

# Tortilla Association Commodity Session



Robert D. Bresnahan  
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# Late Imperial China

“The Ultimate Principle”

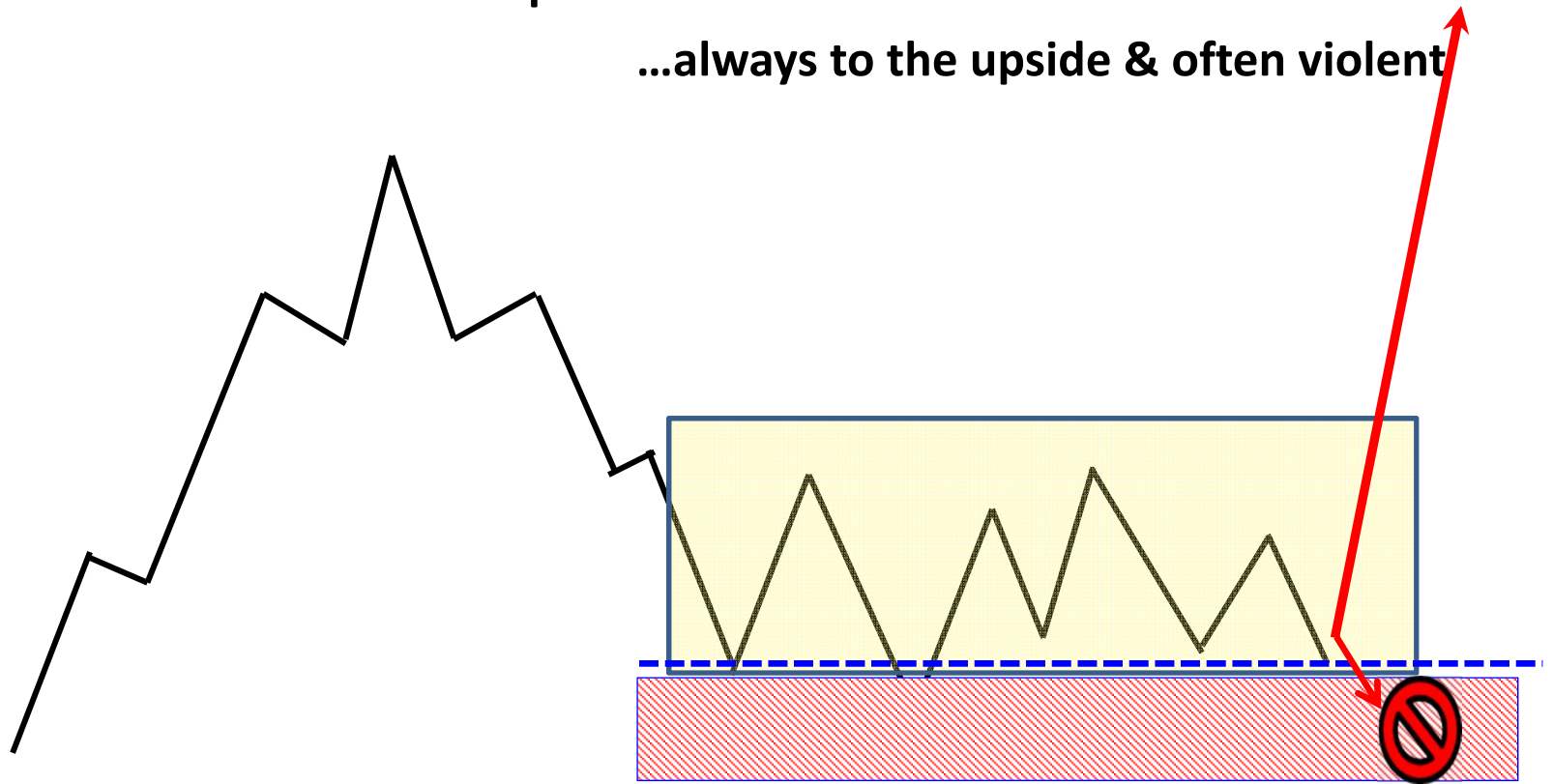
221 B.C. to 206 B.C.

“When goods become extremely expensive,  
then they must become inexpensive again.”

## Personality of commodity markets

- Up-trends transition into downtrends
- Downtrends transition into sideways markets
- Spend most time in consolidation patterns (value zones). Always at the bottom.
- Consolidation is typical before a major change in trend
- Sideways market will not have surprises to the downside

...always to the upside & often violent





# Market Phase

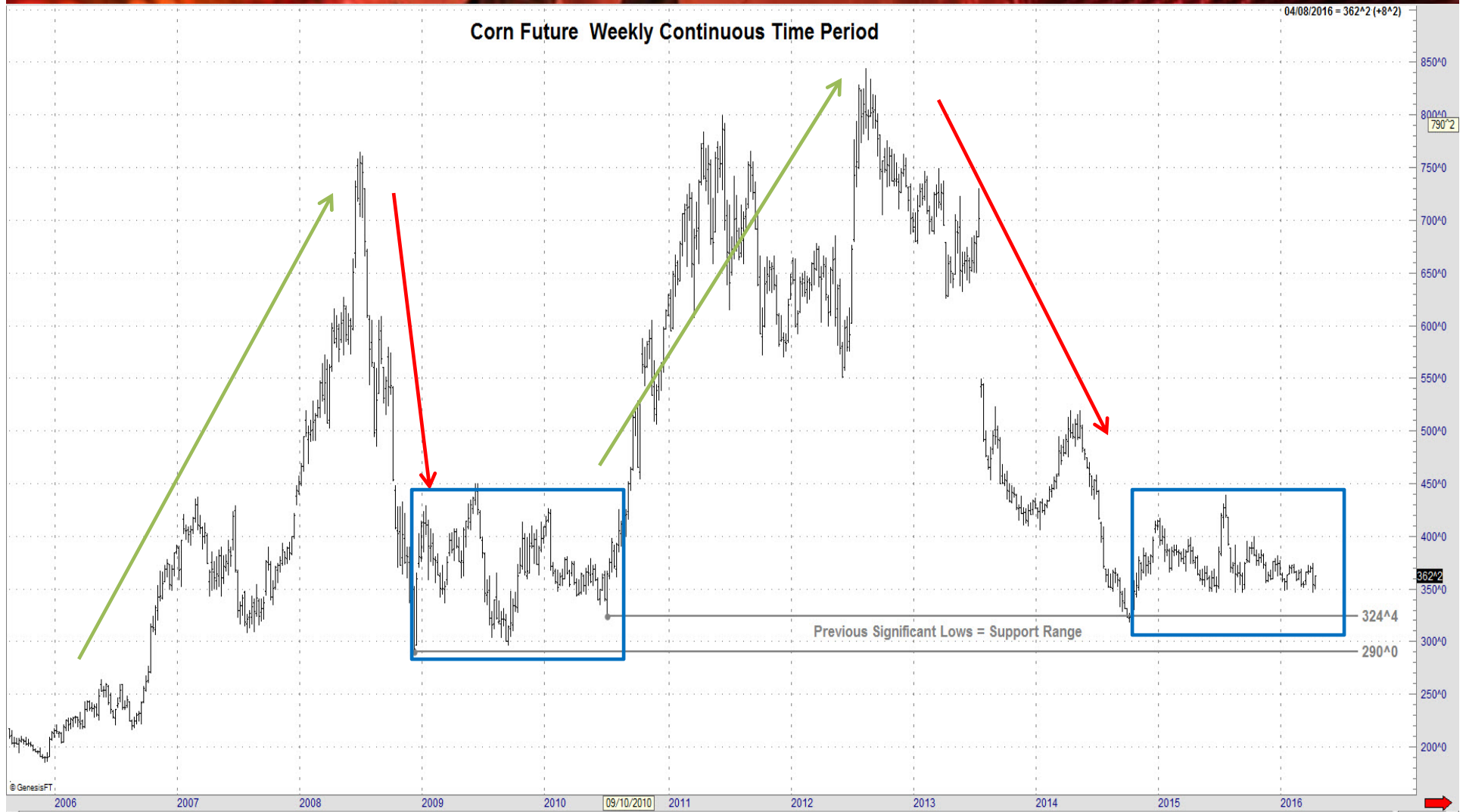
## *A Roadmap Turn by Turn Directions*

### **Market Phase:**

- 1) Uptrend, downtrend or sideways?
- 2) Beginning, middle or nearing the end?
- 3) How long with this phase last?
- \* 4) What should we be preparing for?



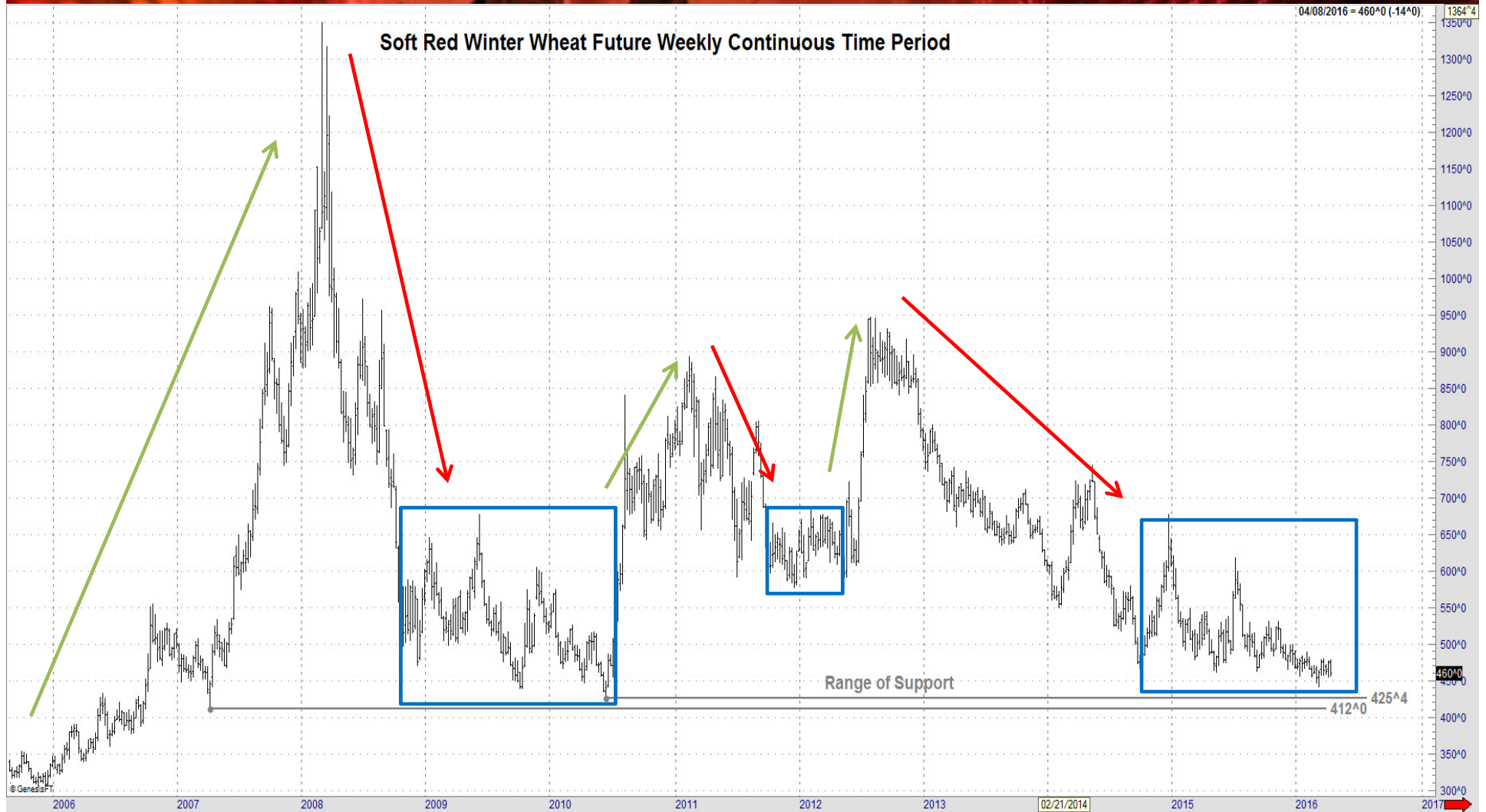
# Which Phase? What should we be preparing for?



1) Have prices fallen enough? 2) What should we be preparing for?



# Which Phase? What should we be preparing for?



1) Have prices fallen enough? 2) What should we be preparing for?





**What causes price to transition from  
down trends to sideways markets?**

## **Cost of Production**



## Crop Economics

	<u>Corn</u>	<u>Soybeans</u>	<u>HRS</u>	<u>SRW</u>	<u>HRW</u>	<u>Cotton</u>
Yield	185	55	50	64	45	900
New Crop Price	\$ 3.30	\$ 8.04	\$4.41	\$4.80	\$4.50	\$0.55
Income	611	442	221	307	203	495
<u>Variable Cost</u>	<u>422</u>	<u>199</u>	<u>188</u>	<u>183</u>	<u>230</u>	<u>516</u>
Return Over Variable Cost	189	243	33	124	-28	-21
Crop Insurance Price	\$ 3.86	\$ 8.85	\$5.13	\$5.13	\$5.20	\$0.62
Adj for 80% Rev Coverage	\$ 3.09	\$ 7.08	\$4.10	\$4.10	\$4.16	\$0.50
Rev protection vs Var Cost	103	153	-19	88	-72	-81
Land Cost	265	265	123	173	40	100
Return over Cash Plus Land Expenses	-162	-112	-142	-85	-112	-181

**The cost of production is higher than projected revenue.**



# Estimated Crop Production Costs in Iowa, 2007-2016

	2007	2008	2009	2010 <sup>1/</sup>	2011	2012	2013	2014	2015	2016
<b>Corn following Corn</b>										
Machinery	\$102.94	\$110.88	\$115.99	\$124.25	\$152.73	\$147.37	\$147.37	\$155.29	\$144.99	\$129.92
Seed, chemicals, etc.	222.22	271.97	387.44	290.78	341.92	376.81	372.43	340.27	357.80	330.55
Labor	31.35	31.35	31.35	31.35	33.06	33.35	34.91	37.05	37.05	37.05
Land	155.00	190.00	205.00	195.00	215.00	258.00	276.00	287.00	273.00	266.00
Total cost per acre	511.51	604.20	739.77	641.37	742.70	815.53	830.70	819.61	812.83	763.52
Assumed yield	145 bu	145 bu	145 bu	165 bu	165 bu	165 bu	165 bu	165 bu	165 bu	165 bu
Total cost per bushel	\$3.53	\$4.17	\$5.10	\$3.89	\$4.50	\$4.94	\$5.03	\$4.97	\$4.93	\$4.63
<b>Corn following Soybeans</b>										
Machinery	\$100.12	\$107.88	\$113.98	\$122.42	\$151.54	\$144.22	\$144.22	\$152.28	\$142.18	\$126.74
Seed, chemicals, etc.	189.33	230.35	344.03	266.48	300.13	329.14	324.61	298.80	311.84	292.47
Labor	28.60	28.60	28.60	28.60	30.16	30.42	31.85	33.80	33.80	33.80
Land	155.00	190.00	205.00	195.00	215.00	258.00	276.00	287.00	273.00	266.00
Total cost per acre	473.05	556.83	691.61	612.50	696.83	761.78	776.68	771.88	760.81	719.01
Assumed yield	160 bu	160 bu	160 bu	180 bu	180 bu	180 bu	180 bu	180 bu	180 bu	180 bu
Total cost per bushel	\$2.96	\$3.48	\$4.32	\$3.40	\$3.87	\$4.23	\$4.31	\$4.29	\$4.23	\$3.99
<b>Soybeans following Corn<sup>2/</sup></b>										
Machinery	\$46.76	\$48.50	\$55.80	\$57.70	\$72.70	\$80.70	\$80.70	\$84.70	\$79.17	\$75.43
Seed, chemicals, etc.	107.58	124.16	202.85	154.00	156.52	180.89	163.44	155.65	166.38	162.63
Labor	26.95	26.95	26.95	26.95	28.42	26.33	27.56	29.25	29.25	29.25
Land	155.00	190.00	205.00	195.00	215.00	258.00	276.00	287.00	273.00	266.00
Total cost per acre	336.29	389.61	490.60	433.65	472.64	545.91	547.71	556.60	547.80	533.30
Assumed yield	50 bu	50 bu	50 bu	50 bu	50 bu	50 bu	50 bu	50 bu	50 bu	50 bu
Total cost per bushel	\$6.73	\$7.79	\$9.81	\$8.67	\$9.45	\$10.92	\$10.95	\$11.13	\$10.96	\$10.67

