INTEL

EQUITY RESEARCH REPORT

Executive Summary

We issue a SELL recommendation on Intel with a price target of $17.12, representing a 41.6% downside from the closing price of $29.34 on November 25, 2022. We gave 70% weightage to intrinsic valuation and 30% weightage to relative valuation while coming up with our target. Our recommendation is supported by

1) The current decline in the PC and tablets market. The client computing group contributes 51% of Intel's total revenue

2) The imposed ban by the U.S. government on the export of goods to China. The imposed ban can affect the company's revenue by 10%

3) The intense competition Intel is facing from its competitors, especially TSMC and AMD.

4) Our assumption of the expected decline in revenue over the next 4 years due to macroeconomic factors which is explained in the thesis below.

Business Description/ Company Overview

Intel is an American Multinational corporation and technology company that focuses on semiconductor chip manufacturing and offers end-to-end solutions, scaling from edge computing to 5g networks, the cloud, and the emerging fields of AI and autonomous driving. They are headquartered in Santa Clara, California, with a market cap of $121.09 billion. The company boasts a workforce of over 120,000 employees and ranks as the world's largest semiconductor company by revenue. Intel has operations in 7 segments – Autonomous driving, 5g Networks, Client connectivity, Cloud computing, IOT, Client computing, and AI and Analytics. Overall, Intel has a total of 73.7% of the market share of laptops, and CPU test benchmarks.

Stats	Value
52-week high/low	56.28/24.59
P/E Multiple	15.74
Beta (5Y)	0.71
Shares outstanding (in millions)	4,127
Market Cap (in billions)	129.09
Last closing share price (as of 11/23/22)	29.34
Debt to equity	39,523/174,841 = 0.226
EV/EBITDA	6.96
YTD return	-41.33%

Intel's reported revenue in the year 2022 (up to Q3) was $49 billion. Revenue decreased by -20% YoY in the 3rd quarter of 2022, majorly because of a plunge in demand in Client Computing Group (CCG). The market saw a dip in demand for PC's and laptops majorly due to the fact that excess products were sold during the pandemic. CCG revenue saw a decrease of 17%, Data Center and AI group (DCAI) saw a decrease of 27% and NEX revenue increased by 14%. Q3 2022 results were impacted by an uncertain macroeconomic environment that continues to deteriorate, persistent inflation, and higher interest rates, that we believe impacts our target semiconductor markets. CCG revenue was down on lower Notebook volume in the consumer and education market segments, though Notebook ASPs were higher due to a resulting change in product mix. DCAI Server volume decreased, led by enterprise customers, and due to customers tempering purchases to reduce existing inventories in a softening data center market. Server ASPs decreased due to a higher mix of revenue from hyperscale customers within a competitive environment. NEX revenue increased primarily due to increased demand for 5G products, higher Ethernet demand and ASPs, and accelerated demand for Edge products, partially offset by lower demand for Network Xeon.

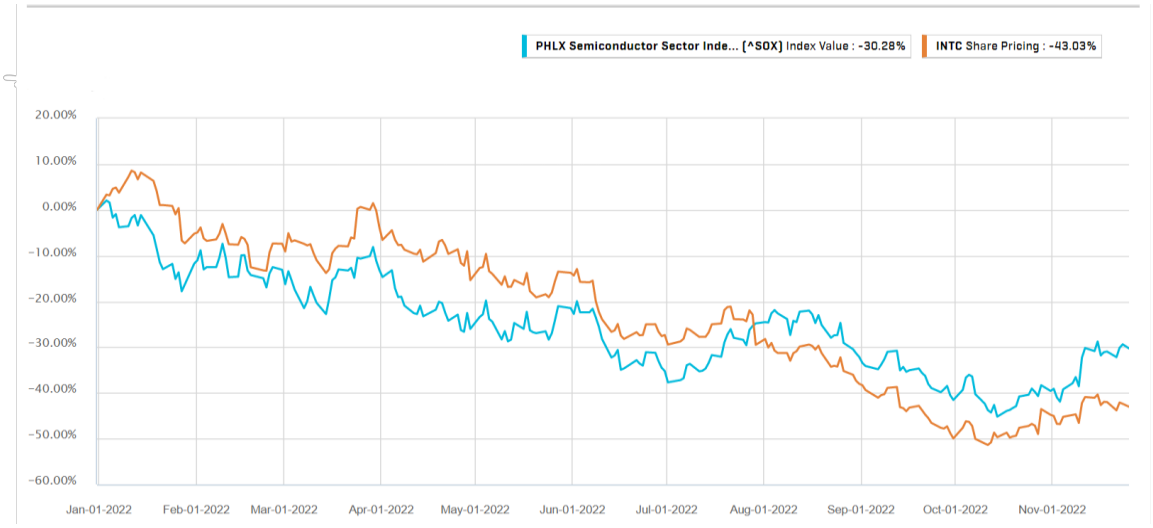
Gross Margin in 2022 was 42.6% as per Q3 earnings report. Lower gross margin was from lower revenue and higher unit costs.

