



Investment Process

We seek to invest in companies that possess franchise characteristics, are benefiting from an accelerating profit cycle and are trading at a discount to our estimate of private market value. Our investment process focuses on two distinct elements—security selection and capital allocation. We overlay our investment process with broad knowledge of the global economy.

Security Selection

We seek to identify companies that have franchise characteristics (e.g., low-cost production capability, possession of a proprietary asset, dominant market share or a defensible brand name), are benefiting from an accelerating profit cycle and are trading at a discount to our estimate of private market value. We also assess key environmental, social and governance (ESG) issues that could impact future stock returns. We look for companies that are well positioned for long-term growth, which is driven by demand for their products and services, at an early enough stage in their profit cycle to benefit from the increased cash flows produced by the emerging profit cycle.

Capital Allocation

Based on our fundamental analysis of a company's profit cycle, we divide the portfolio into three parts. GardenSM investments are small positions in the early part of their profit cycle that may warrant more sizeable allocations as their profit cycle accelerates. CropSM investments are positions that are being increased to a full weight because they are moving through the strongest part of their profit cycles. HarvestSM investments are positions that are being reduced as they near our estimates of full valuation or their profit cycles begin to decelerate.

Broad Knowledge

We overlay the security selection and capital allocation elements of our investment process with a desire to invest opportunistically across the entire global economy. We seek broad knowledge of the global economy in order to find growth wherever it occurs.

Team Overview

We believe deep industry expertise, broad investment knowledge, a highly collaborative decision-making process and individual accountability are a powerful combination. Since the inception of the team, we have been committed to building a team of growth investors that retains these attributes and is solely dedicated to our process and approach.

Portfolio Management



Craigh A. Cepukenas, CFA
Portfolio Manager (Lead)



James D. Hamel, CFA
Portfolio Manager



Matthew H. Kamm, CFA
Portfolio Manager



Jason L. White, CFA
Portfolio Manager

Investment Results (% USD)

As of 31 December 2020	Average Annual Total Returns						
	QTD	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Inception ¹
Composite — Gross	27.48	62.99	62.99	33.75	26.83	20.12	13.04
Composite — Net	27.19	61.43	61.43	32.45	25.59	18.94	11.94
Russell 2000® Growth Index	29.61	34.63	34.63	16.18	16.34	13.47	8.90
Russell 2000® Index	31.37	19.96	19.96	10.24	13.24	11.19	9.64

Annual Returns (% USD) 12 months ended 31 December

	2016	2017	2018	2019	2020
Composite — Gross	6.90	28.38	3.54	41.90	62.99

Source: Artisan Partners/Russell. Returns for periods less than one year are not annualized. ¹Composite inception: 1 April 1995.

Past performance does not guarantee and is not a reliable indicator of future results. Current performance may be lower or higher than the performance shown. Composite performance has been presented in both gross and net of investment management fees.

Investment Risks: 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 near the back of this document, which should be read in conjunction with this material.



Investing Environment

Despite heightened volatility in the final months of the year, equity markets proved resilient and surged to new record highs. Higher forward Street estimates aided the move higher, though multiple expansion played a larger role. Financials, energy and materials—sectors suffering the most in the pandemic’s depths—led, and consumer staples, health care and real estate, while positive, lagged. Small cap stocks led as capital seemingly rotated out of large-cap stocks that provided shelter throughout much of the year. Emerging markets outperformed developed markets.

Several developments in Q4 began clearing the dark clouds that hung over the market throughout the course of the year—a timeline for COVID-19 herd immunity, unclear terms of UK’s exit from the EU, US political discord and uncertainty. A couple of viable COVID-19 vaccine clinical trials released data and showed ~90% or greater effectiveness in preventing the disease, and a vaccine rollout commenced shortly thereafter. As of this writing, the US enters 2021 on the cusp of Democratic control of the legislative and executive branches of government. Several new forms of legislation—green energy legislation, further expansion of the Affordable Care Act, further COVID-19 stimulus, tech-sector regulation, partial or full reversal of the 2017 tax cuts—could be on the table. That said, markets appeared relaxed about the implications of these proposals, even though not all would be positive for profits.

