

Ethanol Industry – A Perspective from Wall Street

U.S. Machinery Equity Research

Ann Duignan^{AC}

Managing Director

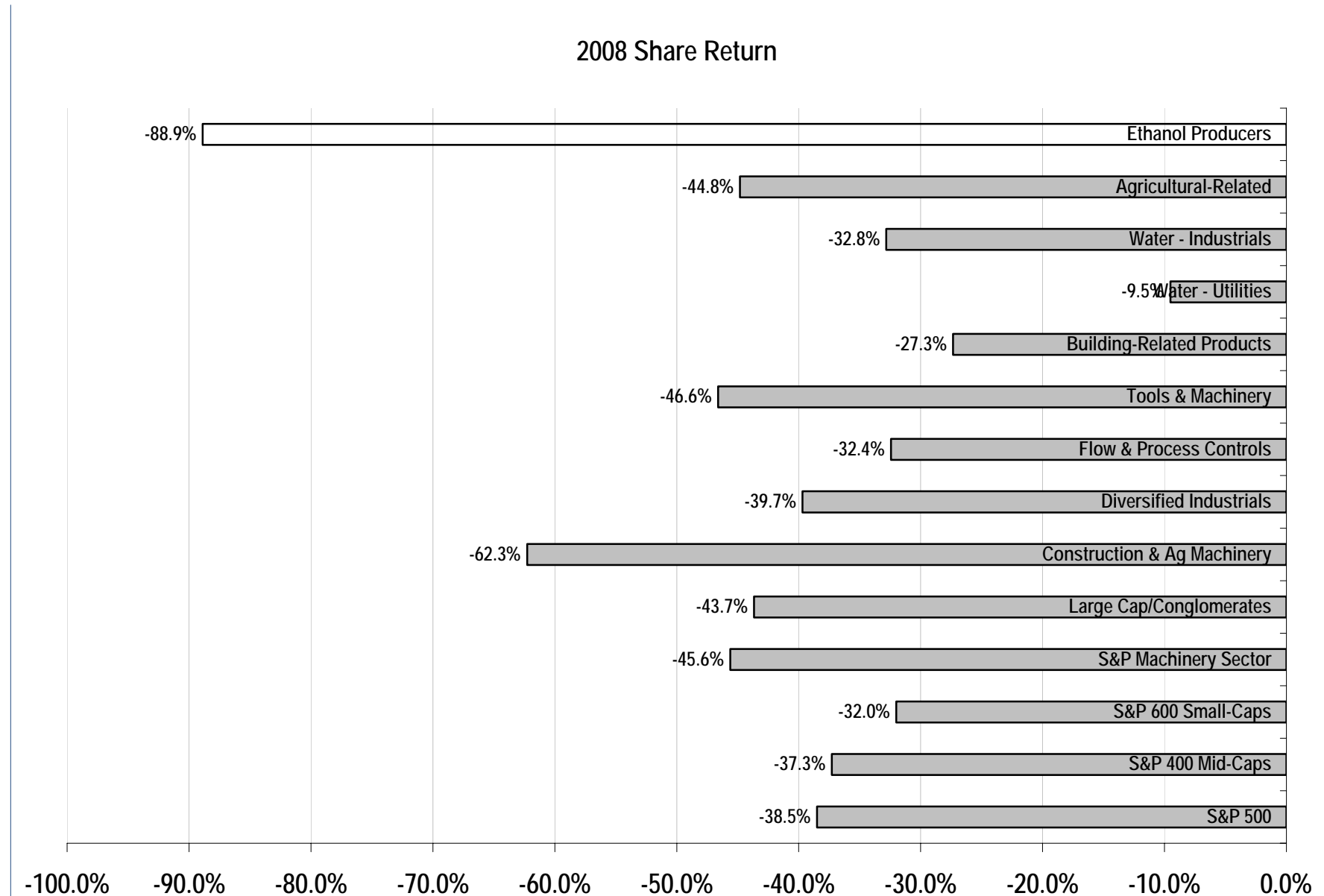
(1-212) 622-0381

ann.duignan@jpmorgan.com

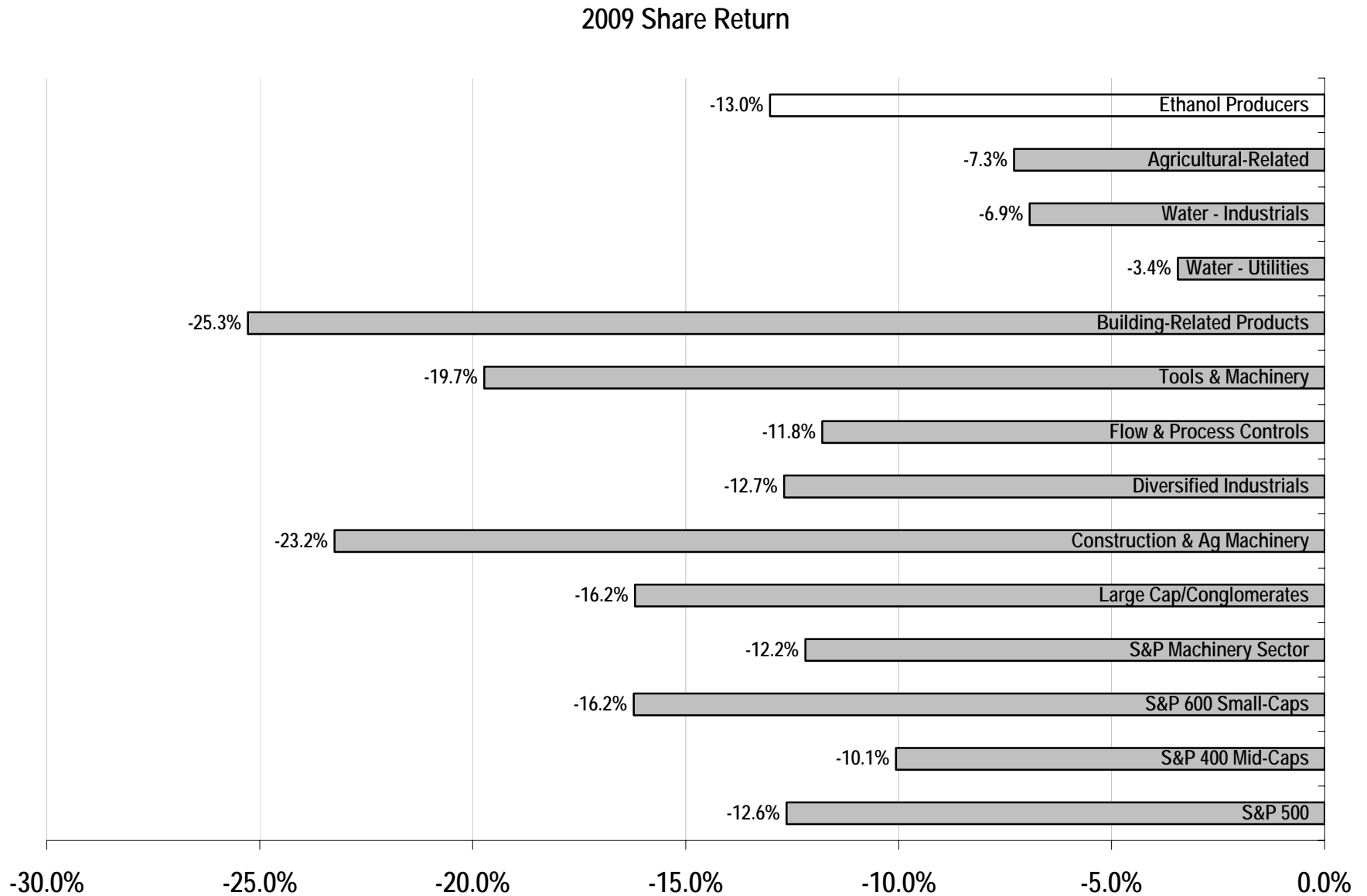
