More Money Does Not Mean Less Grain

It is a story as old as civilization and most likely as old as the human species itself: If you want to topple the leader, be it of the clan, the tribe, the city or the country, there is no better ally for a rebel than a food crisis. From the story of Joseph acting as an inventory consultant to the Pharaoh to the Russian Revolution of 1917 being carried on a slogan of "Peace, land, bread," a failure to ensure food supplies will send the ruler to the exits.

If we add a second thread to this tale weaving through history, the impulse of governments anywhere and everywhere to repudiate debts through currency debasement and inflation, we have the makings of a link between monetary policy and food price surges. You can print more money and do it faster than you can create more grain, and while people know how to juggle household budgets and do without a number of goods and services, they are unwilling to reduce the overall quantity of food consumed and generally are loathe to shift down the dietary curve. Yes, you can subsist on a far more meager diet than you might be willing to admit now, but you really do not want to do so.

The last really prolonged and pronounced time when high inflation ripped through food markets was the early 1970s. Lost in the collective memory of that period four decades ago is the sequence of events. Inflation already had been a problem in the U.S. economy; President Nixon had imposed wage and price controls, a devaluation of the dollar and an increase in the official price of gold on August 15, 1971. The first great commodity price breakout of that era was the so-called Great Grain Robbery of July-August 1972. As surely as night follows day, price controls lead to shortages and high feedgrain prices reduce livestock and poultry herds and flocks, and meat prices shot higher during 1973. The first oil shock of the 1970s did not begin until the aftermath of the Yom Kippur War of October 1973, and yet the perception remains to this day the inflation of the 1970s was caused by high petroleum prices.

Blaming The Federal Reserve

One of the more hackneyed clichés on Wall Street – an award not won easily – is "Don't fight the Fed." Let's put aside for a moment that much of the history of the past decade was a good one for Fed-fighters and ask whether a corollary, "Don't blame the Fed" should be enshrined similarly. Probably not: The central bank is approaching its one-hundredth anniversary and has calamities such as the Great Depression, the Great Inflation and the Great Recession on its resume. However, if Milton Friedman could state, "Inflation is always and everywhere a monetary phenomenon," it does not mean all price spikes across economic sectors are always and everywhere attributable to monetary mismanagement…and this is coming from someone who has criticized the very concept of monetary policy controlled by a central bank.

Let's use the agricultural price spikes of 2010-2011 as cases in point. As these occurred during and after the two money-printing escapades dubbed "quantitative easing," many instinctive Fed-bashers sought to tie them together. However, we should ask the obvious, whether previous large rallies in grains occurred during periods of monetary tightening as well as credit-loosening? If this was the case, how could the Fed-blamers attribute all grain price spikes, always and everywhere, to monetary policy?

Test Cases

We can use the long-term database from the CRB-Infotech CD-ROM to create weekly average cash market prices for various agricultural markets. Six-month percentage price changes were calculated and 90 percent one-tailed Student's confidence intervals were constructed on a rolling basis so as to isolate excessive price changes using only data available at the time. The prices in excess of these bounds are displayed in red columns on the charts below.

