



2018 Agriculture Commodity Futures Conference

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April 10, 2018

What Is Convergence And Why Does It Matter?

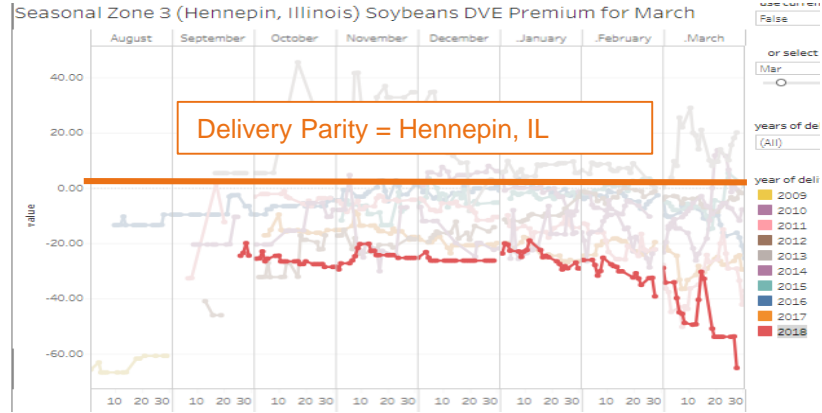
Futures market convergence is the process where cash market prices and futures market prices come together, or converge, at futures market expiration. Theoretically, convergence occurs at every futures contract expiration because of arbitrage; if cash prices remain below futures prices, a market participant could buy in the cash market and sell in the futures market, and make a risk-free profit. Similarly, if the cash price is above the futures price, a market participant could buy in the futures market, take delivery and sell in the cash market, again earning a risk free-profit.

Source: CME

- Agriculture markets represent a physically delivered good at a specified time in a specified region
- If a contract is well designed and functioning properly, this nominal arbitrage and delivery drives convergence

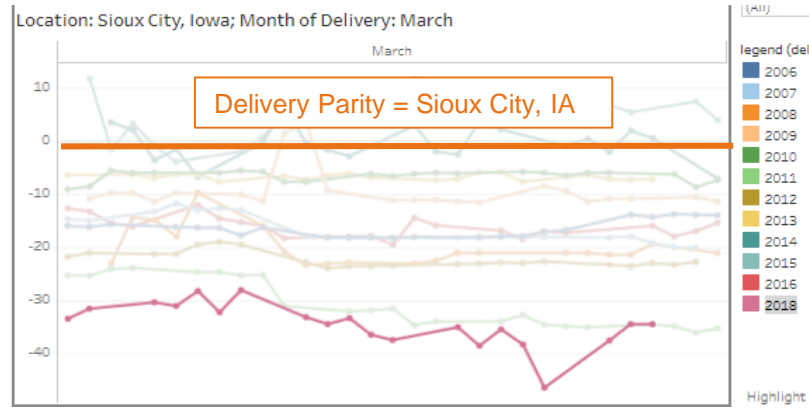
There is a nominal arbitrage... but no one is capitalizing on it

