

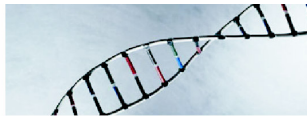
The Economy and Biofuels: Impact of Recession and Prospects for Recovery

**19th Annual EPAC Biofuel Conference
“Fuel, Food and the Future”**

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Both the economy and ethanol industry are experiencing a shakeout

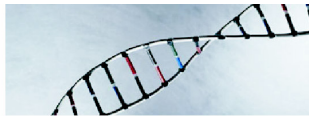
- ❖ The economy slipped into recession in December 2007 ending a 6 year expansion.
- ❖ 31 ethanol plants with 2.4 billion gallons of capacity have shutdown nationwide.*
 - 10 companies (22 plants/2 billion gallons) have filed for bankruptcy.



This is the 11th recession since 1945 and fifth since 1980

Peak	Trough	Duration (Months)	Decline in GDP
Nov 1973	Mar 1975	16	-3.1%
Jan 1980	Jul 1980	6	-2.2%
Jul 1981	Nov 1982	16	-2.3%
Jul 1990	Mar 1991	8	-1.3%
Mar 2001	Nov 2001	8	-0.3%
Dec 2007	2009 Q2	18+/-	-4.0%

Source: NBER



The ethanol industry fell victim to many of the same problems that affected other industries

❖ Overexpansion

➤ (81 plants, 5.4 bil gal capacity in 2005 to 165 plants with 10.6 bil gal capacity today)

❖ Excessive debt

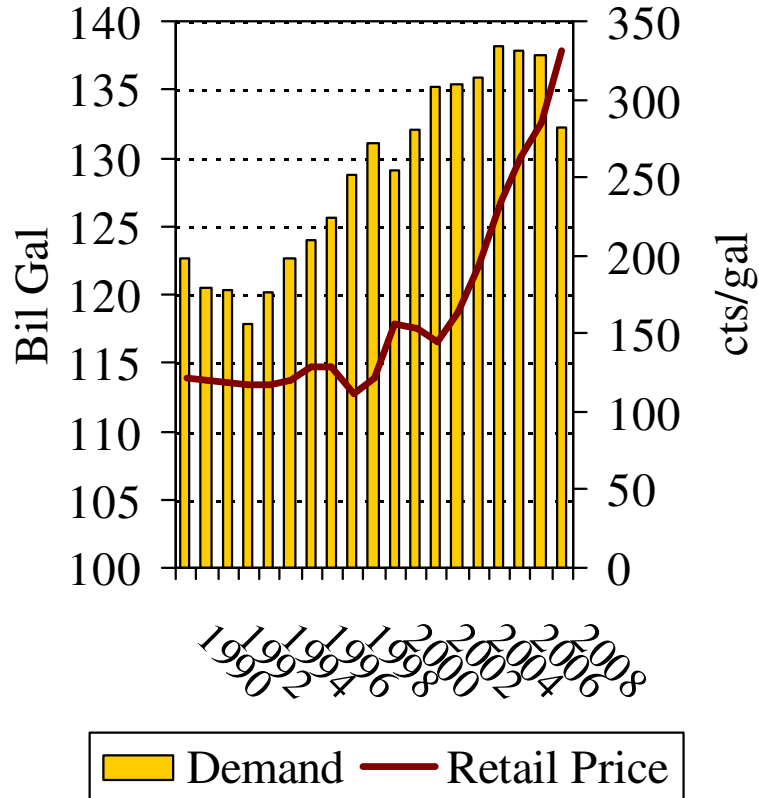
❖ Unavailability of credit

❖ Managerial inexperience and bad decisions

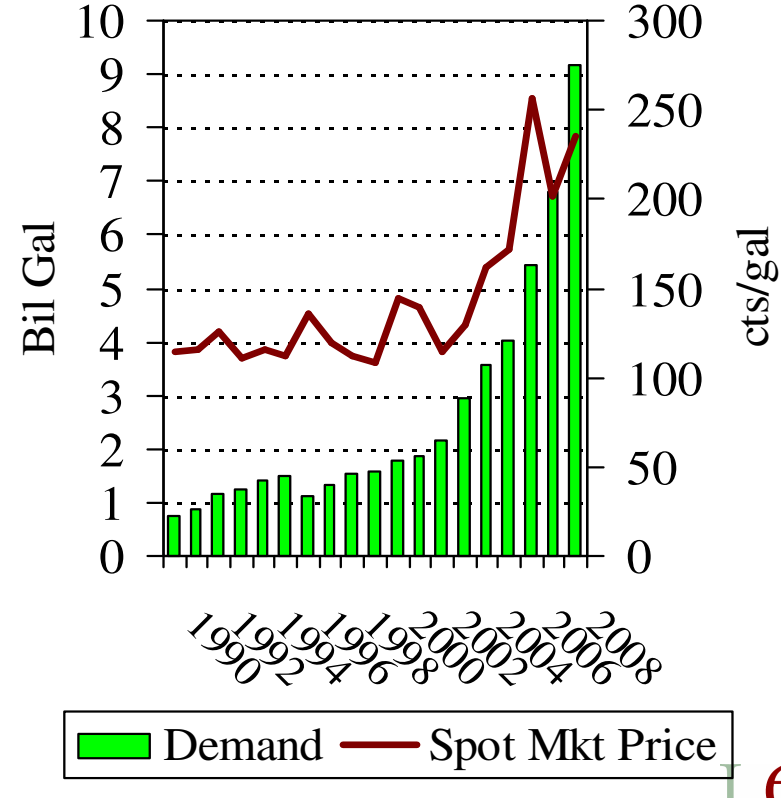
❖ Commodity boom/bust cycle

Gasoline demand fell 4% in 2008 as prices hit record levels. Ethanol use increased due to the RFS mandate