The US economy experienced further recovery from its spring lows in Q4. The unemployment rate dropped further to 6.7% from the 14.8% high in April, and the seasonally adjusted annualized rate of quarter-over-quarter GDP growth is expected to come in at 8.7% in Q4 vs. the -31.4% low in Q2. Looking ahead, many economists are forecasting a reacceleration of GDP growth in 2021 (5.3% vs. -3.5% in 2020 per Goldman Sachs).

Central banks appear cautiously optimistic in their outlooks after the game-changing developments/announcements in Q4. Widespread vaccine rollout and adoption should prompt governments to gradually encourage their respective residents to return to their pre-pandemic activities. That said, cases climbed higher throughout the quarter and a new strain of the virus that is as high as 70% more contagious emerged in the UK. Historically low benchmark interest rates and asset-purchase programs appear to be the norm until there is more compelling evidence the virus is under control.

Performance Discussion

Our portfolio delivered strong absolute returns in Q4 though trailed the Russell 2000® Growth and Russell 2000® Indices on a relative basis. Despite this, we were incredibly pleased with our absolute and relative performance in 2020 as the portfolio delivered both the highest absolute and relative return (vs. the Russell 2000® Growth Index) since our inception in 1995. However, we caution maintaining this pace of appreciation is unlikely, though the team remains focused on outperforming over full market cycles.

Amid the market mania in the spring, our decision to mostly stay the course, stick to our time-tested investment process and recognize early that many of our companies would be beneficiaries from the pandemic (digitization in business, health care and education) generally paid off. The team’s focus on high-quality franchises with strong balance sheets and strong profit cycles helped us enter 2020 with a portfolio able to mitigate risk during the initial market panic phase of the pandemic. We then took advantage of the extreme volatility in March and April to add to existing holdings which we believed would benefit from or weather the storm, opportunistically add new positions to the portfolio and take prudent risks in companies which were suffering from the pandemic’s economic impact but which we thought would thrive on the other side of the crisis.

Stock selection in the CropSM and within three of our four power alleys drove relative outperformance in the year. Our software holdings thrived amid the pandemic. The trends these franchises are enabling (and leading)—the shift to cloud computing, enterprises’ digitizing their operations—were resilient and in several cases accelerated. Biotech and health care equipment were also standouts, continuing to discover and develop new devices and therapies we believe will have meaningful benefits for patients. Finally, the portfolio benefited from what we didn’t own in 2020, since entering the year we saw very few interesting profit cycle opportunities among companies operating within areas of the economy that proved weaker through the pandemic—energy, travel/leisure and real estate.

Turning to individual securities, among our bottom contributors in Q4 were Clarivate Analytics, iRhythm and Ollie’s Bargain Outlet. Clarivate Analytics is a specialized provider of analytics, data, information and workflow solutions to economic sectors that are intellectual property- and brand-intensive. The company has a dominant market share in its niche data and analytics businesses and a high recurring revenue base (~80% recurring, ~90% retention rate). Our interest in the company was first sparked through our relationship with Jerre Stead. Mr. Stead joined Clarivate upon its merger announcement with Churchill Capital Corp, a special purpose acquisition company (SPAC), in early 2019 and was later named CEO and chairman of Clarivate when the merger closed. When we initiated our investment campaign just a month after the de-SPAC-ing event, we believed Mr. Stead would employ a similar playbook at Clarivate to one he used while previously leading a long-time holding in three of our four portfolios, IHS Markit. This included acquiring franchises and subsequently driving better sales execution and margin improvement—a thesis that has played out to date, and which we expect will continue playing out. However, with the company’s market cap exceeding our small-cap mandate, we ended our successful campaign during Q4.

