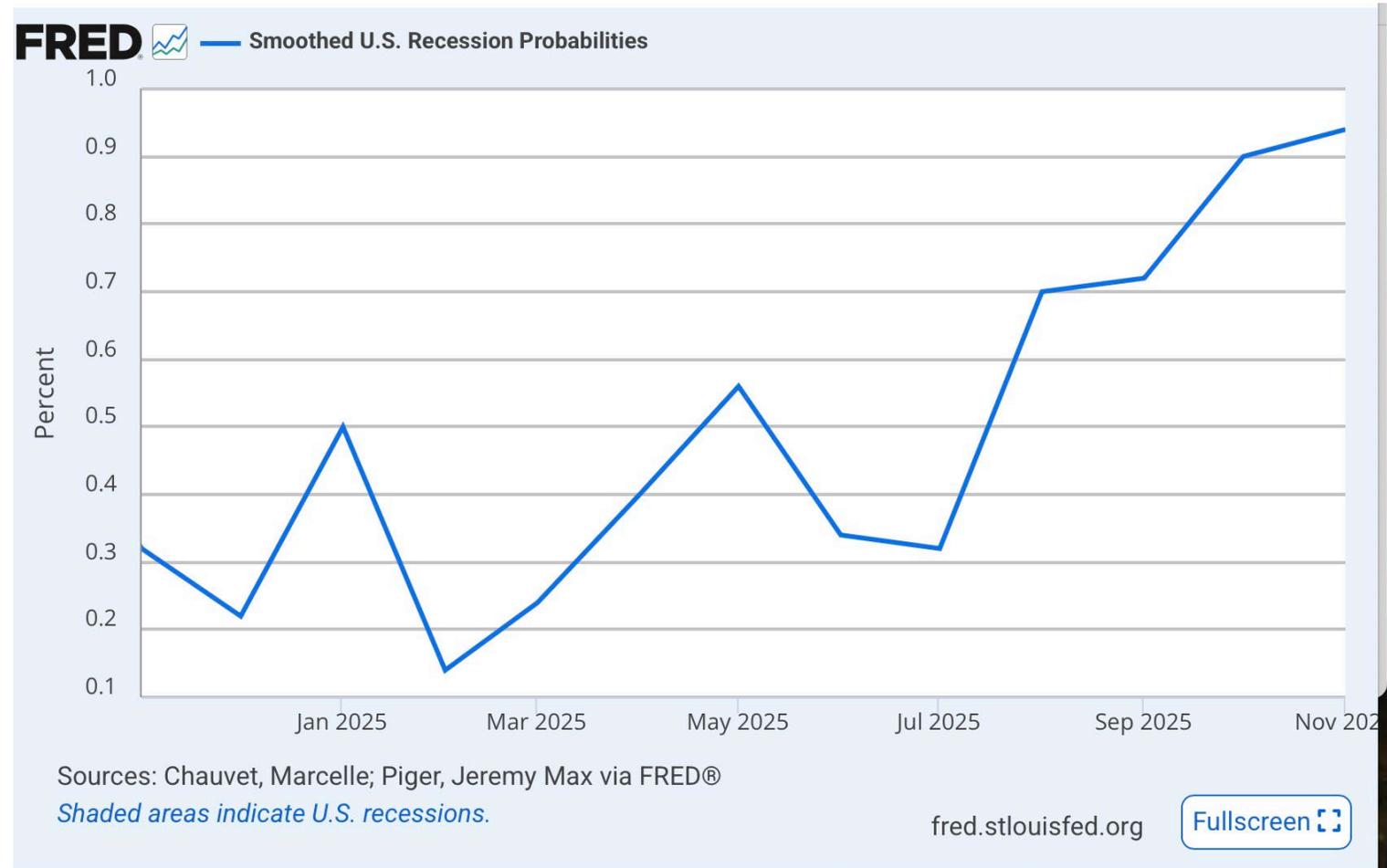
# LEI-- [Linked Here](#)