Operating Income in the year 2022 up to Q3 was $3466 million decreased by 76%. Lower operating expenses were driven by a decrease in CCG sales, and DCAI as mentioned above. Mobileye was the only segment that saw a positive increase of 11% from last year.

Industry Overview

The Semiconductor industry has a total market capitalization of $2.51 trillion as per GICS classification. Currently, around 12% of the semiconductors in the world are manufactured in the USA and almost half of this production comes from Intel.
The semiconductor industry is known for its cyclicality. Chip shortages and a decline in demand have been the key issues in the industry. From the rapid surge for electronics during the pandemic, the semiconductor industry is now witnessing a downturn. PC and smartphone products account for 50% of all chip demand. Demand for PCs, smartphones, and video gaming equipment has seen a decline due to challenging macroeconomic conditions, high inflation, and rising interest rates. The pandemic saw manufacturers stockpiling chips to manage the high demand. The excessive stockpiling is now further creating downward pressure on the semiconductor industry due to low demand for electronics, and manufacturers are using their existing supplies of chips instead of purchasing new ones. The PC demand is expected to fall by 17% against a projected decline of 11%. The markets for PCs and tablets are further expected to decline by 2.3% in 2023. Intel's CEO, Patrick P Gelsinger in the earnings call claimed that the company expects the economic uncertainty to continue in 2023.

The PHLX semiconductor index has declined 30.28% YTD whereas Intel's share price has declined by 43.03% YTD.



Source: Capital IQ

To grapple with the current industry downturn, companies are now taking steps to cut down costs. Semiconductor firms are implementing hiring freezes. Intel plans to lay off employees to reduce costs by as much as $10 Billion by 2025. Major mobile chips maker Qualcomm also plans to cut down on hiring.

Companies such as Micron and AMD have already reported lower financial results this year. The newly implemented restrictions on exports to China have further created pressure on industry member companies as the restrictions will further reduce the revenues companies earn, by exporting to China. For Intel, the revenue is expected to get affected by approximately 10%.

Chip manufacturers expect the demand in the industry to ultimately get back to normal levels in the long term. Taking the long-term perspective into consideration, companies are going ahead with their

expansion plans. Intel is investing in a $20 Billion manufacturing campus in Ohio. Micron aims to spend $100 Million on a manufacturing facility. Samsung has also announced investments of about $16 Billion between 2021-2024. President Biden also signed a $280 Billion CHIPS act recently in a major boost to U.S. semiconductor manufacturing.

Competitive Positioning

Intel operates in a distinctly competitive market in many segments. In the processor segment, the main competitor for Intel is Advanced Micro Devices (AMD) and Qualcomm Inc which operate on ARM architectures. The new competitor in this segment is Apple, which launched M1 Max, M1 Pro, and M2 chips recently. The competition is going to be more intense in the coming years, especially from AMD whose market share has been increasing aggressively compared to other companies in the segment (Sales growth has been high for AMD in the last few years). Intel is losing its market because of mistakes committed in the last decade. Intel has been slow to adapt to the changing requirements. For Intel's 10nm chip release, the company was a year behind its release date, which transferred Intel's market share to Taiwan Semiconductor Manufacturing Company which released its 7nm chips for sale and has the plan to move to 3nm chips in the coming few years. The below data shows Intel's competitors with respect to market capitalization and sales growth.

