

Components, Key Suppliers, and Market Share



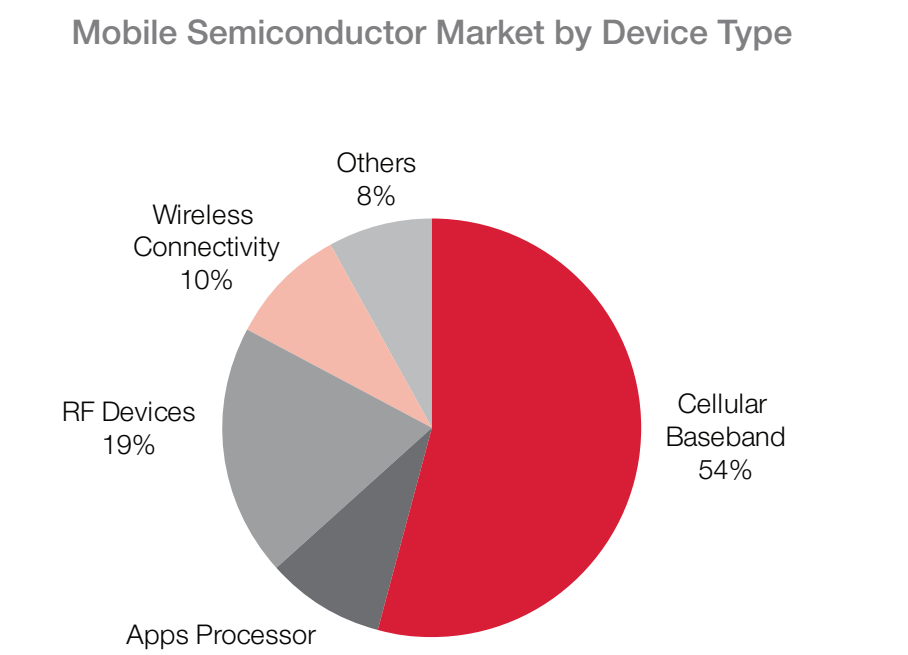
Source: Gartner, Company data, Nomura estimates, \* not covered by Nomura



