



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.

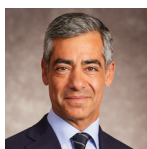
Shareholder-Oriented Management

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

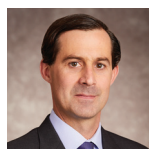
Team Overview

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



N. David Samra
Portfolio Manager (Lead)



Ian P. McGonigle, CFA
Co-Portfolio Manager



Joseph Vari
Co-Portfolio Manager

Investment Results (%)

As of 31 December 2018	Average Annual Total Returns						
	QTD	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Inception ¹
Composite — Gross	-11.39	-14.71	-14.71	4.40	2.71	11.07	11.12
Composite — Net	-11.61	-15.51	-15.51	3.43	1.76	10.05	10.08
MSCI EAFE Index	-12.54	-13.79	-13.79	2.87	0.53	6.31	5.37
MSCI All Country World ex USA Index	-11.46	-14.20	-14.20	4.47	0.68	6.57	5.96

Annual Returns (%) 12 months ended 31 December

	2014	2015	2016	2017	2018
Composite — Gross	1.10	-0.64	6.44	25.34	-14.71

Source: Artisan Partners/MSCI. Returns for periods less than one year are not annualized. ¹Composite inception: 1 July 2002.

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 on the second to last page, which should be read in conjunction with this material.



Market Discussion

Investing on others' behalves is a weighty responsibility. As noted by Anthony Deden in the October 19 edition of *Grant's Interest Rate Observer*, "... savings accumulated over a lifetime is something precious and irreplaceable and ... in order to protect it one must first respect it"—a concept which has been top of mind as we reflect on 2018. At its core, a portfolio manager's job is protecting investors' irreplaceable savings. Or, to put it in Benjamin Graham's terms, "An investment operation is one which, upon thorough analysis promises safety of principal and an adequate return. Operations not meeting these requirements are speculative." Thus, investing is inherently a matter of appropriately balancing risk and reward.

2018 proved one of the more challenging environments in several years. Investors chewed on a handful of considerations—including signs central bankers are finally on the verge of tightening monetary policy (though the means used and the speed at which they're deployed remain open questions); the possibility that global growth rates may be decelerating; and ratcheting trade tensions, particularly between the US and China. Against this backdrop, jittery investors hit more cyclically oriented industries harder—especially technology and technology-related stocks, which had powered much of the last several years' bull market returns. Banks and industrial equities did not fare well and neither did energy stocks as oil prices plummeted.

As such, the S&P 500® Index notched its worst year since the global financial crisis, closing down 4.4% (all figures in USD unless otherwise stated). The MSCI EAFE Index fell harder, down 13.8%—though as the USD strengthened throughout the year, the index held up slightly better in local currency terms, down 11.0% for the year. Emerging markets trailed developed in 2018, declining 14.6%. Much of the decline took place in December, which was the worst one-month decline in the stock market since the Great Depression. For the year, the portfolio trailed the MSCI EAFE Index, though it outperformed in Q4 amid particularly volatile market action.

Portfolio Discussion

The overlays we use to identify cheap securities are risk-mitigating in nature: strong balance sheets, good businesses with the ability to grow value and management teams with a proven track record of adding per-share intrinsic value. During certain periods of our operating history, this conservative investing profile has served to reduce the impact of mark-to-market losses compared to an index. This was not the case in 2018—though it is worth noting that we invest with the intent to grow our clients' purchasing power over a long time horizon and spend no time fretting over an index's returns. We will return shortly to the concept of purchasing power and how we think about returns in a year such as 2018. First, though, a brief review of 2018 from a portfolio perspective.

We began the year with a portfolio we considered fairly valued—the result of a long bull market that has persisted since Q1 2009. The portfolio's discount to intrinsic value (the difference between the aggregate market value of the securities owned in the portfolio and the aggregate value of our internal estimates of what those securities

are worth) as 2018 began was at its lowest level in our operating history. The prospects of improving on this position were poor, as there were few, if any, securities in our investing universe that we didn't own that embodied all the qualities we look for in an investment. Further reflecting these conditions was our cash position: As 2018 opened, it was very close to the portfolio's general threshold of 15%.

