



### Investment Process

We seek to invest in high-quality, undervalued companies with strong balance sheets and shareholder-oriented management teams.

### Undervaluation

Determining the intrinsic value of a business is the heart of our research process. Intrinsic value represents the amount that a buyer would pay to own a company's future cash flows. We seek to invest at a significant discount to our estimate of the intrinsic value of a business.

### Business Quality

We seek to invest in companies with histories of generating strong free cash flow, improving returns on capital and strong competitive positions in their industries.

### Financial Strength

We believe that investing in companies with strong balance sheets helps to reduce the potential for capital risk and provides company management the ability to build value when attractive opportunities are available.

### Shareholder-Oriented Management

Our research process attempts to identify management teams with a history of building value for shareholders.

### Team Overview

Our team has worked together for many years and has implemented a consistent and disciplined investment process. Our team is organized by geographic regions, but within those regions we are generalists who look across all industries. We believe this model enables our analysts to become broad thinkers and gain critical insight across all economic sectors.

### Portfolio Management



Daniel J. O'Keefe  
Portfolio Manager (Lead)  
Managing Director



Michael J. McKinnon, CFA  
Portfolio Manager  
Managing Director

### Investment Results (% USD)

As of 30 September 2022	Average Annual Total Returns						
	QTD	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Inception <sup>1</sup>
<b>Composite — Gross</b>	<b>-9.65</b>	<b>-23.25</b>	<b>-20.21</b>	<b>1.52</b>	<b>2.13</b>	<b>7.86</b>	<b>6.84</b>
<b>Composite — Net</b>	<b>-9.88</b>	<b>-23.81</b>	<b>-20.98</b>	<b>0.55</b>	<b>1.16</b>	<b>6.83</b>	<b>5.82</b>
MSCI All Country World Index	-6.82	-25.63	-20.66	3.74	4.44	7.28	4.23
MSCI All Country World Value Index	-7.66	-19.05	-13.97	1.27	1.71	5.39	2.46

### Annual Returns (% USD) 12 months ended 30 September

	2018	2019	2020	2021	2022
<b>Composite — Net</b>	<b>4.53</b>	<b>-0.32</b>	<b>-5.39</b>	<b>36.00</b>	<b>-20.98</b>

Source: Artisan Partners/MSCI. Returns for periods less than one year are not annualized. <sup>1</sup>Composite inception: 1 July 2007.

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.



## Market Overview

"The multiplying villains of nature do swarm upon us."

—William Shakespeare, Macbeth Act I, Scene II

Assets continued their downward grind in the third quarter. Commodities fell by mid-single-digit percentages. Stocks did roughly the same around the world, China excepted but not in a good way, with shares down more than 20% on average. Bonds offered no harbor, suffering losses that will surprise many when they open their quarterly statements. The bond bear market may feel particularly painful to investors, many of whom have not practiced long enough to experience the last one. Most currencies lost ground against the US dollar, with both the euro and UK sterling bouncing near historic lows.

The headwinds are undeniably many: China's relentless zero-COVID policy; interest rate increases necessary to "whip inflation now" (we cannot resist resurrecting a Gerald Ford presidential campaign slogan); economies faltering under the weight of inflation and interest rates; and the war in Ukraine. None of these are new; we covered them in our second-quarter letter. But a couple of strings are worth pulling.

The war in Ukraine shines a bright light on energy and the surrounding economic, investment and national security questions. When energy is cheap and plentiful, we have the luxury of taking it for granted, and in the case of fossil fuels, convince ourselves that maybe we can do without for the sake of the planet. It is easier to think about going on a diet when your stomach is full than when you are starving. Well, to a degree, we are now starving. Europe, due to some very bad policy decisions, has crushed fossil fuel production within its borders and is now dependent on the kindness of strangers for its economic lifeblood. The stranger in this case is Vladimir Putin, and with the war, the gas from Russia has stopped flowing. We believe that Europe will not be able to replace this lost supply until 2026 or 2027 at the earliest when new liquified natural gas (LNG) capacity comes online. Indeed, the global LNG market must expand by 25% to meet Europe's needs—no small feat in either time or money. It is somewhat poetic—in a tragic sense—that the Groningen gas field in the Netherlands is scheduled to fully close around that same time. Groningen has the capacity to replace all gas lost from Russia, yet to our knowledge, no discussion is underway to ramp up production.