Equity Valuation | CDS Spreads | Op Stats | Profitability

	Name (BICS Best Fit)	Sales Growth
	Median	26.85%
101)	INTEL CORP	2.49%
102)	QUALCOMM INC	42.65%
103)	BROADCOM INC	14.91%
104)	LATTICE SEMICONDUCTOR CORP	26.27%
105)	NVIDIA CORP	61.40%
106)	ADVANCED MICRO DEVICES	68.33%
107)	MICROCHIP TECHNOLOGY INC	25.42%
108)	MARVELL TECHNOLOGY INC	50.30%
109)	TEXAS INSTRUMENTS INC	26.85%
110)	MICRON TECHNOLOGY INC	11.02%
111)	ANALOG DEVICES INC	30.61%

	Name (BICS Best Fit)	Mkt Cap (USD)
	Median	94.36B
101)	INTEL CORP	111.64B
102)	QUALCOMM INC	130.26B
103)	BROADCOM INC	184.98B
104)	LATTICE SEMICONDUCTOR CORP	6.85B
105)	NVIDIA CORP	310.83B
106)	ADVANCED MICRO DEVICES	94.36B
107)	MICROCHIP TECHNOLOGY INC	34.23B
108)	MARVELL TECHNOLOGY INC	32.71B
109)	TEXAS INSTRUMENTS INC	146.49B
110)	MICRON TECHNOLOGY INC	61.04B
111)	ANALOG DEVICES INC	74.12B

Intel's main competitor in the US is AMD, which operates in the Datacenter segment which includes CPUs, Datacenter GPU's and other Datacenter products. The other segment is the Client Segment which includes desktops and notebook PC processors and chipsets. Apart from this, AMD also operates in the Gaming Segment and Embedded segments. AMD's revenue was highest from Data Center and Gaming segments which were $1.6 billion, and the Embedded segment had a $1.3 billion revenue which saw a 1,549% YoY growth compared to Intel which earned $4.2 billion in Datacenter and AI group - 27% lower than last year and earned $8.1 billion in their highest earning segment, Client Computing Group, 17% down compared to last year. Even though the revenue is higher for Intel, the Y/Y growth for AMD is a serious concern for Intel in long run.

Intel is uniquely positioned with the depth and breadth of its software and other platforms along with at-scale manufacturing. Intel with these strengths has a strategy to win which is focused on three areas: Open platform, leadership, and manufacturing at scale.

To counter the competition, Intel is investing to position the company for accelerated long-term growth, where the focus is on both the core business (PC segment) and the growing sector of business (AI, Datacenter, etc.). For the client and server business, Intel is investing to strengthen the competitiveness of their products and explore more opportunities. There is a huge potential in the Graphics, Networking & Edge, Mobility, and Foundry services.

The semiconductor industry is facing supply constraints, which can take a few years to resolve. Intel, on the other hand, is eliminating the bottlenecks, they have removed the third-party component bottlenecks and are trying to improve their own internal capacity. Intel has been working with other companies to provide TAM forecasts that will help the suppliers deliver better based on industry needs.

Industry Key Drivers

The demand for Personal computers hits a 20-year low. Because of this decline, chip demand is plunging rapidly in the short run. Even though the demand for chips is plunging now, the need for chips is expected to increase during the next ten years, and by 2030, the worldwide semiconductor market is expected to reach a trillion-dollar size. The automotive (especially electric vehicle), data storage, and communications industries are expected to account for over 70% of growth. Intel includes planned growth in the client, data center, network, and edge markets based on increasingly competitive roadmaps. In the auto market, the company remains on track and took its spin-off company, Mobileye, public, and is using the proceeds of the IPO to build more chip factories. Intel remains the majority owner of Mobileye. The market for autonomous driving is expected to grow by around 13.38% per year from 2022 to 2030. This structure gives Intel multiple engines for growth and inherent flexibility in how it invests.

Even with a 6 to 8 percent average annual growth of the industry till 2030, it would take the industry to $1 trillion in revenue. The annual growth is based on trends that include remote working, the growth of AI, and soaring demand for electric vehicles. Most of the growth can be attributed to three industries: automotive, computation and data storage, and wireless. The strongest-growing segment is likely to be automotive, where we could see a tripling of demand, fuelled by applications such as autonomous driving and e-mobility. In 2030, the cost of semiconductor content in an SAE Level 4 automobile with an electric drivetrain might be around $4,000 compared to $500 for an SAE Level 1 car with an internal combustion engine.