iRhythm Technologies develops and markets the Zio, a small patch for monitoring suspected heartbeat arrhythmias. The Zio is a significant improvement over the current standard of care, the Holter monitor, which is typically found to be less effective, more cumbersome and

uncomfortable. The Zio utilizes a proprietary algorithm, based on machine learning, capable of detecting 12 classes of arrhythmias from a database of over 2 million patients (over 600 million hours of monitoring). That said, one point of recent controversy has been the price Medicare will pay for Zio, as artificial intelligence interpretation of medical test results is a new, unproven area of health care reimbursement. The company received good news on this front midyear, as Medicare's proposed 2021 funding level was significantly increased. However, funding in the approved legislation was ultimately not increased, causing a sharp selloff in the stock. We saw this as an opportunity to add to our position as our valuation assumes current prices for Zio persist and any future Medicare reimbursement increases (which are still possible) as upside to our future earnings estimates. Furthermore, we believe the longer-term growth runway ahead is meaningful as this \$2 billion market converts to patch sensors over time.

Discount retailer Ollie's Bargain Outlet has benefited from its ability to keep stores open through the harshest of lockdowns, government stimulus checks and consumer lifestyle changes. However, shares have been pressured over the past couple of quarters as investors contemplate the very tough growth comparisons the company will face in 2021. We share these concerns and have pared our position size accordingly. We continue to believe Ollie's unique operating model and significant new-store growth opportunity are compelling profit-cycle drivers longer term.

Among our top Q4 individual contributors were Blackline, Halozyme and Veracyte. Blackline develops cloud-based accounting software that helps businesses improve and automate complex, manual and repetitive accounting processes. The company has been delivering solid results, upselling existing customers and landing new accounts. We believe the growth runway remains compelling as its solutions can lead to cost savings, enhance real-time visibility and improve data integrity.

Halozyme is a biotechnology firm that licenses to pharmaceuticals companies the use of its proprietary enzyme—its ENHANZE® platform—which aids delivery of biologics subcutaneously, as opposed to intravenously. The benefit is improved absorption and convenience to patients and physicians. The company has established partnerships with leading biopharmaceuticals companies—Roche, Johnson & Johnson (JNJ), Bristol-Myers Squibb and Argenx—and ENHANZE® is already used in four approved products. Halozyme's partnership with JNJ/Genmab has recently borne fruit (higher royalty revenues) as Darzalex Faspro—a multiple myeloma drug which utilizes ENHANZE®—has experienced rapid uptake since receiving FDA approval earlier in 2020. Given additional runway for Faspro adoption and a solid pipeline of clinical trials either underway or set to commence over the near term, we remain confident in the profit cycle ahead.

Veracyte specializes in the improvement of diagnostic accuracy utilizing a combination of RNA sequencing, machine learning and the

company's proprietary "field of injury" technology. Field of injury technology can be applied to diagnosing lung cancer, testing cells in the main airway (since it suffers damage from smoking) instead of requiring a procedure to take a direct sample of the potentially cancerous nodule in the lungs. The company has approval, clinical data and reimbursement for four tests—a big hurdle for a diagnostics company—for thyroid cancer, breast cancer, lung cancer and idiopathic pulmonary fibrosis (a form of lung disease). These diagnostics reduce the number of surgeries performed for patients who have indeterminate test results, saving the health care system unnecessary overtreatment costs. All four tests are expected to launch in 2021, and three of the four received positive news on the reimbursement front, which we believe will help accelerate volumes and revenues for the company. Given the pipeline of diagnostics and a nasal swab for early detection of lung cancer in the pipeline, we believe the company is well-positioned for a meaningful profit cycle ahead.

Portfolio Activity

We started new investment campaigns in South Mountain Merger Corp (SMMC) and Denali. SMMC is a special purpose acquisition company (SPAC) which was formed and came public in 2019. In October 2020, the company announced its intention to acquire Billtrust, a private company providing accounts receivable software and payment processing solutions to small and large businesses. We had become familiar with Billtrust a few years prior to the announcement, as we saw its software solutions were well-positioned to benefit from the trend toward automating corporate accounting functions (particularly those in accounts receivable), enabling cost efficiencies from straight-through processing (automatic processing of transactions), reducing reconciliations/errors and decreasing employee headcount. Furthermore, with only ~\$1 trillion out of ~\$120 trillion in annual global invoice volume of B2B payments flowing through Billtrust's software, we saw tremendous opportunity for the company to capture meaningful market share. Accordingly, we initiated a GardenSM position in SMMC shortly after the acquisition announcement during Q4 as it was an opportunity to participate in Billtrust's known public debut. The transaction officially closed on January 12, 2021, with the combined entity now trading as BTRS holdings on the NASDAQ exchange.

