



**WELLS  
FARGO**

# Economic Volatility has Consequences

Michael Swanson Ph.D.  
Wells Fargo Ag Industries

**March 2010**

**Economic volatility will be rising. What does that mean to your strategy?**

# Planning isn't about predicting

---

- **How strong will the recovery be?**
- **Will it last 4 plus years?**
- **Has the “system” changed?**
- **So what does it mean to me?**

# How much GDP makes us happy?

$$C + I + G - (X-M)$$

$$GDP = 13,155 = 9,299 + 1,602 + 2,584 - 341 *$$

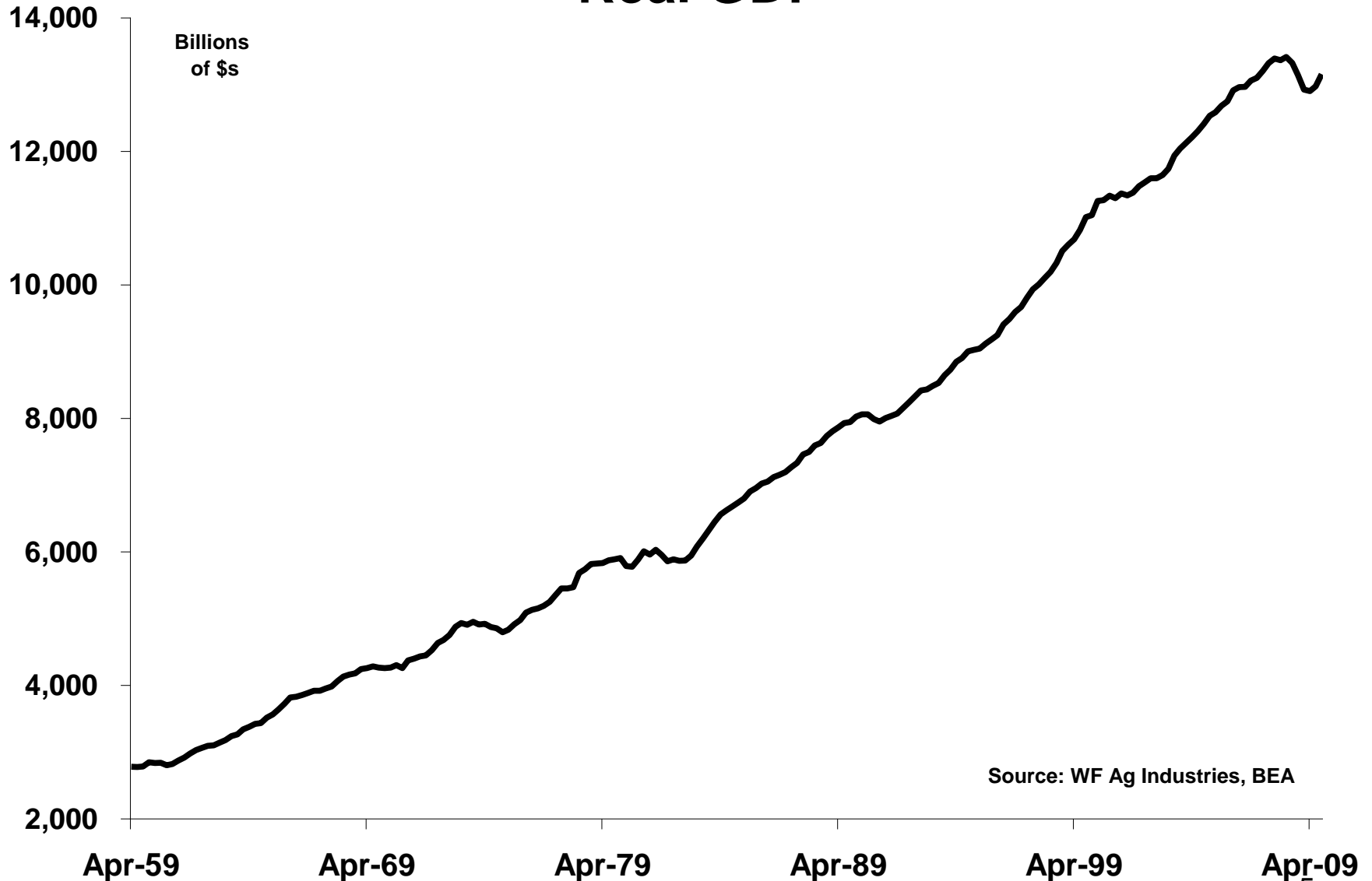
$$71\% + 12\% + 20\% - 3\%$$

\* Net exports bottomed out at (\$757) or 5.7% in the 3<sup>rd</sup> quarter of 2006

Source: BEA 4<sup>th</sup> Qtr (billions inflation adjusted dollars – base 2005)

