

St. John's University
Undergraduate Student Managed Investment Fund
Presents:
The Mosaic Company: MOS



Analysts:

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Share Data:

Price (5/12/08): \$126.99
Shares Outstanding: 443.6M
Market Capitalization: 56.4B
Beta (adj.): 1.126
52 Week High: 143.32
52 Week Low: 29.08

P/E (5/12/08): 37.13
Forward P/E: 19.97
Diluted EPS, 2007: 0.95
Diluted EPS, 2008(E): 3.42
Diluted EPS, 2009(E): 6.36



Executive Summary

After a thorough analysis of The Mosaic Company, we are recommending the purchase of 100 shares of common stock at the current market price. Mosaic is the world's largest fertilizer mining company (or the leading producer of crop nutrients) operating in seven different countries worldwide. They are vertically integrated and carry their operations through all the stages of fertilizer development. The company has rapidly been improving its free cash flows since being founded in 2005. It is quickly moving towards and investment grade rating by Standard & Poor's. According to Mosaic's conference call after releasing third quarter fiscal year 2008 earnings, two of the company's main goals in the near term are to issue dividends and buyback shares. It was rated the #1 performing Fortune 500 company for 2007-2008.

Our proposed purchase of 100 shares will equate to 1.00% of the SMIF's equity holdings and 0.75% of the total SMIF Portfolio. Currently the SMIF only holds two equities in the materials sector including an exchange traded fund. Our relative and absolute valuations show that despite the stock's great past performance, it is still undervalued and is deemed a "buy."

Key Executives

James T. Prokopanko- President and Chief Executive Officer

Norman B. Beung- Senior Vice President, Potash Operations

Richard L. Mack- Senior Vice President- General Counsel; Corporate Secretary

Richard N. McLellen- Senior Vice President- Commercial

Steven L. Pinney- Senior Vice President- Phosphate Operations

Cindy C. Redding- Vice President- Human Resources

Lawrence W. Stranghoener- Executive Vice President and Chief Financial Officer

Linda K. Thrasher- Vice President, Public Relations

Company Overview:

History

The Mosaic Company was officially listed on the New York Stock Exchange October 25, 2004 as a combination between branches of IMC Global, Inc., and Cargill Crop Nutrition. Although it is a relatively new company, its parents, IMC and Cargill, date back 100 years and 40 years respectively in the agriculture chemical industry. Cargill remains Mosaic's largest shareholder with a majority stake of approximately \$35 Billion. The company's corporate headquarters are in Minneapolis, Minnesota.

Operations

Mosaic's business is to increase crop yields and livestock nutrition. Mosaic's nutrients are considered essential to the farming industry increasing crop yields by 200-400%.

Business Segments:

- Diammonium- Phosphate-(DAP) 52% of sales (Fiscal Year 2007)
 - o #1 producer in the world of phosphoric rock and finished phosphate fertilizer. It operates mines and production facilities in Florida and Louisiana generating an annual capacity of 9.4 Million Tonnes of finished phosphate and 15.5 MT of phosphoric rock. Its global market share of phosphate is approximately 16%; larger than its next three competitors combined.
 - o Through the first three quarters of fiscal year 2008, phosphate revenues have totaled \$3.67 billion.
- Potash- (K)- 24% of sales (Fiscal Year 2007)
 - o #2 producer in the world of potash. Operates the world's largest potash mine in Esterhazy, Canada. In total, potash annual capacity is 11.7 MT or about 15% of the global market share.
 - o Revenue through the first three quarters of fiscal year 2008 have totaled \$1.39 billion.
- Off-Shore- 22% of sales (Fiscal Year 2007)
 - o Key to Mosaic's vertical integration is their shipping and distribution network. It operates in seven different countries such as Chile, Brazil, United States, China, Argentina, Mexico, and Canada in order to quickly and effectively get the highest price for their products.
 - o Revenue through the first three quarters of fiscal year 2008 have totaled \$1.53 billion.
- Corporate and Nitrogen: 2% of sales (Fiscal Year 2007)
 - o Nitrogen was eliminated as a separate business line in 2008 but Mosaic continues to offer nitrogen products through its 50% stake in nitrogen producer Saskferco Products.
 - o Revenue in corporate and nitrogen segment has totaled \$-244 million through the first three quarters of 2008.

Specialty Products

Within each business segment, Mosaic offers a diverse range of products to meet and satisfy customer's growing agriculture chemical needs. Among these products are:

- Animal Feed- one of the leading suppliers of the three nutrients for animal feed in the industry. The majority of this business comes from Southeastern poultry producers in the United States located near the Florida and Louisiana mines
- Industrial Potash- Mosaic processes potash so it can be used in over 100 different products including glass manufacturing, batteries, soaps, dyes and fertilizers
- K-Mag- largest specialty fertilizer brand used primarily by fruit and vegetable growers used by farmers in Latin America and Asia
- MicroEssentials: extra-processed with added sulfur fertilizer with three patented versions
- Fluorosilicic Acid- the #1 world producer of this product used for water fluoridation with minor applications in silicon chips and solar panels
- Industrial Urea- nitrogen based product used for emission reduction. Represents a very niche market with fast growth prospects.

Altogether Mosaic's products and services include:

- 10 Phosphate Products
- 20 Potash Products
- 4 Nitrogen Products
- 8 Animal Feed Products
- 5 Industrial Products

Competitive Strategy

Mosaic's strategy focuses around vertical integration. It develops fertilizer through all the stages of production which include mining pure phosphoric/potash rock, developing the raw materials into finished product, blending specialty products, and shipping their finished goods worldwide. By operating their own rock mines, Mosaic avoids buying its raw materials on the open market which can go for prices double or triple the cost of extracting the material themselves. Mosaic also blends its own custom brand products in plants around the world including Chile, Argentina, China and Brazil. Finally, Mosaic quickly and effectively links their worldwide business network with their shipping division. From top to bottom, the company's vertically integrated chain is quick to deliver products to its customers.

Recent Developments

After reporting third quarter fiscal year 2008 earnings, Mosaic officially announced its plan to expand its potash capacity. The plan, which will take 12 years from 2008-2012,

will increase potash capacity at their largest plant, in Canada, by about 50% from 10 Million Tonnes to 15 MT.

In April 2008, Mosaic signed a contract with Canopotex, China to deliver 1 Million Tonnes of Potash to China by the end of 2008. The contract will increase Mosaic's average selling price of potash for the year.

Financial Strategy

Mosaic has increased free cash flow from \$-13M in 2004 to \$540M in 2007. Through the first three quarters of 2008, its free cash flow has been \$1,300M. They are rapidly prepaying their debt obligations reducing total debt from \$2,572M as of third quarter fiscal year 2007 to 1653.3M as of third quarter fiscal year 2008. This \$900M deduction in total debt is part of management's objective of increasing the credit rating of the company in an effort to move to investment grade. Once credit is upgraded, the company has stated intentions to issue dividends. A dividend policy would be a key addition to a commodity based company like Mosaic. Management has also stated their intentions to begin a share buyback program in the near future.

Industry Overview:

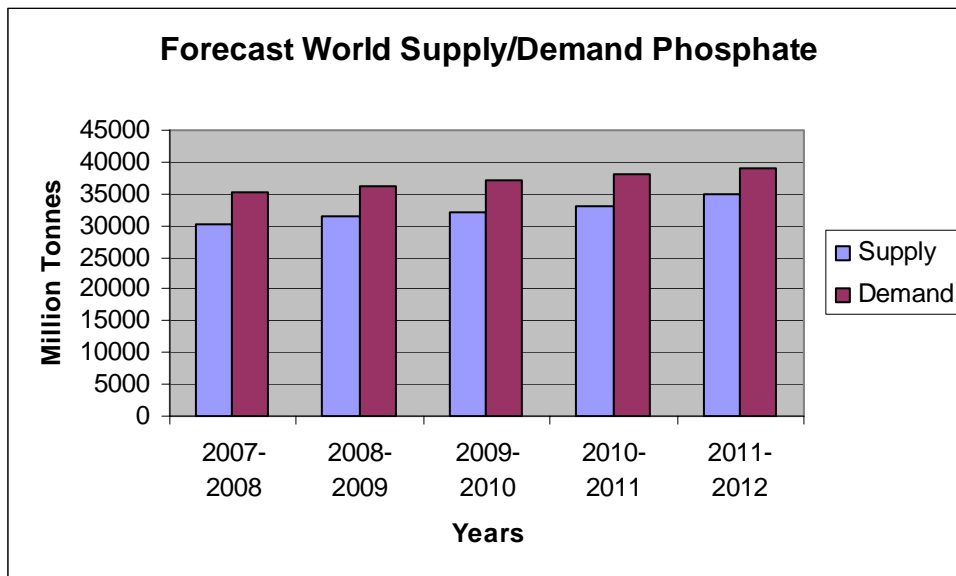
Mosaic operates in the Agriculture Chemical industry which is a highly specialized sub division of the chemicals industry. Mosaic can also be considered a mining company because it operates and mines phosphoric rock and potassium.

