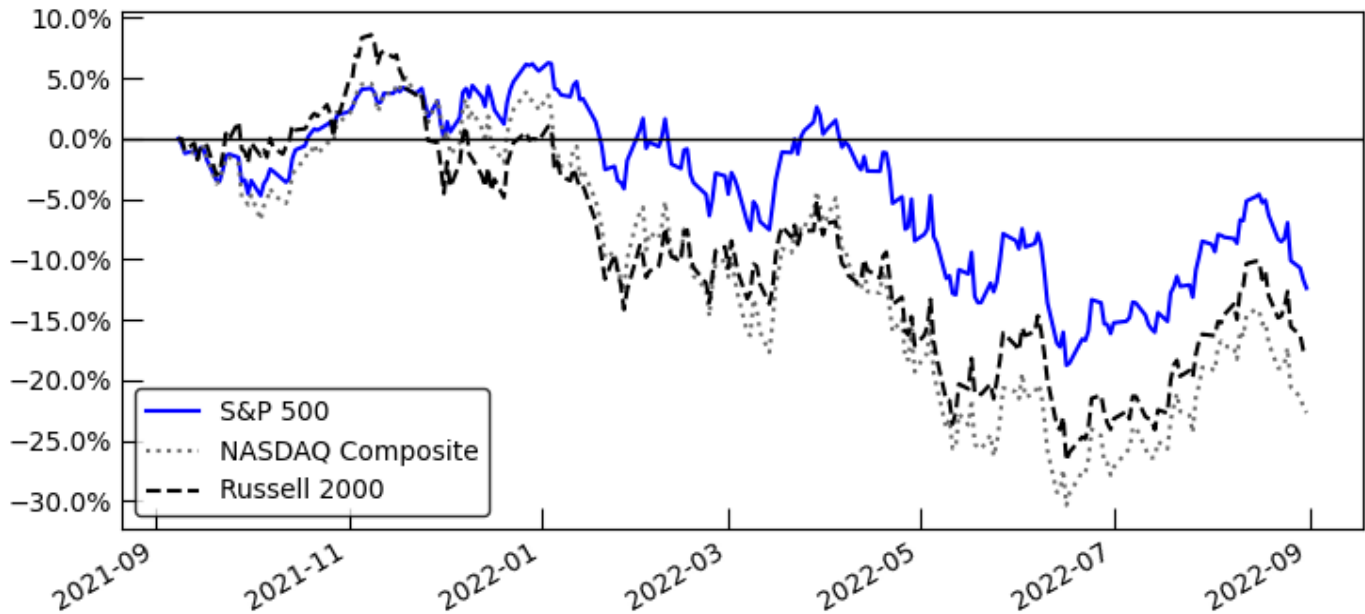


# US Business Cycle Report

For the Month of August 2022

US Equity Indices Trailing 12 Month Cumulative Returns



Source: Yahoo Finance, as of 2022-08-31

## Monthly Summary

### Business Cycle Phase

Early Expansion

**Late Expansion**

Early Contraction

Late Contraction

### Target Asset Allocation

Target Sectors: HC, UT, CS  
Target Factor: Momentum

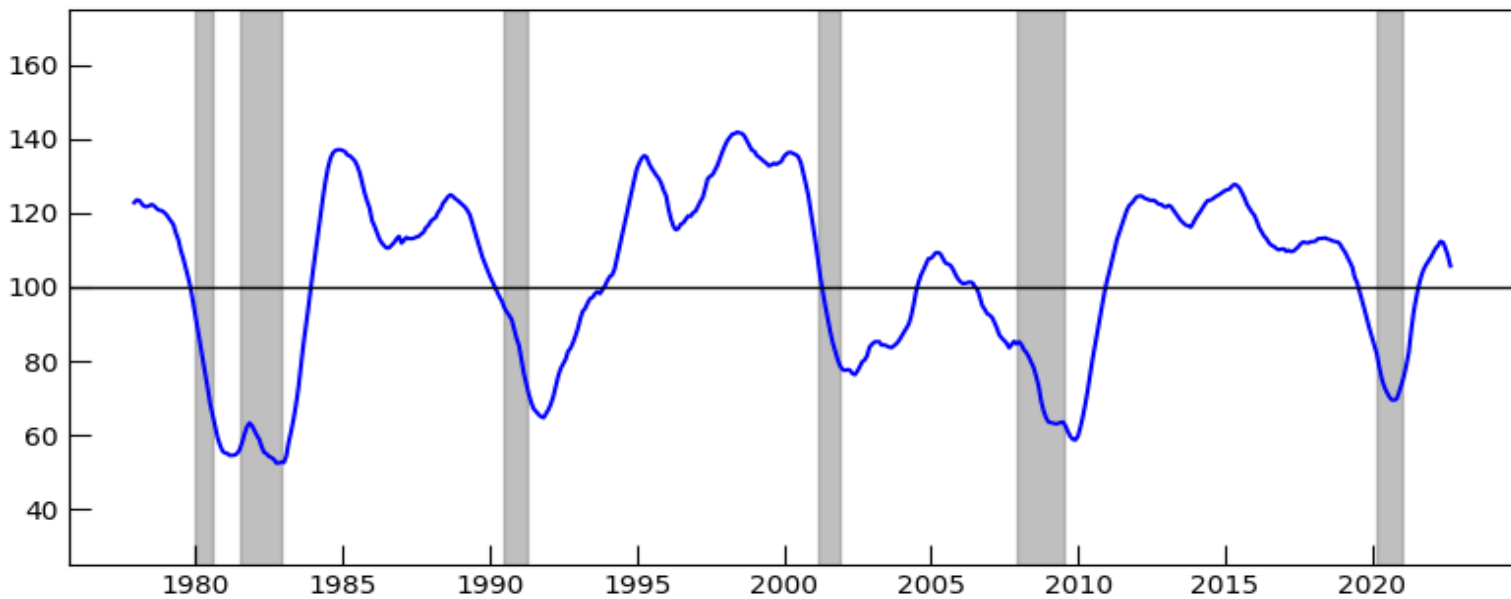
**Target Sectors: ID, UT, CD**  
**Target Factor: Low Volatility**

