

# Artisan Partners Growth Team

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January 2023 | Investor Update



ARTISAN PARTNERS

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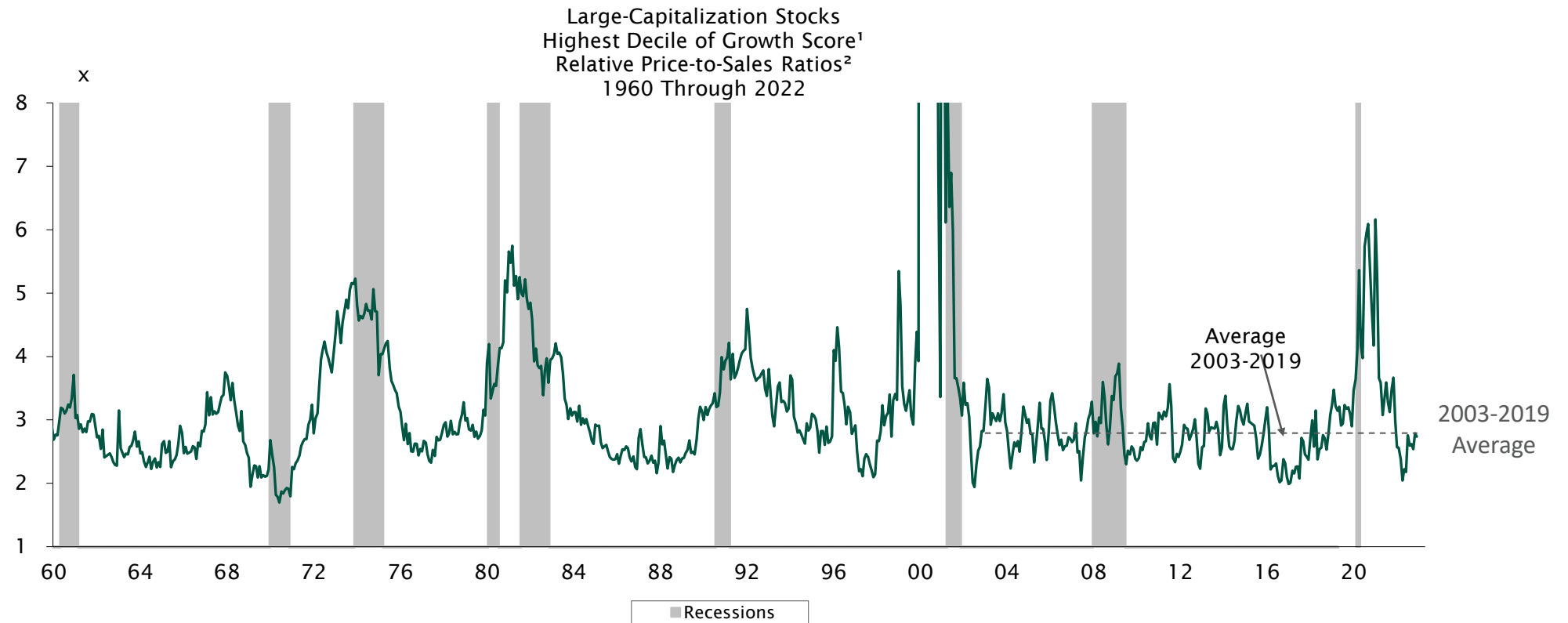
This material is for informational purposes only and shall not be construed as investment or tax advice. Prospective investors should consult their financial and tax adviser before making investments in order to determine whether investment will be suitable for them.

Unless otherwise indicated, the Artisan Strategy characteristics relate to that of an investment composite or a representative account managed within a composite. It is intended to provide a general illustration of the investment strategy and considerations used by Artisan Partners in managing that strategy. Individual accounts may differ, at times significantly, from the reference data shown due to varying account restrictions, fees and expenses, and since-inception time periods, among others. Where applicable, this information is supplemental to, and not to be construed with, a current or prospective client's investment account information.

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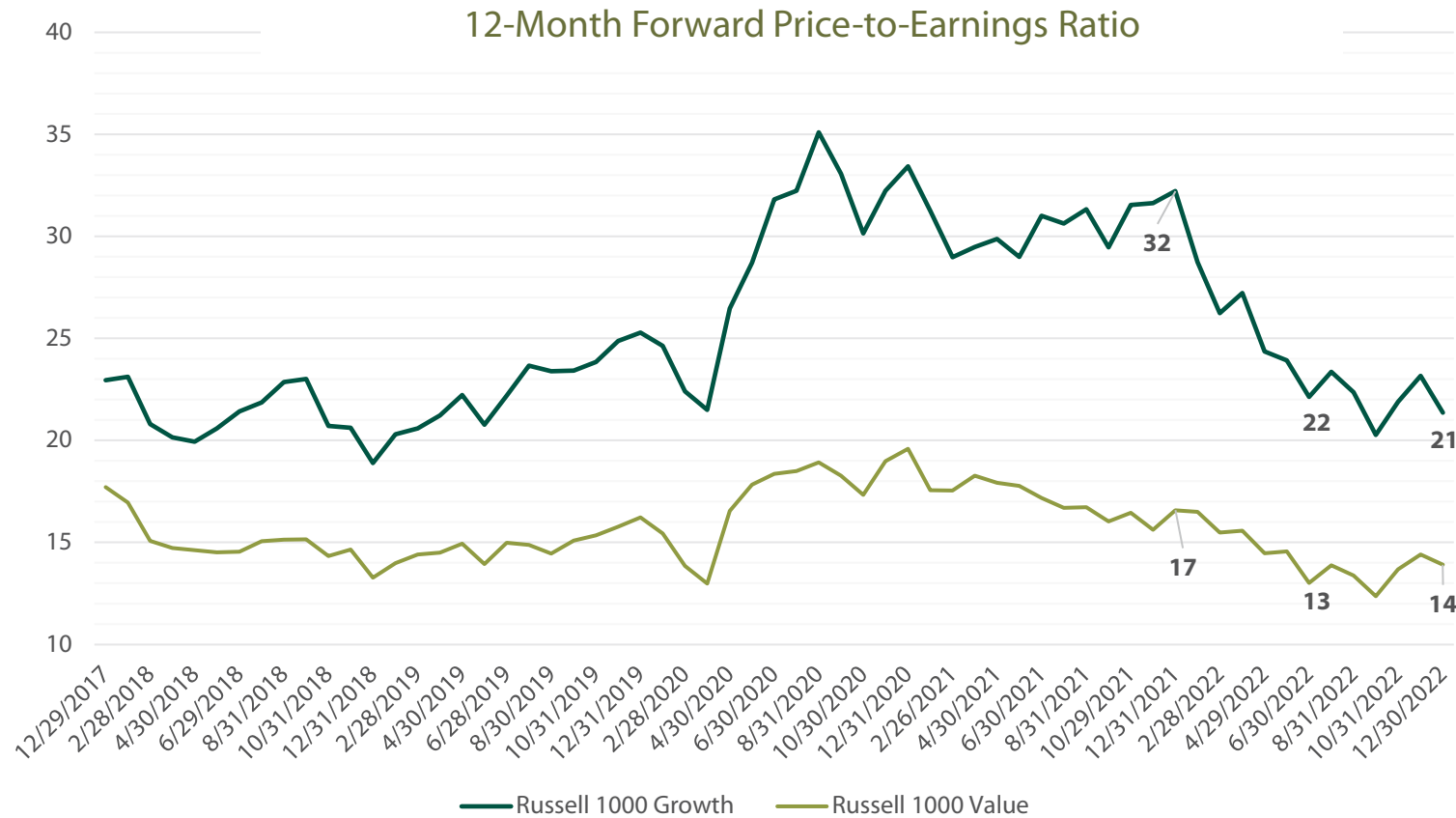
Statements contained in the presentation are based on the beliefs and assumptions of our portfolio management team and on the information currently available to our team at the time of such statements. Although we believe that the expectations reflected in these statements are reasonable, we can give no assurance that these expectations will prove to be correct.

