

Component Signals

MLCC production: Maintain Buy on Murata and TDK on solid earnings support

Price Objective Change

Impact of front-loaded orders became evident in Jan-Mar

According to METI statistics, domestic ceramic capacitor (MLCC) production value in March 2026 declined 9% YoY and increased 14% MoM. While orders for AI servers continue to expand, front-loaded orders likely persisted in the IT equipment market, reflecting concerns over future price increases and material shortages. As a result, product mix rather deteriorated. The overall ASP in March declined 23% YoY, marking a significant decline for three consecutive months. Meanwhile, production volume increased 18% YoY and 12% MoM, which we believe contributed to higher utilization rates at each company.

S/D balance to improve on rising high-end demand

Given that the BB ratio of major MLCC makers exceeded 1.3 in Jan-Mar 2026, production value from Apr to Jun onward is highly likely to improve. We think a reactionary decline from front-loaded orders, mainly for the IT equipment market, could occur. However, production volume of small, high-capacitance and high-voltage products for AI servers is increasing, and utilization rates are rising, particularly in front-end processes. With tightening supply demand balance, price trends should also stabilize.

Maintain Buy on Murata Mfg and TDK

Among the three domestic MLCC makers, we maintain Buy on Murata Mfg (6981) and TDK (6762). Through mix improvement and stabilization in MLCC ASP, we expect Murata Mfg profitability to show steady improvement. For TDK, in addition to solid battery performance and expansion in HDD-related components, MLCC and inductor demand for AI servers should expand from 2H onward.

Taiyo Yuden share price reflects excessive expectations

For Taiyo Yuden (6976), we raise our earnings forecasts in line with expanding MLCC orders as shown in Exhibit 6, and raise our price objective (PO) from ¥3,250 to ¥3,800. However, we reiterate our Underperform rating. The reasons are (1) we believe excessive expectations for MLCC price increases are reflected in the share price, as domestic MLCC makers deny price hikes based solely on supply/demand, and (2) Taiyo Yuden's MLCC operating profit (OP) margin remains in the single digits owing to weak productivity. Our new PO implies significant downside from the current share price, but given the company's current profitability, we judge this to be an appropriate level.

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Exhibit 1: Maintain Buy on Murata/TKD PO of MLCC makers

	Price Objective		Last
	Yen		May 19
	Old	New	¥
TDK	Buy (C-1-7)		
(6762)	3,500	→ 3,500	2,985.5
ADR: TTDKY	22.58	→ 22.58	19.11
Murata	Buy (B-1-7)		
(6981)	6,200	→ 6,200	6,171
Taiyo Yuden	U/P (C-3-7)		
(6976)	3,250	↗ 3,800	7,194

Source: BofA Global Research
Note: U/P = Underperform

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ASP: Average Selling Price

BB ratio: Book-to-Bill Ratio

HDD: Hard Disk Drive

METI: Ministry of Economy, Trade and Industry

S/D: Supply/Demand

MLCC: Multi-layer Ceramic Capacitor

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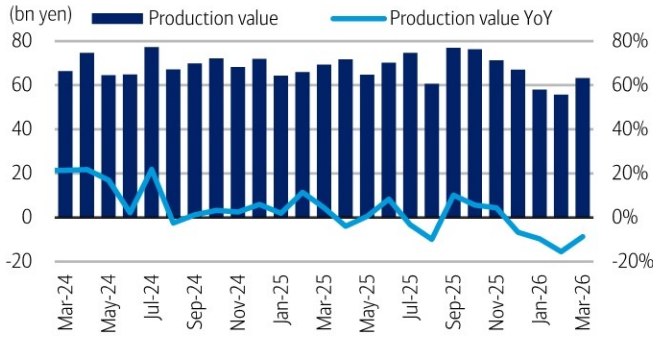
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Refer to important disclosures on page 7 to 10. Analyst Certification on page 5. Price Objective Basis/Risk on page 5.