In the next five years, Application Specific Chips, which include ASSPs and ASICs, would contribute to the largest growth rate in revenue for both Wireless Communication and Computing categories. In addition, Optoelectronics revenue is expected to grow significantly during the next five years. In wired communications, Intel's $2.4 billion sales (9% market share) are second only to switch silicon heavyweight Broadcom.

Foundries like TSMC and Samsung are projected to benefit the most until 2025. With a market share of over 50% in the foundry sector, TSMC is expected to have revenue growth of 10% to 15% between 2020 and 25. Intel's July 26 event laid out its processing technology and packaging roadmap including name changes, a schedule to overtake TSMC by 2024/2025, and ground-breaking technologies in 1H24. Capex should rise to the mid-20s in billions of dollars, but gross margins may be pressured. Intel's potential $30 billion deal to buy GlobalFoundries is doable and would diversify and expand its manufacturing footprint by 50%, lifting sales by 7%. It would also pinch margins by about 200 basis points. Annual CAPEX might need to rise from $19.4 billion now beyond the $25 billion area if Intel wants the combined entity to be competitive vs. TSMC.

In addition, as chip demand increases, the demand for assembly and testing services will rise, which will result in significant revenue growth for OSAT companies in 2023. Larger IDMs and fabless businesses like Intel (INTC), Texas Instrument (TXN), Nvidia (NVDA), and Advanced Micro Devices (AMD) may experience a cyclical boom because of chip scarcity.

Long-term demand for the semiconductor business is increasing because of technological advancements including 5G wireless, artificial intelligence, the Internet of Things, cloud computing, and machine learning. Going forward, further government financing and incentives will be essential

for its explosive expansion. Intel DCG develops workload-optimized platforms for computing, storage, and network functions. The industry also experienced significant growth in adjacencies driven by 5G networking deployment. There are significant opportunities in the cloud, networking, and AI. Because of these innovations, the data center market TAM2 is expected to grow to approximately $119 billion by 2025.

Financial Statements and Proformas Summary

We based our assumptions for the proformas based on the current macroeconomic environment for the semiconductor industry being tumultuous. With inflation and high-interest rates and less demand for PCs and laptops, we assumed a negative 20% growth rate YoY from 2021 to 2022. We assumed a negative 18% growth rate YoY from 2022 to 2023, given the initiation of the $10 billion cost-cutting the company has undertaken. It is reducing $3 billion in COGS and SG&A in the year 2023, but due to a recession scare and less demand for PCs, we believe that a slight 2% growth might be possible compared to the previous year. In line with this bleak projection for next year, Intel is on par with producing its 3nm chips by late 2024 or early 2025 which might boost its chip sales due to the nature of its advancement. Therefore, we expect decent revenue growth by an upscale of 5% from the previous year. We also considered the potential output from the new plant that Intel is investing in New Albany, Ohio as well as the 2nm chips that are going to be developed by 2027. We also anticipate an economic recovery from the recession in 2023 and improvements in the supply chain and therefore we project a high growth rate of 14% YoY from 2026 to 2027. Intel is also considering a $2 billion cost-cutting in R&D expenses in 2027. But overall, compared to Intel's competitors like AMD, we believe Intel will grow at a very slow pace in terms of the production of advanced chips. We used the percent of sales method for the balance sheet and the cash flow statement by taking into consideration of PP&E separate costs and some cost cut downs in the next 4 years.

DCF Valuation

Using our proforma assumptions, we arrived at a series of unlevered free cash flows and valued Intel by discounting these cash flows and adding a terminal value to the company using the Gordan Growth Model. In this perpetuity approach, we used a long-term growth rate of 3.0% by considering the US economic growth rate, inflation, Intel's international exposure, and global strategies. The model yielded a projected share price of $18.12. To arrive at the final share price, we calculated the Enterprise value to be $86,014 million and by considering the number of outstanding shares to be 4,127 million. Considering the current market price of Intel to be $29.34, our DCF valuation drives us to provide a sell rating to the company.

Relative Valuation

To calculate the relative valuation of Intel, we chose Intel's 3 closest competitors, AMD, NVIDIA, and Qualcomm. We compared the company with its competitors using three different multiples, Price/Earnings, Price/Earning-to-Growth, and EV/EBITDA. Using all these multiples our mean valuation for Intel using the P/E multiple was $16.91. The PEG multiple gives a value of $12.36 and EV/EBITDA multiples give a mean value of $76.36. Giving more weightage to the P/E multiple, based on relative valuation we calculated a mean of $16.91, and therefore considering the current market price of Intel to be 29.34, we decided to provide a sell rating for Intel.

