



### 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 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. Garden<sup>SM</sup> investments are small positions in the early part of their profit cycle that may warrant more sizeable allocations as their profit cycle accelerates. Crop<sup>SM</sup> investments are positions that are being increased to a full weight because they are moving through the strongest part of their profit cycles. Harvest<sup>SM</sup> 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



Jason L. White, CFA  
Portfolio Manager (Lead)



James D. Hamel, CFA  
Portfolio Manager



Matthew H. Kamm, CFA  
Portfolio Manager



Craigh A. Cepukenas, CFA  
Portfolio Manager

### Investment Results (%)

As of 31 March 2019	Average Annual Total Returns						
	QTD	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Inception <sup>1</sup>
<b>Composite — Gross</b>	<b>19.02</b>	<b>19.02</b>	<b>11.07</b>	—	—	—	<b>14.41</b>
<b>Composite — Net</b>	<b>18.75</b>	<b>18.75</b>	<b>10.00</b>	—	—	—	<b>13.31</b>
MSCI All Country World Index	12.18	12.18	2.60	—	—	—	5.92

### Annual Returns (%) 12 months ended 31 March

	2015	2016	2017	2018	2019
<b>Composite — Gross</b>	—	—	—	—	<b>11.07</b>

Source: Artisan Partners/MSCI. Returns for periods less than one year are not annualized.

<sup>1</sup>Composite inception: 1 September 2017.

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. The Strategy's investments in initial public offerings (IPOs) made a material contribution to performance. IPO investments may contribute significantly to a small portfolio's return, an effect that will generally decrease as assets grow. IPO investments may be unavailable in the future.

**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

Markets bounced back sharply from Q4's weakness to start 2019 and are effectively flat over the last six months. US markets led the way, followed closely by foreign developed and emerging markets. Though many of the concerns which weighed on sentiment in 2018 remain unresolved—notably Brexit and global trade concerns, particularly between the US and China—investors shrugged off ongoing uncertainty as corporate earnings remain solid overall.

On the monetary policy front, the Fed and ECB sharply reversed course in Q1, returning to easier policy stances. The Fed left interest rates unchanged, as broadly expected, and signaled it may not raise rates at all in 2019—a less anticipated development. Meanwhile, the ECB announced it would reverse course and provide additional monetary stimulus in the form of resurrecting inexpensive, long-term loans for banks. The BoE and the BoJ, meanwhile, left rates on hold—the former given ongoing Brexit uncertainty. The Bank of Japan is maintaining a negative short-term interest rate in the face of ongoing macroeconomic weakness and few signs of domestic inflation. These combined signals from the world's major central banks that the global economy continues needing support helped push rates further down. The real estate sector was not surprisingly one of the leading sectors both in the US and globally, while financials (though positive on an absolute basis) trailed in the face of lower-for-longer rates.

At the sector level, in addition to real estate, technology stocks led—powered by solid earnings reports and despite growing global concerns about areas such as privacy and the potential need for increased regulatory oversight. Energy stocks also rose nicely in Q1 on the back of higher crude prices. Conversely, health care and financials stocks were the primary laggards, though both sectors were positive on an absolute basis. From a style standpoint, the market continues to be led by growth stocks across the cap spectrum.

### Performance Discussion

As markets bounced back from Q4's selloff, our portfolio outperformed the MSCI AC World Index in Q1. Strength has been broad-based at the sector level as fears have subsided and investors have returned to stocks with the strongest fundamentals. At the sector level, our health care, industrials and technology holdings were particularly strong. Conversely, our lack of exposure to the real estate sector modestly detracted in a quarter in which the sector's returns were particularly strong as investors anticipate interest rates will remain muted. Returns among our top-10 holdings were solid, and the majority of the Crop<sup>SM</sup> is behaving as we would generally anticipate.

From an individual holdings perspective, IMCD, Veeva Systems and Techtronic were among our top contributors. Netherlands-based IMCD is the leading international specialty chemicals distributor. It primarily services end markets including pharmaceuticals, personal care, coatings and others. Leading chemical companies outsource their sales efforts to IMCD to capitalize on its expertise and global customer base. The company has executed well, delivering solid organic growth in both its newer and more mature markets. We believe it remains well-positioned to consolidate a highly fragmented market and maintain our conviction in the outlook.

