

# The Composite Leading Indicators, Recession of 2001, and the Monetary Policy

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**Seminar**

**Department of Economics and Finance**

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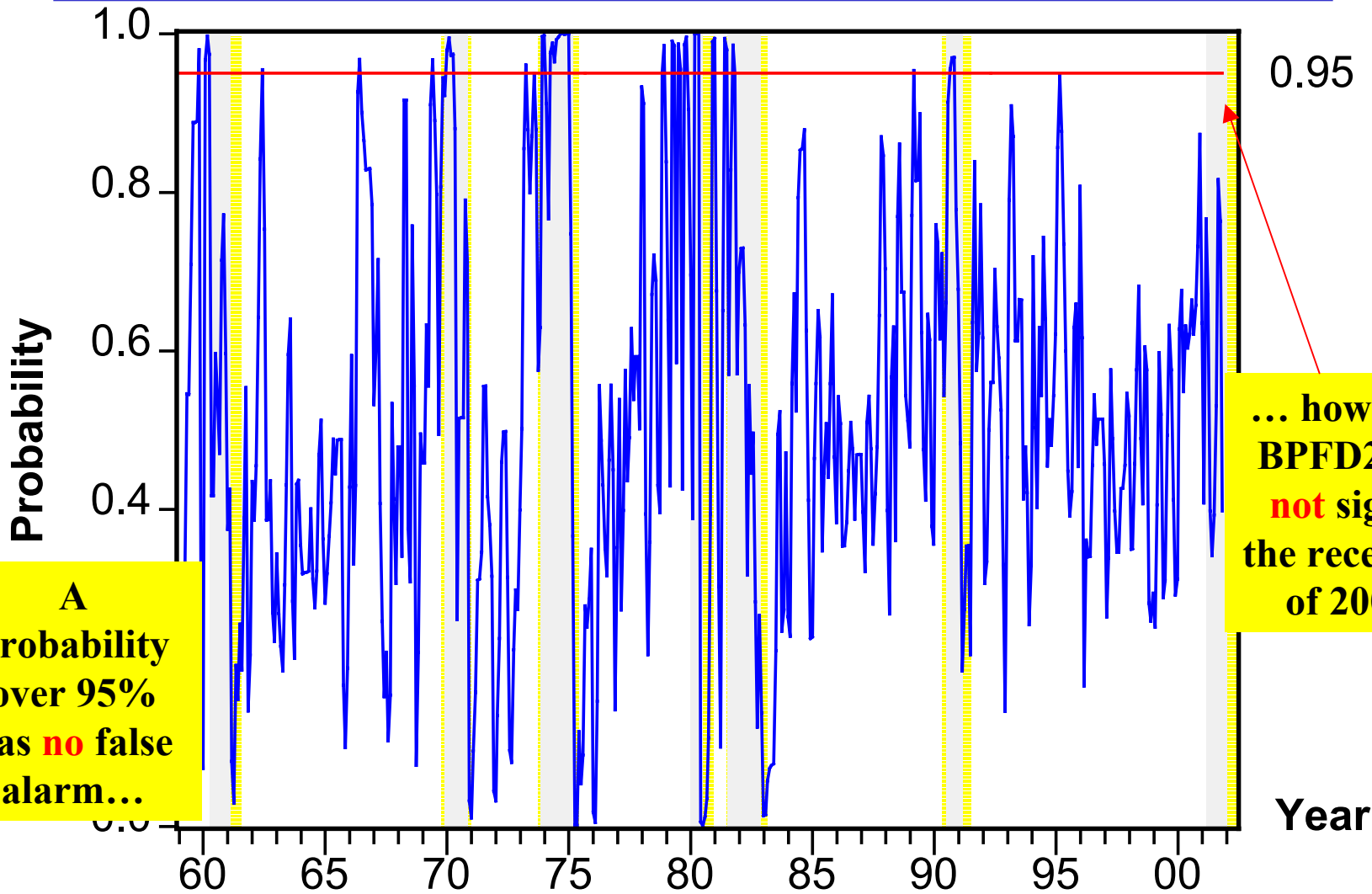
# Opening Statement

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- In April 2001 departmental seminar:
  - Composite Leading Economic Indicators (CLI)
    - Major structural changes since 1996.
    - Significant changes in the probability distributions of the percentage change in CLI for the expansion periods and for the recession periods.
  - Bayesian Probability Forecast of a Downturn (BPDF).
  - Forecast of a downturn (recession) in today's economy.
- Today:
  - Evaluation of the BPDF forecasts of the Recession 2001.
  - Monetary Policy and its impacts on the CLI and the overall state of the economy.
    - Overall.
    - Recession of 2001.