**Prices are at or below the cost of production.**

# Illinois Corn Cost of Production

Corn Revenues and Costs, Central Illinois																	
High Productivity Farmland Corn After Soybeans																	
Actual for 2000-2015, Projected for 2016																	
	Year																
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013P	2014P	2015P	2016
Yield per acre	165	168	152	186	190	172	180	201	199	192	168	174	126	197	196	199	201
Price per bu	\$1.97	\$2.06	\$2.37	\$2.41	\$2.17	\$2.11	\$2.99	\$4.12	\$4.07	\$3.62	\$5.34	\$6.24	\$6.93	\$4.65	\$4.20	\$3.80	\$3.85
LDP per bu	\$0.23	\$0.14	\$0.00	\$0.01	\$0.27	\$0.41	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			
Crop revenue	\$325	\$346	\$360	\$448	\$412	\$363	\$558	\$828	\$810	\$695	\$897	\$1,086	\$873	\$916	\$823	\$756	\$774
ACRE LDP revenue	38	24	0	2	51	71	0	0	0	8	0	0	0	0	0	0	
Other Govn. payments	50	44	22	22	40	45	27	25	25	24	24	24	24	22	10	20	30
Crop insurance proceeds	10	6	6	1	5	14	2	0	22	5	32	23	295	61	0	0	
<b>Gross Revenue</b>	<b>\$423</b>	<b>\$420</b>	<b>\$388</b>	<b>\$473</b>	<b>\$508</b>	<b>\$493</b>	<b>\$587</b>	<b>\$853</b>	<b>\$857</b>	<b>\$732</b>	<b>\$953</b>	<b>\$1,133</b>	<b>\$1,192</b>	<b>\$999</b>	<b>\$833</b>	<b>\$776</b>	<b>\$804</b>
Fertilizers	53	57	55	57	68	78	82	90	124	185	122	159	200	193	163	148	125
Pesticides	32	33	34	38	38	43	40	40	46	52	44	50	49	66	60	60	60
Seed	33	34	34	36	38	43	45	55	67	90	95	96	108	114	119	124	122
Drying	6	8	9	9	9	9	11	9	19	38	22	19	16	24	23	23	23
Storage	7	7	7	5	6	9	8	8	11	14	13	8	7	8	5	5	5
Crop insurance	3	3	5	7	8	6	11	20	27	23	18	30	25	27	27	27	24
<b>Total direct costs</b>	<b>\$134</b>	<b>\$142</b>	<b>\$144</b>	<b>\$152</b>	<b>\$167</b>	<b>\$188</b>	<b>\$197</b>	<b>\$222</b>	<b>\$294</b>	<b>\$404</b>	<b>\$314</b>	<b>\$362</b>	<b>\$405</b>	<b>\$432</b>	<b>\$397</b>	<b>\$387</b>	<b>\$359</b>
Machine hire/lease	7	6	6	6	6	6	6	8	8	9	8	8	10	11	11	11	12
Utilities	5	4	4	3	3	4	3	4	4	4	4	4	5	5	5	5	5
Machine repair	15	12	12	11	13	12	13	16	17	18	17	17	22	22	24	25	25
Fuel and oil	10	8	7	9	10	13	14	18	22	13	17	18	23	24	24	24	17
Light vehicle	2	1	1	1	2	1	2	2	2	1	2	1	2	2	2	2	2
Mach. depreciation	27	30	28	18	19	20	20	23	29	35	38	39	55	63	66	69	64
<b>Total power costs</b>	<b>\$66</b>	<b>\$61</b>	<b>\$58</b>	<b>\$48</b>	<b>\$53</b>	<b>\$56</b>	<b>\$58</b>	<b>\$71</b>	<b>\$82</b>	<b>\$80</b>	<b>\$86</b>	<b>\$87</b>	<b>\$117</b>	<b>\$127</b>	<b>\$132</b>	<b>\$136</b>	<b>\$125</b>
Hired labor	9	8	8	8	8	9	8	9	11	12	13	14	14	16	17	18	18
Building repair and rent	3	4	4	4	4	3	3	4	5	5	4	5	8	6	7	8	7
Building depreciation	5	6	6	3	4	4	4	4	5	5	6	6	9	5	6	7	12
Insurance	10	9	7	6	6	9	9	9	10	7	8	8	9	10	10	10	10
Misc.	5	5	5	6	6	6	6	6	7	7	8	8	8	8	8	8	9
Interest (non-land)	18	16	13	14	12	12	17	18	14	14	13	13	11	11	11	11	12
<b>Total overhead costs</b>	<b>\$50</b>	<b>\$48</b>	<b>\$43</b>	<b>\$41</b>	<b>\$40</b>	<b>\$43</b>	<b>\$47</b>	<b>\$48</b>	<b>\$52</b>	<b>\$50</b>	<b>\$52</b>	<b>\$54</b>	<b>\$59</b>	<b>\$56</b>	<b>\$59</b>	<b>\$62</b>	<b>\$68</b>
<b>Total non-land costs</b>	<b>\$250</b>	<b>\$251</b>	<b>\$245</b>	<b>\$241</b>	<b>\$260</b>	<b>\$287</b>	<b>\$302</b>	<b>\$341</b>	<b>\$428</b>	<b>\$534</b>	<b>\$454</b>	<b>\$503</b>	<b>\$581</b>	<b>\$615</b>	<b>\$588</b>	<b>\$585</b>	<b>\$552</b>
<b>Operator and land return</b>	<b>\$173</b>	<b>\$169</b>	<b>\$143</b>	<b>\$232</b>	<b>\$248</b>	<b>\$206</b>	<b>\$285</b>	<b>\$512</b>	<b>\$429</b>	<b>\$198</b>	<b>\$501</b>	<b>\$630</b>	<b>\$611</b>	<b>\$384</b>	<b>\$245</b>	<b>\$191</b>	<b>\$252</b>

Farmers like to make a minimum of \$200.00 per acre.





# Farmers Economize

(Reuters) - North Dakota farmer Randy Thompson plans to **apply 30 percent less nitrogen fertilizer** to his corn this year to save money in the face of crashing crop prices. In Minnesota, Andy Pulk is trucking crop nutrients to his farm from 350 miles (563.3 km) away because he found a better price than his local cooperative could offer. He has also **halted purchases of machinery**. "We're on a complete spending hold across the farm," Pulk said. With grain prices near five-year lows and farm incomes at their lowest levels since 2002, **growers are tightening their belts by reducing spending on everything from fertilizer to seeds to chemicals.**

***Yields will be effected.***





# Macro Drivers

The sizeable gains in soybean and soybean meal prices (while maintaining board carries) certainly underscores that recent price gains are grounded in **macro drivers**—not cash fundamentals.

*Near term upside momentum in agriculture markets could persist longer than underlying fundamentals suggest when considered against backdrop of a 5 year CRB downside correction that began April 2011.*

**Pent up capital looking to redeploy into commodities should not underestimated.**



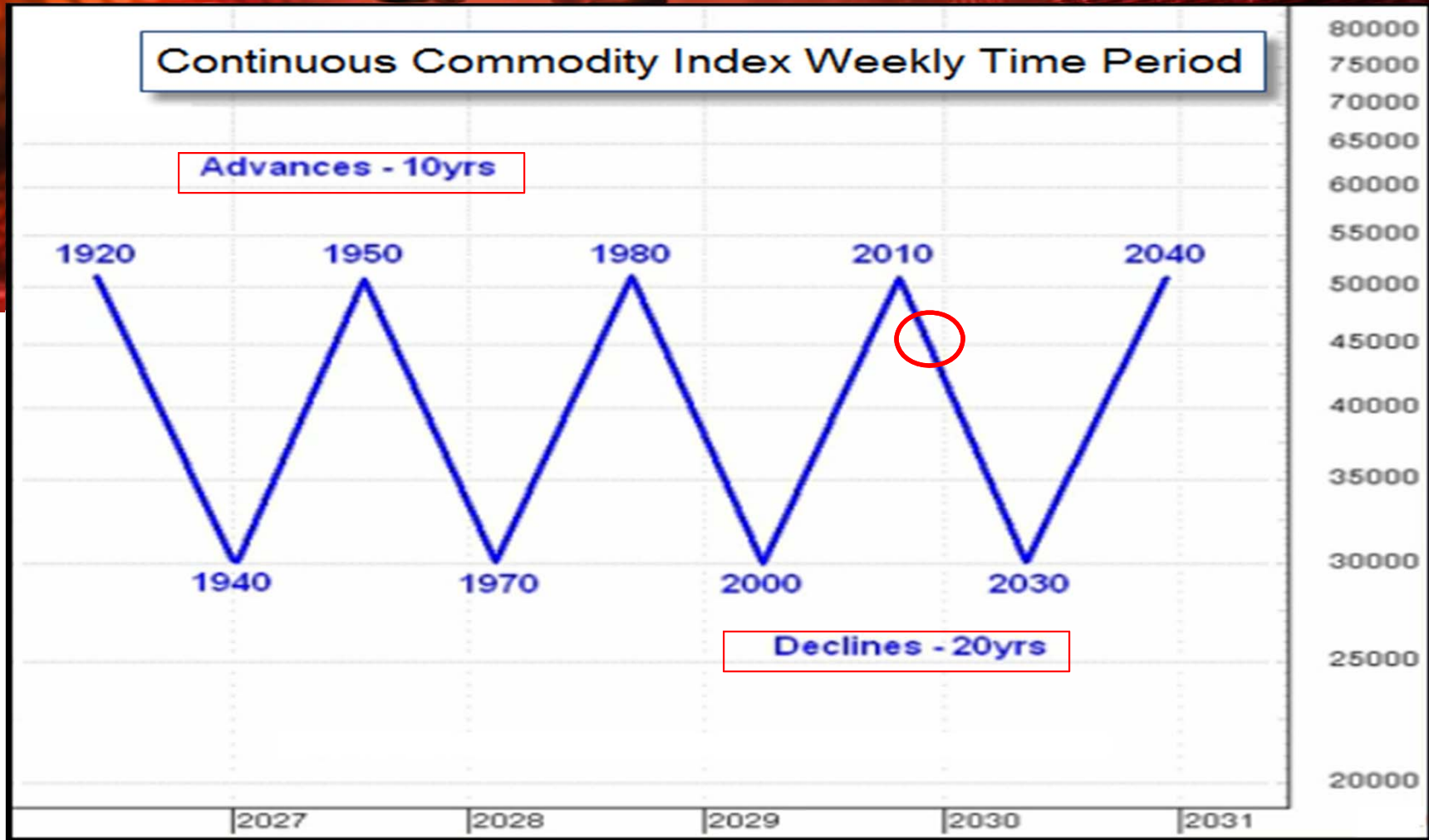


# Marco Influences

- 1) Long-term Commodity Cycle**
- 2) U.S. Dollar**
- 3) Market Psychology**



# #1 Long-term Commodity Cycle

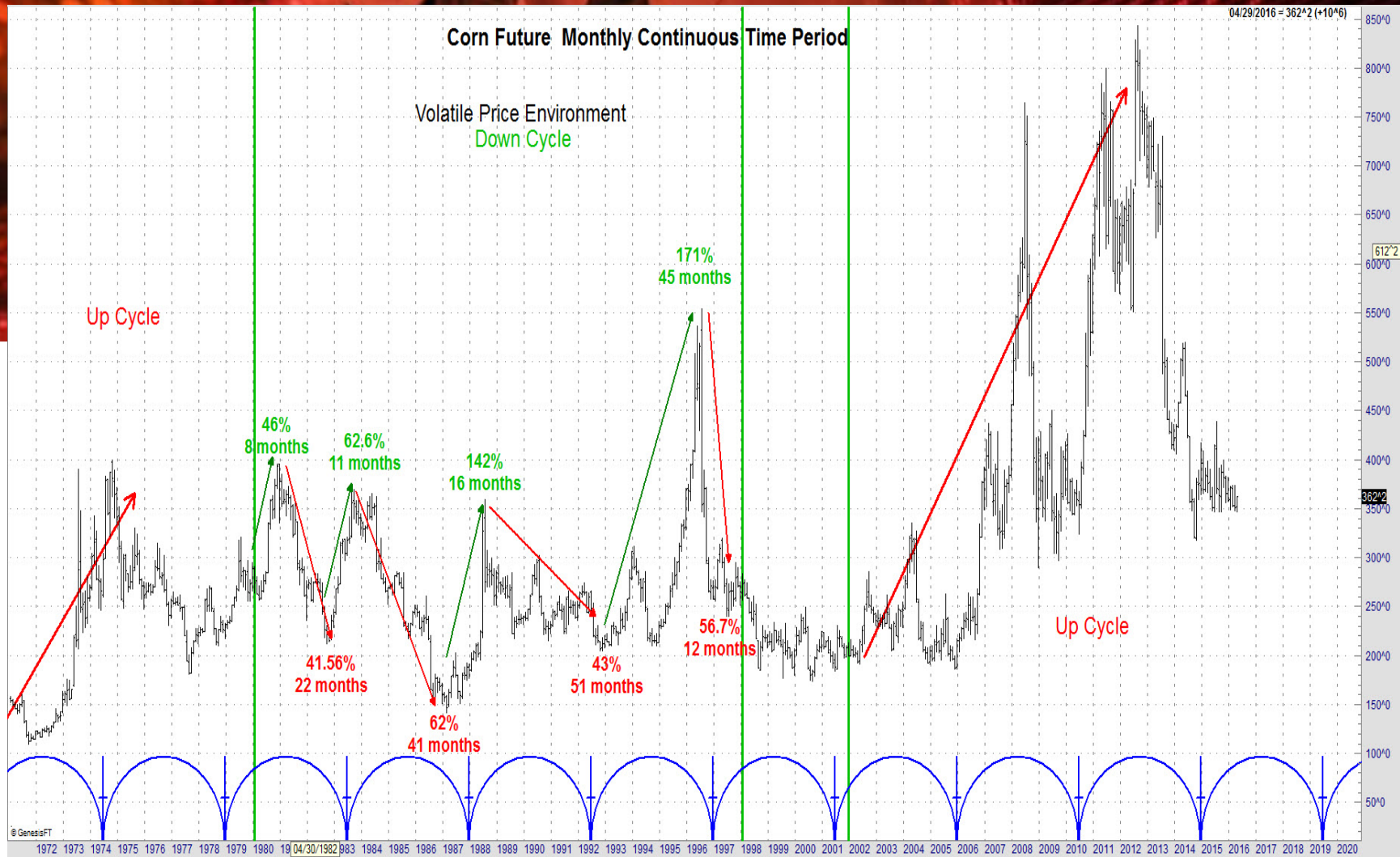


John Dos Passos, the novelist and historian, once said:

*"Often things you think are just beginning are coming to an end."*



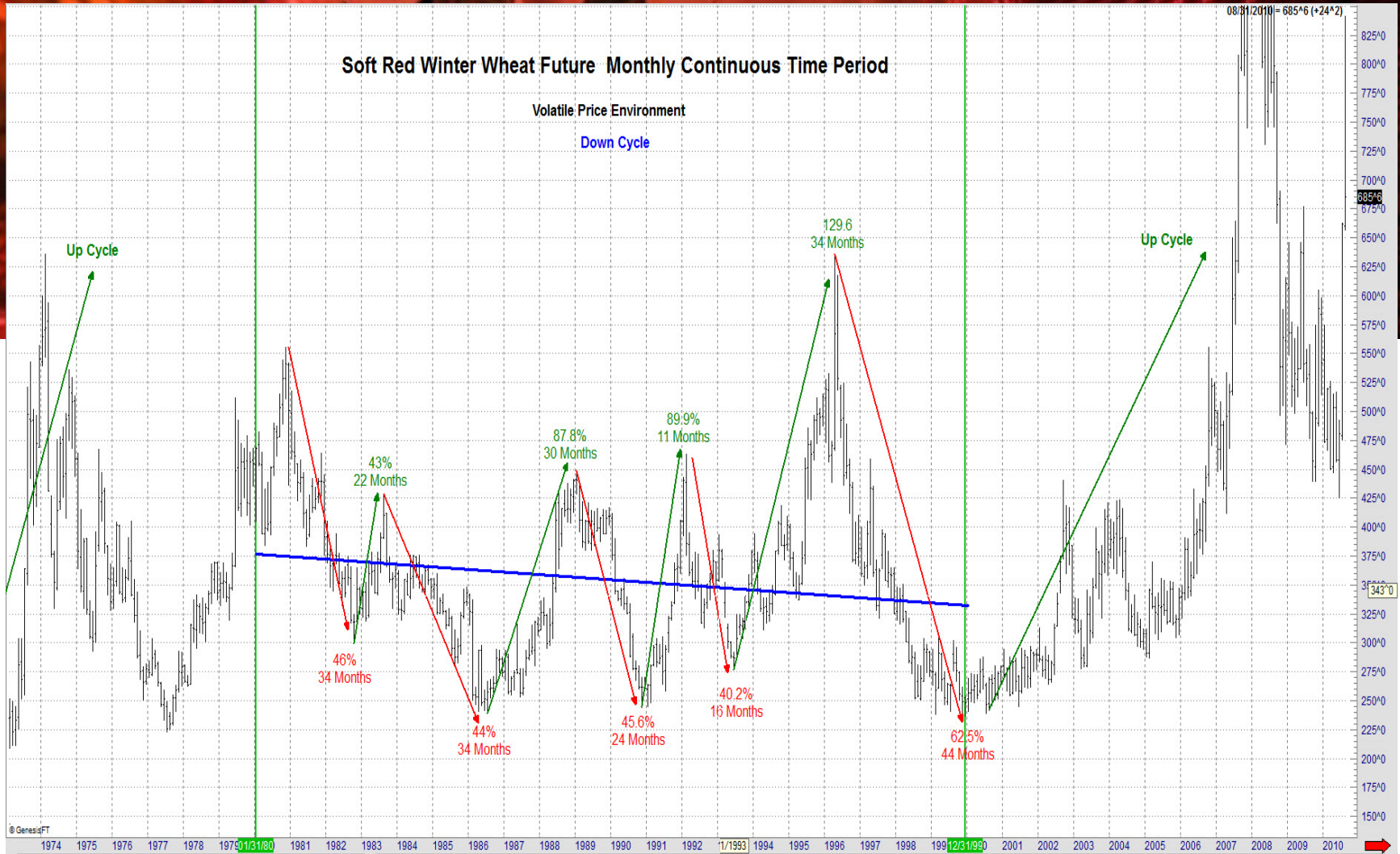
# #1 Long-term Commodity Cycle



1980 through 2000 prices were basically flat.



# #1 Long-term Commodity Cycle

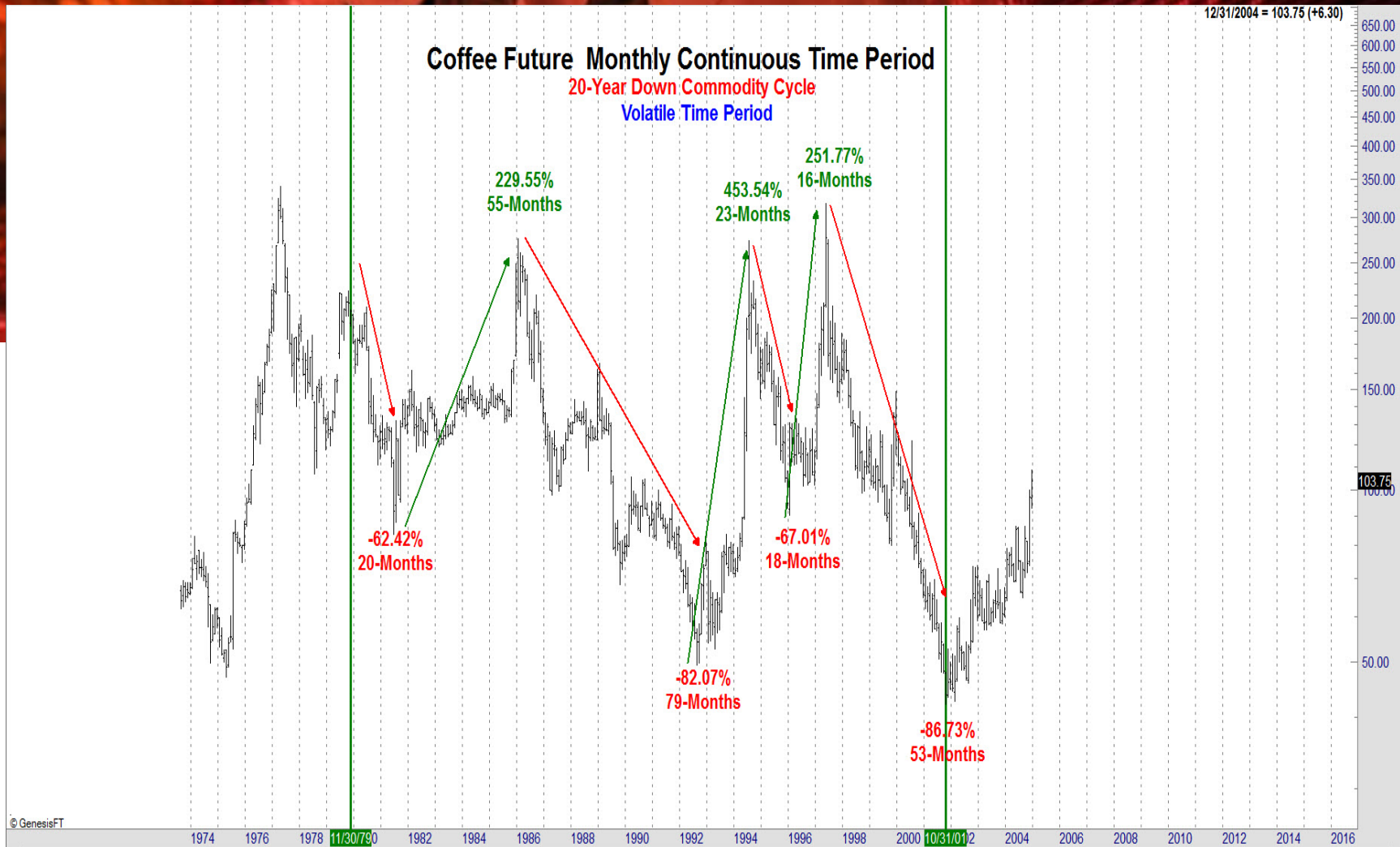


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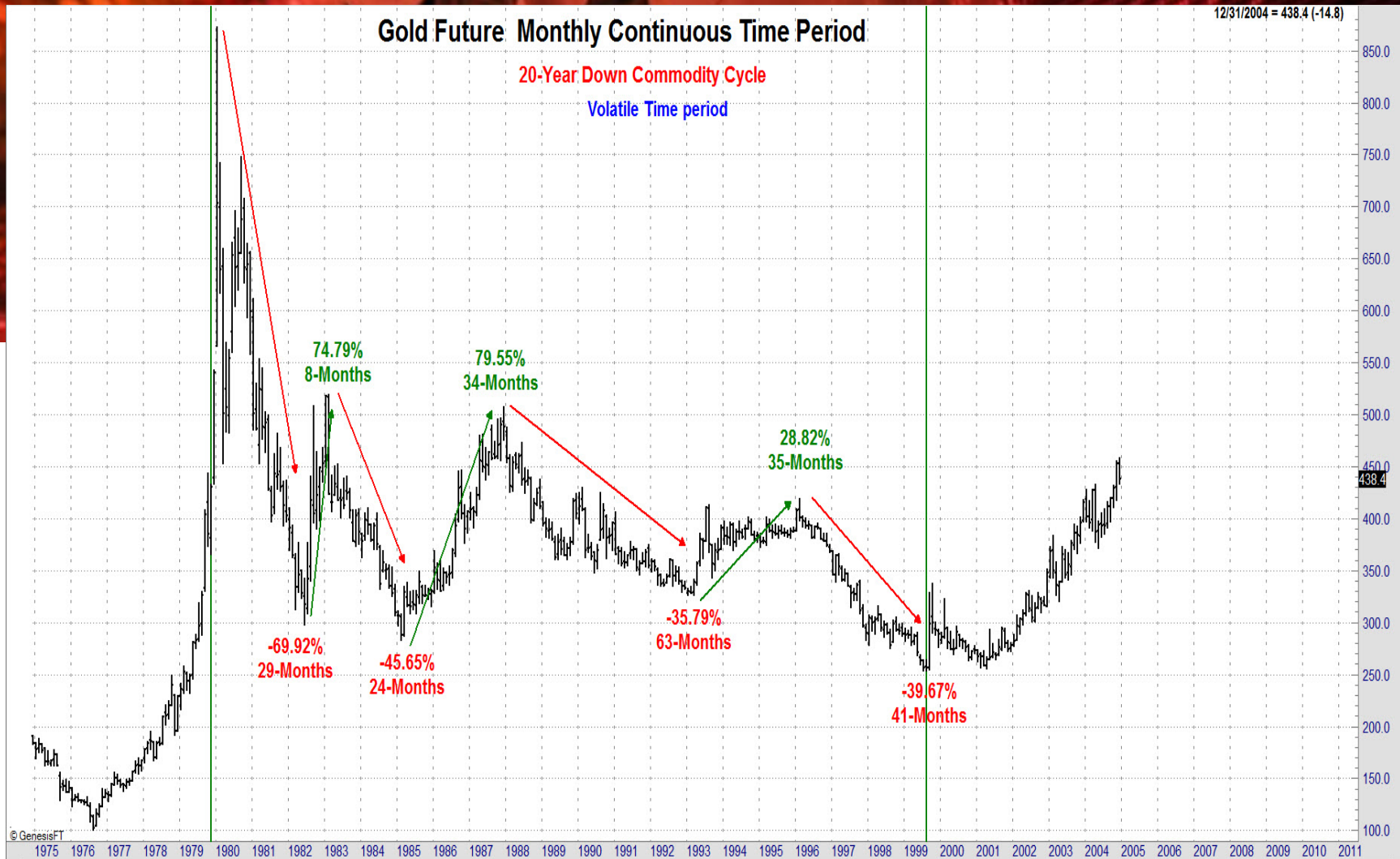
# #1 Long-term Commodity Cycle



Consistent across all commodities.