CIF (delivery equivalent) for soybeans



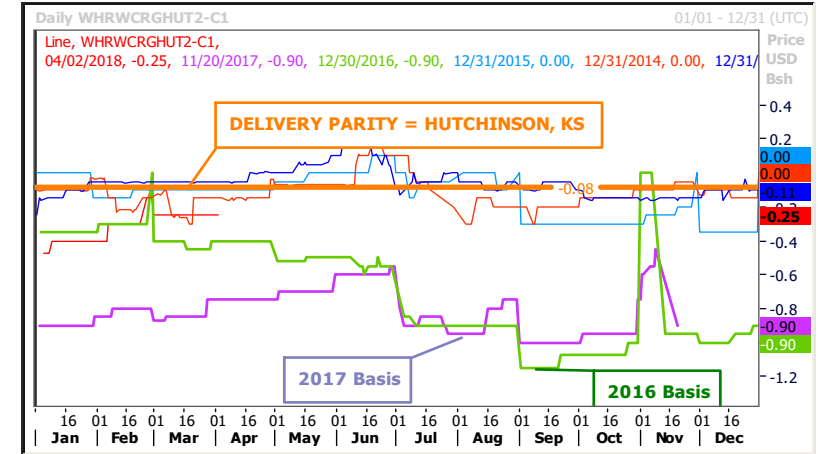
Source: Reuters

Soymeal basis at delivery region



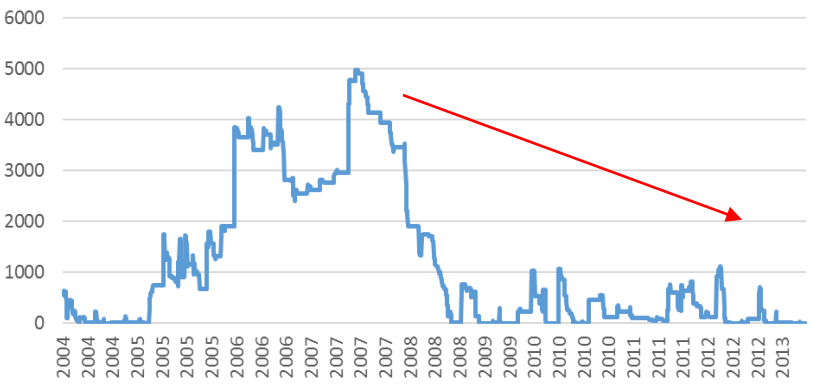
Source: Reuters

HRW basis levels at delivery elevator

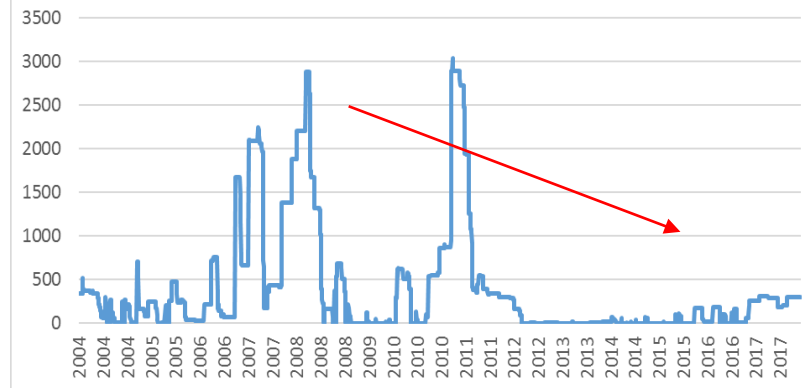


Source: Reuters

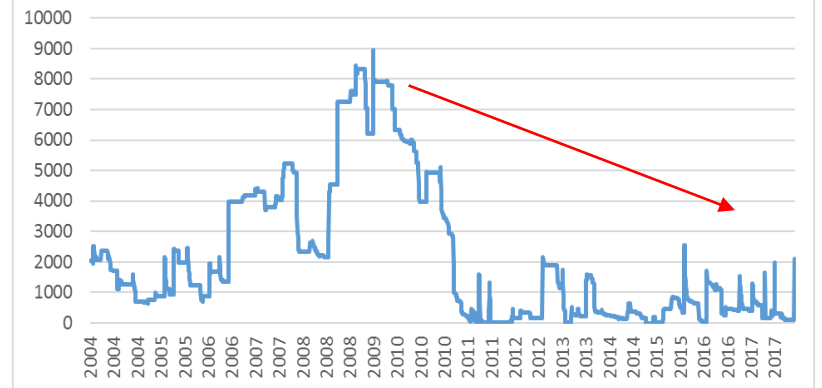
Deliverable Commodities Under Registration - SOYBEANS



Deliverable Commodities Under Registration - SOYBEAN MEAL



Deliverable Commodities Under Registration - WHEAT



Why Aren't There More Deliveries??