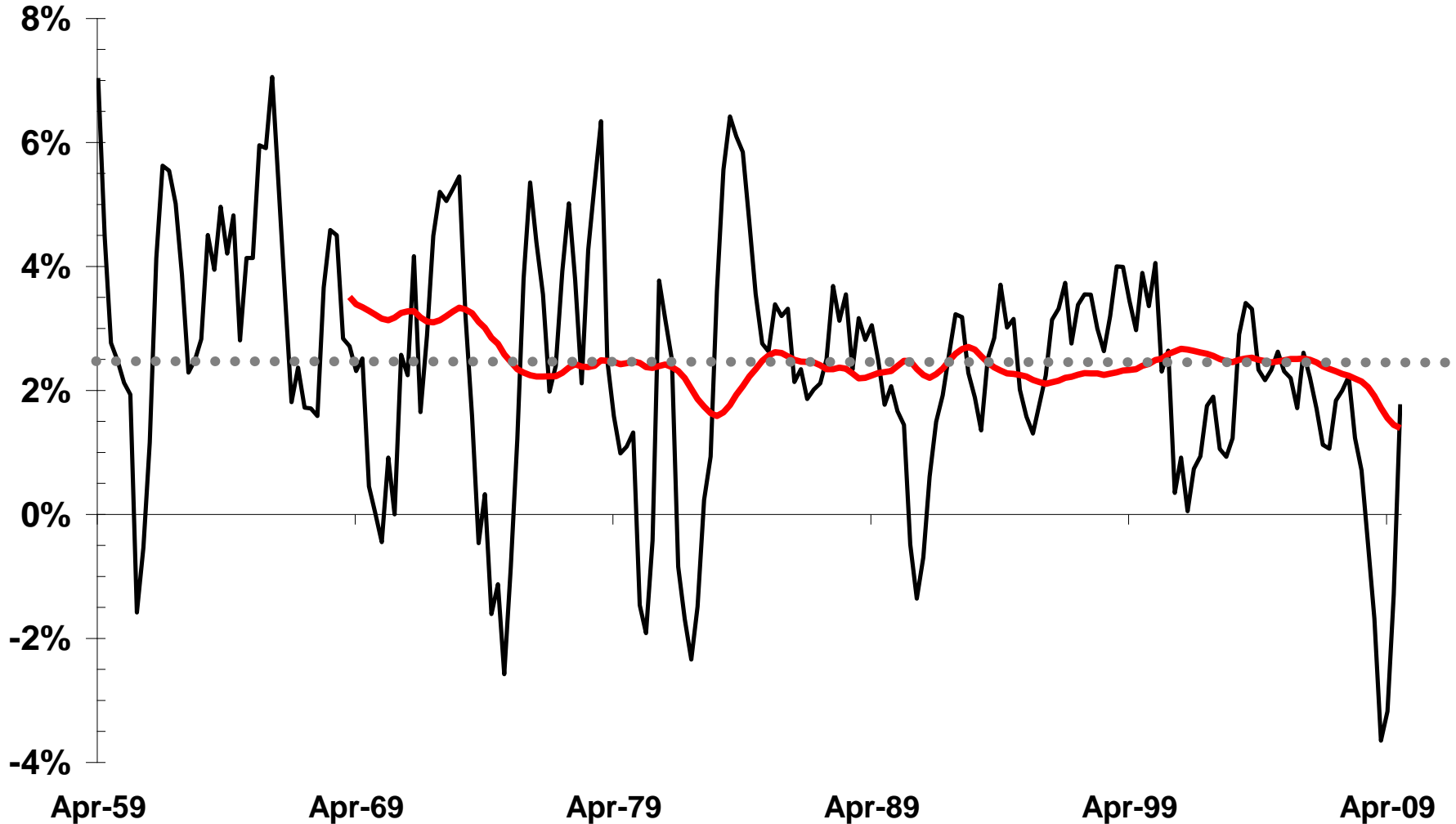
# A very difficult # to get a handle on

## Real GDP



# “Blinded by the lately”

## GDP Change Year over Year



Source: FRED, Wells Fargo Ag Industries

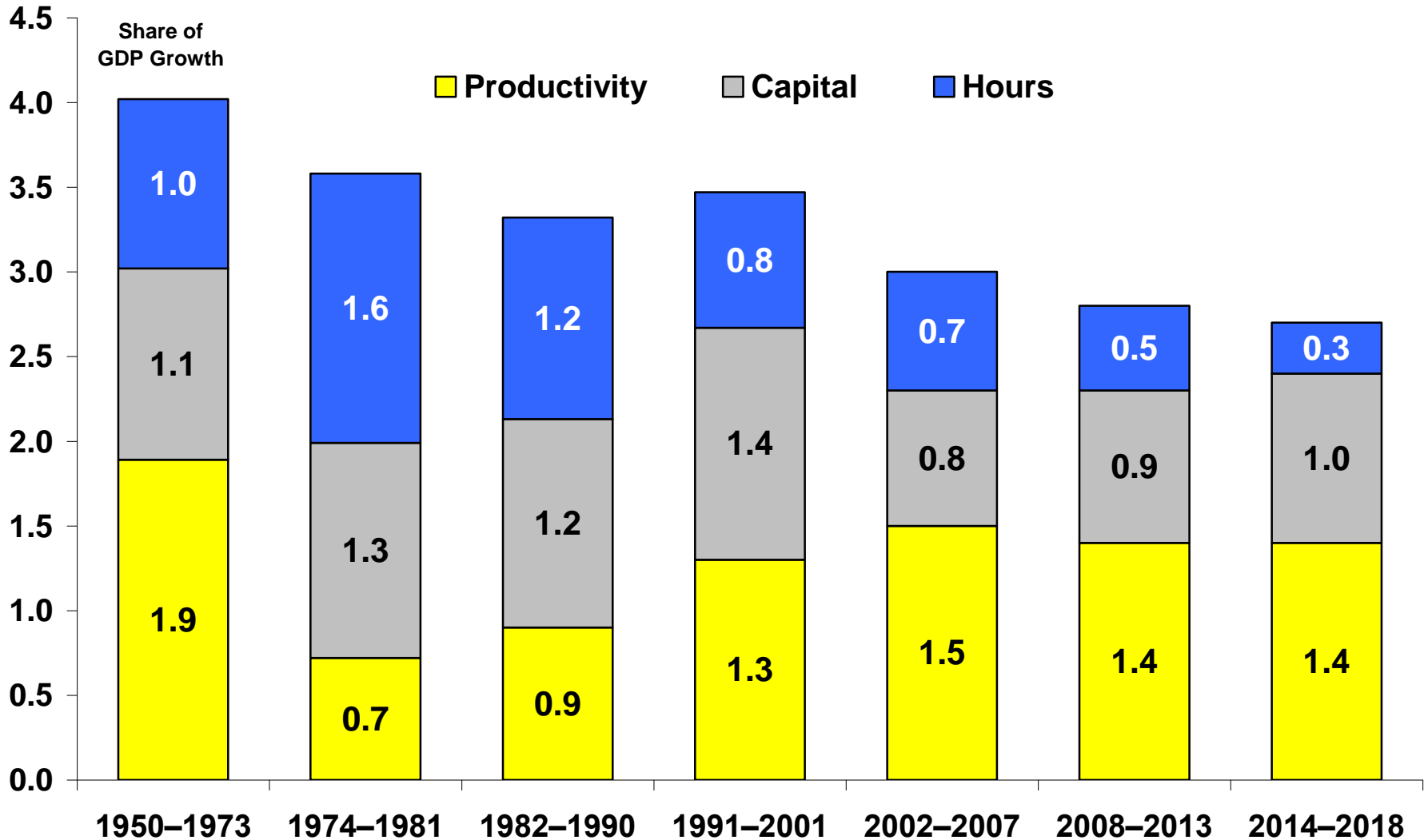
# How does the US economy grow?

---

- Long-term GDP growth is **2.8%**
- Output grows with inputs and productivity
  - ◆ Larger labor pool **0.4%**
  - ◆ More capital invested **1.0%**
  - ◆ Productivity gains **1.4%**
- A recession temporarily reduces demand not supply capacity

