Don’t Sweat the Small Stuff…But What About the BIG Stuff?

How Macroeconomics is Driving Agriculture

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So, what do you really think?

Bernanke Did All He Could For The Economy But It Wasn’t Enough

Romney, Gingrich: Time to Fire Bernanke

Bachmann Also Takes Aim at Fed
No, really, what do you think?

Bachmann’s Irene is God’s response to U.S. debt problem comment an alleged joke

Obama would hike taxes to pay for his jobs bill

Obama’s Stimulus Plan: Failing by Its Own Measure

By Stephen Gandel  Tuesday, July 14, 2009

Despite Perry’s Tough Budget Talk, Texas’ Debt Growing Faster Than The Nation’s

By Alex Seitz-Wald on Jul 13, 2011 at 2:10 pm

Wheels Within Wheels

- Global Macroeconomics
  - Monetary Policy
  - Fiscal Policy
  - Business/Banking
  - Consumers
  - Global Markets

- Agricultural Fundamentals
  - Supply and Use
  - Determines short run volatility
The Monetary Side

The Wind at Our Back: Economic Growth is/was Long Term Trend Creating Demand
How Much of the Growth Was Real? Money Supply Increasing Relative to GDP – Also is this already a “double dip” with 2001-04 being first dip?

How is Fed Increasing Money Supply?
(I guess this is why we hire Bernanke)

“Money for Nothin’…”
Source: Dire Straits
Why No Inflation?

- Fear of Housing?
- Lack of Bus. Investment?
- Concerns About Expected Inflation?
- No Demand for Credit?
- Expectations are Everything
Cautionary Tale: July 16, 2008 – The Start of the Credit Crisis.

Bernanke: Inflation Is 'Too High'

WASHINGTON — Federal Reserve Chairman Ben Bernanke said Wednesday that U.S. inflation "is too high" and reiterated that the Fed will act to achieve price stability.

Mr. Bernanke’s comments, in response to questions from Jay Rosenthal, a senior staff member of the Federal Reserve Board staff, came on the heels of a Labor Department report showing consumer prices jumped 1% in June, the second-highest increase since 1982 and the highest since 1990. Core prices, excluding food and energy, were unchanged.

Mr. Bernanke also said the U.S. needs to focus on energy strategy and that he would favor a transition to address the energy threat.

"If we don’t change our energy strategy, our fossil fuel dependence, we will create a much higher cost for our economy," he said.

Mr. Bernanke also reminded Congress that the Securities and Exchange Commission is considering a proposal to require companies to include a discussion of their climate risks. The SEC has not yet announced a decision on the proposal.

Mr. Bernanke also addressed the issue of the market for mortgage-backed securities and the role of the Federal Reserve in providing liquidity to the market.

"We have a lot of work to do," he said.

Mr. Bernanke also discussed the role of the Federal Reserve in providing liquidity to the market.

"We are working with the Treasury to ensure that the market can continue to function," he said.
Brake: Why aren’t businesses borrowing – Money for Nothin’?

Reasons:
- Risk Concerns?
- Regulatory Burdens?
- Inflations after borrowing good for borrowers?
- Labor/wage costs?
- Expecting deflation – no growth, no demand?

Firms may not need to invest: too much capacity?
Unemployment and Declines in Personal Income Reduce Demand

Consumer Spending Only Recovers to 2007 Levels, 16% Below Trend Levels
Loss of “perceived” wealth - Housing

Consumer Confidence is Still Weak
Government – Tax? Spend?

Can Government Act with Fiscal Policy?
Taxing and spending, yes spending is unsustainable.

Global Ripples or Global Tsunamis?
Fiscal and Monetary Efforts Often Get Exported: The International Dimension

Europe Has A Bit Different Problem – Or Does It?
Summary of Macro Issues

- The issue is **AGGREGATE DEMAND**.

- Easing credit/money and reducing taxes are likely to be ineffective. “Rubber Bullets.”

- Raising demand requires investing in workers and spending on U.S. items (e.g., Infrastructure, R&D, etc.), not a call to restrict trade.

- Downside of upside are **inflation** and **interest rate increases** with implications for agriculture.

Big Agricultural Issues

- Macro Economics – Volatility and Demand

- Biofuels and Livestock

- Climate and the Environment

- International Trade and Competition

- Food Security and Productivity
The Macro-economy Has Created Volatility

THE USUAL SUSPECTS:
- Biofuels?
- Global Trade?
- Global Economic Growth?
- Climate Change?
- Technology Change?

Source: Global Financial Database

In “Real” Terms Agricultural Commodities Still Relatively Low

Energy prices are at a record price.

Food products following energy prices.

Is this beginning of “new era” of tight grain supplies?

Source: Global Financial Database
**Stocks to Use Ratio is Key Price Determinant**

*As stocks to use has declined, world grain price indexes have increased and become more volatile.*

*Year to year global weather variation will have more impacts as a result.*

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**Total World Grain Production**

*World grain production increases 28% since 1990.*

*Primary increase is corn which has increased 81%.*

*Corn production is used by increased ethanol and livestock production.*
Trends in Top Countries’ Corn Production

- 68 percent of world production is by top 4 countries
- Nearly 40% produced by the U.S.
- Concentrated production leads to strong competition for sourcing among importing countries, leading to direct investment.

