



Semiconductors & Semiconductor Equipment

Driving forces

The application of advanced semiconductors has progressed beyond traditional computing products to include the internet of things, artificial intelligence, automotive applications, 5G and high-performance computing. Cybersecurity is a strategic priority that is increasing in importance, since security should be included by design during chip R&D. The rate at which the number of transistors on a chip doubles (i.e. Moore's Law) is slowing as integrated circuits become smaller. The semiconductor industry must therefore investigate new architectures, materials and packaging to go beyond current scaling and performance constraints, while also addressing the demand for more energy-efficient products. To sustain a rapid pace of innovation, the industry will need to increase R&D investment that, in turn, will necessitate attracting and retaining a skilled workforce and developing talent. The industry must continue to improve its ultra-pure water usage, pollution prevention and energy and waste management. It must also develop substitutes for hazardous materials and reduce the sourcing of conflict minerals.

Highlighted criteria & dimension weights

- Environmental Dimension..34%
 - Climate Strategy
 - Environmental Policy & Management Systems
 - Operational Eco-Efficiency
 - Product Stewardship
- Social Dimension 23%
 - Human Capital Development
 - Talent Attraction & Retention
- Governance & Economic Dimension 43%
 - Innovation Management
 - Product Quality and Recall Management
 - Supply Chain Management

Industry Awards 2022

		S&P Global ESG Score
●	S&P Global Gold Class	
	ASE Technology Holding Co., Ltd. Taiwan	92
	United Microelectronics Corporation Taiwan	92
●	S&P Global Bronze Class	
	Taiwan Semiconductor Manufacturing Company Limited Taiwan	87
	Nanya Technology Corporation* Taiwan	87

Industry Statistics

Number of companies assessed	186
Market capitalization of assessed companies (in USD billion)	4,428.4
Number of companies in Yearbook	13
Market capitalization of companies in Yearbook (in USD billion)	1,994.6

Sustainability Yearbook Members

Infineon Technologies AG	Germany	83
Vanguard International Semiconductor Corporation	Taiwan	82
WIN Semiconductors Corp.	Taiwan	82
STMicroelectronics N.V.	Switzerland	81
ASML Holding N.V.	Netherlands	80
SK hynix, Inc.	Rep. of Korea	79
Tokyo Electron Limited	Japan	79
NVIDIA Corporation	United States	74
Intel Corporation	United States	67

* S&P Global Industry Mover