# The Growth Stock Valuation Premium Has Collapsed



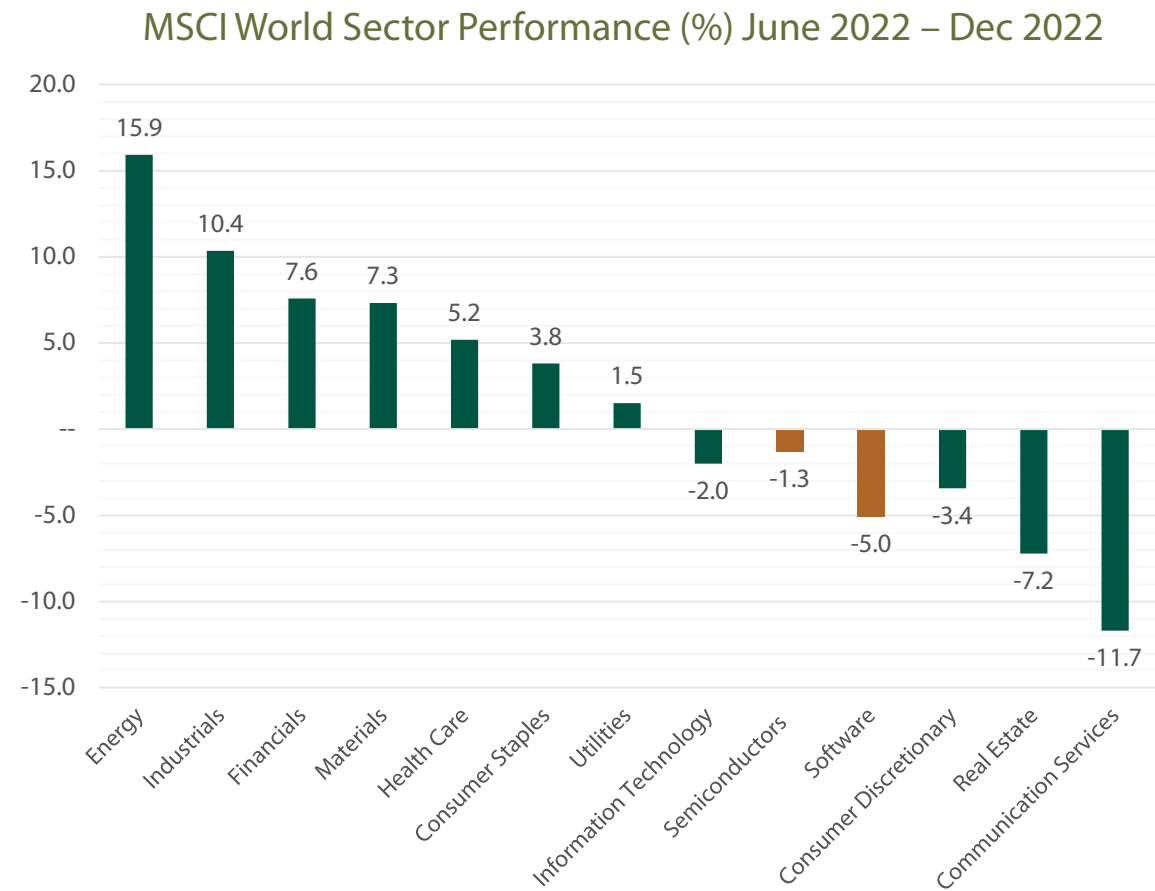
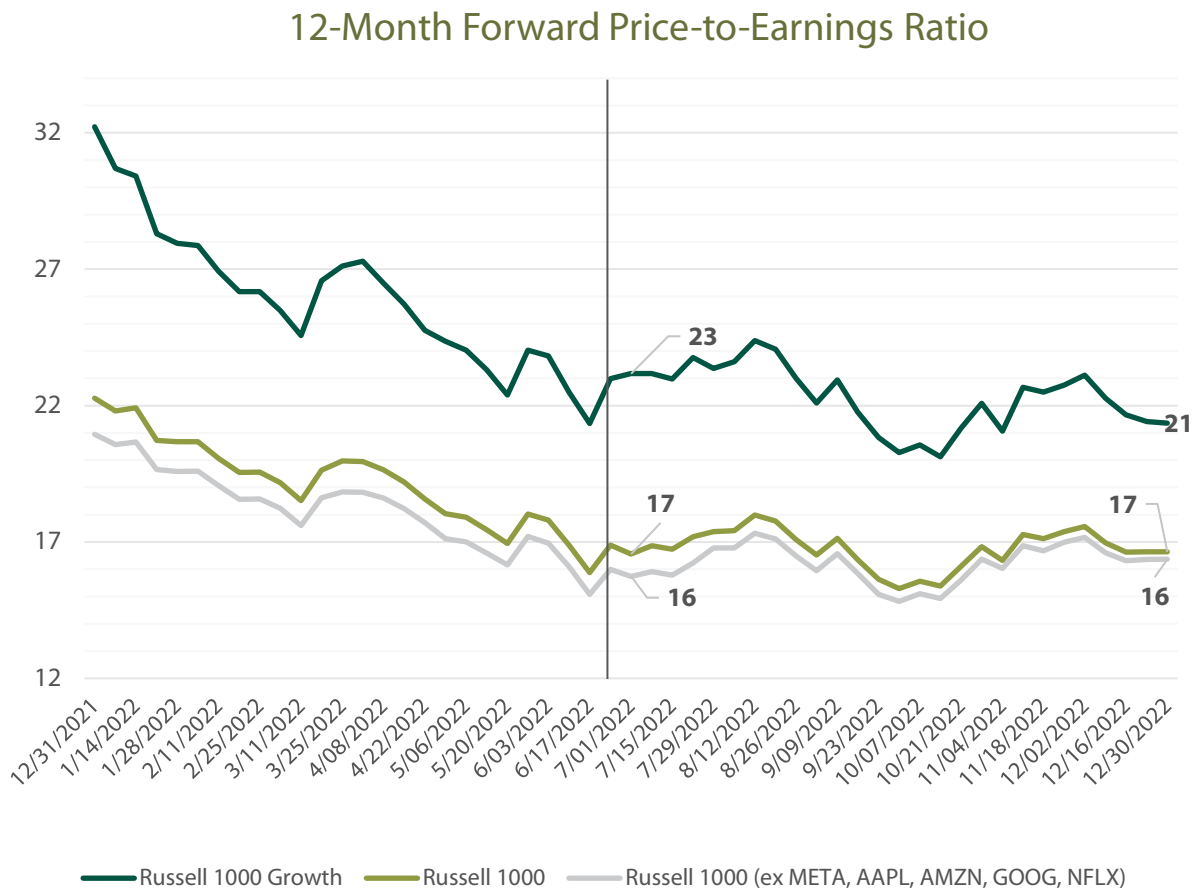
Source: National Bureau of Economic Research, Empirical Research Partners Analysis.

# The Growth Stock Valuation Premium Has Collapsed



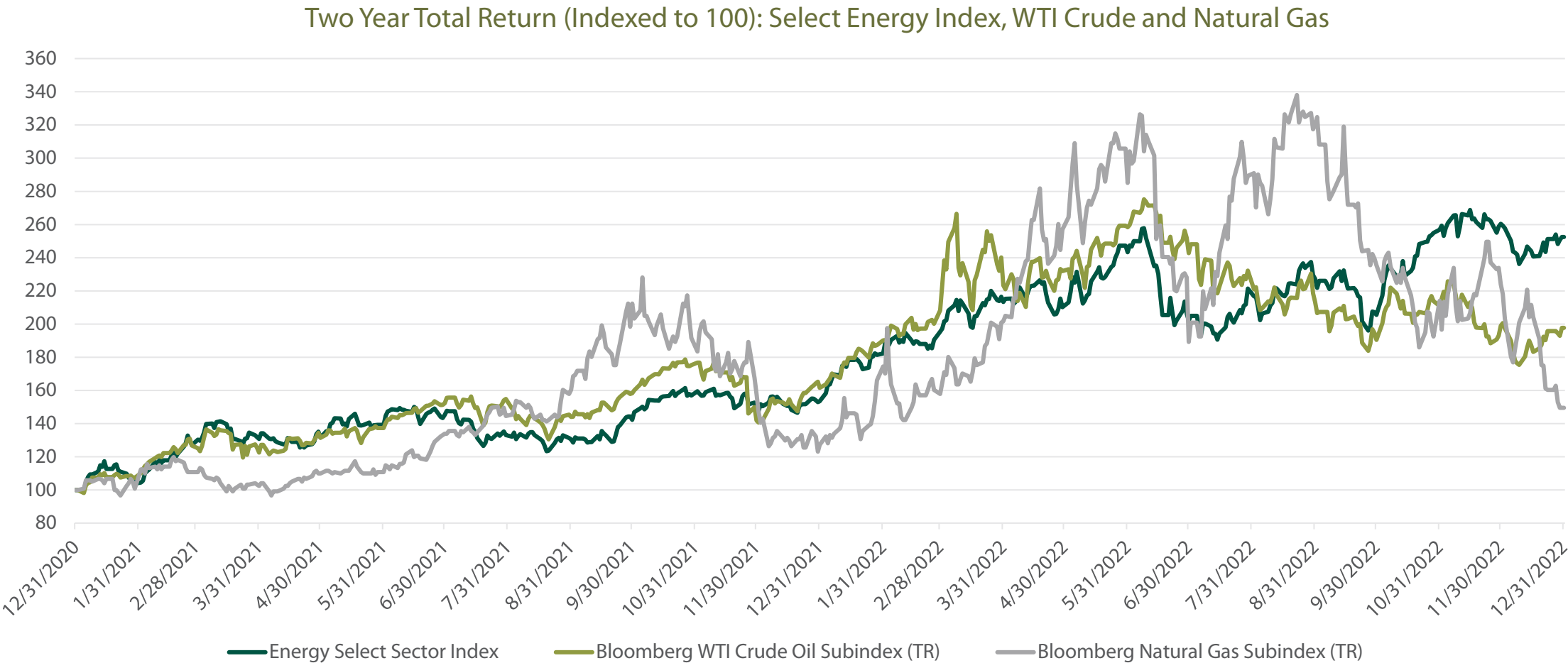
	Russell 1000 Growth	Russell 1000 Value
PE using FY1 Est	21.4	13.9
Est 3-5 Yr EPS Growth	14.5	9.2
PEG (PE/Growth)	1.5	1.5

