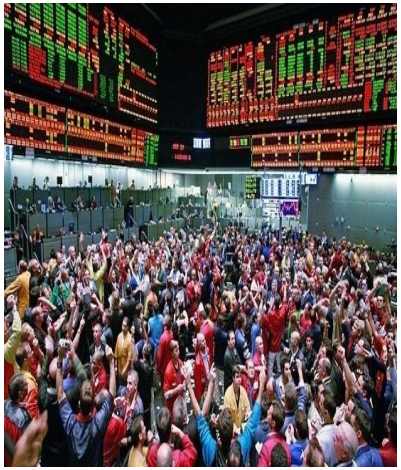

What Lies Beyond The Horizon For Farm Incomes:

The Case For Volatility With An Upward Bias

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July 16, 2012
KC FED Agricultural Symposium

Summary

- Restructuring of margin risk
  - Structural shift in demand leading to expanded production in more volatile areas
  - Tighter global stocks conditions leaving little room for supply disruptions
  - Resulting in higher and more volatile prices
- Cost of production to reclaim historic proportion of crop value
  - Competition between inputs and land values for proportion of crop value
    - Cost of land claims residual profits
  - Outlook returns margins to break even with high volatility
- Margin compaction with high volatility leaves margins vulnerable
  - Warning signs if input costs exceed historic proportions or land costs exceed fundamental drivers
  - Increasing cost of capital, energy markets/policy and macroeconomic conditions are keys to future.

Random Risk

Rabobank

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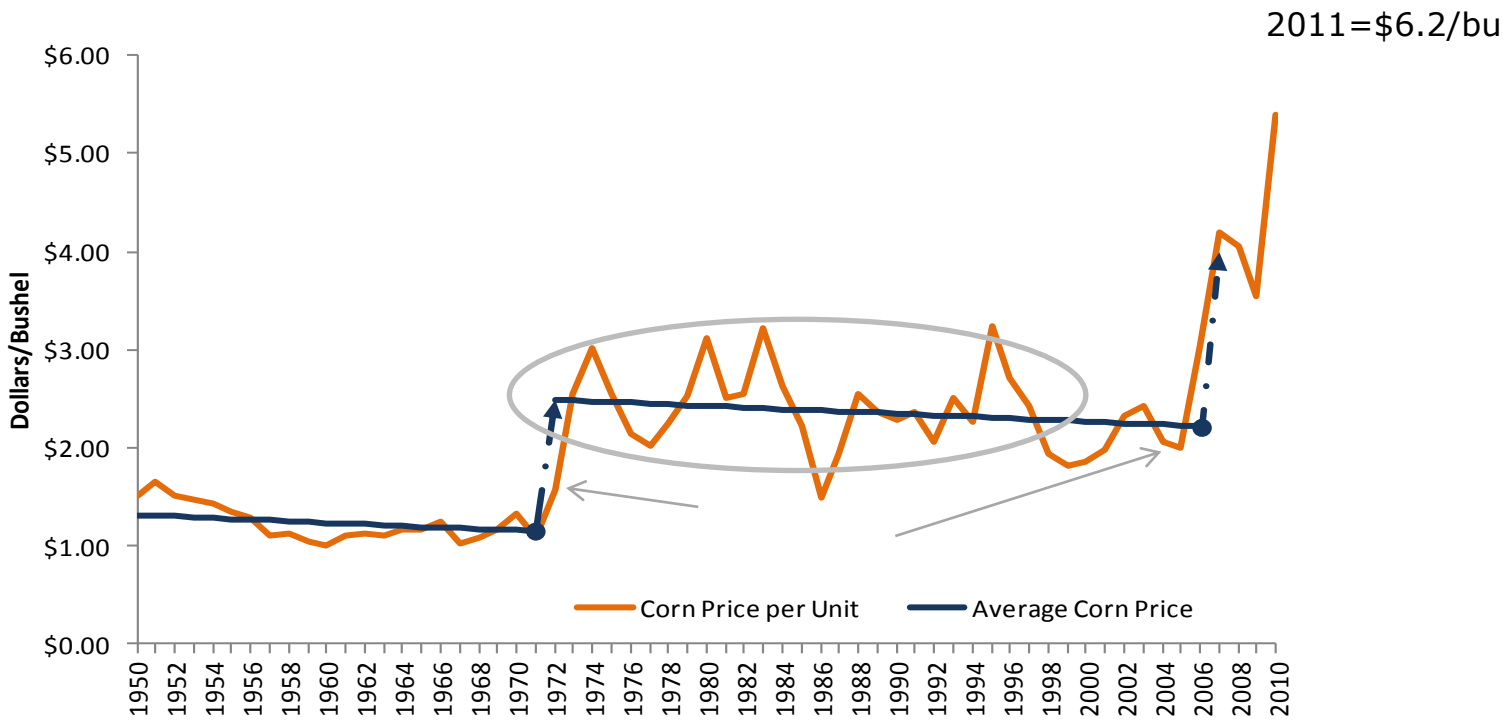
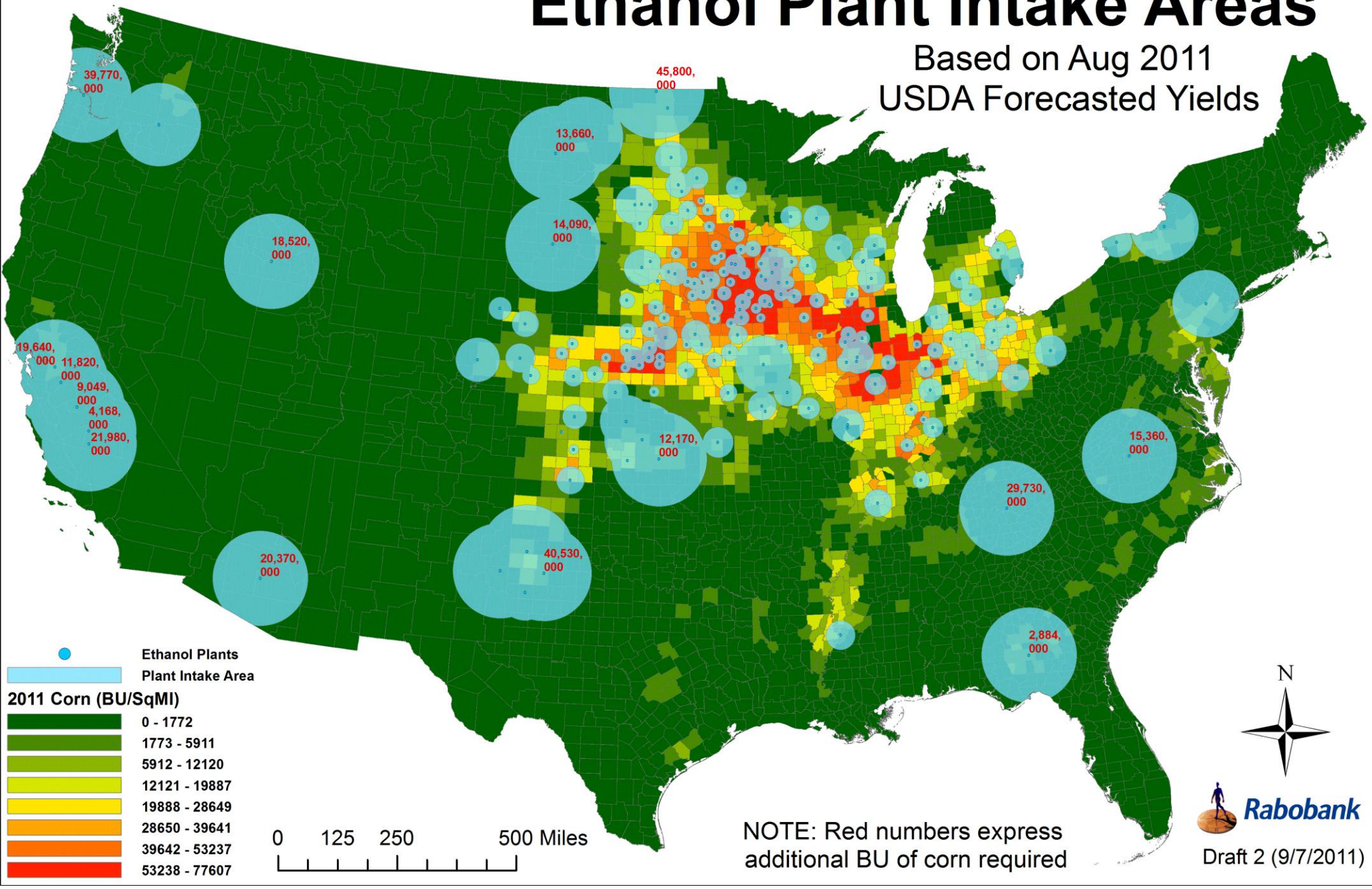
What Happened to Prices