# If you don't have productivity ...

## GDP Growth Factors

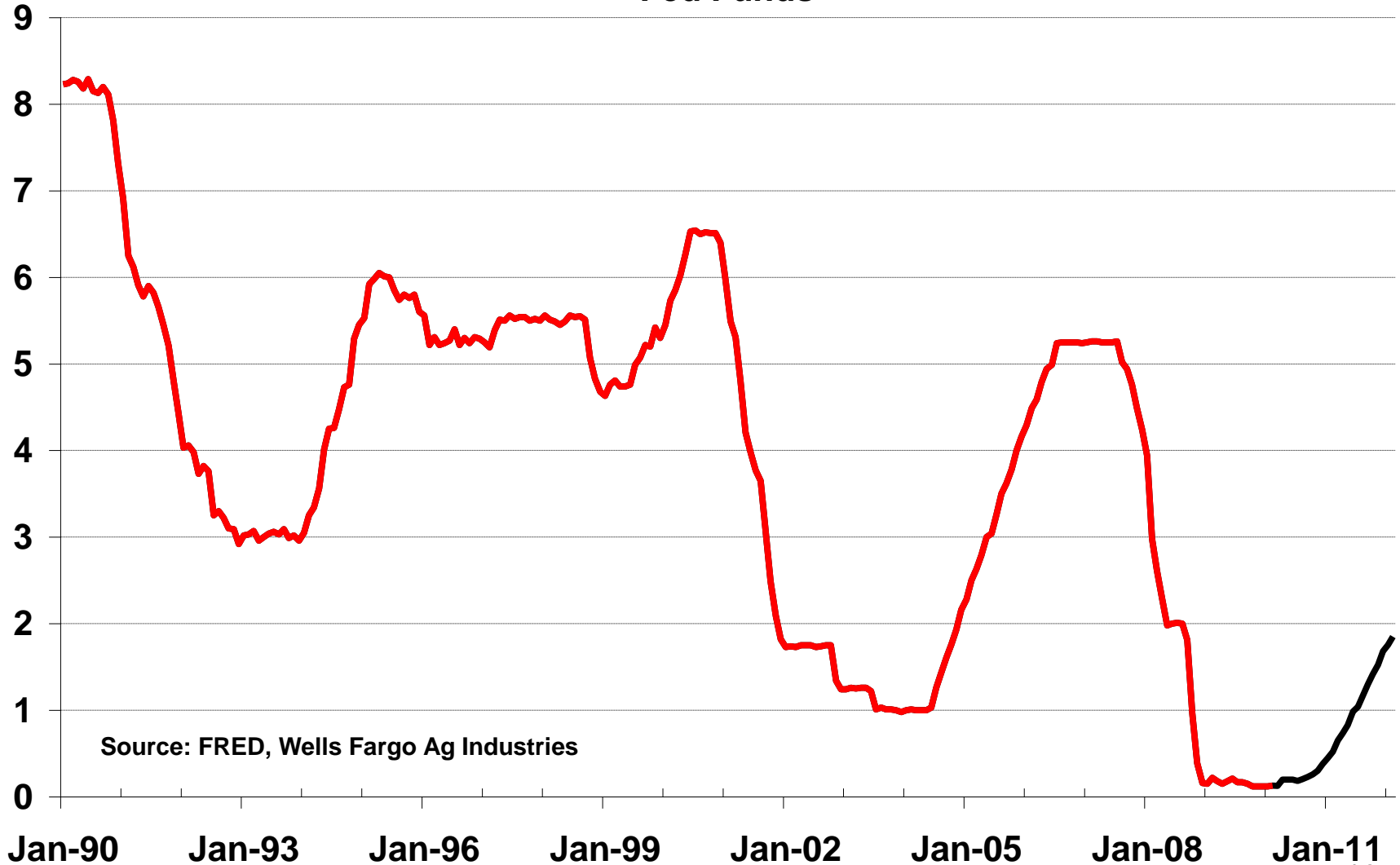


# Some short-term drivers

# Futures $\neq$ A Forecast $\rightarrow$ Futures = An Offer

## History + futures

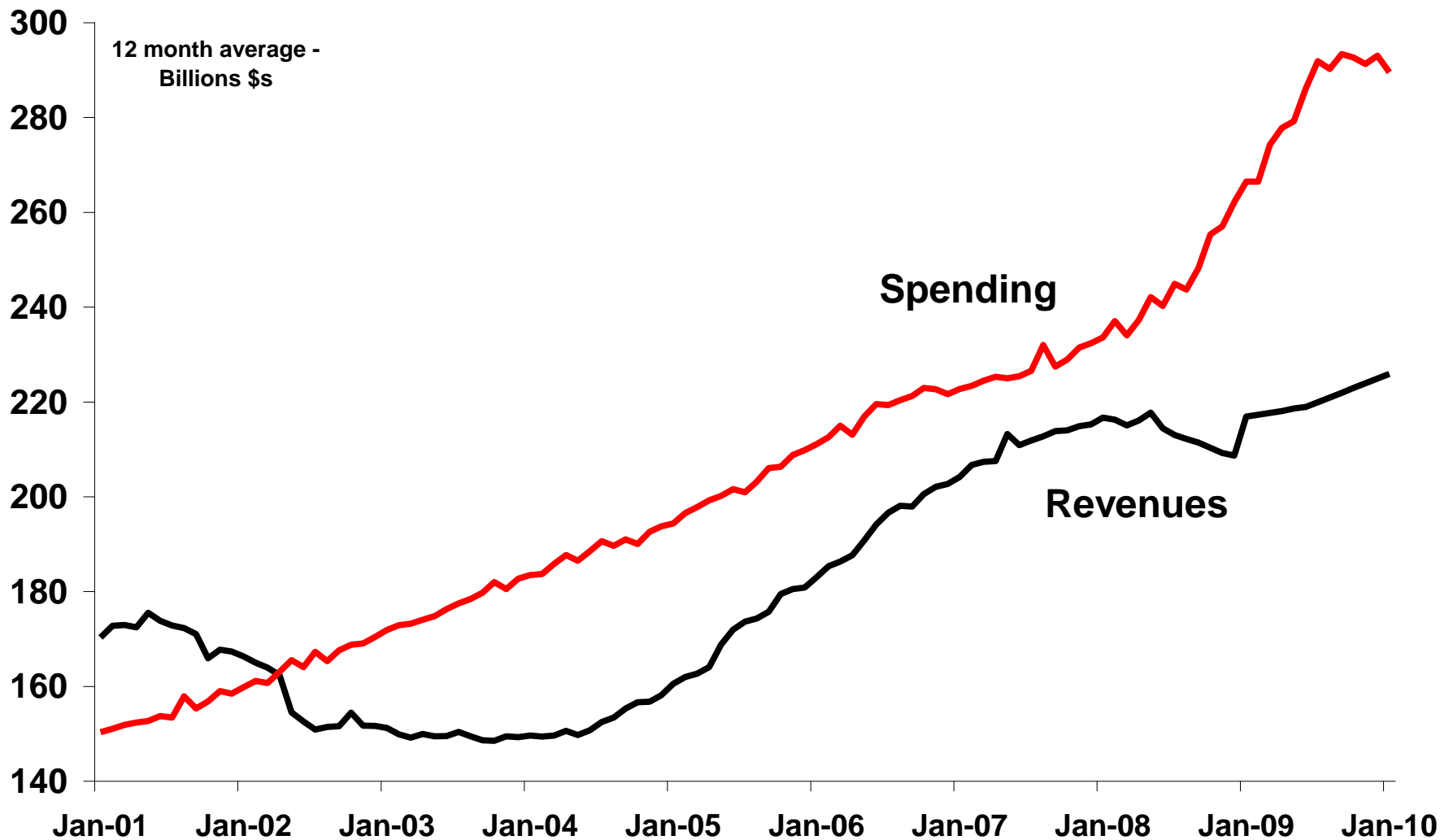
Fed Funds



Source: FRED, Wells Fargo Ag Industries

# We're all Keynesian now ...

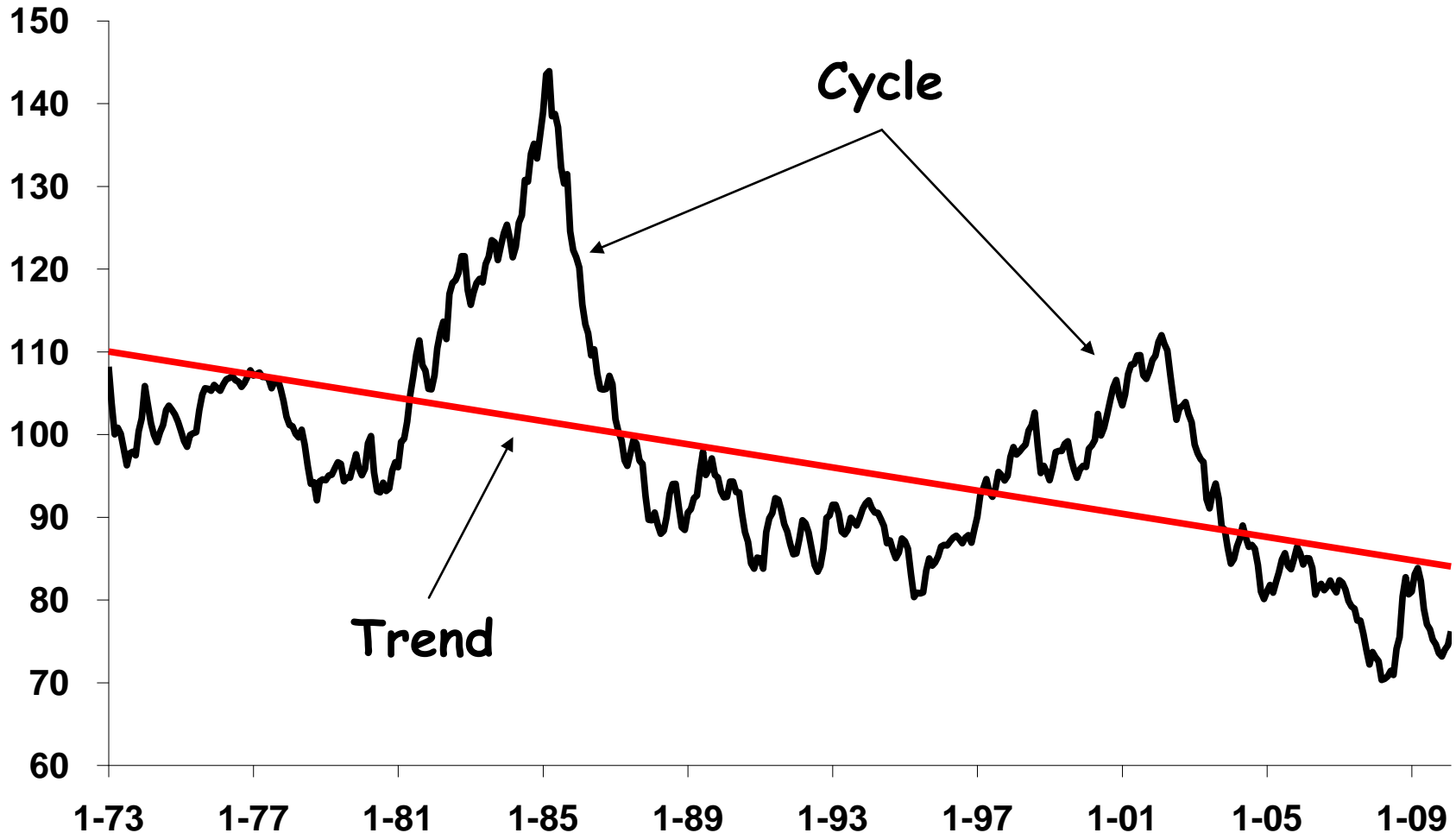
## Government Fiscal Stimulus



Source: WF, CBO