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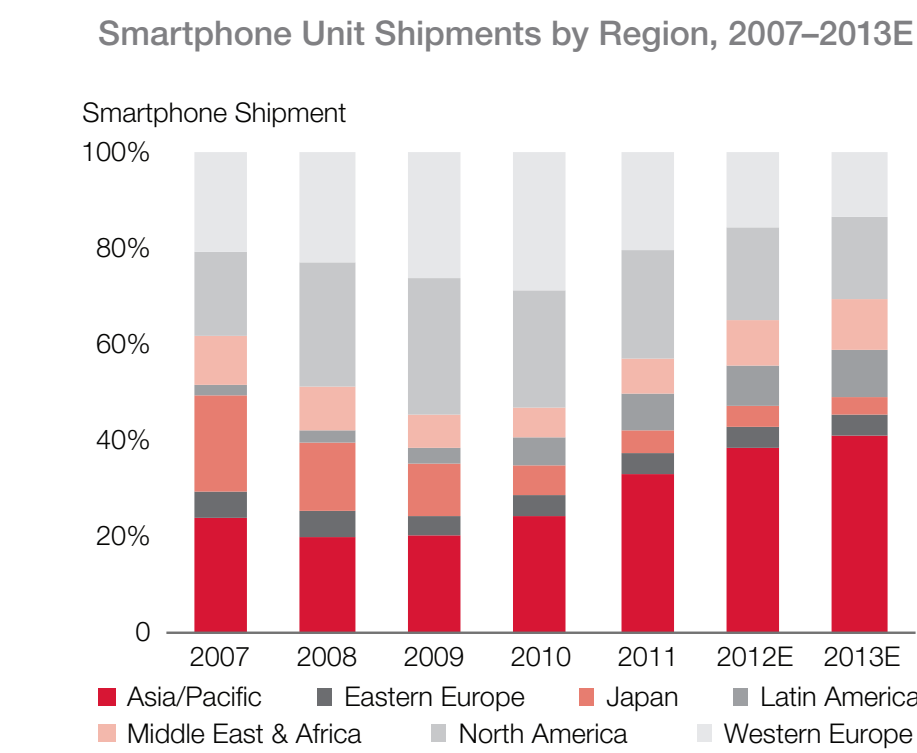
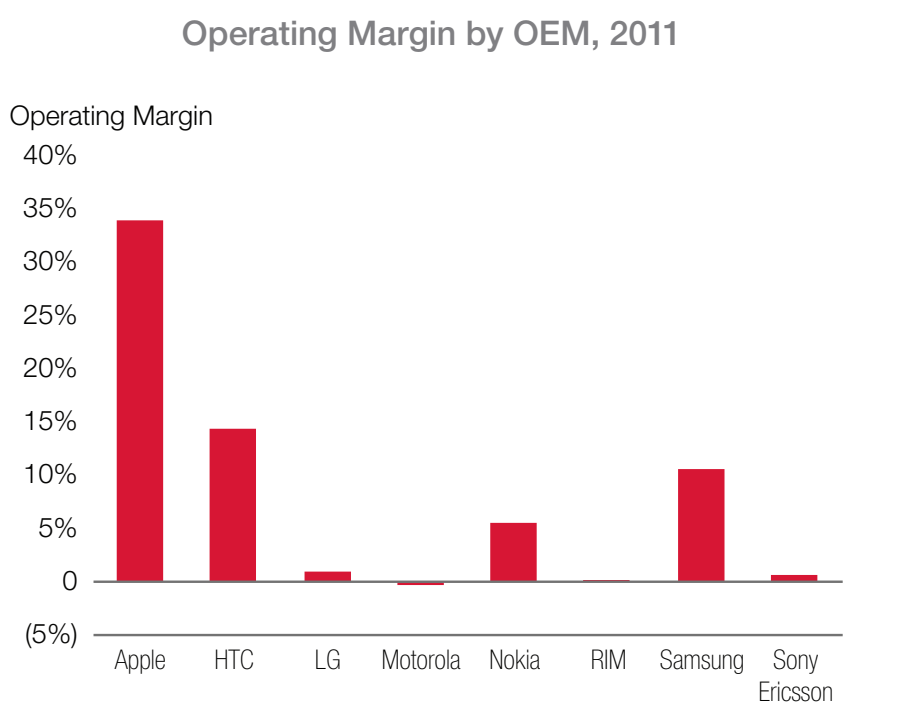
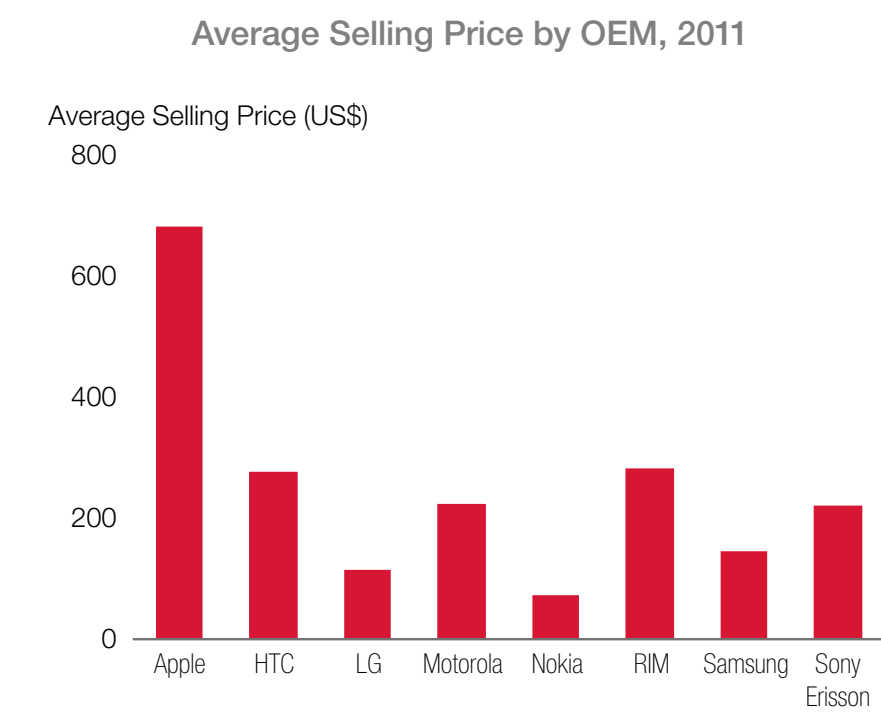
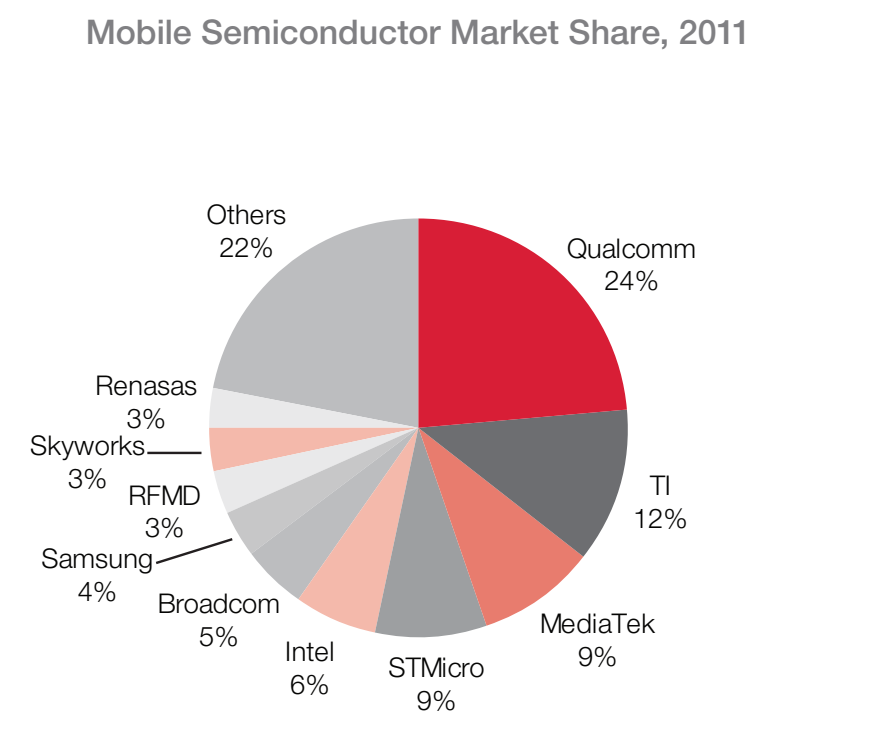
Smartphone Bill of Materials

