

# MediaTek (2454.TW/2454 TT)

# Healthy recovery in 2024F

FTSE4Good TIP Taiwan ESG Index stock

# Outperform • Maintained

Price as of November 29 (NT\$)	948
12M target price (NT\$)	956
Previous target price (NT\$)	956
Unchanged (%)	0.0
Upside (%)	0.8

### Key message

- Global smartphone market could see healthy single-digit shipment growth in 2024 after three consecutive years of decline, which will pave the road to recovery for MediaTek.
- The firm could benefit from potential acceleration of the smartphone upgrade/replacement cycle, driven by edge Al computing.

# **Trading data**

 Mkt cap (NT\$bn/US\$mn)
 1,516 / 48,116

 Outstanding shares (mn)
 1,600

 Foreign ownership (mn)
 949

 3M avg. daily trading (mn)
 5.30

 52-week trading range (NT\$)
 625 –948

Performance	3M	6M	12M
Absolute (%)	33.5	28.5	33
Relative (%)	29	24.1	14.9

# **Quarterly EPS**

NT\$	1Q	2Q	3Q	4Q
2022	21.02A	22.39A	19.54A	11.67A
2023	10.64A	10.07A	11.64A	13.00F
2024	12.13F	13.23F	14.98F	15.81F

# **ESG** score card



Source: Refinitiv

#### **Event**

We expect the current restocking demand to continue into 1Q24, and the global smartphone market could see healthy single-digit shipment growth in 2024 after three consecutive years of decline, which would pave the road to recovery for MediaTek.

## **Impact**

**Restocking demand to continue in 1Q24F.** Restocking demand for both 5G and 4G smartphones has resumed in recent months, which will persist in 1Q24F. We now project healthy single-digit growth for global smartphone shipments in 2024, and expect MediaTek 2024 5G smartphone shipments to reach 170-180mn units, versus 150-160mn units in 2023. As such, we estimate 2024 sales and EPS to reach a respective NT\$505.2bn (up 17.7% YOY) and NT\$56.16 (up 23.8% YOY).

Beneficiary of edge AI computing in the long run. While mobile AI computing may not contribute significantly to MediaTek's top- and bottom-lines any time soon, we believe that on-device AI computing will require more powerful AI engines to run on-device AI applications. This will drive significant silicon content growth for mobile SoC over the long run, boosting overall mobile and AIoT ASP and improving its structural profitability, as well as augmenting the company's value proposition in smart mobile computing business. The company could also benefit from potential acceleration of the smartphone upgrade/replacement cycle, driven by edge AI computing.

# **Valuation & Action**

We remain positive on the counter given its healthy near- to mid-term outlook, coupled with improving smartphone demand sentiment and a stabilizing gross margin outlook. In addition, the company could benefit from potential acceleration of the smartphone upgrade/replacement cycle, driven by edge AI computing. We maintain Outperform on MediaTek, with a target price of NT\$956, based on 17x of 2024F EPS.

# Risks

Slower-than-expected inventory correction; falling demand for 5G smartphones; market share loss in 5G smartphone market.

Key financials and valuations					
	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
Revenue (NT\$mn)	322,146	493,415	548,796	429,243	505,155
Gross profit (NT\$mn)	141,536	231,605	270,904	203,449	236,137
Operating profit (NT\$mn)	43,219	108,040	126,788	68,092	94,071
Net profit (NT\$mn)	40,917	111,421	118,141	71,961	89,151
EPS (NT\$)	26.01	70.56	74.59	45.35	56.16
Cash DPS (NT\$)	37.00	73.00	76.00	52.64	61.36
EPS growth (%)	77.0	171.3	5.7	(39.2)	23.8
PE (x)	36.5	13.4	12.7	20.9	16.9
PB (x)	4.1	3.5	3.4	3.7	3.6
EV/EBITDA (x)	16.4	7.8	6.7	10.0	7.6
Net debt to equity (%)	Net cash				
Dividend yield (%)	3.9	7.7	8.0	5.6	6.5
Return on average equity (%)	12.0	27.7	27.1	16.9	21.5

Source: Company data, KGI Research estimates

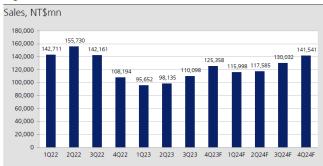


# Figure 1: Company profile

MediaTek was founded in 1997 as a top-five fabless design house specializing in SoC solutions for wireless communications and digital multimedia. It holds a leading position in cutting-edge SoC system solutions for wireless communications, high-definition TV, optical storage, DVD and Blu-ray products. It also offers related product design, testing, maintenance and technology consulting services. MediaTek is headquartered in Hsinchu Science Park, Taiwan, with sales and research subsidiaries in China, Singapore, India, Japan, Korea, the US, Denmark and the UK. Employees numbered around 20,000 in 2021.