The importance of the absence of a meaningful discount cannot be underestimated. As frequently discussed in previous communications, it is the portfolio's discount to intrinsic value that creates the dual benefits of value investing—namely, the ability to both generate significant return potential and manage risk. When questions arise about earnings power, political uncertainty or any other "headline" impact to equities prices, the existence of a significant discount to the value of a business is designed to protect against permanent capital losses.

Another important factor that impacted 2018 performance was the fact that roughly 15% of the portfolio was invested in banks (including securities classified in GICS capital markets industry), which separates the portfolio from the pre-financial crisis period in our operating history. Generally speaking, since the financial crisis, banks have significantly reduced the risk exposure of their assets, increased liquidity, eliminated the use of short-term funding tools and now carry significantly more long-term capital and equity relative to total assets. In short, we believe banks today, compared with other historical periods, represent safe and cheap securities. However, the market disagreed in 2018—which isn't terribly surprising, given the market's electronically driven beta influence over certain sectors, especially during periods of heightened downward volatility. On the other hand, and more importantly to our long-term return prospects, our estimates of intrinsic value for these institutions have barely budged—which means we believe there has been no fundamental loss in purchasing power for our shareholders on a look-through basis.

Let's unpack that last statement because it is critical to how we view a number of considerations related to 2018 and our portfolio's performance. First is the concept of purchasing power (and Mr. Graham's aforementioned definition of an investment operation). We aim to invest in businesses that on a micro basis preserve our investors' purchasing power over their long-term investing time horizon by sustaining and growing earnings power. Further, when we talk about earnings power on a *look-through* basis, we are referring to Warren Buffett's idea that shareholders don't benefit solely from earnings paid out as cash dividends, but they also benefit from earnings retained and reinvested by the business to generate future earnings. In his 2011 annual shareholder letter, Buffett described these ideas thusly:

The riskiness of an investment is *not* measured by beta (a Wall Street term encompassing volatility and often used in measuring risk) but rather by the probability—the *reasoned* probability—of that investment causing its owner a loss of purchasing-power over

his contemplated holding period. Assets can fluctuate greatly in price and not be risky as long as they are reasonably certain to deliver increased purchasing power over their holding period.

Putting these concepts together, then, when we think about something like our financial holdings' 2018 performance (and the portfolio's overall performance, for that matter), we believe that irrespective of the movement in the share price (mark-to-market loss), the long-term purchasing power of the money we've invested in those businesses is intact, considering not only today's earnings, but also those we believe they are likely to earn over our investing time horizon.

On a daily basis, the share prices of these businesses will obviously fluctuate—which, when down, represent a mark-to-market loss. However, that mark-to-market loss isn't necessarily related to the value of the underlying business itself. Rather, it is largely a short-term reflection of investors' sentiment—Graham's famous voting machine. As individual investors among millions (if not billions), our daily vote is obviously insufficient to remind investors of the longer-term intrinsic value of these high-quality businesses.

In addition to the banks, the other securities that had a meaningfully negative impact on the portfolio in 2018 were Baidu and Samsung.

Baidu is China's leading search engine akin to Google that is used throughout much of the rest of the world. Though there has been no weakness in Baidu's fundamentals, shares sold off in 2018 along with those of other large Chinese Internet companies. In our view, Baidu's shares have gone from cheap to very cheap. The company operates the leading search engine in China—where there is significant growth—and sits on excess assets and a net cash position. Baidu is very profitable, and Robin Li, the company's founder, has shown over decades that he can continue to grow the underlying value of this company. Despite the existence of each of the mitigating factors we identify in the securities we own and the absence of any significant issues impacting the business, the share price declined by 32%.