| BOM (front of the phone) | Avg. Cost (\$) |
|--------------------------|----------------|
| NAND Flash (16GB)        | \$20-22        |
| Display                  | \$18-20        |
| Applications Processor   | \$15-17        |
| Baseband                 | \$10-13        |
| Touch Screen             | \$11-13        |
| DRAM                     | \$8-10         |
| FEM and Misc RF          | \$4-5          |
| Combo-chip (WiFi, BT)    | \$3-4          |
| Power Management         | \$3-4          |
| Power Amplifier          | \$3-4          |
| Touch Controller         | \$2-3          |
| GPS                      | \$1-2          |
| Image Sensors ASP        | \$1-2          |



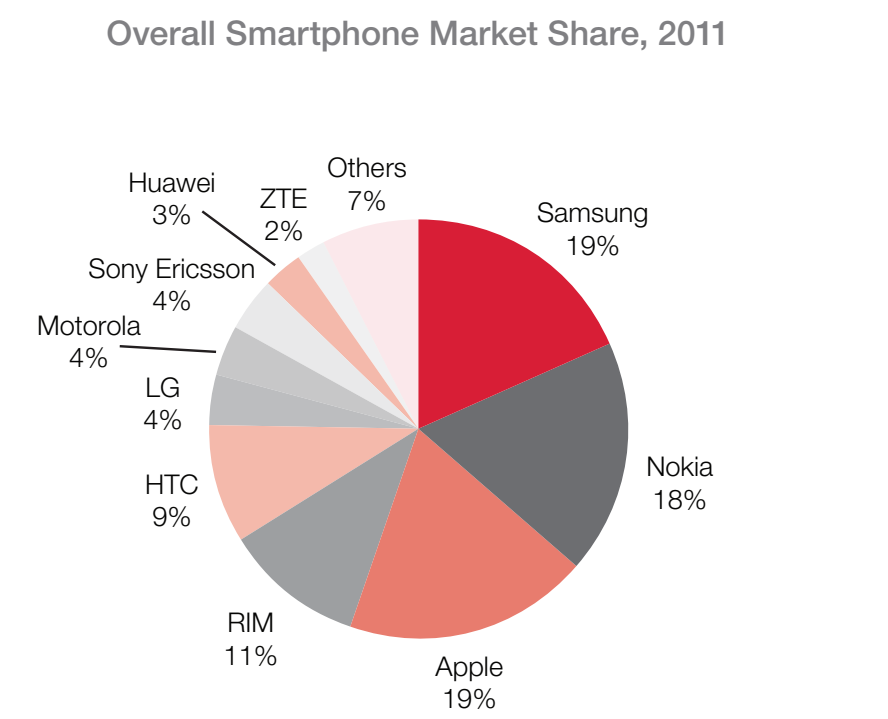
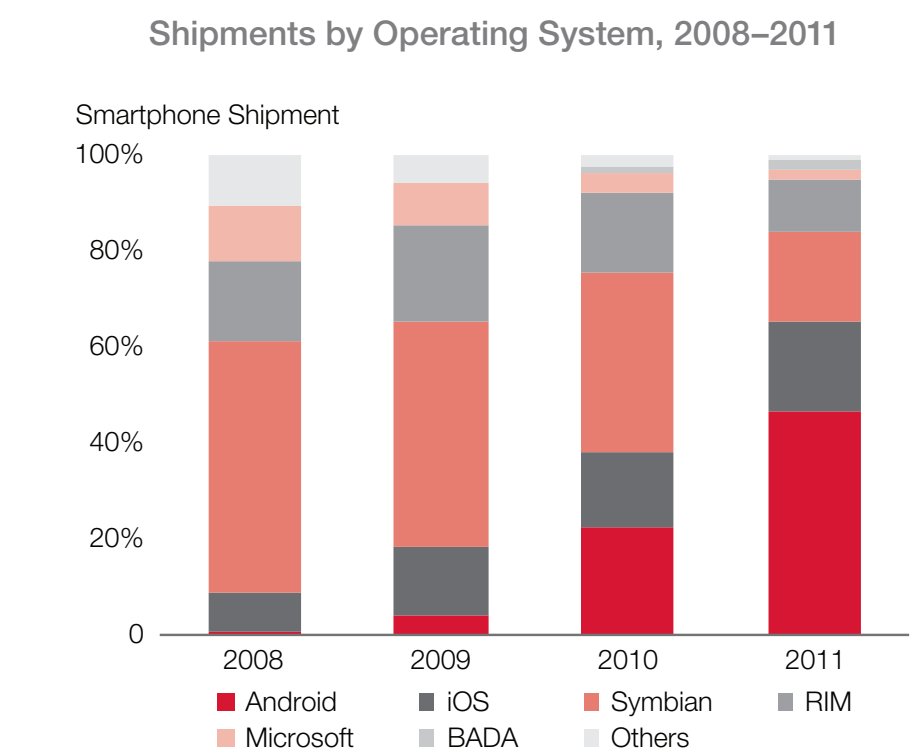
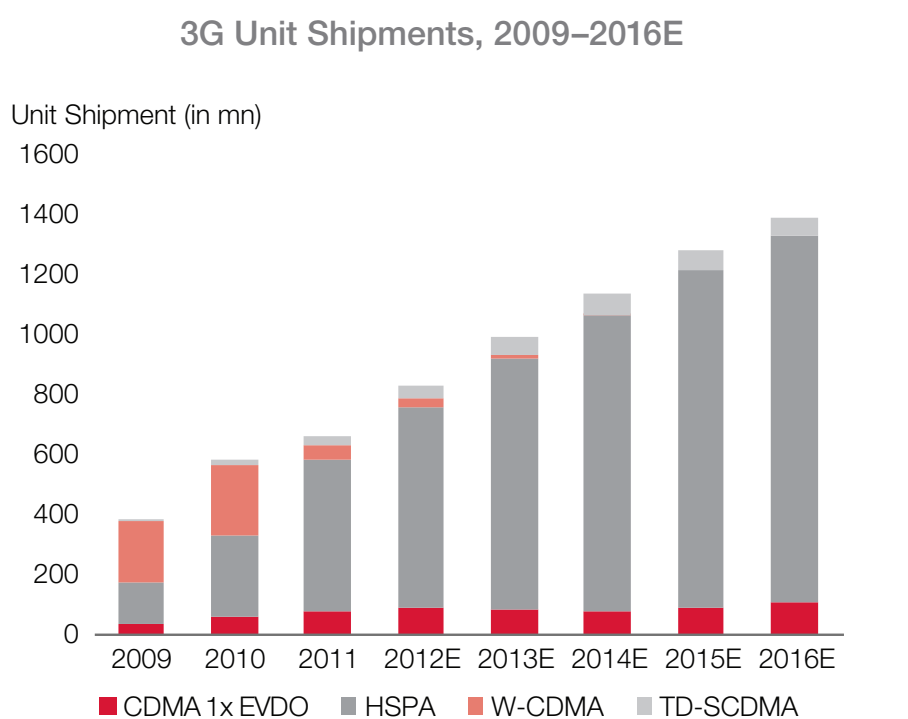
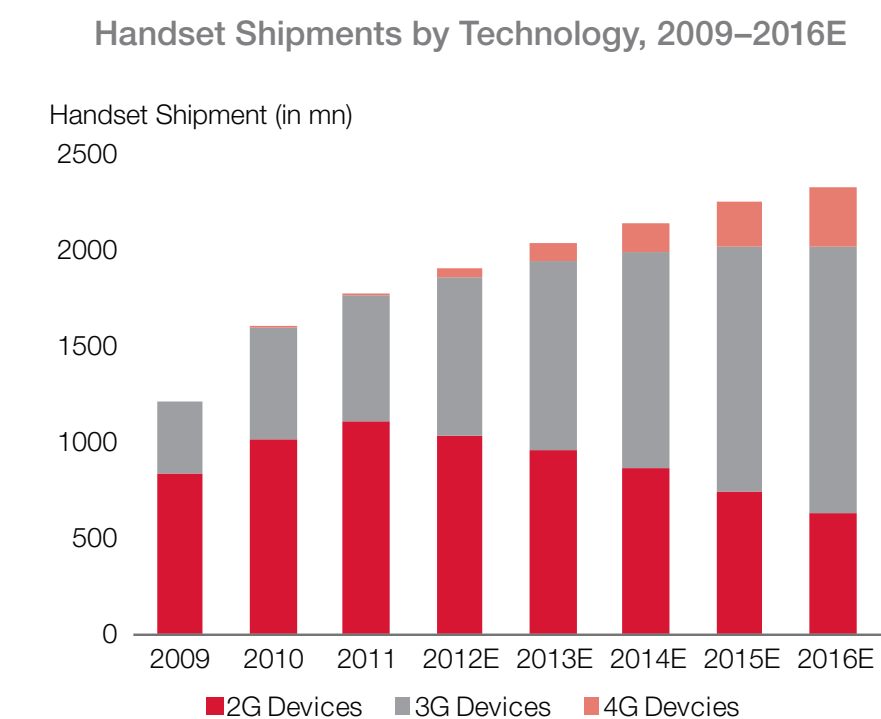
Smartphone Bill of Materials