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Exhibit 2: Production value in March 2026 declined 9% YoY

Japan MLCC production value and YoY growth

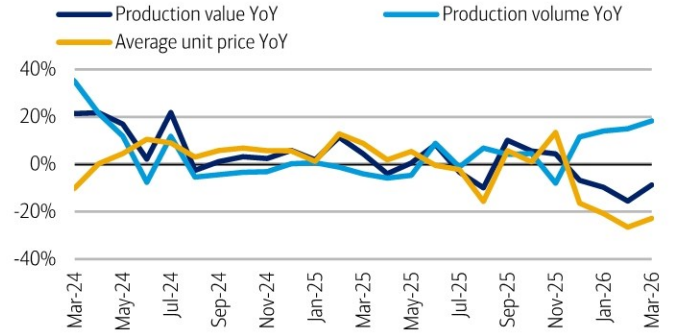


Source: METI, BofA Global Research

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Exhibit 3: Product mix deteriorated due to front-loaded orders

Japan MLCC production value, volume and ASP



Source: METI, BofA Global Research

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Exhibit 4: Production volumes continued to grow at a double-digit rate YoY

Japan domestic ceramic capacitor production

	Volume (K units)	YoY	MoM	Value (mn yen)	YoY	MoM	Average price (yen)	YoY	MoM
Mar-23	66,015,902	-36.6%	19.2%	54,682	-17.2%	11.9%	0.83	30.6%	-6.1%
Apr-23	79,034,337	-26.2%	19.7%	61,342	-8.8%	12.2%	0.78	23.5%	-6.3%
May-23	73,302,223	-23.9%	-7.3%	55,121	-15.6%	-10.1%	0.75	10.8%	-3.1%
Jun-23	89,475,861	-0.4%	22.1%	63,479	-1.3%	15.2%	0.71	-0.9%	-5.7%
Jul-23	89,345,899	-7.9%	-0.1%	63,417	-5.0%	-0.1%	0.71	3.2%	0.0%
Aug-23	97,603,510	2.2%	9.2%	68,976	-0.3%	8.8%	0.71	-2.4%	-0.4%
Sep-23	104,649,030	5.9%	7.2%	69,048	-2.5%	0.1%	0.66	-8.0%	-6.6%
Oct-23	93,806,210	12.9%	-10.4%	69,981	7.2%	1.4%	0.75	-5.0%	13.1%
Nov-23	91,179,426	18.9%	-2.8%	66,639	11.7%	-4.8%	0.73	-6.0%	-2.0%
Dec-23	94,155,954	12.5%	3.3%	67,911	5.5%	1.9%	0.72	-6.3%	-1.3%
Jan-24	82,951,377	18.9%	-11.9%	63,083	18.3%	-7.1%	0.76	-0.5%	5.4%
Feb-24	79,361,175	43.2%	-4.3%	59,222	21.2%	-6.1%	0.75	-15.4%	-1.9%
Mar-24	89,103,904	35.0%	12.3%	66,383	21.4%	12.1%	0.75	-10.1%	-0.2%
Apr-24	95,933,302	21.4%	7.7%	74,662	21.7%	12.5%	0.78	0.3%	4.5%
May-24	82,009,859	11.9%	-14.5%	64,473	17.0%	-13.6%	0.79	4.5%	1.0%
Jun-24	82,678,033	-7.6%	0.8%	64,841	2.1%	0.6%	0.78	10.5%	-0.2%
Jul-24	99,894,095	11.8%	20.8%	77,261	21.8%	19.2%	0.77	9.0%	-1.4%
Aug-24	92,324,886	-5.4%	-7.6%	67,223	-2.5%	-13.0%	0.73	3.0%	-5.9%
Sep-24	100,074,749	-4.4%	8.4%	69,853	1.2%	3.9%	0.70	5.8%	-4.1%
Oct-24	90,642,911	-3.4%	-9.4%	72,213	3.2%	3.4%	0.80	6.8%	14.1%
Nov-24	88,365,306	-3.1%	-2.5%	68,271	2.4%	-5.5%	0.77	5.7%	-3.0%
Dec-24	94,341,682	0.2%	6.8%	71,916	5.9%	5.3%	0.76	5.7%	-1.3%
Jan-25	83,483,545	0.6%	-11.5%	64,265	1.9%	-10.6%	0.77	1.2%	1.0%
Feb-25	78,378,362	-1.2%	-6.1%	65,986	11.4%	2.7%	0.84	12.8%	9.4%
Mar-25	85,478,775	-4.1%	9.1%	69,276	4.4%	5.0%	0.81	8.8%	-3.7%
Apr-25	90,380,132	-5.8%	5.7%	71,674	-4.0%	3.5%	0.79	1.9%	-2.1%
May-25	78,214,941	-4.6%	-13.5%	64,817	0.5%	-9.6%	0.83	5.4%	4.5%
Jun-25	89,974,684	8.8%	15.0%	70,222	8.3%	8.3%	0.78	-0.5%	-5.8%
Jul-25	98,762,026	-1.1%	9.8%	74,698	-3.3%	6.4%	0.76	-2.2%	-3.1%
Aug-25	98,615,801	6.8%	-0.1%	60,557	-9.9%	-18.9%	0.61	-15.7%	-18.8%
Sep-25	104,232,201	4.2%	5.7%	76,915	10.1%	27.0%	0.74	5.7%	20.2%
Oct-25	94,735,172	4.5%	-9.1%	76,247	5.6%	-0.9%	0.80	1.0%	9.1%
Nov-25	81,351,726	-7.9%	-14.1%	71,276	4.4%	-6.5%	0.88	13.4%	8.9%
Dec-25	105,236,963	11.5%	29.4%	67,068	-6.7%	-5.9%	0.64	-16.4%	-27.3%
Jan-26	95,211,635	14.0%	-9.5%	58,039	-9.7%	-13.5%	0.61	-20.8%	-4.4%
Feb-26	90,094,255	14.9%	-5.4%	55,734	-15.5%	-4.0%	0.62	-26.5%	1.5%
Mar-26	101,116,355	18.3%	12.2%	63,248	-8.7%	13.5%	0.63	-22.8%	1.1%

