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SKC (011790 KS)

Global PET film market bottoms-out

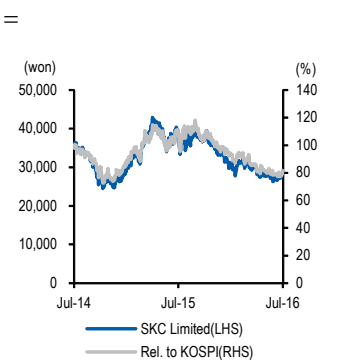
Chemical

BUY (M)
TP: W45,000 (U)

| | |
|---------------------------|------------|
| Share price (won, Jul 28) | 28,750 |
| Paid-in capital (Wbn) | 1,840 |
| Market cap (Wbn) | 1,079 |
| BPS (won) | 39,550 |
| Net debt to equity (%) | 136.98 |
| Shares outstanding | 37,534,555 |
| Avg daily T/O (2M, Wbn) | 6 |
| Avg daily vol (2M, shrs) | 197,276 |
| 52-week high (won) | 40,000 |
| 52-week low (won) | 26,300 |
| Foreign ownership (%) | 11.8 |
| Major shareholders (%) | |
| SK Holdings & others | 43.3 |

Stock performance (%)

| | 1M | 3M | 12M |
|------------|------|-----|--------|
| Absolute | 7.9 | 1.6 | (23.9) |
| Relative | 3.3 | 0.6 | (23.3) |
| Abs (US\$) | 11.4 | 1.9 | (21.9) |



Quarterly earnings

| (Wbn) | 2Q16E | % YoY | % QoQ | Consens | vs consens (%) |
|------------------|-------|----------|----------|---------|----------------|
| Sales | 617 | -2.4 | 8.9 | 588 | 5.0 |
| Operating profit | 38 | -36.4 | -12.6 | 48 | -20.9 |
| Pre-tax profit | 31 | -17.3 | -18.3 | 44 | -28.0 |
| Net profit | 35 | 32.3 | 36.4 | 35 | -1.5 |
| Op margin (%) | 6.1 | -3.3 %pt | -1.5 %pt | 8.1 | -2.0 %pt |
| Net margin (%) | 5.6 | +1.5 %pt | +1.1 %pt | 6.0 | -0.4 %pt |

Note: TTB = turn to black, TTR = turn to red, RR = remain in red

Source: Yuanta Securities

Revise up target price to W45,000, as discount no longer needs to be applied

- SKC belongs to SK Group and is a specialty chemical firm that manufactures PET and propylene oxide (PO, raw materials for urethane). Over 2013~2016, shares remained undervalued on concerns over global PET film oversupply and competition in the domestic PO market. However, as EV is likely to begin recovering in 2H16, we revise up our target price from W40,000 to W45,000. Thanks to the recovery cycle of both of the company's main products, operating profit is also likely to rise from W174.2bn in 2016 to W229.9bn in 2017, and W282.4bn in 2018 (about 60%). We believe the company deserves constant attention, as it is likely to enjoy a further premium if it develops mass production technology for a product that can replace tempered glass, as PET film rival Kolon Industries (ranked 12th globally) did.

Investment point 1: Global PO supply to remain tight until 2019

- PO is the key raw material for artificial leather, sponge, coolant, and insulator, and SKC's production capacity stands at 310,000 tpa (ranked 6th globally). In 2016, the global PO market is strong, as capacity utilization (demand/production capacity) stands at about 86% (vs breakeven point of 75%). Over 2016~2020, global demand is likely to increase by 1.58mn tonnes from 8.98mn to 10.56mn, while capacity is likely to expand by just 1.30mn tonnes. Thus, global capacity utilization is likely to rise to 89% by 2019. S-Oil's new 300,000-tpa facility, which will begin operations in 2H18, is not likely to alleviate global PO supply shortages.

Investment point 2: PET film likely to enter upcycle in 2017~2020

- PET film is used for display protection/reflector sheets, X-ray, and packaging, and SKC's production capacity stands at 260,000 tpa (ranked 6th globally). In 2016, global PET film capacity utilization is 71~72% (vs breakeven point of 69%). PET film has been oversupplied for the past three years. However, 2016~2020 global demand is likely to rise by 960,000 tonnes from 4.45mn to 5.41mn, while capacity is expected to expand by just 390,000. Thus, global capacity utilization should rise from 73% in 2017 to 81% in 2019.

Investment point 3. From discount to premium

- After 2000, shares enjoyed a premium of more than 1.0x P/B when its main PO and PET film businesses improved at the same time. We believe that will be the case in 2H16~2018, and thus, we revise up our target price to W45,000, which implies a P/B of 1.0x.

Forecasts and valuations (K-IFRS, consolidated)

| | (Wbn) | | | |
|------------------|-------|-------|-------|-------|
| FY ends Dec | 2014A | 2015A | 2016E | 2017E |
| Sales | 2,802 | 2,565 | 2,404 | 2,478 |
| Operating profit | 152 | 218 | 174 | 230 |
| Net profit, CI | 69 | 272 | 123 | 149 |
| % YoY | 22.4 | 291.7 | -54.9 | 21.1 |
| P/E (x) | 16.4 | 4.8 | 8.8 | 7.3 |
| P/B (x) | 0.9 | 0.9 | 0.7 | 0.6 |
| EV/EBITDA (x) | 9.9 | 8.1 | 8.1 | 6.7 |
| ROE (%) | 5.8 | 20.5 | 8.2 | 9.2 |

Note: OP = gross profit - SG&A

Source: Yuanta Securities

I. Changing revenue structure: PO's high season and PET film recovery overlaps over 2016 ~2019

Film and PO market conditions drive annual earnings

SKC's annual earnings tend to depend highly on PET film and propylene oxide PO market conditions. When the two markets move in unison, earnings fluctuate significantly. When the two moves into the opposite directions, earnings become relatively stable.

OPM fell to 4% level over 2014~2016 on poor PET market conditions

Since 2014, the two have been heading in different directions. PET film operating profit margin fell sharply from 8~9% in 2013 to almost 2% in 2016. On the other hand, PO operating margin grew from 6.6% to 19% on global supply shortages over the same period. SKC's annual operating profit bottomed-out at W124.0bn in 2013 before rebounding to W152.4bn in 2014 and W218.1bn in 2015 and falling to W174.2bn in 2016E.

OPM to rebound to 10% level over 2016~2019 on global PO shortage

However, the PO market is expected to remain solid over 2016~2019, while PET market conditions should recover. We expect SKC's operating profit to grow from W174.2bn in 2016 to W229.9bn in 2017 and W282.4bn in 2018, with OPM improving from 7% in 2016E to the upcycle level of 10% in 2018.

It is inevitable that global PO supply shortages will be prolonged until 2019. Moreover, the five-year-long capacity expansion cycle in the PET film market is drawing to an end after the market performed extremely poorly over 2014~2016. We expect the market to trend up over the next four years.

SKC: annual operating profit (2015: W218.1bn → 2016E: W174.2 → 2018E: W282.4bn)