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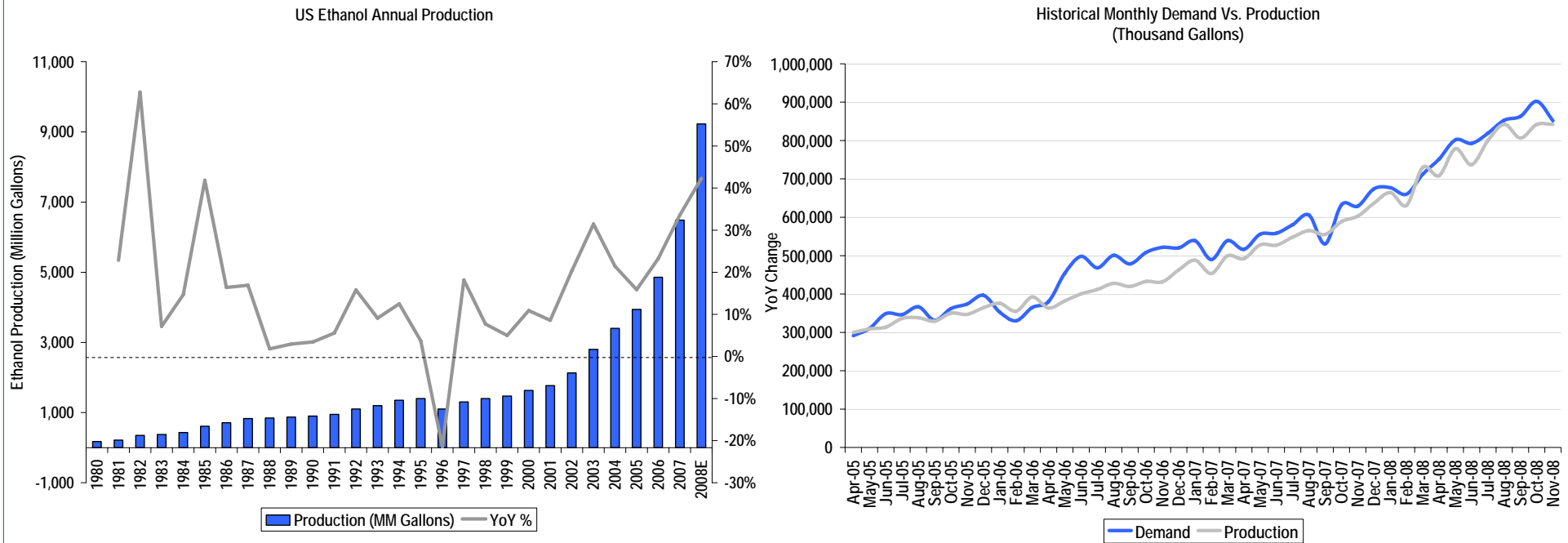
Ethanol Underperformed in 2008: Down -89% vs. S&P500 -39%



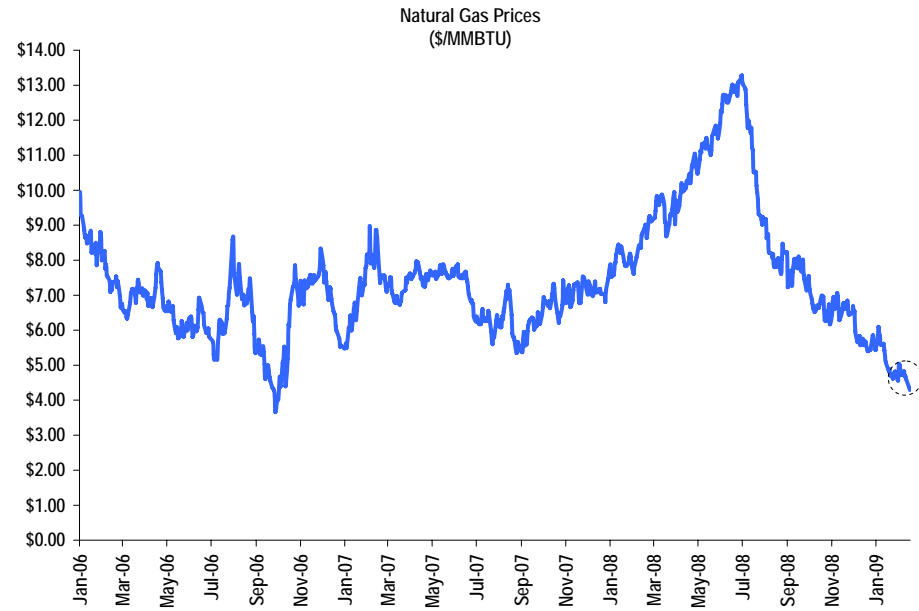
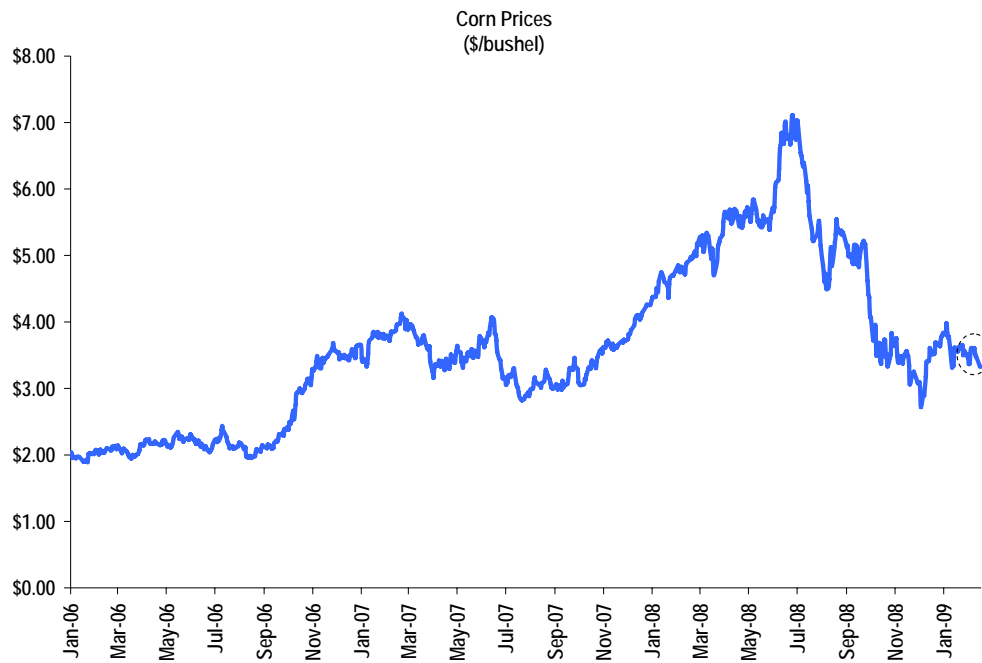
Sector in Line YTD 2009: Ethanol -13% vs. S&P500 -13%



