

Qorvo Inc.

Strong positioning at leading smartphone OEMs, but cautious on industry headwinds

Reiterate Rating: UNDERPERFORM | PO: 110.00 USD | Price: 99.74 USD

Recovery underway, but smartphone market challenging

FQ2 beat, FQ3 inline, as stronger than expected cellular group sales (+12% vs. consensus) offset high performance analog (HPA) weakness. QRVO fundamentals improving, with strong content gains in both Apple and Samsung flagship devices driving strong mobile rebound (we model CY24 cellular group sales up more than 20%+ YoY versus unit growth likely low-single digits). As high cost inventory is consumed (and non-cellular sales gradually recover), we see pathway to return to high-40s GM in FY25, >50% in FY26 (quarterly basis). While we model strong 20%+ EPS CAGR over the next few years (CY24-26), it represents just flattish EPS growth on a 5yr basis, highlighting the severity of the mobile downturn. Despite a pathway to growth, we remain structurally cautious on the smartphone market, where high customer concentration (Apple 35%-40%+ of sales), limited pricing power, and unit maturation limit upside. We reiterate our Underperform, though raise CY24-26E sales 2%-3%, EPS 3%-4% and take our PO to \$110 (from \$100) on unchanged 12x CY25E adjusted P/E.

Likes: Apple/Samsung positioning, GM rebound

1) Despite concerns around QCOM growing its RF presence, QRVO does not believe QCOM are competing for their sockets and highlighted their ability to grow content at Apple in FY25/FY26; 2) Historically strong Android exposure (typically 30%-35%+ of sales) could have benefits as market recovers (SWKS saw Android growth QoQ). We highlight strong positioning in new S24 (mid-high/ultra-high band, transmit/receive, tuning, etc.) and unique LMH solution power amplifier duplexer (integrates low/mid/high-band functionality while reducing surface area by 40%) sampling today; 3) We expect MarQ gross margin guide (42%) to mark the cycle bottom, and see return to high-40s GM starting CY25 as utilization improves (250bp-275bp headwind in DecQ).

Risks: Opex growth, HPA segment, consumer exposure

1) We expect opex to step up near-term (CY24 +8% YoY) to support growth initiatives over the next 2-3 years (both in mobile and power/analog applications), limiting leverage; 2) HPA implied guide up mid-teens QoQ with segment largely defense driven post cellular infra corrections (>50% of segment sales), but see difficult path in returning to >\$200mn qrtly runrate without recovery in other core markets; 3) Smartphone peers trade 13x-14x NTM PE vs. SOX low/mid-20x PE given difficult environment.

Estimates (Mar) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	12.36	5.99	6.03	8.28	10.52
GAAP EPS	9.27	1.01	(0.64)	2.52	4.38
EPS Change (YoY)	26.9%	-51.5%	0.7%	37.3%	27.1%
Consensus EPS (Bloomberg)			5.55	7.61	10.14
DPS	0	0	0	0	0
Valuation (Mar)					
P/E	8.1x	16.7x	16.5x	12.0x	9.5x
GAAP P/E	10.8x	98.8x	NM	39.6x	22.8x
EV / EBITDA*	6.5x	11.9x	12.7x	9.8x	8.3x
Free Cash Flow Yield*	7.9%	6.5%	8.6%	5.6%	6.3%

* For full definitions of *IQmethod*SM measures, see page 12.

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Timestamp: 31 January 2024 09:48PM EST

31 January 2024

Equity

Key Changes

(US\$)	Previous	Current
Price Obj.	100.00	110.00
2024E Rev (m)	3,648.7	3,753.5
2025E Rev (m)	4,094.0	4,200.6
2026E Rev (m)	4,325.6	4,454.4
2024E EPS	5.52	6.03
2025E EPS	8.27	8.28
2026E EPS	10.12	10.52

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Stock Data

Price	99.74 USD
Price Objective	110.00 USD
Date Established	31-Jan-2024
Investment Opinion	B-3-9
52-Week Range	80.62 USD - 114.97 USD
Mrkt Val (mn) / Shares Out	10,580 USD / 106.1 (mn)
Free Float	99.3%
Average Daily Value (mn)	125.36 USD
BofA Ticker / Exchange	QRVO / NAS
Bloomberg / Reuters	QRVO US / QRVO.OQ
ROE (2024E)	15.7%
Net Dbt to Eqty (Mar-2023A)	31.8%
ESGMeter TM	Medium

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BofA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to "BofA ESGMeter Methodology".

See pg. 6 for glossary

iQprofileSM Qorvo Inc.

iQmethodSM – Bus Performance*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Return on Capital Employed	19.1%	9.8%	8.3%	13.8%	16.6%
Return on Equity	30.0%	14.6%	15.7%	21.3%	24.9%
Operating Margin	33.4%	21.1%	18.8%	22.2%	25.4%
Free Cash Flow	836	689	906	593	670

iQmethodSM – Quality of Earnings*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash Realization Ratio	0.8x	1.4x	1.8x	1.0x	0.9x
Asset Replacement Ratio	1.0x	0.8x	0.7x	0.9x	0.8x
Tax Rate	17.6%	16.0%	29.5%	15.6%	17.0%
Net Debt-to-Equity Ratio	23.6%	31.8%	17.5%	11.9%	4.4%
Interest Cover	NA	NA	NA	NA	NA

Income Statement Data (Mar)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Sales	4,646	3,569	3,754	4,201	4,454
% Change	15.7%	-23.2%	5.2%	11.9%	6.0%
Gross Profit	2,433	1,654	1,664	1,965	2,210
% Change	16.3%	-32.0%	0.6%	18.1%	12.5%
EBITDA	1,763	961	901	1,165	1,374
% Change	17.9%	-45.5%	-6.2%	29.3%	18.0%
Net Interest & Other Income	(59)	(46)	(34)	(40)	(40)
Net Income (Adjusted)	1,377	617	593	786	959
% Change	22.0%	-55.2%	-3.9%	32.7%	22.0%

Free Cash Flow Data (Mar)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Net Income from Cont Operations (GAAP)	1,033	104	(63)	239	399
Depreciation & Amortization	211	206	195	231	245
Change in Working Capital	(524)	101	202	89	(24)
Deferred Taxation Charge	32	(66)	2	0	0
Other Adjustments, Net	297	502	715	244	250
Capital Expenditure	(213)	(159)	(145)	(210)	(200)
Free Cash Flow	836	689	906	593	670
% Change	-25.0%	-17.6%	31.5%	-34.5%	12.9%
Share / Issue Repurchase	(1,114)	(830)	(340)	(400)	(400)
Cost of Dividends Paid	0	0	0	0	0
Change in Debt	0	0	0	0	0

Balance Sheet Data (Mar)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash & Equivalents	973	809	1,391	1,105	1,375
Trade Receivables	569	305	407	442	465
Other Current Assets	908	917	708	587	585
Property, Plant & Equipment	1,254	1,150	1,039	1,018	974
Other Non-Current Assets	3,806	3,512	3,232	3,232	3,232
Total Assets	7,509	6,692	6,777	6,383	6,631
Short-Term Debt	0	0	480	0	0
Other Current Liabilities	675	556	868	872	870
Long-Term Debt	2,047	2,048	1,550	1,550	1,550
Other Non-Current Liabilities	234	185	230	230	230
Total Liabilities	2,956	2,789	3,129	2,652	2,651
Total Equity	4,553	3,903	3,648	3,731	3,980
Total Equity & Liabilities	7,509	6,692	6,777	6,383	6,631

* For full definitions of iQmethodSM measures, see page 12.