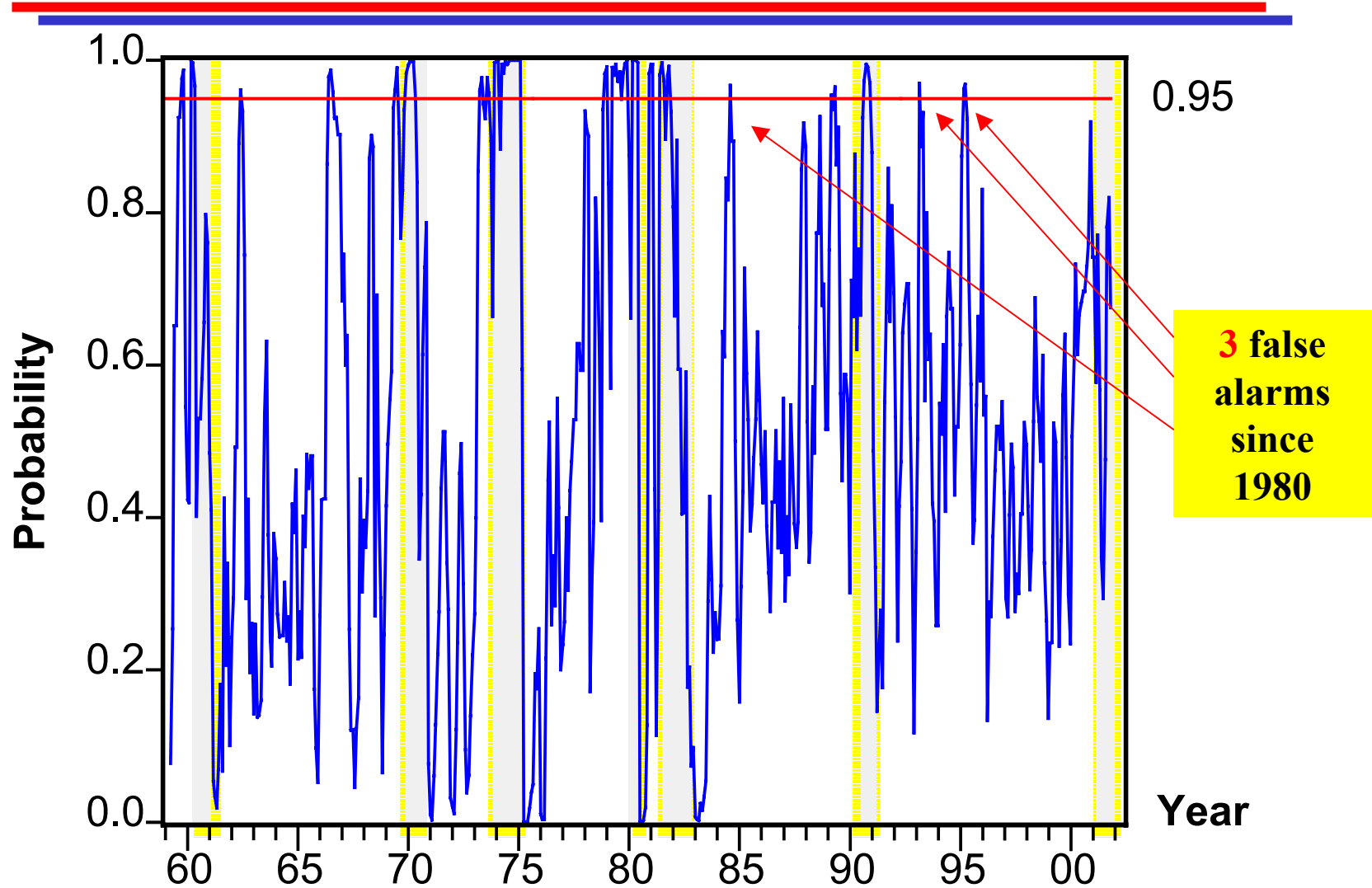
# BPDF2\_1996: Bayesian Probability Forecast of a Downturn Using 2 Consecutive CLI - CLI1996 = 100



