

Stock Valuation, Strategic and Financial Analysis: A Case Study for Arab Potash Company (APOT) (Jordan)

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Abstract: The aim and objective of this study is to make a stock valuation for Arab Potash Company (APC) based on two methods of strategic and financial performance analysis. Specially, we use is Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis for strategic analysis and Discounted Free Cash Flow (DFCF), Dividend Discount Model (DDM) and ratios analysis for financial performance analysis. Based on the aforementioned analyses we came to a conclusion that the stock price of APO is overvalued as the SWOT analysis shows that APC is exposed to different kinds of risks such as, sales risk, financial risk, credit risk, liquidity risk, political risk. However, the volatility of sales is considered the most critical risk could affect the profitability of the APC. With regard to the financial analysis, the valuation of APC stock price arrives at the price of 7.272 JOD which is lower the market price of 16.90 JOD. The estimated value per share is driven by 35% of DFCF Model price of 5.92 JOD and 65% of DDM price of 8.00 JOD. The 65% weight assigned to the DDM Model for two reasons: firstly, a flaw in the DFCF Model is that relies significantly on the terminal value. Secondly, the assumption that APC is a Blue-chip company that has reached maturity as it has been paying dividends consistently with rates that exceed its retention ratio in the last couple of years, thus, APC's stocks are considered to be "Income stocks". In addition, a positive relationship is found between the company's dividends and its closing price.

Key words: A stock valuation, equity valuation, ROE, ROA, companies, closing price

INTRODUCTION

This study aims to evaluate the stock price of Arab Potash Company (APC) and suggest whether the stock price of APO is over-or undervalued. Specifically, we are trying to answer the following question: is the current stock price indeed reflects the intrinsic value of APO. By doing, so, we are performing strategic and financial analysis. "Throughout the history there were times that the market made errors resulted in financial crisis, popular of which are "The great depression" in 1929-39, "the Black Monday" in 1987, "The internet bubble" in 1990's, the financial crises of 2008, etc. Many studies and researches conducted in the attempt of seeking the explanation for those incidents from etc., suggested the theory of behavioral finance. The general idea of behavioral finance is that investors are not always rational and their actions depend on attitudes toward risk and beliefs about probabilities which causes a deviation in market prices from the intrinsic values. Although, the deviation only

last for a short time and the market will eventually correct itself it gives incentive to investors to exploit these temporary efficiencies to make profit" (Le, 2017).

The first analysis, the strategic analysis is Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis. Strategic management can be understood as the collection of decisions and actions taken by business management in consultation with all levels within the organization to determine the long-term activities of the organization (Houben *et al.*, 1999). One of the main approaches used in analyzing the strategic management of an organization is the SWOT analysis which evaluates the opportunities, threats, strengths and weaknesses of an organization. By identifying its strengths, weaknesses, opportunities and threats, the organization can build strategies upon its strengths, eliminate its weaknesses and exploit its opportunities or use them to counter the threats. An internal environment appraisal identifies the strengths and weaknesses while the opportunities and threats are identified by an external environment appraisal

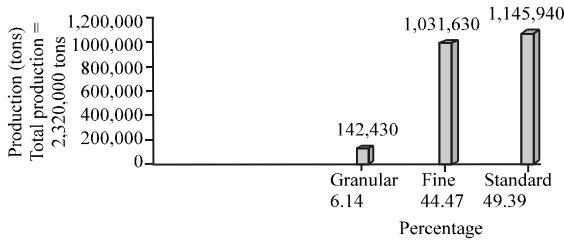


Fig. 1: Production by type 2017 (APC Annual Report)

(Dyson, 2004). SWOT analysis summarizes the most important internal and external factors that may affect the organization’s future which is referred to as strategic factors (Kangas *et al.*, 2003) (Fig. 1).

However, SWOT analysis does not provide an analytical means to determine the importance of the identified factors (i.e., strengths, weaknesses, opportunities and threats) or the ability to assess decision alternatives according to these factors. Yuksel and Dagdeviren (2007) suggest that even though SWOT analysis can successfully pinpoint the factors, individual factors are usually described briefly and very generally. For this reason, SWOT analysis possesses deficiencies in the measurement and evaluation steps. Therefore and in order to provide a comprehensive picture of the strategic and financial situation of APC this study will combine SWOT analysis with the analysis of APC financial performance.

Analysis of the financial performance of a company is an essential tool to obtain information about how the company operated in the previous period. Interpretation of the evolution of financial indicators does not always prove to be easy, requiring multiple calculations and combined approaches while the knowledge and understanding of a type of business reviewed are essential in the proper interpretation of the results. Therefore, the conclusions of the analysis carried out professionally will be able to describe the evolution of the company correctly and to support the user’s investment and financing decisions. Ratio analysis has been a primary tool for conducting a financial analysis of any company. Different ratios highlight the overall financial position of a company.

In addition, to ratio analysis this study is using Discounted Free Cash Flow (DFCF) and Dividend Discount Model (DDM) to determine the fair value of APO stock price. DFCF is a valuation method used to estimate the fair value of a stock price by analyzing future free cash flow projections and discount them to arrive at a present value. If the value of DFCF analysis is higher than the current it would suggest that the stock price is overvalued and vice versa:

$$DFCF = (CF_1/(1+i)) + (CF_2/(1+i)^2) + \dots + (CF_n/(1+i)^{n-1})$$

The fair value market estimate:

$$Value = \sum (CF_n/(1+i)^n) + TV_t/(1+i)^t$$

Where:

- CF_i = Cash flow in year n
- i = Discount rate
- TV = The terminal year cash flow
- n = The number of periods in the valuation model including the terminal year

DDM is another stock valuation method that is based on discounting predicted dividends to the present value. The premise behind DDM is that the fair value of a stock is determined by discounting all future dividends to its net present value:

$$Price\ per\ share = D_1/r-g$$

Where:

- D_i = The estimated dividends for the next period
- r = The cost of equity capital
- g = The constant growth rate for dividends in perpetuity

The aforementioned valuation models can determine whether the stock price of APC is close to its intrinsic value or away from it. Dyson (2004) also, suggest that fair value models can assist in providing a sell/buy recommendation based on the valuation results. The premises of applying DDM and DFCF are:

- If estimated fair value bigger than the market price, investor should buy or hold the stock
- If estimated fair value is less than market price, investors shouldn’t buy or sell the stock

Literature review

Background

Business description who is APC: APC is a public shareholding company established in 1956 in the Hashemite Kingdom of Jordan and specialized in manufacturing of potash with a paid-up capital of JD 83.318 million. APC is granted 100-year concession from the Jordanian government to extract, manufacture and market minerals from the Dead Sea until 2058 with the end of the concession period all the company’s assets are transferred to the government. It is located in Amman, Aqaba and Al Ghor Al Safi. Currently, APC is the largest Jordanian industrial company with a global dimension and

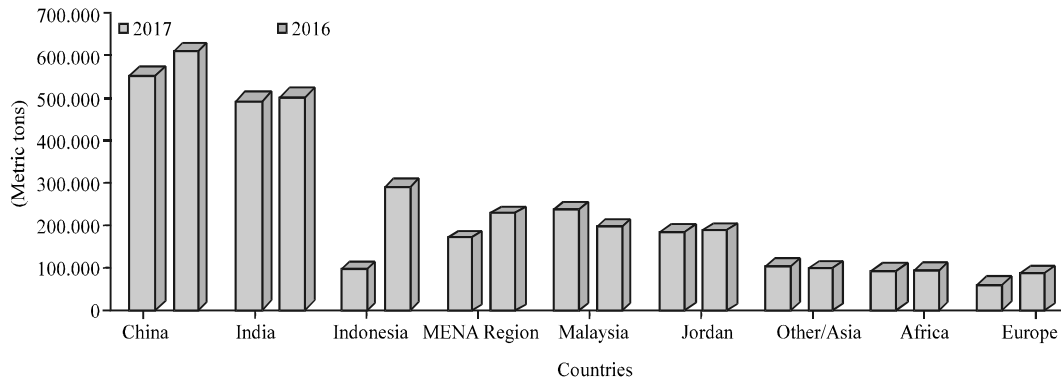


Fig. 2: APC sales distribution 2016 and 2017 (APC Annual Report)

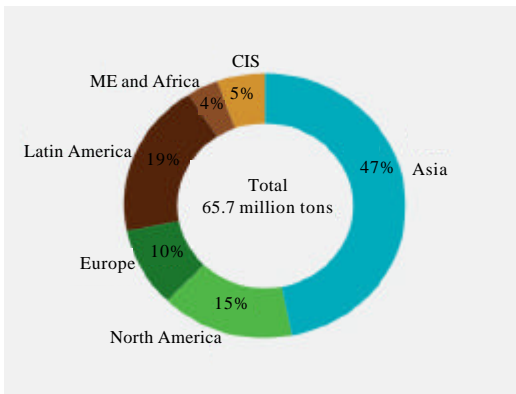


Fig. 3: Local and regional distribution 2017 (APC Annual Report)

the second largest company in the Amman stock exchange by the value. In 2016 APC was the largest potash producer worldwide by volume of production and the only producer of potash in the Arab world. The company manufactures and markets minerals from the dead sea. The company also invests in many manufacturing and supplementary industries related to salt and minerals of the dead sea including potassium nitrate, bromine and other derivatives. The potash reserves of Jordan are estimated “40 metric tons”. The Dead Sea reserves are divided equally between Jordan and occupied Palestine. Jordan is positioned the 9th globally in reserves. APC produces 2.35 mln.ton/year of potash due to it is the 4 plant planted in Jordan: the Hot Leach Plant (HLP), the Cold Crystallization Plant (CCP 1), the Industrial Potash Plant (IPP) and the new Cold Crystallization Plant (CCP 2), more than 90% of our products are exported to over 30 countries spanning Africa, Asia, Europe and the Middle East (Anonymous, 2016) (Fig. 2-4).

