LEADING

Mid-Cap Research

# Kolon Plastics (138490 KS)

Steel for war, plastics for recession

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## Leading Traffic Light: Green

### Kolon Plastics is…

- ✓ An engineering plastics producer (POM, PA, PBT)
- ✓ High entry barrier limits competition to only eight global POM producers

### Green light because:

- ✓ Earnings from new POM plant expansion expected to start in 2012F
- ✓ Expansion earlier than competitors should result in steady POM revenue through 2014F

### Growth potential:

- ➢ Capacity expansion expected to increase revenue by 39.6% and OP by 37.5% in 2012F
- ➢ Expansion will benefit sales of both EP and non-EP products

### Management & shareholder concern:

- ➢ Utilizing more than 20 years of accumulated plastics technology, the firm has independently developed POM production technology
- ➢ Finished POM capacity expansion earlier than its competitors, driven by outstanding market insight

### Earnings Outlook:

- ➢ ROE should remain near 15%~17% between 2011E and 2013F.
- ➢ ROIC exceeds WACC even after the IPO in June 2011
- ➢ Maintaining financial stability through a low net debt to equity ratio of 18.6% in 2011E

### Valuation:

- ➢ Target price of W7,500 per share, using the market EV/EBITDA for 2012F
- ➢ 30.6% share price appreciation potential

### CAVEAT EMPTOR!!! – Watch out for…

- ➢ A lawsuit against the major shareholder (Kolon Industries) negatively influenced share prices, but it has no impact on the core value of Kolon Plastics

**BUY**

| | |
|---|---|
| **Target Price (KRW)** | **W7,500** |
| **Current Price (KRW)** | **W5,740** |
| **Upside Potential** | **30.6%** |

| **Key Data** | **December 7, 2011** |
|---|---|
| **Sector** | Auto & auto parts |
| **KOSDAQ** | 1,919.42 |
| **Market Cap. (Wbn)** | 166.5 |
| **Shares Outstanding** | 29.0mn |
| **Foreign Ownership (%)** | 0.1 |
| **52 Week High (W)** | 10,950 |
| **Low (W)** | 4,500 |
| **60D Turnover (Wbn)** | 1.5 |
| **Major Shareholders** | **(%)** |
| Kolon Industries | 70.00 |
| Treasury | 6.00 |

| **Performance (%)** | **1M** | **6M** | **12M** |
|---|---|---|---|
| **Absolute** | (11.0) | NA | NA |
| **Relative** | (11.0) | NA | NA |

**Relative Performance**

### Valuation Forecast

| FY | Sales (Wbn) | % chg YoY | OP (Wbn) | OPM (%) | NP (Wbn) | EPS (W) | EPS Growth (%) | P/E (x) | EV/EBITDA (x) | ROE (%) | P/B (x) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 84.6 | 87.4 | 5.3 | 6.3 | 2.2 | 534 | 67.4 | N/A | N/A | 8.8 | N/A |
| 2009 | 123.4 | 45.9 | 10.9 | 8.8 | 7.9 | 1,953 | 266.0 | N/A | N/A | 31.0 | N/A |
| 2010 | 166.1 | 34.5 | 11.7 | 7.0 | 9.0 | 445 | (77.2) | N/A | N/A | 25.0 | N/A |
| 2011E | 211.1 | 27.1 | 14.8 | 7.0 | 10.9 | 434 | (2.3) | 13.2 | 7.1 | 16.9 | 1.5 |
| 2012E | 294.7 | 39.6 | 20.3 | 6.9 | 14.6 | 502 | 15.7 | 11.4 | 6.5 | 15.3 | 1.5 |
| 2013E | 356.7 | 21.0 | 25.7 | 7.2 | 19.0 | 655 | 30.3 | 8.8 | 5.0 | 17.0 | 1.4 |

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# Key Check Points

### ✓ EP demand increasing globally

Kolon Plastics specializes in POM (polyoxymethylene), a type of engineering plastic (EP) that requires a high level of technology for production. The firm added product lines for PA (polyamide) and PBT (polybutylene terephthalate) after the spinoff from Kolon Industries' plastics division in 2008. Through the synergy effect created by the expansion following the spinoff, the firm was able to increase its revenue by 100% from 2008 to 2010. A changing trend in the automobile industry is also contributing to the company's growth. As more countries are enforcing fuel efficiency regulations, automakers are using more EP parts as they are lighter than parts made of other materials. In the foreseeable future, demand for EP is expected to increase as US and Asian automakers place more emphasis on fuel economy (Page 13).

### ✓ POM capacity expansion expected to greatly contribute to revenue in 2012F

The firm has increased its POM production capacity by 30,000 tons per year, making the total capacity 57,000 tons per year. The expansion will increase 2012F revenue by 39.6% and OP by 37.5% YoY. Polyplastics and other competitors are also expanding POM production capacity, but most of them will not be able to increase production until 2014, giving Kolon Plastics a competitive advantage. The company has also established a foreign branch in China, which has the highest POM demand in the world. The expansion, along with the new Chinese branch, will likely enable the firm to maintain stable POM exports (Page 14).

### ✓ Increasing the production capacity of the most profitable product, POM

The POM business accounts for more than 30% of total revenue with an OPM exceeding 10%. A high entry barrier precludes competition from firms with limited plastics technology, thus there are only eight POM producers in the world. In 2012F, the company will begin to benefit from the POM capacity expansion, which should increase OPM for the POM business. The margin will increase further in 2013F by 2~3%, following the Kolon group's completion of an industrial gas plant, which will reduce POM production costs. Furthermore, the firm's plan to establish a compounding branch in China will contribute to improved profitability starting in 2013F (Page 15).

### ✓ Kolon Industries' lawsuit has no effect on the fundamental value of Kolon Plastics

DuPont, an American chemical firm, won an intellectual property lawsuit against Kolon Industries, which led to a decrease in the share price of Kolon Plastics. However, as Kolon Plastics is an independent company, a lawsuit against its major shareholder has no effect on the core value of Kolon Plastics (Page 17).

### ✓ Target price of W7,500 per share implies an upside potential of 30.6%

Per our peer comparison, we found that Hyundai EP is the most similar company to Kolon Plastics, as both companies are domestic EP producers and have the same target market. However, as Hyundai EP is not a POM producer and has Hyundai and Kia as captive customers, it is not reasonable to directly compare the two companies. Given that Kolon Plastics has recently expanded its capacity and possesses a high level of technology, we believe that it is reasonable to use the 2012F consensus EV/EBITDA as a valuation tool. Applying the 2012F consensus EV/EBITDA of 8.3X renders a target price of W7,500 per share (Page 19).

# Section 1: Company snapshot

## Engineering plastics manufacturer

**Kolon affiliated plastics manufacturer**

In 1996, Kolon Industries and Toray Industries (of Japan), signed a joint-venture contract that established KTP Industries. After the joint-venture contract expired, the plastics division was spun off from Kolon Industries as Kolon Plastics. The company was listed on the KOSPI in June 2011.

**Manufacturing 3 of the 5 primary types of EP**

The firm is an engineering plastics (EP) specialist, producing PA, POM, and PBT. These 3 types of EP account for 55% of production of the five primary types of EP (PA, POM, PBT, mPPO, and PC). EP produced by Kolon Plastics is used for auto parts and home appliances, replacing metals in many cases.

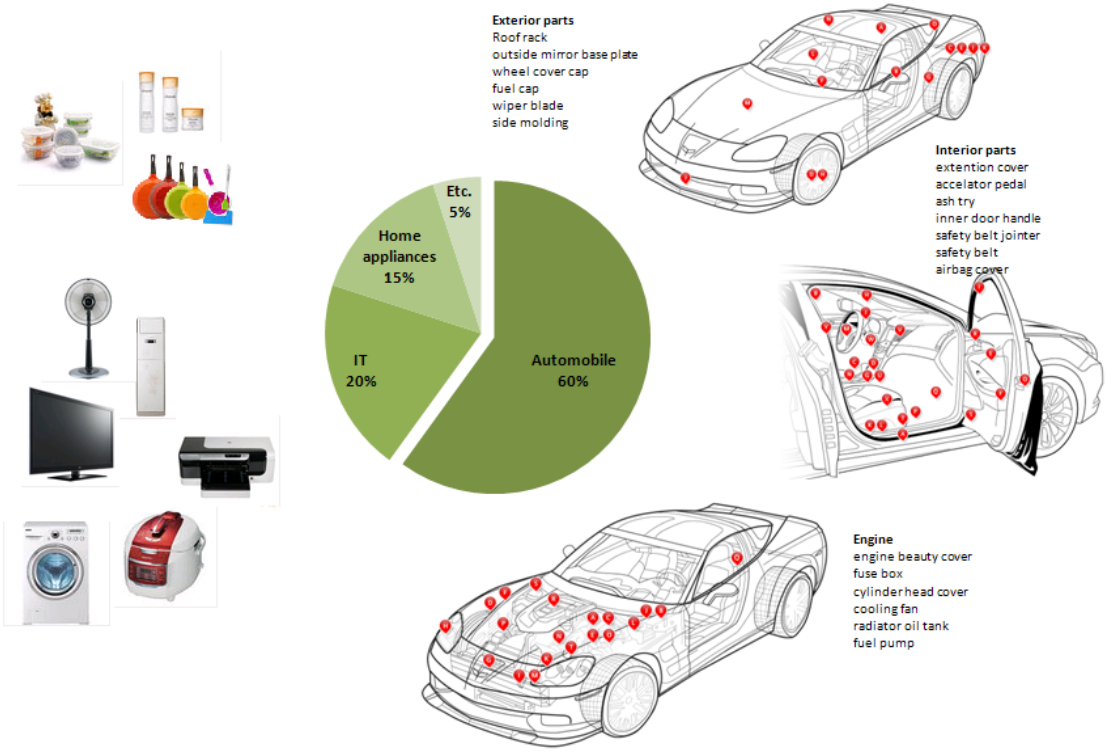
The firm produces EP through processes listed below:

**POM (polyoxymethylene):**
Methanol (Purchased from Methanex) + Catalyst → Base chip production → Compounding
**PA (polyamide), PBT(polybutylene terephthalate):**
Base chip (Purchased from Kolon Industries and other firms) → Compounding

**Table 1 . Production capacity (2010)**

| | CAPA(t/yr) | Capacity Utilization | Location |
|---|---|---|---|
| POM | 27,000 | 109.5% | Gimcheon |
| Compounding | 25,000 | NA | Gimcheon |

**Chart 1. Applications of engineering plastic**




*Source: Company data, Leading Research Center*

## Increasing engineering plastic demand

**5.4% YoY growth in the global EP market**

The size of the global EP market was 9.26mn tons in 2010, and it has been growing consistently at a rate of 5.4% annually since 2006. Ticona, DuPont, BASF, and Rodia are international EP producers, while LG Chem (051910 KS), Hyundai EP (089470 KS), KOPLA (126600 KQ), and Korea Engineering Plastics (Unlisted) are domestic producers. However, because different companies concentrate on different types of POM, competition is not a major concern. Also, the high level of technology required to manufacture POM creates a high entry barrier.

