# US Business Cycle Report

## US Equity Indices Trailing 12 Month Cumulative Returns



Legend:
- S&P 500
- NASDAQ Composite
- Russell 2000
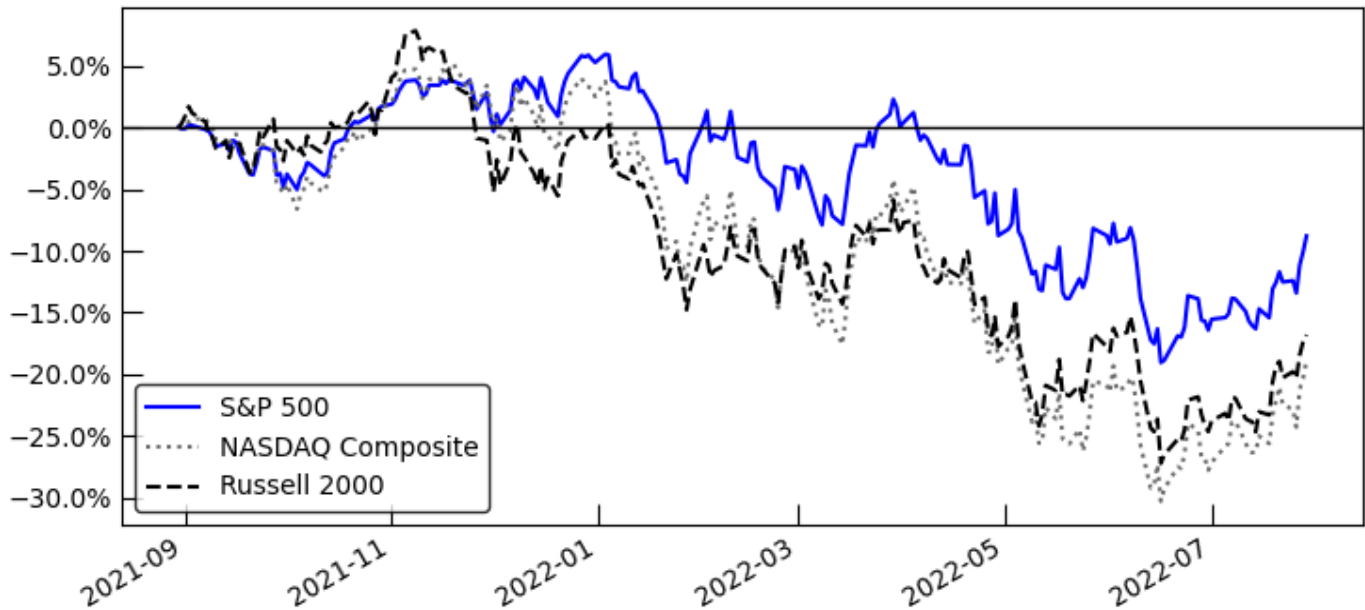
Source: Yahoo Finance, as of 2022-07-31

## Monthly Summary

| Business Cycle Phase | Target Asset Allocation |
|---|---|
| Early Expansion | Target Sectors: HC, UT, IT<br>Target Factor: Momentum |
| **Late Expansion** | **Target Sectors: ID, UT, CD**<br>**Target Factor: Low Volatility** |
| Early Contraction | Target Sectors: HC, MA, CS<br>Target Factor: Safe Haven |
| Late Contraction | Target Sectors: ID, EN, FN<br>Target Factor: Growth |

