

Analyst								
Travis Wiedmeyer								
(262)-365-4452								
Wiedme23@uwm.edu	r							
Updated: 3/9/2017								
Recommendation: BUY								
Target Price:	\$130							
Expected Return:	33%							
Downside Risk:	17%							
Price at Initiation:	\$107.23							
Stock Data								
Ticker Symbol:	NVDA							
Current Price:	\$102.55							
52 Week Range:	31.04-120.92							
Market Cap:	\$58.16B							
Shares Outstanding:	649M							
Company Metrics								
P/E (NTM)	30.7X							
Debt/Ebitda	1.3X							
Payout Ratio	18%							

### **Business Description**

NVIDIA Corp. (NVDA), headquartered in Santa Clara, CA, is a hardware manufacturer in the semiconductor industry. NVDA operates in two main segments; Graphic Processing Unit and their revolutionary Tegra Processor and are industry leaders in verticals including gaming and datacenter. Strong strategic positioning has led to tremendous growth opportunities going forward.

### NVDA Investment Thesis Summary

I believe that NVDA provides an attractive investment opportunity. I believe that consensus revenue growth undervalues the growth potential in multiple industries including autonomous driving and cloud services. NVDA's strong positioning within these industries will lead to exceptional revenue growth as well as continuing expansion of operating margins.

Using a multiple stage DCF analysis and the value I believe derives from growth in the datacenter and auto industries I have constructed a price target of \$131 which provides an upside return of 31%.

### Risk to Investment Thesis Summary

NVDA's current price to earnings of 30.6x is

significantly higher than their peer average of 25.5x. Using a relative valuation with regression to the peer average provides a forecasted price \$82. Other main risks to my NVDA investment thesis include dependence on customer growth, the price of memory, and competition within the semiconductor industry.

	Conse	ensus	My View		
	2018E 2019E		2018E	2019E	
Revenue	\$ 7,208	\$ 7,885	\$ 8,232	\$ 9,439	
Op. Income	2,269	2,560	2,684	3,115	
Net Income	1,748	1,990	2,093	2,450	
EPS	\$ 2.69	\$ 3.07	\$ 3.22	\$ 3.78	



### **Industry Analysis**

The semiconductor industry is a key driver for technological progress and thus is a direct driver to the technology sector. Strong technological movements into artificial intelligence, cloud services, and autonomous driving are powered through semiconductors and the advances in hardware. Major players in the technology sector including Google, Facebook, Amazon, and

#### Exhibit 1



Source: Factset

#### Exhibit 2



Source: Factset (numbers in millions)

Microsoft all rely on semiconductors to power their servers and services.

Exhibit 1 shows the consensus revenue growth estimates as well as the consensus capital expenditure growth estimates for the leaders in the technology sector. Due to the nature of general capital expenditures of these companies we can draw the conclusion that increased capital expenditures should lead to increased revenues in the semiconductor industry. Along with these companies and their technology peers, semiconductor revenues are experiencing strong growth potential through expansion of use into new industries.

Exhibit 2 shows the consensus revenue growth estimates for the US semiconductor industry. Growth is expected to be heavily influenced by new and further adaptation of semiconductors into industries including health care and financial services. Along with horizontal expansion into new industries, continued vertical expansion in already strong verticals will contribute to overall industry revenue growth. Innovations into deep learning through semiconductors are pushing the capabilities of multiple technological products and services and thus driving up overall demand across the industry. This will lead to some shuffling in the industry as the leaders in deep learning technology will see increase in overall market share.



Exhibit 3 gives a representation of the current breakdown of market share between the 7 largest individual companies in the US semiconductor industry. As stated above this

#### Exhibit 3



breakdown looks to be subject to change in the next few years due to slight shift in demand from the industry to newer technologies. The semiconductor industry, just as the technology sector is heavily tied to research and development and constant innovation. An individual company can quickly gain or lose market share based on innovation or lack thereof. This indicates that capital expenditures are an important factor when analyzing the position of companies within the semiconductor industry and future growth potential they may possess.