**41.8% company growth since 2006**

While the entire EP industry is showing approximately 5% YoY growth, Kolon Plastics has recorded growth of 41.8% since 2006. The growth of the domestic EP market, and the expansion through the spinoff (from Kolon Industries) created a synergy effect, which is responsible for the company's exceptional growth.

**Table 2. Leading EP producer comparison**

| Company | PA | PBT | POM | PC | Mppo | TPEE | PET | PPS | PP compound | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| Kolon Plastics | ● | ● | ● | X | ▲ | ● | ● | ● | X | Possesses its own POM technology<br>Varied EP product line |
| LG Chem | ▲ | ● | X | ● | X | ● | X | ● | ● | Focusing on materials for IT devices |
| Hyundai E P | ▲ | X | X | X | ● | X | X | ▲ | ● | Specializing in EP compound |
| Kopla | ● | ▲ | X | X | X | X | X | X | ▲ | Specializing in production of PA |
| Du Pont | ● | ▲ | X | X | X | X | ▲ | X | X | Selling primary types of EP |
| BASF | ● | ● | X | X | X | X | X | X | X | Selling primary types of EP |
| Rodia | ● | ● | X | X | X | X | X | X | X | Selling primary types of EP |
| KEP | ▲ | ▲ | ● | X | X | X | X | X | X | Acquired EP technology from overseas;<br>specializes in POM production |

*Source: Company data*
**Based on Korean EP output volume*
*● – Production volume is above the industry average*
*▲- Production volume is similar to the industry average*
*X - Not produced in Korea*

## Timely expansion

**Capacity expansion earlier than its competitors**

The firm's production capacity for its main product, POM, is now 57,000 tons per year, following the completion of a new POM plant in December. While the company currently has only a 5% share of the POM market, profit from POM should increase in the short term, as Kolon's competitors are not expected to increase their POM output significantly until 2014. Given that there is a high entry barrier, the company is expected to generate remarkable revenue from POM over the next few years.

**Revenue growth of both POM and other EP products expected through expansion**

In addition, the capacity expansion of the compounding plant from 25,000 to 50,000 tons per year will enable the firm to meet the increasing market demand for EP products. While the products made of non-POM EP account for 70% of total revenue, they have relatively low profit margins because the firm produces these only through compounding. However, the increased capacity should still contribute to the firm's growth.

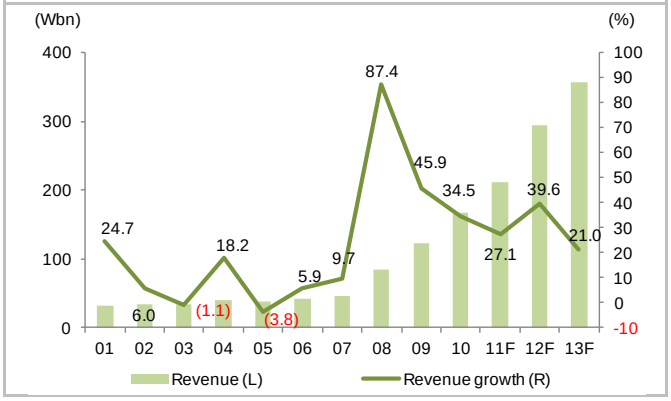
**Large CAPEX not a major burden**

The required CAPEX for the plant expansions of was W85bn. To raise this amount, the firm acquired W36bn in the IPO, and it borrowed an additional W30bn. However, considering that the firm's current debt is insignificant, it will likely not incur any financial pressure.

**Expansion of POM and compounding plants to increase 2012F revenue by 39.6% YoY**

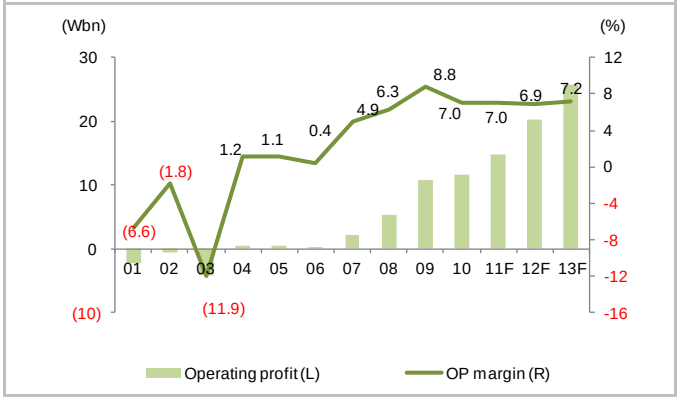
Steady revenue from POM production (producing at full capacity) and the demand increase for PA and PBT for automotive parts will help the firm increase revenue and OP by 27.1% and 26.4% respectively in 2011E. The effects of plant expansion will likely increase revenue by 39.6% YoY in 2012F, and 21.0% in 2013F.

**Chart 2. Revenue and growth trend**



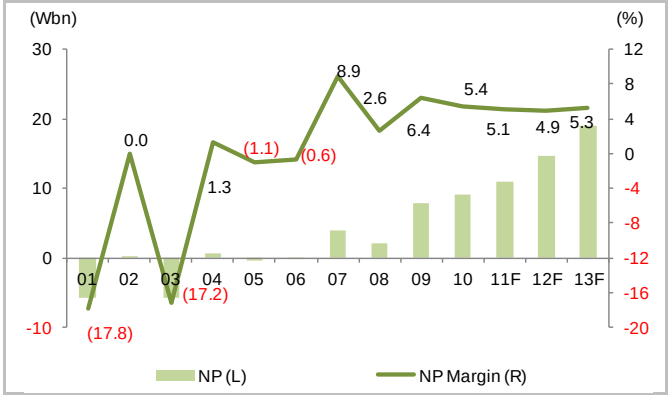

*Source: Company data, Leading Research Center*

**Chart 3. Operating profit and OPM trend**



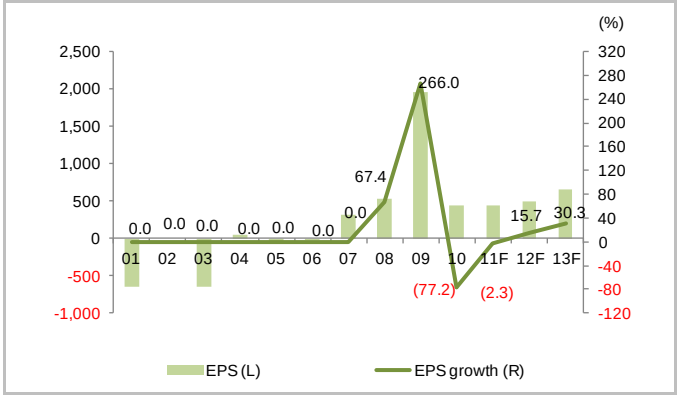

*Source: Company data, Leading Research Center*

**Chart 4. Net profit and NP margin trend**



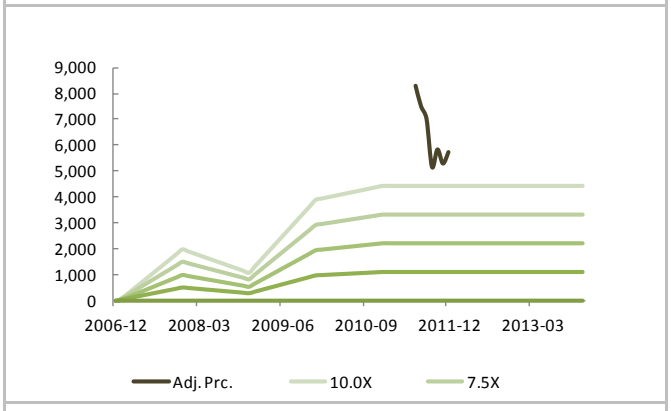

*Source: Company data, Leading Research Center*

**Chart 5. EPS and EPS growth**



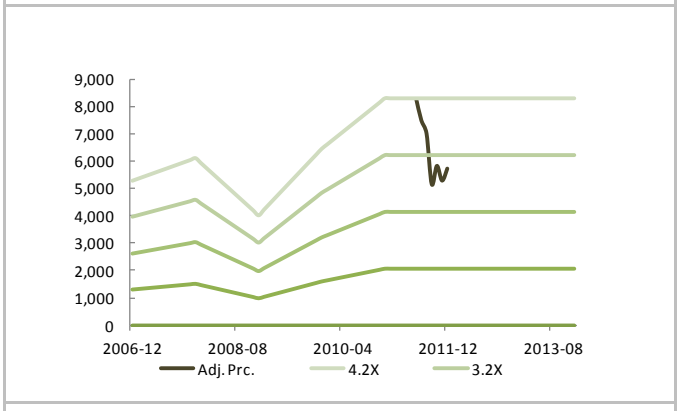

*Source: Company data, Leading Research Center*

**Chart 6. PER Band**




*Source: Company data, Leading Research Center*

**Chart 7. PBR Band**




*Source: Company data, Leading Research Center*

## Section 2: Is the company a value creator?

### Maintaining an ROE above 15% after going public

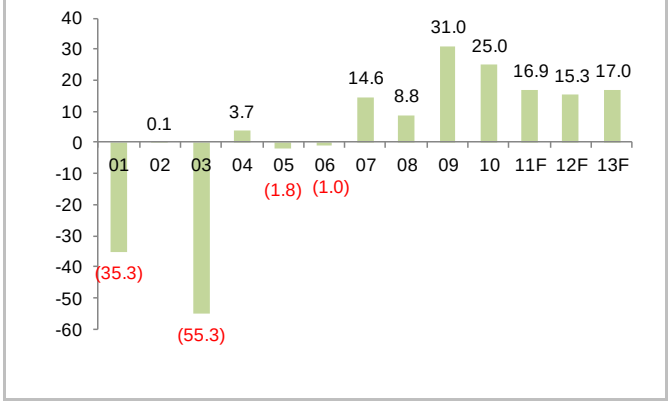
**Spinoff from Kolon Industries' plastics department in 2008**

The solid domestic network of Kolon Industries and Kolon Plastics' global POM business created a synergy through the 2008 spinoff. As a result, the firm's revenue grew by 100% after only two years. The firm's ROE has also been showing improvement with the rapid revenue growth.