| | | Full-year | | | | | | | | |
|----------------------------|------------|----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Production capa | | | | | | | | | | |
| PET film (dom) | 000 tonnes | 94 | 109 | 139 | 164 | 164 | 164 | 164 | 164 | 164 |
| PET film (overseas) | 000 tonnes | | 45 | 45 | 70 | 86 | 93 | 93 | 93 | 93 |
| EVA (dom/overseas) | 000 tonnes | 9 | 21 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| PO | 000 tonnes | 280 | 280 | 295 | 310 | 310 | 310 | 310 | 310 | 310 |
| PG | 000 tonnes | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 113 | 150 |
| PPG | 000 tonnes | 120 | 120 | 138 | 196 | 215 | 215 | 215 | 215 | 215 |
| SM | 000 tonnes | 394 | 394 | 394 | 394 | 394 | 394 | 394 | 394 | 394 |
| | | [consolidated basis] | | | | | | | | |
| Sales | Wbn | 1,458 | 1,687 | 2,629 | 2,641 | 2,802 | 2,565 | 2,404 | 2,478 | 2,717 |
| Film | Wbn | 580 | 677 | 678 | 833 | 814 | 735 | 736 | 736 | 820 |
| Chemical | Wbn | 884 | 1,011 | 1,077 | 1,013 | 1,086 | 881 | 741 | 820 | 961 |
| Subsidiary | Wbn | | | 874 | 796 | 903 | 949 | 936 | 922 | 936 |
| SKC Inc/other | Wbn | | | 249 | 187 | 328 | 386 | 425 | 334 | 218 |
| SKC Solmics | Wbn | | | 97 | 113 | 115 | 113 | 121 | 70 | 73 |
| SK Telesys | Wbn | | | 495 | 451 | 396 | 372 | 390 | 402 | 414 |
| SKC Airgas | Wbn | | | 34 | 45 | 64 | 78 | | | |
| Operating profit | Wbn | 168 | 205 | 145 | 124 | 152 | 218 | 174 | 230 | 282 |
| Film | Wbn | 102 | 81 | 62 | 69 | 41 | 32 | 13 | 38 | 68 |
| Chemical | Wbn | 66 | 125 | 103 | 67 | 96 | 170 | 141 | 147 | 153 |
| Subsidiary | Wbn | | | -20 | -12 | 16 | 16 | 23 | 45 | 62 |
| OPM | | 11.5% | 12.2% | 5.5% | 4.7% | 5.4% | 8.5% | 7.2% | 9.3% | 10.4% |
| Film | | 17.6% | 11.9% | 9.2% | 8.3% | 5.0% | 4.4% | 1.7% | 5.1% | 8.3% |
| Chemical | | 7.5% | 12.3% | 9.5% | 6.6% | 8.8% | 19.3% | 19.0% | 17.9% | 15.9% |
| Subsidiary | | | | -2.3% | -1.5% | 1.7% | 1.7% | 2.5% | 4.9% | 6.6% |
| Equity-method gains | Wbn | 168 | 0 | 14 | 11 | -2 | -13 | 26 | 24 | 35 |
| NP, CI | Wbn | 131 | 139 | 66 | 57 | 69 | 272 | 123 | 149 | 154 |
| EPS | won/shr | | 3,480 | 1,823 | 1,568 | 1,916 | 7,426 | 3,267 | 3,958 | 4,107 |
| BPS | won/shr | | 31,169 | 31,847 | 32,928 | 33,759 | 39,550 | 41,586 | 44,825 | 48,214 |
| EBITDAPS | won/shr | | 129,485 | 144,043 | 6,769 | 7,972 | 9,844 | 8,177 | 9,521 | 10,792 |
| ROE | | | 11.2% | 5.7% | 4.8% | 5.7% | 18.8% | 7.9% | 8.8% | 8.5% |

Source: Yunta Securities

(1) Propylene oxide's upcycle to continue into 2020

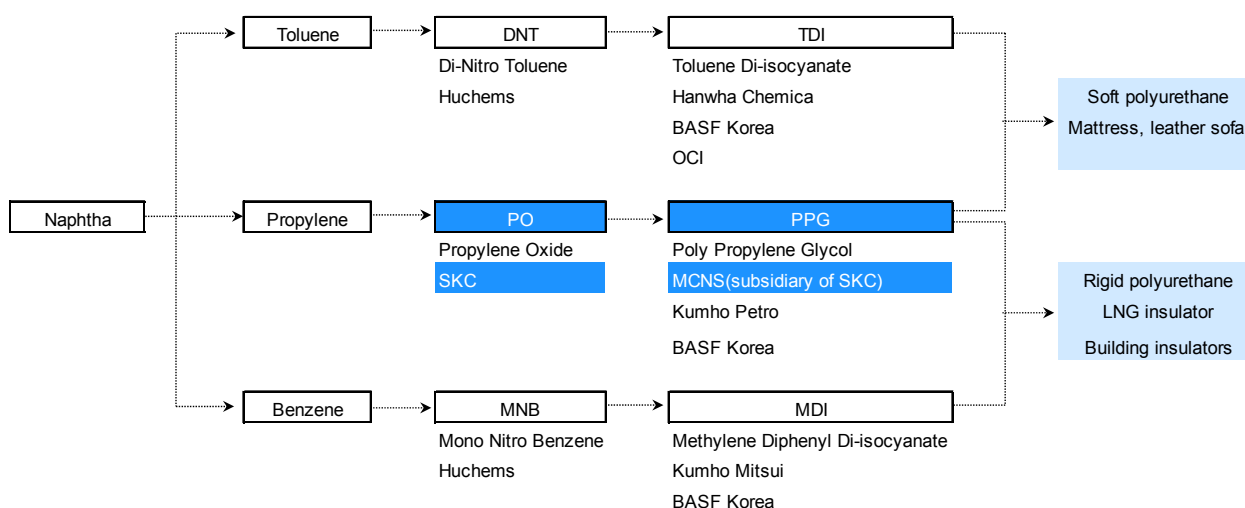
PO key material for urethane used to manufacture materials for insulators and synthetic leather

SKC is the world's sixth-largest supplier of PO (2nd in Asia). It entered the PO market in 2001 when it bought SK Evertec, SK's then 100%-owned subsidiary. PO is one of the critical materials used to manufacture urethane chemical products. It is a toxic liquid which can be polymerized into poly propylene glycol (PPG). PPG is widely used together with toluene di-isocyanate (TDI) to make soft polyurethane for mattresses, synthetic leather, and sponges. When mixed with methylene diphenyl di-isocyanate (MDI), PPG turns into rigid polyurethane, a high-value added product used as insulation materials for fridges and buildings.

As a monopoly in Korea, SKC enjoys an average OPM of 13% since 2011, higher than universal chemical companies

In Korea, PO procurement is competitive since SKC is the sole provider. SKC produces 0.31mn tonnes a year to supply all four major PPG companies in Korea including KPX Chemical (PPG capacity: 0.11mn tonnes), MCNS (JV of SKC and Mistui Chemicals, 0.18mn tonnes), Kumho Petro (0.13mn tonnes), and BASF Korea (0.06mn tonnes).

Polyurethane value chain and SKC's status



Source: Yuanta Securities

Propylene oxide: toxic liquid used to manufacture urethane



Source: SKC

SKC: chemical division OPM at average of 13%

| Year | PO capacity '000 tonnes/year | Sales Wbn | Operating profit Wbn | OPM % |
|-------------------|---------------------------------|--------------|-------------------------|----------|
| 2001(merged into) | 165 | 299 | 76 | 25.3 |
| 2002 | 165 | 343 | 58 | 17.9 |
| 2003 | 165 | 373 | 66 | 17.5 |
| 2004 | 165 | 433 | 57 | 13.2 |
| 2005 | 165 | 480 | 78 | 16.2 |
| 2006 | 165 | 496 | 71 | 14.4 |
| 2007 | 165 | 522 | 41 | 7.9 |
| 2008 | 265 | 624 | 48 | 7.7 |
| 2009 | 265 | 763 | 34 | 4.5 |
| 2010 | 265 | 884 | 66 | 7.5 |
| 2011 | 265 | 1,011 | 125 | 12.5 |
| 2012 | 310 | 1,077 | 103 | 9.5 |
| 2013 | 310 | 1,013 | 67 | 6.6 |
| 2014 | 310 | 1,086 | 96 | 8.8 |
| 2015 | 310 | 884 | 170 | 19.3 |
| Average | | | | 13.0 |
| Peak | | | | 25.3 |
| Bottom | | | | 4.5 |

Source: SKC

Given that 1.05 tonnes of PO is required to produce a tonne of PPG, Korean PPG companies combined need 0.63mn tonnes of PO assuming PPG facility utilization of 100%. This means they need to source more than 0.30mn tonnes from other countries. The monopoly status of SKC's PO chemical (including PO and PPG) division was the reason it has been able to sustain stable earnings.

Since the SK Evertec acquisition, SKC's chemical OPM remained at an average of 13.0%, higher than large Korean naphtha cracking centers (NCCs). SKC's chemical OPM peaked at 25.3% and found bottom at 4.5% during the global financial crisis in 2009. Despite its monopoly status, its OPM weakened over 2007~2014 to an average of 8% before soaring to 20% in 2015, as we detail below.

Conflicts between SKC and KPC Chemical weighed on PO margin over 2007 ~ 2014

Conflicts with Korean PPG producer KPX drove down domestic PO and PPG sales over 2007~2014. KPX asked SKC to cut PO prices, but SKC expanded its own PPG business, intensifying competition with KPX. In response, KPX began to source PO from a Japanese PO company called NOC. Naturally, domestic PO and PPG prices fell, hurting OPM at SKC.

A dramatic change in 2015 pushed up OPM to almost 20%

Things changed dramatically in 2015. NOC announced the permanent closure of its PO operations (annual capacity of 0.18mn tonnes) disrupting KPX's PO procurement. Domestic PO shortages resumed, pushing SKC's chemical OPM sharply up to almost 20%.

