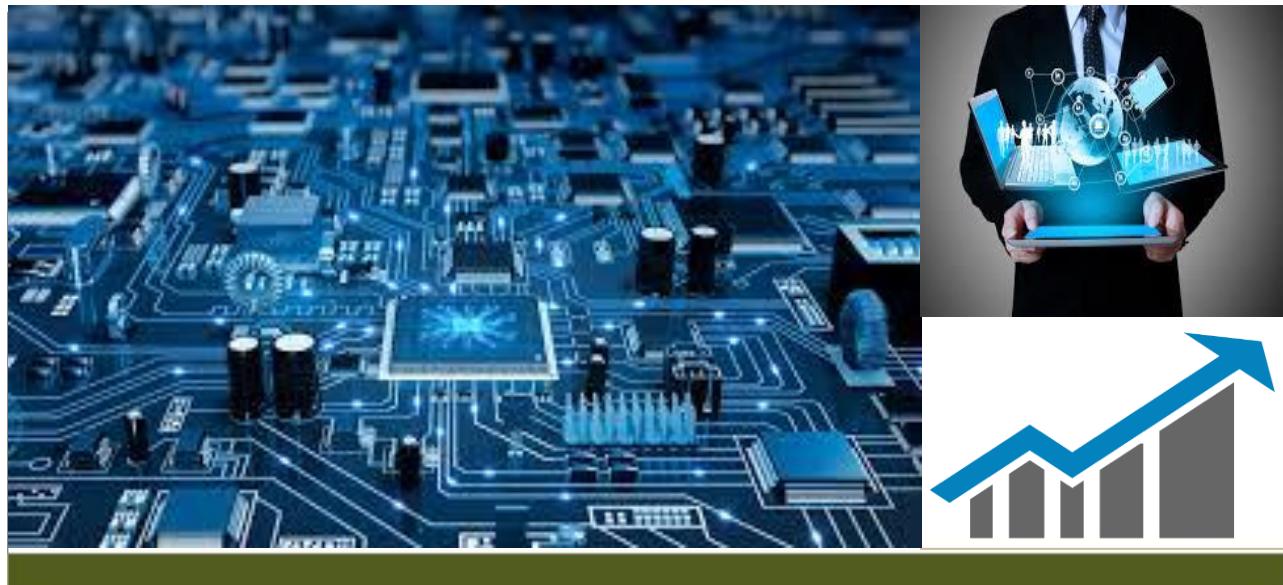




Quarterly M&A and Industry Update - Technology Q4 2020



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By Lucintel**

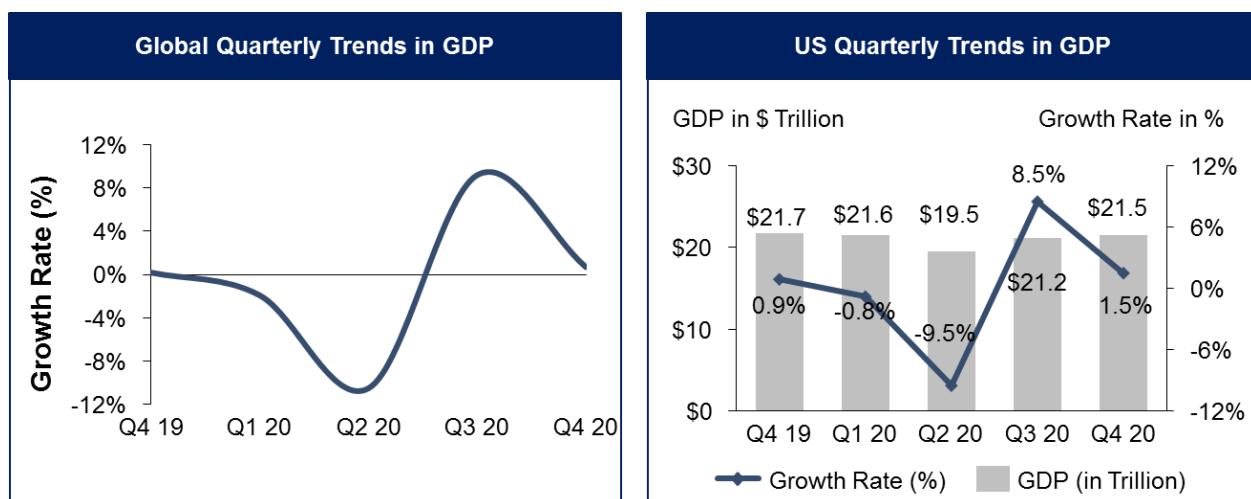
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Economic Situation Q4 2020