It is important to highlight we spent a great deal of time educating our team on SPACs to ensure this transaction met our highly selective investment criteria. While SPACs have been around for nearly 20 years, they have only gained considerable traction in recent years (particularly 2020) among investors and private companies looking to side-step the traditional IPO process. We have been increasingly evaluating these opportunities on a highly selective basis in recent months, and we believe opportunity often lies in the SPAC follow-on offerings used to fund larger mergers/acquisitions the initial SPAC IPO proceeds are unable to cover (referred to as private investments in public entities or PIPEs). While not core to our strategy, we do have opportunities to selectively participate in IPOs, and we believe

selective PIPE offerings are similarly interesting with the added advantage of allowing us to participate earlier in the process of early stage disruptive franchises coming public and our expectation we can likely get a larger share allocation. We are still early in this endeavor and will share more details around future SPAC-related investments in forthcoming letters.

Denali develops medicines for the treatment of rare neurodegenerative diseases such as Alzheimer's, Parkinson's and amyotrophic lateral sclerosis (ALS, or Lou Gehrig's Disease). The company is developing treatments to apply molecular biology and genetics to unique targets in neurology in the same way these disciplines were applied to oncology in the past. We believe the extraordinary size of the opportunity, the quality of management and our historical interactions with two board members make this a unique profit cycle opportunity.

In addition to concluding our campaign in Clarivate, we also exited our investments in Zscaler and Lemonade. Zscaler provides cloud-based Internet security solutions. Cybersecurity remains a top concern for businesses and governments alike as cyberattacks can have devastating financial and reputational consequences. Furthermore, managing the security needs of legacy on-premise applications, a growing number of cloud-based applications (Office 365, Salesforce, etc.) and a remote workforce make operating IT infrastructures increasingly complex. Zscaler's scalable, cloud-based security platform is a more secure and efficient way to connect users and applications, which eliminates the need for several layers of security (firewalls, VPNs, etc.) developed and built over the last couple of decades. While the pandemic crisis is likely disrupting some areas of Zscaler's new sales funnel, the company is particularly well-suited to scale and accelerate our market share-gain thesis. Ninety percent of employees are remotely connecting to the enterprise IT network in today's inverted world, as opposed to prior solutions which are geared to support 10%-20% of workers connecting remotely with the rest connecting from within the walls of a corporate network. Many employees have used traditional VPN connections to log into their networks remotely, but Zscaler's platform offers a more secure connection without exposing an entire internal network, is easier to configure and is less costly to operate at scale. While the trend toward connecting remote devices over the Internet backbone remains firmly in motion, the stock appreciated in 2020, quickly outgrowing our small-cap market cap mandate, and we ended our successful campaign.

Lemonade is a digital-first insurance provider, offering both domestic and international homeowners and renters insurance. The company is disrupting its industry, having digitized the entire insurance experience—from client onboarding to claims—in order to build generational relationships with first-time insurance buyers. Using its app, the median time to receive a bindable renters insurance quote from Lemonade is less than two minutes, and the time for a homeowner's quote is under three minutes. All claims are also filed through the Lemonade app, where a claims-specific bot can pay out

applicable claims in as little as three seconds. The company's long-term strategy is built upon acquiring customers cheaply today as they begin their adult life with the anticipation of growing future premiums as customer demands for insurance products naturally increase as they accumulate typically insured possessions—home and car purchases, travel, pets and providing coverage for beneficiaries in the event of an unforeseen death. We believe the addressable market is massive, particularly given the industry has largely resisted change, giving Lemonade a long runway to take share from weaker legacy competitors. That said, with shares appreciating above our PMV estimate, we exited our campaign.