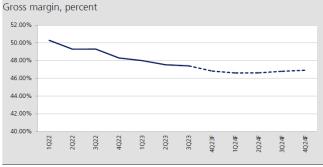
Source: Company data, KGI Research

Figure 3: Sales



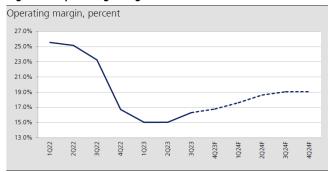
Source: KGI Research

Figure 5: Gross Margin



Source: KGI Research

Figure 7: Operating Margin



Source: KGI Research

Figure 2: MediaTek QFII holdings vs. share price



Source: TEJ, KGI Research

Figure 4: EPS



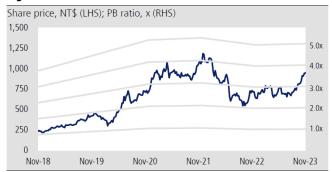
Source: KGI Research

Figure 6: 12M forward PE band



Source: TEJ, KGI Research estimates

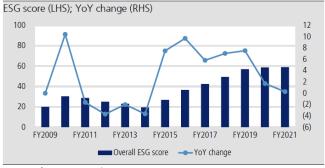
Figure 8: 12M forward PB band



Source: TEJ, KGI Research estimates

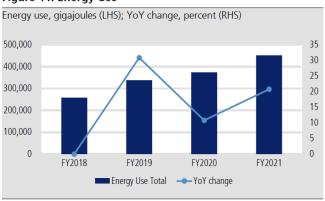


Figure 9: Overall ESG score



Source: Refinitiv, Company data

Figure 11: Energy Use



Source: Refinitiv, Company data

Figure 13: Water use to revenue



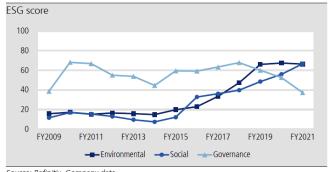
Source: Refinitiv, Company data

Figure 15: Employee training



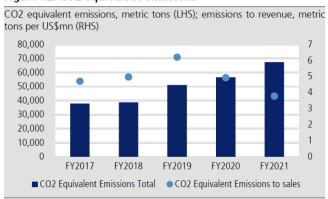
Source: Refinitiv, Company data

Figure 10: ESG scores



Source: Refinitiv, Company data

Figure 12: CO2 equivalent emissions



Source: Refinitiv, Company data

Figure 14: Independent Board Members



Source: Refinitiv, Company data

Figure 16: Gender diversification



Source: Refinitiv, Company data

5 December 2023



ESG chart definition	- 6 to	
Item	Definition	Remarks
Energy use	Total direct and indirect energy consumption in gigajoules.  - the total amount of energy that has been consumed within the boundaries of the company's operations  - total energy use = total direct energy consumption + indirect energy consumption  - purchased energy and produced energy are included in total energy use  - for utilities, transmission/ grid loss as part of its business activities is considered as total energy consumed and data does not consider electricity produced to answer energy use (utility company produces to sell)  - for utilities, raw materials such as coal, gas or nuclear used in the production of energy are not considered under 'total energy use'	
Renewable energy purchased	Total primary renewable energy purchased in gigajoules.  - energy consumed by the company from various sources and among the purchased energy, how much energy is renewable in nature (solar, wind, hydro, biomass, geothermal) are in scope  - if there is no evidence that renewable energy is produced by the company, then we consider the reported energy figure as renewable energy purchased	MediaTek has conducted carbon footprint verification on its office buildings and its internal administration process.
Renewable energy use ratio	Renewable energy to total energy used	
CO2 equivalent emissions	Direct CO2 and CO2 equivalent emissions in metric tons.  - direct emissions from sources that are owned or controlled by the company (scope 1 emissions)  - following gases are relevant: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCS), perfluorinated compound (PFCS), sulfur hexafluoride (SF6), nitrogen trifluoride (NF3)	
CO2 equivalent emissions to sales	Direct CO2 and CO2 equivalent emissions (metric tons) to sales (NT\$mn) - direct emissions from sources that are owned or controlled by the company (scope 1 emissions) - following gases are relevant: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCS), perfluorinated compound (PFCS), sulfur hexafluoride (SF6), nitrogen trifluoride (NF3)	
