

A photograph of a financial market display board. The background is a dark board with various numbers and indicators in green and red. In the foreground, a yellow sign is visible with the text 'FED FUNDS' in large black letters, 'UNCH' in white letters, and '0-0.25%' in black letters. Below the sign, there is a red and white 'BREAKING NEWS' banner. The overall scene is dimly lit, suggesting a trading floor at night or in low light.

# Too low *for* too long?

**Kansas City Fed economist looks  
at impact of monetary policy decisions**

4W	12	-0.01	13	12	3M
3M	25	0.00	25	25	6M
6M	43	0.00	43	42	1Y
1Y	87	0.03	87	85	
S&P 500 FUT	709.00	+18.82			CCMP
900 EURS					
DEALER CP					
99-27+	-04+	150	0.420	MAR	
100-01	-09+	300	0.870	JUN	
99-21	-17+	600	0.960	SEP	
97-31	-30	900	1.340	DEC	
96-27	-1.10	1200	1.500	MAR	
		1800	1.700	JUN	
Swaps					
3.25 3Y	2.050				
10yr Note Fut					120-14

**A**s the nation emerges from the worst economic recession since the Great Depression, one of the key questions facing policymakers will be whether monetary policy may have inadvertently played a role in fostering financial imbalances that eventually led to the crisis.

This question is not unique to this crisis.

While the recent crisis had a substantial economic impact, during the past quarter century the United States faced a number of economic shocks, including the Russian debt default and the bursting of the high-tech bubble. To some extent, each crisis was preceded by a buildup of financial imbalances.

George Kahn, vice president and economist at the Federal Reserve Bank of Kansas City, recently completed a research article looking at the crises of the past 25 years to determine if monetary policy focusing on stable inflation and long-term growth may have left interest rates too low for too long and fostered the turmoil.

Kahn's research is based on what is known in economics circles as the Taylor rule. First proposed in 1993 by economist John Taylor, the Taylor rule suggests how a central bank should adjust monetary policy based on such variables as the inflation rate and the level of gross domestic product (GDP). Although not used explicitly by the Federal Reserve's policy-setting Federal Open Market Committee

(FOMC)—which must also consider other factors including data not encompassed by the comparatively simple formula—the Taylor rule does align closely with policy moves during the late 1980s and early 1990s. As Kahn notes in his research, the rule has become a key guidepost for policymakers.

In his research, Kahn looks at four variations of the Taylor rule to define so-called “off-rule” behavior by Federal Reserve policymakers. His analysis uses data available today, which incorporates revisions that would not have been available to policymakers in real time. His goal was not to identify policy mistakes, but to see what impact the decisions may have had on financial imbalances. Kahn found that the fed funds rate, as targeted by the FOMC, closely followed the Taylor rule for a 10-year span starting in 1987. The fed funds rate is the interest rate depository institutions lend balances to each other overnight.

“From 1998 to 2008, however, the fed funds rate was frequently and persistently below the prescriptions from all versions of the Taylor rule by almost 2 to almost 6 percentage points,” Kahn says.

Two episodes stand out.

The first is from late 1998 through 2000. This period encompassed: the liquidity crisis connected with the Asian financial crisis in 1997, the 1998 Russian default and the later collapse of the hedge fund Long-Term Capital




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THE FEDERAL OPEN MARKET COMMITTEE (FOMC) forms monetary policy to ensure a healthy, growing economy. The FOMC is made up of the seven members of the Federal Reserve Board of Governors and five of the 12 regional Reserve Bank presidents, who vote on a rotating basis with the exception of the New York Fed president, who always votes. Kansas City Fed president Tom Hoenig is a voting member this year.

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Taylor rule prescriptions.

“Policymakers potentially fostered the financing of asset purchases with short-term borrowing, feeding a buildup of financial imbalances,”

Kahn says. “In addition,

they may have contributed to increased leverage, greater risk taking and speculation in commodity markets.”

## Asset bubbles

Monetary policy has been successful in containing inflation essentially since the Paul Volcker-led Federal Reserve took unprecedented action in the early 1980s. Although broadly successful by this measure, has policy contributed to boom and bust cycles in asset prices? And did it foster the most recent crisis?

“Ironically, the success of the Federal Reserve in responding to the 1987 stock market crash and the aftermath of the 1998 Asian financial crisis may have contributed to a view among investors that the stock market represented a one-way bet,” Kahn says.

