

United Microelectronics Corp.

4Q earnings in line; expect modest recovery in 2024; Buy on low valuation

Reiterate Rating: BUY | PO: 55.00 TWD | Price: 49.00 TWD

Buy on attractive valuation with 6-7% yield

UMC's 4Q23 earnings and 1Q24 guidance are in line with expectations. Our conversation with investors signals that many are bearish on mature foundry, and hence, UMC. However, we expect UMC's margin to remain resilient with its pricing strategy and product mix improvement. We are positive about its collaboration with Intel, in view of Total Addressable Market (TAM) expansion and differentiated specialty tech offering. We lift 2023E EPS by 0.4% but lower 2024/25E by 11/10% to reflect 4Q23 actuals, 1Q24 guidance, and a refreshed outlook. Our PO moves to NT\$55 on 12x 2Q24-1Q25E P/E (was 2024E). We think UMC's valuation is attractive at 11x/10x 2024/25E P/E with downside support from 6-7% yield. Reiterate Buy.

Positive on UMC/Intel collaboration

We like UMC's collaboration with Intel on 12nm. Besides what had been announced, UMC guides to expand new offerings to both existing and new clients, eyeing the growing 12nm market and catering for global clients, despite no one-off gains recognized. Intel would operate the 12nm fabs with UMC's assistance. The Performance Demonstration Kit (PDK) would be finished in 2025, followed by trial production in 2026, if it is well executed.

2024: expect revenue to be up 7-9% with resilient ASP

UMC is cautiously optimistic about 2024 and expects the revenue growth to be in line with the foundry industry at 7-9% YoY, given healthier inventory despite macro headwinds. We are encouraged to learn that UMC expects ASP to remain firm throughout 2024 after the one-off annual ASP adjustments in 1Q. We expect the 22/28nm S/D to stay robust thanks to ISP, OLED driver IC, and Wi-Fi. The firm guides to continuously improve product mix (specialty mix in 1Q has hit a high 50%) by reducing commodity mix. By application, PC/smartphone clients remain cautious after recent restocking, while auto clients take more time to digest inventory.

Estimates (Dec) (NT\$)	2021A	2022A	2023E	2024E	2025E
Net Income (Adjusted - mn)	55,780	87,198	60,990	54,947	63,895
EPS	4.57	7.09	4.91	4.43	5.15
EPS Change (YoY)	88.8%	55.2%	-30.7%	-9.9%	16.3%
Dividend / Share	3.00	3.60	2.70	3.00	3.50
Free Cash Flow / Share	3.46	5.34	(0.441)	(0.865)	2.70
ADR EPS (US\$)	0.817	1.19	0.789	0.710	0.826
ADR Dividend / Share (US\$)	0.537	0.604	0.433	0.482	0.562
Valuation (Dec)					
P/E	10.7x	6.9x	10.0x	11.1x	9.5x
Dividend Yield	6.1%	7.3%	5.5%	6.1%	7.1%
EV / EBITDA*	6.3x	4.2x	6.3x	6.0x	4.9x
Free Cash Flow Yield*	6.9%	10.7%	-0.9%	-1.7%	5.5%

* For full definitions of *IQmethod*SM measures, see page 11.

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Refer to important disclosures on page 12 to 15. Analyst Certification on page 9. Price Objective Basis/Risk on page 9.

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Timestamp: 31 January 2024 03:31PM EST

01 February 2024

Equity

Key Changes

(NT\$)	Previous	Current
Price Obj.	58.00	55.00
2023E EPS	4.89	4.91
2024E EPS	4.98	4.43
2025E EPS	5.73	5.15
2023E EBITDA (m)	96,261.7	95,733.7
2024E EBITDA (m)	114,051.8	100,984.1
2025E EBITDA (m)	133,602.1	124,483.6

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Stock Data

Price (Common / ADR)	49.00 TWD / 7.72 USD
Price Objective	55.00 TWD / 8.90 USD
Date Established	1-Feb-2024 / 1-Feb-2024
Investment Opinion	B-1-7 / B-1-7
52-Week Range	42.40 TWD-54.80 TWD
Market Value (mn)	19,709 USD
Market Value (mn)	613,961 TWD
Shares Outstanding (mn)	12,529.8 / 2,506.0
Average Daily Value (mn)	116.94 USD
Free Float	85.2%
BofA Ticker / Exchange	XUMIF / TAI
BofA Ticker / Exchange	UMC / NYS
Bloomberg / Reuters	2303 TT / 2303.TW
ROE (2023E)	17.6%
Net Dbt to Eqty (Dec-2022A)	-49.1%

Exhibit 1: Acronyms

Acronyms and the corresponding full names

Acronym	Full name
IC	Integrated Circuit
ISP	Image Sensor Processor
OLED	Organic Light-Emitting Diode
PDK	Performance Demonstration Kit
TAM	Total Addressable Market
S/D	Supply/Demand

Source: BofA Global Research

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iQprofileSM United Microelectronics Corp.

Key Income Statement Data (Dec)	2021A	2022A	2023E	2024E	2025E
(NT\$ Millions)					
Sales	213,011	278,705	222,533	240,157	268,696
Gross Profit	72,050	125,764	77,744	76,621	89,669
Sell General & Admin Expense	(12,661)	(13,856)	(10,701)	(11,082)	(11,813)
Operating Profit	51,686	104,292	57,890	55,579	66,019
Net Interest & Other Income	10,117	1,805	13,022	7,606	7,513
Associates	NA	NA	NA	NA	NA
Pretax Income	61,803	106,097	70,912	63,185	73,531
Tax (expense) / Benefit	(6,691)	(18,079)	(9,472)	(8,246)	(9,646)
Net Income (Adjusted)	55,780	87,198	60,990	54,947	63,895
Average Fully Diluted Shares Outstanding	12,218	12,306	12,414	12,414	12,414