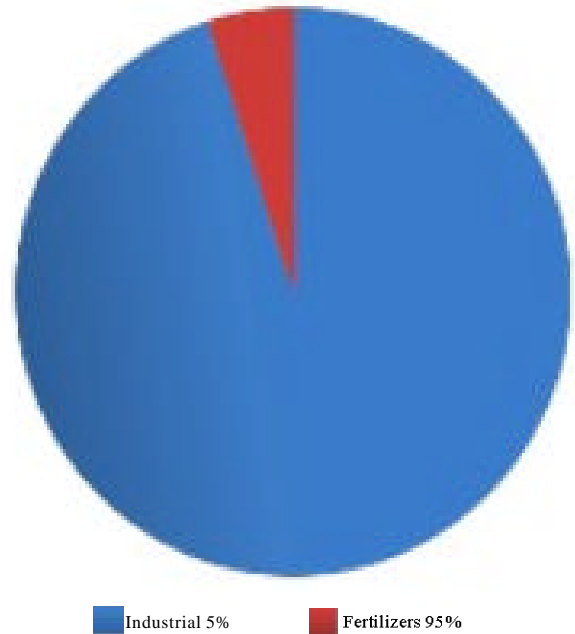


Fig. 4: Uses of potash worldwide (APC Annual Report)

Potash industry worldwide overview and the competitive position of APC: The environment is a significant focus for policymakers in the next few years and it is expected to be one of the significant factors influencing agriculture patterns and trends in the next decade (Fig. 5). This will impact the fertilizer industry in several ways. Cereals, oilseeds, fruits and vegetables account for about 78-80% of fertilizer use. The share of cereals is declining slowly as dietary patterns transform gradually and as fruits and vegetables claim higher prominence. Potash is primarily used for fertilizers (food for plants) in addition, to other industries that form a small percentage of potash production such as, soap, medicines, batteries, melting of drilling, food supplements, livestock and poultry.

Table 1: APC's sales distribution in the top ten markets 2017 vs. 2016: (APC Annual Report)

Rank	Quantity MT (2017)	Countries	Quantity MT (2016)	Countries
1	616,551	China	553,574	China
2	511,759	India	498,089	India
3	294,049	Indonesia	242,551	Malaysia
4	206,004	Malaysia	188,565	Jordan
5	194,477	Jordan	136,000	Egypt
6	164,016	Egypt	104,808	Indonesia
7	61,401	S. Africa	68,185	S. Africa
8	39,479	Mozambique	41,065	Pakistan
9	32,311	Pakistan	28,512	Mozambique
10	46,472	Saudi Arabia	26,000	Taiwan
	2,166,519	Top ten total	1,887,348	
	92%	Top 10% of sales	93%	
	2,360,244	Year sales total	2,030,202	

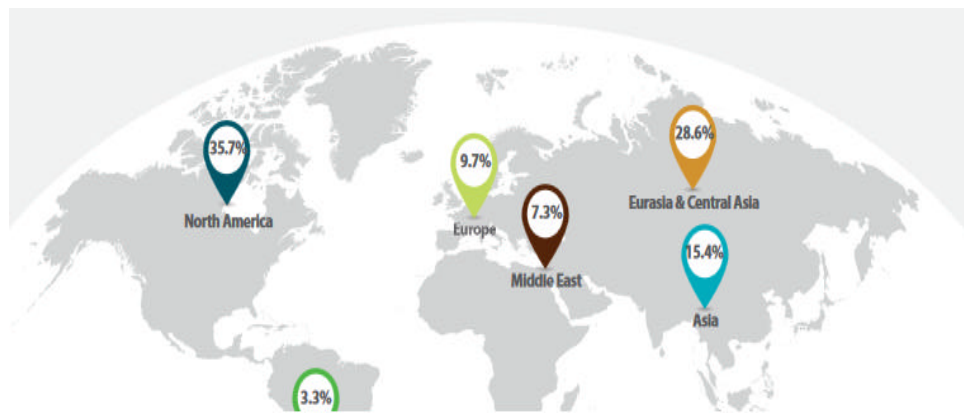


Fig. 5: Worldwide potash produces production capacity (APC Annual Report)

Agriculture is considered the main base for potash demand. The use and demand for agricultural products have been rising and this can be attributed to multiple factors including world population, global GDP growth, changes in world income and agricultural land. North America, Indonesia, Malaysia, Brazil, India and China are among the largest customers of potash fertilizers globally. The global demand for potash reach 42 mln.ton in 2017, approximately 35.5 mln.ton goes to agriculture (Anonymous, 2016).

World potash production in 2017 hit a record. The increase of 2.8 mln.tons from the previous year was 4.5%. Production in 2017 was also 2.5% more than the record year of 2015. The International Fertilizer Association (IFA) estimates the increase of the first half of 2017 over the same period in 2016 at over 16%. The growth slowed down in the second half of the year as Canadian production was optimized to reduce costs drawing more tons from the newly commissioned rocanville expansions and slowing output from other high-cost mines. The new German-owned mine in Canada began production in the last quarter of 2017 and is estimated to have made about 300 k tons. Production in Chile, Germany, the UK, Spain, Brazil and occupied Palestine fell back during 2017 while

all other producers increased output. A new mine in Turkmenistan also began production in 2017 and is expected to ramp up in 2018 to about 1 mln.tons. The new eurochem mine in Russia is also likely to come on stream in 2018 while some higher cost facilities will start to fade out in Germany and the UK. The Chilean producer has announced plans to reduce potash output in favor of other products in their portfolio (Anonymous, 2016) (Table 1). APC sales increased by 16% over the year (Anonymous, 2017). This increase is in line with the estimated growth in global deliveries. The growth in most regions was not structural but related to shipping times and logistics. APC share in Indonesia grew more than the average growth of the market but is still lower than volumes registered by APC some 15 years ago. Shipments to Europe increased significantly but are also short of historical levels for APC in Europe. APC volumes increased in China and India in line with contractual commitments and shipping schedules as well as long-term supply agreements. Sales rose in the local market and in Egypt. The growth of sales in the local and regional sector was about 13% and this growth is expected to continue as the emphasis is placed on these growing areas where geography provides an advantage. The top ten markets

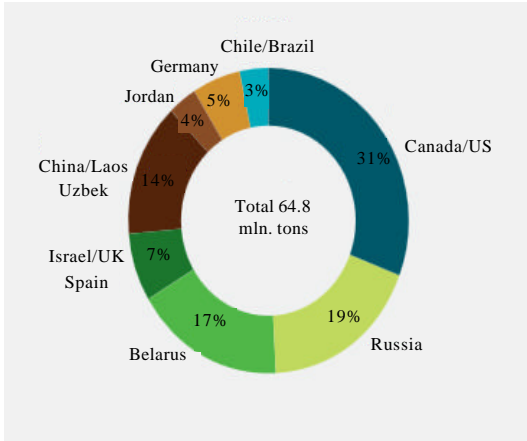


Fig. 6: Global potash production share in 2017 (APC Annual Report)

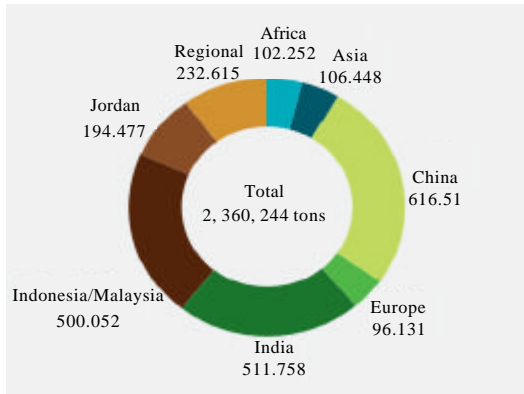


Fig. 7: APC's sales distribution in 2017 (MT) potash production share in 2017 APC Annual Report

for APC had a concentration of 91% of the total compared to 93% the year before (Anonymous, 2016) (Fig. 5-7). The top ten customers for APC were at 80% of the total sales compared to 79% the year before. Granular grade sales fell slightly in 2017 compared to the previous year. This was mainly due to technical issues with the compactors. However, a new unit was brought on stream at the end of 2017 and hence, sales in 2018 are expected to increase significantly. Europe and Africa represented about 67% of the total granular sales in 2017 compared to 45% the year before mainly due to the increase in granular sales to East Africa and reduction in sales to specific destinations in Asia. APC direct sales to non-fertilizer customers reached around 168k MT compared to 165k MT the previous year. This represents 1.8% of APC total sales. Jordan Bromine, Halliburton, the major oil drilling services companies in the Middle East and the industrial customers in Asia accounted for most of these sales (APC, annual report).