# This one they don't control

## US Trade Weighted Dollar



Source: Federal Reserve, Wells Fargo Economics

**What's the tie between land  
and interest rates?**

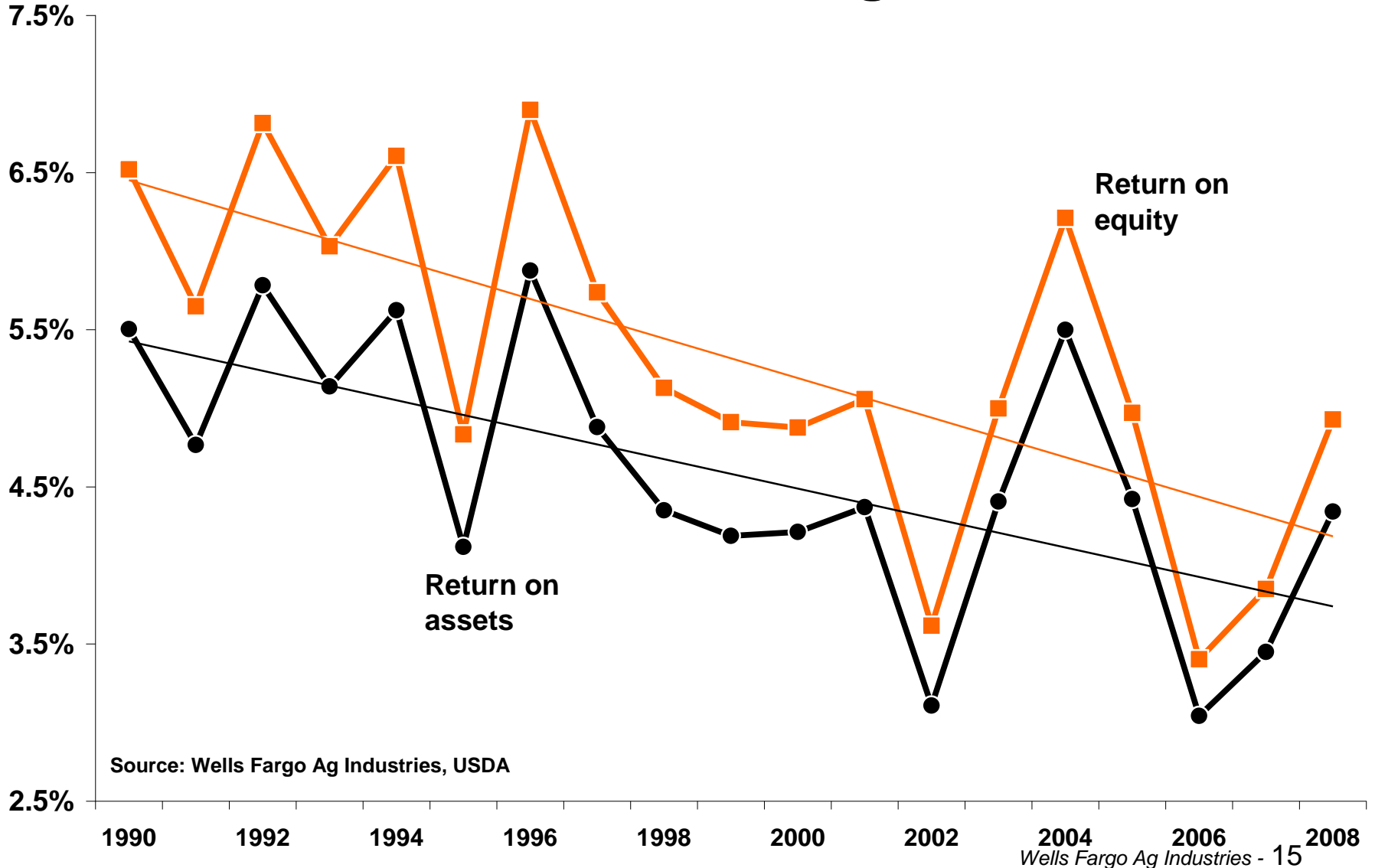
# DCF: Discounted Cash Flow Model

## Cap Rate: Trend + Cycle + Random Noise



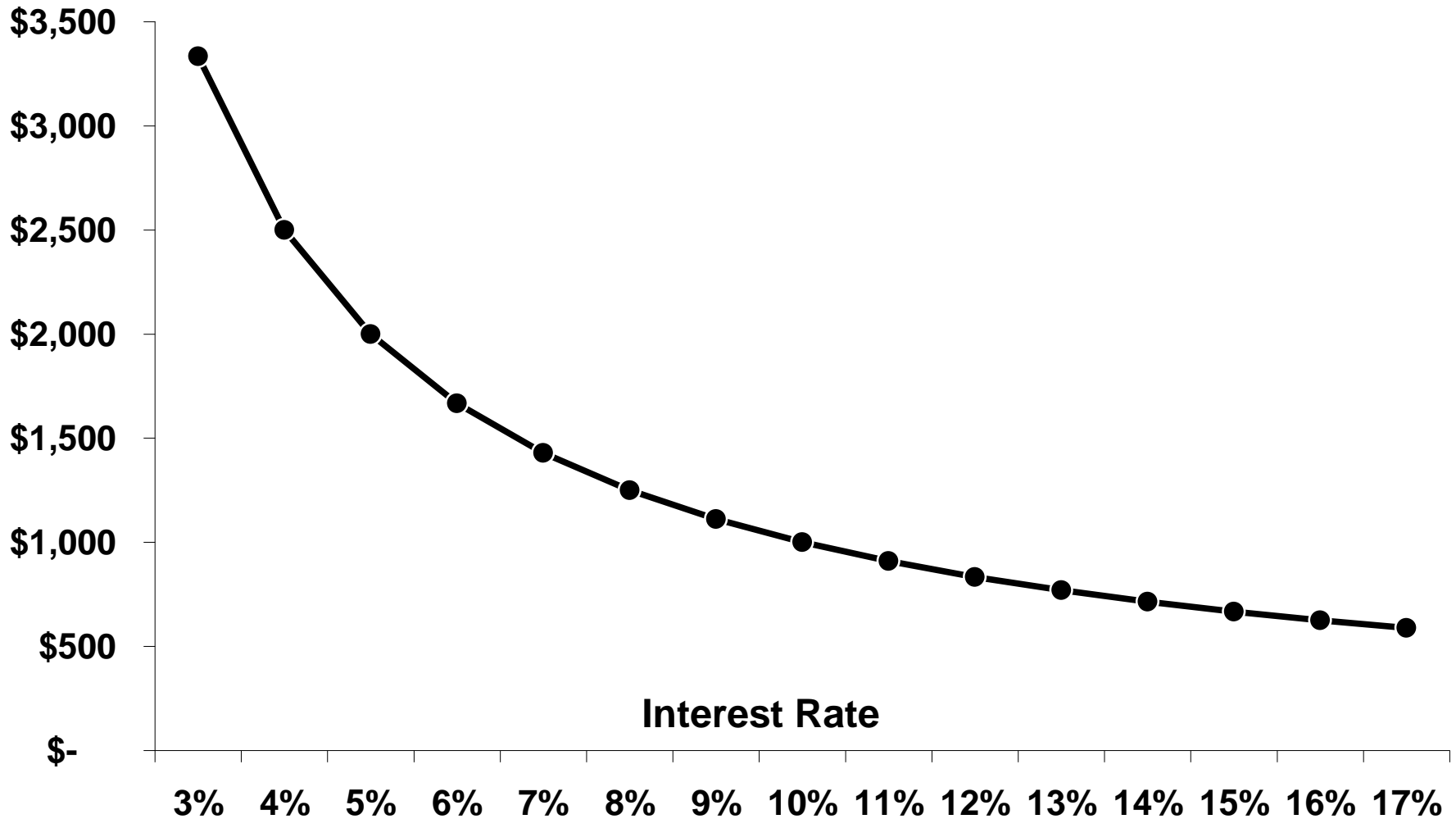
# All Assets Compete for Investment

## Financial Returns in