

Silver Sector Capital Markets Opportunities

Tapping Into the Next Big Move in Silver

- A Niche Sector Ready to Take Off** – With gold reaching new heights on rising inflation expectations from trade disruptions, and silver supply failing to keep up with growing demand, silver and silver equities are set to continue a rally that could see recovering demand for equity financings and M&A. By historical standards, the current silver rally still has room to move (**Figure 1**), with gold:silver ratio mean reversion (**Figure 2**) also pointing to strong upside.
- Persistent Supply Shortages, Demand Growth** – The last three years have seen a cumulative primary silver supply deficit of 543.2 Moz versus the Silver Institute's forecast deficit of 190.3 Moz, with net ETP/physical outflows reducing the actual cumulative deficit to 119.6 Moz. Faster than expected industrial & tech demand growth versus mine supply growth suggest ongoing supply deficits will support foreseeable silver prices and capital markets activity.
- Capital Markets Opportunities in the Silver Sector** – 75% of the silver producers we track are now trading in the upper range of their 52-week high/low, versus 55% for silver developers. This should improve equity and M&A/advisory opportunities after a slow 2024. Recent M&A transactions like Gatos Silver (a 16% premium, at \$8.99/oz P&P), and SilverCrest (a 22.1% premium, at \$16.08/oz P&P) suggest ongoing demand for silver projects with underground mine and resource growth potential such as Vizsla, GoGold, Silver Tiger and GR Silver.
- About Gabriel Gonzalez** – Gabriel's sector coverage led Echelon's mining team equity issuance for three consecutive years, and he was also consistently among Echelon's most profitable research analysts by sector verticals and cost per head, in addition to being a Supervisory Analyst.
- Sector Expertise:** Gabriel's competitive advantage is providing insights into the political and economic risks of Latin American based mining assets, given his familiarity and firsthand experience in the region. In addition, he brings programmatic based tools and automation to streamline and more efficiently complete research tasks. For example, he has published an on-line [tool](#) that generates multiple simultaneous drill hole intersection residual grades and NSR's to evaluate drill results with.

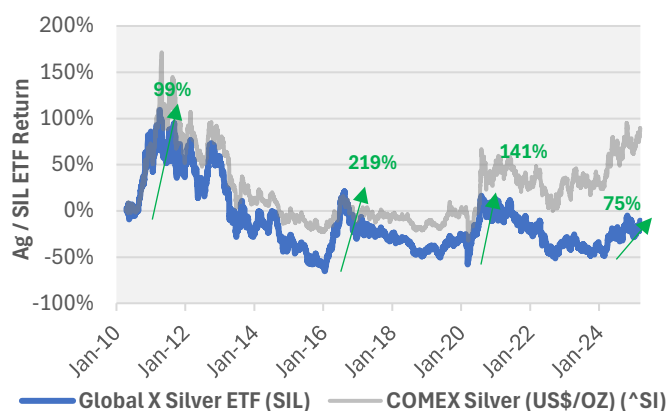
Recent Coverage Universe

Recent Coverage	Mkt.Cap US\$(M)
Silver	
GoGold (GGD-T)	\$472.6
Silver Tiger (SLVR-V)	\$100.9
GR Silver (GRSL-V)	\$50.6
Silvercorp Mining (SVM-T)	\$908.6
Silver X (AGX-V)	\$27.6
Guanajuato Silver (GSVR-V)	\$67.8
Sierra Madre (SM-V)*	\$63.6
New Pacific Metals (NUAG-T)*	\$225.7
Gold	
Argonaut Gold† (AR-T)	\$121.6
Revival Gold (RVG-V)	\$47.7
Freeman Gold (FMAN-V)	\$13.4
Lithium	
E3 Lithium (ETL-V)	\$40.6
Alpha Lithium† (ALLI-NE)	\$276.6
American Lithium (LI-V)	\$71.0
Other	
Ascendant Resources (ASND-T)	\$12.0
Tincorp (TIN-V)*	\$7.5
Previous Coverage	Mkt.Cap US\$(M)
Silver	
First Majestic Silver (FR-T)	\$2,793.2
Gold	
Lundin Gold (LUG-T)	\$7,180.1
Sabina Gold & Silver† (SBB-T)	\$1,203.1
Torex Gold (TXG-T)	\$2,174.9
TMAC Resources† (TMR-T)	\$286.0
Lithium	
Plateau Energy Metals† (PLU-V)	\$64.4
*Watch List	
† Acquired. Market cap at acquisition.	