Veeva Systems is a leading provider of cloud-based SaaS solutions for the pharmaceutical and life sciences industries. As we have written recently, the company is executing at a high level, benefiting from broader adoption of its expanding product suite among pharmaceutical customers—particularly within the areas of clinical trial and clinical data management. Importantly, the value proposition seems to be increasingly clear to pharmaceutical customers, who benefit from an improved offering over legacy solutions while saving costs associated with managing and maintaining the hardware and software themselves. Recent results have provided a reminder of how much margin potential exists in this business model, as the company continues to notch all-time highs despite healthy reinvestment in future growth drivers.

Techtronic's shares were pressured in Q4 by global trade concerns but rebounded in Q1 with increasing visibility into a potential resolution. Importantly, Techtronic chose not to aggressively take up its pricing related to tariff pressures—a decision which has helped drive volume but has also held back margin expansion, though it does remain positive. However, the company is focused on reinvesting its margin expansion into R&D and sales to solidify its market-share opportunity and drive competitiveness. Given the opportunity ahead and Techtronic's ongoing solid execution, we find this high-quality franchise's valuation compelling.

Conversely, among our bottom contributors were Take-Two Interactive, Eicher and Halma. Shares of Take-Two, a leading video game developer, have been pressured as investors weigh the impact of new viral free-to-play hits like Fortnite and, more recently, Apex Legends on full price games like Take-Two's. These developments, combined with Google's announcement of a new video-game streaming service, show there is dynamic change and experimentation underway in this industry. Generally, we believe lower cost onramps for players (in the form of free-to-play and streaming) should benefit the industry longer term by expanding the number of players globally. However, shorter term, it raises the question about whether competition for gamers' attention will impact the growth of Take-Two's full-price games. We believe the target audiences are somewhat different and that the recent blockbuster launch of Red Dead Redemption 2 reinforces that Take-Two continues to produce very high-quality content. If Take-Two's follow-on digital updates for Red Dead Redemption 2 this year inspire players to spend more, we think the company's profit cycle will remain strong.

Based in India, Eicher is known as the maker of Royal Enfield—the oldest motorcycle brand in the world. We anticipated that Eicher's larger, more powerful and differentiated offerings represented an aspirational offering to India's population. We also believed the company would ramp its business in other emerging markets where its brand similarly resonated. However, with recent results showing signs of possible brand fatigue and our thesis consequently delayed, we exited our position in favor of better-positioned opportunities elsewhere.

Halma is a UK-based company with a compelling portfolio of niche instrument businesses focused primarily in health, safety and environmental areas. Over the course of our campaign, it executed

well against a backdrop of solid demand, particularly in its environmental analysis segment and in Asia-Pacific. With its valuation reaching our estimate of private market value, we harvested our position in favor of other opportunities.

### Portfolio Activity

As we've discussed in recent communications, we take a positive view of heightened market volatility as it allows us to capitalize on opportunities to invest in high-quality franchises at compelling valuations. Our ongoing research efforts continued to bear fruit in Q1, and we initiated new campaigns in Skyworks, Ascendis Pharma and Vestas Wind Systems, while increasing our exposure to London Stock Exchange (LSE).

Skyworks is a radio frequency (RF) wireless technology company which addresses the exponential increase in mobile data traffic—including cellular, Wi-Fi and Bluetooth traffic into and out of mobile handsets—as well as broader market applications, including auto, connected home devices, Wi-Fi routers, security cameras and communications equipment. Over the last several years, this industry has seen meaningful consolidation, with Skyworks and Broadcom the market-share leaders. Skyworks' core franchise is built on its leading integration of 15 to 25 components (carrier aggregation, multiple antennas, tuners, amplifiers, transmit/receive, multiplexers, etc.) into a single system-on-chip (SoC). As networks shift from 4G to 5G, we anticipate growing demand for Skyworks' industry-leading content. We capitalized on what we view as an attractive valuation to initiate a Garden<sup>SM</sup> position in Q1.