# Composite Business Cycle Indicator

## Composite Business Cycle Indicator
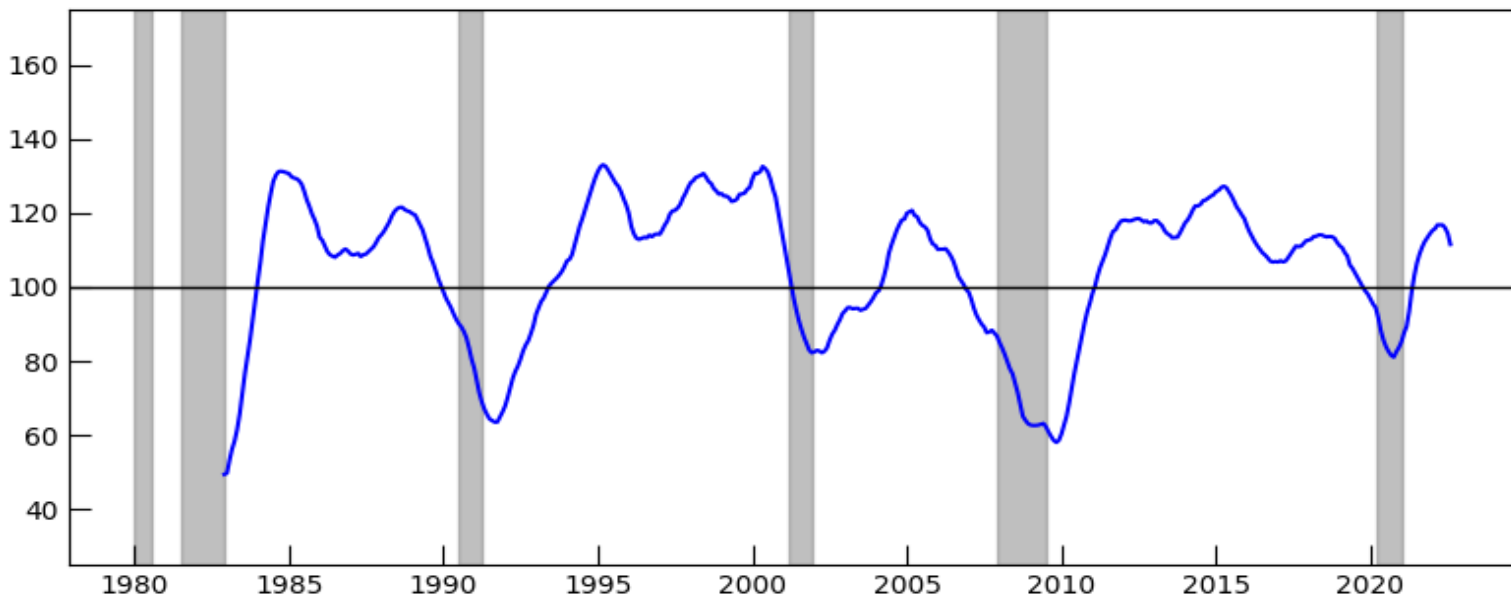


Note: Shaded areas represent US recessions as indicated by NBER.