Source: Gabriel Gonzalez CFA

Figures in US\$ unless otherwise noted.

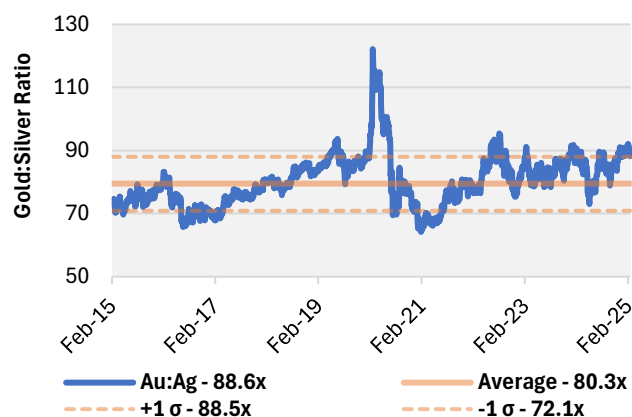
Figure 1: A Still Tame Rally by Historical Standards



Source: Gabriel Gonzalez CFA, CFTC

See page 7 for important disclosures.

Figure 2: Au:Ag Ratio Implies \$3.50/oz to \$7.70/oz Upside



Source: Gabriel Gonzalez CFA

This report is intended to show Gabriel Gonzalez's niche silver sector specific research infrastructure.

Gold, copper, lithium and other metals infrastructure, as well as past research reports, can be provided upon request.

Figure 3: Au:Ag Ratio Implied Ag Price

		Ratio Implied Ag Price		
		- 1 σ	Average	+1 σ
		72.1	80.3	88.5
Spot Au	\$3,185	\$44.15	\$39.64	\$35.97
	\$3,085	\$42.76	\$38.40	\$34.85
	\$2,985	\$41.37	\$37.15	\$33.72
	\$2,885	\$39.99	\$35.91	\$32.59
	\$2,785	\$38.60	\$34.66	\$31.46

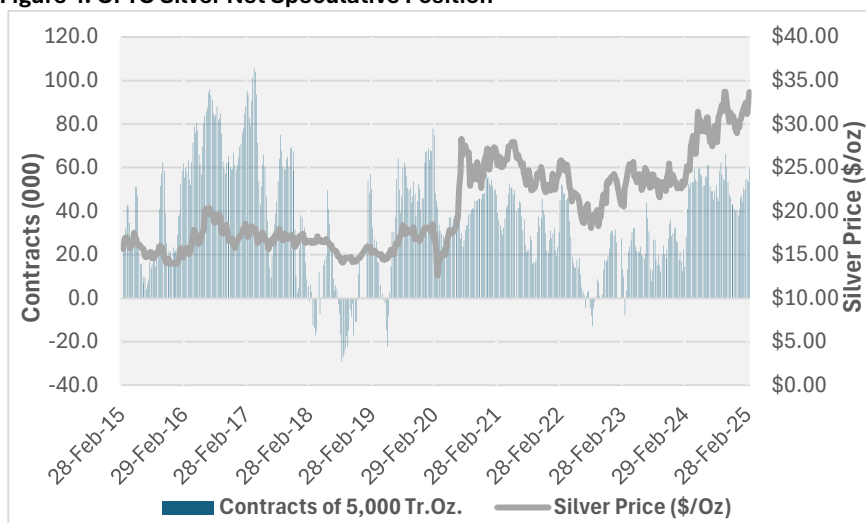
Source: Gabriel Gonzalez CFA

Constructive Outlook for the Price of Silver

Silver Investment Market Outlook. As a monetary metal like gold, the price of silver has recently benefited from concerns over inflation stemming from growing threats to global trade. At the same time, concerns over recession due to declining business and consumer confidence increasing rate-path uncertainty, which we believe will nonetheless continue down-trend despite the potential for higher inflation. This appears to be giving silver traction with investors buying both physical silver, ETP's and silver-related equities.