**Expected ROE of 15%~17% going forward**

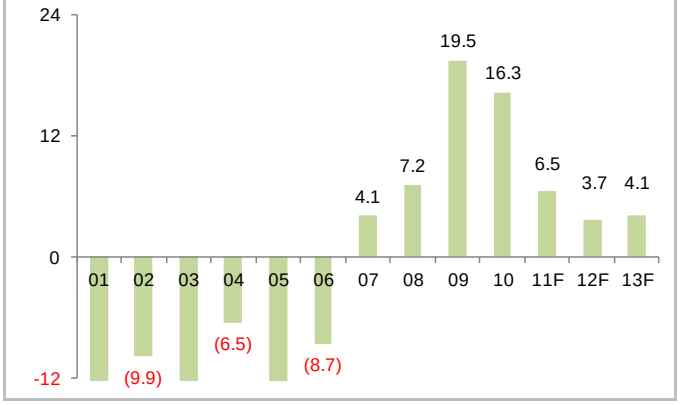
The capital raised from the IPO in June 2011 will lower the ROE for 2011E~2013F. However, we anticipate that the firm will maintain an ROE of 15%~17% for two reasons: EP demand is expected to remain steady, and the expansion of POM plants will begin to generate profit for the firm starting in 2012F.

**Chart 8. ROE (%)**




*Source: Company data, Leading Research Center*

**Chart 9. ROIC less WACC (%)**




*Source: Company data, Leading Research Center*

### Outstanding continuous value creation

**Continuous value creation after making a large-scale investment for expansion of the POM plant**

The sharp rise in EP demand and the synergy effect created by the spinoff from Kolon Industries in 2008 significantly increased NOPAT. As a result, the company's ROIC has been exceeding WACC since 2007.

We believe ROIC less WACC will likely remain below 7% in the near future. In order to increase the POM plant size, the firm has raised W36bn through the IPO in June 2011 and W20bn through borrowing. Invested capital increases will likely lower the ROIC to 16% in 2011E and 14% in 2012F, compared with 25% in 2010. However, the expected increase in EP demand should help the firm to consistently generate returns that exceed WACC

## Section 3: Free cashflow and dividend policy

### Financial turnaround starting in 2011E

**Healthy FCF for the past 10 years**

Despite mediocre cashflow in the last decade, the firm was usually able to generate positive FCF. FCF became negative in 2008 due to increased working capital, but the firm was able to resume positive FCF generation in 2009.

**2011E FCF negative due to CAPEX increase but recovery expected in 2012F**

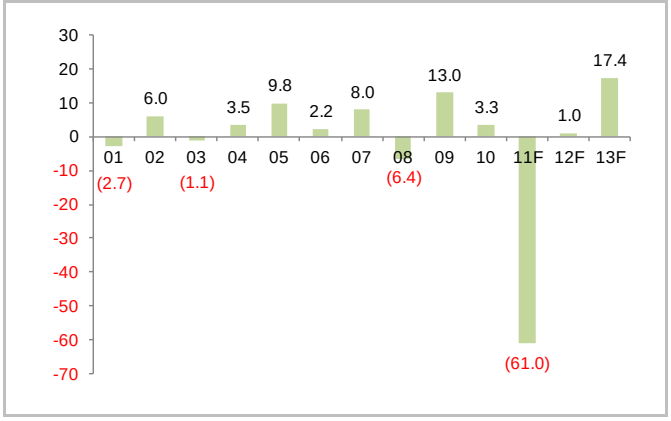
Given the fact that W78bn of W85bn total CAPEX was recorded in 2011E, FCF for 2011E dropped significantly. However, the firm is expected to generate positive FCF of W1bn in 2012F and W17.4bn in 2013F, owing to expected revenue increases from rising EP demand. Furthermore, as the company has no CAPEX plans in the near future, FCF is likely to increase.

**Table 3. FCF**

| (Wbn) | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11E | 12F | 13F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cashflow from operations | (1.7) | 6.9 | 1.0 | 5.8 | 10.8 | 3.4 | 9.1 | (5.1) | 15.3 | 11.7 | 18.5 | 4.0 | 20.4 |
| CAPEX | 1.0 | 0.9 | 2.1 | 2.2 | 1.0 | 1.2 | 1.1 | 1.3 | 2.3 | 8.4 | 79.5 | 3.0 | 3.0 |
| Free Cashflow | (2.7) | 6.0 | (1.1) | 3.5 | 9.8 | 2.2 | 8.0 | (6.4) | 13.0 | 3.3 | (61.0) | 1.0 | 17.4 |

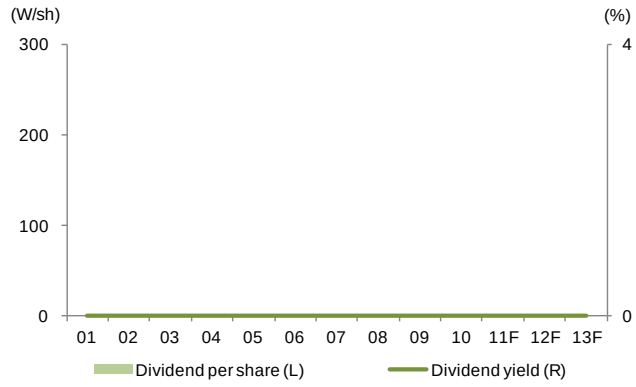
*Source: Company data, Leading Research Center*

**Chart 10. Free cashflow trend (Wbn)**




*Source: Company data, Leading Research Center*

**Chart 11. Dividend per share and yield trend**




*Source: Company data, Leading Research Center*

**No current dividend payment plan**

There is no immediate plan to pay dividends since the company was only listed on the KOPSI in June 2011.

## Section 4: Are the debt and interest burden manageable?

### Gradual reduction of debt to equity ratio

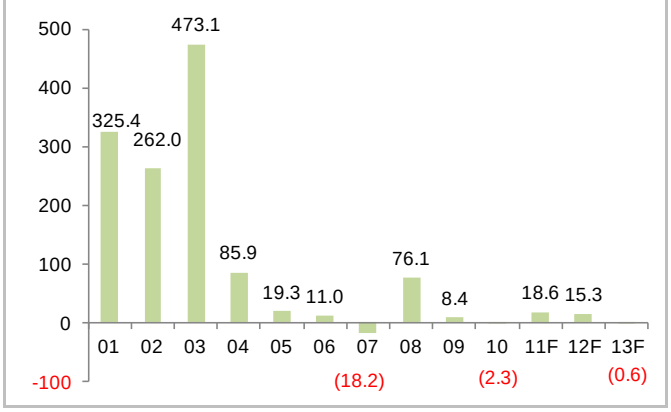
**Continuous effort to reduce debt**

Due to the fact that the firm's COGS was high relative to revenue, there was a time when its net debt to equity ratio reached approximately 400%. However, the company was successful in reducing its debt, with the net debt to equity ratio expected to be approximately 20% in 2011E. There was a temporary rise in debt following the spinoff, but the company is maintaining a low level of debt by generating stable cashflow.

**Maintaining a low debt percentage**

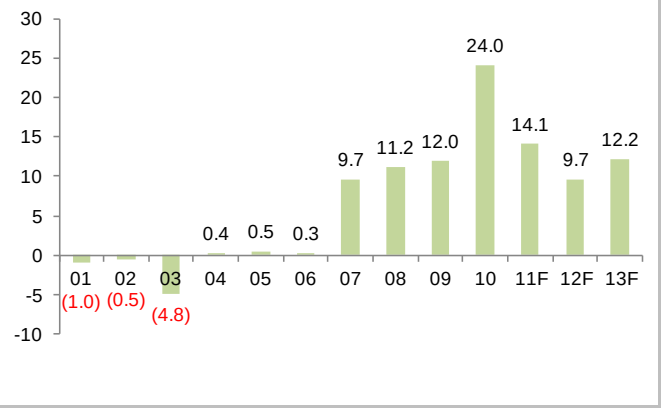
The company has raised W10bn through short-term borrowing to increase the production capacity for POM in 2011, and an additional W20bn through long-term borrowing. However, this will not cause any significant financial pressure on the firm because debt is currently very low. Furthermore, because there is no plan for large-scale expansion in next two years, W30bn in machinery maintenance costs will be the only expense related to production plants in the near future. Finally, the W25bn YoY EBITDA increase will help the firm maintain its low net debt to equity to ratio.

**Chart 12. Net debt/equity ratio (%)**




*Source: Company data, Leading Research Center*

**Chart 13. Interest coverage (X)**




*Source: Company data, Leading Research Center*

**Financial stability expected**

The firm has maintained a low level of debt since 2005, with the net debt to equity ratio falling below zero in 2007. Interest coverage therefore increased to about 10X. There was a rise in debt because of the POM production expansion in 2010, but increasing demand for EP auto parts is expected to provide financial stability to the firm. As a result, interest coverage should be 9.7X in 2012F and 12.2X in 2013F.

**Table 4. Interest bearing debt and interest coverage trend**

| (Wbn) | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011F | 2012F | 2013F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Interest bearing debt | 44.3 | 36.4 | 39.0 | 19.9 | 9.0 | 5.0 | 0.0 | 20.0 | 8.0 | 5.0 | 25.0 | 35.0 | 25.0 |
| Cash & equivalents | 0.2 | 0.9 | 2.6 | 1.3 | 4.0 | 2.2 | 5.4 | 5.1 | 5.4 | 5.9 | 8.7 | 19.4 | 25.7 |
| Net int bearing debt | 44.1 | 35.5 | 36.4 | 18.6 | 5.0 | 2.8 | (5.4) | 14.9 | 2.6 | (0.9) | 16.3 | 15.6 | (0.7) |
| Net int bear debt/eq(%) | 325.4 | 262.0 | 473.1 | 85.9 | 19.3 | 11.0 | (18.2) | 76.1 | 8.4 | (2.3) | 18.6 | 15.3 | (0.6) |
| | | | | | | | | | | | | | |
| Interest expenses | 2.2 | 1.1 | 0.9 | 1.3 | 0.8 | 0.6 | 0.2 | 0.5 | 0.9 | 0.5 | 1.1 | 2.1 | 2.1 |
| Interest coverage(X) | (1.0) | (0.5) | (4.8) | 0.4 | 0.5 | 0.3 | 9.7 | 11.2 | 12.0 | 24.0 | 14.1 | 9.7 | 12.2 |

*Source: Company data, Leading Research Center*

# Section 5: Asking for money with share issues, CB&BW?

## Listing in June 2011

**No plan to raise capital through 2013F**

The firm raised W37.4bn in June 2011 by listing on the KOSPI and invested the raised capital in a POM capacity expansion which was completed in December 2011. There is no plan to raise additional capital because the firm is expected to generate FCF of W18bn by 2013F, with no plans to invest a significant amount of capital in the near future.