To some, the current energy crisis merely highlights the need to accelerate the "Transition"—a move to a fossil fuel-free energy structure built on solar, wind and other renewable energy sources. What could be better than clean, home-grown energy? Indeed, we read a lot of commentary about how this crisis should accelerate the transition, all of it lacking in exposition of the enormous challenges to do so. To be blunt, it is unrealistic. Global energy dependence on fossil fuels is about 84%, down from 86% twenty years ago. Wind and solar account for only 5% of global energy supply. And the barriers to large-scale wind and solar production are high. Wind and solar energy projects per unit of energy relative to fossil fuels consume 300% more

copper and 700% more rare earths. The International Energy Agency (IEA) estimates that clean energy will consume 50%-70% of the world's mineral supply compared to 10%-20% for today's energy stack. Where will all this copper and lithium come from and at what cost? Solar and wind projects require 300X more land than a gas or nuclear power plant. Where will we put them all? Moreover, solar and wind only work when the sun shines and the wind blows. In 2021, Germany increased its renewable energy capacity significantly, but power generated from renewables declined by high single-digit percentages. The number of windmills is irrelevant if there is no wind. Indeed, wind and solar cannot be the foundation of a functioning, reliable grid. For now, natural gas, nuclear and coal are the only viable sources of large-scale baseload power. One need only look at the cautionary tale of California's energy policies. From 2010 to 2020, California added about 11,000 megawatts (MWs) of generating capacity. Capacity from gas and nuclear fell by about 4,000 MWs while solar and wind increased by about 17,000 MWs. Yet the reliability of the grid has fallen dramatically, causing chronic brownouts and shortages. Ironically, the addition of significant renewable generation capacity has made California more dependent on coal- and gas-fired generation from neighboring states at high costs because its renewable capacity is incapable of providing consistent power.

Barriers to replacing internal combustion engines (ICE) with battery electric vehicles (BEV) are similarly daunting.

Electric grids are not designed to handle the demand from a large BEV carpark, and the investment required to make them so will take decades and cost enormous (and potentially prohibitive) sums. This will almost certainly result in structurally higher electricity prices, since utilities will require a return on these investments.

Sourcing the raw materials needed to make BEV batteries is also a critical factor. The IEA estimates that lithium demand for electric car batteries as well as electricity storage will need to grow 40X and nickel, cobalt and graphite to increase 25X by 2040 to meet Paris climate commitments. Increasing production of minerals at this scale is not trivial, fast or cheap.

All of this means BEV batteries and therefore BEVs will continue to get less, rather than more, cost competitive compared to ICEs. The cost of BEVs is already much higher than traditional ICE cars. A basic study of the supply and demand outlook for critical raw materials suggests that this price premium is likely to remain or even increase. In fact, the costs of battery cells per kilowatt (KW) hour have been rising and are now 170 per KW hour compared to the 100 level for BEVs to approach cost parity with ICE vehicles. Our discussions with auto companies suggest the solution is to partially plug the gap with government subsidies. This can help in the short term but is ultimately unsustainable.

National security is also a consideration. The US is dependent on imports for 100% of seventeen renewable and BEV critical minerals. Australia, Chile and China are the largest suppliers of lithium

needed for batteries. China refines 60% of the world's lithium and controls 77% of global battery cell capacity. Europe is experiencing an economic and security crisis as a result of ceding its energy independence to another country. And yet the rush to adopt BEVs risks committing the exact same error in real time.