MATERIALS AND METHODS

The aim and objective of this study is to do a stock valuation for APC by using two types of strategic and financial analysis. One of the main approaches used in analyzing the strategic management of an organization is the SWOT analysis which evaluates the opportunities, threats, strengths and weaknesses of an organization. By identifying its strengths, weaknesses, opportunities and threats the organization can build strategies upon its strengths, eliminate its weaknesses and exploit its opportunities or use them to counter the threats.

The main idea in utilizing the SWOT frame is to systematically appraise the SWOT factors and make them commensurable as regards their weightiness. Strategic management can be understood as the collection of decisions and actions taken by business management in consultation with all levels within the organization to determine the long-term activities of the organization (Houben *et al.*, 1999). Analysis of the financial performance of a company is an essential tool to obtain information about how the company operated in the previous period. Interpretation of the evolution of financial indicators does not always prove to be easy, requiring multiple calculations and combined approaches while the knowledge and understanding of a type of business reviewed are essential in the proper interpretation of the results. The reference period for the study is 10 years beginning from the year 2013-2018. Data for the study has been taken from the annual reports of APC for the year 2013-2018.

RESULTS AND DISCUSSION

Analysis, results and discussion of APC financial and strategic position

Valuation analysis: The valuation of APC stock price arrives at the price of 7.272, driven by 35% DFCF Model price at 5.92 JOD and 60% of DDM price of 8.00 JOD. 65% weight assigned to the DDM Model for two reasons: firstly, a flaw in the DFCF Model is that relies significantly on the terminal value. Secondly, the assumption that APC is a Blue-chip company that has reached maturity as it has been paying dividends consistently with rates that exceed its retention ratio in the last couple of years. Thus, APC's stocks are considered to be "Income stocks" Le (2017).

Intrinsic valuation: DFCF was selected because APC has a positive free cash flow which is expected to increase over time. This method consists of a two-stage growth model. The first phase is based on a specific year-year forecast up to 2021 and the second phase is based on the constant growth of 3.33%. Based on our DFCF the estimated price is 5.92.

Cost of equity: Cost of equity was calculated through the capital asset pricing model. The latest issue of treasury bills rate was used as the risk-free rate, estimated at 3.101%. APC's beta was determined by using a 5-year monthly stock price versus Amman stock exchange index which resulted in a beta of 1.425 and an adjusted β (used in calculating the cost of equity) of 1.285. The expected market equity risk premium was defined to be 10.27% (Swath dam odorant estimate) which leads to a 16.30% cost of equity.

Weighted Average Cost of Capital (WACC): Weighted Average Cost of Capital (WACC) is determined to be 16.30%. APC's capital structure is 99.99% equity; Therefore, its WACC is very similar to the cost of equity.

Terminal growth value: Terminal growth value is obtained a terminal growth rate of 3.33% by estimating the Real-GDP growth and inflation rate after 2022 (Going concern assumption) which was 1.327 and 2%, respectively and adding them together (Table 2).

Growth analysis

Growth in sales: In estimating potash sales, the assumption is that there is a steady increase in potash demand globally. In 2017 three of the four quarterly earnings reports were available for earnings in the final quarter sales are estimated by weighting the transactions that occurred in the last quarter for the past 3 years to the total sales for these years then the results were averaged to estimate the sales in fourth quarter. As for the years 2018-2020, the growth in sales is based on the expected increase in Kemapco sales due to its latest agreement with Yara international, expected global GDP growth, changes in climate especially in agricultural countries and increase on crop demand. For the year 2021 and besides, the factors mentioned APC's new solar ponds expansion project which is set to be complete by 2021 is considered and many other factors (Table 3).

Basis of sales growth rate: Recently in 2018 Kemapco (a company affiliated with APC) (Anonymous, 2018) signed an agreement with Yare International a significant fertilizer producing company in India. This agreement will result in the construction of a new manufacturing plant which will increase the capacity by 175000 MT to be 350000 MT; This project will require a total investment of 200 mln dollar. Demand for agricultural product will increase for the following reason: over the 10-year outlook period, demand is projected to grow more slowly. Future growth in crop production will be attained mostly by increasing yields and growth in meat and dairy production.

Table 2: APC valuation analysis

Items	Values
Risk free rate	3.101%
β	1.425
Adjusted β	1.28475
Market risk premium	10.27%
Cost of equity	16.295383%
Cost of debt after tax	7.73%
Market value equity (JOD)	1,378,904,625
Market value debt (JOD)	17
Weight equity	99.999999%
Weight debt	0.000001%
WACC	16.29538239%

Table 3: Growth analysis

Assumptions	2017 (%)	2018 (%)	2019 (%)	2020 (%)	2021 (%)
Sales growth rate	14.85	09.70	07.00	05.50	13.00
Cost of goods sold growth rate	12.40	07.00	05.00	03.00	10.00
Assets growth rate	-1.93	02.00	-2.00	-2.00	07.00
Finance revenue rate	03.82	03.82	03.82	03.82	03.82
Depreciation rate	28.00	28.00	28.00	28.00	28.00
Tax rate	12.00	12.00	12.00	12.00	12.00

Agricultural trade is expected to grow more slowly but remain less sensitive to weak economic conditions than other sectors. Real prices are expected to remain flat or decline for most commodities. Climate change: for the decade a warming of 0.1° is expected globally an increase in temperature is better for plant growth, thus, an increase in fertilizer demand is most likely to occur.

Growth in cost of sales: The estimate of the growth in the cost of sales is dependent on APC's effective cost controlling mission. For example, in 2016 APC managed to maintain a steady price per unit despite the medawar factory shutting down for 2 months and it's contracts being delayed and in 2017 the increase in the cost of sales was lower than the increase in sales. Besides APC was recently granted a right to use a gas pipeline as a fuel replacement instead of liquid fuel which is expected to drive down energy costs even further (Anonymous, 2013; Anonymous, 2013, 2014).

Assets growth rate: Assets growth rate is based on many factors including. Maintenance costs which are reflected in the CAPEX. Depreciation expense charges which reduce the book value of assets and APC's upcoming expansion projects such as the expansion of solar ponds in 2021 and Kempaco's agreement with Yara international which is expected to boost its production capacity significantly.

Financial analysis

Sales: After reviewing the financial statement of APC, the results show that APC's (Anonymous, 2015) sales had been reasonably stable between 2012 and 2015 even

though potash prices had been declining globally. However, it suffered a significant decrease in 2016 due to the unusual delays in completing contracts with India and China and because of the medawar mine closure due to maintenance which had an estimated production opportunity cost of 120,000 MT.

Profitability analysis: For APC the most profitability ratios decreased dramatically in 2016 because of the decrease in sales that was due to the reasons explained above. Besides, the company's finance revenue has been falling steadily, since, 2012 due to the decline in cash. The decrease in stock can be attributed to 1. Distribution of large amounts cash dividend from its retained earnings, 2. Increase in the number of investments in 2016 related to buildings and equipment, investments in high amount in joint ventures and expansions projects in progress. Besides, APC purchased bonds for about 21,199,000 JOD.

Return on Equity (ROE): Decreased in 2016 because the company experienced a drop in net income due to a decrease in sales and because the company incurred expenses with the shutting down of Al Medawar factory which meant the company had to withstand fixed costs during that period which include depreciation expenses, salaries expenses and utility expenses. Equity decreased about 32,658,000 JOD because the company paid about this amount from its retained earnings as dividends this indicates that the company is mature and has some stuffiness in assets in the short run.

Return on Assets (ROA): Decreased in 2016 due to the decrease in net income. Total assets declined in 2016 especially the current assets their decline can be attributed to the fact that the company paid dividends from its retained earnings and settled some amount of their trade payables for about 9,000,000 JOD of their other current liabilities they also made significant investments in long-term assets which will be discussed in our asset management section. Different profitability ratios decreased dramatically in 2016 for the same reasons that affected sales and expenses.

Short term asset management: When we analyze short-term asset management we are concerned mainly with what happens to working capital (current assets and current liabilities) from our research we found the ratios were relatively stable from 2012-2015 but it diverted in 2016 for the following reasons: working capital decreased in high amounts in 2016 due to a decrease in current assets mainly cash and receivables which were used to pay dividends from retained earnings, investing in bonds and settlement of a significant amount of their trade payable.

Current liabilities: Decreased in 2016 but an amount less than the decrease in current assets its decline was due to the decrease in potash mining fees from 23,698,000 to 4,063,000. Income tax payable decreased because APC's earnings before tax decreased. Working capital turnover decreased in 2016 due to the decrease in sales in a higher amount than the reduction in working capital receivables were relatively stable because receivables and sales decrease comparatively in the same percentage inventory and payable turn over increased in 2016 because inventory and payable had a higher percentage drop in percent higher than the reduction in cost of sales, so, the company incurred some manufacturing cost such as salaries and wages and depreciation on manufactory and utilities regardless the level of outputs.

