

Global Leaders Strategy



2022 ANNUAL INVESTMENT REVIEW | January 2023

The Global Leaders Strategy invests in a concentrated portfolio of market-leading companies from across the globe. We believe that companies that combine exceptional outcomes for their customers with strong leadership can generate high and sustainable returns on invested capital (RoIC) which can lead to outstanding shareholder returns.



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Dear Fellow Investors,

If we had to sum up 2022 in one word it would be valuation. War, inflation, recession, deglobalisation, decoupling, strikes, crypto-crash and energy (crisis) all featured but for us the overriding focus for 2022 was valuation. Our investment philosophy has not changed over time but as our investors know we always challenge what we do and believe there is room to continually improve our process and develop as investors. We have stuck to the same valuation framework since launch that uses a 10% annual return hurdle but with inflation rising we started to question once again if our hurdle was high enough. We have not made any meaningful changes (yet) despite many days of debate and analysis, it is an area we are watching closely to make sure we are being appropriately conservative and setting ourselves tough targets. We think the first half of 2022 was better than any CFA programme or MBA course on valuation. In *The Price of Time*¹ author Edward Chancellor describes the “compression of time” as the misuse of time discounting at too low a rate when interest rates are suppressed. It was one of the best books we read in 2022 and has many lessons for long-term investors. In the author’s view, most asset bubbles and subsequent financial crises are caused by interest rates rising after having previously been set too low. There are many disturbing parallels in today’s global economy.

Since day one of the Global Leaders strategy, we have looked for high-quality companies with superior customer outcomes that we believe are able to pass on prices and generate high levels of recurring revenue while requiring low financial leverage. We believe that by investing in these customer-centric companies and having their economics compound over long periods of time we can generate attractive returns for our investors.

For us, all business starts with the customer. Customer centric businesses typically look after all their constituents leading to a healthy and growing ecosystem. We believe the best businesses solve a problem for their customer in a unique way and create enormous societal value that rewards customers, employees, suppliers and ultimately shareholders. These are the businesses in which we want to invest

¹ The Price of Time: The Real Story of Interest by Edward Chancellor

Past performance is not indicative of future results. The portfolio information is based on a Brown Advisory Global Leaders representative account and is provided as Supplemental Information. Please see the end of the letter for important disclosures and a GIPS compliant presentation. Sectors are based on the Global Industry Classification Standard (GICS®) classification system. The information provided in this material is not intended to be and should not be considered to be a recommendation or suggestion to engage in or refrain from a particular course of action or to make or hold a particular investment or pursue a particular investment strategy, including whether or not to buy, sell, or hold any of the securities mentioned. It should not be assumed that investments in such securities have been or will be profitable. To the extent specific securities are mentioned, they have been selected by the author on an objective basis to illustrate views expressed in the commentary and do not represent all of the securities purchased, sold or recommended for advisory clients. Please see the end of the letter for important disclosures.

your savings (and ours) so that they can compound over time, ensuring your security in retirement and our opportunity to create value for you. We think the quality of the investments within the portfolio today is probably at its highest since launch back in early 2015.

We invested in five new companies during the year which was the most since 2018. These businesses included Dutch lithography equipment provider ASML, Otis the leading elevator company, Moody's credit rating agency, medical device provider Coloplast and lock maker Allegion. All these companies have market shares placing them in the top three in their field globally and fundamentally help their customers to achieve their goals. They are high (>20%) return on invested capital (RoIC) companies, have low financial leverage, and we believe they have Sustainable Business Advantages (SBA) differentiating them from rivals. We expect to be invested in them all for a very long time.

The main driver of our 2022 underperformance (-1.1% relative, net of fees, more later) was not being invested in the energy sector and the opportunity cost of not owning more of the defensive health care companies that outperformed the benchmark this year. We are attracted to high-quality health care investments as we believe that their non-deferrable revenues provide downside protection. Nonetheless, we were underweight health care as many otherwise attractive companies did not pass our valuation hurdle. We were excited when we got the opportunity to invest in Danish medical device manufacturer Coloplast in September, our first new health care company since 2019.

Our biggest gap by far was energy due to our strategy's lack of investment in the sector—this was a drag of -1.8% which was greater than our -1.1% relative underperformance. The energy sector returned 32.6%² in 2022 which positioned it not only as the best relative performer in the benchmark but also as the only sector with absolute positive performance. Whilst we enjoyed reading the rollicking tales from the energy and commodities industries in our Book Club title called *The World for Sale*³, unfortunately it probably only reinforced our caution when investing in these sectors. After nearly eight years we are yet to find an investment in the energy sector that fulfils our criteria, particularly on superior customer outcome, durable 20% RoIC and sustainable business advantage. We wrote about the self-correcting nature of prices in energy and commodities in our August 2022 investment letter ([link here](#)). It is hard to see how a barrel of oil or tonne of coal can offer a superior customer outcome (nor any commodity by definition) with a non-differentiated end product where the moats are narrow, long before we start looking for a sustainable business advantage or durable 20% RoIC. We have looked at a number of potential opportunities especially in those providing services to the sector or intellectual property but nothing yet has passed all our tests.

This year has once again reminded us that share price volatility can throw up interesting long-term opportunities and throughout 2022 we found numerous companies passing our tough valuation test for the first time in years. We define risk as the permanent destruction of our clients' capital which for us primarily comes from either competitive disruption or overpaying for a great business. We are thankful that our investment process, firm's ownership and most importantly the trust of our clients allows us to focus on long-term opportunities in any market environment. We enjoy our Book Club and a number of titles we have read this year are noted throughout⁴. If you have any suggestions please send them in—

² The energy sector returned 32.6% in 2022 as measured by the energy sector within the MSCI ACWI Index, sourced from FactSet.