- 24 of the 31 meal facilities have not utilized the delivery system since 2012
- 18 of the 31 meal facilities have not utilized the delivery system since 2010
- 12 of the 39 soybean facilities have not utilized the delivery system since 2008

SOYBEAN MEAL FUTURES		
Firm	Location	Last Dlvy Date
AG PROCESSING	MANNING, IA	06/04/2007
AG PROCESSING	ST. JOSEPH, MO	07/06/2007
AG PROCESSING	SERGEANT BLUFF, IA	09/03/2008
AG PROCESSING	EAGLE GROVE, IA	09/04/2008
AG PROCESSING	EMMETSBURG, IA	09/04/2008
ARCHER DANIELS MIDLAND CO.	DECATUR, IL	08/19/2009
ARCHER DANIELS MIDLAND CO.	FRANKFORT, IN	12/16/2009
ARCHER DANIELS MIDLAND CO.	GALESBURG, IL	09/16/2010
ARCHER DANIELS MIDLAND CO.	DES MOINES, IA	06/29/2016
ARCHER DANIELS MIDLAND CO.	DEERFIELD, MO	06/29/2016
BUNGE MILLING INC.	DANVILLE, IL	02/03/2009
BUNGE NORTH AMERICA, INC.	MORRISTOWN, IN	06/03/2010
BUNGE NORTH AMERICA, INC.	COUNCIL BLUFFS, IA	05/01/2012
BUNGE NORTH AMERICA, INC.	DECATUR, IN	05/23/2012
BUNGE NORTH AMERICA, INC.	BELLEVUE, OH	05/23/2012
BUNGE NORTH AMERICA, INC.	DECATUR, AL	05/23/2012
BUNGE NORTH AMERICA, INC.	CAIRO, IL	06/29/2012
CARGILL, INC.	CEDAR RAPIDS E, IA	06/07/2007
CARGILL, INC.	KANSAS CITY, MO	07/06/2007
CARGILL, INC.	DES MOINES, IA	06/19/2008
CARGILL, INC.	GUNTERSVILLE, AL	06/19/2008
CARGILL, INC.	SIOUX CITY, IA	07/03/2008
CARGILL, INC.	IOWA FALLS, IA	07/11/2008
CARGILL, INC.	SIDNEY, OH	10/16/2009
CARGILL, INC.	LAFAYETTE, IN	10/17/2012
CONSOLIDATED GRAIN & BARGE	MT. VERNON, IN	09/28/2016
CRESTON BEAN PROCESSING LLC	CRESTON, IA	04/15/2010
INCOBRASA INDUSTRIES, LTD	GILMAN, IL	03/10/2017
LDC CLAYPOOL HOLDINGS,LLC	CLAYPOOL, IN	10/05/2015
OWENSBORO GRAIN COMPANY	OWENSBORO, KY	02/13/2018
SOLAE	GIBSON CITY, IL	06/22/2015