Source: USD, Rabobank

Ethanol Plant Intake Areas

Based on Aug 2011
USDA Forecasted Yields



NOTE: Red numbers express additional BU of corn required

Draft 2 (9/7/2011)

The basics have remained the same

But corn is now $6.50, not $2.50

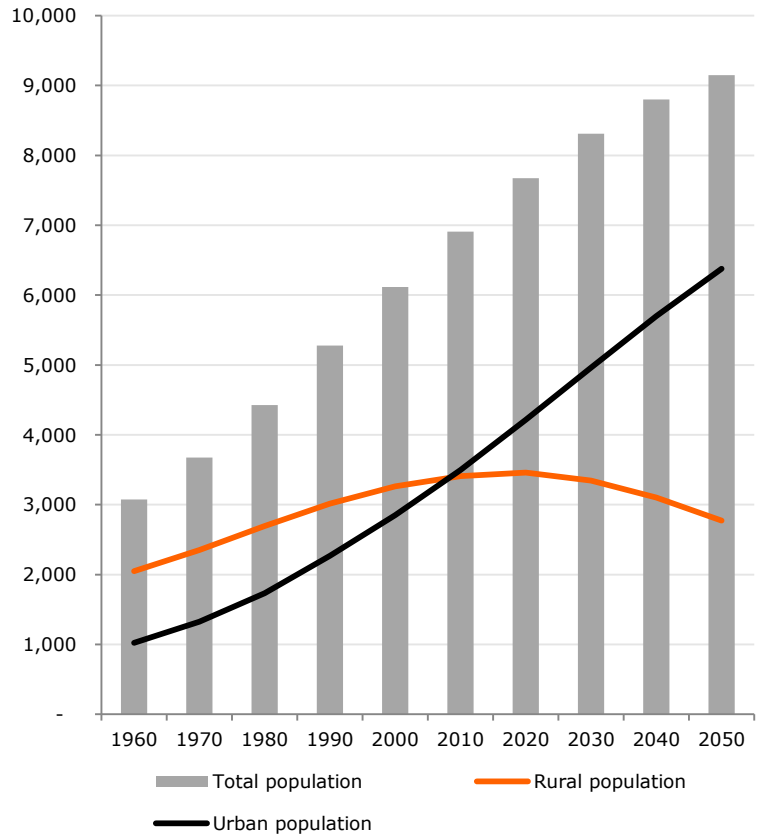
For many decades productivity gains outpaced demand growth. But things have changed.

Now due to GDP growth in the developing world, demand is accelerating.

Unfortunately, productivity from yield improvement is decelerating.

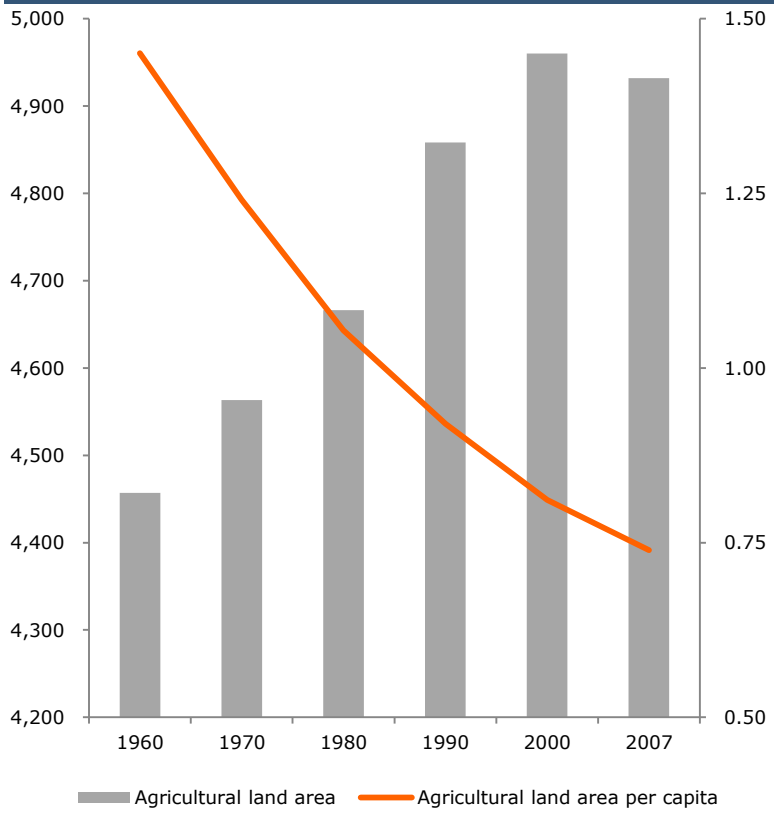
The world has changed from one of structural surplus to structural deficits.