³ *The World for Sale: Money, Power and the Traders Who Barter the Earth's Resources* by Javier Blas and Jack Farchy

⁴ Though not all of them are from our Book Club!

one interesting book below was an engaged client’s recommendation. In the pages that follow below, we detail our performance and many of our individual investments including companies that helped and hurt our performance, and those that we have bought and sold in 2022. Finally, thank you for being invested alongside us in Global Leaders, we look forward to reporting back with more progress throughout 2023.

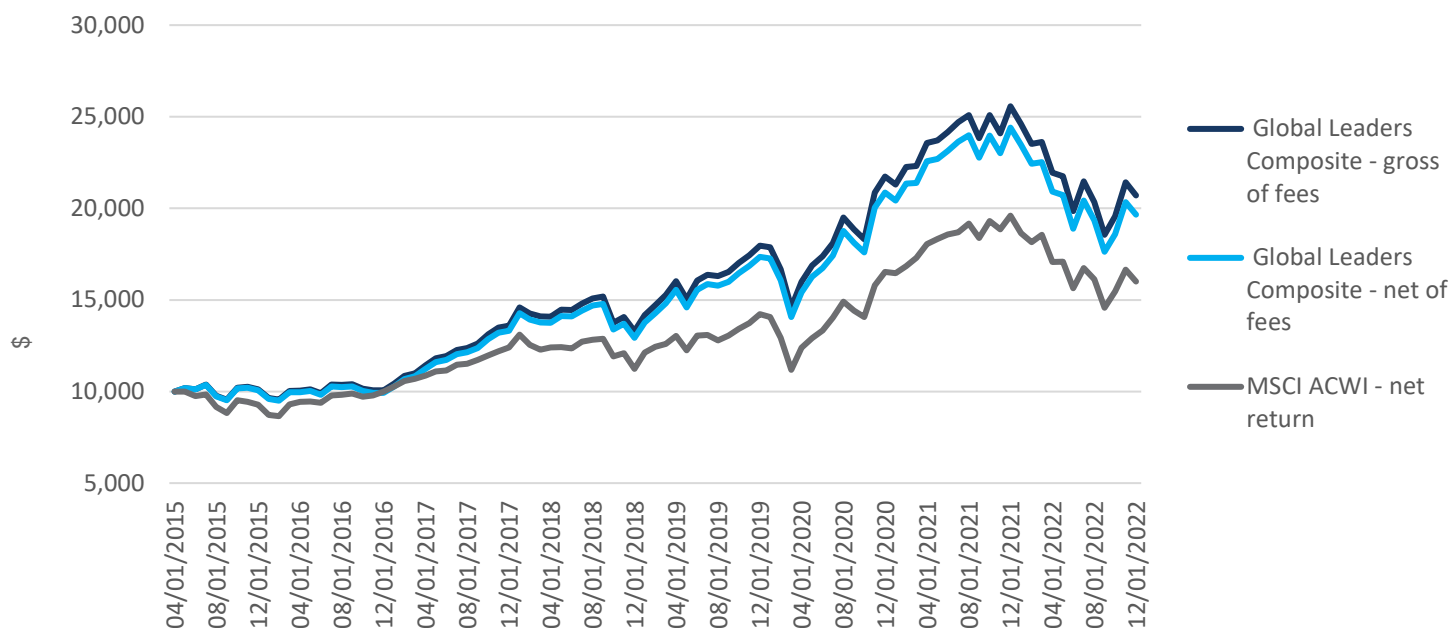
Mick, Bertie and the Global Leaders Team

Performance in 2022

- The Global Leaders Strategy Composite (net of fees) was down -19.5% in 2022, mildly underperforming the benchmark MSCI All Country World Index (net return) of -18.4%.
- The Strategy generated a 17.0% net of fees return in 2021, 20.2% in 2020 and 34.2% in 2019. This compares to the benchmark returns of 18.4%, 16.0% and 26.5% respectively.
- Since inception in May 2015, Global Leaders has compounded at 9.2% absolute return per annum (net of fees) compared to 6.3% for the benchmark, and doubled investors’ money over that period (see chart below).
- This translates to 289 basis points (bps) per annum (net of fees) relative outperformance since inception.

Cumulative Performance Summary: Growth of \$10,000

Global Leaders Composite vs. MSCI ACWI net return from 04/30/2015 to 12/31/2022



Source: Factset. Past performance is not indicative of future results and you may not get back the amount invested. The composite performance shown above reflects the Global Leaders Composite, managed by Brown Advisory Institutional. Brown Advisory Institutional is a GIPS Compliant firm and is a division of Brown Advisory LLC. Please see the end of this letter for important disclosures and a GIPS compliant presentation.

Past performance is not indicative of future results. The portfolio information is based on a Brown Advisory Global Leaders representative account and is provided as Supplemental Information. Please see the end of the letter for important disclosures and a GIPS compliant presentation. Sectors are based on the Global Industry Classification Standard (GICS®) classification system. The information provided in this material is not intended to be and should not be considered to be a recommendation or suggestion to engage in or refrain from a particular course of action or to make or hold a particular investment or pursue a particular investment strategy, including whether or not to buy, sell, or hold any of the securities mentioned. It should not be assumed that investments in such securities have been or will be profitable. To the extent specific securities are mentioned, they have been selected by the author on an objective basis to illustrate views expressed in the commentary and do not represent all of the securities purchased, sold or recommended for advisory clients. Please see the end of the letter for important disclosures.

During 2022, the Global Leaders composite net of fees was down -19.5% in absolute U.S. Dollar terms and we mildly underperformed our benchmark by -1.1% over the twelve months. Given the weakness of U.K. Sterling vs. the Dollar, it is worth noting that in Sterling terms, the strategy was down only -9.2%⁵ on a net of fees basis. In truth we don't worry too much about any index and think in absolute dollars—you cannot spend relative returns but that extra dollar makes all the difference come retirement. We think our strategy of finding companies that do something special for their customers and deliver high return on capital for shareholders means we have great quality within the portfolio. Since inception, the Global Leaders strategy has delivered +9.2% annualised absolute returns net of fees including 2022's drawdown which compares to a 6.3% return from the MSCI All Country World Index benchmark. This is in line with our goal of 10% per annum returns embedded in our discount rate which will double investor's money every seven years.