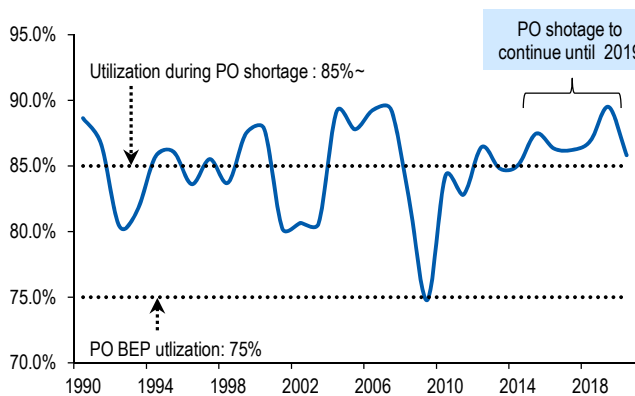
OPM will likely remain solid until 2020

We believe PO market conditions will remain favorable at least until 2020 for the following two reasons:

Global demand to grow from 8.98mn tonnes in 2015 to 10.2mn tonnes in 2019

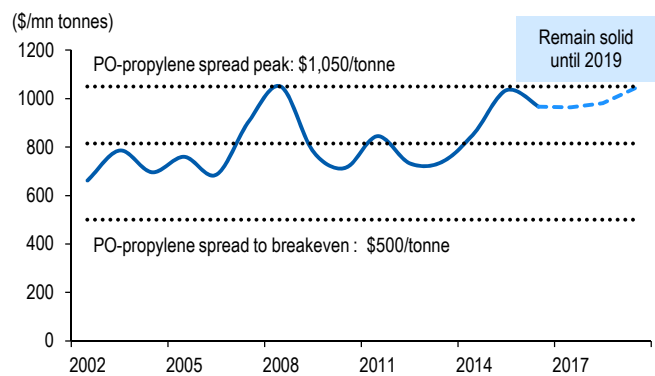
First, capacity expansion is unlikely to fully meet growing demand until 2020. Annual global PO demand stands at 8.98mn tonnes today and is expected to grow 3.5% on average each per year, as its downstream industries (furniture, automobile and construction) tend to outperform global economic growth by 1~2%. Annual PO demand growth of 3.5% should add 1.3mn tonnes to total PO demand each year until it reaches 10.25mn tonnes in 2019.

Global PO facility utilization: PO to remain in shortage until 2019



Source: SKC

Global PO spread: to remain solid until 2019



Source: Yuenta Securities

PO capacity addition estimated to be 1.20mn tonnes over 2015~2020

Meanwhile, global PO capacity stands at 8.98mn tonnes (as of 2015), with SKC accounting for 3.4% with 0.31mn. A total of 1.20mn tonnes are planned to be added up to 2019 (2015: 0.06mn, 2016: 0.50mn, 2017: 0.39mn, 2018: 0.30mn, 2019: none), which should put total global capacity at 11.45mn tonnes. By PO provider, Xinyue Chemical (China) plans to add 0.20mn tonnes and Yantai Wanhua (China) 0.30mn tonnes in 2016. Sadara Project (Saudi Arabia) should also add 0.39mn tonnes in 2017, while S-Oil (Korea) plans to add 0.30mn in 2H18. SKC and Lyondell Basell (US) are mulling over adding 0.4mn and 0.45mn, respectively, but those additions are likely to be completed in 2H20 at the earliest.

Utilization likely to increase from 86% in 2016 to 89% on supply shortage

In short, over 2015~2020, demand is expected to grow by 1.30mn tonnes to 1.50 mn tonnes, but global capacity will likely grow by less than 1.20mn tonnes, which is why we believe PO shortage will be prolonged. Global PO facility utilization projections also support this. In term of utilization, the breakeven point of a PO facility has historically been 75%. When there are shortages, utilization tends to exceed 85%, supporting high OPM. The closure of facilities at NOC in 2015 sent global utilization soaring to 87.5%. Global PO facility utilization is expected to remain high at 86.2% in 2016, 86.3% in 2017, 86.9% in 2018, and 89.5% in 2019.

Unlike feared, S-Oil's capacity addition in 2019 will not cause a supply glut, as SKC's external PO supply will likely decrease

Second, concerns over S-Oil's PO capacity addition in 2019 seem overdone. S-Oil plans to use in-house produced propylene to operate the 0.30mn tonne PO facility. Many are concerned that it will undermine PO market conditions, but we do not believe so.

As mentioned earlier, as of 2015, Korean PO demand was over 0.60mn tonnes, with about half of it being met with PO imports. Moreover, SKC and MCNS will likely expand their PG (propylene glycol, cosmetic moisturizer) and PPG capacities by 50,000~80,000 tonnes and 100,000 tonnes, respectively, which should leave no PO to supply to external clients. When S-Oil completes its 0.30mn tonne capacity expansion, the new capacity will be able to make up for the supply reduction at SKC and partially replace East Asian PO imports for Korean PPG companies including KPC Chemical. In the end, SKC should enhance vertical integration of its PO-PG/PPG-urethane operations while S-Oil may easily secure clients to occupy its new capacity.

Global propylene oxide supply and demand: PO shortage to continue even after S-Oil's capacity addition in 2H18

| Region/country | Company | Capacity addition ('000 tonnes) | | | | | | | | | | | Capacity ('000 tonnes) 2020 | |
|---------------------------|---------------------------------|---------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------------------------|-------|
| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | | |
| US | Dow Chemical | 1,056 | | | | | | | | | | | | 1,056 |
| | Lyondell | 1,125 | | | | | | | | | | | 450 | 1,575 |
| | Huntsman | 238 | | | | | | | | | | | | 238 |
| | Other | 235 | | | | | | | | | | | | 235 |
| Europe | Dow(Germany) | 590 | | | | | | | | | | | | 590 |
| | Basf(Germany) | 125 | | | | | | | | | | | | 125 |
| | Ineos Kolin(Germany) | 200 | | | | | | | | | | | | 200 |
| | Lyondell Bayer(Netherlands) | 530 | | | | | | | | | | | | 530 |
| | Ellba(Netherlands) | 250 | | | | | | | | | | | | 250 |
| | Shell(Netherlands) | 220 | | | | | | | | | | | | 220 |
| | Lyondell(France) | 220 | | | | | | | | | | | | 220 |
| | Basf Dow(Belgium) | 300 | | | | | | | | | | | | 300 |
| | Other | 270 | | | | | | | | | | | | 270 |
| Asia | | 3,397 | 410 | 130 | 330 | 380 | 65 | 500 | 390 | 300 | 0 | 400 | 6,302 | |
| Japan | Sumitomo Chemical | 200 | | | | | | | | | | | | 200 |
| | Nihon Oxirane | 175 | | | | | (175) | | | | | | | 0 |
| | Asahi Glass | 110 | | | | | | | | | | | | 110 |
| | Tokuyama Co | 80 | | | | | | | | | | | | 80 |
| Korea | SKC | 280 | | 30 | 70 | | | | | | | | 400 | 780 |
| | S-Oil | 0 | | | | | | | | 300 | | | | 300 |
| Singapore | Ellba Eastern | 250 | | | | | | | | | | | | 250 |
| | Seraya Chemical | 175 | | | | | | | | | | | | 175 |
| Thailand | SCG Dow | 0 | 390 | | | | | | | | | | | 390 |
| India | Manali Petchem | 24 | | | | | | | | | | | | 24 |
| China | CNOOC | 270 | 20 | | | | | | | | | | | 290 |
| | Tianjin Dagu Chemical | 230 | | | | | | | | | | | | 230 |
| | Shangdong Binhua Co | 170 | | | | | | | | | | | | 170 |
| | Jinhua Chemical | 130 | | | | | | | | | | | | 130 |
| | shangdong Jilin Chemical | 100 | | | | | | | | | | | | 100 |
| | ZRCC Lyondell | 280 | | | | | | | | | | | | 280 |
| | GPRO Kumho Petrochem | 80 | | | 80 | | | | | | | | | 160 |
| | Sinopec Shanghai | 85 | | | | | | | | | | | | 85 |
| | Shangdong Dongda | 60 | | | | | | | | | | | | 60 |
| | Shangdong Dongchen | 50 | | | | | | | | | | | | 50 |
| | Jingsu Zhongshan Chemical | 40 | | | | | | | | | | | | 40 |
| | Meizhou Bay | 40 | | | | | | | | | | | | 40 |
| | Shangdong Shida | 40 | | | | | | | | | | | | 40 |
| | shenyang Jibilan | 40 | | | | | | | | | | | | 40 |
| | Wudi Xinyue chemical | 200 | | 100 | | | | | | | | | | 300 |
| | Nanjing Jilin Huntsman | | | | | | 240 | | | | | | | 240 |
| | Yantai Wanhua | | | | | | | 300 | | | | | | 300 |
| | Shangdong Sanyue Chemical | | | | | 80 | | | | | | | | 80 |
| | Sinopec Changling Petrochemical | | | | 100 | | | | | | | | | 100 |
| | Shangdong Jiling chemical | 80 | | | 80 | | | | | | | | | 160 |
| Jishen chemical | | | | | 300 | | | | | | | | 300 | |
| Xynyue Chemical | | | | | | | 200 | | | | | | 200 | |
| Other | 8 | | | | | | | | | | | | 8 | |
| Middle East | PetroRabigh | 200 | | | | | | | | | | | | 200 |
| | Sadara (Saudi Arabia) | | | | | | | | 390 | | | | | 390 |
| Other | | 192 | | | | | | | | | | | | 192 |
| Change in global capacity | | | 410 | 130 | 330 | 380 | 65 | 500 | 390 | 300 | 0 | 850 | | |
| Total capacity (A) | | 8,948 | 9,358 | 9,488 | 9,818 | 10,198 | 10,263 | 10,763 | 11,153 | 11,453 | 11,453 | 12,303 | | |
| Global demand (B) | | 7,369 | 7,749 | 8,202 | 8,326 | 8,673 | 8,977 | 9,291 | 9,616 | 9,952 | 10,251 | 10,559 | | |
| Change | | 16% | 5.2% | 5.8% | 1.5% | 4.2% | 3.5% | 3.5% | 3.5% | 3.5% | 3.0% | 3.0% | | |
| Utilization (B/A) | | 82.4% | 82.8% | 86.4% | 84.8% | 85.0% | 87.5% | 86.3% | 86.2% | 86.9% | 89.5% | 85.8% | | |