# 2022: Multiple Compression Largely Ended Mid-Year, Yet Cyclical Areas of The Market Continued to Outperform

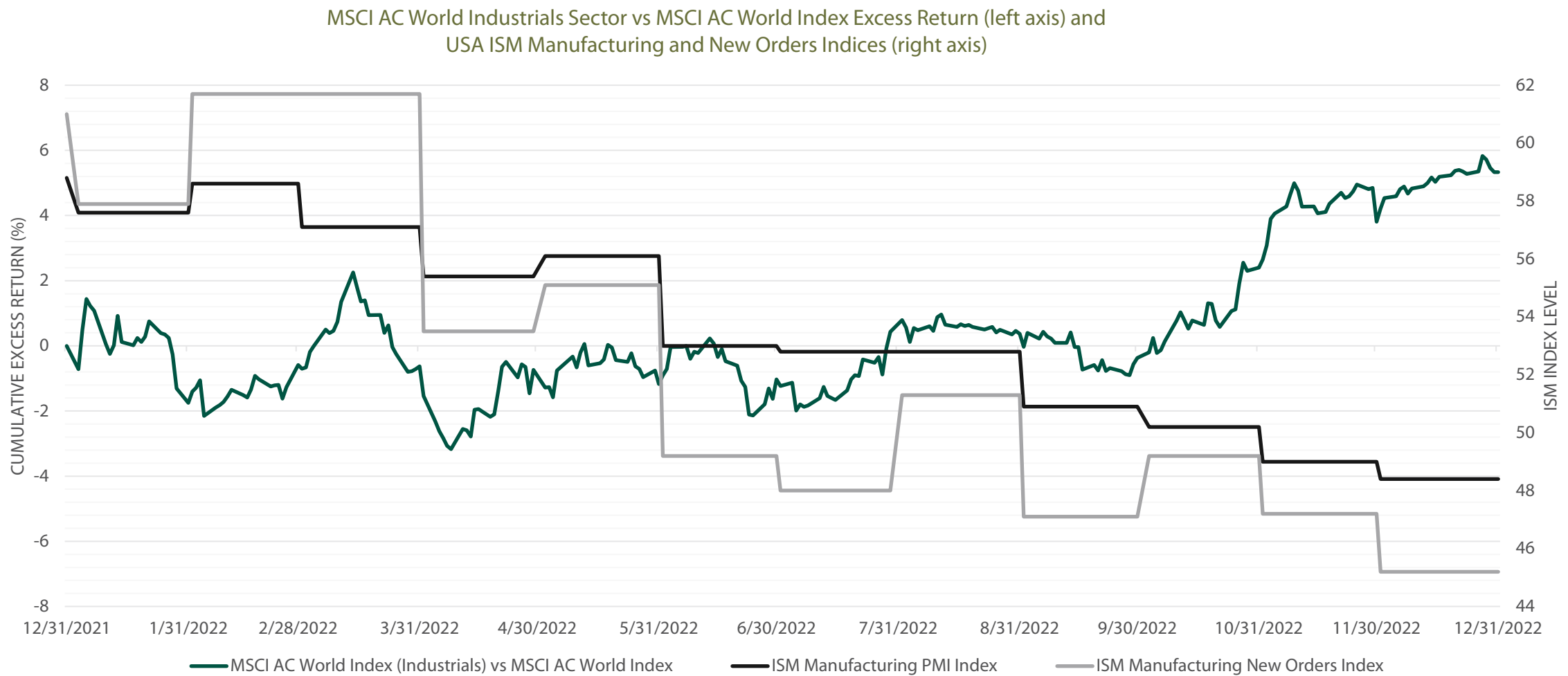


Sources: Artisan Partners/FactSet/Russell/MSCI. As of 31 Dec 2022. Past performance does not guarantee and is not a reliable indicator of future results.

# Energy Equities Resilient Despite Falling Commodity Prices



# Industrial Equities Resilient Despite Deteriorating Economic Data



Sources: Artisan Partners/FactSet/MSCI. As of 31 Dec 2022. Past performance does not guarantee and is not a reliable indicator of future results.

# Cloud Software—A Large Market That’s Early

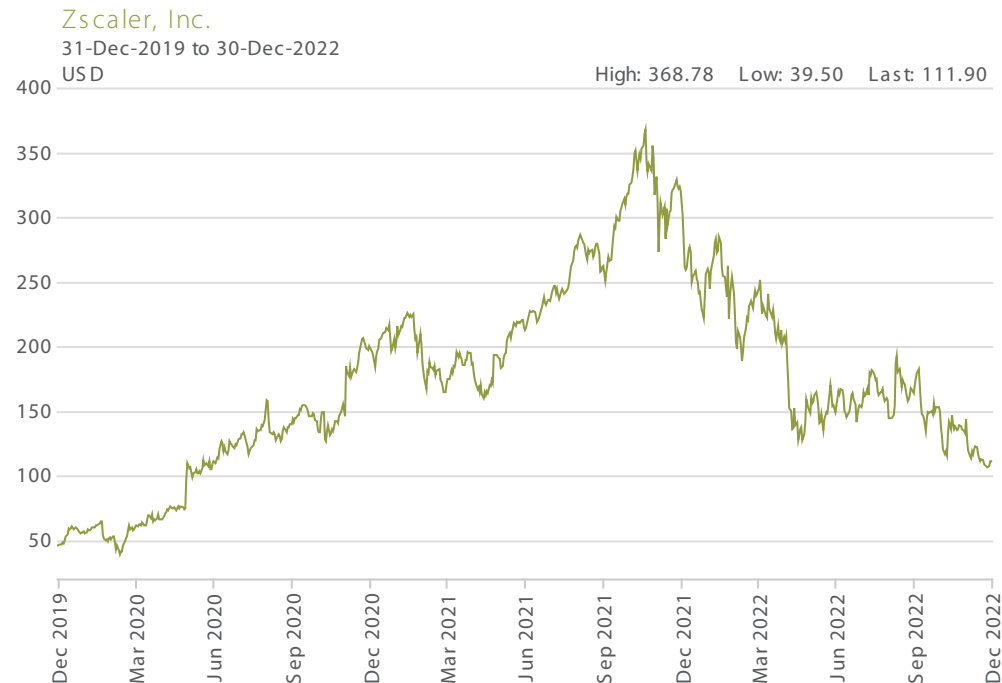
## Holdings Across Our Strategies

Global Opportunities	Global Discovery	U.S. Mid-Cap Growth	U.S. Small-Cap Growth
Veeva Systems Alphabet Atlassian Hexagon Zscaler Intuit	Veeva Systems Zscaler HubSpot Workiva Atlassian Guidewire Ceridian Bill.com Bentley Systems Datadog	Veeva Systems HubSpot Synopsys Atlassian Zscaler Tyler Technologies Bill.com Datadog Ceridian Bentley Systems	Blackline Workiva Tyler Technologies Guidewire Bentley Systems HubSpot DoubleVerify Ceridian Paycor Sprout Social Freshworks Clearwater Gitlab Olo Procore Technologies



# Cloud Software—A Large Market That's Early

## High Conviction Holding: Zscaler



### Franchise Elements

Zscaler is the leader in cloud security for enterprises with the world's largest in-line security cloud platform and a scalable cloud architecture.

### Thesis

The profit cycle is driven by both an external secular trend (security spending is a high priority budget item driven by an ever-evolving threat environment) and internal product cycles that are accelerating Zscaler's share gains of the network security market.

### Upcoming Catalysts / What is Underappreciated

Focusing on the internal driver, adoption of Zscaler's solution drives compelling return on investment. By our estimates, when we analyze Zscaler's cost versus savings combined with the fact that their offering can be implemented in weeks, we think this results in a payback period of <1 year. This cost savings proposition only makes Zscaler's solution resonate more in the current macroeconomic backdrop.