The performance of the semiconductor industry is directly tied to multiple factors. The first of these factors is the overall price of memory. The memory supply and demand curve has shown to be very volatile and sensitive in the recent past but forecasts show that prices should continue to grow in the next year. It is generally regarded that the top three suppliers in the DRAM industry, Samsung, SK Hynix, and Micron, have a strong competitive advantage and the ability to control the overall supply of DRAM. Trendforce is forecasting that the growth rate of the supply of DRAM for 2017 will be 20%, which is a historic low in the industry. This coupled with steady increases in demand look to forecast a continued increase in the overall price of memory.

A second general risk to the semiconductor is the performance of their customers based on sales of services and products. It can often be seen that semiconductor securities are traded as a derivative of the success and failure realized by the consumer products powered through their technology. This leads to high volatility within the industry related to earnings season and product releases. Exhibit 4 shows the correlation between the performance of the NASDAQ US Large Cap Semiconductor Index (black) and the NASDAQ US Benchmark Internet Index (blue).







### **Business Overview**

NVIDIA Corp. operates as a designer and manufacturer of semiconductors by way of their Graphic Processing Unit (GPU) and their Tegra Processor system. NVDA serves customers including original product manufacturers, distributers, and service providers globally.

Exhibit 5							
Name	Symbol						
Alphabet Inc.	GOOGL						
Amazon	AMZN						
Audi AG	NSU						
Daimler AG	DAI						
Dell	DVMT						
Facebook Inc.	FB						
IBM	IBM						
Microsoft	MSFT						
Netflix	NFLX						
Tesla	TSLA						
Apple	APPL						
Volvo AB	Volv.B						
Volkswagen AG	VOW						

Exhibit 5 shows a list of the most prominent customers currently utilizing NVDA products. An examination of the list reveals that NVDA is a direct supplier to many of the industry leading manufacturers and services providers across multiple sectors. NVDA divides their revenues into 5 separate segments including gaming, data visualization, datacenter, auto, and mobile/PC OEM.

**Gaming:** This operation segment consists of GPU's used both within consoles and computers as well as monitors. Also, strong movement has been made into phones and tablets to increase the capabilities of mobile gaming. The gaming segment represented 61% of NVDA total revenues in fiscal year 2017 and looks to remain relatively steady as shown through my projections in exhibit 6. GPU sales in the gaming segment increased 40% for fiscal year 2017 and look to continue strong

growth based on a combination of continued strength in PC gaming and the rise of eSports. New G-Sync HDR as well as Pascal-based GPU technology is continuing to be adopted and upgraded too by the gaming community.



#### Exhibit 6

Source: Factset, Forecasts (numbers in millions)



**Data Visualization:** This operation segment consists of Quadro GPU technology used in highend desktops and utilized by a variety or professions including engineers, designers, architects, and artists. This technology allows these professionals to utilize the most innovative fluid simulation, deep learning, and overall supercomputing. In fiscal year 2017, the data visualization segment accounted for 13% of NVDA's overall revenue and experienced 11% growth within the segment during the period. Growth within data visualization looks to remain steadily moderate based on the recent release and adaptation to the new Quadro GP-100 system.

**Datacenter:** This operational segment includes GPU Instances, High Performance Computing, GRID graphics virtualization, and NVDA's NGX AI supercomputing appliance. This segment is the leading innovator in the artificial intelligence and cloud services industries and NVDA products are being adopted by all major players. Deep learning capabilities available through NVDA products and the resultant AI innovation are already used throughout multiple industries and look to produce strong growth as adaptation continues across multiple fields. The datacenter segment represented 13% of overall revenue for NVDA fiscal year 2017 and projections look to see this segment substantially increase this figure in the upcoming years as shown by exhibit 6. Growth in the datacenter segment for 2017 was 145% with substantial growth estimates forecasted going forward. Cloud services and AI technology look to be primary drivers in the technology sector over the next 5 years.