Samsung is the portfolio's largest position. Having performed very well in 2017, we knew going into 2018 that the fundamentals of the semiconductor industry were likely to deteriorate. However, the share-price increase in 2017 failed to reflect profit growth in 2017—and that continued to be the case through the first three quarters of 2018. Profits continued to improve, and cash continued to build on the balance sheet, yet the share price declined.

Of course, investment results are driven by future cash flows, rather than what has happened in the past or even what a company is earning currently. As with all the securities in the portfolio, we estimate normalized profits a few years out—and for Samsung, we deemed (and still believe today) the shares were undervalued heading into 2018. We knew the company's business would suffer through a short-term downturn. On the other hand, when we surveyed the landscape of undervalued companies, there were few others with such an outstanding leadership position, impressive profitability, high free-cash generation, improving corporate

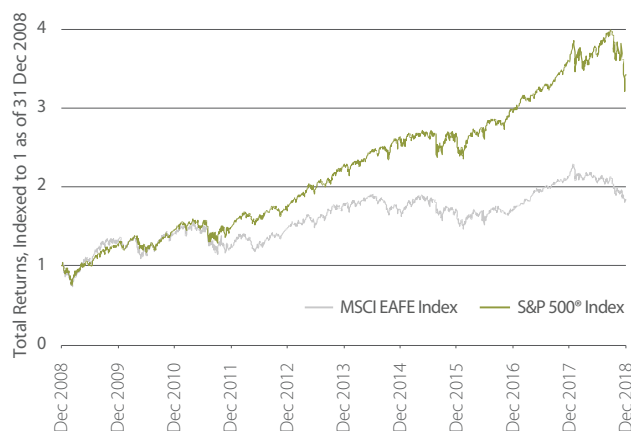
governance, significant net-cash balance sheet and low multiple on current and normalized earnings. Unfortunately (though not surprisingly), the stock market did not get excited about falling profits, and the share price declined 27%. Interestingly, as with the banks and Baidu, our estimate of intrinsic value has barely budged—preserving the long-term purchasing power of our clients.

Of course, there were other factors that negatively impacted the portfolio and a handful of securities that performed well. Positively and most importantly, 2018's volatility combined with the opportunity to deploy the portfolio's cash balance into new securities as well as existing holdings has reintroduced a significant margin of safety to the portfolio. As we enter 2019, we own a portfolio of strong businesses trading at discounts to their intrinsic values with the potential for significant revaluation (please see the appended client communication dated December 27, 2018, for further commentary on this topic).

US vs. Non-US Performance

We have never put ourselves forward as top-down, macroeconomic prognosticators, nor do we intend to start now. With that caveat, there are a couple of questions that we received from clients during the Q4 selloff that we believe are worthy of comment. One is the inescapable fact that we are nearing the end of a decade in which US stocks have markedly outperformed non-US—particularly the MSCI EAFE Index (Exhibit 1).

Exhibit 1: MSCI EAFE Index vs. S&P 500® Index (12/31/08-12/31/18)



Source: FactSet, MSCI EAFE Index returns are net, S&P 500® Index returns are gross. Past performance is not indicative of future results.

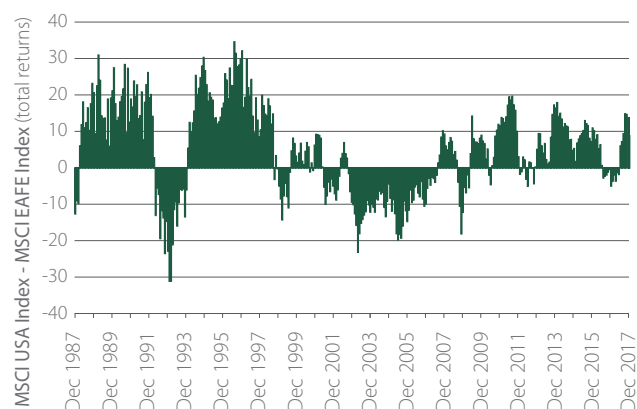
There are many explanations for this—the largest has to do with Europe, the largest regional constituent of the MSCI EAFE Index and the source of most liquid securities outside the US. In addition to the global financial crisis which immediately preceded the bull market, the euro zone went through several additional crises of its own, each prompting existential concerns about the viability of the currency bloc. On the heels of those crises was the UK's surprise decision to leave the EU. Though much of the turmoil seemed to have subsided

by 2017, the damage from a relative performance perspective was largely done. European markets have been flat over the last 10 years in euro terms. Barring a remarkable reversal of roles, this was just not meant to be Europe's decade.