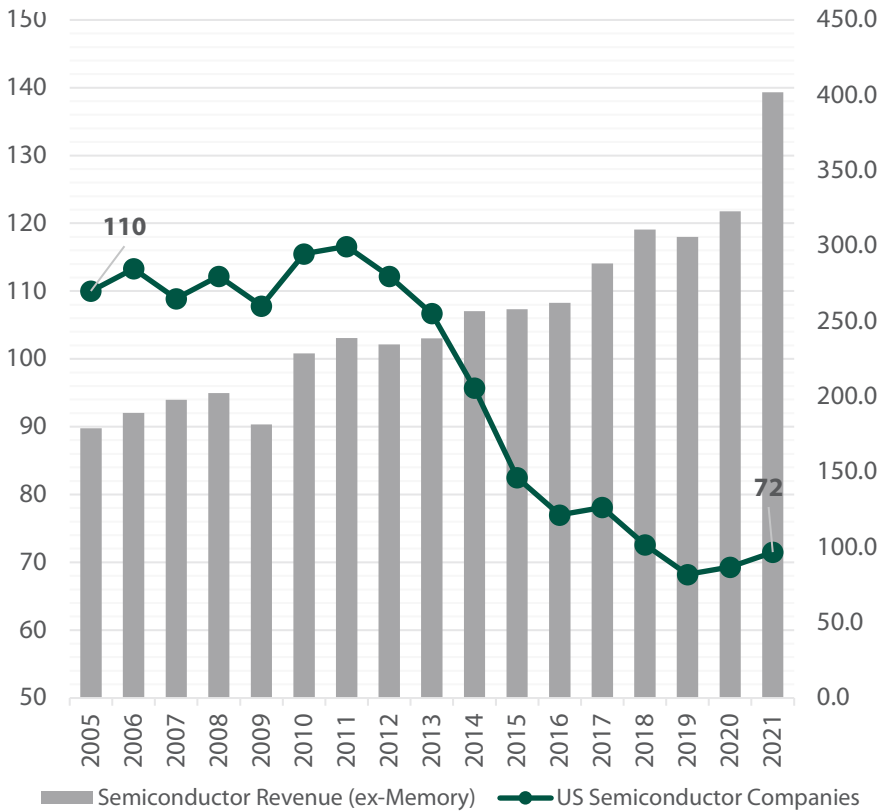
# Semiconductors: Enabling a Cleaner, Connected World

## Holdings Across Our Strategies

Global Opportunities	Global Discovery	U.S. Mid-Cap Growth	U.S. Small-Cap Growth
AMD ON Semi	Lattice Semi AMD ON Semi Nordic Monolithic Power MACOM Silergy	Lattice Semi Synopsys ON Semi Monolithic Power Marvell	Lattice Semi Monolithic Power Allegro Microsystems MACOM Ambarella

# Semiconductors: Enabling a Cleaner, Connected World

# US Semiconductor Companies (left) vs Semiconductor Revenue (\$bn) (right)



Return on Invested Capital (ROIC)



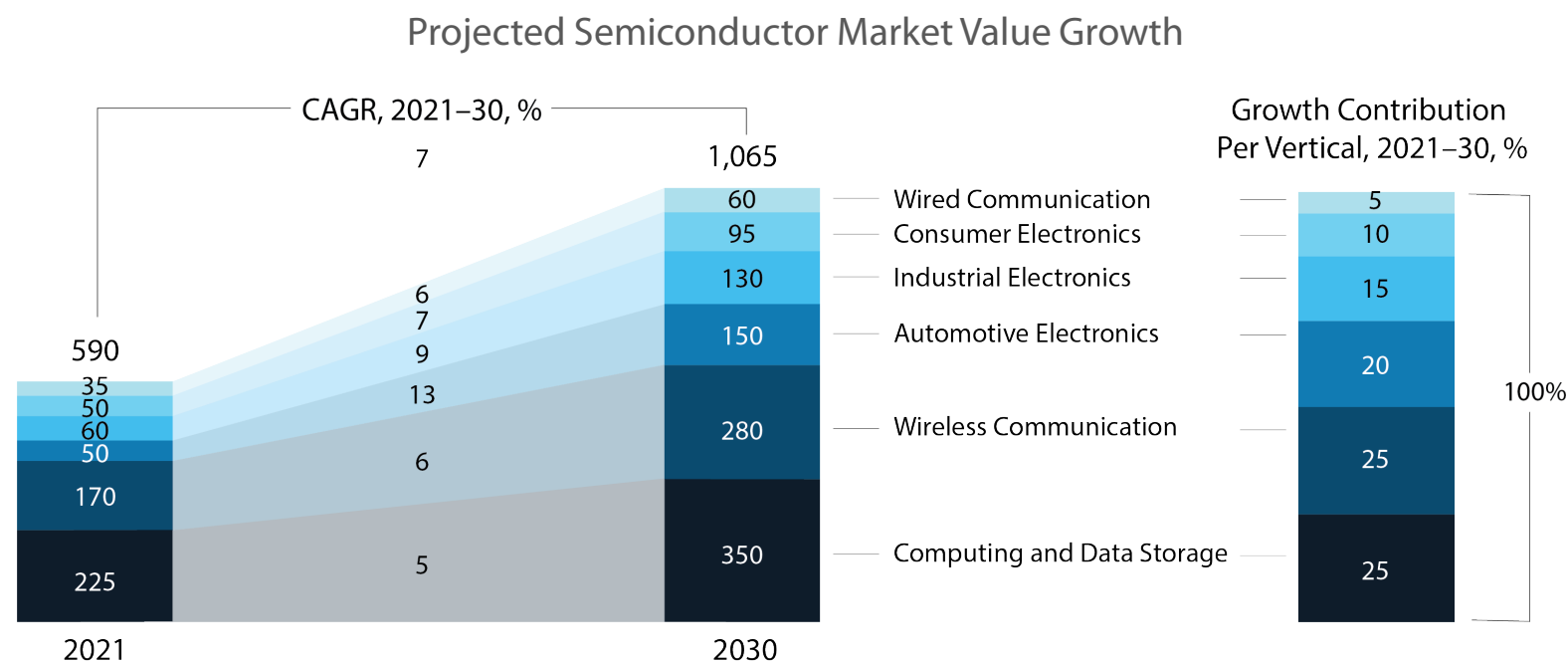
Total Return		
	SOX	S&P 500
2007	-12.0%	5.6%
2008	-47.2%	-37.0%
2009	72.6%	26.4%
2010	15.8%	15.1%
2011	-11.1%	1.0%
2012	7.3%	16.0%
2013	41.7%	32.4%
2014	31.4%	13.7%
2015	-1.6%	1.4%
2016	39.3%	11.9%
2017	40.5%	21.8%
2018	-6.0%	-4.4%
2019	63.3%	31.5%
2020	53.7%	18.4%
2021	42.9%	28.7%
2022	-36.2%	-18.6%

\*PHLX SOX index is a capitalization-weighted index composed of the 30 largest U.S. companies involved in the design, distribution, manufacture, and sale of semiconductors – it is often used as a broad measure of the performance of the semiconductor industry.

Source: Credit Suisse HOLT Lens© Weighted Aggregate January 13, 2023, Credit Suisse HOLT TMT Specialist John Talbott April 06, 2022 HOLT TMT Semi Cycles Perspective report. Past performance is not a reliable indicator of future results.

# Semiconductors: Enabling a Cleaner, Connected World

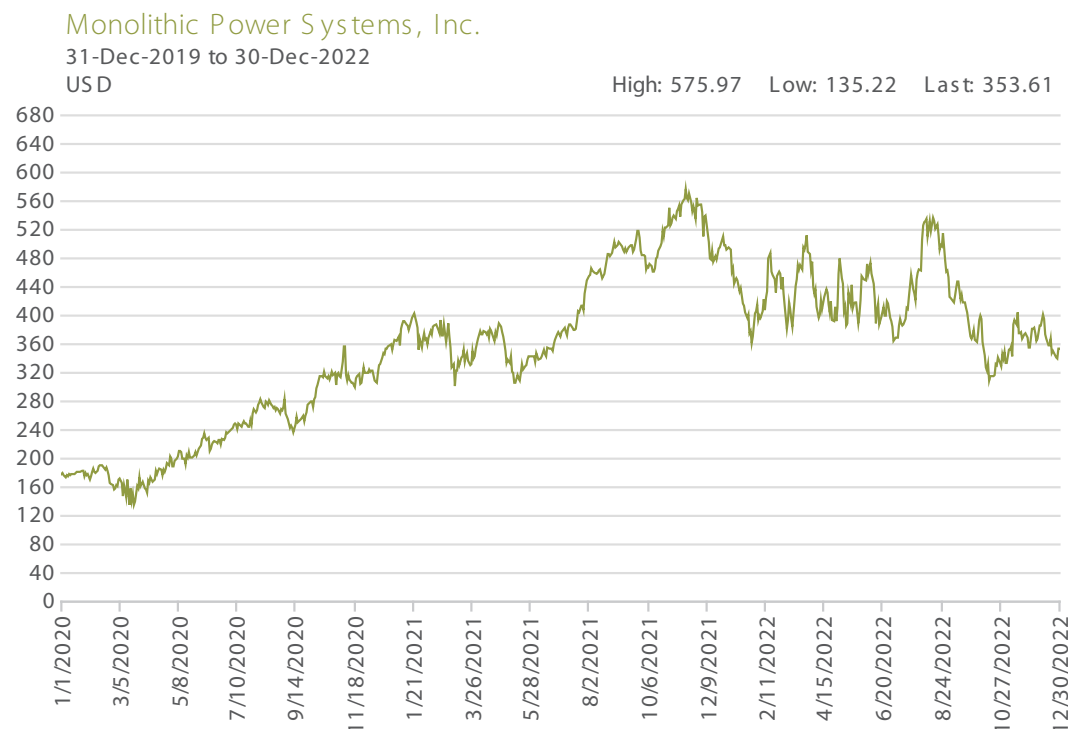
- As the brains of modern electronics, semiconductors are critical components to several secular growth trends we believe will transform many industries over the next decade.
- Our holdings primarily include fabless vendors diversified across several high growth end-markets: vehicle electrification, artificial intelligence and industrial process automation.



