The European Central Bank: Building a Shelter in a Storm

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Figure 1: Stock and GDP Price Evolution

The Timing and Pace of Policy Action Matters

- Akerlof and Shiller: to break downward economic and financial spiral, policy goal must be to restore investor confidence.
- With this lens: we examine contrast in interest rate policy at Fed and ECB:
- We find that:
  - Fed moved rapidly and aggressively—to avert a catastrophic outcome—and hence was more effective in reviving confidence.
  - ECB’s interest rate hikes—and hesitant rate cuts—reflected principal focus on inflation:
    - Hence rate cuts perceived as “too little, too late,” did little to help revive confidence.
- Central Bank Credibility
  - “Medium-term” inflation stability mandate: not compromised by more aggressive action in extraordinary circumstances—in fact, would have been enhanced by aggressive action.
  - A contingent rule that allows for sensible deviations is well-respected by markets.
  - A contingent rule is credible when “words are matched with deeds”
Figure 2: ECB’s Two Crucial Departures

Determining the Market Response

- Ait-Sahalia et al. (2012) event-study methodology.
- Response to the announcement measured by the cumulative “abnormal” change in the stock prices.
  - Excess of the change that would have occurred if the average daily change over the 20 days before the announcement had persisted. [Robustness with 15 and 10 days]
  - Thus, the cumulative abnormal difference shows the post-announcement divergence in the stock price movement from the trend in the preceding twenty days.
- The closing price on the day before the policy announcement is the starting point, identified as date “t-1” in the analysis. Since the announcement is made mid-day, the first day on which the market responds is date “t.” We track the response over the five days from “t” to “t+4.”
- Statistical power is weak, hence complemented by narrative.
Figure 3: An Overview: Stock Market Reactions to the Reduction of Interest Rates

**Note:** In computing the average reaction for 2007-2009, we do not include the market reaction on October 8, 2008, as explained below. “t-1” refers to the market closing stock price on the day before the announcement. The market reaction is measured as the abnormal difference starting with the market closing price on the day of the announcement (“t”) and on the following four days. The abnormal difference is measured as the cumulative change relative to the change based on a continuation of the past 20-day trend.

- Fed waited “a full forty days”—until September 18—before lowering its policy interest rate by 50 basis points.
  - This point marks slow shift from inflation to worries to “negative, non-linear dynamics”
  - Some FOMC members concerned about rising inflation even in late January 2008
  - But those emphasizing serious credit crisis—Janet Yellen, Tim Geithner, Ben Bernanke—carried the argument.
- March 18th, 2008 meeting, following the Bear Sterns bailout:
  - Yellen described the situation as a “financial market implosion.”
  - Mishkin: “[…] worst financial crisis in the post-World War II era.”
  - Again, concerns lingered on reputation for fighting inflation, but debate was between 50 or 75 basis points cut, larger reduction winning to protect against more disruption.
The Global Crisis, 2007-2009, at the ECB: Fighting Inflation is Twice Blessed

- Trichet, September 6, 2007: “Anchoring inflation expectations all the more important in a period of financial volatility: provides base for medium-term and long-term decisions.”
- Optimistic prognosis on growth: February 2008, despite US slowdown: “both domestic and foreign demand are expected to support ongoing growth…..,” inflation worries dominate
- Widely anticipated 25 basis points rate increase on July 3, 2008:
  - Inflation had reached 4 percent and wage pressures had also increased.
  - But inflation was primarily due to the continued rise in oil and other commodity prices,
  - Critics warned the rate hike would hurt growth, stock prices fell in anticipation.
- The inevitable rate cuts did come—to prevent meltdown
  - First rate cut: coordinated with other central banks on October 8, after Lehman bankruptcy.
  - Blinder: “yes, that is 2008, not 2007.”
Note: For the reaction to the Fed interest rate reductions, we use the S&P 500 and for the reaction to the ECB reductions, we use the FTSEEurofirst 300 Eurozone. “t-1” refers to the market closing stock price on the day before the announcement. The market reaction is measured as the abnormal difference starting with the market closing price on the day of the announcement (“t”) and on the following four days. The abnormal difference is measured as the cumulative change relative to the change based on a continuation of the past 20-day trend. There were 10 rate reductions by the Fed and 7 by the ECB during this period from September 2007 and May 2009. For the Fed, 8 of the 10 cuts had a positive outcome, if we consider the average of 3rd to 5th day and 7 of the 10 had a positive outcome if we consider only the 4th day (December 16, 2008 is the one that is different); on the same basis, for the ECB, 3 of the 7 cuts had a positive outcome if we consider the average of 3rd to 5th day, and 4 out of 7 had a positive outcome if we consider only the 4th day (since for the October 8 cut, the market recovered to a small positive outcome after a sharp initial fall).
Figure 5: October 8, 2008 Rate Cuts