Reading greater than 100 indicates expansion, less than 100 indicates contraction.
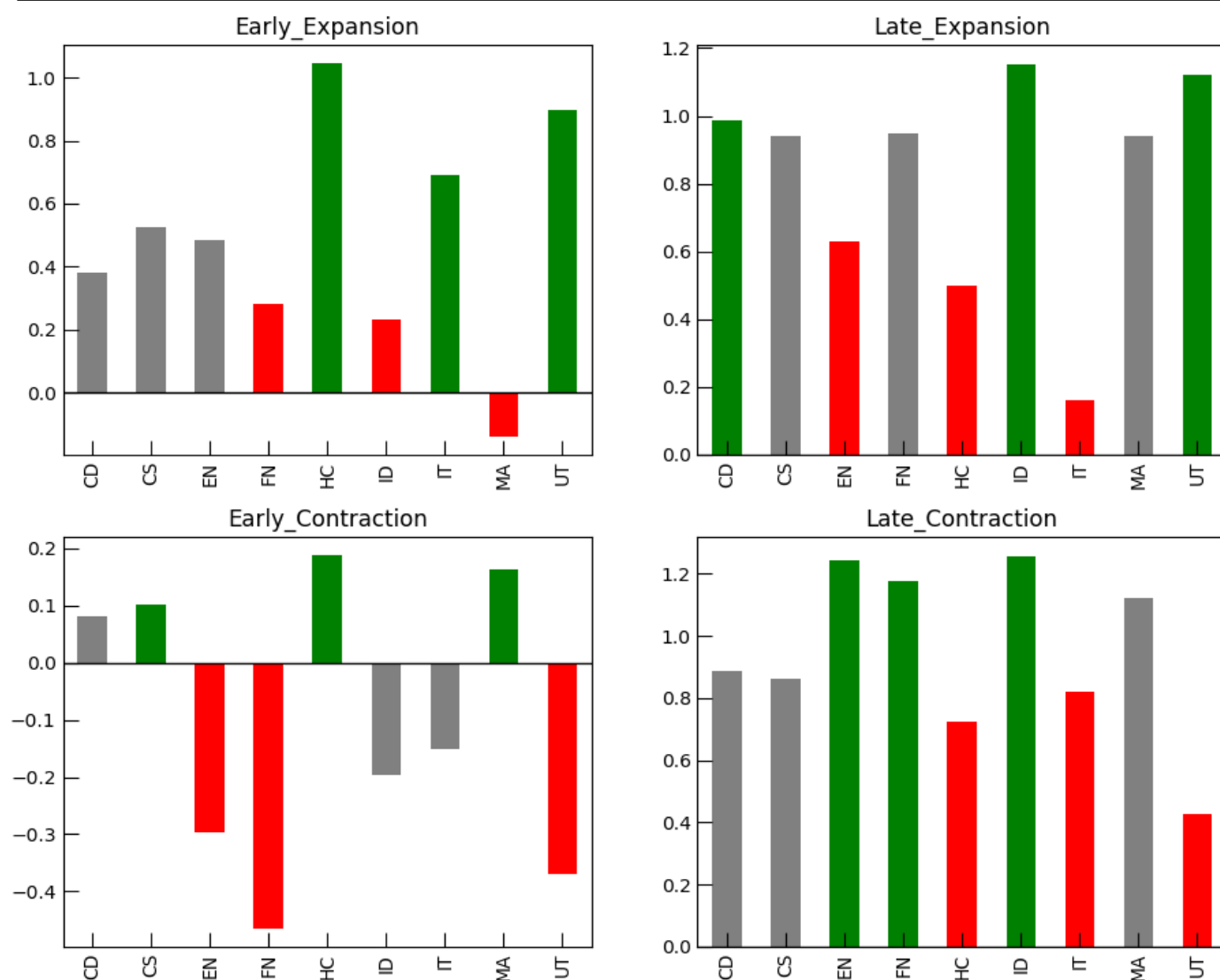
## Business Cycle Compass
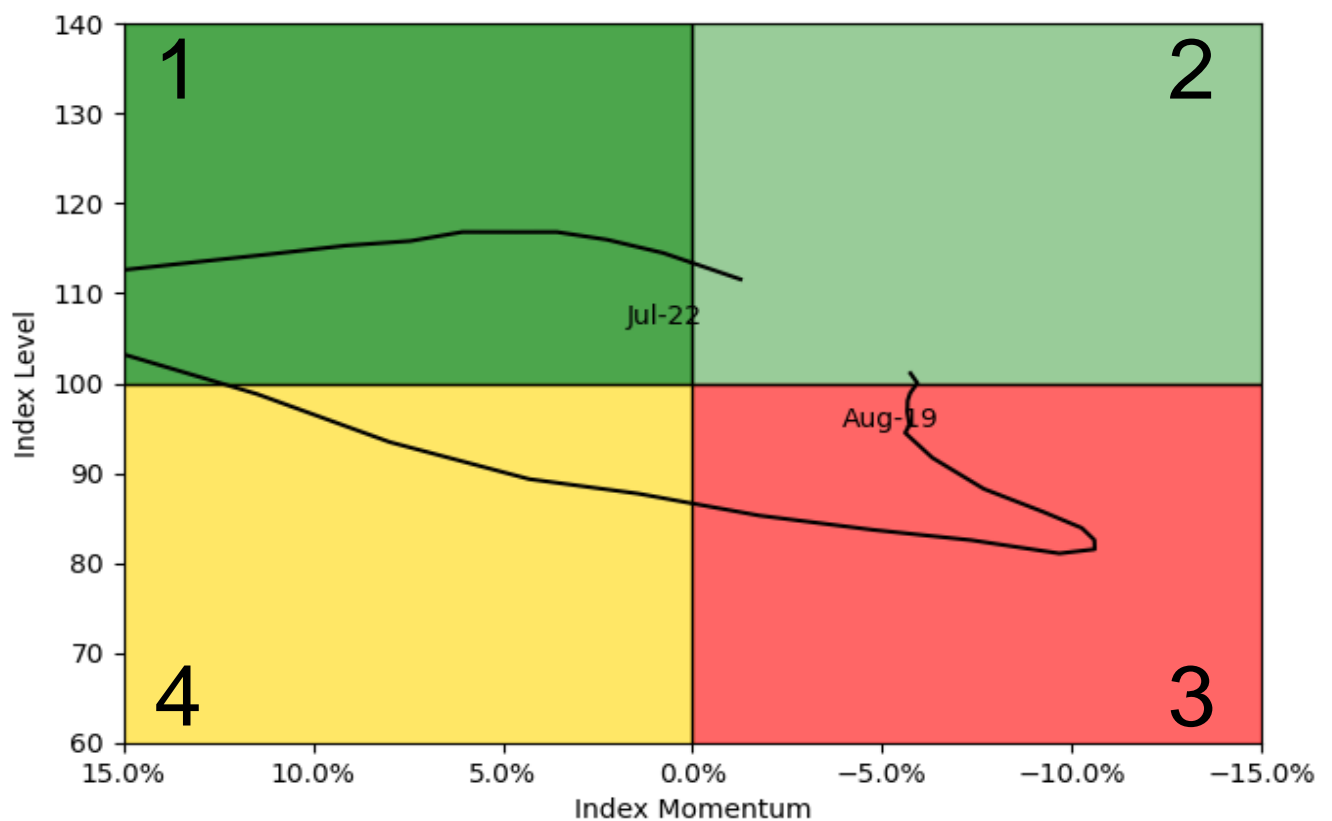