Source:Nexant, SRI, Yuanta Securities

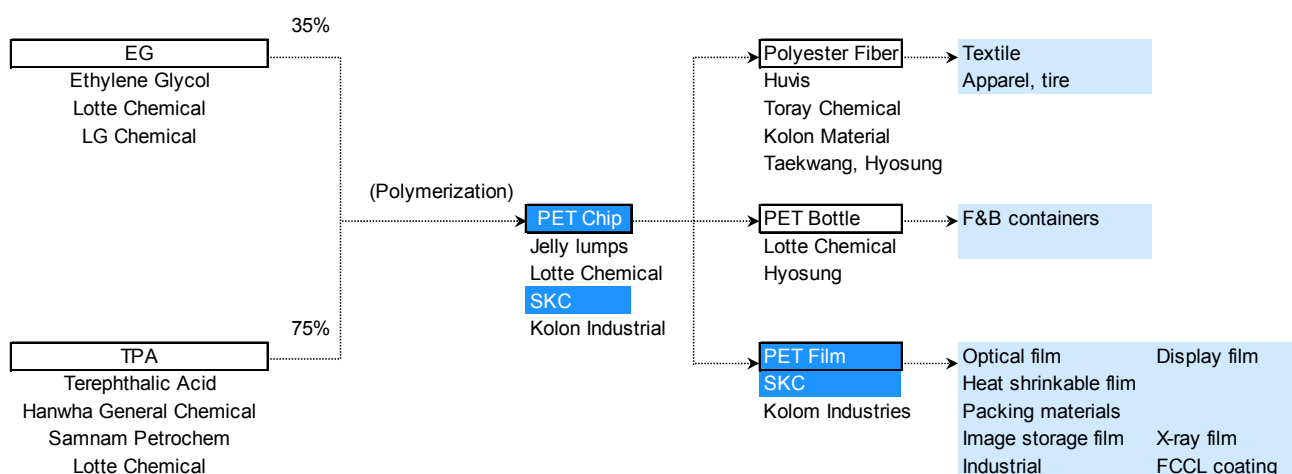
(2) PET market conditions to recover over 2017~2020

Demand for PET film diversifying with technical advances from video tapes to LCD display and other technological innovations

SKC is the world's sixth-largest PET film supplier and has been in the PET film business since its foundation. SKC's video tape (adding magnetic function to PET film) was popular in the 1980's and 1990's. PET film, also called BOPET (biaxially oriented PET), serves as one of the pillars of the polyester manufacturing chain.

When you polymerize ethylene glycol (EG) with PTA, you get jelly-like PET chips. PET chips are processed into three types of products. They can be spun into polyester fibers for fabrics and enhancement materials for tires. You can also make PET beverage bottles by cooling melt chips in a bottle-shaped mold. When you thin the chips by pulling in all four directions, you can get PET film for display film, solar cell protection film, wrapping materials, and medical image storage film such as x-ray film.

PET value chain and SKC's status



Source: Yuanta Securities

PET film: wrapping materials, thin films for industrial uses (solar cell, optical materials)



Source: SKC

SKC: film division earnings (average OPM: 9.0%)

| Year | PO capacity KT/Y | Sales Wbn | Operating profit Wbn | OPM % |
|---------|------------------|-----------|----------------------|-------|
| 2001 | 118 | 229 | 57 | 24.8 |
| 2002 | 118 | 234 | 33 | 14.2 |
| 2003 | 118 | 243 | 19 | 7.7 |
| 2004 | 118 | 271 | 5 | 2.0 |
| 2005 | 118 | 307 | 28 | 9.1 |
| 2006 | 118 | 326 | 31 | 9.5 |
| 2007 | 90 | 322 | 7 | 2.1 |
| 2008 | 90 | 395 | 24 | 6.0 |
| 2009 | 90 | 445 | 40 | 9.1 |
| 2010 | 100 | 580 | 102 | 17.6 |
| 2011 | 128 | 677 | 81 | 11.9 |
| 2012 | 134 | 678 | 62 | 9.2 |
| 2013 | 164 | 833 | 69 | 8.3 |
| 2014 | 164 | 814 | 41 | 5.0 |
| 2015 | 164 | 735 | 32 | 4.4 |
| Average | | | | 9.0 |
| Peak | | | | 24.8 |
| Bottom | | | | 2.1 |

Source: SKC

SKC and Kolon Ind form oligopoly in PET film market, but avg OPM is about 9%

Korea's PET film industry is an oligopoly formed by SKC and Kolon Industries. More specifically, SKC manufactures 160,000 tonnes of PET film (global production is 260,000 tonnes) and Kolon Industries 110,000 tonnes (global production is 140,000 tonnes), and they sell the film to display film makers such as SKC Haas Display Films, Shinwha Intertek, MNTech, and Sangbo Corp, and IT packaging makers such as SK Telesys.

Although it is an oligopolistic market, PET film operating margin is low at an average of around 9%, unlike the above mentioned PO, and profit volatility is quite high, because the Korean companies are competing with Chinese and Japanese rivals, which are top global players.

Amid decline in OPM to about 3% in 2014~2016, China's capacity addition was excessive and competition with Japanese products was fierce

Since 2014, profitability has worsened due to intensifying competition. SKC's film operating margin is about 3~5%, far below the past average of 9%. Considering that global demand for PET film increased by about 7% YoY over 2014~2016 (annual demand increased by about 300,000 tonnes), excessive capacity additions undermined supply-demand balance. Indeed, 690,000 tonnes of global capacity was added in 2013, 600,000 tonnes in 2014, and 490,000 tonnes in 2015, far above annual average demand growth of 300,000.

With global capacity addition cycle ending, global PET market likely to begin recovering in 2017

Then, will global oversupply of PET film worsen in 2017? To answer this question, we note that capacity addition concentrated over 2012~2015 amid solid demand growth is coming to an end.

The chart on the right below shows global PET film market outlook. In 2015 global PET film demand stood at 4.24mn tonnes, 2.52mn tonnes of which were for packaging, 0.89mn tonnes for electric/electricity, 160,000 tonnes for image storage, and 650,000 tonnes for other industrial purposes. With PET film demand CAGR estimated at 5~6%, global demand is likely to reach 5.85mn tonnes in 2020.

Global demand likely to rise by 1.6mn tonnes from 4.24mn in 2015 to 5.85mn in 2020

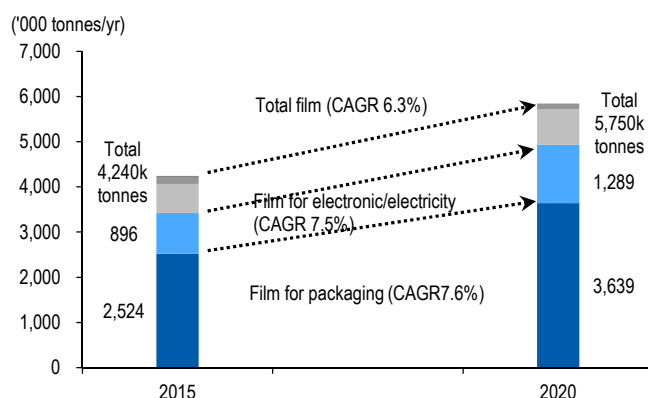
By application, demand for PET film is likely to increase in 2015~2020 by 7.6% (2.52mn → 3.64mn) for packaging, 7.5% (0.9mn → 1.29mn) for electronic/electric, 4.2% (0.64mn → 0.8mn) for other industrial, and -6.2% (0.16mn → 0.11mn) for magnetic film.