Based on the current Au:Ag ratio, we see \$3.30/oz to \$7.70/oz of additional upside from the current price as the ratio reverts to the mean (see **Figure 3**). This may play well with speculators and investors in the physical and ETP space, as with the net speculative positions reported by the CFTC which have remained fairly elevated since February of 2024 (**Figure 4**). Currently at \$37.15/oz, the nominal price of silver is now at levels sustained throughout 2011-2012 when it peaked at as high as \$48.60/oz in April 2011 (\$68.62 in today's dollars). If we see the price of silver rally above \$40/oz as Au:Ag mean reversion suggests is possible, a significant further move in silver and silver equities may become reality. As shown in **Figure 1** on **Page 1**, the current rally in silver equities remains tame by historical standards.

Figure 4: CFTC Silver Net Speculative Position



Source: CFTC; Gabriel Gonzalez CFA

Industrial Demand and Supply. Underpinning the price of silver is increasing industrial demand driven by growing intensity of use from electronics (where silver plays a role in electrical components and solder) in everything from smart appliances to hybrid and electric vehicles (EVs). Whereas the increasing use of embedded electronics in conventional ICE vehicles has already increased silver's intensity of use, EVs alone use 44% more silver on average than conventional vehicles. Photovoltaics have also been a significant source of industrial demand growth, given silver's superior conductivity, which is essential for efficiently transporting electricity from the panel's silicon to the electronic circuitry. Photovoltaic demand has been the fastest growing segment of physical

silver demand, growing at a CAGR of 17% over the past 10 years (**Figure 5**). During this same period, silver mine supply has failed to keep pace with demand. In fact, mine supply has been flat to negative over the last 10 years, and we don't see a sustained increase from primary silver mine supply, which accounts for 28.3% of total mined supply.

Figure 5. Silver Supply and Demand Forecast

Moz	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024F
Supply											
Mine Production	882.0	896.8	899.8	863.6	850.6	837.2	783.4	829.0	836.7	830.5	823.5
Recycling	160.4	147.0	145.7	147.2	148.7	148.2	164.3	173.7	176.9	178.6	178.9
Net Hedging Supply	10.7	2.2	0.0	0.0	0.0	13.9	8.5	0.0	0.0	0.0	0.0
Net Official Sector Sales	1.2	1.1	1.1	1.0	1.2	1.0	1.2	1.5	1.7	1.6	1.5
Total Supply	1,054.2	1,047.0	1,046.5	1,011.8	1,000.5	1,000.3	957.4	1,004.3	1,015.4	1,010.7	1,003.8
Demand											
Industrial (Total)	440.9	457.1	489.5	526.4	524.2	523.5	509.7	561.3	588.3	654.4	710.9
Electrical & Electronics	269.8	272.3	308.9	339.7	331.0	327.3	322.0	351.2	371.3	445.1	485.6
...of which PV	48.4	59.6	81.6	99.3	87.0	74.9	82.8	88.9	118.1	193.5	232.0
Brazing Alloys & Solders	53.3	51.1	49.1	50.9	52.0	52.4	47.5	50.5	49.2	50.2	51.8
Other Industrial	117.8	133.7	131.5	135.8	141.2	143.8	140.2	159.6	167.8	159.0	173.5
Photography	41.0	38.2	34.7	32.4	31.4	30.7	26.9	27.7	27.5	27.0	26.1
Jewelry	193.5	202.5	189.1	196.2	203.2	201.6	150.9	182.0	234.5	203.1	211.3
Silverware	53.5	58.3	53.5	59.4	67.1	61.3	31.2	40.7	73.5	55.2	58.8
Net Physical Investment	283.0	309.3	212.9	155.8	165.9	187.4	208.1	284.3	337.1	243.1	212.0
Net Hedging Demand		0.0	12.0	1.1	7.4	0.0	0.0	3.5	17.9	12.2	0.0
Total Demand	1,011.9	1,065.4	991.8	971.3	999.2	1,004.4	926.8	1,099.6	1,278.9	1,195.0	1,219.1
Market Balance	42.3	-18.4	54.7	40.5	1.3	-4.1	30.6	-95.4	-263.5	-184.3	-215.3
Net Investment in (out of) ETPs	-0.3	-17.1	53.9	7.2	-21.4	83.3	331.1	64.9	-125.8	-42.1	50.0
Market Balance less ETPs	42.6	-1.3	0.8	33.3	22.7	-87.4	300.5	160.3	-137.7	-142.2	-265.3
Silver Price (US\$/oz, London price)	19.1	15.7	17.1	17.1	15.7	16.2	20.6	25.1	21.7	23.4	-