Source: METI, BofA Global Research

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Exhibit 5: TDK (6762) - Double-digit profit growth YoY driven by stable battery performance and expansion in HDD-related businesses

Consolidated earnings estimates

	Sales (mn¥)	YoY (%)	OP (mn¥)	YoY (%)	PTP (mn¥)	YoY (%)	NP (mn¥)	YoY (%)	EPS (¥)	P/E (x)	P/CF (x)
Quarterly											
FY3/27 1Q BofA E	624,400	16.5	64,200	13.8	67,800	17.6	50,300	21.3	25.9	-	-
FY3/27 2Q BofA E	684,200	5.7	88,600	-2.9	92,200	2.6	68,600	-1.9	35.3	-	-
FY3/27 3Q BofA E	678,700	0.5	85,200	2.5	89,100	1.7	66,300	-5.0	34.1	-	-
FY3/27 4Q BofA E	648,700	0.4	63,700	52.5	67,700	61.8	50,300	245.5	25.9	-	-
Full year											
FY3/26 A	2,504,820	13.6	272,415	21.5	276,810	16.4	195,663	17.1	103.0	29.8	14.9
FY3/27 CoE	2,580,000	3.0	295,000	8.3	300,000	8.4	225,000	15.0	118.5	25.1	12.4
FY3/27 BofA E	2,635,500	5.2	301,700	10.8	316,800	14.4	235,500	20.4	121.2	24.6	12.2
FY3/27 Consensus E	2,624,127	4.8	301,238	10.6	311,194	12.4	229,367	17.2	118.0	25.2	12.5
FY3/28 BofA E	2,821,193	7.0	339,800	12.6	360,210	13.7	268,610	14.1	138.2	21.5	10.8
FY3/28 Consensus E	2,821,575	7.5	354,252	17.6	362,306	16.4	267,303	16.5	137.5	21.7	11.4
FY3/29 BofA E	2,994,593	6.1	382,200	12.5	404,951	12.4	302,151	12.5	155.4	19.2	9.9
FY3/29 Consensus E	2,990,009	6.0	398,040	12.4	407,476	12.5	300,469	12.4	154.6	19.3	10.7