Target Sectors: CS, HC, MA  
Target Factor: Safe Haven

Target Sectors: EN, CD, ID  
Target Factor: Growth

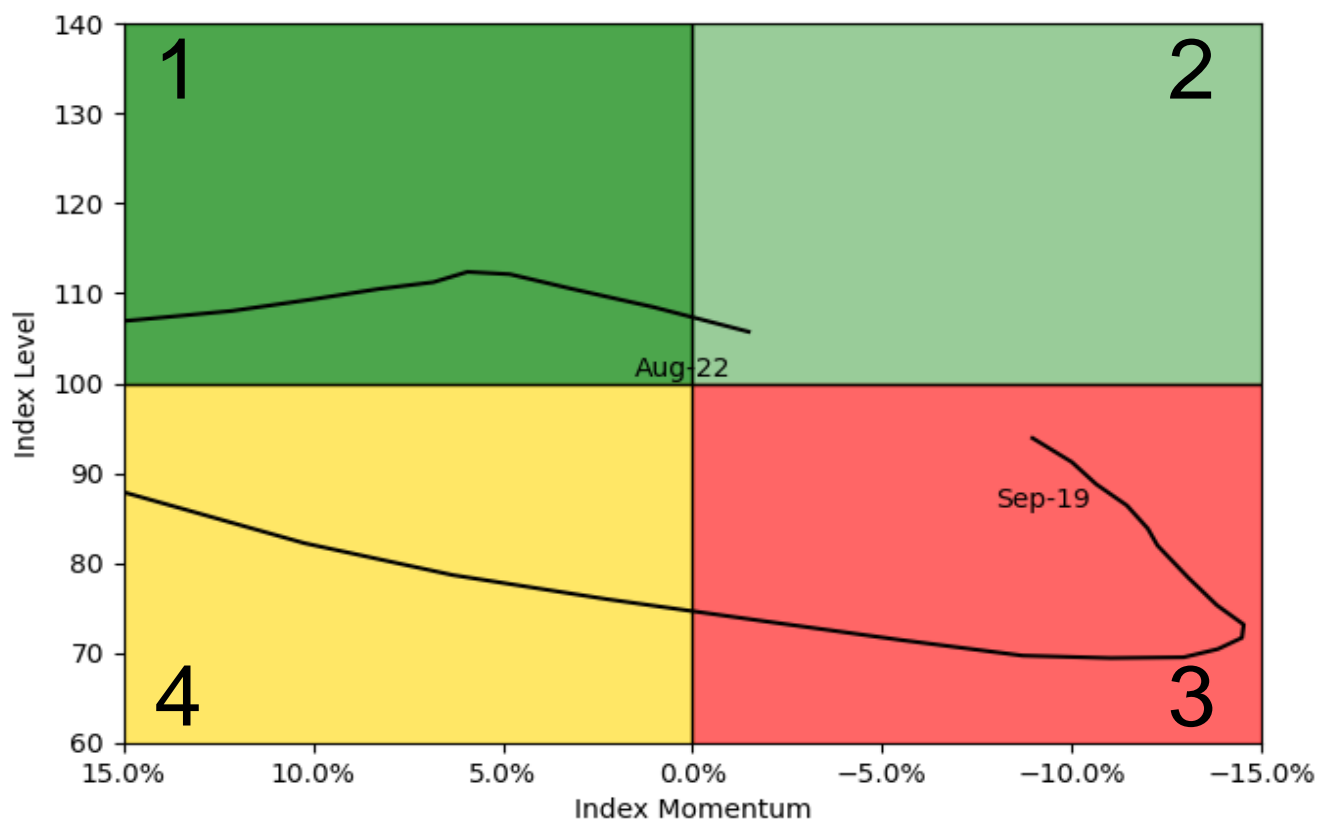
# Composite Business Cycle Indicator

## Composite Business Cycle Indicator



Note: Shaded areas represent US recessions as indicated by NBER.  