Company Sector

Semiconductors

Company Description

Qorvo is a leading designer and manufacturer of core technologies and radio frequency (RF) solutions for mobile, wireless infrastructure, cable TV, broadband, and aerospace/defense applications. Qorvo was formed following the merger of RFMD and TriQuint.

Investment Rationale

We rate Qorvo Underperform. Qorvo is an established vendor of RF components that is benefitting from increasing complexity and content in next generation connected mobile devices such as smartphones and tablets. Still, we believe 5G handset conversion is beginning to increase in maturity, which could limit long-term growth. Additionally, growing competition from Qualcomm and Android inventory correction will likely cap further upside.

Stock Data

Average Daily Volume 1,256,818

Quarterly Earnings Estimates

	2023	2024
Q1	2.25A	0.34A
Q2	2.66A	2.39A
Q3	0.75A	2.10A
Q4	0.26A	1.21E

Summary of model changes

Exhibit 1: Summary of changes in estimates

We raise CY24/245 sales by 3%/3% versus prior

	Sales (\$mn)			Non-GAAP EPS (excl stock comp)		
	Old	NEW	delta	Old	NEW	delta
Jun-23	\$651	\$651	\$0	\$0.34	\$0.34	\$0.00
Sep-23	\$1,103	\$1,103	\$0	\$2.39	\$2.39	\$0.00
Dec-23	\$1,000	\$1,074	\$74	\$1.65	\$2.10	\$0.45
Mar-24E	\$894	\$925	\$31	\$1.14	\$1.21	\$0.06
Mar-24E	\$3,649	\$3,754	\$105	\$5.52	\$6.03	\$0.51
YoY	2.2%	5.2%	2.9%	-8.0%	0.6%	9.3%
Jun-24E	\$884	\$925	\$41	\$1.19	\$1.33	\$0.14
Sep-24E	\$1,134	\$1,153	\$19	\$2.68	\$2.69	\$0.01
Dec-24E	\$1,076	\$1,118	\$42	\$2.42	\$2.42	(\$0.00)
Mar-25E	\$1,000	\$1,005	\$4	\$1.99	\$1.86	(\$0.13)
Mar-25E	\$4,094	\$4,201	\$107	\$8.27	\$8.28	\$0.02
YoY	12.2%	11.9%	2.6%	49.9%	37.4%	0.2%
CY24E	\$3,988	\$4,121	\$133	\$7.41	\$7.61	\$0.20
YoY	17.7%	19.1%	3.3%	60.7%	50.6%	2.8%
CY25E	\$4,257	\$4,400	\$143	\$9.66	\$10.04	\$0.38
YoY	6.7%	6.8%	3.4%	30.4%	31.8%	3.9%
CY26E	\$4,476	\$4,579	\$103	\$11.05	\$11.52	\$0.47
YoY	5.2%	4.1%	2.3%	14.4%	14.7%	4.3%

Source: BofA Global Research estimates, company reports, Bloomberg

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FQ3 reported vs. expectations

Exhibit 2: Summary of DecQ results

FQ3 sales/EPS of \$1.07bn/\$2.10 came ahead of expectations

FY (March)	Dec-22	Sep-23	Dec-23						
			Guidance	Consensus	BofA	Reported	Delta vs Consensus (%)	QoQ	YoY
Sales	\$743	\$1,103	\$1,000 (+/- \$25)	\$1,003	\$1,000	\$1,074	7.1%	-2.7%	44.5%
QoQ%	-35.8%	69.5%		-9.1%	-9.4%	-2.7%			
High Performance Analog	155	150		146	145	119	-18.4%	-20.6%	-23.3%
Connectivity Sensors Group	97	104		105	105	109	4.2%	5.1%	12.5%
Advanced Cellular Group	491	850		753	751	846	12.4%	-0.5%	72.2%
Gross Margin (pf) %	40.9%	47.6%	43%-44%	43.5%	43.5%	43.8%	31	(378)	289
Gross Profit	304	525			435	471		-10.4%	54.7%
R&D	139	163			160	152		-6.7%	9.6%
SG&A	67	79			74	78		-1.3%	17.5%
Opex Total (pf)	206	246			237	234		-4.8%	13.8%
Operating Income	99	279		199	198	237	19.1%	-15.4%	140.0%
Op Margin %	13.3%	25.3%		19.8%	19.8%	22.0%	222	(330)	877
Other expense	(8)	(9)			(10)	(7)			
Tax expense (pf)	(14)	(34)			(26)	(24)			
Tax rate %	15.8%	12.8%			14.0%	10.4%		(234)	(532)
Net Income	76	236			162	206			
Diluted EPS	\$0.75	\$2.39	\$1.65	\$1.67	\$1.65	\$2.10	25.9%	-11.9%	179.7%
Diluted Shares	102	99			98	98		-0.8%	-3.7%

Source: BofA Global Research estimates, company reports, Bloomberg

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FQ4 guidance vs. expectations

Exhibit 3: Summary of MarQ outlook

FQ4 Sales outlook \$10mn ahead, EPS 3c ahead

	Dec-23	Mar-24E				Delta vs Consensus (%)	QoQ	YoY
	Reported	BofA	Consensus	Guidance	New BofA			
Sales	\$1,074	\$894	\$915	\$925 (+/- \$25)	\$925	1.1%	-13.9%	46.2%
QoQ%	-2.7%	-10.6%	-8.5%		-13.9%			
High Performance Analog	119	146	147		136	-8.0%	14.0%	1.8%
Connectivity Sensors Group	109	110	105		111	5.5%	1.8%	35.3%
Advanced Cellular Group	846	638	655		679	3.6%	-19.8%	62.5%
Gross Margin (pf) %	43.8%	42.5%	41.8%	42.0%	42.0%	20	(182)	72
Gross Profit	471	380			388		-17.4%	48.7%
R&D	152	165			157		3.0%	2.4%
SG&A	78	73			85		8.2%	14.4%
Opex Total (pf)	234	241			245		4.7%	7.8%
Operating Income	237	139	\$144		143	-0.7%	-39.3%	324.0%
Op Margin %	22.0%	15.5%	15.8%		15.5%	(28)	(652)	1016
Other expense	(7)	(10)			(10)			
Tax expense (pf)	(24)	(18)			(16)			
Tax rate %	10.4%	14.0%			12.0%		156	1205
Net Income	206	111			117			
Diluted EPS	\$2.10	\$1.14	\$1.17	\$1.20	\$1.21	3.5%	-42.7%	370.9%
Diluted Shares	98	97			97		-0.5%	-3.1%