Key Cash Flow Statement Data

Net Income	55,780	87,198	60,990	54,947	63,895
Depreciation & Amortization	44,180	41,328	37,843	45,405	58,465
Change in Working Capital	(8,774)	(8,262)	2,542	(1,172)	(3,874)
Deferred Taxation Charge	NA	NA	NA	NA	NA
Other Adjustments, Net	(834)	25,596	(15,375)	(7,615)	(7,523)
Cash Flow from Operations	90,352	145,861	86,000	91,566	110,964
Capital Expenditure	(48,035)	(80,128)	(91,474)	(102,300)	(77,500)
(Acquisition) / Disposal of Investments	731	28,497	1,553	0	0
Other Cash Inflow / (Outflow)	(14,860)	(2,797)	(7,866)	2,000	2,000
Cash Flow from Investing	(62,163)	(54,427)	(97,786)	(100,300)	(75,500)
Shares Issue / (Repurchase)	0	0	0	0	0
Cost of Dividends Paid	(19,876)	(37,450)	(45,017)	0	0
Cash Flow from Financing	12,490	(57,255)	(29,086)	(31,758)	(33,509)
Free Cash Flow	42,317	65,733	(5,474)	(10,734)	33,464
Net Debt	(97,173)	(164,771)	(101,258)	(66,811)	(69,770)
Change in Net Debt	(8,284)	(54,148)	84,237	40,493	(1,954)

Key Balance Sheet Data

Property, Plant & Equipment	129,942	170,982	239,123	282,876	304,391
Other Non-Current Assets	101,212	109,699	103,267	108,180	108,487
Trade Receivables	35,190	36,975	29,586	34,130	36,172
Cash & Equivalents	142,069	178,600	137,686	97,239	99,198
Other Current Assets	56,014	36,796	49,525	41,989	43,799
Total Assets	464,427	533,052	559,187	564,413	592,047
Long-Term Debt	5,640	6,242	6,891	6,891	6,891
Other Non-Current Liabilities	72,130	82,794	93,702	95,956	96,490
Short-Term Debt	39,256	7,587	29,537	23,537	22,537
Other Current Liabilities	66,198	100,979	69,478	81,175	82,932
Total Liabilities	183,224	197,601	199,608	207,559	208,850
Total Equity	281,203	335,451	359,579	356,854	383,197
Total Equity & Liabilities	464,427	533,052	559,187	564,413	592,047

iQmethodSM - Bus Performance*

Return On Capital Employed	12.7%	21.2%	11.8%	10.7%	12.3%
Return On Equity	21.6%	28.3%	17.6%	15.4%	17.3%
Operating Margin	24.3%	37.4%	26.0%	23.1%	24.6%
EBITDA Margin	45.0%	52.2%	43.0%	42.0%	46.3%

iQmethodSM - Quality of Earnings*

Cash Realization Ratio	1.6x	1.7x	1.4x	1.7x	1.7x
Asset Replacement Ratio	1.1x	1.9x	2.4x	2.3x	1.3x
Tax Rate (Reported)	10.8%	17.0%	13.4%	13.1%	13.1%
Net Debt-to-Equity Ratio	-34.6%	-49.1%	-28.2%	-18.7%	-18.2%
Interest Cover	26.3x	NM	32.4x	24.7x	33.3x

Key Metrics

* For full definitions of iQmethodSM measures, see page 11.

Company Sector

Semiconductors

Company Description

Founded in 1980, United Microelectronics Corporation (UMC), and listed in 1985, UMC is the second biggest foundry company in Taiwan. It has about 8% market share in the foundry space, and the number is higher in mature technology. By wafer size, it has 55-60%/40-45% capacity in 12"/8" wafers, and its capacity is mainly located in Greater China.

Investment Rationale

We have a Buy rating on UMC, in view of cyclical tailwind from chip supply shortage which should boost its ASP/margin, as well as sustained demand in mature technology including 28nm.

Stock Data

Shares / ADR	5.00
Price to Book Value	1.7x

Key Changes

(US\$)	Previous	Current
Price Obj.	9.40	8.90
2024E EPS	0.80	0.71
2025E EPS	0.92	0.83

4Q results/1Q guidance in-line

The 4Q23 net income came in at NT\$13.2bn (EPS: NT\$1.06), 3%/7% ahead of our/consensus estimates, with a slightly lower margin offset by better non-op/lower tax expenses. Gross margin remained resilient at 32.4%, in line with previous guidance of low-30%. UTR (utilization rate) was 66% in 4Q, slightly down from 67% in 3Q.

Into 1Q24, the wafer shipments are guided to increase 2-3% QoQ, while the ASP in US\$ terms is guided to fall 5% QoQ, mainly due to the one-off annual pricing adjustment and a product mix change. Gross margin is likely to be at ~30% (vs. prior BofAe/consensus at 30-33%), factoring in a lower UTR of low-60% in 1Q. By application, management sees continuous inventory digestion in auto/industrial segments, while computing/communication/consumer segments would likely remain steady with stabilized market dynamics.

Exhibit 2: 4Q23 results review

4Q results came in 3%/7% above BofAe/consensus estimates

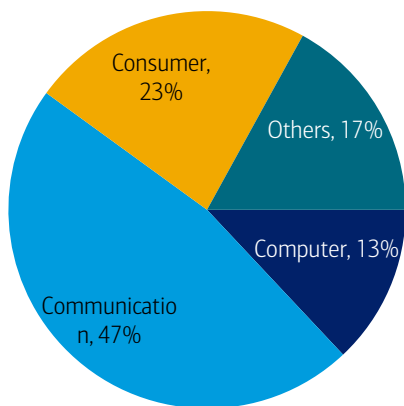
NT\$mn	4Q22A	3Q23A	4Q23A	QoQ %	YoY %	BofAe	Diff (%)	Consensus	Diff (%)
Revenue	67,836	57,069	54,958	-3.7%	-19.0%	54,509	0.8%	54,741	0.4%
Gross profit	29,124	20,461	17,806	-13.0%	-38.9%	17,988	-1.0%	17,935	-0.7%
Gross margin	42.9%	35.9%	32.4%	-3.5ppt	-10.5ppt	33.0%	-0.6ppt	32.8%	-0.4ppt
Operating income	23,637	15,312	12,423	-18.9%	-47.4%	12,913	-3.8%	12,707	-2.2%
Operating margin	34.8%	26.8%	22.6%	-4.2ppt	-12.2ppt	23.7%	-1.1ppt	23.2%	-0.6ppt
Pretax income	24,526	18,648	14,650	-21.4%	-40.3%	14,911	-1.8%	13,733	6.7%
Pretax margin	36.2%	32.7%	26.7%	-6.0ppt	-9.5ppt	27.4%	-0.7ppt	25.1%	1.6ppt
Net income (A)	19,068	15,971	13,195	-17.4%	-30.8%	12,753	3.5%	12,301	7.3%
EPS (NT\$)	1.55	1.29	1.06	-17.7%	-31.4%	1.03	3.1%	0.99	7.3%