Reading greater than 100 indicates expansion, less than 100 indicates contraction.

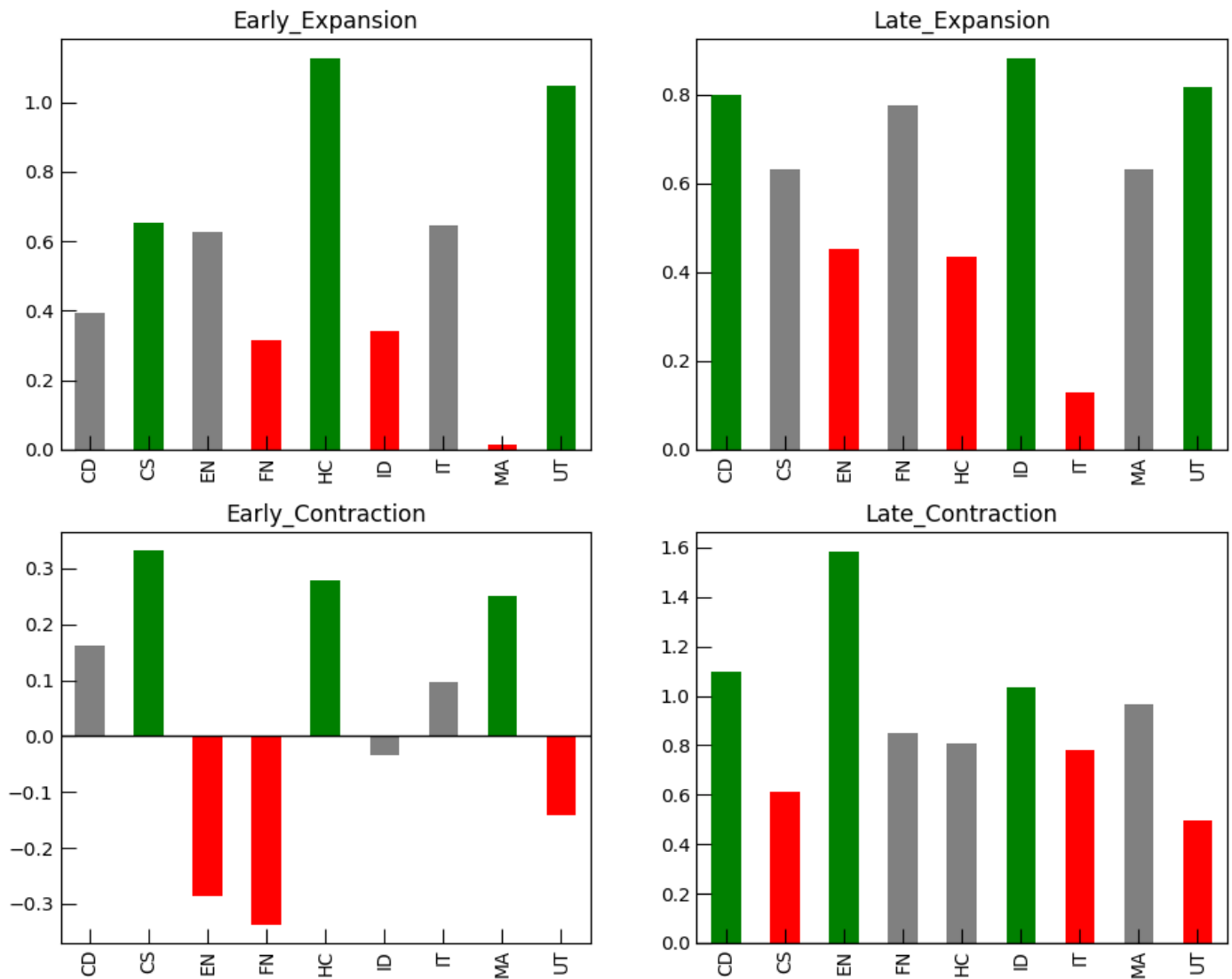
## Business Cycle Compass



Note: Momentum calculated as 25% 6M Change, 75% 3M Average less 12M Average.  
1 = Early Expansion, 2 = Late Expansion, 3 = Early Contraction, 4 = Late Contraction