Investment Thesis

Intel's revenue over the past few years has been a roller coaster due to factors such as an increase in market share by competitors. AMD has been consistently increasing its revenue and capturing around 30% of its market share from Intel due to the innovation of advanced chips. Intel has been slow to innovate smaller, more effective, and cheaper chips as compared to AMD.

Intel is planning to design and produce 3nm chips by late 2024 or early 2025, 2nm chips in 2027, and manufacture semiconductors for Taiwan's MediaTek, but the details of design and production are still in ambiguity.

Intel's performance in comparison to the PHLX semiconductor index has been low. The index declined by 30.28% YTD whereas Intel's stock has declined by 43.03% YTD.

The semiconductor industry currently is facing turmoil due to less demand in personal computer space. Although the electric automobiles sector is upcoming, intel's core business is the client computing group. During the pandemic, the company saw a huge upscale in its revenue due to a surge in demand for laptops and personal computers due to a sudden need for online education and work-from-home modes. Looking at the current market scenario, the semiconductor industry is coming down to pre-pandemic levels and the company is losing profit.

Intel's revenue dropped by 20% from 2021 to 2022 due to factors concerning lower demand, inflation, higher interest rates, and a continuously deteriorating macroeconomic environment. Based on our projections of Intel for the next 5 years, FCF is uneven due to the cost-cutting changes the company has undertaken. The $10 billion cost-cutting saves the company from a lot of turmoil, but still, NOPAT values are coming down based on our DCF model. Although we see an increase in 2027 due to the release of 2nm chips, the design, sourcing, and production plans are still in ambiguity.

Given the market sentiment and the potential of the public to gain confidence in Intel's ability to execute its core business operations, we believe Intel will be an under-performer relative to its peers over the next 5 years, which drives our underweight rating on INTC. It is important to note that INTC might have a good come-back based on its investments in advanced chips, but we believe it will be at a very slow pace compared to its peers.

Business Risks

Interest Rate Risk

Intel has a fixed-interest rate investment portfolio. The company enters into a contract where it exchanges fixed coupon payments on the debt with maturities longer than six months with US Dollar 3-month LIBOR-based returns. The company also enters into swaps to convert fixed-rate coupon payments into floating-rate coupon payments for the company's indebtedness.

Any gains or losses incurred by Intel due to volatility in the LIBOR rates can be offset by corresponding losses or gains on the related hedging instruments.

Intel is also subject to interest rate risks due to the cessation of the US Dollar LIBOR. Various derivatives and investments of the company are linked to LIBOR and with the cessation of LIBOR, the transition to alternative reference rates can expose the company to an increase in interest expenses and a reduction in interest income. The company plans to eliminate the use of LIBOR from existing contracts from June 30, 2023.

Currency Exchange Rate Risks

Intel is potentially exposed to adverse as well as beneficial movements in currency exchange rates. A major portion of Intel's revenue occurs in U.S. dollars, expenses may be paid in local currencies. Appreciation in the U.S. dollar can increase the real cost to the customers of our products in those markets outside the U.S. where Intel sells in dollars, and a depreciated dollar can increase the cost of expenses as well as overseas capital expenditures. The European Union euro, the Israeli shekel, the Malaysian ringgit, the Japanese yen, and the Chinese yuan are the foreign currencies used for operational costs and capital purchases. The company is also conducting certain investing and financing activities in local currencies. Intel's hedging programs reduce, but do not eliminate the impact of currency exchange rate movements; therefore, changes in exchange rates could harm the results of operations and financial conditions.

Political Risks

In the coming future, if there's the slightest possibility that China attacks and takes control of Taiwan, the main source of semiconductor industry manufacturing will be taken control by China and the country can use this opportunity to shut down the supply of semiconductor chips from Taiwan Semiconductor Industry (TSMC) to US major companies like Apple and AMD. This catastrophe can result in a huge decline in the semiconductor industry, which impacts all the other major industries of the US and might potentially reduce the US GDP by 5-10% and send the entire US economy into a depression.