Source: BofA Global Research estimates, company data, Bloomberg

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Exhibit 3: UMC's revenue mix by application - 4Q23

Communication/consumer/computer revenue accounted for 47%/23%/13%



Source: Company data

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Exhibit 4: 1Q24 guidance vs prior BofAe/consensus

4Q guidance weaker on softer auto/industrial business due to continuous inventory digestion

	Guidance	Prior BofAe	Consensus
Revenue	Shipment up 2-3%/ASP in US\$ to be down 5% QoQ	Down 0.5% QoQ	Down 4.5% QoQ
GPM	~30%	32.7%	30.7%

Source: BofA Global Research, company data, Bloomberg

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Exhibit 5: BofAe vs consensus, 2024-25E

Our 2024/25E EPS estimates are slightly ahead of consensus

NT\$m	2024E			2025E		
	BofAe	Consensus	Diff	BofAe	Consensus	Diff
Revenue	240,157	242,657	-1%	268,696	282,009	-5%
Gross profit	76,621	79,516	-4%	89,669	94,529	-5%
Gross margin	31.9%	32.8%	-0.9ppt	33.4%	33.5%	-0.1ppt
Operating income	55,579	56,899	-2%	66,019	69,367	-5%
Operating margin	23.1%	23.4%	-0.3ppt	24.6%	24.6%	0.0ppt
Pretax income	63,185	61,615	3%	73,531	73,408	0%
Pretax margin	26.3%	25.4%	0.9ppt	27.4%	26.0%	1.3ppt
Net income (A)	54,947	53,825	2%	63,895	63,554	1%
EPS (NT\$)	4.43	4.34	2%	5.15	5.12	1%

Source: BofA Global Research estimates, company data, Bloomberg

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Exhibit 6: Earnings estimate change, 2024-25E

We lower our 2024-25E EPS estimates of by 10-11% to reflect the refreshed outlook

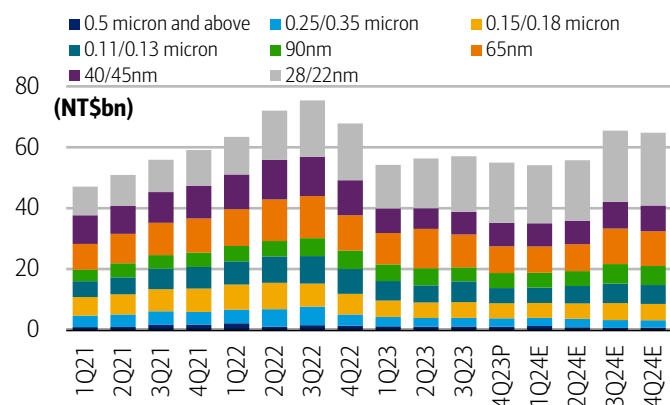
NT\$m	2024E			2025E		
	New	Old	Diff	New	Old	Diff
Revenue	240,157	260,879	-8%	268,696	292,712	-8%
Gross profit	76,621	88,606	-14%	89,669	100,863	-11%
Gross margin	31.9%	34.0%	-2.1ppt	33.4%	34.5%	-1.1ppt
Operating income	55,579	66,271	-16%	66,019	76,675	-14%
Operating margin	23.1%	25.4%	-2.3ppt	24.6%	26.2%	-1.6ppt
Pretax income	63,185	71,999	-12%	73,531	82,862	-11%
Pretax margin	26.3%	27.6%	-1.3ppt	27.4%	28.3%	-0.9ppt
Net income (A)	54,947	61,638	-11%	63,895	70,943	-10%
EPS (NT\$)	4.43	4.98	-11%	5.15	5.73	-10%

Source: BofA Global Research estimates

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Exhibit 7: Quarterly revenue by technology node

UMC expects 22/28nm utilization rate to remain resilient

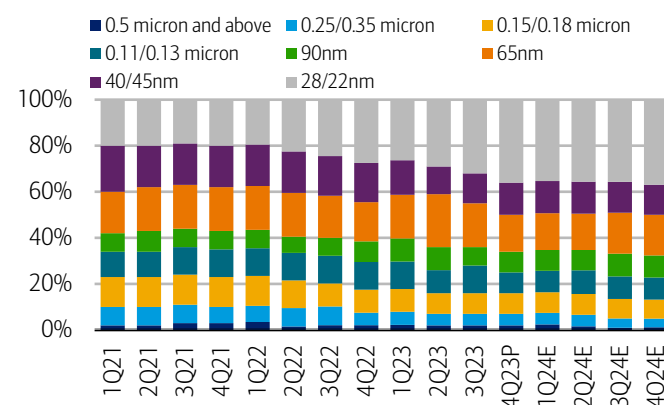


Source: BofA Global Research estimates, company data

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Exhibit 8: Quarterly revenue % by technology node

Estimate 22/28nm revenue mix would be 35-40% in 2024



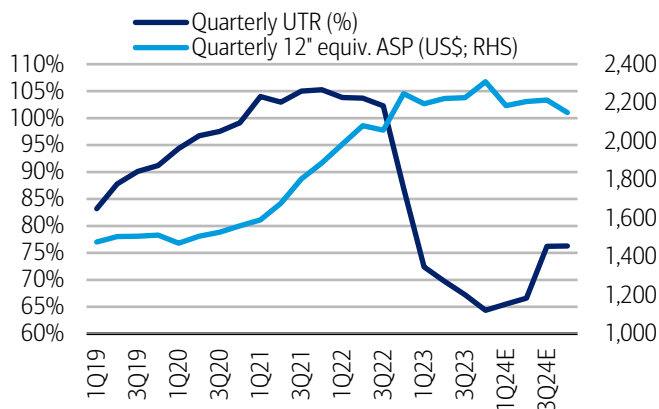
Source: BofA Global Research estimates, company data