The Ethanol Industry Has Come a Long Way

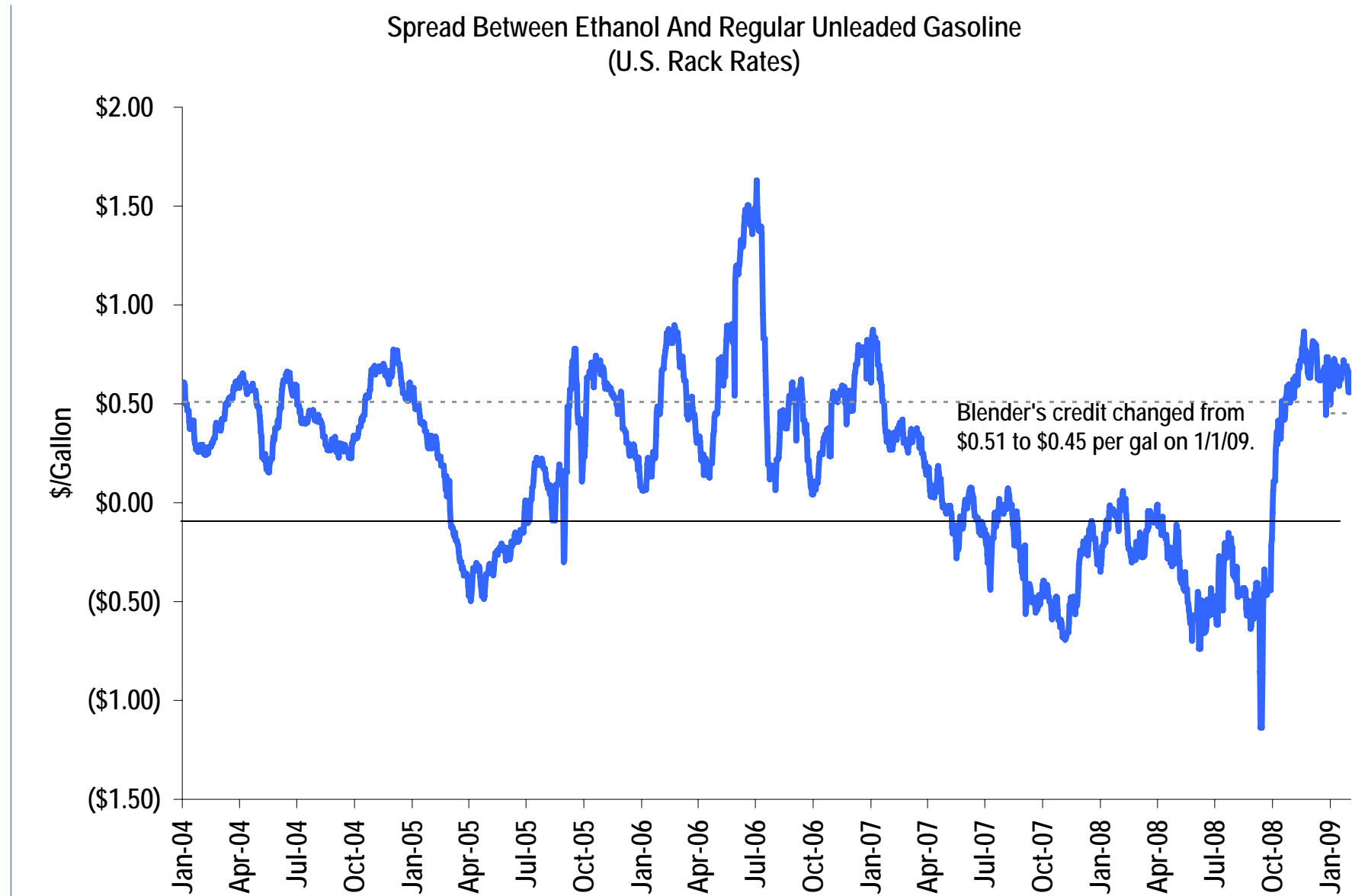


Input Costs Were Attractive – Initially



Source: Haver Analytics.