Given the shape of Exhibit 1, it's unsurprising some investors are increasingly questioning the value of maintaining their non-US exposures. However, we would submit that such thinking is entirely too short-term focused, and investors who choose to act on it risk falling prey to recency bias.

When rationality prevails, we all know category outperformance doesn't signal future outperformance. On the contrary, regions tend to trade leadership roles periodically and with little predictable regularity. Exhibit 2 demonstrates this—showing the difference between US and non-US developed returns on a rolling monthly basis. It also highlights the benefits of investing outside the US: for diversification and a wider opportunity set.

Exhibit 2: US Minus Non-US Developed Stocks: Monthly Rolling Annual Returns, 1987-2017



Source: FactSet. Past performance is not indicative of future results.

We believe part of the US's recent outperformance can be attributed to a generally superior economic model which lends itself to a faster growing economy and higher return, higher growth businesses. It's a rare economy that can produce such technology behemoths as the FAANG stocks. Or some of the world's largest, most innovative biopharmaceutical companies. The US is the world's largest economy using a common language, a common political structure, relatively high corporate governance standards and a coordinated distribution system. Further, the US ceded much of its industrial base to lower cost parts of the world years ago, leaving a service-based economy. Technology- and service-oriented companies generally earn much higher returns than industrial and manufacturing businesses. Simply put, the combination of an advantaged economic structure, rock-solid rule of law and private property rights, clearly defined (if in some cases overly onerous) regulatory environment and as freely

functioning a capital market as the world knows lays an incomparable foundation for the US economy.

In contrast, many countries outside the US are far more varied in their commitments to fully open, free-functioning capital markets and economies. This is particularly true in emerging markets, in some of which the rule of law remains a fairly open question, let alone the basic tenets of capitalism and free markets. Within the developed markets, the complexities behind the European single market have created crises in places such as Greece and Italy, while radical monetary policy in Japan looks more like market manipulation than prudent central banking (more on that to come). It is precisely these issues that create opportunity. Despite significant differences from the US, there are similarly innovative, well-managed, high-quality businesses in non-US markets—though they are more challenging to identify to the casual investor, and they may not be appreciated in a period of turmoil.

We think this variety of factors supports a couple of different ideas: First, the importance of hiring a capable active manager with significant experience researching and managing a portfolio in non-US markets; and second, the important diversification benefits and return potential that non-US exposure can bring investors—particularly against a combined backdrop of a lengthy period of US-led growth plus recently heightened volatility.

Japan

Another common question from shareholders and clients involves Japan. Our earlier discussion of purchasing power and risk mitigation are particularly relevant when considering Japan, which represents some 25% of the MSCI EAFE Index but just over 1% of our portfolio as of December 31, 2018. It is notable that over the course of the period highlighted in Exhibit 1, the Japanese stock market compounded in USD terms at about 5.3%. Local currency returns were higher—7.4% per year.

Japan has long been an interesting country and stock market, both from an economic as well as an investing perspective. For many years, Japan's closed nature, poor corporate governance and highly conservative culture created a stock market chock full of statistically cheap securities with very low financial risk. Today, we believe much of the valuation discount has disappeared and macroeconomic factors represent risks that are too large to ignore.