Gasoline

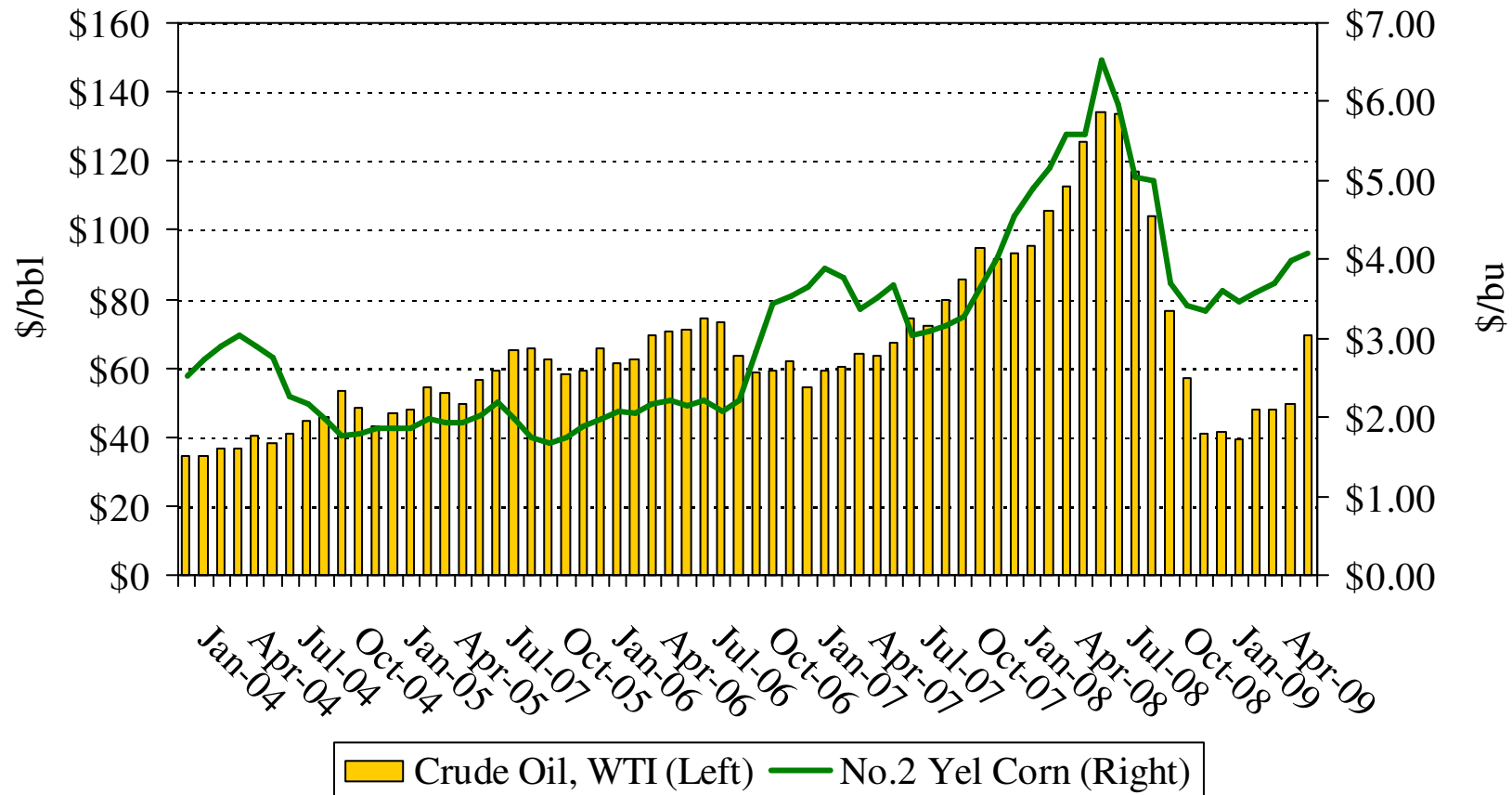


Ethanol



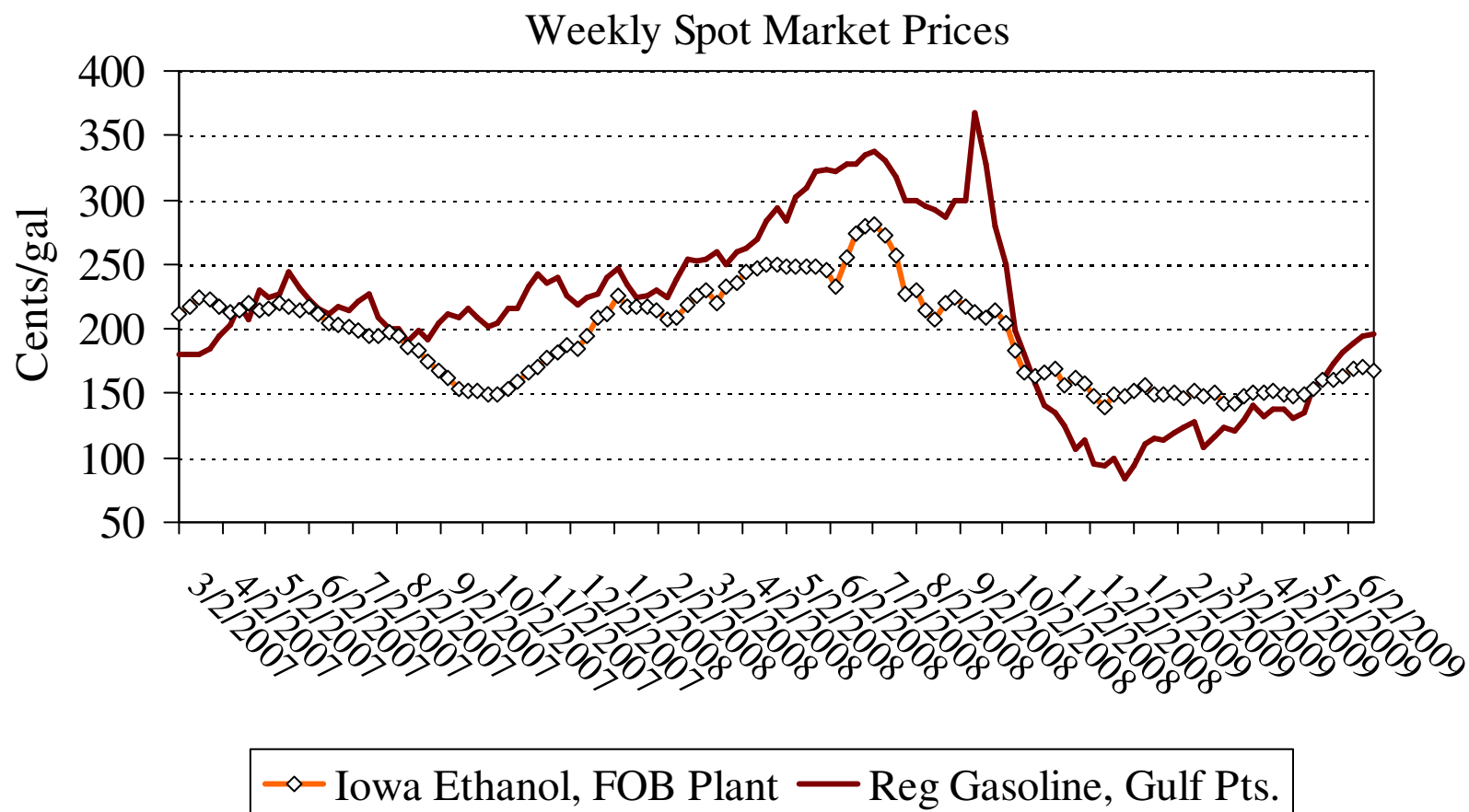


The oil-led commodity boom has ended although prices are again trending up.



