

SGH

# Add Another to the Al Party

Talked up AI exposure and positioning better post-divestiture.

Beat while many are cutting and highlighted AI revenue of >\$250M (50K NVDA GPUs managed) in FY23. The divestiture of the Brazil business will actually be modestly accretive to EPS as it's negative OPM with the Specialty business approaching the high 20s GM. Post the RSC phase 2 (META) the company isn't committing to IPS growth next year and we expect the 1H flattish (vs. normal seasonal uptick). While not the first name to pop into our heads when it comes to AI, it's certainly the cheapest. Despite the slower start to next year we like the PF entity better ex-Memory.

#### SGH: Quarterly and Annual EPS (USD)

	2022		2023			2024		Change y/y			
FY Aug	Actual	Old	New	Cons	Old	New	Cons	2023	2024		
Q1	1.08A	0.79A	0.79A	0.79A	0.35E	0.37E	0.48E	-27%	-53%		
Q2	0.87A	0.76A	0.76A	0.76A	0.38E	0.38E	0.50E	-13%	-50%		
Q3	0.87A	0.40E	0.66A	0.40E	0.45E	0.46E	0.65E	-24%	-30%		
Q4	0.80A	0.23E	0.47E	0.37E	0.50E	0.54E	0.79E	-41%	15%		
Year	3.62A	2.18E	2.67E	2.32E	1.68E	1.75E	2.41E	-26%	-34%		
P/E	7.3		9.8			15.1					

Consensus numbers are from Bloomberg received on 29-Jun-2023; 12:50 GMT

Source: Barclays Research

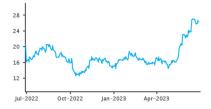
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### CORE

SGH	OVERWEIGHT Unchanged
U.S. Semiconductors & Semiconductor Capital Equipment	NEUTRAL Unchanged
Price Target	USD 30.00
	Unchanged
Price (28-Jun-23)	USD 26.31
Potential Upside/Downside	+14.0%
Market Cap (USD mn)	1291
Shares Outstanding (mn)	49.07
Free Float (%)	94.87
52 Wk Avg Daily Volume (mn)	0.6
Dividend Yield (%)	N/A
Return on Equity TTM (%)	6.48
Current BVPS (USD)	6.64
Source: Bloomberg	

Price Performance Exchange-Nasdaq 52 Week range USD 27.32-12.04



Source: IDC

Link to Barclays Live for interactive charting

### U.S. Semiconductors & Semiconductor Capital Equipment

#### Tom O'Malley

+1 212 526 0692

thomas.o'malley@barclays.com BCI, US

#### **Blayne Curtis**

+1 617 342 4101 blayne.curtis@barclays.com BCI, US

William Levy +1 212 526 8385 william.levy@barclays.com BCI, US

Source: Company data, Bloomberg, Barclays Research

SGH (SGH)   2022A   2023E   2024E   2025E   CAGR   Price (28-Jun-2023)   USD 26.35
Revenue         1,819         1,653         1,576         N/A         N/A         Price Target         USD 30.0           EBITDA (adj)         293         264         231         N/A         N/A         Why OVERWEIGHT?           EBIT (adj)         228         178         149         N/A         N/A         We are constructive as SGH has           Pre-tax income (adj)         217         153         121         N/A         N/A         been diversifying the business and           Net income (adj)         194         138         96         N/A         N/A         using M&A and divestitures to drive.
EBITDA (adj) 293 264 231 N/A N/A Why OVERWEIGHT?  EBIT (adj) 228 178 149 N/A N/A We are constructive as SGH has  Pre-tax income (adj) 217 153 121 N/A N/A been diversifying the business and  Net income (adj) 194 138 96 N/A N/A using M&A and divestitures to drive
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Net income (adj) 194 138 96 N/A N/A using M&A and divestitures to drive
EPS (adj) (\$) 3.62 2.67 1.75 N/A N/A better valuation.
Diluted shares (mn) 53.7 51.5 54.8 N/A N/A Upside case USD 35.0
DPS (\$) 0.00 0.00 N/A N/A Our upside case of \$35 is based
Margin and return data 2022A 2023E 2024E 2025E Average upon 14x our upside CY24 EPS of
EBITDA (adj) margin (%) 16.1 15.9 14.7 N/A 15.6 \$2.50, which assumes accretive
EBIT (adj) margin (%) 12.5 10.7 9.5 N/A 10.9 growth from acquisitions, faster
Pre-tax (adj) margin (%) 11.9 9.3 7.7 N/A 9.6 unit growth, a stronger specialty
Net (adj) margin (%) 10.7 8.3 6.1 N/A 8.4 memory market and better
ROA (%) 4.5 -2.7 -0.0 N/A 0.6 Enterprise spend.
ROE (%) 6.3 20.3 -10.0 N/A 5.5 <b>Downside case USD 20.0</b>
Balance sheet and cash flow (\$mn) 2022A 2023E 2024E 2025E CAGR Our downside case of \$20 is based
Tangible fixed assets 154 174 154 N/A N/A upon 13x our downside CY24 EPS of the company was larger to the company was larg
Intangible fixed assets  74  183  183  N/A  N/A  Spterprise spend a weaker
Cash and equivalents  363  445  523  N/A  N/A  Enterprise spend, a weaker specialty memory market, slower
Total assets 1,572 1,603 1,686 N/A N/A integration, and/or weaker unit
Short and long-term debt 603 806 774 N/A N/A demand.
Other long-term liabilities 87 100 100 N/A N/A
Total liabilities 1,194 1,256 1,252 N/A N/A Upside/Downside scenarios
Net debt/(funds) 240 361 251 N/A N/A Price History Prior 12 months Next 12 months
Shareholders' equity 379 347 434 N/A N/A High Upside
Change in working capital 269 N/A N/A N/A N/A N/A
Cash flow from operations 105 134 158 N/A N/A 27.32 Current Target 30.00
Capital expenditure -38 -55 -62 N/A N/A <sup>26.31</sup>
Free cash flow 67 79 96 N/A N/A 20.00
Valuation and leverage metrics 2022A 2023E 2024E 2025E Average 12.04 Low Downside
P/E (adj) (x) 7.3 9.8 15.1 N/A 10.7
EV/sales (x) 0.9 1.0 1.0 N/A 1.0
EV/EBITDA (adj) (x) 5.3 6.4 6.8 N/A 6.2
Equity FCF yield (%) 4.7 5.8 6.7 N/A 5.7
P/Sales (x) 0.7 0.8 0.8 N/A 0.8
P/BV (x) 3.7 3.9 3.3 N/A 3.7
Dividend yield (%) 0.0 0.0 N/A 0.0
Note: FY End Aug

**Q3 Beat on LED and IPS**: Reported May revenue of \$383M (-11% Q/Q), above the Street's \$376M. LED beat (\$64M vs our \$61M) with the company suggesting Q2 was a bottom and IPS came in higher (\$171M vs. our \$167M) with Penguin accounting for \$125M and Stratus for \$46M (up from \$41M last Q). Memory Solutions came in just below (\$148M vs. our \$150M) with ongoing weakness in Brazil, which accounted for \$39M of total Memory revenue. When looking

at revenue by products and services, products account for \$326M and services \$58M. GM was inline (28%), and opex was slightly lower (\$71M vs. St. \$72M) on continued cost containment and lower bonus accruals. OpM by segment was 8% for Memory, 15% for IPS, and negative 1-2% for LED. This collectively netted EPS ahead at \$0.66 vs. St. \$0.40.

FIGURE 1. May Quarter Results

			MAY QUARTER RESULTS		
	Actual	Prior Barclays Est	Consensus Ests	Guide	Comments
Revenues	\$383.3M	\$377.6M	\$375.5M	\$375.0M	services 15%, product 85%
Q/Q	-11%	-12%	-13%	-13%	
GMs	28.0%	27.8%	28.0%	28.0%	driven by IPS
Non-GAAP Opex	\$70.9M	\$72.0M	\$72.1M	\$72.0M	cost containment and lower bonus accrua
Tax Rate	-14.4%	19.0%			
GAAP EPS	(\$0.50)	-\$0.02	\$0.02	-\$0.03	
Non-GAAP EPS	\$0.66	\$0.40	\$0.40	\$0.40	
Share Count	50M	50M	50M	50.0	
Revenue					
Memory Solutions	\$148M	\$150M			continued weakness in Brazil
Intelligent Platform Solutions	\$171M	\$167M			Penguin \$125M, Stratus \$46M
LED	\$64M	\$61M			Q2 bottom

Source: Barclays Research estimates and Bloomberg

**Guides FQ4 Revenue in Line, EPS Ahead:** Guides August revenue in-line at \$375M (-2% Q/Q). By segment for Q4, IPS is down slightly, Memory flat, and LED up modestly. The company expressed optimism on the LED business as customer design activity increased despite continued channel inventory burn. Guides GMs marginally above at 28% (vs. St. 27.5%). Opex came in below at \$71M (vs St. \$73M). This all nets EPS of \$0.45, well above the Street at \$0.37. Capex is expected to be \$15-\$20M in Q4. The company made further comments on the Brazil merger and expects the business to be ~200 bps accretive to GM and slightly accretive to non-GAAP EPS.

FIGURE 2. August Quarter Guide

AUGUST QUARTER GUIDE											
	Guide	Prior Barclays Est	Consensus Ests	Comments							
Revenues	\$375M	\$362.6M	\$375.8M	Al rev \$250-\$300M in FY23							
Q/Q	-2%	-4%	0%								
GMs	28.0%	26.1%	27.5%								
Non-GAAP Opex	\$71M	\$71.7M	\$72.6M								
Tax Rate	11.0%	19.0%		20% in FY24 due to loss of tax attributes							
GAAP EPS	\$0.02	-\$0.19	\$0.02								
Non-GAAP EPS	\$0.45	\$0.23	\$0.37								
Share Count	53M	50M	50M	benefit of convertible note cap costs							
Revenue											
Memory Solutions		\$150M		flat Q/Q							
Intelligent Platform Solutions		\$152M		down sequentially							
LED		\$61M		modest improvement							

Source: Barclays Research estimates and Bloomberg

### **Changes to Estimates**

Our CY23 revenue/EPS move to \$1565M/\$2.25 (prior \$1565M/\$1.73), and CY24 moves to \$1643M/\$2.00 (prior \$1730M/\$1.93).

Our price target of \$30 is based upon 15x our CY24 EPS of \$2.00. Our prior methodology was based upon 16x our CY24 EPS of \$1.93.

FIGURE 3. SGH Barclays vs. Consensus

	Changes to Re	evenue and EPS Esti	mates - New vs. Old	vs. Consensus	
		Aug Q	Nov Q	CY23	CY24
NEW	Revenues EPS	\$375M \$0.47	\$377M \$0.37	\$1,565M \$2.25	\$1,643M \$2.00
OLD	Revenues EPS	\$363M \$0.23	\$396M \$0.35	\$1,565M \$1.73	\$1,730M \$1.93
CONSENSUS	Revenues EPS	\$376M \$0.37	\$404M \$0.48	\$1,592M \$2.27	\$1,751M \$2.26

Source: Barclays Research estimates and Bloomberg

**FIGURE 4. SGH Income Statement** 

SGH Period Ending Aug	Nov-21	Feb-22	May-22	Aug-22	Nov-22	Feb-23	May-23	Aug-23	Nov-23	Feb-24	May-24	Aug-24	Nov-24	2021	2022	2023	2024	2021	2022	2023	2024
\$ in millions	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4QE	1QE	2QE	3QE	4QE	1QE	FY	FY	FYE	FYE	CY	CY	CYE	CYE
Revenue	\$469.9	\$449.2	\$462.5	\$437.7	\$465.5	\$429.2	\$383.3	\$375.1	\$377.2	\$379.4	\$399.3	\$420.3	\$444.2	\$1.501.1	\$1.819.4	\$1.653.1	\$1.576.1	\$1.679.4	\$1.814.9	\$1,564.8	\$1.643.2
QoQ	0.5%	(4.4%)	3.0%	(5.4%)	6.3%	(7.8%)	(10.7%)	(2.2%)	0.6%	0.6%	5.2%	5.3%	5.7%	<b>\$1,50111</b>	41,013.1	<b>41,033.</b> .	41,570	41,073.1	41,011.5	<b>\$1,501.0</b>	41,015.2
YoY	61.1%	47.7%	5.7%	(6.4%)	(1.0%)	(4.5%)	(17.1%)	(14.3%)	(19.0%)	(11.6%)	4.2%	12.1%	17.8%	33.7%	21.2%	(9.1%)	(4.7%)	47.0%	8.1%	(13.8%)	5.0%
Cost of Goods	342.9	332.2	343.7	329.9	336.3	305.3	276.1	269.1	271.6	272.6	286.0	301.3	318.9	1,168.5	1,348.7	1,186.8	1,131.5	1,273.9	1,342.0	1,122.0	1,178.8
Gross Profit	\$127.0	\$116.9	\$118.9	\$107.8	\$129.2	\$123.9	\$107.2	\$106.0	\$105.7	\$106.8	\$113.2	\$119.0	\$125.4	\$332.6	\$470.7	\$466.3	\$444.7	\$405.5	\$472.9	\$442.8	\$464.4
R&D	14.4	15.5	17.1	17.4	19.7	22.5	13.9	13.9	14.9	14.6	14.3	14.0	13.7	44.8	64.4	69.9	57.8	53.1	69.6	65.1	56.6
SG&A	43.5	44.0	47.6	43.7	54.7	50.0	57.1	57.1	58.1	59.1	59.9	60.7	61.5	127.0	178.7	218.9	237.8	146.3	189.9	222.3	241.2
Total Operating Expenses	57.9	59.5	64.6	61.1	74.4	72.5	70.9	71.0	73.0	73.7	74.2	74.7	75.2	171.8	243.1	288.7	295.6	199.3	259.5	287.4	297.8
Operating Income	\$69.2	\$57.4	\$54.3	\$46.8	\$54.8	\$51.4	\$36.3	\$35.0	\$32.7	\$33.1	\$39.0	\$44.3	\$50.2	\$160.8	\$227.6	\$177.5	\$149.1	\$206.2	\$213.3	\$155.4	\$166.6
Interest Income (Expense)	(2.9)	(2.2)	(2.4)	(3.7)	(7.0)	(7.0)	(7.1)	(7.1)	(7.1)	(7.1)	(7.1)	(7.1)	(7.1)	(9.2)	(11.2)	(28.1)	(28.4)	(11.0)	(15.2)	(28.3)	(28.4)
FX Gain (loss)	1.5	1.4	0.6	1.2	0.2	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.7	1.1	0.0	2.8	3.5	0.9	0.0
Other Income (Expense)	(1.2)	(1.1)	(0.6)	(1.3)	(0.1)	3.4	(0.5)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	(4.2)	2.7	0.0	(2.0)	(3.1)	2.8	0.0
Profit Before Taxes - Pro Forma	66.5	55.5	52.0	43.0	48.0	48.1	29.3	27.9	25.6	26.0	31.9	37.2	43.1	152.4	217.0	153.2	120.7	196.1	198.5	130.8	138.2
Taxes	9.5	7.5	5.7	2.1	8.2	10.0	(4.2)	3.1	5.6	5.7	7.0	8.2	9.5	19.0	24.7	17.1	26.5	25.3	23.4	14.5	30.4
Non-controlling interest	(0.7)	(0.5)	(0.4)	(0.5)	(0.3)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(1.2)	(2.0)	(1.5)	(1.5)	(1.9)	(1.7)	(1.6)	(1.5)
Net Income - Pro Forma	\$56.3	\$47.6	\$45.9	\$40.4	\$39.48	\$37.6	\$33.1	\$24.4	\$19.6	\$19.9	\$24.5	\$28.6	\$33.2	\$134.6	\$194.3	\$137.7	\$95.6	\$172.6	\$176.8	\$117.8	\$109.3
EPS - Pro Forma (ex ESO)	\$1.08	\$0.87	\$0.87	\$0.80	\$0.79	\$0.76	\$0.66	\$0.47	\$0.37	\$0.38	\$0.46	\$0.54	\$0.62	\$2.60	\$3.62	\$2.67	\$1.75	\$3.29	\$3.33	\$2.25	\$2.00
EPS - Pro Forma (incl ESO)	\$0.89	\$0.69	\$0.67	\$0.61	\$0.58	\$0.55	\$0.46	\$0.31	\$0.21	\$0.21	\$0.28	\$0.35	\$0.42	\$1.93	\$2.85	\$1.90	\$1.05	\$2.66	\$2.54	\$1.53	\$1.26
EPS - GAAP	\$0.37	\$0.04	\$0.44	\$0.40	\$0.10	(\$0.55)	(\$0.50)	\$0.01	(\$0.08)	(\$0.07)	\$0.01	\$0.08	\$0.17	\$0.40	\$1.24	(\$0.94)	(\$0.06)	\$0.72	\$0.98	(\$1.12)	\$0.18
Fully Diluted Shares	52.1	54.9	52.9	50.5	49.8	49.8	50.1	52.5	52.7	52.9	53.1	53.3	53.5	51.8	53.7	51.5	54.8	52.4	53.1	52.3	54.8
Percent of Sales																					
Gross Margin	27.0%	26.0%	25.7%	24.6%	27.8%	28.9%	28.0%	28.3%	28.0%	28.2%	28.4%	28.3%	28.2%	22.2%	25.9%	28.2%	28.2%	24.1%	26.1%	28.3%	28.3%
R&D	3.1%	3.5%	3.7%	4.0%	4.2%	5.2%	3.6%	3.7%	3.9%	3.8%	3.6%	3.3%	3.1%	3.0%	3.5%	4.2%	3.7%	3.2%	3.8%	4.2%	3.4%
SG&A	9.2%	9.8%	10.3%	10.0%	11.7%	11.7%	14.9%	15.2%	15.4%	15.6%	15.0%	14.4%	13.8%	8.5%	9.8%	13.2%	15.1%	8.7%	10.5%	14.2%	14.7%
Operating Margin	14.7%	12.8%	11.7%	10.7%	11.8%	12.0%	9.5%	9.3%	8.7%	8.7%	9.8%	10.5%	11.3%	10.7%	12.5%	10.7%	9.5%	12.3%	11.8%	9.9%	10.1%
Taxes	14.3%	13.4%	10.9%	4.9%	17.1%	20.9%	(14.4%)	11.0%	22.0%	22.0%	22.0%	22.0%	22.0%	12.5%	11.4%	11.2%	22.0%	12.9%	11.8%	11.1%	22.0%
Net Income	12.0%	10.6%	9.9%	9.2%	8.5%	8.8%	8.6%	6.5%	5.2%	5.2%	6.1%	6.8%	7.5%	9.0%	10.7%	8.3%	6.1%	10.3%	9.7%	7.5%	6.7%
Sequential Change																					
R&D	(6.2%)	7.9%	9.7%	1.8%	13.3%	14.2%	(38.3%)	0.3%	7.2%	(2.0%)	(2.1%)	(2.1%)	(2.1%)	(2.8%)	43.5%	8.6%	(17.3%)	33.7%	31.2%	(6.5%)	(13.1%)
SG&A	4.4%	1.1%	8.2%	(8.1%)	25.1%	(8.5%)	14.1%	0.1%	1.8%	1.7%	1.4%	1.3%	1.3%	38.2%	40.7%	22.5%	8.7%	60.2%	29.8%	17.0%	8.5%

Source: Company Reports and Barclays Research Estimates

Reconciliation of Pro Forma to	CAAD																				
Stock Based Compensation	(9.8)	(10.0)	(10.5)	(9.8)	(10.4)	(10.4)	(10.0)	(8.0)	(8.5)	(9.0)	(9.5)	(10.0)	(10.5)	(33.9)	(40.1)	(38.8)	(37.0)	(32.6)	(40.8)	(36.9)	(39.0)
Amortization of Intang.	(6.3)	(5.8)	(5.9)	(5.6)	(10.9)	(10.8)	(11.6)	(13.0)	(12.5)	(12.0)	(11.5)	(11.0)	(10.5)	(20.3)	(23.7)	(46.3)	(47.0)	(23.2)	(28.2)	(47.9)	(45.0)
Convertible Debt Related	(2.2)	(2.3)	(2.7)	(2.8)	(1.1)	(1.0)	(0.9)	0.0	0.0	0.0	0.0	0.0	0.0	(8.4)	(10.0)	(3.1)	0.0	(8.6)	(8.9)	(2.0)	0.0
Integration Related	0.0	0.0	0.0	0.0	(6.7)	(2.8)	(8.6)	0.0	0.0	0.0	0.0	0.0	0.0	(2.1)	0.0	(18.2)	0.0	(2.1)	(6.7)	(11.5)	0.0
Other	(18.0)	(27.0)	(2.6)	(2.3)	(5.4)	(39.8)	(26.3)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(46.3)	(49.8)	(74.5)	(12.0)	(63.2)	(37.3)	(72.1)	(12.0)
Net Income - GAAP	\$20.0	\$2.5	\$24.1	\$20.0	\$5.0	(\$27.2)	(\$24.5)	\$0.4	(\$4.4)	(\$4.1)	\$0.5	\$4.6	\$9.2	\$23.7	\$70.6	(\$43.2)	(\$0.4)	\$43.0	\$54.9	(\$52.5)	\$13.3
GAAP Shares	54.6	57.6	55.0	50.5	49.8	49.1	49.4	54.5	54.7	54.9	55.1	55.3	55.5	59.7	56.8	45.9	5.8	59.5	56.2	46.8	72.0
EPS - GAAP	\$0.37	\$0.04	\$0.44	\$0.40	\$0.10	(\$0.55)	(\$0.50)	\$0.01	(\$0.08)	(\$0.07)	\$0.01	\$0.08	\$0.17	\$0.40	\$1.24	(\$0.94)	(\$0.06)	\$0.72	\$0.98	(\$1.12)	\$0.18