Waste total	Total amount of waste produced in metric tons.  - total waste = non-hazardous waste + hazardous waste  - only solid waste is taken into consideration, exceptionally if liquid waste is reported in metric tons, then we do the summation to derive total including liquid waste  - for sectors like mining, oil & gas, waste generation like tailings, waste rock, coal and fly ash are also considered	
Waste recycling ratio	The waste recycling ratio as reported by the company waste recycling ratio = waste recycled/total waste*100 - waste to energy or waste incinerated with energy recovery are considered as waste recycled - waste recovered via composting is considered as recycled waste	
Water withdrawal total	Total water withdrawal in cubic meters.  - the total volume of water withdrawn from any water source that was either withdrawn directly by the reporting organization or through intermediaries such as water utilities  - different sources of water like wells, town/utility/municipal water, river water, and surface water are considered	
Environmental expenditures	Total amount of environmental expenditures all environmental investment & expenditures for environmental protection or to prevent, reduce, control environmental aspects, impacts, and hazards. It also includes disposal, treatment, sanitation, and clean-up expenditures	
Turnover of employees	Percentage of employee turnover.  - includes employees who left the company for any reason (voluntary or involuntary), such as resignations, retirement, natural departure/death, medical incapacitation, redundancy, layoffs, restructuring, dismissal, retrenchment or end of a fixed-term contract  - employees turnover rate = (employees leaving/average number of employees)*100  - where the average number of employees = (employees at the end of the current year + employees at the end of the previous year)/2  - employees at the end of the current fiscal year = employees at the end of the previous fiscal year + new employees - employees leaving	Has disclosed the retention rate in 2019-20, and its HR has launched inventive program with better compensation to keep its talents.
Women managers	Percentage of women managers.  - percentage of women managers among total managers of the company  - if there is a breakdown by category in percentage, such as top, senior, middle, and junior management, then we consider the percentage of middle women managers  - percentage of women managers = number of women managers/total number of managers*100	
Women employees	Percentage of women employees.  - percentage of women employees to the total number of employees of the company - percentage of women employees = number of women/total number of employees*100	
Training hours total	Total training hours performed by all employees.  - consider only employee training hours  - includes all types of training given to general employees (such as health & safety, environmental, emergency response, skills & career development training)  - if the value is given in days, multiply by 8, assuming that 1 day = 8 hours worked	