# US Sector Rotation Strategy

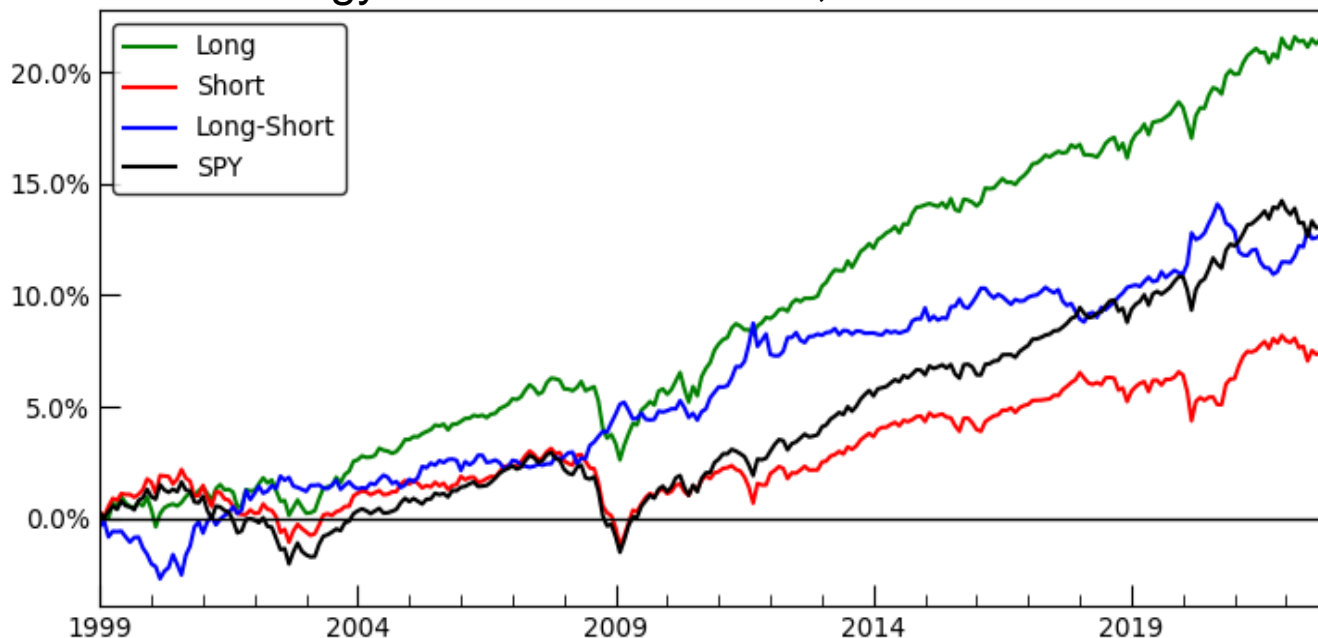
## US Sectors Information Ratios by Phase of Business Cycle



Note: Green bars denote sectors with long position, red short, and grey neutral.