One metric we look at each year is our hit rate, both absolute (how many of our investments went up) and relative (how many outperformed the benchmark). We believe this is a great measure of our bottom-up ability to identify good investments that can help drive outperformance over time. In 2022 only 28% of our investments went up in absolute terms but against a benchmark down nearly -20% this doesn't look so bad. On a relative basis, 56% of our investments outperformed the benchmark which is just under the strategy's approximately 61% relative hit rate since inception. The further we are from 50% the more likely our chances to outperform over time and anything over 60% is a top decile hit rate. Our analysts have delivered 62% absolute and 61% relative hit rate since we launched and we believe they are doing a terrific job of finding great companies to invest in.⁶

Another way to understand how value is being added is to separate returns into alpha from individual investment selection vs. capital allocation across sectors, say being underweight energy in 2022. We are bottom-up stock pickers and we expect that the majority of our returns will come from identifying attractive companies and investing in them for a long time. Since inception, the bulk of outperformance has come from stock selection and this contributed +371bps⁷ in 2022 too, as you might expect with a 61% hit rate. Since inception, sector allocation has been positive but this was not the case last year. The biggest drag in 2022 was a lack of investment in the energy sector which was up 32.6% costing us -175bps. Our allocation to energy since inception is slightly positive despite last year's drag. We look globally in all countries and across all sectors for companies that pass our tests but we will never buy a company just to fill a sector or factor bucket. We are concentrated and want our best ideas in the strategy. Interestingly our overweight to the poorly performing technology sector cost -219bps but this was more than offset by individual company selection adding +239bps. Health care was also an allocation drag of -64bps as discussed above. Stock selection in financials (+276bps) and consumer discretionary (+135bps) were the other two big contributors for the year.

⁵ Net performance is based on a U.K. Sterling denominated Global Leaders representative account as of 12/31/2022 and is provided as Supplementary Information to the composite performance.

⁶ Source: Hit rates are based on Brown Advisory calculations as of 12/31/2022.

⁷ Contribution data included in this paragraph is sourced from Factset as of 12/31/2022.

Top Five Winners

Most of our top five winners in 2022 came from investments within the financials sector which benefitted from rising interest rates and more volatile markets. We have typically been overweight the financials sector since launch as we see some really interesting value in companies that provide often unique services to their customers. Our financial investments include: micro-lending in Indonesia (PT Bank Rakyat), life insurance across Asia (AIA Group), Brazilian and Germany equity and futures exchanges (B3 and Deutsche Boerse), global credit ratings (Moody's), U.S. wealth management (Charles Schwab), Indian retail banking (HDFC) and global payment networks (Visa and Mastercard). Whilst disparate end markets and services, what they share is that all these investments provide a critical piece of financial infrastructure to their clients—often based on proprietary data—which helps improve their clients' daily lives. These are the “win-win” investments we look for and the financials sector has been our second-best long-term contributor to performance after technology.

There is a proposal within the S&P 500® Index to switch the payment networks Visa and Mastercard from the technology sector to financials. We agree! They make their money clipping a toll on each financial payment over their platform. If we apply this definitional change to our strategy then historical attribution would show financials as our best sector since inception. With high willingness-to-pay and nominal pass through of inflation due to a take-rate percentage per transaction business model, Visa and Mastercard are two of our top five investments. We wrote about them last year in the 2021 Annual review ([link here](#)) and continue to see exceptional long-term value in both.

TJX Companies⁸

In early 2020 when COVID-19 first shutdown Europe, we were somewhat caught out that TJX Companies (owners of TJ Maxx in the U.S. and TK Maxx in the U.K.) did not outperform in a downturn and discussed this in our 2020 Annual Review ([link here](#)). TJX's model has always benefitted from imperfect supply-chains and never more so than in 2022 when retailers—having over-ordered to compensate for logistics difficulties in 2021—saw a demand downturn and significant excess inventory resulting in TJX having ample high-quality branded inventory at bargain prices. TJX is one of the “cyclical share winners” we noted in our August 2022 letter ([link here](#)) that win incremental share—particularly in downturns—and try to retain most of these gains as demand returns during the next up-cycle. TJX's off-price value is most evident when money is tight and inflation exacerbates their value gap to rivals. We are currently seeing a more “normal” economic downturn and the strength of the off-price model is on display with asset turns rising and operating margins expanding at TJX as customers look for bargains amongst the “treasure hunt” format on offer. Many customers never go back to paying full price leaving TJX with long-term share gains. We increased our investment in TJX during 2022.

⁸ Information in this section is sourced from TJX Companies company reports and Brown Advisory estimates.

*Charles Schwab*⁹

We have been invested in Charles Schwab (Schwab) since the launch of Global Leaders in 2015. Over the years, Schwab has been in both the top and bottom 5 contributors on 12-month periods, nonetheless it has compounded nicely over time and is one of our best financials contributors to performance over five years. We believe Schwab delivers a terrific outcome to its customers by opening up the world of investments to clients in a relatively inexpensive, easy way. In his latest book “*Invested*”¹⁰, founder Charles Schwab lays out the strategy of creating loyalty through providing unmatched value for customers. What started as a “discount brokerage” is today one of the largest wealth managers in the U.S. with the broadest and least expensive range of products including ETFs, mutual funds, stocks, bonds etc. Schwab tracks their client promoter scores (equivalent to a Net Promoter Score) and these remain healthily north of 60%. Their meticulous use of scale to drive Expenses on Clients Assets down to industry leading 11bps means they can share the benefits of scale with clients through lower costs than rivals yet still produce approximately 50% operating margins. It is a “scale economies shared” business model where customers, the company and shareholders can all win. Schwab management calls it a virtuous circle and it most certainly is—in fact it sums up our investment strategy succinctly.