Long-term assets management: Long-term assets and net long-term assets increased during the years especially in 2016, due to the increases in projects, investments joined ventures and the main reason for this dramatic increase is the investment in bonds market (government bond) with coupon rate 6.125% paid semiannually about of 21199 thousand JOD. PP&E has been decreasing annually due to high depreciation expenses which were higher than the investment in PP&E the last couple of years. Net long-term assets turn over and net long-term holdings to sales were reasonably stable except for 2016 where sales decreased, long-term assets also reduced along with the long-term liabilities for the reasons explained above.

Liquidity: APC is highly liquid as it measures very well in terms of liquidity ratios, the company can cover its current liabilities from current assets or only from cash many times and these ratios increase dramatically in 2016 despite the decrease in current assets and cash due to the significant reduction of current liabilities which outpaced the decline in current assets.

Debt and long-term solvency: APC's capital structure is a mixture of debt and equity with equity weighting approximately 99.9%. APC's capital has decreased in high amounts during 2016 because of the decrease in the book value of equity. Ratios related to debt such as the debt to capital and debt to equity ratios are immaterial (<0.1%) and this indicates that the company doesn't rely on financial leverage.

Risks analysis

Sales risk: These factors include price fluctuations in universal markets and a slowing of the global economy, causing a reduction in demand for potash. Because potash is mainly used as a fertilizer any changes that may

affect this sector such as a decrease in agriculture production, production prices, weather-related factors such as drought and floods or other factors that may lead farmers to plant less and as a result decline their use of fertilizers. APC could reduce the effect of such risks by finding new markets and usages while adapting to market changes and customer demand.

Political risk: The alliance with the United States of America and the United Kingdom and the good relations with its neighbors (such as Saudi Arabia) as well as its good relationship with other Arab neighbors, bring political stability to the Hashemite Kingdom of Jordan. Also, the situation in Syria could affect the investment environment in Jordan positively.

Economic risk: The region, in general is experiencing unrest because of economic, political and social circumstances which may affect commercial and investment activities in the area. This includes potential labor strikes and disputes at the company's facilities and the public service sector. At present, APC's employee-benefit packages are among the highest in the region. Also, management keeps open channels of communication with labor unions and worker representatives. Every 2 years APC and the union sign a labor agreement that covers all needs and concerns of the workers and the union to ensure smooth and uninterrupted operations.

Legal risk: The tax rate in Jordan could be changed over the years because of the need of government to cover the deficit in the budget which in turn will affect the number of profits for Arab Potash company. However, there is no tax on capital gains and dividends. On the other hand, Arab Potash company exports a high percentage of its product to Foreign countries, so, the changes in regulations in those countries will affect the profits of Arab Potash company. The policies of importing countries' government, specific subsidies for the agricultural sector, may influence the number of crops and consequently the sales of fertilizer products.

Environmental risk: The amount of extraction is affected by the decreasing the level of water of the Dead Sea year after year. Besides, the factories of the Arab Potash company are located in Ghor Al Safi where this area is exposed to earthquakes and floods. To avoid this problem, all promises in that area are built in individual specifications and with full insurance.

Operational risks: The process of extracting and producing Potash requires enormous quantities of water

and energy. Therefore, resource scarcity or high prices of water and energy may affect the number and amount of production. The Potash company started using power generators on diesel material. The company continues to explore cheaper energy alternatives. Furthermore, it starts using less expensive and environmentally friendly natural gas of heavy fuel. The company is considering installing a working turbine on natural gas and diesel for electricity and steam. The Potash company also finances the construction of wadi hammad dam that will contribute to bridging the water needs of local communities and some needs of the Potash company.

The company mainly depends on Aqaba port for loading and shipment Potash. The Potash company in partnership with a mining Jordan phosphate company, establishes a new port to facilitate and improve shipping operations through a joint venture company: Jordanian industrial company. Note that, there is a significant increase in volume shipments in bulk as well as bulk cargo in bulk ships. Also, there is a possibility of using roads shipping to neighboring countries which will increase the distribution flexibility.

Financial risks: The current ratio for APC is 8.3 times in 2016 which means that the APC can cover its short-term debts. Also, it has low bankruptcy costs where its Debt/Equity ratio is equal to 0% in 2016 (Fig. 8).

Interest rate risk: The APC is exposed to interest rate risk on its interest-bearing assets and liabilities (bank deposits and term loans).

Credit risk: The APC uses letters of credit and credit insurance to ensure that sales are made to customers with appropriate credit history and do not exceed acceptable credit exposure limits.

Liquidity risk: The APC's policy is to maintain sufficient cash and cash equivalents or have available funding through an adequate amount of committed credit facilities to meet its commitments.

Currency risk: The APC's transactions in US Dollar do not give rise to foreign currency risk because the Jordanian Dinar is fixed against the US Dollar (USD 1.41 for each one JD).

Competition risk: Using porter's five forces model to understand the competitiveness of APC business environment and determine APC's weaknesses and strengths in terms of competitiveness.

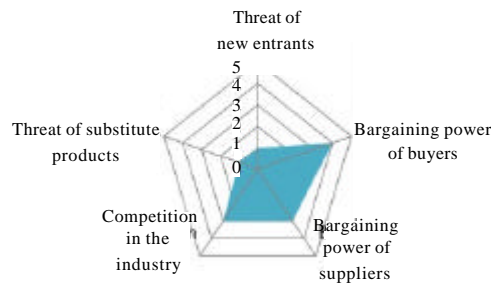


Fig. 8: Porter's five forces model

The threat of new entrants: Substantial barriers to entry because Canada, Russia and Belarus together account for more than 80% of global reserves also production and supply of Potash is concentrated with six of the largest potash producers accounting for over 60% of global capacity. Only companies with high characteristic (high capacity, low production cost) can face global competition. Significant economies of scale to profit (Small players will not be successful)

Competition in the industry:

- Large companies dominate the industry (high concentration, low balance)
- Potash industry operates in a global market (international factor)
- Lower of existing competitors (merger potash corp and agrium to competition for increasing market share)
- Natural resources are differently located (potash reserve is high in some countries)

Bargaining power of suppliers:

- Exist of raw material (available for the producer)
- Potash significance is increasing with time

Bargaining power of buyers

- Lacks a diversified or balance market (concentration threat)
- Low switching cost (product is undifferentiated)
- Long-term contracts are involved
- The risk of buyer's backward integration is insignificant

The threat of substitute products:

- No superior substitute exists
- The intervention of the human factor: genetically modified crops can reduce demand for potash

SWOT analysis

Strengths:

- The sole producer of potash in the Arab world

- The potash company is granted a 100-year concession from the Jordanian government to extract
- The new agreement with Yare international
- Low cost of export when exporting to India, China and the far East compared to others potash produced compared to other potash producing companies

Weaknesses:

- Low capacity of potash production compared to other potash producing companies
- Its only source of salt extraction is the Dead Sea which has a small size compared to the producing countries of the potash

Threats:

- The weakness of the Jordanian economy
- The current political situation in the Middle East
- Fluctuations in global prices of potash
- Reduce China's export volumes as it seeks self-consumption

Opportunities:

- Increase global market share
- Obtain new investments to boost the company's profits
- Signing new agreements that will enhance the company's sales (Appendix 1-13)

CONCLUSION

Good performances within a company are the results of correct interaction of the business management with its internal and or external environment. To operate successfully in this respect, the company must concentrate its future objectives on its strengths while averting tendencies related to the company's weaknesses.

The study found in terms of financial and strategic analysis that APC's sales had been reasonably stable between (2012-2015) even though potash prices had been declining globally; however, it suffered a significant decrease in 2016 due to unusual delays in completing contracts with India and China and because of the medawar mine closure due to the maintenance that had an estimated production opportunity cost of 120 kMT. The APC is exposed to different kinds of risks such as sales risk, operational risk, economic risk, financial risk, credit risk, interest rate risk, liquidity risk, political risk, legal risk and environmental risk. However, the volatility of sales is considered the most critical risk could affect the profitability of the APC.

Moreover, the results reveal that APC performed well regarding return available to all the investors measured as return on average capital employed. It also shows that APC offered a higher return to equity shareholders measured regarding return on equity and earnings per share during the reference period. However, declining return on average net worth on year basis is a cause of concern for APC. Besides, this it was also found that debt policy of the company is very conservative as it uses a lower degree of risk to avoid financial risk and insolvency risk. Though APC is performing well at least regarding book value measures as highlighted above, markets do not seem to be favoring the stock of APC as it is offering a lower premium on its share in terms of low P/E ratio which also offers an opportunity to conduct further research.