Global PET film capacity (2015): SKC 6th, Kolon Ind 12th

| Company | Production capacity ('000 tonnes/yr) | |
|---|--------------------------------------|--------------|
| | 2010 | 2015 |
| Jiangsu Suqian Colour Plastic Packaging | 65 | 413 |
| Toray Advanced Film | 335 | 366 |
| Dupont Teijin | 289 | 290 |
| Uflex Industries | 145 | 283 |
| CIFU Group | 144 | 279 |
| SKC | 145 | 257 |
| Mitsubishi Polyester Films | 221 | 238 |
| Jiangsu Sanfangxiang Group | | 235 |
| Polyplex Co | 147 | 214 |
| JBF Rak FZ | 80 | 200 |
| Hengli Group | | 192 |
| Kolon Industries | 129 | 144 |
| Zhejiang Ningbo Jinyuan Complex Group | | 128 |
| Jindal Poly Films | 123 | 126 |
| Shaoxing Xiangyu Gree Packing | 57 | 125 |
| Sangdong SNTON Optical Materials Technology | 30 | 110 |
| SRF Polyester | 62 | 92 |
| Shaoxing Riyue New Materials | | 90 |
| Zhejiang Great Southeast Group | 30 | 86 |
| Toyobo | 75 | 80 |
| Other | 1,142 | 2,219 |
| Total global production capacity | 3,220 | 6,168 |

Source: PCI, industry data

Global PET film growth forecast, by application: likely to grow strongly by 5~6% per year



Source: PCI, industry data

During the same period, global capacity addition is less than 400,000 tonnes

We estimate global PET film capacity at 5.94mn tonnes (as of 2015). By major company, production capacity is as follows: China's Jiangsu Suqian Colour Plastic Packaging 413,000 tonnes; Japan's Toray Advanced Film 366,000 tonnes; Japan's Dupont Teijin 290,000 tonnes; Uflex Industries 283,000 tonnes; China's CIFU 279,000 tonnes; Korea's SKC 257,000 tonnes; Japan's Mitsubishi Polyester Film 97,000 tonnes (total global production 237,000 tonnes).

As PET film operating margin exceeded 15% in 2010~2011, many companies significantly expanded capacity. In 2012~2015, about 2.32mn tonnes of capacity was added. Pressure from supply growth was strongest in 2015 and 2016, given that it typically takes about 1.5 years to build a new PET film facility and one more year until operations normalize.

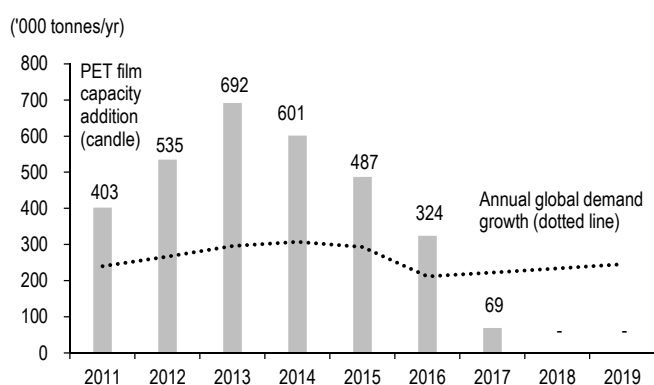
However, the opposite will be the case in 2016~2020. Over the five years, total PET capacity additions will nosedive to just 390,000 tonnes (320,000 in 2016, 70,000 in 2017). Given the low probability of firms deciding to do large-scale capacity additions now when operating margin is low and that it takes about 2.5 years from the investment decision to the beginning of new operations, there will be almost no pressure from capacity addition until 2020.

Global capacity utilization likely to rise from 71% in 2016 to 85% in 2020, as capacity addition will likely be limited despite demand CAGR of 5-6%

We can estimate growth potential of SKC's film profit based on forecasts of global capacity utilization rate (demand/ global production capacity). Global PET film utilization will likely bottom-out at 71.1% in 2016 and rise to 73.9% in 2017, 77.6% in 2018, and 85.5% in 2020. If history is any guide, the PET film industry meets the breakeven point when capacity utilization rate is 69%, and sees an average operating margin of 9% when the rate is 78%. If the rate exceeds 85%, operating margin reaches 15% due to supply shortages.

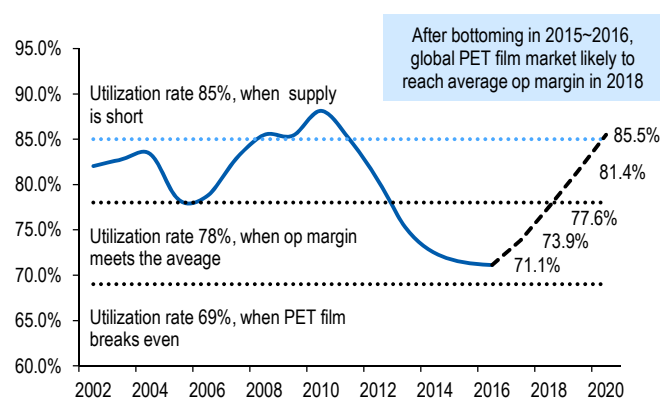
Based on the analysis of global PET film capacity utilization and SKC's operating margin, SKC's operating margin will likely bottom-out at 2~3% in 2016 and recover to 8~9% in 2018. Assuming SKC's PET film sales at W800.0bn, operating profit should rise by about W40.0bn from about W20.0bn in 2016 to W65.0bn in 2018.

Global PET film supply-demand: capacity addition to fall sharply from 2017



Source: PCI, Yuanta Securities

Global PET film capacity utilization forecast: likely to begin turning around in 2016



Source: PCI, Yuanta Securities

Global biaxial stretching PET film supply-demand forecast: bottom in 2015~2016 and likely to recover until 2020