**Auto:** The auto segment consists of the Tegra Processor system which is used in multiple AI car platforms. The NVIDIA DRIVE PX2 platform has already been adopted my multiple automakers and looks to be rolled out in more new models during the 2018 fiscal year. Companies currently using NVDA technology in models on the road and to be released this upcoming year include Tesla, Volvo, Mercedes Benz, and Audi. Given the success and innovation of the platform, this segment looks to continue significant growth due to more adoption within the auto manufacturing industry. The auto revenue segment constituted 7% of total revenues for NVDA and looks to remain steady even through significant growth. Auto segment growth for fiscal year 2017 was 50% and forecasts to continued significant growth in the next 5 years.

**Mobile/PC OEM:** This operational segment consists of Tegra Processors used in OEM smartphones and tablets as well as GForce GPU products used in mainstream OEM PC's. This segment has seen declining growth and fiscal year 2017 seen a decline in revenues of 11%. This segment forecasts to continued minimal to negative revenue growth. The OEM segment represented 7% of total NVDA revenues for 2017 and looks to decrease to 5% by 2020 according to my estimates shown in exhibit 6.



**Operating Margins:** NVIDIA has seen significant increase to their operating margin in the last year and it looks to continue to expand going forward. Fiscal year 2017's operating margin of 28% shows an 88% percent increase from the previous 2016 year. This increase is a direct

#### Exhibit 7



result of NVDA's strategic positioning and the previous capital expenditures associated. NVIDIA's management has done an exceptional job of allocating capital to insure they are driving innovation and the result is their strong position is extremely opportunistic verticals. Operating margins look to continue to grow as general operating expenses remain relatively stable through a strong revenue growth period.

The relatively stable general operating costs and expanding margins look to be somewhat offset by continued capital

Source: Factset, Forecasts

expenditures into research and development. Management is committed to continued investing into innovation to ensure that NVDA retains its strong position within the industry and increases overall market share going forward. In their recent Q4 conference call, NVDA management stated that they forecast their operating expense growth to be in the high teens over the next several quarters due to these commitments.

#### **Investment Thesis**

The gaming, datacenter, and auto segments will see growth higher than expected due to an underestimation of demand in consumer products and services. In 2016 NVIDIA recorded a historically good year based on the beginning of the realization of years of investing and positioning. The company now holds strong positions within some of the highest growth potential verticals in the technology sector. Movements into artificial intelligence, deep learning, and autonomous driving forecast to be the primary technological drivers for the next 5 years and will surely be the basis for future movements. NVDA management has proven to be more than adequate at allocating capital to remain innovative and competitive in an everchanging market. Given these factors as well as the forecasted revenue growths of customers at the consumer level the consensus estimates forecast strong growth, I believe they are undervaluing the growth within the gaming, datacenter, and auto segments going forward. I believe that a quarterly forecast for 2018 shows that the consensus is overly conservative on segment growth within the three segments listed above which leads to an understatement of the total revenues.



#### Exhibits 8-11

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Source: Factset, Forecasts (numbers in millions)

Exhibit 8 shows the overall differences between the consensus estimates and mine in terms of total revenues for the next three years.

I believe the consensus tends to be overly conservative on the gaming segment with the sentiment being that the gaming industry and market is mature and will see declining growth. I feel that the recent and forecasted growth of the new eSports industry is not being fairly valued into the revenue growth that NVDA will see from their gaming segment. 2016 revenue for the eSports industry was 500 million with forecasted revenues reaching 5 billion by 2020. This will lead to increases in demand for NVDA GPU's based on increase in usage as well as increased turnover as leagues look to remain at the cutting edge of innovation to stay relevant in a rapidly moving market. Exhibit 9 shows the differences of my estimates against the consensus based on this difference in valuation.