Worldwide

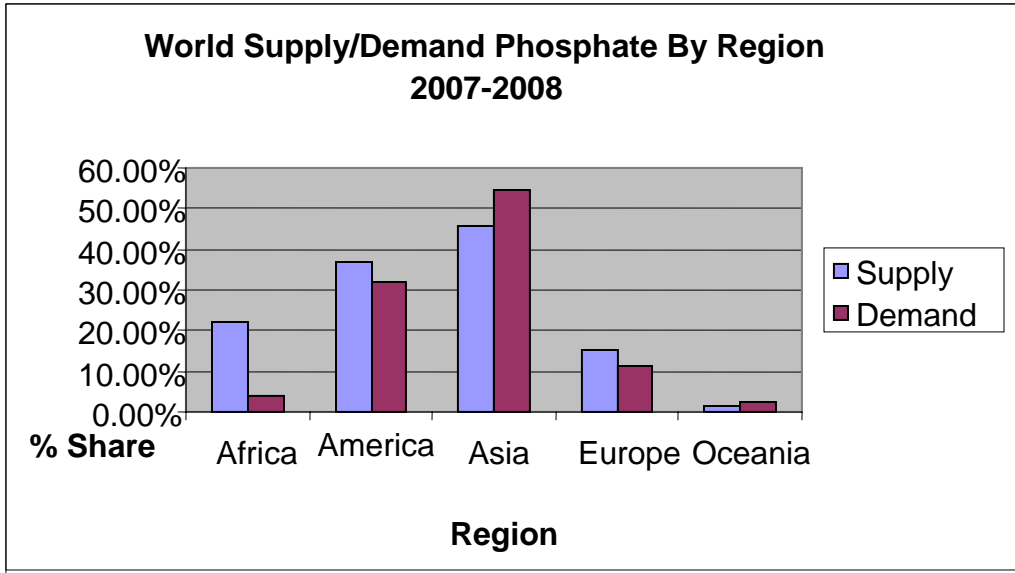
According to statistics provided by the International Fertilizer Association:

- Fertilizer supply and demand balance is predicted to be tight for the next five years. Some regions of the world are more naturally endowed with rock deposits than others so some countries may be purely importers of nutrients or both exporters and importers. For countries with little domestic supply, spot prices of nutrients are forecasted to continue increasing exponentially.

Phosphate by Region:

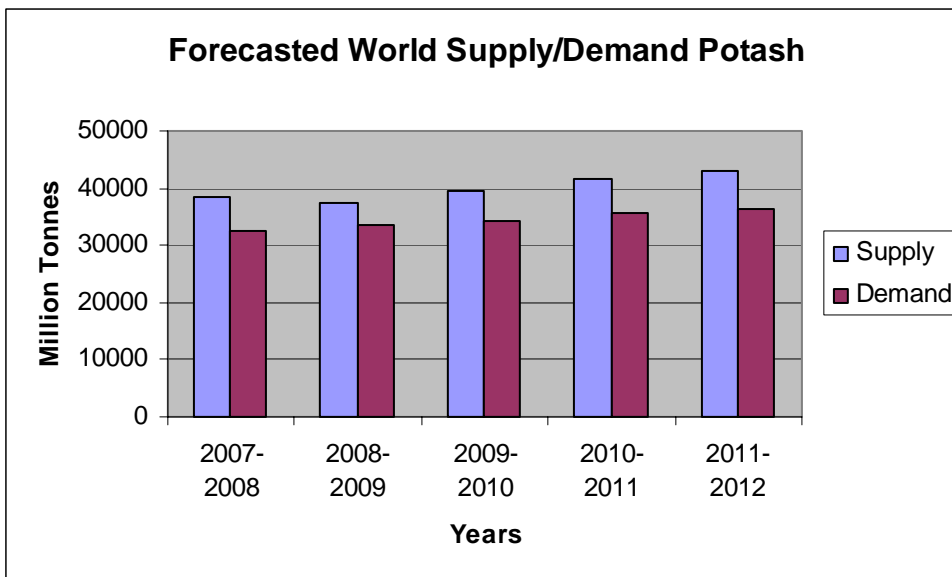


Demand is forecasted to outstrip supply for each of the five years from now through 2012. Annualized supply growth of phosphate is projected at 2.78% while demand is projected to grow at a slightly slower 2.05% annually. The gap between demand and supply is forecasted to narrow slightly, but still operate at a deficit in 2012.



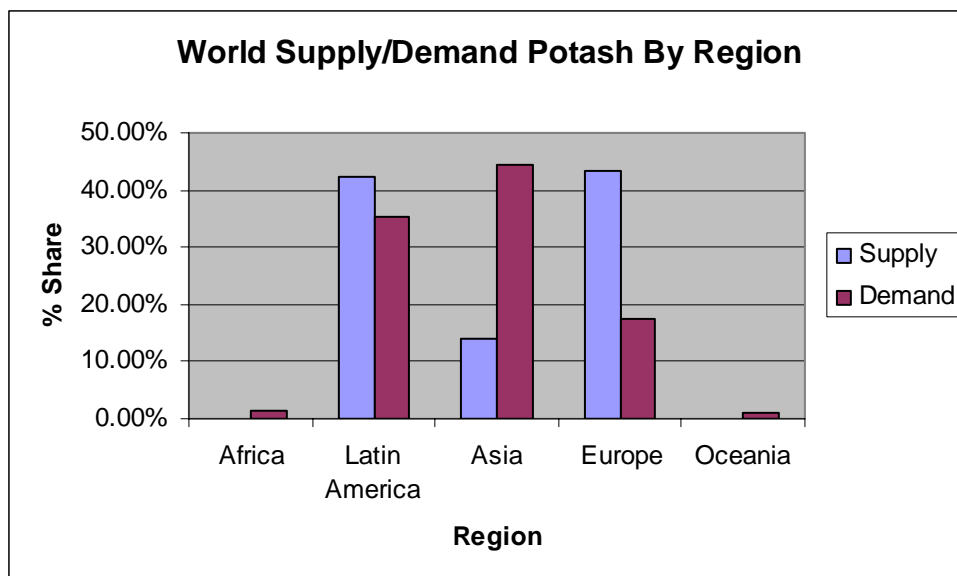
The largest regional supplier and user of phosphate is Asia consuming over half of the world's supply and producing over 45% of the world's crop nutrients. America is second producing slightly more than the necessary domestic consumption and exporting the difference. Africa is a large net supplier of phosphate but not a large user. Europe's domestic situation is similar to that of America while Oceania operates at a deficit-demanding 60% more phosphate than they produce.

Potash by Region:



Potash production outweighs demand at the current time and this situation is expected to remain somewhat constant in the near future. Supply is expected to increase 2.41%

annually for the next five years while demand is forecasted to grow slightly less at 2.22% annually.



By region, Asia is the largest user of Potash; demanding nearly 45% of total world production but only supplying about 15%. The Americas and Europe are the largest suppliers, producing 80+% of global supply. Both Africa and Oceania are entirely dependent on imports for Potash as their domestic industries supply none.

Chinese Fertilizer Industry

Asia is the only region operating their fertilizer industry at a deficit. In early 2000, China began developing its agriculture chemicals industry and became a large net exporter of nutrients. In an effort to ensure enough domestic supply of fertilizer, China has imposed a tariff of first, 30% on all exports as of February 15, and recently in April 2008 increased the tariff to 130%. China supplied nearly one-third of the world's nutrients before curbing its exports significantly by enacting the aggressive tariffs. By removing their production from the global marketplace, there is a greater deficit to other regions like Europe and Oceania.

Factors for Strong Agriculture Industry

The recent strength in the agriculture sector has been a major boost to the fertilizer industry. Demand for crops such as Wheat, Corn and Soybeans are at or near historical

highs while supply of these crops near or break through historical lows. The robust growth in the farm industry has driven the fertilizer industry into a new direction. As the world faces increased growth in farming, fertilizers soon follow. There are primarily two reasons for this recent strength in agriculture:

- 1- As developing countries become richer, citizens move towards more protein rich diets and demand more food.
 - a. It takes more grain to feed livestock to make various meat products, than it does to feed a person. With explosive growth in the economies of China, India, and Brazil in recent years, billions of people are changing their diets and demanding a diverse range of foods, pulling up global food prices. Total meat consumption quintupled from 1970 to 2005 and is expected to rise another 50% by 2030.
 - b. This type of price pull inflation is described as demand-pull. It is a sustainable move in prices because it sets a new floor price for crops like soybeans, wheat, and corn.
- 2- The ethanol bio-fuels movement is fast moving corn crops away from people's diets and putting it elsewhere.
 - a. This new bio-fuel market further increases the demand for crops during a time that is already seeing large shortages. As farmers convert acreage from other crops to corn, shortages of food products of wheat and soybeans increase- continuing to push up prices.