Source: Company data, Visible Alpha, BofA Global Research estimates

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Exhibit 6: Murata Mfg (6981) - Component segment profitability to improve on stabilization in MLCC ASP

Consolidated earnings estimates

	Sales (mn¥)	YoY (%)	OP (mn¥)	YoY (%)	PTP (mn¥)	YoY (%)	NP (mn¥)	YoY (%)	EPS (¥)	P/E (x)	P/CF (x)
Quarterly											
FY3/27 1Q BofA E	465,000	11.7	88,700	43.9	93,200	49.5	70,800	42.4	36.1	-	-
FY3/27 2Q BofA E	529,000	8.7	113,500	9.6	118,000	4.9	89,700	8.5	45.7	-	-
FY3/27 3Q BofA E	510,000	9.1	109,000	187.8	113,500	129.3	86,300	245.6	44.0	-	-
FY3/27 4Q BofA E	503,000	9.2	104,800	33.0	109,300	29.6	83,100	8.8	42.3	-	-
Full year											
FY3/26 A	1,830,856	5.0	281,835	0.8	308,643	1.4	233,920	0.0	127.7	40.3	24.9
FY3/27 CoE	1,960,000	7.1	380,000	34.8	390,000	26.4	293,000	25.3	161.0	38.3	26.1
FY3/27 BofA E	2,007,000	9.6	416,000	47.6	434,000	40.6	329,900	41.0	168.1	36.7	23.8
FY3/27 Consensus E	1,994,091	8.9	412,604	46.4	429,999	39.3	324,654	38.8	165.4	37.3	23.5
FY3/28 BofA E	2,250,100	12.1	511,000	22.8	527,200	21.5	400,700	21.5	204.1	30.2	20.4
FY3/28 Consensus E	2,295,104	15.1	547,849	32.8	565,632	31.5	426,925	31.5	217.5	28.4	19.0
FY3/29 BofA E	2,510,600	11.6	608,700	19.1	626,700	18.9	476,300	18.9	242.6	25.4	17.7
FY3/28 Consensus E	2,519,979	9.8	610,950	11.5	629,783	11.3	475,225	11.3	242.1	25.5	17.5

Source: Company data, Visible Alpha, BofA Global Research estimates

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Exhibit 7: Taiyo Yuden (6976) - The gap between the current share price level and fundamentals is widening