Source: Silver Institute; Gabriel Gonzalez, CFA

Capital Markets Opportunities in Silver

Currently, 75% of the silver producers and 55% of the silver developers we track in our comps (see **Figure 6** and **Figure 7**) are trading in the higher-end of their 52-week high/lows, which suggests improving opportunity for both equity issues and M&A / advisory work. On the equities side, 2024 saw a decrease in the amount of brokered equity issues by silver developers versus 2022 and 2023, despite an improvement in the price of silver. Instead, we saw companies either reducing their G&A & exploration to retain cash, and/or turning to smaller non-brokered deals that only sustain G&A. This may support pend-up demand for larger project development finance transactions.

Given better recent share performance from producers versus developers, we also see a potentially improving M&A / advisory opportunities. In the last 6 months, the silver sector has seen two M&A transactions, with Gatos Silver acquired by First Majestic (at a 16% premium, at \$8.99/oz P&P), and SilverCrest acquired by Hecla Mining (at a 22.1% premium, at \$16.08/oz P&P).

Figure 6. Silver Producer Comparables

		Price	52-Wk	Shares	Mkt.Cap.	Cash	EV	P / Sales			P / E			EV / EBITDA		
Company	Ticker	Ccy	Range	Out. (M)	(US\$M)	(US\$M)	(US\$M)	2025	2026	2027	2025	2026	2027	2025	2026	2027
Silver Producers																
Pan American Silver	PAAS-T	37.69	<div><div></div></div>	362	9,552	887	9,481	2.3	2.2	2.3	23.5	19.4	17.9	7.9	7.5	7.8
Fresnillo PLC	FRES-L	933.77	<div><div></div></div>	737	8,938	691	9,484	2.7	2.7	2.8	15.6	16.7	16.3	7.0	7.2	7.3
Coeur Mining	CDE-T	6.40	<div><div></div></div>	883	5,646	208	6,039	3.6	3.3	3.2	33.4	22.1	19.0	18.7	16.9	16.7
Buenaventura	BVN-N	15.33	<div><div></div></div>	254	3,889	458	3,904	3.0	2.8	2.7	11.6	9.7	7.4	16.8	15.5	15.1
Hecla Mining	HL-N	5.84	<div><div></div></div>	632	3,687	28	3,692	3.7	3.6	4.3	20.9	17.3	21.6	13.0	12.7	15.1
First Majestic Silver	FR-T	8.27	<div><div></div></div>	483	2,792	425	2,891	4.9	3.6	2.8	47.9	43.5	31.8	33.5	24.9	19.4
Fortuna Mining	FVI-T	8.10	<div><div></div></div>	307	1,738	181	1,804	1.1	1.4	1.7	7.4	8.4	9.5	3.7	4.6	5.5
MAG Silver	MAG-T	23.68	<div><div></div></div>	103	1,712	113	1,598	11.4	14.3	4.1	28.0	27.6	24.2	NA	NA	NA
Hochschild Mining	HOC-L	249.50	<div><div></div></div>	514	1,667	101	1,962	1.6	1.5	1.6	9.4	7.6	9.7	5.4	5.2	5.5
Endeavour Silver	EDR-T	6.74	<div><div></div></div>	262	1,237	108	1,250	3.6	2.7	2.5	26.2	11.9	19.3	20.9	15.6	14.4
Silvercorp Mining	SVM-T	6.01	<div><div></div></div>	217	914	355	793	2.2	1.8	1.6	13.5	9.7	NA	4.9	4.1	3.5
Avino Silver & Gold	ASM-T	2.71	<div><div></div></div>	141	267	8	262	3.5	2.9	3.0	26.2	9.3	13.5	99.1	81.8	84.4
Guanajuato Silver	GSVR-V	0.21	<div><div></div></div>	472	68	2	84	0.8	1.2	NA	-208.2	NA	NA	9.5	15.0	NA
Sierra Madre	SM-V	0.57	<div><div></div></div>	154	61	0	66	1.8	1.6	1.3	9.0	9.0	9.0	NA	NA	NA
Impact Silver	IPT-V	0.21	<div><div></div></div>	247	36	5	32	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver X	AGX-V	0.19	<div><div></div></div>	202	27	0	28	0.8	NA	NA	5.9	NA	NA	16.6	NA	NA
Average								3.14	3.27	2.61	19.89	16.33	16.60	19.77	17.58	17.70
Average Excl. Outliers <10% / >90%								2.65	2.51	2.52	17.40	13.90	15.86	12.87	11.94	11.70