As food stockpiles continue to decrease, farmers increase acreage and seek to increase crop yields to meet growing world demand and capitalize on high prices. As prices rise, they can afford more fertilizer to do this- and fertilizer is the product that enables them to increase crop yields. This creates a huge increase in the demand for fertilizer. Nutrient producers, like Mosaic, are set in output and capacity in the short run. Simply: there is not enough phosphoric rock and potash in the world to meet the growing needs of farmers. This gap between supply and demand is responsible for pulling up the selling prices of phosphate and potash in the last 12 months.

Michael Porter Five Forces Model:

Rivalry: Low

The 4 top phosphate and potash producers dominate the market and Mosaic is among the top of them. Rivalry seems to be low because it is a near oligopoly. Canpotex Limited, the world's largest supplier of potash is a joint venture between Mosaic, Agrium Company, and Potash Corporation of Saskatchewan. The five largest fertilizer companies supply nearly 25% of global need. While this global market share may not seem significant, these few companies are the select ones with the sufficient infrastructure and revenue to connect with the global markets. Countries who cannot meet supply needs from their domestic fertilizer industry, will have a high probability of having to do business with one of these companies.

Threat of New Entrants: Extremely Low

The cost to gain access to a new mine/deposit of phosphate costs \$500 million upfront with an estimated \$2.5 billion over a 5 year period to develop the mine and establish the necessary infrastructure. Costs are similar for potash as well. Such high costs provide a huge barrier to entry and protects the much larger firms like Mosaic.

Threat of Substitute Products: Medium

Potash and phosphate are considered essential ingredients to the farming industry in that they maximize crop yields. The International Plant Nutrition Institute cites Potash as being critical in reaching the attainable yield potential of wheat and phosphorous nutrition should be a major part of farm management's programs. Mosaic offers 10 different specialized phosphate products as well as 20 different general and specialized potash products.

Because fertilizer is largely a commodity-based business, there are substitutes for companies purchasing pure phosphoric rock and potash from Mosaic. Commodities by nature are easily substitutable, but Mosaic protects itself against this by offering a diversified line of specialty products.

Bargaining Power of Suppliers: Low

The highest costs to Mosaic are production costs such as oil and natural gas/ammonia. These resources go directly into the production process. Because these are purely commodity products, Mosaic can go to whatever producer gives them the best price, so suppliers do not have a lot of bargaining power. Secondly, as the prices from suppliers rise, Mosaic is able to pass these costs off to their customers by simply increasing future contract prices and avoid a major loss to margins.

Bargaining Power of Buyers: Medium

Buyers can lock in to contracts to avoid the rising prices of finished phosphate and potash as well as pure phosphoric rock. It is not until these contracts expire that Mosaic can charge the higher world prices for their goods. But because the supply of phosphate and potash is so limited, buyers have little choice but to pay the prices for these goods. Because of the scarcity of fertilizer currently, buyers have little bargaining power. During surplus times their power will increase.

Risks:

A dramatic pullback in crop prices would cause farmers to cut active acreage and begin lowering their production. Consequently, fertilizer prices would fall sharply in response to this pullback. We, however, do not see a sharp drop in crop prices in the future. Adverse price moves are possible and will occur, but because of the demand pull

situation (from increased global consumption) a new price floor on crops has been set cushioning both the agriculture and chemical industry from a major collapse. The overall trend is for crop prices and fertilizer prices to continue increasing over the long term.

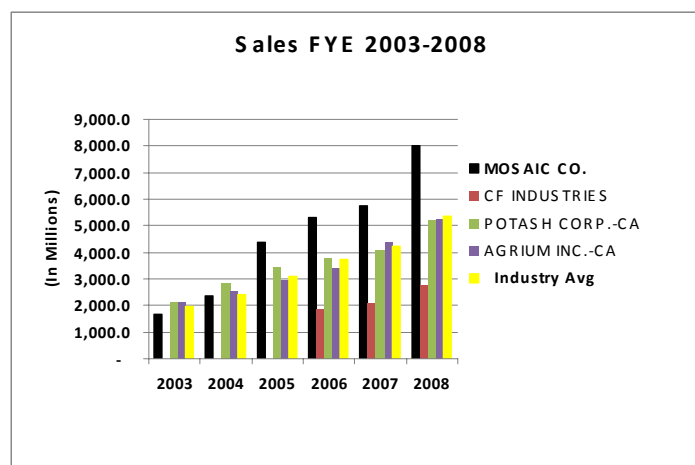
Secondly, costs that go into extracting and finishing phosphoric rock and potash have risen sharply. Higher natural gas prices over the last few years severely affect the cost of Mosaic's other raw materials -- ammonia and sulfur. Further, rising oil prices have made shipping fertilizer more expensive, threatening to further cut into margins. Because of the strength of the top firms in the industry, they are able to pass costs off to their customers and avoid a severe effect on margins.

Ratio Analysis

Annual Growth Rate Comparisons

Sales Growth

Mosaic's sales have surpassed industry and its competitors over the past six years leading us to believe that Mosaic will be a favorable long term investment. Compared to its largest competitor, Potash Corp., Mosaic soared past it in sales by \$2.7 Billion for fiscal year end '08. Mosaic's sales annual growth rate from '07-'08 was roughly 40%, compared to Potash Corp. who had a growth rate of 20%.



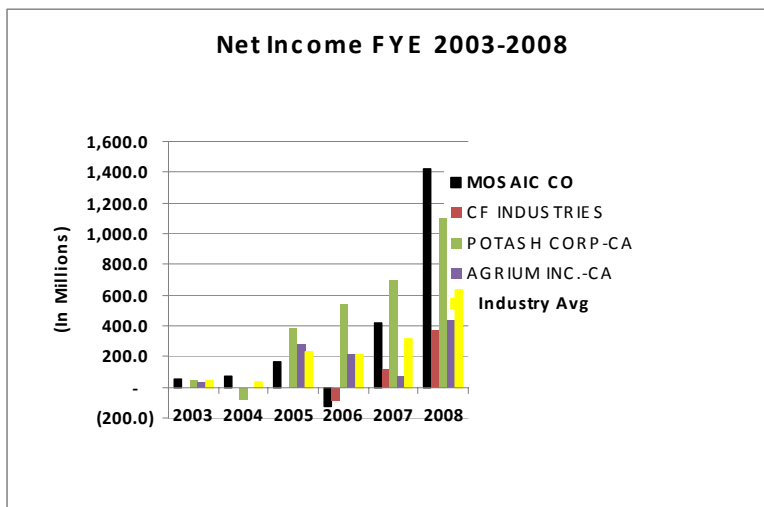
Sales FYE	2003	2004	2005	2006	2007	2008
MOSAIC CO.	1,662.7	2,374.0	4,396.7	5,305.8	5,773.1	8030.3
POTASH CORP.-CA	2,125.9	2,865.5	3,437.4	3,787.4	4,059.8	5234.2

Sales Growth Rate Averaged Year by Year

	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	AVERAGE Annual Growth Rate
MOSAIC CO.	42.78%	85.20%	20.68%	8.81%	39.10%	37.02%
POTASH CORP.-CA	34.79%	19.96%	10.18%	7.19%	28.93%	19.75%

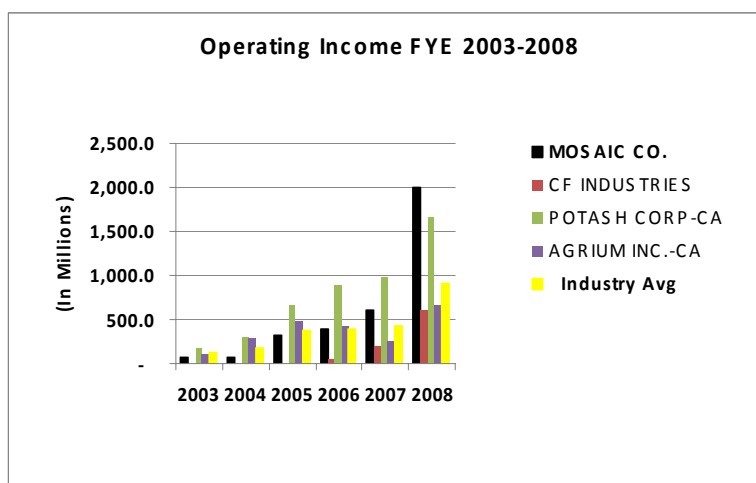
Net Income

Being the #1 and #2 producer of Phosphate, and Potash respectively; we believe that this firm compared to its competitors and the industry as a whole is more favorable. Net Income has been increasing since 2006. The Net Income growth rate from FYE '07-'08 was 239%. Potash Corp., Mosaics main source of competition grew from \$704.3 Million to \$1103.6 Million (57% growth). The industry average increased from \$313.7 Million to \$631.7 Million (101% growth). In conclusion, we feel that Mosaic has outperformed the industry and will continue to do so in future years.



