



GNAM Investment Competition



Top Investment Idea

Samsung SDI

(KRX: 006400)

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Key Take Away

- Aggressive challenger in the market of battery
- Strong growth in demand of large size battery for electric cars and storage systems
- Clear strategic focus
- Stock price impacted by “Note 7” incident

Great investment opportunity

| | |
|---------------------|-------------|
| Current stock price | KRW 93,000 |
| Target stock price | KRW 151,119 |
| Upward potential | 61.54% |

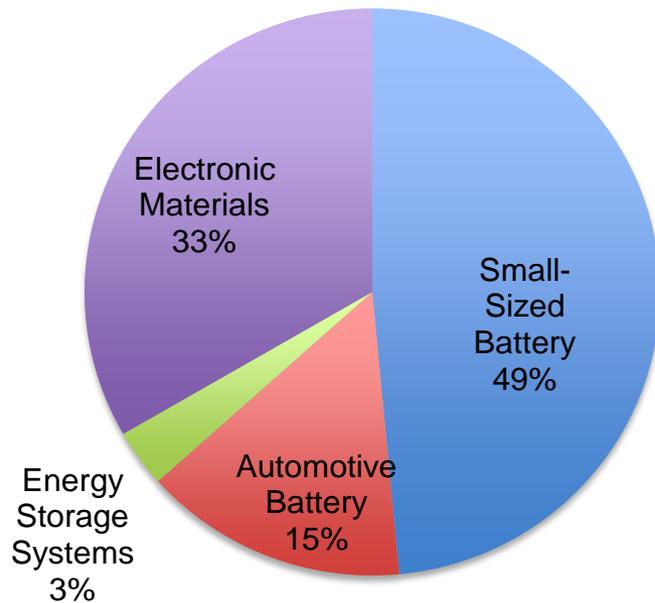


삼성SDI

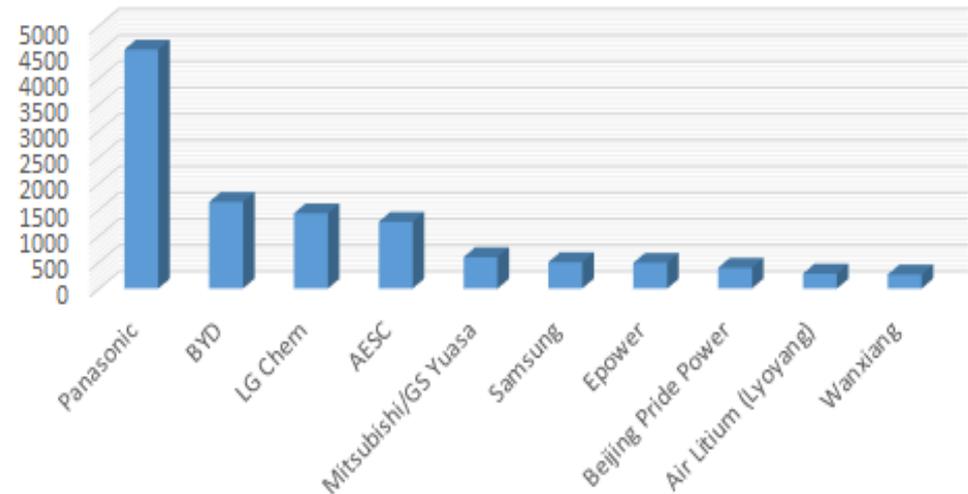


Company Overview

Sales 2016 1st half



Top 10 EV Battery Producer(MWh)
2015



삼성SDI



“Note 7” incident

- Supplier of 70% of units sold (initially)
- Batteries of 2nd supplier (Amperex) fail as well
- Main reason for failure still unclear
- Costs approx. \$200m

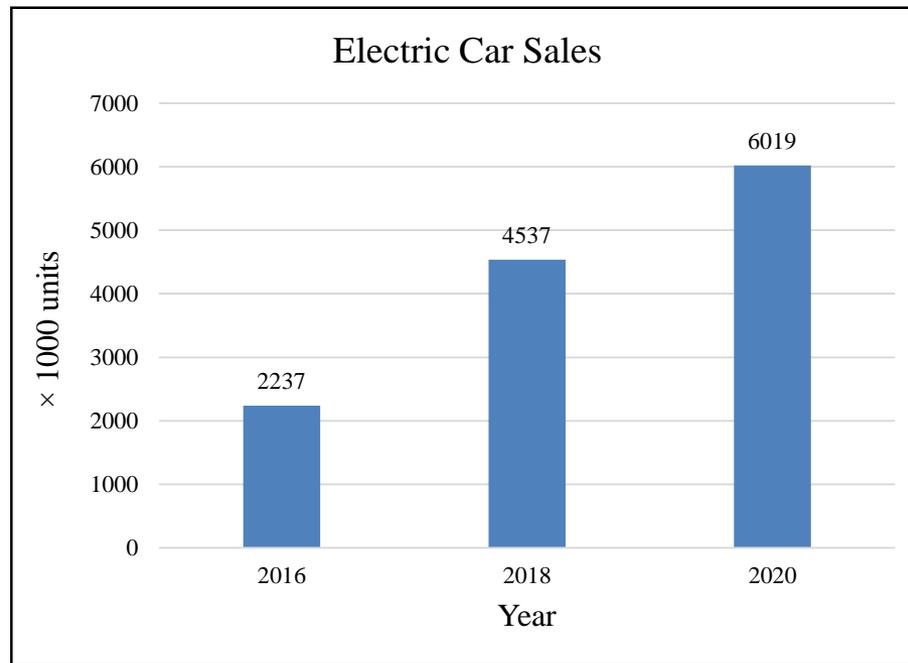


Stop of Production
Full Recall



Outlook

- Focus shift towards automotive battery and ESS
 - Building dedicated factory in Hungary (2018) to address European car manufactures

