The financialization of food and the 2008–2011 food price spikes

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Today’s Seminar Presentation based on:


The financialization of food and the 2008–2011 food price spikes.

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The BIG Problem
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The BIG Problem: Global Food Price Volatility

Food Riots 2007-2016 caused by:

Dark Blue
Food price inflation

Light Blue
Severe shortages

Yellow
Both
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“Are food prices approaching a violent tipping point?” The Guardian, Photograph by Martin Bureau
Tunisian Protester January 18th 2011, Published August 25th 2011
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“Inequality, the new dynamic of history” The Guardian,
Photograph by Fayez Nureldine,
Food Shortage Protest in Algeria 2011, Published February 6th 2011
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Food Prices, Financialization, & Political Unrest

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The Other Problem
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The Other Problem:

“What We’ve Learned About Speculation”

The prevailing neoclassical view dominates discussion of price volatility & financial speculation

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Theory
“[F]lows of money, no matter how large, do not necessarily affect the futures price of a commodity” (Irwin et al., 2009: 379)

Empirical Evidence
“[N]o ‘smoking gun’ has been found.”
(Irwin and Sanders, 2011: 25)

Regulation/Governance
“[L]imiting the participation of index fund investors could unintentionally deprive commodity futures markets of an important source of liquidity and risk-absorption capacity” (Irwin and Sanders, 2010: 1)
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What do we know?
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Common Explanations of Food Price Volatility include:

Demand side factors:
• population increases
• increases in per capita food consumption
• expanded biofuel production

Supply side factors:
• Poor crop yields
• Volatile energy prices

Most Contentious:
• Financial Speculation
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Why is financialization the most contentious?

A causal connection means that financial capitalists helped spark the food crises in countries across the Middle East and North Africa that led to widespread rioting in 2011.

The estimated, although under-reported, death-tolls associated with the 2011 food riots were large,
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**Demand: Biofuel & Speculation**

![Graph showing food price index from 2004 to 2011 with trends labeled as food prices (data), price changes due to corn ethanol production (equilibrium model), speculators and ethanol (theory).]

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Supply: Total Global Food Production

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Supply/Population Demand:
Total Global Food Production Per Capita

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Energy Prices

“The estimates show a statistically significant impact of index investment on both the food price index and on the oil price.” (Gilbert, 2010: 416)

“[T]he oil price was driven by the same set of common factors as food prices albeit with different weights. This can account for the high correlation of the two series.... there does not appear to have been any direct net impact of oil prices on food prices over this period” (Gilbert, 2010: 418)

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**Energy Prices ➔ Food Prices**

**Why?**

Agriculture is not highly energy intensive, and costs are spread out over many units of production.

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Figure 12.2. Input usage in American agriculture, 1910–1990. Source: See Figure 12.1.

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What else do we know?
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Table 1. Investment weights of large investible index funds by sector.

<table>
<thead>
<tr>
<th>Index</th>
<th>S&amp;P Goldman Sachs Commodity Index</th>
<th>JPMorgan Commodity Curve Index</th>
<th>Dow Jones (S&amp;P) AIG Commodity Index</th>
<th>Dow Jones (S&amp;P) UBS Commodity Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total commodities included in index</td>
<td>24</td>
<td>33</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>Energy</td>
<td>72%</td>
<td>46%</td>
<td>33%</td>
<td>32%</td>
</tr>
<tr>
<td>Industrial metals</td>
<td>7%</td>
<td>25%</td>
<td>18%</td>
<td>17%</td>
</tr>
<tr>
<td>Agriculture, including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Corn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soybeans and soybean meal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soybean oil</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Livestock</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Precious metals</td>
<td>2%</td>
<td>9%</td>
<td>8%</td>
<td>14%</td>
</tr>
<tr>
<td>Livestock</td>
<td>6%</td>
<td>3%</td>
<td>11%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: Gordon (2006); Shemilt and Unsal (2004).
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Former CFTC Commissioner Gary Gensler testified to the US Senate in 2009:

“The Chicago contract is really a very small market, about $1.5 billion a year annual production, real farmers producing wheat…. So the influx of index investors over this period of time has effectively taken about half of the long position. About half of the contracts are owned by effectively index investors. That is equivalent to about 3 years of annual production. So, on the shoulders of a very hearty Midwestern crop is placed the whole global financial markets trying to get exposure to wheat.” (USS, 2009: 17)
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“despite the economic gloom many commodity prices hit new highs in recent weeks, driven largely by investment inflows.”
Citigroup, April 7th 2008

“without question, increased fund flow into commodities has boosted prices.”
Goldman Sachs, May 5th 2008

“you have a generalized commodity bubble due to commodities having become an asset class that institutions use to an increasing extent”
George Soros, April 17th 2008
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Average Index Prices 1990-2012

- Food Price Index
- Housing Price Index
- NASDAQ 100 Index
- Cereals Price Index

Key Events:
- 1995-1996 Midwestern Drought
- High Tech Bubble
- Mortgage Bubble
- Food Bubbles
How can we understand this?
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Current and Future Prices?