Risk to Investment Thesis

Based on our proformas and investment thesis there can be ambiguity risks associated with assumptions, i.e., if Intel is able to produce the 3 nm chips and the 2 nm chips before the actual release year, 2027, then their revenue might increase which in turn will create more value and can drive the intrinsic to a buy. Also, if inflation comes down quickly, it will increase their product sales. Intel can grab the market share from AMD if AMD loses its outsourcing from TSMC. The revival of the semiconductor industry can be a valuable addition to Intel because it can create vast opportunities for the introduction of automation chips, which is Mobileye's forte, where Intel holds the majority of ownership.

Economic, Social, and Corporate Governance (ESG) Regulations

The most commonly used minerals in consumer electronics originate from so-called "conflict minerals." These are tin, tantalum, tungsten, and gold (abbreviated 3TG). Unfortunately, some of the largest deposits of these minerals are located in the Democratic Republic of Congo (DRC), a nation in which armed insurgent groups terrorize the locals to benefit from these resources while exploiting the local population. Intel has recently committed to a Responsible Minerals Initiative (RMI) in which they hope to work with miners and smelters who meet certain criteria in order to not only enhance their supply chain but also improve the lives of the people who live in the regions where the minerals are located. Intel would like to make sure that no human rights are being violated in the process of extracting the minerals necessary for creating their semiconductors (i.e., responsibly sourced minerals).

Intel also hopes to go green by constructing "green," eco-friendly buildings intended to minimize energy consumption and water usage and encourage recycling. For product development, Intel hopes

to eliminate hazardous materials from its products and manufacturing. They meet several criteria put forth by regulations across the world, including the European Union's REACH regulation. In their energy conservation efforts, starting in January 2020, they are aiming to save up to 4 billion kWh of electricity by 2030, saving $30 million. In 2021, they saved a cumulative of 486 million kWh, and are projected to save another 100 kWh by the end of this year.

Intel's governance is committed to a diverse, inclusive, workplace and ethical workplace practices. In fact, this year, they were included on Ethisphere Institute's annual list of the most ethical companies for the 12th year in a row. Their commitment to ethics ties back to their eco-friendly and responsible mineral sourcing initiatives outlined earlier. They are also committed to anti-corruption, transparency, and accountability. They were named a "trendsetter" in the 2021 CPA-Zicklin Index of Corporate Political Disclosure and Accountability.

Appendix

DCF Model

Discounted Cash Flow Valuation

$ and shares in millions, except per share data	DD-MM-YYYY		
Most recent fiscal year end	31-12-2021	Discount rate (WACC)	7.5%
End of first fiscal year	31-12-2022	Share price (Public Co)	$29.34
Most recent quarter end date	Oct-22	Share price date	11-23-2020
Valuation date	12-2-22	Midyear adjustment?	0
Portion of year 1 cash flows in forecast	8.1%		

Unlevered Free Cash Flows

	Actual	Forecasts					
Fiscal year ended	12-31-21	12-31-22	12-31-23	12-31-24	12-31-25	12-31-26	12-31-27
Revenue	79,024	63,219	64,800	68,751	74,283	80,604	90,087
% growth		-20%	3%	6%	8%	9%	12%
EBITDA	29,409	13,007	16,332	17,625	18,763	16,584	23,526
% margin	37.2%	20.6%	25.2%	25.6%	25.3%	20.6%	26.1%
EBIT	19,456	5,042	8,168	8,963	9,404	6,428	12,175
% margin	24.6%	8.0%	12.6%	13.0%	12.7%	8.0%	13.5%
Tax on EBIT	2,577	625	1,013	1,111	1,166	797	1,510
Tax rate	13.2%	12.4%	12.4%	12.4%	12.4%	12.4%	12.4%
NOPAT (aka EBIAT)	**16,879**	**4,416**	**7,155**	**7,851**	**8,238**	**5,631**	**10,665**
Depreciation & amortization	9,953	7,966	8,165	8,663	9,360	10,156	11,351
Changes in net working capital	7,761	(15,842)	360	901	1,261	1,441	2,162
Capital expenditures	(20,329)	(13,530)	(13,868)	(14,714)	(15,898)	(17,251)	(19,280)
Unlevered free cash flows (UFCF)		**(16,990)**	**1,812**	**2,701**	**2,961**	**(22)**	**4,898**
Net working capital (WC Assets - WC liabilities)	30,256	14,414	14,774	15,675	16,936	18,378	20,540
as % of revenue	38.3%	22.8%	22.8%	22.8%	22.8%	22.8%	22.8%