Source: Company Reports and Barclays Research

**FIGURE 5. SGH Balance Sheet** 

SCH																					
Period Ending	Nov-21	Feb-22	May-22	Aug-22	Nov-22	Feb-23	May-23	Aug-23	Nov-23	Feb-24	May-24	Aug-24	Nov-24								
\$ in millions				40				40E		20E	30E	40E				FYE	FYE			CYE	
BALANCE SHEET	1 '4		30	14		-4	30	142	142	-4-	JQL	- IQL	142	- 11							
Assets																					
Cash and cash equivalents	\$233.1	\$365.8	\$387.3	\$363.1	\$324.8	\$375.9	\$401.3	\$445.3	\$472.6	\$494.2	\$507.1	\$523.2	\$541.8	\$223.0	\$363.1	\$445.3	\$523.2	\$233.1	\$324.8	\$472.6	\$541.8
Accounts Receivable	344.1	385.9	357.5	410.3	306.3	229.5	243.6	226.1	227.4	228.7	240.6	253.3	267.8	313.4	410.3	226.1	253.3	344.1	306.3	227.4	267.8
Inventory	317.9	334.1	365.3	323.1	416.1	294.4	226.1	221.2	217.2	218.0	228.8	241.1	255.1	363.6	323.1	221.2	241.1	317.9	416.1	217.2	255.
Restricted Cash					2.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0		2.8	0.0	0.0
Prepaid Expenses and Other Current Assets	48.8	45.9	57.5	55.4	71.9	77.5	68.0	68.0	68.0	68.0	70.0	70.0	70.0	50.8	55.4	68.0	70.0	48.8	71.9	68.0	70.
Total Current Assets	\$943.8	\$1,131.7	\$1,167.6	\$1,151.9	\$1,121.9	\$978.2	\$938.9	\$960.6	\$985.2	\$1,008.9	\$1,046.6	\$1,087.6	\$1,134.7	\$950.8	\$1,151.9	\$960.6	\$1,087.6	\$943.8	\$1,121.9	\$985.2	\$1,134.
Property and Equipment	148.9	149.1	159.1	153.9	165.0	171.8	177.8	174.2	168.3	162.6	157.1	153.8	150.7	156.3	153.9	174.2	153.8	148.9	165.0	168.3	150.
Goodwill	72.5	73.4	75.0	74.0	199.7	182.7	183.1	183.1	183.1	183.1	183.1	183.1	183.1	74.3	74.0	183.1	183.1	72.5	199.7	183.1	183.
Intangible Assets	95.3	88.9	83.2	77.8	193.3	182.9	171.4	165.4	159.4	153.4	147.4	141.4	135.4	101.1	77.8	165.4	141.4	95.3	193.3	159.4	135.
Operating lease right-of-use assets	37.7	35.8	43.5	77.4	83.0	80.5	77.8	77.8	77.8	77.8	77.8	77.8	77.8	40.9	77.4	77.8	77.8	37.7	83.0	77.8	77.
Other noncurrent assets	25.4	29.6	25.6	37.0	44.7	44.0	42.2	42.2	42.2	42.2	42.2	42.2	42.2	21.5	37.0	42.2	42.2	25.4	44.7	42.2	42.
Total Assets	\$1,323.7	\$1,508.5	\$1,554.1	\$1,572.1	\$1,807.7	\$1,640.1	\$1,591.2	\$1,603.3	\$1,616.0	\$1,628.0	\$1,654.2	\$1,685.9	\$1,723.9	\$1,344.8	\$1,572.1	\$1,603.3	\$1,685.9	\$1,323.7	\$1,807.7	\$1,616.0	\$1,723.
Liabilities																					
Accounts Payable	\$426.9	\$441.0	\$448.0	\$413.4	\$389.2	\$226.3	\$210.1	\$206.4	\$208.3	\$209.1	\$219.4	\$231.2	\$244.6	\$484.1	\$413.4	\$206.4	\$231.2	\$426.9	\$389.2	\$208.3	\$244.
Accrued Liabilities and Other	72.4	86.4	68.1	90.2	134.2	162.0	141.9	142.9	143.9	144.9	145.9	146.9	147.9	74.3	90.2	142.9	146.9	72.4	134.2	143.9	147.
Short-term Deht	35.8	6.4	8.8	12.0	28.4	32.1	32.3	32.3	32.3	32.3	32.3	32.3	32.3	25.4	12.0	32.3	32.3	35.8	28.4	32.3	32
Total Current Liabilities	\$535.1	\$533.8	\$524.9	\$515.5	\$551.8	\$420.4	\$384.3	\$381.6	\$384.5	\$386.3	\$397.6	\$410.3	\$424.8	\$583.8	\$515.5	\$381.6	\$410.3	\$535.1	\$551.8	\$384.5	\$424
Long-term Debt, net	341.2	483.9	485.0	591.4	797.0	789.4	782.3	774.1	766.0	757.8	749.6	741.5	733.3	340.5	591.4	774.1	741.5	341.2	797.0	766.0	733.
Convertible, net	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 115.1	0.0	0.0	0.
Other long-term liabilities	115.1	135.9	145.1	86.6	99.5	98.8	100.5	100.5	100.5	100.5	100.5	100.5	100.5	101.6	86.6	100.5	100.5		99.5	100.5	100.
Total Liabilities	\$991.4	\$1,153.6	\$1,155.0	\$1,193.5	\$1,448.3	\$1,308.6	\$1,267.0	\$1,256.2	\$1,250.9	\$1,244.5	\$1,247.7	\$1,252.3	\$1,258.6	\$1,025.9	\$1,193.5	\$1,256.2	\$1,252.3	\$991.4	\$1,448.3	\$1,250.9	\$1,258.
Shareholders' Equity																					
Ordinary Shares	\$0.8	\$1.5	\$1.6	\$1.6	\$1.6	\$1.6	\$1.7							\$0.8	\$1.6	\$0.0	\$0.0	\$0.8	\$1.6	\$0.0	\$0.0
Additional paid in capital	411.6	423.1	437.9	448.1	411.6	418.0	432.2	347.1	365.1	383.5	406.5	433.6	465.3	396.9	448.1	347.1	433.6	411.6	411.6	365.1	465.
Accumulated Deficit	(241.1)	(229.7)	(210.9)	(221.7)	(223.7)	(217.6)	(214.4)							(221.6)	(221.7)	0.0	0.0	(241.1)	(223.7)	0.0	0.0
Treasury shares	(53.2)	(53.4)	(67.3)	(107.8)	(112.4)	(124.0)	(124.7)							(50.5)	(107.8)	0.0	0.0	(53.2)	(112.4)	0.0	0.0
Treasury shares Retained Earnings	(53.2) 204.8	(53.4) 207.3	(67.3) 231.4	(107.8) 251.3	(112.4) 275.0	(124.0) 247.8	(124.7) 223.3							(50.5) 184.8	(107.8) 251.3	0.0	0.0	(53.2) 204.8	(112.4) 275.0	0.0	
	(00.0)																	(/			
Retained Earnings	204.8	207.3	231.4	251.3	275.0	247.8	223.3	\$347.1	\$365.1	\$383.5	\$406.5	\$433.6	\$465.3	184.8	251.3			204.8			0.0
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity	204.8 9.3 \$332.3	207.3 6.1 \$354.9	231.4 6.5 \$399.1	251.3 6.9 \$378.5	275.0 7.3 \$359.4	247.8 5.7 \$331.5	223.3 6.1 \$324.2							184.8 <u>8.7</u> \$318.9	251.3 <u>6.9</u> \$378.5	\$347.1	0.0 \$433.6	204.8 9.3 \$332.3	275.0 \$359.4	\$365.1	0.0 0.0 \$465.3
Retained Earnings  Noncontrolling interest in subsidiary  Total Shareholder's Equity  Total Liabilities & Equity	204.8 <u>9.3</u>	207.3 <u>6.1</u>	231.4 6.5 \$399.1 \$1,554.1	251.3 <u>6.9</u>	275.0 7.3 \$359.4 \$1,807.7	247.8 <u>5.7</u>	223.3 6.1 \$324.2 ====== \$1,591.2	\$347.1  \$1,603.3		\$1,628.0	\$1,654.2	\$433.6  \$1,685.9	\$465.3  \$1,723.9	184.8 <u>8.7</u>	251.3 6.9 \$378.5 	\$347.1 \$1,603.3	0.0	204.8 9.3	\$359.4 \$1,807.7	\$365.1 \$1,616.0	\$465.3 \$1,723.9
Retained Earnings <u>Noncontrolling interest in subsidiary</u> Total Shareholder's Equity	204.8 9.3 \$332.3	207.3 6.1 \$354.9	231.4 6.5 \$399.1	251.3 6.9 \$378.5	275.0 7.3 \$359.4	247.8 5.7 \$331.5	223.3 6.1 \$324.2							184.8 <u>8.7</u> \$318.9	251.3 <u>6.9</u> \$378.5	\$347.1	0.0 \$433.6	204.8 9.3 \$332.3	275.0 \$359.4	\$365.1	\$465.3 \$1,723.9
Retained Earnings  Notes of the State of the	204.8 9.3 \$332.3	207.3 6.1 \$354.9	231.4 6.5 \$399.1 \$1,554.1	251.3 6.9 \$378.5	275.0 7.3 \$359.4 \$1,807.7	247.8 5.7 \$331.5	223.3 6.1 \$324.2 ====== \$1,591.2			\$1,628.0	\$1,654.2			184.8 <u>8.7</u> \$318.9	251.3 6.9 \$378.5 	\$347.1 \$1,603.3	0.0 \$433.6	204.8 9.3 \$332.3	\$359.4 \$1,807.7	\$365.1 \$1,616.0	9.0 \$465.3
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity Total Liabilities & Equity CHECK VALUATION RATIOS	204.8 9.3 \$332.3	207.3 6.1 \$354.9	231.4 6.5 \$399.1 \$1,554.1	251.3 6.9 \$378.5	275.0 7.3 \$359.4 \$1,807.7	247.8 5.7 \$331.5	223.3 6.1 \$324.2 ====== \$1,591.2			\$1,628.0	\$1,654.2			184.8 <u>8.7</u> \$318.9	251.3 6.9 \$378.5 	\$347.1 \$1,603.3	0.0 \$433.6	204.8 9.3 \$332.3	\$359.4 \$1,807.7	\$365.1 \$1,616.0	\$465.3 \$1,723.9
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity Total Liabilities & Equity CHECK VALUATION RATIOS Profitability Ratios	204.8 9.3 \$332.3 \$1,323.7	207.3 6.1 \$354.9 \$1,508.5	231.4 6.5 \$399.1 \$1,554.1 0	251.3 6.9 \$378.5 \$1,572.1	275.0 <u>7.3</u> \$359.4 \$1,807.7	247.8 5.7 \$331.5 \$1,640.1	223.3 6.1 \$324.2 \$1,591.2 0	\$1,603.3	\$1,616.0	\$1,628.0	\$1,654.2	\$1,685.9	\$1,723.9	\$318.9 \$1,344.8	251.3 6.9 \$378.5 \$1,572.1	\$347.1 \$1,603.3 0	\$1,685.9	204.8 9.3 \$332.3 \$1,323.7	\$359.4 \$1,807.7	\$365.1 \$1,616.0	\$465.3 \$1,723.9
Retained Earnings Noncontrolling interest in subsidiary Total Shareholders Equity Total Liabilities & Equity CHECK VALUATION RATIOS Profitability Ratios Return On Invested Capital	204.8 9.3 \$332.3 \$1,323.7 0	207.3 6.1 \$354.9 \$1,508.5 0	231.4 6.5 \$399.1 \$1,554.1 0	251.3 6.9 \$378.5 \$1,572.1 0	275.0 7.3 \$359.4 \$1,807.7 0	247.8 5.7 \$331.5 \$1,640.1 0	223.3 6.1 \$324.2 \$1,591.2 0	\$1,603.3 0	\$1,616.0	\$1,628.0	\$1,654.2 0	\$1,685.9	\$1,723.9	\$184.8 8.7 \$318.9 \$1,344.8 0	251.3 6.9 \$378.5 \$1,572.1 0	\$347.1 \$1,603.3 0	\$1,685.9 0	204.8 9.3 \$332.3 \$1,323.7 0	275.0 \$359.4 \$1,807.7 0	\$365.1 \$1,616.0 0	\$465.: \$1,723.:
Retained Earnings  Noncontrolling interest in subsidiary  Total Shareholder's Equity  Total Labilities & Equity  CHECK  VALIATION RATIOS  Profitability Ratios  Return On Invested Capital  Return On Invested  Return On Equity	204.8 9.3 \$332.3 \$1,323.7 0	207.3 6.1 \$354.9 \$1,508.5 0	231.4 6.5 \$399.1 \$1,554.1 0	251.3 6.9 \$378.5 \$1,572.1 0	275.0 7.3 \$359.4 \$1,807.7 0	247.8 5.7 \$331.5 \$1,640.1 0 (10%) (33%)	223.3 6.1 \$324.2 \$1,591.2 0 (8%) (30%)	\$1,603.3 0 4% 0%	\$1,616.0 0	\$1,628.0 0	\$1,654.2 0 4% 1%	\$1,685.9 0	\$1,723.9 0	184.8 8.7 \$318.9 \$1,344.8 0	251.3 6.9 \$378.5 \$1,572.1 0	0.0 \$347.1 \$1,603.3 0 (3%) 20%	0.0 \$433.6 \$1,685.9 0	204.8 9.3 \$332.3 \$1,323.7 0	275.0 \$359.4 \$1,807.7 0 14% 15%	0.0 \$365.1 \$1,616.0 0 (3%) (14%)	\$465.: \$1,723.: \$1,723.:
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity  Total Liabilities & Equity  CHECK  VALUATION RATIOS  Profitability Ratios  Return On Figuity  Return On Equity  Return On Equity  Return On Equity  Return On Equity	204.8 9.3 \$332.3 \$1,323.7 0	207.3 6.1 \$354.9 \$1,508.5 0 4% 3% 12%	231.4 6.5 \$399.1 \$1,554.1 0 22% 24% 20%	251.3 6.9 \$378.5 \$1,572.1 0	275.0 7.3 \$359.4 \$1,807.7 0 7% 6% 15%	247.8 5.7 \$331.5 \$1,640.1 0 (10%) (33%) 6%	223.3 6.1. \$324.2 \$1,591.2 0 (8%) (30%) (7%)	\$1,603.3 0 4% 0% (13%)	\$1,616.0 0 1% (5%) (15%)	\$1,628.0 0	\$1,654.2 0 4% 1% (2%)	\$1,685.9 0 6% 4% (1%)	\$1,723.9 0 9% 8% 2%	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8%	251.3 6.9 \$378.5 \$1,572.1 0	0.0 \$347.1 \$1,603.3 0 (3%) 20% (12%)	0.0 \$433.6 \$1,685.9 0 3% (10%) (0%)	204.8 9.3 \$332.3 \$1,323.7 0	275.0 \$359.4 \$1,807.7 0	0.0 \$365.1 \$1,616.0 0 (3%) (14%) (15%)	\$465 \$1,723 \$1,723
Retained Earnings Moncontrolling interest in subsidiary Total Shareholder's Equity Total Labilities & Equity CHECK  VALUATION RATIOS Profitability Ratios Return On Invested Capital Return On Equity Return on Avg Equity Return on Avg Equity Return on Avg Equity Return on Sesses	204.8 9.3 \$332.3 \$1,323.7 0	207.3 6.1 \$354.9 \$1,508.5 0 4% 3% 12% 1%	231.4 6.5 \$399.1 \$1,554.1 0 22% 24% 20% 6%	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 19% 5%	275.0 7.3 \$359.4 \$1,807.7 0 7% 6% 15% 1%	247.8 5.7 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%)	223.3 6.1. \$324.2 \$1,591.2 0 (8%) (30%) (7%) (6%)	\$1,603.3 0 4% 0% (13%) 0%	\$1,616.0 0 1% (5%) (15%) (1%)	\$1,628.0 0 1% (4%) (9%) (1%)	\$1,654.2 0 4% 1% (2%) 0%	\$1,685.9 0 6% 4% (1%) 1%	\$1,723.9 0 9% 8% 2% 2%	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2%	251.3 6.9 \$378.5 \$1,572.1 0 17% 6% 20% 4%	0.0 \$347.1 \$1,603.3 0 (3%) 20% (12%) (3%) (3%)	3% (10%) (0%)	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 3%	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3%	0.0 \$365.1 \$1,616.0 0 (3%) (14%) (15%) (3%) (3%)	\$465.: \$1,723.: \$1,723.: 59 39 39
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity Total Liabilities & Equity CHECK VALUATION RATIOS Portifability Ratios Return On Invested Capital Return On Equity Return on Avg Equity * Return on Assets Return On Assets Return On Assets Return On Assets	204.8 9.3 \$332.3 \$1,323.7 0 19% 24% 6% 13%	207.3 6.1 \$354.9 \$1,508.5 0 4% 3% 12% 19%	231.4 6.5 \$399.1 \$1,554.1 0 22% 24% 20% 6% 12%	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 19% 5% 10%	275.0 2.3 \$359.4 \$1,807.7 0 7% 6% 15% 19% 3%	247.8 5.7 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%) (15%)	223.3 6.1 \$324.2 \$1,591.2 0 (8%) (30%) (7%) (6%) (13%)	\$1,603.3 0 4% 0% (13%) 0% 0%	\$1,616.0 0 1% (5%) (15%) (1%) (2%)	\$1,628.0 0 1% (4%) (9%) (1%) (2%)	\$1,654.2 0 4% 1% (2%) 0% 0%	\$1,685.9 0 6% 4% (1%) 1% 2%	\$1,723.9 0 9% 8% 2% 2% 4%	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 5%	251.3 6.9 \$378.5 \$1,572.1 0 17% 6% 20% 496	\$347.1 \$1,603.3 0 (3%) 20% (12%) (3%) (6%)	\$433.6 \$1,685.9 0	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 3% 8%	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 7%	\$365.1 \$1,616.0 0 (3%) (14%) (15%) (3%) (7%)	59 39 39 39 29
Retained Earnings Moncontrolling interest in subsidiary Total Shareholder's Equity Total Labilities & Equity CHECK  VALUATION RATIOS Profitability Ratios Return On Invested Capital Return On Equity Return on Avg Equity Return on Avg Equity Return On Net Assets Return On Net Assets Return On Net Assets Return On Net Assets Return On Salles	204.8 9.3 \$332.3 \$1,323.7 0	207.3 6.1 \$354.9 \$1,508.5 0 4% 3% 12% 1%	231.4 6.5 \$399.1 \$1,554.1 0 22% 24% 20% 6%	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 19% 5%	275.0 7.3 \$359.4 \$1,807.7 0 7% 6% 15% 1%	247.8 5.7 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%)	223.3 6.1. \$324.2 \$1,591.2 0 (8%) (30%) (7%) (6%)	\$1,603.3 0 4% 0% (13%) 0%	\$1,616.0 0 1% (5%) (15%) (1%)	\$1,628.0 0 1% (4%) (9%) (1%)	\$1,654.2 0 4% 1% (2%) 0%	\$1,685.9 0 6% 4% (1%) 1%	\$1,723.9 0 9% 8% 2% 2%	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2%	251.3 6.9 \$378.5 \$1,572.1 0 17% 6% 20% 4%	0.0 \$347.1 \$1,603.3 0 (3%) 20% (12%) (3%) (3%)	0.0 \$433.6 \$1,685.9 0 3% (10%) (0%) (0%)	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 3%	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3%	0.0 \$365.1 \$1,616.0 0 (3%) (14%) (15%) (3%) (3%)	\$465.: \$1,723.: \$1,723.: 59 39 39
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity  Total Liabilities & Equity  CHECK  VALUATION RATIOS  Portiability Ratios  Return On Invested Capital  Return On Equity  Return on Aya Equity *  Return on Assess  Return On Assess  Return On Sales  Return On Sales  Return On Sales  *Aya Over Last 4 Qurs	204.8 9.3 \$332.3 \$1,323.7 0 19% 24% 6% 13%	207.3 6.1 \$354.9 \$1,508.5 0 4% 3% 12% 19%	231.4 6.5 \$399.1 \$1,554.1 0 22% 24% 20% 6% 12%	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 19% 5% 10%	275.0 2.3 \$359.4 \$1,807.7 0 7% 6% 15% 19% 3%	247.8 5.7 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%) (15%)	223.3 6.1 \$324.2 \$1,591.2 0 (8%) (30%) (7%) (6%) (13%)	\$1,603.3 0 4% 0% (13%) 0% 0%	\$1,616.0 0 1% (5%) (15%) (1%) (2%)	\$1,628.0 0 1% (4%) (9%) (1%) (2%)	\$1,654.2 0 4% 1% (2%) 0% 0%	\$1,685.9 0 6% 4% (1%) 1% 2%	\$1,723.9 0 9% 8% 2% 2% 4%	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 5%	251.3 6.9 \$378.5 \$1,572.1 0 17% 6% 20% 496	\$347.1 \$1,603.3 0 (3%) 20% (12%) (3%) (6%)	\$433.6 \$1,685.9 0	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 3% 8%	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 7%	\$365.1 \$1,616.0 0 (3%) (14%) (15%) (3%) (7%)	0. \$465. \$1,723.
Retained Earnings Abancenterling interest in subsidiary Total Shareholder's Equity Total Labilities & Equity CHECK  VALUATION RATIOS Profitability Ratios Return On Irequity Return on Avg Equity Return on Avg Equity Return on Avg Equity Return On Net Assets Return On Net Assets Return On Net Assets Return On Net Assets Return On Self Shareholder  * Avg Over Last 4 Qtrs Efficiency, Ratios	204.8 9.3 \$332.3 \$1,323.7 0 19% 24% 613% 696 14% 496	\$1,508.5 0 4% 3% 12% 1%	231.4 6.5 \$399.1 \$1,554.1 0 22% 24% 20% 6% 12% 5%	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 19% 5% 10% 5%	275.0 7.3 \$359.4 \$1,807.7 0 7% 6% 15% 19% 39% 19%	247.8 5.7 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%) (15%) (6%)	223.3 6.1 5324.2 2 51,591.2 0 (8%) (30%) (7%) (6%) (13%) (6%)	\$1,603.3 0 4% 0% (13%) 0% 0%	\$1,616.0 0 1% (5%) (15%) (15%) (1%) (2%) (1%)	\$1,628.0 0 1% (4%) (9%) (1%) (2%) (1%)	\$1,654.2 0 4% 1% (2%) 0% 0% 0%	\$1,685.9 0 6% 4% (1%) 1% 2% 1%	\$1,723.9 0 9% 8% 2% 2% 4% 2%	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 5% 2%	251.3 6.9 \$378.5 \$1,572.1 0 17% 6% 20% 4% 9% 4%	\$347.1 \$1,603.3 0 (3%) 20% (12%) (3%) (6%) (3%)	3% (10%) (0%) (0%) (0%) (0%)	204.8 9.3 \$332.3 \$1,323.7 0	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 7% 3%	\$365.1 \$1,616.0 0 (3%) (14%) (15%) (3%) (7%) (3%)	0. \$465. \$1,723.
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity  Total Liabilities & Equity  CHECK  VALUATION RATIOS  Porfitability Ratios  Return On Invested Capital  Return On Equity  Return on Avg Equity *  Return on Avg Equity *  Return on Avg Equity *  Return On Sales  Return On Sales  * Avg Over Last 4 Qtrs  Efficiency Ratios  A/R turnover	204.8 9.3 \$332.3 \$1,323.7 0	\$1,508.5 \$1,	231.4 6.5 \$399.1 \$1,554.1 0 22% 24% 20% 6% 12% 5%	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 19% 5% 10% 5%	275.0 7.3 \$359.4 \$1,807.7 0 7% 6% 15% 19% 3% 196	247.8 5.7 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%) (15%) (6%)	2233 6.1 8324.2 2 2 51,591.2 0 (8%) (30%) (7%) (6%)	\$1,603.3 0 4% 0% (13%) 0% 0% 0%	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%)	\$1,628.0 0 1% (4%) (9%) (1%) (2%) (1%)	\$1,654.2 0 4% 1% (2%) 0% 0%	\$1,685.9 0 6% 4% (1%) 1% 2% 1%	\$1,723.9 0 9% 8% 2% 2% 4% 2%	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 5% 2%	251.3 6.9 \$378.5 \$1,572.1 0 17% 6% 20% 4% 9% 4%	\$347.1 \$1,603.3 0 (3%) 20% (12%) (3%) (3%) (3%) (3%)	3% (10%) (0%) (0%) (0%) (0%)	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 3% 8% 3%	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 16% 3% 7% 3%	3365.1 \$1,616.0 0 (3%) (14%) (15%) (3%) (3%) (3%)	0. \$465. \$1,723.
Retained Earnings Abnocentrolling interest in subsidiary Total Labilities & Equity Total Labilities & Equity CHECK  VALUATION RATIOS Profitability Ratios Return On Invested Capital Return on Aug Equity * Return on Aug Equity * Return on Aug Equity * Return On Net Assets Return On Net Assets Return On Net Assets Return On Net Assets Return On Selficiency Ratios A/R Lurrover A/R Days Sales Out	204.8 9.3 \$332.3 \$1,323.7 0 19% 24% 13% 6% 14% 4%	207.3 6.1 \$354.9 \$1,508.5 0 4% 12% 11% 11% 14.7 78	231.4 6.5 \$399.1 \$1,554.1 0 22% 24% 20% 6% 12% 5%	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 19% 5% 5% 4.3 86	275.0 7.2 \$359.4 \$1,807.7 0 7% 6% 15% 1% 3% 1% 6.1 60	247.8 5.7 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%) (15%) (6%)	223.3 6.1 \$324.2 \$1,591.2 0 (8%) (30%) (7%) (6%) (13%) (6%)	\$1,603.3 0 4% 0% (13%) 0% 0% 0%	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%)	\$1,628.0 0 1% (4%) (9%) (1%) (2%) (1%) 6.6 55	\$1,654.2 0 4% 1% (2%) 0% 0% 0%	\$1,685.9 0 6% 4% (1%) 1% 2% 1%	\$1,723.9 0 9% 8% 2% 2% 4% 2%	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 5% 5% 4.8 76	251.3 6.9 \$378.5 \$1,572.1 0 17% 6% 20% 4% 9% 4%	\$347.1 \$1,603.3 0 (3%) 20% (12%) (3%) (6%) (3%)	3% (10%) (0%) (0%) (0%) (0%) (0%) (0%)	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 3% 8% 3%	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 7% 3% 3%	0.0 \$365.1 \$1,616.0 0 (3%) (14%) (3%) (3%) (3%) (3%)	0. \$465. \$1,723. 59 39 39 19 29 19
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity Total Labilities & Equity CHECK  VALUATION RATIOS Profitability Ratios Return On Invested Capital Return on Guity Return on Avg Equity Return on Avg Equity Return on Avg Equity Return on Net Assets Return On Sales * Avg Over Last 4 Qtrs Efficiency Ratios A/R turnover A/R Days Sales Out Inventory Turns	204.8 9.3 \$332.3 \$1,323.7 0	207.3 6.1 \$354.9 \$1,508.5 0 4% 3% 12% 196 196 196	231.4 6.5 \$399.1 \$1,554.1 0 22% 24% 20% 6% 12% 5%	251.3 6.9 \$378.5 \$1.572.1 0 19% 21% 19% 5% 10% 5%	275.0 7.3 \$359.4 \$1,807.7 0 7% 6% 15% 196 3% 196	247.8 5.7 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%) (15%) (6%)	2233 6.1 \$324.2 2 2 31,591.2 0 (8%) (30%) (6%) (6%) (6%)	\$1,603.3 0 4% 0% (13%) 0% 0% 0%	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%) (1%)	1% (4%) (9%) (1%) (2%) (1%) 6.6 55 5.0	\$1,654.2 0 4% 1% (2%) 0% 0% 0% 6.6 55 5.0	\$1,685.9 0 6% 4% (1%) 1% 2% 1%	\$1,723.9 0 9% 8% 2% 4% 2% 6.66 55 5.0	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 5% 2% 4.8 76 3.2	251.3 6.9 \$378.5 \$1,572.1 0 17% 6% 20% 4% 9% 4% 4%	(3%) (3%) (2%) (2%) (3%) (6%) (3%) (5%) (5%) (5%) (5%) (5%)	3433.6 \$1,685.9 0 3% (10%) (0%) (0%) (0%) (0%)	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 396 8% 396	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 7% 3% 5.9 62 3.2	(3%) (14%) (15%) (3%) (7%) (3%) (3%) (5%) (5%) (5%) (5%) (5%) (5%) (5%) (5	0. \$465. \$1,723. \$9 39 39 19 29 19 6. 5
Retained Earnings Abnocentroling interest in subsidiary Total Labilities & Equity Total Labilities & Equity CHECK VALUATION RATIOS Profitability Ratios Return On Invested Capital Return On Equity Return on Aug Equity * Return on Aug Equity * Return On Net Assets Return On Sales * Ang Over Last 4 Qtrs Efficiency Ratios A/R turnover A/R Day's Sales Out Inventory Turns Days of Inventory	204.8 9.3 \$332.3 \$1,323.7 0 19% 24% 6% 14% 49%	\$354.9 \$1,508.5 0 \$1,2% 12% 13% 14,7 78 4.0 92	231.4 6.5 \$399.1 \$1,554.1 0 22% 24% 20% 6% 6% 12% 5%	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 19% 5% 4.3 86 4.1 89	275.0 7.3 \$359.4 \$1,807.7 0 7% 6% 15% 19% 19% 6.1 60 3.2 113	247.8 5.7 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%) (15%) (6%)	223.3 6.1 \$324.2 \$1,591.2 0 (8%) (30%) (7%) (6%) (13%) (6%)	\$1,603.3 0 4% 0% (13%) 0% 0% 0% 6.6 55 4.9 75	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%) (2%) (1%)	1% (4%) (9%) (1%) (2%) (1%) 6.6 55 5.0 73	\$1,654.2 0 4% 1% (2%) 0% 0% 0% 6.6 55 5.0 73	\$1,685.9 0 6% 4% (1%) 1% 2% 1%	\$1,723.9 0 9% 8% 2% 2% 4% 2% 6.6 55 5.0 73	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 4.8 76 3.2 114	251.3 6.9 \$378.5 \$1,572.1 0 17% 6% 20% 4% 9% 4%	(3%) (3%) 20% (12%) (3%) (6%) (3%) 7.3 50 5.4	3% (10%) (0%) (0%) (0%) (0%) (0%) (0%) (0%) (	204.8 9.3 \$332.3 51,323.7 0 17% 13% 14% 3% 8% 3%	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 62 3.2 3.2 113	(3%) (14%) (15%) (3%) (15%) (3%) (7%) (3%) (3%) (5,9) (3%) (5,9) (	0. \$465. \$1,723. 59 39 39 19 29 19 6. 5. 5.
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity Total Labilities & Equity GHECK  VALUATION RATIOS Profitability Ratios Return On Invested Capital Return On Equity Return on Aug Equity Return on Aug Equity Return on Aug Equity Return on Net Sasets Return On Net Assets Return On Net Assets Return On Net Assets Return On Sales  "Aug Over Last 4 Qtrs Efficiency Ratios A/R turnover A/R Days Sales Out Inventory Turns Days of Inventory A/P turnover	204.8 9.3 \$332.3 \$1,323.7 0 19% 24% 13% 6% 4% 5.5 67 4.3 8.5 3.2	207.3 5.1 \$354.9 \$1,508.5 0 4% 3% 12% 11% 11% 4.7 78 4.0 92 3.0	231.4 5.5 \$399.1 \$1,554.1 0 22% 24% 24% 6% 12% 5% 5.2 71 3.8 97 3.1	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 19% 5% 10% 5% 4.3 86 4.1 89 3.2	275.0 7.3 \$359.4 \$1,807.7 0 7% 6% 15% 19% 3% 1% 6.1 60 3.2 113 3.5	247.8 \$.7 \$331.5 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%) (15%) (6%) 7.5 49 4.1 88 5.4	223.3 6.1 5324.2 0 (8%) (30%) (7%) (6%) (13%) (6%)	\$1,603.3 0 4% 0% (13%) 0% 0% 0% 6.6 55 4.9 75 5.2	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%) (1%) 6.6 55 5.0 73 3 5.2	1% (4%) (9%) (1%) (2%) (1%) 6.6 55 5.0 73 35.2	\$1,654.2 0 4% 1% (2%) 0% 0% 0% 06 55 5.0 73 3	\$1,685.9 0 6% 4% (1%) 1% 2% 2% 55 5.0 73 35.2	\$1,723.9 0 9% 8% 2% 2% 4% 2% 55 5.0 73 5.2	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 5% 2% 5% 2% 14.8 76 3.2 114	251.3 6.9 \$378.5 \$1,572.1 0 17% 6% 20% 4% 9% 4% 44 82 4.2 87 3.3	(3%) 20% (12%) (3%) (3%) (6%) (3%) 50 5.4 68 5.7	3% (10%) (0%) (0%) (0%) (0%) (0%) (0%) (0%) (	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 3% 8% 3% 4.9 75 4.0 911	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 7% 3% 5.9 62 3.2 113 3.4	3365.1 \$1,616.0 0 (3%) (14%) (15%) (3%) (	0. \$465. \$1,723. 59 39 39 19 29 19
Retained Earnings Noncentrolling interest in subsidiary Total Shareholder's Equity Total Unibilities & Equity CHECK VALUATION RATIOS Profitability Ratios Return On Invested Capital Return On Neg Equity Return On Neg Equity Return On Nestes Return On Nest Assets Re	204.8 9.3 \$332.3 \$1,323.7 0 19% 24% 6% 14% 49%	\$354.9 \$1,508.5 0 \$1,2% 12% 13% 14,7 78 4.0 92	231.4 6.5 \$399.1 \$1,554.1 0 22% 24% 20% 6% 6% 12% 5%	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 19% 5% 4.3 86 4.1 89	275.0 7.3 \$359.4 \$1,807.7 0 7% 6% 15% 19% 19% 6.1 60 3.2 113	247.8 5.7 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%) (15%) (6%)	223.3 6.1 \$324.2 \$1,591.2 0 (8%) (30%) (7%) (6%) (13%) (6%)	\$1,603.3 0 4% 0% (13%) 0% 0% 0% 6.6 55 4.9 75	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%) (2%) (1%)	1% (4%) (9%) (1%) (2%) (1%) 6.6 55 5.0 73	\$1,654.2 0 4% 1% (2%) 0% 0% 0% 6.6 55 5.0 73	\$1,685.9 0 6% 4% (1%) 1% 2% 1%	\$1,723.9 0 9% 8% 2% 2% 4% 2% 6.6 55 5.0 73	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 4.8 76 3.2 114	251.3 6.9 \$378.5 \$1,572.1 0 17% 6% 20% 4% 9% 4%	(3%) 20% (12%) (3%) (5%) (6%) (3%) 7.3 50 5.4 68	3% (10%) (0%) (0%) (0%) (0%) (0%) (0%) (0%) (	204.8 9.3 \$332.3 51,323.7 0 17% 13% 14% 3% 8% 3%	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 62 3.2 3.2 113	(3%) (14%) (15%) (3%) (15%) (3%) (7%) (3%) (3%) (5,9) (3%) (5,9) (	0. \$465. \$1,723. 59 39 39 19 29 19