Source: BofA Global Research estimates, company reports, Bloomberg

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Balance sheet snapshot

Exhibit 4: Summary of changes in net cash and inventory balances

Inventory dollars increased QoQ

Balance Sheet	3Q22	4Q23	1Q24	2Q24	3Q23	QoQ	YoY
	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23		
Total Cash	\$919	\$809	\$744	\$707	\$1,072	51.7%	16.7%
ST Debt	\$0	\$0	\$0	\$0	\$480		
LT Debt	\$2,048	\$2,048	\$2,048	\$2,049	\$1,550		
Total Debt	\$2,048	\$2,048	\$2,048	\$2,049	\$2,030		
Net Cash	(\$1,129)	(\$1,239)	(\$1,304)	(\$1,342)	(\$958)		
Net Cash/Share	(\$11.18)	(\$12.45)	(\$13.24)	(\$13.61)	(\$9.87)	27.5%	11.8%
DSO	45.0	43.8	43.0	48.9	41.0		
DPO	43.1	37.0	63.4	40.8	40.7		
Inventory \$	\$857	\$797	\$917	\$840	\$727	-13.5%	-15.2%
Inventory Turns	2.2	2.6	1.8	2.9	3.8		
Inventory Days	164.2	139.9	197.8	124.5	96.4	(28.1)	(67.8)
Cash Conversion days	166.1	146.7	177.4	132.6	96.7		
Cash Flow from Ops	\$237	\$70	\$45	\$93	\$493	429.9%	107.7%
Capex	(\$34)	(\$34)	(\$39)	(\$29)	(\$26)	-7.7%	-176.7%
Free cash flow	\$203	\$36	\$5	\$64	\$467	624.4%	129.8%

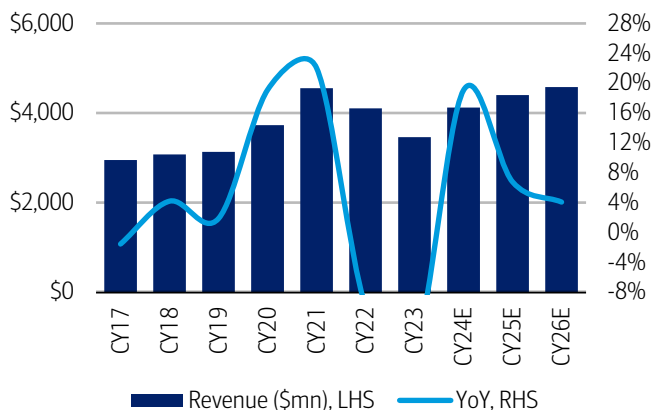
Source: Company reports

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Key charts

Exhibit 5: QRVO annual sales and YoY growth

Content wins should drive CY24 growth

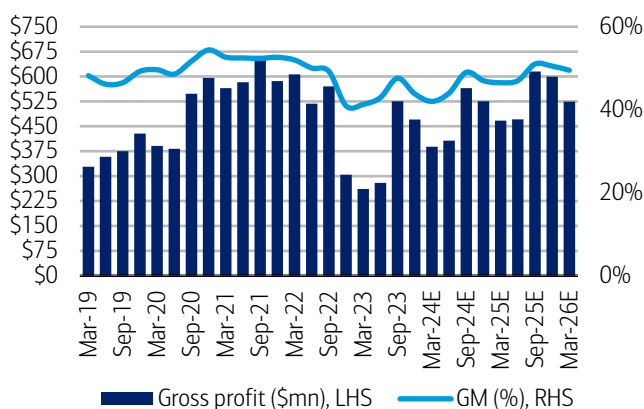


Source: BofA Global Research estimates, company reports

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Exhibit 7: QRVO quarterly gross profit \$s and GM %

GMs to slowly rebound from utilization/mix headwinds

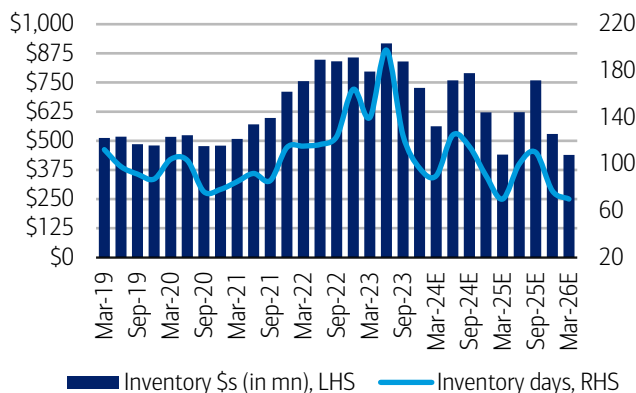


Source: BofA Global Research estimates, company reports

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Exhibit 9: QRVO quarterly inventory \$s and days

Inventory levels slowly improving

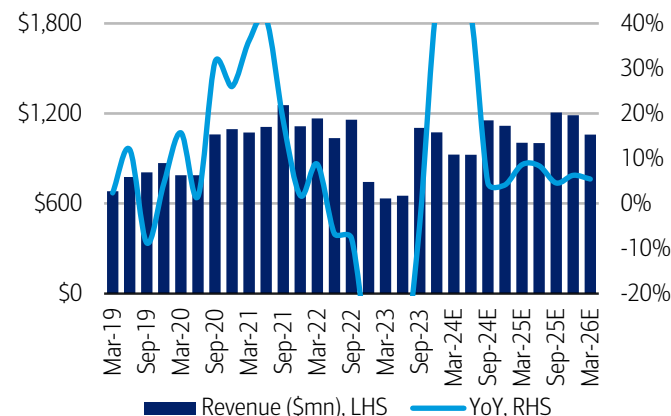


Source: BofA Global Research estimates, company reports

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Exhibit 6: QRVO quarterly sales and YoY growth

