

# Zeno AN Solutions San Jose Police and Fire Department Retirement Plan

Investment Committee Presentation

Fiscal Year 7/1/2022 – 6/30/2023

December 2023

*Vinod Pakianathan: Managing Director Zeno AN Solutions*

# Presentation Overview



## About Us

Introduction to Abel Noser Solutions  
Abel Noser Measures Trading for over 300 Asset  
Owners and Managers  
Our Global Universe comprises over 20 Trillion in  
Principal across Asset Classes

## US Equity Trading Review

**Artisan Global Value**

**Cove Street SCV**

## International Equity

**Trading overview**

**Artisan Global Value**

**Morgan Stanley**

## International Small Cap Trading Review

**Oberweis**

## Glossary of Terms





## Our Team

Dedicated, Thorough, Experienced

Our unparalleled team will work as an extension of your staff. Along with market leading product solutions, **Zeno AN Solutions** continues to be the ultimate client advocate, leveraging our expertise and custom services to help you achieve measurably superior executions, compliance peace-of-mind, and game-changing analytics data. We also offer bespoke data and reporting solutions that can be tailored to your specific set-up, fiduciary make-up or business model.

## Zeno AN Solutions

Over 30 Years of Industry Leading Analytics

Zeno AN Solutions offers the industry's most comprehensive TCA analytics and monitoring solutions for all asset owners including pension funds, mutual funds, insurance companies and endowments.

Our leading TCA and compliance analytics can provide you with the critical transparency, substantive due diligence, and insight into how your managers are handling fund assets. Not only do we provide you with customized metrics so you can control excessive trade costs, we give you the reporting and archiving necessary to mitigate investment and fiduciary risk.





# San Jose Police and Fire Retirement Plan

## Fiscal Year US Equity Transaction Cost Analysis Summary

### Covering the Third Quarter 2022 through the Second Quarter 2023

## Artisan Global Value and Cove Street Small Cap Value

Total - Current Period			Commission Cost				Execution Cost / Gain								Total Cost / Gain			
Shares	Principal						oOpnStrike Cost / Gain				oVWAP Cost / Gain				oVWAP + Commission			
	(000)		Dollars (000)	BP	¢/Share	Rank	Dollars (000)	BP	¢/Share	Rank	Dollars (000)	BP	¢/Share	Rank	Dollars (000)	BP	¢/Share	Rank
<b>Total</b>	<b>6,202,666</b>	<b>\$198,647</b>	<b>-\$86</b>	<b>-4.3</b>	<b>-1.39</b>	<b>41%</b>	<b>-\$741</b>	<b>-37.3</b>	<b>-11.95</b>	<b>46%</b>	<b>-\$105</b>	<b>-5.3</b>	<b>-1.69</b>	<b>56%</b>	<b>-\$191</b>	<b>-9.6</b>	<b>-3.07</b>	<b>47%</b>
Buy	1,217,015	\$56,813	-\$18	-3.1	-1.44	42%	-\$298	-52.5	-24.51	69%	\$158	27.8	12.95	5%	\$140	24.7	11.51	5%
Sell	4,985,651	\$141,834	-\$69	-4.8	-1.37	40%	-\$443	-31.2	-8.89	33%	-\$262	-18.5	-5.26	70%	-\$331	-23.3	-6.63	67%

Manager 2: Artisan Global Value			Commission Cost				Execution Cost / Gain								Total Cost / Gain			
	(000)		Dollars (000)	BP	¢/Share	Rank	Dollars (000)	BP	¢/Share	Rank	Dollars (000)	BP	¢/Share	Rank	Dollars (000)	BP	¢/Share	Rank
<b>Total</b>	<b>1,104,359</b>	<b>\$70,661</b>	<b>-\$21</b>	<b>-3.0</b>	<b>-1.89</b>	<b>61%</b>	<b>-\$565</b>	<b>-79.9</b>	<b>-51.14</b>	<b>81%</b>	<b>-\$160</b>	<b>-22.7</b>	<b>-14.52</b>	<b>95%</b>	<b>-\$181</b>	<b>-25.7</b>	<b>-16.42</b>	<b>95%</b>
Buy	169,512	\$13,179	-\$4	-2.7	-2.08	64%	-\$59	-44.4	-34.52	77%	\$36	27.3	21.20	5%	\$32	24.6	19.13	5%
Sell	934,847	\$57,482	-\$17	-3.0	-1.86	59%	-\$506	-88.1	-54.16	77%	-\$196	-34.2	-21.00	94%	-\$214	-37.2	-22.86	92%