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Exhibit 9: Quarterly UTR & 12" equiv. wafer ASP trend, 1Q19-4Q24E

After the one-off ASP adjustment in 1Q, we expect it to stay resilient

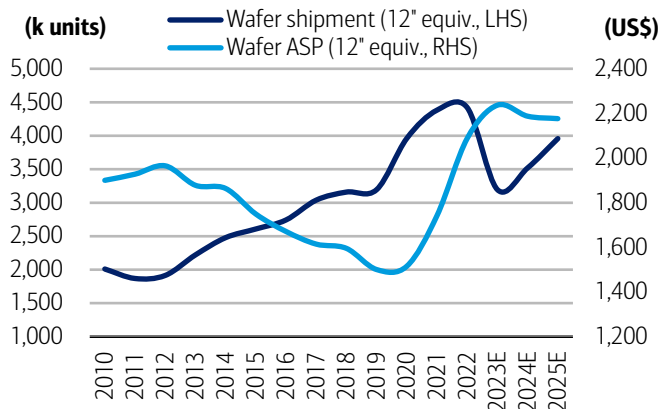


Source: BofA Global Research estimates, TEJ, company data

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Exhibit 10: 12" equivalent wafer ASP and shipment trend, 2010-25E

We expect 2024-25E blended ASP to be resilient

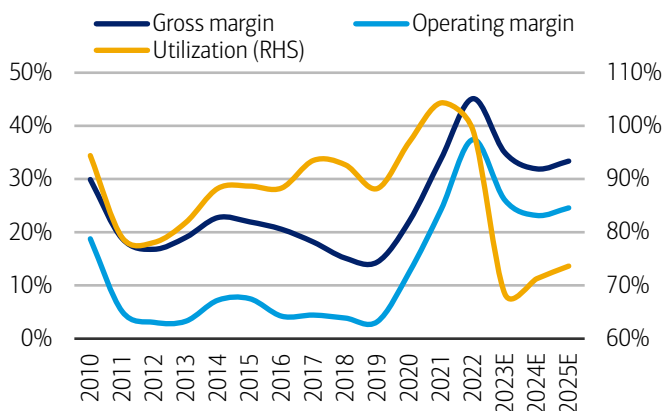


Source: BofA Global Research estimates, company data

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Exhibit 11: GPM/OPM/UTR trend, 2011-25E

We expect modest recovery in utilization rate in 2024-25E

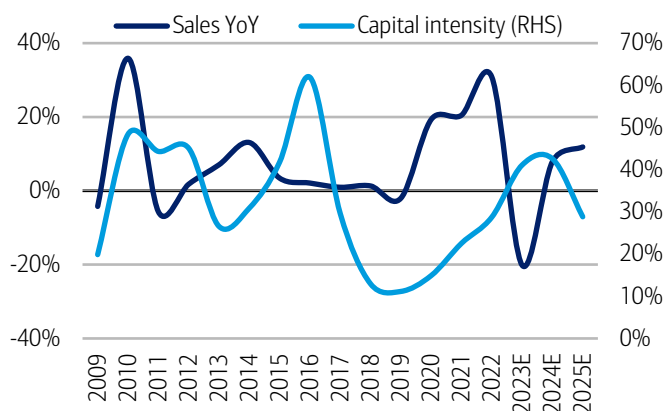


Source: BofA Global Research estimates, TEJ, company data

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Exhibit 12: Capital intensity vs sales YoY, 2009-25E

We expect UMC's capital intensity to be 43%/29% in 2024/25E



Source: BofA Global Research estimates, company data

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Exhibit 13: Profit & loss, 2022-25E

UMC targets its revenue growth to be in line with foundry industry at 7-9% YoY

NT\$mnn; %	1Q23	2Q23	3Q23	4Q23P	1Q24E	2Q24E	3Q24E	4Q24E	2022	2023E	2024E	2025E
Revenue	54,209	56,296	57,069	54,958	54,134	55,758	65,460	64,805	278,705	222,533	240,157	268,696
Cost of Revenue	(34,985)	(36,044)	(36,608)	(37,152)	(37,785)	(38,473)	(43,858)	(43,419)	(152,941)	(144,789)	(163,536)	(179,027)
Gross profit	19,224	20,252	20,461	17,806	16,348	17,285	21,602	21,386	125,764	77,744	76,621	89,669
Operating exp	(4,744)	(4,577)	(5,149)	(5,383)	(4,881)	(4,999)	(5,380)	(5,783)	(21,472)	(19,853)	(21,042)	(23,650)
Operating income	14,481	15,675	15,312	12,423	11,467	12,286	16,222	15,603	104,292	57,890	55,579	66,019
Non-opt income (expense), net	4,648	2,811	3,337	2,227	1,781	1,785	1,986	2,055	1,805	13,022	7,606	7,513
Income before tax	19,128	18,485	18,648	14,650	13,248	14,071	18,208	17,659	106,097	70,912	63,185	73,531
Income Tax	(2,744)	(2,589)	(2,683)	(1,457)	(1,900)	(1,971)	(2,619)	(1,756)	(18,079)	(9,472)	(8,246)	(9,646)
Net income	16,385	15,897	15,966	13,193	11,348	12,100	15,588	15,902	88,018	61,440	54,939	63,885
Minority	202	256	(5)	(2)	(2)	(2)	(2)	(2)	820	450	(8)	(10)
Net income attributable to												
Parent's shareholders	16,183	15,641	15,971	13,195	11,349	12,102	15,591	15,905	87,198	60,990	54,947	63,895
Diluted EPS (NT\$)	1.31	1.27	1.29	1.06	0.91	0.97	1.26	1.28	7.09	4.91	4.43	5.15
Margin; tax rate												
Gross margin	35.5%	36.0%	35.9%	32.4%	30.2%	31.0%	33.0%	33.0%	45.1%	34.9%	31.9%	33.4%
Operating expenses	8.8%	8.1%	9.0%	9.8%	9.0%	9.0%	8.2%	8.9%	7.7%	8.9%	8.8%	8.8%
Operating margin	26.7%	27.8%	26.8%	22.6%	21.2%	22.0%	24.8%	24.1%	37.4%	26.0%	23.1%	24.6%
Pretax margin	35.3%	32.8%	32.7%	26.7%	24.5%	25.2%	27.8%	27.2%	38.1%	31.9%	26.3%	27.4%
Net margin	30.2%	28.2%	28.0%	24.0%	21.0%	21.7%	23.8%	24.5%	31.6%	27.6%	22.9%	23.8%
Sequential growth %												
Revenue	-20.1%	3.8%	1.4%	-3.7%	-1.5%	3.0%	17.4%	-1.0%	30.8%	-20.2%	7.9%	11.9%
Gross profit	-34.0%	5.3%	1.0%	-13.0%	-8.2%	5.7%	25.0%	-1.0%	74.6%	-38.2%	-1.4%	17.0%
Operating exp	-13.5%	-3.5%	12.5%	4.5%	-9.3%	2.4%	7.6%	7.5%	5.4%	-7.5%	6.0%	12.4%
Operating income	-38.7%	8.2%	-2.3%	-18.9%	-7.7%	7.1%	32.0%	-3.8%	101.8%	-44.5%	-4.0%	18.8%
Net income	-14.3%	-3.0%	0.4%	-17.4%	-14.0%	6.6%	28.8%	2.0%	59.7%	-30.2%	-10.6%	16.3%