We expect YoY growth to resume to hold from here

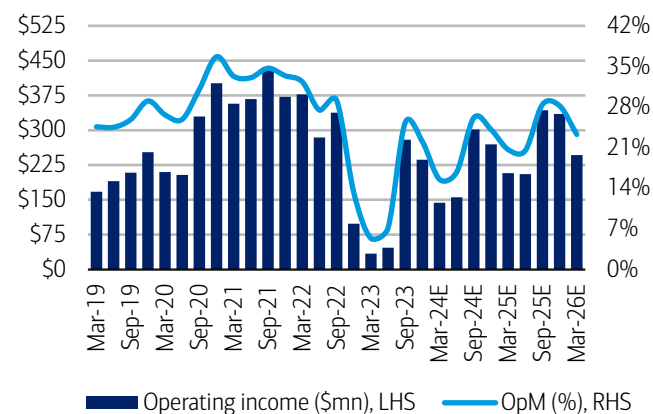


Source: BofA Global Research estimates, company reports

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Exhibit 8: QRVO quarterly operating income \$s and OpM %

OpMs likely to reach mid-20% range

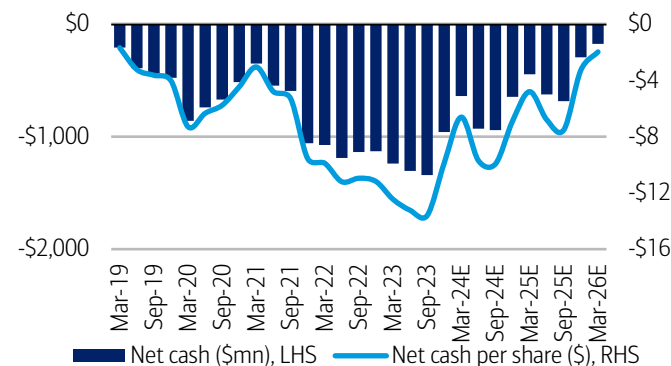


Source: BofA Global Research estimates, company reports

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Exhibit 10: QRVO quarterly net cash and net cash per share

We believe QRVO will hold a negative cash position for multiple qtrs

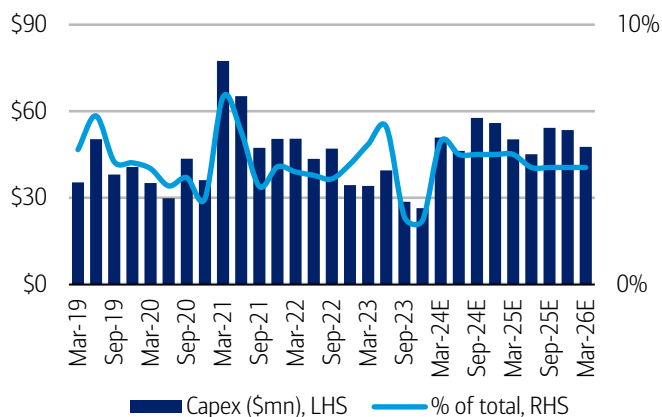


Source: BofA Global Research estimates, company reports

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Exhibit 11: QRVO quarterly capex and YoY growth

We expect QRVO capex to remain a mid-single digit percent of sales

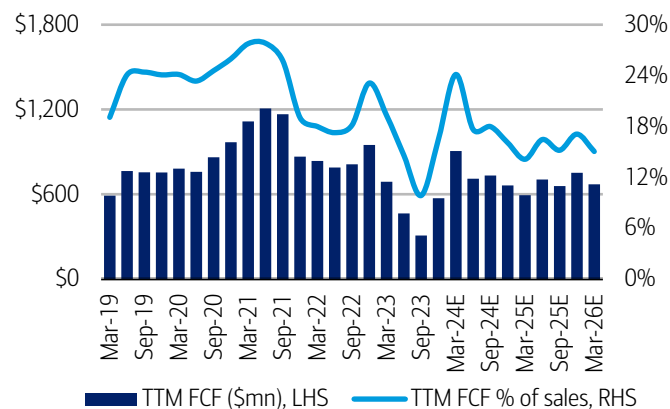


Source: BofA Global Research estimates, company reports

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Exhibit 12: QRVO quarterly TTM FCF and TTM FCF % of sales