We had a meeting with long-time CFO Pete Crawford in November 2022 and our whole discussion centred on how to bring even more investing and financial opportunities to clients and to Schwab. One risk that can be difficult to calibrate in banks is the health of the credit or lending book—will those loans get repaid? Or is there a risk of default and loss? Charles Schwab doesn’t take meaningful credit risk as total loans of \$40bn are a small (less than 7% of balance sheet assets) part of their operation. This is a potential growth opportunity as some clients would happily borrow using their investment portfolios as security. Opportunities for ongoing share gains and new products remain, meanwhile the merger with TD Ameritrade is delivering new growth and cost saving avenues. Distribution fees for fund managers on platforms is industry standard at rivals but only in its infancy at Schwab and we believe this has the possibility to create meaningful value.

*Deutsche Boerse*¹¹

Deutsche Boerse is another long-term investment which became a top contributor in 2022 after we did a drawdown review in January and added more. Deutsche Boerse provides some the most critical financial plumbing in Europe. It operates the Eurex futures and derivatives exchange—a vertically integrated trading venue providing liquidity in futures and derivatives on interest rates, currencies and equities—as well as Clearstream which is one of two dominant central security depositories (CSDs) in Europe. It is in times of high volatility and more normalised cost of money customers want to hedge risk and Deutsche Boerse enables them to do this with limited counterparty risk (i.e., they will be hedged when they need it most with a guarantee of payment). Deutsche Boerse’s derivatives and interest rate volumes picked-up at Eurex which provided cyclical tailwinds while the Clearstream custody assets benefited from rising interest rates.

⁹ Information in this section is sourced from Charles Schwab company reports and Brown Advisory estimates.

¹⁰ *Invested: Changing Forever the Way Americans Invest* by Charles Schwab

¹¹ Information in this section is sourced from Deutsche Boerse company reports and Brown Advisory estimates.

For over ten years, Deutsche Boerse has run the European Energy Exchange (EEX) which has enabled power producers to hedge their electricity output. This helps enable customers to plan long-term investments by locking in future rates. Without this ability to hedge, long-term investment and planning is difficult and subject to randomness. EEX saw volumes on its power exchange double in 2022 as the war in Europe and subsequent commodity price volatility meant a lot more people wanted to hedge their risk via a regulated exchange and clearinghouse. Deutsche Boerse solved a problem for many clients right when they were most concerned—a great customer outcome from a ten-year investment.

B3 – Brazil, Bolsa, Balcano¹²

We invested in B3 during 2021 after it had fallen approximately -50% in the first half of the year. It was one of our worst investments in 2021 and became one of our top contributors in 2022. This feature of jumping from top to bottom and vice versa across years is common within Global Leaders but it is the long-term cumulative performance that ultimately matters. B3 is another piece of unique financial infrastructure, this time in Brazil. Similar to Deutsche Boerse, B3's products and services really stand out in uncertain times. Brazil is no stranger to inflation and B3's products have a counter-cyclical nature to them. As with a number of our investments in the financials sector we expect them to have a defensive nature in our portfolio and 2022 proved this to be true.

B3 was established through the mergers of the Sao Paulo Stock Exchange, the Brazilian Mercantile and Futures exchange and with Cetip, Latin America's largest central depository, to form Brazil's leading exchange that operates a vertically integrated monopoly in trading of cash, equities, fixed income and listed derivatives. B3 has high barriers to entry in the form of powerful network effects and switching costs combined with scale which drive strong cash flow generation and high incremental RoIC. It benefits from a number of secular growth trends such as the deepening of local capital markets, increased domestic investor participation as well as new products such as OTC instruments and data analytics. Despite its prominence as a stock exchange, the majority of revenues are derived from more stable and recurring post-trading activities such as custody. We continue to see a double-digit internal rate of return (IRR) at B3 even when applying a 15% weighted average cost of capital (WACC) to address country and currency risk in the Brazilian market for U.S. dollar investors.

AIA Group¹³

We have been invested in AIA since the inception of Global Leaders. Our long-term view has not changed significantly despite the interruption to development from COVID-19. As Asia and specifically China removes the last of its sometimes draconian COVID-containment measures since late November 2022, we see renewed opportunity for growth at AIA. The business has progressed during the past three years as a result of strategic objectives on business digitisation, continued investment into the Premier Agency sales model, and expansion within mainland China through new provincial license approvals.

¹² Information in this section is sourced from B3 company reports and Brown Advisory estimates.

¹³ Information in this section is sourced from AIA Group company reports and Brown Advisory estimates.

In China alone, we believe AIA still has meaningful growth opportunities. They are solving an important societal need and welcomed by the government. As noted last year China is only 65% urbanised and has 50 urban areas with over two million people out of 260 built-up urban areas globally. For reference the U.S. has 26 urban areas over 2 million but is 82% urbanised (see: <http://www.demographia.com/db-worldua.pdf>). AIA has been gaining approval to start operations in new provinces at a rate of one to two each year since just before COVID-19 and currently has approval for operations in eight out of 32 provinces and municipalities, up from four when we first invested. Importantly, AIA is not even fully penetrated in the places in which they do operate today. It takes time to scale as AIA runs a high-quality agent strategy targeting the relatively affluent segment of the population, so it typically takes roughly two years to start generating positive value from new business.

Developing nations across Asia have limited safety nets and underfunded social security systems, AIA's products provides financial safety for families in the event that an unfortunate accident results in loss of primary income. AIA's saving products also help long-term financial planning for a future "rainy day" or education investment. Historically AIA often provided the first financial product to many families and it was a life changing customer outcome. As middle classes expand in China and other Asian economies, life insurance is sold to more wealthy customers who want expanded coverage but the same guaranteed protection from a trusted partner.