Similarly, I believe that the consensus is undervaluing the growth potential of the datacenter. The sentiment for this segment is overall very positive but I feel once again that the turnover increase is underestimated. As deep learning progresses and more daily use objects become reliant on it there will be little choice but to remain in stride with advances. Al looks to be heavily integrated into daily life both at the consumer level as well as the institutional level within the next decade which will lead to this reliance. NVDA looks to benefit greatly from this increase in demand and turnover in the next 3 years based on their strong competitive positioning. Exhibit 10 shows my optimism in datacenter estimates compared to the consensus.



I also believe that the consensus estimates of auto segment revenues for the upcoming 3 years undervalue the very strong strategic position that the management at NVDA has procured between both auto manufacturers as well as other suppliers to the manufacturers. Along with the aforementioned partnerships with Mercedes Benz, Volvo, Tesla, and Audi, NVDA has also formed crucial partnerships with companies such as Bosch, ZF, TomTom, and Baidu. These partnerships and others give NVDA a strong position both vertically and horizontally across the automotive industry. Along with the positioning, the proven performance of their auto platforms insures that NVDA will be a strong partnership candidate for future manufacturers making their own moves into autonomous driving. Exhibit 11 reflects my optimism in the auto segment with regard to the consensus estimates.

**Operating margins will continue to expand greater than consensus even given continued increases in capital expenditures.** The consensus estimate is that operating margins will remain relatively stable during the next 3 years. This is based on the sentiment that the



Source: Factset, Forecasts

operating expenses will experience significant growth rates due to capital expenditures. While I agree with the overall sentiment I feel confident that operating margins will continue to expand in the next 3 years. NVDA management is committed to increasing efficiency along with their commitment to research and development. I feel that the increase in efficiency realized through their commitment to R&D is undervalued and will result in a strong offset to the initial capital expenditures. I believe that this

expansion of operating margins will also help to mitigate the risk of NVDA's high price to earnings ratio which I discuss below in the risks to investment thesis section.

### Risks to Investment Thesis

**NVDA's high P/E compared to peer average gives them an overvalued rating in relative valuation.** NVIDIA currently has a price to earnings ratio of 30.6x for the next twelve months compared to an average of 25.5x of their closest peers. This is somewhat skewed given their closest peer and competitor AMD reported negative earnings and thus has a negative P/E. A relative valuation with a regression to peer average P/E for NVDA produces a 12-month price target of \$82.12 or an overvaluation of -17%. As stated above I feel that continued expansion in operating margin will help to correct this overvaluation and mitigate risk.



Exhibit 13 shows the positive correlation of P/E to EBIT margin between NVDA and its peers in the US semiconductor industry. As stated above you can see the current overvalued state of NVDA but you can also see that the regression, indicated by R squared, is skewed by the recent

#### Exhibit 13



erratic nature of NVDA's price. Given NVDA's current forward P/E of 30.7x compared to the graphed trailing P/E of 38.1x you can see that expansion of the operating margin will reduce regression and help push NVDA to a more fairly valued position according to relative valuation.

Given the ability to more accurately adjust the forecasts I also used a multiple stage Discounted Cash Flow analysis to value NVDA. The information regarding my DCF model is below in the valuation section and produces the price target used for this report.

NVIDIA's share price is tied to customer performance leaving NVDA often volatile based on earnings reports and other news stories. NVDA often finds its equity traded as a derivative of the performance of their customer's products and services. An example of this is March 3-March 6 when NVDA seen a 4% decrease in price due to analyst sentiment that Nintendo's new Shift console powered by NVDA GPU's would underperform in sales. Exhibit 14 shows this occurrence that the volatility that resulted.



#### Exhibit 14



**Competitors successfully moving into key NVDA positions in deep learning, AI, and auto.** As stated above, much of this investment thesis is based on key positions held by NVDA in multiple verticals that are the result of strategic movement and capital expenditure. The drivers of this thesis leave a significant amount of risk to competition. I believe, however, that NVIDIA has sufficiently insulated itself to this risk for the next three years. The capital expenditures and especially the research and development needed to reach the advantage that they currently have makes time a natural barrier to short-term entry into the positions that NVDA holds. I also believe that NVDA management's commitment to continuing innovation through R&D will insure that their competitive advantage remains for the near future.