As of 1 Apr 2022. Source: McKinsey & Company, The Semiconductor Decade: A Trillion-dollar industry. <https://www.mckinsey.com/industries/semiconductors/our-insights/the-semiconductor-decade-a-trillion-dollar-industry>. McKinsey analysis based on a range of macroeconomic assumptions. Analysis is based on 48 listed companies and assumes average price increases of about 2 percent a year and a return to balanced supply and demand after current volatility. Figures are in \$ billions and approximate.

# Semiconductors: Enabling a Cleaner, Connected World

## High Conviction Holding: Monolithic Power Systems



### Franchise Elements

MPS is a leading fabless analog and mixed signal integrated circuit (IC) company that designs, develops and markets high-performance power conversion solutions.

### Investment Thesis

The ever-increasing performance requirements and complexity of electronics has made the challenge of efficiently powering them more than the afterthought it once was. This challenge aligns well with MPS's core competence and strategic focus.

### Upcoming Catalysts / What is Underappreciated

After several years of outperformance, MPS is a well-known company, but the market is preoccupied with cyclical concerns and losing sight of the long-term growth potential of a still low-penetration, share-gain story. More complex, higher ASP PMICs used in cloud datacenter servers, 5G base stations and EVs - 3 segments that will soon exceed 50% mix - should drive better-than-expected revenue and margins.

# Picks and Shovels for the Biologic Drug Era

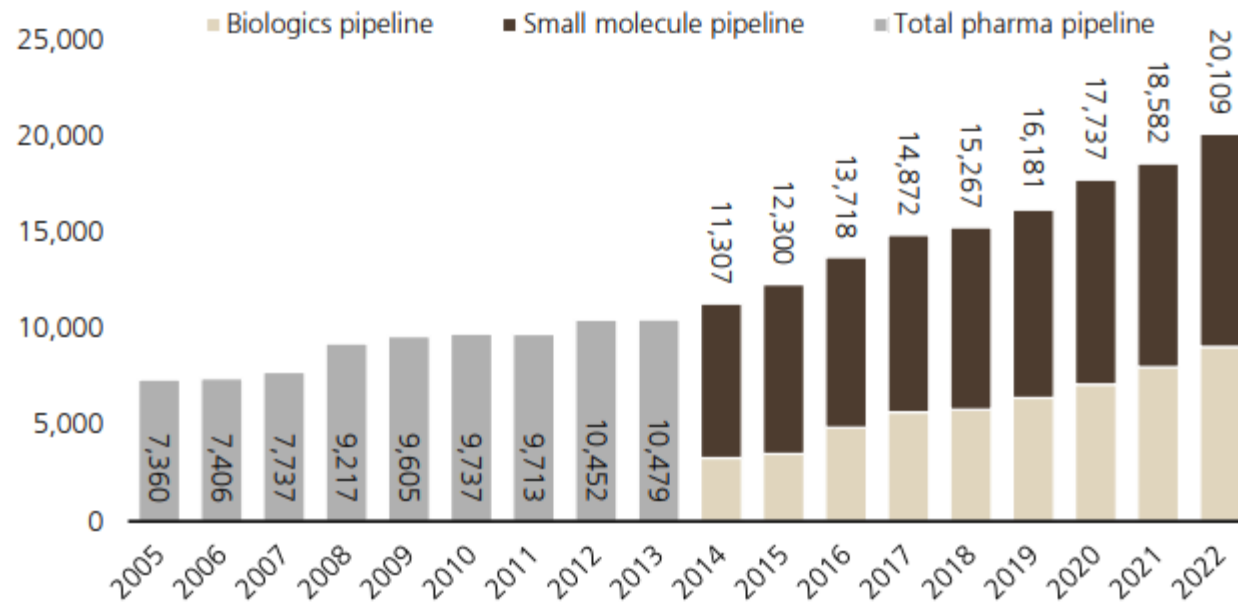
## Holdings Across Our Strategies

Global Opportunities	Global Discovery	U.S. Mid-Cap Growth	U.S. Small-Cap Growth
Lonza Danaher	Catalent Gerresheimer	Agilent Catalent West Pharmaceutical Repligen Halozyme	Halozyme Catalent Repligen Azenta Avid Biosciences

# Picks and Shovels for the Biologic Drug Era

## Biologics An Increasing Share of the Drug Pipeline

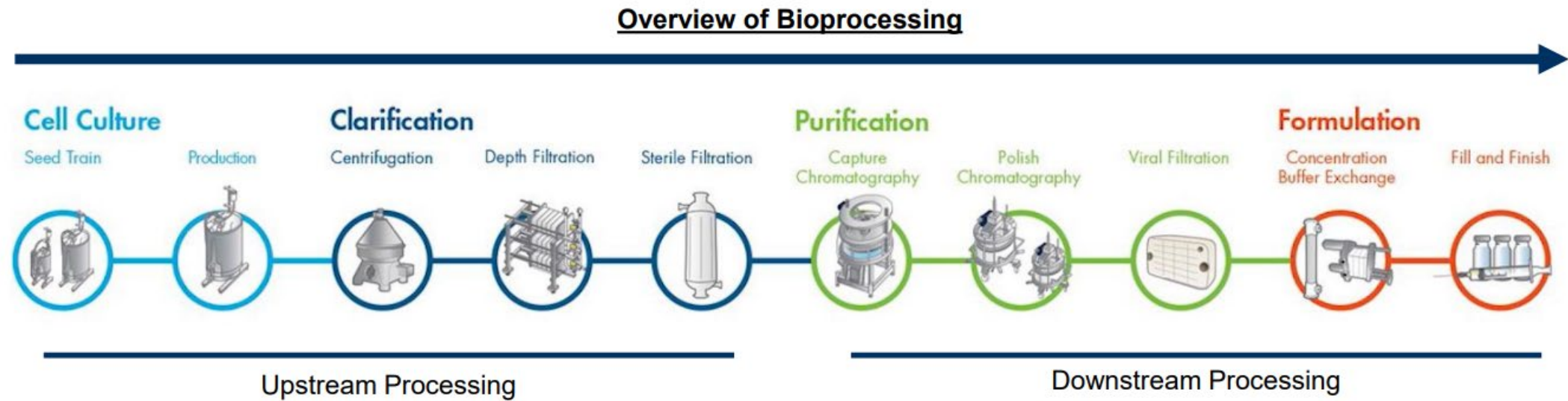
**Global Pharma Pipeline by Drug Count**



Source: UBS Research, PharmaIntelligence.

- Biologics have been increasingly used as alternatives to chemically manufactured, small-molecule compounds (from 21% of top 100 drug sales in 2006 to 53% in 2018).
- The increasing complexity of these therapies, coupled with a growing proportion of small companies taking products to market themselves are driving outsourcing to reduce cost.
- Leading suppliers of equipment, consumables and services needed for biologic manufacturing are poised for significant long-term growth.

# Picks and Shovels for the Biologic Drug Era





# Picks and Shovels for the Biologic Drug Era

## High Conviction Holding: Lonza Group



### Franchise Elements

A leading biopharmaceutical contract manufacturer with global reach, scale advantages and scientific expertise.

### Thesis

Drug development is complex, and contract development organizations (CDMOs) such as Lonza allow pharmaceutical and biotech companies to outsource their drug development and manufacturing needs. This provides several benefits, including reducing or eliminating infrastructure costs, providing access to additional expertise and enabling pharma and biotech companies to rapidly scale.

### Upcoming Catalysts / What is Underappreciated

As drug discovery and development is increasingly done by smaller biotechs, Lonza's geographic reach, scientific know-how and flexibility to manufacture drugs provide it with a clear competitive advantage to drive attractive growth.