RECOMMENDATIONS

The future plans of the APC are increasing the market share of a company in global markets, raising the company's ability to support the Jordanian national economy and generate jobs and keep focusing on reducing costs to the lowest achievable level. The company is working on several projects to reduce costs now and in the future. The production volume in 2016 is

equal to 2.32 mln.tons. Therefore, APC's production is ranked as the 8th worldwide with 3% of the world production. From the analysis a stock valuation of APC by using two types of strategic and financial analysis. We issue a sell recommendation with a target price of 7.272 JOD/ share. The valuation of APC stock price arrives at this price driven by 35% of DFCF Model price at 5.92 JOD and 60% of DDM price of 8.00 JOD. The 65% weight assigned to the DDM Model for two reasons: firstly, a flaw in the DFCF Model is that relies significantly on the terminal value. Secondly, the assumption that APC is a Blue-chip company that has reached maturity as it has been paying dividends consistently with rates that exceed its retention ratio in the last couple of years; thus, APC's stocks are considered to be "Income stocks". Besides, a positive relationship is found between the company's dividends and its closing price. We came to a conclusion that the stock price of APO is overvalued as the valuation of APC stock price arrives at the price of 7.272 JOD which is lower the market price of 16.90 JOD.

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APPENDIX

Appendix 1: Balance sheet (Thousand JOD)

Assets	2013	2014	2015	2016	2017 F	2018 F	2019 F	2020 F	2021 F
Non-current assets									
property, plant and equipment	JOD 333,947	JOD 291,846	JOD 241,573	JOD 227,599	JOD 232,151	JOD 227,508	JOD 222,958	JOD 238,565	JOD 232,078
Intangible Assets	JOD -	JOD -	JOD -	JOD 74,620	JOD 76,112	JOD 74,590	JOD 73,098	JOD 78,215	JOD 76,088
- project in progress	JOD 26,928	JOD 39,683	JOD 68,932	JOD 146,396	JOD 153,242	JOD 160,408	JOD 167,910	JOD 175,762	JOD 76,088
Investment in associates and joint ventures	JOD 87,023	JOD 104,746	JOD 133,608	JOD 660	JOD 660	JOD 660	JOD 660	JOD 660	JOD 139,856
Financial assets at fair value through other comprehensive income	JOD 920	JOD 715	JOD 771	JOD 5,287	JOD 4,774	JOD 4,440	JOD 4,196	JOD 3,650	JOD 660
660				JOD 18,723	JOD 18,626	JOD 18,529	JOD 18,433	JOD 18,338	
Total noncurrent assets	JOD 471,468	JOD 459,614	JOD 466,902	JOD 494,910	JOD 494,387	JOD 506,572	JOD 507,046	JOD 508,069	JOD 535,908
Current assets									
Employees housing loans	JOD 2,299	JOD 2,321	JOD 2,960	JOD 2,896	JOD 2,833	JOD 2,772	JOD 2,712	JOD 2,654	JOD 2,596
Accounts receivable	JOD 52,480	JOD 61,546	JOD 68,453	JOD 52,349	JOD 60,123	JOD 65,955	JOD 70,572	JOD 74,453	JOD 84,132
Inventories	JOD 53,126	JOD 17,924	JOD 31,462	JOD 20,922	JOD 10,111	JOD 10,819	JOD 11,360	JOD 11,700	JOD 12,871
Spare parts and supplies	JOD 54,040	JOD 52,813	JOD 42,533	JOD 40,511	JOD 39,729	JOD 40,524	JOD 39,713	JOD 38,919	JOD 41,643
Other current assets	JOD 67,565	JOD 59,946	JOD 65,349	JOD 53,926	JOD 61,934	JOD 67,942	JOD 72,698	JOD 76,696	JOD 86,566
Carh on hand and bank balance	JOD 304,437	JOD 294,759	JOD 338,463	JOD 255,140	JOD 231,280	JOD 210,964	JOD 234,865	JOD 258,995	JOD 287,015
Total current assets	JOD 533,947	JOD 498,809	JOD 549,220	JOD 425,744	JOD 406,010	JOD 398,975	JOD 421,919	JOD 463,417	JOD 514,923
TOTAL ASSETS	JOD 1,005,415	JOD 948,423	JOD 1,016,122	JOD 920,654	JOD 900,397	JOD 905,547	JOD 928,965	JOD 971,486	JOD 1,050,831
Equity and Liabilities									
Equity									
Paid in capital	JOD 83,318	JOD 83,318	JOD 83,318	JOD 83,318	JOD 83,318	JOD 83,318	JOD 83,318	JOD 83,318	JOD 83,318
Statutory reserve	JOD 50,464	JOD 50,464	JOD 50,464	JOD 50,464	JOD 50,464	JOD 50,464	JOD 50,464	JOD 50,464	JOD 50,464
Voluntary reserve	JOD 80,699	JOD 80,699	JOD 80,699	JOD 80,699	JOD 80,699	JOD 80,699	JOD 80,699	JOD 80,699	JOD 80,699
Fair value reserve	JOD 263	JOD 58	JOD 114	JOD 3	JOD 3	JOD 3	JOD 3	JOD 3	JOD 3
Retained earnings	JOD 673,744	JOD 644,443	JOD 677,995	JOD 645,048	JOD 621,705	JOD 627,181	JOD 649,789	JOD 690,708	JOD 763,862
Total Equity	JOD 886,488	JOD 860,982	JOD 892,190	JOD 859,532	JOD 836,189	JOD 841,665	JOD 864,273	JOD 905,192	JOD 978,346
Non-current liabilities									
Long-term loans	JOD 119	JOD 85	JOD 51	JOD 17	JOD -	JOD -	JOD -	JOD -	JOD -
Other non-current liabilities	JOD 14,147	JOD 9,106	JOD 9,326	JOD 9,918	JOD 10,548	JOD 11,217	JOD 11,929	JOD 12,686	JOD 13,492
Total non-current liabilities	JOD 14,266	JOD 9,191	JOD 9,377	JOD 9,935	JOD 10,548	JOD 11,217	JOD 11,929	JOD 12,686	JOD 13,492
Current liabilities									
current portion of long term loan	JOD 1,228	JOD 34	JOD 34	JOD 34	JOD 17	JOD -	JOD -	JOD -	JOD -
Potash mining fees due to the government of the Hashemite kingdom of Jordan	JOD 5,949	JOD 6,330	JOD 23,698	JOD 4,063	JOD 4,666	JOD 5,119	JOD 5,477	JOD 5,779	JOD 6,530
Trade payables and other accruals	JOD 31,239	JOD 28,941	JOD 25,535	JOD 17,468	JOD 19,634	JOD 21,008	JOD 22,059	JOD 22,721	JOD 24,993
Income tax provision	JOD 10,187	JOD 5,097	JOD 29,039	JOD 4,187	JOD 11,496	JOD 14,014	JOD 16,440	JOD 18,943	JOD 23,145
Other current liabilities	JOD 56,058	JOD 37,848	JOD 36,249	JOD 25,435	JOD 17,847	JOD 12,523	JOD 8,787	JOD 6,166	JOD 4,326
Total current liabilities	JOD 104,661	JOD 78,250	JOD 114,555	JOD 51,187	JOD 53,661	JOD 52,664	JOD 52,763	JOD 53,608	JOD 58,993
Total Liabilities	JOD 118,927	JOD 87,441	JOD 123,932	JOD 61,122	JOD 64,208	JOD 63,882	JOD 64,692	JOD 66,294	JOD 72,485
TOTAL EQUITY AND LIABILITIES	JOD 1,005,415	JOD 948,423	JOD 1,016,122	JOD 920,654	JOD 900,397	JOD 905,547	JOD 928,965	JOD 971,486	JOD 1,050,831