**Table 5. Capital raised through stock issuance**

| (Wbn) | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Incr. during 2010-2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Paid-in capital | 45.0 | 45.0 | 45.0 | 58.5 | 63.0 | 63.0 | 63.0 | 20.3 | 20.3 | 29.0 | 8.7 |
| Paid-in cap in excess of par | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capital raised thru stock issue | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | (20.3) | 8.7 |

*Source: Company data*

## Overhang – Lock-up period ending in December 2011

**Lock-up period ending in near future**

The firm was listed on the KOSPI on June 15, 2011. The major shareholder, with a 70% stake in the company is Kolon Industries with 20.3mn shares. These shares cannot be traded until December 15, 2011 when the lock-up period ends. Furthermore, 6% of total treasury shares (1.74mn) are in a lock-up period that will end on June 15, 2012.

**No CB or BW issued**

No existing CB or BW

**Table 6. Outstanding CB and BW and number of shares exercisable**

| Type | Date issued | Due date | Face Value (Wbn) | Exercise period | Exercise price/sh | Remaining Value (Wbn) | No. shares exercisable |
|---|---|---|---|---|---|---|---|
| Detachable BW (non-secured) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Detachable BW (secured) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| CB (secured) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| **Total** | | | **N/A** | | | **N/A** | **N/A** |

*Source: Company data*

## Section 6: What is the management philosophy?

**CEO is a plastic parts specialist with excellent management skills refined over 35 years**

Ho-Jin Kim, the CEO of Kolon Plastics, joined the Kolon Group in 1977. Having served the company in various positions over 35 years, he specialized in the chemical and plastics industries, later becoming the CEO of Kolon Plastics. Under his leadership, the firm recorded annual revenue growth of 40% while that of global plastics industry was only 5%. Furthermore, by establishing the company's POM production, he was able to increase the OPM to 7~8% from the 5% level in the past. Optimistic growth is expected to continue as the firm completed expansion of POM production capacity in 2011.

**CEO appointed Kolon experts to leadership positions**

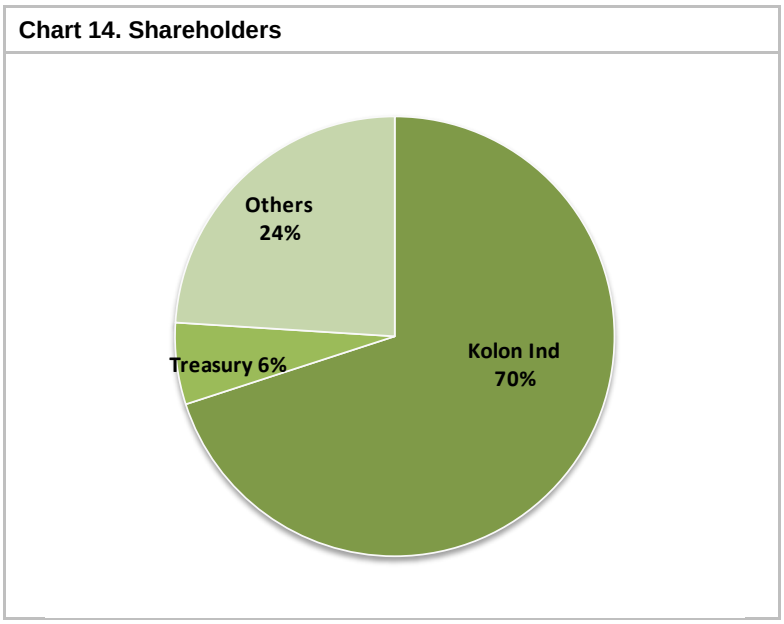
Mr. Kim has given leadership positions to experts that have worked in different departments of Kolon for over 20 years, and he himself only participates in the most significant activities of the company. This structure has enabled the firm to independently develop POM technology, which requires a very high level of knowledge. As a result, the firm was able to diversify its target customers.

**Revenue Goal: W500bn by 2015F**

Furthermore, Mr. Kim's market insight is likely to lead to immediate revenue growth in 2012F thanks to the company's rapid expansion of POM production capacity under his direction. The firm also acquired a production plant in China, which is expected to generate even more profit. The company is pursuing a goal of generating W500bn in revenue by 2015F.

Kolon Industries has a 70% stake in Kolon Plastics. We believe the firm's risk related to the Kolon Group is minimal as it is treated as an independent company.

**Chart 14. Shareholders**




*Source: Company data, Leading Research Center*

**Table 7. CEO Profile – Ho-Jin Kim**

| | Career |
|---|---|
| 2009~ | Kolon Plastics CEO(2009) |
| 2004~ | Kolon Plastics COO(2004) |
| 2003~ | Kolon Industries Director of Headquarters of Chemical business(2003) |
| 1997~ | Kolon Industries Manager of Plastics business(1997) |
| 1977~ | Joined Kolon Group(1977) |

*Source: Company data*

## Section 7: FX exposure and sensitivities

**No exposure to fluctuations in the exchange rate**

40% of Kolon Plastics' revenue is from exports and all transactions are executed in USD. The company primarily exports its products to the EU, US, and China. Furthermore the cost of raw materials accounts for 45% of manufacturing costs, which are 40% of total revenue. As both imports and exports are settled in USD, FX risk is naturally hedged.

FX related loss of W1.3bn in 3Q11 was a temporary loss caused by a prepaid expense for the purchase of raw materials for the POM plant expansion. We believe the loss is unlikely to have a significant influence on the firm's operation.

Given the fact that the firm has no debt, there is no debt related FX gain or loss.

# Section 8: Operations Overview

## I. Steady domestic demand for EP

**100% earnings improvement from 2008 to 2010**

Since Kolon Plastics was spun off from Kolon Industries' plastics department in 2008, revenue has increased by 100% with the dramatic increase in EP demand from the automobile sector.

**Automobile production ↑ + EP use in automobiles ↑ → EP revenue ↑**

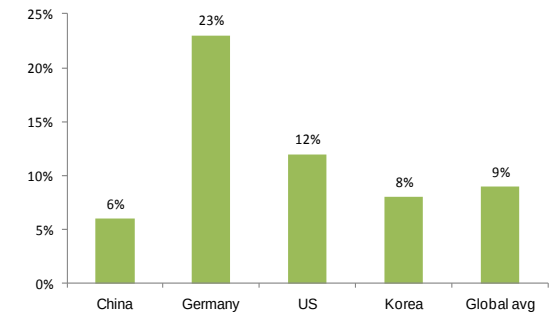
The increase in demand for EP auto parts is a result of the increase in automobile production and the increasing use of plastic parts in cars.

While automobile production rates fluctuate with economic conditions, increasing numbers of plastic parts are used in each car. This trend is a result of fuel efficiency regulations, as plastic parts weigh less than parts made of other materials.

**More countries are setting fuel efficiency regulations**

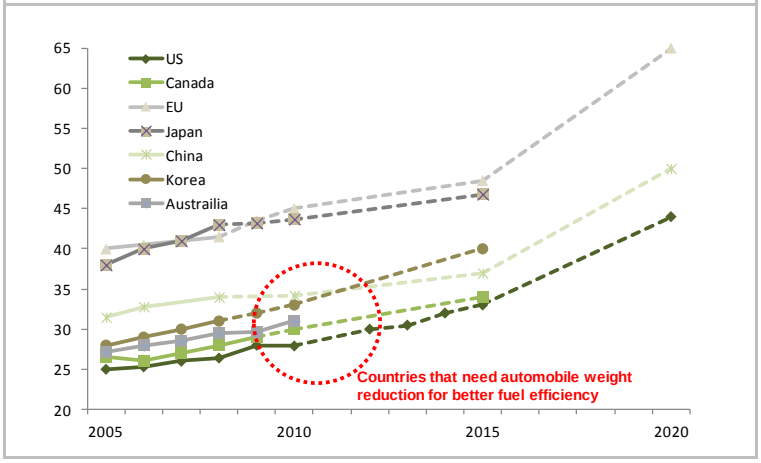
According to the ICCT's fuel efficiency regulations (chart 16), many countries are requiring improved fuel economy in automobiles. At the moment, cars in Europe are the most fuel efficient, with at least 20% of their parts made of EP. Meanwhile, the plastic part content of cars made in the US and Asia is only 6-8%. We expect that EP demand will increase in the US and Japan as auto companies in those countries try to match the fuel efficiencies of their European counterparts.

**Chart 15. Plastic parts content of domestically produced cars**




*Source: Company data, Leading Research Center*

**Chart 16. Fuel economy regulations by country (miles/gallon)**




*Source: ICCT 2010(**MPG-Converted to CAFE Test Cycle),** Leading Research Center*

## Ⅱ. Seller's market

**15-20% OPM due to focus on POM**

Kolon Plastics has product lines for POM and other types of EP such as PA and PBT. POM production has a higher profitability because the company performs all processes from base chip production to compounding, whereas the company only performs compounding for PA and PBT production. The company therefore focuses on POM production.

**Table 8. Product categories of Kolon Plastics**

| | Production process | | % of revenue | Profit margin |
|---|---|---|---|---|
| | Base chip production | Compounding | | |
| POM | O | O | 36% | 15~20% |
| PA, PBT | X | O | 64% | 4~5% |

*Source: Company data, Leading Research Center*

**5% POM market share, eight competitors**

There are only eight POM producers in the world because of the technology based high entry barrier. The leading producers of POM are Ticona (Germany), DuPont (U.S), Polyplastic (Japan), and Korean Engineering Plastics (Korea, Unlisted). The capacity for Kolon Plastics was 27,000 tons per year in 2011, which accounts for 5% of the global POM market share.