The global GDP grew by 0.7% in Q4 2020 as compared to Q3 2020. The U.S. GDP grew by 1.5% in Q4 2020 as compared to Q3 2020, while it declined by 1.1%, when compared to Q4 2019. Second wave of COVID-19 have slowed down or even temporarily reversed economic recoveries. The strength of the recovery varies across countries, depending on the severity of the health crisis, the extent of domestic disruptions to activity, the exposure to cross-border spillovers, and importantly the effectiveness of policy support to limit persistent damage. The pandemic will slow down the recovery particularly in more hard-hit countries, such as the US, the UK, Spain, and France. The future is highly dependent on the response towards the pandemic situation. Recent vaccine approvals have raised hopes of a turnaround in the pandemic situation.



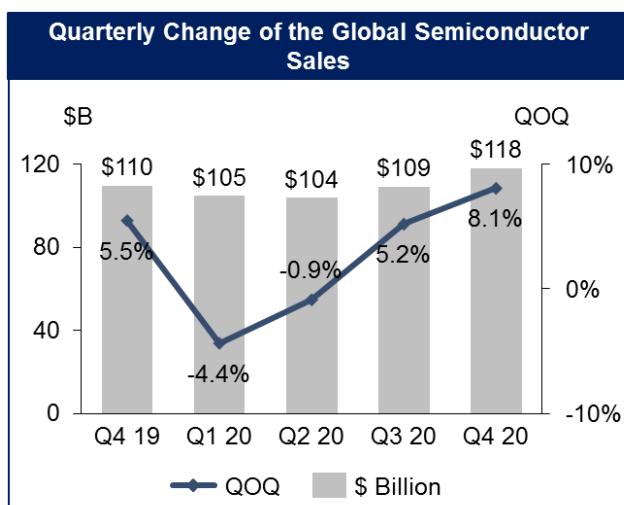
Note: The above image shows quarter over quarter change in GDP

Source: OECD, Fred Louis, Lucintel

Figure 1: Quarterly GDP Trends

Technology Industry Update – Q4 2020

The global semiconductor sales grew by 8.1% in Q4 2020, i.e. semiconductor sales increased to \$118.1 billion from \$109.3 billion in Q3 of 2020, while on yearly basis, it increased by 7.8% from Q4 of 2019. The global semiconductor market got off to a solid start in Q4 of 2020, with the positive year-to-year sales growth for the first time in more than a year. Still, the global market faces significant macroeconomic headwinds, including global trade unrest and ongoing concerns about worldwide spread of the coronavirus, which could limit continued market recovery. ASE Technology registered the highest revenue increase of 24% in Q4 of 2020 on quarter-over-quarter basis. Technology companies are feeling better about their revenue outlook, along with strong venture capital funding and vibrant capital markets. Companies look to strengthen their market and competitive positioning, it requires rethinking of all aspects of the business from workforce, products and services, and end-user experience. The figure below depicts change semiconductor sales in the past five quarters (Q4 2019 – Q4 2020).