Appendix 2: Common size of balance sheet

Common size of balance sheet	2013	2014	2015	2016	2017 F	2018 F	2019 F	2020 F	2021 F
Assets									
Non-current assets									
property, plant and equipment	33.215%	30.772%	23.774%	25.208%	25.278%	25.637%	24.490%	22.950%	22.702%
Intangible Assets		0.000%	0.000%	0.000%	1.588%	1.466%	1.319%	1.157%	0.972%
0.000% project in progress		2.678%	4.184%	6.784%	8.287%	8.405%	8.029%	7.524%	7.443%
8.265% investment in associates and joint ventures		8.655%	11.044%	13.149%	16.259%	16.923%	17.267%	17.284%	16.726%
15.191% Financial assets at fair value through other comprehensive income		0.092%	0.075%	0.076%	0.073%	0.073%	0.071%	0.068%	0.063%
0.072% Finance assets at amortized cost		0.000%	0.000%	0.000%	2.344%	2.320%	2.251%	2.143%	1.972%
2.303% Deferred tax assets		0.373%	0.323%	0.305%	0.587%	0.527%	0.478%	0.432%	0.347%
0.674% Employee housing loans		1.880%	2.062%	1.862%	2.079%	2.057%	1.995%	1.897%	1.745%
Total non-current assets	46.893%	48.461%	45.949%	53.756%	54.908%	55.941%	54.582%	52.298%	50.998%
Current assets									
Employees housing loans	0.229%	0.245%	0.291%	0.315%	0.315%	0.306%	0.292%	0.273%	0.247%
Accounts receivable	5.220%	6.489%	6.737%	5.686%	6.677%	7.283%	7.597%	7.664%	8.006%
Inventories	5.284%	1.890%	3.096%	2.273%	1.123%	1.195%	1.223%	1.204%	1.225%
Spare parts and supplies	5.375%	5.516%	4.186%	4.400%	4.412%	4.475%	4.275%	4.006%	3.963%
Other current assets	6.720%	6.321%	6.431%	5.857%	6.879%	7.503%	7.826%	7.895%	8.247%
Cash on hand and bank balance	30.280%	31.079%	33.309%	27.713%	25.686%	23.297%	24.206%	26.660%	27.313%
Total current assets	53.107%	51.539%	54.051%	46.244%	45.092%	44.059%	45.418%	47.702%	49.002%
TOTAL ASSETS	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%
Equity and Liabilities									
Equity									
Paid in capital	8.287%	8.785%	8.200%	9.050%	9.253%	9.201%	8.969%	8.576%	7.929%
Statutory reserve	5.019%	5.321%	4.966%	5.481%	5.605%	5.573%	5.432%	5.195%	4.802%
Voluntary reserve	8.026%	8.509%	7.942%	8.765%	8.963%	8.912%	8.687%	8.307%	7.680%
Fair value reserve	0.026%	0.006%	0.011%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Retained earnings	66.813%	68.160%	66.684%	70.064%	69.048%	69.260%	69.948%	71.098%	72.691%
Total Equity	88.171%	90.780%	87.803%	93.361%	92.869%	92.946%	93.036%	93.176%	93.102%
Non-current liabilities									
Long-term loans	0.012%	0.009%	0.005%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%
Other non-current liabilities	1.407%	0.960%	0.918%	1.077%	1.171%	1.239%	1.284%	1.306%	1.284%
Total non-current liabilities	1.419%	0.969%	0.923%	1.079%	1.171%	1.239%	1.284%	1.306%	1.284%
Current liabilities									
current portion of long term loan	0.122%	0.004%	0.001%	0.004%	0.002%	0.000%	0.000%	0.000%	0.000%
Potash mining fees due to the government of the Hashemite kingdom of Jordan	0.992%	0.647%	2.332%	0.441%	0.518%	0.545%	0.590%	0.595%	0.621%
Trade payables and other accruals	3.107%	3.051%	2.511%	1.897%	2.181%	2.320%	2.375%	2.399%	2.378%
Income tax provision	1.013%	0.537%	2.858%	0.455%	1.277%	1.548%	1.770%	1.950%	2.202%
Other current liabilities	5.570%	3.993%	3.567%	2.761%	1.982%	1.383%	0.946%	0.620%	0.412%
Total current liabilities	10.410%	8.251%	11.274%	5.560%	5.960%	5.816%	5.680%	5.518%	5.614%
Total liabilities	11.829%	9.220%	12.197%	6.639%	7.131%	7.054%	6.964%	6.824%	6.898%
TOTAL EQUITY AND LIABILITIES	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%

Appendix 3: Income statement

Income Statement (Thousand JOD)	2013	2014	2015	2016	2017 F	2018 F	2019 F	2020 F	2021 F
Sales	JOD 521,209	JOD 535,465	JOD 527,527	JOD 369,651	JOD 424,544	JOD 465,725	JOD 498,326	JOD 525,734	JOD 594,079
Cost of sales	JOD 277,418	JOD 335,298	JOD 252,890	JOD 239,853	JOD 269,595	JOD 288,466	JOD 302,890	JOD 311,976	JOD 343,174
Gross profit	JOD 243,791	JOD 200,167	JOD 274,637	JOD 129,798	JOD 154,949	JOD 177,259	JOD 195,436	JOD 213,757	JOD 250,905
Administrative expenses	JOD 16,175	JOD 21,611	JOD 22,301	JOD 16,843	JOD 17,399	JOD 17,653	JOD 18,091	JOD 18,539	JOD 19,005
selling and distribution expenses	JOD 14,868	JOD 16,796	JOD 18,006	JOD 15,679	JOD 18,007	JOD 19,754	JOD 21,137	JOD 22,299	JOD 25,198
Royalty to the Government of Jordan	JOD 25,949	JOD 13,330	JOD 23,698	JOD 4,063	JOD 4,666	JOD 5,119	JOD 5,477	JOD 5,779	JOD 6,530
Depreciation expenses	JOD 63,813	JOD 62,749	JOD 63,527	JOD 64,706	JOD 63,457	JOD 64,726	JOD 63,432	JOD 62,163	JOD 66,515
Amortization expenses	JOD -	JOD -	JOD -	JOD -	JOD 1,021	JOD 1,021	JOD 1,021	JOD 1,021	JOD 1,021
Operating profit	JOD 122,986	JOD 85,681	JOD 147,105	JOD 28,507	JOD 50,398	JOD 68,985	JOD 86,278	JOD 103,955	JOD 132,636
Finance revenue	JOD 15,822	JOD 10,948	JOD 10,452	JOD 8,413	JOD 8,845	JOD 8,068	JOD 8,599	JOD 9,905	JOD 10,976
Donations expenses	JOD 10,074	JOD 7,633	JOD 10,138	JOD 8,118	JOD 9,324	JOD 10,228	JOD 10,944	JOD 11,546	JOD 13,047
Finance costs and bank charges	JOD 1,027	JOD 641	JOD 1,525	JOD 1,366	JOD 1,569	JOD 1,721	JOD 1,842	JOD 1,943	JOD 2,195
Other income , net	JOD 1,588	JOD 3,338	JOD 879	JOD 15,771	JOD 18,113	JOD 19,870	JOD 21,261	JOD 22,430	JOD 25,346
Other expenses	JOD 1,501	JOD 344	JOD -	JOD -	JOD -	JOD -	JOD -	JOD -	JOD -
Foreign currency exchange differences	JOD 851	JOD 2,270	JOD 2,100	JOD 255	JOD 255	JOD 255	JOD 255	JOD 255	JOD 255
Profit before tax and gain from associates and joint ventures	JOD 128,645	JOD 89,079	JOD 144,673	JOD 42,952	JOD 66,209	JOD 84,719	JOD 103,098	JOD 122,547	JOD 153,461
Company's share of profit of associates and joint ventures	JOD 19,511	JOD 21,228	JOD 18,471	JOD 28,606	JOD 32,854	JOD 36,041	JOD 38,564	JOD 40,685	JOD 45,974
Revaluation of Islamic Development Bank loan for Jordan Magnesia Company	JOD 283	JOD 102	JOD 320	JOD -	JOD -	JOD -	JOD -	JOD -	JOD -
Profit before tax	JOD 147,873	JOD 110,205	JOD 162,824	JOD 71,558	JOD 99,062	JOD 120,759	JOD 141,661	JOD 163,231	JOD 199,435
Income tax expense	JOD 17,212	JOD 10,529	JOD 31,691	JOD 4,124	JOD 11,496	JOD 14,014	JOD 16,440	JOD 18,943	JOD 23,145
Profit for the year	JOD 130,661	JOD 99,676	JOD 131,133	JOD 67,434	JOD 87,566	JOD 106,745	JOD 125,222	JOD 144,288	JOD 176,290

Appendix 4: Common size of income statement

Common Size of Income Statement									
	2013	2014	2015	2016	2017 F	2018 F	2019 F	2020 F	2021 F
Sales	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Cost of sales	53.23%	62.62%	47.94%	64.89%	63.50%	61.94%	60.78%	59.34%	57.77%
Gross profit	46.77%	37.38%	52.06%	35.11%	36.50%	38.06%	39.22%	40.66%	42.23%
Administrative expenses	3.10%	4.04%	4.23%	4.56%	4.10%	3.79%	3.63%	3.53%	3.20%
selling and distribution expenses	2.85%	3.14%	3.41%	4.24%	4.24%	4.24%	4.24%	4.24%	4.24%
Royalty to the Government of Jordan	4.98%	2.49%	4.49%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%
Depreciation expenses	12.24%	11.72%	12.04%	17.50%	14.95%	13.90%	12.73%	11.82%	11.20%
Amortization expenses	0.00%	0.00%	0.00%	0.00%	0.24%	0.22%	0.20%	0.19%	0.17%
Operating profit	23.60%	16.00%	27.89%	7.71%	11.87%	14.81%	17.31%	19.77%	22.33%
Finance revenue	3.04%	2.04%	1.98%	2.28%	2.08%	1.73%	1.73%	1.88%	1.85%
Donations expenses	1.93%	1.43%	1.92%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%
Finance costs and bank charges	0.20%	0.12%	0.29%	0.37%	0.37%	0.37%	0.37%	0.37%	0.37%
Other income , net	0.30%	0.62%	0.17%	4.27%	4.27%	4.27%	4.27%	4.27%	4.27%
Other expenses	0.29%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Foreign currency exchange differences	0.16%	0.42%	0.40%	0.07%	0.06%	0.05%	0.05%	0.05%	0.04%
Profit before tax and gain from associates and joint ventures	24.68%	16.64%	27.42%	11.62%	15.60%	18.19%	20.69%	23.31%	25.83%
Company's share of profit of associates and joint ventures	3.74%	3.96%	3.50%	7.74%	7.74%	7.74%	7.74%	7.74%	7.74%
Revaluation of Islamic Development Bank loan for Jordan Magnesla Company	0.05%	0.02%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Profit before tax	28.37%	20.58%	30.87%	19.36%	23.33%	25.93%	28.43%	31.05%	33.57%
Income tax expense	3.30%	1.97%	6.01%	1.12%	2.71%	3.01%	3.30%	3.60%	3.90%
Profit for the year	25.07%	18.61%	24.86%	18.24%	20.63%	22.92%	25.13%	27.45%	29.67%