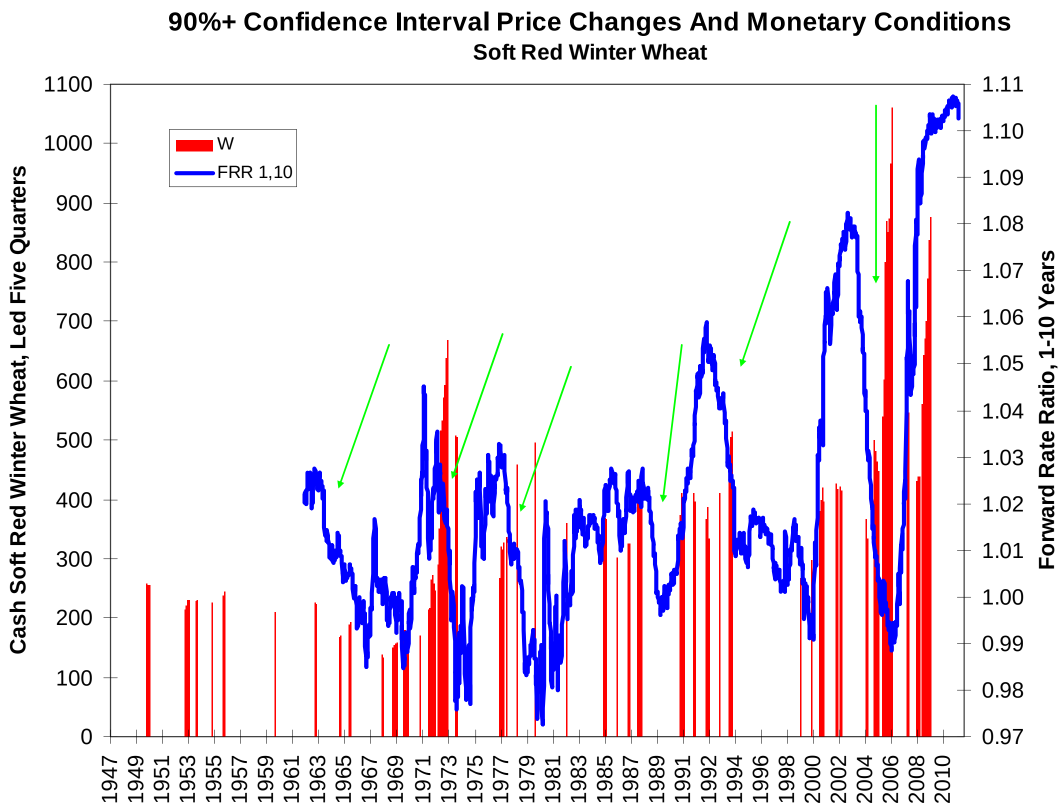
How do these relate to monetary cycles? For that answer, let's construct a long-term history of the forward rate ratio between one- and ten-year Treasuries ($FRR_{1,10}$). This is the rate at which we can lock in borrowing for nine years starting one year from now, divided by the ten-year rate. A declining $FRR_{1,10}$ signals a tighter credit environment. Six cycles beginning with the history in 1962 were identified and are marked with arrows on the charts below:

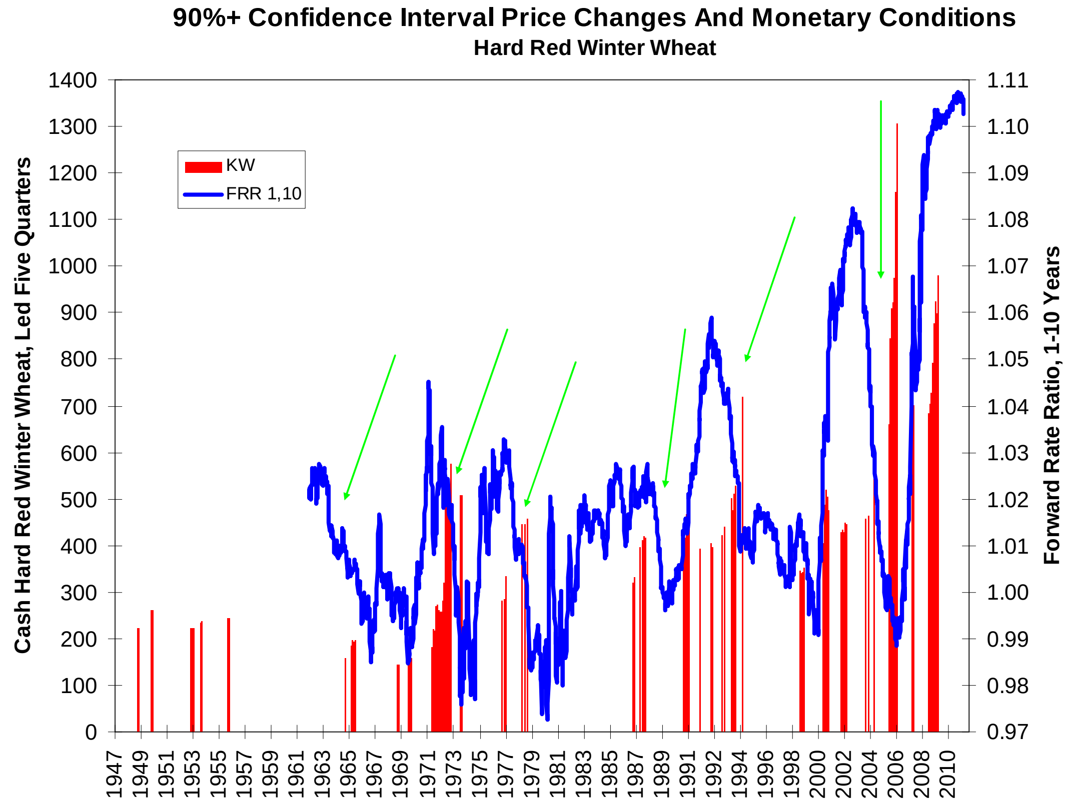
1. March 1963 – August 1969;
2. February 1971 – October 1974;
3. December 1976 – April 1980;
4. October 1987 – June 1989;
5. October 1992 – December 2000; and
6. October 2003 – March 2007