Note: “t-1” refers to the market closing stock price on the day before the announcement. The market reaction is measured as the abnormal difference starting with the market closing price on the day of the announcement (“t”) and on the following four days. The abnormal difference is measured as the cumulative change relative to the change based on a continuation of the past 20-day trend.
Figure 6: Did the Fed gain Traction by Surprising Markets? Not really

Note: Whether an announcement was expected or not, is judged by a survey of analysts, where available, and by reports in news articles in case no surveys are available. If markets correctly anticipated a cut, but not its size, we classified the cut as expected. As explained in the text, we do not consider October 8, 2008. For the rest, there was 1 unexpected (January 22, 2008) and 8 expected cuts for the Fed, whereas all of the ECB’s 6 cuts were expected. “t-1” refers to the market closing stock price on the day before the announcement. The market reaction is measured as the abnormal difference starting with the market closing price on the day of the announcement (“t”) and on the following four days. The abnormal difference is measured as the cumulative change relative to the change based on a continuation of the past 20-day trend.
Figure 7: The Key was that the Fed acted aggressively: and was able to DEFINE what constituted “aggressive”

Aggressive and Non-Aggressive Rate Cuts, 2007-2009

**Note:** Rate cuts were defined as aggressive if they were 50 basis points or larger, and non-aggressive otherwise. Once again, omitting October 8, 2008, 6 of the Fed’s 9 rate cuts were “aggressive,” and 4 of the ECB’s 6 rate cuts were “aggressive.” “t-1” refers to the market closing stock price on the day before the announcement. The market reaction is measured as the abnormal difference starting with the market closing price on the day of the announcement (“t”) and on the following four days. The abnormal difference is measured as the cumulative change relative to the change based on a continuation of the past 20-day trend.

• First cut on September 18, 2007—a larger-than-expected 50 basis points.
  o Observers applauded the bold pre-emptive move.
  o Aggressive cut had had a big psychological impact.
  o Fed would do everything it could to protect the economy.
  o “They said we’re going to be a little bold and remove at least one source of uncertainty.”

• On October 31 and December 11, 2011, the Fed twice cut rates by 25 basis points.
  o Mixed reactions to the first cut: inflation concerns diluted message.
  o Second cut judged too timid.

• January 22, 2008, the Fed cut interest rates by 75 basis points.
  o Biggest cut in 25 years, a week ahead of regularly scheduled meeting on January 29-30.
  o The Fed indicated it could lower rates further.
  o Former Fed official Professor Steve Cecchetti said: “The signal is that there is a new sheriff in town; when he see[s] changes in the economy that compromise medium-term stabilization objectives, he will do what needs to be done and do it right away.”
The Global Crisis, 2007-2009, the Market Reacts to ECB Focus on Inflation

• Markets anticipated November 6, 2008 cut 50 basis points:
  o But “stunning” BOE 150 basis point cut earlier that day had raised the stakes.
  o “[…] ECB must change conservative approach quickly before bad situation worsens.”

• After January 15, 2009, 50 basis points cut on January 15, 2009, Trichet warned of inflation:
  o Governing Council considered postponing the cut: risk of a “liquidity trap.”
  o Analysts accused ECB of “dragging their heels” and “being behind the curve.”
  o “Trichet is focused more on inflation, which is not really a concern in the eurozone.”

• Before March 5, 2009 decision, Thomas Mayer, DB, called for a 100 basis points reduction:
  o “You suspect the ECB just wants to close its eyes to what’s going on…”
  o After 50 basis points rate cut, an analyst: “The ECB remains vastly behind the curve.”
  o Another: “They really should be exhausting the traditional weapons of monetary policy.”

• At May 7, 2009, the ECB cut by 25 basis points, and announced non-standard measures.
  o “ECB compelled because the eurozone economy remains in serious trouble.”
Figure 8: Headline inflation and core inflation for the US and Eurozone

Sources: Federal Reserve Bank of St. Louis, for figure 8(a) “Personal Consumption Expenditures: Chain-type Price Index, Index 2009=100, Monthly, Seasonally Adjusted”, and for figure 8(b) “Personal Consumption Expenditures Excluding Food and Energy (Chain-Type Price Index), Index 2009=100, Monthly, Seasonally Adjusted”; Eurostat, for figure 8(a) “All-items HICP”, Index, 2005=100, monthly data, and for figure 8(b) HICP “Overall index excluding energy and unprocessed food”, Index, 2005=100, monthly data. Note: The inflation rate is calculated from the index as follows: ln(t) – ln(t-12), where t is the index for the current month. Subsequently, the rate is smoothed by taking the average rate over the past twelve months.
After the Global Crisis, Fed’s New Risk Management Focus: Counter Deflation