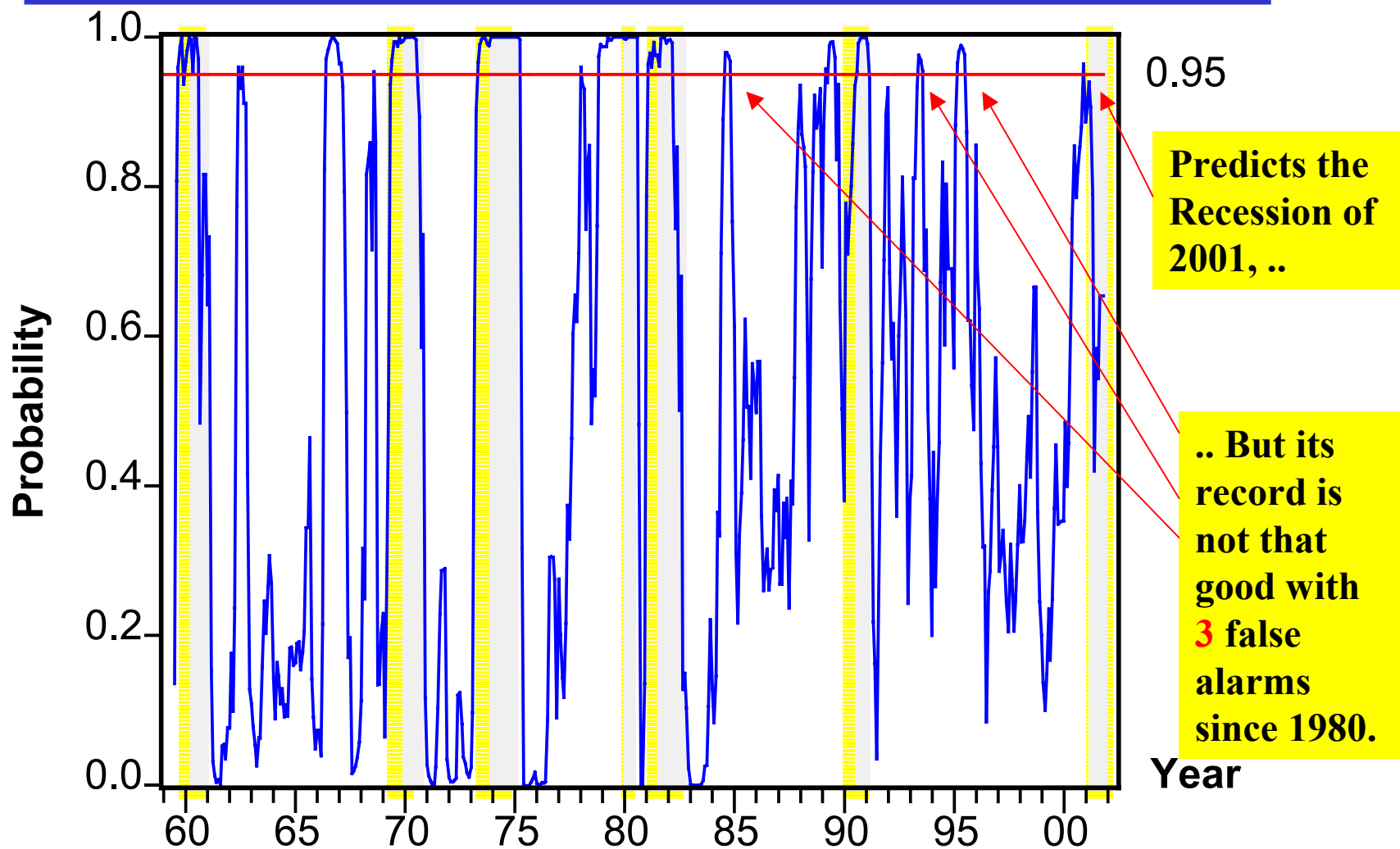
A probability over 95% has **no** false alarm...

... however, BPDF2 **did not** signal the recession of 2001.