Operating Income Growth

Among the other various analyst tools, Operating Income serves a purpose that is most important to many investors. Operating Income describes the amount of money derived exclusively from the main reason why the firm is open, it's central business. Mosaic has out- performed the industry and its competitors in Operating Income growth since late 2007. If Operating Income exceeds the industry average and Potash Corp. we can conclude that Mosaic's operating efficiency is fairly high. Since FYE 2003 Operating Income has increased from \$72.4 Million to \$1994.2 Million in '08 (2654% growth). See chart below for growth rate comparisons.

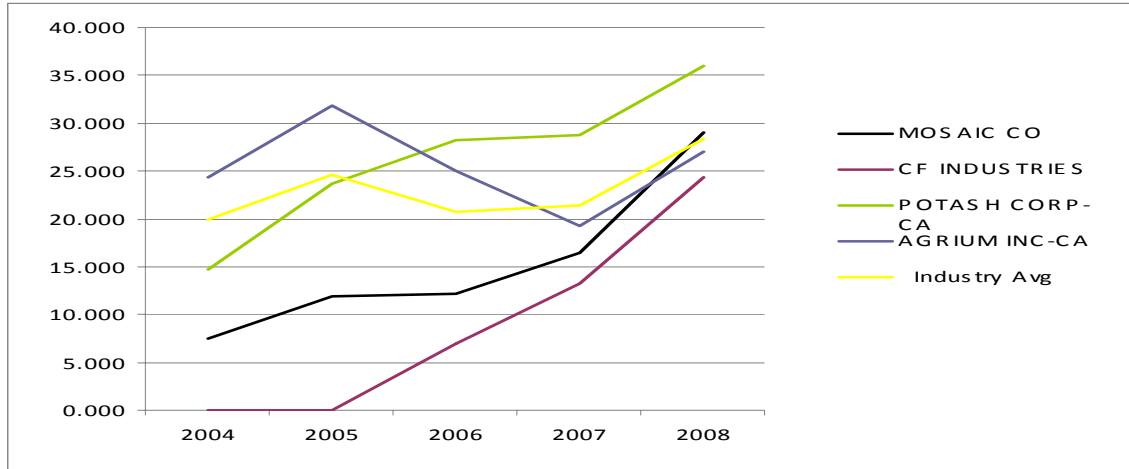


Operating Income Growth FYE	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	AVERAGE
Mosaic Co.	6.08%	314.71%	22.29%	57.69%	224.68%	125.09%
Potash Corp.	74.23%	115.08%	34.18%	10.98%	69.07%	60.71%
INDUSTRY AVERAGE	51.80%	100.38%	4.97%	10.77%	108.66%	55.32%

Operating Ratios

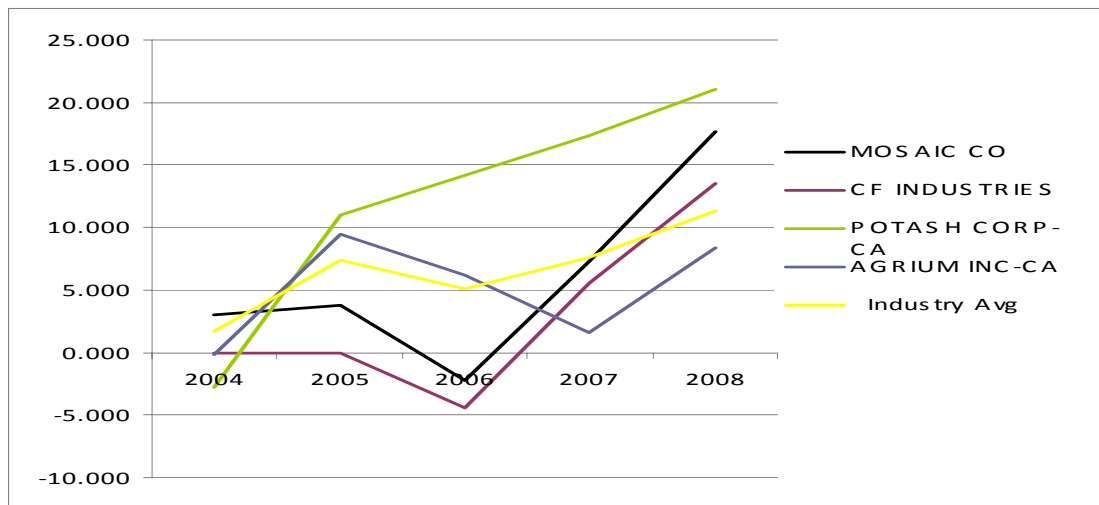
Gross Margin

Since 2007 Mosaic has been increasing its Gross Margin. Gross Margin represents the amount of money the company generated over the cost of producing its goods or services. In the below chart you will see that Mosaic has remained constant with its fellow competitors and the industry as a whole. In prior years Mosaic has trailed some of the comparables but now trails Potash Corp.



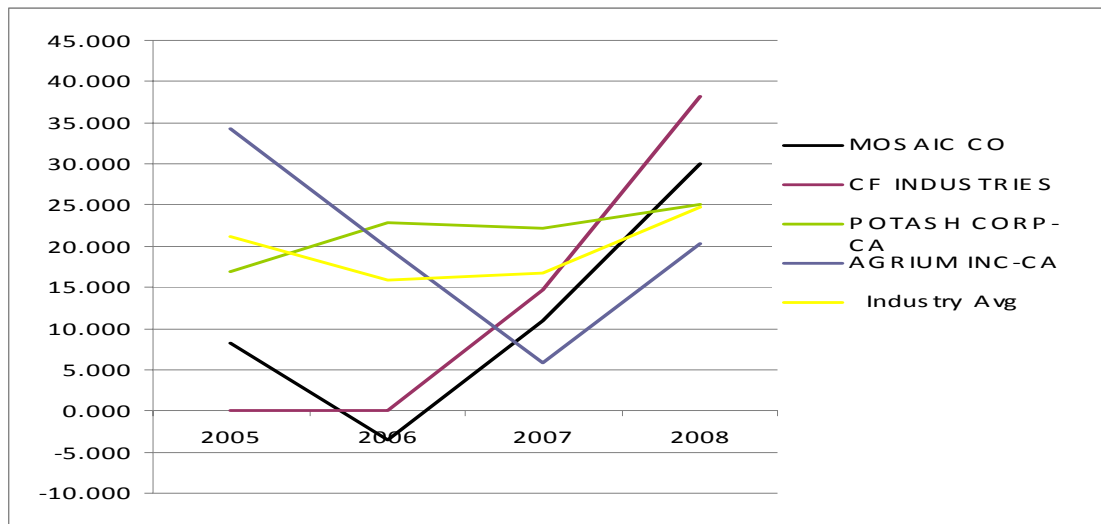
Net Profit Margin

Since 2006 Mosaic's Net Profit Margin has been increasing. A company with a high Net Profit Margin indicates that the firm has better control over its costs compared to its competitors. Mosaic's current margin is 17.17% which means that the company has a net income of \$0.17 for each dollar of sales with only one main competitor: Potash Corp. with a 21.08% Net Profit Margin.



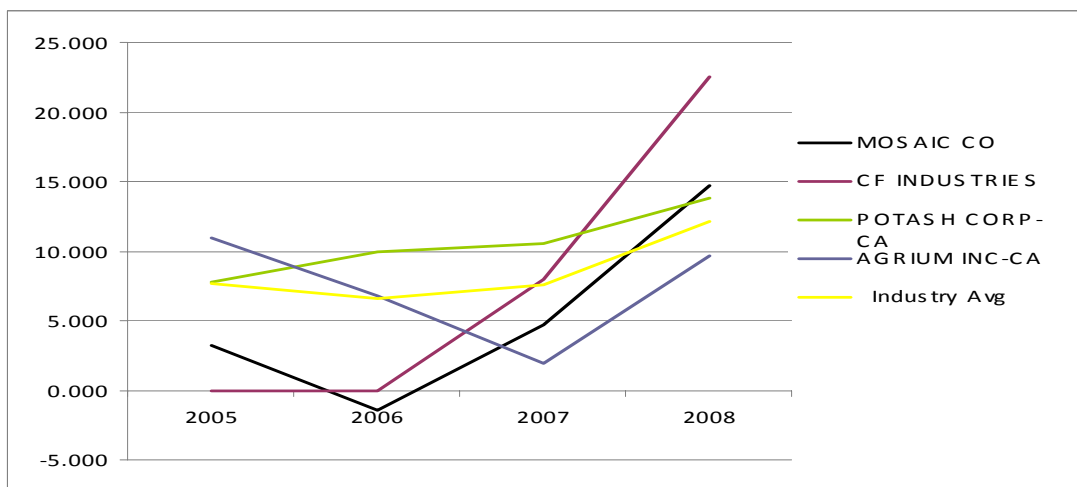
ROE

Return on Equity is based on how much profit a company generates with the money its shareholders have invested. Mosaic’s Return on Equity is behind that of CF Industries; however, Mosaic’s ROE has been above the industry average since mid-2007 and therefore the firm’s profitability is above average. Since 2005 there has been a significant increase in ROE. In FYE 2005 ROE was \$167.7 Million and increased to \$1422.9 Million in FYE 2008 (748% growth).