Retained Earnings  Noncontrolling interest in subsidiary  Total Shareholder's Equity  Total United States of Control  CHECK  VALUATION RATIOS  Profitability Ratios  Return On Invested Capital  Return On Invested Capital  Return On Regulty  Return on Any Equity  Return on Any Equity  Return on Net Assets  Re	204.8 9.3 \$332.3 \$1,323.7 0 19% 6% 14% 6% 14% 65 5.5 67 4.3 85 5.3 2	207.3 5.1 535.49 51,508.5 0 4% 3% 12% 196 196 196 4.7 78 4.0 92 3.0 121	231.4 6.5 5399.1 31,554.1 0 22% 624% 620% 65% 12% 571 3.8 97 3.1 119	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 5% 10% 5% 4.3 86 4.1 89 3.2 114	275.0 2.3 \$1,807.7 0 7% 6% 15% 196 3% 116 6.1 6.0 3.2 113 3.5 106	247.8 \$.7 \$331.5 \$331.5 \$1,640.1 0 (10%) (33%) (6%) (7%) (6%) (7%) (6%) 7.5 49 4.1 88 5.4 68	223.3 6.1 5324.2 0 (8%) (30%) (7%) (6%) (13%) (6%)	\$1,603.3 0 0 4% 0% (13%) 0% 0% 0% 6.6 55 4.9 75 5.2 70	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%) (1%) 55 5.0 73 5.2 70	\$1,628.0 0 1% (4%) (9%) (1%) (2%) (1%) 6.6 55 5.0 73 5.2 70	\$1,654.2 0 4% 1% (2%) 0% 0% 6.6 55 5.0 73 5.2 70	\$1,685.9 0 6% 4% (1%) 1% 2% 1% 6.6 55 5.0 73 5.2 70	\$1,723.9 0 9% 8% 2% 2% 4% 2% 6.66 55 5.0 73 5.2 70	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 5% 2% 5% 2% 14.8 76 3.2 114	251.3 <u>6.9</u> \$378.5 \$1,572.1 0 17% 6% 6% 20% 4% 9% 4% 44 82 4.2 87 3.3 112	(3%) (3%) (20%) (12%) (3%) (6%) (3%) 50 5.4 68 5.7 63	3% (10%) (0%) (0%) (0%) (0%) (0%) (0%) (0%) (	204.8 9.3 \$332.3 0 17% 17% 13% 14% 396 8% 396 4.9 75 4.0 91 3.0	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 7% 3% 5.9 62 3.2 113 3.4 106	(3%) (14%) (15%) (3%) (7%) (3%) (7%) (3%) (7%) (3%) (5,9) (5,9) (5,9) (5,9) (5,9) (6,9) (5,9) (6	0. \$465. \$1,723. 59 39 39 19 29 19 6. 5 5 4. 7
Retained Earnings Noncentrolling interest in subsidiary Total Shareholder's Equity Total Unibilities & Equity CHECK VALUATION RATIOS POrtfacibility Ratios Return On invested capital Return on Faquity Return on Equity Return on Assets Return On Next Assets Return On Next Assets Return On Next Assets Return On Next Assets Return On Seality A/R Days Salse Out Investory Turns Days of Inventory A/P turnover Days polyable	204.8 9.3 \$332.3 \$1,323.7 0 19% 24% 13% 6% 4% 5.5 67 4.3 8.5 3.2	207.3 5.1 \$354.9 \$1,508.5 0 4% 3% 12% 11% 11% 4.7 78 4.0 92 3.0	231.4 5.5 \$399.1 \$1,554.1 0 22% 24% 24% 6% 12% 5% 5.2 71 3.8 97 3.1	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 19% 5% 10% 5% 4.3 86 4.1 89 3.2	275.0 7.3 \$359.4 \$1,807.7 0 7% 6% 15% 19% 3% 1% 6.1 60 3.2 113 3.5	247.8 \$.7 \$331.5 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%) (15%) (6%) 7.5 49 4.1 88 5.4	223.3 6.1 5324.2 0 (8%) (30%) (7%) (6%) (13%) (6%)	\$1,603.3 0 4% 0% (13%) 0% 0% 0% 6.6 55 4.9 75 5.2	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%) (1%) 6.6 55 5.0 73 3 5.2	1% (4%) (9%) (1%) (2%) (1%) 6.6 55 5.0 73 35.2	\$1,654.2 0 4% 1% (2%) 0% 0% 0% 06 55 5.0 73 3	\$1,685.9 0 6% 4% (1%) 1% 2% 2% 55 5.0 73 35.2	\$1,723.9 0 9% 8% 2% 2% 4% 2% 55 5.0 73 5.2	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 5% 2% 5% 2% 14.8 76 3.2 114	251.3 6.9 \$378.5 \$1,572.1 0 17% 6% 20% 4% 9% 4% 44 82 4.2 87 3.3	(3%) 20% (12%) (3%) (3%) (6%) (3%) 50 5.4 68 5.7	3% (10%) (0%) (0%) (0%) (0%) (0%) (0%) (0%) (	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 3% 8% 3% 4.9 75 4.0 911	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 7% 3% 5.9 62 3.2 113 3.4	3365.1 \$1,616.0 0 (3%) (14%) (15%) (3%) (	59 39 39 39 29
Retained Earnings  Noncontrolling interest in subsidiary  Total Shareholder's Equity  Total United States of Control  CHECK  VALUATION RATIOS  Profitability Ratios  Return On Invested Capital  Return On Invested Capital  Return On Regulty  Return on Any Equity  Return on Any Equity  Return on Net Assets  Re	204.8 9.3 \$332.3 \$1,323.7 0 19% 6% 14% 6% 14% 65 5.5 67 4.3 85 5.3 2	207.3 5.1 535.49 51,508.5 0 4% 3% 12% 196 196 196 4.7 78 4.0 92 3.0 121	231.4 6.5 5399.1 31,554.1 0 22% 624% 620% 65% 12% 571 3.8 97 3.1 119	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 5% 10% 5% 4.3 86 4.1 89 3.2 114	275.0 2.3 \$1,807.7 0 7% 6% 15% 196 3% 116 6.1 6.0 3.2 113 3.5 106	247.8 \$.7 \$331.5 \$331.5 \$1,640.1 0 (10%) (33%) (6%) (7%) (6%) (7%) (6%) 7.5 49 4.1 88 5.4 68	(8%) (30%) (6%) (6%) (6%) (6%) (5%) (6%) (6%)	\$1,603.3 0 0 4% 0% (13%) 0% 0% 0% 6.6 55 4.9 75 5.2 70	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%) (1%) 55 5.0 73 5.2 70	\$1,628.0 0 1% (4%) (9%) (1%) (2%) (1%) 6.6 55 5.0 73 5.2 70	\$1,654.2 0 4% 1% (2%) 0% 0% 6.6 55 5.0 73 5.2 70	\$1,685.9 0 6% 4% (1%) 1% 2% 1% 6.6 55 5.0 73 5.2 70	\$1,723.9 0 9% 8% 2% 2% 4% 2% 6.66 55 5.0 73 5.2 70	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 5% 2% 4.8 76 3.2 114 2.4 151	251.3 <u>6.9</u> \$378.5 \$1,572.1 0 17% 6% 6% 20% 4% 9% 4% 44 82 4.2 87 3.3 112	(3%) (3%) (20%) (12%) (3%) (6%) (3%) 50 5.4 68 5.7 63	3% (10%) (0%) (0%) (0%) (0%) (0%) (0%) (0%) (	204.8 9.3 \$332.3 0 17% 17% 13% 14% 396 8% 396 4.9 75 4.0 91 3.0	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 7% 3% 5.9 62 3.2 113 3.4 106	(3%) (14%) (15%) (3%) (7%) (3%) (7%) (3%) (7%) (3%) (5,9) (5,9) (5,9) (5,9) (5,9) (6,9) (5,9) (6	59 39 39 39 19 29 19 6. 5 4. 7
Retained Earnings Noncentrolling interest in subsidiary Total Shareholder's Equity Total Unibilities & Equity CHECK  VALUATION RATIOS Profitability Ratios Return On Invested capital Return On Equity Return on Equity Return on Assets Return on On Seales Return on Steel Return on Steel Return on Steel Return on Assets Return of Net Assets Return on Steel Return on Ste	204.8 9.3 \$332.3 \$1,323.7 0 19% 24% 13% 6% 14% 44%	207.3 6.1 535.49 51,508.5 0 4% 12% 12% 196 196 4.7 78 4.0 92 3.0 0 121	231.4 6.5 5399.1 51,554.1 0 22% 22% 22% 6.6 6.6 6.12% 5.7 1.3.8 9.7 3.1 1.19	251.3 6.9 5378.5 \$1,572.1 0 19% 21% 5% 10% 5% 4.3 86 4.1 89 3.2 114	275.0 2.3 \$359.4 \$1,807.7 0 7% 6% 15% 19% 19% 6.1 60 3.2 113 3.5 5 106	247.8 5.7 5331.5 51,640.1 0 (10%) (33%) 6% (7%) (15%) (6%) (5%) (6%)	223.3 6.1 53242 0 (8%) (30%) (7%) (6%) (6%) (6%) 6.3 5.8 4.9 7.5 5.3 6.9	\$1,603.3 0 4% 0% (13%) 0% 0% 0% 6.6 55 4.9 75 5.2 70 2.5	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%) (1%) 6.6 55 5.0 73 3 5.2 70	\$1,628.0 0 1% (4%) (9%) (1%) (2%) (1%) 6.6 55 5.0 73 5.2 70	\$1,654.2 0 4% 1% (2%) 0% 0% 0% 6.66 55 5.0 73 35.2 70	\$1,685.9 0 0 6% 4% (1%) 1% 2% 1% 6.6 55 5.0 73 35.2 70	\$1,723.9 0 9% 8% 2% 4% 2% 6.66 55 5.0 7.3 3.5.2 70	184.8 8.7 \$318.9 0 24% (0%) 8% 2% 2.6 4.8 76 3.2 114 2.4 151	251.3 6.9 5378.5 51,572.1 0 17% 6% 20% 4% 9% 4% 4% 44 82 4.2 87 3.3 112 2.2	\$347.1 \$1,603.3 0 (3%) (2%) (12%) (5%) (6%) (6%) (3%) 7.3 50 5.4 68 5.7 63	3% (10%) (0%) (0%) (0%) (0%) (0%) (0%) (0%) (	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 3% 8% 3% 4.9 9.7 5 4.0 9.1 3.0 9.1 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 5.9 62 3.2 113 3.4 106	(3%) (14%) (15%) (7%) (3%) (7%) (3%) (5%) (7%) (3%) (5%) (4%) (4%) (4%) (4%) (4%) (4%) (4%) (5%) (4%) (5%) (4%) (4%) (4%) (5%) (5%) (5%) (5%) (5%) (5%) (5%) (5	59 39 39 39 39 19 29 19 6. 5. 4. 7.
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity Total Unities & Equity CHECK  VALUATION RATIOS Profitability Ratios Return On Invested Capital Return on Pagity Return on Avg Equity Return on Avg Equity Return on Avg Equity Return on Avg Sequity Return on Net Assets Re	204.8 9.3 \$332.3 \$1,323.7 0 19% 24% 13% 6% 4% 4% 5.5 67 4.3 8.5 3.2 114	207.3 6.1 535.49 51,508.5 0 4% 3% 12% 1% 1% 1% 4.7 7.8 4.0 92 3.0 121 11.5	231.4 6.5 5399.1 31,554.1 0 22% 24% 20% 6% 12% 6% 12% 55%	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 19% 5% 10% 5% 4.1 89 3.2 114 2.2 1.6	275.0 2.3 \$359.4 \$1,807.7 0 7% 6% 15% 3% 11% 6.1 60 3.2 2.1 13 3.5 106 2.0 1.3	247.8 5.7 \$331.5 \$3	223.3 6.1 5324.2 0 (8%) (30%) (7%) (6%) (13%) (6%) (6%) 6.3 5.8 4.9 7.5 5.3 69	\$1,603.3 0 0 4% 0% (13%) 0% 0% 0% 6.6 55 4.9 75 5.2 2.70	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%) 6.6 55 5.0 73 5.2 70 2.6 2.0	\$1,628.0 0 1% (4%) (9%) (9%) (1%) (2%) (1%) 6.6 55 5.0 73 5.2 70 2.6 2.0	\$1,654.2 0 4% 1% (2%) 0% 0% 0% 0% 55 5.0 73 5.2 70 2.6 2.1	\$1,685.9 0 0 6% 4% (1%) 1% 2% 1% 6.6 55 5.0 73 5.2 70	\$1,723.9 0 9% 8% 2% 4% 2% 6.6 55 5.0 73 5.2 70 2.7	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 5% 2% 5% 2.7 4.8 76 3.2 114 2.4 151 151 161 1.0	251.3 <u>6.9</u> \$378.5 \$1,572.1 0 17% 6% 20% 4% 9% 4.4 82 4.2 87 3.3 112 2.2 1.6	(3%) (3%) (2%) (12%) (3%) (5%) (3%) (5%) (5%) (5%) (5%) (5%) (5%) (5%) (5	3% (10%) (0%) (0%) (0%) (0%) (2%) 4.7 78 4.9 75 2.7 2.1	204.8 9.3 \$332.3 0 17%6 13%6 14%6 3%6 8%6 4.9 7.5 4.0 91 3.0 122 1.8	275.0 \$359.4 \$1,807.7 0 14% 15% 3% 3% 3% 5.9 62 3.2 113 3.4 106 2.0 1.3	(3%) (14%) (15%) (3%) (3%) (3%) (3%) (3%) (5%) (3%) (5%) (4%) (4%) (5%) (5%) (5%) (5%) (5%) (5%) (5%) (5	\$465. \$1,723. 59,339 39,19 29,919 6,55 4,4,77
Retained Earnings Noncentrolling interest in subsidiary Total Shareholder's Equity Total Unibilities & Equity CHECK  VALUATION RATIOS Profitability Ratios Return On invested capital Return on Equity Return on Assets Return on Assets Return on Net Assets Return on Net Assets Return on Sales * "Ang Over Last Q'us Efficiency Ratios A/R turnover A/P turnover Liquidity Ratios Current Ratio Quick Ratio Quick Ratio	204.8 9.3 9.3 9.3 9.1,223.7 0 19% 24% 13% 66% 66% 64% 456 14% 456 14% 456 14% 456 14% 456 14% 456 14% 456 14% 456 14% 456 14% 456 156 156 156 156 156 156 156 156 156 1	207.3 5.1 535.49 207.3 5.508.5 0 4% 12% 12% 11% 1.508.5 0 12% 1.508.5 0 1.20%	231.4 6.5 5399.1 51,554.1 0 22% 62% 62% 62% 62% 62% 63% 77 3.8 97 73.1 119 22 126 127 128 129 129 129 129 129 129 129 129 129 129	251.3 6.9 \$378.5 \$1.572.1 0 19% 21% 19% 5% 6 4.1 89 3.2 114 2.2 1.6 \$636	275.0 2.3 \$359.4 \$1,807.7 0 7% 6% 15% 19% 60 3.2 113 3.5 106 2.0 1.3 \$570	247.8 5.7 5.331.5 5331.5 51,640.1 0 (10%) (33%) 6% (7%) (6%) (15%) (6%) 7.5 49 4.1 8.8 8.8 8.3 1.6 6.8 5.4 6.8 5.4 6.8	223.3 6.1 5324.2 0 (8%) (30%) (7%) (6%) (6%) 6.3 5.8 4.9 7.5 5.3 69 2.4 1.9 9.5555	\$1,603.3 0 0 4% 0% (13%) 0% 0% 0% 6.6 55 4.9 75 5.2 70 2.5 1.9 \$579	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%) 6.6 55 5.0 73 5.2 70 2.6 2.0 \$601	\$1,628.0 0 1% (4%) (9%) (1%) (2%) (1%) 6.6 5.5 5.0 7.3 5.2 70 2.6 2.0 \$623	\$1,654.2 0 4% 1% (2%) 0% 0% 0% 0% 55 5,0 73 5,2 70 2,6 2,1	\$1,685.9 0 6% 4% 4% (1%) 1% 2% 1% 6.6 55 5.0 73 3.5.2 70 2.7 2.1 8677.5	\$1,723.9 0 9%6 8%6 2%6 2%6 4% 2%6 55 5.0 73 5.2 70 2.7 2.1 5710	184.8 8.7 8.7 \$318.9 \$1.344.8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	251.3 6.9 5378.5 51.572.1 0 17% 6% 20% 4% 4% 4% 44 82 4.2 87 3.3 112 2.2 1.6 636	3347.1 \$1,603.3 0 (3%) 20% (12%) (2%) (3%) (5%) (5%) 50 5.4 68 8.5.7 63 2.5 1.9 \$579	3% (10%) (0%) (0%) (0%) (0%) (0%) (2.59) 4.7 78 4.9 75 2.7 2.1 \$677	204.8 9.3 5332.3 51,323.7 0 17% 13% 14% 3% 4.9 7.5 4.0 91 13.0 122 1.8 1.2 5409	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 62 3.2 113 3.4 106 2.0 1.3 \$570	(3%) (14%) (15%) (3%) (15%) (3%) (3%) (3%) (3%) (3%) (3%) (4%) (3%) (3%) (4%) (3%) (4%) (3%) (4%) (4%) (4%) (4%) (4%) (4%) (4%) (4	\$465.5 \$1,723.
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity Total Unibilities & Equity CHICK  VALUATION RATIOS Profitability Ratios Return On invested capital Return on Equity Return on A Equity Return on A Sets Return On Net Assets Return On Net Assets Return On Sets	204.8 9.3 \$332.3 \$1,323.7 0 19% 24% 13% 6% 4% 4% 5.5 67 4.3 85 3.2 114 1.2 \$409 103%	207.3 5.1. \$1.508.5 51.508.5 0 4% 3% 1% 1% 1% 4.7 78 4.0 92 3.0 121 1.5 \$598 136%	231.4 6.5 5399.1 51,554.1 51,554.1 51,554.1 0 22% 6% 62% 66% 12% 57 3.1 119 22 1.5 543 122%	251.3 6.9 5378.5 51.572.1 0 19% 19% 5% 4.3 86 4.1 89 3.2 114 2.2 1.6 \$636.6 \$156%	275.0 2.3 3359.4 51,807.7 0 7% 6% 15% 6.1 6.1 6.0 3.2 2.1 113 3.5 106 2.0 1.3 \$570 222%	247.8 \$.7 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%) (15%) (6%) (6%) 7.5 49 4.1 8.8 5.4 6.8 5.4 6.8 5.5 8.2 3.3 1.6 6.8 5.4 6.8 5.4 6.8 5.4 6.8 5.4 6.8 5.4 6.8 5.4 6.8 5.4 6.8 5.4 6.8 5.4 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8	2333 6.1 83242 \$1,591.2 0 (8%) (30%) (6%) (6%) (6%) (6%) 6.3 5.8 4.9 9.75 5.3 69 24 1.9 \$555 241%	\$1,603.3 0 0 4% 0% (13%) 0% 0% 0% 6.6 55 4.9 75 5.2 70 2.5 1.9 \$579 \$223%	1% (5%) (15%) (1%) (2%) (1%) (2%) (1%) (2%) (2%) (2%) (2%) (2%) (2%) (2%) (2	\$1,628.0 0 1% (4%) (9%) (1%) (2%) (1%) (55 5.0 73 3 5.2 70 2.6 2.0 \$623 158%	\$1,654.2 0 4% (2%) 0% 0% 0% 6.6 55 5.0 73 5.2 2.7 2.1 \$649 184%	51,685.9 6% 4% (1%) 1% 2% 6.6 55 5.0 73 5.2 70 2.7 2.1 \$677 171%	\$1,723.9 9% 8% 2% 2% 4% 4% 55 55 50 73 5.2 70 2.7 2.1 \$710 158%	184.8 8.7 8.7 8.134.8 0 0 24% (0%) 8% 2% 5% 2% 114 2.4 151 1.6 1.0 \$367 107%	251.3 \$378.5 \$1,572.1 0 17% 6% 20% 4% 9% 44,8 82 4.2 82 4.2 87 3.3 112 2.2 1.6 \$636 \$636	\$347.1 \$1,603.3 0 (3%) 20% (12%) (3%) (6%) (3%) 5.7 68 5.7 63 2.5 1.9 \$579 \$223%	\$433.6 \$1,685.9 0 3% (10%) (0%) (0%) (0%) (0%) (0%) 4.7 78 4.9 9.75 2.7 2.1 36777 171%	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 8% 3% 4.9 75 4.0 91 3.0 122 18 12 \$409 103%	275.0 \$359.4 \$1,807.7 0 14% 15% 15% 20,3% 3% 5.9 62 3.2 113 3.4 106 2.0 1.3 \$570 222%	(3%) (14%) (15%) (3%) (7%) (3%) (7%) (3%) (3%) (5%) (4%) (4%) (4%) (4%) (4%) (4%) (4%) (4	50 33 33 36 55 4. 77 4. 4. 77 2. 2. 2. 2. 3. 3. 3. 4. 7. 7. 4. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity Total United States of Control Health States of Control Return On Invested Capital Return On Invested Capital Return on Any Equity * Return on Nex Assets Return On Nex Assets Return On Nex Assets Return on Sales * Any Over Last 4 Ctrs Efficiency Ratios A/R Burnover A/R Days Sales Out Investory Turns Days of Investory Turns Days of Investory A/P Turnover Days payable Luguidify Ratios Current Ratio Quick Ratio Nex Working Capital Next Working Capital Long-Term Debt / Equity Total Debt / Equity	204.8 204.8 3.332.3 51,323.7 0 19% 24% 13% 66% 64% 44% 45 5.5 67 4.3 8.5 3.2 2 114 1.8 1.2 1.9 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	207.3 6.1 535.49 207.3 5.508.5 0 4% 3% 12% 12% 12% 14,7 78 4.0 92 3.0 121 1.5 5.598 1.508.5 1.	231.4 6.5 5399.1 51,554.1 0 22% 24% 20% 6% 6% 6% 12% 5% 12% 571 3.8 97 71 3.8 119 2.2 1.5 5643 122%	251.3 6.9 \$378.5 \$1,572.1 0 19% 21% 10% 5% 4.3 8.6 4.1 8.9 3.2 114 2.2 1.6 \$5636 156%	275.0 23.359.4 \$1,807.7 0 7% 6% 15% 19% 3% 6.1 6.0 3.2 113 3.5 106 2.0 1.3 \$570 2.2% 2.20%	247.8 5.7 \$331.5 \$331.5 \$1,640.1 0 (10%) (33%) 6% (7%) (6%) (15%) (6%) 4.1 88 8.5 4.4 68 2.3 1.6 \$558 2.8%	223.3 6.1 5324.2 0 (8%) (30%) (7%) (6%) (13%) (6%) 6.3 5.8 4.9 7.5 5.3 69 2.4 1.9 \$5555 241%	\$1,603.3 0 4% 0% (13%) 0% 0% 0% 6.6 55 5.2 70 2.5 1.9 \$579 223%	\$1,616.0 0 1% (5%) (15%) (1%) (2%) (1%) 6.6 55 5.0 73 5.2 70 2.6 2.0 \$601 210%	\$1,628.0 0 1% (4%) (9%) (1%) (2%) (1%) 6.6 55 5.0 73 5.2 70 2.6 2.0 \$623 198%	\$1,654.2 0 4% (2%) 0% 0% 0% 6.66 55 5.0 73 3 5.2 70 2.6 2.1 \$649 184%	\$1,685.9 0 6% 4% (1%) 1% 2% 55.0 73 5.2 70 2.7 2.1 \$677 171%	\$1,723.9 9% 8% 2% 2% 2% 4% 6.6 55 5.0 73 5.2 70 2.7 2.1 \$710 158%	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 5% 5% 6 3.2 114 2.4 151 1.6 1.0 \$367 107% 115%	251.3 £.9 \$378.5 \$1,572.1 0 17% 6% 20% 4% 4% 4.4 8.2 4.2 8.7 3.3 112 2.2 1.6 \$636 156% 159%	\$347.1 \$1,603.3 0 (3%) 20% (12%) (3%) (6%) (3%) 50 5.4 68 5.7 63 2.5 1.9 \$579 223%	\$433.6 \$1,685.9 0 3% (10%) (0%) (0%) (0%) (0%) (0%) (0%) (0%) (	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 3% 8% 6 8% 6 3% 149 9.7 13.0 122 14.0 9.1 122 14.0 9.1 122 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 23% 5.9 62 3.2 113 3.4 106 2.0 1.3 \$570 222%	3365.1 \$1,616.0 0 (3%) (14%) (15%) (3%) (3%) (3%) (3%) 53 52 71 54 68 26 20 \$601 219%	50 33 33 36 55 4. 77 4. 4. 77 2. 2. 2. 2. 3. 3. 3. 4. 7. 7. 4. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.
Retained Earnings Moncontrolling interest in subsidiary Total Shareholder's Equity Total Labilities & Equity CHECK  VALUATION RATIOS Profitability Ratios Return On Invested Capital Return On Invested Capital Return On Aug Equity Return on Sales Lat 4 Qrs Efficiency Ratios A/R turnover Days of Inventory Turns Days of Inventory A/P furnover Days payable Liquidity Ratios Current Ratio Quick Ratio Net Working Capital Long-Term Debt / Equity Total Debt / Equity Op Inc / Assets, exc. Cash Book & Cash Value	204.8 204.8 332.3 5322.3 51,323.7 0 19% 24% 14% 4% 5.5 67 4.3 3.5 3.2 114 1.8 1.2 5409 103% 113%	207.3 5.1 535.49 51.508.5 0 0 4% 6 3% 6 12% 6 19	231.4 55.5 5399.1 51.554.1 0 22% 6% 6% 12% 6% 12% 5% 5% 52 71 3.8 97 3.1 119 2.2 1.5 5643 122% 124% 124% 124% 124% 129% 12	251.3 \$378.5 \$1,572.1 0 19% 5% 19% 5% 10% 5% 4.3 86 4.1 89 3.2 114 2.2 1.6 \$636 156% 159%	275.0 23359.4 \$1,807.7 0 7% 6% 15% 6% 19% 6.1 60 3.2 113 3.5 106 2.0 2.2 2.2 2.2 2.2 2.2 2.2 2.2	247.8 5.7 5.7 5.1.640.1 0 (10%) (33%) 6% (7%) (15%) (6%) 7.5 49 4.1 88 8.5 4.6 8 2.3 1.6 5 558 248% 248%	223.3 6.1 5324.2 51.591.2 0 (8%) (30%) (6%) (13%) (6%) 6.3 5.8 4.9 7.5 5.3 69 2.4 1.9 5.555 2.41% 2.51% 2.51%	51,603.3 0 4% 0% (13%) 0% 0% 0% 6.6 55 55 5.2 70 2.5 1.9 \$579 223% 232% 12%	1% (5%) (15%) (1%) (2%) (1%) (2%) (1%) (2%) (2%) (1%) (2%) (2%) (1%) (2%) (1%) (2%) (1%) (2%) (1%) (2%) (1%) (2%) (2%) (1%) (2%) (2%) (2%) (2%) (2%) (2%) (2%) (2	\$1,628.0 0 1% (4%) (9%) (1%) (2%) (1%) 6.6 55 5.0 73 5.2 70 2.6 2.0 \$623 198% 206% 12%	\$1,654.2 0 4% 1% (2%) 0% 0% 0% 6.6 55 5.0 73 5.2 70 2.6 2.11 \$649 184% 192% 14%	51,685.9 0 6% 4% (1%) 1% 2% 1% 6.6 55 5.0 73 5.2 70 2.7 2.1 \$677 171% 178% 15%	\$1,723.9 0 9%6 8%6 2%6 4%6 2%6 55 5.0 73 5.2 70 2.7 2.1 \$710 1.58%6 165%6 17%6	184.8 8.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 5% 5% 4.8 76 3.2 2114 2.4 151 1.6 \$1.0 \$367 107% 115% 115%	251.3 6.9 \$378.5 \$1.572.1 0 17% 6% 4% 9% 4% 4% 4.4 8.2 4.2 8.7 3.3 112 2.2 1.6 \$636 156% 159% 19%	3347.1 \$1,603.3 0 (3%) 20% (12%) (3%) (5%) (3%) 5.4 68 5.7 63 2.5 1.9 \$579 223% 232%	\$433.6 \$1,685.9 0 3% (10%) (0%) (0%) (0%) (0%) (0%) (0%) (0%) (	204.8 9.3 \$332.3 \$1,323.7 0 17% 13% 14% 3% 8% 8% 4.9 91 3.0 122 1.8 1.2 5.4 9.9 1.3 9.0 9.0 9.0 1.3 9.0 1.3 9.0 1.3 9.0 1.3 9.0 1.3 9.0 1.3 9.0 1.3 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	275.0 \$359.4 \$1.807.7 0 14% 15% 16% 3% 5.9 62 3.2 113 3.4 106 2.0 1.3 \$570 222% 230% 14%	(3%) (14%) (15%) (3%) (25%) (2	51,723. \$1,723. 51,723. 51,723. 51,723. 51,723. 66,53. 67,77. 68,77. 69,77.
Retained Earnings Noncontrolling interest in subsidiary Total Shareholder's Equity Total University Total University VALUATION RATIOS Profitability Ratios Return On Invested Capital Return on Niersted Capital Return on Avg Equity Return on Avg Equity Return on Avg Equity Return on Avg Equity Return on Net Assets Return on	19% 1332.3 132.3 132.3 132.3 132.3 132.3 132.3 132.	207.3 £1. \$354.9 \$1,508.5 0 4% 4% 12% 12% 12% 14% 14,7 78 4.0 92 3.0 121 1.5 \$5598 1.36%	231.4 6.5 5399.1 51,554.1 0 22% 6% 24% 20% 6% 12% 5.56 12% 3.8 97 3.1 119 22 1.5 5643 122% 122% 5445 5445 122% 5445 122% 5445 122% 5445 122% 5445 545 545 545 545 545 545 545 545 5	251.3 3378.5 3178.5 11572.1 0 19% 5% 10% 5% 4.3 89 3.2 114 2.2 1.6 636 159% 159% 57.50	275.0 275.0 3359.4 \$1,807.7 0 7% 6% 15% 11% 160 3.2 2.1 113 3.5 106 2.0 1.3 \$570 2.22% 2.20% 1.5%	247.8 5.2 \$331.5 \$1,640.1 0 (10%) (33%) (6%) (7%) (15%) (6%) (6%) 7.5 49 4.1 88 5.4 68 2.3 1.6 \$558 238% 248% 248% 5465 \$655	223.3 6.1 83.24.2 (8%), (30%), (7%), (6%),	51,603.3 0 4% 0% (13%) 0% 0% 0% 6.6 55 4.9 7.5 7.5 5.2 70 2.23% 232% 232% 232% 56.61	\$1,616.0 0 1% (5%) (15%) (15%) (2%) (1%) (2%) (1%) 55.5 73 5.2 2.70 2.6 2.00 2.10% 2.19% 5.11%	\$1,628.0 0 1% (4%) (9%) (1%) (2%) (1%) 6.6 55 5.0 73 3 5.2 70 2.6 2.0 \$623 198% 206% \$7.25	\$1,654.2 0 4% 1% (2%) 0% 0% 0% 666 55 5.0 73 5.2 2.1 \$649 184% 192% 194% 194% \$7.66	51,685.9 0 6% (1%) 1% 2% 1% 6.66 55 5.0 73 3 5.2 70 2.7 2.1 18677 171% 178% 58.13	\$1,723.9 0 9% 8% 2% 2% 4% 2% 6.6 55 5.0 73 3 5.2 70 2.7 2.1 158% 165% 165%	184.8 8.7.7 \$318.9 \$1,344.8 0 24% (0%) 8% 2% 2% 2% 4.8 76 3.2 114 2.4 151 1.6 1.0 \$367 107% 115% 4.8 \$367 107%	251.3 251.3	347.1 \$1,603.3 0 (3%) (20% (12%) (3%) (5%) (3%) 5.0 5.4 6.8 5.7 6.3 2.5 1.9 9.579 2.23% 2.23% 5.74 5.74 5.75 5.75 5.75 5.75 5.75 5.75	\$1,685.9 0 3% (10%) (0%) (0%) (0%) (0%) (0%) (0%) (0%) (	204.8 9.3 5332.3 51,323.7 0 17% 13% 14% 3% 8% 6 3% 4.9 75 4.0 91 3.0 122 1.8 1.2 5409 103% 113% 113% 113% 113% 113% 113% 113%	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 3% 62 3.2 3.4 106 2.0 1.3 \$570 222% 220% 14% \$6.76	(3%) (3%) (14%) (15%) (3%) (3%) (3%) (3%) (3%) (3%) (3%) (3	51,723.  51,723.  51,723.  51,723.
Retained Earnings Moncontrolling interest in subsidiary Total Shareholder's Equity Total Unifilities & Equity CHECK  VALUATION RATIOS Profitability Ratios Return on Invested capital Return on Fourity Return on Augusty Return on Sales *- Ang Derr Last 4 Qtrs Efficiency Ratios A/R turnover A/R turnover A/R Days Sales Out Investory Turns Days of Investory A/P turnover Days polyable Uspadidy Ratios Current Ratio Quick Ratio Quick Ratio Quick Ratio Quick Ratio Long-Term Debt / Equity Total Debt / Equity Op Inc / Assets, exc. Cash Book & Cash Value Per Share Tanglie Book Value Per Share	204.8 204.8 \$332.3 \$1,323.7 0 19% 24% 14% 4% 6% 14% 4% 4% 48 11.8 1.2 \$409 10.3% 25% \$5.55 67 43.35 5.55 67 43.35 5.55 67 43.35 5.55 67 43.35 67 43.35 67 43.35 67 43.35 67 43.35 67 43.35 67 47 47 47 47 47 47 47 47 47 4	207.3 207.3	231.4 231.4 53393.1 51,554.1 0 22% 522% 6% 6% 6% 52 71 3.8 97 73 3.1 119 22 544 19% 544 19% 545 547 19% 19% 19% 19% 19% 19% 19% 19%	251.3 29.3 378.5 51.572.1 0 19% 5% 6.3 6.2 11.4 1.1 1.2 1.5 6.3 6.3 6.3 6.3 6.3 6.3 6.3 6.3 6.3 6.3	275.0 275.0 3359.4 \$1,807.7 0 7% 6% 15% 19% 39% 11% 6.1 6.1 6.0 3.2 113 3.5 5 106 2.20% 15% 220% 15% 220% 15% 23% 23% 24% 25% 25% 25% 25% 25% 25% 25% 25% 25% 25	247.8 247.8 247.8 247.8 247.8 247.8 247.8 247.8 247.8 247.8 248.8	2233 2242 31,5912 0 (8%) (8%) (8%) (9%) (6%) (6%) (13%) 4.9 5.5 5.3 6.9 5.5 5.3 6.9 5.5 5.3 6.9 5.5 5.3 6.9 5.5 5.3 6.9 5.5 5.3 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9	51,603.3 0 0 4% 0% 0% 0% 0% 0% 6.6 55 4.9 75 5.2 70 2.5 1.9 \$232% 232% 232% \$232% \$3.12	\$1,616.0 0 1% (5%) (15%) (15%) (2%) (1%) (2%) (1%) (2%) (1%) 55 5.0 73 5.2 70 2.6 2.0 \$601 210% 219% 219% 111%	1% (4%) (9%) (1%) (2%) (1%) (2%) (1%) (2%) (1%) (2%) (1%) (2%) (1%) (2%) (1%) (2%) (1%) (2%) (2%) (2%) (2%) (2%) (2%) (2%) (2	\$1,654.2 0 1% 1% (2%) 0% 0% 0% 6.6 55 5.0 73 5.2 70 2.6 2.1 8649 192% 14% 57.66 54.21	51,685.9 0 6% 4% (1%) 1% 2% 1% 6.6 55 5.0 73 5.2 70 2.7 2.1 \$677 171% 178% 188% 158%	\$1,723.9 0 9% 8% 2% 2% 4% 2% 6.6 55 5.0 73 5.2 70 2.7 2.1 \$710 158% 165% 177%	184.8 8.7. 33189 0 51,344.8 0 0 524% 6(9%) 5% 2% 5% 2% 5% 114 1.6 1.6 1.0 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6	251.3 251.3 251.3 251.3 251.3 251.3 251.3 251.5	347.1 (3%) 0.0 (3%) 0.0 (3%) (3%) (3%) (3%) (3%) (3%) (3%) (3%)	\$433.6 \$1,685.9 0 3%,(10%) (0%) (0%) (0%) (0%) (0%) (0%) (0%) (	204.8 2332.3 5332.3 51,223.7 0 17% 13% 3% 8 3% 4.9 9.1 1.2 2.2 549.9 113% 113% 119%	275.0 \$359.4 \$1,807.7 0 14% 15% 3% 3% 3% 3% 3% 3% 3% 3% 3% 3	(3%) (3%) (14%) (3%) (3%) (3%) (3%) (3%) (3%) (3%) (2%) (2%) (4%) (3%) (3%) (3%) (3%) (3%) (3%) (3%) (3	51,723. 51,723. 51,723. 66,67. 77. 2. 2. 2. 2. 2. 2. 371. 15866. 1655. 551. 551. 551. 551. 552. 553. 553. 553. 553. 553.
Retained Earnings Moncontrolling interest in subsidiary Total Labilities & Equity COHECK  VALUATION RATIOS Profitability Ratios Return On Invested Capital Return On Equity Return on Avg Equity Return on Avg Equity Return on Avg Equity Return on Avg Equity Return on On Seasts Return On Net Assets Return On Seasts Return On Seasts Return On Seast Return On Seast Avg Over Last 4 Qtrs Efficiency Ratio AVR Days Sales Out Investory Turns Days of Inventory AVP turnover AVP Eurnover AVP Eurnover AVP Eurnover AVP Eurnover Days payable Liquidity Ratios Current Ratio Quick Ratio Net Working Capital Long-Term Debt / Equity Total Debt / Facily Total D	19% 1332.3 132.3 132.3 132.3 132.3 132.3 132.3 132.3 132.3 132.3 132.3 1	207.3 2 2 2 3 2 3 2 4 4 4 4 5 2 5 1 5 2 8 5 2 8 2 2 8 2 8 2 8 2 8 2 8 2 8 2	231.4 231.4 51.554.1 51.554.1 0 22% 6% 6% 6% 6% 6% 12% 5% 52 71 18 38 97 31 119 22 15 15 19 24 5% 5% 5% 6% 6% 6% 6% 6% 6% 6% 6% 6% 6	251,3 25,3 378,5 51,572,1 0 19% 5% 6.0 2,2 1% 6.5 6.0 2,2 1% 6.5 6.0 2,2 1% 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	275.0 275.0	247.8 247.8 331.5 \$1,640.1 0 (10%) (33%) (6% 6% 6% 6% 6% 15%) 49 4.1 8.8 8.5 4.4 8.5 52.99 16% 5558 238% 248% 5558 5558 5558 5558 52.99 16% 5558 52.99 52.90 52.90 52.90 52.90 52.90 52.90 52.90 52.90 52.90 52.90 52.90 52.90 52.90 52	2233	51,603.3 0 0 0% 0% 0% 0% 0% 0% 0% 0% 6.66 55 5.2 77 72 2.5 1.9 5579 223% 232% 232% 232% 232% 232% 232% 232	51,616.0 0 1% (5%) (15%) (1%) (2%) (1%) 6.6 55 5.0 73 5.2 2.0 \$601 210% 219% 219% \$6.93 \$3.45 \$0.61	\$1,628.0 0 1% (4%) (9%) (1%) (1%) 6.66 55 5.0 73 3.52 70 2.66 8.623 1.2% \$1.2%	\$1,654.2 0 1% (2%) (2%) (0%) 0% 0% 6.6 55 5.0 73 5.2 2.7 2.1 8649 184% 192% \$149%	51,685.9 6% 4% (1%) 1% 2% 1% 6.6 55 5.0 73 5.2 2.7 2.1 \$677.7 171% 178% \$8.13 \$4.70 \$0.39	\$1,723.9 0 9% 8% 2% 4% 2% 6.6 55 5.0 73 5.2 2,7 0 2,7 2,1 15% 165% 165% 175%	184.8 8.7. 2318.9 51.344.8 0 0 24% 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2513 2515 572.1 0 17% 65% 65% 65% 65% 65% 65% 65% 65% 65% 65	\$347.1 \$1,603.3 0 (3%) (20%) (12%) (3%) (5%) (5%) (5%) (5%) (5%) (5%) (5%) (5	\$433.6 \$1,685.9 0 3% (10%) (0%) (0%) (0%) (0%) (0%) (0%) (0%) (	204.8 2 3 3 3 3 2 3 3 3 3 2 3 3 3 3 3 3 3 3	275.0 \$359.4 \$1,807.7 0 14% 15% 16% 33% 5.9 62 2.2 113 3.4 4.0 6.2 2.2 1.3 3.4 4.6 2.0 1.4 5.7 6.7 6.7 6.7 6.7 6.7 6.7 6.7 6	(3%), (3%), (15%), (3%),	51,723.  51,723.  51,723.  51,723.  51,723.  51,723.  51,723.  51,723.  51,723.
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Source: Company Reports, Barclays Research