QRVO FCF margins will likely normalize in high-teens



Source: BofA Global Research estimates, company reports

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Glossary

QRVO: Qorvo

QCOM: Qualcomm

SWKS: Skyworks

RF: Radio Frequency

LMH: low/mid/high

**Exhibit 13: QRVO – Income Statement (\$mn)**

We model mid-single digit sales growth in FY24

	1Q24	2Q24	3Q23	4Q24E	1Q25	2Q25E	3Q25E	4Q25E	1Q26E	2Q26E	3Q26E	4Q26E	FY23	FY24E	FY25E	CY23	CY24E	CY25E
	Jun-23	Sep-23	Dec-23	Mar-24E	Jun-24E	Sep-24E	Dec-24E	Mar-25E	Jun-25E	Sep-25E	Dec-25E	Mar-26E	Mar-23	Mar-24E	Mar-25E	Dec-23	Dec-24E	Dec-25E
Total Revenues	\$651.2	\$1,103.5	\$1,073.9	\$925.0	\$924.8	\$1,153.3	\$1,118.0	\$1,004.6	\$1,002.1	\$1,205.6	\$1,187.7	\$1,059.0	\$3,569.4	\$3,753.5	\$4,200.6	\$3,461.3	\$4,121.0	\$4,400.0
QoQ %	2.9%	69.5%	-2.7%	-13.9%	0.0%	24.7%	-3.1%	-10.1%	-0.2%	20.3%	-1.5%	-10.8%						
YoY %	-37.1%	-4.7%	44.5%	46.2%	42.0%	4.5%	4.1%	8.6%	8.4%	4.5%	6.2%	5.4%	-23.2%	5.2%	11.9%	-15.6%	19.1%	6.8%
COGS (GAAP)	422.1	613.8	686.0	568.2	552.6	625.2	629.2	572.9	566.6	628.3	625.3	570.8	2,272.5	2,290.1	2,379.9	2,239.9	2,375.1	2,393.1
Gross Profit (GAAP)	229.1	489.7	387.9	356.8	372.2	528.1	488.8	431.6	435.5	577.4	562.5	488.2	1,296.9	1,463.5	1,820.7	1,221.4	1,745.9	2,007.0
Gross Profit (pf)	279.5	525.2	470.6	388.5	406.9	565.1	525.4	467.1	471.0	614.9	599.8	524.2	1,653.9	1,663.8	1,964.6	1,536.5	1,886.0	2,152.8
Research & Development	163.1	174.9	164.3	163.3	178.9	191.4	187.4	184.5	191.5	199.8	194.0	200.0	649.8	665.7	742.1	666.0	721.0	769.8
Selling, General & Administrative	105.4	103.7	86.9	95.2	95.7	99.6	95.1	99.5	98.6	100.7	98.8	103.3	358.8	391.3	389.9	379.0	385.7	397.7
Total Opex (GAAP)	277.2	338.3	429.4	334.5	355.2	389.6	390.8	374.9	384.7	398.6	390.8	398.7	1,113.8	1,379.4	1,510.5	1,348.6	1,470.0	1,549.0
Operating Income (GAAP)	(48.1)	151.4	(41.5)	22.3	17.0	138.6	98.0	56.7	50.8	178.7	171.7	89.4	183.2	84.1	310.3	(127.2)	275.9	457.9
Stock comp expense	38.4	39.0	21.7	18.7	27.7	34.6	33.5	30.1	30.1	36.2	35.6	31.8	105.6	117.9	126.0	117.9	114.6	132.0
Total Opex (pf)	232.7	245.8	234.0	245.0	251.8	263.6	255.8	259.6	265.7	272.1	264.8	277.8	899.4	957.6	1,030.7	940.0	1,016.2	1,062.2
Operating Income (pf)	46.7	279.4	236.5	143.5	155.1	301.5	269.6	207.5	205.2	342.8	335.0	246.4	754.4	706.1	933.8	596.5	869.8	1,090.6
Other Expenses	(3.5)	(11.9)	(2.2)	(10.0)	(10.0)	(10.0)	(10.0)	(10.0)	(10.0)	(10.0)	(10.0)	(10.0)	(58.5)	(27.7)	(40.0)	(27.7)	(40.0)	(40.0)
Income Tax Expense	8.1	(42.1)	(83.1)	(1.5)	(0.8)	(15.4)	(10.6)	(5.6)	(4.9)	(20.2)	(19.4)	(9.5)	(21.5)	(118.6)	(32.4)	(56.5)	(28.3)	(50.2)
Net Income (GAAP)	(43.6)	97.5	(126.9)	10.9	6.2	113.1	77.4	41.1	35.9	148.5	142.3	69.9	103.1	(62.2)	237.9	(211.4)	207.6	367.8
Tax Expense (pf)	(5.0)	(34.5)	(24.0)	(16.0)	(17.4)	(35.0)	(31.2)	(23.7)	(23.4)	(39.9)	(39.0)	(28.4)	(92.0)	(79.5)	(107.3)	(63.5)	(99.6)	(126.1)
Net Income (pf)	33.6	235.5	205.9	117.4	127.7	256.5	228.5	173.8	171.8	292.9	286.0	208.0	616.8	592.4	786.6	500.7	730.2	924.5
Diluted Shares (pf)	99.3	98.6	97.8	97.3	96.4	95.4	94.5	93.5	92.6	91.6	90.7	89.7	103.0	98.3	95.0	99.0	95.9	92.1
EPS (GAAP)	(\$0.44)	\$0.99	(\$1.31)	\$0.11	\$0.06	\$1.19	\$0.83	\$0.44	\$0.39	\$1.63	\$1.58	\$0.78	\$1.01	(\$0.64)	\$2.52	(\$2.15)	\$2.18	\$4.02
EPS (pf)	\$0.34	\$2.39	\$2.10	\$1.21	\$1.33	\$2.69	\$2.42	\$1.86	\$1.86	\$3.20	\$3.15	\$2.32	\$5.99	\$6.03	\$8.28	\$5.06	\$7.61	\$10.04
Gross Margin (pf)	42.9%	47.6%	43.8%	42.0%	44.0%	49.0%	47.0%	46.5%	47.0%	51.0%	50.5%	49.5%	46.3%	44.3%	46.8%	44.4%	45.8%	48.9%
R&D expense	23.5%	14.8%	14.2%	17.0%	18.3%	15.6%	15.8%	17.4%	18.1%	15.6%	15.3%	17.9%	17.1%	16.7%	16.7%	18.0%	16.6%	16.5%
Selling, General & Administrative	12.0%	7.2%	7.3%	9.2%	8.9%	7.3%	7.1%	8.5%	8.4%	7.0%	7.0%	8.3%	8.1%	8.5%	7.9%	8.9%	8.0%	7.6%
Operating Margin (pf)	7.2%	25.3%	22.0%	15.5%	16.8%	26.1%	24.1%	20.7%	20.5%	28.4%	28.2%	23.3%	21.1%	18.8%	22.2%	17.2%	21.1%	24.8%
Cash Tax Rate (pf)	13.0%	12.8%	10.4%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	13.0%	11.8%	12.0%	11.2%	12.0%	12.0%
Net income (GAAP)	-6.7%	8.8%	-11.8%	1.2%	0.7%	9.8%	6.9%	4.1%	3.6%	12.3%	12.0%	6.6%	2.9%	-1.7%	5.7%	-6.1%	5.0%	8.4%
Net Income (pf)	5.2%	21.3%	19.2%	12.7%	13.8%	22.2%	20.4%	17.3%	17.1%	24.3%	24.1%	19.6%	17.3%	15.8%	18.7%	14.5%	17.7%	21.0%
Stock comp expense	5.9%	3.5%	2.0%	2.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.1%	3.0%	3.4%	2.8%	3.0%

Source: BofA Global Research estimates, company reports

BofA GLOBAL RESEARCH

Exhibit 14: QRVO Segment Model (\$mn)

ACG should grow nicely with new content wins

	1Q24	2Q24	3Q23	4Q24E	1Q25E	2Q25E	3Q25E	4Q25E	1Q26E	2Q26E	3Q26E	4Q26E	FY23	FY24E	FY25E	CY23	CY24E	CY25E
	Jun-23	Sep-23	Dec-23	Mar-24E	Jun-24E	Sep-24E	Dec-24E	Mar-25E	Jun-25E	Sep-25E	Dec-25E	Mar-26E	Mar-23	Mar-24E	Mar-25E	Dec-23	Dec-24E	Dec-25E
High Performance Analog	139.7	149.8	118.9	135.5	144.4	151.6	148.5	151.5	157.6	165.5	163.8	168.7	727.2	543.9	596.0	541.5	580.0	638.3
Connectivity Sensors Group	99.3	103.6	108.9	110.9	108.6	121.7	129.0	130.3	129.0	145.7	138.4	128.8	474.4	422.6	489.6	393.7	470.2	543.4
Advanced Cellular Group	412.2	850.1	846.1	678.6	671.8	880.0	840.4	722.8	715.5	894.4	885.5	761.5	2367.8	2786.9	3115.0	2526.1	3070.8	3218.3
Total	651.2	1,103.5	1,073.9	925.0	924.8	1,153.3	1,118.0	1,004.6	1,002.1	1,205.6	1,187.7	1,059.0	3,569.4	3,753.5	4,200.6	3,461.3	4,121.0	4,400.0
QoQ%																		
High Performance Analog	5%	7%	-21%	14%	7%	5%	-2%	2%	4%	5%	-1%	3%						
Connectivity Sensors Group	21%	4%	5%	2%	-2%	12%	6%	1%	-1%	13%	-5%	-7%						
Advanced Cellular Group	-1%	106%	0%	-20%	-1%	31%	-5%	-14%	-1%	25%	-1%	-14%						
Total	3%	69%	-3%	-14%	0%	25%	-3%	-10%	0%	20%	-1%	-11%						
YoY%																		
High Performance Analog	-34%	-34%	-23%	2%	3%	1%	25%	12%	9%	9%	10%	11%	3%	-25%	10%	-33%	7%	10%
Connectivity Sensors Group	-35%	-28%	12%	35%	9%	17%	18%	18%	19%	20%	7%	-1%	-33%	-11%	16%	-31%	19%	16%
Advanced Cellular Group	-39%	8%	72%	62%	63%	4%	-1%	7%	7%	2%	5%	5%	-27%	18%	12%	-7%	22%	5%
Total	-37%	-5%	44%	46%	42%	5%	4%	9%	8%	5%	6%	5%	-23%	5%	12%	-16%	19%	7%
% of Sales																		
High Performance Analog	21%	14%	11%	15%	16%	13%	13%	15%	16%	14%	14%	16%	20%	14%	14%	16%	14%	15%
Connectivity Sensors Group	15%	9%	10%	12%	12%	11%	12%	13%	13%	12%	12%	12%	13%	11%	12%	11%	11%	12%
Advanced Cellular Group	63%	77%	79%	73%	73%	76%	75%	72%	71%	74%	75%	72%	66%	74%	74%	73%	75%	73%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: BofA Global Research estimates, company reports