• Global population (in millions)



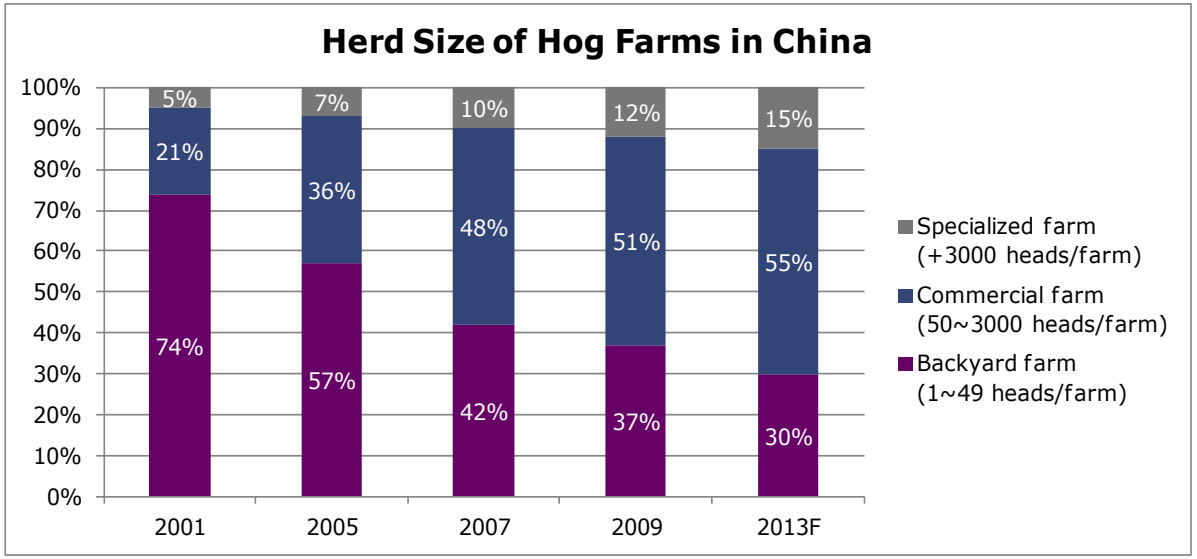
Source: FAO Stat

• Agricultural land (1,000 ha)