Source: CME

SOYBEAN FUTURES		
Firm	Location	Last Dlvy Date
ADM GRAIN COMPANY	HAVANA-S, IL	03/06/2008
ADM GRAIN COMPANY	NAPLES, IL	03/07/2008
ADM GRAIN COMPANY	HAVANA-N, IL	03/14/2008
ADM GRAIN COMPANY	BEARDSTOWN, IL	01/08/2009
ADM GRAIN COMPANY	MORRIS, IL	08/18/2009
ADM GRAIN COMPANY	OTTAWA-S, IL	01/11/2012
ADM GRAIN COMPANY	HENRY, IL	04/29/2014
ADM GRAIN COMPANY	OTTAWA-N, IL	07/16/2014
ADM GRAIN COMPANY	HENNEPIN, IL	07/16/2014
ADM GRAIN COMPANY	CREVE COEUR, IL	07/21/2014
ADM GRAIN COMPANY	SPRING VALLEY, IL	05/18/2015
ADM GRAIN COMPANY	LACON, IL	10/23/2015
BUNGE NORTH AMERICA, INC.	FAIRMONT CITY, IL	07/12/2016
CARGILL, INC.	EAST ST. LOUIS, IL	03/07/2008
CARGILL, INC.	BEARDSTOWN, IL	08/06/2008
CARGILL, INC.	HAVANA-N, IL	08/29/2008
CARGILL, INC.	HENNEPIN, IL	12/04/2008
CARGILL, INC.	MORRIS, IL	12/11/2008
CARGILL, INC.	SENECA, IL	12/11/2008
CARGILL, INC.	HAVANA-S, IL	05/26/2010
CARGILL, INC.	FLORENCE, IL	03/20/2014
CARGILL, INC.	MEREDOSIA, IL	03/20/2014
CARGILL, INC.	OTTAWA, IL	07/11/2016
CARGILL, INC.	LACON, IL	07/11/2016
CARGILL, INC.	SPRING VALLEY, IL	07/12/2016
CARGILL, INC.	BURNS HARBOR, IN	07/28/2016
CHS INC	HAVANA,, IL	07/11/2016
CHS INC	PEKIN, IL	07/15/2016
CHS INC	MORRIS, IL	08/03/2017
CIRM	CHICAGO, IL	03/02/2018
CONSOLIDATED GRAIN & BARGE	PERU, IL	03/03/2008
CONSOLIDATED GRAIN & BARGE	CAHOKIA, IL	08/16/2013
CONSOLIDATED GRAIN & BARGE	NAPLES, IL	03/14/2016
CONSOLIDATED GRAIN & BARGE	UTICA, IL	08/03/2016
CONSOLIDATED GRAIN & BARGE	HENNEPIN, IL	08/17/2016
ZEN-NOH GRAIN CORPORATION	PERU, IL	05/01/2008
ZEN-NOH GRAIN CORPORATION	NAPLES, IL	07/10/2008
ZEN-NOH GRAIN CORPORATION	UTICA, IL	08/03/2016
ZEN-NOH GRAIN CORPORATION	HENNEPIN, IL	08/18/2016

Source: CME

Two Factors Work Together to Disincentivize Deliveries

1. Delivery Restricted to Warehouse Owners

- Limited number of market players with delivery rights
- No independence between warehouse ownership and receipt ownership

2. Exchange Controlled Storage Economics

- Develops an explicit alternative to delivery – financial carry product
- Incentivizes potential delivery recipient to capture financial carry; not move product
- Breaks storage/receipt joint ownership

Together these factors highly disincentivize deliveries:

- If you own storage you do not want to deliver and lose control
- If you do not own storage you cannot access the delivery mechanics

Potential Solutions

Proposals span one or a combination of two main themes:

1. Broaden delivery rights beyond warehouse ownership
2. Change mandated storage economics

My Opinion: Both need to be addressed.

- Only broadening delivery rights would harm warehousemen because recipients get access to free carry and no obligation to move the stock
- Only changing storage economics allows unconverted arbitrages to remain open any time the incentives of delivery and storage control are opposed

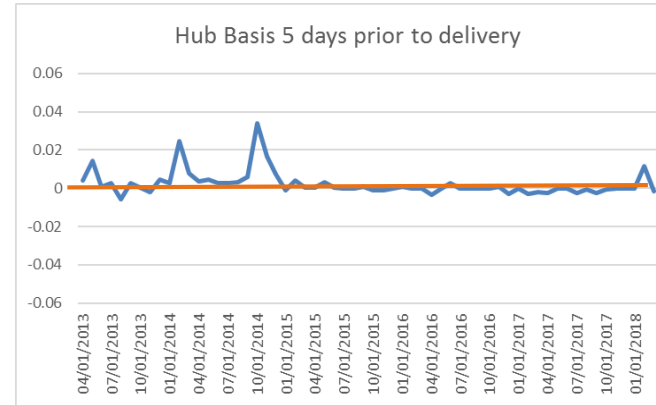
Energy Markets – No Convergence Problems