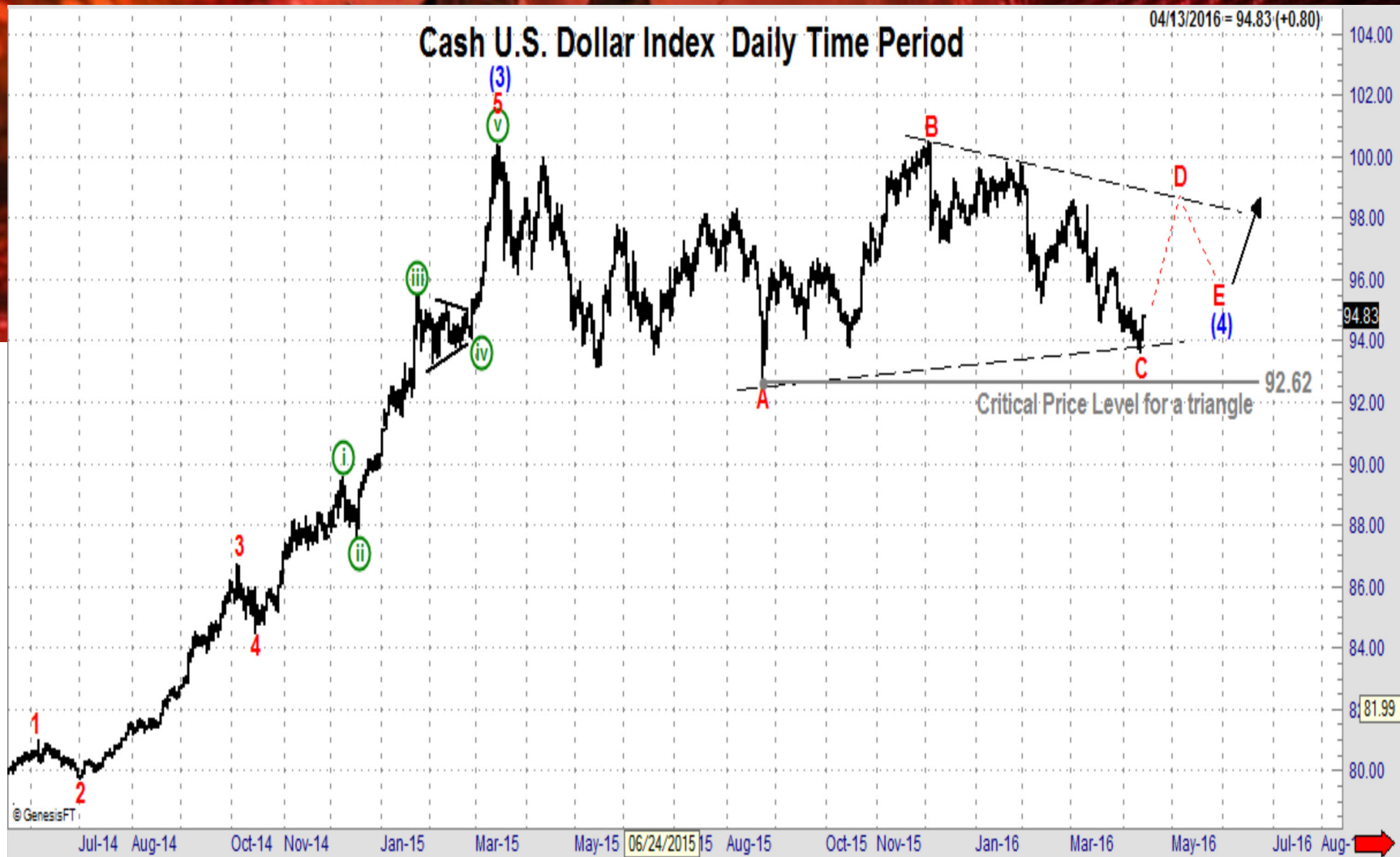
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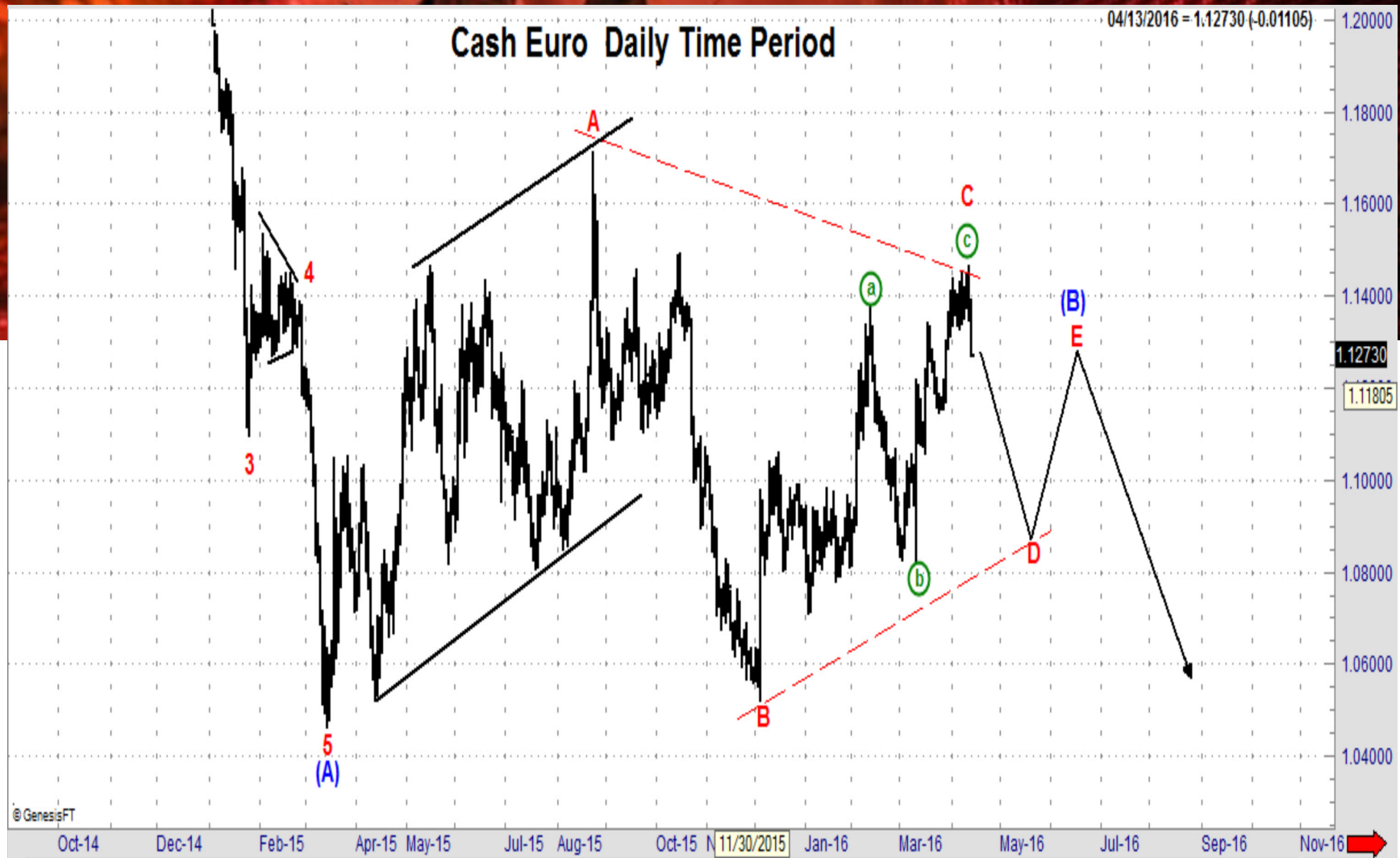
# #2 U.S. Dollar



As long as prices remain above 92.62 the triangular pattern is viable.



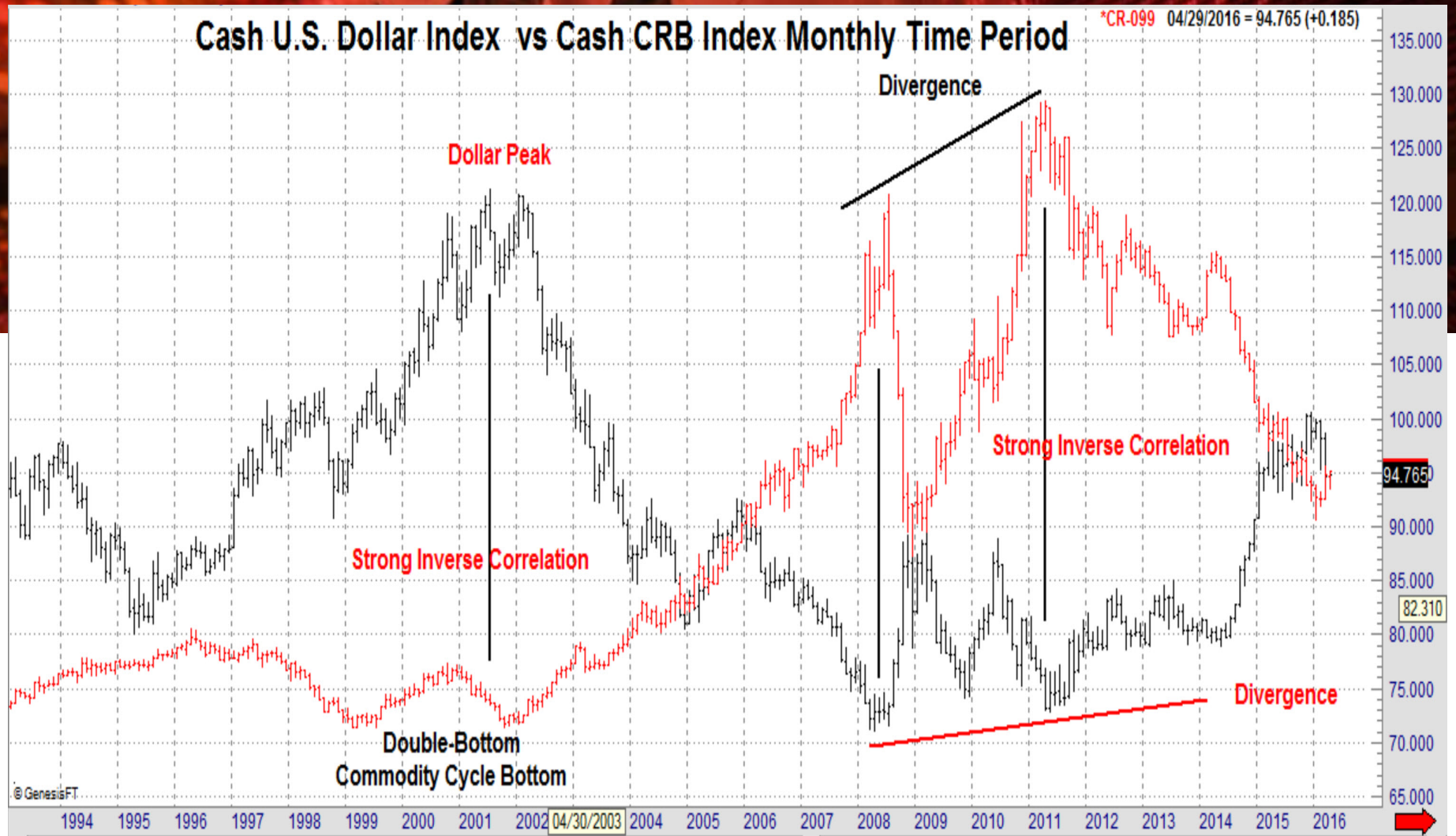
# #2 U.S. Dollar



The Euro which is basically the opposite of the U.S. dollar confirms the dollar's price action and strongly suggests a new high in the dollar/new low in the Euro.



# #2 Dollar Bottom



Strong Inverse Correlation

*If the dollar goes up, commodity go down*



## #3 Major Change in Market Psychology

03-04-16

Grain prices have 'bottomed out', after four-year slide, says ABN. Some revival in grain futures is on the way, ABN Amro said, even as it cut its estimate for values near-term – saying that these low prices were having an impact in quelling growth in supplies. Some stabilisation in grain prices this year could be a sign that the drop in grain prices could – after nearly four years - be running out of steam. ***"The fact that prices have been moving sideways for the last few weeks would seem to indicate that prices have now bottomed out,"*** said ABN Amro analyst Frank Rijkers.

03-21-16

Oil World says “In 2016 the ***Tightness in Vegetable Oils Will Be Even Greater Than Expected***. Additional production losses in palm and lauric oils would make the price outlook even more bullish in coming months.”

## #3 Major Change in Market Psychology

03-29-16

(Bloomberg) --BlackRock Inc. joined Pacific Investment Management Co. in recommending inflation-linked bonds and warning costs are poised to pick up. **"Stabilizing oil prices** and a tighter labor market could contribute to rising actual, and expected, U.S. inflation," Richard Turnill, BlackRock's global chief investment strategist, wrote Monday on the company's website. "We like inflation-linked bonds and gold as diversifiers." New York-based BlackRock manages \$4.6 trillion.

(WSJ) Oil demand is rebounding after a sluggish fourth quarter, Credit Suisse economist Jan Stuart says. **"We think that with hindsight this winter will look like a dip in an otherwise still unfolding fairly strong growth trend that is partly fueled by the ongoing economic recovery of in North America and Europe and longer standing trends across key emerging market economies,"** Stuart wrote in a note.

(Reuters) **Hedge funds establish near-record bullish bet on rising oil.**

***After reading this would you be more prone to buy or sell?***



# Risk

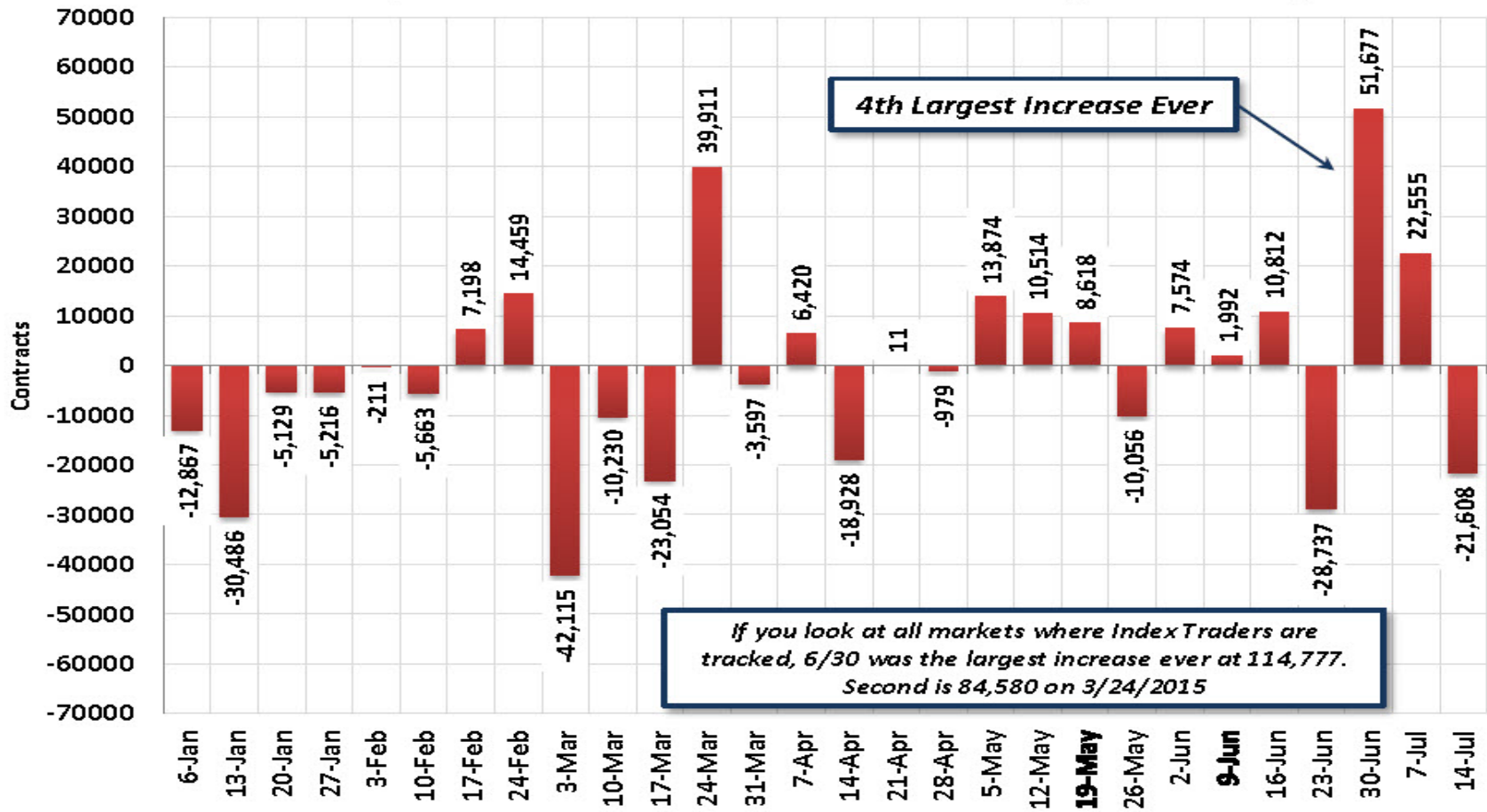
**Could we be right on overall price direction  
and still suffer enormous losses?**





