



The Global Semiconductor Market 2015-2020

Data, Analysis & Forecast for the Global Semiconductor Market to 2020



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4.2 Discrete Semiconductor Market 2015-2020

Discrete semiconductors find their major application across multiple platforms/sectors, including the power, automotive, communication, mobile phone, computer / office equipment, consumer, medical, transportation, industrial and renewable energy sectors.

The global discrete semiconductor market reached \$19.6bn during 2014 up from \$14.5bn in 2009 equating to a 5-year CAGR of 6.2%.

Similarly to the semiconductor market as a whole the discrete semiconductors sub-market faced negative growth across 2008-2009 (-15% YoY) due to cautious global markets facing recession. Market recovery, in this sub sector, in 2010 and 2011, was driven by strong growth in sales of IGBTs.

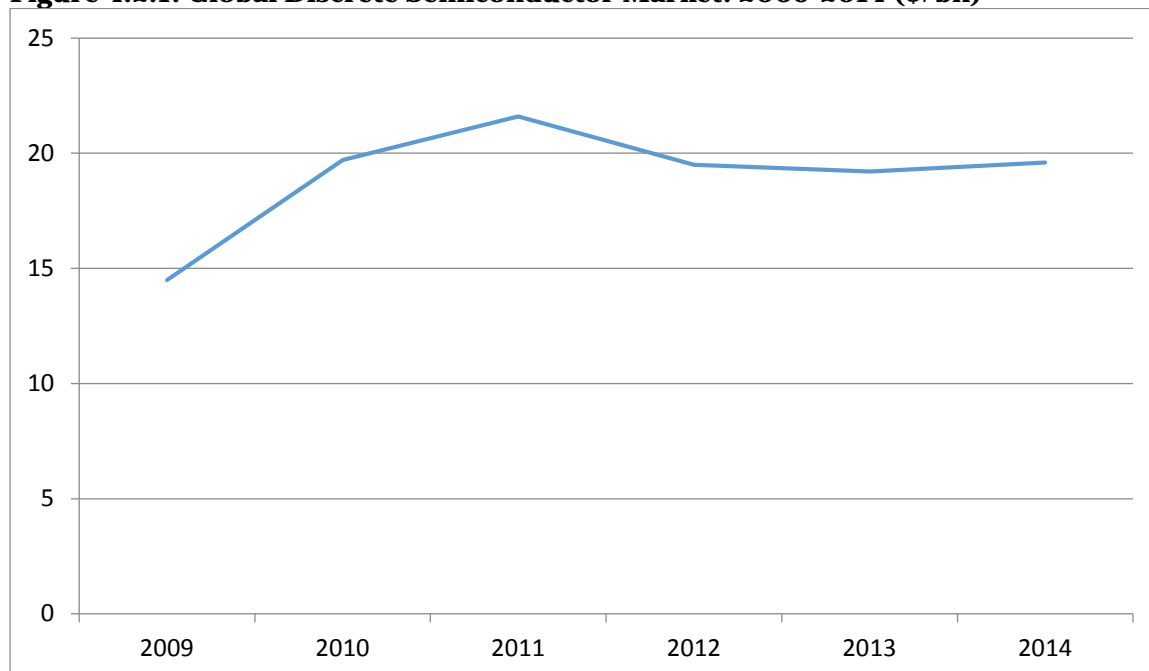
With a strengthening global market in 2010 -2011 the discrete semiconductors market rallied; YoY growth from 2009 to 2010 was a sector leading 36%, reaching \$19.7bn (2010) from \$14.5bn in 2009. Growth was still significant from 2010 to 2011, showing 9.7% YoY growth reaching \$21.6 (2011) from \$19.7bn in 2010. During 2012, the growth of IGBTs was offset by the decline of MOSFETs due to the subdued global economy, which affected mainly computing and consumer segments; a traditional revenue generator for discrete semiconductors.

Table 4.2.1: Global Discrete Semiconductor Market: 2009-2014 (\$/bn)

| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 5-yr CAGR |
|-------------|--------|-------|------|-------|-------|------|-----------|
| \$bn | 14.5 | 19.7 | 21.6 | 19.5 | 19.2 | 19.6 | 6.2% |
| AGR | -14.6% | 36.0% | 9.7% | -9.5% | -1.6% | 1.9% | |

GMR Data 2015

Figure 4.2.1: Global Discrete Semiconductor Market: 2009-2014 (\$/bn)