Present value of UFCF on Dec 02, 2022 valuation date

		Val date	Yr 1 - Stub	Year 2	Year 3	Year 4	Year 5	Year 6
Date for discounting cash flows		02-12-2022	31-12-2022	31-12-2023	31-12-2024	31-12-2025	31-12-2026	31-12-2027
Unlevered free cash flows (UFCF) stub adj	8.1%		(1,369)	1,812	2,701	2,961	(22)	4,898
Present value of of unlevered free cash flows			**(1,361)**	**1,676**	**2,323**	**2,369**	**(17)**	**3,392**

Terminal value - growth in perpetuity approach	
Long term growth rate	3.0%
2027 FCF x (1+g)	5,045
Terminal value in 2026	1,12,115
Present value of terminal value	77,631
Present value of stage 1 cash flows	8,382
Total enterprise value (TEV)	**86,014**
Terminal value as % of TEV	*90.3%*
Stage 1 cash flows as % of TEV	*9.7%*
Implied TV exit EBITDA multiple	*4.8x*

Net debt	
Source doc	Q3 2022 10Q
Source date	14-11-2022
Gross debt and equivalents	
Debt	39,523
Convertible debt	0
Preferred stock	0
Noncontrolling (minority) interests	0
Nonoperating assets	
Cash	28,413
Equity investments	0
Net debt	**11,110**

Shares outstanding			
	Source doc	Date	Shares
Basic shares	Q3 2022 10Q	10-01-2022	4,127.000
Restricted stock / RSUs	Q3 2022 10Q	12-31-2021	7.000
Options / warrants			0.000
Convertible debt			0.000
Convertible preferred stock			0.000
Net diluted shares outstanding			**4,134.000**

Valuation	
	Perpetuity
Enterprise value	86,014
Net debt	*11,110*
Equity value	74,904
Shares outstanding	4,134
Equity value per share	**$18.12**

Relative Valuation

x **Relative Valuation**

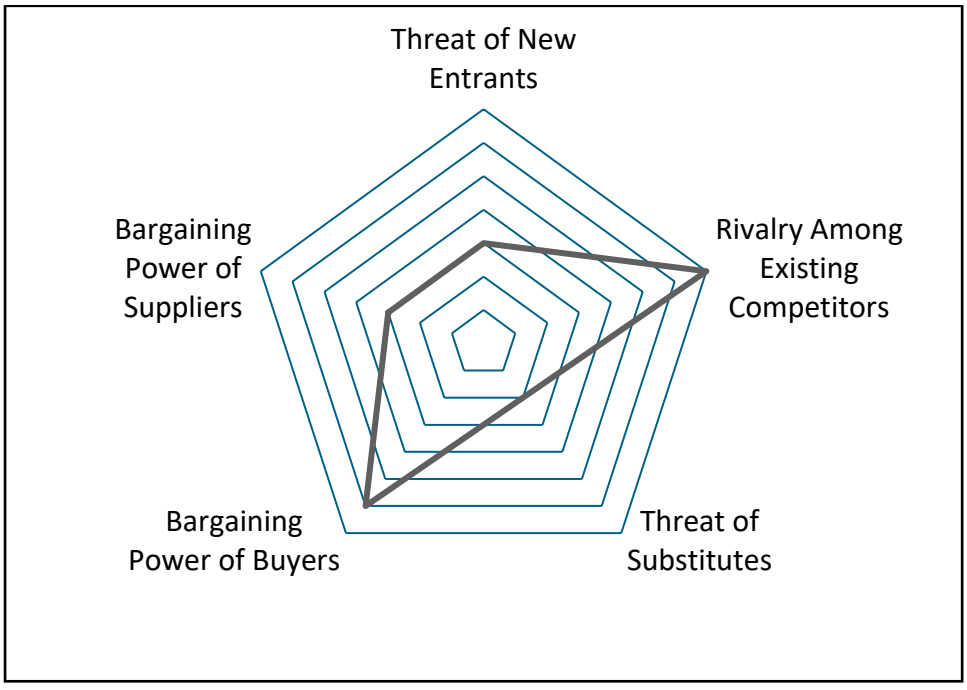
Share Price	$	29.34
Share Price Date		11-23-2022
Net Income (2022)	$	2,788.70
Common Shares Outstandi		4,127.0
EPS	$	0.68
EBITDA	$	13,007
Net Debt	$	11,110
Annual EPS growth rate(%)		-86%