In addition to iRhythm, we also added to our positions in Zynga and JFrog. Our multiyear investment campaign in Zynga has been based on a new management team's ability to drive steady growth in the company's base portfolio of games, expand margins, reinvigorate the new game development pipeline and use its strong balance sheet to acquire complementary games and studios. Shares have been pressured in recent quarters, presumably because of investor concerns about the company's moderating growth rate and Apple's pending new privacy policy which will make it more difficult for Zynga to both efficiently acquire new players and sell advertising in its games. We believe the company has multiple growth levers it can pull in the periods ahead, including the rollout of new games, acquisitions, further penetration into international markets and entry into new gaming categories, to name a few. Furthermore, our research suggests the Apple privacy policy change is manageable for larger mobile game developers such as Zynga. Given our strong conviction in the profit cycle, we used recent weakness to add to our position.

JFrog is the market leader in continuous software release management (CSRM), which enables a faster cadence of developing, securing and releasing software to customers and devices (servers, PCs, smartphones, automobiles, Internet of things) to ensure users have the most up-to-date security and features. Digital transformations are accelerating, and companies across all industries are adopting new software applications to automate different parts of their businesses. This has helped fuel the adoption of DevOps, a set of practices working to automate and integrate the processes between software development and IT teams, so they can build, test and release software faster and more reliably to their users. JFrog's core product, Artifactory, is a critical bridge connecting the development side of the DevOps workflow to the operation side and ultimately to software release. The company already has an impressive slate of customers (~75% of Fortune 100 companies), which we believe is not only a testament to the quality of its product offering, but also an opportunity for it to penetrate further. In addition, the addressable market is already sizable and still growing, and as the market leader in CSRM, the growth runway ahead is meaningful.

In addition to Ollie's Bargain Outlet, we also trimmed our position in Cree. Cree is a producer of semiconductors used in electric vehicles (EVs). Investors are increasingly recognizing Cree's critical role as the electrification of autos accelerates. In our view, we are still in the early

innings of this implementation which could accelerate quickly in the coming years as EVs are expected to reach price parity with internal combustion engine vehicles. However, with shares of Cree appreciating meaningfully in Q4 and beyond our PMV estimate, we pared our exposure accordingly.

Portfolio Statistics

As of December 31, the portfolio had a median market cap of \$6 billion and a 3-5 year forecasted weighted average earnings growth rate of 15%. Our holdings were selling at a weighted harmonic average P/E (excluding negative earnings) of 58X FY1 earnings and 48X FY2 earnings. As of quarter end, we held 59 positions. Our top 20 holdings accounted for roughly 61% of portfolio assets as of quarter end. Our top 30 holdings represented about 76% of portfolio assets.

Our ESG Journey

Over the last 12 months, we have delved into various aspects of our ESG journey in these letters. As we close the year and look ahead to 2021, we reflect on the meaningful progress our team has made this year. We feel good about the accomplishments we made in the second year of this journey, and while relatively early in our integration efforts, we believe the framework we have incorporated has elevated our investment process.

Our analysts and portfolio managers devoted considerable time and effort in 2020 assessing and identifying the key ESG risks and opportunities for each of our existing and prospective holdings—Issues that Matter Assessments (ITMAs) in our nomenclature—as we introduced in our Q4 2019 commentary. Nearly all our holdings have gone through this process, and we have found it beneficial to how we think about the investment case for each of our holdings. This exercise has also laid the groundwork for our engagement activities, which have notably ramped up in recent quarters.

We also took an enhanced approach to the 2020 proxy season. While we have always reviewed and voted on proxy items, in 2020 we undertook a review of our process and instituted a more systematic approach to both non-routine items, such as compensation plans and shareholder proposals, as well as more routine items, such as uncontested director elections. We paired these reviews with selective engagements to hear management teams' views and express our own. We then cast our votes based on the merits of the specific proposals as written, each company's responsiveness to our concerns and its historical and expected direction of travel on the topics.

We believe the consideration of ESG factors across all types of organizations will continue taking hold as the global business community evolves from a profits-first mentality to a stakeholder mentality. We are encouraged by the foundation we have established through the implementation of an ESG framework that cohesively fits with our investment process and are pleased with the team's effort to adopt and operationalize it. As we round the corner and think about our goals for 2021, we look to build upon the momentum of this year. We will continue to refine and enhance our ESG integration

capabilities through repetition, iteration and proactive efforts to develop the team's ESG-related knowledge and expertise. We look forward to communicating our efforts in more detail in our first ESG report set for publication by Q2.