Source: EIA, USDA
6/24/2009

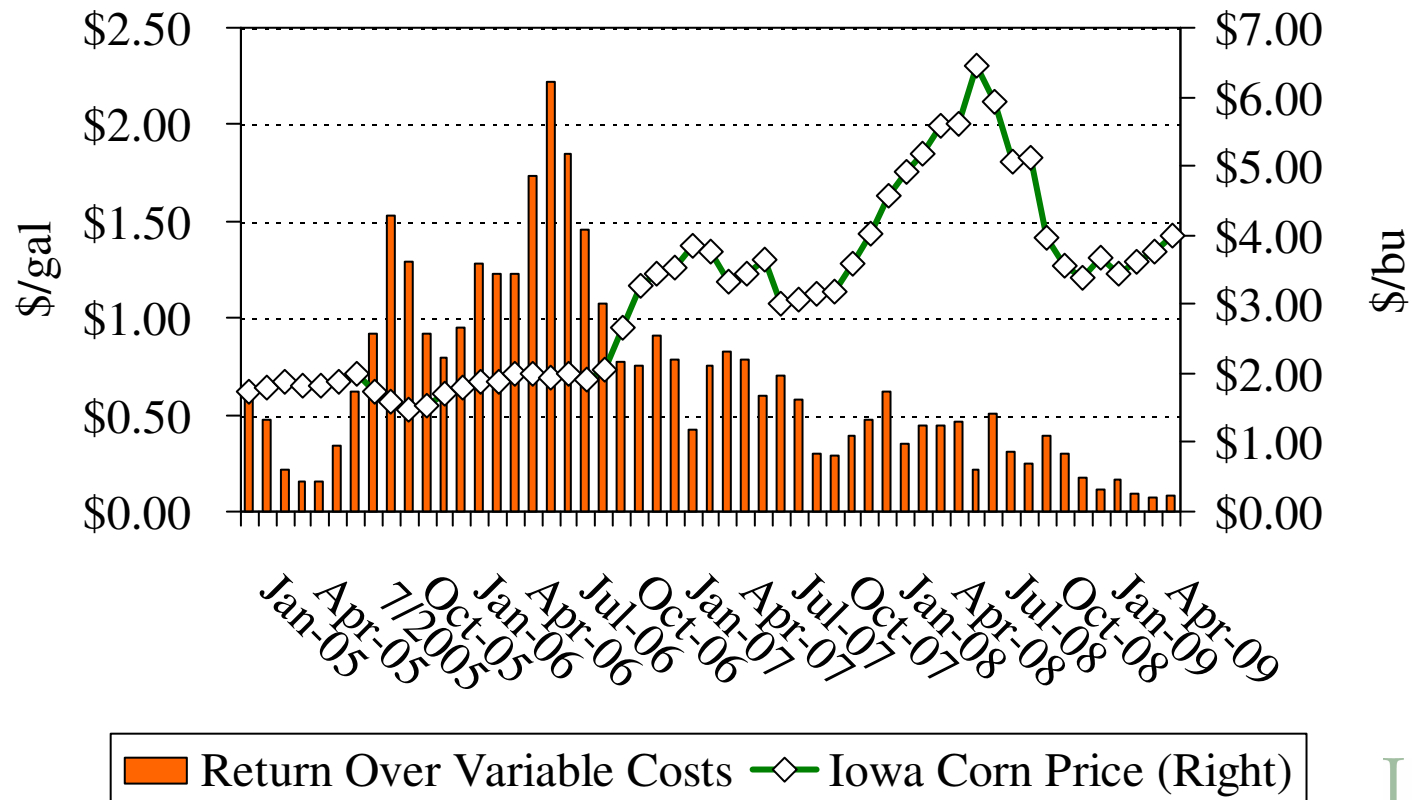
Rising gasoline and stable ethanol prices are improving the economics of blending ethanol.



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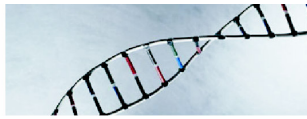


Ethanol profitability has suffered. Producers continue to cover variable costs but margins are shrinking.



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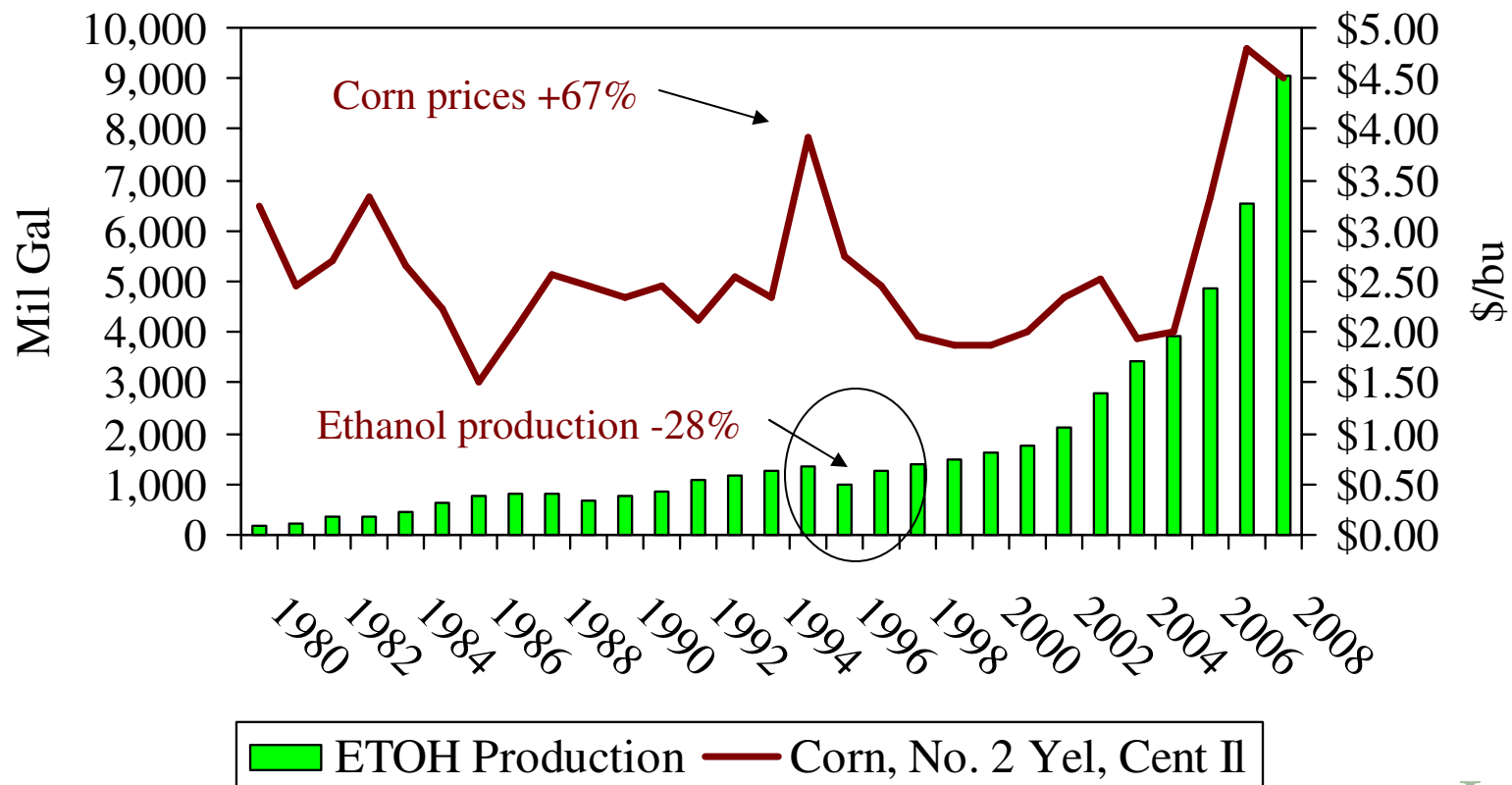
Source: Iowa State Univ. 6/1/2009

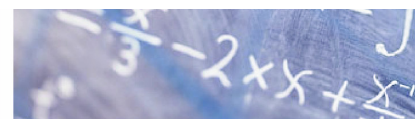


We've been here before ... and survived!