Source: Refinitiv, Company data, KGI Research



	Quarterly								Annually		
	Mar-23A	Jun-23A	Sep-23A	Dec-23F	Mar-24F	Jun-24F	Sep-24F	Dec-24F	Dec-22A	Dec-23F	Dec-24
Income statement (NT\$mn)											
Revenue	95,652	98,135	110,098	125,358	115,998	117,585	130,032	141,541	548,796	429,243	505,155
Cost of goods sold	(49,739)	(51,489)	(57,905)	(66,660)	(61,936)	(62,764)	(69,176)	(75,143)	(277,892)	(225,794)	(269,018
Gross profit	45,912	46,646	52,192	58,698	54,062	54,821	60,855	66,398	270,904	203,449	236,137
Operating expenses	(31,543)	(31,896)	(34,248)	(37,670)	(33,639)	(32,924)	(36,084)	(39,419)	(144,116)	(135,357)	(142,066
Operating profit	14,369	14,751	17,944	21,028	20,423	21,898	24,772	26,979	126,788	68,092	94,071
Depreciation of fixed assets	(2,794)	(2,428)	(2,889)	(2,966)	(3,153)	(3,153)	(3,153)	(3,153)	(9,282)	(11,077)	(12,612
Amortisation of intangible assets	(1,522)	(1,791)	(1,924)	(2,142)	(2,092)	(2,092)	(2,092)	(2,092)	(5,697)	(7,379)	(8,368
EBITDA	18,685	18,970	22,757	26,136	25,668	27,143	30,017	32,224	141,768	86,547	115,051
Interest income	1,391	1,885	1,664	876	749	1,207	1,428	286	3,218	5,816	3,670
Investment income	3,116	1,165	1,124	500	320	330	330	350	3,281	5,905	1,330
Other non-op income	443	1,157	762	1,000	600	650	700	800	3,438	3,362	2,750
Non-operating income	4,950	4,208	3,549	2,376	1,669	2,187	2,458	1,436	9,937	15,083	7,750
Interest expense	(36)	(38)	(253)	(38)	(38)	(38)	(38)	(38)	(371)	(366)	(153
Investment loss	(108)	108	-	-	-	-	-	-	-	-	-
Other non-op expenses	(70)	(658)	(248)	-	-	-	-	-	(794)	(976)	-
Non-operating expenses	(215)	(588)	(501)	(38)	(38)	(38)	(38)	(38)	(1,165)	(1,342)	(153
Pre-tax profit	19,104	18,370	20,993	23,365	22,054	24,046	27,192	28,376	135,561	81,832	101,668
Current taxation	(2,213)	(2,351)	(2,424)	(2,570)	(2,646)	(2,885)	(3,263)	(3,121)	(16,936)	(9,559)	(11,916
Minorities	(17)	(54)	(91)	(150)	(150)	(150)	(150)	(150)	(484)	(312)	(600
Normalised net profit	16,874	15,965	18,478	20,645	19,257	21,010	23,779	25,105	118,141	71,961	89,151
Extraordinary items	(0)	0	(0)	-	=	-	=	-	=	-	-
Net profit	16,874	15,965	18,478	20,645	19,257	21,010	23,779	25,105	118,141	71,961	89,151
EPS (NT\$)	10.64	10.07	11.64	13.00	12.13	13.23	14.98	15.81	74.59	45.35	56.16
Margins (%)											
Gross profit margin	48.0	47.5	47.4	46.8	46.6	46.6	46.8	46.9	49.4	47.4	46.7
Operating margin	15.0	15.0	16.3	16.8	17.6	18.6	19.1	19.1	23.1	15.9	18.6
EBITDA margin	19.5	19.3	20.7	20.8	22.1	23.1	23.1	22.8	25.8	20.2	22.8
Pretax profit margin	20.0	18.7	19.1	18.6	19.0	20.4	20.9	20.0	24.7	19.1	20.
Net profit margin	17.6	16.3	16.8	16.5	16.6	17.9	18.3	17.7	21.5	16.8	17.6
Sequential growth (%)											
Revenue growth	(11.6)	2.6	12.2	13.9	(7.5)	1.4	10.6	8.9			
Gross profit growth	(12.1)	1.6	11.9	12.5	(7.9)	1.4	11.0	9.1			
Operating profit growth	(20.6)	2.7	21.7	17.2	(2.9)	7.2	13.1	8.9			
EBITDA growth	(16.3)	1.5	20.0	14.8	(1.8)	5.7	10.6	7.4			
Pretax profit growth	(9.3)	(3.8)	14.3	11.3	(5.6)	9.0	13.1	4.4			
Net profit growth	(8.7)	(5.4)	15.7	11.7	(6.7)	9.1	13.2	5.6			
YoY growth (%)											
Revenue growth	(33.0)	(37.0)	(22.6)	15.9	21.3	19.8	18.1	12.9	11.2	(21.8)	17.
Gross profit growth	(36.0)	(39.2)	(25.5)	12.3	17.8	17.5	16.6	13.1	17.0	(24.9)	16.
Operating profit growth	(60.6)	(62.4)	(45.7)	16.3	42.1	48.5	38.0	28.3	17.4	(46.3)	38.
EBITDA growth	(52.9)	(55.6)	(38.5)	17.0	37.4	43.1	31.9	23.3	19.5	(39.0)	32.9
Pretax profit growth	(49.7)	(55.1)	(41.0)	11.0	15.4	30.9	29.5	21.4	6.9	(39.6)	24.
Net profit growth	(49.3)	(54.9)	(40.3)	11.7	14.1	31.6	28.7	21.6	6.0	(39.1)	23.9