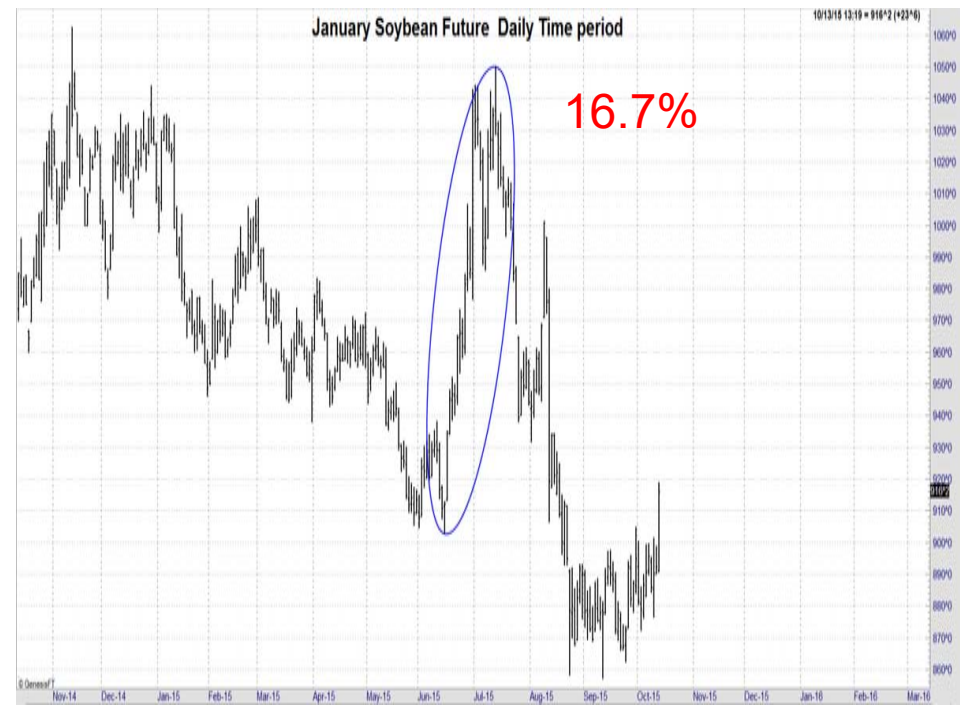
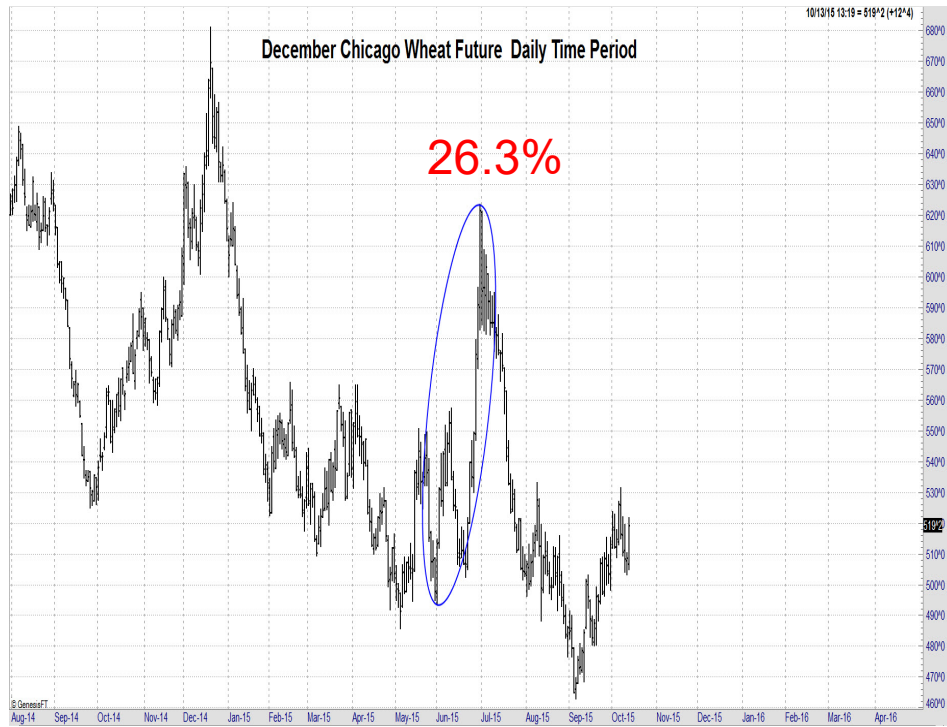
# Money Flow

**CBOT Corn, Soybeans and Wheat Combined  
Commodity Index Trader Net Position Weekly Net Change**

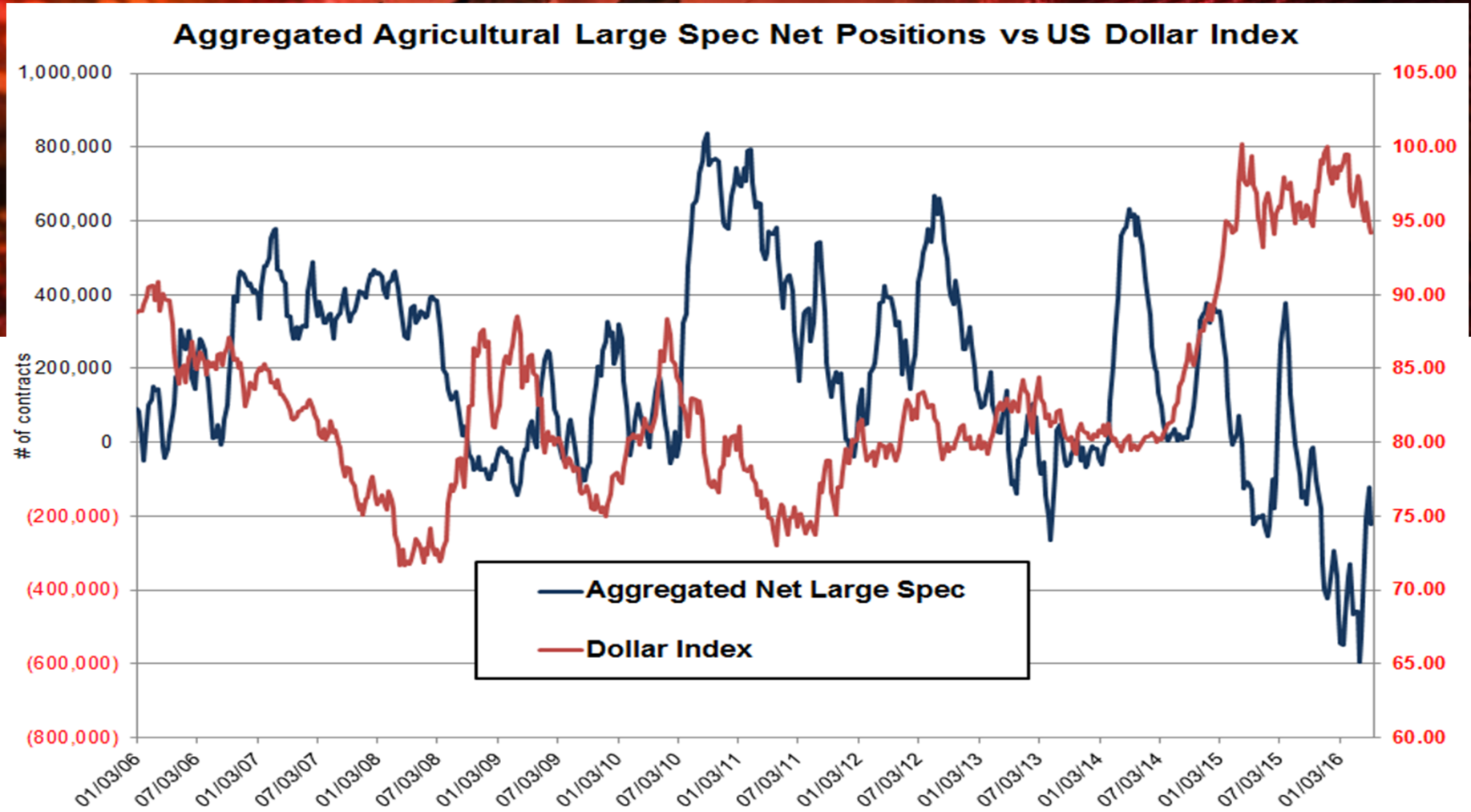


Commodity Funds Influence Near-term Price Direction – (Volatility)





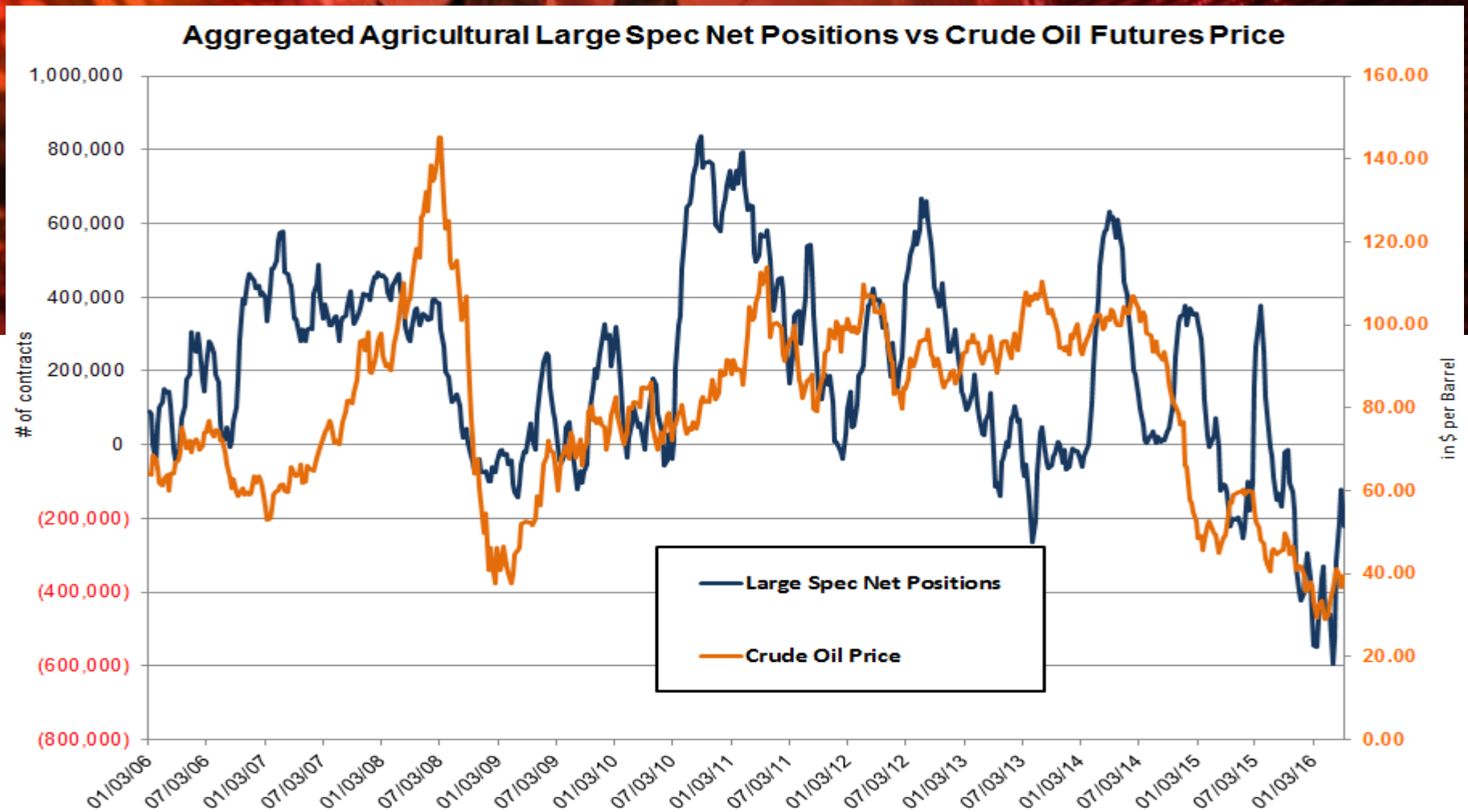
# Money Flow



Correlation of commodity fund positions to dollar is strong.



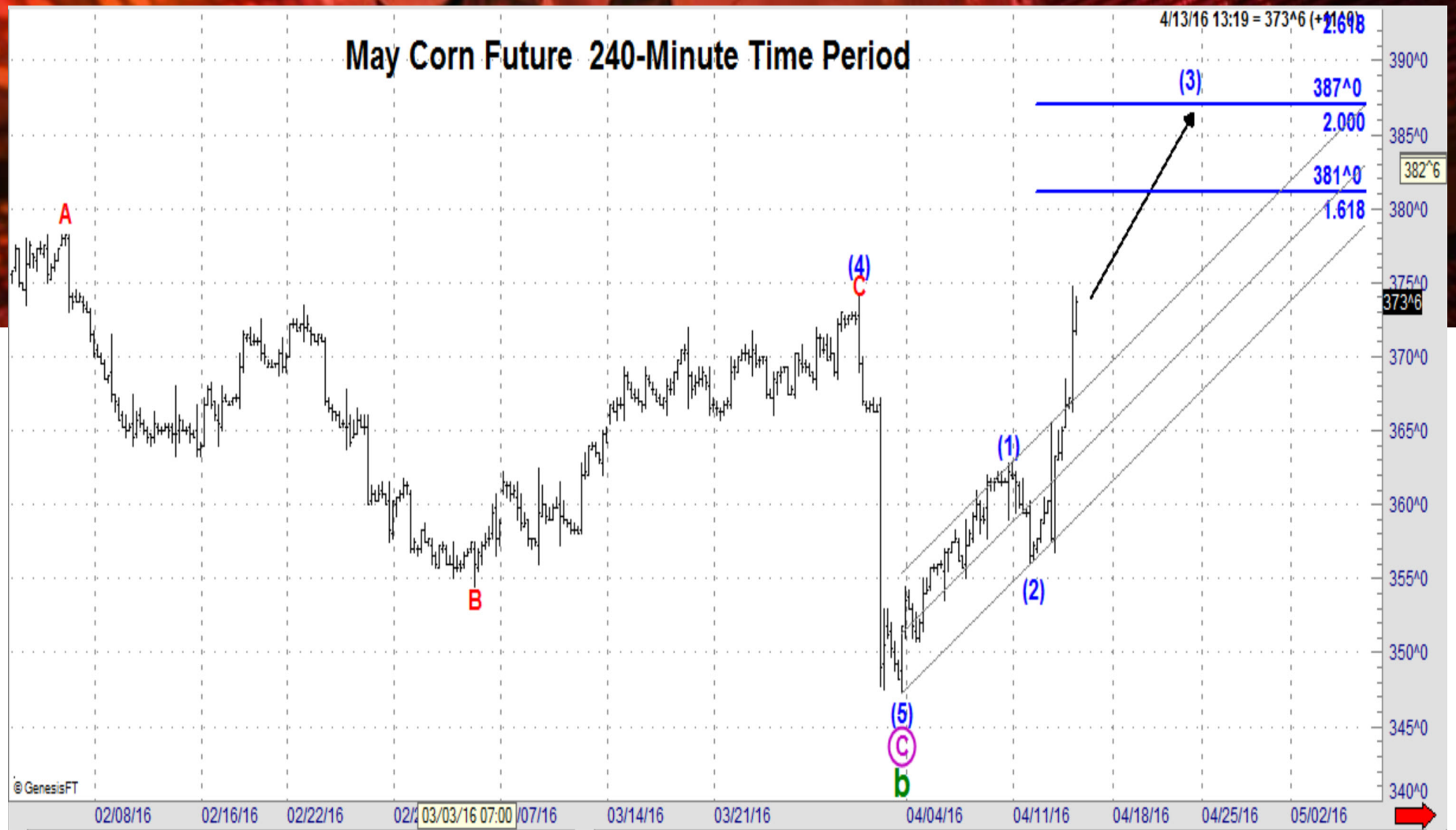
# Money Flow



Crude oil is up 61.7% from the \$26.05 low on February 11, 2016.