Note: Momentum calculated as 25% 6M Change, 75% 3M Average less 12M Average.
1 = Early Expansion, 2 = Late Expansion, 3 = Early Contraction, 4 = Late Contraction
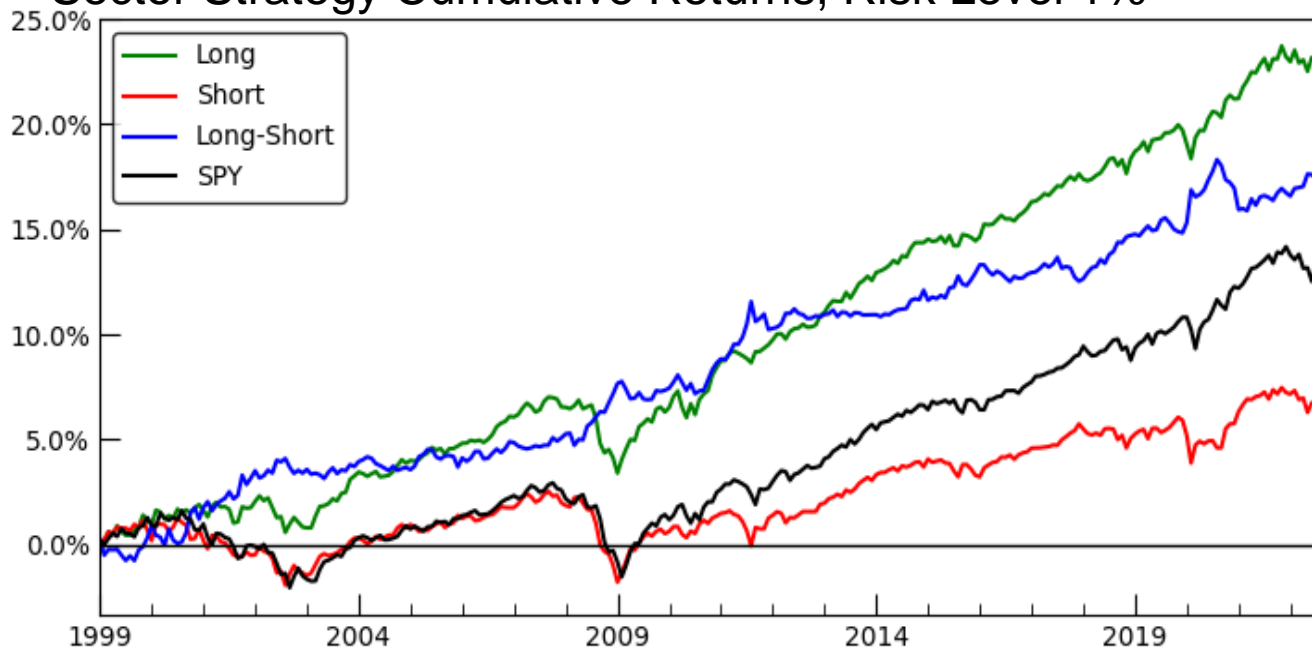
# US Sector Rotation Strategy