Finally, the fundamental assumption of emissions reduction benefit of BEVs is questionable. BEVs are not emission free. They merely export the emissions to the mines that extract the battery minerals, the plants that manufacture them, and the power producers that generate the electricity. Depending on the composition of the grid, BEVs do not necessarily generate lower overall emissions than ICE alternatives. For many states in the US, the breakeven point on emissions is not until the odometer reaches about 100,000 miles.

Despite these challenges, government mandates to replace ICE cars with BEVs continue to roll out ahead of the investments required to make the switch feasible. The best recent example is California, which recently announced all cars sold in the state must be BEVs by 2030. The very next day, the state put out a request to limit charging of BEVs because the grid was short of power. Mandate it and it will happen. Somehow.

The investment implications of the above are not trivial. The market has routinely taken the path to net zero as an article of faith. We expect that this will change. The assumption that ICE vehicle sales will be replaced entirely by BEV sales within the decade looks tenuous at best. Similarly, the assumption that oil and gas producers are on the verge of precipitous demand-driven declines looks similarly unlikely. We could go on. The "Transition" is unlikely to materialize in any reasonable forecast period, yet many businesses have already been cast on the winning and losing sides. This will require a change in thinking on the part of many market participants.

Europe's current energy predicament has placed it at a serious economic disadvantage relative to nations with more stable energy supply. The lack of reliable, cheap energy is a tremendous economic challenge for businesses and consumers in Europe, where many simply cannot afford electricity at its current price. Governments, as a result, are absorbing the cost to protect consumers and doing so at enormous cost. Germany announced an energy subsidy plan that amounts to 5% of its GDP, all of which will be borrowed. The UK announced a similar plan. Not only does the current energy crisis damage government balance sheets and reduce consumer confidence, it imperils the industrial base of Europe, notably Germany. If companies do not have reasonably priced energy at consistent levels of supply, they will not invest. They may even disinvest.

The US, on the other hand, is at an enormous comparative advantage. It is entirely energy independent with vast reserves of natural gas and oil. While the natural gas powering much of the grid in the US has risen in price, it is still multiples cheaper than in Europe. Excluding the government subsidy, monthly home energy costs in the UK are about 3,500 sterling. UK median household income is about 31,000 sterling.

Translating that to US median household income would equate to a family paying \$8,000 a year to heat and cool their home. With abundant gas reserves, US consumers and businesses are far better off than their European counterparts, and the US is looking like a great place for businesses to invest relative to Europe. We may very well see meaningful production capacity shift from Europe to the US and elsewhere.

This—and the geographic proximity to the war in Ukraine—is why we see the enormous valuation discount of European equities compared to US equities. Europe, broadly speaking, trades at about 11X earnings compared to the US at about 16X earnings. This is the largest discount we can remember seeing in our careers. Part of this is certainly valid. If a business operates entirely within Europe, that business is at much greater risk for lack of energy supply, rising energy costs and economic stagnation than a purely US-focused business. But a Europe-domiciled business does not necessarily have more European exposure than a business based in the US. Even though businesses are often global and their domiciles do not represent a full picture of their true economic exposures, these days, the European domicile generally translates into a large valuation discount regardless of economic exposure. Let us oversimplify for illustration. Paccar Inc is one of the world's largest manufacturers of trucks. It is based in the US and sells at 12X earnings. Daimler Truck is based in Germany and is also one of the largest manufacturers of trucks. It trades at 8X earnings. Paccar generates 59% of its revenue in North America and 27% of its revenue in Europe. Daimler generates 41% in North America and 33% in Europe.

### Portfolio Discussion

Our top contributors this quarter were Sodexo and Willis Towers Watson. Expedia was also a notable leading contributor.

Sodexo's share price appreciated 7% in USD and 14% in local currency (euro). The company reported strong organic growth of 18% in Q3 (ending 31 May 2022), which was a step-up from 17% organic growth in H1, and better than their expectation of being at the low end of their fiscal-year guidance of 15%-18% organic growth. Business continues to recover from the pandemic-driven downturn, with Q3 revenue at 97% of 2019 levels in constant currency. The company has been working to improve performance in North America, which has been an underperforming region. New wins and retention both continued to improve in Q3.