# Innovation within Pharmaceuticals and Biotechnology

High Conviction Holdings: AstraZeneca, Novo Nordisk, Argenx, Ascendis

## Argenx

### De-risked Profit Driver<sup>1</sup>

- VYVGART for myasthenia gravis

### R&D Pipeline Opportunities

- VYVGART in >10 additional indications. ARGX-117

## AstraZeneca

### De-risked Profit Driver

- Enhertu for breast cancer

### R&D Pipeline Opportunities

- Dato-Dxd for lung cancer, new therapies for kidney, heart, respiratory and rare diseases

### De-risked Profit Driver

- SKYTROFA for growth hormone deficiency

### R&D Pipeline Opportunities

- TransCon-PTH for hypoparathyroidism, TransCon-CNP for achondroplasia, TransCon cancer programs, TransCon ophthalmology programs

## Ascendis

### De-risked Profit Driver

- Wegovy for obesity

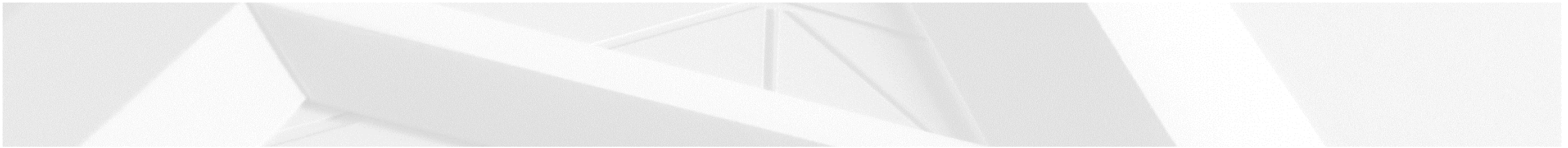
### R&D Pipeline Opportunities

- Oral semaglutide for obesity and diabetes, CagriSema for obesity, Mim8 for hemophilia

## Novo Nordisk

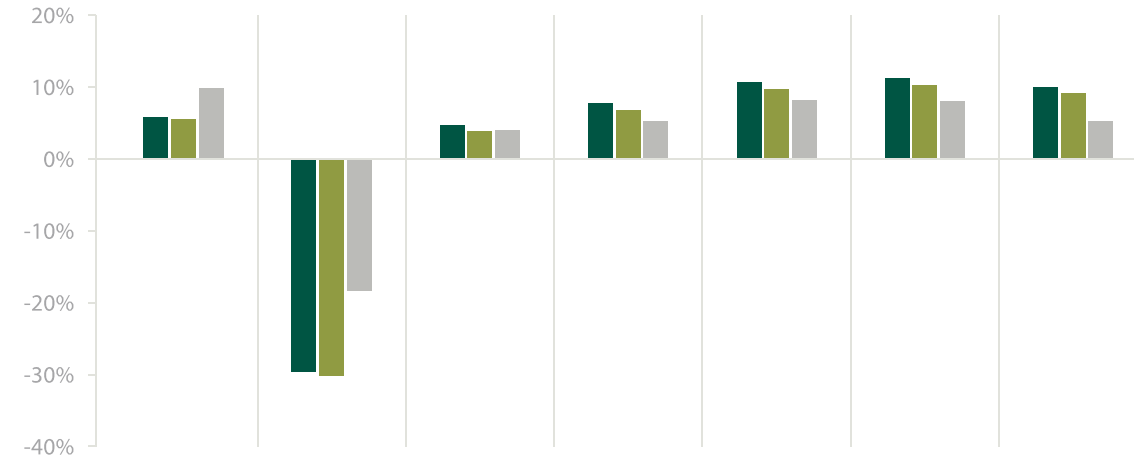
Performance

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# Artisan Global Opportunities Strategy

## Investment Results—Average Annual Total Returns (USD)



(%) as of 31 Dec 2022	QTD	1 Yr	3 Yr	5 Yr	7 Yr	10 Yr	Inception
■ Artisan Global Opportunities Composite: Gross	5.73	-29.53	4.71	7.69	10.63	11.22	9.95
■ Artisan Global Opportunities Composite: Net	5.52	-30.13	3.85	6.80	9.71	10.28	9.04
■ MSCI All Country World Index	9.76	-18.36	4.00	5.22	8.10	7.97	5.22

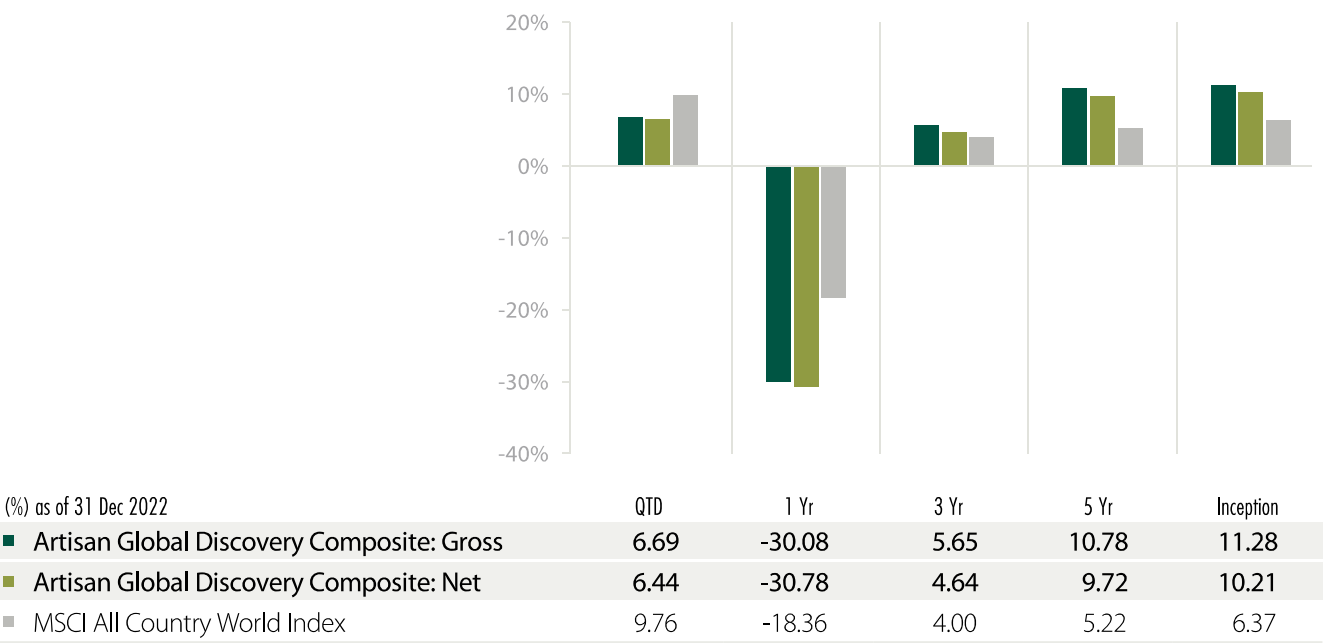
### Annual Returns (% USD) 12 months ended 31 December

	2018	2019	2020	2021	2022
Composite — Net	-8.71	35.90	40.34	14.23	-30.13

Source: Artisan Partners/MSCI. Past performance does not guarantee and is not a reliable indicator of future results. Gross- and net-of-fees performance shown for the Composite. Current performance may be lower or higher than that shown. Returns less than one year are not annualized. Composite inception: 1 Feb 2007.

# Artisan Global Discovery Strategy

Investment Results—Average Annual Total Returns (USD)



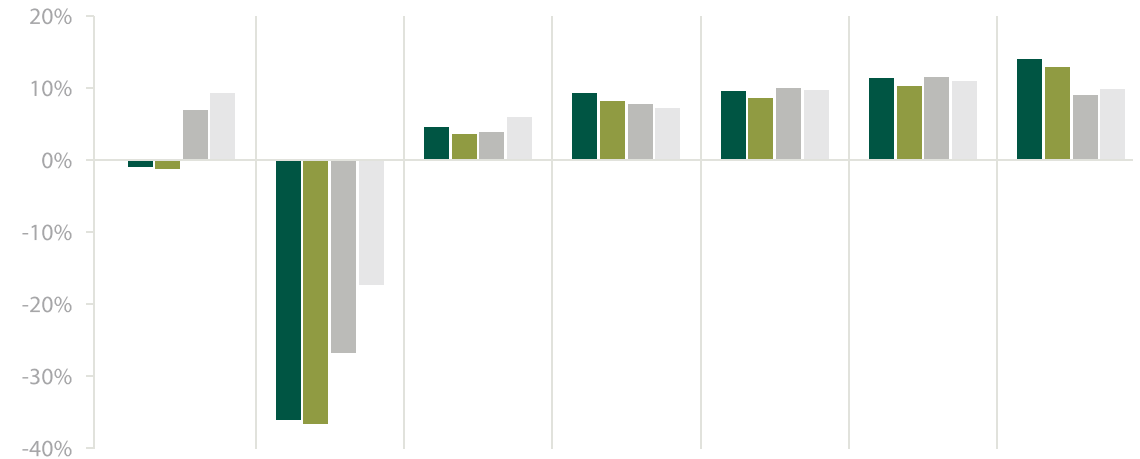
Annual Returns (% USD) 12 months ended 31 December

	2018	2019	2020	2021	2022
Composite — Net	-2.89	42.93	46.56	12.94	-30.78

Source: Artisan Partners/MSCI. Past performance does not guarantee and is not a reliable indicator of future results. Gross- and net-of-fees performance shown for the Composite. Current performance may be lower or higher than that shown. Returns less than one year are not annualized. Composite inception: 1 Sep 2017.