Source: USDA, FAS: Production, Supply and Distribution Online

Corn Yield Trends

- Corn yields are increasing most rapidly in Argentina (135%), though all three are increasing at a greater rate than the rest of the world.
- Corn yield is much lower in South America compared to U.S. This suggests potential yield gaps to exploit.
- Brazil raises two crops which can overcome some of the yield gap.

Source: USDA, FAS: Production, Supply and Distribution Online
Corn Acreage Harvested, Major Import Sources

- Corn acreage has increased 29%, while yields have increased 40%.
- U.S. corn acreage has increased dramatically at the expense of other crops. Due primarily to biofuels and livestock demand.

Wheat Yield Trends

- Wheat yields vary dramatically by wheat type and production methods (irrigated v. dryland).
- Other than China, wheat yields are stagnant to declining.
- Lack of genetic advancements and concerns about pest issues such as wheat rust and scab (e.g., Ug99)
Wheat acreage has decreased 4% since 1990.
- Australia has increased 44%.
- U.S. and China have decreased 31 and 21%, respectively.

Soybean yields are relatively consistent across countries.
- Brazil has increased as improved fertilization (primarily lime to combat aluminum in soils) has developed (yield increase 80%).
- China struggles with yields.
Soybean Acreage Trends: Major Production Sources

- Acreage harvested has nearly doubled, led by Brazil (156%) and Argentina (306%).
- Acreage is new land brought into production rather than substitution as in the U.S.
- There is continuing acreage potential, and S.Am. will be major source of soy.

Trends in Top Countries’ Production - Soybeans

- 84% of World production is by 4 countries and Brazil is growing rapidly.
- U.S. acreage is kept in check by acreage demand for corn.
- 151% increase in production world-wide.
Overall, World Grain and Oilseed Production is Increasing

- Increasing acreage in developing regions of South America and Eastern Europe account for changes in soybeans and wheat.

- Increasing corn yield is resulting from improved genetics, also acreage is increasing at the expense of other grains and oilseeds.

- Corn is only crop with major yield increases – will there be enough acreage to supply the world’s growing population if yields do not increase?

What’s Happening to Crop Use?

- Use for all grains is increasing but corn demand is increasing the most.

Source: USDA, FAS: Production, Supply and Distribution Online
Two Growing Users For Two Different Reasons: Ethanol and Livestock

- U.S. will likely continue to reduce feed use of corn – though policy changes may impact this.
- Note FSI downturn in U.S. ethanol economics is worsening.
- China’s feed demand grows as meat consumption and income grows.

The Livestock Driver: Doubling in 20 years

- Pigs and chickens drive production and consumption in developed countries.
- Cattle growth is slow and largely in developing countries in pasture systems.
- U.S. beef industry is in decline.
**Meat Consumption Grows As Income Grows**

- Growth declined briefly during global recession.
- Broader global growth likely to place increased demand for meat and grains.

**Source:** USDA, NASS and World Bank

**Soybean Markets Driven by the Growth in Meat and Livestock Demand**

- Rising incomes in Asia and S. America have lead to increasing meat demand and hence protein demand.
- Plant proteins demonstrate that ethanol is only part of story.

**Source:** USDA, FAS: Production, Supply and Distribution Online
**Ethanol Impact on Corn Use in the U.S.**

- 2009 first time in history industrial use of corn exceeds feed use of corn.
- Decline in feed use, shows up as reduced U.S. meat production

**Inflation With Low Interest is Good For Agriculture?**

*Median Net Farm Income*

Data Sources: Minnesota Farm Business Management Education (MFBE), Southeastern Minnesota Farm Business Management Association (SMFBMA)
Until Increased Profits Bid Into Land Prices.

Risks: Interest Rates, Ethanol Policy, Livestock Policy, Global Economic Growth – Prices Can Come DOWN.

Four Long Run Driving Factors

- Global Economic Environment
  - International Trade and Economic Growth
- Population dynamics
  - Must increase developing countries’ productivity rates
- Overall Resource Constraints
  - Land, Water, Fertilizer
- Critical Investments in Research and Development – we’re not keeping pace.
Many Large Structural Challenges – Both Demand and Production

Population Doubling, Soil Degradation, Water Availability

To Meet Challenges:
A MAJOR Concern is Productivity
Applied Economics

Ag R&D Spending Rate is Declining – We’re Increasing Costs by Policies and Reducing Potential to Grow Adequate Supplies

Growth rates adjusted for productivity-based R&D over the 1976-2006 period are in parentheses.

Source: Philip Pardey, U of M

Actions Required to Maintain Food Security

- Increase investments in research and development to increase yields and reduce susceptibility to pest and disease.
- Pursue alternative energy technologies to reduce pressures on biofuels and non-renewables.
- Increase investment in developing countries to reduce productivity gaps and improve infrastructure.
- Policy liberalization on Foreign Direct Investment?
- Focus on overall economic development to reduce population pressure (higher incomes → lower birthrates).
- Review policies on restrictions in GMO’s and technology incentives (e.g., patent laws)
- Trade policies and particularly embargoes on shortages.
Summary of Global Grain Fundamentals

- Global yields of corn are dominating production, will yield increases continue?
- Ethanol and Livestock are both increasing use for corn and livestock and meat demand is driving soybean demand.
- U.S. continues to dominate exports, but increasingly S. America and perhaps Eastern Europe will compete.
- There are many major external factors affecting global grain supply and demand.

A Dismal Economist Perspective!?
Not the last station from the South,
But the first station toward the North.

A More Optimistic Perspective

THANK YOU!