Putting the pandemic aside, Sodexo is relatively more resilient compared to the average business, both from a recession as well as from a cost inflation perspective. The company's Onsite Services business is successfully passing on inflationary cost pressures in the form of price (with price contributing over 5% of organic revenue growth in Q3) while also managing costs to protect profitability. Its Benefits & Rewards segment is naturally hedged from inflation given its indexation to nominal currency, and is also benefiting from rising interest rates. Sodexo's resiliency likely helped its share price

outperformance as recessionary fears came into focus during the quarter.

Willis Towers Watson shares rose 2% in the quarter. This modest increase made it one of our best performers during a difficult quarter. Absent significant news, the business continues to benefit from a hard insurance market. Results are still lagging peers, but the management team seems to be making progress in closing the gap. In the meantime, the company is returning significant amounts of capital to shareholders. Over the past eight months, it has repurchased \$4 billion in stock and reduced the share count by 15%. And there is more on the way. This is a good business in a fantastic industry trading at 12X normalized earnings. We believe it is worth much more.

Expedia shares declined 1% during the quarter. Part of this was just the shares finding a bottom after a significant decline in the prior quarter. The business continues to perform well. The core business has largely recovered from the pandemic, with lodging revenues now 9% higher than 2019 levels. The overall travel environment has remained strong, but the big question is whether inflationary pressure on consumer discretionary spending will render the recovery short lived. Time will tell. In the meantime, the business is performing well, and the structural improvements in Expedia's cost structure made during the pandemic are becoming visible. We estimate the shares are trading at ~10X normalized earnings, which remains attractive.

Our bottom contributors this quarter were Alibaba, Philips and Danone.

Alibaba declined 30% during the quarter primarily due to the continued impact of China's zero-COVID policy. In August, more than 70 Chinese cities with 300 million combined population were in some state of lockdown. Unfortunately, this comes on top of the other regulatory and competitive challenges that had previously been pressuring Alibaba's shares over the past year. The painful decline in the share price has made Alibaba a poor investment so far—for good reason. In the second quarter, core online e-commerce revenues were down 10%, and adjusted profits declined 18%. That said, Alibaba shares are priced for this terrible environment to continue forever, and many of the exogenous issues should eventually abate. Signs suggest the regulatory pressure is already easing. The government has been stepping in with economic stimulus. The zero-COVID policy must eventually end. In addition, Alibaba's management has taken important steps to improve profitability by reducing investments in loss-making new business ventures. When the environment improves, we believe that Alibaba's core business franchises will return to growth, and profits will follow. The disconnect between Alibaba's price and value continues to be one of the biggest we have seen in our careers.

Philips' shares declined 23% (in local currency) during the quarter. The company's performance has been weak this year, and management recently decreased forward guidance. The CPAP machine recall is

progressing but continues to dominate headlines. The rest of the business has also struggled due to supply chain difficulties, which have impacted reported sales even as the company reports record orders and strong order inflow. A new CEO with a history of turning around underperforming divisions will take over on October 15. The company plans to have 90% of the recall completed this year.

We think the bad news is in the price, and then some. The shares trade at about 10X our estimate of next year's earnings. The market capitalization is only 7X management's free cash flow target for 2025. The company could pay out a sizable settlement to CPAP users and still be significantly undervalued. The underlying demand for the company's products and solutions appears robust. We believe this valuation, along with improved execution under the new management, creates a favorable outlook for shareholders.

Danone shares were down 16% during the quarter in US dollars and down 10% in local currency. As best we can tell, the decline in the share price was simply due to the gloomy macro environment in Europe. The business is performing well operationally—second-quarter earnings showed good organic growth from strong pricing and steady volumes. So far, Danone has successfully navigated the inflationary environment with a combination of pricing and cost reductions. The new management team is in the early stages of a credible plan to structurally improve growth and margins. In addition, the company continues to make progress on meaningfully improving the board and governance. Danone shares trade around 11X-12X normalized earnings, which we view as a bargain for a brand portfolio of this quality.