Consolidated earnings estimates

	Sales (mn¥)	YoY (%)	OP (mn¥)	YoY (%)	RP (mn¥)	YoY (%)	NP (mn¥)	YoY (%)	EPS (¥)	P/E (x)	P/CF (x)
Quarterly											
FY3/27 1Q BofA E	90,800	7.1	6,100	131.9	5,900	-29.6	4,000	-36.6	27.1	-	-
FY3/27 2Q BofA E	100,400	8.2	10,500	78.5	10,300	31.2	7,100	10.7	48.2	-	-
FY3/27 3Q BofA E	99,200	12.1	9,900	32.1	9,700	-17.1	6,700	-5.4	45.4	-	-
FY3/27 4Q BofA E	97,000	8.2	8,500	117.7	8,300	83.4	5,700	139.9	38.7	-	-
Full year											
FY3/26 A	355,341	4.1	19,996	91.2	24,129	129.4	14,806	536.0	107.6	66.9	19.4
FY3/27 CoE	384,000	8.1	30,000	50.0	27,000	11.9	18,000	21.6	143.9	50.0	16.1
FY3/27 BofA E (New)	387,400	9.0	34,900	74.5	34,100	41.3	23,400	58.0	158.7	45.3	14.8
FY3/27 BofA E (Old)	372,300	4.8	32,900	64.5	33,700	39.7	23,900	61.4	162.1	44.4	14.4
FY3/27 Consensus E	381,722	7.4	36,013	80.1	35,778	48.3	24,865	67.9	190.2	37.8	12.8
FY3/28 BofA E (New)	421,800	8.9	46,100	32.1	45,600	33.7	31,700	35.5	215.0	33.5	13.2
FY3/28 BofA E (Old)	396,300	6.4	39,800	21.0	40,800	21.1	29,700	24.3	201.5	35.7	13.1
FY3/28 Consensus E	418,254	9.6	52,468	45.7	53,257	48.9	37,722	51.7	288.6	24.9	10.6
FY3/29 BofA E (New)	461,700	9.5	57,500	24.7	57,300	25.7	40,100	26.5	272.0	26.4	11.5
FY3/29 BofA E (Old)	423,600	6.9	49,100	23.4	50,200	23.0	36,600	23.2	248.3	29.0	10.5
FY3/29 Consensus E	465,102	11.2	76,994	46.7	78,933	48.2	54,358	44.1	415.8	17.3	8.8

Source: Company data, Visible Alpha, BofA Global Research estimates

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Our new PO of ¥3,800 is based on a P/E of 18x our FY3/28 EPS estimate. Considering the outlook for expanding MLCC orders, we raise the multiple from the previous 16x to the historical average level. However, MLCC profitability remains at a low single-digit level owing to weak productivity, making it difficult to assign a multiple above the historical average. In addition, although expectations for product price increases remain strong in some areas, such increases are not achievable at present. We see the shares as highly overvalued at current price.



Price objective basis & risk

TDK (6762 / TTDKF / TTDKY)

Our PO for TDK is ¥3,500 (\$22.58/ADR). The PO is based on a P/E of 25x our FY3/28 estimate. This level is approximately 10% above the upper end of the company's past five-year P/E range of 22x. In addition to (1) the medium-term to long-term expansion potential of the battery business, (2) profitability upside in passive components centered on automotive applications, and (3) an improving profitability outlook for magnetic application products, expansion in AI-related businesses has become increasingly evident, and we believe achieving a multiple above the historical upper range is sufficiently achievable. Risks to achieving our PO are (1) an accelerated slowdown in growth of the battery business, (2) inventory buildup and a slowdown in component demand in the HDD market, and (3) delays in the pace of profit expansion in the sensor business, mainly for automotive applications.

Taiyo Yuden (6976 / TYOYF)

Our PO for Taiyo Yuden is ¥3,800. The PO is based on a P/E of 18x our FY3/28 estimate. This level is in line with the company's 10-year historical average P/E. While earnings are on an improving trend supported by better MLCC utilization, profitability remains at a low level due to the burden of fixed costs and weak productivity. Given the lack of prospects for a significant improvement in profitability from next fiscal year onward, we expect the share price to continue trading near its historical average P/E level for the time being. Upside risks to our PO are (1) a stronger-than-expected recovery in demand for IT-related devices, including AI servers and AI-enabled PCs, and (2) an acceleration in the pace of earnings improvement in the inductors and integrated modules and devices businesses. On the other hand, downside risks are (1) a deterioration in the MLCC supply demand balance beyond our assumptions driven by slower growth in major applications such as smartphones, (2) continued deterioration in profitability in the integrated modules and devices business, particularly for the China smartphone market, and (3) yen appreciation exceeding our assumptions.