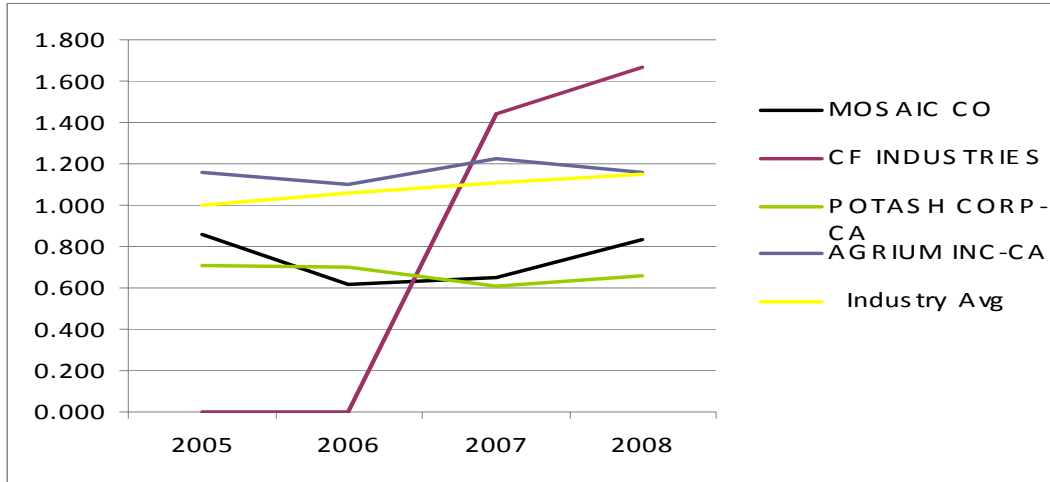
ROA

Mosaic’s ability to generate profit from its assets has been improving since 2006. The firm’s ROA has been behind that of CF Industries, and Potash Corp; however, it has been increasing at a quick rate which makes us believe that the firm’s assets have been providing us with much profit.



Asset Turnover

Asset turnover measures a firm’s efficiency at using its assets in generating sales or revenue. Since Mosaics profit margin is fairly high (above Industry average) we feel that even if their Asset Turnover is fairly low to its comparables this will not affect their investment capabilities. For FYE 2008 their Asset Turnover was \$0.83 which means that for every dollar worth of assets you have \$0.83 of sales. We believe that this factor has no value due to a high profit margin. Mosaics Net Profit Margin was 17% for FYE 2008 which was ranked 2nd in its industry behind Potash Corp., but above industry average (7.2%).



Short Term Solvency

Current Ratio

Current ratio measures the company’s ability to pay back its short term liabilities with its short-term assets. Mosaic’s is ranked fairly low against its competitors and has a lower ability of repaying its short term liabilities.

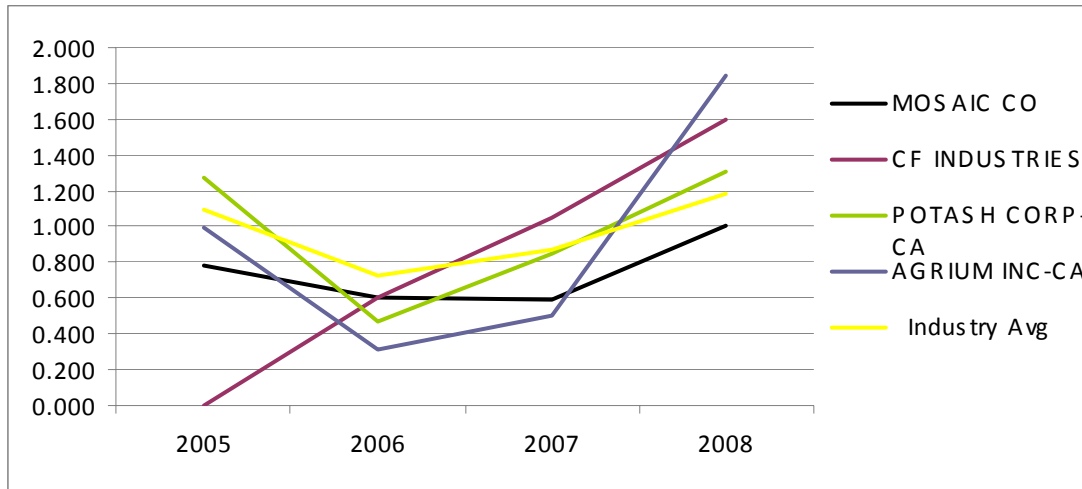


Current Ratio (continued)

One of the reasons for a low Current Ratio is because of a quicker growth in Liabilities from FYE '03-'08 (256% growth) versus the 193% growth in current assets. In '08 current assets rose at a growth rate of roughly 62% and current liabilities grew at 11% thus leading to a low (under industry average) Current Ratio.

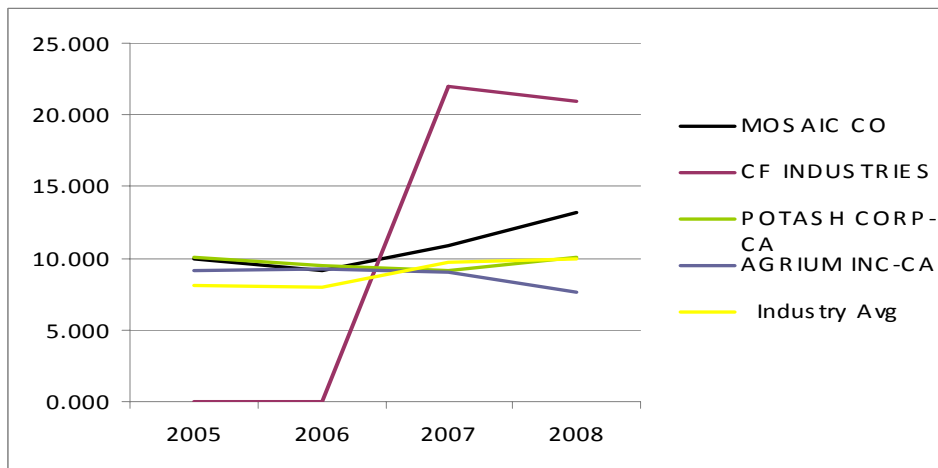
Quick Ratio 2

Quick Ratio 2 measures a company's ability to meet its short term obligations with its most liquid assets. Mosaic had a fairly low Quick Ratio 2 compared to the industry and its competitors but has been increasing since 2007.



Account Receivables Turnover

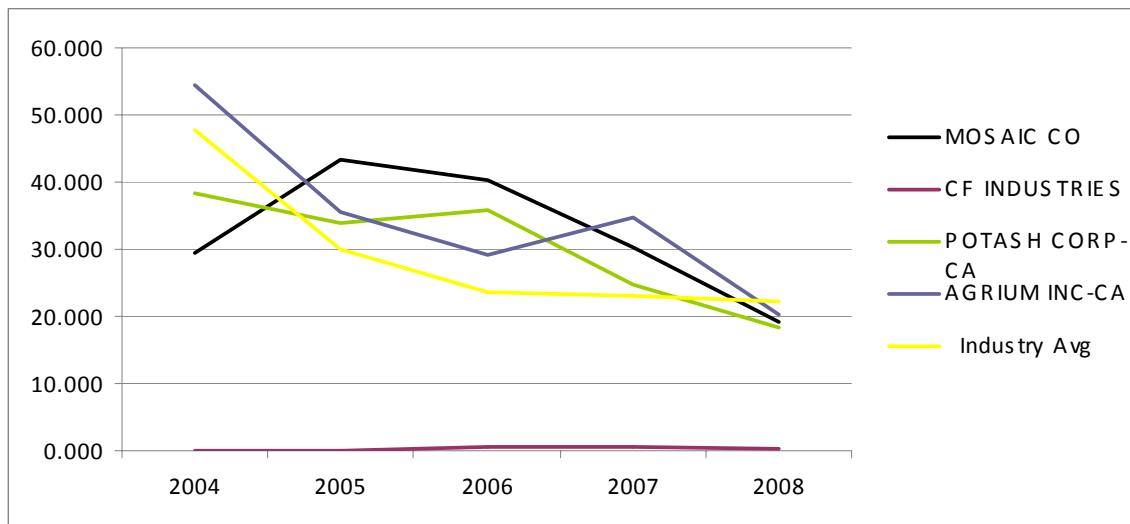
An accounting measure used to quantify a firm's effectiveness in extending credit as well as collecting debts. Since 2006 Mosaic's AR turnover has been increasing and despite CF Industries whom is the current outlier of the market due to recent entrance; Mosaic has been above average since 2006.