## US Sectors Information Ratios by Phase of Business Cycle



Note: Green bars denote sectors with long position, red short, and grey neutral.
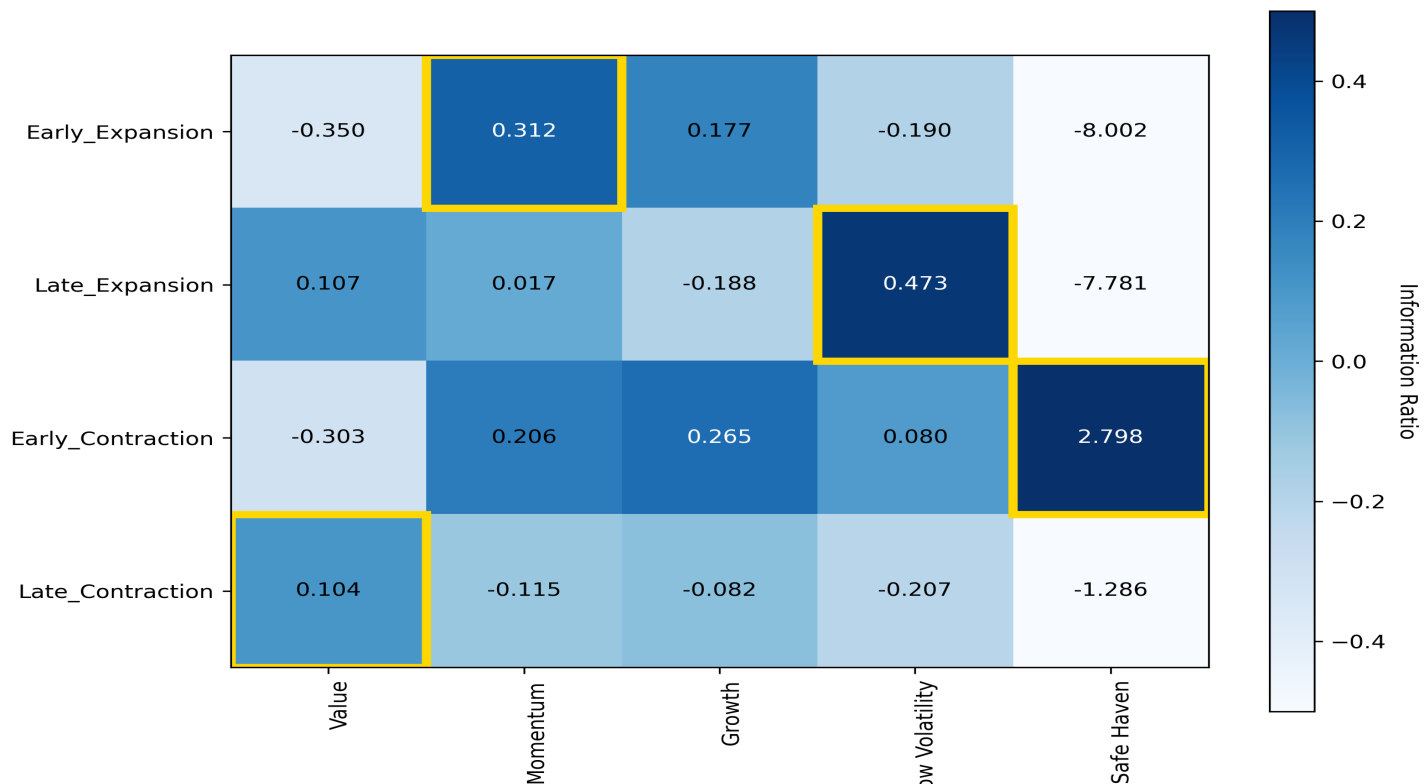Sector returns based on SPDR Sector ETF returns from 1999-01-31 to 2022-07-31

## Sector Strategy Cumulative Returns, Risk Level 1%

# US Factor Rotation Strategy

## US Factors Information Ratios by Phase of Business Cycle



| | Value | Momentum | Growth | Low Volatility | Safe Haven |
|---|---|---|---|---|---|
| Early_Expansion | -0.350 | 0.312 | 0.177 | -0.190 | -8.002 |
| Late_Expansion | 0.107 | 0.017 | -0.188 | 0.473 | -7.781 |
| Early_Contraction | -0.303 | 0.206 | 0.265 | 0.080 | 2.798 |
| Late_Contraction | 0.104 | -0.115 | -0.082 | -0.207 | -1.286 |