Agriculture



# Any Asset (even land) reflects opportunity

## What's \$100 Cash Flow Worth?

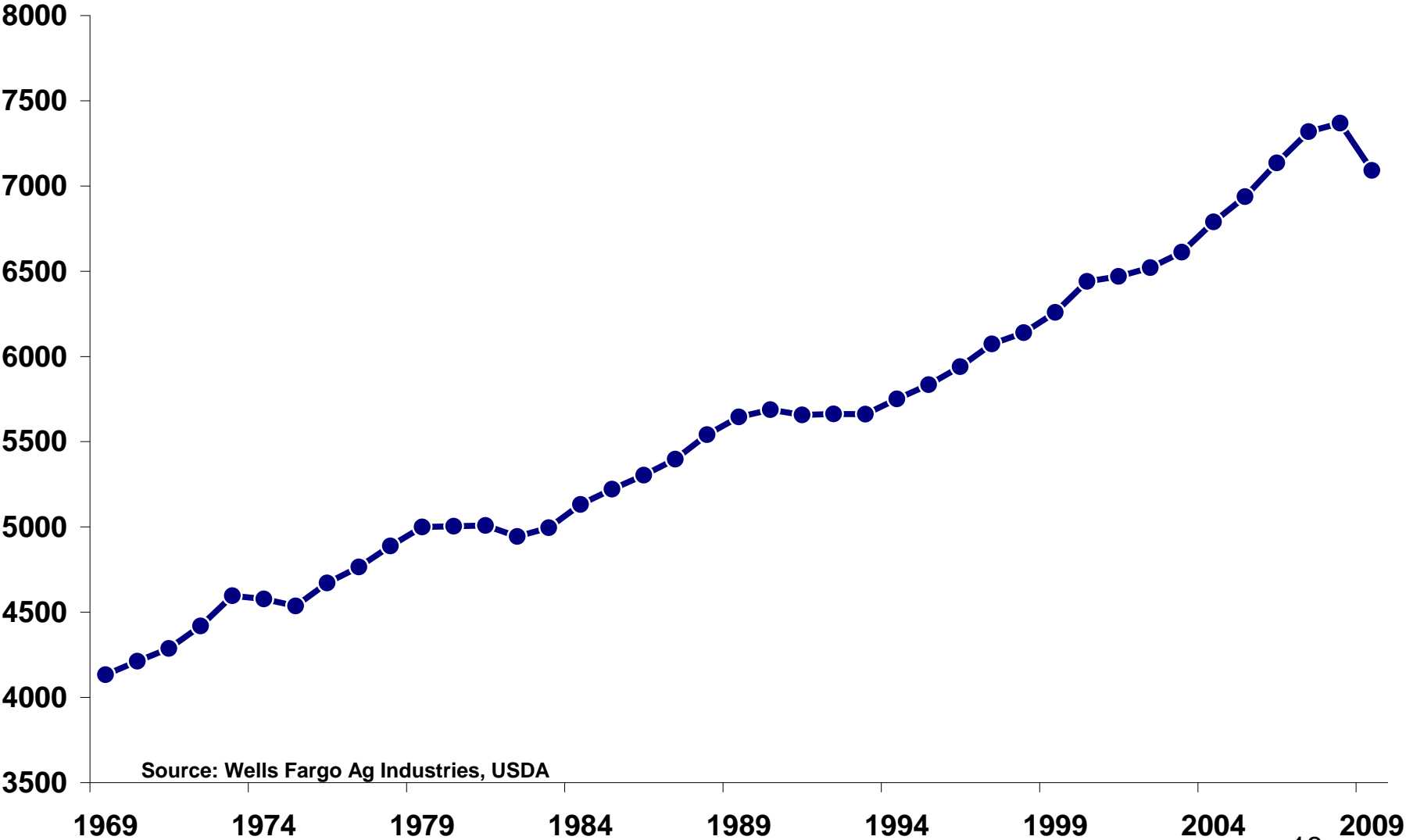


**How will it hit agriculture and  
credit?**

# The net/net is very positive



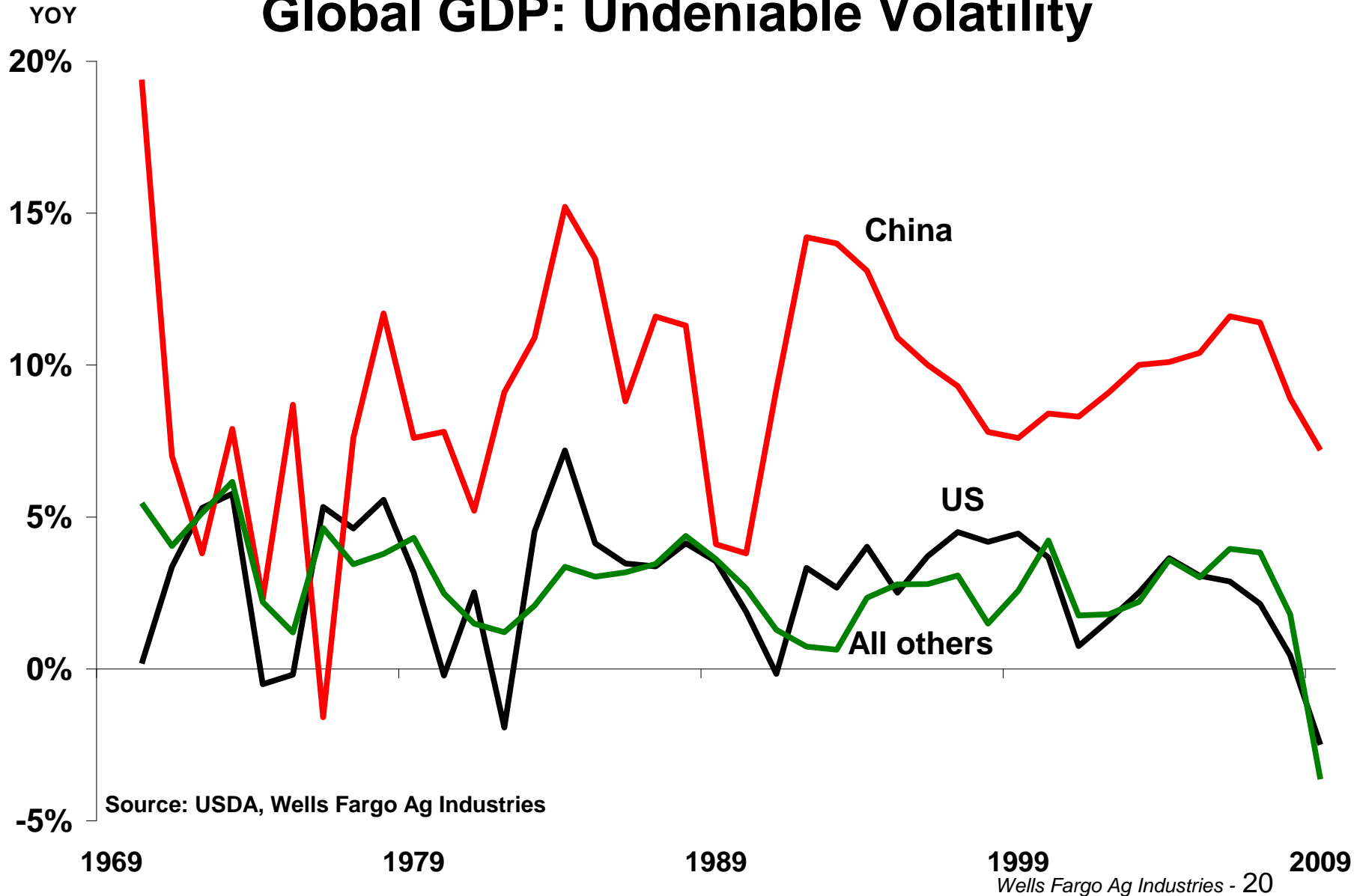
## Global Per Capita Real GDP



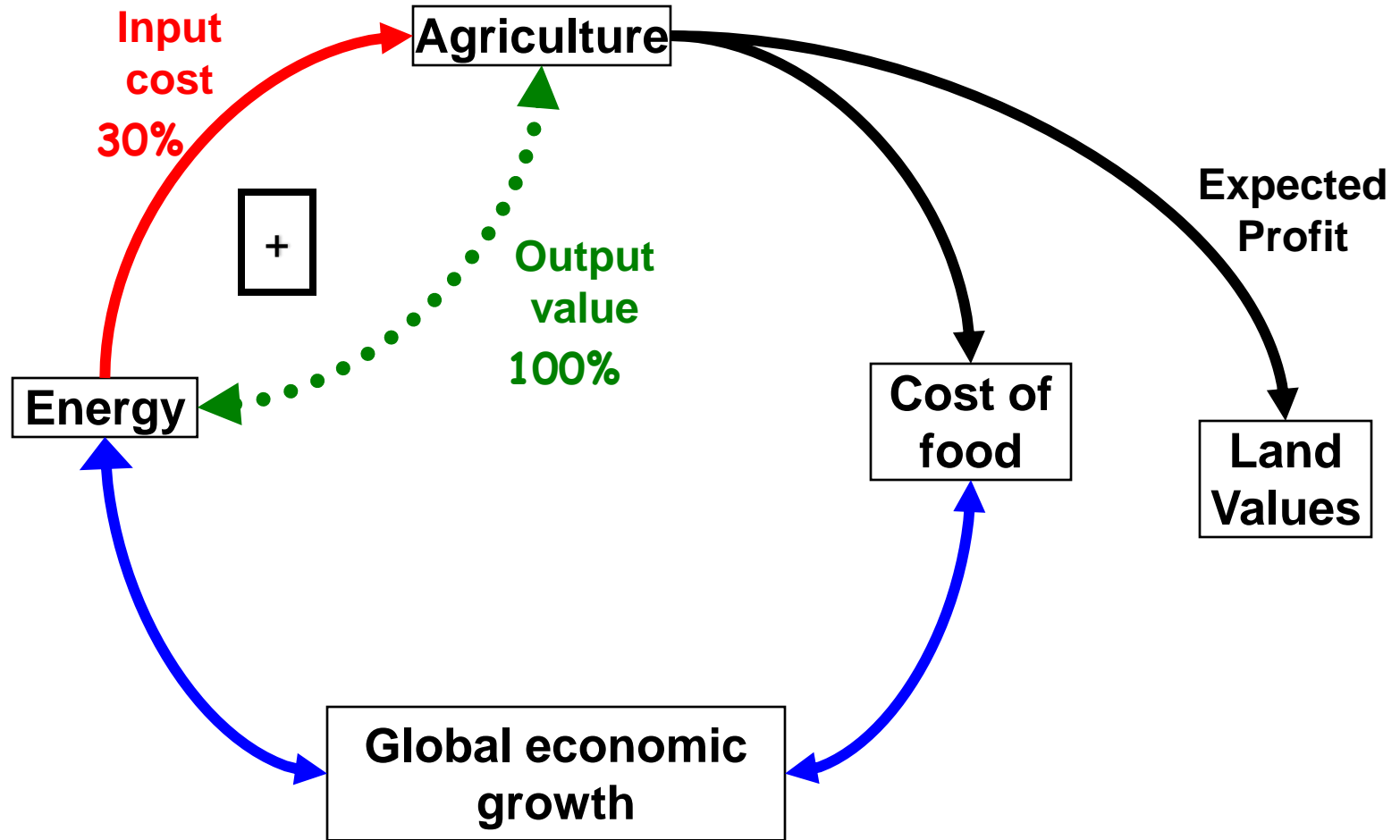
**Interconnected global  
financial markets transmit  
crisis faster than before.**