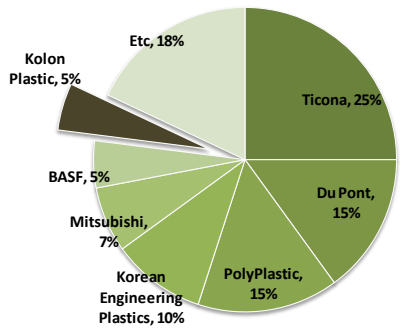
**Companies are increasing plant sizes as the demand is increasing**

The POM market is a seller's market because there are only a few POM producers. As global POM demand is increasing, each company is increasing its plant size to meet the market demand. The leading producer of POM, Ticona, has completed a new plant that can produce 40,000 tons annually. Kolon Plastics has also increased its POM production capacity by 30,000 tons in December 2011, which will enable the firm to produce 57,000 tons per year.

**Still seller's market**

However, because POM producers cannot satisfy the market demand of 450,000 tons per year, the POM market still remains a seller's market.

**Chart 17. POM market share (2011E)**




*Source: Company data, Leading Research Center*

**Table 9. Planned global POM capacity expansion**

| Company | Expansion size (tons/year) | Date of completion | Location |
|---|---|---|---|
| Ticona | 40,000 | September 2011 | Germany (Frankfurt) |
| PolyPlastic | 90,000 | End of 2013 | Malaysia |
| Mitsubishi | 45,000 | 2013 | Thailand |
| Kolon Plastics | 30,000 | December 2011 | Korea (Gimcheon) |
| Sabic | 50,000 | 2013 | Saudi Arabia |

*Source: Company data, Leading Research Center*

**POM production shortage to remain until 2014**

China has the highest EP demand, and an increasing need for POM for automotive parts and electronic devices. To meet this demand, POM manufacturers are actively increasing their production capacities. Kolon Plastics also plans to export 30,000 tons of POM to China in 2012. As a result, the revenue from sales in China will account for 20% of the total revenue in 2012F, eventually reaching 50% in 2013F. Furthermore, the POM shortage is expected to end as Polyplastics completes its new plant in Malaysia with a capacity of 90,000 tons per year in 2014.

## Ⅲ. 2012= (P↑ * Q↑)

**POM = P↑ * Q↑**

The firm's product line is diversified into two different sections: a POM plant, and a compounding plant. Both sections are expected to increase their capacities when a new plant is built in 2012.

**POM price has a strong correlation to methanol price**

Despite increasing demand for EP, the price of POM has been steady since 2008. This is because methanol, a raw material for POM production, is less sensitive to price fluctuation than petroleum. However, as the price of methanol increased in 2011, the price of POM is 15% higher compared to 2010. There was another price appreciation in 4Q11 as well. According to a report published by Chemical Market Associates in 2011, the demand of methanol will continue to rise by double figures as its use as fuel continually increases. Considering future price changes for methanol, the increasing trend of POM prices will remain at its current rate.

**Quantity supplied doubles as the firm expands production capacity**

The firm's revenue is expected to experience dramatic growth with a 100% increase in capacity. The firm's new plant, with a capacity of 30,000 tons per year, was completed in December 2011. POM produced by the new plant will be exported to China, which has an increasing demand. Assuming the new product line's capacity utilization is 70%, this expansion will help the company achieve POM revenue growth of 70% YoY, while the total revenue will likely grow by 22% YoY in 2012F.

**Table 10. Capacity expansions**

| (tons/year) | Before | After |
|---|---|---|
| POM | 27,000 | 57,000 |
| Compounding | 25,000 | 50,000 |

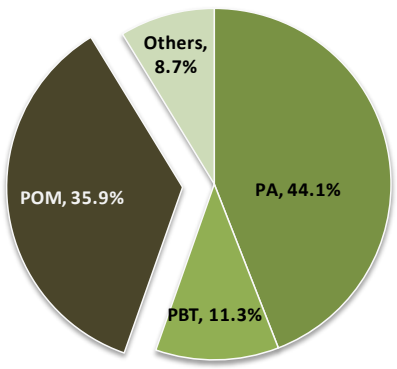
*Source: Company data, Leading Research Center*

**PA, PBT to also contribute to profit growth**

Revenue from the firm's non-POM line has been growing at 26.8% annually after the spinoff in 2008. The non-POM line uses base chips purchased from Kolon Industries in its compounding plant, which doubled its production capacity in 2011.

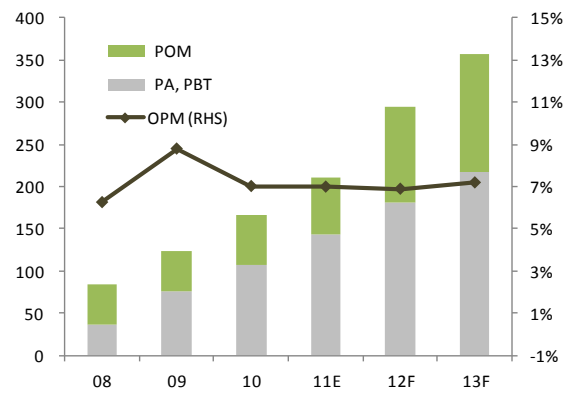
Given the fact that domestic demand for PA and PT is relatively high, revenue is likely to rapidly increase. We therefore expect 30% YoY growth in non-POM EP revenue which will also contribute to growth.

**Chart 18. Revenue breakdown (2010)**




*Source: Company data, Leading Research Center*

**Chart 19. POM and non-POM sales (Wbn)**




*Source: Company data, Leading Research Center*

## Profitability to improve in 2013F

**OPM to likely remain at the 7% level**

Although revenue is expected to increase with capacity expansions in the POM and compounding plants, OPM will likely remain at the current level of 7%.

**Cheaper industrial gas to improve OPM for POM by 2~3%**

Kolon Construction & Engineering and SK E&S are currently constructing energy facilities, which will give Kolon Plastics access to cheaper industrial gas. OPM will likely improve as a result. With cheaper industrial gas, POM will be 2~3% more profitable.

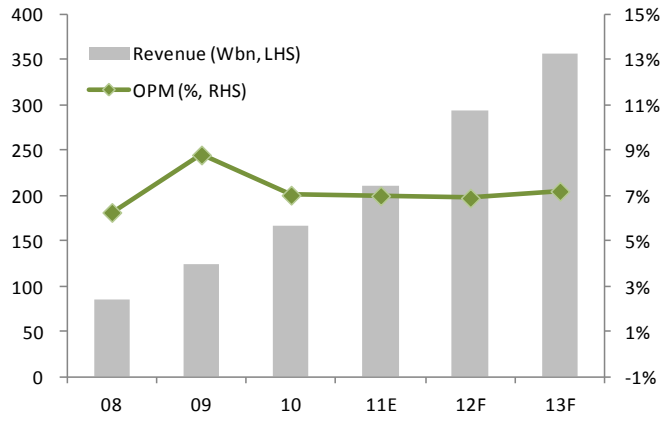
**Acquisition of compounding plant in China**

Furthermore, the firm is considering the acquisition of a compounding plant in China to create additional value. As the firm currently owns only a sales branch in China, the acquisition will allow it to produce goods intended for Chinese firms in China itself.

**Price discrimination through production of environment friendly products, low VOC POM**

The firm is also producing a high quality product, low-VOC (Volatile Organic Compound) POM. Low-VOC POM contains less formaldehyde (a toxic chemical) than regular POM. It is usually used for interior materials that have frequent contact with the human body. Although the manufacturing cost for low-VOC POM is about 20% higher than that of regular POM, the firm supplies both at similar prices. However, as governments begin to promote the use of eco-friendly products, the firm can begin to practice price discrimination.

**Chart 20. Sales and operating profit**




*Source: Company data, Leading Research Center*

## 2011E~2013F earnings forecast

**3Q11 Performance**
**Revenue: increased by 26% YoY**
**OP: decreased by-40.1% (FX related)**

In 3Q11, Kolon Plastics' revnue increased by 26% YoY, to W52.7bn, while OP decreased by 40.1% YoY to W2.7bn. Even though the firm should have recorded OP of W4.0bn, the W1.3bn FX loss (from the prepaid expense for raw material purchase) lowered OP to W2.7bn. However, we expect this loss to be recovered in 4Q11 as the FX rate stablizes.

**Table 11. Quarterly earnings review**

| (Wbn, %) | 3Q10 | 3Q11 | YoY (%) | 2Q11E | 3Q11E | QoQ (%) |
|---|---|---|---|---|---|---|
| Revenue | 41.8 | 52.7 | 26.1 | 53.2 | 52.7 | (0.9) |
| Operating Profit | 4.5 | 2.7 | (40.1) | 3.4 | 2.7 | (20.7) |
| Profit before tax | 4.4 | 2.9 | (34.0) | 3.5 | 2.9 | (17.2) |
| Net profit | 2.8 | 2.4 | (14.2) | 3.0 | 2.4 | (21.6) |
| (%) | | | | | | |
| OPM | 10.9 | 5.2 | | 6.4 | 5.2 | |
| NPM | 6.6 | 4.5 | | 5.7 | 4.5 | |

*Source: Company data, Leading Research Center*

**2012F revenue +39.6%, OP +37.6%**

Benefit from the capacity expansion will be reflected starting 2012F: the revenue and OP are expected by 39.6% YoY and 37.6% YoY respectively. Additional POM produced from increased production capacity will be exported to China, the firm has already acquired a sales branch in China to maximize the efficiency. Furthermore, other EP proportion of the firm is giong to contribute to the growth of the company as it is showing over 20% of growth. Even so, POM is likely to account for the same percentage of revenue, as the company has increased the production capacities for POM and non-POM EP almost equally.

**Table 12. Annual earnings review**

| | Earnings outlook | | | | Growth (%, YoY) | | |
|---|---|---|---|---|---|---|---|
| (Wbn, %) | 2010 | 2011E | 2012F | 2013F | 2011E | 2012F | 2013F |
| Revenue | 166.1 | 211.1 | 294.7 | 356.7 | 27.1 | 39.6 | 21.0 |
| Operating Profit | 11.7 | 14.8 | 20.3 | 25.7 | 26.6 | 37.6 | 26.3 |
| Profit before tax | 11.1 | 13.6 | 18.2 | 23.7 | 21.9 | 34.2 | 30.3 |
| Net profit | 9.0 | 10.9 | 14.6 | 19.0 | 20.3 | 34.2 | 30.3 |
| (%) | | | | | | | |
| OPM | 7.0 | 7.0 | 6.9 | 7.2 | | | |
| NPM | 5.4 | 5.1 | 4.9 | 5.3 | | | |

*Source: Company data, Leading Research Center*

## Risk factors – The legal case of Kolon Industries

**Lawsuit presents opportunity to buy at a discounted price**

Kolon Industries lost an intellectual property suit brought up by Dupont, resulting in a depreciation of the firm's share price. Although Kolon Industries is the major shareholder of Kolon Plastics, the suit will have little effect on the fundamentals of Kolon Plastics. However, we believe that the share price will still be negatively affected by the suit until the final verdict is given in two years.