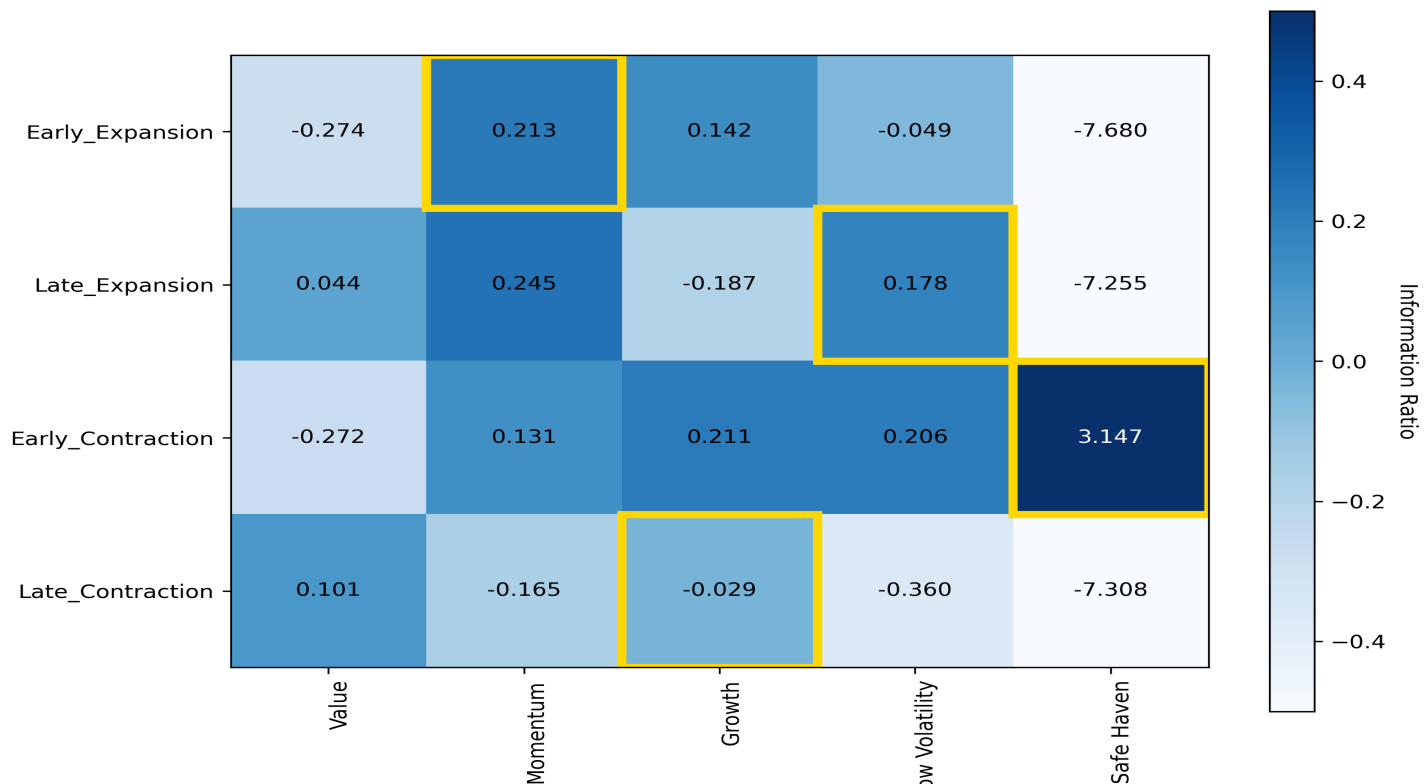
Sector returns based on SPDR Sector ETF returns from 1999-01-31 to 2022-08-31