FIGURE 6. SGH Cash Flow Statement

SGH																					
Period Ending	Nov-21	Feb-22	May-22	Aug-22	Nov-22	Feb-23	May-23	Aug-23	Nov-23	Feb-24	May-24	Aug-24	Nov-24	2021	2022	2023	2024	2021	2022	2023	2024
\$ in millions	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4QE	1QE	2QE	3QE	4QE	1QE	FY	FY	FYE	FYE	CY	CY	CYE	CYE
CASH FLOW																					
Cash Flow from Ops.																					
Net Income	\$20.7	\$3.0	\$24.5	\$20.4	\$5.3	(\$26.8)	(\$24.1)	\$0.4	(\$4.4)	(\$4.1)	\$0.5	\$4.6	\$9.2	\$22.5	\$68.6	(\$45.1)	(\$3.4)	\$41.2	\$53.2	(\$54.9)	\$10.3
Depreciation & Amortization	15.8	16.1	16.6	16.4	19.8	19.9	21.3	21.1	20.9	20.7	20.5	20.3	20.1	49.1	64.9	82.1	82.4	56.6	68.9	83.2	81.6
Stock-based Compensation	9.8	10.0	10.5	9.8	10.4	10.4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	33.9	40.1	40.9	40.1	32.6	40.8	40.5	40.1
Non-cash interest expense (amort of fees and OID)	2.3	2.4	2.7	2.8	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	8.8	10.3	4.0	3.7	9.0	9.0	3.9	3.7
Other Non-Cash Items	19.6	28.0	2.8	0.1	3.3	44.4	14.0	14.0	14.0	14.0	14.0	14.0	14.0	37.7	50.3	75.6	56.0	55.6	34.0	86.3	56.0
Changes in Assets and Liabilities (Net of Acquisitions)																					
Accounts Receivable	(36.1)	(39.5)	34.1	(56.0)	129.7	78.5	(13.7)	17.5	(1.3)	(1.3)	(12.0)	(12.7)	(14.4)	(51.4)	(97.5)	212.0	(27.3)	(85.6)	68.2	81.0	(40.4
Inventories	39.6	(13.2)	(26.5)	39.8	(82.9)	119.5	68.0	4.9	3.9	(0.8)	(10.8)	(12.3)	(14.0)	(137.9)	39.7	109.4	(19.9)	(111.2)	(82.9)	196.2	(37.9
Prepaid Expenses and Other Assets	(0.9)	6.1	(11.1)	(3.4)	(5.2)	(1.5)	15.4	0.0	0.0	0.0	(2.0)	0.0	0.0	(17.5)	(9.3)	8.7	(2.0)	(9.1)	(13.6)	13.9	(2.0)
Accounts Payable	(53.8)	22.1	(15.3)	(7.6)	(83.0)	(146.0)	(49.9)	(3.7)	1.9	0.8	10.3	11.8	13.4	209.0	(54.5)	(282.6)	24.7	137.3	(83.8)	(197.7)	36.3
Accrued Expenses and Other Liabilities	(1.9)	(2.7)	(1.5)	(1.4)	(72.4)	1.0	(0.8)	1.0	1.0	1.0	1.0	1.0	1.0	(0.8)	(7.6)	(71.2)	4.0	6.6	(78.1)	2.2	4.0
Net Cash from Operations	\$15.1	\$32.2	\$36.7	\$20.9	(\$74.0)	\$100.5	\$41.0	\$66.2	\$46.9	\$41.2	\$32.6	\$37.7	\$40.3	\$153.4	\$104.9	\$133.7	\$158.4	\$132.9	\$15.8	\$254.7	\$151.7
Net cash from operations	₩13.1	432.2	450.7	\$20.5	(474.0)	\$100.5	₽41.0	\$00.Z	\$40.5	ψT1.2	432.0	<b>\$37.7</b>	\$40.5	₩133. <del>1</del>	\$104.5	<b>\$133.7</b>	\$150.4	\$152.5	\$15.0	4254.7	\$131.7
Cash Flow from Investing																					
Purchase of PP&E, net	(\$12.8)	(\$7.4)	(\$9.2)	(\$8.9)	(\$11.6)	(\$12.6)	(\$13.3)	(\$17.5)	(\$15.0)	(\$15.0)	(\$15.0)	(\$17.0)	(\$17.0)	(\$47.4)	(\$38.2)	(\$55.0)	(\$62.0)	(\$45.5)	(\$37.0)	(\$58.4)	(\$64.0)
Acquisitions	0.0	0.0	0.0	0.0	(210.3)	(2.8)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(35.7)	0.0	(213.1)	0.0	(35.7)	(210.3)	(2.8)	0.0
Other	(0.6)	(0.1)	(0.1)	(0.1)	(1.7)	2.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	(1.1)	(0.8)	0.8	0.0	(1.8)	(1.9)	2.5	0.0
Net Cash from Investing	(\$13.4)	(\$7.5)	(\$9.2)	(\$8.9)	(\$223.6)	(\$13.4)	(\$12.8)	(\$17.5)	(\$15.0)	(\$15.0)	(\$15.0)	(\$17.0)	(\$17.0)	(\$84.2)	(\$39.0)	(\$267.3)	(\$62.0)	(\$82.9)	(\$249.2)	(\$58.7)	(\$64.0)
Cash Flows from Financing																					
Net issuance (repayment) of Term Loan	\$0.0	\$169.8	\$0.0	\$5.8	\$290.8	(\$4.5)	(\$8.2)	(\$8.2)	(\$8.2)	(\$8.2)	(\$8.2)	(\$8.2)	(\$8.2)	\$11.4	\$175.6	\$270.0	(\$32.6)	\$11.4	\$466.4	(\$29.0)	(\$32.6)
Proceeds from issuance of convert. Preferred stock	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proceeds from Stock Offerings	5.0	2.4	4.4	0.3	3.9	0.3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	(36.8)	12.1	11.3	14.1	(33.1)	11.1	10.9	14.1
Tax Withholding for Employee RSUs	(2.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(4.2)	(2.7)	0.0	0.0	(3.4)	0.0	0.0	0.0
Proceeds from employee stock purchase plan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proceeds (repayment) of borrowings under revolver	10.0	(59.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	(49.0)	0.0	0.0	35.0	(59.0)	0.0	0.0
Other	0.0	(7.8)	(13.9)	(40.4)	(32.8)	(35.4)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	0.0	(62.2)	(68.2)	(0.0)	0.0	(94.9)	(35.4)	(0.0)
Net Cash from Financing	\$12.4	\$105.4	(\$9.5)	(\$34.3)	\$262.0	(\$39.6)	(\$4.6)	(\$4.6)	(\$4.6)	(\$4.6)	(\$4.6)	(\$4.6)	(\$4.6)	\$2.8	\$73.9	\$213.1	(\$18.5)	\$15.6	\$323.5	(\$53.5)	(\$18.5)
FX Impact	(4.1)	2.6	3.6	(1.9)	0.2	1.7	0.8							0.2	0.2	2.7	0.0	3.4	4.5	2.5	0.0
	4222.5	4222.5	*205.5	4207.5	4262.5	4227.5	4276.5	4401.5	****	6472.6	# 40 4 5	4507.1	4522.5	4150.5	*****	*252.5	****	*****	******	4227.6	4470.5
Cash and Cash eqv at beginning	\$223.0	\$233.1	\$365.8	\$387.3	\$363.1	\$327.6	\$376.9	\$401.3	\$445.3	\$472.6	\$494.2	\$507.1	\$523.2	\$150.8	\$223.0	\$363.1	\$445.3	\$164.1	\$233.1	\$327.6	\$472.6
Net increase in cash and cash eqv.	10.1	132.7	21.6	(24.3)	(35.4)	49.3	24.4	44.0	27.3	21.6	12.9	16.0	18.6	72.2	140.1	82.2	77.9	69.0	94.6	145.0	69.2
Cash and Cash eqv at end	\$233.1	\$365.8	\$387.3	\$363.1	\$327.6	\$376.9	\$401.3	\$445.3	\$472.6	\$494.2	\$507.1	\$523.2	\$541.8	\$223.0	\$363.1	\$445.3	\$523.2	\$233.1	\$327.6	\$472.6	\$541.8
CHECK	233.1	365.8	387.3	363.1	327.6	376.9	401.3	445.3	472.6	494.2	507.1	523.2	541.8	223.0	363.1	445.3	523.2	233.1	327.6	472.6	541.8
Cash Flow from Operations	\$15.1	\$32.2	\$36.7	\$20.9	(\$74.0)	\$100.5	\$41.0	\$66.2	\$46.9	\$41.2	\$32.6	\$37.7	\$40.3	\$153.4	\$104.9	\$133.7	\$158.4	\$132.9	\$15.8	\$254.7	\$151.7
Capex	(12.8)	(7.4)	(9.2)	(8.9)	(11.6)	(12.6)	(13.3)	(17.5)	(15.0)	(15.0)	(15.0)	(17.0)	(17.0)	(47.4)	(38.2)	(55.0)	(62.0)	(45.5)	(37.0)	(58.4)	(64.0)
	( -)	, ,																		(/	\$87.7

Source: Company Reports and Barclays Research Estimates

Source: Company Reports and Barclays Research

#### Analyst(s) Certification(s):

I, Tom O'Malley, hereby certify (1) that the views expressed in this research report accurately reflect my personal views about any or all of the subject securities or issuers referred to in this research report and (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

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#### Primary Stocks (Ticker, Date, Price)

SGH (SGH, 28-Jun-2023, USD 26.31), Overweight/Neutral, CD/CE/D/E/FA/J/K/L/M/N

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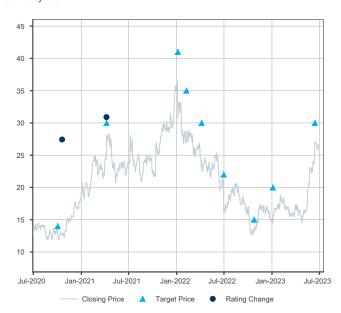
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#### SGH (SGH / SGH)

Stock Rating: **OVERWEIGHT**Industry View: **NEUTRAL USD 26.31** (28-Jun-2023)

#### Rating and Price Target Chart - USD (as of 28-Jun-2023)

Currency=USD



Source: IDC, Barclays Research

#### Link to Barclays Live for interactive charting

Publication Date	Closing Price*	Rating	Adjusted Price Target
14-Jun-2023	25.66		30.00
04-Jan-2023	15.12		20.00
24-Oct-2022	13.49		15.00
30-Jun-2022	20.28		22.00
06-Apr-2022	23.17		30.00
07-Feb-2022	26.85		35.00
05-Jan-2022	30.76		41.00
07-Apr-2021	27.28	Overweight	30.00
19-Oct-2020	12.72	Rating Suspended	
02-Oct-2020	12.45		14.00

On 29-Jun-2020, prior to any intra-day change that may have been published, the rating for this security was Equal Weight, and the adjusted price target was 13.00.

Source: Bloomberg, Barclays Research

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Valuation Methodology: Our price target of \$30 is based upon 15x our CY24 EPS of \$2.00.

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#### U.S. Semiconductors & Semiconductor Capital Equipment

Ezra Weener +1 212 526 2604 ezra.weener@barclays.com BCI, US

#### Deutsche Bank Research



# Rating Buy

North America United States

**TMT** 

Semiconductors

#### Company

# SMART Global Holdings

SCH OO

Bloomber

Exchange

Ticker

### Date 29 June 2023

### **Forecast Change**

Price at 29 Jun	n 2023 (USD)	26.63
Price target		34.00
52-week range	е	27.03 - 12.63

# F3Q Results: Macro headwinds, but Al focus is a LT positive

#### IPS lumpy in the short-term; Brazil divestiture is the right move

F3Q results were above the mid-point of guidance, with lower tax rate leading to half of the EPS upside. F4Q guidance for revenue is in line with Street estimate but EPS is higher. With the divestiture of Brazil Memory, SGH is now more leveraged to its enterprise-focused businesses, with \$250-300m of IPS/Memory revenue (or ~15% of FY23E total revenue) deriving from AI applications. Given SGH's experience in deploying and managing complex systems, we expect AI to be a significant revenue tailwind going forward. That said, we acknowledge IPS revenue is lumpy in the near term, as SGH guided the business to decline in F4Q due to macro challenges and supply constraints. We are also encouraged that the divestiture is neutral to slightly accretive to EPS. Post results, our CY24E EPS is unchanged, but we raise our price target from \$28 to \$34 as we believe the company's increased focus in enterprise solutions deserves higher valuation. We believe the stock trading at ~10x CY24E EPS is attractively valued, and we maintain our Buy rating.

#### What we liked

1) SGH saw an uptick in levels of activity/customer interest for IPS solutions addressing Al. In FY23, management quantified SGH's Al exposure to be of ~\$250-300m, with Financials, Healthcare and Research as some of the new sectors looking to introduce HPC systems. 2) SGH expects the divestiture of its Brazil memory business (see note) to be neutral/slightly positive to EPS, and immediately accretive to gross margins by 200bps+. We note that SGH's outlook currently does not include the deployment of net proceeds from the divestiture toward other accretive options (i.e., strategic M&A/buy-backs/etc.) 3) LED Solutions was up +14% q/q (vs. DBe up +5% q/q) and management expects revenues to be up modestly in F4Q. SGH also pointed to F2Q as the potential revenue trough for the segment, as the observed increase in customer design activity should be a precursor for a demand recovery. 4) SGH noted growing design activity/interest in CXL-based solutions, as memory connectivity appears to be a substantial technical bottleneck in today's most advanced HPC systems.

#### What to monitor

1) In IPS, despite an uptick in customer activity, management still expects muted growth and revenues to remain lumpy through 2H CY23. Similarly, SGH suggested low visibility over its order funnel for 1H FY24, as the macro environment is impacting IT budgets. 2) SGH also suggested supply constrains as currently

#### Valuation & Risks

#### Sidney Ho

Research Analyst +1-415-262-2061

Key changes			
TP	28.00 to 34.00	$\uparrow$	21.4%
EPS (USD)	2.27 to 2.66	$\uparrow$	17.0%
Revenue (USDm)	1,638.1 to 1,653.0	$\uparrow$	0.9%
Source: Deutsche Bank			

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impacting its IPS business. Management pointed to limited GPUs availability and constraints in networking equipment – NVDA and Mellanox (switches), per DBe – as some of the components in shortage. 3) Management appeared cautious on the recovery of Memory Solutions. While Specialty Memory is currently not as impacted as the (Brazil) consumer segment, management's commentary on the recovery of memory pricing appeared cautious, and noted that not much of a recovery from current demand levels is currently being factored into FY24.

#### Results and guide

F3Q (May) revenues of \$383m (down -11% q/q) were above DBe/Street of \$375m/\$376m and the mid-point of guidance of \$355-395m. Intelligent Platform Solutions revenues were down -23% q/q at \$171m (vs. DBe \$166m), Memory Solutions revenues were down -2% q/q at \$148m (vs. DBe \$151m), and LED Solutions revenues up +15% q/q at \$64m (vs. DBe \$58m). Gross margin was 28.0% (in line with DBe) and operating margin was 9.5% (vs. DBe 8.8%). The resulting non-GAAP EPS of \$0.66 was above DBe/Street at \$0.40 and above the high-end of guidance of \$0.30-0.50 partly due to a lower tax rate. SGH guided F4Q (Aug) revenues of \$350-400m, with the mid-point roughly in line with DBe/Street at \$368m/\$376m. F4Q gross margin is expected to be 27.0-29.0%, with the mid-point above prior DBe of 27.7%. The mid-point of EPS guidance of \$0.45 +/- \$0.15 is also above DBe/Street at \$0.33/\$0.37, with a lower tax rate being a positive factor. Post results, we raise our EPS estimate for F4Q from \$0.33 to \$0.45 and CY23E from \$1.95 to \$2.28, but leave CY24E unchanged at \$2.60.

#### Raising price target to \$34; Valuation and risks

We raise our price from \$28 to \$34, which is based on a  $\sim 13x$  CY24E (vs.  $\sim 11x$  prior), at the high end of a 5-year range, as we appreciate SGH's growing exposure HPC/AI, while the announced divestiture of the Brazil Memory provides incremental focus on high-value, high-availability enterprise solutions (vs. low growth/margin consumer-centric markets). Key risks include the cyclicality of the memory and LED markets, exposure to Brazil, changes in Brazil's laws and taxes, and integration of acquisitions.



Figure 1: F3Q (May-23) results summary

in \$m	DBe	Actual	Actual vs. DBe	Comments
Revenues	\$375	\$383	\$8	Upside in IPS and LED
q/q	-13%	-11%		
y/y	-19%	-17%		
Gross Margin (adjusted)	28.0%	28.0%	0 bps	
Operating expenses	72	71	(1)	
EBIT	33	36	3	
Tax rate	19%	-15%		Reduction in taxes driven by use of NOL = +\$0.13 in EPS
EPS (adjusted)	\$0.40	\$0.66	\$0.26	
Product segments				
Intelligent Platform Soliutions	\$166	\$171	\$5	
q/q	-26%	-23%		
y/y	74%	79%		
LED Solutions	\$58	\$64	\$6	Design activities improved
q/q	5%	15%		
y/y	-42%	-37%		
Memory Solutions	\$151	\$148	(\$3)	Brazil memory was \$39m
q/q	0%	-2%		
y/y	-43%	-44%		
Balance sheet				
Cash and marketable securities	\$447	\$401	(\$45)	
Inventory	\$246	\$226	(\$20)	
DIO	83	75	(8)	
LT debt	\$822	\$815	(\$7)	
Cash flow				
Cash flow from operations	\$82	\$41	(\$41)	Higher working capital
Capital expenditures	(\$11)	(\$13)	(\$2)	
Free cash flow	\$71	\$28	(\$43)	
Share repurchases	\$0	(\$1)	(\$1)	
Source : Company data, Deutsche Bank estimates				

Figure 2: Revenue by segment

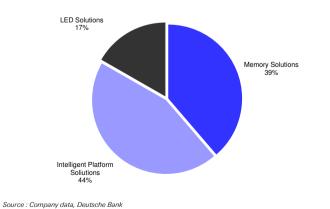
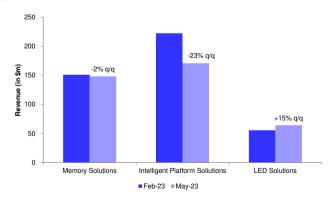


Figure 3: Sequential growth rates by segment



Source : Company data, Deutsche Bank



#### **Guidance and Estimates**

SGH provided the following F4Q (Aug-23) guidance:

**Revenues:** \$350-400m

Gross margin: 28.0% +/- 1.0%
 Non-GAAP EPS: \$0.45 +/- \$0.15
 Diluted share count: ~52.5m

Figure 4: Summary of estimate changes

Year end: Aug	May-23		Aug-23E		Nov	-23E	CY23E		CY24E	
(in \$m)	Old	Actual	Old	New	Old	New	Old	New	Old	New
Sales	375	383	368	375	400	382	1,572	1,569	1,822	1,783
q/q growth	-13%	-11%	-2%	-2%	9%	2%				
y/y growth	-19%	-17%	-16%	-14%	-14%	-18%	-13%	-14%	16%	14%
Gross margin	28.0%	28.0%	27.7%	28.0%	28.1%	28.3%	28.2%	28.3%	28.2%	28.8%
Operating margin	8.8%	9.5%	7.9%	9.1%	9.3%	9.2%	9.6%	10.0%	10.8%	11.5%
Adjusted EPS	\$0.40	\$0.66	\$0.33	\$0.45	\$0.47	\$0.41	\$1.95	\$2.28	\$2.60	\$2.60

Source: Company data, Deutsche Bank estimates

#### Valuation and Risks

Our price is based on a  $\sim 13x$  CY24E (vs.  $\sim 11x$  prior), at the high end of a 5-year range, as we appreciate the company's growing exposure to HPC/AI, while the announced divestiture of the Brazil Memory provides incremental focus on high-value, high-availability enterprise solutions (vs. low growth/margin consumer-centric markets). Key risks include the cyclicality of the memory and LED markets, exposure to Brazil, changes in Brazil's laws and taxes, and integration of acquisitions.

29 June 2023 Semiconductors SMART Global Holdings

Figure 5: SGH income statement summary

Fiscal Year End August		Fiscal	2022			Fiscal 2	2023E			Fiscal 2	2024E			Fiscal 2	2025E							
(\$ in millions)	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4QE	1QE	2QE	3QE	4QE	1QE	2QE	3QE	4QE	FY22	FY23E	FY24E	CY22	CY23E	CY24E
	Nov-21	Feb-22	May-22	Aug-22	Nov-22	Feb-23	May-23	Aug-23	Nov-23	Feb-24	May-24	Aug-24	Nov-24	Feb-25	May-25	Aug-25	Aug-22	Aug-23	Aug-24			
INCOME STATEMENT																						
Total Revenue	469.9	449.2	462.5	437.7	465.5	429.2	383.3	375.0	381.8	381.9	422.9	470.9	506.9	461.2	474.2	499.6	1,819.4	1,653.0	1,657.6	1,814.9	1,569.4	1,782.6
QoQ	0%	-4%	3%	-5%	6%	-8%	-11%	-2%	2%	0%	11%	11%	8%	-9%	3%	5%	040/	00/	00/	00/	4.40/	4.40/
YoY	61%	48%	6%	-6%	-1%	-4%	-17%	-14%	-18%	-11%	10%	26%	33%	21%	12%	6%	21%	-9%	0%	8%	-14%	14%
Cost of Goods Sold	342.9	332.2	343.7	329.9	336.3	305.3	276.1	270.0	273.8	273.0	301.8	335.2	359.9	327.3	334.6	350.7	1,348.7	1,187.6	1,183.9	1,342.0	1,125.2	1,270.0
Gross Profit	127.0	116.9	118.9	107.8	129.2	123.9	107.2	105.1	108.0	108.9	121.1	135.7	147.0	133.9	139.5	148.9	470.7	465.4	473.7	472.9	444.2	512.6
Gross Profit (GAAP)	122.2	112.7	114.5	103.8	118.4	110.4	98.6	96.7	99.7	100.5	112.7	127.4	138.6	125.5	131.2	140.5	453.2	424.2	440.2	449.4	405.4	479.2
R&D	17.7	18.8	20.3	20.6	24.1	26.7	22.2	22.7	23.6	24.1	24.8	25.4	25.9	25.9	26.4	27.2	77.4	95.6	97.8	83.8	95.2	100.1
SG&A	40.2	40.7	44.3	40.5	50.3	45.8	48.7	48.2	49.2	49.6	51.1	52.4	53.5	52.4	53.4	55.6	165.7	193.0	202.4	175.8	191.8	206.7
Other (one-time charges)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Operating expenses	57.9	59.5	64.6	61.1	74.4	72.5	70.9	70.9	72.7	73.7	75.9	77.8	79.4	78.3	79.9	82.8	243.1	288.6	300.2	259.5	287.0	306.8
Operating income	69.2	57.4	54.3	46.8	54.8	51.4	36.3	34.2	35.3	35.2	45.2	57.9	67.6	55.6	59.7	66.1	227.6	176.8	173.5	213.3	157.2	205.8
Interest expense	(2.9)	(4.0)	(3.0)	(3.7)	(7.0)	(7.0)	(7.1)	(8.5)	(8.5)	(8.5)	(8.5)	(8.5)	(8.5)	(8.5)	(8.5)	(8.5)	(13.5)	(29.5)	(34.0)	(17.6)	(31.1)	(34.0)
FX gain (loss)	1.5	1.4	0.6	1.2	0.2	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	1.1	0.0	3.5	0.9	0.0
Other income/(expense)	(1.2)	0.7	0.0	(1.3)	(0.1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(1.9)	(0.1)	0.0	(0.7)	0.0	0.0
One time income/(expense)	(0.7)	(0.5)	(0.4)	(0.5)	(0.3)	2.9	(0.9)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(2.0)	1.7	0.0	(1.7)	2.0	0.0
Pretax income	65.8	55.0	51.6	42.5	47.7	47.7	28.9	25.7	26.8	26.7	36.7	49.4	59.1	47.1	51.2	57.6	215.0	150.0	139.5	196.8	129.1	171.8
Tax Exp/(Inc)	9.5	7.5	5.7	2.1	8.2	10.0	(4.2)	2.8	6.0	6.0	8.2	11.1	13.3	10.6	11.5	13.0	24.7	16.9	31.4	23.4	14.7	38.7
Adjusted Net Income	56.3	47.6	45.9	40.4	39.5	37.6	33.1	22.9	20.8	20.7	28.4	38.3	45.8	36.5	39.7	44.6	190.2	133.1	108.1	173.4	114.4	133.2
GAAP Net Income	20.0	2.5	24.1	20.0	5.0	(27.2)	(24.5)	(34.0)	(36.2)	(36.3)	(28.5)	(18.7)	(11.1)	(20.5)	(17.3)	(12.3)	66.6	(80.7)	(119.6)	51.5	(121.9)	(94.6)
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Adjusted EPS	\$1.08	\$0.87	\$0.87	\$0.80	\$0.79	\$0.76	\$0.66	\$0.45	\$0.41	\$0.41	\$0.56	\$0.74	\$0.89	\$0.70	\$0.76	\$0.85	\$3.62	\$2.66	\$2.12	\$3.33	\$2.28	\$2.60
GAAP EPS	\$0.37	\$0.04	\$0.44	\$0.40	\$0.10	(\$0.55)	(\$0.49)	(\$0.68)	(\$0.71)	(\$0.71)	(\$0.56)	(\$0.36)	(\$0.22)	(\$0.39)	(\$0.33)	(\$0.23)	\$1.22	(\$1.61)	(\$2.35)	\$0.97	(\$2.43)	(\$1.84)
Basic Shares	49.0	49.5	50.1	49.2	49.0	49.1	49.4	49.6	49.9	50.1	50.4	50.6	50.9	51.1	51.4	51.6	49.5	49.3	50.3	49.5	49.5	50.5
Diluted Shares	54.6	57.6	55.0	50.5	49.8	49.8	50.1	50.4	50.6	50.9	51.1	51.4	51.7	51.9	52.2	52.4	54.4	50.0	51.0	53.2	50.2	51.3
Diluted Shares (non-GAAP)	52.1	54.9	52.9	50.5	49.8	49.8	50.1	50.4	50.6	50.9	51.1	51.4	51.7	51.9	52.2	52.4	52.6	50.0	51.0	52.0	50.2	51.3
. ,																-						
Percent of Sales																						
Gross Margin	27.0%	26.0%	25.7%	24.6%	27.8%	28.9%	28.0%	28.0%	28.3%	28.5%	28.6%	28.8%	29.0%	29.0%	29.4%	29.8%	25.9%	28.2%	28.6%	26.1%	28.3%	28.8%
R&D	3.8%	4.2%	4.4%	4.7%	5.2%	6.2%	5.8%	6.0%	6.2%	6.3%	5.9%	5.4%	5.1%	5.6%	5.6%	5.4%	4.3%	5.8%	5.9%	4.6%	6.1%	5.6%
SG&A	8.6%	9.1%	9.6%	9.2%	10.8%	10.7%	12.7%	12.8%	12.9%	13.0%	12.1%	11.1%	10.5%	11.4%	11.3%	11.1%	9.1%	11.7%	12.2%	9.7%	12.2%	11.6%
Operating expenses	12.3%	13.2%	14.0%	14.0%	16.0%	16.9%	18.5%	18.9%	19.1%	19.3%	18.0%	16.5%	15.7%	17.0%	16.8%	16.6%	13.4%	17.5%	18.1%	14.3%	18.3%	17.2%
Operating Margin	14.7%	12.8%	11.7%	10.7%	11.8%	12.0%	9.5%	9.1%	9.2%	9.2%	10.7%	12.3%	13.3%	12.0%	12.6%	13.2%	12.5%	10.7%	10.5%	11.8%	10.0%	11.5%
EBITDA Margin	16.3%	15.1%	14.5%	13.4%	13.6%	14.8%	11.8%	11.8%	12.0%	12.1%	13.4%	14.8%	15.8%	14.8%	15.4%	16.0%	14.9%	13.1%	13.2%	14.2%	12.7%	14.2%
Adj EBITDA - capex margin	13.6%	13.5%	12.6%	11.4%	11.1%	11.9%	8.3%	7.2%	9.0%	9.1%	10.4%	11.8%	12.8%	11.8%	12.4%	13.0%	12.8%	9.8%	10.2%	12.1%	9.2%	11.2%
Pretax Margin	14.0%	12.3%	11.2%	9.7%	10.2%	11.1%	7.5%	6.9%	7.0%	7.0%	8.7%	10.5%	11.7%	10.2%	10.8%	11.5%	11.8%	9.1%	8.4%	10.8%	8.2%	9.6%
Effective Tax Rate	14.4%	13.6%	11.0%	5.0%	17.2%	21.0%	-14.5%	11.0%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	11.5%	11.2%	22.5%	11.9%	11.4%	22.5%
Net Margin	12.0%	10.6%	9.9%	9.2%	8.5%	8.8%	8.6%	6.1%	5.4%	5.4%	6.7%	8.1%	9.0%	7.9%	8.4%	8.9%	10.5%	8.1%	6.5%	9.6%	7.3%	7.5%
					l												L					

Source : Company data, Deutsche Bank estimates





# Appendix 1

#### Important Disclosures

\*Other information available upon request

Disclosure checklist			
Company	Ticker	Recent price*	Disclosure
SMART Global Holdings	SGH.OQ	26.31 (USD) 28 Jun 2023	7, 8, 14, 15

<sup>\*</sup>Prices are current as of the end of the previous trading session unless otherwise indicated and are sourced from local exchanges via Reuters, Bloomberg and other vendors. Other information is sourced from Deutsche Bank, subject companies, and other sources. For disclosures pertaining to recommendations or estimates made on securities other than the primary subject of this research, please see the most recently published company report or visit our global disclosure look-up page on our website at <a href="https://research.db.com/Research/Disclosures/">https://research.db.com/Research/Disclosures/Dis

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The views expressed in this report accurately reflect the personal views of the undersigned lead analyst(s) about the subject issuer and the securities of the issuer. In addition, the undersigned lead analyst(s) has not and will not receive any compensation for providing a specific recommendation or view in this report. Sidney Ho.



#### Historical recommendations and target price: SMART Global Holdings (SGH.OQ)

(as of 06/29/2023)

100.00

80.00

40.00

20.00

Jul '20

Jan '21

Jul '21

Jan '22

Jul '22

Jan '23

Jul '23

Current Recommendations

Buy
Hold
Sell

Not Rated Suspended Rating

\*\* Analyst is no longer at Deutsche Bank

1.	01/03/2021	Buy, Target Price Change USD 44.00, Current Price USD 37.63 Sidney Ho	7.	02/02/2022	Buy, Target Price Change USD 40.00, Current Price USD 27.85 Sidney Ho
2.	01/06/2021	Buy, Target Price Change USD 48.00, Current Price USD 39.24 Sidney Ho	8.	06/30/2022	Buy, Target Price Change USD 32.00, Current Price USD 16.37 Sidney Ho
3.	04/07/2021	Buy, Target Price Change USD 60.00, Current Price USD 54.55 Sidney Ho	9.	09/25/2022	Buy, Target Price Change USD 28.00, Current Price USD 16.27 Sidney Ho
4.	07/07/2021	Buy, Target Price Change USD 66.00, Current Price USD 56.02 Sidney Ho	10	. 10/05/2022	Buy, Target Price Change USD 24.00, Current Price USD 15.80 Sidney Ho
5.	10/13/2021	Buy, Target Price Change USD 70.00, Current Price USD 51.72 Sidney Ho	11.	01/04/2023	Buy, Target Price Change USD 20.00, Current Price USD 15.75 Sidney Ho
6.	01/05/2022	Buy, Target Price Change USD 80.00, Current Price USD 61.52 Sidney Ho	12	. 06/13/2023	Buy, Target Price Change USD 28.00, Current Price USD 25.66 Sidney Ho

Date

#### **Equity Rating Key**

Buy: Based on a current 12-month view of TSR, we recommend that investors buy the stock.

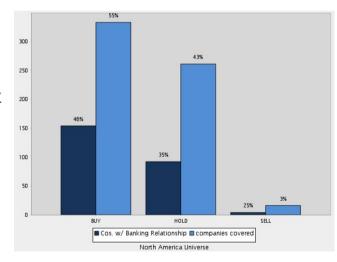
Sell: Based on a current 12-month view of TSR, we recommend that investors sell the stock.

Hold: We take a neutral view on the stock 12-months out and, based on this time horizon, do not recommend either a Buy or Sell.

TSR = Total Shareholder Return. Percentage change in share price from current price to projected target price plus projected dividend yield

Newly issued research recommendations and target prices supersede previously published research.

#### Equity rating dispersion and banking relationships



Deutsche Bank Securities Inc. Page 7



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#### David Folkerts-Landau

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#### **International Production Locations**

Deutsche Bank AG

Deutsche Bank Place Level 16 Corner of Hunter & Phillip Streets Sydney, NSW 2000 Australia Tel: (61) 2 8258 1234

Deutsche Bank AG 1 Great Winchester Street London EC2N 2EQ

United Kingdom Tel: (44) 20 7545 8000 Deutsche Bank AG

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# **Jefferies**

USA | Electronic Components

### **SMART Global Holdings**

**Equity Research** June 29, 2023

### SGH May-23Q: Remain Constructive on SGH's **Datacenter Opportunity**

SGH reported a beat and raise, though with revs roughly in-line with street on AugQ guidance. While IPS (datacenter) faces tough QQ comps due to a recently-completed program at META, we continue to view SGH as an underthe-radar datacenter play w/ 45% revs exposed to datacenter/Al markets. We expect its multiple to re-rate as it divests its Brazil business. Raise PT to \$31 based on 13x multiple on FY24E EPS of \$2.34.

#### IPS Expected to Decline by ~5% QQ.

- The outlook implies a 1H/2H FY23 split at  $\sim$ 57%/43%
- SGH noted that due to customers still formulating budgets and navigating supply chain challenges in particular with leading edge GPUs
- Visibility is still lacking beyond 3 months to commit to a return to prior quarter high levels of \$210m+. Thus, we model flattish -5.5% and +0.5% QQ for Aug-23Q and Nov-23Q from reported \$171m for May-23Q
- SGH expects more favorable supply conditions by the middle of next year and we model IPS FY24 revs to be \$835m. We expect SGH visibility to increase over the next quarter as customers set budgets through early fall
- Stratus revs in May-23Q were ~\$45m. Attaching services (high GMs of 60%+ and \$58m in May-23Q) to their engagements remains core to IPS' strategy increasing its recurring revenue

LED MayQ Revs up 15% QQ; AugQ LED Revs Expected to be "Up Modestly." SGH called out design activity improving, a leading indicator to demand improvement. The MayQ saw continued channel burn as management does not expect a hockey stick-like recovery. We would expect revs to return to \$100m/qtr as demand improves across more regions.