Relative Attribution – Bottom Five

Four of the bottom five performers in 2022 were top five in 2020 and three were also top five in 2021 (Microsoft, Marvell, Alphabet). Given our five plus year holding period, twelve months is a short space of time to measure any investment, yet a lot can change. All these investments have been long-term holdings (range four to seven years) and our view on a five-year basis has only changed on one (Tencent). We have undertaken drawdown reviews on three of these investments in 2022 and added to two of them (TSMC, Marvell) and exited Tencent.

*Microsoft Corporation*¹⁴

After three years in a row as our top alpha contributor, Microsoft was the biggest detractor in 2022. Microsoft Cloud now makes up 50% of revenues growing healthy double digits powered by the Azure offering. Azure has significantly closed the gap to cloud leader Amazon Web Services technically, grew 40+% in fiscal 2022, is highly profitable and essential to its enterprise customers. Azure is now a "staple for the enterprise" alongside other services including Office 365, Teams, OneDrive, Dynamics, Windows OS and Windows Server as these products create unique value for customers. Whilst we see slowing cloud growth in Fiscal 2023 as customers rationalise spend and boost efficiency of operations, our base case remains on track on a five-year view and we continue to see double digit IRR potential, in fact, our bear case is starting to approach double-digit IRR. Recently, Microsoft has seen the Federal Trade Commission (FTC) voice opposition to its pending \$69bn acquisition of gaming company Activision Blizzard. This is a "nice to have" community but not essential for our investment case.

¹⁴ Information in this section is sourced from Microsoft company reports and Brown Advisory estimates.

*Marvell Technology*¹⁵

Marvell was a top contributor in 2021, it was up 45% in the fourth quarter of 2021 alone and we took some capital away in December 2021. On a three- and five-year basis it is one of our best investments despite being a drag and one of the worst in 2022. We have a rule that if any investment underperforms by either -20% from where we first invested or by -20% relative to our benchmark on a 12-month basis we have to do a “drawdown review”. The outcome of this is to either buy more or exit the investment—it is either a bargain moment or we are wrong—in either case it is time to act. Late in 2022 we undertook a drawdown review on Marvell after meaningful underperformance in the year and we decided to add more. Nothing is broken within our investment thesis and we spelt out parts of this in our 2020 and 2021 annual reviews. We also discussed Marvell’s inorganic capital allocation strategy (read: buying other companies) in our investment letter from August 2022 ([link here](#)). We believe it remains a very interesting company with a double-digit five-year IRR and we are happy to invest more when the share price has been weak.

*Taiwan Semiconductor Manufacturing Company (TSMC)*¹⁶

We have written many times on TSMC, most recently in our August 2022 letter on capital cycle ([link here](#)). Mick did a presentation at the London Value Investors Conference in June 2022 detailing why we prefer TSMC to Intel over the next five years. We undertook a drawdown review in 2022 and we added more in October as fear around an imminent Chinese invasion of Taiwan was rife but we estimate the near-term probability is low and valuation multiples were at twenty-year lows. We are no geopolitical experts and an invasion scares us too—on a number of levels. About the last person we would have expected to see investing into TSMC is folksy investment hero Warren Buffett. Nonetheless in November he took a \$4bn stake right when fear of an invasion of Taiwan was at its peak. Calibrating geopolitical risk is incredibly difficult (if not completely impossible for bottom-up investors like us) and we are therefore cautious with our investment size but optimistic on potential investment returns. It has delivered cashflow materially above our base case estimate over the past seven years and on a trailing five-year view TSMC has been one of our top three investments despite the fall in 2022. We see double-digit IRR over the next five years as well.

Another great book we read in 2022 was *Chip War* by Chris Miller¹⁷ and it is a timely look at the development of the semiconductor industry and why we find ourselves in today’s geopolitical predicament. We thoroughly recommend it as one of the most accessible and insightful books on the semiconductor industry which we have read.

¹⁵ Information in this section is sourced from Marvell Technology company reports and Brown Advisory estimates.

¹⁶ Information in this section is sourced from Taiwan Semiconductor company reports and Brown Advisory estimates.

¹⁷ *Chip War: The Fight for the World’s Most Critical Technology* by Chris Miller

*Alphabet*¹⁸

“Dr Google” has some of the best moats/barriers to entry/competitive advantages in our portfolio. One book we read recently at the suggestion of a client took a healthily sceptical view on network effects and the “Platform Delusion”¹⁹ yet it concurred that Google Search was a unique online business. The author Jonathan Knee is a professor at Columbia Business School and his analysis led him to believe that scale and network effects are often conflated. We agree! We regularly debate the disentanglement of these two competitive advantages—they sometimes combine in a very powerful way—but often it is old school scale disguised as a network effect. In Google’s case we believe they have both, they are self-reinforcing and it is hard to beat!

Nothing defines a customer outcome better than daily use and Alphabet has many products which fit this bill. At just under 93% market share of global search, Google remains invaluable to clients—if you really want to test Google’s value try going for a week without Google Search, Maps, Gmail, Docs, Chrome web-browser, Android OS, Translate or YouTube—it is not impossible but certainly difficult!

Whilst advertising budgets are naturally cyclical, the return on investment from performance advertising spend often goes up in an economic downturn. Each incremental customer becomes more valuable, not less. We believe Alphabet delivers a great outcome to advertisers despite the cycles within their budgets and is taking share of ad dollars over time. One risk comes from regulation with a number of investigations underway globally. In a worst-case scenario, some outcomes could be detrimental to our future returns but most suggestions (e.g., break-up) could actually release meaningful hidden value. The other risk is technology obsolescence and the release of ChatGPT in late 2022 was a reminder that transformational shifts in technology irregularly occur (as Meta has discovered with the rise of TikTok) and competition is just one click away. Today ChatGPT is experimental and in order to challenge Google’s advertising business would need to build a two-sided network supported by an ad-based revenue model. This is not on the radar (yet) although Microsoft may try. Our base case remains healthily double-digit IRR over the next five years and Alphabet is looking increasingly attractive as a reasonable bear case starts to approach 10% IRR too.

