



# Baron Large Cap Growth Strategy

December 31, 2022

## DEAR INVESTOR:

### PERFORMANCE

Baron Large Cap Growth Strategy was down 7.1% during the fourth quarter, compared to a gain of 2.2% for the Russell 1000 Growth Index and a gain of 7.6% for the S&P 500 Index, the Strategy's benchmarks. For the year, the Strategy was down 50.5% compared to declines of 29.1% and 18.1% for the benchmarks, respectively.

**Table 1.**  
**Performance<sup>1</sup>**

Annualized for periods ended December 31, 2022

	Baron Large Cap Growth Strategy (net) <sup>1</sup>	Baron Large Cap Growth Strategy (gross) <sup>1</sup>	Russell 1000 Growth Index <sup>1</sup>	S&P 500 Index <sup>1</sup>
Three Months <sup>2</sup>	(7.08)%	(6.93)%	2.20%	7.56%
One Year	(50.51)%	(50.18)%	(29.14)%	(18.11)%
Three Years	(5.96)%	(5.32)%	7.79%	7.66%
Five Years	2.53%	3.21%	10.96%	9.42%
Ten Years	9.60%	10.37%	14.10%	12.56%
Fifteen Years	6.89%	7.61%	10.32%	8.81%
Since Inception <sup>3</sup> (September 30, 2004)	7.62%	8.47%	10.43%	9.18%

There is a saying among investors that "markets take the stairs up and the elevator down." After an almost uninterrupted 13-year climb, we were on the express elevator down in 2022. The details behind our underperformance follow, but the short of it is we were in all the wrong places (software, electric

vehicle (EV) manufacturers, Consumer Discretionary), without being in any of the right ones (Energy, Utilities, Consumer Staples, insurance). Almost every investment we owned was down, and most of them were down a lot. While avoiding several costly mistakes (which we will go into below) would have helped on the margin, the rapid and dramatic shift in the market regime left us exposed to a severe correction with few tools at our disposal with which to protect shareholder capital given our philosophy, process, and style-related factors.

Baron Large Cap Growth Strategy is designed to invest in Big Ideas. We think of them as competitively advantaged businesses that are either leading or benefiting from disruptive change and have an opportunity to become significantly larger in the future. That means that they are in the earlier stages of their growth lifecycles and are overinvesting and underearning in the present. These are *long-duration* investments. As a sidebar, all equities are long-duration assets. A company with a 10% current free-cash-flow yield (FCFY), assuming no growth, will earn its market cap in 10 years, but a company with a 2% FCFY... will take 50 years to earn its market cap. Long-duration assets are particularly sensitive to changes in interest rates. In response to the housing/financial crisis of 2008-2009, the Fed implemented an unprecedented quantitative easing program (QE). Zero Interest Rate Policy, or ZIRP, was supposed to be a short-term remedy (while Europe, not to be outdone, implemented a negative interest-rate policy), but 10 years later... it was still with us and going strong. Well... a low interest-rate environment is conducive to underearning and overinvesting and is a strong tailwind to investing in Big Ideas. Then COVID-19 hit, and we were introduced to free money. Not just loan (and rent) forgiveness and extended unemployment benefits that often exceeded actual earnings, but actual free money directly deposited into consumers' checking accounts not once, not twice, but three times. "Have you been

*For Strategy reporting purposes, the Firm is defined as all accounts managed by Baron Capital Management, Inc. ("BCM") and BAMCO, Inc. ("BAMCO"), registered investment advisers wholly owned by Baron Capital Group, Inc. As of December 31, 2022, total Firm assets under management are approximately \$35.4 billion. The Strategy is a time-weighted, total return composite of all large-cap accounts greater than \$1 million using our standard investment process. Since 2010, accounts in the Strategy are market-value weighted and are included on the first day of the month following one full month under management. Prior to 2010, accounts were included on the first day of the quarter after one full quarter. Gross performance figures do not reflect the deduction of investment advisory fees. Actual client returns will be reduced by the advisory fees and any other expenses incurred in the management of the investment advisory account. A full description of investment advisory fees is supplied in our Form ADV Part 2A. Valuations and returns are computed and stated in U.S. dollars. Performance figures reflect the reinvestment of dividends and other earnings. The Strategy is currently composed of one mutual fund managed by BAMCO and separately managed accounts managed by BCM. BAMCO and BCM claim compliance with the Global Investment Performance Standards (GIPS®). To receive a complete list and description of the Firm's strategies please contact us at 1-800-99BARON.*

Performance data quoted represents past performance. Current performance may be lower or higher than the performance data quoted. Past performance is no guarantee of future results.

<sup>1</sup> The Strategy's 3-, 5-, and 10-year historical performance was impacted by gains from IPOs and there is no guarantee that these results can be repeated or that the Strategy's level of participation in IPOs will be the same in the future.

<sup>2</sup> The **Russell 1000® Growth Index** is an unmanaged index that measures the performance of large-sized U.S. companies that are classified as growth and the **S&P 500 Index** measures the performance of 500 widely held large-cap U.S. companies. All rights in the FTSE Russell Index (the "Index") vest in the relevant LSE Group company which owns the Index. Russell® is a trademark of the relevant LSE Group company and is used by any other LSE Group company under license. Neither LSE Group nor its licensors accept any liability for any errors or omissions in the indexes or data and no party may rely on any indexes or data contained in this communication. The indexes and the Strategy include reinvestment of dividends, net of withholding taxes, which positively impact the performance results. The indexes are unmanaged. Index performance is not Strategy performance. Investors cannot invest directly into an index.