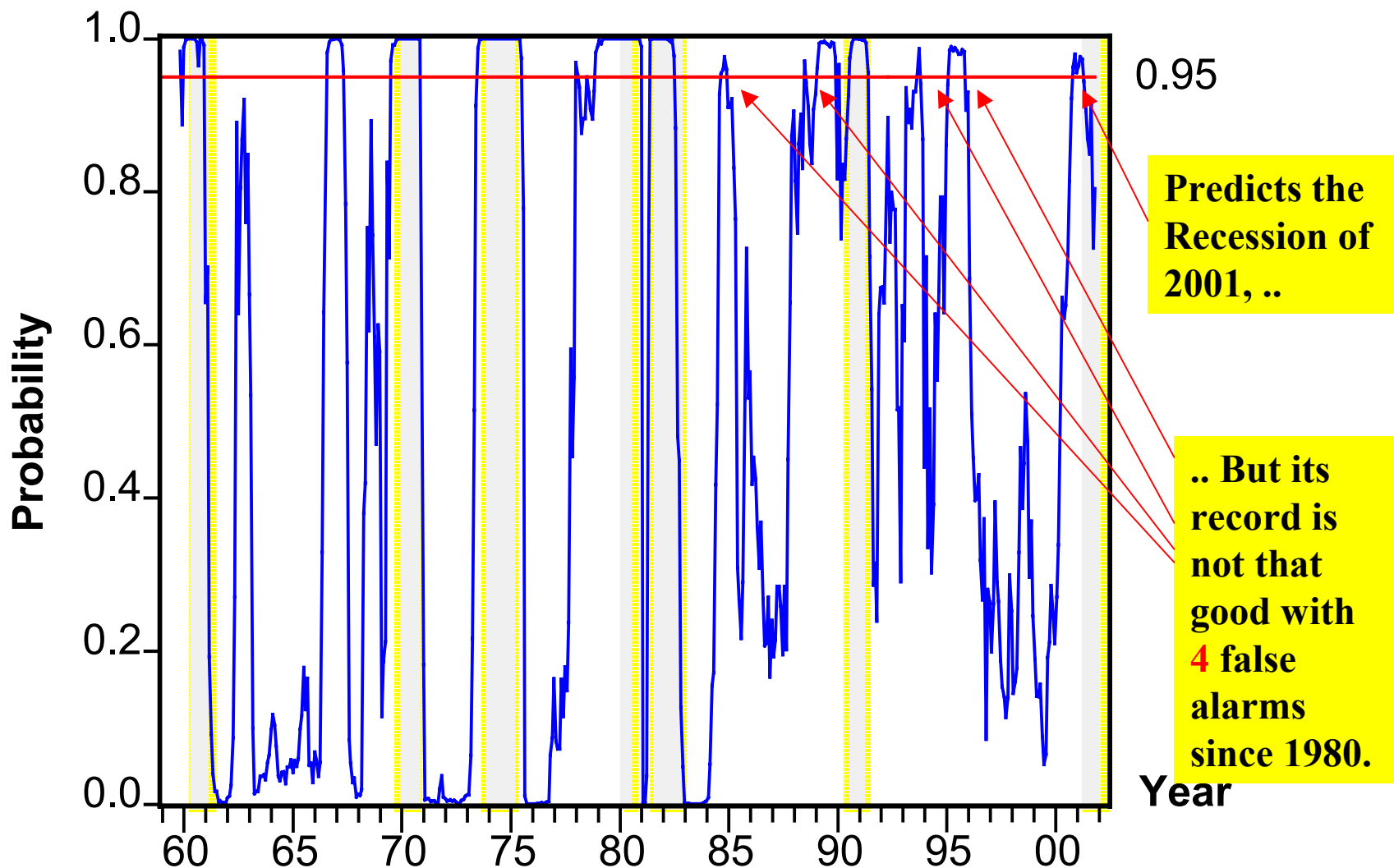
# BPF3\_1996: Bayesian Probability Forecast of a Downturn Using 3 Consecutive CLI - CLI1996=100



# BPF6\_1996: Bayesian Probability Forecast of a Downturn Using 6 Consecutive CLI - CLI1996=100



# BPDF10\_1996: Bayesian Probability Forecast of a Downturn Using 10 Consecutive CLI - CLI1996=100



**Table 2: Models' signals of a downturn in the U.S. Economy with probability of 95% or more - 1973/01 - 2001/12**

CLI Peaks	NBER Peaks	BPF2_96			BPF3_96			BPF6_96			BPF10_96		
		Signal Dates	Lead (-) Lag(+)	NCDS	Signal Dates	Lead (-) Lag(+)	NCDS	Signal Dates	Lead (-) Lag(+)	NCDS	Signal Dates	Lead (-) Lag(+)	NCDS
73/03	73/11	73/12	+1	2	73/04	-7	2	73/05	-6	24	73/07	-4	25
		74/04	+5	10	73/08	-3	2						
					73/12	+1	3						
					74/04	+5	10						
79/03	80/01	78/11	-14	2	78/12	-13	2	78/11	-14	23	78/12	-13	27
		79/04	-10	2	79/04	-10	5						
		79/07	-6	2	79/10	-3	3						
		79/10	-3	2	80/03	+2	4						
		80/03	+2	3									
81/04	81/07	80/12	-7	2	80/12	-7	3	81/02	-5	14	81/07	0	12
		81/06	-1	2	81/06	-1	3						
		81/10	+3	1	81/10	+4	2						
					84/08	-	1	84/08	-	4	84/09	-	4
											88/07	-	1
90/08	90/07	89/03	-16	1	89/03	-16	1	89/03	-16	1	89/02	-17	11
		90/09	+2	3	89/05	-14	1	89/05	-14	4	90/02	-6	1
					90/09	+2	4	90/08	+1	7	90/08	+1	11
					93/03	-	1	93/06	-	3	93/09	-	2
					95/03	-	2	95/03	-	5	95/03	-	9
2000/01	2001/03							2000/12	-	1	2000/11	-	6