And the Spread Was Great for Producers



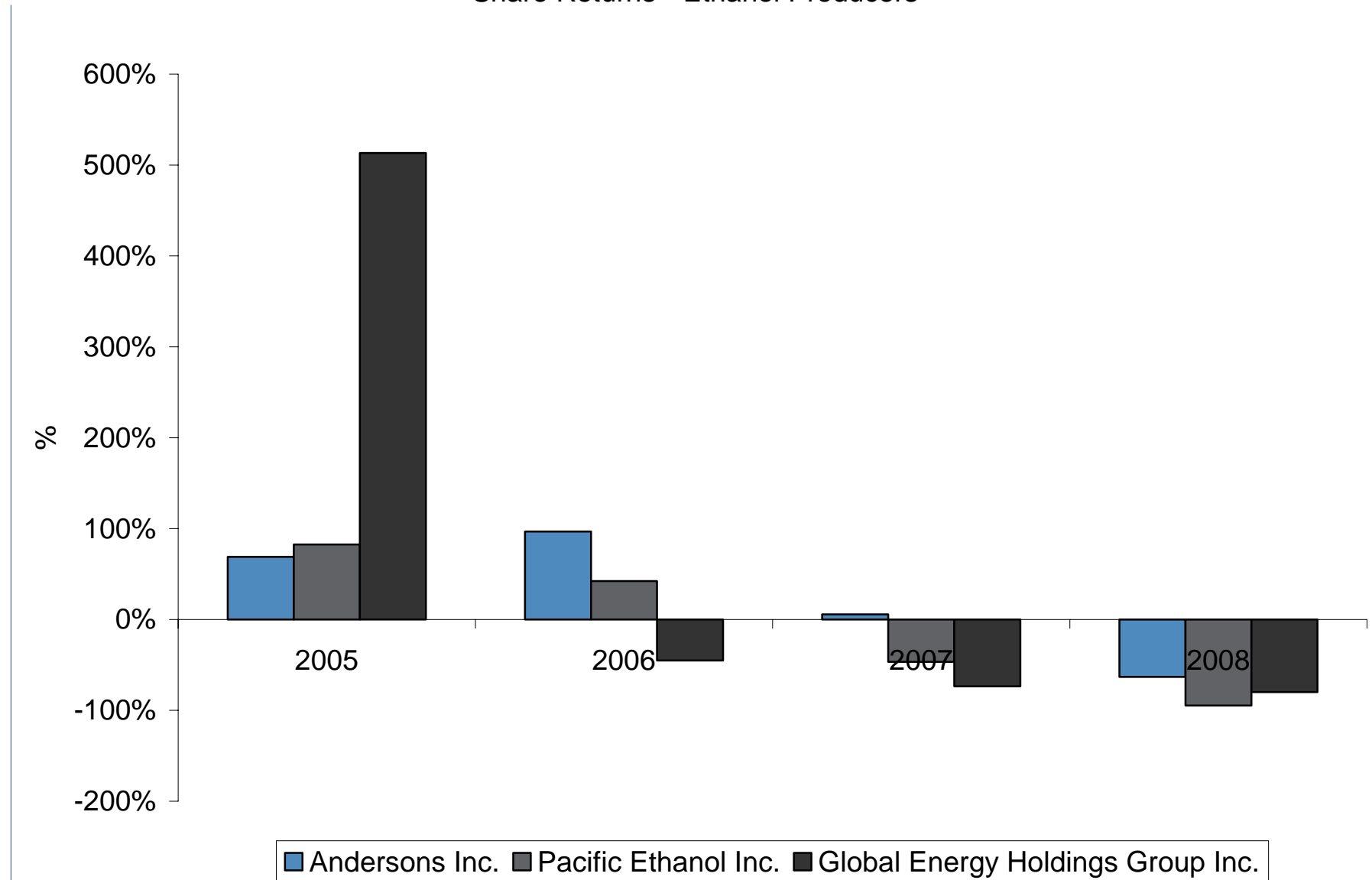
As a Result, Returns Were Extraordinary

Corn-based Ethanol: Gross Margin Analysis

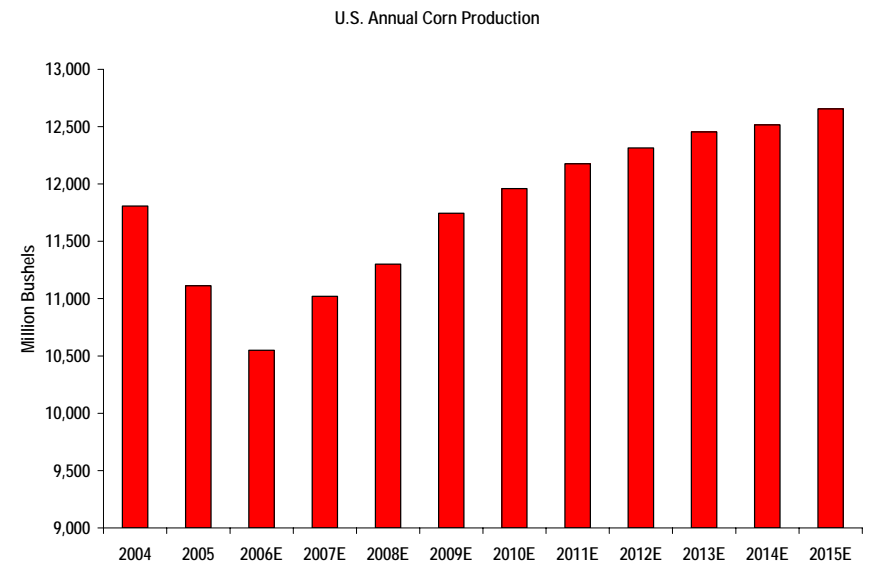
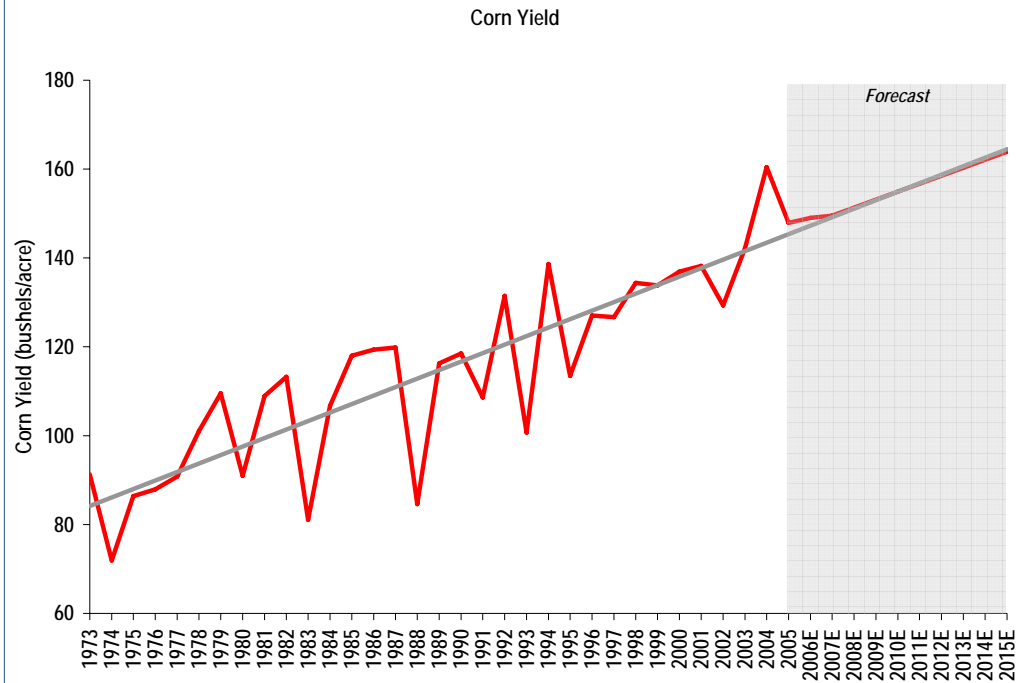
Corn Ethanol - Dry Mill - Today				Breakeven Corn Price				Breakeven Ethanol Prices			
Input:				Input:				Input:			
Corn (1)	1 bushel @	\$2.00	\$2.00	Corn	1 bushel @	\$11.00	\$11.00	Corn (1)	1 bushel @	\$4.00	\$4.00
Natural Gas (1)	0.155 mBtu @	\$9.00	\$1.40	Natural Gas (1)	0.155 mBtu @	\$9.00	\$1.40	Natural Gas (1)	0.155 mBtu @	\$9.00	\$1.40
Variable Production Cost per bushel			\$3.40	Variable Production Cost per bushel			\$12.40	Variable Production Cost per bushel			\$5.40
Ethanol Gallons per bushel			2.8	Ethanol Gallons per bushel			2.8	Ethanol Gallons per bushel			2.8
Variable Production Cost per gallon			\$1.23	Variable Production Cost per gallon			\$4.51	Variable Production Cost per gallon			\$1.96