- Storage
- Contract arbitrage
- Supply chains
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Desai’s Circuits of Capital

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Harvey’s Circuits of Capital


*Fig. 3. The structure of relations between the primary, secondary, and tertiary circuits of capital*
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Circuits of Capital

The US Agricultural Circuit

Commodity Index Swap Circuit

Integrated Commodity Circuits
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A spatial-credit fix amidst a general crisis in (falling) financial returns

Commodity futures trading allows speculators to multiply the
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Methods & Data

**Mixed Method: Concurrent Triangulation**

- Two or more methods used to confirm, cross validate, or corroborate findings.

**Quantitative Data:**

- U.S. Commodities Futures Trading Commission (CFTC);
- The United Nations Food and Agricultural Organization (FAO);
- The United States Department of Agriculture (USDA); and,
- The Agriculture and Horticulture Development Board (AHDB)

**Crops:** Wheat, Corn, Soybeans.

**Statistical Methods:** Descriptive, Correlation, and Regression.

**Why Quantitative?**

Illustrate trends in food prices, capital, storage, production, consumption, their co-movement (i.e. up, down, etc.) over time.
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Methods & Data

Qualitative Data: Semi-Structured Interviews

**Where?** New York (Wall Street), Washington D.C., Ottawa, Toronto, Minneapolis, Winnipeg, Geneva, Calgary, Atlanta (Georgia), and, Sacramento (California).

113 interview requests were issued; 49 contacts were made; 28 informants were interviewed.

**Discourse Analysis Method:** Latent and Manifest content coding.

**Why?** To capture insider knowledge, first-hand experience, what informants’ think and believe, and gain a window into exclusive financial communities.
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Table 3: OLS and Quantile Regression Results

<table>
<thead>
<tr>
<th>Dependent Variable June 2006 - Dec. 2014</th>
<th>Independent Variable</th>
<th>OLS Regression</th>
<th>Quantile Regression</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBOT Wheat Price</td>
<td>Index Swap Dealers (Swap Report)</td>
<td>1.91* 0.06 no</td>
<td>0.91 0.02 no</td>
</tr>
<tr>
<td>CBOT Corn Price</td>
<td>Index Swap Dealers</td>
<td>5.50*** 0.23 no</td>
<td>3.77*** 0.14 no</td>
</tr>
<tr>
<td>MGEX Wheat Price</td>
<td></td>
<td>1.06 0.01 no</td>
<td>0.37 0.01 no</td>
</tr>
<tr>
<td>CBOT Corn Price</td>
<td>Hedge Funds</td>
<td>6.50*** 0.29 no</td>
<td>2.81*** 0.16 no</td>
</tr>
<tr>
<td>CBOT Soybean Oil Price</td>
<td></td>
<td>- - no</td>
<td>0.36- 0.00 no</td>
</tr>
<tr>
<td>KCBT Wheat Price</td>
<td>Index Swap Dealers</td>
<td>0.81 0.26 no</td>
<td>2.72*** 0.20 no</td>
</tr>
<tr>
<td>KCBT Wheat Price</td>
<td>Hedge Funds</td>
<td>5.49*** no</td>
<td>7.09*** no</td>
</tr>
<tr>
<td>CBOT Corn Price</td>
<td>Index Swap Dealers</td>
<td>6.85-*** 0.52 no</td>
<td>5.48*** 0.31 no</td>
</tr>
<tr>
<td>CBOT Corn Price</td>
<td>Hedge Funds</td>
<td>7.77*** no</td>
<td>4.44*** no</td>
</tr>
<tr>
<td>CBOT Soybean Oil Price</td>
<td>Index Swap Dealers</td>
<td>3.79*** 0.12 no</td>
<td>5.27*** 0.15 no</td>
</tr>
<tr>
<td>CBOT Soybean Oil Price</td>
<td>Hedge Funds</td>
<td>0.30- 0.12 no</td>
<td>0.07 0.15 no</td>
</tr>
</tbody>
</table>

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Table 4: OLS and Quantile Regression Results Continued