Brazil Memory Divestiture Expected to be 200bps+ Accretive to Non-GAAP GMs. We estimate that Brazil GMs are likely low double digits today with OMs that are slightly negative. Mgmt also quided that the non-GAAP EPS effect of the divestiture is neutral to slightly positive. Given this outlook and expected tax rate increase to 23%, we estimate FY24 EPS of \$2.34 and \$2.38 ex-Brazil.

Aug-23Q EPS Outlook Beat Driven by 30bp GM Beat and Lower Opex. The revenue outlook of \$375m is 90bps below street of \$379m. EPS outlook of \$0.45 at midpoint is \$0.08 above consensus. GM guide of 28% is 30bps above street on higher mix from IPS.

May-23Q Beat Primarily Driven by LED/IPS beat by \$4.5m/\$4m and \$6.5m Tax Benefit. SGH sales of \$383m was 2.2% above consensus. EPS of \$0.66 was \$0.26 above consensus of \$0.40.

(FY Aug)	2021A	2022A	2023E	2024E
Rev. (MM)	1,501.1	1,819.5	1,653.1	1,813.6
Cons. Rev.	1,501.1	1,819.5	1,656.5	1,778.3
EV/Rev	1.0x	1.0x	1.1x	0.9x
Cons. EPS	2.60	3.62	2.58	2.42

TARGET  ESTIMATE CHANGE							
RATING	BUY						
PRICE	\$26.63^						
PRICE TARGET   % TO PT	<b>↑</b> \$31.00 (\$30.00)   +16%						
52W HIGH-LOW	\$27.32 - \$12.04						
FLOAT (%)   ADV MM (USD)	94.4%   28.54						
MARKET CAP	\$1.3B						
TICKER	SGH						
^Prior trading day's closin	ng price unless otherwise						

	CH	ANGE TO	) JEFe	JEF vs CONS			
	2	023	2024	2023	2024		
REV	NM -2%		-2%	NM	+2%		
EPS	+	12%	-12%	+3%	-3%		
2023 (\$)	Q1A	Q2A	Q3A	Q4	FY		
EPS	0.79	0.76	<b>↑</b> 0.66	<b>↑</b> 0.46	<b>↑</b> 2.67		
PREV			0.40	0.44	2.38		

#### Links to Related Notes

13-Jun-23: SGH to Divest Brazil Memory Business - Reiterate Buy

4-Apr-23: SGH Feb-23Q: Under the Radar **Datacenter Play** 

6-Jan-23: Notes from Lunch with SGH at

4-Jan-23: SGH Nov-22Q: Diversification Strategy Paying Off

16-Oct-22: Notes from NDR w/ CEO and

5-Oct-22: Aug-22 Earnings

29-Jun-22: Consumer Headwinds Offset 30%+ IPS Growth; Acquiring Stratus

19-Oct-20: Cree Acquiring **Diversification Continues** 

Mark Lipacis \* | Equity Analyst (415) 229-1438 | mlipacis@jefferies.com

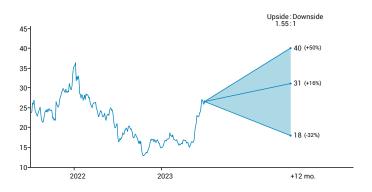
Brian Chen, CFA \* | Equity Associate (415) 229-1478 | bchen1@jefferies.com

### The Long View: SMART Global Holdings

#### Investment Thesis / Where We Differ

- Diversification of markets and customers allows SGH to differentiate itself as a global memory solutions supplier of custom solutions and supply chain services.
- Favorable industry supply/demand dynamics provide an upward bias to prices, enabling SGH to grow its businesses.

#### Risk/Reward - 12 Month View



# Base Case, \$31, +16%

- Maintains Steady GMs going forward from 28% today
- Growth in Penguin Specialty Computing markets with growing demand in HPC markets
- Execution of transformation to Sapphire and fabless model in Cree business to maintain 900 bps GM expansion
- Growth in Specialty Memory from greater average system memory content; need for custom design and supply chain services; and emerging datacenter applications
- Executes divestiture of Brazil business by end of CY23
- FY24E EPS: \$2.34; P/E: 13x; Price Target \$31.

# Upside Scenario, \$40, +50%

- Custom business model and mix shift toward Penguin drives continued margin expansion
- Better-than-expected synergies capture in integration of Cree LED business
- Accelerated growth for software and service offerings across multiple end-markets
- Greater-than-expected operating leverage on growth, resulting in operating margins >14%
- Faster deleveraging as a result of greater-thanexpected FCF growth lowers interest expense, driving EPS growth
- FY26 EPS Power: \$4; P/E: 12x discounted back two years; Price Target: \$40.

# Downside Scenario, \$18, -32%

- Slowdown in overall datacenter spend impacting IPS top line
- Mis-execution of Cree integration and intense competition in LED lowering pricing power
- Lack of attractive acquisition targets available mitigating M&A strategy
- Share loss or steep memory price declines in worldwide memory services market impacting Memory sales and margins
- FY24E EPS: \$2; P/E: 9x; Price Target: \$18.

#### Sustainability Matters

Top Material Issue(s): 1) Water & Wastewater Mgmt: Its Brazil facility recycled ~60% of water withdrawn in 2020, a 50% improvement over 2018; it expects to improve upon this going forward. GH notes that 80% of its operational GHG emissions is attributed to electrical procurement and where it focuses its climate strategy. Its Brazil location began sourcing 100% of electricity from renewable sources in 2016 and reduced total emissions by 98% since 2017. 2) Product Design & Lifecycle: SGH designs and manufactures specialty solutions for memory, HPC systems, and LED applications. It partners with Meta to help build out and deploy its supercomputer for AI research.

**Company Target(s): 1)** Achieve a total of 75% renewable energy at global operations by 2025 compared to the current level, which is greater than 60%.

**Qs to Mgmt: 1)** What initiatives will you take to achieve your goal of 75% of renewable energy for global operations by 2025? **2)** What percentage of GHG emissions and water usage for global operations is from the Brazil facility? How do you plan to increase percentage of water recycled?

#### Catalysts

- Margin expansion and double-digit growth in longer product cycle businesses: Specialty Memory and IPS.
- · Incremental design win announcements in IPS.

### **Jefferies**

Chart 1 - SGH expects the divestiture of Brazil memory to be neutral to slightly positive to non-GAAP EPS. Implied SGH Pro-Forma for FY24 Earnings Ex-Brazil

	SGH FY24 with Brazil	Brazil Business	Implied SGH Pro- Forma	Comments
Revenue	1,814	204	1,610	
Gross Margin	28.3%	12.0%	30.4%	Immediately accretive to non-GAAP GMs by 200+ basis points
Gross Profit	513	24	489	
Operating Margin	10.9%	1.0%	12.3%	
Operating Profit	198	0	198	
Net Income	126		128	Neutral to slightly positive to non-GAAP EPS
Diluted Share Count	54		54	
EPS	2.34		2.38	

Management expects the Brazil divestiture to be immediate accretive to non-GAAP GMs by 200+ basis points and neutral to slight positive for non-GAAP EPS. We estimate FY24 EPS of \$2.38 ex-Brazil based on management guidance and our FY24 estimate of \$2.34 with Brazil

## **Jefferies**

Chart 2 - We Estimate FY26 EPS Power of \$4

	SGH FY24 Pro- Forma ex- Brazil	Rev Growth / Margin Expansion	FY26 EPS Power	Comments
Revenue	1,610	6%	2,183	Assumed 6% CAGR
Gross Margin	30.4%		30.4%	Assumed GMs stays flat
Gross Profit	489		663	•
Operating Margin	12.3%	2.2%	14.5%	Assumed OM improvement to 14.5%
Operating Profit	198		317	
Net Income	128		220	Assumed 23% Tax Rate and ~8m Interest Expense/qr
Diluted Share Count	53.8		55.0	Assumed 0.5% Share Count QQ Increase
<b>EPS</b> Source: Jefferies, company	<b>2.38</b> data		4.00	

We estimate FY2026 EPS power of \$4 under the scenario that revenue CAGR is 6% over our FY24 pro-forma EPS estimate ex-Brazil, GM of 30.4%, and OM of 14.5% are achieved

Chart 3 - Results Summary

MayQ23											
ltem	Actual	vs.	Consensus	Jefferies							
Sales (\$M)	383	2.2%	375	375							
GM %	28.0%	0.1%	27.9%	28.0%							
OM %	9.5%	0.7%	8.8%	8.8%							
Tax rate	-14.4%	(31.1%)	16.7%	19.2%							
EPS	0.66	63.6%	0.40	0.40							
Shares	50			50							

MayQ revenues of \$383m were 200bps above consensus. GM of 28.0% was 10bps above consensus and OM of 9.5% was 70bps above. EPS of \$0.66 was \$0.26 above consensus on higher revs and margins

Source: Jefferies, company data, FactSet

Chart 4 - Outlook Summary

AugQ23														
Item	Guidance	vs.	Consensus	Jefferies										
Sales (\$M)	375	(0.9%)	379	382										
GM %	28.0%	0.3%	27.7%	28.0%										
OM %	9.1%	0.5%	8.6%	9.1%										
Tax rate	12.7%	(3.5%)	16.2%	17.0%										
EPS	0.45	20.9%	0.37	0.44										
Shares	53			50										

SGH's sales outlook of \$375m +/- \$25m is 95bps below consensus. GM outlook of 28.0% +/- 1% is 30bps above consensus. OM outlook of 9.1% is 50bps above consensus. EPS outlook of \$0.45 +/-\$0.15 is \$0.08 above consensus at the midpoint on higher margins

Source: Jefferies, company data, FactSet

Chart 5 - SGH Variance Analysis

Item	Actual	Jefferies	<b>EPS Impact</b>
Sales (\$M)	383	375	0.05
GM %	28.0%	28.0%	(0.00)
OpEx	71	72	0.03
Int/Other XP	7	8	0.02
Tax	(4)	5	0.18
Shares	50	50	(0.00)
EPS	0.66	0.40	0.26

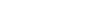
Higher Sales, lower OpEx and Int/Other Exp, and taxes benefit resulted in EPS of \$0.66, \$0.26 above our estimate

Source: Jefferies, FactSet

Chart 6 - Quarterly Operational Performance

Item	MayQ22	FebQ23	MayQ23	Q/Q	Y/Y
Revenue	463	429	383	-11%	-17%
COGS	344	305	276	-10%	-20%
AR	357	229	244	6%	-32%
Inventory	365	294	226	-23%	-38%
Payables	448	226	210	-7%	-53%
DSO	31	37	42	6	11
DOI	36	58	48	(10)	12
DOP	44	45	45	0	0
CCC	23	50	46	(4)	22
Source: Jefferies, company data					

A/R DSO days declined by 15 days QQ and by 30 days YY. DOI declined by 24 days QQ and increased by 3 days YY



**Jefferies** 

Chart 7 - Segment Trends

May '23				Aug '23
Segment	% Sales	q/q %	Commentary	Outlook
Memory Solutions 39%			Overall F3Q memory revenue came in at \$148m, and was relatively flat QQ.	
		-2%	Memory business continues to demonstrate relative stability throughout the current memory cycle due to the specialty nature of SGH value-add business model. In F3Q, this translated into operating margins of ~8% for memory business	Expect to be relatively flat QQ
IPS	45%	-23%	In F3Q, IPS sales totaled \$171m, reinforcing the transformation company is going through. Sales increased by 31% YY, excluding Stratus Technologies and were up 79% by including Stratus.  Service revenue, the majority of which is generated in IPS represented 15% of total SGH revenue in F3Q and reflects the incremental value SGH is providing to customers	Expect QQ revenues to be down slightly at the midpoint
LED - Cree	17%	15%	LED Solutions totaled \$64m were up 15% QQ from what could have been the bottom in F2Q.  While customers are continuing to work down inventory levels, SGH is seeing customer design activity improving. Typically as company come through these cycles, it looks for this as a precursor to demand improving. And while SGH is still in early days in the recovery of the LED market, company is optimistic that the business will have a stronger fiscal 2024	Expect revenues to be up modestly in F4Q23

Chart 8 - SGH Income Statement

Income Statement (FYE August)	Aug '22	Nov '22	Feb '23	May '23	Aug '23	Nov '23	Feb '24	May '24				
Thousands of \$	F4Q22	F1Q23	F2Q23	F3Q23	F4Q23E	F1Q24E	F2Q24E	F3Q24E				
ex-SBC and Intangible Amortization	C3Q22	C4Q22	C1Q23	C2Q23	C3Q23E	C4Q23E	C1Q24E	C2Q24E	FY21	FY22	FY23E	FY24E
Total Net Revenue	437,697	465,478	429,174	383,330	375,119	380,963	414,271	471,797	1,501,141	1,819,352	1,653,101	1,813,569
Guidance midpoint	440,000	450,000	435,000	375,000	375,000							
Guidance low	420,000	425,000	410,000	355,000	350,000							
Guidance high	460,000	475,000	460,000	395,000	400,000							
Revenue Growth									34%	21%	-9%	10%
COGS	329,850	336,295	305,257	276,117	270,095	274,349	298,173	337,676	1,168,506	1,348,651	1,187,764	1,300,175
Gross Profit	107,847	129,183	123,917	107,213	105,024	106,614	116,097	134,121	332,635	470,701	465,337	513,394
Gross Margin	24.6%	27.8%	28.9%	28.0%	28.0%	28.0%	28.0%	28.4%	22.2%	25.9%	28.1%	28.3%
R&D	19,051	22,402	24,950	20,643	18,122	18,663	20,079	21,773	44,845	71,013	86,117	84,314
R&D as % of Sales	4.4%	4.8%	5.8%	5.4%	4.8%	4.9%	4.8%	4.6%	3.0%	3.9%	5.2%	4.6%
SG&A	45,772	59,580	51,260	58,907	55,890	56,825	59,309	61,427	132,575	180,022	225,637	242,855
SG&A as % of sales	10.5%	12.8%	11.9%	15.4%	14.9%	14.9%	14.3%	13.0%	8.8%	9.9%	13.6%	13.4%
OpEx SBC	8,187	8,704	9,026	8,376	8,418	8,460	8,502	8,545	29,284	33,379	34,524	34,095
OpEx Amortization of Intangibles	3,247	4,392	4,200	4,905	4,905	4,905	4,905	4,905	12,026	12,988	18,402	19,620
Total OpEx (Non-GAAP)	61,073	74,350	72,486	70,913	71,012	72,489	76,389	80,200	171,842	243,070	288,761	315,168
Total OpEx as % of sales	14.0%	16.0%	16.9%	18.5%	18.9%	19.0%	18.4%	17.0%	11.4%	13.4%	17.5%	17.4%
Operating Income	46,774	54,833	51,431	36,300	34,012	34,126	39,709	53,920	160,793	227,631	176,576	198,226
Operating Margin	10.7%	11.8%	12.0%	9.5%	9.1%	9.0%	9.6%	11.4%	10.7%	12.5%	10.7%	10.9%
Interest Income												
Interest Expense	(6,491)	(8,037)	(8,006)	(8,059)	(8,059)	(8,059)	(8,059)	(8,059)	(17,599)	(21,169)	(32,161)	(32,236)
Pro forma interest expense									0	0	0	0
FX Gain (Loss)	1,212	242	281	590					718	4,728	1,113	0
Loss/gain on debt transactions	2,788	1,069	1,048	937					8,420	9,999	3,054	0
Import Taxes - Out of Period Adjustment												
Other Income	(1,267)	660	(13,329)	(514)	1,400				375	(4,837)	(11,783)	0
Transaction Tax Refund												
Pretax Income	43,015	48,000	48,116	29,254	27,353	26,067	31,650	45,861	152,445	217,004	152,723	165,990
Pro Forma Pretax Income	43,015	48,000	48,116	29,254	27,353	26,067	31,650	45,861	152,445	217,004	152,723	165,990
Tax Expense	2,112	8,190	10,037	(4,198)	2,894	5,995	7,279	10,548	19,037	24,746	16,923	38,178
Pro Forma Tax Expense	2,112	8,190	10,037	(4,198)	2,894	5,995	7,279	10,548	19,037	24,746	16,923	38,178
Tax rate %	4.9%	17.1%	20.9%	-14.4%	11.0%	23.0%	23.0%	23.0%	12.5%	11.4%	11.1%	23.0%
Net Income attributable to NCI	468	332	433	378	378	378	378	378	1,195	2,035	1,521	1,512
Pro Forma Net Income	40,435	39,478	37,646	33,074	24,081	19,693	23,992	34,935	132,213	190,223	134,279	126,300
EPS Fully Diluted	0.80	0.79	0.76	0.66	0.46	0.37	0.45	0.65	2.60	3.62	2.67	2.34
Basic Shares Non-GAAP	50,504	49,791	49,116	49,380	51,746	52,251	52,762	53,279	50,820	54,444	50,008	53,024
Diluted Shares Non-GAAP	50,504	49,791	49,842	50,134	52,500	53,005	53,516	54,033	50,687	52,592	50,567	53,778

CY21	CY22	CY23E	CY24E
1,679,389	1,814,886	1,568,587	2,046,414
47%	8%	-14%	30%
1,273,854	1.342.030	1.125.818	1,463,447
405,535	472.856	442,768	582,966
24.1%	26.1%	28.2%	28.5%
54.787	77,286	82,379	91,213
3.3%	4.3%	5.3%	4.5%
149,545	196,815	222,882	254,340
8.9%	10.8%	14.2%	12.4%
27,078	34,039	34,280	34,265
12,507	14,133	18,915	19,620
199,333	259,542	286,900	333,553
11.9%	14.3%	18.3%	16.3%
206,202	213,314	155,869	249,413
12.3%	11.8%	9.9%	12.2%
<b>12.3%</b> (19,551)	11.8% (24,100)	(32,183)	(32,236)
(19,551) 0	(24,100)	(32,183)	(32,236)
(19,551) 0 2,827	(24,100) 0 3,503	(32,183) 0 871	(32,236) 0 0
(19,551) 0	(24,100)	(32,183) 0 871 1,985	(32,236) 0 0 0
(19,551) 0 2,827 8,568	(24,100) 0 3,503 8,858	(32,183) 0 871 1,985	(32,236) 0 0 0
(19,551) 0 2,827	(24,100) 0 3,503	(32,183) 0 871 1,985	(32,236) 0 0 0
(19,551) 0 2,827 8,568 (1,692)	(24,100) 0 3,503 8,858 (2,942)	(32,183) 0 871 1,985 0 (12,443)	(32,236) 0 0 0 0 0
(19,551) 0 2,827 8,568 (1,692)	(24,100) 0 3,503 8,858 (2,942) 198,518	(32,183) 0 871 1,985 0 (12,443)	(32,236) 0 0 0 0 0 0 217,177
(19,551) 0 2,827 8,568 (1,692) 196,092 196,092	(24,100) 0 3,503 8,858 (2,942) 198,518 198,518	(32,183) 0 871 1,985 0 (12,443) 130,790 130,790	(32,236) 0 0 0 0 0 0 217,177 217,177
(19,551) 0 2,827 8,568 (1,692) 196,092 196,092 25,333	(24,100) 0 3,503 8,858 (2,942) 198,518 198,518 23,429	(32,183) 0 871 1,985 0 (12,443) 130,790 130,790 14,728	(32,236) 0 0 0 0 0 0 217,177 217,177 49,951
(19,551) 0 2,827 8,568 (1,692) 196,092 196,092 25,333 25,333	(24,100) 0 3,503 8,858 (2,942) 198,518 198,518 23,429 23,429	(32,183) 0 871 1,985 0 (12,443) 130,790 14,728 14,728	(32,236) 0 0 0 0 0 217,177 217,177 49,951 49,951
(19,551) 0 2,827 8,568 (1,692) 196,092 196,092 25,333 25,333 12,9%	(24,100) 0 3,503 8,858 (2,942) 198,518 198,518 23,429 23,429 11.8%	(32,183) 0 871 1,985 0 (12,443) 130,790 130,790 14,728 14,728 11,3%	(32,236) 0 0 0 0 0 217,177 217,177 49,951 49,951 23.0%
(19,551) 0 2,827 8,568 (1,692) 196,092 196,092 25,333 25,333 12,9%	(24,100) 0 3,503 8,858 (2,942) 198,518 198,518 23,429 23,429 11.8%	(32,183) 0 871 1,985 0 (12,443) 130,790 14,728 14,728 11,3%	(32,236) 0 0 0 0 217,177 217,177 49,951 49,951 23.0% 1,512
(19,551) 0 2,827 8,568 (1,692) 196,092 196,092 25,333 25,333 12,9% 1,866 168,893	(24,100) 0 3,503 8,858 (2,942) 198,518 198,518 23,429 23,429 11.8% 1,696 173,393	(32,183) 0 871 1,985 0 (12,443) 130,790 130,790 14,728 14,728 11,3% 1,567 114,495	(32,236) 0 0 0 0 0 217,177 217,177 49,951 49,951 23.0% 1,512 165,714
(19,551) 0 2,827 8,568 (1,692) 196,092 196,092 25,333 25,333 12.9% 1,866 168,893 3.30	(24,100) 0 3,503 8,858 (2,942) 198,518 198,518 23,429 11.8% 1,696 173,393 3.33	(32,183) 0 871 1,985 0 (12,443) 130,790 130,790 14,728 14,728 11,3% 1,567 114,495 2,23	(32,236) 0 0 0 0 0 217,177 217,177 49,951 23.0% 1,512 165,714 3.05
(19,551) 0 2,827 8,568 (1,692) 196,092 196,092 25,333 25,333 12,9% 1,866 168,893	(24,100) 0 3,503 8,858 (2,942) 198,518 198,518 23,429 23,429 11.8% 1,696 173,393	(32,183) 0 871 1,985 0 (12,443) 130,790 130,790 14,728 14,728 11,3% 1,567 114,495	(32,236) 0 0 0 0 0 217,177 217,177 49,951 49,951 23.0% 1,512 165,714

## **Jefferies**

June 29, 2023

Chart 9 - SGH Balance Sheet

Balance Sheet (FYE August)	Aug '22	Nov '22	Feb '23	May '23	Aug '23	Nov '23	Feb '24	May '24								
Thousands of \$	F4Q22	F1Q23	F2Q23	F3Q23	F4Q23E	F1Q24E	F2Q24E	F3Q24E								
	C3Q22	C4Q22	C1Q23	C2Q23	C3Q23E	C4Q23E	C1Q24E	C2Q24E	FY21	FY22	FY23E	FY24E	CY21	CY22	CY23E	CY24E
ASSETS																
Current Assets:																
Cash and cash equivalents	363,065	324,821	375,854	401,275	348,416	357,458	346,401	324,839	222,986	363,065	348,416	300,689	233,050	324,821	357,458	294,535
Accounts receivable, net	410,323	306,323	229,474	243,571	314,559	319,460	347,390	395,629	313,393	410,323	314,559	458,305	344,107	306,323	319,460	514,713
Inventories	323,084	416,082	294,367	226,051	219,516	222,961	242,367	275,003	363,601	323,084	219,516	317,931	317,851	416,082	222,961	356,872
Prepaid expenses & other current assets	55,393	74,685	78,475	68,014	68,014	68,014	68,014	68,014	50,838	55,393	68,014	68,014	48,829	74,685	68,014	68,014
Total current assets	1,151,865	1,121,911	978,170	938,911	950,506	967,893	1,004,173	1,063,485	950,818	1,151,865	950,506	1,144,938	943,837	1,121,911	967,893	1,234,134
Property and equipment, net	153,935	165,033	171,798	177,751	169,711	161,671	153,631	145,591	156,266	153,935	169,711	137,551	148,897	165,033	161,671	129,511
Operating lease right of use asset	77,399	83,018	80,468	77,789	77,789	77,789	77,789	77,789	40,869	77,399	77,789	77,789	37,723	83,018	77,789	77,789
Other noncurrent assets	37,044	44,670	44,043	42,233	23,007	23,007	23,007	23,006	21,517	37,044	23,007	23,007	25,423	44,670	23,007	23,007
Intangible assets, net	77,812	193,337	182,894	171,415	159,987	149,322	139,367	130,076	101,073	77,812	159,987	121,404	95,331	193,337	149,322	113,310
Goodwill	74,009	199,691	182,710	183,089	183,089	183,089	183,089	183,089	74,255	74,009	183,089	183,089	72,487	199,691	183,089	183,089
Total assets	1,572,064	1,807,660	1,640,083	1,591,188	1,564,089	1,562,770	1,581,055	1,623,036	1,344,798	1,572,064	1,564,089	1,687,778	1,323,698	1,807,660	1,562,770	1,760,840
LIABILITIES & SHAREHOLDERS' EQUITY												<u> </u>				
Current liabilities:																
Accounts payable	413,354	389,151	226,289	210,125	201,145	204,301	222,084	251,989	484,107	413,354	201,145	291,323	426,883	389,151	204,301	327,005
Accrued liabilities	90,161	109,721	131,117	96,227	96,227	96,227	96,227	96,227	74,337	90,161	96,227	96,227	72,434	109,721	96,227	96,227
Acquisition-related contingent consideration		24,500	30,900	45,700												
Current portion of long-term debt	12,025	28,435	32,141	32,253	32,253	32,253	32,253	32,253	25,354	12,025	32,253	32,253	35,802	28,435	32,253	32,253
Total current liabilities	515,540	551,807	420,447	384,305	329,625	332,781	350,564	380,469	583,798	515,540	329,625	419,803	535,119	551,807	332,781	455,485
Long-term debt	591,389	796,985	789,364	782,258	783,195	784,132	785,069	786,006	340,484	591,389	783,195	786,943	341,150	796,985	784,132	787,880
Long-term operating lease liability	71,754	76,950	76,092	73,421	73,421	73,421	73,421	73,421	32,419	71,754	73,421	73,421	29,396	76,950	73,421	73,421
Other long-term liabilities	14,835	22,531	22,660	27,038	27,038	27,038	27,038	27,038	69,173	14,835	27,038	27,038	85,749	22,531	27,038	27,038
Total liabilities	1,193,518	1,448,273	1,308,563	1,267,022	1,213,279	1,217,372	1,236,092	1,266,934	1,025,874	1,193,518	1,213,279	1,307,205	991,414	1,448,273	1,217,372	1,343,824
Total shareholders' equity	378,546	359,387	331,520	324,166	350,810	345,398	344,963	356,102	318,924	378,546	350,810	380,573	332,284	359,387	345,398	417,016
Total liabilities and shareholders' equity	1,572,064	1,807,660	1,640,083	1,591,188	1,564,089	1,562,770	1,581,055	1,623,036	1,344,798	1,572,064	1,564,089	1,687,778	1,323,698	1,807,660	1,562,770	1,760,840

Chart 10 - SGH Cash Flow Statement

Cash Flow (FYE August)	Aug '22	Nov '22	Feb '23	May '23	Aug '23	Nov '23	Feb '24	May '24									
Thousands of \$	F4Q22	F1Q23	F2Q23	F3Q23	F4Q23E	F1Q24E	F2Q24E	F3Q24E									
	C3Q22	C4Q22	C1Q23	C2Q23	C3Q23E	C4Q23E	C1Q24E	C2Q24E	FY21	FY22	FY23E	FY24E	C	Y21	CY22	CY23E	CY24E
Cash Flows from Operating Activities:																	
Net income (loss)	20,427	5,324	(26,786)	(24,077)	2,377	1,034	5,300	16,211	22,505	68,592	(43,162)	51,466	41,	177 5	3,218	(47,452)	90,749
Depreciation and amortization	16,446	19,789	19,931	21,300	21,300	21,300	21,300	21,300	49,109	64,907	82,320	85,200	56,	555 6	8,883	83,831	85,200
Non-cash adjustments	9,878	9,964	30,791	9,220	9,220	9,220	9,220	9,220	39,161	49,140	59,195	36,880	38,	583 4	6,973	58,451	36,880
Amortization of debt discount and issuance costs	2,787	1,069	1,048	937	937	937	937	937	8,798	10,263	3,991	3,748	9,	014	9,000	3,859	3,748
Impairment of goodwill			17,558														
Change in fair value of contingent consideration	-	3,700	6,400	14,800					32,400	41,324	24,900	0	49,	500 2	7,824	21,200	0
Accounts receivable	(56,019)	129,695	78,529	(13,746)	(70,988)	(4,900)	(27,930)	(48,239)	(51,440)	(97,509)	123,490	(143,745)	(85,	563) 6	8,239	(11,106)	(195,253)
Inventories	39,783	(82,882)	119,491	67,952	6,535	(3,444)	(19,407)	(32,636)	(137,889)	39,667	111,096	(98,414)	(111,	168) (8	2,855)	190,533	(133,911)
Prepaid expenses and other assets	(3,422)	(5,199)	(1,525)	15,391	0	0	0	0	(17,480)	(9,306)	8,667	0	(9,	135) (1	3,573)	13,866	0
Accounts payable	(7,564)	(83,030)	(145,951)	(49,907)	(8,980)	3,156	17,783	29,905	209,031	(54,533)	(287,868)	90,178	137,	258 (8	3,812)	(201,682)	122,704
Accrued expense and other liabilities	(1,410)	(72,415)	1,049	(832)	0	0	0	0	(847)	(7,614)	(72,198)	0	6,	606 (7	8,097)	217	0
Net cash from operating activities	20,906	(73,985)	100,535	41,038	(39,599)	27,302	7,203	(3,303)	153,348	104,931	27,989	25,313	132,	927 1	5,800	129,276	10,117
Cash Flows from Investing Activities:																	
Capital expenditures and deposits on equipment	(8,855)	(11,649)	(12,613)	(13,260)	(13,260)	(13,260)	(13,260)	(13,260)	(47,580)	(38,153)	(50,782)	(53,040)	(45,	702) (3	7,036)	(52,393)	(53,040)
Acquisition of business, net cash		(210,273)	(2,800)	0					(35,677)	0	(213,073)	0	(35,	677) (21	0,273)	(2,800)	0
Others	(71)	(1,721)	2,060	434					(920)	(817)	773	0	(1,	547) (	1,927)	2,494	0
Net cash from investing activities	(8,926)	(223,643)	(13,353)	(12,826)	(13,260)	(13,260)	(13,260)	(13,260)	(84,177)	(38,970)	(263,082)	(53,040)	(82,	926) (24	9,236)	(52,699)	(53,040)
Cash Flows from Financing Activities:																	
Share Repurchase	(40,431)	(4,659)	(11,564)	(660)		(5,000)	(5,000)	(5,000)	(44,330)	(40,431)	(16,883)	(20,000)	(44,	330) (4	5,090)	(17,224)	(20,000)
Proceeds from long-term borrowing	7,882	295,287							175,939	362,657	295,287	0	216,	439 59	7,944	0	0
Early repayment of long-term debt									0	0	0	0		0	0	0	0
Repayments of debt	(2,073)	(4,489)	(4,507)	(8,153)					(139,500)	(236,073)	(17,149)	0	(170,	000) (19	0,562)	(12,660)	0
IPO proceeds/Proceeds from issuance of ordinary	shares	3,942	308	4,180					0	0	8,430	0		0	3,942	4,488	0
Payment of acquisition-related contingent consider	ration	(28,100)							0	0	(28,100)	0		0 (2	8,100)	0	0
Payment of premium in connection with convertible	note excha	nge	(14,141)						0	0	(14,141)	0		0	0	(14,141)	0
Net cash paid for settlement and purchase of Capp	oed Calls		(4,304)						0	0	(4,304)	0		0	0	(4,304)	0
Distribution to noncontrolling interest			(2,009)						0	0	(2,009)	0		0	0	(2,009)	0
Net proceeds from SBC									11,310	0	0	0	8,	205	0	0	0
Others	291	(2)	(3,414)	(1)					(571)	(12,274)	(3,417)	0	5,	275 (1	4,639)	(3,415)	0
Net cash from financing activities	(34,331)	261,979	(39,631)	(4,634)	0	(5,000)	(5,000)	(5,000)	2,848	73,879	217,714	(20,000)	15,	589 32	3,495	(49,265)	(20,000)
Effect of exchange rate changes and Other	(1,910)	205	1,712	813					152	239	2,730	0	3,	361	4,512	2,525	0
Net increase (decrease) in cash	(24,261)	(35,444)	49,263	24,391	(52,859)	9,042	(11,057)	(21,563)	72,171	140,079	(14,649)	(47,727)	68,	951 9	4,571	29,837	(62,923)
Cash at beginning of period	387,326	363,065	324,821	375,854	401,275	348,416	357,458	346,401	150,811	222,986	363,065	348,416	164,	097 23	3,050	324,821	357,458
Cash at end of period	363,065	327,621	374,084	400,245	348,416	357,458	346,401	324,839	222,982	363,065	348,416	300,689	233,	048 32	7,621	354,658	294,535



### Company Description

#### **SMART Global Holdings**

SMART is a global leader in specialty memory solutions and supply chain services for major OEMs and is also the largest in-country manufacturer of memory for smartphones, PCs, and servers in Brazil.