Transportation (4)			\$0.12	Transportation (4)			\$0.12	Transportation (4)			\$0.12
Variable Input Cost per Gallon			\$1.35	Variable Input Cost per Gallon			\$4.63	Variable Input Cost per Gallon			\$2.08
Output:				Output:				Output:			
Ethanol (2)	2.75 gallons @	\$4.00	\$11.00	Ethanol (2)	2.75 gallons @	\$4.00	\$11.00	Ethanol	2.75 gallons @	\$1.50	\$4.13
DDGS (lbs) (3)	18 lbs.			DDGS (lbs) (3)	18 lbs.			DDGS (lbs) (3)	18 lbs.		
	0.008 tons @	\$185.00	\$1.51		0.008 tons @	\$185.00	\$1.51		0.008 tons @	\$185.00	\$1.51
Revenue per bushel			\$12.51	Revenue per bushel			\$12.51	Revenue per bushel			\$5.64
Ethanol Gallons per bushel			2.8	Ethanol Gallons per bushel			2.8	Ethanol Gallons per bushel			2.8
Revenue per Gallon			\$4.55	Revenue per Gallon			\$4.55	Revenue per Gallon			\$2.05
Gross Margins:			70.2%	Gross Margins:			-1.7%	Gross Margins:			-1.5%