Less consumer discretionary spending due to general economic slowdown and rising interest rates. There is some general sentiment throughout the industry that the market is nearing the end of its current bull cycle and is approaching a slowdown. History has shown overall bear markets to have a particularly negative effect on both technology companies and the automotive industry. The consumer discretionary spending that drives the markets in these industries is decreases significantly during bear cycles.

This spending has also historically been negatively affected by increases in interest rates as the price of lending and the return on investment increase. The probability of the Federal Reserve to raise interest rates at next week's March meeting is now above 90% based on the general consensus and forecasts are predicting more interest rate hikes in the near future.



#### Valuation

Given the ability to more accurately use financial forecasts to predict future price, I chose to use a multiple stage Discounted Cash Flow model to find an absolute valuation and target price. Using the revenue and operating margin forecasts discussed in the investment thesis I arrived a target price of \$130.24 which provides an upside return of 27%. I calculated cost of equity for WACC at 11.13% using a Capital Asset Pricing Model and cost of debt at 1.4%. Using these figures, I calculated a Working Average Cost of Capital of 7.86%. Risk free rate used was current price of US 10yr Treasury and unlevered beta was found on Damodaran Online (Beta by Sectors, Semiconductors).

NVIDIA Discounted Cash Flow Forecast

	2018E	2019E	2020E	2021E	2022E	2023 E	2024E	2025E	2026E	2027
Revenue	8232	9439	12007	13448	14793	15976	16935	17781	18493	1904
Growth Rate	19.13%	14.66%	27.20%	12.00%	10.00%	8.00%	6.00%	5.00%	4.00%	3.009
Adjusted EBIT	2684	3119	4151	4644	5108	5592	5927	6223	6472	6667
Operating Margin	32.60%	33.04%	34.57%	34.53%	34.53%	35.00%	35.00%	35.00%	35.00%	35.009
Tax Rate	17.00%	17.00%	17.00%	17.00%	17.00%	17.00%	17.00%	17.00%	17.00%	17.009
NOPAT	2228	2589	3445	3855	4240	4641	4920	5165	5372	5533
Add: D&A	391	433	532	588	581	615	652	685	712	733
Less: Capex	-287	-330	-420	-471	-518	-559	-593	-622	-647	-66
ΔNWC	-2	-7	-16	-9	-8	-160	-169	-178	-185	-190
FCFF	2333	2699	3573	3981	4310	4857	5148	5406	5622	579
Growth Rate		15.70%	32.37%	11.42%	8.29%	12.67%	6.00%	5.00%	4.00%	3.00%
3/15/17	1/31/18	1/31/19	1/31/20	1/31/21	1/31/22	1/31/23	1/31/24	1/31/25	1/31/26	1/31/27
CF Years	0.882	1.882	2.882	3.882	4.882	5.882	6.882	7.882	8.882	9.882
PVIF	0.9354	0.8673	0.8041	0.7455	0.6912	0.6408	0.5941	0.5508	0.5107	0.473
PV of FCFF	2182	2341	2873	2967	2979	3112	3059	2978	2871	274

DCF Assumptions							
L/T Growth Rate	2.50%						
Capex/Revenue	3.50%						
∆NWC/Revenue	-1.00%						
D&A/Capex	110.00%						
Tax Rate	17.00%						
WACC	7.86%						
Shares Outstanding	649						
EV/EBITDA	16						

Terminal Mult Terminal Value

PV of Term, Value

Enterprise Value

Expected Upside

PVIF

PV FCF's

(-) Debt

(+) Cash

Equity Value
NVDA Share Price \$

118399

0.4735

56060

28104

84163

6,798 88145

135.82

37%

2816

Gordon Growth Model								
Terminal Value FCF	110750							
PVIF	0.4735							
PV of Term. Value	52438							
PV FCF's	28104							
Enterprise Value	80542							
(-) Debt	2816							
(+) Cash	6,798							
Equity Value	84524							
NVDA Share Price	\$ 130.24							