Source: BofA Global Research estimates, company data

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Exhibit 14: Balance sheet, 2022-25E

We expect UMC's balance sheet to stay solid

NT\$mnn	1Q23	2Q23	3Q23	4Q23P	1Q24E	2Q24E	3Q24E	4Q24E	2022	2023E	2024E	2025E
Assets												
Cash & cash equivalent	171,834	163,097	140,642	132,554	130,458	124,214	86,158	92,061	173,819	132,554	92,061	94,016
AR, NR	27,065	30,618	31,105	29,586	29,251	31,551	34,868	34,130	36,975	29,586	34,130	36,172
Inventory	32,679	34,553	36,561	35,713	32,914	32,985	34,766	32,395	31,070	35,713	32,395	34,834
Other current assets	10,389	10,766	10,973	18,944	12,768	13,363	14,012	14,772	10,507	18,944	14,772	14,147
Total current assets	241,967	239,033	219,280	216,797	205,391	202,113	169,803	173,358	252,371	216,797	173,358	179,169
Long-term investments	72,087	70,455	70,890	74,255	74,255	74,255	74,255	74,255	64,855	74,255	74,255	74,255
Fixed Assets	192,185	198,618	212,367	239,123	238,712	254,433	269,154	282,876	170,982	239,123	282,876	304,391
Other noncurrent assets	43,393	45,090	44,733	29,012	36,873	32,942	34,908	33,925	44,844	29,012	33,925	34,232
Total noncurrent assets	307,664	314,163	327,991	342,390	349,840	361,631	378,317	391,056	280,681	342,390	391,056	412,878
Total Assets	549,631	553,196	547,271	559,187	555,231	563,743	548,120	564,413	533,052	559,187	564,413	592,047
Liabilities												
Short-term debt & Current portion of												
LT debt	9,774	11,592	30,074	29,537	27,537	25,537	23,537	23,537	7,587	29,537	23,537	22,537
A/P	9,213	8,831	8,371	8,578	9,502	9,534	10,453	8,631	8,982	8,578	8,631	9,239
Other current liability	86,898	122,555	53,625	60,900	80,995	79,519	68,760	72,544	91,996	60,900	72,544	73,693
Total current liabilities	105,886	142,978	92,070	99,015	118,034	114,590	102,750	104,712	108,565	99,015	104,712	105,469
LT debt & Corp bond	6,516	6,500	6,891	6,891	6,891	6,891	6,891	6,891	6,242	6,891	6,891	6,891
Other noncurrent liability	81,679	76,829	98,294	93,702	78,863	86,922	89,445	95,956	82,794	93,702	95,956	96,490
Total noncurrent liabilities	88,195	83,329	105,185	100,593	85,754	93,813	96,336	102,847	89,036	100,593	102,847	103,381
Total Liabilities	194,081	226,308	197,255	199,608	203,788	208,403	199,086	207,559	197,601	199,608	207,559	208,850
Equity												
Equity attributable to Parent's shareholders	355,206	326,545	349,677	359,238	351,102	354,999	348,693	356,513	335,107	359,238	356,513	382,856
Minority interest	344	343	339	341	341	341	341	341	344	341	341	341
Total Equity	355,550	326,888	350,016	359,579	351,443	355,340	349,034	356,854	335,451	359,579	356,854	383,197