| Region | Company | Prod capa ('000 tonnes) | New capacity ('000 tonnes) | | | | | | | | | | Prod capa ('000 tonnes) | |
|--------------------------------------|--|----------------------------|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------|-------|
| | | End-2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | End-2020 | |
| Americas | 3M | 55 | | | | | | | | | | | 55 | |
| | Dupont-Teijin Film (US) | 87 | | | | | | | | | | | 87 | |
| | Mitsubishi Polyester Film (US) | 71 | | | | | | | | | | | 71 | |
| | SKC Inc (US) | 45 | | | | 15 | | | | | | | 60 | |
| | Toray Pastics (US) | 33 | | | | | | | | | | | 33 | |
| | Terphane (Brazil) | 37 | | | | 28 | | | | | | | 65 | |
| | OPP Film (Peru) | | | | | 35 | | 35 | | | | | 70 | |
| Other | 103 | 3 | | 31 | | | | | | | | 137 | | |
| Europe | Toray Films Europe (France) | 39 | | | | | | | | | | | 39 | |
| | Mitsubishi Polyester Film (Germany) | 51 | | | | | | | | | | | 51 | |
| | Polyplex Europa Polyester Film (Turkey) | 58 | | | | | | | | | | | 58 | |
| | Agfa-Gevaert (Belgium) | 55 | | | | | | | | | | | 55 | |
| | Dupont-Teijin Film (UK) | 40 | | | | | | | | | | | 40 | |
| | Other | 70 | 8 | 30 | | | 18 | | | | | | 128 | |
| Asia | | | | | | | | | | | | | | |
| Japan | Fuji Film | 35 | | | | | | | | | | | 35 | |
| | Konica | 20 | | | | | | | | | | | 20 | |
| | Mitsubishi Polyester Film | 75 | | | | | | | | | | | 75 | |
| | Dupont-Teijin Film | 62 | | | | | | | | | | | 62 | |
| | Toray Advanced Film | 82 | | | | | | | | | | | 82 | |
| | Toyobo | 75 | | 15 | | | | | | | | | 90 | |
| | Futamura Chemical | 21 | | | | | | | | | | | 21 | |
| | Unitika | 25 | | | | | | | | | | | 25 | |
| Korea | SKC | 100 | 15 | 15 | 30 | | | | | | | | 160 | |
| | Kolon Industries | 113 | | 15 | | | | | | | | | 128 | |
| | Toray Advanced Materials | 116 | | | 12 | | | | | | | | 128 | |
| | Hyosung | 20 | | | 15 | 15 | | | | | | | 50 | |
| | Lotte Chemical | | | 25 | | | | | | | | | 25 | |
| China | Zhejiang Euro-Asia Film Materials | 144 | | | | | | | | | | | 144 | |
| | Jiansu Suqian Color Plastics | 65 | 112 | 64 | | | | | | | | | 241 | |
| | Dupont Honglii Films | 56 | | | | | 25 | | | | | | 81 | |
| | Hefei Lucky Science& Technology | 43 | | | 21 | | 25 | | | | | | 89 | |
| | Shaoxing XiangYu Green Packing | 57 | 68 | | | | | | | | | | 125 | |
| | Shaoxing Weiming Plastics | 53 | 26 | | | | | | | | | | 78 | |
| | Fuweil Film | 31 | | | 20 | | | | | | | | 51 | |
| | Changzhou Zhongheng New Material | 39 | | | | | | | | | | | 39 | |
| | Zhejiang Qiangmeng Industry | 41 | | | | | | | | | | | 41 | |
| | Fujian Quanzhou Billion Fibre | | | 31 | | | | 120 | | | | | 151 | |
| | Hangzhou Great South East Lyhai Packing | | | | 54 | | | | | | | | 54 | |
| | Jiangsu Eurasian Film Material | | 135 | | | | | | | | | | 135 | |
| | Jiangsu Shuangxing Color Plastic New Materials | | | | 168 | | 20 | | | | | | 188 | |
| | Jiangyin Xingye Juhua | | | | | 240 | | | | | | | 240 | |
| | Qingzhou Fuxiang Plasticc Film | | | 30 | | | | | | | | | 30 | |
| | Shangdong Fenghua Plastic Technology | | | 30 | | | | | | | | | 30 | |
| | Shangdong Shouguang Jianyuanchun | | | | | 30 | | | | | | | 30 | |
| | Shagndong Sihui Kaqdexin Composite Material | | | | | 20 | | | | | | | 30 | |
| | Shangdong SNTON Optical Materials | | | | | 60 | | | | | | | 60 | |
| | Shaoxing Riyue New Materials | | | | | 62 | 28 | | | | | | 90 | |
| SKC Jiangsu Hightech Plastic | | | 18 | 15 | | | | | | | | 33 | | |
| Yingkou Kanghui Petrochemical | | | | | 32 | 178 | | | | | | 210 | | |
| Zhejiang Ningbo Jinyuan Complex | | | 65 | 63 | | | | | | | | 128 | | |
| Zhejiang Taizhou Nanyang Technology | | | 25 | | | 30 | | 20 | | | | 75 | | |
| Other | | | 124 | 130 | 49 | 133 | 103 | 16 | | | | 555 | | |
| Taiwan | Nanya Plastics | 78 | | | | | | 36 | | | | | 114 | |
| | Sinkong Synthetic Fibers | 36 | | 18 | | | | | | | | | 54 | |
| India | Garware Polyester | 46 | | | | | | | | | | | 46 | |
| | Jindal PolyFilms | 123 | | | | | | | | | | | 123 | |
| | Polyplex | 34 | | | | | | | | | | | 34 | |
| | SRF Polyesters | 62 | | | | | | 30 | | | | | 92 | |
| | Uflex | 54 | | | | | | | | 33 | | | 87 | |
| | VacMel India | 24 | 36 | | | | | | | | | | 60 | |
| Thailand | Polyplex | 42 | | | 28 | | | | | | | | 70 | |
| | AJ Plast Public Co | 34 | | | 30 | | | | | | | | 64 | |
| | SRF Polyester | | | | 30 | | | | | | | | 30 | |
| Other Asia | PenFibre (Malaysia) | 45 | | | | | | | | | | | 45 | |
| | PT Trias Sentosa (Indonesia) | 30 | | | | | | | | | | | 30 | |
| Middle East | Flex Middle East (UAE) | 55 | | | | | | | | | | | 55 | |
| | JBF Rak UAE (UAE) | 50 | | 30 | | | | | | | | | 80 | |
| | JBF Bahrain (Bahrain) | | | | 60 | | 30 | | | | | | 90 | |
| Other | 493 | | | | | | | | | | | 493 | | |
| Change in global production capacity | | | | 403 | 535 | 692 | 601 | 467 | 324 | 69 | 0 | 0 | 0 | 6,331 |
| Total production capacity (A) | | | 3,220 | 3,623 | 4,158 | 4,850 | 5,451 | 5,938 | 6,282 | 6,331 | 6,331 | 6,331 | | |
| Global demand (B) | | | 2,838 | 3,078 | 3,345 | 3,641 | 3,948 | 4,241 | 4,453 | 4,676 | 4,909 | 5,165 | 5,413 | |
| Growth | | | 10.8% | 6.5% | 6.7% | 6.8% | 6.4% | 7.4% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | |
| Utilization rate (B/A) | | | 88.1% | 85.0% | 80.5% | 75.1% | 72.4% | 71.4% | 71.1% | 73.9% | 77.6% | 81.4% | 85.5% | |

Source: PCI, Yunta Securities

II. Valuations: discount to be dispelled in 2016~2018

SKC shares trade at discount or premium at 2~3 year intervals

SKC shares have traded at alternating discounts or premiums at two~three years intervals, affected by global market conditions of PO and PET film, the two main products of SKC.

More specifically, EV has moved up and down as follows since 2008.

In 2008~2010, SKC shares traded at discount of 0.6~1.0x P/B on PO market weakness and potential support for SK Shipping

In 2008~2010, SKC shares traded at a discount (shares undervalued vs the company's asset value). P/B fell from 1.0x to 0.6x. Global PET film utilization rate was strong at 86%, while global PO utilization rate declined to 74% after overinvestment. Moreover, with subsidiary SK Shipping's troubled financials, subsidiary risk emerged for SKC.

In 2010~2012, traded at average P/B of 1.2x thanks to market upcycle for both PET film and PO

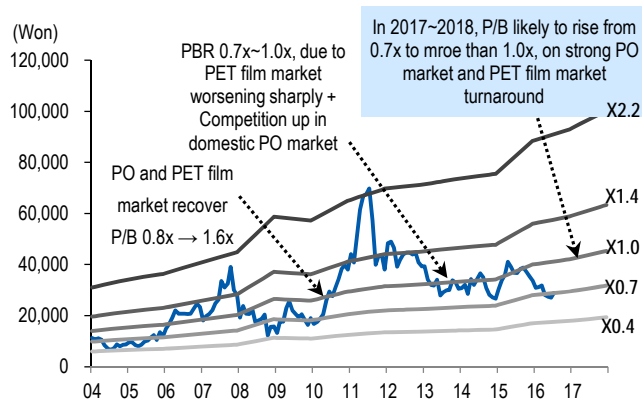
In 2010~2012, shares enjoyed a premium (shares overvalued vs the company's asset value). P/B averaged 1.2x (0.7x~2.2x). Both the PO and PET film market entered an upcycle, with global average capacity utilization at about 84%. In particular, in line with solar cell market growth, market expectations were strong for solar cell film (PET film, PTFE film, EVA film, etc).

SKC valuation: discount to be dispelled in 2016~2017

| | Valuation | Details |
|-----------|---|---|
| 2006~2008 | Premium P/B 1.2x on average (0.5~1.8x) | <ul style="list-style-type: none"> ▷ Both PO PET film markets enter upcycle ▷ SKC restructures business Sells handset and battery business; acquires SK Solmics, solar cell wafer maker |
| 2008~2009 | Discount 0.7x on average (0.6 ~ 1.0x) | <ul style="list-style-type: none"> ▷ PET film market strong; PO market enters downcycle due to global capacity addition ▷ Subsidiary risk increases in wake of global financial crisis Financial burden rises due to huge loss at SK Shipping |
| 2010~2012 | Overshooting 1.2x on average (0.7 ~ 2.2x) | <ul style="list-style-type: none"> ▷ PO and PET film market enters upcycle ▷ In line with strong growth of solar cell market, expectations strong for solar cell film (PET film, PTFE film, EVA film, etc) |
| 2013~2016 | Discount 0.85x on average (0.6 ~ 0.9) | <ul style="list-style-type: none"> ▷ PO market strong, but PET film oversupplied ▷ S-Oil's announcement on investment in PO raises concerns over SKC's monopolistic status in Korea ▷ Expectations for supply of semiconductor materials to SK Hynix high, but SK Group's acquisition of SK Materials at end-2015 created concerns over SKC's role |
| 2016~2018 | Trade at fair value More than 1.0x | <ul style="list-style-type: none"> ▷ Both PO and PET film, SKC's main products, to enter upcycle ▷ Two risks likely to ease Despite S-Oil's PO capacity addition, supply will likely remain tight Risks of being a conglomerate will likely ease |