#### Expected Upside 31%

CAPM 8 50%	Market Rate Assumption
	Risk-Free Rate
	Market Risk Premium
1.43	Beta
8.76%	Stock Risk Premium
2.37%	Risk-Free Rate
11.13%	Cost of Equity Capital

Beta	
0.96	Unlevered Beta
48.87%	Debt/Equity
1.43	Levered Beta

Source: Forecasts

Cost of Debt Analysis	Outstanding	Coupon	Price YTM		Convertible	
2018 NVIDIA Note	1428	1.00%	457	0.22%	Yes	
2021 NVIDIA Note	1000	2.20%	98.52	2.23%		
2026 NVIDIA Note	1000	3.20%	97.17	2.26%		
Total	3428			1.40%		

Debt/Capital	32.83%
Equity/Capital	67.17%
Tax Rate	17.00%

WACC

7.86%

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Relative P/E Valuation		
	P/E (NTM)	
NVDA-Current Data	30.57	
Peers		
AMD		
Intel	17.12	
Qualcomm	17.21	
Ambarella	45.49	
Texas Instruments	22.06	
Peer Average	25.47	
Peer Median	19.64	
	2018	2019
NVDA Projected Price with Progression to Peer P/E	82.12	96.17
NVDA Projected Price with Current P/E	98.56	115.42

	Revenue CAGR										
		5%	7%	9%	11%	13%	15%	17%	19%	21%	
gi	29%	2.48	2.53	2.59	2.64	2.69	2.74	2.79	2.84	2.89	
Margin	30%	2.58	2.63	2.68	2.73	2.79	2.84	2.89	2.95	3.00	
۷ b	31%	2.67	2.72	2.78	2.83	2.89	2.94	3.00	3.05	3.11	
atir	32%	2.76	2.82	2.87	2.93	2.99	3.04	3.10	3.16	3.21	
Operating	33%	2.85	2.91	2.97	3.03	3.09	3.15	3.20	3.26	3.32	
0	34%	2.95	3.01	3.07	3.13	3.19	3.25	3.31	3.37	3.43	

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		2.60	2.70	2.80	2.90	3.00	3.10	3.20	3.30	3.40	3.50
	24	62.40	64.80	67.20	69.60	72.00	74.40	76.80	79.20	81.60	84.00
	25	65.00	67.50	70.00	72.50	75.00	77.50	80.00	82.50	85.00	87.50
	26	67.60	70.20	72.80	75.40	78.00	80.60	83.20	85.80	88.40	91.00
	27	70.20	72.90	75.60	78.30	81.00	83.70	86.40	89.10	91.80	94.50
	28	72.80	75.60	78.40	81.20	84.00	86.80	89.60	92.40	95.20	98.00
P/E	29	75.40	78.30	81.20	84.10	87.00	89.90	92.80	95.70	98.60	101.50
6	30	78.00	81.00	84.00	87.00	90.00	93.00	96.00	99.00	102.00	105.00
	31	80.60	83.70	86.80	89.90	93.00	96.10	99.20	102.30	105.40	108.50
	32	83.20	86.40	89.60	92.80	96.00	99.20	102.40	105.60	108.80	112.00
	33	85.80	89.10	92.40	95.70	99.00	102.30	105.60	108.90	112.20	115.50
	34	88.40	91.80	95.20	98.60	102.00	105.40	108.80	112.20	115.60	119.00
	35	91.00	94.50	98.00	101.50	105.00	108.50	112.00	115.50	119.00	122.50