Source: BofA Global Research estimates, company data

BofA GLOBAL RESEARCH

Exhibit 15: Cash flow, 2022-25E

UMC guides its 2024 capex to be US\$3.3bn, marking the peak in recent years

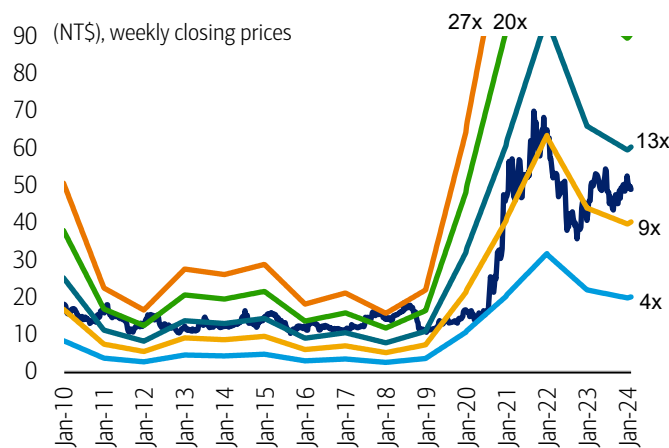
NT\$mnn	1Q23	2Q23	3Q23	4Q23P	1Q24E	2Q24E	3Q24E	4Q24E	2022	2023E	2024E	2025E
Net income	16,385	15,897	15,966	13,193	11,348	12,100	15,588	15,902	88,018	61,440	54,939	63,885
Depre & Amortization	9,222	9,286	9,296	10,039	9,854	10,854	11,853	12,844	41,328	37,843	45,405	58,465
Change in working capital	8,451	(6,230)	(2,253)	2,574	4,058	(2,339)	(4,179)	1,288	(8,262)	2,542	(1,172)	(3,874)
Other operating activities	(7,094)	(5,193)	(3,950)	412	(1,781)	(1,785)	(1,986)	(2,055)	24,776	(15,825)	(7,606)	(7,513)
Cash flow from operating activities	26,964	13,760	19,059	26,217	23,479	18,831	21,278	27,979	145,861	86,000	91,566	110,964
Purchase of PP&E	(29,756)	(24,139)	(17,245)	(20,334)	(25,575)	(25,575)	(25,575)	(25,575)	(80,128)	(91,474)	(102,300)	(77,500)
Acquisition/Disposal of Investment	892	803	(141)	-	-	-	-	-	28,497	1,553	-	-
Other investing activities	(722)	(330)	(335)	(6,479)	-	500	-	1,500	(2,797)	(7,866)	2,000	2,000
Cash flow from investing activities	(29,586)	(23,667)	(17,720)	(26,813)	(25,575)	(25,075)	(25,575)	(24,075)	(54,427)	(97,786)	(100,300)	(75,500)
Capital injection	-	-	-	-	-	-	-	-	-	-	-	-
Increase (decrease) in debt	105	4,115	38,752	-	-	-	-	-	(12,951)	42,972	-	-
Other financing activities	1,242	(3,054)	(66,354)	(3,892)	-	-	(33,758)	2,000	(44,303)	(72,058)	(31,758)	(33,509)
Cash flow from financing activities	1,347	1,061	(27,602)	(3,892)	-	-	(33,758)	2,000	(57,255)	(29,086)	(31,758)	(33,509)
Exchange influence	(709)	108	3,809	(3,600)	-	-	-	-	7,018	(392)	-	-
Change in Cash & equiv.	(1,984)	(8,738)	(22,455)	(8,088)	(2,096)	(6,244)	(38,056)	5,904	41,197	(41,265)	(40,493)	1,954
Cash Equiv-Beginning	173,819	171,834	163,097	140,642	132,554	130,458	124,214	86,158	132,622	173,819	132,554	92,061
Cash Equiv-End	171,834	163,097	140,642	132,554	130,458	124,214	86,158	92,061	173,819	132,554	92,061	94,016

Source: BofA Global Research estimates, company data

BofA GLOBAL RESEARCH

Exhibit 16: 12-month forward P/E

The stock is traded at 11x 2024E P/E

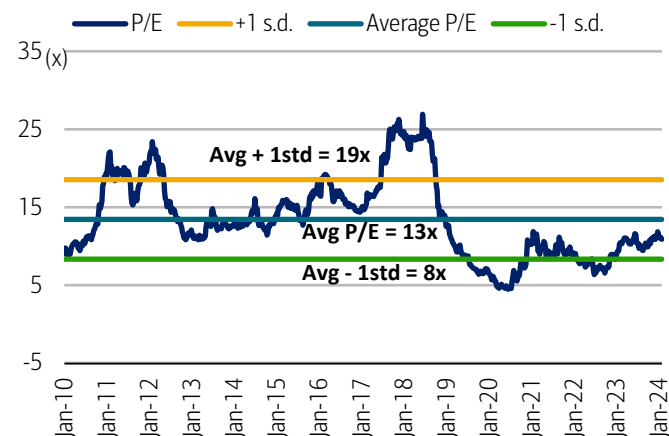


Source: BofA Global Research estimates, company data, Bloomberg

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Exhibit 17: 12-month forward P/E with standard deviation

The multiple (11x) is at the lower end of the historical range

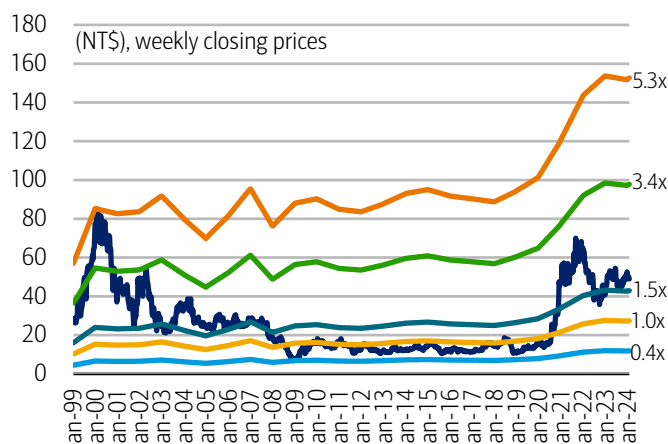


Source: BofA Global Research estimates, company data, Bloomberg

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Exhibit 18: 12-month forward P/B

The stock trades at 1.7x 2024E P/B

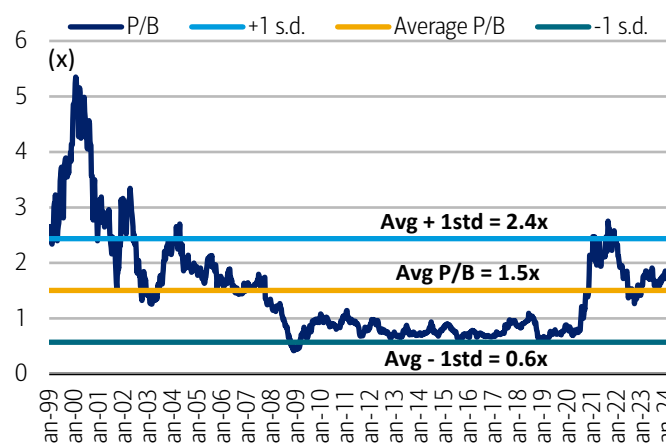


Source: BofA Global Research estimates, company data, Bloomberg

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Exhibit 19: 12-month forward P/B with +1 to -1 standard deviation