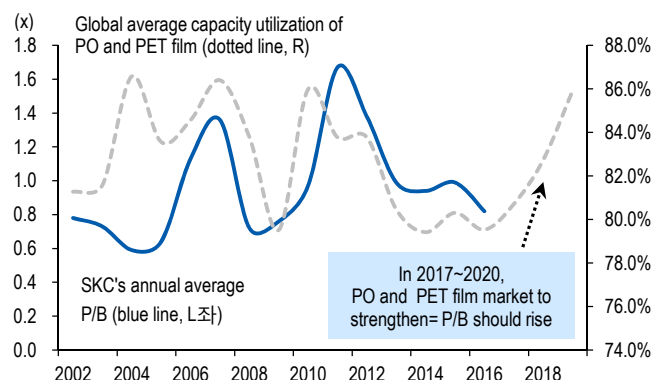
Source: Yuanta Securities

SKC P/B band: P/B too low at 0.7x



Source: Yuanta Securities

Relations between global PO and PET film market conditions and SKC's P/B: important



Source: Yuanta Securities

In 2014~2016, traded at 0.8~0.9x P/B due to global PET film oversupply

In 2H16~2018, shares likely to enjoy premium again on ultra-strong PO market and PET film market turnaround

Based on SOTP, fair price estimated at W45,000, equivalent to 1.0x P/B

Fair value likely to rise further, if SKC develops materials that can replace flexible display glass, like Kolon Ind's colorless polyimide

In 2013~2016, shares traded at a discount again, with P/B falling from 0.9x to 0.6x. Global PO utilization remained strong at 85%, while PET film utilization nosedived to 71% due to oversupply.

In 2H16~2018, shares will likely trade at a premium, as the PET film market should recover up to 2019 amid the strong PO market. We expect the average utilization of major products to recover to 81% and P/B to reach at least 1.0x. Moreover, if SKC puts forward a detailed film business strategy in response to the birth of the flexible display market, shares should enjoy a premium.

Based on sum-of-the-parts, we estimate the firm's fair share price at W45,000, given the strong PO market and PET film turnaround in 2016~2018. The fair price translates into a net asset value of W1.67tn, which is 1.0x P/B based on the book value of 2016E shareholders' equity of W1.67tn.

- 1) The fair value of operations is W2.5tn, derived by applying fair EV/EBITDA to 2016~2017E EBITDA of main businesses. The value of operations breaks down as W1.3tn for the parent chemical business, W751.9bn for the parent film business, and W379.1bn for major subsidiaries. Here, the value of the film business reflects the market turnaround in 2017~2018.
- 2) The fair value of investments is W650.4bn, derived by applying fair P/B to the book values of equity invested companies: W87.3bn from SKC Kolon PI (27%-owned), W23.8bn from SKC Haas Display Films (49%-owned), W354.3bn from MCNS, a 50%-owned joint venture with Japan's Mitsui Chemical, and W106.9bn from real estate.
- 3) Net debt stands at W1.46tn (total borrowings of W1.45tn – cash equivalents W29.8bn). We assumed that the unpaid amount of bonds with warrants of W31.5bn (warrant exercisable between Jun 2014 and Jun 2016) was included into debt, with warrants not exercised.

SKC fair price: W45,000, given film turnaround and Solmics' solar cell business restructuring

| | As of Jul 28, 2016 | Details | | | | | |
|-----------------------------------|-----------------------|---------------------------|---------------------|--------------------------|---------------------|----------------------|---|
| | | Operations | Average OP (Wbn) | Depreciation (Wbn) | Avg EBITDA (Wbn) | Fair multiple (x) | Fair value (Wbn) |
| (+) Value of operations | W2.5tn | | | | | | |
| | | ► Chemical | 143 | 33 | 176 | 7.5x | 1,319 |
| | | ► Film | 53 | 73 | 125 | 7.9x | 752 |
| | | [Consolidated affiliates] | | | | | |
| | | SKC Inc (100%) | 10 | 13 | 23 | 6.0x | 135 |
| | | SKC Solmics (45%) | 10 | 15 | 25 | 7.0x | 80 |
| | | Bioland (28%) | 30 | 6 | 36 | 10.0x | 99 |
| | | SK Telesys (78%) | 3 | 11 | 14 | 6.0x | 65 |
| | | Sum | 248 | 150 | 398 | 6.2x | 2,450 |
| (+) Value of investments | W650bn | Investments | Stake | Net assets (Mar 2016) | P/B (x) | Fair value (Wbn) | Note |
| | | SKC Kolon PI | 27% | 56 | 1.6x | 87 | Polyimide film for flexible PCB |
| | | SKC Haas Display Films | 49% | 48 | 0.5x | 24 | Makes IT films with base films |
| | | MCNS | 50% | 354 | 1.0x | 354 | Manufacturing urethane, using SKC's PO as raw materials |
| | | Real estate | | 107 | 1.0x | 107 | Rent to Ulsan MCNS and Cheonan Haas |
| | | Other | | 78 | 1.0x | 78 | |
| | | Sum | | 643 | 1.0x | 650 | |
| (-) Net borrowings | W1.4tn | | | | | | |
| Total borrowings | W1.5tn | | | | | | |
| Cash equivalents | W30bn | | | | | | |
| Value of common shares (A) | W1.7 tn | | | | | | |
| Shares outstanding (B) | 36,291,344 | Shares outstanding | Number of shares | | | | |
| | | Total shares outstanding | 36,580,217 | | | | |
| | | (-) Treasury shares | 288,873 | | | | |
| | | Net sum | 36,291,344 | | | | |
| Per-share value | W45,000/shr | | | | | | |

Source: Yuanta Securities

SKC (011790 KS) pro forma financial statements (K-IFRS, consolidated)

| Statement of comprehensive income | | | | | |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|
| FY ends Dec (Wbn) | 2014A | 2015A | 2016E | 2017E | 2018E |
| Sales | 2,802 | 2,565 | 2,404 | 2,478 | 2,717 |
| Cost of sales | 2,361 | 2,065 | 1,939 | 1,943 | 2,101 |
| Gross profit | 441 | 500 | 464 | 535 | 616 |
| SG&A | 289 | 281 | 290 | 305 | 334 |
| Operating profit | 152 | 218 | 174 | 230 | 282 |
| EBITDA | 289 | 361 | 307 | 357 | 405 |
| Non-op profit/loss | -81 | 152 | -20 | -22 | -11 |
| Forex gain/loss | 0 | -7 | 0 | 0 | 0 |
| Net interest inc | -70 | -59 | -45 | -45 | -43 |
| Equity-meth gain/loss | -6 | -13 | 26 | 22 | 33 |
| Other | -4 | 230 | -2 | 0 | 0 |
| Net prof before income tax | 72 | 370 | 154 | 208 | 272 |
| Income tax | 29 | 124 | 37 | 48 | 62 |
| Net profit from cont op | 43 | 246 | 117 | 160 | 209 |
| Net profit from discont op | 0 | 0 | 12 | 0 | 0 |
| Net profit | 43 | 246 | 129 | 160 | 209 |
| NP for controlling int | 69 | 272 | 123 | 149 | 154 |
| Total comprehensive inc | 23 | 250 | 133 | 160 | 209 |
| TCI for controlling int | 49 | 276 | 127 | 149 | 154 |

Note: Operating profit calculation same as K-GAAP (sales - COGS - SG&A).