Ascendis Pharma is a biotechnology company with a proprietary technology platform (TransCon) that supports pipeline development of multiple, best-in-class therapies while minimizing clinical risk and expense. Recently, the company reported better-than-expected phase three results for its long-acting weekly growth hormone, TransCon GH. We believe this drug will be a strong driver of profitability. Importantly, this outcome also de-risks the company's other endocrine programs, as well as the TransCon technology platform itself. With a promising pipeline, we believe Ascendis is capable of driving a compelling profit cycle in the period ahead.

We initiated our campaign in Vestas Wind Systems on the thesis that we are in the early stages of an inflection point in the wind- and solar-power industries. Some background is helpful: In the wake of the 2011 Fukushima earthquake and accompanying nuclear concerns, successive countries passed mandates to eliminate their own nuclear-power reliance. In Germany, this had the unintended consequence of forcing it to rely on the dirtiest-burning coal, lignite. As a result, Germany (and others, particularly in Europe) have focused increasingly on shifting from coal to a cleaner energy source—namely, wind and solar. As these demand-side considerations were playing out, the supply side was also evolving. During 2017, alternatives prices underwent a sharp, one-time reset, while global energy prices began climbing—compounded in Europe by carbon taxes. These pricing dynamics helped drive wind energy producers to develop more efficient turbines. The interplay of these dynamics, then, has produced an inflection point, with companies now generating wind power at scale. We believe we are in the very early innings with alternative energy sources and expect the industry to

ramp very quickly in the coming years. We believe Vestas is particularly well-positioned given it is the low-cost producer. Amid 2017's pricing correction, while competitors were taken down to their cash margins, Vestas was able to maintain a positive margin. Given our conviction in the strength of this trend and the incredibly long runway ahead, we introduced Vestas to the Garden<sup>SM</sup> in Q1.

LSE is an international market infrastructure and capital markets business. Through acquisitions, the company has shifted its focus from traditional, volume-based revenue streams and positioned itself as an information services business and clearinghouse—shifts which expose the company to some of the strongest structural trends in the finance industry, including ETF penetration, OTC clearing and quantitative investing. These trends are producing heavy demand for data analytics, which should result in a meaningful margin opportunity for LSE. Further, LSE has meaningful scale that should position the company well relative to the ongoing digitization of collateral and clearing. Recent results have shown strong performance in its clearinghouse business, lending credence to our thesis. We accordingly continue to add to our position opportunistically.

In addition to the aforementioned Eicher and Halma, we also exited Sartorius in Q1, while paring our exposure to Teledyne, Atlassian and Vivendi. Sartorius is a Germany-based leading international laboratory and process technology provider for the biotech, pharmaceutical and food industries. Given its already high market share, we have held it for its competitive positioning relative to several durable, long-term trends—including the ongoing shifts toward biologic drugs and single-use technology. While we maintain our conviction in this high-quality franchise, the valuation has reached our estimate of private market value, and we consequently exited in favor of earlier profit cycles.

As the market rose in Q1, valuations naturally rose with it. In accordance with our disciplined approach, we consequently pared our exposure to holdings whose valuations neared our estimates of private market value—including Teledyne Technologies and Atlassian.

We also trimmed our exposure to Vivendi, one of Europe's largest media companies and owner of Universal Music Group (UMG), one of the "big three" music labels globally. The music business has been under meaningful pressure in recent years thanks to the digitization of much of the business—particularly since the advent of Apple's products, followed by others. However, as Spotify and others have gained traction, UMG's business has similarly begun to turn around, with streaming services and the subscription plans behind them now overwhelming the decline in paid music. We believe this secular trend toward streaming music still has meaningful legs—including in large markets like China. However, investors have also begun to recognize the opportunity in Vivendi's valuation. Further, the company is in the process of carving out a 50% stake in UMG for strategic investors—a move perhaps aimed at making the business's value more transparent. As these developments have played out, the price has risen accordingly, so we have begun to slowly harvest our position as the true valuation has begun to be recognized.