Long Term Solvency

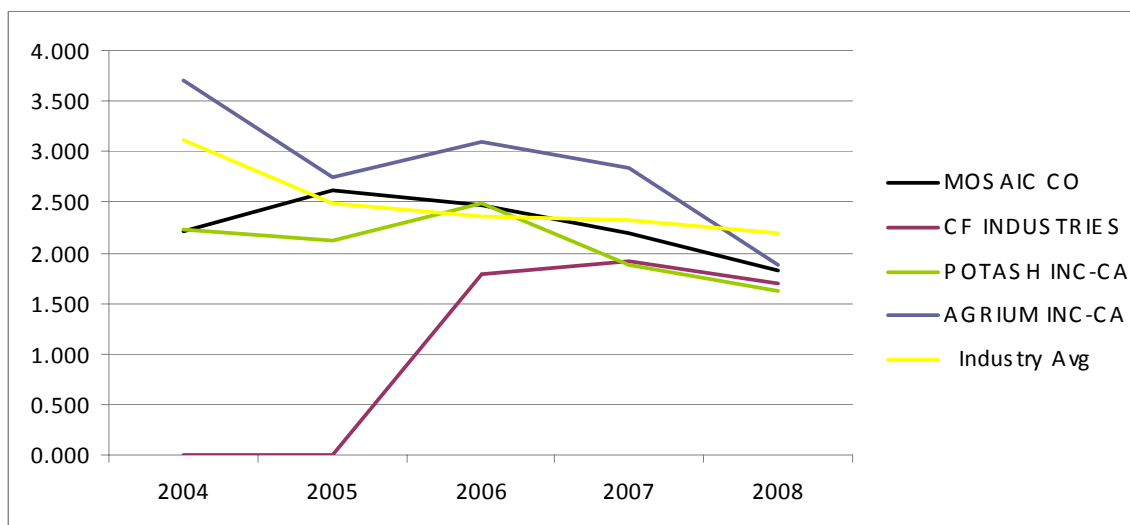
Debt-to-Equity

Debt to Equity indicates what proportion of equity and debt the company is using to finance its assets. Since 2005 Mosaic's Debt to Equity ratio has been decreasing thus indicating that less of the firm's assets are financed by debt. IN 2008, Mosaic's ratio dropped below the current Industry Average of 22%.



Financial Leverage

This ratio once again describes the degree to which a company utilizes borrowed money. Once again Mosaic remains below the Industry average. The lower the Financial Leverage ratio, the less liabilities the firm uses to conduct its business.



DUPONT ANALYSIS

The DUPONT analysis tells us that Return on Equity is affected by three different things. Operating Efficiency, Asset Use Efficiency, and Financial Leverage. All three of these components play a huge part in determining which part of ROE is considered unsatisfactory within the firm. IF ROE is unsatisfactory, the DUPONT identity helps locate the part of the business that is underperforming and in this case the part that is over performing to help the overall ROE is the firms Net Profit Margin. Mosaic's main driving factor has been its Net Profit Margin which has increased from 2005-2008 by 365%.

DuPont Analysis	2005	2006	2007	First 3 Quarters, FY 2008
Asset Turnover	0.855	0.619	0.646	0.642
Net Profit Margin	3.812	-2.288	7.269	19.23
Financial Leverage	2.535	2.541	2.319	1.973
ROE %	8.26	-3.6	10.88	24.36

Forecasted FY 2009 Income Statement:

We forecasted Mosaic's earnings per share for fiscal year 2009. Historically, we set up a similar income statement to the company's own issued version with a subsection at the top for industry revenues and Mosaic's market share of that revenue. We used a custom industry composed of Mosaic Co. (MOS), Potash Corporation of Saskatchewan (POT-CA), Agrium Corporation (AGU-CA), C.F. Industries (CF), and Terra Industries (TRA).

Estimating industry revenues for each year posed a serious problem because Mosaic's fiscal year runs June- May while all of its competitors run January- December. In order to avoid inconsistencies in the time frame of the data series for industry revenue, we broke down each company's revenues from past quarters as a % of the total revenue for the year. We averaged the percent numbers for each quarter for 2004-2007 and used the relationship to predict future revenue by quarter. Then we aligned each quarter of the year to Mosaic's calendar. The overlap turned out to be: Mosaic's Fiscal Year 2007= Q3 and Q4 2006 + Q1 and Q2 2007 for the industry.

The industry revenue numbers below for 2005, 2006, 2007 and total 3 quarters 2008 are May- May numbers for the industry; that is, they coincide with Mosaic's fiscal year. The industry estimate for 2009 was provided by Factset. We obtained estimates for each company's 2008 and 2009 revenues (except for Mosaic's) and applied the quarterly historical relationships described above.

Mosaic's market share showed signs of increasing over the period from 2004-2008. In order to be conservative in our estimates, we carried the market share forward from the total through 3 quarters of 2008.

We calculated Mosaic's Fiscal Year 2009 revenue by applying its market share to the custom industry forecast for 2009.

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>3Q2008</u>	<u>2009 E</u>
Industry Revenue	<i>14724</i>	<i>16860</i>	<i>19179</i>	<i>18301</i>	<i>36951</i>
Market Share	29.86%	31.47%	30.10%	34.67%	34.77%
Revenue	4397	5306	5774	6346	12850
Cost of Goods Sold	3871	4668	4848	4473	8508
Gross Profit	526	637	926	1872	4342
Selling, General, Administrative	207	241	310	249	531
Other Expenses	0	294	0	21.20	18
Operating Income	319	102	616	1624	3794
Net Interest Income/Expense	111	153	150	155	150
Other, Net Expense	-7	109	-39	-30	-35
Earnings Before Taxes	-160	506	396	1500	3678
Tax Rate	46%	-3%	24%	24%	24%
Earnings After Taxes	117	-165	382	1139	2785
Other Income After Taxes	-49	44	37	81	53
Net Income	166	-121	420	1220	2839
Diluted Shares Outstanding	360	382	440	446.	446
Earnings per Share	0.46	-0.32	0.95	2.74	6.36

Relative Valuation

A relative valuation allows us to derive a stock price for Mosaic based on their relationship with C.F. Industries, Potash Corp., Agrium Inc, the industry, and S&P1500 Chemicals sector. Mosaic's P/E relationship with it comparables was derived using Mosaic's year-end of May 31, for 2000-2007. Also included below are the NTM forward P/Es as of May 5, 2008 for each comparable.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	
P/E	*As of May 31 Trailing P/E's -----									Average
MOSAIC CO.						36.8	55.2	2375.3		822.43
CF INDUSTRIES								74	10.3	74.00
POTASH CORP.		16.2	48.9	59.3		33.5	18.5	35.8	16.7	32.70
AGRIUM INC.	24.8	20.1				10.1	11.6	159	13.8	39.90
Industry Avg.	24.8	14.1	28.6	28.4	15.7	20.9	24.1	386	27.8	63.38
S&P 1500 Chemicals	33.5	58.1	30.2	20.7	104.6	21.9	25.3	35.7	14.3	38.26

Price to earning is measured by dividing the price paid for a share by the earnings per share. This shows the amount people are willing to pay for \$1 of the Mosaic's earnings. This can be an indication of expected growth.

Due to the Mosaic's large P/E as of May 31, 2007 (2375.3), a larger than historically accurate adjustment factor for each comparable was produced. This 2007 data showed no correlation with previous years which prompted us to not include it in our valuation.

As shown below, the price estimate of \$256.80 was calculated using the averaged historical relationship from 2005-2006 and the E (EPS2009) = \$6.36.

	E(P/EPS)	*E(EPS)	* Adjustment Factor	
	<i>Adjustment w/out 2007</i>			
Industry Avg.	23.4	6.36	2.026	\$ 301.46
SP1500	15	6.36	1.931	\$ 184.22
CF Industries	11.8	6.36		\$ 75.05
Potash	23.4	6.36	2.041	\$ 303.76
Agrium	15.7	6.36	4.201	\$ 419.49
			Average=	\$ 256.80
Industry Avg. w/out 2007	22.4	6.36		\$ 142.28
S&P w/out 2004	32.2	6.36		\$ 204.79
			Average=	\$ 201.29

In an effort to remove all discrepancies from the valuation, different price estimates relative to the Industry Average and S&P 1500 Chemical sector index were required. Both prices used their historical mean P/E, calculated excluding the outlier years of 2007 and 2004, respectively. The three price estimates -- \$256.80 from above, \$142.28 using the historical Industry Average P/E, and \$204.79 using the historical average P/E for the S&P 1500 Chemical index -- average a price of \$201.29.