### Company Valuation/Risks

#### **SMART Global Holdings**

Our \$31 PT is based on 13x our \$2.34 FY24E EPS. SGH has traded at 4x-13x NTM P/E over the last five years. We think a multiple at the higher end of the range is justified as the company focuses on GM expansion, is diversifying away from Brazil, and focusing on IPS opportunities. We expect revenue growth, FCF generation, and deleveraging to drive multiple expansion. Downside risks: Cree integration, memory price volatility, lower datacenter spending environment.

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#### (Article 3(1)e and Article 7 of MAR)

Recommendation Published June 29, 2023, 23:46 ET.
Recommendation Distributed June 29, 2023, 23:46 ET.

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The expected total return (price appreciation plus yield) for Buy rated securities with an average security price consistently below \$10 is 20% or more within a 12-month period as these companies are typically more volatile than the overall stock market. For Hold rated securities with an average security price consistently below \$10, the expected total return (price appreciation plus yield) is plus or minus 20% within a 12-month period. For Underperform rated securities with an average security price consistently below \$10, the expected total return (price appreciation plus yield) is minus 20% or less within a 12-month period.

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• SMART Global Holdings, Inc. (SGH: \$26.63, BUY)



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<u>Legend:</u>

I: Initiating Coverage

D: Dropped Coverage

B: Buy

H: Hold

UP: Underperform

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Equity Research June 29, 2023

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	Count	Percent	Count	Percent	Count	Percent			
BUY	1810	58.07%	298	16.46%	105	5.80%			
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June 29, 2023



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SMART Global Holdings, Inc. (SGH)

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Equity Research June 29, 2023

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**Global Memory** 

## **SMART Global Holdings, Inc. (SGH)**

RATING BUY

PRICE TARGET \$37.00

PRICE \$26.63

52-WEEK RANGE \$12.04 - \$27.32

## **Under-the-Radar AI Play, Undergoing Company Transformation; Raise PT \$37**

We maintain our Buy and raise our price target to \$37 following a solid beat and raise quarter. Key takeaways: 1) SGH is divesting the Brazil segment, which is projected to boost the gross margin by 200bps (neutral to EPS), free up capital for AI investment and M&A, and unlock the valuation multiple; 2) IPS segment is benefiting from secular trends of AI, ML and data analytics with its highly customizable hardware and service solution; 3) RFQ funnel is growing for AI implementations although the company is being selective on which projects to chose in order to ensure higher margins; and 4) gross margin profile will improve on a mix shift toward IPS and services. Net, we believe the shares are undervalued at ~1x EV/sales and a 10x P/E on our respective FY24 estimates. We see the valuation expanding as the revenue mix shifts toward AI/HPC.

## IPS business is being driven by demand for AI system implementation services for AI, data center and edge computing

IPS accounted for 45% of sales and grew 31% Y/Y in 3QF23 excluding Stratus (\$45M per qrt). For context, Penguin computing has 25 years of experience in designing, installing and managing supercomputers and HPC systems. SGH mentioned it has the capability to deploy 50-60K NVIDIA GPUs for AI training at scale. For example, Meta completed the second phase build-out of its AI Research SuperCluster, with Penguin as implementation partner. SGH helps companies design an optimized AI architecture compute system for specific HPC/AI workloads, node provisioning, and clustering monitoring. Services accounted for 15% of total sales including both point of sales and long-term managed services. Commercial accounted for a higher percentage of IPS as the company is seeing activity across oil/gas, financial services and hyperscalers. We highlight that IPS sales will be lumpy due the unpredictability of large installations and government spending plans.

## RFQ funnel has grown since beginning of the year - SGH is looking to become the "trusted advisor" for AI/HPC implementations, not chasing hardware-only deals

Given the surge of generative AI applications, the level of IPS activity is accelerating. Management is actively selecting AI projects in which it will become the trusted advisor, i.e. providing a full range of hardware and services from designing to implementation to managed services. The company was clear that it does not intend to only chase AI hardware deals where the margins are substantially lower and instead select engagements where it can maximize its value and in turn margins.

#### **RAJVINDRA S. GILL**

(212) 705-0355 rgill@needhamco.com

#### **NICK DOYLE**

(212) 705-0442

ndoyle@needhamco.com

#### **KEY DATA**

Market Cap (MM)	\$1,306.8
Price (06/29/2023)	\$26.63
52-Week Range	\$12.04 - \$27.32
Shares Outstanding	49.07
Avg. Daily Volume	1,071,460.3

#### **ESTIMATES**

Growth Rev

FY (Aug)	2022A	2023E	2024E
EPS			
Q1	1.08A	0.79A	0.42E
Previous	_	_	0.43E
Q2	0.87A	0.76A	0.45E
Previous	_	_	0.48E
Q3	0.87A	0.66A	0.70E
Previous	_	0.40E	_
Q4	0.80A	0.45E	0.93E
Previous	_	0.39E	0.88E
Year	3.62A	2.64E	2.50E
Previous	_	2.33E	_
Growth	36.1%	NM	NM
P/E	7.4x	10.1x	10.6x
Rev. (MM)(\$)			
Year	1,819.4A	1,653.0E	1,750.0E
Previous	_	16446F	1740 OF

21.2%

[9.1]%

5.9%



## At a Glance

#### **OUR INVESTMENT THESIS**

We believe SGH stands to benefit from multiple secular tailwinds (including AI/ML, data analytics, 5G, enterprise storage and specialty lighting) and a recovery in the memory cycle. We view the Memory Solutions segment as a reliable source of revenue and cash flow, the LED segment as an opportunistic acquisition with levers to enhance profitability and the IPS segment as the long-term growth driver.

#### **BULL CASE ASSUMPTIONS**

IPS is able to win larger AI projects, Memory Solutions benefits from higher density solutions (5G, DDR5), LED rebounds strongly off the bottom and contributes to operating profit.

#### **OUR CASE ASSUMPTIONS**

We expect SGH results to showcase their continuous transformation from a Memory-and-Brazil-focused business to a diversified company leveraged to HPC secular trends. Near-term, LED has found a bottom, IPS estimates remain in flux, and Memory should rebound in F4Q23. Services have hit an inflection point that provide greater margins and visibility.

#### **BEAR CASE ASSUMPTIONS**

SGH fundamentals can be negatively by volatile IPS projects, including unexpected customer push-outs, rapidly changing memory prices and related demand, lower enterprise spending, a downturn in the Brazilian economy and/or unfavorable legislative changes that affect its preferred tax status.

#### **COMPANY DESCRIPTION**

SMART Global Holdings is a provider of specialty memory, storage and hybrid solutions, LED products and high-performance compute systems. It is composed of the Memory Solutions, LED Solutions and Intelligent Platform Solutions (IPS) businesses.

#### **PRICE PERFORMANCE**



#### **KEY DATA**

Market Cap (MM)	\$1,306.8
Price (06/29/2023)	\$26.63
52-Week Range	\$12.04 - \$27.32
Shares Outstanding	49.07
Avg. Daily Volume	1.071.460.3



Smart Global Holdings (\$MM)		F3Q23	A (May)	
	Company	Needham	Needham	Consensus
	Guidance	Est	Old Est	Est
Total Revenue (\$MM)	\$375.0	\$383.3	\$375.0	\$383.3
Q/Q growth		-10.7%	-12.6%	-10.7%
Y/Y growth		-17.1%	-18.9%	-17.1%
Gross Profit (\$MM)		\$107.2	\$104.9	\$107.2
Gross Margin	28.0%	28.0%	28.0%	28.0%
R&D (\$MM)		\$11.3	\$18.8	\$20.1
SG&A (\$MM)		\$59.6	\$53.1	\$51.5
OPEX (\$MM)	\$72.0	\$70.9	\$72.0	\$71.5
OPEX % of sales		18.5%	19.2%	18.7%
Operating income (loss)		\$36.3	\$32.9	\$34.6
Operating Margin		9.5%	8.8%	9.0%
Non-GAAP Net Income (\$MM)		\$33.1	\$19.9	\$33.1
Diluted Shares Out (MM)	50.0	50.1	50.0	
Non-GAAP EPS (\$)	\$0.40 +/- \$0.10	\$0.66	\$0.40	\$0.66

	<u>F4Q23</u>	<u>E (Aug)</u>	
Company	Needham	Needham	Consensus
Guidance	Est	Old Est	Est
\$375 +/- \$25	\$375.0	\$375.0	\$376.4
	-2.2%	0.0%	-1.8%
	-14.3%	-14.3%	-14.0%
	\$104.9	\$104.5	\$105.1
28.0%	28.0%	27.9%	27.9%
	\$11.3	\$19.1	\$20.3
	\$59.7	\$53.8	\$52.1
\$71.0	\$71.0	\$73.0	\$72.4
	18.9%	19.5%	19.2%
	\$33.9	\$31.5	\$33.5
	9.0%	8.4%	8.9%
	\$23.5	\$19.5	\$22.3
52.5	52.5	50.0	
\$0.45	\$0.45	\$0.39	\$0.44

	F1Q24E (Nov)	
Needham	Needham	Consensus
Est	Old Est	Est
\$380.7	\$379.6	\$388.3
1.5%	1.2%	3.1%
-18.2%	-18.4%	-16.6%
\$108.0	\$106.7	\$107.8
28.4%	28.1%	27.8%
\$11.5	\$19.3	\$21.0
\$59.8	\$53.9	\$52.7
\$71.3	\$73.3	\$73.8
18.7%	19.3%	19.0%
\$36.7	\$33.4	\$35.4
9.6%	8.8%	9.1%
\$22.1	\$21.4	\$22.0
52.5	50.0	
\$0.42	\$0.43	\$0.42

Smart Global Holdings (\$MM)	<u>FY23E (Aug '23)</u>									
	Company	Needham	Needham	Consensus						
	Guidance	Est	Old Est	Est						
Total Revenue (\$MM)		\$1,653.0	\$1,644.6	\$1,651.1						
Y/Y growth		-9.1%	-9.6%	-9.2%						
Gross Profit (\$MM)		\$465.3	\$462.6	\$461.0						
Gross Margin		28.1%	28.1%	27.9%						
R&D (\$MM)		\$54.9	\$70.3	\$82.7						
SG&A (\$MM)		\$234.8	\$222.4	\$212.1						
OPEX (\$MM)		\$289.7	\$292.7	\$294.8						
OPEX % of sales		17.5%	17.8%	17.9%						
Operating income (loss)		\$176.5	\$170.8	\$174.8						
Operating Margin		10.7%	10.4%	10.6%						
Non-GAAP Net Income (\$MM)		\$133.7	\$116.5	\$127.3						
Diluted Shares Out (MM)		50.6	49.9							
Non-GAAP EPS (\$)		\$2.64	\$2.33	\$2.56						

=	Y24E (Aug '2	<b>4</b> )
Needham	Needham	Consensus
Est	Old Est	Est
\$1,750.0	\$1,740.0	\$1,745.0
5.9%	5.8%	5.7%
\$498.4	\$490.6	\$489.6
28.5%	28.2%	28.1%
\$50.1	\$80.0	\$87.8
\$245.3	\$230.7	\$220.4
\$295.4	\$310.6	\$308.2
16.9%	17.9%	17.7%
\$202.9	\$180.0	\$185.7
11.6%	10.3%	10.6%
\$131.4	\$125.0	\$123.0
52.6	50.1	
\$2.50	\$2.50	\$2.28

Source: Needham & Company, LLC, FactSet

### Divest majority of the Brazil stake

At 100% divestment, the enterprise value of \$205M; at 81% the value is \$166M. Brazil generated revenue of \$153M through the first three fiscal quarters of the year and will most likely end at roughly \$200M. The divestment will be immediately accretive to Non-GAAP margins by 200bps and neutral to positive for Non-GAAP EPS. The transaction is expected to close by the end of CY23, at which point we will adjust our model.



Rajvindra S. Gill (212) 705-0355															
Smart Global Holdings (NASDAQ - SGH Income Statement Model	)														
Amounts in millions, except per share data)															
<del>-</del>	1Q:22A Nov-21	2Q:22A Feb-22	3Q:22A May-22	4Q:22A Aug-22	Year 2022A	1Q:23A Nov-22	2Q:23A Feb-23	3Q:23A May-23	4Q:23E Aug-23	Year 2023E	1Q:24E Nov-23	2Q:24E Feb-24	3Q:24E May-24	4Q:24E Aug-24	Y 202
tevenues	\$469.9	\$449.2	\$462.5	\$437.7	\$1,819.4	\$465.5	\$429.2	\$383.3	\$375.0	\$1,653.0	\$380.7	\$395.2	\$458.7	\$515.4	\$1,75
Depreciation	9.5	10.0	11.0	10.8	41.3	8.9	10.8	9.5	9.5	38.7	9.5	9.5	9.5	9.5	3
Cost of Goods	333.4	322.2	332.7	319.1	1,307.4 470.7	327.4	294.4	266.6	260.6	1,149.1	263.2	274.3	318.4	357.8	1,21
Gross Profit Research and Development	127.0 12.0	116.9 12.6	118.9 13.2	107.8 13.0	470.7 50.8	129.2 13.7	124.0 18.6	107.2 11.3	104.9 11.3	465.3 54.9	108.0 11.5	111.3 12.1	130.8 13.0	148.2 13.6	49
Selling, General and Administrative	45.9	46.9	51.5	48.1	192.3	60.7	54.7	59.6	59.7	234.8	59.8	60.8	61.8	62.8	24
Other Operating Expenses / (Income)	0.0	0.0	0.0	0.0	0.0	0.0	(0.9)	0.0	0.0	(0.9)	0.0	0.0	0.0	0.0	
Total Operating Expenses	57.9	59.5	64.6	61.1	243.1	74.4	72.5	70.9	71.0	288.8	71.3	72.9	74.8	76.4	29
Operating Income Interest Income	69.2 0.0	57.4 0.0	54.3 0.0	46.8 0.0	227.6 0.0	54.8 0.0	51.5 0.0	36.3 0.0	33.9 0.0	176.5 0.0	36.7 0.0	38.4 0.0	56.0 0.0	71.8 0.0	20
Total Interest Expense	5.1	1.8	3.3	6.5	16.7	7.8	8.0	8.1	8.1	31.9	8.1	8.1	8.1	8.1	3
Other Non-operating Expense / (Income)	1.0	0.1	0.0	(2.7)	(1.6)	(1.0)	(4.6)	(1.0)	(2.5)	(9.1)	0.0	0.0	0.0	0.0	
Pretax Income	63.0	55.5	50.9	43.0	212.5	48.0	48.1	29.3	28.3	153.7	28.7	30.4	47.9	63.7	17
Income Tax Expense	6.0	7.5	4.6	2.1	20.2	8.2	10.0	(4.2)	4.8	18.8	6.6	7.0	11.0	14.7	3
Minority Interest Equity in Net Income of Affiliates	0.0 (0.7)	0.0 (0.5)	0.0 (0.4)	0.0 (0.5)	0.0 (2.0)	0.0 (0.3)	(0.4)	0.0 (0.4)	0.0	0.0 (1.1)	0.0	0.0	0.0	0.0	
Net Income	56.3	47.6	45.9	40.4	190.2	39.5	37.6	33.1	23.5	133.7	22.1	23.4	36.9	49.1	13
Basic Pro Forma Earnings per Share	\$1.08	\$0.96	\$0.92	\$0.82	\$3.78	\$0.81	\$0.76	\$0.67	\$0.45	\$2.66	\$0.42	\$0.45	\$0.70	\$0.93	\$2
Fully Diluted Pro Forma Earnings per Share	\$1.08	\$0.90 \$0.87	\$0.92 \$0.87	\$0.82 \$0.80	\$3.62	\$0.79	\$0.76	\$0.66	\$0.45	\$2.64	\$0.42	\$0.45	\$0.70	\$0.93	\$2
D. F. W. L. IA	52 120	40.522	50.005	40.220	50.250	40.072	10.012	10.200	52.500	50.171	52.520	52.540	52.560	52.500	52.5
Pro Forma Weighted Average Shares Out. Pro Forma Fully Diluted Shares	52,130 52,130	49,522 54,877	50,095 52,935	49,328 50,504	50,269 52,611	48,962 49,791	49,842 49,842	49,380 50,134	52,500 52,500	50,171 50,567	52,520 52,520	52,540 52,540	52,560 52,560	52,580 52,580	52,
101 Sinu Luly Diuted Sinues	32,130	31,077	32,733	50,501	32,011	12,721	17,012	50,151	52,500	30,307	32,320	52,510	52,500	32,500	J2,.
Amortization of Goodwill and Intangibles	\$6.0	\$5.8	\$5.9	\$5.6	\$23.4	\$10.9	\$10.8	\$10.0	\$11.8	\$43.5	\$11.8	\$11.8	\$11.8	\$11.8	\$4
Stock-Based Compensation Expenses	\$9.8	10.0	10.5	9.8	40.1	10.4	10.4	11.6	21.0	53.4	24.0	24.0	24.0	24.0	9
Nonrecurring Charges	22.3	29.2	5.8	7.7	65.0	16.5	55.4	25.0	0.0	96.9	3.0	0.0	0.0	0.0	
Income Tax Effect of Nonrecurring Charges  Reported Net Income	(1.8) \$20.0	0.1 \$2.5	(0.5) \$24.1	(2.7) \$20.0	(4.8) \$66.5	(3.3) \$5.0	(11.8) \$(27.2)	10.9 \$(24.5)	0.0 \$(9.3)	(4.2) \$(56.0)	0.0	0.0 \$(12.4)	0.0 \$1.1	0.0 \$13.3	\$(1-
	Ψ2010	Ų ZIU	Ψ2111	Ψ2010	φουε	φεισ	ψ(2712)	+(= 11+)	ψ()10)	φ(Εθίθ)	\$(16.7)		7-1-	7-1-1	
Reported Fully Diluted EPS Reported Fully Diluted Shares	<b>\$0.38</b> 52,130	<b>\$0.04</b> 54,877	<b>\$0.46</b> 52,935	<b>\$0.40</b> 50,504	<b>\$1.26</b> 52,611	<b>\$0.10</b> 49,791	(\$0.55) 49,842	( <b>\$0.50</b> ) 50,134	(\$0.18) 52,500	( <b>\$1.12</b> ) 50,567	( <b>\$0.32</b> ) 52,520	( <b>\$0.24</b> ) 52,540	\$0.02 52,560	<b>\$0.25</b> 52,580	( <b>\$0.</b> 52,5
EBITDA EBITDA per Fully Diluted Share	\$76.7 \$1.47	\$66.0 \$1.20	\$64.0 \$1.21	\$56.7 \$1.12	\$263.4 \$5.01	\$63.2 \$1.27	\$66.9 \$1.34	\$43.8 \$0.87	\$45.9 \$0.87	\$219.8 \$4.35	\$46.2 \$0.88	\$47.9 \$0.91	\$65.5 \$1.25	\$81.3 \$1.55	\$24 \$4
	\$1.47	\$1.20	\$1.21	\$1.12	\$5.01	\$1.27	\$1.34	\$0.87	\$0.87	\$4.33	30.66	\$0.91	\$1.23	\$1.55	34
Margin Analysis															
Gross Margin (incl. goodwill amortization)	27.0%	26.0%	25.7%	24.6%	25.9%	27.8%	28.9%	28.0%	28.0%	28.1%	28.4%	28.2%	28.5%	28.7%	28
R&D/Sales SG&A/Sales	2.6 9.8	2.8 10.4	2.8 11.1	3.0 11.0	2.8 10.6	2.9 13.0	4.3 12.8	2.9 15.6	3.0 15.9	3.3 14.2	3.0 15.7	3.1 15.4	2.8 13.5	2.6 12.2	14
EBITDA Margin	16.3	14.7	13.8	12.9	14.5	13.6	15.6	11.4	12.2	13.3	12.1	12.1	14.3	15.8	13
Operating Margin (incl. goodwill amortization)	14.7	12.8	11.7	10.7	12.5	11.8	12.0	9.5	9.0	10.7	9.6	9.7	12.2	13.9	11
Non-Operating Expenses/Sales	1.3	0.4	0.7	0.9	0.8	1.5	0.8	1.8	1.5	1.4	2.1	2.0	1.8	1.6	
Pretax Margin (incl. goodwill amortization) Tax Rate	13.4 9.6	12.4 13.4	11.0 9.1	9.8 4.9	11.7 9.5	10.3 17.1	11.2 20.9	7.6 (14.3)	7.5 17.0	9.3 12.3	7.5 23.0	7.7 23.0	10.5 23.0	12.4 23.0	23
1 ax Kate Net Margin (incl. goodwill amortization)	12.0	10.6	9.1	9.2	9.5 10.5	8.5	8.8	8.6	6.3	8.1	5.8	5.9	8.0	9.5	2:
Year-over-year D												_			
Total Revenues	61.1% 134.7%	47.7% 97.4%	5.7% 24.3%	(6.4%)	21.2%	(1.0%)	(4.4%)	(17.1%)	(14.3%)	(9.1%)	(18.2%)	(7.9%)	19.7% 22.0%	37.4%	5.
Gross Profit EBITDA	162.3%	97.4% 109.4%	24.5%	(12.7%) (25.4%)	41.5% 40.0%	(17.6%)	6.0% 1.4%	(9.8%) (31.5%)	(2.8%) (19.1%)	(1.2%) (16.6%)	(16.4%) (26.9%)	(10.2%) (28.4%)	49.6%	41.3% 77.2%	7. 9.
Operating Income	191.3%	111.5%	25.3%	(29.8%)	41.6%	(20.7%)	(10.3%)	(33.1%)	(27.6%)	(22.5%)	(33.0%)	(25.4%)	54.3%	112.0%	15.
Pretax Income	175.9%	122.7%	24.7%	(32.6%)	39.4%	(23.8%)	(13.4%)	(42.6%)	(34.2%)	(27.7%)	(40.3%)	(36.9%)	63.9%	125.1%	11.
Net Income	186.9%	116.9%	29.3%	(26.7%)	43.9%	(29.9%)	(20.9%)	(27.9%)	(41.9%)	(29.7%)	(44.1%)	(37.9%)	11.6%	108.9%	(1.
Fully Diluted Earnings Before Goodwill	173.9% 4.7%	96.7% 10.3%	21.5% 6.4%	(27.7%) 1.5%	36.1% 5.7%	(26.6%) (4.5%)	(12.9%) (9.2%)	(23.9%) (5.3%)	(44.1%) 4.0%	(26.9%)	(47.0%) 5.5%	(41.1%) 5.4%	6.5% 4.8%	108.5% 0.2%	(5. 3.
Fully Diluted Avg. Shares Outstanding	4./%	10.5%	0.4%	1.5%	3.1%	(4.5%)	(9.2%)	(3.3%)	4.0%	(3.7%)	5.5%	3.4%	4.8%	0.2%	3.
Quarter-over-quarter D															
	0.5%	(4.4%)	3.0%	(5.4%)		6.3%	(7.8%)	(10.7%)	(2.2%)		1.5%	3.8%	16.1%	12.4%	l
		(7.9%)	1.7%	(9.3%)		19.8%	(4.0%)	(13.5%)	(2.2%)		3.0%	3.1%	17.5%	13.3%	
Gross Profit	2.8%					11 50/									
Total Revenues Gross Profit EBITDA Operating Income	1.1%	(13.9%)	(3.1%)	(11.4%)		11.5%	5.9%	(34.6%)	4.7%		0.8%	3.7%	36.7% 45.8%	24.1%	
Gross Profit EBITDA Operating Income						11.5% 17.2% 11.6%	5.9% (6.1%) 0.2%	(34.6%) (29.5%) (39.2%)	4.7% (6.7%) (3.3%)		0.8% 8.4% 1.3%	3.7% 4.6% 6.0%	36.7% 45.8% 57.9%	24.1% 28.1% 32.9%	
Gross Profit EBITDA Operating Income Pretax Income	1.1% 3.8%	(13.9%) (16.9%)	(3.1%) (5.5%)	(11.4%) (13.8%)		17.2%	(6.1%)	(29.5%)	(6.7%)		8.4%	4.6%	45.8%	28.1%	
Gross Profit	1.1% 3.8% (1.3%)	(13.9%) (16.9%) (11.8%)	(3.1%) (5.5%) (8.3%)	(11.4%) (13.8%) (15.5%)		17.2% 11.6%	(6.1%) 0.2%	(29.5%) (39.2%)	(6.7%) (3.3%)		8.4% 1.3%	4.6% 6.0%	45.8% 57.9%	28.1% 32.9%	

Source: Company reports and Needham & Company, LLC estimates. A Actual. E Estimated. NA Not available. NM Not meaningful. LTM Latest twelve months.



Q:22A Nov-21 5233.1 0.0 344.1 317.9 0.0 48.8 943.8 148.9 0.0 72.5 95.3 63.1 323.7	2Q:22A Feb-22 \$365.8 0.0 385.9 334.1 0.0 45.9 1,131.7 149.1 0.0 73.4 88.9 65.4 \$1,508.5	3Q:22A May-22 \$387.3 0.0 357.5 365.3 0.0 57.5 1,167.6 159.1 0.0 75.0 83.2 69.1 \$1,554.1	4Q:22A Aug-22 \$363.1 0.0 410.3 323.1 0.0 55.4 1,151.9 153.9 0.0 74.0 77.8 114.4	Year 2022A \$363.1 0.0 410.3 323.1 0.0 55.4 1,151.9 153.9 0.0 74.0	10:23A Nov-22 \$324.8 0.0 306.3 416.1 0.0 74.7 1,121.9 165.0 0.0	2Q:23A Feb-23 \$375.9 0.0 229.5 294.4 0.0 78.5 978.2 171.8	3Q:23A May-23 \$401.3 0.0 243.6 226.1 0.0 68.0 938.9	4Q:23E Aug-23 \$397.6 0.0 221.6 221.2 0.0	Year 2023E \$397.6 0.0 221.6 221.2	1Q:24E Nov-23 \$419.8 0.0 225.0 217.2	2Q:24E Feb-24 \$429.3 0.0 233.5 229.2	3Q:24E May-24 \$447.0 0.0 271.1	4Q:24E Aug-24 \$507.5 0.0 281.7	\$ 20 \$50
Nov-21  2233.1 0.0 344.1 317.9 0.0 48.8 943.8 943.8 943.8 95.3 323.7	\$365.8 0.0 385.9 334.1 0.0 45.9 1,131.7 149.1 0.0 73.4 88.9 65.4	\$387.3 0.0 357.5 365.3 0.0 57.5 1,167.6 159.1 0.0 75.0 83.2 69.1	\$363.1 0.0 410.3 323.1 0.0 55.4 1,151.9 153.9 0.0 74.0 77.8 114.4	\$363.1 0.0 410.3 323.1 0.0 55.4 1,151.9 153.9 0.0	\$324.8 0.0 306.3 416.1 0.0 74.7 1,121.9 165.0 0.0	\$375.9 0.0 229.5 294.4 0.0 78.5 978.2	\$401.3 0.0 243.6 226.1 0.0 68.0	\$397.6 0.0 221.6 221.2	\$397.6 0.0 221.6 221.2	\$419.8 0.0 225.0	\$429.3 0.0 233.5	May-24 \$447.0 0.0	<b>Aug-24</b> \$507.5 0.0	<b>20</b> \$50
Nov-21  2233.1 0.0 344.1 317.9 0.0 48.8 943.8 943.8 943.8 95.3 323.7	\$365.8 0.0 385.9 334.1 0.0 45.9 1,131.7 149.1 0.0 73.4 88.9 65.4	\$387.3 0.0 357.5 365.3 0.0 57.5 1,167.6 159.1 0.0 75.0 83.2 69.1	\$363.1 0.0 410.3 323.1 0.0 55.4 1,151.9 153.9 0.0 74.0 77.8 114.4	\$363.1 0.0 410.3 323.1 0.0 55.4 1,151.9 153.9 0.0	\$324.8 0.0 306.3 416.1 0.0 74.7 1,121.9 165.0 0.0	\$375.9 0.0 229.5 294.4 0.0 78.5 978.2	\$401.3 0.0 243.6 226.1 0.0 68.0	\$397.6 0.0 221.6 221.2	\$397.6 0.0 221.6 221.2	\$419.8 0.0 225.0	\$429.3 0.0 233.5	May-24 \$447.0 0.0	<b>Aug-24</b> \$507.5 0.0	<b>20</b> \$50
2233.1 0.0 344.1 317.9 0.0 48.8 943.8 148.9 0.0 72.5 95.3 63.1 323.7	\$365.8 0.0 385.9 334.1 0.0 45.9 1,131.7 149.1 0.0 73.4 88.9 65.4	\$387.3 0.0 357.5 365.3 0.0 57.5 1,167.6 159.1 0.0 75.0 83.2 69.1	\$363.1 0.0 410.3 323.1 0.0 55.4 1,151.9 153.9 0.0 74.0 77.8 114.4	\$363.1 0.0 410.3 323.1 0.0 55.4 1,151.9 153.9 0.0	\$324.8 0.0 306.3 416.1 0.0 74.7 1,121.9 165.0 0.0	\$375.9 0.0 229.5 294.4 0.0 78.5	\$401.3 0.0 243.6 226.1 0.0 68.0	\$397.6 0.0 221.6 221.2	\$397.6 0.0 221.6 221.2	\$419.8 0.0 225.0	\$429.3 0.0 233.5	\$447.0 0.0	\$507.5 0.0	\$50
0.0 344.1 317.9 0.0 48.8 943.8 148.9 0.0 72.5 95.3 63.1 323.7	0.0 385.9 334.1 0.0 45.9 1,131.7 149.1 0.0 73.4 88.9 65.4	0.0 357.5 365.3 0.0 57.5 1,167.6 159.1 0.0 75.0 83.2 69.1	0.0 410.3 323.1 0.0 55.4 1,151.9 153.9 0.0 74.0 77.8 114.4	0.0 410.3 323.1 0.0 55.4 1,151.9 153.9 0.0	0.0 306.3 416.1 0.0 74.7 1,121.9 165.0 0.0	0.0 229.5 294.4 0.0 78.5 978.2	0.0 243.6 226.1 0.0 68.0	0.0 221.6 221.2	0.0 221.6 221.2	0.0 225.0	0.0 233.5	0.0	0.0	
0.0 344.1 317.9 0.0 48.8 943.8 148.9 0.0 72.5 95.3 63.1 323.7	0.0 385.9 334.1 0.0 45.9 1,131.7 149.1 0.0 73.4 88.9 65.4	0.0 357.5 365.3 0.0 57.5 1,167.6 159.1 0.0 75.0 83.2 69.1	0.0 410.3 323.1 0.0 55.4 1,151.9 153.9 0.0 74.0 77.8 114.4	0.0 410.3 323.1 0.0 55.4 1,151.9 153.9 0.0	0.0 306.3 416.1 0.0 74.7 1,121.9 165.0 0.0	0.0 229.5 294.4 0.0 78.5 978.2	0.0 243.6 226.1 0.0 68.0	0.0 221.6 221.2	0.0 221.6 221.2	0.0 225.0	0.0 233.5	0.0	0.0	
344.1 317.9 0.0 48.8 943.8 148.9 0.0 72.5 95.3 63.1 323.7	385.9 334.1 0.0 45.9 1,131.7 149.1 0.0 73.4 88.9 65.4	357.5 365.3 0.0 57.5 1,167.6 159.1 0.0 75.0 83.2 69.1	410.3 323.1 0.0 55.4 1,151.9 153.9 0.0 74.0 77.8 114.4	410.3 323.1 0.0 55.4 1,151.9 153.9 0.0	306.3 416.1 0.0 74.7 1,121.9 165.0 0.0	229.5 294.4 0.0 78.5 978.2	243.6 226.1 0.0 68.0	221.6 221.2	221.6 221.2	225.0	233.5			
317.9 0.0 48.8 943.8 148.9 0.0 72.5 95.3 63.1 323.7	334.1 0.0 45.9 1,131.7 149.1 0.0 73.4 88.9 65.4	365.3 0.0 57.5 1,167.6 159.1 0.0 75.0 83.2 69.1	323.1 0.0 55.4 1,151.9 153.9 0.0 74.0 77.8 114.4	323.1 0.0 55.4 1,151.9 153.9 0.0	416.1 0.0 74.7 1,121.9 165.0 0.0	294.4 0.0 78.5 978.2	226.1 0.0 68.0	221.2	221.2			271.1	281.7	
0.0 48.8 943.8 148.9 0.0 72.5 95.3 63.1 323.7	0.0 45.9 1,131.7 149.1 0.0 73.4 88.9 65.4	0.0 57.5 1,167.6 159.1 0.0 75.0 83.2 69.1	0.0 55.4 1,151.9 153.9 0.0 74.0 77.8 114.4	0.0 55.4 1,151.9 153.9 0.0	0.0 74.7 1,121.9 165.0 0.0	0.0 78.5 978.2	0.0 68.0			217.2				2
48.8 943.8 148.9 0.0 72.5 95.3 63.1 323.7	45.9 1,131.7 149.1 0.0 73.4 88.9 65.4	57.5 1,167.6 159.1 0.0 75.0 83.2 69.1	55.4 1,151.9 153.9 0.0 74.0 77.8 114.4	55.4 1,151.9 153.9 0.0	74.7 1,121.9 165.0 0.0	78.5 978.2	68.0	0.0	0.0	0.0	0.0	246.6 0.0	255.8 0.0	2
943.8 148.9 0.0 72.5 95.3 63.1 323.7	1,131.7 149.1 0.0 73.4 88.9 65.4	1,167.6 159.1 0.0 75.0 83.2 69.1	1,151.9 153.9 0.0 74.0 77.8 114.4	1,151.9 153.9 0.0	1,121.9 165.0 0.0	978.2		60.2	60.2	61.1	63.4	73.6	82.7	
148.9 0.0 72.5 95.3 63.1 323.7	149.1 0.0 73.4 88.9 65.4	159.1 0.0 75.0 83.2 69.1	153.9 0.0 74.0 77.8 114.4	153.9 0.0	165.0 0.0			900.6	900.6	923.0	955.4	1,038.2	1,127.7	1,1
0.0 72.5 95.3 63.1 323.7	0.0 73.4 88.9 65.4	0.0 75.0 83.2 69.1	0.0 74.0 77.8 114.4	0.0	0.0		177.8	181.5	181.5	185.8	190.0	194.3	198.5	19
72.5 95.3 63.1 323.7	73.4 88.9 65.4	75.0 83.2 69.1	74.0 77.8 114.4			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.
95.3 63.1 323.7 \$35.8	88.9 65.4	83.2 69.1	77.8 114.4		199.7	182.7	183.1	183.1	183.1	169.3	155.5	141.7	127.9	1
63.1 ,323.7 \$35.8	65.4	69.1	114.4	77.8	193.3	182.9	171.4	159.6	159.6	159.6	159.6	159.6	159.6	1.
\$35.8	\$1,508.5	\$1,554.1		114.4	127.7	124.5	120.0	120.3	120.3	120.6	120.8	121.1	121.4	10
			\$1,572.1	\$1,572.1	\$1,807.7	\$1,640.1	\$1,591.188	\$1,545.1	\$1,545.1	\$1,558.2	\$1,581.4	\$1,654.9	\$1,735.1	\$1,7
	\$6.4	\$8.8	\$12.0	\$12.0	\$28.4	\$32.1	\$32.3	\$33.5	\$33.5	\$35.1	\$36.7	\$38.3	\$39.6	s
	441.0	448.0	413.4	413.4	389.2	226.3	210.1	205.6	205.6	210.5	219.2	253.2	283.6	2
72.4	86.4	68.1	90.2	90.2	109.7	131.1	45.7	87.4	87.4	88.7	92.1	106.9	120.1	1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	İ
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	İ
0.0	0.0	0.0	0.0	0.0	24.5	30.9	96.2	0.0	0.0	0.0	0.0	0.0	0.0	
535.1	533.8	524.9	515.5	515.5	551.8	420.4	384.3	326.5	326.5	334.4	348.0	398.4	443.3	4
341.2	483.9	485.0	591.4	591.4	797.0	789.4	782.3	782.3	782.3	782.3	782.3	782.3	782.3	7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
115.1	135.9	145.1	86.6 1.193.5	86.6 1.193.5	99.5 1.448.3	98.8 1.308.6	1.267.0	1.209.3	1.209.3	100.5 1,217.1	1.230.7	1.281.1	1.326.0	1,3:
	,			,			,							1,3.
322.9	348.8	392.6	371.6	371.6	352.1	325.8	318.1	329.8	329.8	335.1	344.6	367.8	403.0	40
,323.7	\$1,508.5	\$1,554.1	\$1,572.1	\$1,572.1	\$1,807.7	\$1,640.1	\$1,591.2	\$1,545.1	\$1,545.1	\$1,558.2	\$1,581.4	\$1,654.9	\$1,735.1	\$1,73
66	77	70	84		59	48	57	53		53	53	53	49	
														İ
														İ
37	46	46	60		66	08	62	36		33	30	31	42	
5.5	4.7	5.2	4.3		6.1	7.5	6.3	6.8		6.8	6.8	6.8	7.3	1
4.3	4.0	3.8	4.1		3.2	4.1	4.9	4.9		5.0	5.0	5.3	5.7	
\$6.19	\$6.36	\$7.42	\$7.36		\$7.07	\$6.54	\$6.34	\$6.28		\$6.38	\$6.56	\$7.00	\$7.66	
\$2.98	\$3.40	\$4.43	\$4.35		(\$0.82)	(\$0.80)	(\$0.73)	(\$0.25)		\$0.12	\$0.56	\$1.26	\$2.20	1
(\$2.76)	(\$2.27)	(\$2.01)	(\$4.76)		(\$10.05)	(\$8.94)	(\$8.24)	(\$7.96)		(\$7.57)	(\$7.42)	(\$7.11)	(\$5.98)	1
50.7%	57.7%	54.9%	61.0%		68.9%	70.4%	70.7%	70.0%		69.6%	69.0%	67.7%	65.7%	1
53.1%	58.0%	55.3%	61.4%		69.7%	71.2%	71.5%	70.8%		70.6%	70.0%	68.7%	66.8%	
16.9%	13.4%	12.0%	10.3%	13.0%	9.3%	8.7%	8.2%	6.0%	8.6%	5.7%	6.0%	9.1%	11.6%	
32.3%	24.5%	21.1%	17.3%	22.8%	14.6%	12.9%	11.5%	8.2%	12.5%	7.6%	8.0%	12.5%	16.2%	1
71.1%	56.7%	49.5%	42.3%	55.8%	43.6%	44.4%	41.1%	29.0%	38.1%	26.6%	27.5%	41.5%	50.9%	3
9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	323.7  66 83 112 37  5.5 4.3  \$6.19 \$2.98 \$2.76)  50.7% 53.1%  16.9% 32.3%	9.3 6.1 0.0 0.0 322.9 348.8 323.7 \$1,508.5 66 77 83 91 112 119 37 48 5.5 4.7 4.3 4.0 \$6.19 \$6.36 \$2.98 \$3.40 \$2.76 (\$2.27) \$50.7% 57.7% \$53.1% 58.0% 16.9% 13.4% 24.5%	9.3 6.1 6.5 0.0 0.0 0.0 20.2 9 348.8 392.6 323.7 \$1,508.5 \$1,554.1    66 77 70 83 91 96 112 119 117 37 48 48 48 48 48 48 48 48 48 48 48 49 3.8 5.5 4.7 5.2 4.3 4.0 3.8 56.19 \$6.36 \$7,42 \$2.98 \$3.40 \$4.43 \$2.76 \$(\$2.21) \$(\$2.01) \$5.76 \$5.76 \$5.76 \$5.536 \$1.9 \$5.36 \$1.9 \$5.36 \$1.9 \$5.36 \$1.9 \$5.36 \$1.9 \$1.9 \$1.9 \$1.9 \$1.9 \$1.9 \$1.9 \$1.9	9.3 6.1 6.5 6.9 0.0 0.0 0.0 0.0 20.2 9 348.8 392.6 371.6 323.7 \$1,508.5 \$1,554.1 \$1,572.1 \$66 77 70 84 83 91 96 88 112 119 117 113 37 48 48 60 5.5 4.7 5.2 4.3 4.3 4.0 3.8 4.1 \$6.19 \$6.36 \$7.42 \$7.36 \$2.98 \$3.40 \$4.43 \$4.3 \$4.5 \$2.98 \$3.40 \$4.43 \$4.3 \$5.2 \$7.36 \$2.98 \$3.40 \$4.43 \$4.3 \$6.19 \$6.36 \$7.42 \$7.36 \$2.98 \$3.40 \$4.43 \$4.35 \$2.76 \$5.27 \$6.20 \$1 \$6.0% 53.1% 55.3% 61.4% 13.4% 12.0% 10.3% 16.9% 13.4% 12.0% 10.3% 16.9% 13.4% 12.0% 10.3% 10.3% 12.0% 10.3% 12.0% 10.3% 12.0% 10.3% 1	9.3 6.1 6.5 6.9 6.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	9.3 6.1 6.5 6.9 6.9 7.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	9.3 6.1 6.5 6.9 6.9 7.3 5.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	9.3 6.1 6.5 6.9 6.9 7.3 5.7 6.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	9.3 6.1 6.5 6.9 6.9 7.3 5.7 6.1 6.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	9.3 6.1 6.5 6.9 6.9 7.3 5.7 6.1 6.1 6.1 6.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	9.3 6.1 6.5 6.9 6.9 7.3 5.7 6.1 6.1 6.1 6.1 6.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	93 6.1 6.5 6.9 6.9 7.3 5.7 6.1 6.1 6.1 6.1 6.1 6.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	9.3 6.1 6.5 6.9 6.9 7.3 5.7 6.1 6.1 6.1 6.1 6.1 6.1 6.1 6.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	9.3 6.1 6.5 6.9 6.9 7.3 5.7 6.1 6.1 6.1 6.1 6.1 6.1 6.1 6.1 6.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0