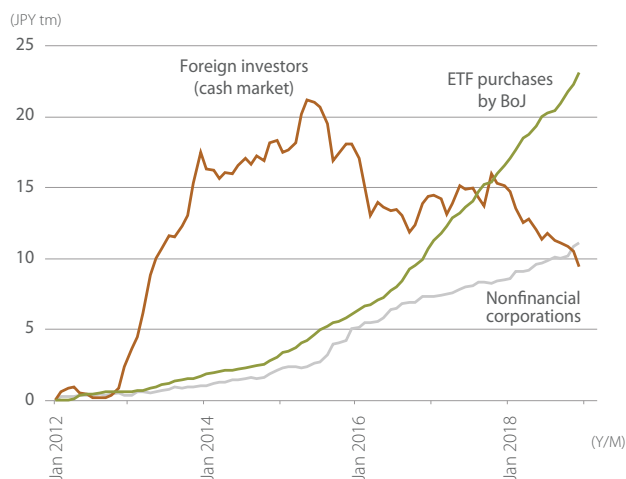
Following the financial crisis, the Japanese central bank began its asset-purchase program in yet another attempt to revive inflation. As of 2010, the central bank owned about 10% of all government debt. By the end of 2018, the central bank was closing in on 50% of all government debt. We would note that these efforts far exceeded (relative to GDP) what was done and what is being done in the United States and Europe. We would also note Japanese inflation has barely budged.

Putting aside the potential for significant negative side effects associated with expanding a monetary base and introducing moral

hazard to government budget deficits, there are some observable impacts of Japan’s monetary policy—including a weaker Japanese yen. By late 2014, the yen had devalued by more than 50%, powering earnings and share-price returns for Japan’s export-heavy stock market. Indeed, USD-denominated returns, as mentioned earlier, are well below yen-denominated returns.

But the BOJ did not stop at purchasing government debt: It also purchases stocks in the form of ETFs and real estate in the form of REITs. By the end of 2017, the central bank had purchased about \$150 billion’s worth of equities—or about 74% of Japanese ETFs—with a simple formula that **purchases equities on down days**. Given the concentration of these purchases among Japan’s largest equities, the market-clearing, or natural, pricing mechanisms have been sidelined. The central bank has now become one of the largest shareholders of most companies in Japan’s benchmark index, the Nikkei 225. Today, the BOJ remains one of the largest traders in the Japanese market (Exhibit 3).

Exhibit 3: Japanese Equity Trading Trends by Investor Category



Notes: Cumulative total of monthly net buying, indexed to January 2012; data for Tokyo and Nagoya markets.
Source: Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.

Along with ongoing debt-monetization efforts, this combination has resulted in what we find to be misleadingly inflated asset prices that are unsupported by any meaningful earnings growth. By way of comparison, as of December 31, 2018, the MSCI Japan Index’s long-term EPS growth rate expectation is -15%, versus 8% for the MSCI EAFE Index and 10% for the MSCI EM Index.

Against this backdrop, we have failed to find companies (with the occasional exception) that meet all of our criteria—notably, from a valuation standpoint. Considering the fact that those valuations are largely predicated on money the central bank is printing, we find ourselves questioning whether there is objective value in most Japanese businesses—which ultimately makes most of the companies domiciled there not worth the risk of potentially meaningful losses of

purchasing power over time. While it’s not typically in our DNA to make such broad, macro-oriented judgments, this is an instance in which we struggle to find a potential reward that matches the magnitude of the risk.

Conclusion

While we attempt to capitalize on share-price changes that may over- or undervalue the businesses in our portfolio, how the stock market treats those businesses over any given period (good or bad) rarely has much to do with their fundamentals—a comforting confirmation of the stock market’s near-term inefficiencies and a true indication of the value that active investing can add over time. Though we believe there is renewed reason for enthusiasm as we enter 2019, there is always reason for caution and concern. As Peter Bernstein once noted, “In making decisions under conditions of uncertainty, the consequences must dominate the probabilities.” And so we will continue to exercise the same investment discipline and conservative philosophy that we have always used in investing our clients’ (and our own) capital.

For more information: Visit www.artisanpartners.com

Investment Risks: 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. Value securities may underperform other asset types during a given period. These risks, among others, are further described in Artisan Partners Form ADV, which is available upon request.