Appendix 5: Financial ratios

profitability ratio	2013	2014	2015	2016	2017 F	2018F	2019F	2020F	2021F
ROE									
ROA									
Operating ROA									
Gross profit margin									
EBIT margin									
EBITDA margin									
NOPAT									
NOPAT margin									
Net profit margin									
Assets management ratio									
short term assets management									
working capital									
working capital turnover									
working capital to sales									
Operating working capital									
Operating working capital turnover									
Operating working capital to sales									
Accounts receivable turnover									
Inventory turnover									
Accounts payable turnover									
Long-Term Assets Management									
Net Long-Term assets									
net assets									
Net Long-Term assets turnover									
Net Long-Term assets to sales									
PPE turnover	1.56	1.83	2.18	1.59					
Liquidity ratio									
current ratio	5.10	6.25	4.79	8.32					
quick ratio	4.59	6.02	4.52	7.91					
cash ratio	2.91	3.77	2.95	4.98					
Debt and Long-term solvency									
capital	JOD 887,835	JOD 861,101	JOD 892,275	JOD 859,583					
debt	JOD 1,347	JOD 119	JOD 85	JOD 51					
liabilities to equity ratio	0.13	0.10	0.14	0.07					
debt-to-equity ratio	0.00	0.00	0.00	0.00					
Debt-to-capital ratio	0.00	0.00	0.00	0.00					
Equity multiplier	1.13	1.10	1.14	1.07					
sustainable growth									
cash dividend	JOD 124,977.00	JOD 99,981.00	JOD 99,981.00	JOD 83,318.00					
dividend payout ratio		95.65%	100.31%	76.24%	123.55%				
Appendix 5: Financial Ratios		0.64%	-0.04%	3.49%	-1.85%				
dividend per share	JOD 1.50	JOD 1.20	JOD 1.20	JOD 1.00					

Appendix 6: Assumption

Assumption	2017	2018	2019	2020	2021
sales growth rate	14.85%	9.70%	7.00%	5.50%	13.00%
cost of goods sold growth rate	12.40%	7.00%	5.00%	3.00%	10.00%
Assets growth rate	-1.93%	2.00%	-2.00%	-2.00%	7.00%
finance revenue rate	3.82%	3.82%	3.82%	3.82%	3.82%
Depreciation rate	28%	28%	28%	28%	28%
tax rate	12%	12%	12%	12%	12%

Appendix 7: Free cash flow and CAPEX

CAPX												
capital expenditures	2016		2017		2018		2019		2020		2021	
PP&E	JOD	232,078	JOD	227,599	JOD	232,151	JOD	227,508	JOD	222,958	JOD	238,565
change PP&E			JOD	4,479-	JOD	4,552	JOD	4,643-	JOD	4,550-	JOD	15,607
Depreciation			JOD	63,457	JOD	64,726	JOD	63,432	JOD	62,163	JOD	66,515
capital expenditures			JOD	58,978	JOD	69,278	JOD	58,789	JOD	57,613	JOD	82,122

		2016		2017		2018		2019		2020		2021	
Net working capital	JOD	374,557	JOD	352,350	JOD	346,311	JOD	369,156	JOD	409,809	JOD	455,930	
change in net Working capital			JOD	22,207-	JOD	6,039-	JOD	22,846	JOD	40,653	JOD	46,121	

Free cash flow										
	2017		2018		2019		2020		2021	
Net income	JOD	87,566	JOD	106,745	JOD	125,222	JOD	144,288	JOD	176,290
depreciation	JOD	63,457	JOD	64,726	JOD	63,432	JOD	62,163	JOD	66,515
Amortization	JOD	1,021	JOD	1,021	JOD	1,021	JOD	1,021	JOD	1,021
capital expenditures	JOD	58,978	JOD	69,278	JOD	58,789	JOD	57,613	JOD	82,122
change in working capital	JOD	22,207-	JOD	6,039-	JOD	22,846	JOD	40,653	JOD	46,121
Free cash flow	JOD	115,274	JOD	109,254	JOD	108,040	JOD	109,207	JOD	115,584

Appendix 8: WACC

risk free rate		3.101%
beta		1.425
Adjusted beta		1.28475
market risk premium		10.27%
camp (cost of equity)		16.295383%
Cost of debt after tax		7.73%
Market value equity	JOD	1,378,904,625
market value debt	JOD	17
weight equity		99.999999%
weight debt		0.000001%
WACC		16.29538239%

Appendix 9: Valuation

DDM approach		2017		2018		2019		2020		2021	
		1	2	3	4	5					
Dividend per share	JOD	1.22	JOD	1.22	JOD	1.22	JOD	1.22	JOD	1.22	JOD
termagant value											
present value factor	JOD	0.86	JOD	0.74	JOD	0.64	JOD	0.55	JOD	0.47	JOD
present value	JOD	1.05	JOD	0.91	JOD	0.78	JOD	0.67	JOD	0.59	JOD
price	JOD	8.00									

DCF approach		2017		2018		2019		2020		2021	
		1	2	3	4	5					
free cash flow	JOD	115,274.19	JOD	109,253.85	JOD	108,040.30	JOD	109,206.91	JOD	115,583.94	JOD
termagant value											
present value factor	JOD	0.86	JOD	0.74	JOD	0.64	JOD	0.55	JOD	0.47	JOD
present value	JOD	99,121.90	JOD	80,781.48	JOD	68,690.77	JOD	59,703.56	JOD	433,315.69	JOD
interstice value	JOD	493,019.25									
price	JOD	5.92									

The Estimated Price According to The Three Methods		Price	Weight	Price
Method				
DDM	JOD 8.00		60%	
DCF	JOD 5.92		40%	
				JOD 7.17

Appendix 10: Beta

Potash price	ASE Index	Potash Return	Index Return	Potash AVG Return	Index AVG Return	Potash Return - AVG	Index Return - AVG	H*1
46.51	1957.6	0	0	-0.012972496	0.001632662	0.012972496	-0.001632662	-2.11797E-05
46.55	2045.7	0.00086003	0.04502017	-0.012972496	0.001632662	0.013832526	0.043387508	0.000600159
44.2	2042.4	-0.050483351	-0.001616152	-0.012972496	0.001632662	-0.037510855	-0.003248814	0.000121866
45.97	2101.4	0.040045249	0.028857765	-0.012972496	0.001632662	0.053017745	0.027225103	0.001443414
45	1998.1	-0.021100718	-0.049127024	-0.012972496	0.001632662	-0.008128222	-0.050759686	0.000412586
47.25	2017.5	0.05	0.00967802	-0.012972496	0.001632662	0.062972496	0.008045358	0.000506636
43.5	1980.5	-0.079365079	-0.01830663	-0.012972496	0.001632662	-0.066392583	-0.019939292	0.001323821
42.49	1956.5	-0.023218391	-0.012123805	-0.012972496	0.001632662	-0.010245895	-0.013756467	0.000140947
36	1875.0	-0.152741822	-0.041689104	-0.012972496	0.001632662	-0.139769326	-0.043321766	0.006055054
23.8	1850.6	-0.338888889	-0.012994956	-0.012972496	0.001632662	-0.325916393	-0.014627618	0.00476738
29.4	1969.3	0.235294118	0.064165548	-0.012972496	0.001632662	0.248266614	0.062532886	0.015524828
28.85	2022.6	-0.018707483	0.027060509	-0.012972496	0.001632662	-0.005734987	0.025427847	-0.000145828
28.05	2065.8	-0.027729636	0.021359468	-0.012972496	0.001632662	-0.01475714	0.019726806	-0.000291111
27.4	2207.0	-0.023172906	0.068315448	-0.012972496	0.001632662	-0.01020041	0.066682786	-0.000680192
26.26	2178.2	-0.041605839	-0.013042358	-0.012972496	0.001632662	-0.028633343	-0.01467502	0.000420195
26.81	2148.9	0.020944402	-0.01342531	-0.012972496	0.001632662	0.033916898	-0.015057972	-0.00051072
27.9	2124.2	0.040656471	-0.011530754	-0.012972496	0.001632662	0.053628967	-0.013163416	-0.00070594
26.6	2130.9	-0.046594982	0.003186363	-0.012972496	0.001632662	-0.033622486	0.001553701	-5.22393E-05
25.8	2113.0	-0.030075188	-0.008393756	-0.012972496	0.001632662	-0.017102692	-0.010026418	0.000171479
26.25	2136.6	0.01744186	0.011139562	-0.012972496	0.001632662	0.030414356	0.0095069	0.000289146
23.6	2131.9	-0.100952381	-0.002182446	-0.012972496	0.001632662	-0.087979885	-0.003815108	0.000335653
22.99	2115.0	-0.025847458	-0.007941677	-0.012972496	0.001632662	-0.012874962	-0.009574339	0.000123269
22.48	2106.1	-0.022183558	-0.004183724	-0.012972496	0.001632662	-0.009211062	-0.005816386	5.35751E-05
20	2132.5	-0.110320285	0.012515555	-0.012972496	0.001632662	-0.097347789	0.010882893	-0.001059426
19.5	2165.5	-0.025	0.015460153	-0.012972496	0.001632662	-0.012027504	0.013827491	-0.00016631
18.8	2169.6	-0.035897436	0.00191744	-0.012972496	0.001632662	-0.02292494	0.000284778	-6.52852E-06
17.96	2195.5	-0.045212766	0.01191466	-0.012972496	0.001632662	-0.03224027	0.010281998	-0.000331494
16.01	2135.4	-0.108077994	-0.027344638	-0.012972496	0.001632662	-0.095105498	-0.0289773	0.002755901
15.8	2115.5	-0.013116802	-0.009318626	-0.012972496	0.001632662	-0.000144306	-0.010951288	1.58034E-06
20.76	2183.6	0.313291139	0.032165659	-0.012972496	0.001632662	0.326263635	0.030532997	0.009961807
21.6	2115.6	0.036144578	-0.031110818	-0.012972496	0.001632662	0.049117074	-0.03274348	-0.001608264
23.45	2125.7	0.090697674	0.004765946	-0.012972496	0.001632662	0.10367017	0.003133284	0.000324828
23	2097.6	-0.019189765	-0.013236543	-0.012972496	0.001632662	-0.006217269	-0.014869205	9.24459E-05
21.32	2045.2	-0.073043478	-0.02496167	-0.012972496	0.001632662	-0.060070982	-0.026594332	0.001597548
21.48	2034.4	0.00750469	-0.005284781	-0.012972496	0.001632662	0.020477186	-0.006917443	-0.00014165
20.6	1993.7	-0.040968343	-0.020006098	-0.012972496	0.001632662	-0.027995847	-0.02163876	0.000605795
21	2136.3	0.019417476	0.071526704	-0.012972496	0.001632662	0.032389972	0.069894042	0.002263866
19.79	2147.0	-0.057619048	0.004999461	-0.012972496	0.001632662	-0.044646552	0.003366799	-0.000150316