(Corn prices spiked in 1995 in response to short crops in 1993 and 1995 caused by severe drought)

Ethanol Production and Corn Price



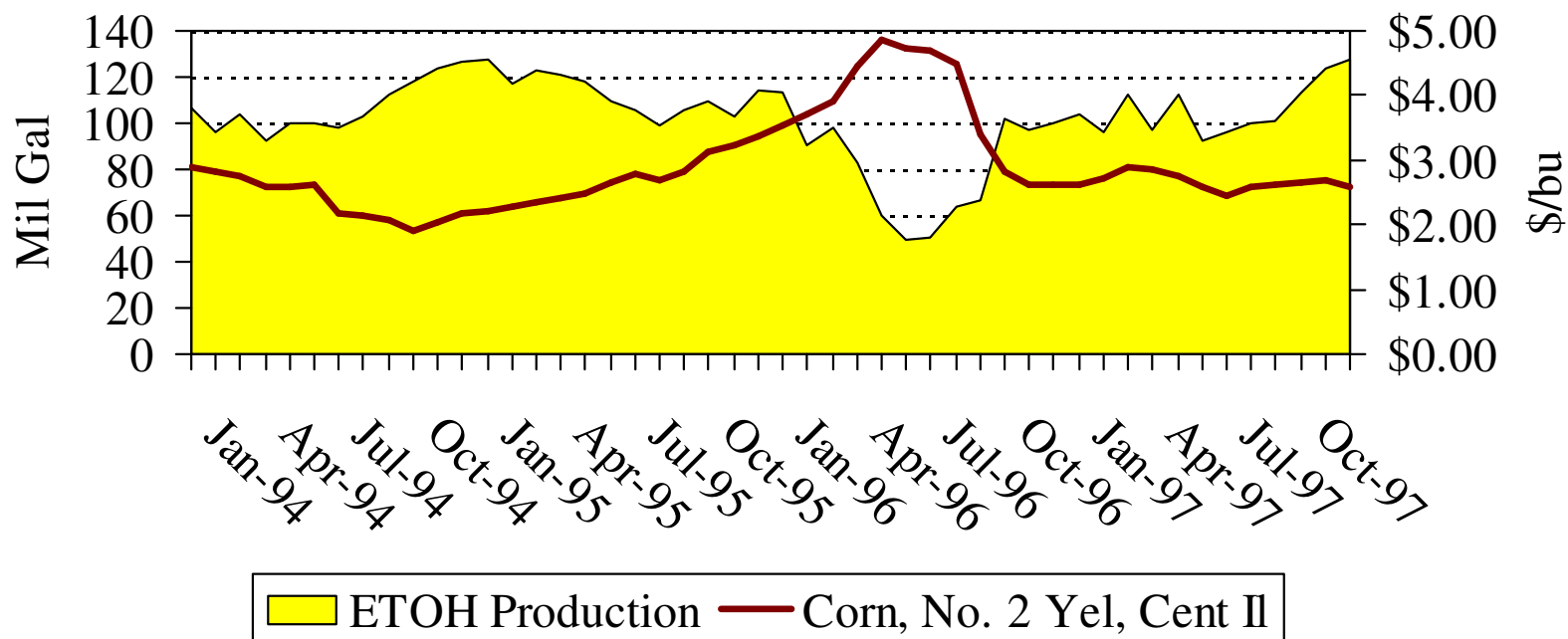


A closer look at the last ethanol “bust”...

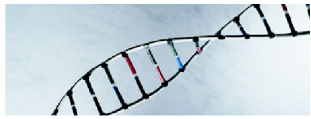
Ethanol Production and Corn Price

Corn prices +153% (Oct 04-May 96)

Ethanol production -62% (Jan 95-Jun 96)

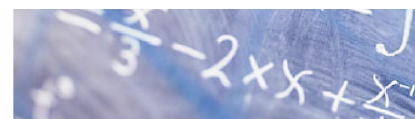


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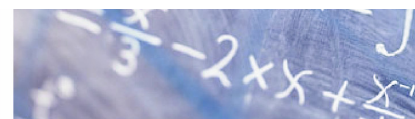
Conditions for a recovery in the current environment parallel those of 1995-1997

- ❖ The post 95 drought recovery was stimulated by
 - Lower corn prices,
 - Strong demand caused by Phase II of the RFG requirement and problems with MTBE in groundwater.
- ❖ This recovery will result from:
 - Lower corn prices
 - Strong demand from the RFS
 - Higher oil prices

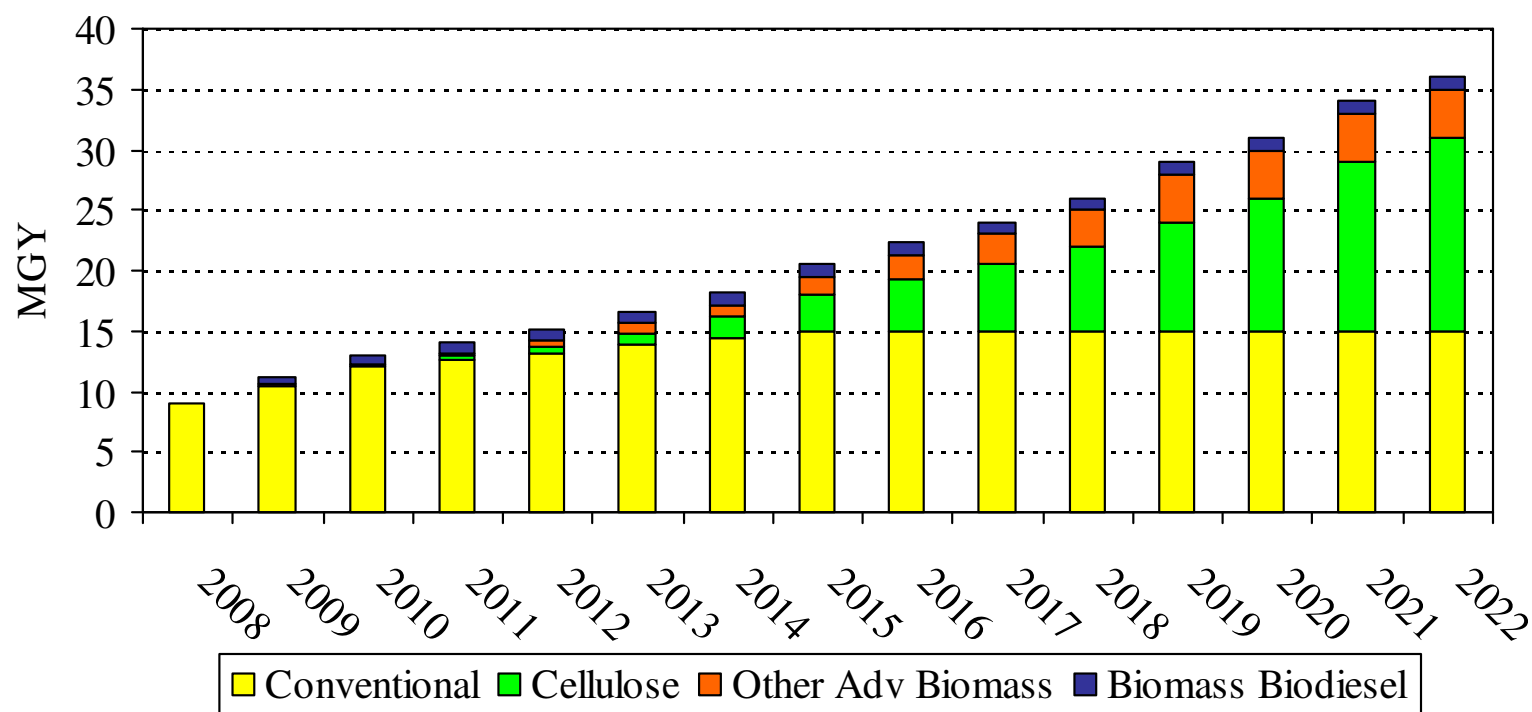


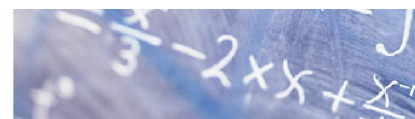
Challenges for ethanol

- ❖ Approval for higher blend levels
 - 10% blend tops out at about 13 bil gal
- ❖ Cellulose capacity – can it build fast enough?
- ❖ Climate change
 - RFS 2 requires renewable fuels to meet GHG reductions.
 - 20% for corn ethanol; 50% for Advanced Feedstocks, and 60% for cellulose.
 - Corn ethanol grandfathered and meets 20% target
 - Ethanol from sugarcane is close to requirement
 - Biodiesel has a big problem



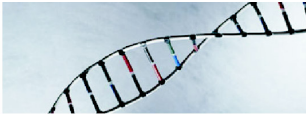
EISA 2007 contains a 36 billion gallon RFS. Corn ethanol is capped at 15 BG.