In both of those cases, the FOMC aggressively lowered rates and put liquidity into the system. This belief, combined with the opinion the Internet would be a boon to business and the search for yield in an environment of low rates, may have led to the stock market’s high-tech bubble, Kahn says.

When it burst, the Federal Reserve once again lowered rates from 6.5 percent in 2000 to 1 percent in 2003.

“Moreover, the FOMC signaled in its statements that rates would remain low, first

Management. Looking back with perfect hindsight, the U.S. economy actually expanded briskly during this period, and while the fed funds rate target was lowered because of the unfolding crises, the Taylor rule actually called for a rate hike. In 1999, the FOMC reversed course and began to tighten policy, albeit at a slower rate than suggested by the Taylor rule.

The second notable episode was 2002 through 2006, which included the response to the 2001 recession. During this period, the FOMC slashed rates to 1 percent and held them there for a year amid concerns about high unemployment and sluggish GDP growth. There was even some discussion about the possibility, although remote, of deflation.

“Clearly, concern that the United States could experience the same kind of deflationary episode experienced in Japan in the previous decade weighed heavily on policymakers’ minds,” Kahn says.

In the United States, as policymakers hoped to avoid a crisis, they not only lowered rates, but also offered guidance on numerous occasions that rates would remain low for “a considerable period.”

“All of these statements (by the FOMC) contributed to a view among investors that a low level of rates relative to fundamentals would likely persist,” Kahn says.

Rates remained persistently well below

indicating that policy accommodation would be maintained for a 'considerable' period and then suggesting that it could be removed at a 'measured' pace," Kahn says. "This period of low rates may have set the stage for the 2008 global financial crisis."

Kahn notes that Taylor himself has argued that easy monetary policy from 2003 to 2006 helped to create the housing bubble.

"Taylor ran simulations that showed that the housing boom would have been less excessive in terms of housing starts had the federal funds rate followed the path prescribed by the Taylor rule instead of its actual path," Kahn says. "He also suggested the subsequent collapse of housing activity would have been less severe."

Not everyone agrees with Taylor, Kahn notes. Fed Chairman Ben Bernanke, most notably, disagrees with Taylor's conclusions and has offered his own case to suggest that the fed funds rate played only a small role in the housing boom.

Kahn also examined leverage activity, which he found accelerated rapidly from 2003 to 2007, and commodity prices, which rose from 2002 to 2007.

## The crisis of 2007-08

So, did easy money in the years before the crisis foster the recession?

That question will be debated for a long time, Kahn says.

A case can be made that low rates encouraged over-leverage, high-risk investments and a spike in home prices. But an argument can also be made that the Federal Reserve's actions were appropriate based on what was known at the time and that other factors were at work in fostering the crisis. One such factor suggested by Bernanke may have been a glut in global savings that sought safe harbor in U.S. assets.

Kahn also notes a real world challenge facing policymakers. William McChesney Martin, the Federal Reserve's longest-serving chairman, famously said that the Federal Reserve's job is "to take away the punch bowl just as the party gets going," but can that always

be accomplished?

"Detecting and leaning against growing financial imbalances may be difficult or impossible in real time," Kahn says.

Regardless, the question remains: Did steps taken to stabilize output and inflation cause other problems?

Kahn concludes that while there appears to be a statistically significant relationship between deviations from the Taylor rule and a number of financial indicators, their economic significance is mixed. With the benefit of 20/20 hindsight, it appears that the Taylor rule deviations helped to predict the housing bubble; it was not as useful in predicting other bubbles. One challenge in finding a robust relationship is that imbalances appeared in different areas at different times.

Policymakers may be able to be on alert for emerging imbalances that may suggest interest rates are too low even when real-time data on inflation and output might suggest low rates are warranted.

"Policymakers should be cautious in deliberately maintaining rates below Taylor rule prescriptions," Kahn says. "Although policymakers may have reasons to deviate from simple rule-like behavior, they should be alert to unintended consequences from maintaining rates too low for too long."

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BY TIM TODD, TEN CONTRIBUTING WRITER

## FURTHER RESOURCES

### "TAYLOR RULE DEVIATIONS AND FINANCIAL IMBALANCES"

By George A. Kahn  
KansasCityFed.org/TEN

COMMENTS/QUESTIONS are welcome and should be sent to [teneditors@kc.frb.org](mailto:teneditors@kc.frb.org).

To learn more about the Federal Reserve System's FOMC, and to read minutes from its meetings, visit [KansasCityFed.org/TEN](http://KansasCityFed.org/TEN).