- Leading Credit Index
- Effective Jan 2012
- Includes:
  - The United States Department of Labor's monthly report on the unemployment rate, average hourly earnings and the average workweek hours from the Employment Situation report
  - The United States Department of Labor's weekly report on first-time claims for state unemployment insurance
  - The United States Census Bureau's monthly consumer goods and materials report from the Preliminary Report on Manufacturers' Shipments, Inventories, and Orders
  - The United States Census Bureau's monthly non-defense capital goods report from the Preliminary Report on Manufacturers' Shipments, Inventories, and Orders
  - The United States Census Bureau's monthly report on building permits from the Housing Starts and Building Permits report
  - The difference (spread) between the interest rates of 10-year United States Treasury notes and the federal funds rate
  - The Conference Board's Leading Credit Index, itself a composite index of six financial indicators, e.g. yield spreads and investor sentiment
  - The Institute for Supply Management's monthly ISM Index of Manufacturing including: supplier deliveries, imports, production, inventories, new orders, new export orders, order backlogs, prices and employment.
  - The S&P 500
  - The University of Michigan Consumer Sentiment Index's consumer expectations

# FRED – [Linked Here](#)

## Coincident Variables:

- non-farm payroll employment
- index of industrial production
- real personal income excluding transfer payments
- real manufacturing and trade sales.

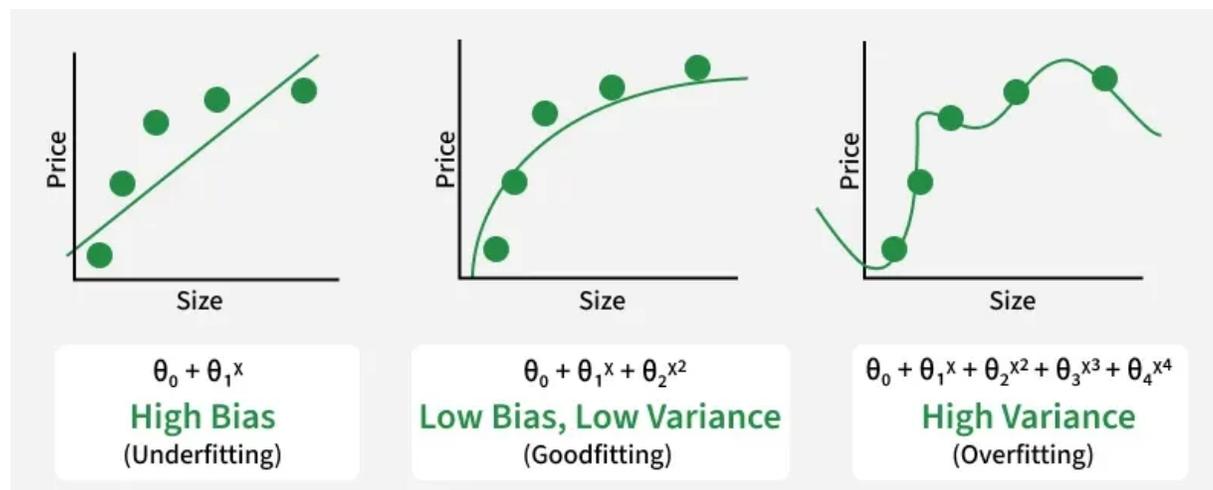


# Composite Indicators: Strengths & Weaknesses

Pros	Cons	Mitigation Recommendations
Summarize complex & multi-dimensional issues	Could be misleading for policy messaging	Sensitivity Analysis
Simplify ranking procedure	Big pictures could lose sight of details – overly simplistic policy	Composite indicator used to connect sub-indicators
Attract public interest, more palatable	Value judgements are necessary	Transparency is key
Reduce size or add more info w/in existing size	Need more data	

# Model Risk & Overfitting

- **Underfitting** : Straight line trying to fit a curved dataset but cannot capture the data's patterns, leading to poor performance on both training and test sets.
- **Overfitting**: A squiggly curve passing through all training points, failing to generalize performing well on training data but poorly on test data.
- **“Good” Fitting**: Curve that follows the data trend without overcomplicating to capture the true patterns in the data.



# Model Risk & Overfitting