One further adjustment is necessary. Much to the surprise of financial players who wander into the world of physical commodities, developments are not instantaneous and involve logistical constraints. Farmers must make planting decisions and once those decisions on which crops over how many acres are made, the crop takes time to grow. Finally, monetary policy famously works, once again per Friedman, with "long and variable lags," which sounds so much better than saying, "We do not have a clue as to what will happen and when." If we combine these two time periods, two quarters for planting decisions and three quarters for monetary effects, we should get a five-quarter lead time between monetary policy changes and crop supplies becoming available; please remember these are cash market, not futures, prices we are examining here.

The Results

Six different markets are displayed below out of the eleven examined; the results for coffee, soymeal, beanoil, hard red spring wheat and cocoa were essentially similar to the ones seen here. As you peruse the charts, ask yourself whether you seen price spikes occurring during the long-term credit-tightening cycles marked. The answers will be obvious.




90%+ Confidence Interval Price Changes And Monetary Conditions
Hard Red Winter Wheat
KW
FRR 1,10
Cash Hard Red Winter Wheat, Led Five Quarters
Forward Rate Ratio, 1-10 Years
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
0.97
0.98
0.99
1.00
1.01
1.02
1.03
1.04
1.05
1.06
1.07
1.08
1.09
1.10
1.11
1947
1949
1951
1953
1955
1957
1959
1961
1963
1965
1967
1969
1971
1973
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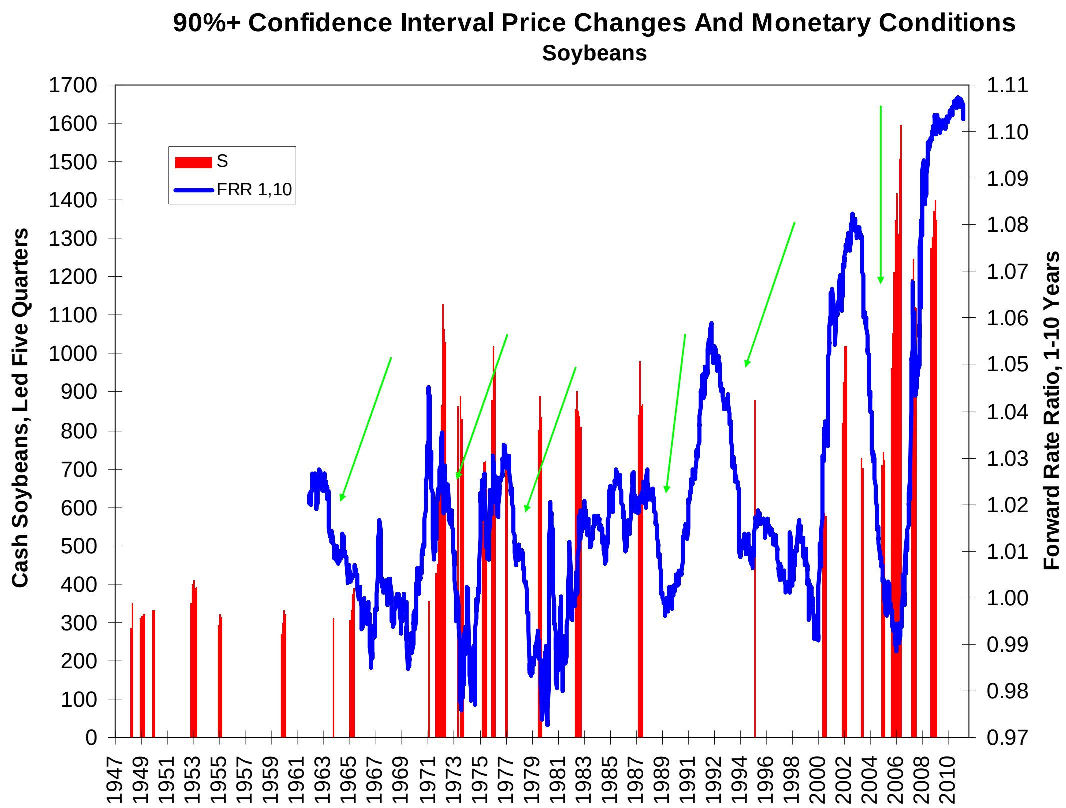
2002
2004
2006
2008
2010