And Investors Piled In

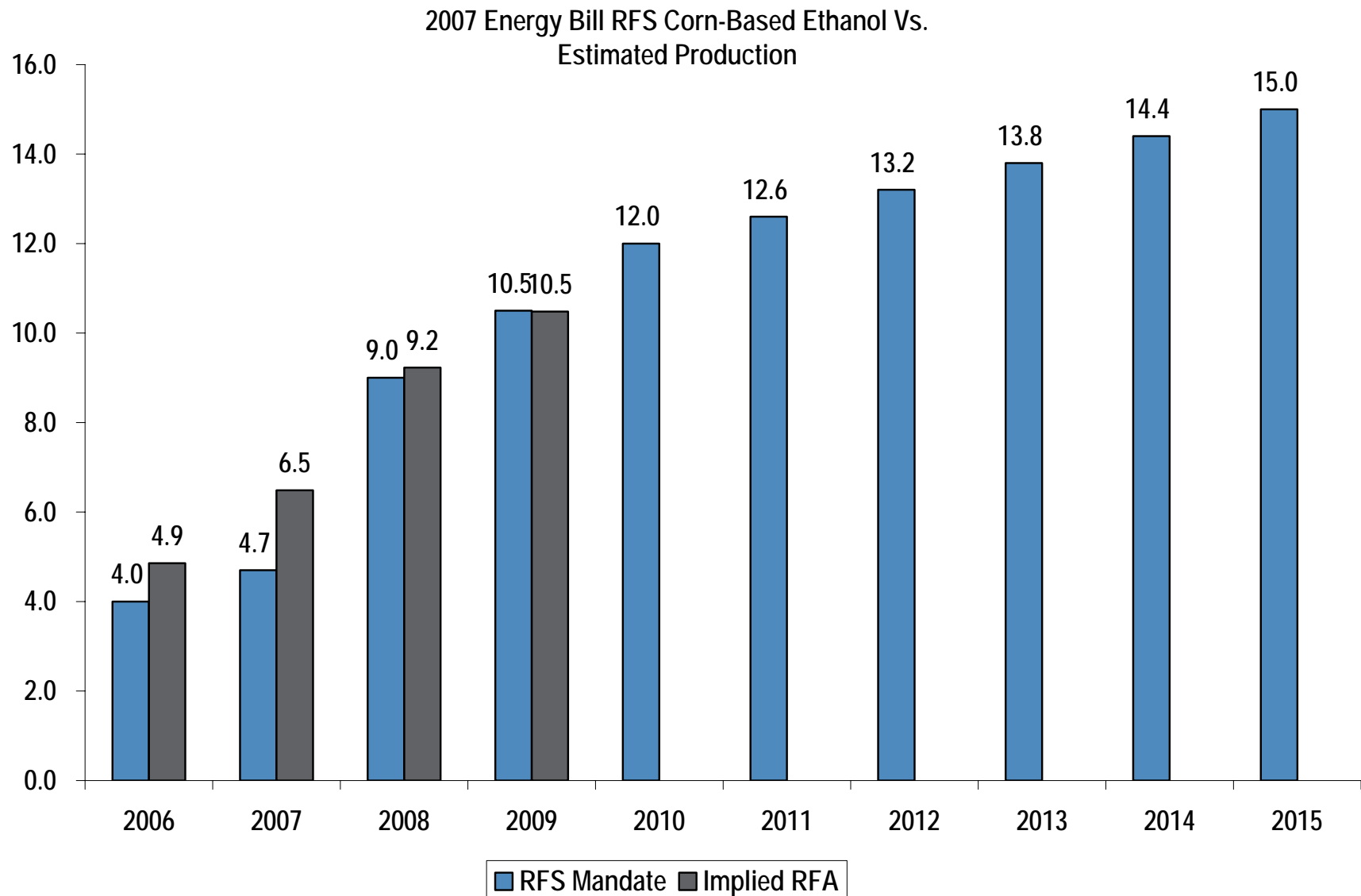
Share Returns --Ethanol Producers



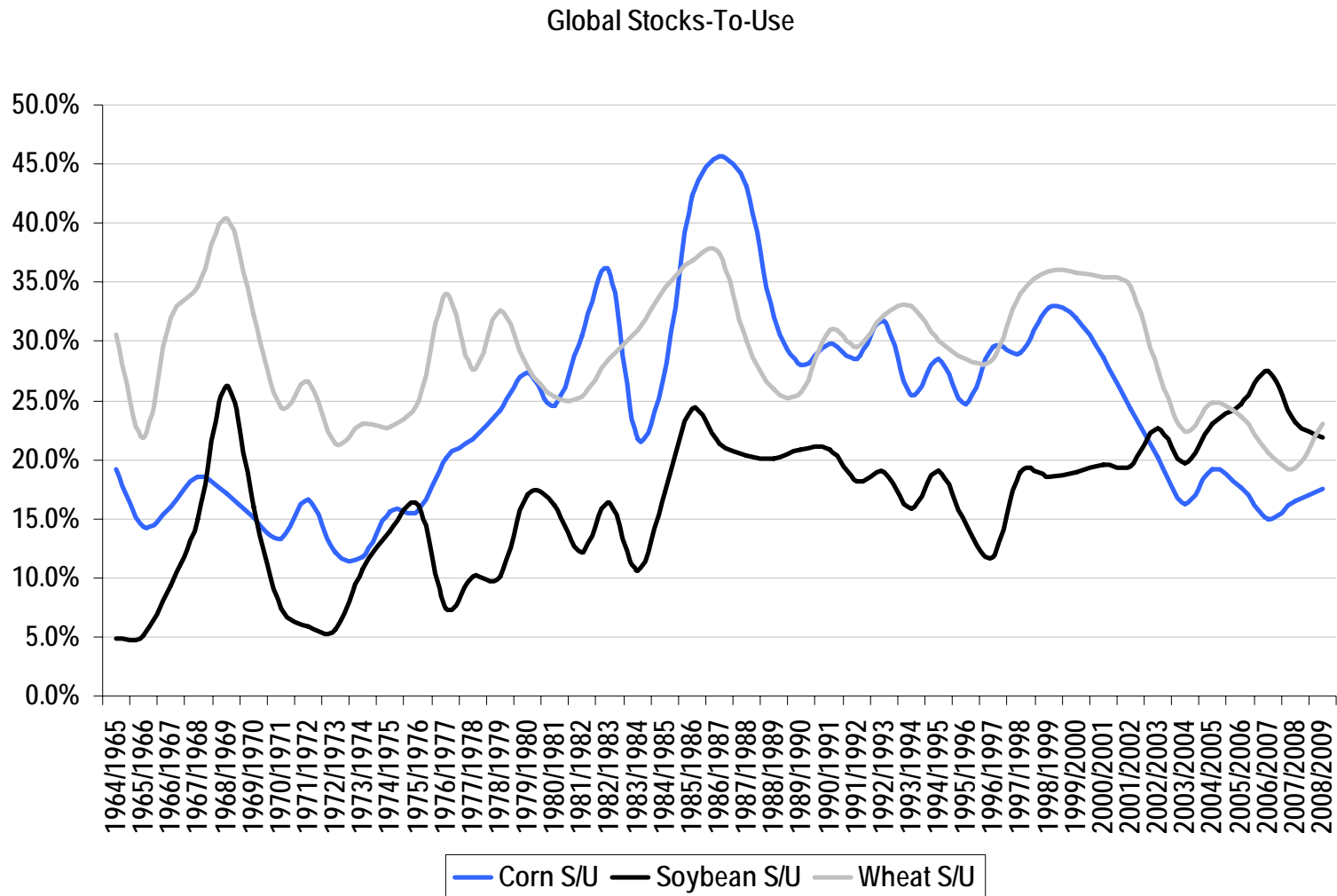
The Belief Was that Yields Would Support Greater Production



However, in Our View, No One “Policed” the Industry and Production Grew Too Rapidly



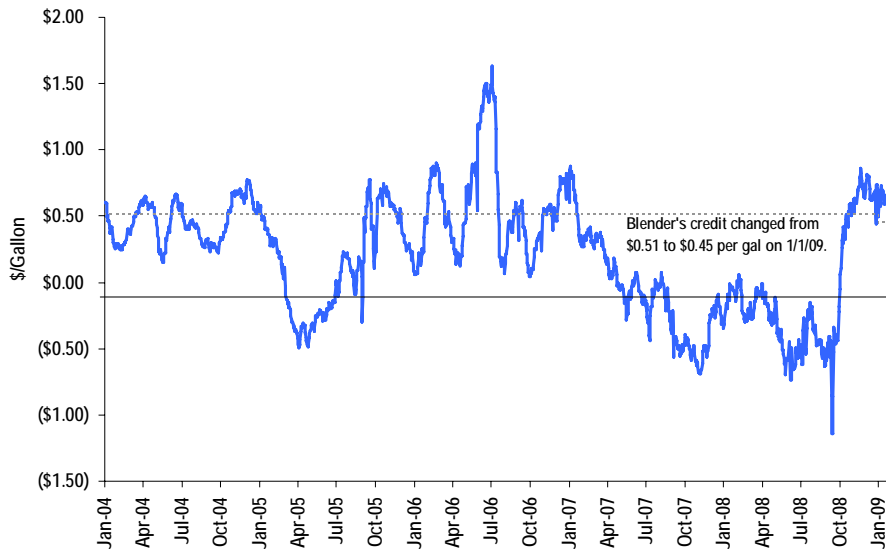
Agricultural Fundamentals Likely to Continue to Support Higher Prices