# Artisan U.S. Mid-Cap Growth Strategy

## Investment Results—Average Annual Total Returns (USD)



(%) as of 31 Dec 2022	QTD	1 Yr	3 Yr	5 Yr	7 Yr	10 Yr	Inception
■ Artisan U.S. Mid-Cap Growth Composite: Gross	-0.89	-36.04	4.51	9.18	9.58	11.30	13.90
■ Artisan U.S. Mid-Cap Growth Composite: Net	-1.12	-36.65	3.55	8.18	8.57	10.28	12.84
■ Russell Midcap® Growth Index	6.90	-26.72	3.85	7.64	9.95	11.40	8.96
■ Russell Midcap® Index	9.18	-17.32	5.87	7.10	9.60	10.95	9.86

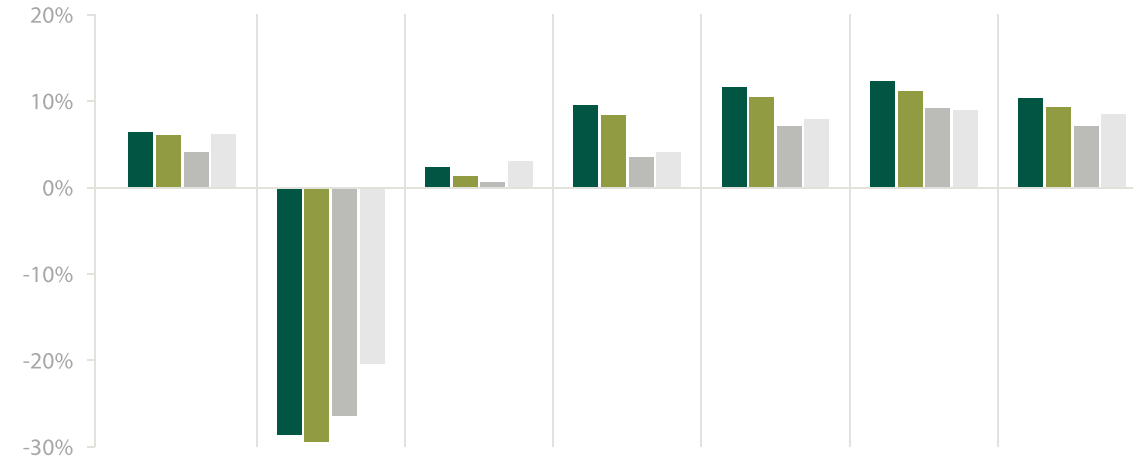
### Annual Returns (% USD) 12 months ended 31 December

	2018	2019	2020	2021	2022
Composite — Net	-3.64	38.52	58.38	10.66	-36.65

Source: Artisan Partners/Russell. Past performance does not guarantee and is not a reliable indicator of future results. Gross- and net-of-fees performance shown for the Composite. Current performance may be lower or higher than that shown. Returns less than one year are not annualized. Composite inception: 1 Apr 1997.

# Artisan U.S. Small-Cap Growth Strategy

## Investment Results—Average Annual Total Returns (USD)



(%) as of 31 Dec 2022	QTD	1 Yr	3 Yr	5 Yr	7 Yr	10 Yr	Inception
■ Artisan U.S. Small-Cap Growth Composite: Gross	6.39	-28.67	2.35	9.51	11.64	12.29	10.37
■ Artisan U.S. Small-Cap Growth Composite: Net	6.13	-29.40	1.33	8.43	10.53	11.19	9.29
■ Russell 2000® Growth Index	4.13	-26.36	0.65	3.50	7.09	9.20	7.16
■ Russell 2000® Index	6.23	-20.44	3.10	4.12	7.89	9.01	8.56

### Annual Returns (% USD) 12 months ended 31 December

	2018	2019	2020	2021	2022
Composite — Net	2.51	40.52	61.43	-8.70	-29.40

Source: Artisan Partners/Russell. Past performance does not guarantee and is not a reliable indicator of future results. Gross- and net-of-fees performance shown for the Composite. Current performance may be lower or higher than that shown. Returns less than one year are not annualized. Composite inception: 1 Apr 1995.

# Notes and Disclosures

**This section of this presentation contains information important to a complete understanding of the material presented. Please review it carefully.**

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**Artisan Global Opportunities Strategy, Artisan Global Discovery Strategy, Artisan U.S. Mid-Cap Growth Strategy and Artisan U.S. Small-Cap Growth Strategy:**

**International investments involve special risks, including currency fluctuation, lower liquidity, different accounting methods and economic and political systems, and higher transaction costs. These risks typically are greater in emerging markets. Securities of small- and medium-sized companies tend to have a shorter history of operations, be more volatile and less liquid and may have underperformed securities of large companies during some periods. Growth securities may underperform other asset types during a given period. Investments will rise and fall with market fluctuations and investor capital is at risk. Investors investing in strategies denominated in non-local currency should be aware of the risk of currency exchange fluctuations that may cause a loss of principal. These risks, among others, are further described in Artisan Partners Form ADV, which is available upon request.**

This material may include the views of the portfolio manager and other information relating to the portfolio and portfolio securities. While we believe the data accurately reflects the investment process, this information is presented as of the date indicated and will change over time.

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Totals may not sum due to rounding. All data shown is in USD unless otherwise indicated.

Security Examples: The security examples provided do not constitute recommendations to buy or sell investments. The examples present information about the companies believed to be accurate and are the views of the portfolio managers as of the date indicated.

Portfolio Holdings: For the purpose of determining the portfolio's holdings, securities of the same issuer are aggregated to determine the weight in the portfolio. Holdings information is not intended to represent or predict portfolio investment performance or as a recommendation of any individual security. Securities named in this material, but not listed within the portfolio holdings page were not held as of the date reported. Portfolio holdings are subject to change without notice.

Net-of-fees composite returns were calculated using the highest model investment advisory fees applicable to portfolios within the composite. Fees may be higher for certain pooled vehicles and the composite may include accounts with performance-based fees. All performance results are net of commissions and transaction costs, and have been presented gross and net of investment advisory fees. Dividend income is recorded net of foreign withholding taxes on ex-dividend date or as soon after the ex-dividend date as the information becomes available to Artisan Partners. Interest income is recorded on the accrual basis. Performance results for the Index include reinvested dividends and are presented net of foreign withholding taxes but, unlike the portfolio's returns, do not reflect the payment of sales commissions or other expenses incurred in the purchase or sale of the securities included in the indices.