Murata Mfg (6981 / MRAAF)

Murata Mfg's price objective (PO) is ¥6,200. The base for our PO calculation is a P/E of 30x our FY3/28 estimate. This is about 10% above the upper end of the past 10-year range of 28x. We apply a P/E above the historical range upper limit in light of the significant expansion potential of the components business, including MLCCs for AI servers. Downside risks to our earnings forecasts and PO are: (1) a significant downside to production volumes of end products such as smartphones and automobiles caused by rising memory prices and shortages, (2) a slowdown in component demand exceeding our assumptions, (3) prolonged weakness in the communication module business, and (4) rapid yen appreciation from current levels. Upside risks are: (1) recovery in delivery share of high frequency modules for major customers, (2) accelerated expansion in electronic component demand for AI servers, and (3) demand recovery in key MLCC applications such as smartphones and automobiles.

Analyst Certification

I, Masashi Kubota, 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.



Japan – Semiconductors/Tech Hardware/ Software & IT Svc Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Advantest	ADTTF	6857 JP	Mikio Hirakawa
	Baycurrent	BYCRF	6532 JP	Hiromu Yabuki
	DISCO	DISPF	6146 JP	Mikio Hirakawa
	Fujitsu	FJTSF	6702 JP	Hideaki Tanaka
	Fujitsu	FJTSY	FJTSY US	Hideaki Tanaka
	Hitachi	HTHIF	6501 JP	Mikio Hirakawa
	Hitachi	HTHIY	HTHIY US	Mikio Hirakawa
	HOYA	HOCPF	7741 JP	Masashi Kubota
	HOYA	HOCPY	HOCPY US	Masashi Kubota
	Ibiden	IBIDF	4062 JP	Masashi Kubota
	JEOL	XJEOF	6951 JP	Mayako Ouchi
	KIOXIA	XIYUF	285A JP	Mikio Hirakawa
	Lasertec	LSRCF	6920 JP	Mikio Hirakawa
	MinebeaMitsumi	MNBEF	6479 JP	Masashi Kubota
	Mitsubishi Electric	MIELF	6503 JP	Mikio Hirakawa
	Murata Mfg	MRAAF	6981 JP	Masashi Kubota
	NEC	NIPNF	6701 JP	Hideaki Tanaka
	Niterra	NGKSF	5334 JP	Masashi Kubota
	Nitto Denko	NDEKF	6988 JP	Masashi Kubota
	Nomura Research Institute	NURAF	4307 JP	Hideaki Tanaka
	Nomura Research Institute	NRILY	NRILY US	Hideaki Tanaka
	Obic	OBIF	4684 JP	Hideaki Tanaka
	OBIC	OBICY	OBICY US	Hideaki Tanaka
	Obic Business Consultants	OBIBF	4733 JP	Hideaki Tanaka
	Oracle Japan	OCLCF	4716 JP	Hideaki Tanaka
	Panasonic	PCRFF	6752 JP	Mikio Hirakawa
	Renesas Electronics	RNECF	6723 JP	Mikio Hirakawa
	Rigaku Corporation	RGAKF	268A JP	Mikio Hirakawa
	Sony Group Corporation	SONY	SONY US	Mikio Hirakawa
	Sony Group Corporation	SNEJF	6758 JP	Mikio Hirakawa
	TDK	TTDKY	TTDKY US	Masashi Kubota
	TDK	TTDKF	6762 JP	Masashi Kubota
	Tokyo Electron	TOELF	8035 JP	Mikio Hirakawa
	Tokyo Seimitsu	TMIUF	7729 JP	Mayako Ouchi
	ULVAC	ULVAF	6728 JP	Mayako Ouchi
NEUTRAL				
	BIPROGY	NTULF	8056 JP	Hideaki Tanaka
	Iriso Electronics	IREEF	6908 JP	Hazel Xue
	Nikon	NINOF	7731 JP	Mayako Ouchi
	SCREEN Holdings	DINRF	7735 JP	Mikio Hirakawa
	TIS	TISNF	3626 JP	Hideaki Tanaka
	Trend Micro	TMICF	4704 JP	Hideaki Tanaka
UNDERPERFORM				
	Alps Alpine	APELF	6770 JP	Masashi Kubota
	Alps Alpine	APELY	APELY US	Masashi Kubota
	Anritsu	AITUF	6754 JP	Mikio Hirakawa
	Fuji Electric	FELTF	6504 JP	Mikio Hirakawa
	Hirose Electric	HRSEF	6806 JP	Masashi Kubota
	Japan Aviation	JPAVF	6807 JP	Masashi Kubota
	Kyocera	KYOCF	6971 JP	Masashi Kubota
	Kyocera	KYOCY	KYOCY US	Masashi Kubota
	Mabuchi Motor	MBUMF	6592 JP	Masashi Kubota
	NS Solutions	NSSXF	2327 JP	Hideaki Tanaka
	Otsuka Corp	OSUKF	4768 JP	Hideaki Tanaka
	Sharp	SHCAF	6753 JP	Mikio Hirakawa
	Taiyo Yuden	TYOYF	6976 JP	Masashi Kubota
RVW				
	Nidec	NNDNF	6594 JP	Masashi Kubota
	NIDEC	NJDCY	NJDCY US	Masashi Kubota