Manager 1: Cove Street Small Cap Value			Commission Cost				Execution Cost / Gain								Total Cost / Gain			
	(000)		Dollars (000)	BP	¢/Share	Rank	Dollars (000)	BP	¢/Share	Rank	Dollars (000)	BP	¢/Share	Rank	Dollars (000)	BP	¢/Share	Rank
<b>Total</b>	<b>4,554,374</b>	<b>\$117,570</b>	<b>-\$58</b>	<b>-4.9</b>	<b>-1.27</b>	<b>37%</b>	<b>-\$17</b>	<b>-1.4</b>	<b>-0.37</b>	<b>21%</b>	<b>\$68</b>	<b>5.8</b>	<b>1.49</b>	<b>24%</b>	<b>\$10</b>	<b>0.8</b>	<b>0.22</b>	<b>24%</b>
Buy	909,727	\$38,893	-\$13	-3.2	-1.38	40%	-\$184	-47.4	-20.25	64%	\$134	34.5	14.74	5%	\$122	31.3	13.36	5%
Sell	3,644,647	\$78,677	-\$45	-5.7	-1.24	36%	\$167	21.3	4.60	16%	-\$66	-8.4	-1.82	56%	-\$112	-14.2	-3.06	47%

### Historical Summary

			Commission Cost				Execution Cost / Gain								Total Cost / Gain			
Shares	Principal						oOpnStrike Cost / Gain				oVWAP Cost / Gain				oVWAP + Commission			
	(000)		Dollars (000)	BP	¢/Share	Rank	Dollars (000)	BP	¢/Share	Rank	Dollars (000)	BP	¢/Share	Rank	Dollars (000)	BP	¢/Share	Rank
2023 Q2	3,166,694	\$114,559	-\$44	-3.8	-1.39	41%	-\$856	-74.7	-27.03	69%	-\$87	-7.6	-2.75	63%	-\$131	-11.4	-4.14	58%
2023 Q1	2,236,208	\$61,997	-\$31	-4.9	-1.37	40%	\$249	40.1	11.12	8%	-\$15	-2.4	-0.65	44%	-\$45	-7.3	-2.02	40%
2022	2,276,837	\$89,471	-\$37	-4.1	-1.63	49%	-\$347	-38.8	-15.23	56%	\$144	16.1	6.32	16%	\$107	11.9	4.69	16%
2021	3,270,667	\$175,675	-\$55	-3.1	-1.67	50%	-\$270	-15.4	-8.25	39%	-\$580	-33.0	-17.73	95%	-\$635	-36.1	-19.40	95%
2020	4,302,892	\$176,765	-\$64	-3.6	-1.49	44%	-\$703	-39.8	-16.33	57%	-\$248	-14.0	-5.76	77%	-\$312	-17.7	-7.25	76%
2019	2,433,719	\$97,731	-\$36	-3.7	-1.47	44%	-\$159	-16.2	-6.52	36%	\$34	3.5	1.40	25%	-\$2	-0.2	-0.08	24%
2018	2,041,641	\$88,577	-\$34	-3.8	-1.64	49%	\$508	57.3	24.88	5%	\$123	13.9	6.03	16%	\$90	10.1	4.39	16%
2017	2,709,742	\$83,580	-\$52	-6.2	-1.92	61%	-\$313	-37.4	-11.54	45%	\$23	2.8	0.86	32%	-\$29	-3.4	-1.06	34%
2016	1,209,358	\$28,536	-\$27	-9.5	-2.25	70%	-\$89	-31.1	-7.35	37%	\$17	6.0	1.42	25%	-\$10	-3.5	-0.83	32%
2015	1,603,855	\$53,075	-\$31	-5.9	-1.96	62%	-\$289	-54.4	-18.01	59%	-\$76	-14.4	-4.77	75%	-\$108	-20.3	-6.72	74%
2014	18,935,297	\$751,825	-\$135	-1.8	-0.71	19%	\$950	12.6	5.02	15%	\$321	4.3	1.70	24%	\$186	2.5	0.98	22%
2013	3,011,038	\$102,233	-\$55	-5.4	-1.84	59%	-\$77	-7.5	-2.55	24%	\$112	11.0	3.72	20%	\$57	5.5	1.88	21%