# Will you bet against it?

## Global GDP: Undeniable Volatility

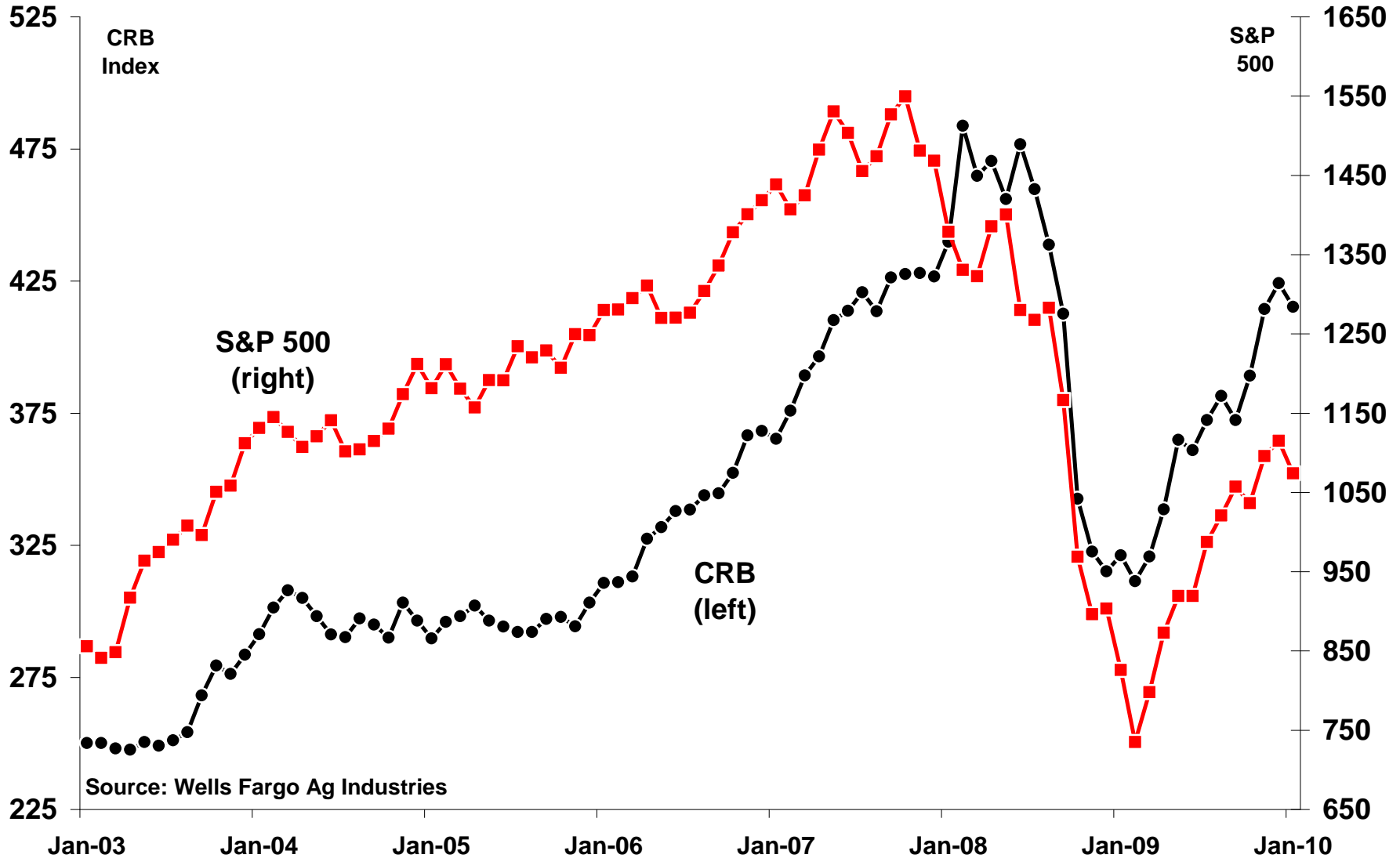


# (Un?)intended Consequence



# Fight the Story at Your Own Peril

## CRB and S&P 500



Source: Wells Fargo Ag Industries

# Convergence: Temporary or permanent?

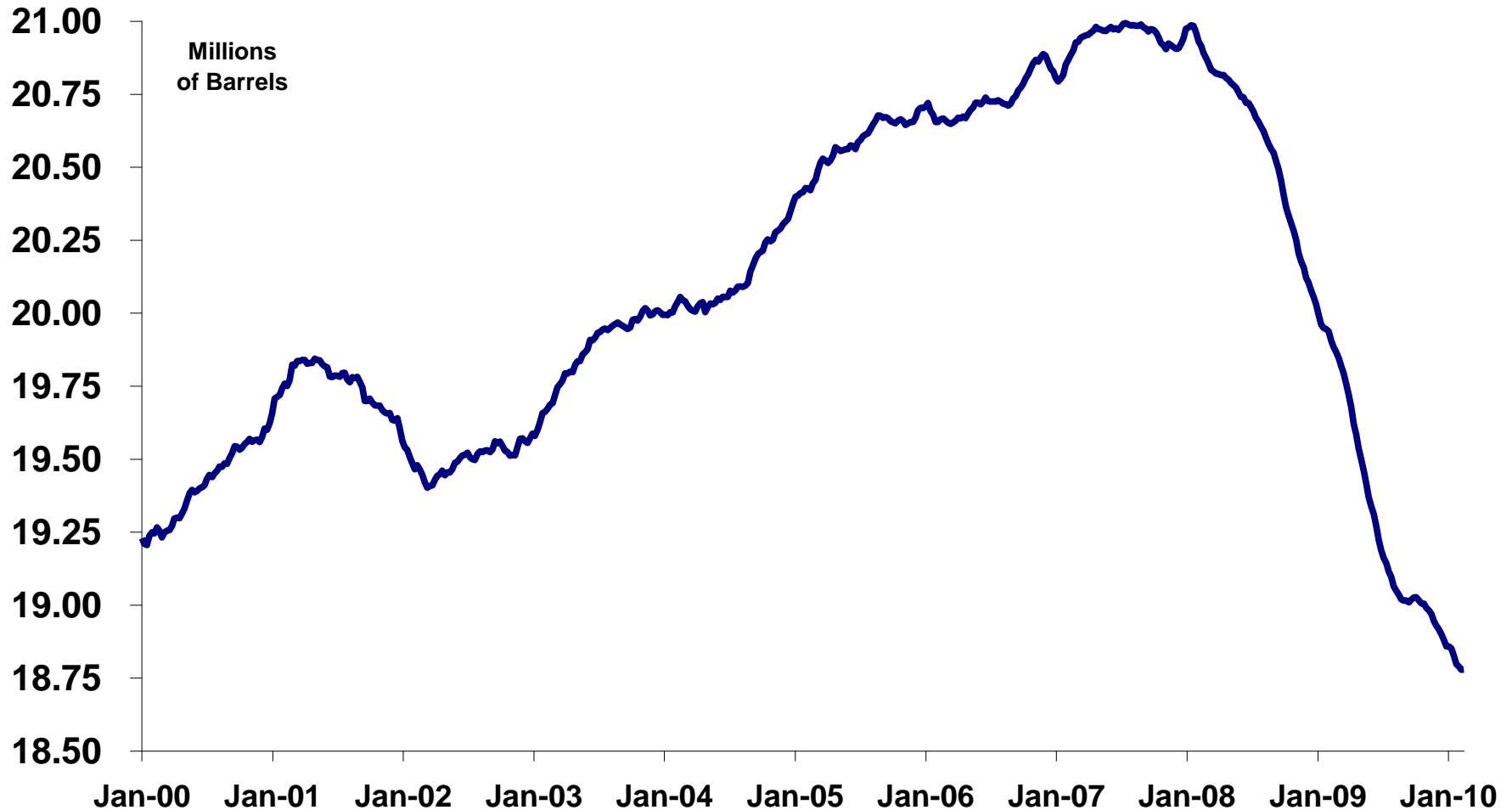
## Nearby Crude Oil v Corn



# Guess what? Feedback, delay and noise

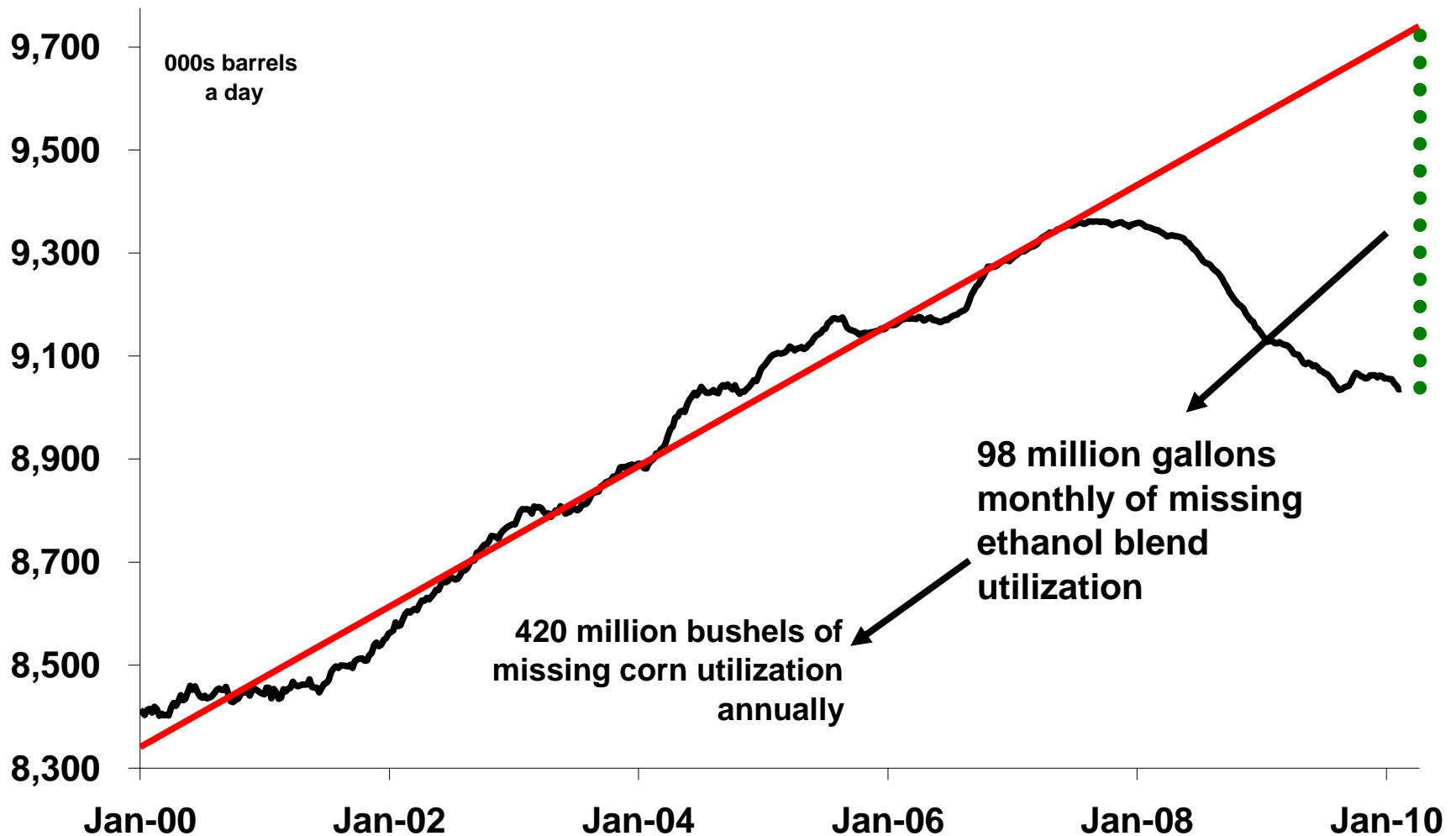