## Portfolio Statistics

As of March 31, the portfolio had a median market cap of \$8.6 billion and a 3-5 year forecasted weighted average earnings growth rate of 19%. Our holdings were selling at a weighted harmonic average P/E (excluding negative earnings) of 25X FY1 earnings and 21X FY2 earnings. As of quarter end, we held 58 positions. Our top 20 holdings accounted for roughly 53% of portfolio assets as of quarter end. Our top 30 holdings represented about 68% of portfolio assets.

## Perspective

We have emphasized over the past couple years the degree to which markets can be highly volatile—a fact easily lost sight of by many investors amid an ongoing, long bull market. Markets provided a sharp reminder in 2018—especially in Q4—as macroeconomic uncertainty picked up. We have also noted that during the early stages of a sharp correction, our stocks can go down every bit as much (if not more than) the market, as investors seek to de-risk portfolios by selling higher-multiple growth stocks.

But ultimately, we gravitate toward businesses that are less dependent on the overall strength of the underlying global economy and are more driven by factors such as innovation, demographic changes and internal change catalysts. Our assessment during the Q4 selloff that those drivers remained intact for the businesses we hold in the portfolio gave us the confidence to take advantage of the attractive valuations we were seeing. Those decisions largely paid off in Q1 as investor confidence returned to markets.

Against the backdrop of Q4's correction and the market's subsequent Q1 bounce-back, we kept our heads down, researching new secular trends and investment ideas which are yielding a solid pipeline of high-quality franchises that we believe are on the cusp of compelling, long-term potential profit cycles. For example, we did extensive work during the quarter building conviction in a number of new alternative energy-related profit cycles.

As mentioned during our discussion of Vestas Wind Systems, we believe alternative energy-related companies are at an important inflection point. Not only is global demand undoubtedly rising, but supply is becoming increasingly economical, requiring few if any subsidies for producers. In addition to Vestas Wind Systems, we hold positions in First Solar and Cree. First Solar, a leading global producer of solar panels, is entering a new product cycle with its Series 6 panels, which should establish it as the low-cost producer in the industry. The company also has expertise in developing full solar power plants and possesses a very strong balance sheet. We believe these attributes position First Solar as an attractive partner for US utility companies looking to significantly shift their mix of energy sources toward renewables in the coming years.

Cree is another holding which we believe is well-positioned relative to this trend. As we have discussed over the course of our campaign, we find Cree's silicon carbide (SiC) business particularly compelling given SiC's high electronic connectivity properties and its very high melting point, which means it can be used in particularly harsh environments. We believe SiC has an important role to play in electronic vehicles and energy storage. Given Cree's dominant position in the SiC business, the market is coming to the company, which is in turn reinvesting in

the business to perpetuate its advantage and capitalize on the growth opportunity ahead.

These holdings exemplify the essence of our disciplined approach to identifying profit cycles: Regardless of the market environment, we conduct in-depth research across markets, eschewing growth at any price in favor of high-quality, durable franchises which we believe are trading at attractive valuations relative to the opportunity we believe is ahead of them.

That said, though we are enthusiastic about the output of our research efforts, we simultaneously recognize that valuations have quickly reverted to higher levels, and many of the macro concerns that plagued markets in 2018 have not been completely dispelled. As such, we certainly wouldn't be surprised to see ongoing market volatility in the coming quarters. Regardless, we will stay focused on looking for compelling new profit cycles, and we will remain disciplined about what we pay for them, as we have over the course of our history.

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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.

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Our capital allocation process is designed to build position size according to our conviction. Portfolio holdings develop through three stages: Garden<sup>SM</sup>, Crop<sup>SM</sup> and Harvest<sup>SM</sup>. Garden<sup>SM</sup> 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. Crop<sup>SM</sup> investments are holdings where we have gained conviction in the company's profit cycle, so positions are larger. Harvest<sup>SM</sup> investments are holdings that have exceeded our estimate of intrinsic value or holdings where there is a deceleration in the company's profit cycle. Harvest<sup>SM</sup> investments are generally being reduced or sold from the portfolios.