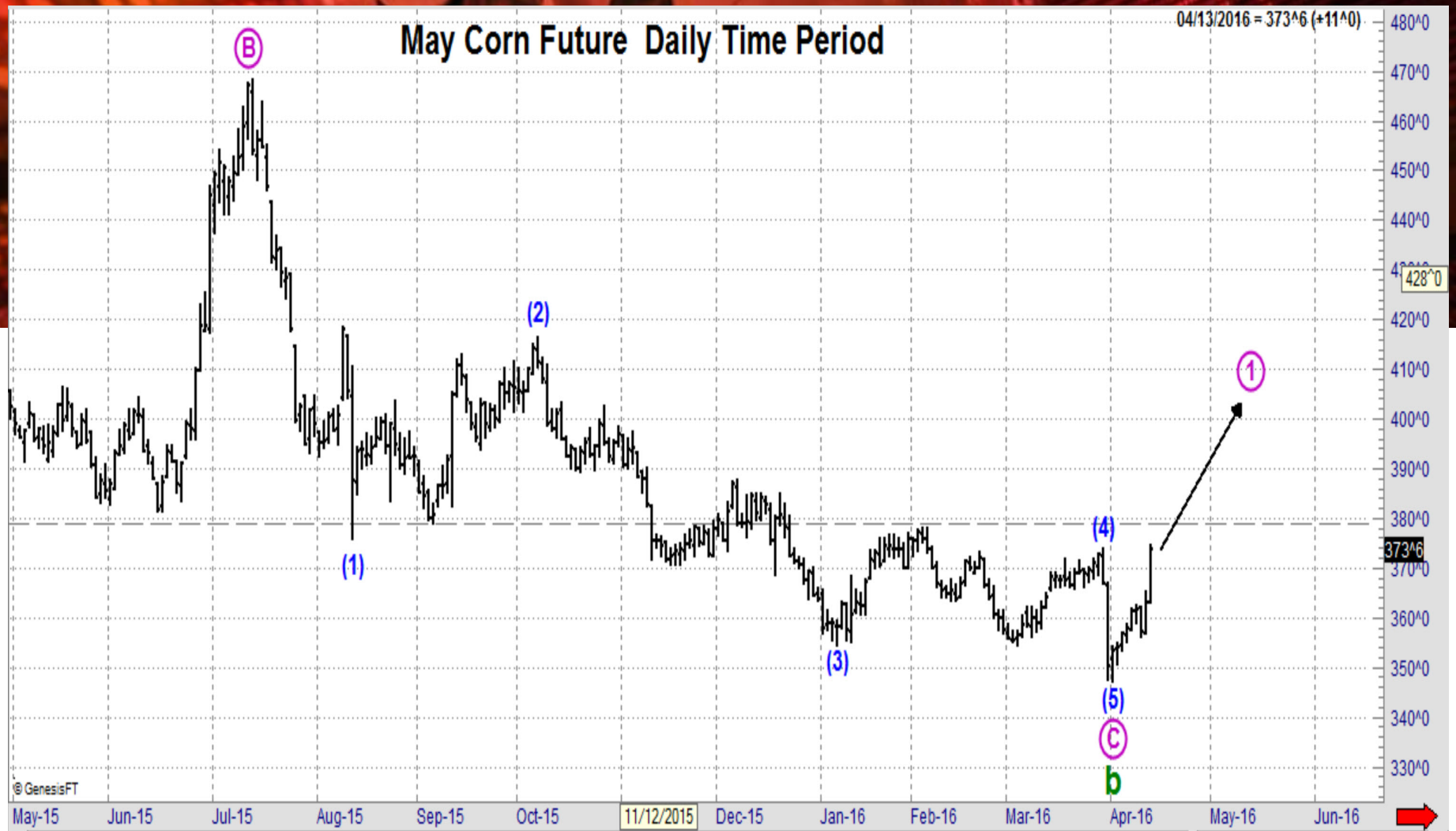
# Highlighted Markets - Corn



This rally should initially trade to between 3.81 <sup>3</sup>/<sub>4</sub> to 3.87.



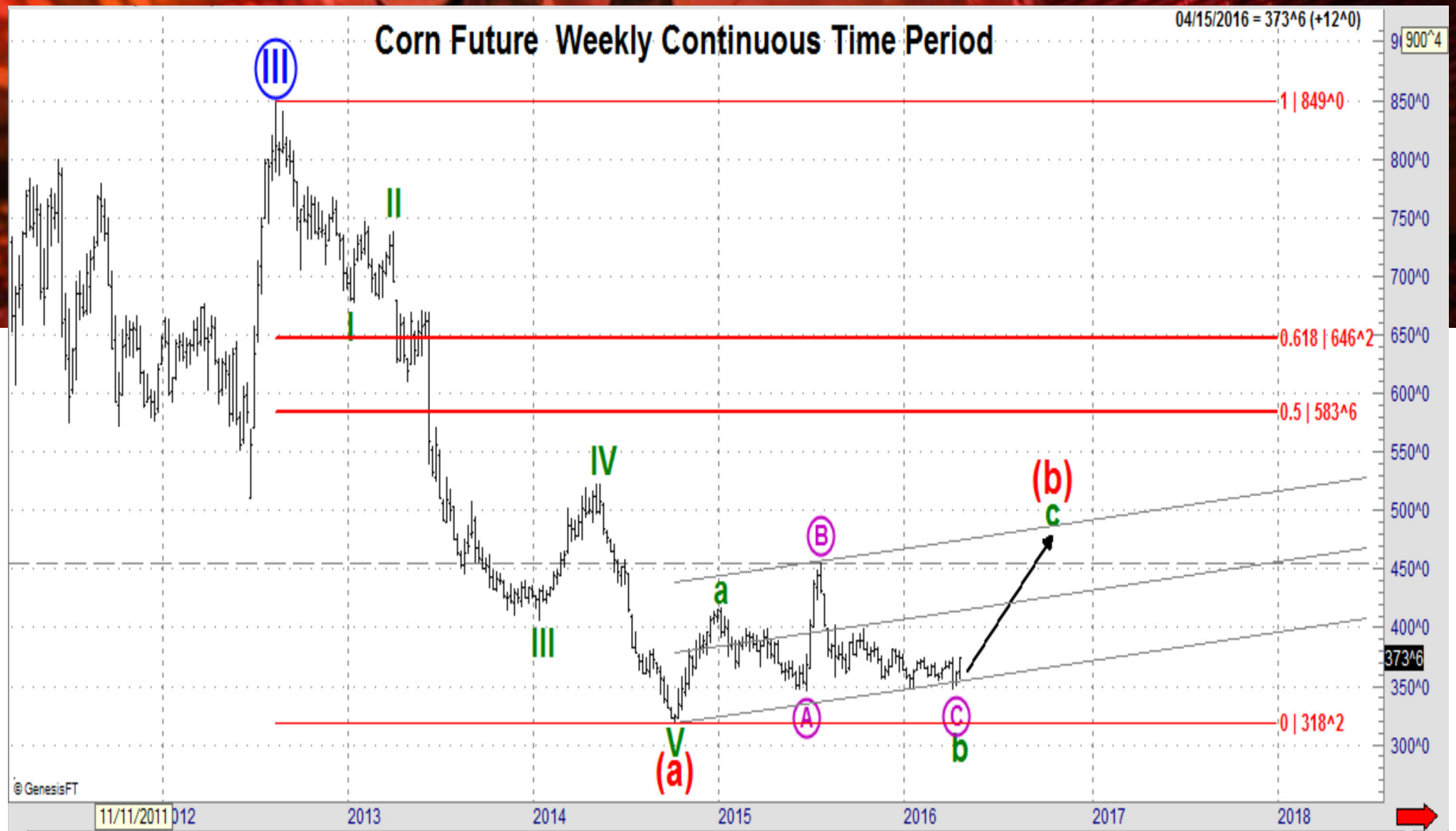
# Highlighted Markets - Corn



Prices have established a “value” range. All risk in now to the upside.



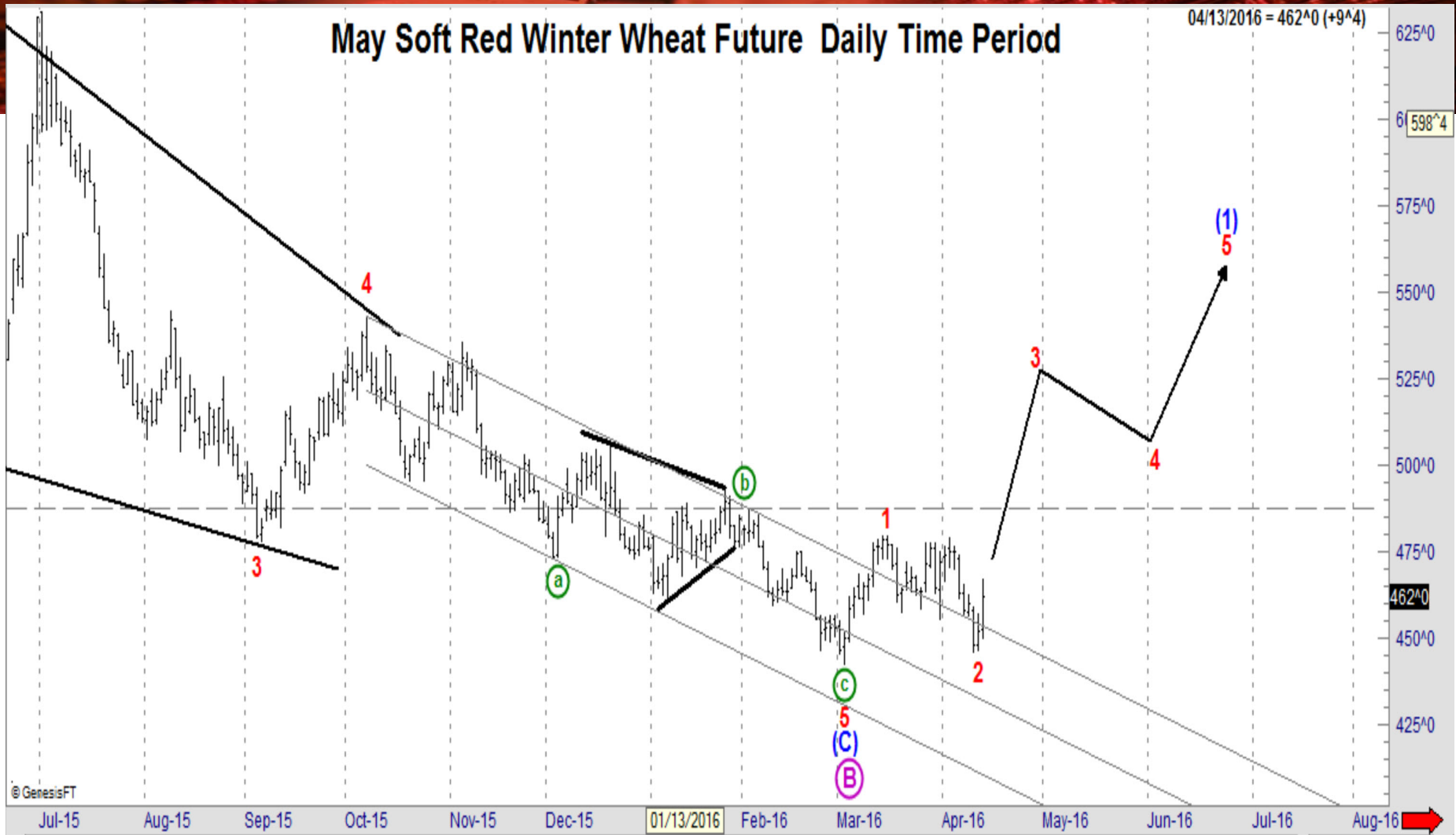
# Highlighted Markets - Corn



Corn could easily trade to between 4.50 and 5.00.



# Other Markets - Wheat

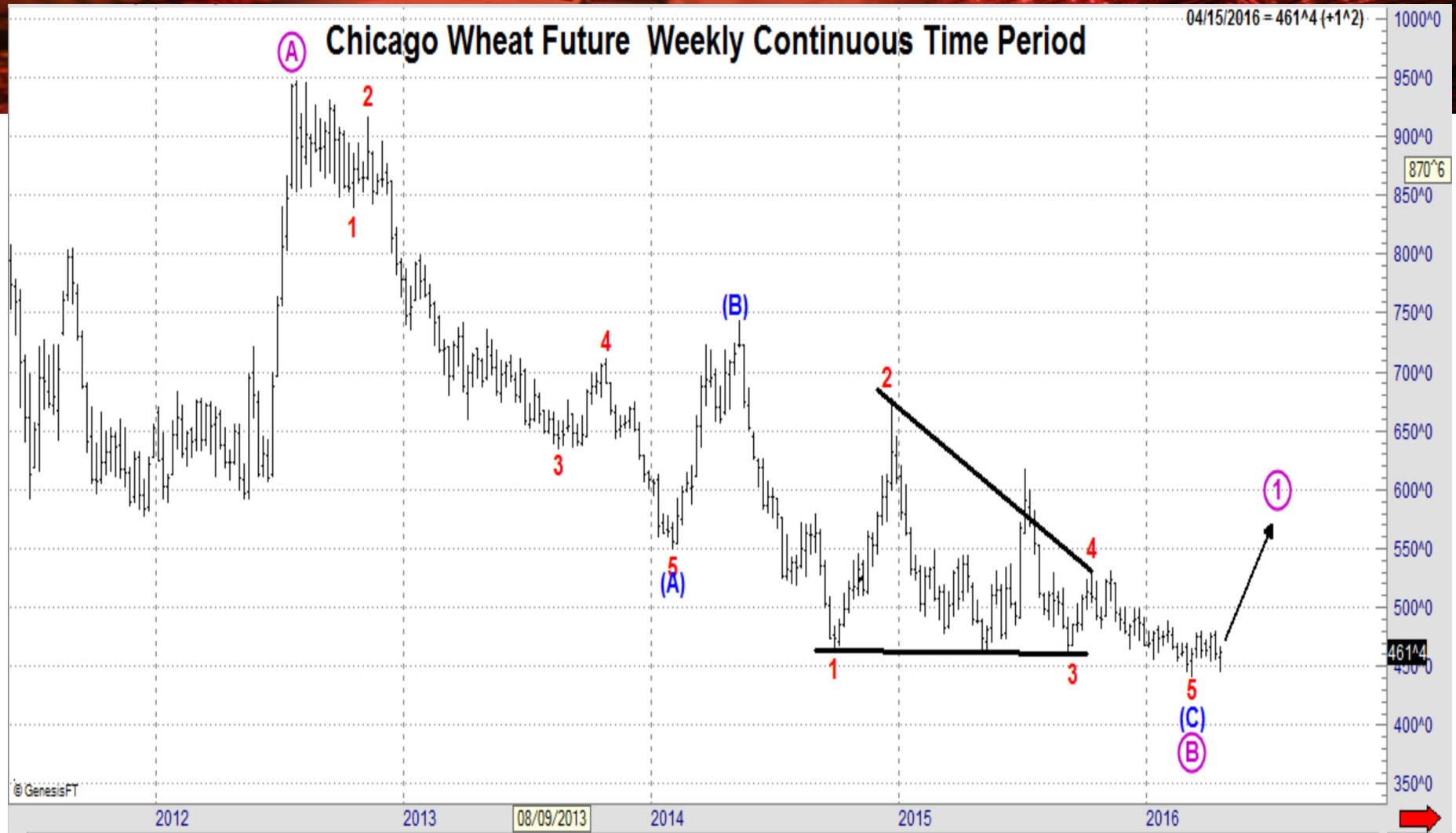


A bottom appears to be in place.