# San Jose Police and Fire Retirement Plan

## Fiscal Year International Equity Transaction Cost Analysis Summary

### Covering the Third Quarter 2022 through the Second Quarter 2023

## Artisan Global Value and Morgan Stanley International

Total - Current Period			Commission Cost			Execution Cost / Gain						Total Cost / Gain		
Shares	Principal					oOpnStrike Cost / Gain			oVWAP Cost / Gain			oVWAP + Commission		
	(000)		Dollars (000)	BP	Rank	Dollars (000)	BP	Rank	Dollars (000)	BP	Rank	Dollars (000)	BP	Rank
Total	6,982,920	\$97,682	-\$52	-5.3	58%	-\$52	-5.3	36%	\$102	10.4	21%	\$50	5.1	21%
Buy	1,339,855	\$21,653	-\$13	-5.8	61%	-\$136	-62.9	73%	-\$1	-0.6	41%	-\$14	-6.4	41%
Sell	5,643,065	\$76,029	-\$39	-5.1	58%	\$84	11.1	25%	\$103	13.5	20%	\$64	8.4	20%

Manager 1: Artisan Global Value			Commission Cost			Execution Cost / Gain						Total Cost / Gain		
		(000)	Dollars (000)	BP	Rank	Dollars (000)	BP	Rank	Dollars (000)	BP	Rank	Dollars (000)	BP	Rank
Total	6,443,449	\$83,332	-\$45	-5.4	59%	\$44	5.3	24%	\$98	11.8	20%	\$54	6.4	20%
Buy	1,054,222	\$13,489	-\$9	-6.8	68%	-\$95	-70.2	76%	\$2	1.8	37%	-\$7	-5.1	39%
Sell	5,389,227	\$69,843	-\$36	-5.1	57%	\$139	19.9	21%	\$96	13.8	19%	\$60	8.6	19%

Manager 2: Morgan Stanley			Commission Cost			Execution Cost / Gain						Total Cost / Gain		
		(000)	Dollars (000)	BP	Rank	Dollars (000)	BP	Rank	Dollars (000)	BP	Rank	Dollars (000)	BP	Rank
Total	539,471	\$14,350	-\$7	-4.8	55%	-\$96	-67.0	75%	\$3	2.3	34%	-\$4	-2.5	35%
Buy	285,633	\$8,163	-\$3	-4.2	45%	-\$41	-50.8	68%	-\$4	-4.4	47%	-\$7	-8.7	44%
Sell	253,838	\$6,186	-\$3	-5.5	60%	-\$55	-88.4	76%	\$7	11.2	24%	\$4	5.7	24%

### Historical Summary

	Shares	Principal	Commission Cost			Execution Cost / Gain						Total Cost / Gain		
		(000)	Dollars (000)	BP	Rank	oOpnStrike Cost / Gain			oVWAP Cost / Gain			oVWAP + Commission		
			Dollars (000)	BP	Rank	Dollars (000)	BP	Rank	Dollars (000)	BP	Rank	Dollars (000)	BP	Rank
2023 Q2	5,065,471	\$67,143	-\$32	-4.8	56%	-\$211	-31.5	58%	\$55	8.2	23%	\$23	3.4	23%
2023 Q1	980,407	\$14,210	-\$12	-8.7	75%	\$237	166.8	5%	\$36	25.1	10%	\$23	16.4	11%
2022	3,953,240	\$62,271	-\$31	-5.0	57%	\$380	60.9	8%	\$297	47.6	5%	\$266	42.7	5%
2021	5,237,994	\$98,018	-\$59	-6.0	62%	-\$172	-17.5	45%	\$36	3.6	31%	-\$24	-2.4	33%
2020	11,513,305	\$85,806	-\$50	-5.8	63%	-\$4	-0.4	32%	-\$250	-29.1	86%	-\$300	-35.0	84%
2019	1,799,702	\$15,986	-\$13	-8.4	75%	-\$191	-119.3	82%	-\$12	-7.4	60%	-\$25	-15.8	64%
2018	7,004,479	\$57,431	-\$33	-5.8	63%	\$116	20.2	18%	\$112	19.6	16%	\$79	13.8	15%
2017	126,178	\$1,324	-\$1	-10.6	78%	\$3	24.8	18%	\$4	30.5	5%	\$3	19.9	5%
2016	3,030	\$212	\$0	-1.1	16%	-\$1	-43.2	60%	\$0	-5.6	46%	\$0	-6.7	38%
2014	84,587,227	\$557,596	-\$138	-2.5	32%	-\$56	-1.0	32%	-\$245	-4.4	47%	-\$383	-6.9	40%
2013	3,830,082	\$46,753	-\$26	-5.5	59%	-\$177	-38.0	59%	-\$62	-13.2	71%	-\$87	-18.7	69%