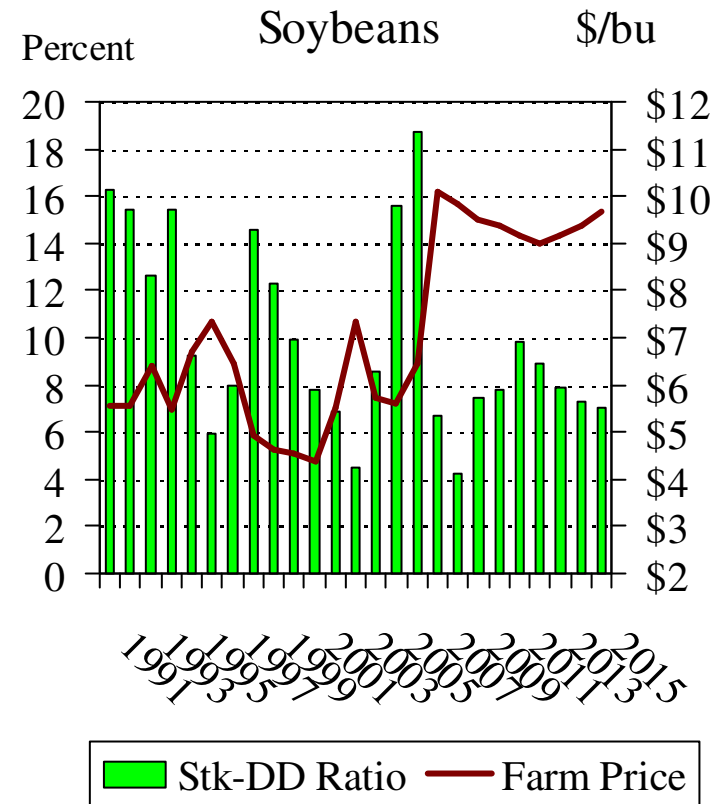
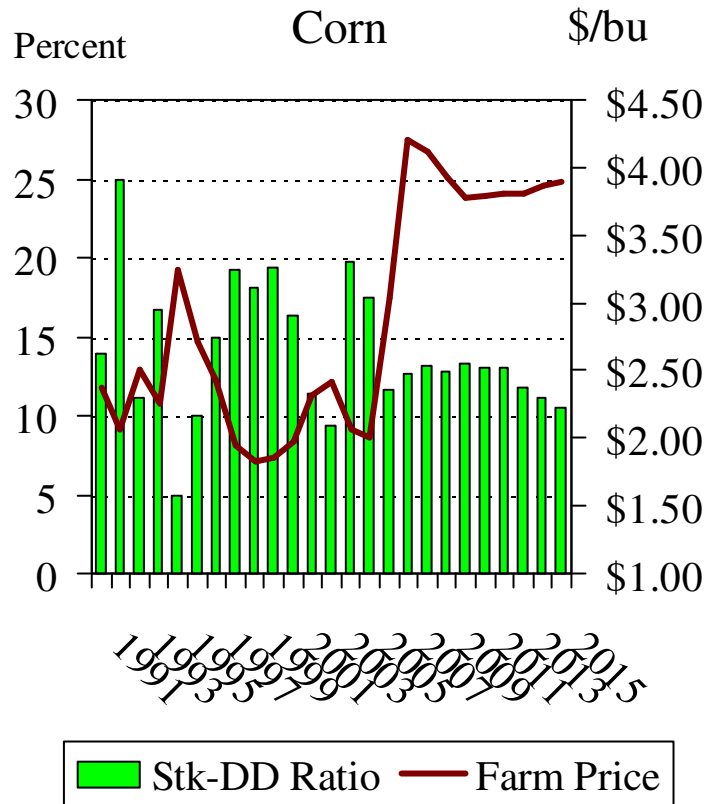


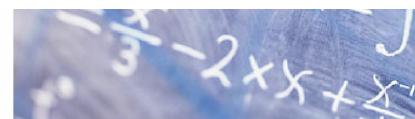
Agriculture faces major questions and challenges

- ❖ How will the financial crisis affect farmer's ability to get credit?
- ❖ How severe will the shakeout in the ethanol industry be?
- ❖ Will the financial bailout improve the availability of and access to debt capital for development of second generation feedstock technology?
- ❖ How will the financial problems of firms like Smithfield and Pilgrim affect feed demand?
- ❖ How much will slower world economic growth trim export demand?



Despite large crops this fall there is little near-term hope for lower corn or soybean prices.





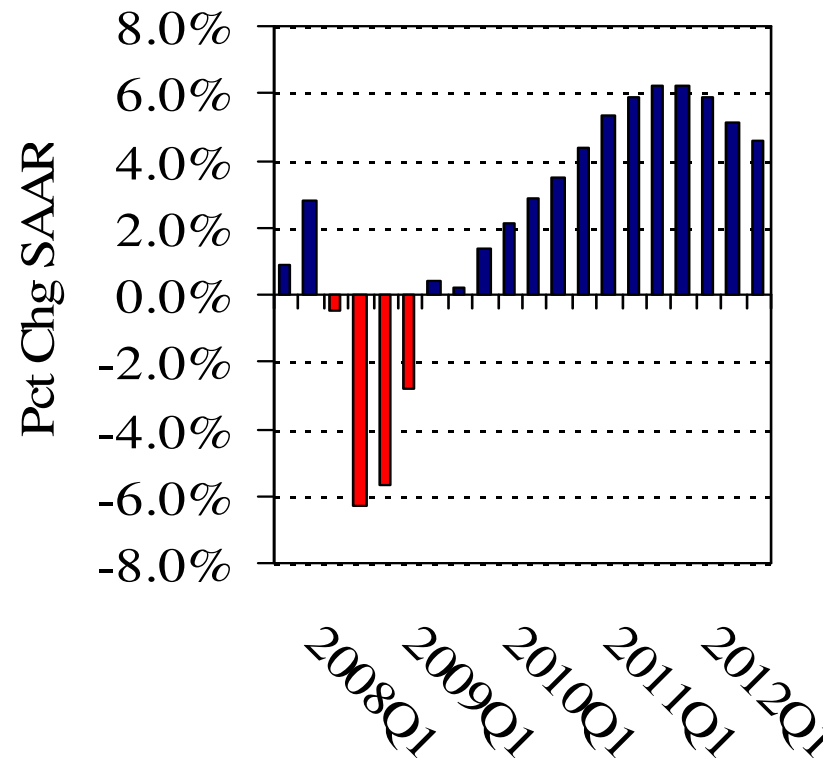
The outlook for agriculture...

- ❖ According to USDA farmers planted 85 million acres of corn and 76 million acres of soybeans this spring.
- ❖ Pray for good weather. With a corn yield of 156.2 bu/ac, expect a 12.2 bil bu crop this fall!
- ❖ Farm level corn prices are projected to average around \$4.20/bu for the 08/09 crop and \$4.11/bu for 09/10.
- ❖ Soybean prices will average \$9.85/bu this season and \$9.50/bu next season.
- ❖ Net farm cash income will fall 17% in 2009 to \$77.3 billion from the 2008 record level of \$93.4 billion.
- ❖ The CPI for food will increase 2.0% -2.3% in 2009 after a 5.5% increase in 2008.

This recession will be relatively deep but should end in late 2009.