The multiple (1.7x) is slightly above the average of historical range



Source: BofA Global Research estimates, company data, Bloomberg

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Exhibit 20: Valuation comparison

UMC trades at a lower valuation, but with higher ROE & dividend yield vs peers

Ticker	Company	Share price (LC)	Rating	Mkt cap (US\$mn)	EPS (LC) 2024E	EPS (LC) 2025E	PER (X) 2024E	PER (X) 2025E	PBR (X) 2024E	PBR (X) 2025E	Div. yield (%) 2024E	Div. yield (%) 2025E	ROE (%) 2024E	ROE (%) 2025E	EV/EBITDA 2024E	EV/EBITDA 2025E
Pure-play foundry																
2330 TT	TSMC	628.0	BUY	520,415	39.05	48.25	16.1	13.0	4.0	3.4	2.4	2.6	27.0	28.1	8.1	6.6
GFS US	GlobalFoundries	56.5	Neutral	31,239	2.12	2.70	26.6	20.9	2.7	2.4	0.0	0.0	10.1	12.3	12.3	10.7
981 HK	SMIC	14.1	NC	22,659	0.10	0.15	17.7	12.0	0.6	0.6	0.0	0.0	3.7	5.1	9.8	8.4
2303 TT	UMC	49.0	BUY	19,620	4.43	5.15	11.1	9.5	1.7	1.6	6.1	7.1	15.4	17.3	6.0	4.9
1347 HK	Hua Hong	14.2	U/P	4,274	0.17	0.22	10.8	8.3	0.7	0.7	0.0	0.0	7.0	8.3	4.8	4.1
5347 TT	Vanguard	73.5	Neutral	3,850	4.03	6.01	18.2	12.2	3.3	3.2	6.1	7.5	17.4	26.6	8.0	6.8
6770 TT	PSMC	27.0	U/P	3,513	-0.43	-0.02	n.m.	n.m.	1.3	1.2	0.0	0.0	-2.0	-0.1	10.6	7.6
3105 TT	Win Semi	155.0	U/P	2,100	4.26	8.44	36.4	18.4	1.8	1.7	1.7	3.4	5.2	9.7	11.9	8.8
Pure-play foundry average							19.6	13.5	2.0	1.8	2.0	2.6	10.5	13.4	8.9	7.2
IDM foundry																
INTC US	Intel	42.9	Neutral	181,466	1.18	1.91	36.4	22.5	1.3	1.2	1.2	1.2	4.0	5.6	10.3	7.9
005930 KS	Samsung	72,700.0	BUY	325,267	3967.48	6939.81	18.3	10.5	1.3	1.2	2.0	2.0	7.4	12.0	6.0	4.4
IDM foundry average							27.3	16.5	1.3	1.2	1.6	1.6	5.7	8.8	8.2	6.1

Source: BofA Global Research estimates, company data, Bloomberg

BofA GLOBAL RESEARCH



Price objective basis & risk

United Microelectronics Corp. (XUMIF / UMC)

Our PO NT\$55 (ADR PO US\$8.9) is based on 12x 2Q24-1Q25E P/E, which is at low- to mid-end of UMC's historical range since 2010, when it started to generate stable net income. In our view, P/E valuation is appropriate for UMC given its strong growth in earnings over past few years, future growth potentials with upside in TAM and market shares, and enhanced FCF generation capability. We think 12x P/E, on par with the average P/E level of Asian pure-play foundry peers, is justified, supported by resilient GPM/OPM/ROE profile and 6-7% dividend yield.

Downside risks to our PO are

- 1) softening end-demand to inflect the semis cycle, hurting the company's ASP/margin
- 2) greater competition pressure by peers when it seeks to fill its utilization during industry downturn.

Analyst Certification

I, Brad Lin, 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.

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APR - Semiconductor Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY	Alchip	ALCPF	3661 TT	Mike Yang
	ASE Technology Holding	XSRIF	3711 TT	Brad Lin
	ASE Technology Holding -ADR	ASX	ASX US	Brad Lin
	ASMPT	ASMVF	522 HK	Simon Woo, CFA
	Crystal Clear	XPPTF	300655 CH	Dai Shen
	eMemory	XYLWF	3529 TT	Mike Yang
	Faraday	FDYTF	3035 TT	Mike Yang



APR - Semiconductor Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Global Unichip Corp.	GBUHF	3443 TT	Mike Yang
	GlobalWafers	XWLFF	6488 TT	Brad Lin
	Hwatsing Technology	XSNIF	688120 CH	Dai Shen
	JCET Group Co Ltd	XJIEF	600584 CH	Mike Yang
	King Yuan Electronics Corp.	KYUFF	2449 TT	Angela Huang
	Kingsemi	XKSQF	688037 CH	Dai Shen
	LX Semicon	XLXSF	108320 KS	Simon Woo, CFA
	Maxscend	MXSXF	300782 CH	Daley Li, CFA
	MediaTek	MDTKF	2454 TT	Brad Lin
	Montage Technology	XRDFE	688008 CH	Daley Li, CFA
	Nanya Technology	NNYAF	2408 TT	Simon Woo, CFA
	Novatek	NVKMF	3034 TT	Brad Lin
	Parade	PRDWF	4966 TT	Mike Yang
	Realtek	RLTKF	2379 TT	Brad Lin
	Samsung Elec -G	SSNHZ	SMSN LI	Simon Woo, CFA
	Samsung Electronics	SSNLF	005930 KS	Simon Woo, CFA
	Samsung Electronics Preferred	SSNNF	005935 KS	Simon Woo, CFA
	Silicon Motion	SIMO	SIMO US	Simon Woo, CFA
	SK Hynix	HXSCF	000660 KS	Simon Woo, CFA
	Taiwan Semiconductor Manufacturing Co.	TSM	TSM US	Brad Lin
	Taiwan Semiconductor Manufacturing Co.	TSMWF	2330 TT	Brad Lin
	United Microelectronics Corp.	XUMIF	2303 TT	Brad Lin
	United Microelectronics Corp.	UMC	UMC US	Brad Lin
	Will Semiconductor	XXHQF	603501 CH	Dai Shen
	Winbond Electronics	WBEKF	2344 TT	Dai Shen
	Wonik IPS	XRHQF	240810 KS	Simon Woo, CFA
NEUTRAL				
	ASMedia Technology Inc.	XZSFF	5269 TT	Mike Yang
	Aspeed	XLKMF	5274 TT	Mike Yang
	Macronix International	MXICF	2337 TT	Dai Shen
	Powertech Technology	XPPZF	6239 TT	Simon Woo, CFA
	Soulbrain	XSBOF	357780 KS	Simon Woo, CFA
	Vanguard International Semiconductor Co	VGILF	5347 TT	Mike Yang
UNDERPERFORM				
	GigaDevice	XGXIF	603986 CH	Daley Li, CFA
	Hangzhou Silan Microelectronics	XDFRF	600460 CH	Mike Yang
	Hua Hong Semi	HHUSF	1347 HK	Mike Yang
	Ingenic	XISCF	300223 CH	Dai Shen
	Lion Electronics	XDHFF	605358 CH	Dai Shen
	Phison Electronics	PISNF	8299 TT	Simon Woo, CFA
	Powerchip Semiconductor Manufacturing Co	XCHPF	6770 TT	Mike Yang
	Shenzhen Goodix	XQPLF	603160 CH	Mike Yang
	Silergy Corp.	SLEGF	6415 TT	Brad Lin
	VeriSilicon	XMLZF	688521 CH	Mike Yang
	Win Semiconductors	XWIIF	3105 TT	Brad Lin