# San Jose Police and Fire Retirement Plan

## Fiscal Year Small Cap International Transaction Cost Analysis Summary

### Covering the Third Quarter 2022 through the Second Quarter 2023

## OBERWEIS

## Benchmark International Small Cap Universe

### US Summary

	Shares	Principal (000)	Commission Cost			Execution Cost / Gain						Total Cost / Gain dVWAP + Commission		
			Dollars (000)	CPS	Rank	dOpnStrike Cost / Gain			dVWAP Cost / Gain			Dollars (000)	CPS	Rank
Total	76,700	\$2,469	-\$1	-1.5	43%	-\$2	-2.8	36%	\$0	0.5	21%	-\$1	-1.0	19%
Buy	3,400	\$69	\$0	-2.0	62%	-\$2	-51.3	95%	\$0	-2.8	58%	\$0	-4.8	58%
Sell	73,300	\$2,400	-\$1	-1.4	42%	\$0	-0.5	25%	\$0	0.7	23%	-\$1	-0.8	24%

### Global Summary

	Shares	Principal (000)	Commission Cost			Execution Cost / Gain						Total Cost / Gain dVWAP + Commission		
			Dollars (000)	BP	Rank	dOpnStrike Cost / Gain			dVWAP Cost / Gain			Dollars (000)	BP	Rank
Total	9,178,605	\$112,103	-\$111	-9.9	35%	-\$1,381	-123.2	69%	-\$174	-15.5	45%	-\$285	-25.4	40%
Buy	3,797,220	\$58,674	-\$59	-10.1	46%	-\$619	-105.5	72%	-\$88	-15.0	50%	-\$147	-25.1	47%
Sell	5,381,385	\$53,430	-\$52	-9.7	23%	-\$762	-142.7	64%	-\$86	-16.1	43%	-\$138	-25.9	38%

### Historical Summary

	Shares	Principal (000)	Commission Cost			Execution Cost / Gain						Total Cost / Gain dVWAP + Commission		
			Dollars (000)	BP	Rank	dOpnStrike Cost / Gain			dVWAP Cost / Gain			Dollars (000)	BP	Rank
2023 Q2	3,008,376	\$38,734	-\$38	-9.8	37%	-\$364	-94.1	64%	-\$46	-11.9	41%	-\$84	-21.8	37%
2023 Q1	2,953,137	\$36,171	-\$37	-10.1	36%	-\$478	-132.2	72%	-\$79	-21.7	57%	-\$115	-31.9	48%
2022	6,296,571	\$83,897	-\$88	-10.5	41%	-\$1,215	-144.8	76%	-\$143	-17.1	49%	-\$232	-27.6	45%
2021	8,681,764	\$137,538	-\$144	-10.5	50%	-\$2,129	-154.8	78%	-\$192	-14.0	48%	-\$336	-24.5	47%
2020	18,378,681	\$206,234	-\$263	-12.8	42%	-\$3,305	-160.3	75%	-\$437	-21.2	50%	-\$700	-33.9	47%
2019	8,315,493	\$85,377	-\$109	-12.7	38%	-\$819	-95.9	59%	-\$141	-16.5	42%	-\$250	-29.3	39%
2018	17,598,960	\$164,980	-\$225	-13.6	37%	-\$1,981	-120.1	62%	-\$165	-10.0	34%	-\$390	-23.6	31%
2017	22,190,612	\$180,807	-\$259	-14.3	34%	-\$1,897	-104.9	56%	-\$151	-8.4	32%	-\$410	-22.7	24%
2016	13,197,835	\$129,435	-\$197	-15.2	44%	-\$1,776	-137.2	66%	-\$208	-16.0	41%	-\$404	-31.2	39%
2015	19,448,414	\$198,842	-\$334	-16.8	56%	-\$3,006	-151.2	70%	-\$432	-21.7	48%	-\$765	-38.5	48%
2014	83,218,657	\$305,069	-\$435	-14.3	15%	-\$3,627	-118.9	40%	-\$501	-16.4	31%	-\$936	-30.7	20%

## Glossary of Metrics

**d**: Trade day measure

**o**: Order length measure

**/K**: U.S. dollars in thousands

**/BP**: Basis Points

**/CPS**: Cents per Share

**OpenStrike**: This measure compares your execution price to the price at market open on the trade date (d) or the first day of the order (o)

**VWAP**: Volume Weighted Average Price: Total Principal traded divided by the number of shares for a specific period – Trade Day (d) or Order Length (o).

**Total Cost**: Commission plus execution gain/loss to the VWAP.