## Petroleum Product Supplied

52 Week Average

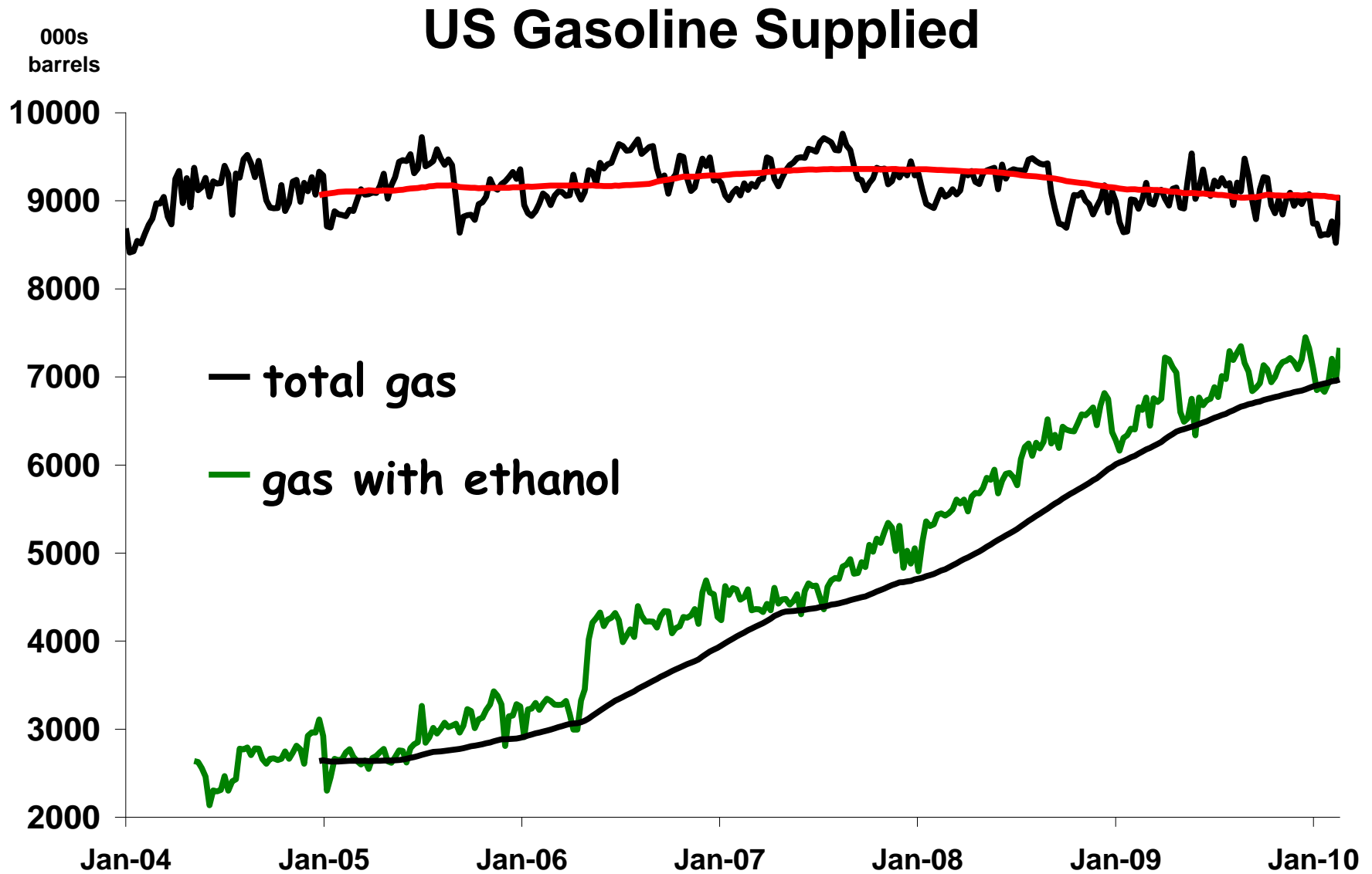


# Missing gasoline = missing corn demand

## 52 Week Average Gasoline Supplied



# The direct agricultural link



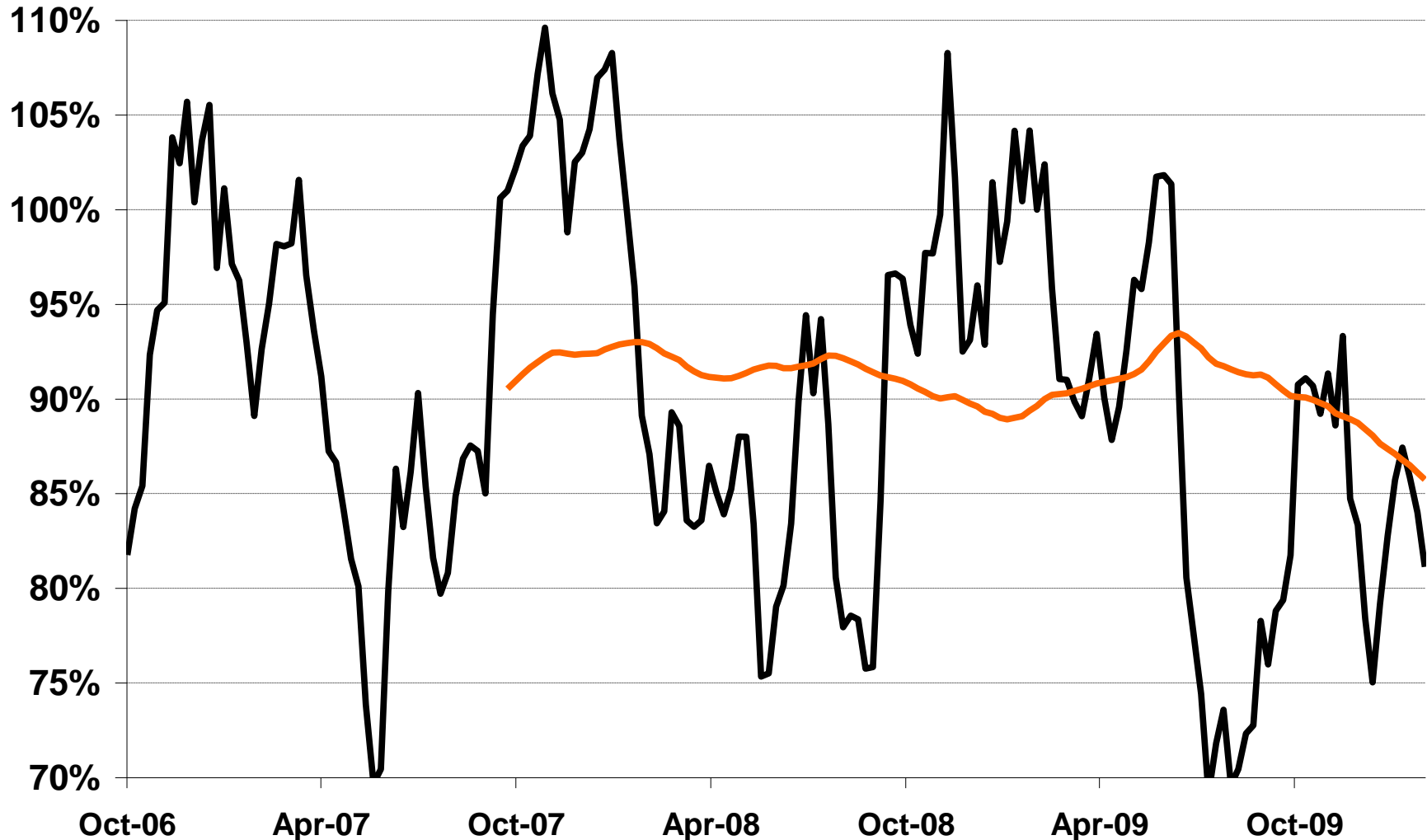
# They don't run – just for fun

Iowa Spot ethanol less spot corn 20 lbs.