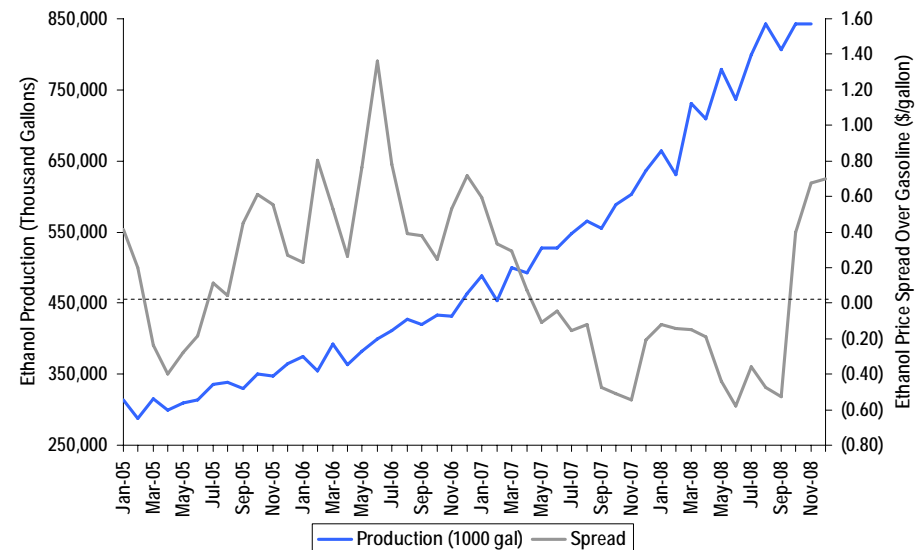
Coupled with Lower Oil Prices – No One Making Money Today

Corn Ethanol - Dry Mill - Today				Corn Ethanol - Dry Mill - Corn Breakeven Price				Corn Ethanol - Dry Mill - Ethanol Breakeven Price			
Input:				Input:				Input:			
Corn (1)	1 bushel @	\$3.33	\$3.33	Corn	1 bushel @	\$3.63	\$3.63	Corn (1)	1 bushel @	\$3.33	\$3.33
Natural Gas (1)	0.165 mBtu @	\$4.29	\$0.71	Natural Gas (1)	0.165 mBtu @	\$4.29	\$0.71	Natural Gas (1)	0.165 mBtu @	\$4.29	\$0.71
Variable Production Cost per bushel			\$4.04	Variable Production Cost per bushel			\$4.34	Variable Production Cost per bushel			\$4.04
Ethanol Gallons per bushel			2.8	Ethanol Gallons per bushel			2.8	Ethanol Gallons per bushel			2.8
Variable Production Cost per gallon			\$1.47	Variable Production Cost per gallon			\$1.58	Variable Production Cost per gallon			\$1.47
Transportation (4)			\$0.29	Transportation (4)			\$0.29	Transportation (4)			\$0.29
Variable Input Cost per Gallon			\$1.76	Variable Input Cost per Gallon			\$1.87	Variable Input Cost per Gallon			\$1.76
Output:				Output:				Output:			
Ethanol (2)	2.75 gallons @	\$1.53	\$4.21	Ethanol (2)	2.75 gallons @	\$1.53	\$4.21	Ethanol	2.75 gallons @	\$1.42	\$3.91
DDGS (lbs) (3)	18 lbs.			DDGS (lbs) (3)	18 lbs.			DDGS (lbs) (3)	18 lbs.		
	0.008 tons @	\$114.00	\$0.93		0.008 tons @	\$114.00	\$0.93		0.008 tons @	\$114.00	\$0.93
Revenue per bushel			\$5.14	Revenue per bushel			\$5.14	Revenue per bushel			\$4.84
Ethanol Gallons per bushel			2.8	Ethanol Gallons per bushel			2.8	Ethanol Gallons per bushel			2.8
Revenue per Gallon			\$1.87	Revenue per Gallon			\$1.87	Revenue per Gallon			\$1.76
Gross Margins:			5.9%	Gross Margins:			0.0%	Gross Margins:			0.1%

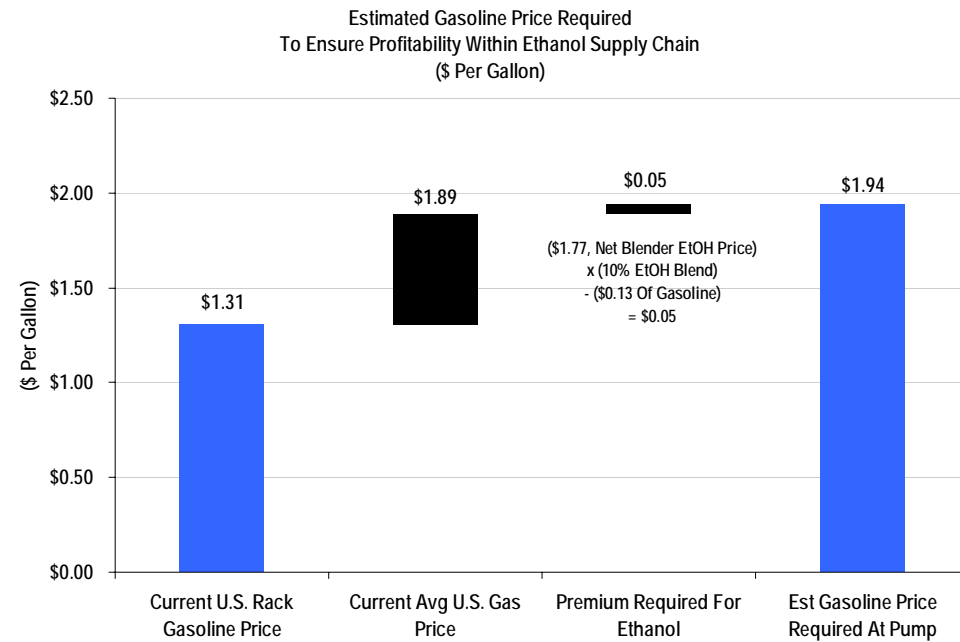
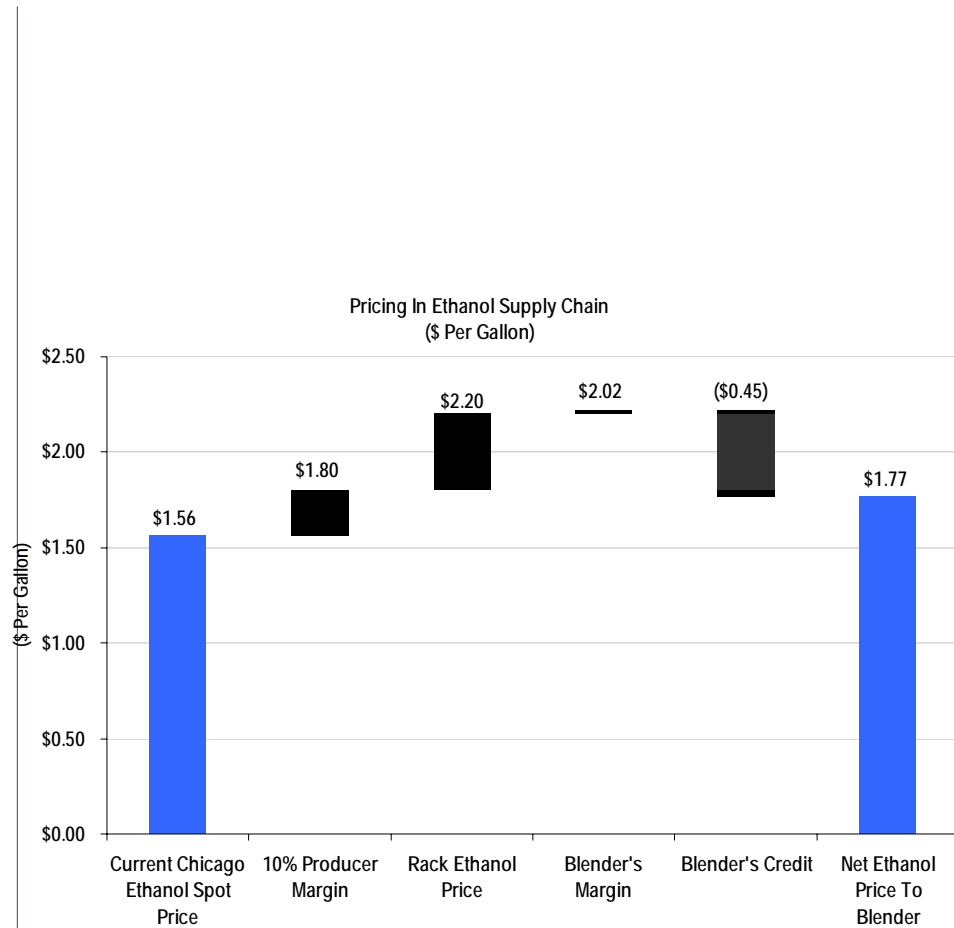
Spread Between Ethanol And Regular Unleaded Gasoline (U.S. Rack Rates)