90%+ Confidence Interval Price Changes And Monetary Conditions
Soybeans
S
FRR 1,10
Cash Soybeans, Led Five Quarters
Forward Rate Ratio, 1-10 Years
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
0.97
0.98
0.99
1.00
1.01
1.02
1.03
1.04
1.05
1.06
1.07
1.08
1.09
1.10
1.11
1947
1949
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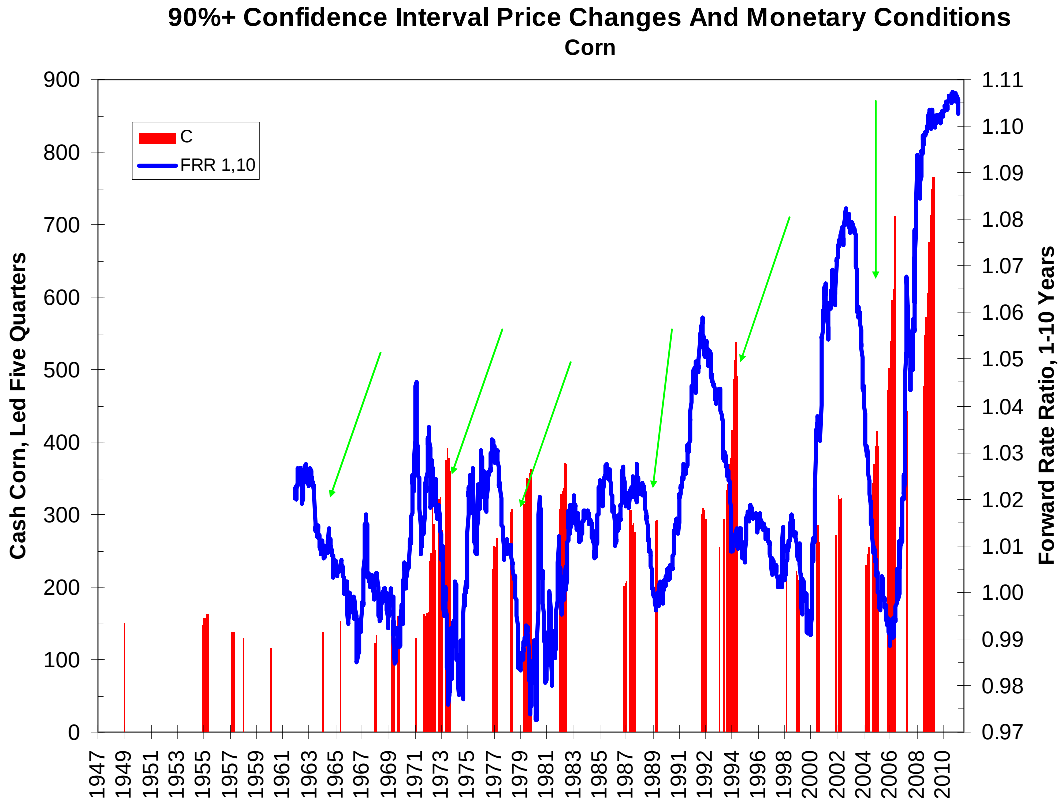