Source: Forecasts



### Statements

Fiscal Year	2013A	2014A	2015A	2016A	2017A	Q1 2018E	Q2 2018E	Q3 2018E	Q4 2018E 2	018E 20	019E 2	020E	2021E 20	22E
Fiscal Year End Date	1/31/13	1/31/14	1/31/15	1/31/16	1/31/17	4/30/17	7/30/17	8/31/17	1/31/18	1/31/18	1/31/19	1/31/20	1/31/21	1/31/22
Income Statement														
Total Revenues	4280	4130	4682	5010	6910	1909	1958	2095	2270	8232	9439	12007	13448	14793
Revenue Period over Period Growth %	13.00%	-3.50%	13.35%	7.02%	37.92%	-12.16%	2.60%	6.97%	8.36%	19.13%	14.66%	27.20%	12.00%	10.00%
Gaming					4,013	1,107	1,129	1,219	1,341	4,797	5,277	6,860		
Data Visualization					835	207	209	217	228	862	888	941		
Datacenter					830	317	342	376	414	1,449	2,029	2,840		
Auto					487	127	134	145	157	563	675	824		
Mobile/PC OEM					434	151	144	137	130	562	571	543		
Cost of Goods Sold	1,828	1,623	1,862	2,002	2,626	688	711	760	825	2,985	3,437	4,391	4,926	5,484
D&A Expense	226	239	220	197	221	94	92	99	105	391	433	532	588	581
Gross Profit	2,226	2,268	2,599	2,811	4,063	1,126	1,155	1,236	1,339	4,857	5,569	7,084	7,934	8,728
Operating Expenses	1,578	1,772	1.840	2.064	2.129	515	523	545	590	2,173	2,454	2,942	3,295	3,624
Operating Income	648	496	759	747	1.934	611	633	691	749	2.684	3.115	4,142	4,640	5,103
Non Op Interest Income	20	17	28	39	54	14	14	14	14	56	56	57	57	57
Interest Expense	(3)	(10)	(46)	(47)	(58)	(14)	(14)	(15)	(15)	(58)	(58)	(58)	(58)	(58
Other Income/(Expense)	(3)	7	14	4	(25)	2	2	2	2	8	8	8	8	8
Pretax Income	662	510	755	743	1.905	613	635	692	750	2,690	3,121	4,149	4,647	5,110
Income Tax Expense	100	70	124	129	2,505	104	108	118	128	457	531	705	790	869
Deferred Taxes	32	15	83	134	140	35	35	35	35	140	140	140	140	140
Net Income	563	440	631	614	1,666	474	492	540	588	2,093	2,450	3,304	3,717	4,102
Net Income Available to Common Shareholders	563	440	631	614	1,666	474	492	540	588	2,093	2,450	3,304	3,717	4,102
wet income Available to common shareholders	505	440	051	014	1,000	4/4	452	540	566	2,035	2,450	3,304	3,111	4,102
Gross Margin	52.02%	54.91%	55.53%	56.11%	58.83%	59.00%	59.00%	59.00%	59.00%	59.00%	59.00%	59.00%	59.00%	59.00%
Operating Margin	15.15%	12.01%	16.21%	14.91%	27.99%	32.00%	32.30%	33.00%	33.00%	32.60%	33.00%	34.50%	34.50%	34.50%
Tax Rate	15.03%	13.77%	16.46%	17.36%	12.55%	17.00%	17.00%	17.00%	17.00%	17.00%	17.00%	17.00%	17.00%	17.00%
Net Margin	13.14%	10.65%	13.47%	12.26%	24.11%	24.81%	25.11%	25.76%	25.88%	25.42%	25.96%	27.52%	27.64%	27.73%
Basic Shares Outstanding	617	568	545	539			-							
mpact of Diluted Shares	8		18											
Diluted Shares Outstanding	625					64	9 64	9 64	49 649	649	64	9 6	49 64	Э
Basic EPS	0.91			-										
Diluted EPS	0.90	0.74	1.12	1.08	2.57	0.7	3 0.7	6 0.8	33 0.91	3.22	3.7	8 5.	09 5.7	3
Adjusted EBIT		496	761	741	1949	60	7 63	3 69	3 751	2684	311	9 41	51 464	1 5
*	İ													
Revenues														
Gaming					4013		-			4797	_			
Period over Period % Change		-				-18			10%	19.6%	105			
Data Visualization					835					862	L	-	-	
Period over Period % Change						-85			% 5%	3.2%	39		10	
Datacenter					830		-	-		1449	_	-		
Period over Period % Change					107	7				74.6%	40%			
Auto					487	-19				563		_		
Period over Period % Change						-19			% 8% 37 130	15.6%				
Mobile/PC OEM					434	15	1 14	4 13 % -5	5/ 130	562	57	1 5	43	