Source: Company data, KGI Research estimates



NTSmn	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
Total assets	533,906	660,877	608,399	655,331	677,627
Current assets	291,862	346,865	297,654	300,682	321,314
Cash & ST securities	210,113	204,764	164,810	131,660	130,585
Inventory	37,677	73,271	70,703	61,463	69,285
Accounts receivable	33,133	58,660	40,842	70,253	79,322
Other current assets	10,939	10,171	21,298	37,306	42,122
Non-current assets	242,044	314,012	310,746	354,649	356,313
LT investments	116,767	129,729	125,575	157,707	159,707
Net fixed assets	38,971	49,111	53,862	51,226	47,435
Total other assets	86,306	135,172	131,309	145,715	149,170
Total liabilities	158,822	227,229	165,341	239,565	256,311
Current liabilities	143,798	211,106	141,570	208,570	223,000
Accounts payable	34,470	43,504	21,518	35,454	39,965
Interest bearing ST liabilities	24,964	54,961	6,569	38,441	38,441
Other current liabilities	84,364	112,641	113,484	134,675	144,595
Non-current liabilities	15,023	16,123	23,771	30,995	33,311
Long-term debt	3,620	1,684	863	5,117	5,117
Other L-T liabilities	11,404	14,439	22,907	25,879	28,194
Total equity	375,084	433,648	443,058	415,766	421,316
Share capital	15,903	15,989	15,994	15,997	15,997
Retained earnings reserve	173,052	252,433	286,689	229,840	234,789
Minority interests	3,251	1,633	2,949	2,858	3,458
Preferred shareholders funds	-	-	-	-	_

	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
Growth					
Revenue growth	30.8%	53.2%	11.2%	(21.8%)	17.7%
Operating profit growth	91.5%	150.0%	17.4%	(46.3%)	38.2%
EBITDA growth	71.6%	123.4%	19.5%	(39.0%)	32.9%
Net profit growth	77.6%	172.3%	6.0%	(39.1%)	23.9%
EPS growth	77.0%	171.3%	5.7%	(39.2%)	23.8%
Profitability					
Gross profit margin	43.9%	46.9%	49.4%	47.4%	46.7%
Operating margin	13.4%	21.9%	23.1%	15.9%	18.6%
EBITDA margin	16.5%	24.0%	25.8%	20.2%	22.8%
Net profit margin	12.7%	22.6%	21.5%	16.8%	17.6%
Return on average assets	8.2%	18.7%	18.6%	11.4%	13.4%
Return on average equity	12.0%	27.7%	27.1%	16.9%	21.5%
Stability					
Gross debt to equity	7.6%	13.1%	1.7%	10.5%	10.3%
Net debt to equity	Net cash	Net cash	Net cash	Net cash	Net cash
Interest coverage (x)	81.0	659.6	366.5	224.6	663.8
Interest & ST debt coverage (x)	0.6	0.7	1.0	0.7	0.7
Cash flow interest coverage(x)	133.7	244.5	389.8	222.6	661.7
Cash flow/int. & ST debt (x)	3.1	0.9	20.8	2.1	2.6
Current ratio (x)	2.0	1.6	2.1	1.4	1.4
Quick ratio (x)	1.8	1.3	1.6	1.1	1.1
Net debt (NT\$mn)	(167,996)	(127,060)	(140,070)	(73,234)	(74,159)
Per share data					
EPS (NT\$)	26.01	70.56	74.59	45.35	56.16
CFPS (NT\$)	50.57	29.82	91.29	51.33	63.93
BVPS (NT\$)	233.82	270.20	275.16	258.12	261.21
Adj BVPS (NT\$)	236.34	273.59	277.88	260.23	263.21
SPS (NT\$)	204.75	312.47	346.51	270.53	318.20
EBITDA/share (NT\$)	33.76	75.15	89.51	54.55	72.47
Cash DPS (NT\$)	37.00	73.00	76.00	52.64	61.36
Activity					
Sales / avg assets	0.65	0.83	0.86	0.68	0.76
Days receivable	37.6	43.4	27.2	59.7	57.5
Days inventory	76.4	102.1	92.9	99.4	94.3
Days payable	69.9	60.7	28.3	57.3	54.4
Cash cycle	44.1	84.9	91.8	101.8	97.4