- ❖ The Obama recovery plan will improve consumer sentiment but add little to growth this year.
- ❖ Key to recovery is consumer spending.
- ❖ Housing will recover slowly, improving household net worth.
- ❖ The financial bailout is slowly improving credit availability.

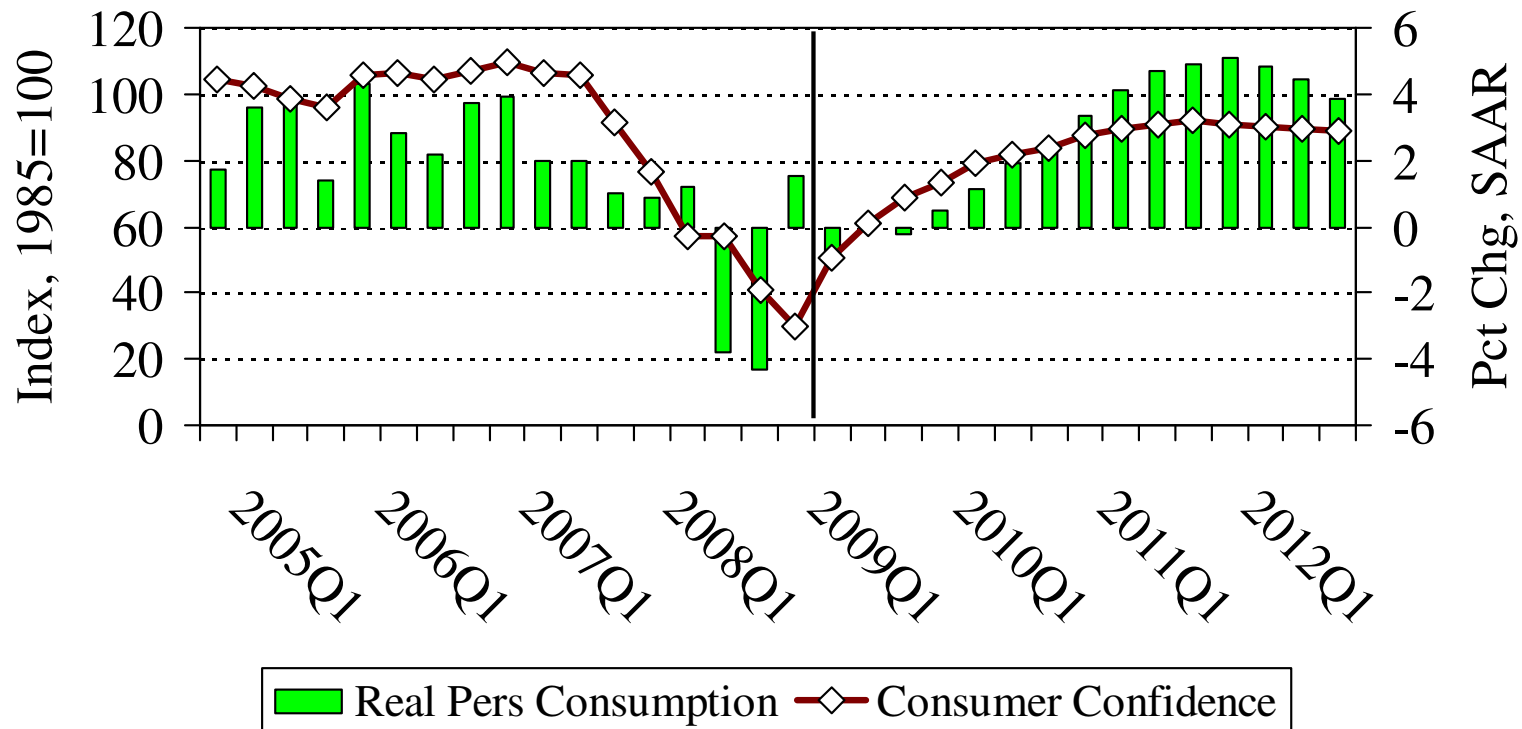
GDP Growth





This recession will end when consumers start spending

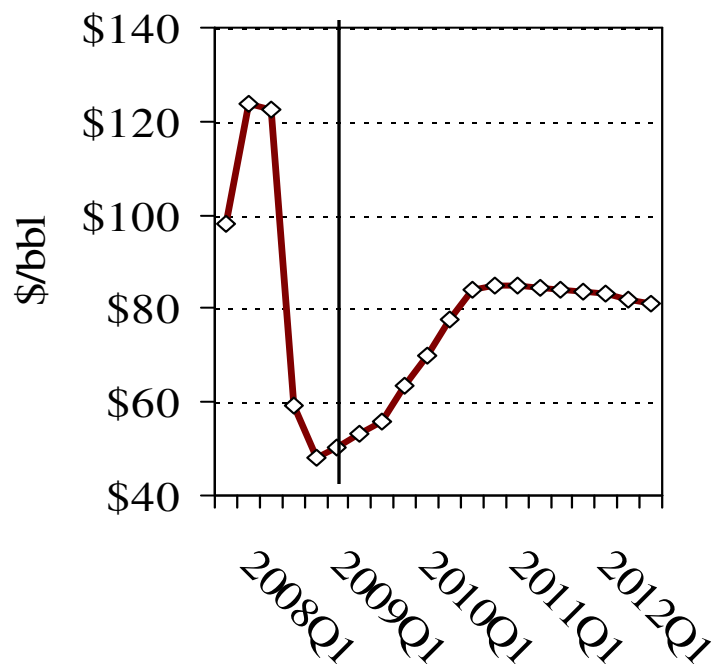
Consumer Confidence and Spending



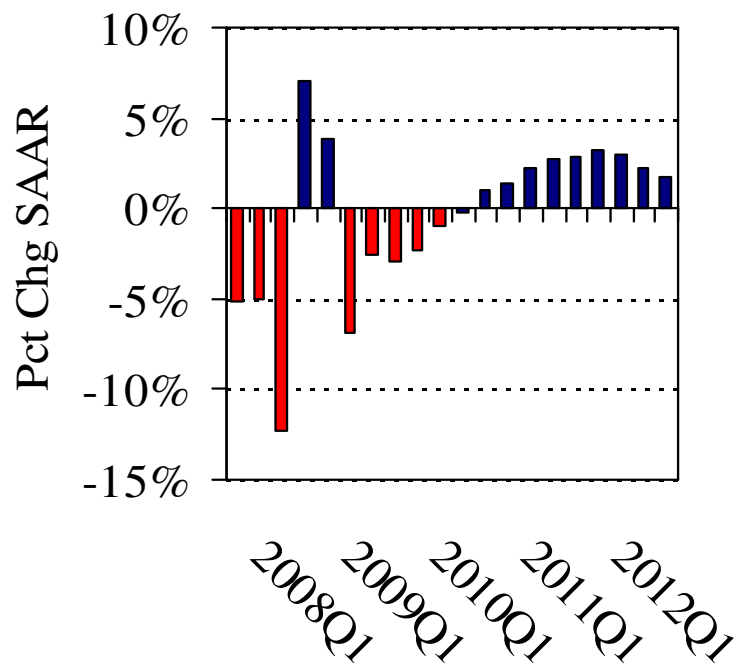
Source: BEA; Conference Board, May 2009

Higher oil prices will offset improved economic growth so that motor fuel consumption remains weak this year.