| Statement of financial position | | | | | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|
| FY ends Dec (Wbn) | 2014A | 2015A | 2016E | 2017E | 2018E |
| Current assets | 941 | 787 | 1,067 | 1,246 | 1,388 |
| Cash & cash equiv | 52 | 39 | 179 | 273 | 375 |
| Accts rec & other | 313 | 403 | 406 | 456 | 480 |
| Inventory | 326 | 284 | 272 | 306 | 322 |
| Non-current assets | 2,746 | 2,901 | 2,761 | 2,756 | 2,766 |
| Tangible assets | 2,213 | 2,079 | 1,913 | 1,891 | 1,872 |
| Investment in affiliate | 175 | 508 | 543 | 565 | 598 |
| Other non-current | 26 | 24 | 23 | 23 | 23 |
| Total assets | 3,687 | 3,688 | 3,829 | 4,003 | 4,154 |
| Current liabilities | 1,333 | 1,056 | 1,172 | 1,034 | 1,048 |
| Accts payable & other | 455 | 354 | 369 | 412 | 431 |
| ST financial liabilities | 345 | 362 | 317 | 316 | 311 |
| Liquid LT liabilities | 472 | 300 | 376 | 196 | 196 |
| Non-current liabilities | 1,053 | 1,076 | 981 | 1,161 | 1,161 |
| LT financial liabilities | 353 | 292 | 234 | 234 | 234 |
| Debentures | 539 | 588 | 548 | 728 | 728 |
| Total liabilities | 2,386 | 2,132 | 2,153 | 2,194 | 2,209 |
| Equity, controlling int | 1,217 | 1,444 | 1,549 | 1,670 | 1,796 |
| Paid-in capital | 182 | 184 | 188 | 188 | 188 |
| Capital surplus | 157 | 126 | 127 | 127 | 127 |
| Retained earnings | 884 | 1,130 | 1,225 | 1,346 | 1,472 |
| Equity, non-control int | 84 | 112 | 127 | 139 | 150 |
| Total equity | 1,301 | 1,556 | 1,676 | 1,808 | 1,945 |
| Net debt | 1,649 | 1,488 | 1,277 | 1,182 | 1,074 |
| Total debt | 1,711 | 1,543 | 1,476 | 1,474 | 1,469 |

Cash flow statement

| FY ends Dec (Wbn) | 2014A | 2015A | 2016E | 2017E | 2018E |
|-----------------------------------|------------|------------|-------------|-------------|-------------|
| Operating cash flow | 190 | 108 | 340 | 373 | 432 |
| Net profit | 43 | 246 | 129 | 160 | 209 |
| Depreciation & amort | 130 | 136 | 127 | 123 | 118 |
| Forex gain/loss | -1 | 5 | 0 | 0 | 0 |
| Affiliate invest gain/loss | 6 | 13 | -26 | -22 | -33 |
| Inc(dec) net working cap | -38 | -177 | -10 | -41 | -18 |
| Other | 49 | -113 | 120 | 154 | 155 |
| Investing cash flow | -84 | -96 | -102 | -100 | -100 |
| Investment | 41 | -20 | 0 | 0 | 0 |
| Inc in tangible assets | -134 | -68 | -100 | -100 | -100 |
| Dec in tangible assets | 11 | 5 | 0 | 0 | 0 |
| Other | -2 | -14 | -2 | 0 | 0 |
| Financing cash flow | -77 | -26 | -12 | -33 | -37 |
| Inc(dec) in ST fin liab | 119 | 94 | -8 | -1 | -5 |
| Inc(dec) in LT fin liab | -182 | -103 | 23 | 0 | 0 |
| Inc(dec) in equity | 5 | 12 | 5 | 0 | 0 |
| Cash dividend | -18 | -23 | -31 | -31 | -31 |
| Other | 0 | -6 | -2 | -1 | -1 |
| Other cash flow | 1 | 1 | -86 | -145 | -192 |
| Inc (dec) in cash & eq | 29 | -13 | 140 | 94 | 103 |
| Beginning cash & equiv | 23 | 52 | 39 | 179 | 273 |
| Ending cash & equiv | 52 | 39 | 179 | 273 | 375 |
| NOPLAT | 152 | 218 | 174 | 230 | 282 |
| FCF | 57 | 42 | 155 | 163 | 222 |

Note: EPS, BPS, P/E and P/B are based on controlling interest

For valuation metrics such as P/E, historical figures are based on annual averages, estimates on current price

For ROA or ROE, assets and equity are averages of end-of-year figures for given year and year prior

Data to 2010 based on K-GAAP and from 2011, K-IFRS

Source: Yuanta Securities

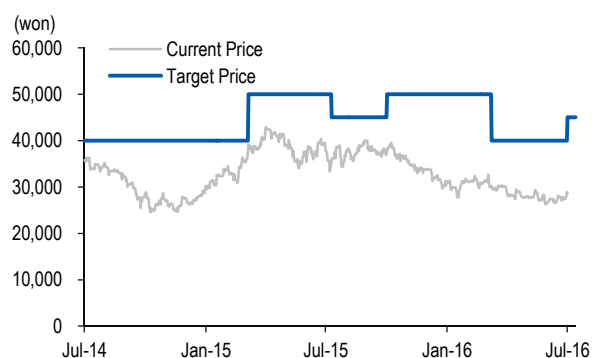
Valuation

| FY ends Dec | 2014A | 2015A | 2016E | 2017E | 2018E |
|----------------------|-------------|------------|------------|------------|------------|
| EPS (won) | 1,916 | 7,426 | 3,267 | 3,958 | 4,107 |
| BPS (won) | 33,759 | 39,550 | 41,586 | 44,825 | 48,214 |
| EBITDA/shr (won) | 7,972 | 9,844 | 8,177 | 9,521 | 10,792 |
| SPS (won) | 77,246 | 69,972 | 64,042 | 66,017 | 72,375 |
| DPS (won) | 550 | 750 | 750 | 750 | 750 |
| P/E (x) | 16.4 | 4.8 | 8.8 | 7.3 | 7.0 |
| P/B (x) | 0.9 | 0.9 | 0.7 | 0.6 | 0.6 |
| EV/EBITDA (x) | 9.9 | 8.1 | 8.1 | 6.7 | 5.7 |
| PSR (x) | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 |

Key financial data

| FY ends Dec | 2014A | 2015A | 2016E | 2017E | 2018E |
|--------------------------------|-------------|--------------|--------------|-------------|-------------|
| Sales (% YoY) | 6.1 | -8.5 | -6.3 | 3.1 | 9.6 |
| Operating profit (%YoY) | 22.9 | 43.1 | -20.1 | 31.9 | 22.9 |
| NP, CI (%YoY) | 22.4 | 291.7 | -54.9 | 21.1 | 3.8 |
| Gross margin (%) | 15.7 | 19.5 | 19.3 | 21.6 | 22.7 |
| Operating margin (%) | 5.4 | 8.5 | 7.3 | 9.3 | 10.4 |
| NP, CI margin (%) | 2.5 | 10.6 | 5.1 | 6.0 | 5.7 |
| EBITDA margin (%) | 10.3 | 14.1 | 12.8 | 14.4 | 14.9 |
| ROIC (%) | 3.5 | 5.4 | 5.3 | 7.2 | 8.9 |
| ROA (%) | 1.9 | 7.4 | 3.3 | 3.8 | 3.8 |
| ROE (%) | 5.8 | 20.5 | 8.2 | 9.2 | 8.9 |
| Debt-to-equity (%) | 183.4 | 137.0 | 128.5 | 121.4 | 113.5 |
| Net debt-to-equity (%) | 135.4 | 103.1 | 82.5 | 70.8 | 59.8 |
| OP/financing cost (x) | 2.1 | 3.6 | 3.6 | 4.4 | 5.3 |

SKC (011790 KS) ratings and target price history



| Date | Rating | TP (won) |
|------------|--------|----------|
| 2016-07-28 | BUY | 45,000 |
| 2016-07-27 | BUY | 40,000 |
| 2016-06-29 | BUY | 40,000 |
| 2016-05-31 | BUY | 40,000 |
| 2016-05-11 | BUY | 40,000 |
| 2016-04-27 | BUY | 40,000 |
| 2016-04-04 | BUY | 40,000 |
| 2016-03-30 | BUY | 50,000 |
| 2016-03-02 | BUY | 50,000 |
| 2016-01-27 | BUY | 50,000 |

Source: Yuanta Securities

Current distribution of Yuanta Securities Korea ratings

| Rating | Share (%) |
|------------|-----------|
| STRONG BUY | 2.7 |
| BUY | 83.5 |
| HOLD | 13.7 |
| SELL | 0.0 |
| Total | 100.0 |

Note: As of Jul 26

※ Excluding reports written or published by overseas affiliates

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Analyst certification

I/We, as the research analyst/analysts who prepared this research report, do hereby certify that the views expressed in this report accurately reflect my/our personal views about the subject securities discussed in this report.

Stock and sector ratings

- **Stock ratings** include an Investment Rating (Strong Buy, Buy, Hold, Sell) based on the expected absolute return of a stock over the next 6 - 12 months.
 - Strong Buy: Expected to return 30% or more
 - Buy: Expected to return between 10% and 30%
 - Hold: Expected to return between -10 and +10%
 - Sell: Expected to return -10% or less
- **Sector ratings** suggest 6 to 12 - month forward investment weighting of a given sector compared to its market capitalization weighting.
 - Overweight: Investment weighting is higher than the market capitalization weighting
 - Neutral: Investment weighting is equal to the market capitalization weighting
 - Underweight: Investment weighting is lower than the market capitalization weighting

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