

NYSE: TSM - TAIWAN SEMICONDUCTOR MANUFACTURING (TSMC) – TOO MUCH FOR A CYCLICAL

ISIN TW0002330008 – Ticker 2330

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TWD10 TSM

### TSM stock price overview

TSM stock has been an amazing compounder over the years and it is actually more than a 100 bagger.

Taiwan Semiconductor Mfg. Co. Ltd.  
NYSE: TSM

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**130,52** USD +1,38 (1,07%) ↑

Closed: 25 Jan, 19:59 GMT-5 · Disclaimer  
After hours 130,84 +0,32 (0,25%)

1 day 5 days 1 month 6 months YTD 1 year 5 years **Max**



Open	131,83	Div yield	1,65%
High	132,17	Prev close	129,14
Low	127,35	52-wk high	136,13
Mkt cap	608,49B	52-wk low	42,70
P/E ratio	38,52		

### TSM stock historical chart

The reason for such an amazing stock performance are the fundamentals shown in the figure below. This is also what one should look for when investing in companies; a good growing market, high returns on equity, a strong balance sheet that makes you survive the cycles, organic growth that is possible thanks to a profitable operation.

### Excellent Financial Performance; Consistently Delivered >20% ROE

- The only foundry that consistently delivers excellent financial results. Delivered 17.4% revenue CAGR and 16.1% earnings CAGR since listing in 1994
- Strategic financial objectives: (1) minimum 20% ROE across cycles; (2) earnings CAGR to be between 5% and 10% for the next few years
- Fortress balance sheet with semiconductor industry's highest credit rating (S&P: AA-; Moody's Aa3)
- Have relied only on internally generated funds to finance organic growth
- Highly disciplined in mergers and acquisitions

### Commit to Sustainable Cash Dividends and Paid US\$8.5bn in 2019

- Started paying cash dividends from 2004, and have never reduced dividend per share
- Committed to a stable cash dividends on both annual and quarterly basis

TSM stock analysis – Source: [TSMC investor relations](#)

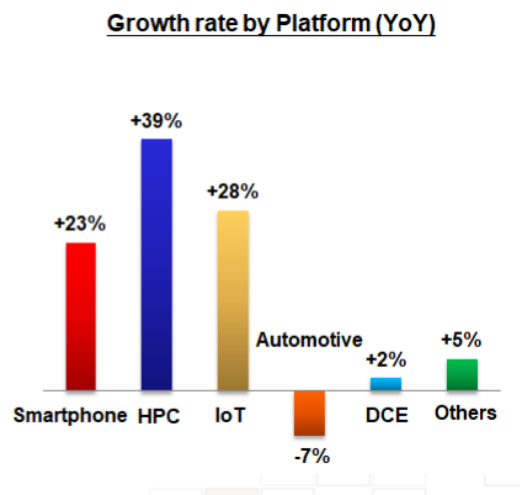
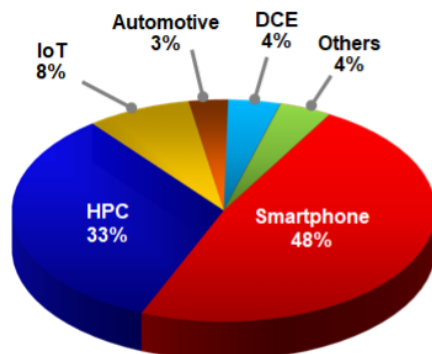
However, it is also on the top of the list of MSCI emerging market index which means it has the largest market capitalization and thus could also be an expensive stock.

Let's look at the business, fundamentals and investing outlook and finish with a TSM stock valuation. The management expects low teens growth over the next few years.

### TSM stock analysis – business overview

Taiwan Semiconductor (TSMC) is the world's largest semiconductor foundry, it manufactures a lot of the chips that are in your phone and computer. Its total foundry market share of 56% and it is about to spend \$28 billion in 2021 to keep that position and to dissuade competitors from entering the field (constructing plant in Arizona too for US market). Given the environment we are in, the company must anticipate a huge surge in chipmaking, especially advanced chips. It is not yet known whether TSMC expected to get also a share of INTEL's chip production as the company said earlier it has been exploring outsourced production but the new CEO recently said how most will still be kept inhouse. Perhaps TSMC will lower its CAPEX in 2021, we will see.

Smartphones are currently contributing to most of the revenue but as other segments like IoT, automotive and other grow, this might change over time and further grow both the top and bottom line for TSMC.



TSM stock analysis – Source: [TSMC Q4 2020 Earnings presentation](#)

All in all, global market leader in chip manufacturing making the chips for many companies, from Apple to Qualcomm. The sector is a growth one which is always a good tailwind when investing; if you make a mistake, the growth in demand might save your investment while if you nail the right business, you can expect great returns.