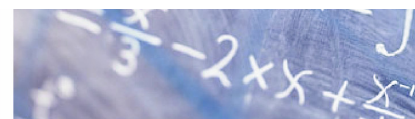
Crude Oil, WTI



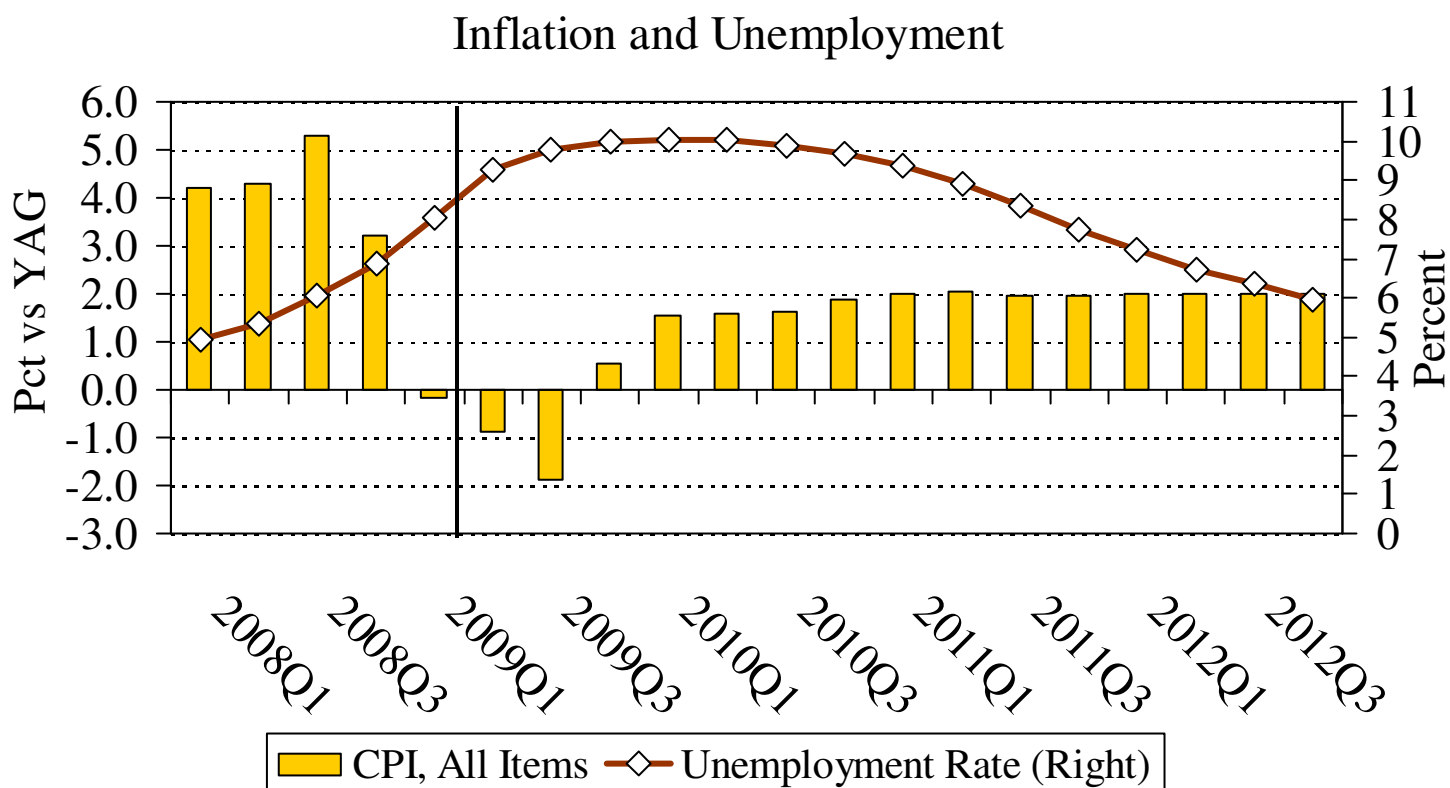
Real Consumer Spending
Motor Fuel



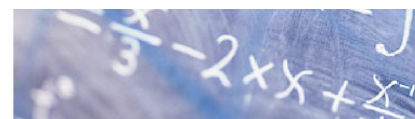
Source: LECG LLC; Moody's Economy.com



**Inflation will moderate despite massive infusions of credit.
Unemployment should peak at 10% by year's-end then
decline as the economy expands.**

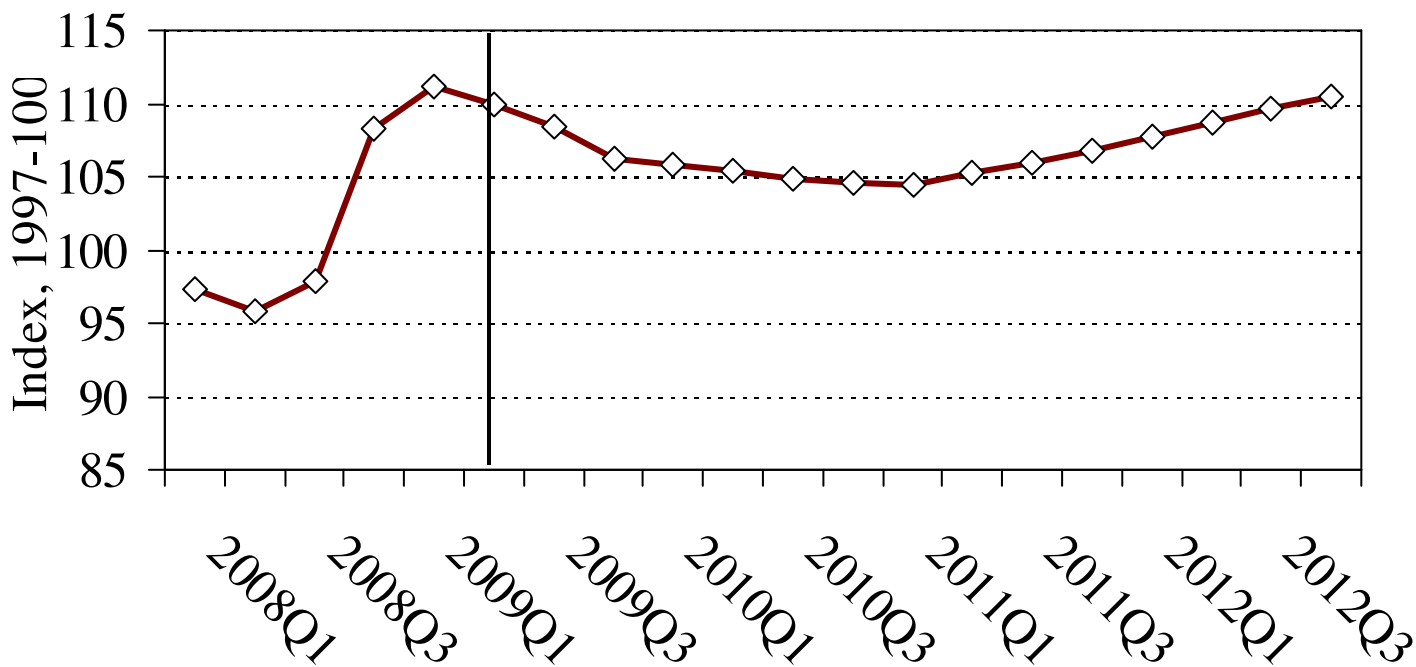


Source: LECG LLC; Moody's Economy.com

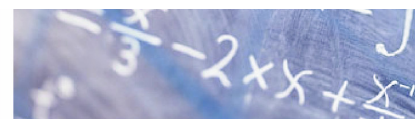


The U.S. dollar will weaken modestly through 2011 reflecting a large budget deficit. Recovery in the economy will eventually strengthen the dollar.