Perspective

In last quarter's letter, we wrote that two imminent events—the first Phase III data from COVID-19 vaccine programs and the US presidential election—would be important determinants of the economic outlook. The vaccine data from both the Pfizer/BioNTech and Moderna trials were incredibly positive—a testament to the scientists and clinicians who moved mountains to develop these products at record (warp) speed, as well as to the power of modern biotechnology tools that have long attracted us to innovative biopharmaceuticals franchises. While the initial rollout of the vaccines has been frustratingly slow, we hope and expect health care systems around the world will rise to the occasion in the coming months to match the companies' accelerating production schedules. If so, the pandemic could be largely over by mid-2021, which (among other obvious benefits) should enable a sharp recovery in economic activity for affected industries.

While the recent US political turmoil has been heartbreaking, the federal government's near-term profile actually seems quite clear following the run-off Senate elections in Georgia: Democrats now control the presidency and (by very slim margins) both houses of Congress. We expect the new administration to focus on vaccine distribution, economic recovery, clean energy and economic inequality (minimum wage, health care coverage). A partial reversal of the 2017 corporate tax cut is seen as a source of funding for these initiatives. That said, the Democrats' lack of commanding Congressional majorities may constrain the scope of their ambitions.

Overall, we view the outlook for corporate profits as positive given the pandemic's expected end. On its own, that suggests a favorable backdrop for equity markets, but we can't ignore the strong returns in 2020 and the signs of froth in some areas of the market. We certainly expect some richly valued but highly speculative "story stocks" to fail to deliver relative to high expectations in the coming years. In higher quality situations where we've felt the need to manage valuation risk in recent quarters, we take some comfort in the fact that these companies' profit cycles are de-risked and very strong. Nonetheless, some of the coming year's potential gains may have been pulled forward.

As a final market outlook thought, it's worth noting that falling interest rates have certainly contributed to rising equity valuations in recent years. The recent modest recovery in rates is likely an encouraging economic sign, but if rates meaningfully surprise to the upside, we'd expect valuations to come under pressure. While we view this as possible, we believe trends in information technology continue to serve as important deflationary factors in the global economy.

As we close a remarkably successful year, we're very thankful for the hard work and good judgment of our team members, and for the trust and support of our longstanding clients. We humbly acknowledge it will be impossible to keep up our pace of performance over the past two years, both on an absolute and relative basis. But with confidence in the profit growth potential of our portfolio companies and in the proven success of our investment process, we remain optimistic about the portfolio's long-term prospects.

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Our capital allocation process is designed to build position size according to our conviction. Portfolio holdings develop through three stages: GardenSM, CropSM and HarvestSM. GardenSM investments are situations where we believe we are right, but there is not clear evidence that the profit cycle has taken hold, so positions are small. CropSM investments are holdings where we have gained conviction in the company's profit cycle, so positions are larger. HarvestSM investments are holdings that have exceeded our estimate of intrinsic value or holdings where there is a deceleration in the company's profit cycle. HarvestSM investments are generally being reduced or sold from the portfolios.

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For Institutional Investors — Not for Onward Distribution



Artisan U.S. Small-Cap Growth Strategy

Quarterly Contribution to Return (% USD)