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 2022-07-31

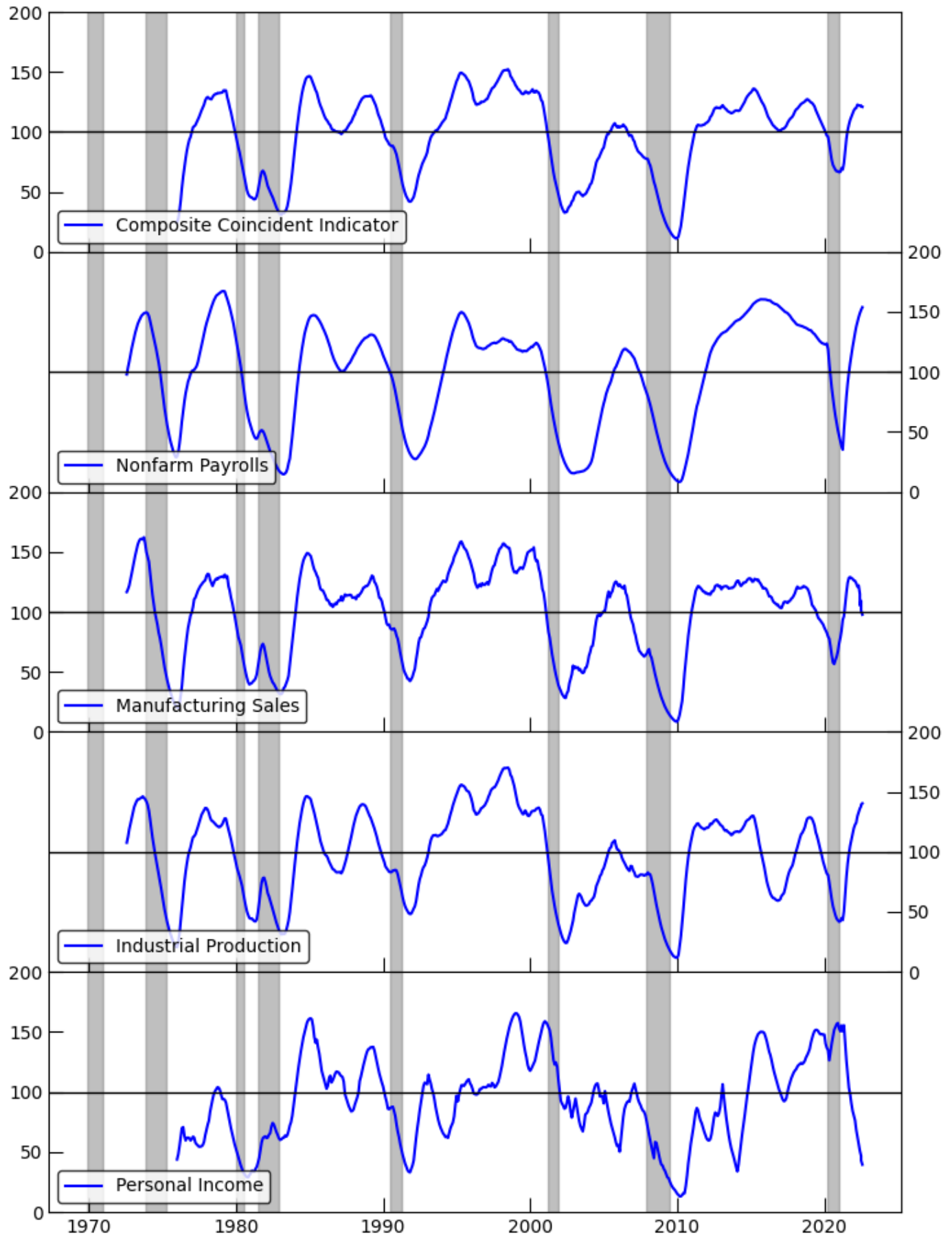## Factor Strategy Cumulative Returns, Risk Level 1%
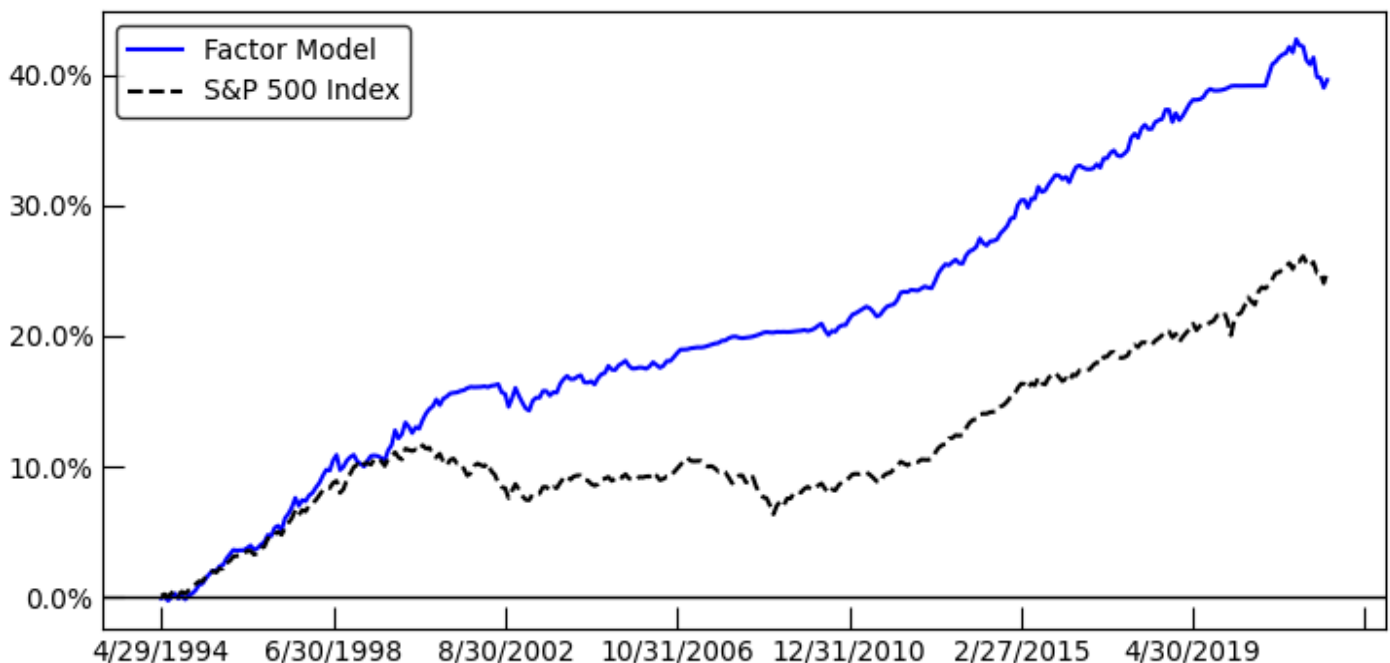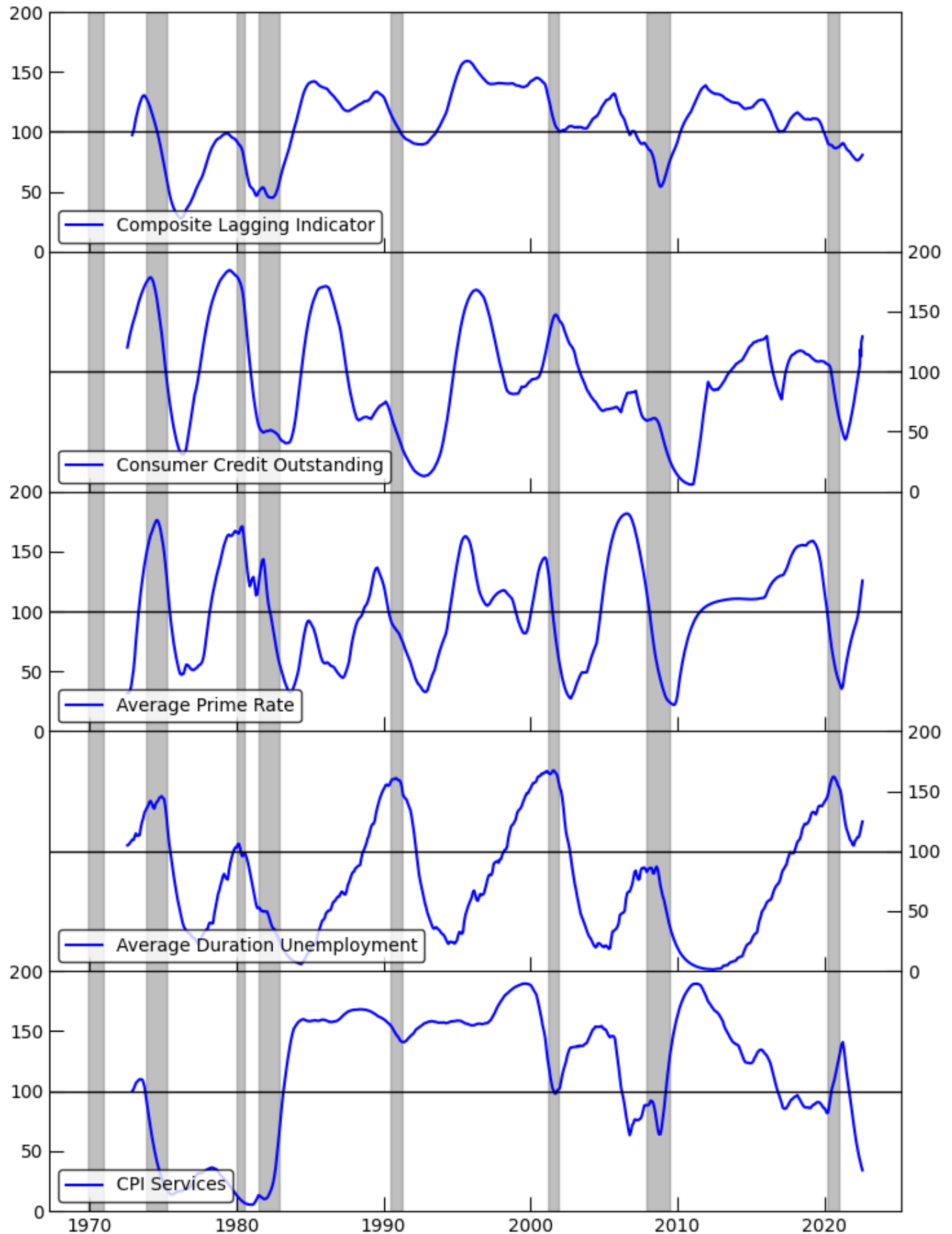