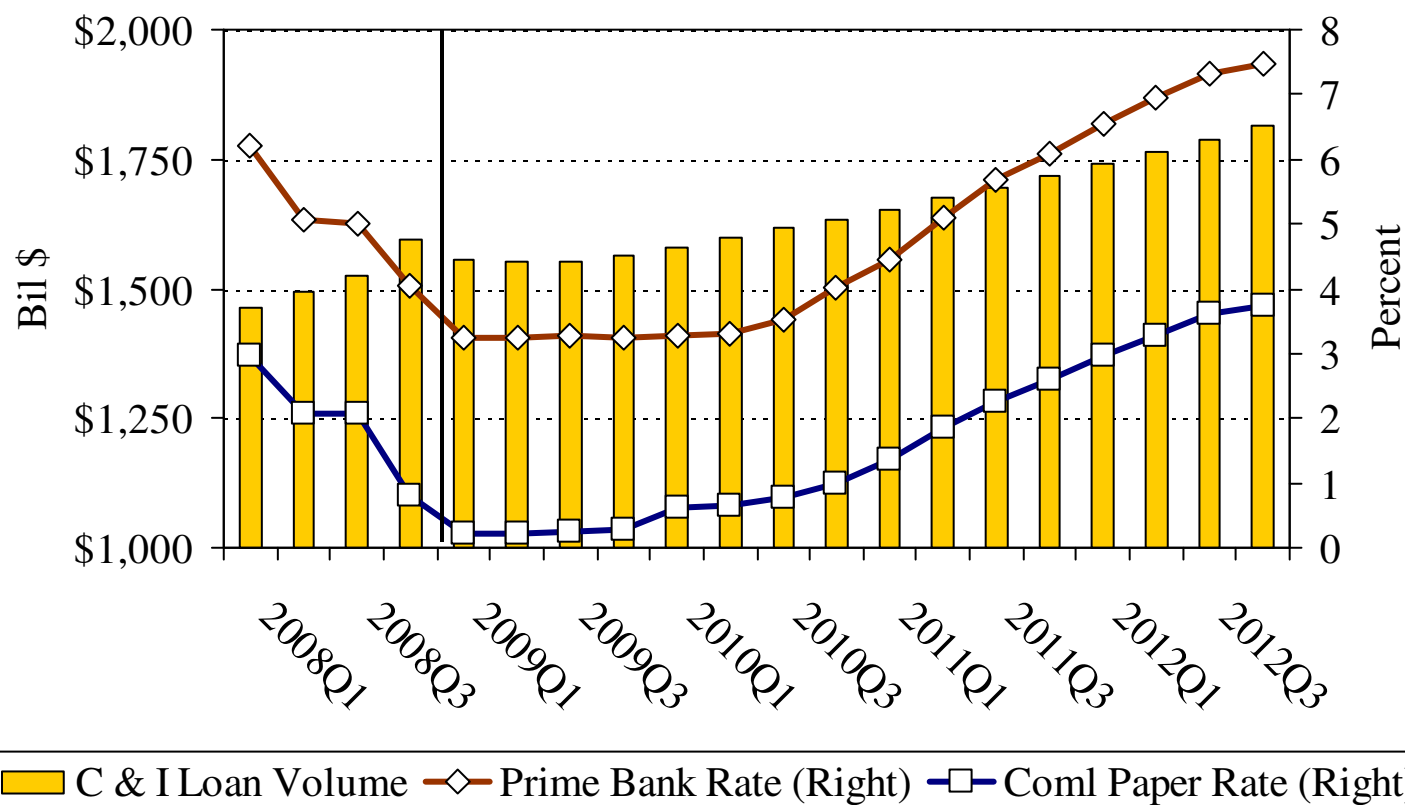
Weighted Avg U.S. Dollar, Broad Index



Source: LECG LLC; Moody's Economy.com



Commercial and industrial loan volume is expected to recover slowly improving credit availability. Interest rates will remain low through most of 2010.

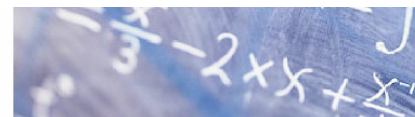


Source: LECG LLC; Moody's Economy.com



Admittedly this is an optimistic outlook. What can go wrong?





Upsides and downsides to the outlook

Upside Risks

- ❖ Improved consumer confidence that stimulates spending.
- ❖ A return to sanity to the financial system.
- ❖ Improved investor confidence
- ❖ Increased bank lending

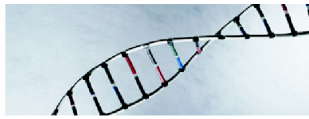
Downside Risks

- ❖ Failure of banks to begin lending
- ❖ Inability of Treasury to sell U.S. debt obligations.
- ❖ Deflation
- ❖ Another oil price shock



The economic outlook

- ❖ A deeper and longer recession with recovery in third quarter 2009 followed by modest growth in 2010.
- ❖ The stimulus plan will have more impact in 2010 than this year.
- ❖ Slowly improving credit and equity markets
- ❖ Strengthening of oil, gasoline, and ethanol prices by mid-year.
- ❖ EPA approval of higher ethanol blend levels, but not this year.
- ❖ No meaningful change to existing biofuels policy (RFS, VEETC, tariff)



Keys to a turnaround: What to look for

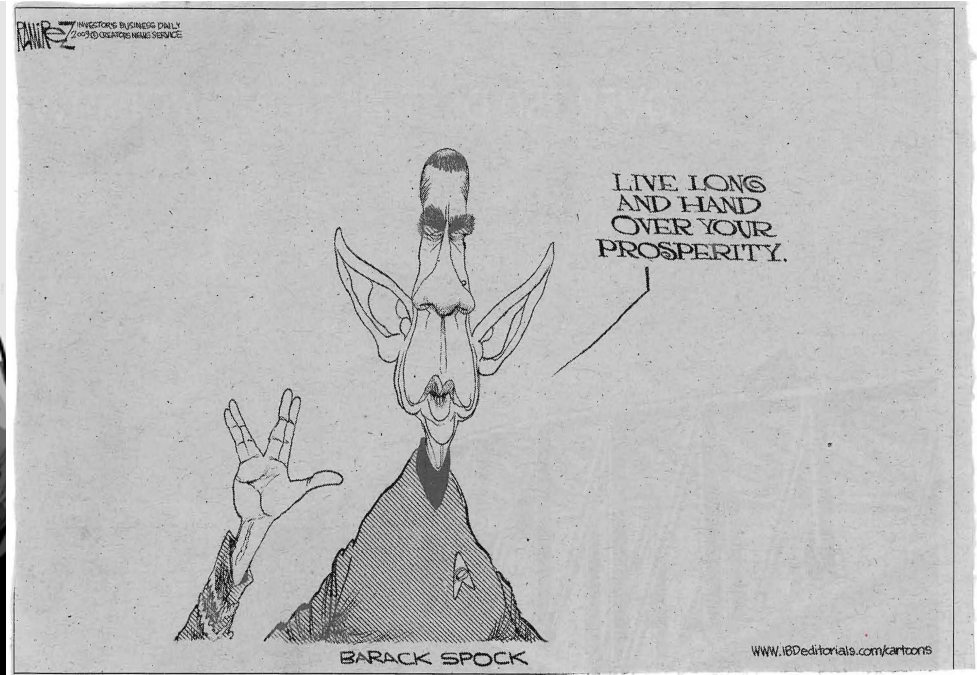
- ❖ Less negative media coverage of the economy
- ❖ Improved consumer confidence
- ❖ More traffic in local restaurants and malls
- ❖ Increases in new and existing home sales
- ❖ Improved investor confidence: an increasing DJIA



The road ahead for America?



10/10





Thank you! Questions?