# Notes and Disclosures

This summary represents the views of the portfolio managers as of 31 Dec 2022. Those views may change, and the strategy disclaims any obligation to advise investors of such changes. For the purpose of determining the Portfolio's holdings, securities of the same issuer are aggregated to determine the weight in the strategy. Securities named in the Commentary; but not listed here are not held in the Portfolios as of the date of this report. The holdings mentioned comprise the following percentages of a representative account within the composites' total net assets as of 31 Dec 2022: **Artisan Global Opportunities Strategy:** Veeva Systems Inc 5.1%, NextEra Energy Inc 5.1%, Techtronic Industries Co LTD 4.9%, Boston Scientific Corp 4.5%, Advanced Micro Devices Inc 4.2%, Novo Nordisk A/S 3.7%, Lonza Group AG 3.6%, AstraZeneca PLC 3.5%, The Charles Schwab Corp 3.4%, CNH Industrial NV 3.1%, Alphabet Inc 2.9%, The Progressive Corp 2.8%, UBS Group AG 2.8%, Danaher Corp 2.8%, Keyence Corp 2.5%, Lululemon Athletica Inc 2.4%, AIA Group Ltd 2.4%, Atlassian Corp 2.3%, Chipotle Mexican grille Inc 2.1%, London Stock Exchange Group PLC 2.1%, ON Semiconductor Corp 2.1%, Ingersoll Rand Inc 2.0%, Hexagon AB 2.0%, Vestas Wind Systems A/S 1.8%, Telefonaktiebolaget LM Ericsson 1.7%, Arista Networks Inc 1.5%, Hoya Corp 1.5%, Airbnb Inc 1.4%, Zscaler Inc 1.3%, Lowe's Cos Inc 1.3%, Adyen NV 1.2%, BioNTech SE 1.2%, Genmab A/S 1.1%, SVB Financial Group 1.1%, Netflix Inc 1.0%, NU Holdings Ltd 1.0%, Cie Financiere Richemont SA 1.0%, Aptiv PLC 1.0%, Amazon.com Inc 0.9%, CoStar Group Inc 0.7%, Intuit Inc 0.6%, Banco Bilbao Vizcaya Argentaria SA 0.6%, S&P Global Inc 0.5%, Tesla Inc 0.3%. **Artisan Global Discovery Strategy:** Veeva Systems Inc 5.0%, Boston Scientific Corp 4.5%, Techtronic Industries Co Ltd 3.8%, Ascendis Pharma A/S 3.7%, CNH Industrial NV 3.0%, Lattice Semiconductor Corp 3.0%, Nasdaq Inc 3.0%, Valmont Industries Inc 2.9%, Advanced Micro Devices Inc 2.7%, ON Semiconductor Corp 2.6%, Argenx SE 2.5%, Ingersoll Rand Inc 2.3%, Catalent Inc 2.2%, Teledyne Technologies Inc, Zscaler Inc 2.0%, HubSpot Inc 2.0%, London Stock Exchange Group PLC 1.9%, Vestas Wind Systems A/S 1.8%, Global Payments Inc 1.8%, Eurofins Scientific SE 1.8%, Workiva Inc 1.7%, CTS Eventim AG & Co KGaA 1.7%, Obic Co Ltd 1.7%, Atlassian Corp 1.6%, Genresheimer AG 1.6%, Morningstar Inc 1.6%, Arista Networks Inc 1.6%, Tradeweb Markets Inc 1.5%, Metso Outotec Oyj 1.4%, CAE Inc 1.3%, Nordic Semiconductor ASA 1.3%, iRhythm Technologies Inc 1.3%, Guidewire Software Inc 1.2%, First Republic Bank 1.2%, SVB Financial Group 1.1%, The Cooper Cos Inc 1.1%, Moncler SpA 1.0%, Marel HF 0.9%, Bill.com Holdings Inc 0.9%, NU Holding Ltd 0.9%, Hapvida Participacoes e Investimentos S/A 0.9%, Smithe Group PLC 0.8%, Bentley Systems Inc 0.8%, Altus Group Ltd 0.8%, MACOM Technology Solutions Holdings Inc 0.8%, Silegry Corp 0.7%, Take-Two Interactive Software Inc 0.7%, Novanta Inc 0.6%, Genmab A/S 0.6%, S&P Global Inc 0.6%, Papa John's International Inc 0.5%, XP Inc 0.5%, Davide Campari-Milano NV 0.5%, Saia Inc 0.5%, Industrie De Nora SpA 0.5%, Puma SE 0.5%, Datadog Inc 0.2%. **Artisan Mid-Cap Growth Strategy:** Veeva Systems Inc 4.5%, Ascendis Pharma A/S 4.0%, HubSpot Inc 3.8%, Lattice Semiconductor Corp 3.7%, Argenx SE 3.6%, Global Payments Inc 3.5%, Nasdaq Inc 3.1%, Ingersoll Rand Inc 3.0%, Chipotle Mexican grille Inc 2.9%, Agilent Technologies Inc 2.7%, Synopsys Inc 2.5%, Atlassian Corp 2.5%, ON Semiconductor Corp 2.5%, Catalent Inc 2.5%, Zscaler Inc 2.5%, MSCI Inc 2.4%, West Pharmaceutical Services Inc 2.4%, Arista Networks Inc 2.1%, Teledyne Technologies Inc 2.0%, Monolithic Power Systems Inc 1.7%, Dexcom Inc 1.7%, Lululemon Athletica Inc 1.6%, Fortive Corp 1.6%, Tyler Technologies Inc 1.6%, CNH Industrial NV 1.5%, First republic Bank 1.5%, CoStar Group Inc 1.5%, Bill.com Holdings Inc 1.4%, ZoomInfo Technologies Inc 1.4%, Datadog Inc 1.4%, Repligen Corp 1.4%, BioNTech SE 1.3%, Five Below Inc 1.3%, Tradeweb Markets Inc 1.2%, Etsy Inc 1.2%, Ryan Specialty Holdings Inc 1.1%, SVB Financial Group 1.1%, LPL Financial Holdings Inc 1.1%, Envista Holdings Corp 1.1%, The Cooper Cos Inc 0.9%, Holozyme Therapeutics Inc 0.9%, Ceridian HCM Holdings Inc 0.8%, Take-Two Interactive Software Inc 0.8%, Bentley Systems Inc 0.7%, Shopify Inc 0.7%, Exact Sciences Corp 0.7%, Aptiv PLC 0.7%, iRhythm Technologies Inc 0.7%, Global-e Online Ltd 0.6%, Trex Co Inc 0.6%, Dollar Tree Inc 0.6%, Match Group Inc 0.6%, Verisk Analytics Inc 0.6%, Genmab A/S 0.5%, Marvell Technology Inc 0.5%, Arthur Gallagher & Co 0.5%, Sais Inc 0.5%, Advanced Drainage Systems Inc 0.4%. **Artisan Small-Cap Growth Strategy:** Holozyme Therapeutics Inc 9.8%, Lattice Semiconductors Corp 6.4%, Valmont Industries Inc 5.2%, Argenx SE 5.1%, Ascendis Pharma A/S 4.6%, Shockwave Medical Inc 4.2%, Blackline Inc 3.5%, Monolithic Power Systems Inc 3.3%, Novanta Inc 3.0%, Wingstop Inc 2.9%, Veracyte Inc 2.7%, Workiva Inc 2.4%, Tyler Technologies Inc 2.2%, Guidewire Software Inc 2.1%, Papa Johns International Inc 1.9%, Chegg Inc 1.9%, Catalent Inc 1.8%, Bentley Systems Inc 1.6%, Allegro MicroSystems Inc 1.6%, HubSpot Inc 1.5%, DoubleVerify Holdings Inc 1.5%, Repligen Corp 1.5%, Morningstar Inc 1.5%, Floor & Decor Holdings Inc 1.5%, Shoals Technologies Group Inc 1.4%, Ceridian HCM Holding Inc 1.3%, iRhythm Technologies Inc 1.3%, Azenta Inc 1.2%, Wolfspeed Inc 1.1%, SVB Financial Group 1.1%, Etsy Inc 1.1%, Paycor HCM Inc 1.0%, Option Care Health Inc 1.0%, Five Below Inc 0.9%, Exact Sciences Corp 0.9%, Penumra Inc 0.8%, Envista Holdings Corp 0.8%, Leslie's Inc 0.8%, MACOM Technology Solutions Holdings Inc 0.7%, Advanced Drainage Systems Inc 0.7%, Sprout Social Inc 0.7%, Live Oak Bancshares Inc 0.7%, Ambarella Inc 0.6%, Freshworks Inc 0.6%, Clearwater Analytics Holdings Inc 0.6%, Freshpet Inc 0.5%, Eventbrite Inc 0.5%, Global-e Online Ltd 0.5%, Ivance Biotherapeutics Inc 0.5%, Trex Co Inc 0.5%, MarketAxess Holdings Inc 0.5%, Gitlab Inc 0.5%, Avid Bioservices Inc 0.5%, Olo Inc 0.4%, Denali Therapeutics 0.4%, Kornit Digital Ltd 0.3%, Procore Technologies Inc 0.3%, John Bean Technologies Corp 0.2%.

**Definitions:** **A Semiconductor Fabrication Plant (FAB)** is a factory where devices such as integrated circuits are manufactured. **Spread** is the gap between the bid and the ask prices of a security or asset, like a stock, bond, or commodity. **The Risk-Free (RF) Rate of Return** is the theoretical rate of return of an investment with zero risk. **Forward price-to-earnings (forward P/E)** is a version of the ratio of price-to-earnings (P/E) that uses forecasted earnings for the P/E calculation. **The PEG Ratio** is (an indicator of a stock's potential value) measures the ratio of the P/E of a company to the growth rate. **The Purchasing Managers' Index (PMI)** is an index of the prevailing direction of economic trends in the manufacturing and service sectors. **Return on investment (ROI)** is a performance measure used to evaluate the efficiency or profitability of an investment or compare the efficiency of a number of different investments. **Return on invested capital (ROIC)** is a calculation used to assess a company's efficiency in allocating capital to profitable investments. **Yield** is the income returned on an investment, such as the interest received from holding a security. **Research and development (R&D)** includes activities that companies undertake to innovate and introduce new products and services. **The CHIPS and Science Act of 2022** invests billions over the next five years to help the U.S. regain a leading position in semiconductor chip manufacturing. **Capital expenditures (CapEx)** are funds used by a company to acquire, upgrade, and maintain physical assets such as property, plants, buildings, technology, or equipment.

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