**BPF2 has no false alarm in 1980s and 1990s.**

**Both BPF2 and BPF3 missed the recession of 2001.**

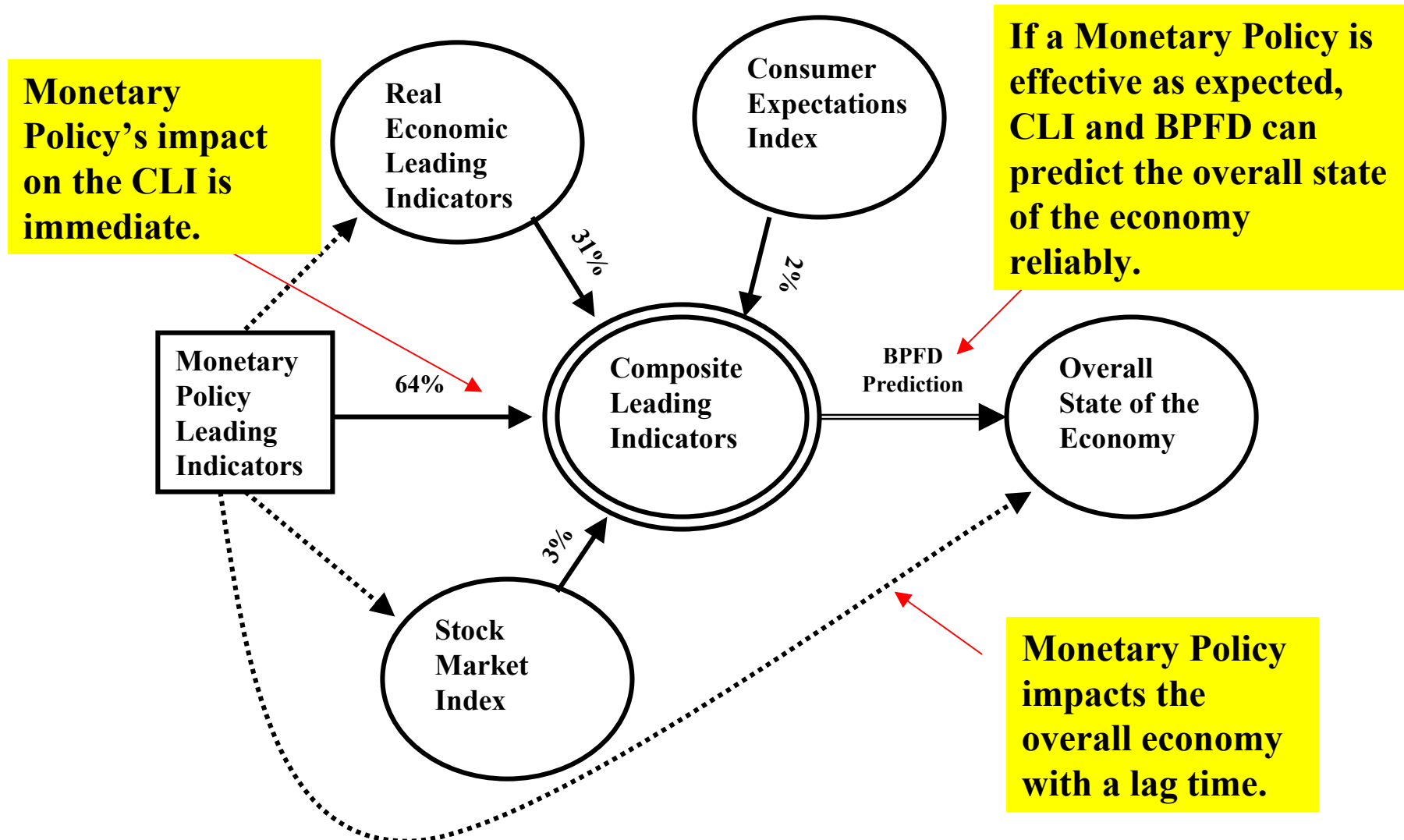
# What Did Go Wrong?