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Artisan Non-U.S. Value Strategy

Quarterly Contribution to Return (%)

As of 31 December 2018

Top Contributors	Average Weight	Contribution to Return	Ending Weight
Telefonica Brasil SA	2.83	0.56	3.21
Bharti Infratel Ltd	1.07	0.06	1.29
Willis Towers Watson PLC	0.11	0.06	1.53
Novartis AG	3.21	0.01	2.89
Diageo PLC	1.06	0.01	1.16
Telefonaktiebolaget LM Ericsson	0.76	0.00	0.43
Ambev SA	0.02	0.00	0.21
KT&G Corp	0.28	0.00	0.30
Cash Holdings	9.29	0.00	2.32
Hyundai Motor Co	0.93	-0.01	1.26
Orkla ASA	0.43	-0.03	0.45
Akzo Nobel NV	0.52	-0.05	0.76
RELX PLC	3.63	-0.05	3.99
Pargesa Holding SA	0.61	-0.06	0.69
Nestle SA	2.17	-0.06	2.38
Sodexo SA	2.43	-0.06	2.61
GlaxoSmithKline PLC	1.80	-0.06	1.79
Vivendi SA	1.75	-0.08	1.97
IMI PLC	0.66	-0.09	0.91
Carlsberg A/S	0.81	-0.09	0.41
Aon PLC	1.98	-0.11	1.99
HCL Technologies Ltd	2.01	-0.14	2.25
Panalpina Welttransport Holding AG	2.10	-0.16	2.35

Bottom Contributors	Average Weight	Contribution to Return	Ending Weight
Baidu Inc	3.23	-1.11	3.32
Samsung Electronics Co Ltd	5.88	-0.97	6.09
UBS Group AG	3.86	-0.83	4.20
ABB Ltd	3.61	-0.73	4.01
ING Groep NV	3.65	-0.64	3.64
Tesco PLC	2.81	-0.64	2.87
Allergan PLC	1.66	-0.60	1.93
Imperial Oil Ltd	2.42	-0.55	2.18
Cie Financiere Richemont SA	2.35	-0.48	2.69
Yahoo Japan Corp	1.35	-0.48	1.26
Groupe Bruxelles Lambert SA	2.41	-0.41	2.47
Arch Capital Group Ltd	3.98	-0.40	4.17
Bankia SA	1.21	-0.38	1.34
LafargeHolcim Ltd	2.41	-0.38	2.57
Royal Bank of Scotland Group PLC	2.32	-0.35	2.42
Lloyds Banking Group PLC	2.34	-0.35	2.37
John Wood Group PLC	0.74	-0.30	0.74
NAVER Corp	1.83	-0.22	2.33
ISS A/S	0.97	-0.21	0.91
Medtronic PLC	2.88	-0.21	3.01
Compass Group PLC	4.37	-0.20	4.80
NXP Semiconductors NV	1.79	-0.20	1.95
TE Connectivity Ltd	1.48	-0.19	1.57

Source: Artisan Partners/FactSet. Performance is historical and is not a reliable indicator of future results. As of 31 Dec 2018. 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.



Artisan Non-U.S. Value Strategy

The light can at *any time* go from green to red without pausing at yellow.

Warren Buffett, 2017 shareholder letter

This quote sums up the stock market near the end of 2018. Sentiment has changed dramatically. At the beginning of the year, international markets were looked upon as a valuation opportunity. Risks were ignored coming off breathtaking returns in 2017. As 2018 concludes, international markets have become less interesting to pundits, and risks—rather than opportunities—have become the focus.

Over the last few years, we have consistently highlighted the fact that both the stock market and our own portfolio have been relatively unattractive. Today, on the back of persistent selling that at times has seemed almost mechanical, circumstances, and our own opinion, have changed dramatically.