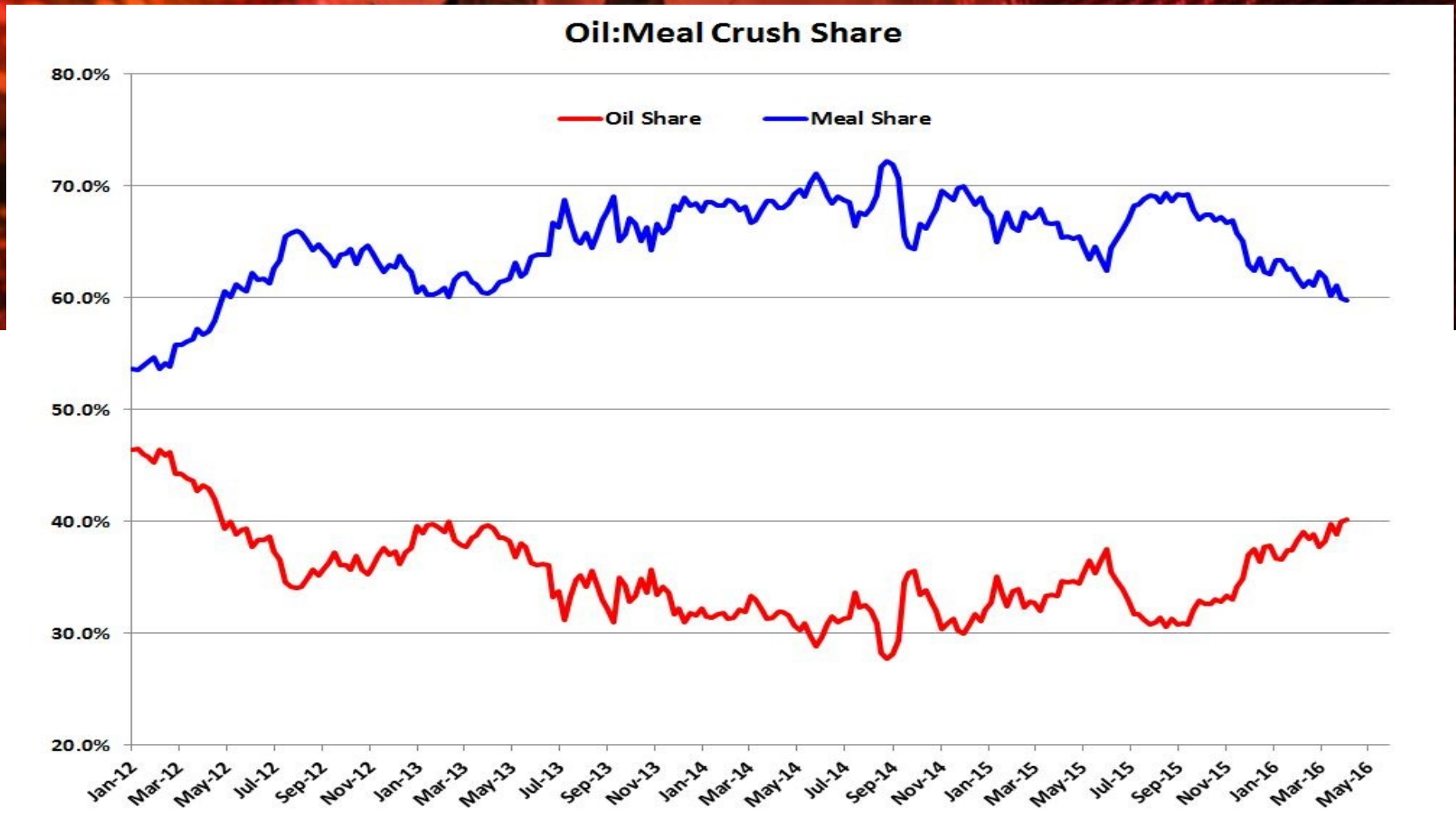
# Other Markets - Wheat



Prices could be up for the next 9-months.



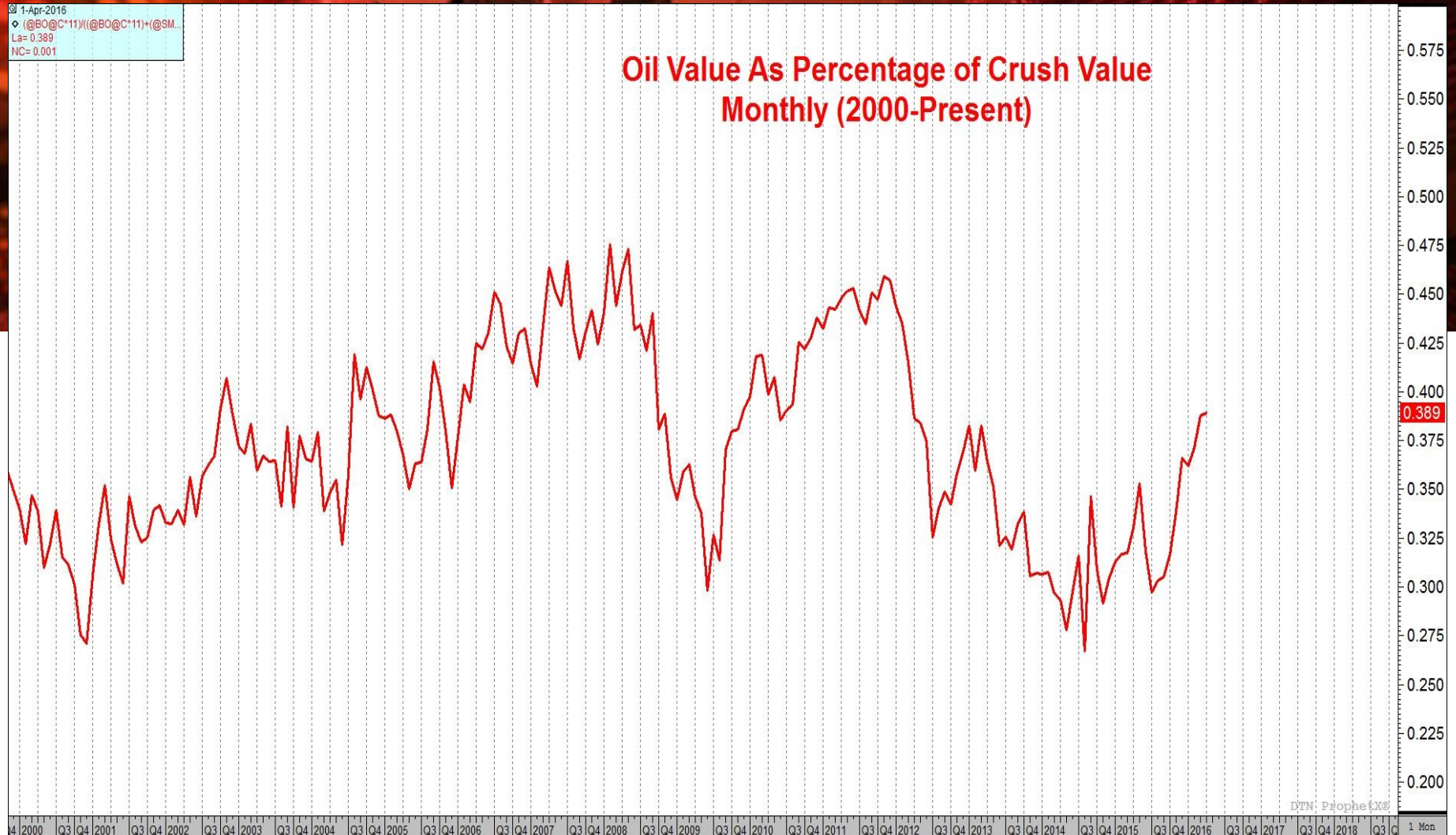
# Product Value



Soybean Meal loosing to soybean oil.



# Product Value



The spot oilshare hit 39.3 percent, its highest since 2012, earlier this week.



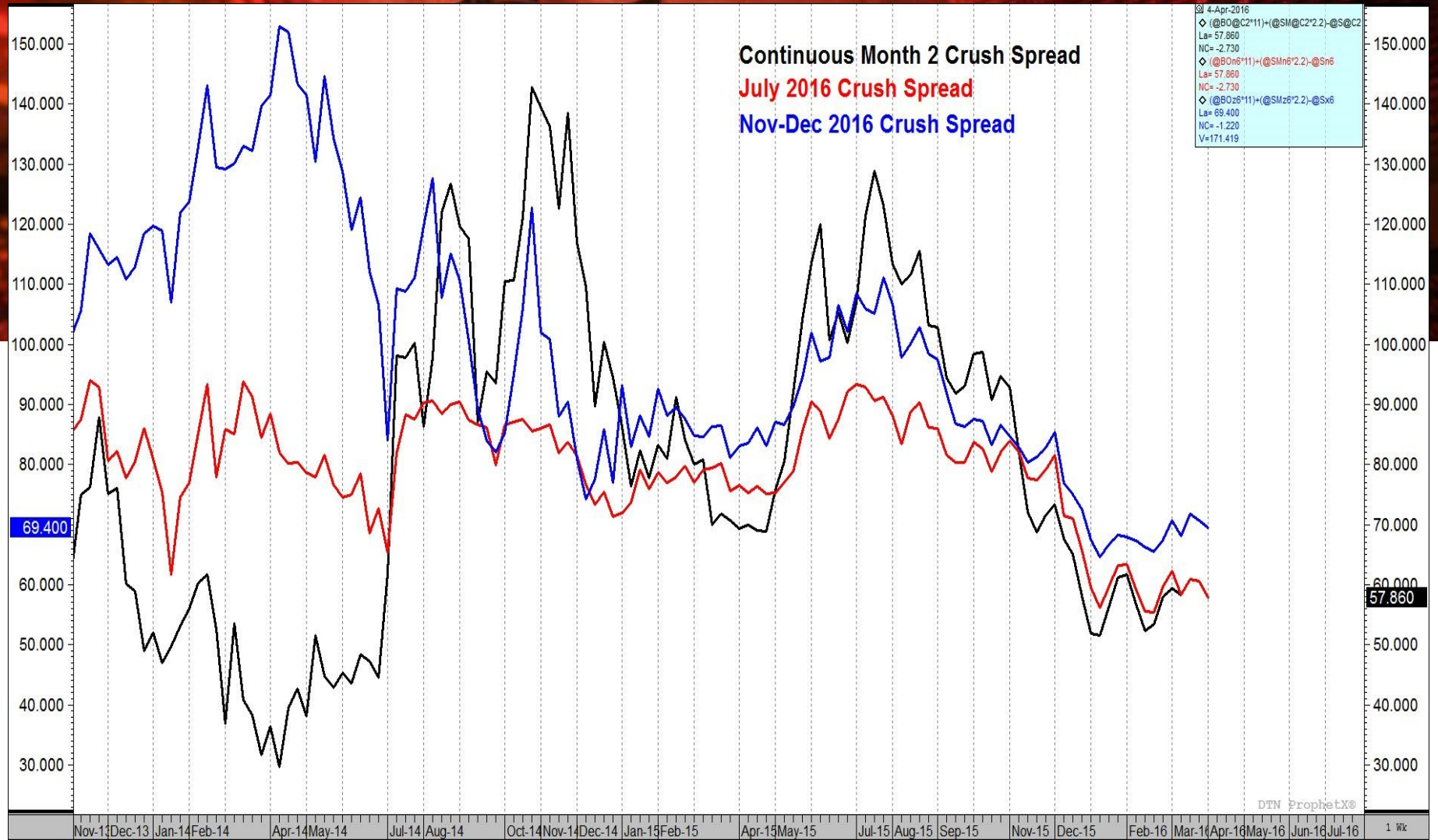
# Product Value



Soybean oil had been a price driver much of March following palm oil. But as palm has softened, the oilshare trade has made a dramatic reversal and the reason behind much of the meal strength.



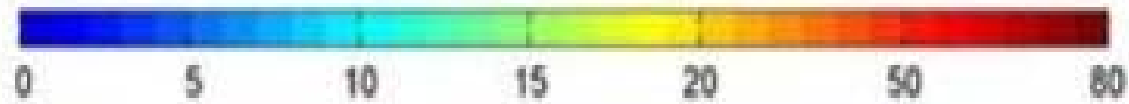
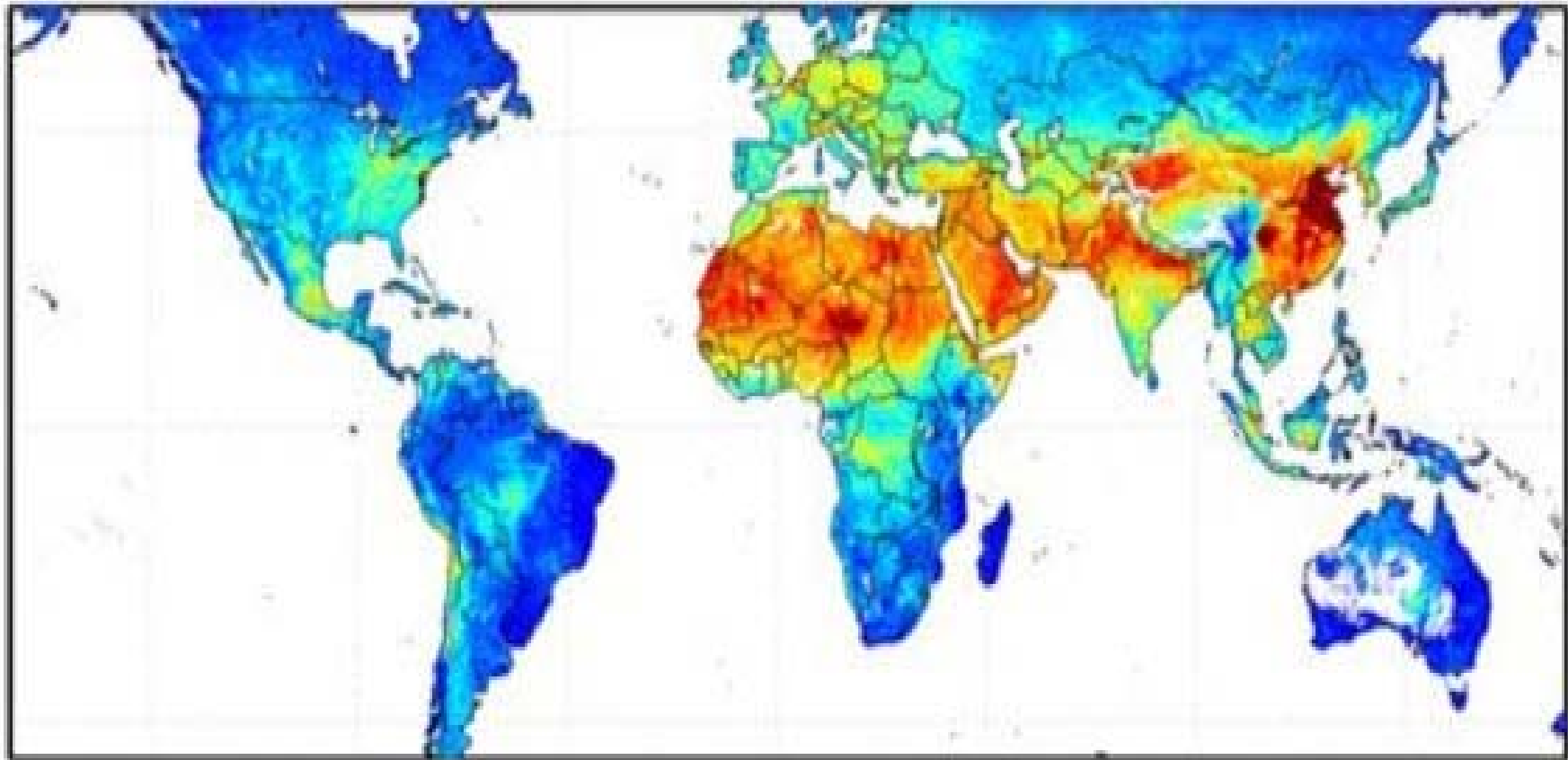
# Crush History



Expect crush margins to improve.