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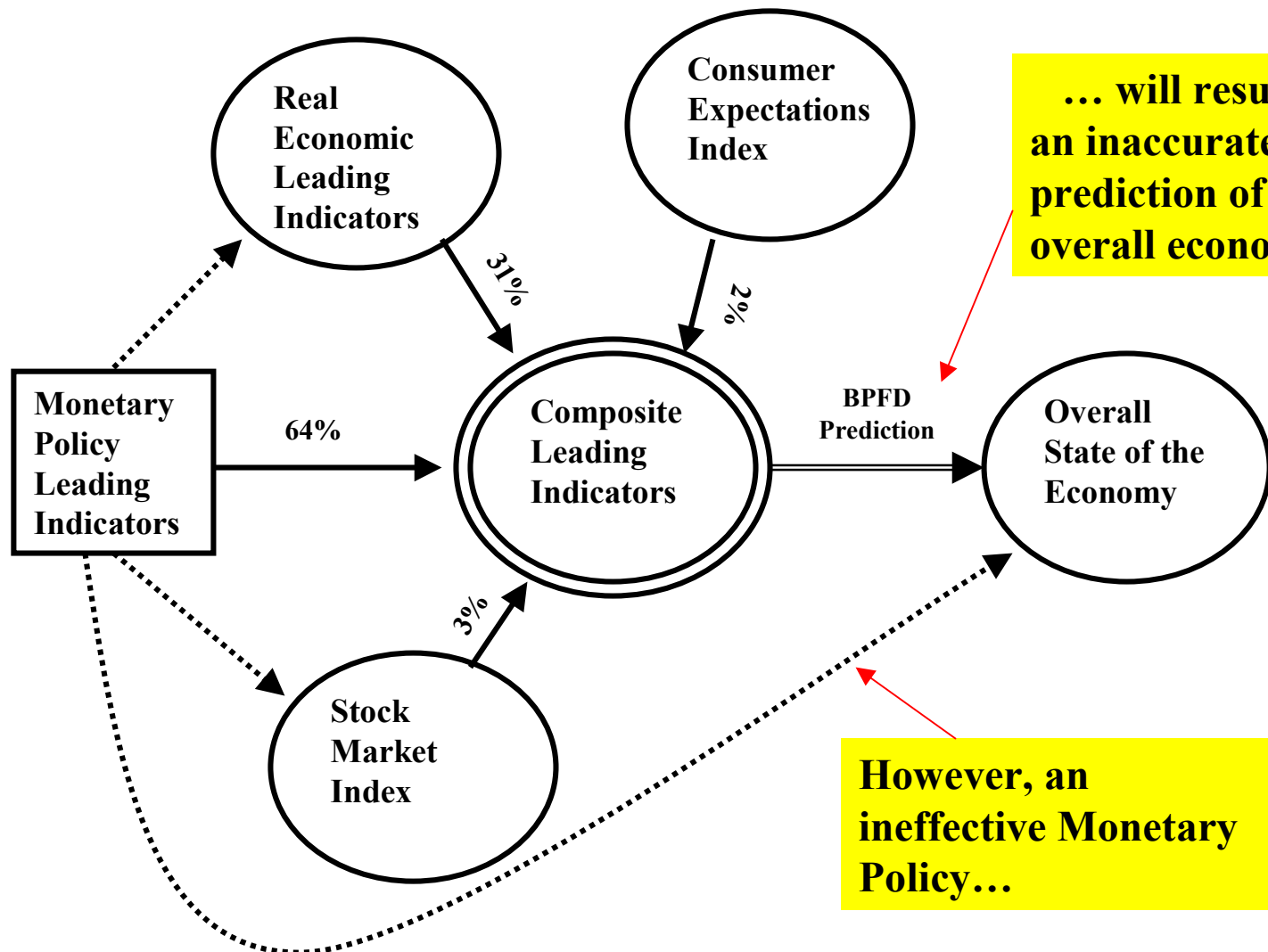
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- The influence of the monetary policy on CLI, direct impact, versus its impact on the overall economy, delayed impact.
  - Limitations of a monetary policy.
- Recession of 2001:
  - Monetary policy and its impact on CLI and on predicting a downturn point.