# Something is changing

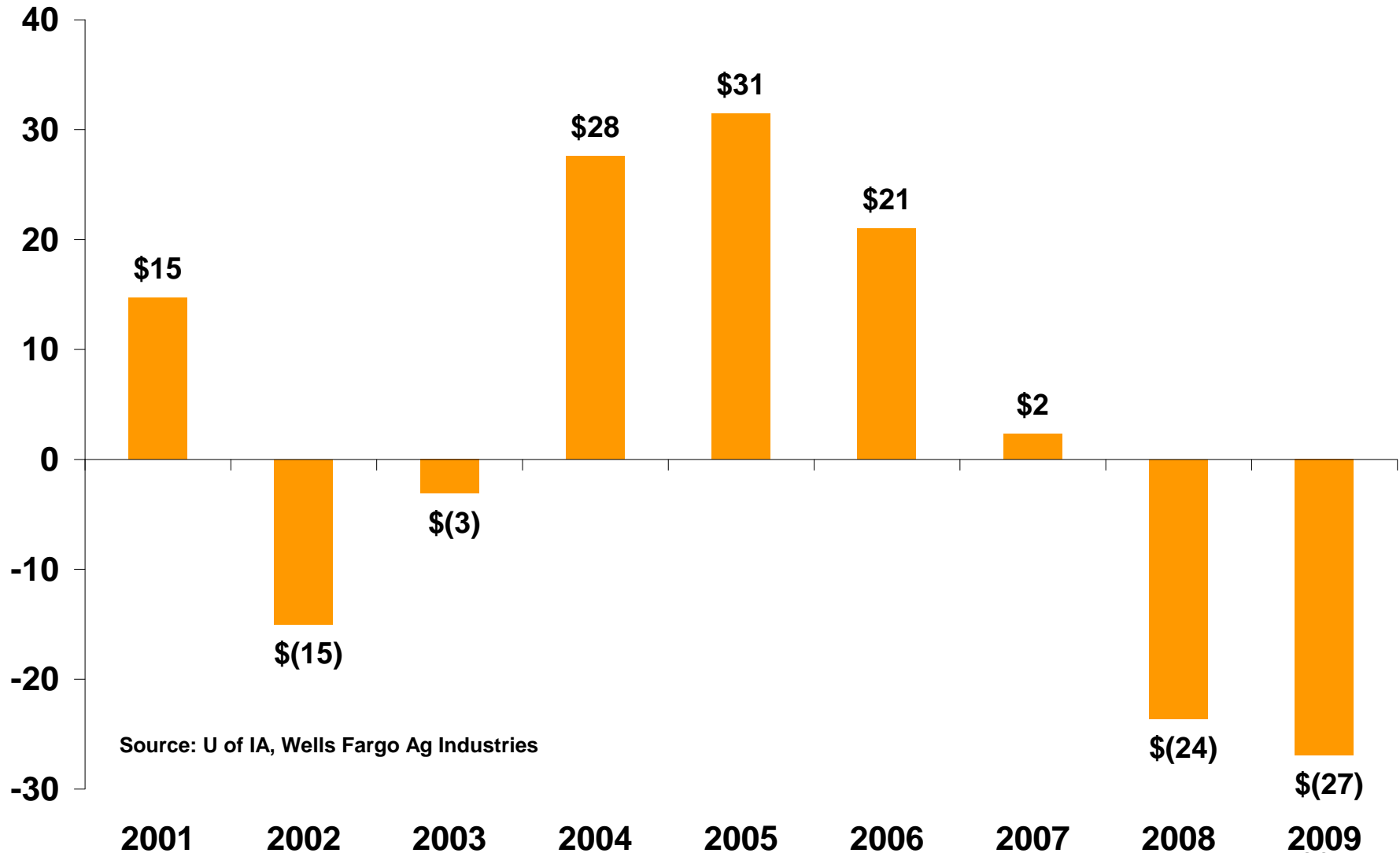
## IA DDG and Corn Spot Price Ratio



**At the end of the day,  
protein equals corn.**

# No one is making good money in protein

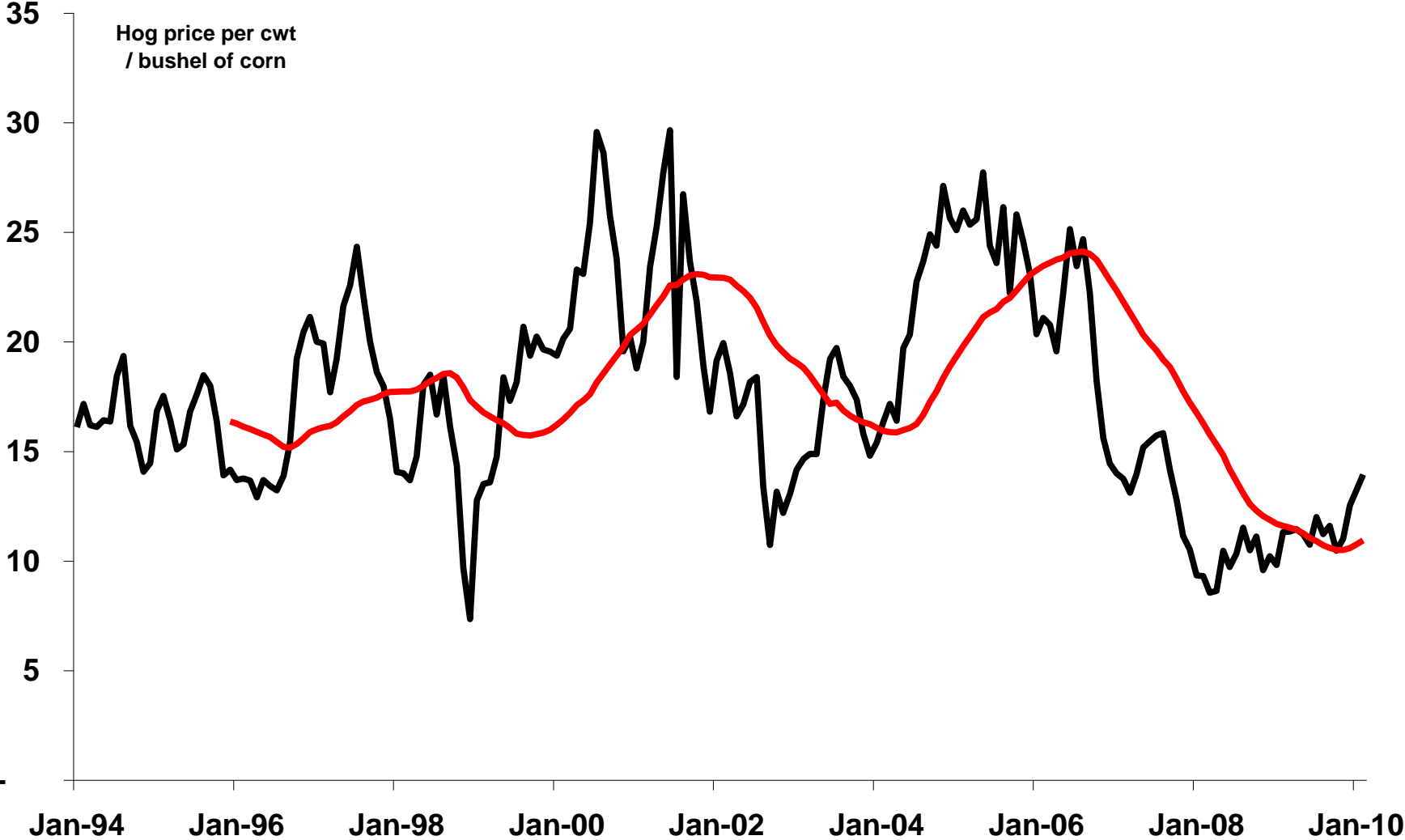
## Average Profits/Losses per Hog



Source: U of IA, Wells Fargo Ag Industries

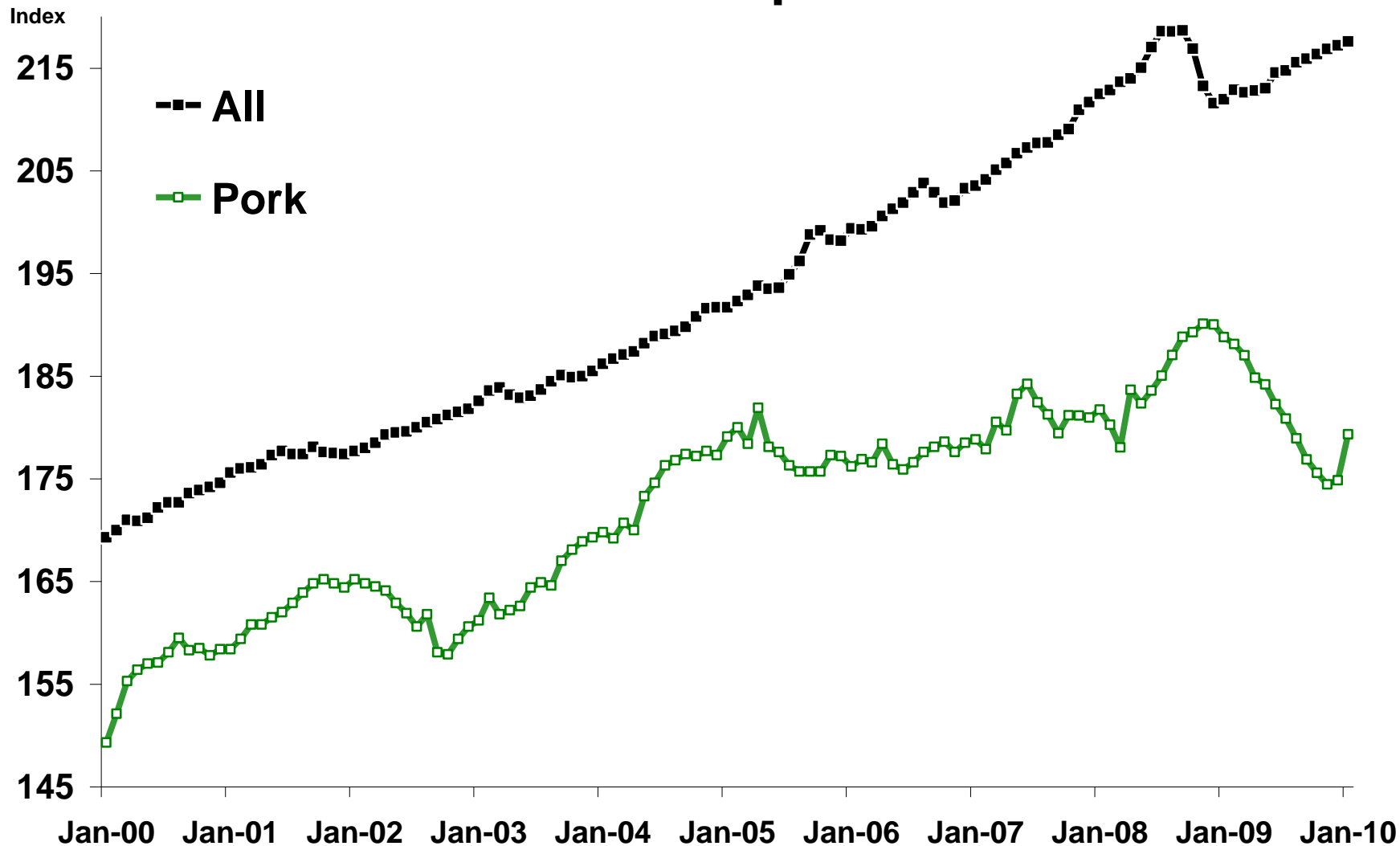
# What needs to change?

## Hog to Corn Price ratio



# Energy = corn = protein = **BIG TROUBLE**

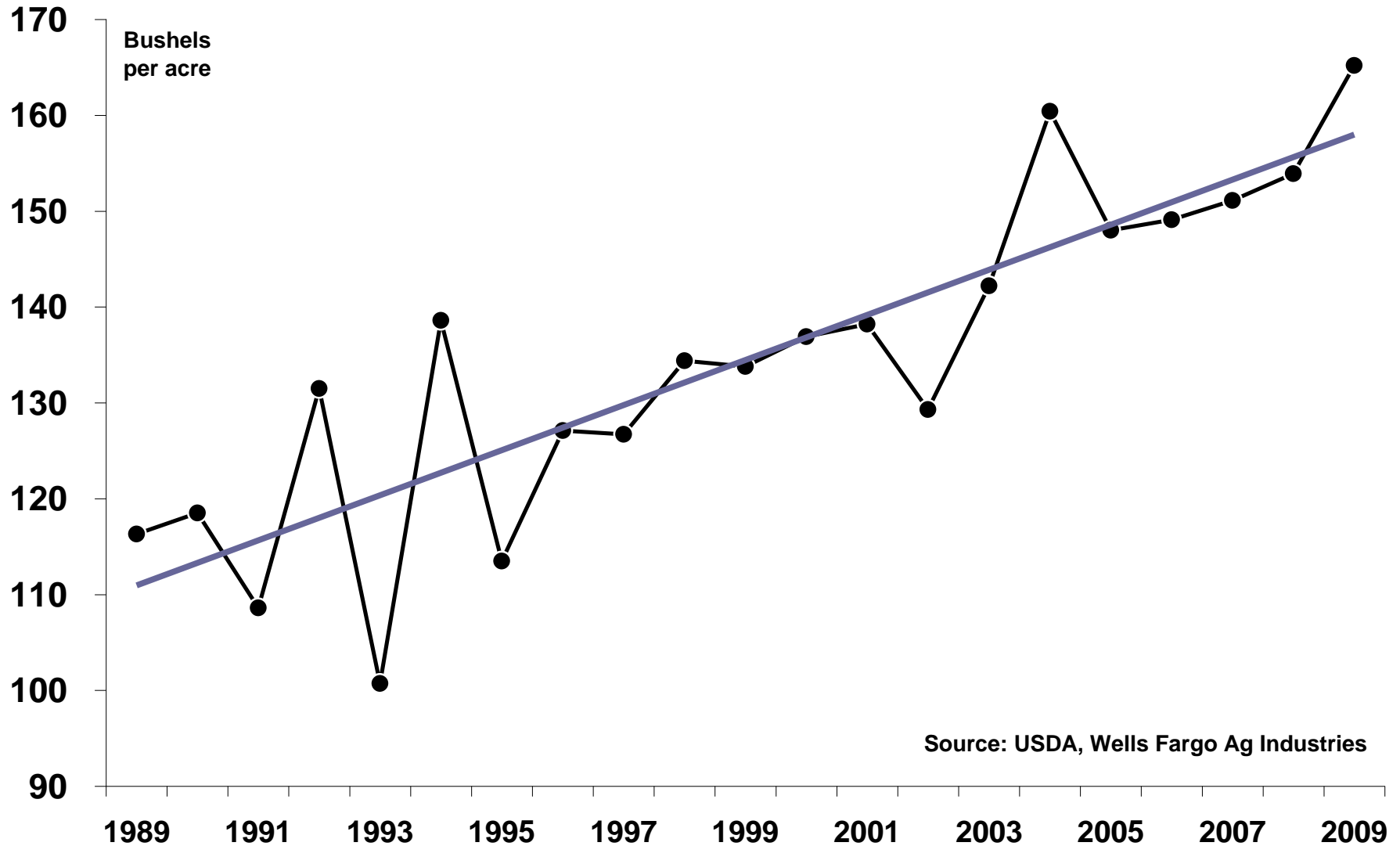
## Inflation Components



**The US has not had a “below average” yield since 2002**

# Good and great yields recently

## Yield Progression



Source: USDA, Wells Fargo Ag Industries

**How much risk do you want on  
your plate?**

**This is no “perfect” strategy**

**It's about executing “your”  
strategy**

**Does your playbook match your players?**