Due to the lack of historically accurate data and the inability to use our most recent 2007 data, a new valuation approach was taken. Unlike in our first valuation, where we gather P/E as of Mosaic's year end of May 31st, we would now gather P/Es as of December 31, the year end of Mosaic's competitors. This eliminates the problem with above normal P/Es for 2007, and added relationship data for 2004.

EPS 2009	\$	2000	2001	2002	2003	2004	2005	2006	2007	2008
	6.23									
*As of December 31										
P/E	Trailing P/E's -----									
MOSAIC CO.						37.2	32.9	n/a	67.9	
CF INDUSTRIES								91.9	25.4	10.3
POTASH CORP.		21.9	26.9	83.1	N/A	38.6	18	26.6	51.1	16.7
AGRIUM INC.		33.2	28.3	N/a	25.8	53.1	9.1	28.2	47.3	13.8
Industry Avg.		27.3	19.7	41.2	17.2	28.8	14.9	32.3	47.3	27.8
S&P 1500 Chemicals		20.1	197.5	24.1	29.5	27.8	22.9	25.1	24.6	14.3

Using the average historical relationship as our adjustment factor, our E (EPS2009) = \$6.36, and the NTM P/Es as of May 5, 2008 a comparable price of \$189.58 is estimated. Even when excluding the highest estimate (Industry Average), Mosaic's price is \$164.26

	E(P/EPS)	*E(EPS)	* Adjustment Factor	
Industry Avg.	27.8	6.36	1.65	\$ 290.86
SP1500	14.3	6.36	1.84	\$ 167.80
CF Industries	10.3	6.36	2.67	\$ 175.12
Potash	16.7	6.36	1.37	\$ 145.87
Agrium	13.8	6.36	1.92	\$ 168.26
			Average =	\$ 189.58

Average w/out Ind. Avg. = \$ 164.26

Current Market Price as of 5/9/08: \$127.08

Based on the Relative valuation model, using December 31st P/E ratios, Mosaic is undervalued at its current market price of \$127.08.

ABSOLUTE VALUATION

Absolute valuation models specify an asset's intrinsic value by supplying a point estimate of value that can be compared with the market price. The model used to determine Mosaic's intrinsic value is the Discounted Cash Flow model, which views the intrinsic value of a security as the present value of its expected future cash flows. These expected future cash flows can be either free cash flow to the firm, or free cash flow to equity holders. Free cash flow to the firm is the cash flow available to the company's suppliers of capital after all operating expenses have been paid and necessary investments in fixed capital and working capital have been made. Free cash flow to equity holders is the cash flow available to the company's common equity holders after all operating expenses, interest, and principal payments have been paid and necessary investments in fixed capital and working capital have been made. The present value of free cash flow is calculated to determine the intrinsic value, or target- price estimate of Mosaic's stock.

The first step in Discounted Cash Flow analysis is to establish a cost of capital for the firm (K), which will be used as the discount rate in our present value calculation. In the case of Mosaic, two discount rates were determined K1 and K2. Cost of Capital, K1, was determined using the Capital Asset Price Model (CAPM). Mosaic's second Cost of Capital, K2, was calculated using the bond yield plus equity premium method, in which an equity premium is added to the company's outstanding bond yield to maturity. The equity premium is the historical average spread between equity and corporate debt. The table below demonstrates Mosaic's two Cost of Capital calculations:

COST OF CAPITAL

CAPM:

10 Year Treasury Strip	4.100%
Beta (Adj):	1.126
Return on Market (S&P 500)	10.430%
Market Risk Premium	6.330%
CAPM=	4.100%+1.126(6.330%)

K1=

11.228%

UTENDAHL:

Mosaic 10 Year Bond YTM	7.240%
Equity Premium	4.000%

K2=

11.240%

Mosaic's beta was determined by taking monthly data from October 2004 to April 2008. The return on the market (S&P 500) was determined by taking the annualized total return of the index from January 1926 through December 2007. The annualized total return consisted of both capital appreciation and dividends reinvested.

After calculating the Cost of Capital, free cash flow for the firm must be determined. In order to determine the free cash flow for fiscal year 2008, we began by calculating the free cash flow for the last four years, 2003-2007. We also calculated the free cash flow for the three reported quarters of fiscal year 2008. We then estimated the free cash flow

for the fourth quarter 2008, by applying the historical relationship between first quarter and fourth quarter free cash flow. We then totaled the four quarters to arrive at our estimate of fiscal year 2008 free cash flow for the firm. The following chart demonstrates the free cash flow calculations for Mosaic. All figures are in millions of U.S. dollars.

	2003	2004	2005	2006	2007	Qtr 1 2008	Qtr 2 2008	Qtr 3 2008	Est. Qtr 4 2008	Fiscal Yr. 2008
Free Cash Flow Firm:										
Cash Flow from Operations	39.70	121.50	331.90	294.40	707.90	438.40	542.50	528.00		
Plus interest expense(1-Tax)	35.80	27.60	64.73	154.82	123.61	30.35	25.88	25.23		
Minus investment in fixed capital	119.20	162.10	255.20	404.40	292.10	82.10	79.10	86.60		
Final	\$-43.70	\$-13.00	\$141.43	\$44.82	\$539.41	\$386.65	\$489.28	\$466.63	\$619.30	\$1961.85

In order to predict free cash flow going forward, we needed to establish the average annual growth rate in free cash flow. The average annual growth rate in free cash flow from 2005 to 2007 was 95.294%. The average annual growth rate in cash flow from 2005 to 2008 was 140.275%. Upon analysis of these figures, we deemed that neither was reasonable to use as a constant growth rate, since such large growth may be unsustainable in the long run.

We were also concerned with the high price estimate that would result from using these inflated growth rates. In order to avoid using these rates, we decided to conduct a scenario analysis of various near-term growth rates to determine our estimates of free cash flow to the firm over the next six years. The growth rates we used in our scenario analysis were 2%, 5%, 10%, 15%, 30%, 45%, 60% and 80%. The future free cash flow estimates that resulted from these near-term growth rates are listed below:

E(G)	2008	2009	2010	2011	2012	2013	2014
2%	\$1,961.85	\$2,001.09	\$2,041.11	\$2,081.93	\$2,123.57	\$2,166.04	\$2,209.36
5%	\$1,961.85	\$2,059.94	\$2,162.94	\$2,271.09	\$2,384.64	\$2,503.87	\$2,629.07
10%	\$1,961.85	\$2,158.04	\$2,373.84	\$2,611.22	\$2,872.35	\$3,159.58	\$3,475.54
15%	\$1,961.85	\$2,256.13	\$2,594.55	\$2,983.73	\$3,431.29	\$3,945.98	\$4,537.88
30%	\$1,961.85	\$2,550.41	\$3,315.53	\$4,310.19	\$5,603.24	\$7,284.21	\$9,469.48
45%	\$1,961.85	\$2,844.68	\$4,124.79	\$5,980.95	\$8,672.37	\$12,574.94	\$18,233.66
60%	\$1,961.85	\$3,138.96	\$5,022.34	\$8,035.74	\$12,857.18	\$20,571.49	\$32,914.39
80%	\$1,961.85	\$3,531.33	\$6,356.39	\$11,441.51	\$20,594.72	\$37,070.50	\$66,726.89

This process allowed us to determine a more reasonable constant growth rate, which we determined to be 30%. We believe 30% to be the most reasonable average annual growth rate because it did not produce extremely conservative estimates, such as those produced by 2%, 5%, 10% and 15%. It also did not produce extremely bullish and possibly unsustainable estimates such as those produced by growth rates of 60% and 80%. We ultimately decided to assume a 30% constant growth rate rather than 45% because we felt it to be a more conservative estimate, although not extremely bearish.