Source: Forecasts



Fiscal Year	2013A	2014A	2015A	2016A	2017A	Q1 2018E	Q2 2018E	Q3 2018E	Q4 2018E	2018E	2019E	2020E	2021E	2022E
Fiscal Year End Date	1/31/13	1/31/14	1/31/15	1/31/16	1/31/17	4/30/17	7/30/17	8/31/17	1/31/18	1/31/18	1/31/19	1/31/20	1/31/21	1/31/22
Balance Sheet														
Assets														
Cash, Cash Equivelents and Marketable Securities	3,728	4,672	4,623	5,037	6,798	5,971	6,127	6,553	7,102	7,102	8143	10358	11601	12761
Cash and Cash Equivelents	733	1,152	497	596										
Marketable Securities	2,995	3,520	4,126	4,441										
Accounts Receivable	454	426	474	505	826	726	744	796	863	863	989	1259	1410	1551
Inventories	420	388	483	418	794	697	716	765	829	829	951	1210	1355	1491
Prepaid Expenses and Other Current Assets	173	139	133	93	118	104	106	114	123	123	141	180	201	222
Total Current Assets	4,775	5,625	5,713	6,053	8,536	7,498	7,693	8,229	8,917	8,917	10,225	13,006	14,567	16,024
Property and Equipment, Net	576	583	557	466	521	510	503	496	488	488	455	413	366	314
Goodwill	641	643	618	618	618	618	618	618	618	618	618	618	618	618
Intangible Assets	312	296	222	166	104	98	92	85	78	78	58	88	83	72
Other Assets	107	104	91	67	62	54	56	60	65	65	74	94	106	116
Total Assets	6,412	7,251	7,201	7,370	9,841	8,779	8,962	9,487	10,166	10,166	11,430	14,220	15,740	17,144
Liabilities														
Accounts Payable	356	324	293	296	485	426	437	468	507	507	581	739	828	910
ST Debt & Current Portion of LT Debt	0	3	0	1413	796	646	496	346	196	196	0	0	0	0
Other Current Liabilites	620	621	603	642	507	445	457	489	530	530	607	773	865	952
Total Current Liabilites	976	948	896	2351	1788	1517	1390	1302	1232	1232	1188	1512	1693	1862
Long Term Debt	19	1371	1398	97	2020	2020	2020	2020	2020	2020	2020	2020	2020	2020
Other Liabilites	589	475	489	453	271	271	271	271	271	271	271	271	271	271
Total Liabilities	1585	2794	2783	2901	4079	3808	3681	3593	3523	3523	3479	3803	3984	4153
Equity														
Preferred Stock	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common Stock	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Additional Paid-in Capital	3,194	3,483	3,855	4,170	4,351	4,395	4,439	4,486	4,536	4,536	4,744	4,994	5,274	5,582
Treasury Stock	(1,623)	(2,537)	(3,395)	(4,048)	(4,292)	(5,516)	(5,653)	(5,528)	(5,312)	(5,312)	(5,995)	(5,835)	(6,095)	(4,579)
Other Comprehensive Income/(Loss)	10	5	8	(4)	-	-	-	-	-	-	-	-	-	-
Retained Earnings	3,246	3,505	3,949	4,350	5,702	6,090	6,494	6,936	7,418	7,418	9,200	11,257	12,575	11,987
Total Equity	4828	4457	4418	4469	5762	4970	5281	5895	6643	6643	7951	10417	11756	12991
Balance Check	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Forecasts