BofA GLOBAL RESEARCH



**Exhibit 15: QRVO – Balance Sheet (\$mn)**

inventory levels typically increase ahead of iPhone ramp

	1Q24	2Q24	3Q23	4Q24E	1Q25E	2Q25E	3Q25E	4Q25E	1Q26E	2Q26E	3Q26E	4Q26E	FY23	FY24E	FY25E	CY23	CY24E	CY25E
	Jun-23	Sep-23	Dec-23	Mar-24E	Jun-24E	Sep-24E	Dec-24E	Mar-25E	Jun-25E	Sep-25E	Dec-25E	Mar-26E	Mar-23	Mar-24E	Mar-25E	Dec-23	Dec-24E	Dec-25E
ASSETS																		
Cash and equivalents	744.4	706.8	1,072.0	1,391.3	1,101.5	1,088.7	904.4	1,104.8	925.5	866.4	1,256.6	1,374.9	808.8	1,391.3	1,104.8	1,072.0	904.4	1,256.6
ST investments																0.0	0.0	0.0
A/R, net	307.9	592.7	483.8	406.6	457.3	570.3	491.4	441.6	440.5	529.9	522.1	465.5	304.5	406.6	441.6	483.8	491.4	522.1
Inventories	917.4	839.9	726.7	561.9	759.0	790.1	622.2	440.7	622.6	759.4	529.1	439.1	796.6	561.9	440.7	726.7	622.2	529.1
Deferred Income Taxes																0.0	0.0	0.0
Assets Held For Sale																0.0	0.0	0.0
Other current assets	49.5	46.4	68.9	68.9	68.9	68.9	68.9	68.9	68.9	68.9	68.9	68.9	46.7	68.9	68.9	68.9	68.9	68.9
Total current assets	2,087.8	2,262.9	2,428.4	2,505.7	2,463.8	2,594.9	2,163.9	2,132.9	2,134.5	2,301.7	2,453.6	2,425.4	2,029.8	2,505.7	2,132.9	2,428.4	2,163.9	2,453.6
PP&E, net	1,087.7	1,061.2	1,039.4	1,039.4	1,034.8	1,029.0	1,023.5	1,018.4	1,008.4	996.4	984.5	973.9	1,149.8	1,039.4	1,018.4	1,039.4	1,023.5	984.5
Deferred Income Taxes																0.0	0.0	0.0
Intangible assets+ Goodwill, net	507.2	473.2	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	537.7	500.0	500.0	500.0	500.0	500.0
Long-term investments	27.0	25.6	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	20.4	24.7	24.7	24.7	24.7	24.7
Other non-current assets	216.0	187.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4	193.4	166.4	166.4	166.4	166.4	166.4
Total assets	6,686.6	6,718.5	6,699.4	6,776.8	6,730.2	6,855.5	6,419.0	6,383.0	6,374.5	6,529.6	6,669.7	6,630.9	6,691.9	6,776.8	6,383.0	6,699.4	6,419.0	6,669.7
LIABILITIES + EQUITY																		
Accounts payable/liabilities	294.2	275.3	306.6	374.6	364.3	412.2	414.8	377.8	373.6	414.2	446.6	376.4	210.7	374.6	377.8	306.6	414.8	446.6
Current portion of LT debt			480.0	480.0	480.0	480.0								480.0		480.0	0.0	0.0
Other ST liabilities, net	80.5	92.9	189.9	189.9	189.9	189.9	189.9	189.9	189.9	189.9	189.9	189.9	122.6	189.9	189.9	189.9	189.9	189.9
Total current liabilities	639.0	671.9	1,280.3	1,348.3	1,338.0	1,385.9	908.6	871.5	867.3	908.0	940.4	870.1	555.8	1,348.3	871.5	1,280.3	908.6	940.4
LT debt, net	2,048.3	2,048.6	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	2,048.1	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4
Long-term income tax liability																0.0	0.0	0.0
Cross-licensing liability																0.0	0.0	0.0
Other LT liabilities	187.1	180.8	230.3	230.3	230.3	230.3	230.3	230.3	230.3	230.3	230.3	230.3	185.3	230.3	230.3	230.3	230.3	230.3
Total liabilities	2,874.4	2,901.3	3,061.0	3,129.0	3,118.8	3,166.6	2,689.3	2,652.2	2,648.0	2,688.7	2,721.1	2,650.8	2,789.1	3,129.0	2,652.2	3,061.0	2,689.3	2,721.1
Shareholders' equity	3,812.2	3,817.2	3,638.3	3,647.7	3,611.4	3,688.9	3,729.7	3,730.7	3,726.5	3,840.9	3,948.6	3,980.1	3,902.8	3,647.7	3,730.7	3,638.3	3,729.7	3,948.6
Total liabilities & equity	6,686.6	6,718.5	6,699.4	6,776.8	6,730.2	6,855.5	6,419.0	6,383.0	6,374.5	6,529.6	6,669.7	6,630.9	6,691.9	6,776.8	6,383.0	6,699.4	6,419.0	6,669.7
Cash and Liquidity Ratios																		
Total cash (incl. rest. cash)	744.4	706.8	1,072.0	1,391.3	1,101.5	1,088.7	904.4	1,104.8	925.5	866.4	1,256.6	1,374.9	808.8	1,391.3	1,104.8	1,072.0	904.4	1,256.6
ST debt			480.0	480.0	480.0	480.0								480.0		480.0	0.0	0.0
LT debt	2,048.3	2,048.6	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	2,048.1	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4
Total debt	2,048.3	2,048.6	2,030.4	2,030.4	2,030.4	2,030.4	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	1,550.4	2,048.1	2,030.4	1,550.4	2,030.4	1,550.4	1,550.4
Net Cash	-1,303.8	-1,341.7	-958.4	-639.1	-928.9	-941.7	-646.1	-445.7	-624.9	-684.0	-293.9	-175.5	-1,239.3	-639.1	-445.7	-958.4	-646.1	-293.9
Net Cash/dil. share	-\$13.24	-\$13.61	-\$9.87	-\$6.61	-\$9.70	-\$9.94	-\$6.88	-\$4.80	-\$6.80	-\$7.52	-\$3.26	-\$1.97	-\$12.08	-\$6.54	-\$4.73	-\$9.74	-\$6.78	-\$3.21