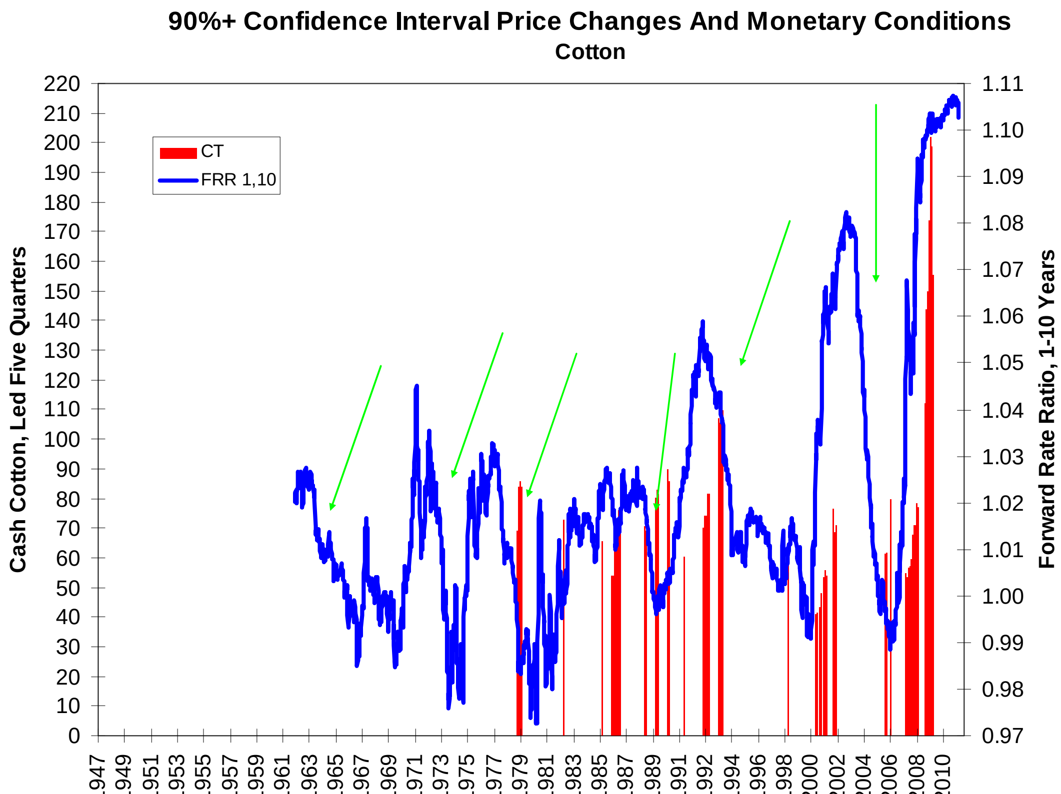

90%+ Confidence Interval Price Changes And Monetary Conditions
Corn
C
FRR 1,10
Cash Corn, Led Five Quarters
Forward Rate Ratio, 1-10 Years
0
100
200
300
400
500
600
700
800
900
0.97
0.98
0.99
1.00
1.01
1.02
1.03
1.04
1.05
1.06
1.07
1.08
1.09
1.10
1.11
1947 1949 1951 1953 1955 1957 1959 1961 1963 1965 1967 1969 1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010