Disclosures

Important Disclosures

Murata Mfg (MRAAF) Price Chart



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Taiyo Yuden (TYOYF) Price Chart



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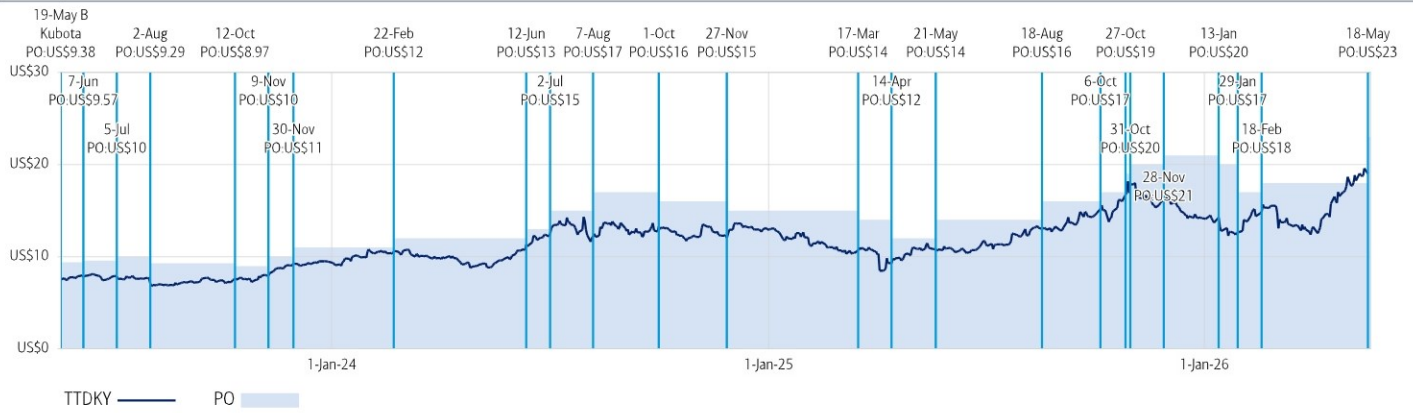
TDK (TTDKF) Price Chart



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TDK (TTDKY) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

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Equity Investment Rating Distribution: Electronics Group (as of 31 Mar 2026)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	34	56.67%	Buy	17	50.00%
Hold	10	16.67%	Hold	3	30.00%
Sell	16	26.67%	Sell	6	37.50%

Equity Investment Rating Distribution: Global Group (as of 31 Mar 2026)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1993	55.76%	Buy	1186	59.51%
Hold	821	22.97%	Hold	509	62.00%
Sell	760	21.26%	Sell	400	52.63%

^{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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