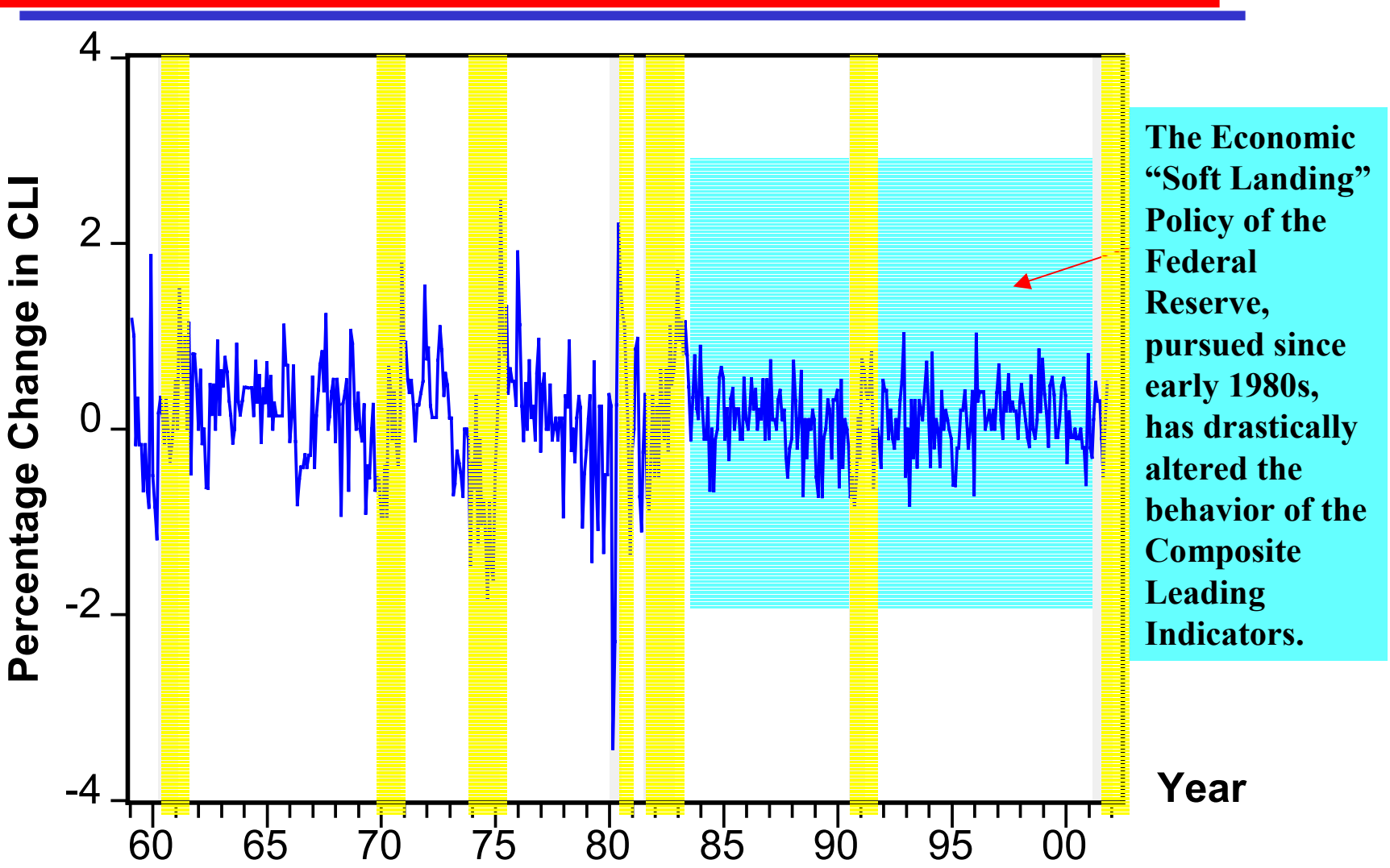
# Influence Diagram of the Monetary Policy Impacts on the CLI and on the Overall Economy