iQmethodSM Measures Definitions

Business Performance

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

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

Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill Amortization

Shareholders' Equity

Sales

N/A

N/A

Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

Numerator

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash & Equivalents

EBIT

Denominator

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

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

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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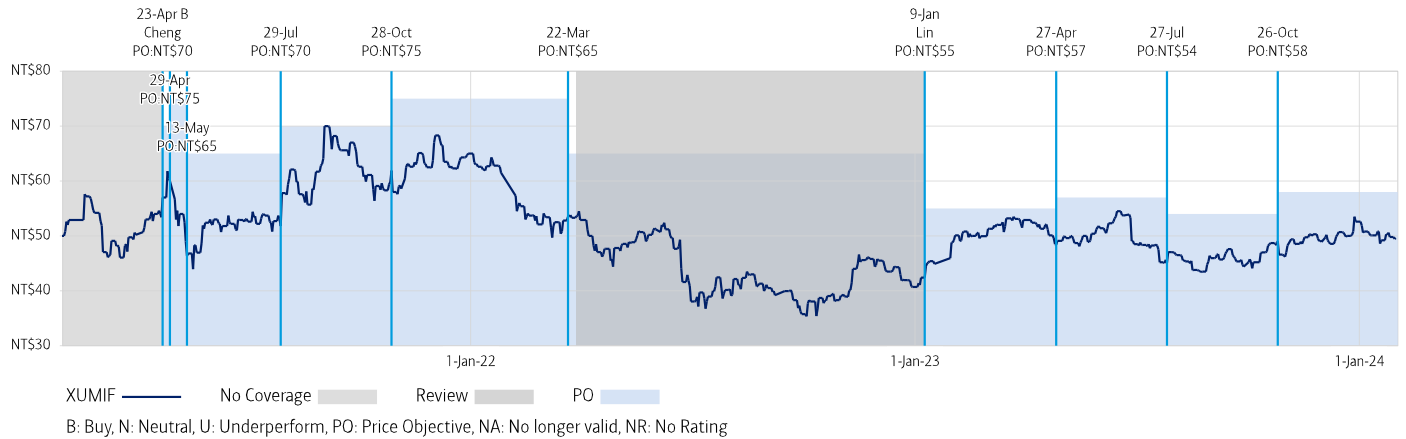
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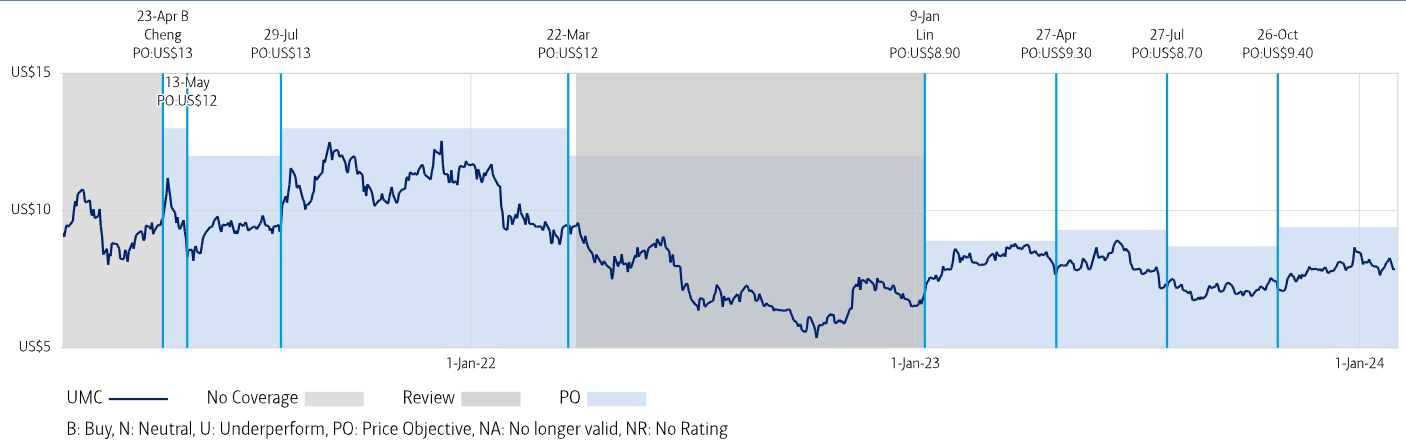
Important Disclosures

XUMIF (XUMIF) Price Chart



The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

United Microelectron (UMC) Price Chart



The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

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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