Profit & loss					
NT\$mn	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
Revenue	322,146	493,415	548,796	429,243	505,155
Cost of goods sold	(180,610)	(261,810)	(277,892)	(225,794)	(269,018)
Gross profit	141,536	231,605	270,904	203,449	236,137
Operating expenses	(98,316)	(123,564)	(144,116)	(135,357)	(142,066)
Operating profit	43,219	108,040	126,788	68,092	94,071
Non-operating income	4,958	19,013	9,937	15,083	7,750
Interest income	2,482	1,651	3,218	5,816	3,670
Investment income	1,773	6,760	3,281	5,905	1,330
Other non-op income	703	10,602	3,438	3,362	2,750
Non-operating expenses	(595)	(202)	(1,165)	(1,342)	(153)
Interest expense	(595)	(193)	(371)	(366)	(153)
Investment loss	-	-	-	-	-
Other non-op expenses	-	(9)	(794)	(976)	-
Pre-tax profit	47,583	126,852	135,561	81,832	101,668
Current taxation	(6,144)	(14,980)	(16,936)	(9,559)	(11,916)
Minorities	(522)	(451)	(484)	(312)	(600)
Extraordinary items	-	0	0	-	-
Net profit	40,917	111,421	118,141	71,961	89,151
EBITDA	53,120	118,661	141,768	86,547	115,051
EPS (NT\$)	26.01	70.56	74.59	45.35	56.16
F1 > (141 4)	20.01	70.30	74.33	43.33	50.10

Cash flow					
NTSmn	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
Operations cash flow	79,558	47,095	144,583	81,453	101,495
Net profit	40,917	111,421	118,141	71,961	89,151
Depreciation & amortisation	9,901	10,621	14,980	18,456	20,980
Decrease in working capital	(4,201)	(52,087)	(1,601)	(6,235)	(12,379)
Other operating cash flow	32,941	(22,860)	13,063	(2,729)	3,742
Investing cash flow	(6,769)	(28,924)	(37,535)	(25,334)	(16,368)
Sale of ST investment	13,618	307	(4,156)	18,493	2,000
New investments	(10,551)	(3,596)	(15,626)	(27,259)	(2,000)
Capital expenditure	(5,000)	(16,985)	(13,622)	(7,788)	(8,821)
Others investing cashflow	(4,836)	(8,650)	(4,130)	(8,780)	(7,547)
Free cash flow	33,006	31,752	105,008	57,192	74,457
Financing cash flow	(49,221)	(27,951)	(156,280)	(93,686)	(84,202)
Increase in short term debt	(35,784)	29,796	(47,567)	29,094	-
Increase in long term loans	4,847	(1,736)	(1,645)	7,031	-
New ordinary shares issued	-	-	-	-	-
Ordinary dividends paid	(16,589)	(58,585)	(116,141)	(120,981)	(84,202)
Other financing cashflow	(1,642)	2,573	9,073	(8,830)	-
Forex effects	(4,533)	(3,094)	13,030	6,855	
Total cash generated	19,035	(12,875)	(36,202)	(30,711)	926
Cashflow by merger	-	_			

ROIC					
	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
1 - COGS/revenue	43.9%	46.9%	49.4%	47.4%	46.7%
<ul> <li>Operating exp./revenue</li> </ul>	30.5%	25.0%	26.3%	31.5%	28.1%
= Operating margin	13.4%	21.9%	23.1%	15.9%	18.6%
1 / (Working capital/revenue	(0.1)	(0.0)	(0.0)	(0.0)	0.0
+ Net PPE/revenue	0.1	0.1	0.1	0.1	0.1
+ Other assets/revenue)	0.3	0.3	0.2	0.3	0.3
= Capital turnover	3.7	2.9	3.0	2.2	2.5
Operating margin	13.4%	21.9%	23.1%	15.9%	18.6%
x Capital turnover	3.7	2.9	3.0	2.2	2.5
x (1 - tax rate)	87.1%	88.2%	87.5%	88.3%	88.3%
= After-tax ROIC	42.7%	56.0%	60.6%	30.7%	41.0%

Source: Company data, KGI Research estimates

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Source: Company data, KGI Research estimates

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