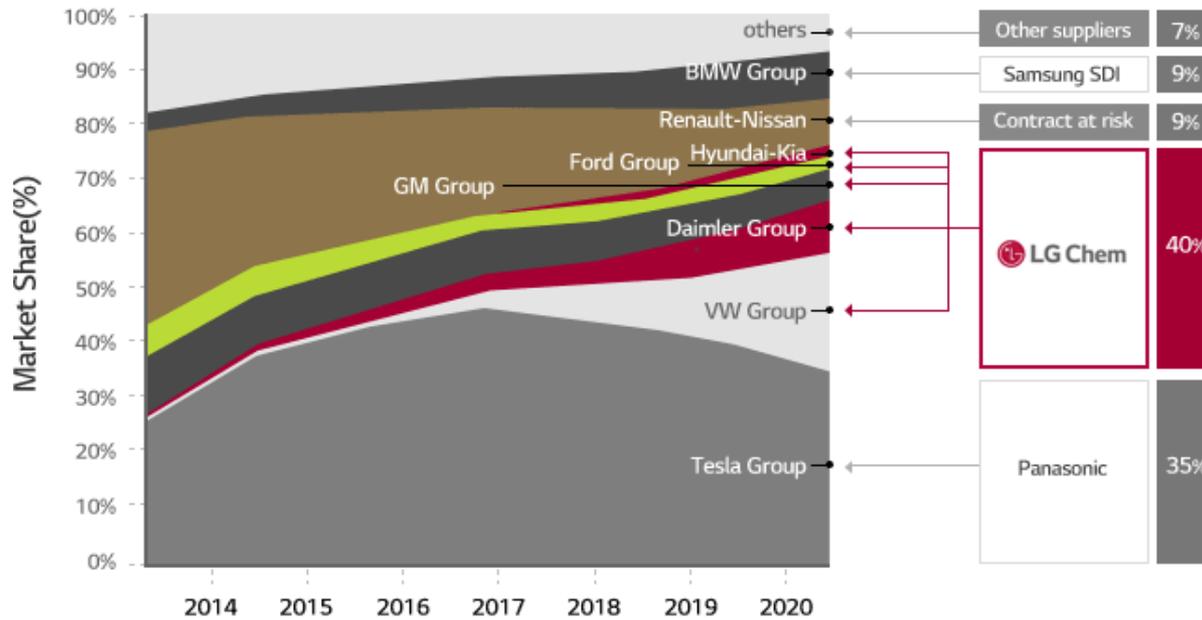


Source: Samsung SDI



Outlook / Competition

- Established car manufacturers enter electronic car market
- Allocation of suppliers is uncertain
- Multiple suppliers per manufacturer possible



“Watch the Throne: How LG Chem and Others Can Take Panasonic's EV Battery Crown by 2020”, Lux Research 2015,
<http://www.lgchem.com/global/vehicle-battery/car-batteries-Different/product-detail-PDEB0002>



Valuation

- DCF model assumptions
 - Revenue growth 10%-15%
 - WACC 6.12%
- Perpetuity Growth Model
- Estimated valuation: KRW 151,119 per share

| In bn KRW | 2015a | 2016e | 2017f | 2018f | 2019f | 2020f |
|----------------|----------|-----------|----------|----------|----------|----------|
| Revenue | 7,569.00 | 5,214.00 | 5,996.10 | 6,895.52 | 7,585.07 | 8,343.57 |
| YoY change | 38.27% | -31.11% | 15.00% | 15.00% | 10.00% | 10.00% |
| Free Cash flow | -567.00 | -1,784.28 | -333.72 | 99.97 | 517.51 | 855.19 |
| YoY change | 29.83% | -214.69% | 81.30% | 129.96% | 417.67% | 65.25% |



Valuation

| | | Perpetuity growth rate | | |
|----------------------|-------|------------------------|-----------------|----------|
| Price per Share(KRW) | | 1.5% | 2.00% | 2.50% |
| WACC | 4.00% | 338327.2 | 444690.2 | 621961.8 |
| | 5.00% | 205401.5 | 254148.5 | 322394.2 |
| | 6.12% | 125346.4 | 151119.5 | 184012.1 |
| | 7.00% | 85619.82 | 102879.2 | 123974.1 |

| | | Perpetuity growth rate | | |
|--------------------|-------|------------------------|---------------|---------|
| Upside share price | | 1.5% | 2.00% | 2.50% |
| WACC | 4.00% | 263.79% | 378.16% | 568.78% |
| | 5.00% | 120.86% | 173.28% | 246.66% |
| | 6.12% | 34.78% | 62.49% | 97.86% |
| | 7.00% | -7.94% | 10.62% | 33.31% |



Risks

- “Note 7” uncertainty
 - Scrapping costs
 - Reputational impact
- Low oil price
 - Impact on electric car sales
- KRW fx-rate



Conclusion

Uncertainty in the short term

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Very promising long term outlook

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Great Investment Opportunity