Source: FAO Stat, Rabobank

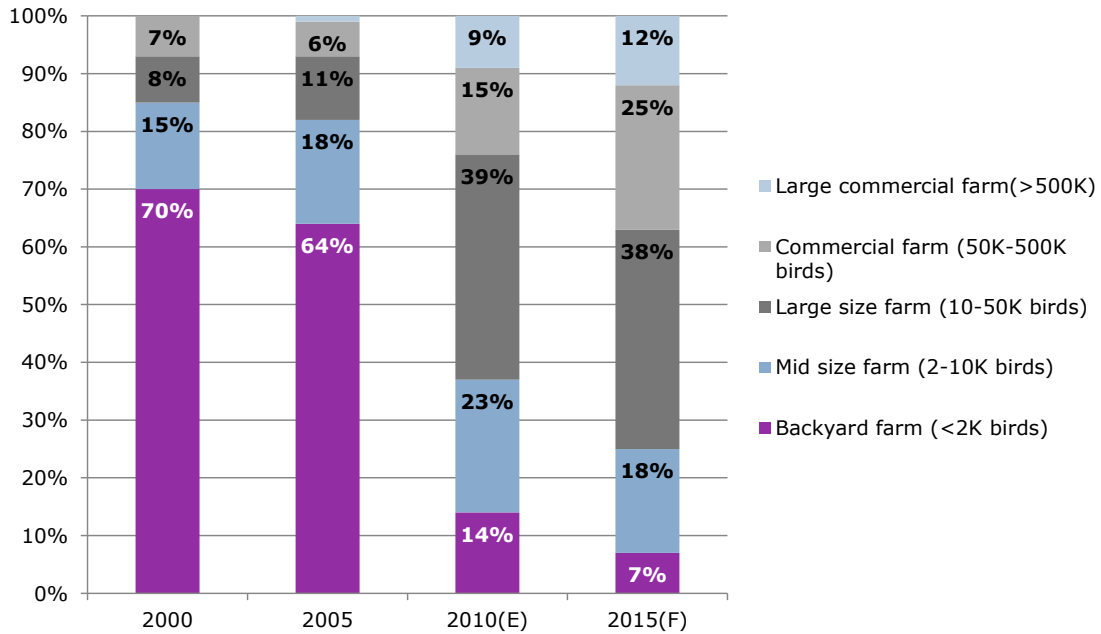
China Industrialization



Structural trend towards scaled farming will accelerate in coming years

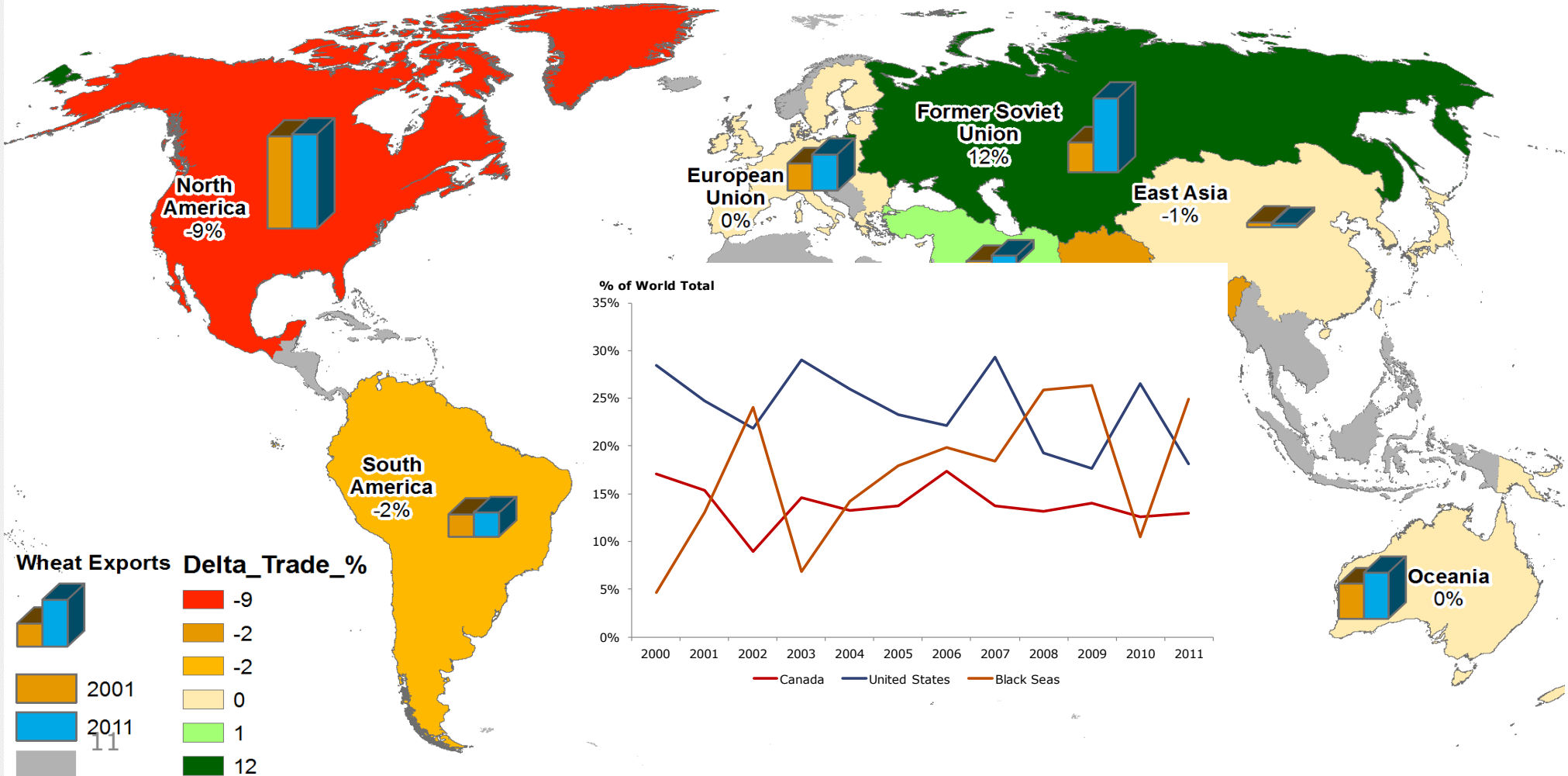
"BEIJING (Dow Jones)--China's grain demand will likely increase by 4 million metric tons a year over the next five years, while the local supply of agricultural products will face huge pressure, Vice Agricultural Minister Chen Xiaohua said Thursday." January 28, 2011