Source: Gabriel Gonzalez, CFA; Wiseshets; Company Reports

Figure 7. Silver Developer Comparables

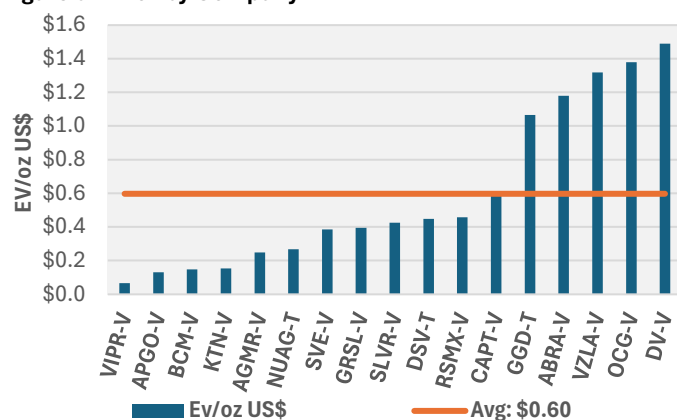
		Price	52-Wk	Shares	Mkt.Cap.	Cash	EV	Project	P&P	P&P AgEq	M&I+I	M&I+I AgEq	EV/oz	EV/oz	M&I+I	M&I+I
Company	Ticker	Ccy	Range	Out. (M)	(US\$M)	(US\$M)	(US\$M)	Locations	AgEq (Moz)	Grade g/t	AgEq (Moz)	Grade g/t	P&P (US\$)	M&I+I (US\$)	AuAg %	Ag%
Silver Developers																
Discovery Silver	DSV-T	2.03	<div><div></div></div>	400	569	24	546	Mexico	643	61	1,206	43	0.85	0.45	57%	46%
Vizsla Silver	VZLA-V	2.69	<div><div></div></div>	275	518	28	491	Mexico	0		372	492	0.00	1.32	94%	54%
GoGold	GGD-T	2.02	<div><div></div></div>	331	468	76	392	Mexico	117	158	362	151	3.36	1.08	92%	63%
AbraSilver	ABRA-V	3.14	<div><div></div></div>	152	335	10	325	Argentina	221	162	276	152	1.47	1.18	100%	55%
Dolly Varden	DV-V	1.13	<div><div></div></div>	317	251	24	227	Yukon	0		153	433	0.00	1.48	98%	42%
New Pacific Metals	NUAG-T	1.84	<div><div></div></div>	172	221	18	203	Bolivia	175	105	810	79	1.15	0.25	80%	60%
Silver Tiger	SLVR-V	0.37	<div><div></div></div>	365	95	5	90	Mexico	42	32	223	84	2.16	0.40	97%	52%
Outcrop Silver & Gold	OCG-V	0.27	<div><div></div></div>	342	63	5	58	Colombia	0		40	561	0.00	1.47	100%	69%
Silver One	SVE-V	0.28	<div><div></div></div>	269	53	3	50	Nevada	0		139	73	0.00	0.36	100%	89%
Apollo Silver	APGO-V	0.30	<div><div></div></div>	242	50	1	49	California, Mexico	0		411	104	0.00	0.12	63%	52%
GR Silver	GRSL-V	0.20	<div><div></div></div>	344	48	2	47	Mexico	0		118	153	0.00	0.39	80%	65%
Kootenay Silver	KTN-V	1.01	<div><div></div></div>	62	44	6	38	Mexico	0		255	96	0.00	0.15	84%	58%
Bear Creek Mining	BCM-V	0.21	<div><div></div></div>	228	34	8	103	Peru	368	82	706	62	0.28	0.15	70%	64%
Capitan Silver	CAPT-V	0.42	<div><div></div></div>	98	29	0	29	Mexico	0		46	51	0.00	0.62	100%	37%
Silver Mountain	AGMR-V	0.07	<div><div></div></div>	277	13	4	8	Peru	0		29	305	0.00	0.28	55%	43%
Regency Silver	RSMX-V	0.07	<div><div></div></div>	105	5	0	5	Mexico	0		11	256	0.00	0.43	100%	89%
Silver Viper	VIPR-V	0.30	<div><div></div></div>	19	4	1	4	Mexico	0		56	107	0.00	0.06	100%	35%
Average													1.55	0.60		
Average Excl. Outliers <10% / >90%													0.94	0.54		

Notes:

- AgEq values are based on spot metal prices. No adjustment for recoveries are made.
- Resource data provided by company reports.