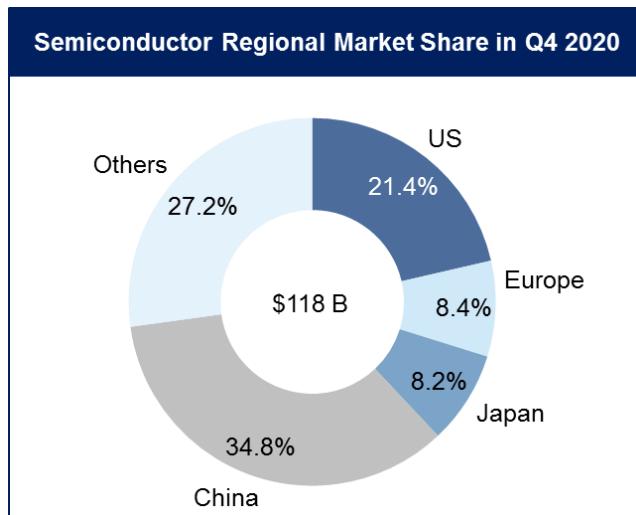
Source: SIA, Lucintel

Figure 2: Quarterly Change in Sales of Global Semiconductor Market

Company Name	Change in Revenue	
	Q4 20/Q3 20	Q4 20/Q4 19
Samsung	-4%	9%
Intel	9%	-1%
Taiwan Semiconductor	35%	52%
STMicroelectronics	21%	17%
Micron Technology	-5%	12%
Qualcomm Inc	-1%	62%
Broadcom	11%	12%
Texas Instruments	7%	22%
ASE Technology	61%	71%
Nvidia	6%	61%

Source: Lucintel

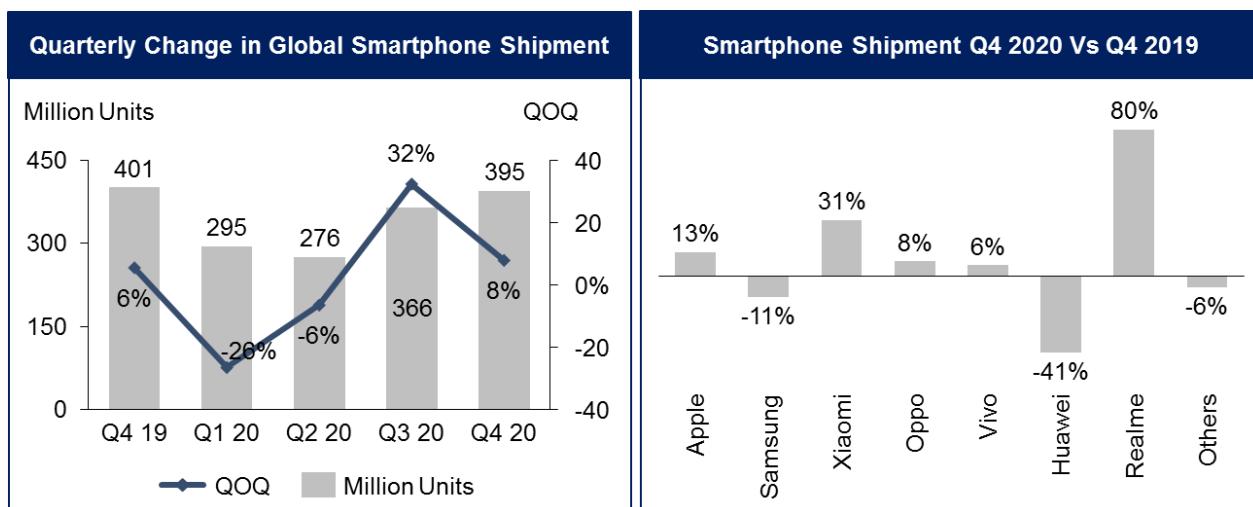
Figure 3: Change in Revenue of Major Semiconductor Companies



Source: SIA, Lucintel

Figure 4: Regional Market Share in the Semiconductor Market

The sales of semiconductors increased in all regions. China holds the largest individual market for semiconductors with the highest demand of around 34.8% in the global semiconductor market, followed by others. China consumes more than 50% of all semiconductors, both for internal use and eventual export. The rapid growth of Chinese demand lifted the entire industry worldwide. US followed China with share of 21.4% in Q4 2020.