We added one new position this quarter, TotalEnergies (TTE). TTE is one of the world's largest energy companies. It develops and produces oil and gas, produces and sells refined products, is one of the largest producers and traders of LNG, and owns a large portfolio of renewable power generating assets. TTE has one of the lowest cost portfolios of oil and gas assets and therefore one of the lowest breakeven points in the industry. It also has one of the best balance sheets in the industry. We estimate it will reach a net cash position sometime in 2023.

The valuation of TTE—and that of Shell—is fascinating. TTE sells at approximately 4X earnings and has a 5% dividend yield. With its current buyback program and a recently announced special dividend, the owners yield is more than 10%. The valuation and owners yield are not dissimilar to those of Shell, which we also own and which trades at just under 5X earnings. To say that a discount is attached to European oil companies relative to US peers is an understatement. Exxon Mobil sells at 8X earnings, Chevron 9X and Conoco 8X. If TTE and Shell re-domiciled to the US, their share prices would probably double.

We have a few theories for the valuation anomaly. First, as mentioned above, Europe generally trades at a big discount to the US. In the case of TTE and Shell, this makes no economic sense. The oil and gas business is a global one, and TTE and Shell have attractive assets. The

main explanation, we believe, is that large sections of the European asset management industry will not invest in oil and gas because of ESG restrictions. Yet if the recent war in Ukraine and the current energy crisis have shown us nothing else, the supply of energy is an enormous social good. Indeed, it is an existential good. Moreover, it is companies such as TTE that will invest billions to supply the LNG that Europe desperately needs to restore its economy and reduce the crushing cost burden on families who must now choose between heating their homes and eating. Finally, TTE is also investing billions per year in renewable power generating assets such as wind and solar. Such assets will likely never replace clean burning natural gas and nuclear as base power suppliers, but they are a valuable and clean adjunct to modern grids. We believe TTE's renewable portfolio is worth between \$25 billion and \$35 billion and is moving from almost no profit contribution toward meaningful levels of profit over the next few years. We wonder how it makes sense for investors to disinvest from these kinds of assets on ethical grounds.

### Conclusion

At risk of stating the obvious, we are in a bear market. We have been through several during our careers. They are never fun and the circumstances always differ—compare today to the pandemic, the financial crisis and the technology bubble—though there are commonalities to each. Timing the bottom is just as impossible as knowing exactly what will trigger it. Rather than attempt to peer into our crystal ball, which is as hazy as anyone else's, we choose to look through the lens of valuation. What we see is attractive. We highlighted a few in this letter, but many of our holdings are at single-digit multiples of earnings. We have not seen the portfolio's overall discount to fair value this wide since the pandemic and the financial crisis. While earnings will certainly go backwards in a global recession, they will recover and have historically reached new highs. In our experience, the best values are had when the mood in the market is at its worst—and it sure feels bad right now. We suspect in a few years we will look back on this time as a good one for generating attractive long-term returns.

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For the purpose of determining the portfolio's holdings, securities of the same issuer are aggregated to determine the weight in the Strategy. The holdings mentioned above comprised the following percentages of a representative account within the Artisan Global Value Strategy Composite's total net assets as of as of 30 Sep 2022: Danone SA 4.5%, Alibaba Group Holding Ltd 2.9%, Willis Towers Watson PLC 2.6%, Koninklijke Philips NV 2.4%, Shell PLC 2.4%, Sodexo SA 1.4%, Daimler Truck Holding AG 1.0%, TotalEnergies SE 0.8%, Expedia Group Inc 2.1%. Securities named in the Commentary, but not listed here are not held in the portfolio as of the date of this report. Portfolio holdings are subject to change without notice and are not intended as recommendations of individual securities.

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