Source: BofA Global Research estimates, company reports

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Exhibit 16: Qorvo – Cash Flow Statement (\$mn)

We model FCF margin in the high-teens

	1Q24	2Q24	3Q23	4Q24E	1Q25E	2Q25E	3Q25E	4Q25E	1Q26E	2Q26E	3Q26E	4Q26E	FY23	FY24E	FY25E	CY23	CY24E	CY25E
	Jun-23	Sep-23	Dec-23	Mar-24E	Jun-24E	Sep-24E	Dec-24E	Mar-25E	Jun-25E	Sep-25E	Dec-25E	Mar-26E	Mar-23	Mar-24E	Mar-25E	Dec-23	Dec-24E	Dec-25E
Operating Activities:																		
Net income (loss)	(43.6)	97.5	(126.9)	10.9	6.2	113.1	77.4	41.1	35.9	148.5	142.3	69.9	103.1	(62.2)	237.9	(211.4)	207.6	367.8
Depreciation	50.0	49.2	45.0	50.9	50.9	63.4	61.5	55.3	55.1	66.3	65.3	58.2	206.4	195.1	231.0	195.5	226.7	242.0
Amortization	31.0	30.1	30.0	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	132.4	120.9	119.1	124.0	119.1	119.1
Excess tax benefit from stock options																		
Deferred income taxes	(18.3)	19.9											(66.1)	1.6		(62.0)		
Asset impairments/restructuring													227.1			227.1		
(Gain) loss on disposal of assets																		
Share-based compensation expense	38.4	39.1	21.7	18.7	27.7	34.6	33.5	30.1	30.1	36.2	35.6	31.8	105.6	118.0	126.0	117.9	114.6	132.0
Other	3.6	60.8	411.6										37.7	475.9		418.2		
Changes in op assets/liabilities:																		
Accounts receivable, net	(3.3)	(284.9)	108.9	77.2	(50.7)	(113.0)	78.9	49.8	1.1	(89.5)	7.9	56.6	264.8	(102.1)	(35.0)	(116.3)	(7.6)	(30.7)
Inventories	(121.7)	76.0	113.2	164.7	(197.1)	(31.0)	167.8	181.5	(181.9)	(136.8)	230.4	90.0	(81.5)	232.2	121.2	84.9	104.4	93.2
Prepaid expense & other cur assets	(0.8)	(1.8)	(22.4)										43.2	(25.0)		(24.7)		
Acct payable and accr. liabilities	146.3	2.3	31.4	68.0	(10.3)	47.9	2.6	(37.1)	(4.2)	40.7	32.4	(70.2)	(115.5)	248.0	3.1	149.8	108.2	31.8
Income tax payable/recoverable	(6.8)	(2.9)											(33.2)	(9.7)		(25.6)		
Other current assets			(22.4)											(22.4)		(22.4)		
Other liabilities	(30.0)	7.7	(97.1)										36.8	(119.3)		(141.0)		
Net cash from operations	44.9	93.0	492.9	420.2	(143.6)	144.8	451.6	350.6	(34.1)	95.1	543.6	266.0	847.5	1051.0	803.4	700.5	873.0	955.2
Investing activities:																		
Purchase of PP&E	(39.5)	(28.6)	(26.4)	(50.9)	(46.2)	(57.7)	(55.9)	(50.2)	(45.1)	(54.3)	(53.4)	(47.7)	(159.0)	(145.3)	(210.0)	(128.6)	(210.7)	(203.0)
Proceeds from sale of PP&E	41.7	5.6												47.3		47.3		
Maturities of securities																		
Purchase of businesses, net													(0.1)					
Purchase of intangibles																		
Purchase of securities																		
Investment in other companies																		
Other	(6.2)	2.8											5.6	(3.4)		(5.4)		
Net cash from investing	(3.9)	(20.3)	(26.4)	(50.9)	(46.2)	(57.7)	(55.9)	(50.2)	(45.1)	(54.3)	(53.4)	(47.7)	(153.4)	(101.5)	(210.0)	(86.6)	(210.7)	(203.0)
Financing Activities:																		
Payment of debt																		
Repayment of Long-Term Debt							(480.0)								(480.0)		(480.0)	
Proceeds from no net cost loan																		
Proceeds from stock issuance	10.0	11.0											32.5	21.0		32.7		
Tax withholding for employees for RSUs	(5.4)	(20.1)											(23.4)	(25.5)		(26.2)		
Restricted cash from financing																		
Share repurchase	(100.0)	(100.0)	(100.0)	(50.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(861.8)	(350.0)	(400.0)	(450.0)	(350.0)	(400.0)
Net borrowings on lines of credit																		
Net cash from financing	(105.0)	(109.3)	(101.3)	(50.0)	(100.0)	(100.0)	(580.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(853.3)	(365.7)	(880.0)	(455.0)	(830.0)	(400.0)
Change in cash/equivalents	(64.1)	(36.6)	365.2	319.3	(289.8)	(12.9)	(184.3)	200.4	(179.2)	(59.1)	390.2	118.4	(159.2)	583.9	(286.6)	158.9	(167.6)	352.2
Effect of exchange rate changes	(0.3)	(1.0)											(4.6)	(1.3)		(5.7)		
Cash/equivalents at the start	808.8	744.4	706.8	1072.0	1391.3	1101.5	1088.7	904.4	1104.8	925.5	866.4	1256.6	972.6	808.8	1391.3	918.8	1072.0	904.4
Cash/equivalents at the end	744.4	706.8	1072.0	1391.3	1101.5	1088.7	904.4	1104.8	925.5	866.4	1256.6	1374.9	808.8	1391.3	1104.8	1072.0	904.4	1256.6

Source: BofA Global Research estimates, company reports

BofA GLOBAL RESEARCH



Price objective basis & risk

Qorvo Inc. (QRVO)

Our \$110 price objective is based on 12x our CY25E Non-GAAP EPS (ex. stock comp expense, cash adjusted), only in the middle of QRVO's 9x-19x trading range and smartphone peers, justified given uncertainty around consumer/mobile demand.