Herd Size of Poultry Farms in China

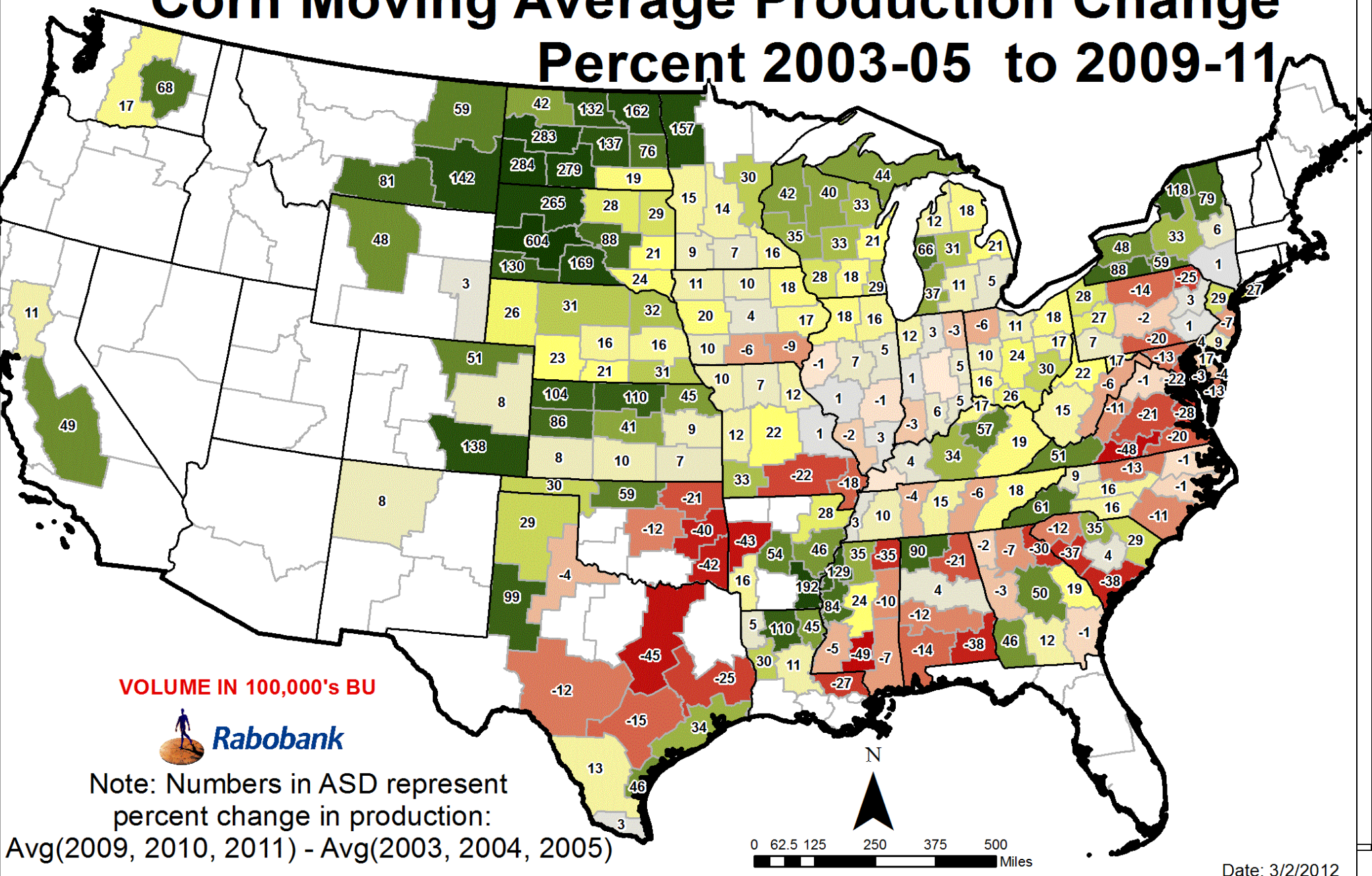


Source: MOA, Rabobank estimates

Supply For Global Wheat Trade Is Shifting



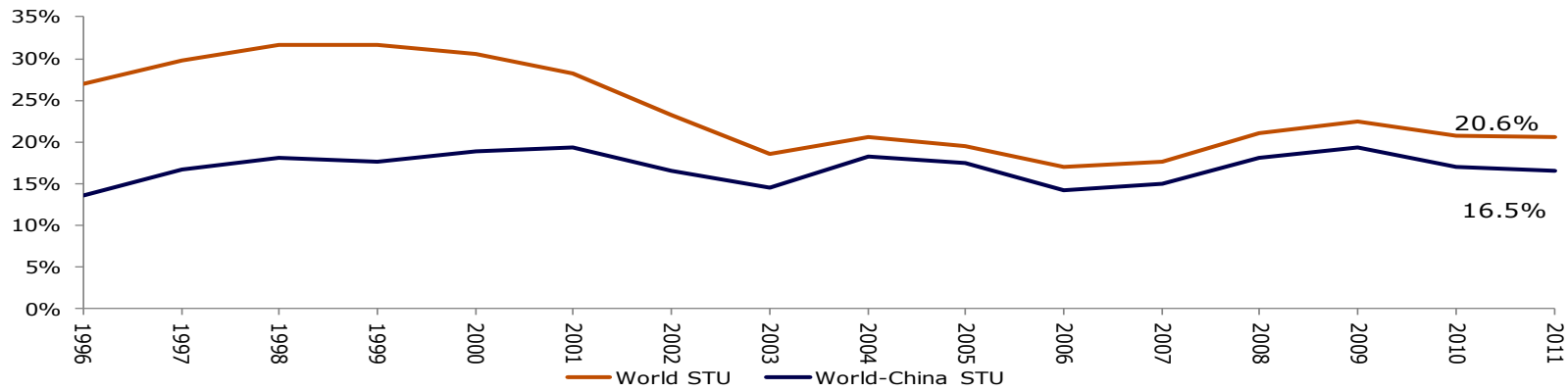
Corn Moving Average Production Change Percent 2003-05 to 2009-11