Because the suit is not related to Kolon Plastics' fundamentals, we believe that it provides an opportunity to buy at a discounted price.

## Section 9-1: Valuation – Peer Valuation

**Peer comparison: one domestic and three overseas companies**

We compared three global POM producers and one domestic EP manufacturer to Kolon Plastics. KEP is the only domestic POM producer, but given the fact that it is not a listed company, we did not include it in our comparison. We decided to include Hyundai EP as it is in the EP industry.

The other peers are vertically integrated global firms that produce a wide range of high value added products through downstream operations, with EP production as one of their many business areas. For that reason, we believe the best comparison is made with Hyundai EP, as it is similar to Kolon Plastics in the sense that it only produces EP products, concentrating on automotive parts. It also has a similar market capitalization.

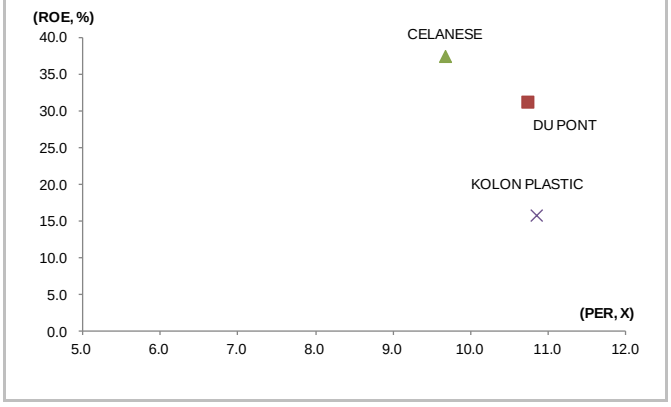
**Table 13. Peer evaluation**

| Name | Ticker | Country | Market Cap (USD) | Sales (USD) | | | | OP Margin (%) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 09 | 10 | 11E | 12F | 09 | 10 | 11E | 12F |
| KOLON PLASTIC | 138490 KS | KOREA | 145.2 | 109.4 | 147.2 | 187.2 | 265.4 | 8.8 | 7.0 | 7.0 | 6.9 |
| HYUNDAI EP | 089470 KS | KOREA | 170.2 | 166.4 | 391.8 | 557.6 | 616.1 | 2.4 | 1.3 | 3.7 | 3.6 |
| BASF | BASFY US | GERMANY | 66,249.9 | 70,688.5 | 84,734.9 | 95,128.0 | 88,915.0 | 9.4 | 13.3 | 11.5 | 10.8 |
| DU PONT | DD US | US | 43,442.7 | 26,109.0 | 31,505.0 | 38,603.7 | 41,975.4 | 6.1 | 9.6 | 13.7 | 13.8 |
| CELANESE | CE US | US | 7,113.6 | 5,082.0 | 5,918.0 | 6,792.9 | 7,087.8 | 7.5 | 9.2 | 13.6 | 13.0 |

| Name | P/E (X) | | | | EV/EBITDA (X) | | | | P/B (X) | | | | ROE (%) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 09 | 10 | 11E | 12F | 09 | 10 | 11E | 12F | 09 | 10 | 11E | 12F | 09 | 10 | 11E | 12F |
| KOLON PLASTIC | 2.9 | 12.9 | 15.3 | 11.4 | 2.1 | 8.7 | 8.2 | 6.5 | 0.7 | 1.7 | 1.6 | 1.5 | 31.0 | 25.0 | 16.9 | 15.3 |
| HYUNDAI EP | 17.4 | 10.9 | 9.5 | 8.7 | 22.0 | 20.9 | 10.5 | 9.9 | 1.8 | 1.2 | 1.8 | 1.5 | 9.9 | 10.3 | 20.2 | 18.9 |
| BASF | NA | NA | 8.8 | 10.8 | 6.4 | 5.8 | NA | NA | NA | NA | NA | NA | 10.1 | 24.1 | 24.5 | NA |
| DU PONT | 16.6 | 15.2 | 11.8 | 10.9 | 11.7 | 11.3 | 8.1 | 7.3 | 4.4 | 5.1 | 4.0 | 3.2 | 26.6 | 37.7 | 34.9 | 31.3 |
| CELANESE | 18.3 | 12.6 | 9.9 | 9.9 | 9.7 | 10.4 | 6.9 | 6.7 | 7.9 | 6.9 | 4.2 | 3.2 | 132.3 | 53.6 | 59.2 | 37.5 |

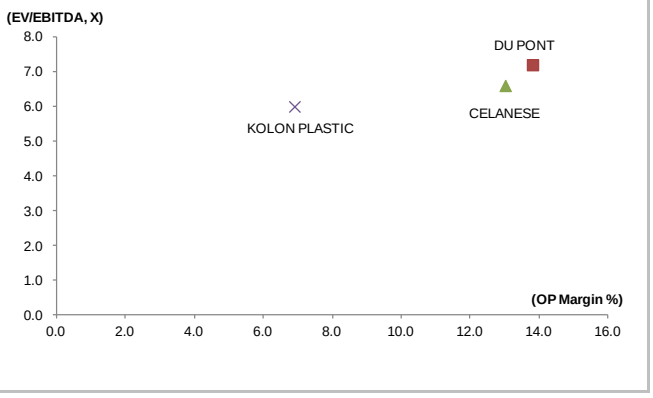
*Source: Company data, Bloomberg, Fnguide, Leading Research Center (December 5, 2011)*

**Chart 21. Peer group PER vs. ROE**




*Source: Bloomberg, Leading Research Center*

**Chart 22. Peer group EV/EBITDA vs. OP margin**




*Source: Bloomberg, Leading Research Center*

## Section 9-2: Valuation – Target Price

**Only one domestic competitor for POM**

Kolon Plastics has the most diversified EP product line in Korea, and there is only one competitor in the POM industry, KEP (Unlisted). While Kolon Plastics developed its own POM production technology, KEP licensed the technology from overseas. For that reason it is hard to conclude that KEP is a true competitor to Kolon Plastics.

**Value comparable to Hyundai EP**

Therefore, the only domestic company that can be considered for peer evaluation is Hyundai EP. Hyundai EP has had a lower OPM in the past, and its expected OPM for 2012F is 3.6% while we expect 6.9% for Kolon Plastics.

With Kolon Plastics' superior performance, its value is comparable to that of Hyundai EP. Hyundai EP's 2012F EV/EBITDA of 9.9X is higher than Kolon Plastics' 6.5X. On the other hand, Kolon Plastics has a 2012F PER of 11.4X, which is higher than Hyundai EP's 8.7X.

Kolon Plastics invested W79.5bn in 2011, thus incurring depreciation expenses of 58.9% of the company's OP in 2011E, and 40% in 2012F. We therefore believe that EV/EBITDA is an appropriate valuation tool for Kolon Plastics.

**Applying the 2012F market consensus EV/EBITDA, fair share price of W7,500**

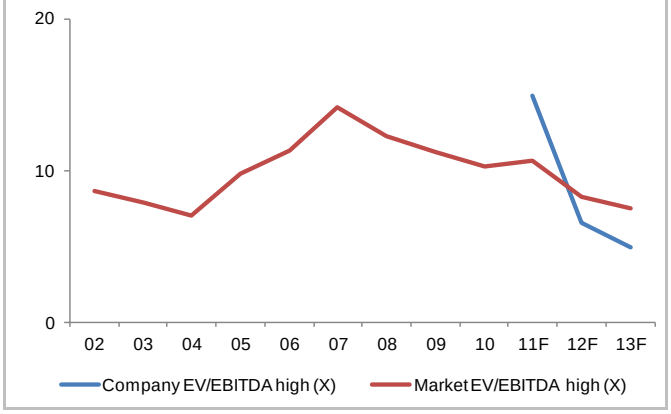
Since Hyundai EP is an affiliate of Hyundai Motors, it has Hyundai and Kia as its major captive customers. Therefore, its 2012F EV/EBITDA is 9.9X, which is higher than Kolon Plastics' 6.5X. We believe it is more appropriate to use the market EV/EBITDA of 8.3X, considering Kolon Plastics' independently developed POM technology and potential for growth through rapid expansion. Applying the market EV/EBITDA, we derive a fair share price of W7,500 per share, which implies a 30.6% price appreciation potential compared to the current share price of W5,740 per share.

**Table 14. Kolon valuation vs. Market valuation**

| (x, %) | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011E | 2012F | 2013F |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Kolon year-high EV/EBITDA | Unlisted | Unlisted | Unlisted | Unlisted | Unlisted | Unlisted | Unlisted | Unlisted | 14.9 | 6.5 | 5.0 |
| Market year-high EV/EBITDA | 7.9 | 7.1 | 9.8 | 11.3 | 14.2 | 12.3 | 11.3 | 10.3 | 10.6 | 8.3 | 7.5 |
| **Discount/ (Premium) to market** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **(224.9)** | **(42.8)** | **(25.3)** |
| | | | | | | | | | | | |
| Kolon year-high PER | Unlisted | Unlisted | Unlisted | Unlisted | Unlisted | Unlisted | Unlisted | Unlisted | 29.2 | 11.4 | 8.8 |
| Market year-high PER | 20.7 | 9.9 | 13.9 | 17.9 | 22.3 | 42.4 | 20.4 | 16.0 | 11.2 | 9.2 | 7.9 |
| **Discount/ (Premium) to market** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **(161.1)** | **(24.7)** | **(10.4)** |

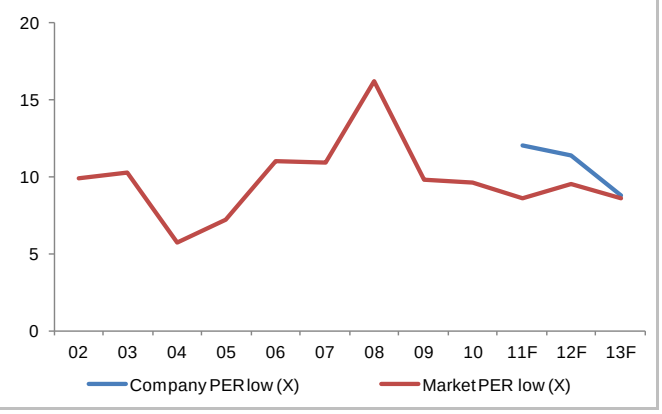
*Source: Company data, Leading Research Center*
**Market = KOSPI + KOSDAQ*