■ Natural Gas

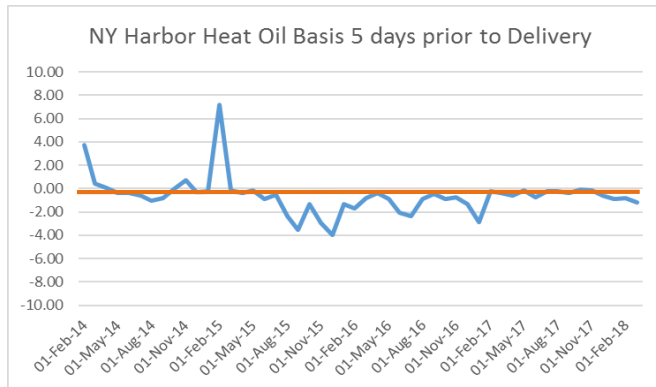
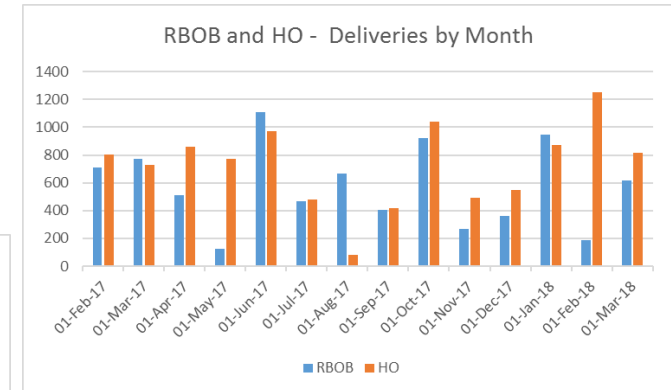
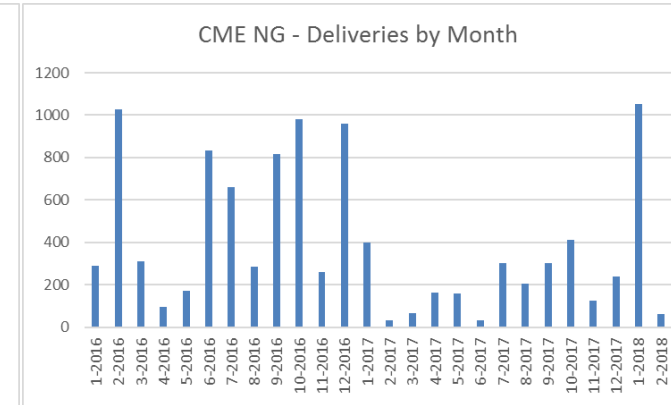
- Physically delivered = Henry Hub in Louisiana
- Open delivery mechanism, deliveries every expiry
- Market dictated return to storage
- Near perfect convergence

■ WTI Crude, RBOB Gasoline, Heating Oil

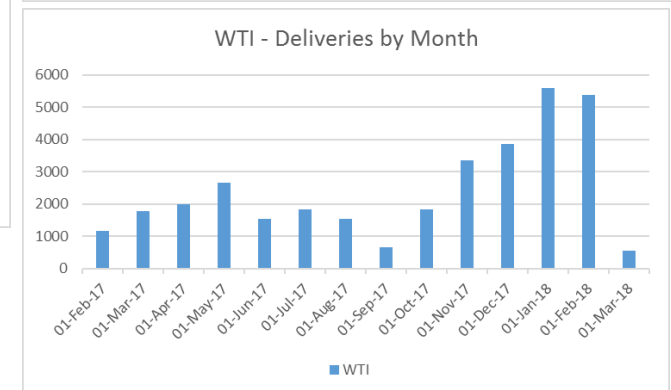
- Physically delivered = Cushing and New York Harbor
- Open delivery mechanism, deliveries every expiry
- Market dictated return to storage
- Near perfect convergence