Peer Firm	P/E NTM	PEG	EV/EBITDA
AMD	22.78x	0.68x	16.88x
NVIDIA	40.03x	2.26x	43.12x
Qualcomm	12.28x	0.86x	10.12x
Mean	25.03x	1.27x	23.37x
Median	22.78x	0.86x	16.88x
Maximum	40.03x	2.26x	43.12x
Minimum	12.28x	0.68x	10.12x

Intel	P/E	PEG	EV/EBITDA
Mean	$ 16.91	$ (73.23)	$ 76.36
Median	$ 15.39	$ (49.72)	$ 55.89
Maximum	$ 27.05	$ (130.66)	$ 138.59
Minimum	$ 8.30	$ (39.31)	$ 34.59

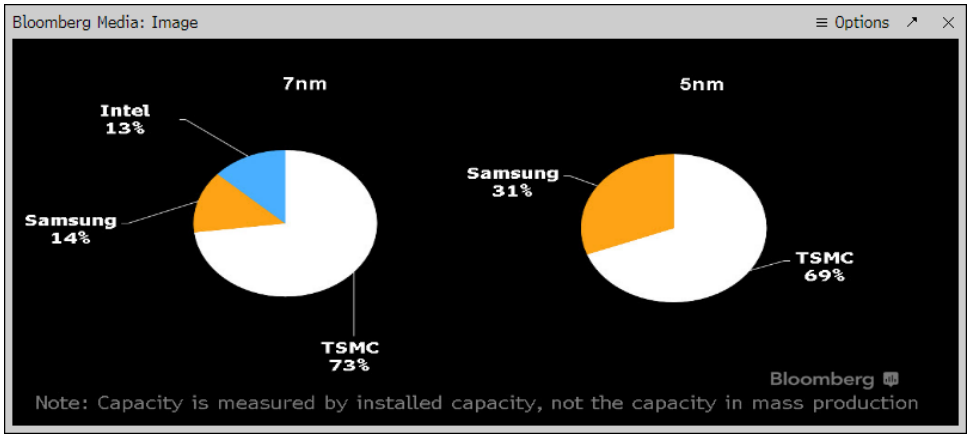
		Implied Value	Weightage
Mean of P/E	Relative Valuation	$ 16.91	30%
DCF	Intrinsic Value	$ 18.12	70%
	Weighted Valuatio		**$ 17.76**

Porter's Five Forces Analysis for Intel



Threat of new entrants (Medium): The threat is medium as the new entrants will find it difficult to set up and compete against Intel, but existing tech companies are setting up new plants to produce semiconductor chips like Apple and Tesla.

Rivalry among existing competitors (High): The rivalry among competitors in the semiconductor industry is high. Intel has high competition with AMD and Samsung in the manufacturing of semiconductors. International firms such as TSMC and SMIC are also competing with Intel on a global level. Intel has been lagging behind Samsung and TSMC in the manufacturing of 7nm chips and 5nm chips. The competition will only intensify as companies will start developing the 3nm chips.



Bargaining power of Suppliers (Moderately Low): In the case of Intel, the bargaining power of suppliers is moderately low because of different factors. First and foremost, the reason is the number of suppliers, there are many suppliers who provide the same raw material. Intel, being a large corporation having enormous financial strength, helps to have an upper hand against the suppliers.

Bargaining Power of Customers (Moderately High): In recent times, the bargaining power of buyers has increased exponentially. Customers now are more informed and have a number of options to choose from. The company providing cheaper and better products is preferred by the customers. As the competition in the semiconductor industry has become so intense, there has been an increase in the bargaining power of customers. As a result, companies must spend more on marketing and research & development of the products.

Threat of Substitutes (Moderately Low): Threats of being substituted for Intel are moderately low. Firms such as AMD and Taiwan Semiconductor Manufacturing Company are the strongest competitors for Intel and have been capturing Intel's market share. But matching the product portfolio and overall capabilities of Intel is quite difficult for the competitors.

Citations and References

- *Bloomberg News Articles*
- *Bloomberg Data for Intel, AMD, and the industry*
- *Capital IQ*
- *Intel 10K reports*
- *Intel 10Q reports*
- *Intel earnings call reports*
- *Wall Street Journal*
- *Yahoo Finance*