*Tencent Holdings (sold)*²⁰

Tencent has been a disappointing investment for us and cost us significant alpha. We are no longer invested. We believe we timed our entry into the investment well but had multiple opportunities to exit with smaller losses during earlier drawdown reviews. We do an “After Action Review” six months after exit in order to strengthen our investment process and reassess our actions in a less emotionally charged atmosphere. There are a number of lessons to learn here and our review is forthcoming.

When we categorise long-term risks to each of our investments we bucket them into demand, supply-side or regulation. Supply-side is typically our biggest risk as it means someone is stealing the customer and

¹⁸ Information in this section is sourced from Alphabet company reports and Brown Advisory estimates.

¹⁹ *The Platform Delusion: Who Wins and Who Loses in the Age of Tech Titans* by Jonathan A. Knee

²⁰ Information in this section is sourced from Tencent company reports and Brown Advisory estimates.

can result in terminal business decline. The hardest to calibrate is regulatory risk as the winds can change or unexpected outcomes emerge. Tencent has consistently been most at risk from regulation, which in China is done behind closed doors. We read a book in 2022 called *Influence Empire* by Lulu Chen²¹ a Bloomberg journalist looking at the history of Tencent and the increasing meddling of the Chinese Communist Party into the company. It makes for sombre reading. An unusual risk is misappropriation of one's technology for nefarious or non-economic end use – this has become inescapable under President Xi's consolidation of power in China and made us question our environmental, social, and governance (ESG) thesis leading to ultimate exit. Tencent remains a critical part of the Chinese technology ecosystem and key to a number of government initiatives, such as digitisation of government technology infrastructure and development of the domestic semiconductor industry. However, commercial freedom is increasingly subsumed to government mandates such as diverting shareholder dividends to “common prosperity” funds (wait, isn't that the government's job? what are the taxes for?). Sometimes calibration becomes too hard and we believe it is best to reinvest elsewhere.

Additions and Deletions in 2022

*Allegion (added)*²²

Allegion is the U.S. leader of mechanical and electronic security products with a number two position globally. Allegion was spun-out of Ingersoll Rand in 2013 and it's thirty-two brands including Schlage in the U.S. stand for superior security and quality. The company's core strength lies in the non-residential markets of education and healthcare and approximately 50% of revenue is derived from aftermarket activities. Allegion has demonstrated strong pricing power in 2022 and has a consistently high (>20%) RoIC. The ongoing mix shift to higher priced electro-mechanical lock systems—where Allegion is a leader—supports ongoing share gains in the U.S. We believe Allegion's newer products have clear environmental benefits, such as greater energy efficiency from electronic access systems in modern buildings, and we expect these to become more material over time. We bought Allegion in January at a projected 12% five-year IRR.

*ASML (added)*²³

ASML is the world's leading supplier of lithography machines—a critical step to manufacturing semiconductors. Through decades of investment into research and development, ASML has become the only company able to make cutting edge extreme ultraviolet lithography (EUV) tools needed for production of the most advanced semiconductors. These are arguably the most complicated machines humankind has ever produced. Lithography has for decades been the most critical part of the semiconductor manufacturing process as it's responsible for patterning the finest details of a chip design onto the silicon wafer. ASML's EUV lithography machines enable chip makers to economically

²¹ *Influence Empire: The Story of Tencent and China's Tech Ambition* by Lulu Chen

²² Information in this section is sourced from Allegion company reports and Brown Advisory estimates.

²³ Information in this section is sourced from ASML company reports and Brown Advisory estimates.

manufacture the next generation of chips that deliver high performance and energy efficiency while dramatically reducing manufacturing complexity and wastage of raw materials. ASML's technology leadership make its machines essential to the leading global semiconductor producers such as TSMC, Intel and Samsung—their factories cannot function without ASML's tools.²⁴ We believe the company is well positioned to benefit from the continuation of Moore's law in addition to the larger digitisation trends in the global economy. When we invested we believed we could see a 75% probability of getting our base case 5-year double-digit internal rate of return (IRR).

*Moody's Corporation (added)*²⁵

Moody's was one of our original investments when we launched Global Leaders in 2015 and had been waiting patiently on our ready-to-buy list since we sold in 2017 based on valuation. We are thrilled to have been given the opportunity to re-invest! We count our decision to exit Moody's in 2017 as "a lesson learnt" that high-quality compounders can periodically become temporarily overvalued and should not always be sold purely on short-term valuation. We were overly focused on short-term bond issuance trends but are now comfortable that issuance is mean reverting due to average five-year tenure of debt outstanding. Moody's has evolved from predominantly relying on its credit rating business (Moody's Investor Services) to a meaningful contribution from Moody's Analytics, its data and analytics business. We expect Moody's Analytics with fast growing—typically subscription—products in compliance and ESG to become a larger value driver and increase the mix of recurring revenue.

*Otis (bought) and Schindler (sold)*²⁶

In the second quarter 2022 we invested in the global elevator and escalator (E&E) company Otis. We funded this position by selling Otis' peer, Schindler, an investment that we had in the portfolio since 2016. Otis is one of the global leaders in the E&E sector and was only recently (2020) spun out of United Technology and publicly listed. We believe this is an attractive industry with a strong, recurring service business, regulation driving installation and servicing frequency growth. Otis has the largest installed elevator base among peers which drives its higher margin profile from route density, a key characteristic for service profitability. Otis is the second biggest operator in China, an E&E growth market. Lately China has been a short-term headwind which created an attractive entry point to this investment. Schindler has shown less progress in closing its margin gap to peers than we anticipated which was a key part of our investment thesis. When combined with a change in management and a closing valuation gap, we decided to switch the position into Otis. We believe that this switch is an upgrade to a higher quality company within the sector and it became available to us at an attractive double-digit five-year base case internal rate of return (IRR).