Downside risks to our PO are: 1) Potential share losses in handset power amplifiers (PAs) where product cycles are short (6-12 months) resulting in changes in power amplifier selection by key customers, 2) Customer concentration at Apple and Samsung, 3) Gross margin headwinds associated with lower factory utilization due to weaker design win momentum, 4) Weaker smartphone growth trajectory, and 5) Semiconductor cyclicality driven by strong macroeconomic conditions and/or supply chain expansion, 6) COVID-19 headwinds further impacting supply chain or creating demand destruction.

Upside risks to our PO are: 1) higher RF content growth in new smartphones more than offsets quarterly unit volatility in Q4, 2) M&A that diversifies the business away from mobile and adds more long life cycle business, and 3) substantial share gain against peers in smartphone driven by higher R&D spend.

Analyst Certification

I, Vivek Arya, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

US - Semiconductors and Semiconductor Capital Equipment Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Advanced Micro Devices, Inc	AMD	AMD US	Vivek Arya
	Analog Devices Inc.	ADI	ADI US	Vivek Arya
	Applied Materials, Inc.	AMAT	AMAT US	Vivek Arya
	Arm Holdings	ARM	ARM US	Vivek Arya
	Broadcom Inc	AVGO	AVGO US	Vivek Arya
	Cadence	CDNS	CDNS US	Vivek Arya
	Camtek	CAMT	CAMT US	Vivek Arya
	KLA Corporation	KLAC	KLAC US	Vivek Arya
	Lam Research Corp.	LRCX	LRCX US	Vivek Arya
	M/A-Com	MTSI	MTSI US	Vivek Arya
	Marvell Technology Group Ltd.	MRVL	MRVL US	Vivek Arya
	Microchip	MCHP	MCHP US	Vivek Arya
	Micron Technology, Inc	MU	MU US	Vivek Arya
	Nova	NVMI	NVMI US	Vivek Arya
	NVIDIA Corporation	NVDA	NVDA US	Vivek Arya
	NXP Semiconductors NV	NXPI	NXPI US	Vivek Arya
	onsemi	ON	ON US	Vivek Arya
	Synopsys	SNPS	SNPS US	Vivek Arya
NEUTRAL				
	Advanced Energy Industries	AEIS	AEIS US	Duksan Jang
	Allegro MicroSystems	ALGM	ALGM US	Blake Friedman
	Axcelis Technologies	ACLS	ACLS US	Duksan Jang
	Coherent Corp	COHR	COHR US	Vivek Arya
	GlobalFoundries	GFS	GFS US	Vivek Arya
	Intel	INTC	INTC US	Vivek Arya
	Lattice Semiconductor	LSCC	LSCC US	Blake Friedman
	Texas Instruments Inc.	TXN	TXN US	Vivek Arya
UNDERPERFORM				
	Ambarella	AMBA	AMBA US	Vivek Arya
	Credo Technology	CRDO	CRDO US	Vivek Arya



US - Semiconductors and Semiconductor Capital Equipment Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Lumentum Holdings	LITE	LITE US	Vivek Arya
	Qorvo Inc.	QRVO	QRVO US	Vivek Arya
	Skyworks Solutions, Inc.	SWKS	SWKS US	Vivek Arya
	Teradyne	TER	TER US	Vivek Arya
	Wolfspeed Inc	WOLF	WOLF US	Vivek Arya

iQmethodSM Measures Definitions**Business Performance**

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

EV / EBITDA

Numerator

NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization

Net Income

Operating Profit

Expected 5 Year CAGR From Latest Actual

Cash Flow From Operations – Total Capex

Numerator

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash & Equivalents

EBIT

Numerator

Current Share Price

Current Share Price

Annualised Declared Cash Dividend

Cash Flow From Operations – Total Capex

EV = Current Share Price × Current Shares + Minority Equity + Net Debt +

Other LT Liabilities

Enterprise Value

Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill

Amortization

Shareholders' Equity

Sales

N/A

N/A

Denominator

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

Denominator

Diluted Earnings Per Share (Basis As Specified)

Shareholders' Equity / Current Basic Shares

Current Share Price

Market Cap = Current Share Price × Current Basic Shares

Sales

Basic EBIT + Depreciation + Amortization

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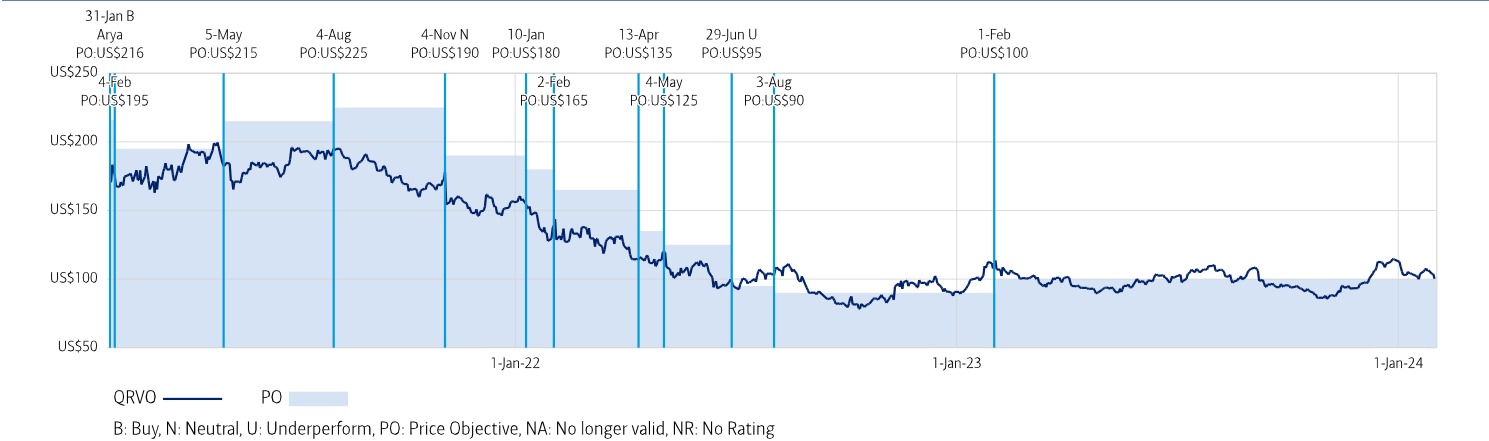
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Important Disclosures

Qorvo Inc. (QRVO) Price Chart



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Equity Investment Rating Distribution: Technology Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	215	53.09%	Buy	111	51.63%
Hold	97	23.95%	Hold	45	46.39%
Sell	93	22.96%	Sell	24	25.81%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

^{R1} Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R2}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R2} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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