### TSM stock fundamental analysis

Operating margins (1) have been improving over time but we must always keep in mind the high cyclicality of the sector as in exuberant periods there can easily be overcapacity that lowers margins like it had been the case in 2011 to 2013.

Net income (2) has been growing at a steady pace alongside earnings and dividends (3) and what is very important is that the company achieved it all without issuing any shares (4) like many current growth stocks do.

Taiwan Semiconductor Manufacturing Co Ltd ADR TSM   ★★★											
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Financials											
	2010-12	2011-12	2012-12	2013-12	2014-12	2015-12	2016-12	2017-12	2018-12	2019-12	TTM
Revenue TWD Mil	419,538	427,080	506,223	597,003	762,835	843,513	947,909	977,442	1,031,362	1,069,989	1,294,856
Gross Margin %	49.4	45.4	48.1	47.1	49.5	48.7	50.1	50.6	48.3	46.0	52.1
Operating Income TWD Mil	159,175	141,557	181,057	209,997	296,819	321,730	377,911	386,657	385,052	373,350	534,556
Operating Margin %	37.9	33.1	35.8	35.2	38.9	38.1	39.9	39.6	37.3	34.9	41.3
Net Income TWD Mil	161,605	134,201	166,158	183,978	254,301	302,851	331,714	344,998	363,053	353,948	499,838
Earnings Per Share TWD	31.15	25.90	30.75	35.50	49.05	58.40	63.95	66.50	70.00	68.25	96.40
Dividends TWD	12.03	14.94	14.75	15.18	14.98	—	30.38	35.23	41.17	61.87	50.06
Payout Ratio % *	—	54.0	46.0	42.6	34.6	—	51.9	53.5	60.5	75.1	51.9
Shares Mil	5,184	5,185	5,186	5,186	5,186	5,186	5,186	5,186	5,186	5,186	5,186
Book Value Per Share * USD	—	3.84	4.82	5.18	5.82	6.56	7.66	9.24	9.93	10.22	12.31
Operating Cash Flow TWD Mil	229,475	247,587	289,063	347,384	421,524	529,879	539,834	585,318	573,954	615,138	766,490
Cap Spending TWD Mil	-186,944	-213,963	-246,137	-290,345	-292,400	-261,801	-333,094	-335,889	-322,682	-469,752	-602,183
Free Cash Flow TWD Mil	42,531	33,625	42,926	57,038	129,124	268,079	206,740	249,430	251,272	145,387	164,307
Free Cash Flow Per Share * USD	—	0.10	0.29	0.38	0.35	1.76	1.16	1.16	2.03	1.21	—
Working Capital TWD Mil	138,328	108,253	109,852	154,513	401,780	506,972	469,443	470,313	594,842	224,250	—

\* Indicates calendar year-end data information

TSM stock analysis – Source: [TSM stock quote Morningstar](#)

Operating cash flows have tripled and free cash flows quadrupled (5) over the past 10 years and even more in 2020 where free cash flows expanded to \$9.25 billion.

## 2020 Financial Highlights

(In NT\$ billions unless otherwise noted)	2020	2019	YoY
Net Revenue (US\$ billions)	45.51	34.63	+31.4%
Net Revenue	1,339.26	1,069.99	+25.2%
Gross Margin	53.1%	46.0%	+7.1 pts
Operating Margin	42.3%	34.8%	+7.5 pts
Income before Tax	584.78	389.85	+50.0%
EPS - Diluted (NT\$)	19.97	13.32	+50.0%
Operating Cash Flow	822.67	615.14	+33.7%
Capital Expenditures	507.24	460.42	+10.2%
Free Cash Flow (FCF)	315.43	154.72	+103.9%
Cash Dividends	259.30	259.30	-
Cash & Marketable Securities	791.48	583.45	+35.7%
ROE	29.8%	20.9%	+8.9 pts

TSM stock analysis – Source: [TSMC Q4 2020 Earnings presentation](#)

Total liabilities are just 32.16% of total assets and long-term liabilities are just 9.83% of total assets which puts TSMC in a very strong financial position.

For reference:

1 United States Dollar equals

28,02 New Taiwan dollar

26 Jan, 09:23 UTC · Disclaimer



Data provided by Morningstar for Currency and Coinbase for Cryptocurrency

TSMC's functional currency is TWD

### TSM stock intrinsic valuation

For a valuation I am going to take the dividend that quadrupled over the last decade. I am focusing on the dividend because that is how the company rewards its shareholders as the other 50% of net income is reinvested into growth. As long as they keep reinvesting the equity at an ROE of above 20%, shareholders have nothing to worry.