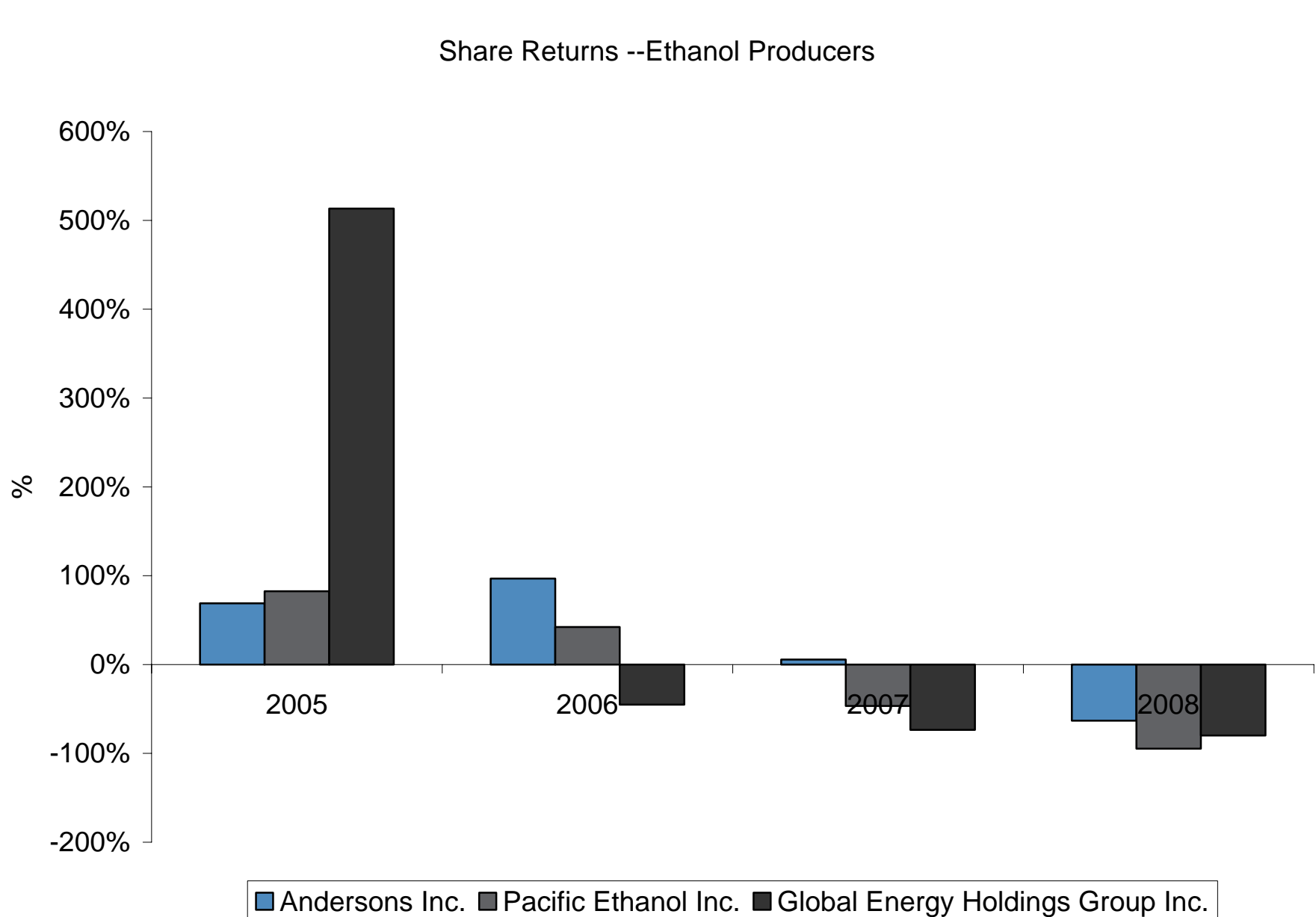
Ethanol Production vs. Ethanol Price Spread Over Gasoline



Ethanol Will Likely Have to Trade Higher Long Term and Consumers Pay the Price – How Realistic Is This??



. . . As A Result, Memories Are Likely to Be Focused on Recent History – It Will Likely Be Tough to Get Investors Back



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