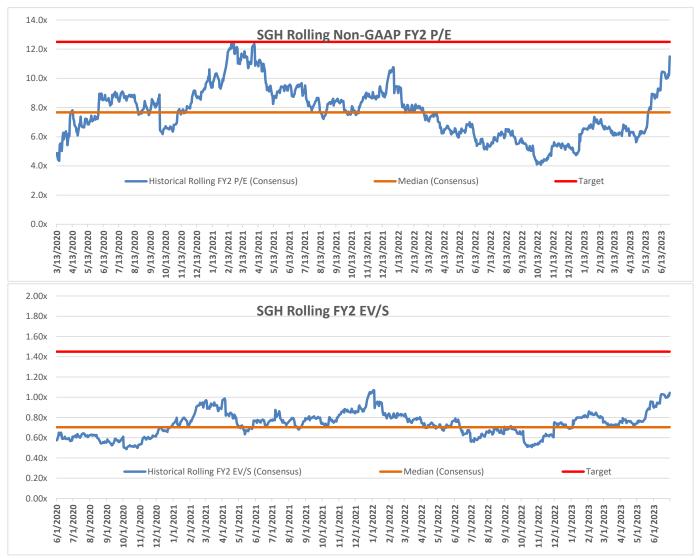
Rajvindra S. Gill (212) 705-0355															
Smart Global Holdings (NASDAQ - SGH)															
9															i
Cash Flow Model - GAAP															i
Amounts in millions, except per share data)															i
	1Q:22A	2Q:22A	3Q:22A	4Q:22A	Year	1Q:23A	2Q:23A	3Q:23A	4Q:23E	Year	1Q:24E	2Q:24E	3Q:24E	4Q:24E	3
	Nov-21	Feb-22	May-22	Aug-22	2022A	Nov-22	Feb-23	May-23	Aug-23	2023E	Nov-23	Feb-24	May-24	Aug-24	20
Net Cash Provided By/(Used In) Operating Activities:															
et Income	\$20.7	\$3.0	\$24.5	\$20.4	\$68.6	\$5.3	\$(26.8)	\$(24.1)	\$(9.3)	\$(54.9)	\$(16.7)	\$(12.4)	\$1.1	\$13.3	\$()
Depreciation	9.5	10.0	11.0	10.8	41.3	8.9	10.8	9.5	9.5	38.7	9.5	9.5	9.5	9.5	- :
mortization of Goodwill	6.3	8.5	8.3	8.4	31.5	10.9	10.2	11.8	11.8	44.7	11.8	11.8	11.8	11.8	
tock Based Compensation Expenses	9.8	10.0	10.5	9.8	40.1	10.4	10.4	10.0	21.0	51.8	24.0	24.0	24.0	24.0	
finority Interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
quity in Net Income of Affiliates	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	i
Change in Deferred Taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Other Non-Cash Charges	21.9	28.0	2.8	0.1	52.7	3.3	44.4	14.9	0.0	62.5	0.0	0.0	0.0	0.0	
Change in Net Working Capital	(53.0)	(27.2)	(20.4)	(28.6)	(129.3)	(113.8)	51.6	18.9	(24.4)	(67.8)	6.0	(10.9)	(16.3)	14.7	
Cash Flow From Operations	\$15.1	\$32.2	\$36.7	\$20.9	\$104.9	\$(75.1)	\$100.5	\$41.0	\$8.6	\$75.1	\$34.6	\$21.9	\$30.1	\$73.2	\$1:
et Cash Provided By/(Used In) Investing Activities:															i
apital Expenditures (net)	\$(12.8)	\$(7.4)	\$(9.2)	\$(8.9)	\$(38.2)	\$(11.6)	\$(12.6)	\$(13.3)	\$(13.3)	\$(50.8)	\$(13.8)	\$(13.8)	\$(13.8)	\$(13.8)	\$(
Purchase)/Sale of Short-Term Investments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	i
ncrease)/Decrease in Long-Term Investments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	i
Increase)/Decrease in Other Long-Term Assets	0.0	0.0	0.0	0.0	0.0	(210.3)	(2.8)	0.0	(0.3)	(213.3)	(0.3)	(0.3)	(0.3)	(0.3)	
ncrease/(Decrease) in Other Long-Term Liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	i
Other Investing Activities	(0.6)	(0.1)	(0.1)	(0.1)	(0.8)	(1.7)	2.1	0.4	0.0	0.8	0.0	0.0	0.0	0.0	
Cash Flow Provided by Investing Activities	\$(13.4)	\$(7.5)	\$(9.2)	\$(8.9)	\$(39.0)	\$(223.6)	\$(13.4)	\$(12.8)	\$(13.5)	\$(263.4)	\$(14.0)	\$(14.0)	\$(14.0)	\$(14.0)	\$(5
Vet Cash Provided By/(Used In) Financing Activities:															i
ssuance/(Repayment) of Short-Term Debt	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$(4.5)	\$0.0	\$0.0	\$1.3	\$(3.2)	\$1.6	\$1.6	\$1.6	\$1.3	
ssuance/(Repayment) of Snort-Term Debt	12.4	113.2	0.0	5.8	131.4	295.3	(4.5)	(8.2)	0.0	282.6	0.0	0.0	0.0	0.0	1 .
ssuance/(Repayment) of Convertible Debt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	i
ncrease/(Decrease) in Minority Interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	i
ncrease/(Decrease) in Preferred Stock	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	i
ommon Dividends Paid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	i
ssuance/(Repurchase) of Common Stock	0.0	0.0	4.4	(40.1)	(35.7)	(0.7)	(11.3)	3.5	0.0	(8.5)	0.0	0.0	0.0	0.0	
Other Financing Activities	0.0	(7.8)	(13.9)	0.0	(21.7)	(28.1)	(23.9)	0.0	0.0	(52.0)	0.0	0.0	0.0	0.0	l
Cash Flow Provided by Financing Activities	\$12.4	\$105.4	\$(9.5)	\$(34.2)	\$74.0	\$262.0	\$(39.6)	\$(4.6)	\$1.3	\$219.0	\$1.6	\$1.6	\$1.6	\$1.3	
ffect of Exchange Rate on Cash	\$(4.1)	\$2.6	\$3.6	\$(1.9)	\$0.2	\$0.2	\$1.7	\$0.8	\$0.0	\$2.7	\$0.0	\$0.0	\$0.0	\$0.0	
Change in Cash and Equivalents	\$10.1	\$132.7	\$21.6	\$(24.2)	\$140.2	\$(36.5)	\$49.3	\$24.4	\$(3.6)	\$33.5	\$22.1	\$9.5	\$17.7	\$60.5	\$1
deginning Cash Balance	\$223.0	\$233.1	\$365.8	\$387.3	\$223.0	\$363.1	\$324.8	\$375.9	\$401.3	\$363.1	\$397.6	\$419.8	\$429.3	\$447.0	\$3
Ending Cash Balance	\$233.0	\$365.8	\$387.3	\$363.2	\$363.1	\$326.6	\$374.1	\$400.2	\$397.6	\$396.6	\$419.8	\$429.3	\$447.0	\$507.5	\$5
perating Cash Flow	\$15.1	\$32.2	\$36.7	\$20.9	\$104.9	\$(75.1)	\$100.5	\$41.0	\$8.6	\$75.1	\$34.6	\$21.9	\$30.1	\$73.2	\$1
perating Cash Flow Per FD Share	\$0.29	\$0.59	\$0.69	\$0.41	\$1.99	(\$1.51)	\$2.02	\$0.82	\$0.16	\$1.49	\$0.66	\$0.42	\$0.57	\$1.39	\$1
ree Cash Flow	\$2.4	\$24.8	\$27.6	\$12.1	\$66.8	\$(86.7)	\$87.9	\$27.8	\$(4.7)	\$24.3	\$20.8	\$8.2	\$16.4	\$59.5	\$1



#### **VALUATION (PRICE TARGET: \$37.00)**

Our new \$37 price target is based on a 50/50 blend of a higher EV/S (~1.5x) and P/E (12.5x), using our respective FY24 estimates. Our prior target of \$25 was based on 1.3x EV/S and 12.5x our previous FY24 sales and EPS estimates, respectively. We increased our valuation multiples to reflect catalysts we expect to emerge following the Brazil divestiture announcement including gross margin expansion, removal of Brazil overhang, and the likelihood of additional HPC/AI-related M&A.

Method	Target Multiple	Price
P/E Target Price	12.5x	\$31.3
EV/S Target Price	1.5x	\$42.4
Target Price		\$37
	+/-	38.3%



Source: Needham & Company, LLC, FactSet

#### **RISKS TO TARGET**

#### **SGH**

Risks include, but are are not limited to: 1) The semiconductor and memory market is volatile and can face sharp pricing declines; 2) SGH benefits from a preferred tax status, so changes in legislation or operations could affect this status; 3) the company has a few customers that make up a large portion of revenues and could be materially impacted with a loss of business at one of them; and 4) a significant portion of revenue comes from the Brazilian market, where the company faces country-specific economic risks







#### ANALYST CERTIFICATION

I, Rajvindra S. Gill hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company (ies) and its (their) securities. I, also certify that I, have not been, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

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	% of companies under coverage with this rating	% for which investment banking services have been provided for in the past 12 months
Strong Buy	1	0
Buy	74	8
Hold	24	1
Underperform	< 1	0
Rating Suspended	0	0
Restricted	<1	0

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Strong Buy: A security, which at the time the rating is instituted, we expect to outperform the average total return of the broader market as well as the securities in the analyst's coverage universe over the next 12 months.

Buy: A security, which at the time the rating is instituted, we expect to outperform the average total return of the broader market over the next 12 months.

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<u>Underperform:</u> A security, which at the time the rating is instituted, we expect to underperform the average total return of the broader market over the next 12 months.

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The research analyst and research associate have received compensation based upon various factors, including quality of research, investor client feedback, and the Firm's overall revenues, which includes investment banking revenues for the following: SMART Global Holdings, Inc.

The Firm, at the time of publication, makes a market in the subject company SMART Global Holdings, Inc. .

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## **SMART Global Holdings, Inc. (SGH)**

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Solid Results and Guide, Selectively Addressing Al Engagements

#### Summary

SGH delivered a solid quarter and outlook. All three business units' revenue have stabilized and are positioned for growth. Customer engagements for Al/HPC have increased significantly in multiple end markets such as Oil & Gas, Financial, Healthcare, Research and Cloud. Management's strategy is for selecting customers that need SGH's customization and servicing capabilities. We expect this business' visibility will increase in the next quarter. The Memory Solutions and LED businesses are recovering, though not at the pace we had been modeling. We are lowering estimates for this slower growth. For the Brazil divestiture, there will likely be no downside to non-GAAP EPS. We are maintaining our Buy rating and \$35 12-month target price. We continue to view SGH as a great way to play the secular Al theme at a reasonable valuation

#### **Key Points:**

- Revenue of \$383 came in above the mid-point of the guidance range of \$355-\$395M and consensus for \$375M.
- Revenue of IPS came in at \$171M, above our \$165M estimate. Revenue from IPS represented 45% of total SGH sales.
- LED revenue of \$64M, slightly above our estimate of \$60M, and up 15% sequentially from \$55,6M. Management noted they believe recovery is underway.
- Revenue of \$148M, was slightly below our estimate for \$150M and relatively flat sequentially. Memory sales were 39% of total SGH sales.
- SGH recorded record cash and cash equivalents, which totaled \$401M for the quarter up from \$376M (7%) in 2QF23. Cash Flow from operating activities totaled \$41M.
- SGH revenue guidance of \$350-\$400M is roughly in line with consensus for \$379M and our estimate of \$375M. Non-GAAP gross margin is expected to remain at ~28% +/- 1%.

**3QF23 (May 2023 ending) Results –** Revenue of \$383 came in above the mid-point of the guidance range of \$355-\$395M and consensus for \$375M. Product revenue of \$326M and services was around 15% of total revenue at \$58M compared to 13% the prior quarter. Increasing services revenue is management's strategy for increasing profitability and a key criterion for selecting customer engagements. Non-GAAP gross margin was a record 28%, in line with guidance and consensus. The combination of lower OpEx and a \$0.13/share in lower taxes drove non-GAAP EPS above expectations. Non-GAAP EPS of \$0.66 beat consensus of \$0.40 and guidance range of \$0.30 - \$0.50.

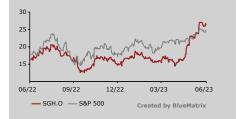
Intelligent Platform Solutions (45% of 3QF23 revenue) - Revenue of \$171M, was above our \$165M estimate. Revenue from IPS represented 45% of total SGH sales, with Q2 IPS sales up 31% y/y excluding the Stratus acquisition and were up 79% including Stratus. Penguin released a new version of its Scyld Clusterware Software Platform, which is a tool for management and monitoring, and provides greater scalability, performance, and ease to customers. Stratus announced a next generation fault tolerant computing platform for edge-core-cloud data architectures. During the quarter Meta announced the completion of the second-phase buildout of their AI research SuperCluster, with Penguin Solutions as their implementation partner. Management noted that the Navy DoD Supercomputer, a Penguin TrueHPOC system, completed its final testing in April.

PRICE: \$26.63 TARGET: \$35.00

#### Kevin Cassidy Semiconductors (212) 607-3165 kcassidy@rblt.com

Changes	Previous	Current
Q3 23(E) Rev (\$M)	375.0(E)	383.3
Q4 23(E) Rev (\$M)	385.0	375.0
FY 23(E) Rev (\$M)	1.65B	1.65B
FY 24(E) Rev (\$M)	_	484.9
Q3 23(E) EPS	0.42(E)	0.66
Q4 23(E) EPS	0.41	0.45
FY 23(E) EPS	2.38	2.66
FY 24(E) EPS	_	2.29

Price	\$26.63
Rating	Buy
Price Target	\$35.00
52-Week Low	\$12.04
52-Week High	\$27.32
Average Daily Volume (M)	16.8
Shares Outstanding (M)	49.1
Market Cap (\$M)	\$1,291



VEAD			Reve	enue					EF	PS		
YEAR	Nov	Feb	May	Aug	Ann	EV/Rev	Nov	Feb	May	Aug	Ann	P/E
2022A	469.9	449.2	462.5	437.7	1.82B	1.0x	1.08	0.87	0.87	0.80	3.62	7.4x
2023E	465.5A	429.2A	383.3A	375.0	1.65B	1.1x	0.79A	0.76A	0.66A	0.45	2.66	10.0x
2024E	110.0	106.4	126.0	142.5	484.9	3.6x	0.43	0.36	0.64	0.86	2.29	11.6x

SGH also announced that Dave Laurello, CEO of Stratus, will take on the role of President of IPS, replacing Thierry Pellegrino. We view Mr. Laurello's years of system level sales and services as an important in leading IPS to increased services revenue and increased profitability.

Management characterized the IPS interest as having a noticeable uptick. Management emphasized that their strategy is in developing customer relationships from a trusted advisor role. Their customer engagements are more full service (design, deployment, long term support) model. While this is a longer sales cycle than selling hardware, we expect the recurring revenue aspect can remove the lumpiness of typical system sales and increase profitability.

We have been modeling IPS 4QF23 revenue at \$163mn. This is roughly in-line with management's comments for IPS revenue to be down slightly q/q.

**LED Components (17% of 3QF23 revenue)** - LED revenue of \$64M, slightly above our estimate of \$60M, and up 15% sequentially from \$55,6M. Management noted they believe recovery is underway. Their outsourced manufacturing model, management noted, seems to help them to be positioned well as the sector recovers. LED sales totaled 17% of overall SGH sales. The LED brand Cree LED remains a brand leader with strong IP. SGH was also recognized for their customer focused innovation with BrightStar Awards by LEDs magazine, and awarded three of Cree's LEDs latest product releases. Looking to Q4FY23, SGH sees revenue up modestly q/q due to improving demand. While customers continue to work down inventory levels, SGH is seeing customer design activity improve. Management is optimistic that LED will have a stronger fiscal 2024. We are estimating revenue for 4QF23 at \$67M.

**Memory Solutions (39% of 3QF23 revenue) -** Revenue of \$148M, was slightly below our estimate for \$150M and relatively flat sequentially. Memory sales were 39% of total SGH sales and achieved Q3 FY23 segment operating margin of around 8%, showing good performance in this challenging pricing environment. Within Specialty Memory, business is stable due to their custom/ value-added business model. The company estimates revenue to be flat q/q in Q4FY23.

The company continues to focus on enterprise applications in the data center, primarily around DDR5 and CXL. SGH announced they began shipments of DDR5 Zefr modules. Management noted that they are seeing strong design activity and customer interest for their CXL offerings. We expect to see good volumes in CXL in FY2025.

On June 13<sup>th</sup>, SGH announced the divestiture of 81% interest of Brazil, which aligns with their overall business strategy, and should be positive for the buyer who is less familiar with Brazil. For the remaining 19% interest, the parties have agreed to a put/call option, during three exercise windows between 2027 and 2029. This is based on an enterprise value of 205M, with an up-front cash payment of \$138M and a deferred cash payment of \$28M to be paid 18 months post-closing. This transaction is expected to close by the end of CY23 and will be immediately accretive to non-GAAP gross margins by around 200 basis points. This should also be neutral to slightly positive to non-GAAP EPS. We are estimating revenue for 4QF2023 to come in around \$148M.

**Balance Sheet –** SGH recorded record cash and cash equivalents, which totaled \$401M for the quarter up from \$376M (7%) in 2QF23. Cash Flow from operating activities totaled \$41M. DSOs came in at 42 days, up 6 days from Q2, primarily due to the timing of invoicing and collection for IPS. Inventory totaled \$226M at the end of Q3, down from \$294M in Q2, due primarily to a reduction in IPS and memory inventories in Q3. The decrease was driven by higher levels of IPS shipments in Q3. Inventory turns were 7.6x down from 6.3x in Q2. Capex for Q3 was \$13.3M.

**4QF23 (August 2023 ending) Outlook -** SGH revenue guidance of \$350-\$400M is roughly in line with consensus for \$379M and our estimate of \$375M. Non-GAAP gross margin is expected to remain at ~28% +/- 1%. Consensus had been modeling about the same at 27.8% and our model 28%. Non-GAAP operating expenses are expected to be ~\$71M +/- \$2M, flat q/q. Non-GAAP EPS guidance for \$0.30-\$0.60 versus consensus of \$0.37 and our estimate of \$0.45. We are lowering our estimates our estimates mainly due to lowering memory and LED revenue. Both end markets are improving, though not as quickly as we had previously thought. We are estimating FY23 revenue to come in at \$1,653M, FY24 at \$1730M, and FY25 at \$1985M.

**Valuation:** Our 12-month price target is \$35 based on 12x our NTM non-GAAP EPS. While the shares have had a good increase this quarter, we believe as management's strategy plays out, investors will revalue the shares.

Figure 1 - SGH 2QFY23 results vs Rosenblatt estimates

CURRENT QUARTER:	Old Estimate	Q3F23 Actual	% Est. Change	Prior Qtr. Actual	% Q/Q Change
Revenues (\$ MM)	\$375.0	\$383.3	2.2%	\$429.2	-10.7%
Gross Margin	28.0%	28.0%	-3 bp	28.9%	-90 bp
Operating Expenses (\$ MM)	\$72.0	\$70.9	-1.5%	\$72.5	-2.2%
R&D	\$18.0	\$13.9	-23.0%	\$17.6	-21.4%
SG&A	\$54.0	\$57.1	5.7%	\$54.8	4.0%
Other OpEx	\$0.0	\$0.0	0.0%	\$0.0	0.0%
Operating Income (\$ MM)	\$33.0	\$36.3	10.0%	\$51.4	-29.4%
Operating Margin	8.5%	9.5%	97 bp	12.0%	-251 bp
Interest and Other, net	(\$8.8)	(\$7.0)	-19.9%	(\$3.3)	112.5%
Pretax Income (\$ MM)	\$24.2	\$29.3	20.9%	\$48.1	-39.2%
Pretax Margin	6.5%	7.6%	113 bp	11.2%	-358 bp
Tax Rate	14.0%	-14.4%	-2835 bp	20.9%	-3521 bp
Net income non-GAAP (\$MM)	\$20.8	\$33.1	59.0%	\$37.6	-12.1%
EPS non-GAAP	\$0.42	\$0.66	57.1%	\$0.76	-13.2%
Non-GAAP diluted shares (MM)	50.0	50.1	0.3%	49.8	0.6%

Source: Company reports, Rosenblatt estimates

Figure 2 - SGH 4QFY23 guide vs Rosenblatt estimates

NEXT QUARTER:	Old Estimate	Q4F23 Estimate	% Est. Change	Current Qtr. Actual	% Q/Q Change
Revenues (\$ MM)	\$385.0	\$375.0	-2.6%	\$383.3	-2.2%
Gross Margin	27.5%	28.0%	50 bp	28.0%	3 bp
Operating Expenses (\$ MM)	\$73.0	\$71.0	-2.7%	\$70.9	0.1%
R&D	\$18.0	\$16.0	-11.1%	\$13.9	15.4%
SG&A	\$55.0	\$55.0	0.0%	\$57.1	-3.6%
Other OpEx	\$0.0	\$0.0	0.0%	\$0.0	0.0%
Operating Income (\$ MM)	\$32.9	\$34.0	3.4%	\$36.3	-6.3%
Operating Margin	8.5%	9.1%	53 bp	9.5%	-40 bp
Interest and Other, net	(\$8.8)	(\$7.5)	-14.7%	(\$7.0)	6.1%
Pretax Income (\$ MM)	\$24.1	\$26.5	10.0%	\$29.3	-9.3%
Pretax Margin	6.3%	7.1%	81 bp	7.6%	-56 bp
Tax Rate	14.0%	11.0%	-300 bp	-14.4%	2535 bp
Net income non-GAAP (\$MM)	\$20.7	\$23.6	13.8%	\$33.1	-28.6%
EPS non-GAAP	\$0.41	\$0.45	9.8%	\$0.66	-31.8%
Non-GAAP diluted shares (MM)	50.1	52.5	4.8%	50.1	4.7%

Source: Company reports, Rosenblatt estimates

Figure 3 - Rosenblatt old vs new estimates

New FY Estimates:	FY22	FY23E	Y/Y Chg.	FY24E	Y/Y Chg.
Rev (\$ MM)	\$1,819.3	\$1,653.0	-9.1%	\$1,730.0	4.7%
EPS - non-GAAP	\$3.62	\$2.66	-26.5%	\$2.29	-13.9%
Old FY Estimates:		FY23E	Est. Chg.	FY24E	Est. Chg.
Rev (\$ MM)		\$1,654.7	-9.1%	\$1,800.0	8.8%
EPS - non-GAAP		\$2.38	-34.3%	\$2.71	13.9%