²⁴ *Chip War: The Fight for the World's Most Critical Technology* by Chris Miller

²⁵ Information in this section is sourced from Moody's company reports and Brown Advisory estimates.

²⁶ Information in this section is sourced from Otis and Schindler company reports and Brown Advisory estimates.

*Coloplast (added)*²⁷

Coloplast had been on our ready-to-buy list for over five years and in September it finally passed our valuation test on what we believe are temporary issues so we pounced. Coloplast is a global leader in developing products and services that make life better for people with intimate medical conditions in ostomy, continence care, urology and wound care. Coloplast's founder Aage Louis-Hansen and his wife developed the first ostomy bag in the 1950s and the company is an innovation leader today. It has a dominant market position for 75% of its product portfolio. Within its core Chronic Care division (Ostomy and Continence Care businesses) it benefits from strong moats of switching cost, intellectual property, network effect and scale. Their products help patients with invasive chronic conditions and a need for treatment over multiple decades to lead normal lives. Switching to an inferior product with lower comfort or higher risk of failure could materially impact well-being and therefore creates high levels of loyalty from customers. Coloplast's end market growth is driven by ageing populations, new patients and increased access to health care. By offering products that strive to improve clinical outcomes, increase patient satisfaction and simplify care, we believe that Coloplast's products can sustain meaningful long-term growth.

Ecolab (sold)

We had held Ecolab in the portfolio since the inception of the strategy and while we continue to like Ecolab's business with a differentiated service model and global scale, we weighed the defensiveness of the asset against its valuation as well as other competing investment opportunities. We exited Ecolab to fund our purchase of Allegion in the first quarter 2022.

*Electronic Arts (sold)*²⁸

We invested in video games publisher Electronic Arts (EA) back in 2017. The moats around the live services offering in EA's core sports franchise were as strong as ever and the sports business had delivered cashflow in-line with our original base case expectations. However, future cashflows increasingly relied upon mobile games, microtransactions or subscriptions, all of which have struggled at EA historically. Mobile gaming underperformed our original thesis and after multiple acquisitions in quick succession, it became material to the future success of the business. Mobile gaming has a notably wider distribution of probable outcomes than the core sports annuity-like franchises. There were a number of lessons we took away from our After Action Review, particularly on trust in management. Ultimately, we decided to sell EA in order to fund the new addition of Moody's Corporation.

Lastly – Thanks!

For anyone who has made it this far, we thank you! It is difficult to know how much depth, detail and numbers to use to describe each investment case so we try to keep this widely accessible. It's also hard

²⁷ Information in this section is sourced from Coloplast company reports and Brown Advisory estimates.

²⁸ Information in this section is sourced from Electronic Arts company reports and Brown Advisory estimates.

to calibrate how many different investment decisions to detail—what about all those top-ups and trims? Or errors of omission? Or our decisions to not do something either—there were plenty of these in 2022! This review is hopefully a reasonably short and accessible guide to the outcomes from our investment process in 2022 and a chance to highlight a number of our key steps and fundamental beliefs. We wish you all the best on your investment journey in 2023 and look forward to keeping you updated on ours as the year progresses.

Past performance is not indicative of future results. The portfolio information is based on a Brown Advisory Global Leaders representative account and is provided as Supplemental Information. Please see the end of the letter for important disclosures and a GIPS compliant presentation. Sectors are based on the Global Industry Classification Standard (GICS®) classification system. The information provided in this material is not intended to be and should not be considered to be a recommendation or suggestion to engage in or refrain from a particular course of action or to make or hold a particular investment or pursue a particular investment strategy, including whether or not to buy, sell, or hold any of the securities mentioned. It should not be assumed that investments in such securities have been or will be profitable. To the extent specific securities are mentioned, they have been selected by the author on an objective basis to illustrate views expressed in the commentary and do not represent all of the securities purchased, sold or recommended for advisory clients. Please see the end of the letter for important disclosures.

Disclosures

Past performance may not be a reliable guide to future performance and investors may not get back the amount invested. All investments involve risk. The value of the investment and the income from it will vary. There is no guarantee that the initial investment will be returned.

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RoIC is a measure of determining a company's financial performance. It is calculated as NOPAT/IC ; where NOPAT (net operating profit after tax) is $(\text{EBIT} + \text{Operating Leases Due 1-Yr}) * (1 - \text{Cash Tax Rate})$ and IC (invested capital) is $\text{Total Debt} + \text{Total Equity} + \text{Total Unfunded Pension} + (\text{Operating Leases Due 1-Yr} * 8) - \text{Excess Cash}$. ROIC calculations presented use LFY (last fiscal year) and exclude financial services.

The Total Return of an equity security is the sum of the return from price movement and the return due to dividend payments or other sources of income. Standard benchmark-, sector- and portfolio-level returns are the sums of the weights of each security multiplied by its return, summed and calculated daily and summed over the period covered by the report or by an otherwise-noted period.

Contribution To Return is calculated by multiplying a security's beginning weight as a percentage of a portfolio by that security's return for the period covered in the report.

The internal rate of return (IRR) is a measure of an investment's rate of return. The internal rate of return is a discount rate that makes the net present value (NPV) of all cash flows from a particular project equal to zero. It is also called the discounted cash flow rate of return.

Tracking Error is the standard deviation of the difference in the portfolio and benchmark returns

Alpha is a measure of performance on a risk-adjusted basis. Alpha takes the volatility (price risk) of a portfolio and compares its risk-adjusted performance to a benchmark index.

Annualized Return is the geometric average amount of money earned by an investment each year over a given time period. It is calculated as a geometric average to show what an investor would earn over a period of time if the annual return was compounded.

Volatility is a statistical measure of the dispersion of returns for a given security or market index. Volatility can either be measured by using the standard deviation or variance between returns from that same security or market index.