**Chart 23 Kolon Plastics yr-hi EV/EBITDA vs. market**




*Source: Bloomberg, Leading Research Center*

**Chart 24. Kolon Plastics yr-hi PER vs. market**




*Source: Bloomberg, Leading Research Center*

# Summary of financials

**Income statement**

| (Wbn) | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011F | 2012F | 2013F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Revenue** | **32.6** | **34.6** | **34.2** | **40.4** | **38.9** | **41.2** | **45.2** | **84.6** | **123.4** | **166.1** | **211.1** | **294.7** | **356.7** |
| % chg YoY | 24.7 | 6.0 | (1.1) | 18.2 | (3.8) | 5.9 | 9.7 | 87.4 | 45.9 | 34.5 | 27.1 | 39.6 | 21.0 |
| COGS | 32.9 | 33.1 | 34.5 | 37.0 | 34.8 | 37.4 | 38.7 | 73.7 | 105.4 | 143.6 | 183.5 | 255.5 | 307.8 |
| **Gross profit** | **(0.3)** | **1.5** | **(0.3)** | **3.4** | **4.1** | **3.7** | **6.5** | **10.9** | **18.0** | **22.5** | **27.7** | **39.2** | **48.9** |
| GP margin (%) | (0.8) | 4.4 | (0.7) | 8.5 | 10.4 | 9.1 | 14.3 | 12.8 | 14.6 | 13.5 | 13.1 | 13.3 | 13.7 |
| | | | | | | | | | | | | | |
| **SG&A** | **1.9** | **2.1** | **3.8** | **3.0** | **3.6** | **3.5** | **4.2** | **5.6** | **7.1** | **10.8** | **12.9** | **18.9** | **23.2** |
| **Operating income** | **(2.2)** | **(0.6)** | **(4.1)** | **0.5** | **0.4** | **0.2** | **2.2** | **5.3** | **10.9** | **11.7** | **14.8** | **20.3** | **25.7** |
| OP margin (%) | (6.6) | (1.8) | (11.9) | 1.2 | 1.1 | 0.4 | 4.9 | 6.3 | 8.8 | 7.0 | 7.0 | 6.9 | 7.2 |
| | | | | | | | | | | | | | |
| Non-operating income | 0.8 | 3.0 | 0.4 | 1.6 | 0.4 | 0.5 | 0.9 | 3.5 | 1.0 | 1.4 | 1.3 | 1.5 | 1.7 |
| Interest income | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.3 | 0.5 |
| FX related gains | 0.1 | 2.9 | 0.3 | 1.1 | 0.3 | 0.3 | 0.7 | 3.1 | 0.8 | 1.1 | 1.0 | 1.0 | 1.0 |
| Equity method gains | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | | | | | | | | | | | | |
| Non-operating expenses | 4.4 | 2.4 | 2.2 | 1.6 | 1.3 | 0.9 | 0.5 | 6.2 | 2.5 | 1.9 | 2.6 | 3.6 | 3.6 |
| Interest expenses | 2.2 | 1.1 | 0.9 | 1.3 | 0.8 | 0.6 | 0.2 | 0.5 | 0.9 | 0.5 | 1.1 | 2.1 | 2.1 |
| FX related losses | 2.0 | 0.2 | 0.6 | 0.2 | 0.4 | 0.3 | 0.3 | 2.0 | 1.2 | 1.1 | 1.0 | 1.0 | 1.0 |
| Equity method losses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | | | | | | | | | | | | |
| **Profit before tax** | **(5.8)** | **0.0** | **(5.9)** | **0.5** | **(0.4)** | **(0.3)** | **2.7** | **2.6** | **9.4** | **11.1** | **13.6** | **18.2** | **23.7** |
| Tax | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | (1.4) | 0.4 | 1.5 | 2.1 | 2.7 | 3.6 | 4.7 |
| Tax rate (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | (51.0) | 16.3 | 15.5 | 19.0 | 20.0 | 20.0 | 20.0 |
| **Net income** | **(5.8)** | **0.0** | **(5.9)** | **0.5** | **(0.4)** | **(0.3)** | **4.0** | **2.2** | **7.9** | **9.0** | **10.9** | **14.6** | **19.0** |

## Balance sheet

| (Wbn) | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011F | 2012F | 2013F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cash & deposit | 0.1 | 0.6 | 2.6 | 1.3 | 3.9 | 2.0 | 5.2 | 5.0 | 5.3 | 5.9 | 8.6 | 19.3 | 25.6 |
| Marketable securities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| A/R | 7.5 | 7.1 | 9.7 | 8.1 | 2.5 | 5.2 | 5.9 | 11.2 | 14.4 | 15.2 | 20.5 | 39.8 | 45.7 |
| Other quick assets | 2.6 | 2.1 | 2.5 | 1.7 | 0.6 | 0.4 | 0.7 | 1.0 | 0.5 | 0.8 | 0.6 | 0.6 | 0.6 |
| Total quick assets | 10.1 | 9.8 | 14.8 | 11.2 | 7.1 | 7.7 | 11.9 | 17.2 | 20.2 | 21.9 | 29.7 | 59.6 | 71.8 |
| Inventory | 4.4 | 3.5 | 4.1 | 5.7 | 7.5 | 5.6 | 4.9 | 20.1 | 20.1 | 26.0 | 27.7 | 39.1 | 48.6 |
| **Total current assets** | **14.5** | **13.4** | **18.9** | **16.9** | **14.6** | **13.4** | **16.9** | **37.3** | **40.3** | **48.0** | **57.4** | **98.7** | **120.5** |
| | | | | | | | | | | | | | |
| Investments | 0.2 | 0.3 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 1.8 | 1.7 | 1.7 | 1.8 | 1.8 | 1.8 |
| Tangible assets | 44.0 | 40.0 | 37.3 | 34.4 | 30.0 | 25.8 | 21.4 | 18.9 | 24.7 | 31.4 | 103.3 | 98.7 | 94.1 |
| Others | 5.1 | 3.3 | 1.5 | 0.2 | 0.4 | 0.5 | 1.1 | 0.9 | 0.9 | 0.8 | 0.9 | 0.9 | 0.9 |
| **Total non-current assets** | **49.3** | **43.7** | **38.7** | **34.6** | **30.5** | **26.3** | **22.6** | **21.6** | **27.3** | **33.9** | **106.0** | **101.4** | **96.8** |
| **Total assets** | **63.8** | **57.1** | **57.6** | **51.5** | **45.1** | **39.7** | **39.4** | **58.9** | **67.5** | **81.9** | **163.4** | **200.1** | **217.3** |
| | | | | | | | | | | | | | |
| Trade Payables | 2.9 | 3.8 | 5.1 | 3.8 | 4.5 | 3.9 | 4.1 | 12.1 | 18.0 | 23.1 | 29.7 | 41.9 | 50.8 |
| Short-term borrowings | 9.5 | 13.9 | 25.5 | 16.0 | 9.0 | 5.0 | 0.0 | 15.0 | 0.0 | 5.0 | 15.0 | 15.0 | 5.0 |
| Current portion of LT debt | 9.9 | 9.0 | 9.0 | 3.9 | 0.0 | 0.0 | 0.0 | 5.0 | 8.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Others | 3.0 | 3.0 | 5.5 | 5.8 | 5.4 | 4.9 | 5.4 | 5.9 | 8.1 | 11.3 | 17.6 | 17.3 | 16.6 |
| **Total current liabilities** | **25.3** | **29.8** | **45.1** | **29.5** | **18.9** | **13.8** | **9.6** | **37.9** | **34.2** | **39.3** | **62.3** | **74.2** | **72.4** |
| | | | | | | | | | | | | | |
| Bonds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Long-term debt | 24.9 | 13.5 | 4.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 20.0 | 20.0 |
| Allowance for retirement reserve | 0.2 | 0.2 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.6 | 0.8 | 0.6 | 1.0 | 1.0 | 1.0 |
| Others | 0.0 | 0.0 | (0.0) | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 1.0 | 1.4 | 2.1 | 2.5 | 2.4 |
| **Total LT liabilities** | **25.0** | **13.7** | **4.9** | **0.4** | **0.4** | **0.4** | **0.4** | **1.4** | **1.8** | **2.0** | **13.1** | **23.5** | **23.4** |
| **Total liabilities** | **50.3** | **43.5** | **49.9** | **29.9** | **19.4** | **14.2** | **10.0** | **39.3** | **36.0** | **41.3** | **75.4** | **97.7** | **95.8** |
| | | | | | | | | | | | | | |
| Paid-in capital | 45.0 | 45.0 | 45.0 | 58.5 | 63.0 | 63.0 | 63.0 | 20.3 | 20.3 | 20.3 | 29.0 | 29.0 | 29.0 |
| Capital surplus | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.7 | 0.0 | 0.0 | 27.8 | 27.8 | 27.8 |
| Retained earnings | (31.5) | (31.4) | (37.3) | (36.8) | (37.2) | (37.4) | (33.4) | (31.3) | 7.3 | 16.3 | 27.1 | 41.7 | 60.7 |
| Capital adjustments | 0.0 | 0.0 | 0.0 | (0.1) | (0.1) | (0.1) | (0.1) | (0.1) | 3.9 | 4.0 | 4.0 | 4.0 | 4.0 |
| **Total shareholder's equity** | **13.5** | **13.6** | **7.7** | **21.7** | **25.7** | **25.5** | **29.5** | **19.6** | **31.5** | **40.6** | **87.9** | **102.5** | **121.4** |