As of 31 December 2020

Top Contributors	Average Weight	Contribution to Return	Ending Weight
Halozyme Therapeutics Inc	4.65	2.54	5.03
Blackline Inc	4.00	1.84	4.33
NeoGenomics Inc	3.61	1.49	3.89
Q2 Holdings Inc	3.79	1.41	4.07
Lattice Semiconductor Corp	2.68	1.39	2.90
HubSpot Inc	3.98	1.38	4.05
Veracyte Inc	2.76	1.30	2.64
Chegg Inc	4.72	1.14	4.81
Cree Inc	1.74	0.97	1.34
Teledyne Technologies Inc	2.87	0.79	2.82
Zscaler Inc	2.00	0.79	0.00
Monolithic Power Systems Inc	2.47	0.74	2.53
Iovance Biotherapeutics Inc	1.95	0.72	2.06
Glaukos Corp	1.41	0.65	1.52
Avalara Inc	2.11	0.64	1.95
LivePerson Inc	3.18	0.64	3.09
Ingersoll Rand Inc	2.07	0.61	2.05
Tyler Technologies Inc	2.12	0.57	1.76
Guidewire Software Inc	2.25	0.54	2.28
MyoKardia Inc	0.05	0.54	0.00
LiveRamp Holdings Inc	1.46	0.53	1.56
John Bean Technologies Corp	1.85	0.46	1.84
Morningstar Inc	0.98	0.40	1.07
Shockwave Medical Inc	1.06	0.38	1.23
Twist Bioscience Corp	0.55	0.38	0.64
Argenx SE	2.65	0.36	2.54
YETI Holdings Inc	0.72	0.34	0.81
Floor & Decor Holdings Inc	1.32	0.32	1.32
Novanta Inc	2.08	0.31	1.88
Zynga Inc	3.09	0.31	3.41
Ascendis Pharma A/S	2.81	0.31	2.53
Lemonade Inc	0.28	0.29	0.00
Denali Therapeutics Inc	0.34	0.28	0.54

Bottom Contributors	Average Weight	Contribution to Return	Ending Weight
Clarivate PLC	1.26	-0.27	0.00
JFrog Ltd	0.78	-0.21	1.20
Ollie's Bargain Outlet Holdings Inc	2.29	-0.14	1.90
Tricida Inc	0.07	-0.13	0.00
Vapotherm Inc	0.82	-0.04	0.76
iRhythm Technologies Inc	1.85	-0.01	1.96
Cash Holdings	2.14	0.00	4.22
Tabula Rasa HealthCare Inc	0.83	0.00	0.83
Wingstop Inc	0.81	0.01	0.89
Vericel Corp	0.01	0.01	0.24
Orchard Therapeutics PLC	0.21	0.02	0.18
Casey's General Stores Inc	1.33	0.02	1.37
Papa John's International Inc	0.74	0.02	0.69
Invitae Corp	0.73	0.02	0.57
Evo Payments Inc	0.70	0.06	0.80
BWX Technologies Inc	0.84	0.06	0.79
RealPage Inc	0.35	0.06	0.00
Sumo Logic Inc	0.21	0.06	0.23
Mesa Laboratories Inc	0.62	0.09	0.57
South Mountain Merger Corp	0.18	0.10	0.29
Trex Co Inc	0.56	0.10	0.55
Adaptive Biotechnologies Corp	0.60	0.12	0.62
Bentley Systems Inc	0.42	0.16	0.79
Repligen Corp	0.52	0.17	0.49
Advanced Drainage Systems Inc	0.49	0.17	0.52
Radius Health Inc	0.34	0.17	0.36
Smartsheet Inc	0.51	0.19	0.54
Accelaron Pharma Inc	1.42	0.19	1.39
Sage Therapeutics Inc	0.50	0.19	0.54
Cognex Corp	0.71	0.19	0.70
Bright Horizons Family Solutions Inc	1.48	0.21	1.40
Y-mAbs Therapeutics Inc	0.80	0.25	0.79
The New York Times Co	1.27	0.25	1.32

Source: Artisan Partners/FactSet. Performance is historical and is not a reliable indicator of future results. As of 31 Dec 2020. These investments made the greatest contribution to, or detracted most from, performance during the period based on a representative account within the strategy Composite. Upon request, Artisan will provide: (i) the calculation methodology and/or (ii) a list showing the contribution of each holding to overall performance during the measurement period. Securities of the same issuer are aggregated to determine the weight in the portfolio. % Contribution to Return is calculated by FactSet by multiplying a security's weight in the portfolio by its in portfolio return for the period referenced and does not take into account expenses of the portfolio. Purchases/sales are accounted for by using end of the day prices, which may or may not reflect the actual purchase/sale price realized by the portfolio.