| BOM (back of the phone) | Avg. Cost (\$)       |
|-------------------------|----------------------|
| Camera Module           | \$9-10               |
| Touch Panel             | \$7-11               |
| Battery                 | \$5-6                |
| HDI PCB                 | \$3-5                |
| Gyro/Accelerometer      | \$2-3                |
| LCD driver IC           | \$1-2                |
| Camera Lens             | \$1-2                |
| Digital Compass         | \$0.80-1.00          |
| Speaker                 | \$0.50-0.60          |
| Audio Codecs            | \$0.70-0.80          |
| MEMS Microphone         | \$0.70-0.80          |
| IC Substrates           | (incl. in chip cost) |



Smartphone Unit Shipments by Vendor (in mn)

| Smartphone units | 2008 | 2009 | 2010 | 2011 |
|------------------|------|------|------|------|
| Apple            | 11   | 25   | 47   | 89   |
| Samsung          | 5    | 6    | 25   | 87   |
| Nokia            | 61   | 71   | 102  | 85   |
| RIM              | 23   | 34   | 50   | 52   |
| HTC              | 7    | 11   | 25   | 43   |
| LG               | 0    | 1    | 6    | 19   |
| Motorola         | 3    | 3    | 14   | 17   |
| Sony Ericsson    | 2    | 1    | 10   | 20   |
| Huawei           | 0    | 0    | 0    | 16   |
| ZTE              | 0    | 0    | 0    | 11   |
| Others           | 27   | 21   | 67   | 34   |
| Total            | 139  | 172  | 299  | 472  |



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