After calculating our estimates of free cash flow to the firm over the next six years, we then determined the present value of these estimates using both K1 and K2. The following figures represent the 2008 present values:

**Present Value of Future
CF Calculations**

	Estimates						
	2009	2010	2011	2012	2013	2014	SUM
Estimated FCFF	\$2,550.41	\$3,315.53	\$4,310.19	\$5,603.24	\$7,284.21	\$9,469.48	\$32,533.05
2008 PV Using K1	\$2,292.96	\$2,679.96	\$3,132.26	\$3,660.91	\$4,278.78	\$5,000.93	\$21,045.81
K1	11.228%	11.228%	11.228%	11.228%	11.228%	11.228%	
2008 PV Using K2	\$2,292.71	\$2,679.36	\$3,131.22	\$3,659.28	\$4,276.39	\$4,997.58	\$21,036.53
K2	11.240%	11.240%	11.240%	11.240%	11.240%	11.240%	

Once these estimates were determined, we then needed to calculate the terminal value of the free cash flows. In order to perform this calculation we needed to estimate free cash flow for fiscal year 2015, which would enable us to calculate post-2014 free cash flow of the firm. In order to accurately estimate 2015 free cash flow, we chose to conduct a scenario analysis using eleven different growth rates ranging from 0% to 10%. The results of these calculations are shown below:

Estimates of 2015 FCFF	Using Different Growth Rates										
	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
2015 Estimates FCFF: \$9,469.48	\$9,469.48	\$9,564.17	\$9,658.87	\$9,753.56	\$9,848.26	\$9,942.95	\$10,037.65	\$10,132.34	\$10,227.04	\$10,321.73	\$10,416.42

Now that we have estimated 2015 free cash flow to the firm, we are able to calculate the terminal value of the cash flows, or the 2014 intrinsic value of all post-2014 free cash flow to the firm. The term present value can also be substituted for intrinsic value in this analysis. We chose to continue our scenario analysis, thus resulting in a range of estimates for terminal value cash flow. We calculated the terminal value of all eleven estimates of 2015 free cash flow. We calculated the terminal value cash flow using the

formula $E(FCFF1)/(K-G)$, where FCFF1 was our estimate of 2015 free cash flow to the firm, and K-G being the Cost of Capital minus the rate of growth for all post-2014 free cash flows. We used both estimates of K in this analysis. We calculated the intrinsic value of all post-2014 cash flows in 2014 and back to 2008. The results of this analysis are as follows:

FCFF Model= E(FCFF1)/k-g

Using K1	est. 2015				
	FCFF	K1	G	est. (IV2014)	est.(IV2008)
est.(IV2015)	\$9,469.48	0.1122758	0	\$84,341.21	\$44,541.51
est.(IV2015)1	\$9,564.17	0.1122758	0.01	\$93,513.54	\$49,385.51
est.(IV2015)2	\$9,658.87	0.1122758	0.02	\$104,673.88	\$55,279.41
est.(IV2015)3	\$9,753.56	0.1122758	0.03	\$118,547.15	\$62,606.03
est.(IV2015)4	\$9,848.26	0.1122758	0.04	\$136,259.38	\$71,960.06
est.(IV2015)5	\$9,942.95	0.1122758	0.05	\$159,659.94	\$84,318.14
est.(IV2015)6	\$10,037.65	0.1122758	0.06	\$192,013.24	\$101,404.27
est.(IV2015)7	\$10,132.34	0.1122758	0.07	\$239,672.35	\$126,573.56
est.(IV2015)8	\$10,227.04	0.1122758	0.08	\$316,863.87	\$167,339.24
est.(IV2015)9	\$10,321.73	0.1122758	0.09	\$463,360.68	\$244,705.79
est.(IV2015)10	\$10,416.42	0.1122758	0.1	\$848,533.26	\$448,119.60

FCFF Model= E(FCFF1)/k-g

Using K2	est. 2015				
	FCFF	K2	G	est. (IV2014)	est.(IV2008)
est.(IV2015)	\$9,469.48	0.1124	0	\$85,090.50	\$44,907.12
est.(IV2015)1	\$9,564.17	0.1124	0.01	\$94,324.87	\$49,780.62
est.(IV2015)2	\$9,658.87	0.1124	0.02	\$105,558.02	\$55,709.00
est.(IV2015)3	\$9,753.56	0.1124	0.03	\$119,517.67	\$63,076.30
est.(IV2015)4	\$9,848.26	0.1124	0.04	\$137,333.57	\$72,478.77
est.(IV2015)5	\$9,942.95	0.1124	0.05	\$160,859.70	\$84,894.86
est.(IV2015)6	\$10,037.65	0.1124	0.06	\$193,365.27	\$102,049.90
est.(IV2015)7	\$10,132.34	0.1124	0.07	\$241,203.66	\$127,296.95
est.(IV2015)8	\$10,227.04	0.1124	0.08	\$318,571.91	\$168,128.60
est.(IV2015)9	\$10,321.73	0.1124	0.09	\$465,018.95	\$245,417.07
est.(IV2015)10	\$10,416.42	0.1124	0.1	\$840,034.24	\$443,334.07

Since we now have estimates of the present value of near-term free cash flows to the firm, as well as long term or post-2014 cash flows, we are able to estimate a target price per share that would equate the intrinsic value of Mosaic's stock with the value of Mosaic's stock as determined by the market price. This allows us to make judgments regarding if the price at which Mosaic's stock is currently trading is undervalued, overvalued, or fairly valued.

The method by which we determine this target market price is by taking the sum of the present value of both near term free cash flow estimates and the terminal value free cash flow estimates. However, since we are trying to price that value of the firm for the equity holders we must adjust the sum of these cash flow estimates to remove the value that is

only available to creditors of the firm. This separation can be accomplished by subtracting the value of Mosaic's outstanding debt from the sum of the free cash flow to the firm. This leaves us with the free cash flow available to equity. If we divide this total free cash flow to equity by the number of shares outstanding, we arrive at a price target that equates Mosaic's intrinsic value with its market value. We chose to continue our scenario analysis, and thus arrived at a range of price estimates. The resulting price estimates are as follows:

Shares Outstanding 446.1 million
Value of Debt \$1,653.3 million

<u>Scenario 1- 0 Growth Rate</u>	<u>Sum FCFF</u>	<u>Price per Share</u>
K1: E(Price 2008)	\$65,587.32	\$143.32
K2: E(Price 2008)	\$65,943.65	\$144.12
<u>Scenario 2: 1% Growth Rate</u>	<u>Sum FCFF</u>	<u>Price Per Share</u>
K1: E(Price 2008)	\$70,431.32	\$154.18
K2: E(Price 2008)	\$70,817.16	\$155.04
<u>Scenario 3: 2% Growth Rate</u>	<u>Sum FCFF</u>	<u>Price Per Share</u>
K1: E(Price 2008)	\$76,325.22	\$167.39
K2: E(Price 2008)	\$76,745.53	\$168.33
<u>Scenario 4: 3% Growth Rate</u>	<u>Sum FCFF</u>	<u>Price Per Share</u>
K1: E(Price 2008)	\$83,651.84	\$183.81
K2: E(Price 2008)	\$84,112.84	\$184.85
<u>Scenario 5: 4% Growth Rate</u>	<u>Sum FCFF</u>	<u>Price Per Share</u>
K1: E(Price 2008)	\$93,005.87	\$204.78
K2: E(Price 2008)	\$93,515.31	\$205.92
<u>Scenario 6: 5% Growth Rate</u>	<u>Sum FCFF</u>	<u>Price Per Share</u>
K1: E(Price 2008)	\$105,363.95	\$232.48
K2: E(Price 2008)	\$105,931.39	\$233.75
<u>Scenario 7: 6% Growth Rate</u>	<u>Sum FCFF</u>	<u>Price Per Share</u>
K1: E(Price 2008)	\$122,450.08	\$270.78
K2: E(Price 2008)	\$123,086.44	\$272.21
<u>Scenario 8: 7% Growth Rate</u>	<u>Sum FCFF</u>	<u>Price Per Share</u>
K1: E(Price 2008)	\$147,619.37	\$327.20
K2: E(Price 2008)	\$148,333.49	\$328.81
<u>Scenario 9: 8% Growth Rate</u>	<u>Sum FCFF</u>	<u>Price Per Share</u>
K1: E(Price 2008)	\$188,385.05	\$418.59
K2: E(Price 2008)	\$189,165.13	\$420.34
<u>Scenario 10: 9% Growth Rate</u>	<u>Sum FCFF</u>	<u>Price Per Share</u>

K1: E(Price 2008)	\$265,751.60	\$592.02
K2: E(Price 2008)	\$266,453.61	\$593.59
<u>Scenario 11: 10% Growth Rate</u>	<u>Sum FCFF</u>	<u>Price Per Share</u>
K1: E(Price 2008)	\$469,165.41	\$1,048.00
K2: E(Price 2008)	\$464,370.60	\$1,037.25

In conclusion, according to the Discounted Cash Flow absolute valuation model, if Mosaic's near-term cash flows grow at a constant rate of 30%, and the company's post-2015 cash flows grow at a rate of 0%, Mosaic stock would be considered undervalued if compared to its current stock price. If Mosaic's post-2015 cash flows grow at a rate greater than 0%, this would further suggest that the stock is undervalued.

Sources:

-Mosaic's Annual Reports and Company Website
www.mosaicco.com

-International Fertilizer Association- Statistics
www.fertilizer.org/ifa/statistics

-United States Department of Agriculture
www.usda.gov