Source: CME



Source: CME



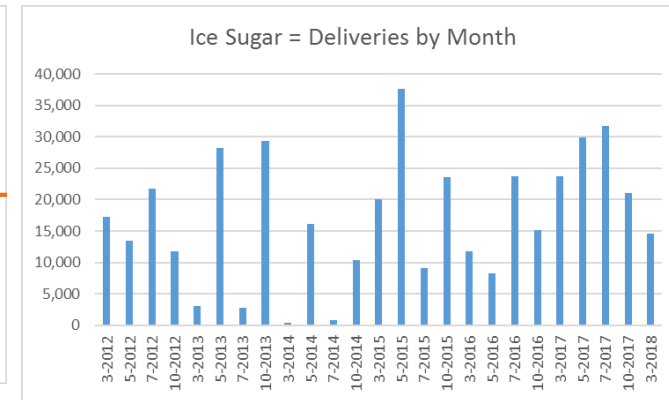
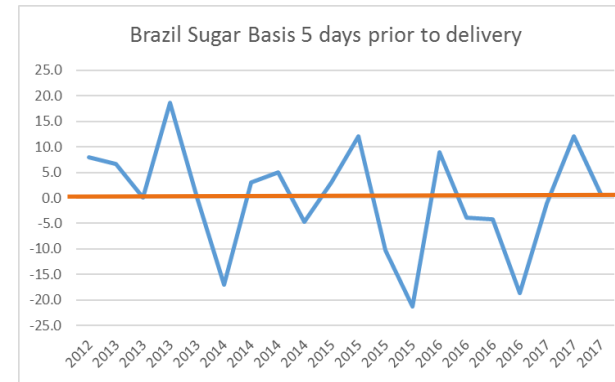
Softs Markets – No Convergence Problems

■ Sugar

- Physically Delivered = Free on Board the receivers vessel to a port within the country of origin of the sugar
- Port delivery mechanism disjointed from storage ownership
- Market dictated return to storage

■ Cotton

- Physically Delivered = Graded cotton within registered warehouse
- Unique degrading receipt essentially providing incentive for goods to move



Source: ICE

Penalty on Certificated Cotton After Third Month (Over Age Cotton):

Cotton remaining under certification for a period exceeding three months shall incur penalties as indicated hereunder.

3 pound per bale penalty begins 4th month and runs thru the 10th month:

4 th month	5 th month	6 th month	7 th month	8 th month	9 th month	10 th month
3 lbs.	6 lbs.	9 lbs.	12 lbs.	15 lbs.	18 lbs.	21 lbs.

4 pound per bale penalty begins 11th month and runs thru the 16th month:

11 th month	12 th month	13 th month	14 th month	15 th month	16 th month
25 lbs.	29 lbs.	33 lbs.	37 lbs.	41 lbs.	45 lbs.

5 pound per bale penalty begins 17th month and runs thru the 22nd month:

17 th month	18 th month	19 th month	20 th month	21 st month	22 nd month
50 lbs.	55 lbs.	60 lbs.	65 lbs.	70 lbs.	75 lbs.

6 pound per bale penalty begins 23rd month and each month thereafter:

23 rd month	24 th month	25 th month	26 th month	27 th month	28 th month
81 lbs.	87 lbs.	93 lbs.	99 lbs.	105 lbs.	111 lbs.

Source: ICE

Summary

- **What we have today:**

- Delivery rights restricted to warehouse owners
- Exchange mandated storage rates

- **Why I believe this prevents convergence:**

- Storage owners are disincentivized to relinquish access/control for a mandated storage return
- Non-storage owners are prevented from delivering

- **My proposal for change:**

- Extend delivery rights beyond warehouse ownership
- Defend storage business models via either:
 - Mandated responsibility to move out stock on receipt
 - Market dictated storage rates

Endnotes

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