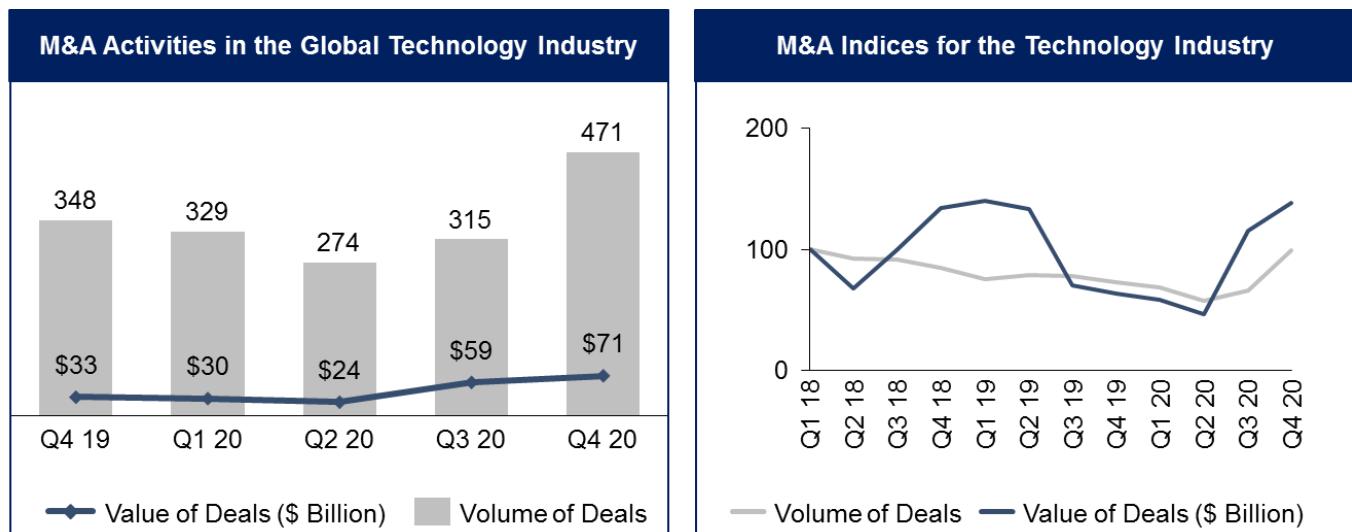
Source: Counterpoint, Lucintel

Figure 5: Quarterly and Yearly Change in Global Smartphone Shipment

The global smartphone market continued to recover in the last quarter of 2020, the smartphone shipment increased by 8% in Q4 2020, i.e. smartphone shipment increased to 395 million units from 366 million units in Q3 of 2020, while on yearly basis, it decreased by 1.6% from Q4 of 2019. The overall market continued to rebound from the ill effects of COVID-19. On year-over-year basis, most of the brands registered positive growth in Q4 of 2020. Realme emerged as the fastest-growing brand with 80% growth on year-over-year. A strong 5G push by the industry through reduced device prices and operator tariffs further boosted the market's recovery process. The overall 5G smartphone penetration increased to 34% of total smartphone shipments compared to 17% in the previous quarter. The growth was driven by the launch of the iPhone 12 and a strong portfolio of products from brands like OnePlus, OPPO, Xiaomi, and Vivo.

M&A Update – Q4 2020

Merger and acquisition activities in the global technology industry increased in Q4 of 2020 as compared to Q3 and Q2 of 2020. The global technology industry recorded 471 completed M&A deals in the Q4 of 2020, an increase of 50% from Q3 of 2020 and 35% increase on yearly basis, i.e., from Q4 of 2019. The total deal value in Q4 of 2020 was \$71.1 billion, which was an increase of 20% from Q3 of 2020. The pandemic has hurt the broader economy; the technology sector has been less impacted, as consumers and businesses have looked for technology solutions to support new ways of working and living. As a result, tech deal-makers appear to have increasing levels of optimism, which increased M&A activity. Companies are positioning themselves for growth through mid-to-high growth areas, which include 5G, data centers, cloud computing, industrial IoT and automotive areas where deal activity expect to continue in 2021.