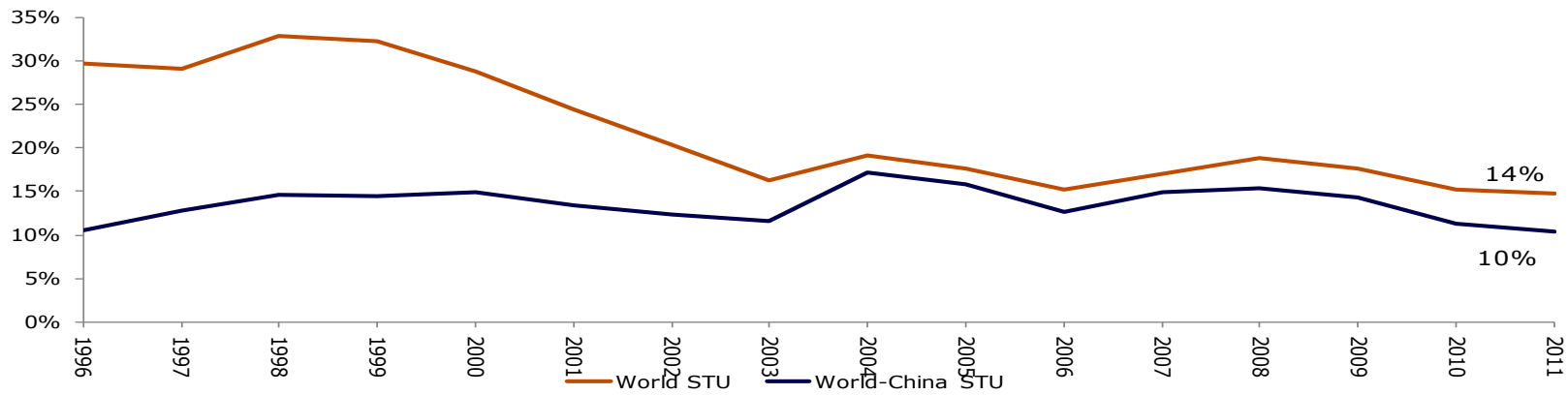
Date: 3/2/2012

Tightening In Global Stocks

World STU ratio: All Grains

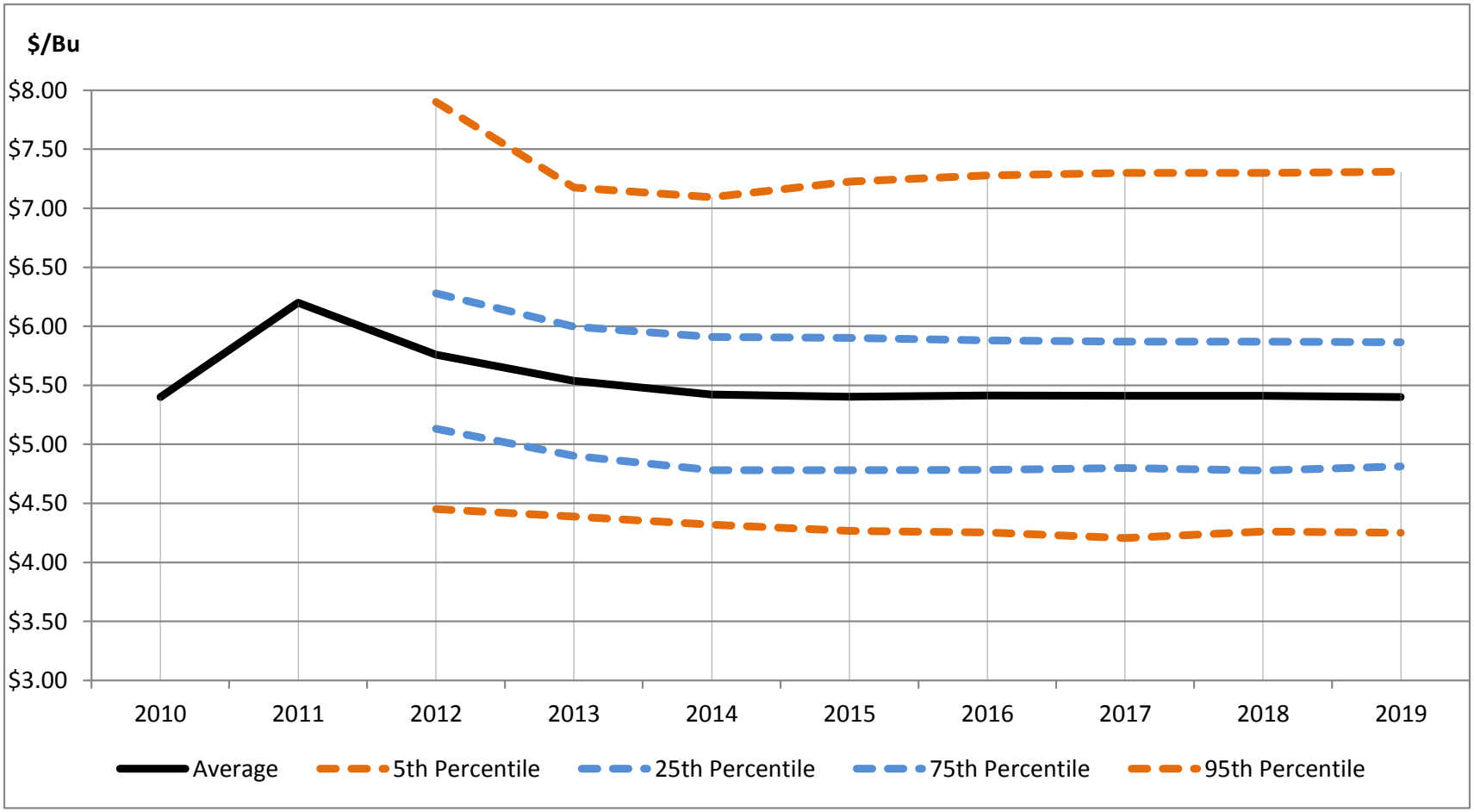


World STU ratio: Corn



Source: USDA/FAS, Rabobank

Higher and more volatile price outlook (Farm Received Corn Price)



