

Economics Detox, Recession or Stagflation: A New Approach

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Abstract

Our work estimates that there are 13 episodes of stagflation and 13 periods of soft-landings in the post-1950 era. The NBER suggested that there are 11 recessions during the same period. An ordered probit framework is presented to generate one-year out probabilities of stagflation, recession and soft-landing. In a simulated real-time, out-of-sample analysis, our framework accurately predicted all three scenarios in the post-1980 period. A new method is developed to identify periods of monetary policy pivots, and there are 26 episodes of policy pivots in the post-1990 era. Moreover, a probit model is proposed to predict the six-month-out probability of a policy pivot. The final phase presented a framework to predict the fed funds rate up to four FOMC meetings out. We compare results based on the newly developed framework with those of the FOMC and Blue-Chip fed funds rate forecast. Our approach accurately predicted monetary policy pivots as well as the levels of the fed funds rate.

Introduction

This study presents a novel framework to characterize the economic outlook into three distinct regimes of soft-landing, stagflation and recession. The second phase predicts the probability of those three scenarios during the next year. Our approach helps decision makers identify (a) whether the next phase is a soft-landing, (b) if stagflation is in the near-term picture and (c) whether a recession is coming. We believe our approach would help policymakers decide when it would be appropriate to (1) follow contractionary policies to fight higher inflation (higher probabilities of stagflation), (2) turn to policy normalization (higher probabilities of soft-landing) or (3) start expansionary policies (typically during a recession). The evolving nature of the economy highlights the need for evolving toolkits to help decisionmakers design effective policies. Our work suggests that the traditional approach to utilize forecasts of GDP growth rates and inflation (two key inputs for central bankers’ decision making), for example, may not be enough for effective policy decisions. Instead, policy decisions based on probabilities of three defined outlooks such as soft-landing, stagflation and recession are more effective. Predicting the likelihood of risk of recession and/or stagflation to the economic environment would help to design forward looking policies to mitigate those risks. We readily acknowledge that, in some ways, predicting the probability of recession may be akin to the GDP growth rate forecast; however, recession and/or stagflation predictions help to identify some potential risks to the policy decisions. Historically, fighting stagflation is more challenging, and to some extent, may require a different policy path than recessions. For example, the last four recessions are associated with expansionary monetary policy compared to the 1980s stagflation/recession when the FOMC raised the fed funds to fight inflation. Recent years’ experience shows that predicting the near-term economic outlook poses challenges for central bankers around the globe. For example, the past few years have noted talks of recession, stagflation and soft-landing. Members of the Federal Open Market Committee (FOMC) have been busy fighting higher inflation, volatile GDP growth rates and financial market participant worries, first about recession and then stagflation. Moreover, in the post-pandemic era, the FOMC’s early characterization of “transitory” inflation turned out to be persistent inflation.

Methods and Materials

The first phase of our framework characterizes the U.S. economic outlook into three regimes; recession, soft-landing and stagflation. The major reason to divide the economy into three regimes is that these regimes are structurally different from each other and thereby lead to different sets of monetary policy stances, all else equal. That is, a recession forecast may dictate an accommodative policy stance (following the past four recessions’ experience, for example), while a stagflation prediction would ask for policy tightening. Why are these three scenarios important in guiding monetary policy decisions? We believe that generating simultaneous probabilities of the three scenarios would help to capture some major risks to the economy. Our proposed framework to identify a soft-landing would help to differentiate periods of soft-landings from recessions and thereby a potentially different policy stance, all else equal, as a soft-landing, by definition, suggests no near-term risk to the economy.

Results

Soft-landing Episodes

Episode Dates		Duration (in quarters)
1	Q1-1963:Q2-1963	2
2	Q3-1966:Q1-1967	3
3	Q2-1976:Q4-1976	3
4	Q4-1984:Q3-1986	8
5	Q2-1989:Q3-1989	2
6	Q3-1995:Q1-1996	3
7	Q4-1997:Q2-1998	3
8	Q1-1999:Q2-1999	2
9	Q2-2004:Q3-2004	2
10	Q4-2010:Q2-2011	3
11	Q3-2016:Q2-2017	4
12	Q2-2018:Q1-2019	4
13	Q1-2023:Q2-2023	2