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# Artisan Global Discovery Strategy

Quarterly Contribution to Return (%)

As of 31 March 2019

Top Contributors	Average Weight	Contribution to Return	Ending Weight
Global Payments Inc	4.94	1.47	5.26
Veeva Systems Inc	2.91	1.10	3.10
Techtronic Industries Co Ltd	3.50	0.87	3.65
Teledyne Technologies Inc	4.57	0.73	4.01
Gardner Denver Holdings Inc	2.07	0.68	2.17
Guidewire Software Inc	3.09	0.65	3.17
The Progressive Corp	2.79	0.65	2.78
BWX Technologies Inc	2.06	0.65	1.70
The New York Times Co	1.59	0.65	1.68
Cree Inc	2.09	0.64	2.21
Alexion Pharmaceuticals Inc	1.87	0.64	2.05
Varta AG	1.47	0.63	1.58
IMCD NV	3.07	0.59	2.99
B&M European Value Retail SA	1.68	0.55	1.75
Zynga Inc	1.59	0.51	1.69
First Republic Bank	2.81	0.47	2.71
Fevertree Drinks PLC	1.25	0.47	1.33
Novanta Inc	1.38	0.45	1.32
IHS Markit Ltd	2.90	0.41	2.85
Boston Scientific Corp	3.50	0.34	3.31
Vivendi SA	1.67	0.31	1.36
ASML Holding NV	1.57	0.30	1.45
Cintas Corp	1.41	0.29	1.40
Pageseguro Digital Ltd	0.59	0.29	0.70
Sartorius AG	0.68	0.28	0.00
Atlassian Corp PLC	1.02	0.26	0.80
Notre Dame Intermedica Participacoes SA	1.75	0.26	1.57
Amadeus IT Group SA	1.62	0.25	1.65
Puma SE	1.28	0.24	1.29
HDFC Bank Ltd	2.07	0.22	2.18
Webster Financial Corp	2.02	0.20	0.00
Lonza Group AG	0.99	0.19	1.18

Bottom Contributors	Average Weight	Contribution to Return	Ending Weight
Take-Two Interactive Software Inc	1.31	-0.13	1.26
Eicher Motors Ltd	0.02	-0.10	0.00
Halma PLC	0.02	-0.03	0.00
Wabtec Corp	0.22	-0.02	0.00
Ascendis Pharma A/S	0.20	-0.01	0.78
Vestas Wind Systems A/S	0.13	-0.01	1.01
ServiceMaster Global Holdings Inc	0.15	0.00	0.47
Skyworks Solutions Inc	0.20	0.01	0.86
Kambi Group PLC	0.11	0.03	0.51
Cash Holdings	6.54	0.04	7.07
CAE Inc	0.43	0.05	0.61
Takeaway.com NV	0.73	0.06	0.75
Treasury Wine Estates Ltd	1.69	0.07	1.47
RealPage Inc	0.52	0.07	0.70
Genmab A/S	1.78	0.08	1.86
Eurofins Scientific SE	0.74	0.08	0.77
First Solar Inc	0.71	0.09	1.06
TD Ameritrade Holding Corp	1.43	0.09	1.24
Cision Ltd	0.72	0.13	0.73
Visteon Corp	0.90	0.14	0.76
Coherent Inc	0.45	0.14	0.47
FLIR Systems Inc	1.29	0.14	1.18
WellCare Health Plans Inc	0.85	0.15	0.92
Nintendo Co Ltd	1.46	0.15	1.12
Burberry Group PLC	1.04	0.16	1.25
Orpea	0.98	0.16	1.13
Diamondback Energy Inc	1.02	0.17	0.00
Canada Goose Holdings Inc	1.34	0.17	1.27
Tableau Software Inc	2.23	0.17	2.10
Cognex Corp	0.62	0.17	0.70
London Stock Exchange Group PLC	0.95	0.18	1.31
HealthEquity Inc	0.54	0.19	0.59
Fortive Corp	0.91	0.19	1.15

Source: Artisan Partners/FactSet. Performance is historical and is not a reliable indicator of future results. As of 31 Mar 2019. 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.