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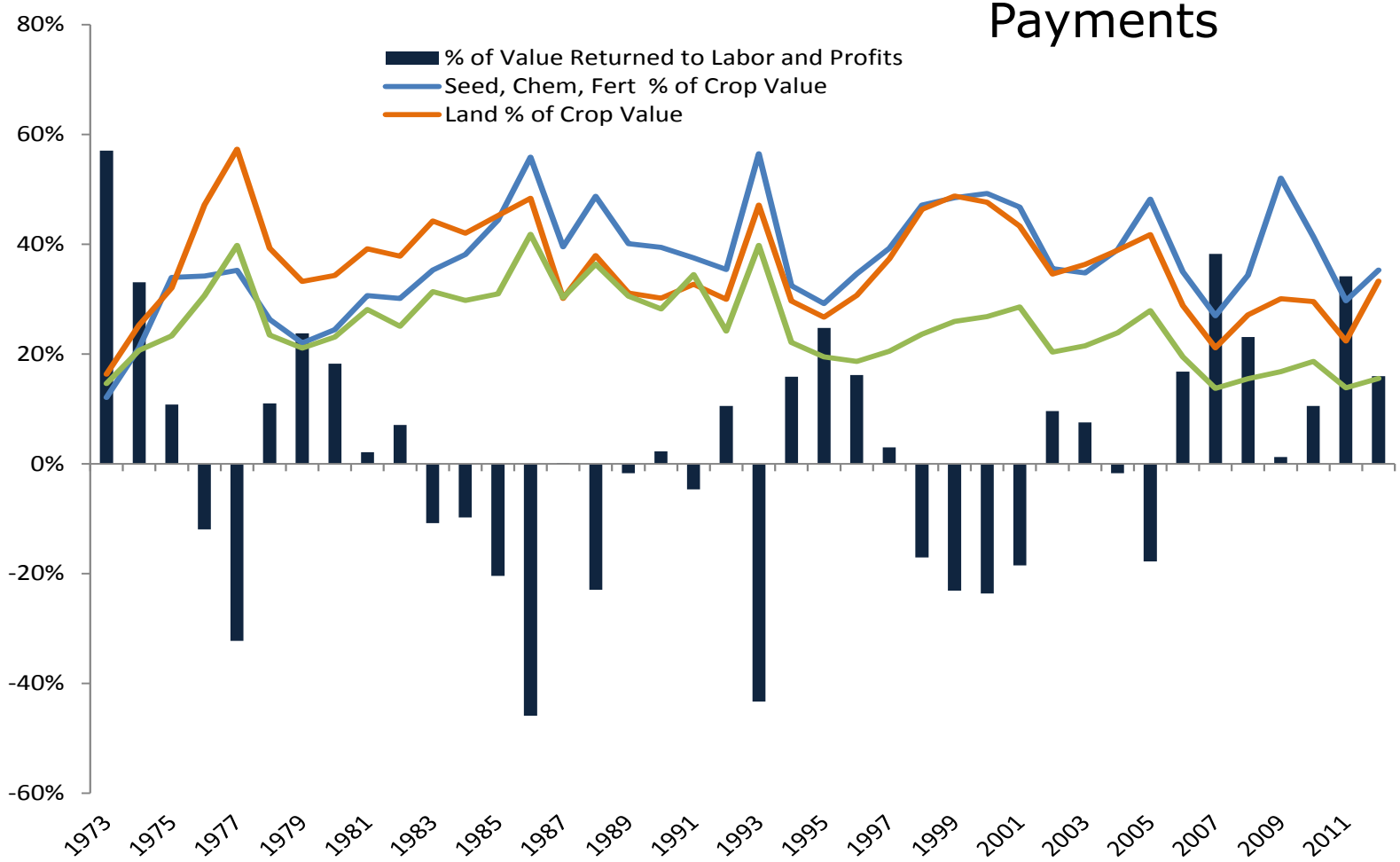
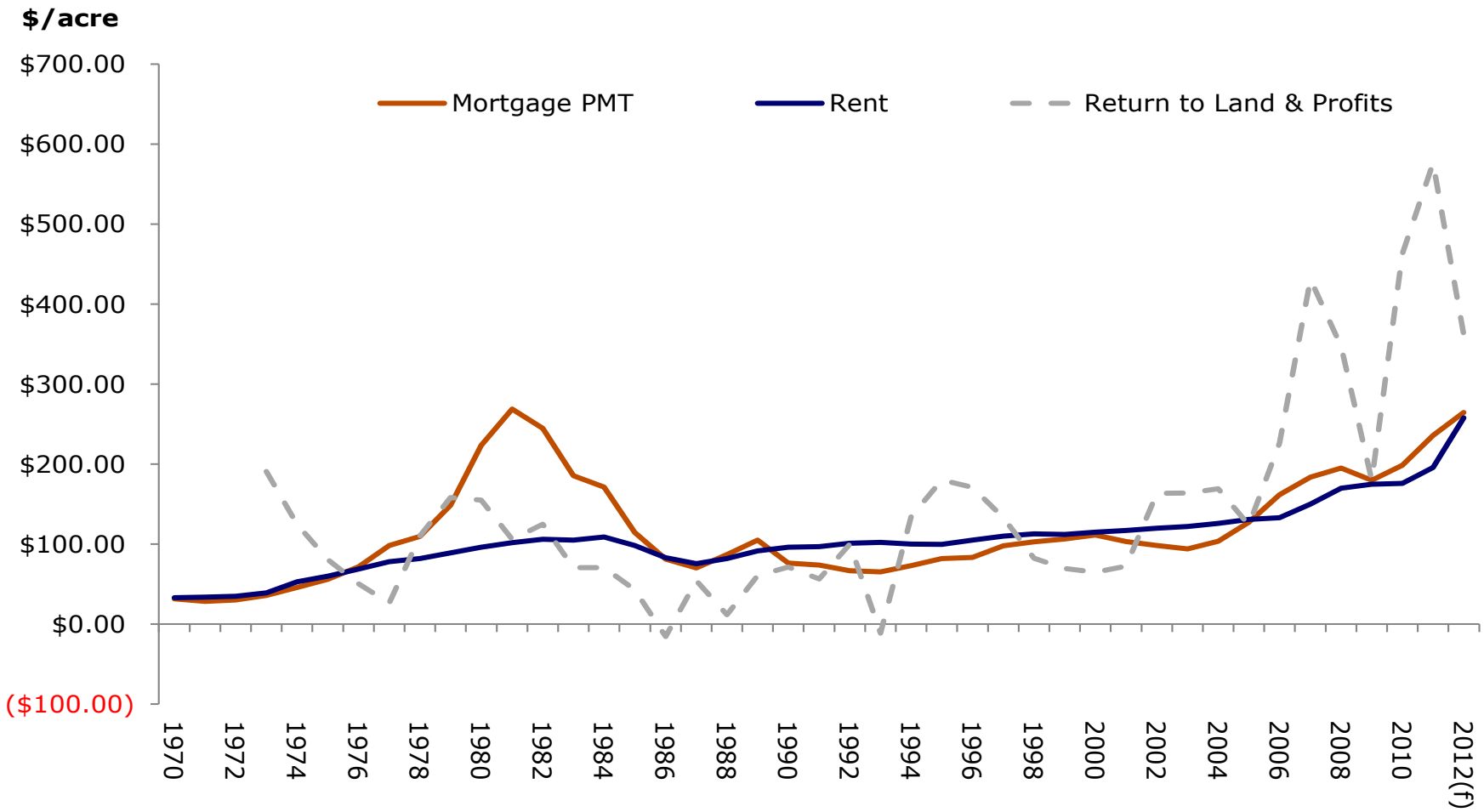
Margins Showing Sign of Compaction

No Government Payments



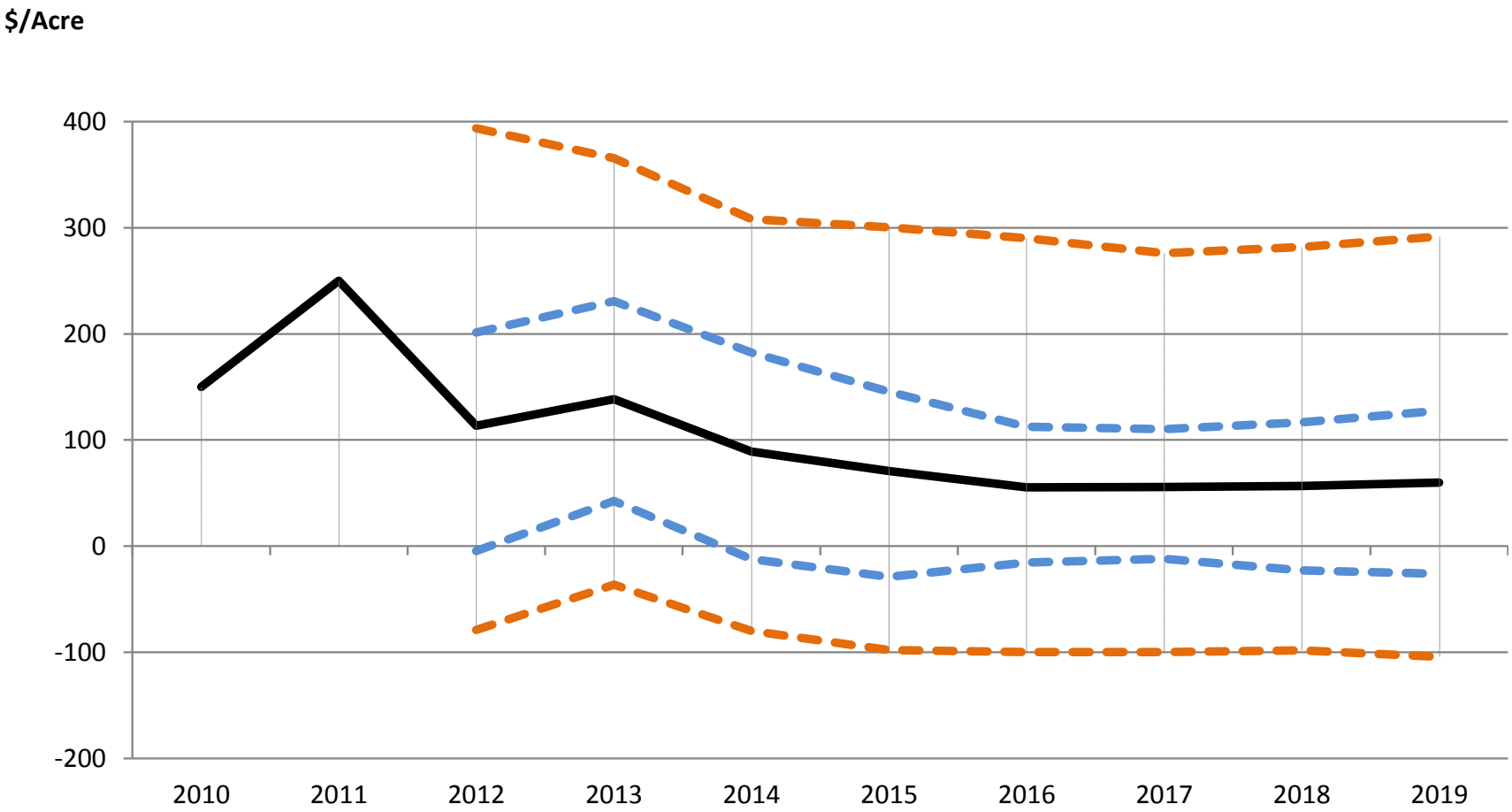
Source: Iowa State University, University if Illinois, Rabobank