Note: there are 13 episodes of soft-landing in the post-1950 era

Stagflation Episodes

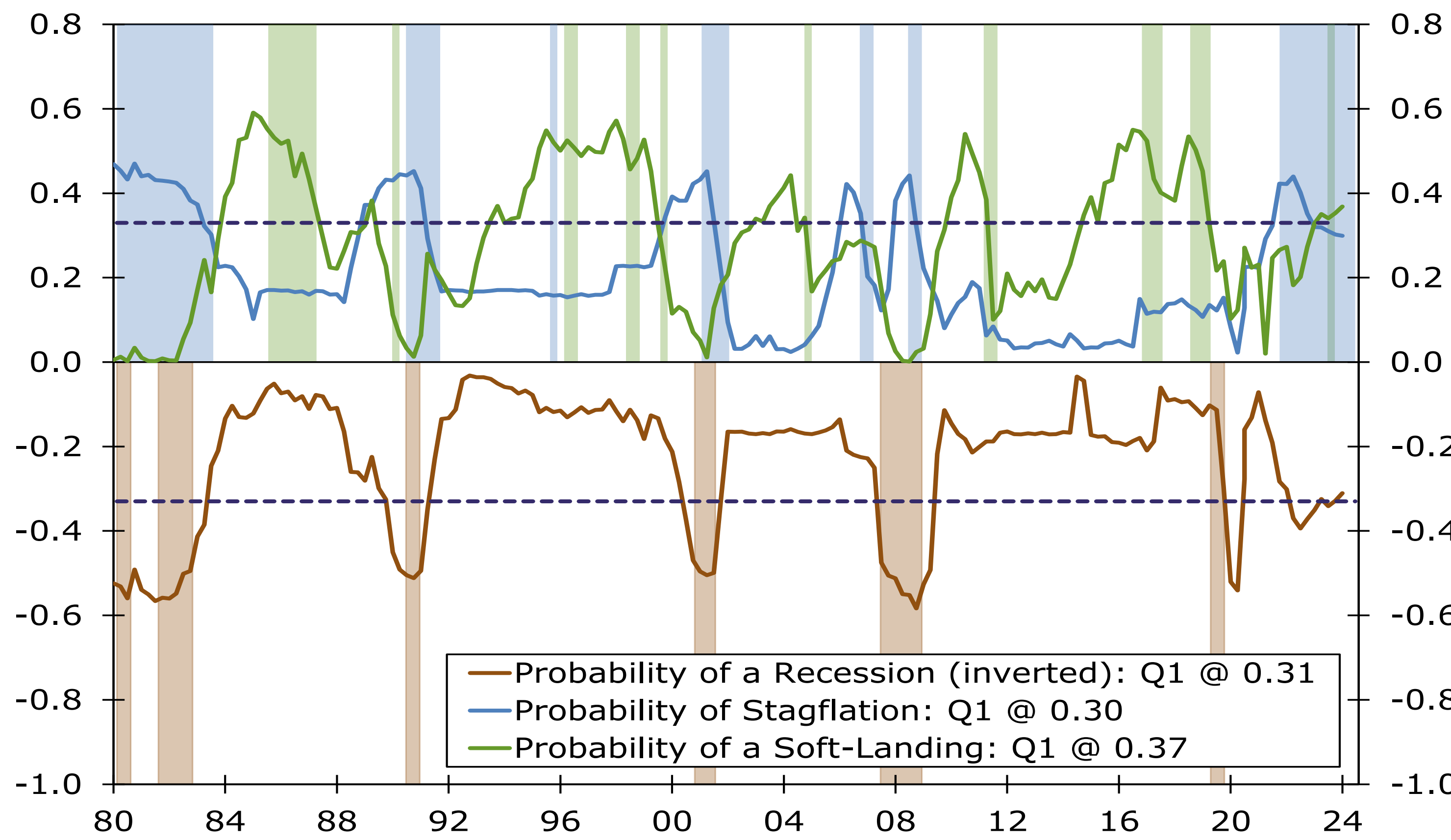
Episode Dates	Characterization	Duration (in quarters)
Q1-1957:Q2-1958*	Moderate	6
Q2-1969:Q4-1970*	Severe	7
Q2-1971:Q4-1971*	Mild	3
Q3-1973:Q2-1975*	Severe	8
Q2-1976:Q4-1976**	Mild	3
Q4-1977:Q1-1978**	Mild	2
Q1-1979:Q4-1982*	Severe	16
Q4-1989:Q1-1991*	Moderate	6
Q1-1995:Q2-1995**	Mild	2
Q3-2000:Q3-2001*	Moderate	5
Q2-2006:Q4-2006**	Mild	3
Q1-2008:Q3-2008*	Moderate	3
Q2-2021:Q2-2024	Severe	14

*Episode with recession
a) Mild = 2 consecutive quarters where the CPI is above average by 1 S.D. of the mean, and GDP growth is below the prior cycle's average.
b) Moderate = 3 or 4 consecutive quarters where the CPI is above average within 1 to 3 S.D., and GDP growth is below the prior cycle's average.
c) Severe = At least 6 consecutive quarters where the CPI is above average by 3 S.D. or more, and GDP growth is below the prior cycle's average.

**Episode without recession

4-Quarters Ahead Probability of Growth Scenarios

Threshold from -0.33 to 0.33



Conclusions

In conclusion, our framework to predict potential risks to the economic outlook and then utilize those probabilities to forecast policy pivots as well as the pace of a policy stance would help decisionmakers to design effective policies. Our framework is flexible and can be updated in real-time to incorporate the changing nature of potential risks.

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