<table>
<thead>
<tr>
<th>Dependent Variable June 2006 - Dec. 2014</th>
<th>Independent Variable</th>
<th>OLS Regression</th>
<th>Quantile Regression</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Month-to-Month Change in Nominal Prices</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>t</td>
<td>R^2</td>
</tr>
<tr>
<td>CBOT Wheat Price</td>
<td>Index Swap Dealers (Swap Report)</td>
<td>1.87*</td>
<td>0.05</td>
</tr>
<tr>
<td>CBOT Wheat Price</td>
<td>Index Swap Dealers</td>
<td>1.81*</td>
<td>0.03</td>
</tr>
<tr>
<td>CBOT Corn Price</td>
<td>Index Swap Dealers</td>
<td>2.91***</td>
<td>0.08</td>
</tr>
<tr>
<td>CBOT Soybean Price</td>
<td>Index Swap Dealers</td>
<td>3.48***</td>
<td>0.11</td>
</tr>
<tr>
<td>MGEX Wheat Price</td>
<td></td>
<td>2.21**</td>
<td>0.05</td>
</tr>
<tr>
<td>CBOT Corn Price</td>
<td>Hedge Funds</td>
<td>4.63***</td>
<td>0.18</td>
</tr>
<tr>
<td>CBOT Soybean Price</td>
<td>Hedge Funds</td>
<td>3.46***</td>
<td>0.11</td>
</tr>
<tr>
<td>CBOT Soybean Oil Price</td>
<td></td>
<td>4.74***</td>
<td>0.18</td>
</tr>
<tr>
<td>CBOT Corn Price</td>
<td>Index Swap Dealers</td>
<td>3.26***</td>
<td>0.26</td>
</tr>
<tr>
<td></td>
<td>Hedge Funds</td>
<td>4.88***</td>
<td>0.26</td>
</tr>
<tr>
<td>CBOT Soybean Oil Price</td>
<td>Index Swap Dealers</td>
<td>2.21**</td>
<td>0.22</td>
</tr>
<tr>
<td></td>
<td>Hedge Funds</td>
<td>4.44***</td>
<td>0.22</td>
</tr>
</tbody>
</table>

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Swiss hedge fund manager:

“If you look at the interaction between commodity markets and the financial market . . . the vector that the financial markets took to basically enter or interact in commodities space was through the futures markets, which initially were there to provide a source of price stability or protection for various actors in the value chain at the production level, supply level or the consumption level . . . Futures markets rapidly became very speculative because the biggest chunk of the trade volumes that were taking place on these future markets were not generated by an underlying physical trade.”

Informant 18
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Swiss hedge fund manager:

The futures market ended up being not anymore the confrontation of supply and demand of the underlying commodity that was traded against the future, but became the price not the commodity but the supply and demand of the financial instrument.

Informant 18
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California Pension Fund

If you go back and look in the 1980’s and institutional investors started expanding the use and allowing managers to go into the equity markets, while it isn’t a one to one dollar flow, you can see a push, like a tailwind pushing them because there’s more capital flowing in.

Informant 2
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Former RBS Dominion Securities Executive and Grain Company Executive

Commodities became a separate asset class and it wasn’t originally recognized as such by pension fund managers . . . it is that particular realization and requirement for this asset class that has fuelled a lot of the hedge funds, created a lot of volume you might say, in a lot of the commodity futures, none more so than in probably oil. But nevertheless that basically is what has transpired. And I’ve watched it develop or evolve since the early seventies actually.

Informant 8
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CFTC Market Oversight Division:

[Speculators] are showing an awful lot of money into these markets, so the hedge funds are getting bigger. And they are trying to, you know, get better returns in the markets that they are not getting from other places. You know you can’t just park your money in treasuries and make any kind of real rate of return, and the stock market of course has been sort of a frightening place as well, so it has kind of turned to the commodity markets in hopes that they could get a really rate of return there.

Informant 27
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Former Commodity Analyst with Weston Foods Ltd.:

[A]t the end of the day, it just goes back to consumer, if you like it or not, it just goes back, so even if prices increase or decrease, it is the customer who has to pay for that.

Informant 26
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Former Commodity Analyst with Weston Foods Ltd.:

I mean there is an interesting thing that happened to us at Weston. We made an analysis that Maple Leafs’ were making horrible bets on wheat futures which resulted in them forcibly increasing the price of their bread, from a $1.99 to something else. So in response, we did the same thing, we just matched their price but because we needed a futures for resulting gains for us, we were just making a lot more money. So the consumer was forced to accept the higher price simply because everyone was charging the same price, and George Weston reaped the benefits.

Informant 26
The financialization of food and the 2008–2011 food price spikes

“2 richest Canadians have more money than 11 million combined”

“The two richest Canadians have the same amount of wealth as the poorest 30 per cent of the country combined… The Oxfam report says the wealth of billionaire businessmen David Thomson and Galen Weston Sr. equals that of about 11 million Canadians.”

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Conclusions

• An empirical connection between financial speculation and increased food price volatility exists.

• Quantitative data from the CFTC (2015a; 2015b) show that the influx of speculative money from swap dealers and hedge funds significantly influenced US and global food price volatility between June 2006 and December 2014.
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Conclusions

The effect of financial speculation did not materialize in the building and foreclosure of homes,

Instead, it materialized as higher food prices that acutely changed some consumers’ food access by making it unaffordable.
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Conclusions

This geographical pattern exposes the hierarchy of global power relations where between financial corporations, U.S. regulators, foreign governments, and global populations are all connected.... that places index swap dealers and hedge funds near the top of the hierarchy and the food vulnerable global poor near the bottom.
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Thank you & Questions