**Free cashflow analysis**

| (Wbn) | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011F | 2012F | 2013F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Net profit** | **(5.8)** | **0.0** | **(5.9)** | **0.5** | **(0.4)** | **(0.3)** | **4.0** | **2.2** | **7.9** | **9.0** | **10.9** | **14.6** | **19.0** |
| **Add non-cash expenses** | **7.0** | **6.2** | **6.3** | **5.5** | **5.7** | **6.0** | **5.8** | **4.5** | **2.6** | **2.9** | **8.9** | **8.9** | **8.9** |
| Depreciation | 4.8 | 4.8 | 4.9 | 5.1 | 5.3 | 5.4 | 5.5 | 3.7 | 1.7 | 1.6 | 7.6 | 7.6 | 7.6 |
| Equity method losses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other non-cash expenses | 2.2 | 1.3 | 1.4 | 0.4 | 0.4 | 0.6 | 0.3 | 0.8 | 0.9 | 1.3 | 1.3 | 1.3 | 1.3 |
| **Subtract non-cash incomes** | **0.6** | **2.8** | **0.1** | **1.1** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **1.0** | **1.0** | **1.0** |
| Equity method gains | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other non-cash incomes | 0.6 | 2.8 | 0.1 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 |
| **Add chgs in op asset &liab** | (2.2) | 3.5 | 0.7 | 0.8 | 5.5 | (2.4) | (0.7) | (11.7) | 4.8 | (0.2) | (0.3) | (18.5) | (6.5) |
| Investment in WC | 3.3 | (2.2) | 1.9 | 1.4 | (4.6) | 1.5 | (0.2) | 12.6 | (2.9) | 1.8 | 0.3 | 18.5 | 6.5 |
| Others | (1.1) | (1.3) | (2.6) | 2.1 | (0.9) | 0.9 | 1.0 | (0.8) | (1.9) | (1.6) | 0.0 | 0.0 | 0.0 |
| **Cash from operation** | **(1.7)** | **6.9** | **1.0** | **5.8** | **10.8** | **3.4** | **9.1** | **(5.1)** | **15.3** | **11.7** | **18.5** | **4.0** | **20.4** |
| Subtract capital expenditure | 1.0 | 0.9 | 2.1 | 2.2 | 1.0 | 1.2 | 1.1 | 1.3 | 2.3 | 8.4 | 79.5 | 3.0 | 3.0 |
| **Free cash flow** | **(2.7)** | **6.0** | **(1.1)** | **3.5** | **9.8** | **2.2** | **8.0** | **(6.4)** | **13.0** | **3.3** | **(61.0)** | **1.0** | **17.4** |
| Dividend | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Net investments | 0.2 | 0.2 | (0.3) | (0.0) | 0.0 | (0.0) | (0.0) | 1.7 | 0.0 | (0.0) | 0.1 | 0.0 | 0.0 |
| Share issues | 0.0 | 0.0 | 0.0 | 13.4 | 4.5 | 0.0 | 0.0 | (8.7) | 0.0 | 0.0 | 37.4 | 0.0 | 0.0 |
| Increase in debt | 3.5 | (7.9) | 2.5 | (19.1) | (10.9) | (4.0) | (5.0) | 20.0 | (12.0) | (3.0) | 20.0 | 10.0 | (10.0) |
| Others | 0.6 | (2.6) | (0.2) | (0.8) | 0.7 | 0.1 | 0.0 | 3.6 | 0.8 | (0.2) | (6.5) | 0.3 | 1.1 |
| **Net cash flow** | **0.1** | **0.6** | **2.0** | **(1.3)** | **2.7** | **(1.9)** | **3.2** | **(0.2)** | **0.3** | **0.6** | **2.8** | **10.7** | **6.3** |
| Beginning cash | 0.0 | 0.1 | 0.6 | 2.6 | 1.3 | 3.9 | 2.0 | 5.2 | 5.0 | 5.3 | 5.9 | 8.6 | 19.3 |
| Ending cash | 0.1 | 0.6 | 2.6 | 1.3 | 3.9 | 2.0 | 5.2 | 5.0 | 5.3 | 5.9 | 8.6 | 19.3 | 25.6 |

**Key ratios and stability ratio**

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011F | 2012F | 2013F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Current ratio | 57.4 | 44.9 | 41.9 | 57.4 | 77.2 | 96.8 | 176.4 | 98.4 | 117.8 | 121.9 | 92.1 | 133.1 | 166.4 |
| Quick ratio | 29.9 | 25.9 | 27.4 | 32.0 | 33.9 | 52.4 | 116.5 | 42.7 | 57.5 | 53.6 | 46.6 | 79.6 | 98.4 |
| Inventory holding period | 41.9 | 43.7 | 40.3 | 48.4 | 69.4 | 64.0 | 49.9 | 62.0 | 69.5 | 58.5 | 53.4 | 47.7 | 52.0 |
| A/R collection period (days) | 74.3 | 77.0 | 89.7 | 80.6 | 49.8 | 34.1 | 44.8 | 36.9 | 37.8 | 32.5 | 30.9 | 37.3 | 43.7 |
| A/P period (days) | 32.6 | 37.8 | 46.2 | 41.7 | 41.3 | 43.1 | 38.5 | 33.2 | 52.1 | 50.2 | 52.0 | 49.0 | 53.3 |
| Interest bear debt (Wbn) | 44.3 | 36.4 | 39.0 | 19.9 | 9.0 | 5.0 | 0.0 | 20.0 | 8.0 | 5.0 | 25.0 | 35.0 | 25.0 |
| Cash & equivalents (Wbn) | 0.2 | 0.9 | 2.6 | 1.3 | 4.0 | 2.2 | 5.4 | 5.1 | 5.4 | 5.9 | 8.7 | 19.4 | 25.7 |
| Net int. bear debt (Wbn) | 44.1 | 35.5 | 36.4 | 18.6 | 5.0 | 2.8 | (5.4) | 14.9 | 2.6 | (0.9) | 16.3 | 15.6 | (0.7) |
| Net debt/equity (%) | 325.4 | 262.3 | 473.1 | 85.9 | 19.3 | 11.0 | (18.2) | 76.1 | 8.4 | (2.3) | 18.6 | 15.3 | (0.6) |
| Liability/equity (%) | 371.3 | 321.3 | 649.6 | 137.9 | 75.3 | 55.8 | 33.8 | 200.4 | 114.2 | 101.9 | 85.8 | 95.4 | 78.9 |
| Interest coverage (X) | -1.0 | -0.5 | -4.8 | 0.4 | 0.5 | 0.3 | 9.7 | 11.2 | 12.0 | 24.0 | 14.1 | 9.7 | 12.2 |

**Valuations and margins**

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011F | 2012F | 2013F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EV/EBITDA (X) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 8.2 | 6.5 | 5.0 |
| EPS (W) | (646) | N/A | (652) | 47 | (33) | (20) | 319 | 534 | 1,953 | 445 | 374 | 502 | 655 |
| EPS y-y (%) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 67.4 | 266.0 | (77.2) | (15.8) | 34.2 | 30.3 |
| PER (X) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 15.3 | 11.4 | 8.8 |
| BVPS (W) | 3,010 | 3,013 | 1,707 | 2,093 | 2,117 | 2,021 | 2,340 | 2,355 | 7,767 | 3,330 | 3,566 | 3,533 | 4,188 |
| P/BVPS (X) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 1.6 | 1.6 | 1.4 |
| Dividend (W) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yield (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ROE (%) | (35.3) | 0.1 | (55.3) | 3.7 | (1.8) | (1.0) | 14.6 | 8.8 | 31.0 | 25.0 | 16.9 | 15.3 | 17.0 |
| ROA (%) | (8.9) | 0.0 | (10.2) | 1.0 | (0.9) | (0.6) | 10.1 | 4.4 | 12.5 | 12.1 | 8.9 | 8.0 | 9.1 |
| GP margin (%) | (0.8) | 4.4 | (0.7) | 8.5 | 10.4 | 9.1 | 14.3 | 12.8 | 14.6 | 13.5 | 13.1 | 13.3 | 13.7 |
| OP margin (%) | (6.6) | (1.8) | (11.9) | 1.2 | 1.1 | 0.4 | 4.9 | 6.3 | 8.8 | 7.0 | 7.0 | 6.9 | 7.2 |
| NP margin (%) | (17.8) | 0.0 | (17.2) | 1.3 | (1.1) | (0.6) | 8.9 | 2.6 | 6.4 | 5.4 | 5.1 | 4.9 | 5.3 |
| EBITDA margin (%) | 8.0 | 12.2 | 2.4 | 13.8 | 14.8 | 13.6 | 17.2 | 10.6 | 10.2 | 8.0 | 10.6 | 9.5 | 9.3 |
| ROIC (%) | (3.7) | (1.2) | (8.8) | 1.1 | 1.2 | 0.6 | 12.9 | 15.1 | 26.7 | 25.6 | 16.4 | 14.6 | 17.2 |
| WACC (%) | 8.9 | 8.7 | 7.3 | 7.6 | 13.8 | 9.3 | 8.8 | 7.9 | 7.2 | 9.3 | 9.9 | 10.9 | 13.1 |
| ROIC less WACC (%) | (12.6) | (9.9) | (16.1) | (6.5) | (12.6) | (8.7) | 4.1 | 7.2 | 19.5 | 16.3 | 6.5 | 3.7 | 4.1 |

** After the IPO in 2011, the number of shares outstanding increased by 42.9% from 20.3m to 29m.*

## ▶ Compliance Notice

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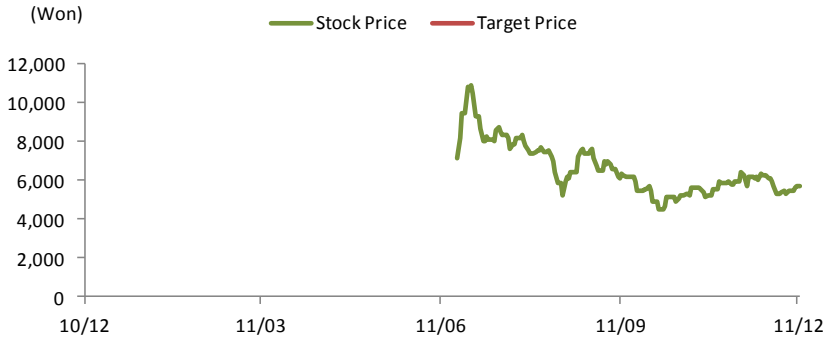
## ▶ Ratings and target price history in past two years

| **Kolon Plastics (138490 KS)** | |
|---|---|
| Date | 2011-12-8 |
| Rating | BUY |
| Target Price | 7,500 |

## ▶ Target price change in past two years




## ▶ Investment period and ratings

**Company**

| | |
|---|---|
| BUY | The stock is expected to outperform the market by at least 15%p over the next 12 months. |
| HOLD | The stock is expected to either outperform or underperform the market by less than 15%p over the next 12 months. |
| SELL | The stock is expected to underperform the market by at least 15%p over the next 12 months. |

**Industry**

| | |
|---|---|
| OVERWEIGHT | Industry indicators are expected to outperform the market by at least 5%p over the next 12 months. |
| NEUTRAL | Industry indicators are expected to be in line with the market within 5%p over the next 12 months. |
| UNDERWEIGHT | Industry indicators are expected to underperform the market by at least 5%p over the next 12 months. |

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