Source: Lucintel

Figure 6: Quarterly M&A Activities in the Global Technology Industry

Table 1: Quarterly Changes in M&A Activities in the Global Technology Industry

M&A Deals	Quarter Over Quarter Change in Merger and Acquisition Activities				
	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20
Value (\$ Billion)	-9%	-7%	-21%	148%	20%
Volume	-6%	-5%	-17%	15%	50%

Table 2: M&A Deals in the Global Technology Industry

Date	Target Company	Acquirer Company	Description
Dec 31, 2020	High Technology	Spartronics Llc	This transaction reflects OEP's ability to identify strategically important acquisitions that build scale and accelerate growth.
Dec 30, 2020	Sensor Scientific Inc	CTS Corp	The acquisition of SSI expands temperature sensing product portfolio and focus on innovative products that sense, connect, and move.
Dec 25, 2020	Nanjing Cec Panda Fpd Tech Co	BOE Technology Group Co Ltd	The CEC acquisitions will give BOE its first oxide TFT LCD lines, which will enable BOE to offer more advanced products in TV and IT markets.
Dec 17, 2020	Novoserve Data Centers	InterDC Hengelo	This acquisition therefore benefits the growth strategy of both companies. Through focus on core activities both businesses are able to realize their ambitions for growth.

Dec 08, 2020	Fox Electronics Inc	Abracon LLC	With the acquisition of Fox Electronics, Abracon will be able to further expand its Timing and Frequency portfolio.
Nov 27, 2020	Optigot AB	Nvidia Corp	Nvidia Corp of the US acquired Optigot AB, a Gotland-based manufacturer of semiconductors and related device.
Nov 23, 2020	Midas Technology Inc	Shure Inc	With the acquisition, Shure will be able to expand and diversify its solution offering for organizations of all sizes, while Midas will be able to take advantage of Shure's global infrastructure and support capabilities.
Nov 16, 2020	Photonic Lattice Inc	Photron Ltd	With this acquisition, Photron hopes to not only shorten the development time and improve the production quality but also aims to develop new products to expand into the global market in the fields of photonic and semiconductor manufacturing.
Nov 12, 2020	VLC Photonics SL	Hitachi High-Tech Corp	Hitachi High-Tech Corp of Japan, a unit of Hitachi Ltd, acquired VLC Photonics SL, a Valencia-based manufacturer of semiconductors and related device.
Nov 09, 2020	Digistor	CRU Data Security Group LLC	The two companies have complementary product offerings with little overlap, creating a solution that spans laptops, desktops, workstations and into the enterprise and defense storage ecosystems.
Oct 28, 2020	Metro Data Centers LLC	DartPoints LLC	The acquisition expands DartPoints' footprint with high-tier data center infrastructure capabilities. DartPoints will continue to execute its strategy through acquisitions and deploying edge colocation data centers in order to develop regional carrier-neutral aggregation points.
Oct 15, 2020	Somos SA	STMicroelectronics NV	With this acquisition, ST reinforces its specialist staff, IP and roadmaps of Front-End Modules for the IoT and 5G markets.
Oct 10, 2020	MTI Technology Ltd	Ricoh Europe PLC	The acquisition will enable Ricoh customers to gain access to MTI Technology's expertise and competencies in cyber and data security, data center modernization, IT managed services and IT transformation services.
Oct 02, 2020	Tekron International Ltd	Microchip Technology Inc	The transaction brings together two organizations with a shared commitment to innovation and flawless execution that is so critical in the timing and synchronization industry.
Oct 01, 2020	Nexlan AS	Direktronik AB	Direktronik AB of Sweden, a unit of Lagercrantz Group AB, acquired the entire share capital of Nexlan AS, a Blomsterdalen-based electronic parts and equipment merchant wholesaler, from Cmh Holding AS. The acquisition is expected to only generate a marginal addition to the Group's earnings per share.

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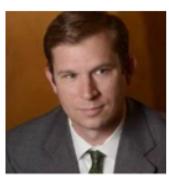


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