90%+ Confidence Interval Price Changes And Monetary Conditions
Cotton
CT
FRR 1,10
Cash Cotton, Led Five Quarters
Forward Rate Ratio, 1-10 Years
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220
0.97
0.98
0.99
1.00
1.01
1.02
1.03
1.04
1.05
1.06
1.07
1.08
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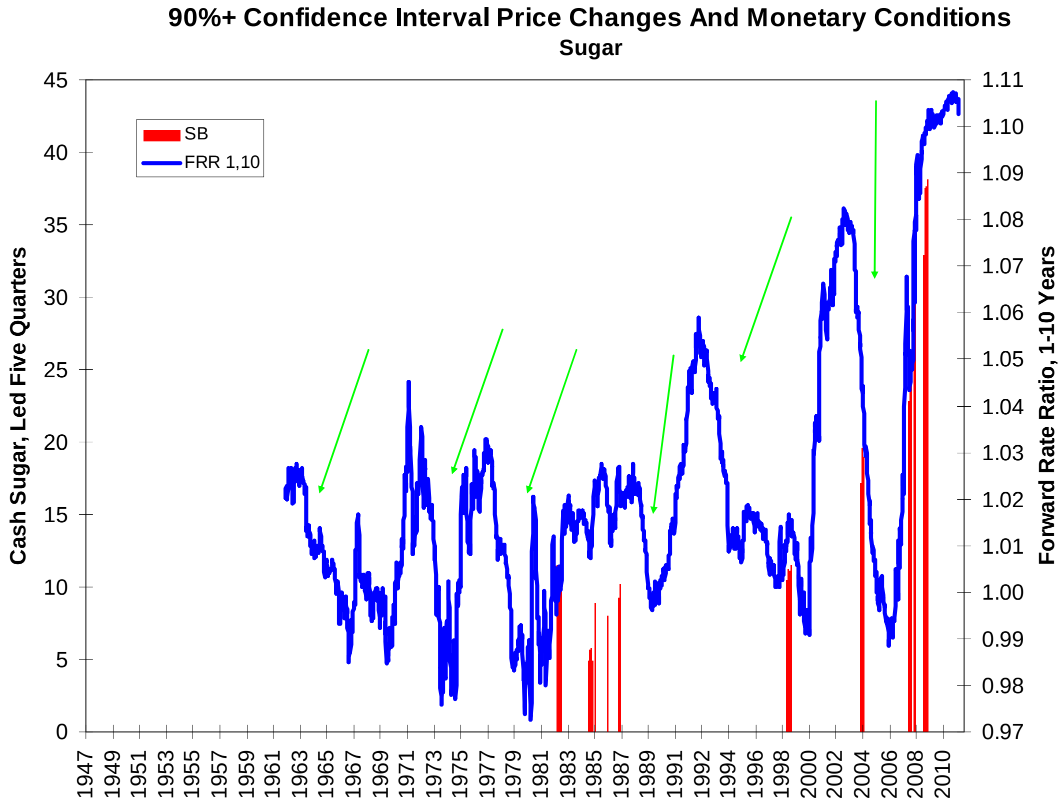
1.10
1.11
1947 1949 1951 1953 1955 1957 1959 1961 1963 1965 1967 1969 1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010



As befits the time of the season, we should hold certain truths to be self-evident, that among these truths are drought, floods and other natural disasters known to affect crop production are not at all amenable to monetary creation or monetary contraction. The Federal Reserve cannot create grain; it can only produce the fertilizer for inflation. Just because they have abused this power does not mean they have been endowed with Jovian powers of weather management. Those who agree we need to rethink how money is managed and do not like the present system should think before they blame the Federal Reserve for food price spikes unless they want to blame credit-tightening for food price spikes as well.