GMR Data 2015

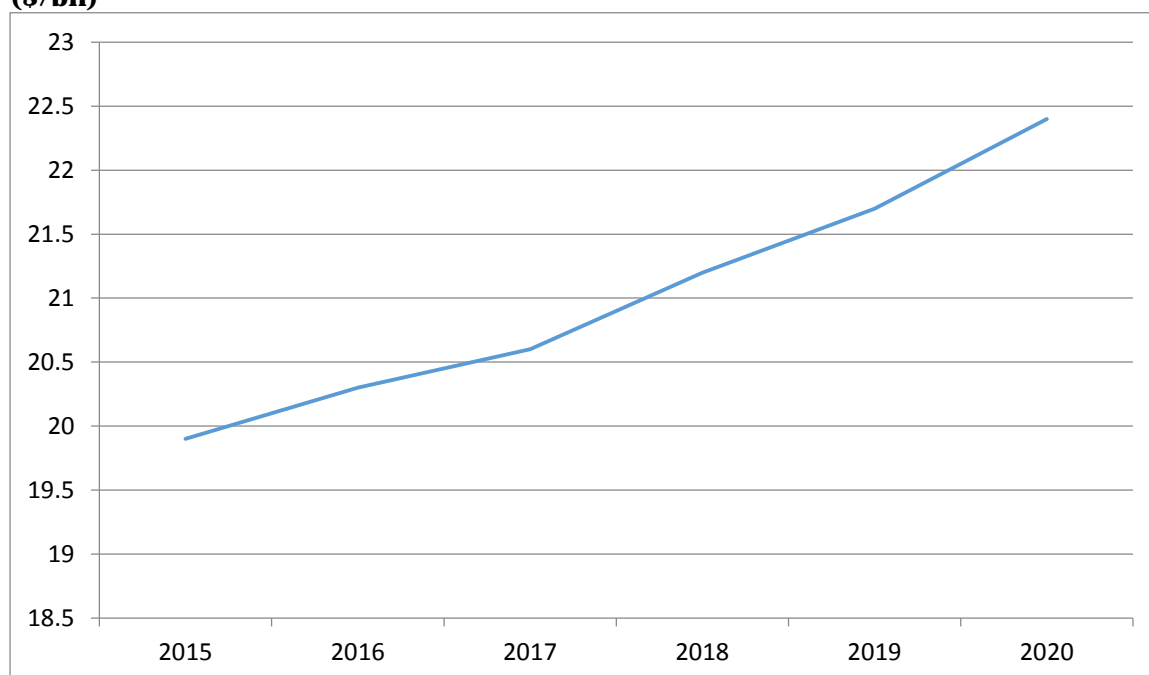
GMR Data forecast that the discrete semiconductor market will reach \$19.6bn across 2014 from \$19.2bn in 2013, equating to a YoY growth rate of 1.9%. Moreover, across the forecast period, 2015 to 2020, the market is expected to grow at a 5-year CAGR of 2.7% to reach \$22.4bn in 2020. The discrete semiconductor market growth is offset by the high cost of discrete power semiconductors.

Table 4.2.2: Global Discrete Semiconductor Market Forecast: 2015-2020 (\$/bn)

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 5-yr CAGR |
|--------------|------|------|------|------|------|------|-----------|
| \$/bn | 19.9 | xx | xx | xx | xx | xx | xx% |
| AGR | 1.5% | xx% | xx% | xx% | xx% | xx% | |

GMR Data 2015

Figure 4.2.2: Global Semiconductor Market Forecast for Data Processing: 2015-2020 (\$/bn)



GMR Data 2015

Factors for forecasting include:

- The discrete semiconductor market will continue its upward growth trajectory across 2015-2020 due to it being a vital part of many consumer, commercial and industrial applications. In addition to these multiple applications, discrete semiconductors will gain additional market exposure in the HEVs and EVs; these new and growing, markets will drive the discrete power semiconductor revenues due to the growth of IGBTs and MOSFETS replacing thyristors and bipolar junction transistors.

8. Expert Opinion

8.1. On Semi

On Semi was a top 25 global semiconductor company across 2014, supplying chips across multiple applications to multiple companies, including Intel. The company spent over \$0.5bn on acquisitions in H1 2014 and generated revenues of around \$4bn across 2014. The following interview is with a senior representative at the company.

GMR Data - What function or application do your semiconductors typically facilitate – what are your primary markets?

ON Semi - *From our site we supply computing and consumer electronics; Power and Thermal Management Integrated Circuits, with which we supply to companies such as Intel, amongst others. Our centre here is very much a research and development hub. Manufacture is primarily carried out in other geographies.*

GMR Data - What proportion of your output, or revenue, would be custom products? Would custom products feature quite heavily in your output?

ON Semi - *Depending on application but usually about 40%. The 40% would probably be better described as application specific as opposed to custom. It is fairly constant at this point in time.*

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