The Total Return of an equity security is the sum of the return from price movement and the return due to dividend payments or other sources of income. Standard benchmark-, sector-and portfolio-level returns are the sums of the weights of each security multiplied by its return, summed and calculated daily and summed over the period covered by the report or by an otherwise-noted period.

Weighted Average Cost of Capital (WACC) presents a firm's average after-tax cost of capital from all sources, including common stock, preferred stock, bonds, and other forms of debt. WACC is the average rate a company expects to pay to finance its assets.

Brown Advisory Global Leaders Strategy Composite

Year	Composite Total Gross Returns (%)	Composite Total Net Returns (%)	Benchmark Returns (%)	Composite 3-Yr Annualized Standard Deviation (%)	Benchmark 3-Yr Annualized Standard Deviation (%)	Portfolios in Composite at End of Year	Composite Dispersion (%)	Composite Assets (\$USD Millions)*	GIPS Firm Assets (\$USD Millions)*
2021	17.6	17.0	18.4	17.2	16.8	Five or fewer	N/A	4,207	79,715
2020	21.0	20.2	16.0	16.9	18.1	Five or fewer	N/A	2,428	59,683
2019	35.1	34.2	26.5	11.6	11.2	Five or fewer	N/A	731	42,426
2018	-2.2	-2.8	-9.6	11.0	10.5	Five or fewer	N/A	303	30,529
2017	35.1	34.0	24.0	N/A	N/A	Five or fewer	N/A	77	33,155
2016	-0.6	-1.4	8.0	N/A	N/A	Five or fewer	N/A	38	30,417
2015**	1.2	0.7	-4.4	N/A	N/A	Five or fewer	N/A	24	43,746

**Return is for period May 1, 2015 through December 31, 2015

Brown Advisory Institutional claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Brown Advisory Institutional has been independently verified for the periods from January 1, 1993 through December 31, 2021. The Verification reports are available upon request. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. Verification does not provide assurance on the accuracy of any specific performance report. GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein.

1. *For the purpose of complying with the GIPS standards, the firm is defined as Brown Advisory Institutional, the Institutional and Balanced Institutional asset management divisions of Brown Advisory. As of July 1, 2016, the firm was redefined to exclude the Brown Advisory Private Client division, due to an evolution of the three distinct business lines.
2. The Global Leaders Composite (the Composite) aims to achieve capital appreciation by investing primarily in global equities. The strategy will invest in equity securities of companies that the portfolio manager believes are leaders within their industry or country, as demonstrated by an ability to deliver high relative return on invested capital over time. The minimum account market value required for Composite inclusion is \$1.5 million.
3. The Composite creation date is August 26, 2015. The Composite inception date is May 1, 2015.
4. The benchmark is the MSCI ACWI Net Index. The MSCI ACWI Net Index captures large and mid cap representation across Developed Markets (DM) and Emerging Markets (EM) countries. The Index covers approximately 85% of the global investable equity opportunity set. All MSCI indexes and products are trademarks and service marks of MSCI or its subsidiaries. An investor cannot invest directly into an index. Benchmark returns are not covered by the report of the independent verifiers.
5. As of September 1, 2022, the Composite benchmark was changed from the FTSE All-World Net Index to the MSCI ACWI Net Index. The change was applied retroactively from the Composite inception date. The Advisor determined that MSCI indices are more widely used for global products, and thereby provide more relevant data to shareholders and prospects as well as comparisons to competitors.
6. As of January 1, 2019, the Composite benchmark was changed from Russell Global Large-Cap Net Index to the FTSE All-World Net Index. The change was applied retroactively from the Composite inception date. The Russell Global Large-Cap Net Index was decommissioned as of December 31, 2018 and is no longer published.
7. Composite dispersion is an equal-weighted standard deviation of portfolio gross returns calculated for the accounts in the Composite for the entire calendar year period. The composite dispersion is not applicable (N/A) for periods where there were five or fewer accounts in the Composite for the entire period.
8. Gross-of-fees performance returns are presented before management fees but after all trading commissions, and gross of foreign withholding taxes (if applicable). Net-of-fee performance returns reflect the deduction of actual management fees and all trading commissions. Other expenses can reduce returns to investors. The standard management fee schedule is as follows: 0.80% on the first \$50 million; 0.55% on the next \$50 million; 0.45% on the next \$50 million; and 0.40% on the balance over \$150 million. Further information regarding investment advisory fees is described in Part II A of the firm's form ADV. Actual fees paid by accounts in the Composite may differ from the current fee schedule.
9. The investment management fee for the Investor Shares of the Brown Advisory Global Leaders Fund (the Fund), which is included in the Composite, is 0.65%, and represents the highest fee charged excluding Advisor Shares. The total expense ratio for the Investor Shares of the Fund as of the most recent fiscal year end (June 30, 2021) was 0.91%. Further information regarding investment management fees and expenses is described in the fund prospectus and annual report.

10. The investment management fee for the Dollar Class B Acc Shares of the Brown Advisory Global Leaders Fund (the UCITS), which is included in the composite, is 0.75%. The total expense ratio for the Dollar Class B Acc Shares of the UCITS as of the most recent fiscal year end (October 31, 2021) was 0.88%. Further information regarding investment management fees and expenses is described in the fund prospectus and annual report.
11. The three-year annualized ex-post standard deviation measures the variability of the Composite (using gross returns) and the benchmark for the 36-month period ended on December 31. The 3 year annualized standard deviation is not presented as of December 31, 2015, December 31, 2016 and December 31, 2017 because 36 month returns for the Composite were not available (N/A) and the Composite did not exist.
12. Valuations and performance returns are computed and stated in U.S. Dollars. All returns reflect the reinvestment of income and other earnings.
13. A complete list of composite descriptions and broad distribution and limited distribution pooled funds is available upon request.
14. Policies for valuing investments, calculating performance, and preparing GIPS Reports are available upon request.
15. Past performance is not indicative of future results.
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