- Second round of the Fed’s QE (Operation Twist) continued through June 2011.
  - The first two QEs reduced the effective interest rate in the U.S., stemmed the rise in the value of the U.S. dollar, and thus limited the fall in imported prices.
  - The Fed was, therefore, helping economic recovery while trying to hold up inflation. The risk of deflation was understood early by the Fed.
- June 22-23 2010 FOMC meeting: a number of members cited risk of deflation.
  - At that meeting, several participants noted that, “a continuation of lower-than-expected inflation and high unemployment could eventually lead to a downward movement in inflation expectations that would reinforce disinflationary pressures.”
- August: Bernanke Jackson Hole Speech, promised to fight deflation.
- November 2-3 2010 FOMC meeting
  - “[…] the stimulus provided by additional securities purchases would help protect against further disinflation and the small probability that the U.S. economy could fall into persistent deflation.”
After the Global Crisis, the ECB Fights a Retreating Enemy in 2011

• January 2011, policy rate kept at 1 percent—where it had been since May 2009.
  o Trichet said upward inflationary pressures needed monitoring.
  o Decision to keep the interest rate unchanged described as “accommodative.”
  o July 2008 decision to raise the policy rate recalled favorably.
  o “No dilemma in hampering growth.” Financial stability through liquidity provision.
• By March 2011, the ECB concluded inflationary pressures required “strong vigilance.”
• Policy rate was raised by 25 basis points on April 7 to “firmly anchor” inflation.
• Policy rate was raised by 25 basis points on July 7.
  o Trichet said: “paramount importance” to prevent the spread of inflationary pressures fueled by rising energy prices.
  o “Controlling inflation was essential to preserving the central bank’s credibility.”
  o “We are not seeing the inflation risk that the ECB is seeing,” said one analyst.
Figure 9: The Inevitable Rate Cuts Did Come, 2011-2014: But Evoked Skepticism

Note: There were 7 rate reductions by the ECB during this period. Of these, 3 were unexpected. Although, the average is clearly negative, 2 of the 7 announcements had a positive outcome, measured either on the 4th day or as average of the 3rd to the 5th days. “t-1” refers to the market closing stock price on the day before the announcement. The market reaction is measured as the abnormal difference starting with the market closing price on the day of the announcement (“t”) and on the following four days. The abnormal difference is measured as the cumulative change relative to the change based on a continuation of the past 20-day trend.
2011-14: Market Questions ECB Unwillingness to Preempt Deflation

• Following surprise 25 basis point cut on November 3, 2011:
  o “ECB is finally waking up to the fact that financial conditions are too tight in Europe.”
  o “[The latest] move, while welcome, was too modest.”

• On July 5, 2012, 25 basis point cut and cut the deposit rate to zero.
  o But question was: “how far they are they ready to go into unconventional measures?”

• On November 7, 2013, the ECB surprised markets with a rate cut of 25 basis points.
  o Euro area core inflation was dropping fast, while U.S. core inflation had stabilized.
  o Governing Council apparently divided; analysts: can ECB do “big stuff?”
  o Draghi November speech: more action “if needed;” in January 2014, if “too prolonged.”

• September 4, 2014 a 10 basis point cut and promise of an asset purchase program.
  o “The frustration is that it has taken so long with inflation having already fallen so low.”
  o The BBC’s Robert Peston: “last roll of the dice:” risk of deflationary spiral.
  o November 2014, Andrew Balls, PIMCO “The eurozone is one shock away from sinking into deflation. There are real costs of acting too late.”
Figure 10: The Result: Real Long-Term Interest Rates (Core Inflation)

Sources: Eurostat, HICP “Overall index excluding energy and unprocessed food”, Moving 12 months average rate of change, monthly data, Available from ec.europa.eu/eurostat/web/hicp/data/database; OECD, "Long-term interest rate", level, ratio or index, monthly data, Available from stats.oecd.org

Note: The real interest rate is calculated as follows: $r = \frac{1 + i}{1 + \pi} - 1$. Where $r$ is the real interest rate, $i$ is the nominal interest rate, and $\pi$ is the inflation rate.
An Interpretation: Contingent Rules and Credibility in Extraordinary Circumstances

- ECB pre-crisis approximated by the Taylor’s rule: when Fed below Taylor’s Rule, so also ECB
- After crisis started, Fed focused on economic activity, the ECB emphasized inflation. The ECB self-consciously departed from the Fed approach—dismissed it as irresponsible.
- Mandate: medium-term price stability: aggressive action not risky when private deleveraging.
  - In 2008 and in 2011, inflation was high because of temporary spurts in commodity prices.
- Lessons for central bank credibility:
  - Steadfast commitment to inflation stability is the touchstone of central bank credibility.
  - But credibility requires dealing with contingencies.
  - Bordo and Kydland (1995): under the gold standard, reasonable to depart from the rule in extraordinary circumstances.
  - Central bank credibility was maintained because the expectation was that once the circumstances normalized, the central bank would return to its original commitment.
  - The Fed explained that it was operating on that basis—its words matched its deeds—and the markets accepted that premise.
Déjà vu all over again


![Policy Rates Graph](image)

(a) Stock Prices

![Stock Prices Graph](image)

(b) GDP

![GDP Graph](image)