# Composite Leading Indicators
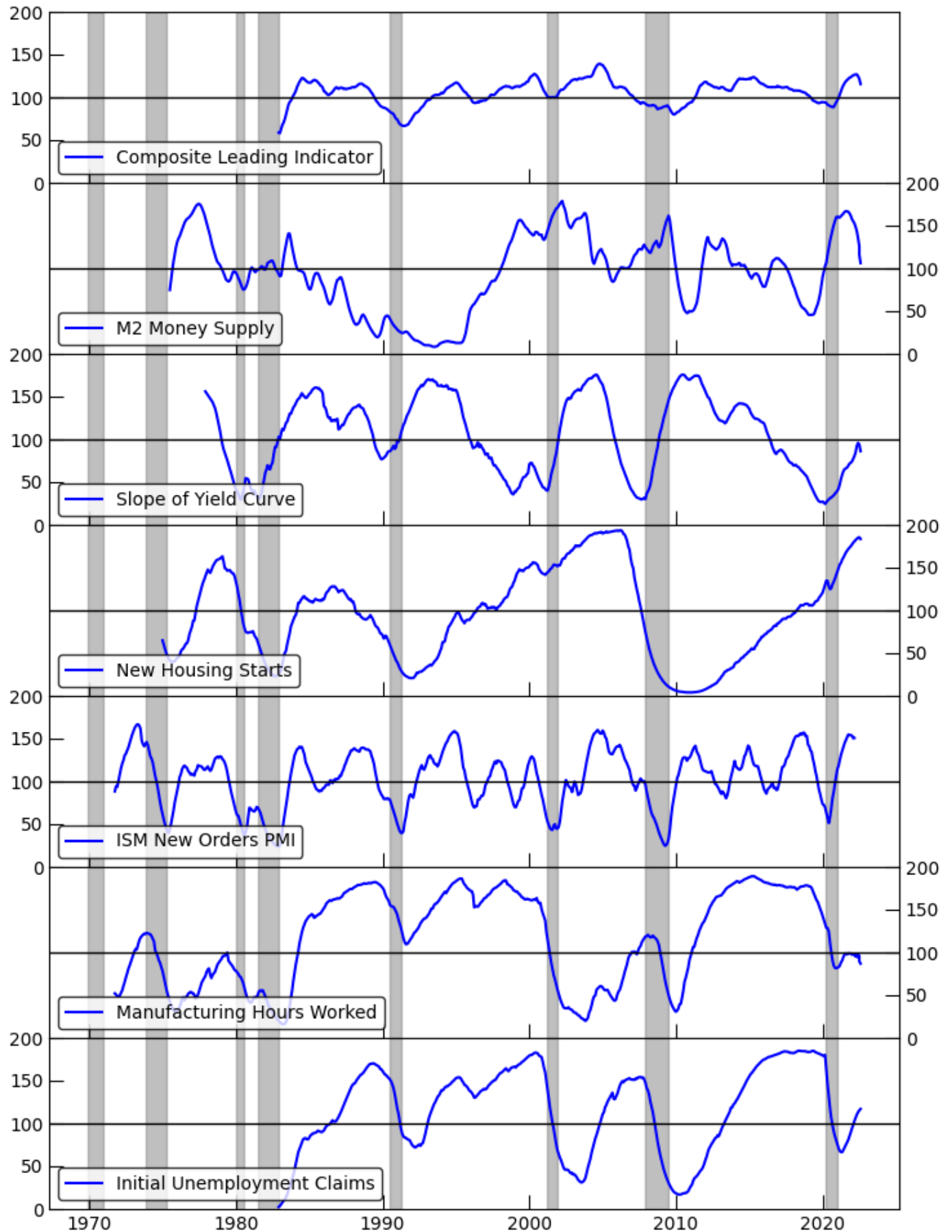


Note: Shaded areas represent US recessions as indicated by NBER.
Reading greater than 100 indicates expansion, less than 100 indicates contraction.

# Composite Coincident Indicators



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

0

# Composite Lagging Indicators



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