# Emerging Trends



China and India will need to originate their auto fuel with ethanol.  
This could be what China does with its corn stockpile.



# Trends

## Key Facts

One-third of food produced for human consumption is lost or wasted globally, which amounts to about 1.3 billion tons per year.


Food is lost or wasted throughout the supply chain, from initial agricultural production down to final household consumption.

Food losses represent a waste of resources used in production such as land, water, energy and inputs, increasing the green gas emissions in vain (FAO, 2011)

### Global quantitative food losses and waste for each commodity group per year:


**30%**  **CEREALS**  
In industrialized countries, consumers throw away 286 million tonnes of cereal products.


**20%**  **DAIRY PRODUCTS**  
In Europe alone, 29 million tonnes of dairy products are lost or wasted every year.

**35%**  **FISH AND SEAFOOD**  
8% of fish caught globally is thrown back into the sea. In most cases they are dead, dying or badly damaged.

**45%**  **FRUITS AND VEGETABLES**  
Almost half of all the fruits and vegetables produced are wasted.

**20%**  **MEAT**  
Of the 263 million tonnes of meat produced globally, over 20% is lost or wasted.

**20%**  **OILSEEDS AND PULSES**  
Every year, 22% of the global production of oilseeds and pulses is lost or wasted.

**45%**  **ROOTS AND TUBERS**  
In North America & Oceania alone, 5 814 000 tonnes of roots and tubers are wasted at the consumption stage alone.

Source: FAO





# Triggers for Action

What would cause speculative capital to flow into the grain complex?  
What is the probable timing?

Which charts should we be focusing on?

What will drive prices?







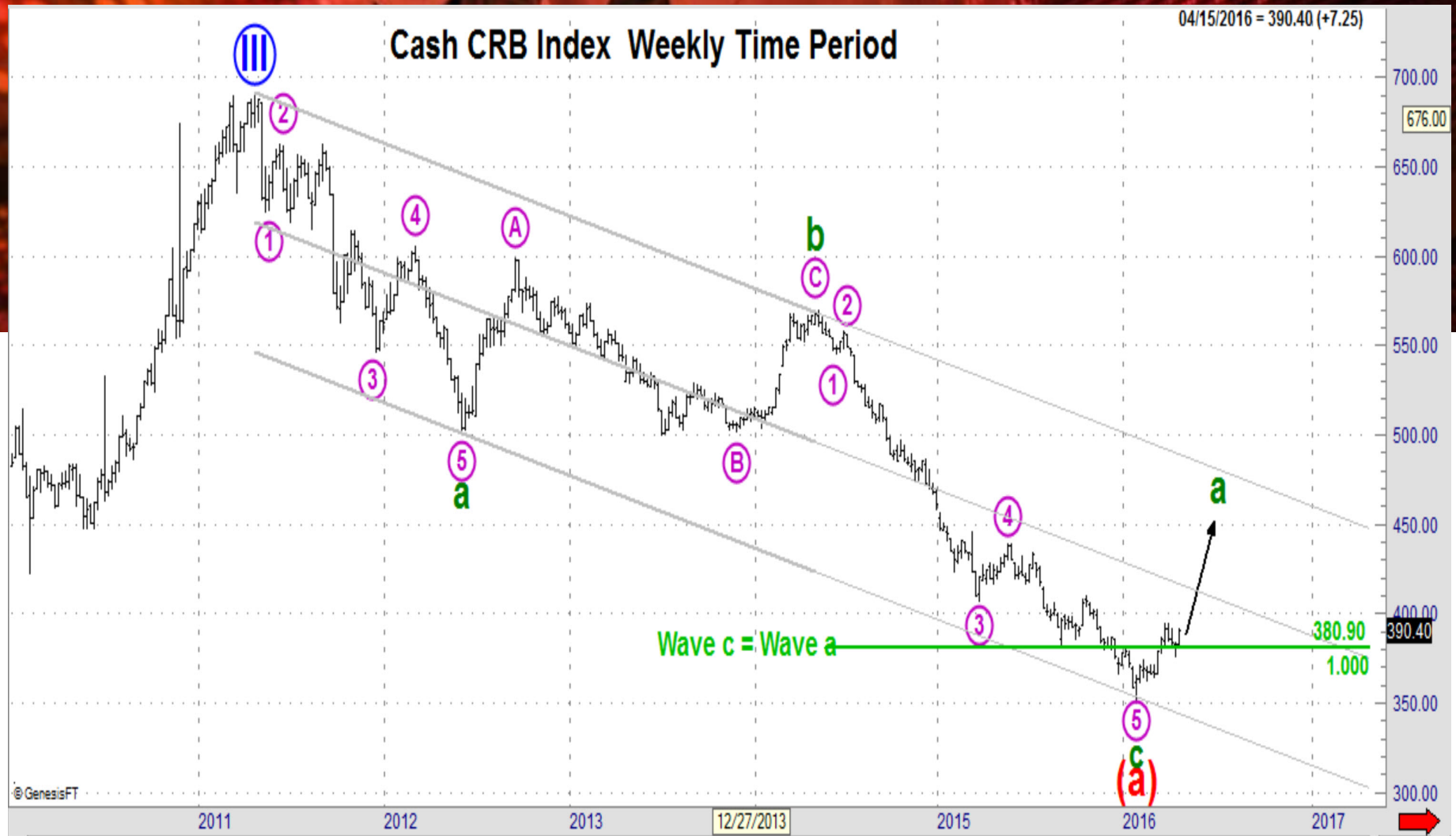
# Outside Influences Technical Influences

Long-term trends are decidedly lower.  
Short-term trends are oversold.

The current technical condition of the grain complex represents a *buyers dilemma and the need to hedge.*



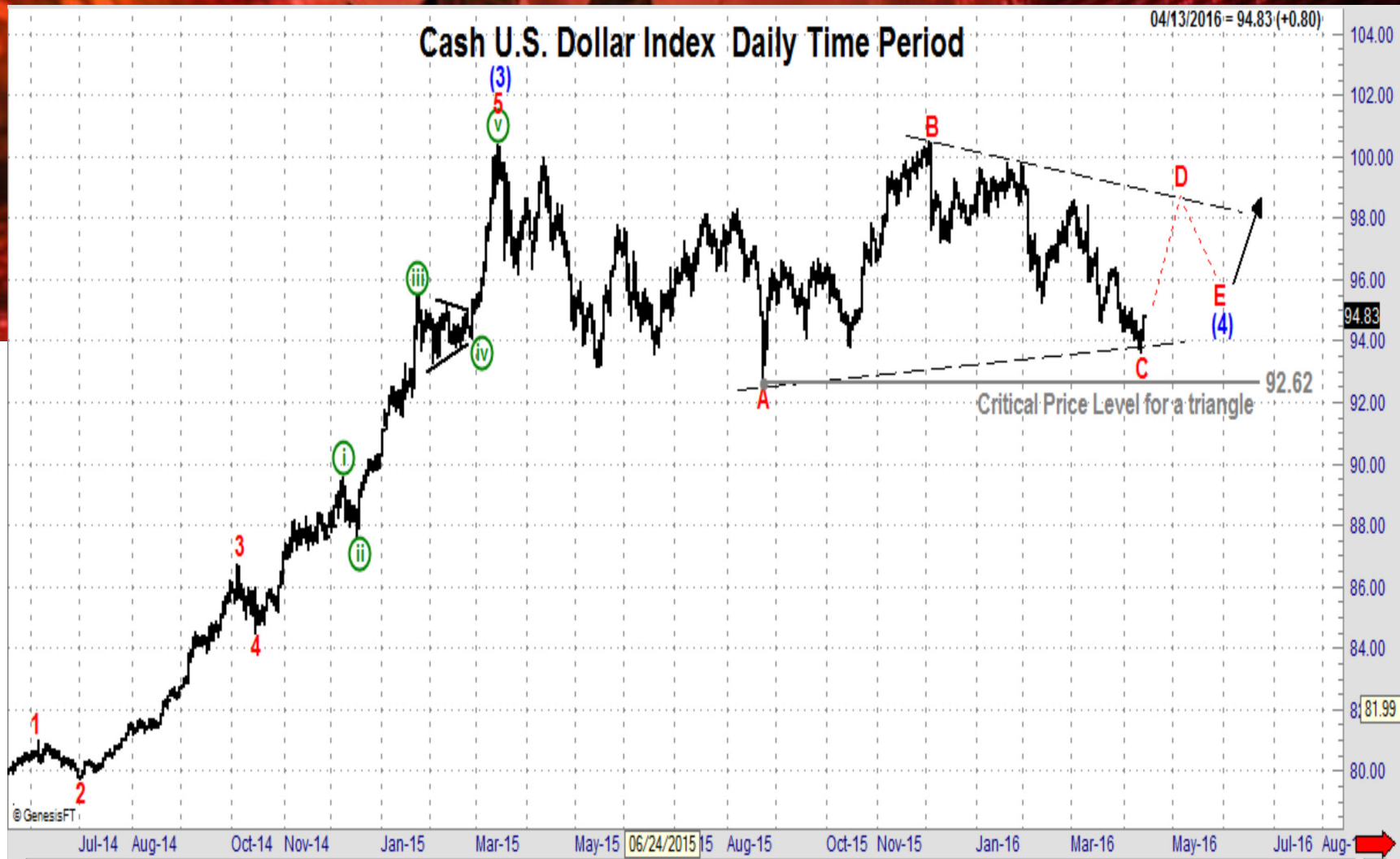
# Long-term Commodity Outlook



The end of a 5-year correction could be in place.



# How High Can the Dollar Go?



The U.S. Dollar is in the last wave higher.



# Corn Intra-Market Spreads

	Month	Price		@CN16	@CU16	@CZ16	@CH17	@CK17	@CN17	@CU17
@CK16	May 16	362' 2s	Market Carry	2.75	5.75	12.75	22.25	28.00	32.50	28.50
			Cost of Carry	12.42	24.84	43.07	61.10	72.91	85.53	97.95
			% Full Carry	22.14%	23.15%	29.60%	36.42%	38.40%	38.00%	29.10%
@CN16	Jul 16	365' 0s	Market Carry		3.00	10.00	19.50	25.25	29.75	25.75
			Cost of Carry		12.44	30.71	48.77	60.61	73.25	85.70
			% Full Carry		24.11%	32.57%	39.98%	41.66%	40.61%	30.05%
@CU16	Sep 16	368' 0s	Market Carry			7.00	16.50	22.25	26.75	22.75
			Cost of Carry			18.30	36.40	48.27	60.94	73.41
			% Full Carry			38.25%	45.33%	46.10%	43.90%	30.99%
@CZ16	Dec 16	375' 0s	Market Carry				9.50	15.25	19.75	15.75
			Cost of Carry				18.19	30.11	42.84	55.37
			% Full Carry				52.23%	50.65%	46.10%	28.44%
@CH17	Mar 17	384' 4s	Market Carry					5.75	10.25	6.25
			Cost of Carry					12.00	24.82	37.43
			% Full Carry					47.91%	41.31%	16.70%
@CK17	May 17	390' 2s	Market Carry						4.50	0.50
			Cost of Carry						12.86	25.53
			% Full Carry						34.98%	1.96%
@CN17	Jul 17	394' 6s	Market Carry							-4.00
			Cost of Carry							12.70
			% Full Carry							

Below 35% is bullish. Above 65% is bearish.



# El Nino/La Nina

Strong El Niño sets the stage for an early La Nina

The widely talked about fundamental story has been the excess rain in Argentina. Pictures like this began flooding social media early this Wednesday morning and was the story du jour.

The water is causing beans to sprout or pop out of the pods. There are quotes that almost a million hectares are at risk of not being harvest.

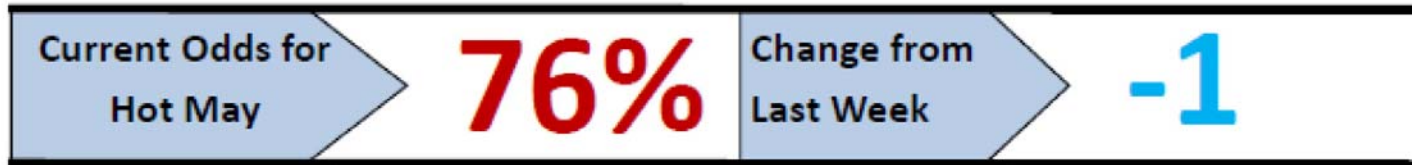


# La Nina

## Month Ahead Scorecard

Wednesday April 13, 2016

*The Month Ahead Scorecard is a weekly feature tracking factors that may influence the month ahead and our future updates*



Difficult to gage impact of El Nino-La Nina shift although a North Dakota climatologist is calling for hot summer.

It's definitely a supportive factor.



# Closing /Recommendations

## **Overall Perspective:**

Risk for further upside follow-through in agriculture markets heighten by following factors:

- o Managed funds still nursing shorts in corn and wheat.
- o Speed and magnitude of rally may spawn some end users to extend forward coverage.
- o Prospects for another 10 days of too wet Argentina/too dry Brazil.
- o Friday 4/15 PRC release of Q1 GDP/IP/Retail Sales which may support PRC recovery narrative.
- o Sunday 4/17 Crude Oil freeze meeting where outcome may exceed low expectations.

***This rally could last for 9-months or more.***

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# Closing /Recommendations

Suspect agriculture buying momentum (largely on macro drivers) will continue short term. We have no idea when investor appetite for increasing commodity longs will abate. An early indicator was last Friday when index funds added nearly 50,000 Corn, Soybeans, Wheat, Soybean Meal and Soybean Oil contracts (over ½ of which was corn which is linked to crude via ethanol) to their combined long without any apparent fundamental catalyst.

Difficult to gage impact of El Nino-La Nina shift (North Dakota climatologist calling for hot summer) but its definitely a supportive factor.

An important early test will be how agriculture markets respond to mid to late next week when Midwest planters will be racing corn into the ground. CWG places 76% probability on warmer than normal May which, if realized, suggests above average plant populations and ratings in ramp up to May 10th crop report.

***Current agriculture rally is not about fundamentals but rather sentiment shift to increasing commodity portion of investment portfolios.***

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**Trilateral, Inc.**

P.O. Box 5786

River Forest, Illinois 60305-5786 USA

708-795-0482

[rbresnahan@trilatinc.com](mailto:rbresnahan@trilatinc.com)

[www.trilatinc.com](http://www.trilatinc.com)