## Sector Strategy Cumulative Returns, Risk Level 1%



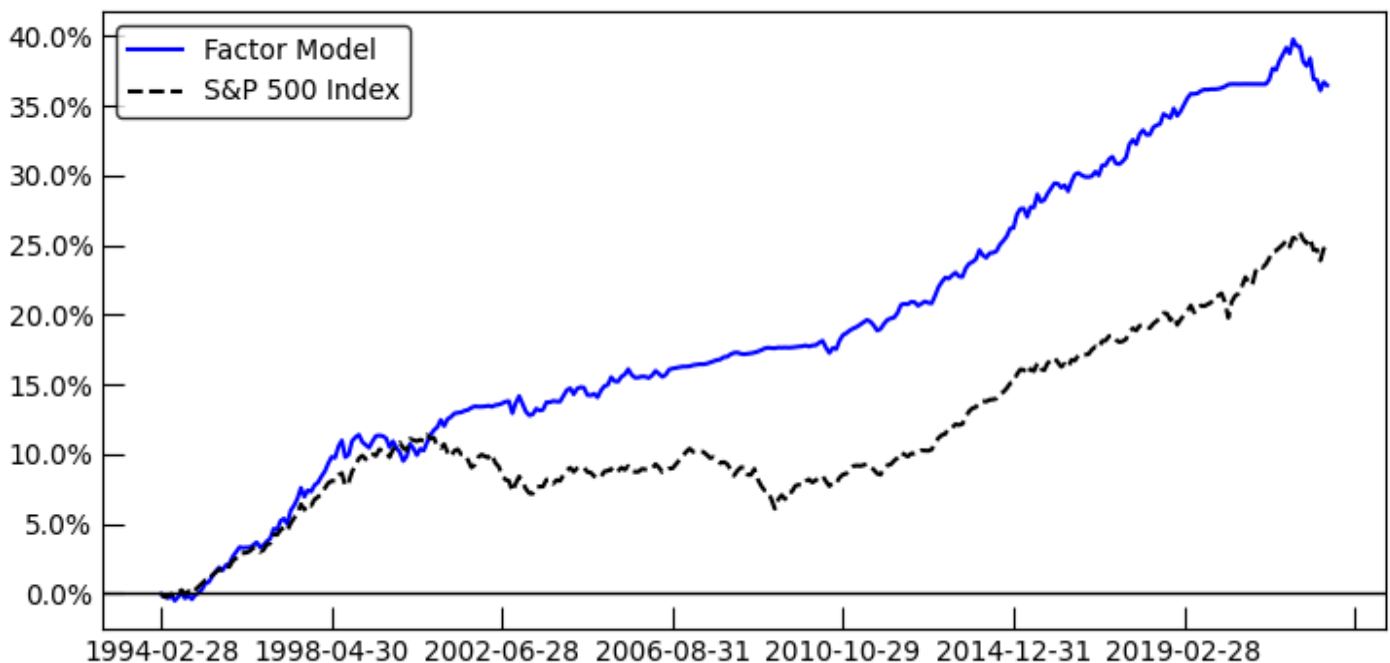
# US Factor Rotation Strategy

## US Factors Information Ratios by Phase of Business Cycle

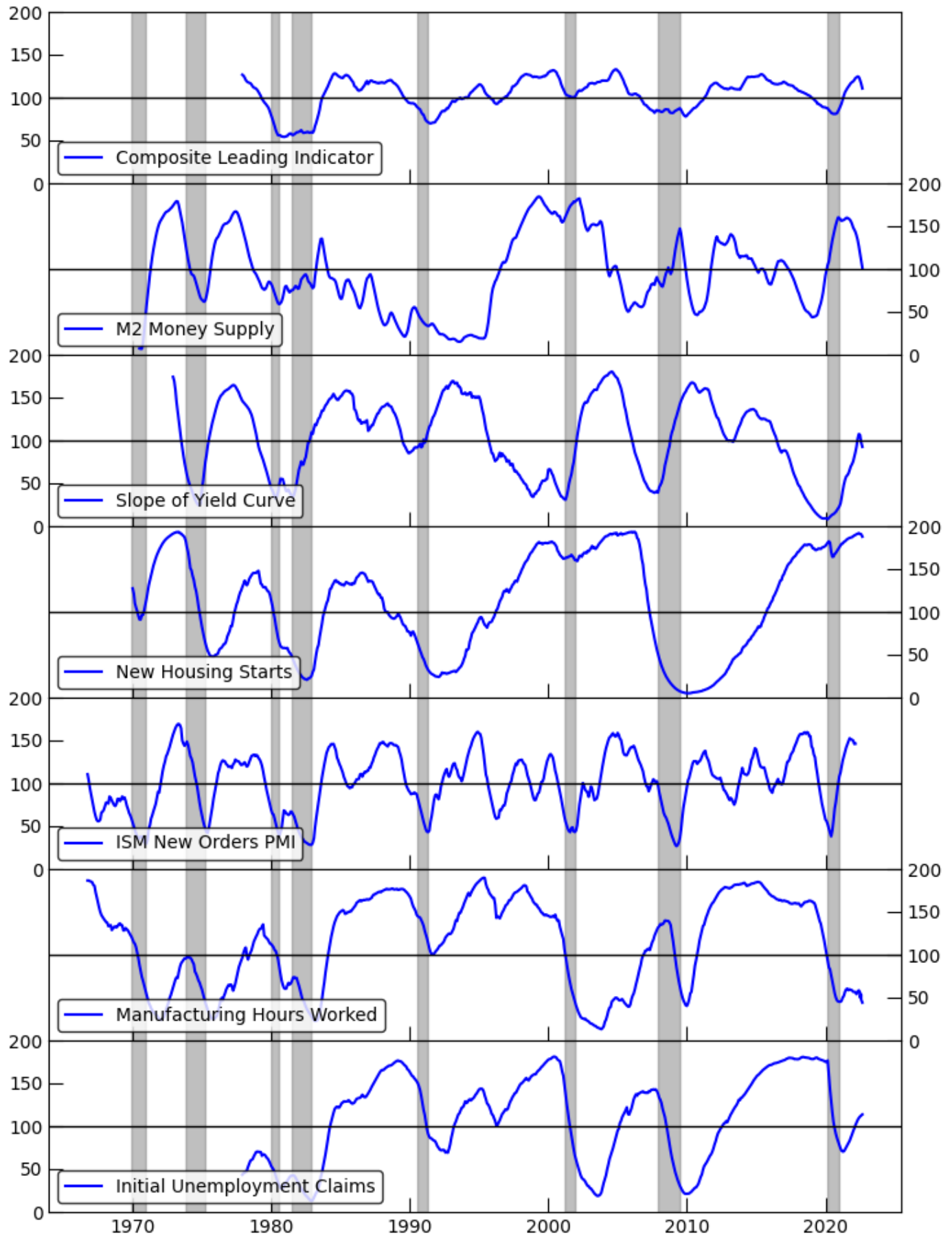


Note: Gold borders denote factors with long exposure during phase of Business Cycle.  
Information Ratio calculated as factor excess return to S&P 500 Index, scaled by annualized volatility.  
Returns sourced from period 1994-02-28 to 2022-08-31