Based on our earnings estimates, the portfolio’s valuation is inexpensive—as you can see from Exhibit 1. Non-financials trade at a pre-tax multiple of 9.0X and an after-tax P/E on normalized earnings of 9.5X. The portfolio’s holdings are financially strong, with non-financials aggregating \$649mn of net debt against \$9.1bn of market value. More than one-third of the portfolio’s non-financial securities have net-cash balance sheets. Financials, including European banks and Arch Capital in the property casualty insurance business, trade at 86% of year-end 2017 book value, with meaningful growth in that book value through the first nine months of 2018, and a normalized P/E of 7.6X earnings. Finally, the three holding companies we own trade at 72% of book value.

The return potential of the portfolio—measured by the difference between the portfolio’s market value and the portfolio’s estimated intrinsic value—is at one of the most attractive levels in our operating history.

Exhibit 1

Portfolio Statistics—As of 27 Dec 2018

	Market Value (millions)	Net Debt (millions)	EV/EBITA ¹	P/E ¹	P/B	P/NAV
Non-Financials Holdings	\$9,098	\$649	9.0X	9.5X	—	—
Financials Holdings	\$2,236	—	—	7.6X	0.86X	—
Holding Companies	\$636	—	—	—	—	0.72X

Source: Artisan Partners. ¹Based on the team’s estimates of normalized earnings. Portfolio subcategories determined by the investment team. Based on a representative account in the Artisan Non-U.S. Value Strategy.

Though these statistics say nothing about the stock-market’s short-term direction (the portfolio can always get cheaper), what we can say is that in our view, the portfolio holds strong businesses trading at a large margin of safety, combined with the potential for significant revaluation—a statement we are happy to make for the first time in many years.

We appreciate your continued support.

Investment Risks: 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. Value securities may underperform other asset types during a given period. These risks, among others, are further described in Artisan Partners Form ADV, which is available upon request.

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.

For the purpose of determining the portfolio's holdings, securities of the same issuer are aggregated to determine the weight in the Strategy. The discussion of portfolio holdings does not constitute a recommendation of any individual security. These holdings comprise the following percentages of a representative account within the Composite's total net assets as of 30 Sep 2018: Arch Capital Group Ltd 4.0%. Securities referenced may not represent all of the securities in the portfolio. If certain information is unavailable for a particular security Artisan Partners may use data from a related security to calculate portfolio characteristics. All information in this report is as of the date shown in the upper right-hand corner unless otherwise indicated and is subject to change without notice. Totals may not sum due to rounding.

This summary represents the views of the portfolio manager as of 27 Dec 2018. Those views and portfolio holdings are subject to change and Artisan Partners disclaims any obligation to advise investors of such changes. The discussion of portfolio holdings does not constitute a recommendation of any individual security.

Portfolio statistics are intended to provide a general view of the entire portfolio, or Index, at a certain point in time. Statistics are calculated using information obtained from various data sources. If information is unavailable for a particular security, Artisan Partners may exclude those securities when calculating portfolio statistics.

Net Debt reflects a company's financial leverage as measured by its net debt (total debt minus cash & cash equivalents.) **EV/EBITA** is a measure of the intrinsic value of a business. EV is calculated as the market capitalization of the company plus its long-term debt and other liabilities. EBITA is an approximate measure of a company's operating cash flow based on data from the company's income statement. It is calculated by looking at earnings before the deduction of interest expenses, taxes and amortization. **Price-to-Earnings Ratio (P/E)** measures how expensive a stock is. Earnings figures used for FY1 and FY2 are estimates for the current and next unreported fiscal years. **Price-to-Book Ratio (P/B)** is a valuation measure used to compare a stock's market value to its book value. **Normalized Earnings** are earnings that are adjusted for the cyclical ups and downs over a business cycle. **Margin of Safety**, a concept developed by Benjamin Graham, is the difference between the market price and the estimated intrinsic value of a business. A large margin of safety may help guard against permanent capital loss and improve the probability of capital appreciation. Margin of safety does not prevent market loss—all investments contain risk and may lose value. **Book Value** is the net asset value of a company, calculated by total shareholder equity divided by shares outstanding.

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