Room For Land Costs to Grow



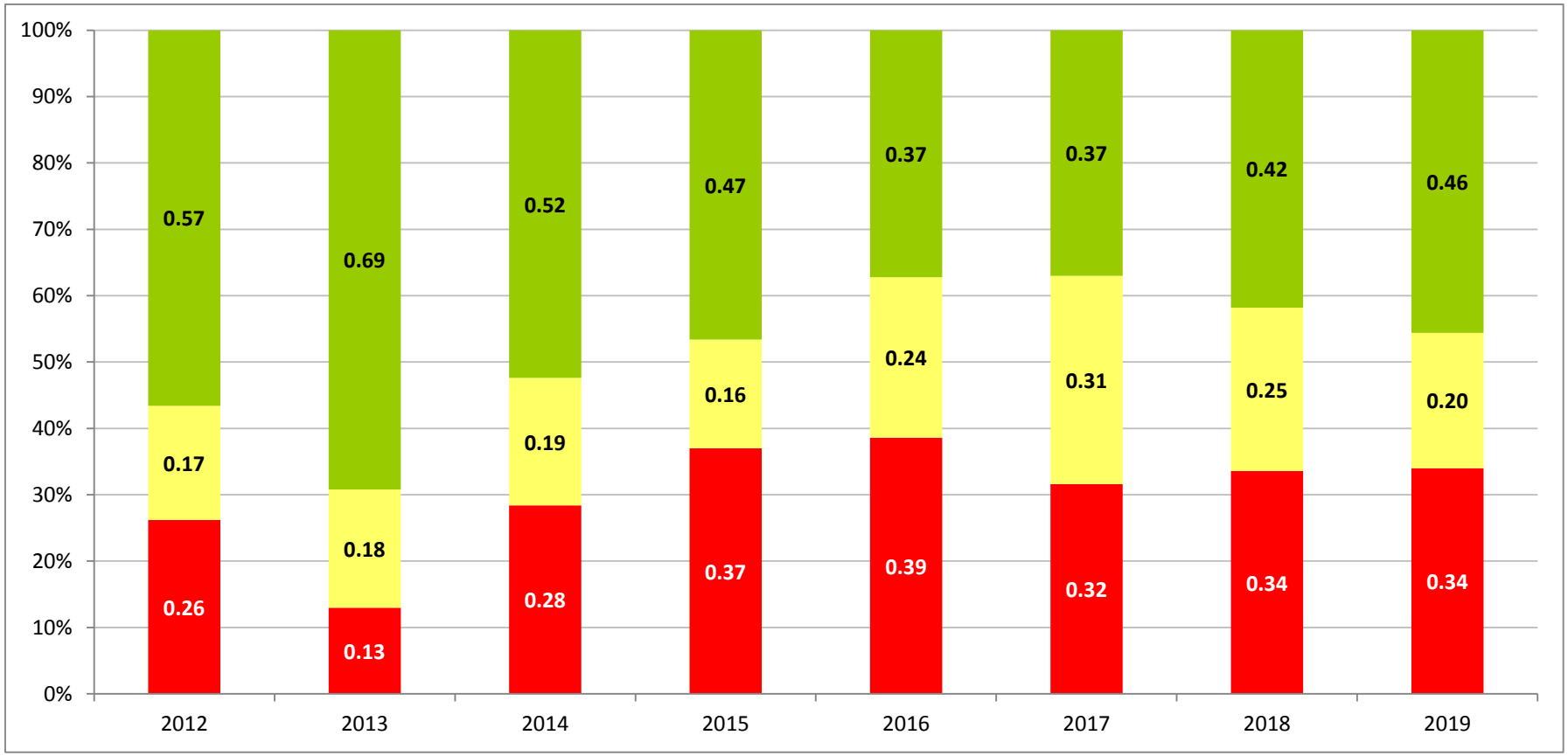
Source: Chicago Federal Reserve Board, Rabobank

Volatility Persists As Margins Tighten



Increased Probability of Losses

- Probability of Margins Less Than $0.00/bu and Greater Than $60/bu



Confidence:

- The feeling just before you completely understand the situation

- Manage the balance sheet
- Secure liquidity
- Secure working capital
  - Depends on how much growth is desired in the future
  - 20%-40%
- Maintain good lending/credit standards
- Behavior consistent with margin minimization

Summary Key Risks

- Margin compaction with high volatility leaves margins vulnerable
  - Warning signs if input costs exceed historic proportions or land costs exceed fundamental drivers
  - Increasing cost of capital, energy markets/policy and macroeconomic conditions
  - Interest rate increases
  - Demand destruction as a result of drought

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"The financial link in the global food chain"™