## Factor Strategy Cumulative Returns, Risk Level 1%

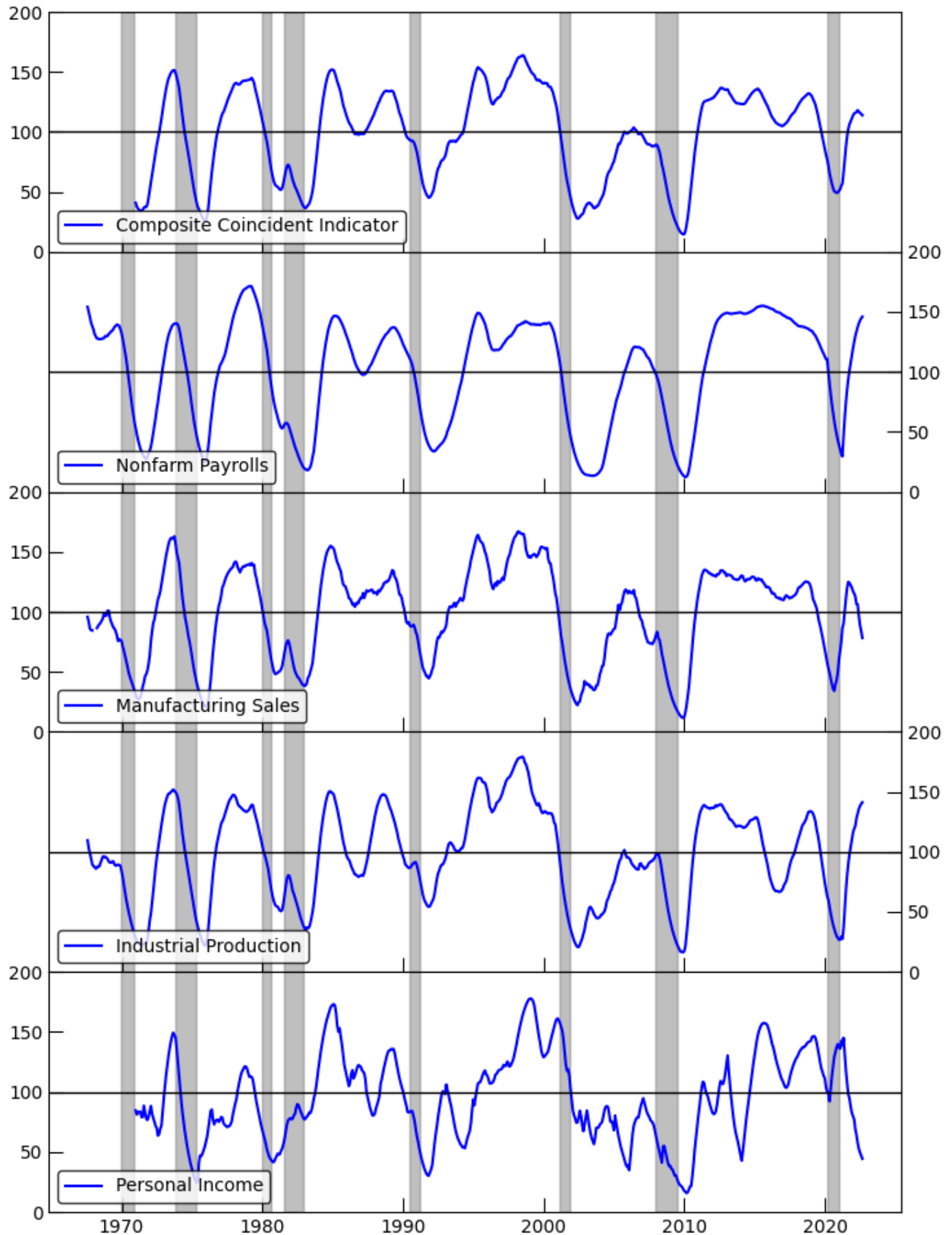


# Composite Leading Indicators



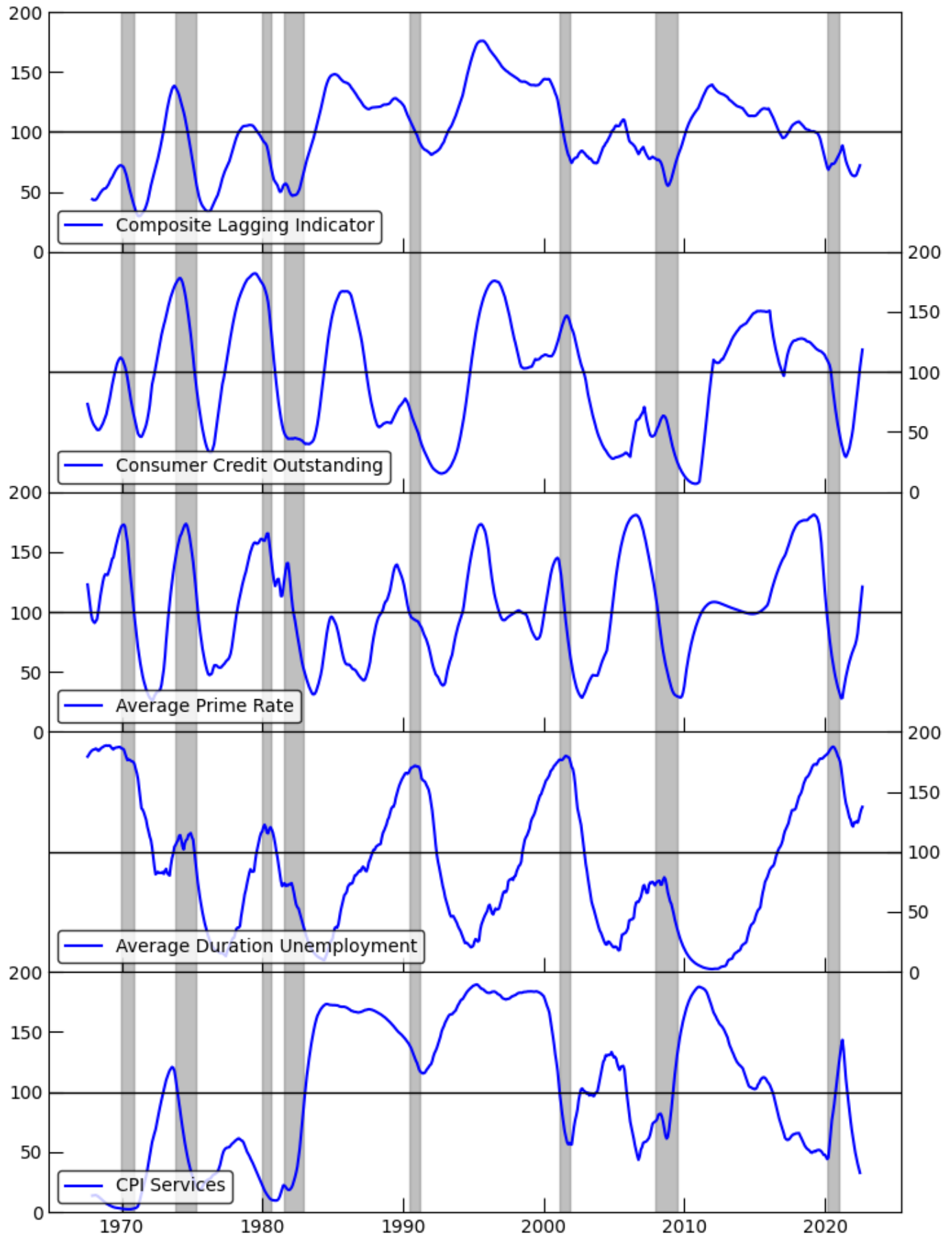
Note: Shaded areas represent US recessions as indicated by NBER.  
Reading greater than 100 indicates expansion, less than 100 indicates contraction.

# Composite Coincident Indicators



Note: Shaded areas represent US recessions as indicated by NBER.  
Reading greater than 100 indicates expansion, less than 100 indicates contraction.

# Composite Lagging Indicators



Note: Shaded areas represent US recessions as indicated by NBER.  
Reading greater than 100 indicates expansion, less than 100 indicates contraction.