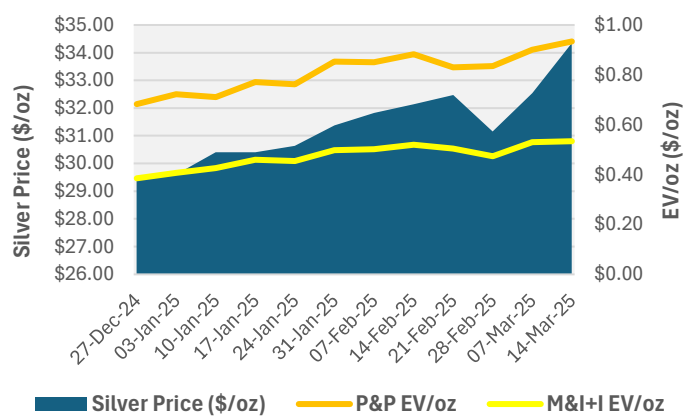
Source: Gabriel Gonzalez, CFA; Wiseshets; Company Reports

Figure 8. EV/oz by Company



Source: Gabriel Gonzalez CFA, CFTC

Figure 9. Silver Price, Historical Developer EV/oz



Source: Gabriel Gonzalez CFA

About Gabriel Gonzalez

Gabriel is from Edmonton, Alberta, and began his 18-year equity research career focused on mining at Citigroup Investment Research, and at HSBC Global Banking at Markets, in Mexico City. He then moved back to Canada and continued to focus on mining at Canaccord Genuity and Echelon Capital Markets (now Ventum Financial Corp) in Toronto. He is a CFA charterholder, and has also completed an executive master's in business administration.

Gabriel's sector coverage led Echelon's mining team equity issuance for three consecutive years, and he was also consistently among Echelon's most profitable research analysts by sector verticals and cost per head.

Figure 10: Select Equity Transactions in Gabriel's Coverage Sector

Close Date	Issuer	Type
2021		
Feb-21	Argonaut Gold Inc. - Charity - Public/Private	Bought
Mar-21	Silver Tiger Metals Inc	Bought
Apr-21	Silver X Mining Corp	Marketed
Apr-21	GR Silver Mining Ltd.	Bought
May-21	GoGold Resources Inc	Bought
Nov-21	American Lithium Corp	Marketed
Nov-21	Burin Gold Corp - FT Shares	IPO
Nov-21	Burin Gold Corp - Units	IPO
	Total	
2022		
Mar-22	Argonaut Gold Inc - CDE Charity FT Shares	Bought
Mar-22	Argonaut Gold Inc - CEE Charity FT Shares	Bought
Mar-22	GoGold Resources Inc	Bought
Mar-22	Silver Tiger Metals Inc	Bought
Mar-22	GR Silver Minnig Ltd	Marketed
Jun-22	Silver Hammer Mining Corp.	Marketed
Jul-22	Guanajuato Silver Company Ltd	Marketed
Aug-22	GR Silver Minnig Ltd	Marketed
Nov-22	Argonaut Gold Inc	Bought
	Total	
2023		
Feb-23	GoGold Resources Inc.	Bought
Feb-23	Reyna Silver Corp.	Bought
Feb-23	Silver Tiger Metals	Bought
Mar-23	EMP Metals Corp	Marketed
Apr-23	US Critical Metals Corp	Marketed
May-23	LithiumBank Resources Corp.	Bought
May-23	Silver Hammer Mining Corp.	Marketed
May-23	Argonaut Gold Inc - CEE	Bought
May-23	Argonaut Gold Inc - CDE	Bought
Sep-23	E3 Lithium Ltd.	Bought
Sep-23	New Pacific Metals	Bought
	Total	

Source: Echelon Wealth Partners ECM (now Ventum Financial); Gabriel Gonzalez CFA

IMPORTANT DISCLOSURE

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