Source: Company reports, Rosenblatt estimates

SMART Global Holdings, Inc. June 29, 2023

				Nov-22	Feb-23	May-23	Aug-23		Nov-23	Feb-24	May-24	Aug-24		Nov-24	Feb-25	May-25	Aug-25	
FY End: Last Fri in Aug Net Sales	FY20A \$1,122.4	FY21A \$1,501.1	FY22A \$1,819.3	1Q23A \$465.5	2Q23A \$429.2	3Q23A \$383.3	4Q23E \$375.0	FY23E \$1,653.0	1Q24E \$400.0	2Q24E \$380.0	3Q24E \$450.0	4Q24E \$500.0	FY24E \$1,730.0	1Q25E \$495.0	2Q25E \$450.0	3Q25E \$505.0	4Q25E \$535.0	FY25E \$1,985.0
Sequential change	\$1,122.4	\$1,501.1	\$1,619.5	6.3%	-7.8%	-10.7%	-2.2%	\$1,655.0	6.7%	-5.0%	18.4%	11.1%	\$1,750.0	-1.0%	-9.1%	12.2%	5.9%	\$1,965.0
Change vs year ago	-7.4%	33.7%	21.2%	-1.0%	-4.5%	-17.1%	-14.3%	-9.1%	-14.1%	-11.5%	17.4%	33.3%	4.7%	23.8%	18.4%	12.2%	7.0%	14.7%
Change vs year ago	-7.476	33.776	21.2/0	-1.0%	-4.376	-17.176	-14.576	-9.176	-14.1/6	-11.5%	17.4/0	33.376	4.776	23.676	18.476	12.2/6	7.0%	14.776
Cost of Goods	\$900.1	\$1,168.5	\$1,348.7	\$336.3	\$305.3	\$276.1	\$270.0	\$1,187.7	\$290.0	\$273.6	\$324.0	\$357.5	\$1,446.5	\$356.4	\$321.8	\$358.6	\$377.2	\$1,413.9
Percent of revenue	80.2%	77.8%	74.1%	72.2%	71.1%	72.0%	72.0%	71.9%	72.5%	72.0%	72.0%	71.5%	83.6%	72.0%	71.5%	71.0%	70.5%	71.2%
r creene or revenue	00.270	77.070	7 4.270	, 2.2,0	, 1.1,0	72.070	72.070	, 1.5,0	72.370	72.070	72.070	71.570	03.070	72.070	71.570	71.070	70.570	, 1.2,0
Gross Margin	\$222.3	\$332.6	\$470.7	\$129.2	\$123.9	\$107.2	\$105.0	\$465.3	\$110.0	\$106.4	\$126.0	\$142.5	\$484.9	\$138.6	\$128.3	\$146.5	\$157.8	\$571.1
Percent of revenue	19.8%	22.2%	25.9%	27.8%	28.9%	28.0%	28.0%	28.1%	27.5%	28.0%	28.0%	28.5%	28.0%	28.0%	28.5%	29.0%	29.5%	28.8%
			20.071															
R&D	\$49.0	\$44.8	\$71.1	\$15.4	\$17.6	\$13.9	\$16.0	\$62.9	\$18.0	\$18.3	\$18.7	\$19.0	\$74.0	\$19.5	\$20.0	\$20.5	\$20.7	\$80.7
Percent of revenue	4.4%	3.0%	3.9%	3.3%	4.1%	3.6%	4.3%	3.8%	4.5%	4.8%	4.2%	3.8%	4.3%	3.9%	4.4%	4.1%	3.9%	4.1%
Total SG&A	\$88.6	\$127.0	\$171.9	\$59.0	\$54.8	\$57.1	\$55.0	\$225.9	\$55.5	\$56.0	\$56.5	\$57.0	\$225.0	\$58.0	\$58.3	\$58.7	\$59.0	\$234.0
Percent of revenue	7.9%	8.5%	9.4%	12.7%	12.8%	14.9%	14.7%	13.7%	13.9%	14.7%	12.6%	11.4%	13.0%	11.7%	13.0%	11.6%	11.0%	11.8%
Other operating expenses	\$0.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
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Operating income	\$84.2	\$160.8	\$227.7	\$54.8	\$51.4	\$36.3	\$34.0	\$176.6	\$36.5	\$32.1	\$50.8	\$66.5	\$185.9	\$61.1	\$49.9	\$67.3	\$78.1	\$256.4
Percent of revenue	7.5%	10.7%	12.5%	11.8%	12.0%	9.5%	9.1%	10.7%	9.1%	8.4%	11.3%	13.3%	10.7%	12.3%	11.1%	13.3%	14.6%	12.9%
Interest income/expense, net	(\$15.0)	(\$17.6)	(\$21.2)	(\$8.0)	(\$8.0)	(\$8.1)	(\$9.5)	(\$33.6)	(\$9.4)	(\$9.3)	(\$9.2)	(\$9.1)	(\$37.1)	(\$9.1)	(\$9.0)	(\$8.9)	(\$8.8)	(\$35.7)
Other income (expense)	\$5.0	\$9.3	\$10.1	\$0.9	\$4.7	\$1.0	\$2.0	\$8.6	\$2.0	\$2.0	\$2.0	\$2.0	\$8.0	\$2.5	\$2.5	\$2.5	\$2.5	\$10.0
Interest and other, net	(\$10.0)	(\$8.3)	(\$11.1)	(\$7.1)	(\$3.3)	(\$7.0)	(\$7.5)	(\$24.9)	(\$7.4)	(\$7.3)	(\$7.2)	(\$7.1)	(\$29.1)	(\$6.6)	(\$6.5)	(\$6.4)	(\$6.3)	(\$25.7)
Profit before taxes	\$74.2	\$152.4	\$216.6	\$47.7	\$48.1	\$29.3	\$26.5	\$151.6	\$29.1	\$24.8	\$43.6	\$59.4	\$156.8	\$54.5	\$43.5	\$60.9	\$71.8	\$230.7
Percent of revenue	6.6%	10.2%	11.9%	10.3%	11.2%	7.6%	7.1%	9.2%	7.3%	6.5%	9.7%	11.9%	9.1%	11.0%	9.7%	12.1%	13.4%	11.6%
																		l.
Taxes	\$10.5	\$19.0	\$24.7	\$8.2	\$10.0	(\$4.2)	\$2.9	\$16.9	\$6.7	\$5.7	\$10.0	\$13.7	\$36.1	\$12.5	\$10.0	\$14.0	\$16.5	\$53.1
Tax rate, non-GAAP	14.2%	12.5%	11.4%	17.2%	20.9%	-14.4%	11.0%	11.2%	23.0%	23.0%	23.0%	23.0%	23.0%	23.0%	23.0%	23.0%	23.0%	23.0%
																		l.
Net Income attributable to noncontrolling interest			\$2.0	\$0.3	\$0.4	0.38												l.
Net income, non-GAAP ex-SBC	\$63.7	\$132.2	\$190.2	\$39.5	\$37.6	\$33.1	\$23.6	\$133.9	\$22.4	\$19.1	\$33.6	\$45.7	\$120.8	\$42.0	\$33.5	\$46.9	\$55.3	\$177.6
Percent of revenue	5.7%	8.8%	10.5%	8.5%	8.8%	8.6%	6.3%	8.1%	5.6%	5.0%	7.5%	9.1%	7.0%	8.5%	7.4%	9.3%	10.3%	8.9%
Stock-based compensation, net of tax	\$18.7	\$33.9	\$40.1	\$10.4	\$10.4	\$10.0	\$9.4	\$40.2	\$10.0	\$9.5	\$11.3	\$12.5	\$43.3	\$12.4	\$11.3	\$12.6	\$13.4	\$49.6
Percent of revenue	1.7%	2.3%	2.2%	2.0%	2.4%	2.6%	2.5%	2.4%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
																		l.
Amortization of Intangibles	\$13.7	\$20.3	\$23.7	\$10.9	\$10.8	\$11.6	\$11.3	\$44.5	\$5.2	\$4.9	\$5.9	\$6.5	\$22.5	\$6.4	\$5.9	\$6.6	\$7.0	\$25.8
Percent of revenue	1.2%	1.3%	1.3%	1.3%	2.5%	3.0%	3.0%	2.7%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
																		l.
Tax adjustment	(\$0.0)	(\$1.1)	(\$4.8)	(\$3.3)	(\$11.8)	\$10.9	\$2.0	(\$2.2)	\$1.5	\$1.5	\$1.5	\$1.5	\$6.0	\$1.5	\$1.5	\$1.5	\$1.5	\$6.0
Other NG adjustments	\$32.5	\$57.8	\$88.4	\$16.5	\$55.4	\$25.0	\$0.0	\$96.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Net income, GAAP	(\$1.1)	\$21.3	\$42.7	\$5.1	(\$27.2)	(\$24.5)	\$1.0	(\$45.6)	\$5.7	\$3.1	\$15.0	\$25.2	\$49.0	\$21.7	\$14.9	\$26.2	\$33.5	\$96.2
Percent of revenue	-0.1%	1.4%	2.3%	1.1%	-6.3%	-6.4%	0.3%	-2.8%	1.4%	0.8%	3.3%	5.0%	2.8%	4.4%	3.3%	5.2%	6.3%	4.8%
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EPS, non-GAAP ex-SBC	\$2.59	\$2.61	\$3.62	\$0.79	\$0.76	\$0.66	\$0.45	\$2.66	\$0.43	\$0.36	\$0.64	\$0.86	\$2.29	\$0.79	\$0.63	\$0.87	\$1.02	\$3.31
Change vs year ago	-22.9%	0.8%	38.7%	-26.9%	-12.6%	-24.1%	-43.8%	-26.5%	-45.6%	-52.6%	-3.0%	91.1%	-13.9%	83.7%	75.0%	35.9%	18.6%	44.5%
EPS, GAAP	(\$0.07)	\$0.40	\$0.86	\$0.10	(\$0.55)	(\$0.50)	\$0.02	(\$0.93)	\$0.11	\$0.06	\$0.29	\$0.49	\$0.95	\$0.42	\$0.28	\$0.50	\$0.63	\$1.83
Change vs year ago	-	-	115.0%	-75.6%	-	-	-95.0%	-	10.0%	-	-	2350.0%	-	281.8%	366.7%	72.4%	28.6%	92.6%
Adjusted EBITDA	\$110.1	\$196.3	\$278.1	\$64.7	\$65.2	\$58.6	\$41.5	\$230.1	\$44.1	\$40.0	\$58.9	\$75.4	\$218.5	\$70.5	\$59.6	\$77.2	\$88.4	\$295.6
Percent of revenue	9.8%																	
GAAP Diluted shares outstanding	24.5	50.7	52.6	49.8	49.1	49.4	49.5	50.6	49.6	49.7	49.8	49.9	52.8	50.0	50.1	50.2	50.3	53.7
Non-GAAP Diluted shares outstanding	24.5	50.7	52.6	49.8	49.8	50.1	52.5	50.6	52.6	52.7	52.8	52.9	52.8	53.2	53.5	53.8	54.1	53.7
	L I																	
Source: Company reports and Rosenblatt estimates							_					_					_	

### **Company Description**

SMART Global Holdings, Inc. designs and manufactures specialty solutions for the computing, memory, and LED markets. The company specializes in application specific product development and support for customers in enterprise, government and original equipment manufacturer, or OEM, markets. It operates through the following segments: Memory Solutions, Intelligent Platform Solutions (IPS), and LED Solutions. The memory Solutions segment provides performance and reliable memory solutions through the design, development, and advanced packaging to extended lifecycle products. The IPS segment consists of specialized platform solutions for high-performance computing, artificial intelligence, machine learning and advanced modeling for technology research. The LED Solutions segment offers a broad portfolio of application-optimized LEDs focused on improving on lumen density, intensity, efficacy, optical control and reliability. The company was founded in 1988 and is headquartered in Milpitas, CA.

#### **Valuation Summary**

Our \$35 12-month target price is based on 12x our NTM non-GAAP EPS estimate.

#### **Risks**

- · COVID-19 and other natural disaster related manufacturing shutdowns and supply chain disruptions.
- · Memory component lead-times extending and price volatility
- Recently acquired businesses not meeting expectations.
- · Majority shareholders lowering ownership.

#### **Required Disclosures**

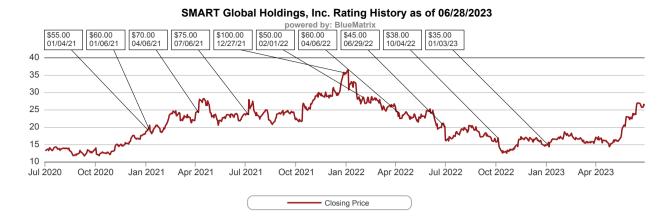
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	Distribution of Ratings/IE	3 Services		
			IB S	Serv./Past 12 Mos.
Rating	Count	Percent	Count	Percent
BUY	79	71.82	2	2.53
NEUTRAL	26	23.64	0	0
SELL	5	4.55	0	0

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## Smart Global Holdings, Inc. SGH - NASDAO

June 30, 2023 Americas

Americas - Semiconductors: Processors & Components

## BUY ANALYSIS OF SALES/EARNINGS

Financial Summary									
Changes	Prev	rious	Current						
Rating	-	_	Buy						
Target Price	-	_	\$32.00						
FY23E EPS (net)	\$2	.37	\$2.65						
FY24E EPS (net)	\$2	.69	\$2.50						
FY23E Rev (net)	\$1.	65B	\$1.65B						
FY24E Rev (net)	\$1.	78B	\$1.76B						
Price ( 06/29/23 ):			\$26.63						
52-Week Range:			\$27 - \$12						
Market Cap.(mm):			\$1,334.2						
Shr.O/S-Diluted (mr	n):		50.1						
Enterprise Val. (mm	):		\$1,251.0						
Avg Daily Vol (3 Mo	):		799,731						
Dividend / Yield:		\$0	.00 / 0.0%						
Cash (mm):			\$325						
Debt (mm):			\$825						
FYE			Aug						
EPS (net)	2022A	2023E	2024E						
Q1	\$1.08	\$0.79A	\$0.40						
Q2	\$0.87	\$0.76A	\$0.47						
Q3	\$0.87	\$0.66A	\$0.70						
Q4	\$0.80	\$0.45	\$0.92						
9	3.62A	\$2.65	\$2.50						
P/E	7.4x	10.0x	10.7x						
Rev (net)	2022A	2023E	2024E						
Q1 S	\$469.9	\$465.5A	\$380.0						
Q2	\$449.2	\$429.2A	\$405.0						
Q3	\$462.5	\$383.3A	\$460.0						
Q4	\$437.7	\$375.0	\$515.0						
9	31.82B	\$1.65B	\$1.76B						

#### Price Performance

EV/Revenue



# Brazil impact more favorable than anticipated as IPS assumes top billing

#### **Summary**

**SGH reported F3Q(May) earnings on Thursday**, with revenue/non-GAAP earnings comfortably above ours/consensus. The outlook for F4Q(Aug), which includes Brazil, also exceeded expectations.

Management disclosed that the current EPS impact when stripping out Brazil is neutral-toslightly positive, a surprise to us though perhaps not in retrospect with the business at trough.

IPS would represent >50% of F3Q revenue (ex-Brazil), and should now be the undisputed focal point of the company/stock. Even with growth here decelerating in F4Q, IPS is on track to grow +75% YY in FY23 (+35%, ex-Stratus).

SGH attributes nearly 40% of IPS revenue to AI, and SGH has seen a clear uptick in generative AI engagement, which we think can help restock the order funnel and re-accelerate revenue growth in F2H:24.

We expect the stock to re-rate (from current ~9x normalized earnings) as leadership transfers to higher-growth AI HPC-driven IPS.

#### **Key Points**

Revenue/non-GAAP EPS estimates versus consensus

**F3Q(May) results:** \$383M/\$0.66, vrs. ours/cons. \$375.0M/\$0.40, guide \$355-395M/\$0.30-0.50 **F4Q(Aug) outlook:** \$350-400M/\$0.30-\$0.60, vrs. our prior \$382M/\$0.42, cons. \$378.5M/\$0.37

**Spotlight on AI.** SGH has been building the IPS (Intelligent Platform Solutions) business for several years, providing HPC-AI solutions and services to notable reference customers like Meta, Shell, and the US DoD/DoE. As it exits Brazil, IPS will move toward/above 50% of SGH revenue (from <25% the past few years). IPS is presently and historically a lumpy business, particularly on a quarterly basis, but on an annual basis has been the recent growth engine of the company. Though seeing an uptick in engagement in high interest areas like generative AI, management's preference was to temper expectations for an immediate acceleration in its revenue due to its: 1) lengthy sales-design-implementation cycle, and 2) potential for supply constraints for key components. We are hopeful that moving through the quarter, SGH will provide indications that it is rebuilding IPS backlog, thus gaining better visibility into FY24 growth.

**Tchau Brazil.** For now, Brazil stays in our estimates until its divested (targeted for late CY23) or moved into discontinued operations. In the interim, SGH shared two new datapoints on the model ex-Brazil: 1) GMs should increase 200bps+, and 2) EPS impact is neutral-to-slightly positive. Both of these disclosures were more favorable than we had anticipated (i.e., GMs +100bps, >40c EPS reduction). Yet we should point out that Brazil revenue is currently at a trough, thus on a normalized through-cycle basis, Brazil might contribute ~40c EPS. We were expecting Brazil to grow but not back to normalized levels in FY24, thus would judge the EPS impact next year as closer to 20c.

**Estimates/Valuation.** Based largely on management's update for a higher tax rate (reduction in NOL benefits) in FY24, we are lowering our EPS estimate to \$2.50 (from \$2.69). Once Brazil is removed, we expect EPS to be ~\$2.30. Given the higher growth potential of IPS (40%+ 3Y trailing revenue cagr, 30%+ excluding Stratus), we believe incremental revenue from IPS can replace Brazil in a few years, and at better profitability. Thus we expect SGH to retest and eventually surpass prior peak earnings (achieved in FY22), resulting in normalized throughcycle earnings of ~\$3. SGH trades ~9x normalized, but in our view should warrant a higher multiple given the company's improving growth/profitability attributes.

Brian Chin, CFA | (281) 655-4015 | chinb@stifel.com Denis Pyatchanin, CFA | (617) 488-4408 | pyatchanind@stifel.com Stifel Equity Trading Desk | (800) 424-8870

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Americas - Semiconductors: Processors & Components

#### Investment Thesis

We rate SGH at a Buy. Over the past few years SGH has diversified the company's geographic, end-market and product exposure from a largely memory-focused company to one addressing a broader variety of memory, storage and specialty compute products/services. The most recent example of this are the acquisition of Cree's specialty LED business and recently closed acquisition of Stratus Technologies to bolster the IPS business. SGH's CEO Mark Adams (former LED and Memory executive) is the driving force behind this corporate turnaround, having already vastly improved the operational focus of the company. Ultimately, we believe the end product of SGH's ongoing strategic and financial efforts is apt to be a more diversified and profitable model, which we argue remains under-appreciated by the market.

Summary	of F3Q(May)	Actual	versus	Estimates

	F3Q23(May)										
_	Actual	Estimate	Var								
Sales (\$M)	\$383.3	\$375.0	\$8.3								
COGS	<u>\$276.1</u>	\$270.0	<u>\$6.1</u>								
%GM	28.0%	28.0%	0.0%								
R&D	\$20.7	\$25.3	-\$4.6								
SGA	\$50.2	\$46.9	\$3.3								
Total Opex	\$70.9	\$72.2	<u>-\$1.3</u>								
Op Profit	\$36.3	\$32.8	\$3.5								
%ОрМ	9.5%	8.8%	0.7%								
Int Inc (Evn)	(\$7.0\)	(¢9.5)	\$1.5								
Int Inc (Exp)	(\$7.0)	(\$8.5)									
Pretax Inc	\$29.3	\$24.3	\$4.9								
Tax	<u>-\$4.2</u>	<u>\$3.6</u>	<u>-\$7.8</u>								
%TR	-14.4%	15.0%	-29.4%								
Net Inc	\$33.5	\$20.7	\$12.8								
%NM	8.7%	5.5%	3.2%								
EPS (non GAAP*)	\$0.66	\$0.40	\$0.26								
Dil Shares	50.1	50.0	0.1								

\*ex stock based comp, amortization Source: Stifel estimates, FactSet

#### Target Price Methodology/Risks

We believe that SGH's diversified growth model will produce higher highs/lows for earnings and cash flows over time. Taking FY22 as a recent high and FY23E as a recent low, and adjusting for recent events (proposed Brazil divestiture) yields normalized earnings ~\$3 and our \$32 target price is based on <11x normalized. Off what we believe could represent a more realistic trough-like earnings scenario for the company, we would pay a multiple at/above the higher end of the stock's 3-year historical forward PE range of ~7x-10x (investors tend to show more willingness to pay higher multiples on trough earnings). We believe strong company execution reshaping the business (and P&L) over the prior ~24-mths remains under-appreciated by the market and should eventually warrant a re-rate.

Key Risks to achieving the target price include:

- (1) Geopolitical and or macroeconomic driven headwinds to downstream consumer/enterprise demand
- (2) Adverse shifts in Brazil regulatory and fiscal/trade policies,
- (3) Execution and integration of Cree/LED acquisition,
- (4) Changes in key management,
- (5) Prolonged cyclical downturn in LED or DRAM/NAND pricing/demand,
- (6) Global production/supply chain constraints based on broadening guarantine measures,
- (7) Escalation of global trade/tariff actions.

#### **Company Description**



Analysis of Sales/Earnings

**Smart Global Holdings, Inc.** 

SGH - NASDAQ

June 30, 2023

Americas - Semiconductors: Processors & Components

SGH is a leading supplier of specialty memory, storage, LED and embedded/high performance computing products and services for enterprise, government, industrial and OEM customers. The company has broad expertise in areas like application specific product development, memory/storage module manufacturing, and supply chain logistics and procurement. Key vertical industries served include: communications, storage, networking, lighting, mobile, industrial, government, and military/aerospace. SGH is a leading memory solutions suppliers to electronics companies in Brazil, where it has operated since 2002. In 2018, the company entered the high performance/edge compute market through its acquisition of Penguin Computing, and has subsequently broadened its footprint into embedded computing via recent acquisitions. In March 2021, SGH acquired the LED chip/component business of Cree, and in August 2022 the edge compute software/services business of Stratus Technologies.



SGH - NASDAQ

Americas - Semiconductors: Processors & Components

Brian Chin, CFA (281) 655-4015

June 30, 2023

SGH, Inc. (NASDAQ: SGH)

Income Statement (\$ in millions except per share data)

Fiscal Year (August)

		2022 2023					2024									
		Nov	Feb	May	Aug		Nov	Feb	May	Aug		Nov	Feb	May	Aug	
Revenues	2021A	1QA \$469.9	2QA \$449.2	3QA	4QA \$437.7	2022A \$1.819.4	1QA \$465.5	2QA	3QA	4QE	2023E \$1,653.0	1QE \$380.0	2QE	3QE \$460.0	4QE	2024E \$1.760.0
Cost of Revenues	\$1,501.1 \$1,168.5	\$342.9	\$332.2	<b>\$462.5</b> \$343.7	\$329.9	\$1,348.7	\$336.3	\$429.2 \$305.3	<b>\$383.3</b> \$276.1	\$375.0 \$270.0	\$1,053.0	\$275.5	\$405.0 \$293.6	\$328.9	<b>\$515.0</b> \$367.7	\$1,760.0
Stock-Based Compensation	\$4.6	\$1.7	\$1.6	\$1.7	\$1.6	\$9.3	\$1.7	\$1.4	\$1.7	\$1.2	\$14.3	\$1.7	\$1.2	\$1.2	\$1.2	\$1,203.7
Amortization of Intangibles	\$8.2	\$3.1	\$2.6	\$2.7	\$2.4	\$18.3	\$6.5	\$6.6	\$6.7	\$5.5	\$29.8	\$5.5	\$5.5	\$5.0	\$5.0	\$33.7
Gross Profit	\$328.0	\$125.3	\$115.3	\$117.2	\$106.2	\$461.4	\$127.5	\$122.5	\$105.6	\$103.8	\$451.0	\$102.8	\$110.2	\$129.9	\$146.1	\$480.3
Operating Expenses							***				•••	***	***			
Research & Development	\$44.8 \$127.0	\$16.2 \$41.7	\$17.3 \$41.6	\$18.8 \$45.8	\$19.1 \$42.0	\$71.4 \$171.1	\$22.6 \$51.8	\$25.2 \$47.3	\$20.7 \$50.2	\$21.8 \$48.8	\$90.2 \$198.0	\$22.8 \$47.5	\$23.5 \$48.6	\$25.3 \$50.6	\$25.8 \$51.5	\$97.3 \$198.2
SG&A Stock-Based Compensation	\$29.3	\$8.0	\$8.3	\$45.6 \$8.8	\$8.2	\$33.4	\$8.7	\$47.3 \$9.0	\$50.2 \$8.4	\$46.6 \$8.8	\$196.0	\$47.5 \$8.7	\$46.6 \$8.8	\$8.8	\$8.8	\$35.1
Amortization of Intangibles	\$12.0	\$3.2	\$3.2	\$3.2	\$3.2	\$13.0	\$4.4	\$4.2	\$4.9	\$3.2	\$16.7	\$4.4	\$3.2	\$3.2	\$3.2	\$14.0
Total Operating Expense (excl. amort)	\$201.1	\$65.9	\$67.2	\$73.4	\$69.3	\$275.8	\$83.1	\$81.5	\$79.3	\$79.3	\$323.2	\$79.0	\$80.9	\$84.7	\$86.1	\$330.6
Operating Income (incl. stock comp, amort)	\$106.7	\$53.0	\$42.3	\$37.8	\$31.3	\$164.4	\$33.6	\$30.2	\$14.7	\$15.8	\$94.2	\$13.9	\$20.6	\$37.0	\$51.8	\$123.3
Operating Income (incl. stock comp)	\$126.9 <b>\$160.8</b>	\$59.4 <b>\$69.2</b>	\$48.1 \$58.1	\$43.7 \$54.3	\$37.0 <b>\$46.8</b>	\$188.2 <b>\$228.3</b>	\$44.4 \$54.8	\$41.0 \$51.4	\$26.3 \$36.3	\$24.5 <b>\$34.5</b>	\$136.2 <b>\$177.1</b>	\$23.8 \$34.2	\$29.3 \$39.3	\$45.2 \$55.2	\$60.0 \$70.0	\$158.3 <b>\$198.7</b>
Operating Income (excl. stock comp)	\$100.0	\$69.2	\$30.1	<b>\$34.3</b>	\$40.0	\$220.3	\$54.6	<b>\$31.4</b>	<b>\$30.3</b>	<b>\$34.5</b>	\$177.1	\$34.2	<b>\$39.3</b>	\$33.Z	\$70.0	\$190.7
Interest Expense	(\$17.6)	(\$5.1)	(\$4.5)	(\$5.1)	(\$6.5)	(\$21.2)	(\$8.0)	(\$8.0)	(\$8.1)	(\$8.5)	(\$32.6)	(\$8.5)	(\$8.5)	(\$8.5)	(\$8.5)	(\$34.0)
Other Income (Expense)	\$9.2	\$2.4	\$1.9	\$2.8	\$2.7	\$9.9	\$1.2	\$4.7	\$1.0	\$1.0	\$7.9	\$2.0	\$2.0	\$2.0	\$2.0	\$8.0
Total Other Expense (excl. FX gain/loss)	(\$8.4)	(\$2.7)	(\$2.5)	(\$2.3)	(\$3.8)	(\$11.3)	(\$6.8)	(\$3.3)	(\$7.0)	(\$7.5)	(\$24.7)	(\$6.5)	(\$6.5)	(\$6.5)	(\$6.5)	(\$26.0)
Pretax Income (excl. amort)	\$152.4	\$66.5	\$55.5	\$52.0	\$43.0	\$217.0	\$48.0	\$48.1	\$29.3	\$27.0	\$152.4	\$27.7	\$32.8	\$48.7	\$63.5	\$172.7
Income Tax (Benefit)	\$19.0	\$9.5	\$7.5	\$5.7	\$2.1	\$24.7	\$8.2	\$10.0	(\$4.2)	\$3.0	\$17.0	\$6.4	\$7.5	\$11.2	\$14.6	\$39.7
Net Income (loss) attributable to non-controlling interest	\$1.2	\$0.7	\$0.5	\$0.4	\$0.5	\$2.0	\$0.3	\$0.4	\$0.4	\$0.5	\$1.6	\$0.3	\$0.5	\$0.5	\$0.5	\$1.8
Net Income (GAAP)	\$25.7	\$20.0	\$2.5	\$24.1	\$20.0	\$66.6	\$5.0	(\$27.2)	(\$24.5)	\$4.8	(\$41.9)	\$0.7	\$6.0	\$18.8	\$30.2	\$55.8
Net Income (incl. stock comp)	\$133.4	\$47.9	\$38.9	\$36.5	\$31.1	\$154.5	\$30.8	\$29.4	\$21.6	\$14.6	\$96.5	\$13.0	\$17.0	\$29.3	\$40.7	\$100.0
Net Income (non-GAAP, excl. stock comp)	\$132.2	\$56.3	\$47.6	\$45.9	\$40.4	\$190.2	\$39.5	\$37.6	\$33.1	\$23.5	\$133.7	\$21.0	\$24.7	\$37.0	\$48.4	\$131.2
GAAP Basic shares outstanding	48.6	49.0	49.5	50.1	49.2	49.5	49.0	49.2	49.4	49.5	49.2	49.0	49.1	49.2	49.3	49.1
Non-GAAP Diluted shares outstanding	50.7	52.1	54.9	52.9	50.5	52.6	49.8	49.8	50.1	52.5	50.6	52.5	52.5	52.5	52.5	52.5
GAAP EPS	\$0.40	\$0.37	\$0.04	\$0.44	\$0.40	\$1.24	\$0.10	(\$0.55)	(\$0.50)	\$0.10	(\$0.85)	\$0.01	\$0.12	\$0.37	\$0.60	\$1.11
Diluted EPS (incl. stock comp)	\$2.02	\$0.92	\$0.04	\$0.69	\$0.40	\$2.94	\$0.62	\$0.59	\$0.43	\$0.10	\$1.92	\$0.25	\$0.12	\$0.56	\$0.78	\$1.91
Non-GAAP Diluted EPS (excl. stock comp)	\$2.60	\$1.08	\$0.87	\$0.87	\$0.80	\$3.62	\$0.79	\$0.76	\$0.66	\$0.45	\$2.65	\$0.40	\$0.47	\$0.70	\$0.92	\$2.50
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Extraordinary Items	(\$52.8)	(\$18.7)	(\$27.9)	(\$4.7)	(\$3.8)	(\$55.1)	(\$13.0)	(\$43.4)	(\$35.3)	\$0.0	(\$91.6)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
FX (gain) loss	\$0.7	\$1.5	\$1.4	\$0.6	\$1.2	\$4.7	\$0.2	\$0.3	\$0.6	\$0.0	\$1.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Reported Net Income	\$21.3	\$20.0	\$2.5	\$24.1	\$20.0	\$66.6	\$5.0	(\$27.2)	(\$24.5)	\$4.8	(\$41.9)	\$0.7	\$6.0	\$18.8	\$30.2	\$55.8
Reported GAAP EPS	\$0.40	\$0.37	\$0.04	\$0.44	\$0.40	\$1.25	\$0.10	(\$0.55)	(\$0.50)	\$0.10	(\$0.85)	\$0.01	\$0.12	\$0.37	\$0.60	\$1.10
EBITDA (adjusted for stock comp)	\$183.1	\$78.7	\$68.3	\$64.8	\$57.3	\$269.0	\$63.7	\$60.3	\$45.2	\$43.4	\$212.7	\$43.1	\$48.2	\$64.1	\$78.9	\$234.3
-																
As a % of Revenue																
Gross Margin Research & Development	<b>22.2%</b> 3.0%	<b>27.0%</b> 3.4%	<b>26.0%</b> 3.9%	<b>25.7%</b> 4.1%	<b>24.6%</b> 4.4%	<b>25.9%</b> 3.9%	<b>27.8%</b> 4.8%	<b>28.9%</b> 5.9%	<b>28.0%</b> 5.4%	<b>28.0%</b> 5.8%	28.1% 5.5%	<b>27.5%</b> 6.0%	<b>27.5%</b> 5.8%	<b>28.5%</b> 5.5%	<b>28.6%</b> 5.0%	<b>28.1%</b> 5.5%
SG&A	8.5%	8.9%	9.3%	9.9%	9.6%	9.4%	11.1%	11.0%	13.1%	13.0%	12.0%	12.5%	12.0%	11.0%	10.0%	11.3%
Stock-Based Compensation	2.0%	1.7%	1.9%	1.9%	1.9%	1.8%	1.9%	2.1%	2.2%	2.3%	2.1%	2.3%	2.2%	1.9%	1.7%	2.0%
Operating Income	10.7%	14.7%	12.9%	11.7%	10.7%	12.5%	11.8%	12.0%	9.5%	9.2%	10.7%	9.0%	9.7%	12.0%	13.6%	11.3%
Pretax Income	10.2%	14.1%	12.4%	11.2%	9.8%	11.9%	10.3%	11.2%	7.6%	7.2%	9.2%	7.3%	8.1%	10.6%	12.3%	9.8%
Tax Rate (% of Pretax Income)	12.5%	14.3%	13.4%	10.9%	4.9%	11.4%	17.1%	20.9%	-14.4%	11.0%	11.2%	23.0%	23.0%	23.0%	23.0%	23.0%
Net Income	8.9%	10.2%	8.7%	7.9%	7.1%	8.5%	6.6%	6.9%	5.6%	3.9%	5.8%	3.4%	4.2%	6.4%	7.9%	5.7%
W07 =																
Y/Y Growth		0.10:	100:				40:	40:	400			100:			0.00	
Revenue	34%	61%	48%	6%	-6%	21%	-1%	-4%	-17%	-14%	-9%	-18%	-6%	20%	37%	278%
Operating Expenses Continuing Operating EPS (excluding options)	31% 100%	62% 177%	83% 102%	23% 24%	8% -26%	37% 39%	26% -27%	21% -13%	8% -24%	14% -44%	17% -27%	-5% -49%	-1% -38%	7% 7%	9% 106%	298% 216%
Continuing Operating EFS (excluding options)	100%	11176	102%	2470	-20%	39%	-2170	-13/0	-24 /0	-44%	-21%	-43%	-30%	1 70	100%	210%
Q/Q Growth																
Revenue	-	0%	-4%	3%	-5%	-	6%	-8%	-11%	-2%	-	1%	7%	14%	12%	-
Operating Expenses	-	3%	2%	9%	-6%	-	20%	-2%	-3%	0%	-	0%	2%	5%	2%	-
Continuing Operating EPS (excluding options)	-	0%	-19%	0%	-8%	-	-1%	-4%	-13%	-32%	-	-11%	18%	50%	31%	

Source: Company Reports and Stifel Estimates



SGH - NASDAO

Americas - Semiconductors: Processors & Components

June 30, 2023

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#### Smart Global Holdings, Inc. (SGH) as of June 29, 2023 (in USD)



<sup>\*</sup>Represents the value(s) that changed.

Buy=B; Hold=H; Sell=S; Discontinued=D; Suspended=SU; Discontinued=D; Initiation=I

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## Smart Global Holdings, Inc.

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## Smart Global Holdings, Inc.

GH - NASDAO

Americas - Semiconductors: Processors & Components

June 30, 2023

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