The U.S. economy continues to advance slowly.

U.S. Real GDP Growth

Percent change from year ago

2007 2008 2009 2010 2011 2012 2013 2014

Change from previous quarter
Change from year ago

Blue Chip Forecast

Calculations based on BEA and Blue Chip Forecast April 2013
Unemployment rates trend down.

Source: Bureau of Labor Statistics
Underlying the modest growth is a shift in market performance.

**Booming sectors plateau in 2012**
- Commodities
- Exports
- Manufacturing

**The Wildcards**
- Investment
- Government

**A Rebound in Household Spending**
- Housing
- Consumer Spending
Consumer spending and housing drive growth.

Consumer Spending and Housing

Percent change from a year ago

- Personal Consumption Expenditures (left scale)
- Existing Home Sales (right scale)

Source: Bureau of Economic Analysis and National Association of Realtors
Long-term fiscal policy remains uncertain.

Federal Government Debt as a Percent of GDP

Source: Congressional Budget Office
Investment: uncertainty is a heavy burden.

- Potential changes in tax law sparked an increase in business investment at the end of 2012.
- Businesses report that increased economic, fiscal policy, and regulatory uncertainty are weighing on investments.

Source: Bureau of Economic Analysis
Export growth has slowed and manufacturing has weakened.

Real U.S. Net Exports and Tenth District Manufacturing

Source: Bureau of Economic Analysis and Federal Reserve Bank of Kansas City
Commodity markets are no longer booming.

Commodity Prices and Performance vs. Equities

Source: Commodity Research Bureau, Yahoo! Finance, and author’s calculations
* Commodities include: natural gas, gasoline, WTI crude oil, copper, gold, platinum, corn, wheat, live cattle, cocoa, coffee, and sugar. Equities include the S&P 500 index.
Transition in commodity markets will affect some places more than others.

Difference between Per Capita Income Growth in Tenth Federal Reserve District and U.S.

Calculations based on BEA data
Are commodities driving a transition in U.S. agriculture?
Awash in corn and crude oil?

U.S. Corn Inventories and Crude Oil Production

Source: USDA, EIA Short-Term Energy Outlook, and EIA Annual Energy Outlook 2013
Crop prices are expected to fall post-harvest, again.

U.S. Corn Futures Prices

Sources: barchart.com, data as of May 29, 2012 and CBOT, data as of May 29, 2013
Crop sector profits are projected to fall in 2014.

Net Returns
(Returns less variable costs)

Dollars per acre

Source: USDA Agricultural Baseline Projections, various years
Livestock profits are projected to rise.

Feed Price Ratios

Source: USDA Agricultural Baseline Projections
Could the transition in agriculture lead to a bust?
There are many potential risks.

Farm Incomes
Farmland Values
Agricultural Exports

Global Competition
Energy Policy
Farm Debt

Interest Rates
Farm incomes are projected to drop sharply in 2014.

U.S. Real Net Farm Income

Billion Dollars (Constant 2012 Dollars)

Source: USDA
Farmland values set new records, but growth moderated.

Federal Reserve 10th District Farmland Value Gains

Percent change from a year ago

- Nonirrigated Cropland
- Irrigated Cropland
- Ranchland

Source: FRB KC, Survey of Agricultural Credit Conditions
Is farmland overvalued?

Cropland Value-to-Cash Rent Ratios

Percent change from previous year

Investors will spend $32 for every dollar of revenue. Implies a capitalization rate of 3.1%

Source: NASS, USDA and Iowa State University
Agricultural exports have surged, especially to China.

U.S. Agricultural Exports

Billion Dollars

Source: USDA
Note: 2013 agricultural exports forecast based on year-to-date 2013 annual growth rate.
* China’s share of total U.S. agricultural exports in parentheses.
Will export demand continue to grow?

U.S. Agricultural Export Growth

Billion dollars

Source: USDA
Will the U.S. lose market share?

Global Corn, Soybean, and Wheat Expansion

Acreage Index (2000 = 100)  Percent

**U.S. Share of World Acreage** (Right Scale)
- **U.S. (Left Scale)**
- **Brazil & Argentina (Left Scale)**
- **China (Left Scale)**
- **Black Sea Region*** (Left Scale)

* Black Sea Region includes Russia, Ukraine, and Kazakhstan
Source: USDA
What will happen to Renewable Energy Policy?

U.S. Gasoline Consumption, Ethanol Production, and Mandates

Billion Gallons

Source: Energy Information Administration.
* Ethanol Production is net of trade
How will investments and debt respond to income changes?

U.S. Farm Profits and Capital Investments per Farm

- **Net Returns to Farm Operators** (Left Scale)
- **Farm Capital Expenditures** (Right Scale)

Source: USDA
Farm debt started to rise in 2012.

Farm Debt Outstanding at Commercial Banks

Percent change from previous year

Source: FDIC, Call Report data
Farm debt appears to be concentrated.

- **KS Farm Management Farms:**
  - **Average Debt-to-Asset Ratio**
    - 1979 – 24.6%
    - 2010 – 26.8%
  - **Debt-to-Asset Ratio >40%**
    - 1979 – 19.4%
    - 2010 – 25.6%
  - **Debt-to-Asset Ratio >70%**
    - 1979 – 1.3%
    - 2010 – 5.9%

Monetary Policy
Low inflation leads to accommodative monetary policy.

Personal Consumption Expenditures Price Index

Percent change from previous year

Source: Bureau of Economic Analysis
Interest rates are expected to rise.

Source: Federal Reserve Board of Governors, Summary of Economic Projections, March 2013
What is the exit strategy?

Federal Reserve Balance Sheet: Assets

Source: Federal Reserve Board of Governors
Conclusions

- Modest economic recovery continues, but in transition.

- Commodities drive a transition in U.S. agriculture.
  - Softer crop sector profits
  - Strengthening livestock profits

- In the transition, there are risks to U.S. agriculture, possibly beyond 2013.
  - Farm incomes, farmland values, export markets, global competition, ethanol, farm debt, and interest rates
Federal Reserve Bank of Kansas City
2013 Agricultural Symposium

For an invitation e-mail
AgSymposium@kc.frb.org