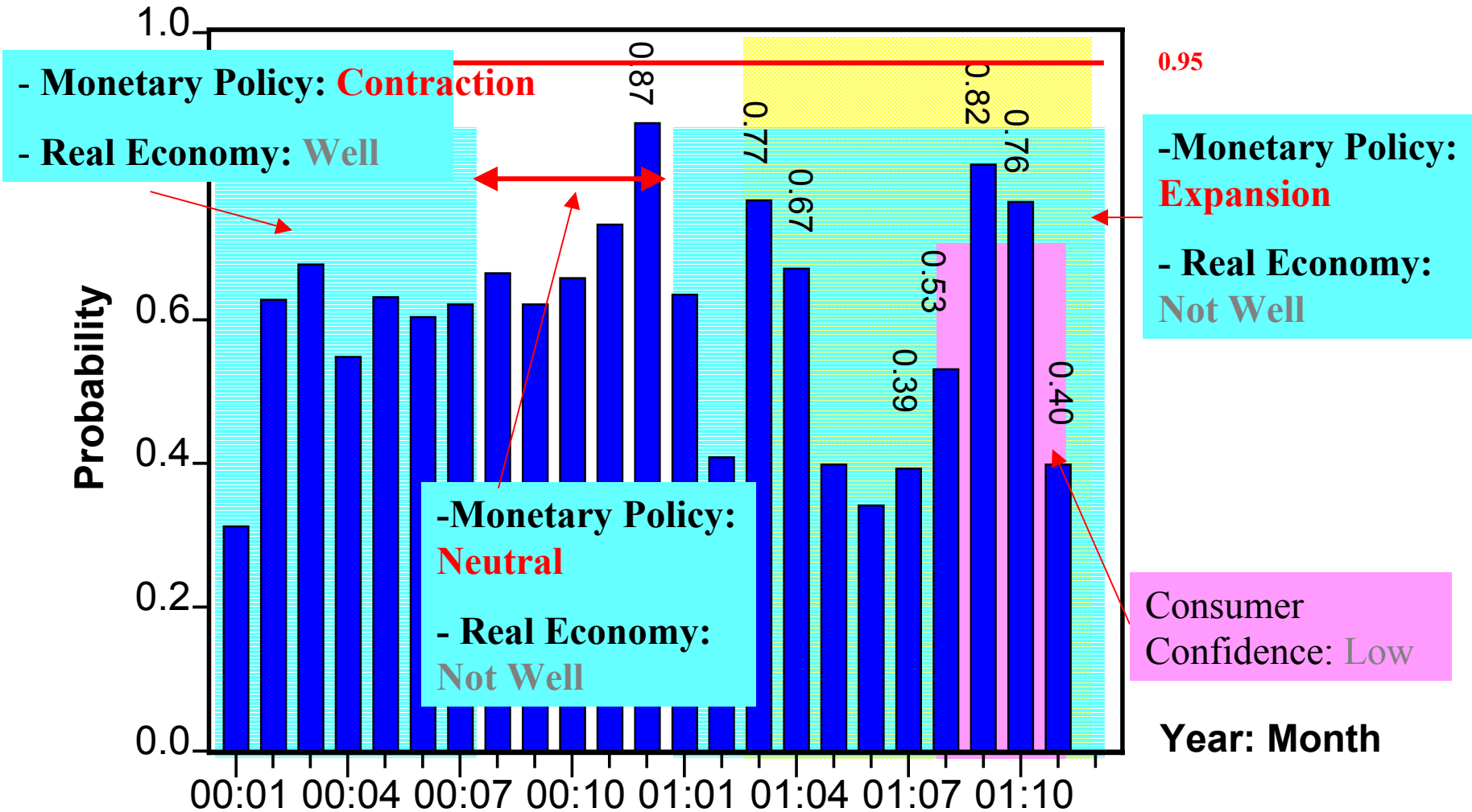
# Influence Diagram of the Monetary Policy Impacts on the CLI and on the Overall Economy



# Percentage Change in the Composite Leading Indicators - CLI1996.



# Is the Monetary Policy Applied Beyond Its Effective Level?



Source: Mostaghimi M. (2001), An Information-Theoretic Methodology for Estimating Bayesian Probability Forecast of a Downturn in the U.S. Economy, Manuscript, Department of Economics and Finance, Southern CT State U., New Haven, CT 06515.  
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 M. Mostaghimi

# What can be done?

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- Monetary Policy:
  - Recognizing the limitations of the monetary policy and applying it to its effectiveness.
- Composite Leading Economic Indicators:
  - Monetary policy tools are great predictors of the near future state of the overall economy and have a good credibility among the business and financial communities.
  - However, these tools are discretionary, their predictive effectiveness are limited by the degree to which the overall economy respond to them.
  - Assigning about 64% of the CLI weights to the monetary policy tools is over exposing the CLI to the Type II error:
    - *The error of not to signaling a downturn, when in fact it is a downturn.*
  - Recommendation: Reduce the CLI's exposure to the monetary policy tools.
- Bayesian Probability Forecast of a downturn (BPDF2):
  - Can prior probabilities be used to overcome the CLI's shortcoming?
    - Subjective versus empirical e.g., diffusion index.