## Latest Dividend

TSMC Dividend Policy	Latest Dividend	Dividend History
	2020	1Q20
Ex-Dividend Date	2020/12/17	2020/09/17
Record Date	2020/12/23 (Common Shares) 2020/12/18 (ADR)	2020/09/23 (Common Shares) 2020/09/18 (ADR)
Cash Dividend	NT\$2.5 per common share 0.446428 per ADR 0.352678 per ADR net of at-source withholding tax	NT\$2.5 per common share US\$0.435024 per ADR US\$0.343669 per ADR net of at-source withholding tax
Distribution Date	2021/01/14 (Common Shares) 2021/01/14 (ADR)	2020/10/15 (Common Shares) 2020/10/15 (ADR)
Detailed Announcement	<a href="#">2Q20 Announcement</a>	<a href="#">1Q20 Announcement</a>

TSM stock dividend – Source: [TSMC investor relations - dividend](#)

The last quarterly dividend was \$0.446428 per ADR which multiplied by 4 is \$1.7857 for a dividend yield of 1.367%. TSMC's dividend policy is to increase or at least keep the dividend stable.

Over the last ten years top line growth was around 11% and the dividend grew at 15%. Given the outlook is not for 11 to 15% revenue growth, I'll estimate 15% dividend growth over the coming decade, slower now as huge capex is expected, bigger later.

Scenario 1

normal case

DIVIDEND	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2030	Terminal Value	Growth rate
	1.79	1.96	2.16	2.38	2.61	2.88	3.45	4.14	4.97	5.96	7.16	268.35	10%
PV(10%)		1.79	1.79	1.79	1.79	1.79	1.95	2.13	2.32	2.53	2.76	103.46	20%
INTRINSIC VALUE		124.07											10%
													45.0

45 - implies dividend yield of 2.22%

Scenario 2

best case in EUR

DIVIDEND	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2030	Terminal Value	Growth rate
	1.79	1.96	2.16	2.38	2.61	2.88	3.45	4.14	4.97	5.96	7.16	387.62	10%
PV(10%)		1.79	1.79	1.79	1.79	1.79	1.95	2.13	2.32	2.53	2.76	149.45	20%
Present value sum		170.05											10%
													65.0

Terminal multiple

Scenario 3

worst case in EUR

DIVIDEND	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2030	Terminal Value	Growth rate
	1.79	1.87	1.97	2.07	2.17	2.28	2.51	2.76	3.03	3.34	3.67	33.37	5%
PV(10%)		1.70	1.63	1.55	1.48	1.42	1.42	1.42	1.42	1.42	1.42	12.86	10%
Present value sum		27.72											10%
													10.0

Terminal multiple

4% div yield

Scenario	Probability	PV	Part
Scenario 1 (normal case)	0.2	124.07	24.81
Scenario 2 (best case)	0.2	170.05	34.01
Scenario 3 (worst case)	0.6	27.72	16.63
Sum		75.46	

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TSM stock valuation by Sven Carlin ([downloadable template here](#))

The above calculation tells me that what is currently priced in TSM stock is similar execution to the last 10 years and a stable valuation for 10 years where investors are happy with a 1.5% dividend yield and growth in the best case scenario or 2.22% yield in the normal case

scenario assuming the required yield increases to 2.2%. We could say the market is pricing in low required yields for the next decade in this case.

In a worst-case scenario (actually the Intel scenario), where the expected dividend yield in 2030 would be 4%, the present value is a bit less than half of the current stock price with all estimations keeping a stable growth rate which we know is not something natural for the semis industry.

### **TSM stock investing conclusion**

I would say that if you own TSM stock you have to expect a lot of volatility and therefore adjust your exposure in line with the portfolio impact volatility can have. TSMC is priced for perfection thanks to its technological advantages, global scale and extremely strong market position alongside the collaboration with companies like Apple and Qualcomm. However, always keep in mind the cycle in the industry because things change very quickly.

### **TSM stock vs Intel stock**

A good example of how things can change is Intel. Further, my [Intel stock analysis](#) shows what can happen to a company if it loses its advantage over the cycles. Compared to TSM, Intel is a cheap stock and perhaps the best description of the risk of investing in TSM now.

Intel's free cash flows are around \$20 billion while TSMC's are at \$9.25 billion where Intel's market capitalization is at \$230 billion where TSMC's is at \$608 billion. I guess the investing depends more on what kind of an investor you are; a value investor looking for a margin of safety and cash flows will likely pick Intel while a growth investor will stick to TSMC.

Comparison with INTC

<b>TSMC</b>	<b>VS</b>	<b>INTEL</b>
<b>\$608</b>	Market cap	<b>\$230</b>
<b>1.54%</b>	Dividend	<b>2.51%</b>
<b>\$9</b>	FCF	<b>\$20</b>
<b>10 to 15%</b>	Growth	<b>5%</b>
<b>1.4%</b>	FCF YIELD	<b>8.6%</b>
<b>GROWTH</b>	-	<b>VALUE</b>

**TSM stock vs Intel stock – Source: Author's calculations**