Appendix 10: Beta

19.3	2116.2	-0.02475998	-0.014325383	-0.012972496	0.001632662	-0.011787484	-0.015958045	0.000188105
19	2151.9	-0.015544041	0.01684536	-0.012972496	0.001632662	-0.002571545	0.015212698	-3.91201E-05
17.74	2094.7	-0.092631579	-0.026569511	-0.012972496	0.001632662	-0.079659083	-0.028202173	0.002246559
17	2118.4	-0.013921114	0.011325493	-0.012972496	0.001632662	-0.000948618	0.009692831	-9.19479E-06
17.15	2091.4	0.008823529	-0.012788118	-0.012972496	0.001632662	0.021796025	-0.01442078	-0.000314316
16.75	2102.1	-0.023323615	0.005154502	-0.012972496	0.001632662	-0.010351119	0.00352184	-3.6455E-05
16	2076.8	-0.044776119	-0.012035193	-0.012972496	0.001632662	-0.031803623	-0.013667855	0.000434687
15.6	2120.5	-0.025	0.021007606	-0.012972496	0.001632662	-0.012027504	0.019374944	-0.000233032
15.52	2107.6	-0.005128205	-0.006076546	-0.012972496	0.001632662	0.007844291	-0.007709208	-6.04733E-05
17.5	2171.0	0.12757732	0.030083405	-0.012972496	0.001632662	0.140549816	0.028450743	0.003998747
19.18	2170.3	0.096	-0.00031768	-0.012972496	0.001632662	0.108972496	-0.001950342	-0.000212534
17.5	2161.5	-0.087591241	-0.004062589	-0.012972496	0.001632662	-0.074618745	-0.005695251	0.000424972
17.1	2212.8	-0.022857143	0.023727317	-0.012972496	0.001632662	-0.009884647	0.022094655	-0.000218398
17.76	2250.2	0.038596491	0.016910077	-0.012972496	0.001632662	0.051568987	0.015277415	0.000787841
19	2185.3	0.06981982	-0.028850163	-0.012972496	0.001632662	0.082792316	-0.030482825	-0.002523744
18.9	2175.2	-0.005263158	-0.004614365	-0.012972496	0.001632662	0.007709338	-0.006247027	-4.81604E-05
18.6	2167.4	-0.015873016	-0.003574634	-0.012972496	0.001632662	-0.00290052	-0.005207296	1.51039E-05
18.79	2139.8	0.010215054	-0.012726299	-0.012972496	0.001632662	0.02318755	-0.014358961	-0.000332949
18.35	2157.3	-0.023416711	0.00815156	-0.012972496	0.001632662	-0.010444215	0.006518898	-6.80848E-05
18	2121.5	-0.019073569	-0.016566084	-0.012972496	0.001632662	-0.006101073	-0.018198746	0.000111032
17	2093.2	-0.055555556	-0.013355243	-0.012972496	0.001632662	-0.04258306	-0.014987905	0.000638231
17	2122.5	0	0.013990489	-0.012972496	0.001632662	0.012972496	0.012357827	0.000160312
16.85	2126.8	-0.008823529	0.002030794	-0.012972496	0.001632662	0.004148967	0.000398132	1.65184E-06
							0.000802186	0.000562746
							Beta	1.425485508
							Adjusted Beta	1.28507529

Appendix 11: Investment summary

Basis of our sales growth rate:

1. Recently in 2018 Kemapro signed an agreement with Yare International, a major fertilizer producing company. This agreement will result in the construction of a new manufacturing plant which will increase the capacity by 175000 MT to be 350000 MT, this project will require a total investment of 200 million dollars.

2. Demand for agricultural product will increase for the following reasons:

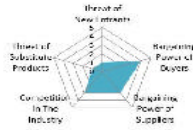
- Over the ten-year outlook period, demand is projected to grow more slowly.
- Future growth in crop production will be attained mostly by increasing yields, and growth in meat and dairy production.
- Agricultural trade is expected to grow more slowly, but remain less sensitive to weak economic conditions than other sectors.
- Real prices are expected to remain flat or decline for most commodities.

3. Climate change: for the decade, a warming of 0.1 degrees is expected globally, an increase in temperature is better for plant growth, thus an increase in fertilizer demand is most likely to occur.

*** all forecasted accounts in the income statement and balance sheet were based on rational team estimates.

Appendix 12: Porter's five forces model

Appendix 12: Porter's Five Forces Model



Threat of New Entrants,

*Substantial barriers to entry because Canada, Russia and Belarus together account for more than 80 percent of global reserves also Production and supply of potash is concentrated with six of the largest potash producers accounting for over 60% of global capacity

- * Only companies with high characteristic (high capacity, low production cost) can face global competition
- * Large economies of scale to profit (Small players will not be successful).

Competition in the Industry,

- * Large companies dominate the industry (High concentration, low balance)
- * Potash industry operates in global market (international factor)
- * Lower of Existing competitors (merger Potash corp and Agram to competition for increasing market share)
- * Natural resources are differently located (potash reserve is high in some countries)

Bargaining Power of Suppliers,

- * Exist of raw material (available for producer)
- * Potash significance is increasing with time

Bargaining Power of Buyers,

- * Lacks a diversified or balance market (concentration threat)
- * Low switching cost (product is undifferentiated)
- * Long term contracts are involved
- * The risk of buyer's backward integration is insignificant

Threat of Substitute Products

- * No superior substitute exists
- * The intervention of the human factor (Genetically modified crops can reduce demand for potash

The scale of the interaction:		
0 No interaction	2 Low	4 High
1 Insignificant	3 Average	5 Very high

Appendix 13: Stock price and dividend

The relationship between closing price and dividend paid during years


	2012	2013	2014	2015	2016
Dividend paid	208293 JOD	124977 JOD	99981 JOD	99981 JOD	83318 JOD
Closing price	46.15 JOD	28.05 JOD	19.5 JOD	21 JOD	19.18 JOD

* Dividend paid in thousands JOD.

This proves our justification to give DDM method a higher weight in valuation

Appendix 14

Key facts

Name	Arab Potash Company (APC)
Founded	1956
Logo	
Industries served	Mining and Extraction Industries
Geographic areas served	Worldwide (more than 140 countries)
Headquarters	Amman - Jordan
Current CEO	Brent Edward Heimann
Revenue (USD)	595.910 million (2017) increase over 520.413 million (2016)
Profit (USD)	126.485 million (2017) 44.3% increase over 87.630 million (2016)
Employees	1,811 (2017)

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