

Company: Taiwan Semiconductors Ticker: TSM Current price: \$93.45 Industry: Technology Sub-industry: Semiconductors			
Target Price: \$120.46	TTM P/E: 14.41	Beta: 0.95	Market Cap: \$393.95B
Stop Loss: \$74.76	Forward P/E: 13.09	Credit Rating: Stable	Avg Vol (12M): 14.36M
52 Week High/Low: \$145/ \$59.43	EPS: 5.5	Rating Outlook: Stable	Dividend Yield: 2.31%

Company Background:
Taiwan Semiconductor Manufacturing engages in the manufacture and sale of integrated circuits and wafer semiconductor devices. Its chips are used in personal computers and peripheral products, information applications, wired and wireless communication systems products, and automotive and industrial equipment. Industrial equipment segment includes consumer electronics such as digital video compact disc player, TV's, game consoles, and digital cameras. Taiwan Semiconductor Manufacturing Co. is the world's largest dedicated chip foundry, with over 57% market share in 2021 per Gartner. TSMC was founded in 1987 as a joint venture of Philips, the government of Taiwan, and private investors. It went public as an ADR in the U.S. in 1997. TSMC's scale and high-quality technology allow the firm to generate solid operating margins, even in the highly competitive foundry business. Furthermore, the shift to the fabless business model has created tailwinds for TSMC. The foundry leader has an illustrious customer base, including Apple, AMD, and Nvidia, that looks to apply cutting-edge process technologies to its semiconductor designs.
Industry Outlook:
Taiwan Semiconductor Manufacturing Co. is the world's largest dedicated chip foundry, with over 57% market share in 2021 per Gartner. TSMC was founded in 1987 as a joint venture of Philips, the government of Taiwan, and private investors. It went public as an ADR in the U.S. in 1997. TSMC's scale and high-quality technology allow the firm to generate solid operating margins, even in the highly competitive foundry business. Furthermore, the shift to the fabless business model has created tailwinds for TSMC. The foundry leader has an illustrious customer base, including Apple, AMD, and Nvidia, that looks to apply cutting-edge process technologies to its semiconductor designs. We believe the pandemic permanently changed the landscape where more individuals are likely to work from home, increasing the usage for cloud offerings from cloud giants like Microsoft and Amazon. Accelerated computing technologies are gaining traction, in our view, as they help overcome the limitations of CPUs. Chipmakers tied to the data center are exposed to the best financially positioned customers on the planet, and despite quarterly lumpiness, the long-term prospects related to themes like AI and the metaverse remain extremely encouraging and offer significant growth potential ahead.
Investment Thesis:
TSM's long-term growth outlook is resilient given they currently have >90% share in the leading-edge foundry processes (7nm and below), while strong generation and net cash position should support TSM's investment needs throughout the industry downcycle to extend its technology leadership. We believe that the consumer-driven industry weakness is cyclical, and should rebound by 2024 supported by AI, cloud/edge-computing, and 5G applications. Bringing strong performance to the stock's ROI along with overall industry performance to continue.
3-5 take away from last quarter investor call transcript:
<ol style="list-style-type: none"> 1. Wendell Huang -- Vice President and Chief Financial Officer Earnings Call: "The third quarter revenue increased 14.8% sequentially in NT dollar, or 11.4% in US dollars, as our third quarter business was supported by strong demand for our industry leading 5-nanometer technology." 2. Wendell Huang -- Vice President and Chief Financial Officer Earnings Call: "Excluding the impact of foreign exchange rates of which we have no control over and taking the other five factors into consideration, we believe a long term gross margin of 53% and higher is achievable." 3. C.C. Wei -- Chief Executive Officer Earnings Call: "We expect our full year gross in 2022 to be mid 30% in US dollar terms. On the demand side, we continue to observe softness in consumer end market segment. Other end market segments such as data center and automotive related remain steady for now for TSMC. But we start to see the possibility of adjustment unrolled."

Financial performance:							Discounted Cash Flow:		
	2017	2018	2019	2020	2021	2022		2018-2022	2023-2031
Revenue	31,524.5	33,266.9	34,509.0	43,193.4	51,197.0	66,972.5	Avg Revenue Growth	29%	10.1%
Operating Profit	6,371.0	7,370.0	8,367.0	8,681.0	9,097.0	8,407.0	Avg Gross Margin	49.09 %	59.8%
Net Income	11,126.8	11,709.1	11,415.5	16,472.4	19,104.7	28,468.0	Avg EBITDA Margin	58%	69%
Revenue Growth (%)	3.1%	5.5%	3.7%	25.2%	18.5%	37.5%	Avg NOPAT Margin	-	-
EBITDA%	65.9%	65.7%	61.3%	66.6%	67.2%	68.0%	Avg FCF/Margin	8.84%	6.04%
Operating Profit %	12.8%	13.7%	14.0%	13.3%	13.6%	13.0%	Tax Rate	10.8%	11%
Net Income Margin	35.3%	35.2%	33.1%	38.1%	37.3%	42.5%	WACC	-	4.34%
D/E	0.33	0.26	0.40	0.47	0.73	0.69	Perpetuity Growth Rate	-	3.8%
EPS	3.99	5.26	-2.50	44.32	15.94	79.60	Analyst Opinion		
PE Ratio	17.98	16.61	26.47	31.55	30.5	17.98	Buy:	Hold:	Sell:
Current Ratio	2.22	2.67	1.37	1.73	2.12	2.49		Rating	Target
ROE	24.19	23.02	21.62	29.62	29.74	36.67	S&P Net Advantage	Buy	\$88.43
ROA	17.79	17.79	16.26	20.33	18.27	22.13	Bloomberg	Buy	\$113
Dividend/share	1.16	1.35	2.01	1.72	1.88	1.78	Yahoo Finance	Buy	\$ 96.73
FCF	8,326.95	8,162.90	4,804.74	4,997.8	10,679.46	9,468.19			

Relative Valuation													Total Return %			
Company Information		Financial Metrics			Valuation Metrics				Operational Metrics					TSM	Industry Sec	S&P 500
Ticker	Firm	Market Cap	BV of Equity	Total Assets	P/Sales	P/B	P/E	P/FCF	Gross Margin	EBIT Margin	ROE	ROA	YTD	-33.10%	-43.03%	-20.89
TSM	Taiwan	\$ 410,841	\$16.88	\$148,450	6.06	4.59	13.65	24.41	57.30	40.95%	27.55%	15.91%	2021	-30.99%	20.05%	26.61%
UMC	United	\$ 17,873	\$17.26	\$16,257	2.52	1.76	7.01	9.28	44.35	31%	35.19%	20.62%	Last 3years	-21.51%	13.8%	27.47%
ASX	ASE	\$ 13,081	\$67.25	\$20,783	0.62	1.41	6.42	16.08	20.07	11.77%	13.51%	2.93%	Last 5 years	42.43%	1.25%	50.25%
TPE:2454	Mediatek	\$ 36,082.	\$267.31	\$20,458	1.96	2.63	8.62	12.65	49.62	23,2%	10.67%	17.54%	CSR Characteristics			
															Peers	
														ESG Disclosure	13.6	20
														Governance Disclosure Score	7.7	6.2
														Social Disclosure Score	13.4	11.2
														Environmental Disclosure Score	5.0	3.1

*Industry Avg. includes companies listed

-Prepared by MSFRM Fund 2 (DATE) using Bloomberg, S&P Net Advantage, Morningstar, Yahoo Finance