<sup>3</sup> Not annualized.

<sup>3</sup> The Strategy has a different inception date than its underlying portfolio, which is April 30, 2004.

# Baron Large Cap Growth Strategy

properly stimulated by your government today?” was the running joke among the college kids during their Zoom sessions. Well, when money is free and you’re discounting future cash flows back at really low interest rates, Big Ideas look particularly attractive. We weren’t terribly comfortable with what was going on and responded by not allocating fresh capital to about a third of our portfolio due to high valuations and increasing the number of holdings in the Strategy from the high 20s to the low 40s.

As we were exiting 2021, the environment started to change. QE appeared to have finally run its course and the Fed was messaging about tapering and gradually starting to normalize interest rates back to their historical averages over the next few years. Then in February, a war broke out in Europe, geopolitical tensions, particularly between U.S. and China hit a new high, and a new surge of COVID-19 further disrupted the global supply chain, causing inflation in the U.S. (as measured by CPI) to hit 9.1% in July—the highest inflation rate in over 40 years. By then, QE had turned into a full QT (Quantitative Tightening). From June 16 through November 2, the Fed implemented an unprecedented four consecutive 75 basis points hikes. Those four hikes were bookended by additional 50 basis points hikes on both sides. *In less than nine months*, the interest rate as set by the Fed (the Fed Funds rate) went from 0.00% – 0.25% on March 16 to 4.25% – 4.50% on December 14. There was no way our companies were going to hold up well in this kind of calamity.

This painful experience brings an important psychological phenomenon to the forefront. We think it is important to understand the possible psychological impact of the last year on decision making. Loss aversion often leads investors to buy and sell at exactly the wrong times. The story usually goes something like this: an investor buys a stock expecting the price to go up. When it goes down instead, initially the investor would sweat it out and occasionally even double down (this buy-the-dip mentality works well during bull markets but obviously does not in bear markets). As losses grow, loss aversion kicks into high gear, making past gains seem like a distant memory. At some point the pain becomes too difficult to bear and the investor capitulates. This is also usually the sign of a bottom. Despite the fact that this is exactly the wrong time to sell, many investors do just that. This psychological aversion to loss is one of the reasons why the average equity fund investor earns 350 basis points less than the market over long periods of time.<sup>1</sup>

Similarly, psychology dramatically alters an investor’s time horizon and risk appetite. During bull markets it feels good to be invested. Every dip has proven to be a buying opportunity and the confidence in our decision making and in the future is sky high. We don’t wait for the next pullback because we are in it for the long haul, and if prices go down, we will simply buy more. Stock market volatility is perceived as healthy, time horizons stretch, and no multiple is high enough when our time horizon is forever. On the other hand, in years like 2022 when the *elevator* is going down fast, investors sell every rally **and** every dip. The confidence in our ability and that of others shrinks. We see the future as inherently uncertain, loss aversion kicks in and our time horizons shrink to the point of here and now. In the here and now, no prospects are high enough and no multiple is low enough. That’s a terrible environment for long-duration assets and this is the story of 2022 as we see it.

So, what now? Psychology aside, how have the companies’ intrinsic values (IVs) changed and where are they relative to their stock prices?

At any point in time the price of a stock reflects a combination of the business’ estimated IV and investor psychology. Analysts calculate IVs by underwriting company-specific assumptions such as growth rates, profitability/margins, cost of capital, and the ability to generate returns on invested capital, as well as macro factors such as interest rates and the growth of the economy. Well-managed companies with strong competitive advantages generally retain and often enhance their ability to grow profitably and to generate healthy returns on invested capital over full economic cycles. While few businesses are immune to recessions or significant economic slowdowns, their prospects often remain positive, and growth in earnings and cash flows is likely to be reinvigorated once the macro environment improves. The change in long-term interest rate assumptions (terminal interest rate) is certainly a headwind to companies’ IVs but it is both far less dramatic than the change in short-term interest rates and is largely offset by the corresponding changes in the companies’ terminal growth rates – inflation works both ways. Regardless, these assumptions are formulaic and are based on a range of outcomes and our assessment of their respective probabilities and consequences. The impact of psychology or the degree of optimism or pessimism with which investors sometimes perceive these assumptions and range of outcomes often has a disproportionate impact on stock prices. When investors are optimistic, they drive stock prices above IVs and when they are pessimistic, below. The decline in the stock prices of long-duration assets in 2022 was partially driven by objective factors such as the rise in interest rates, which reduced the present value of long-duration assets, but also by the rapid and dramatic shift in investor psychology.

Over the long run, stock prices will follow and approximate a business’ IV. But at any given snapshot in time, they tend to swing around the IV trend line based on investor psychology and their time horizons. We have often pointed out that prospective returns are inversely correlated to current or recent results. The commercialization of the internet and the resultant bull market in the late 1990s led to a dot-com bubble, which ended abruptly in March of 2000. From then until late in 2002 the Russell 1000 Growth Index lost 64%, while the tech-heavy NASDAQ Composite Index declined 78%. It was then up 97% in 2003-2005, and 155% until the next peak in late 2007, while the Russell 1000 Growth Index gained 55% and 93%, respectively. During the global financial crisis that followed, the Russell 1000 Growth Index lost 52%. It then recovered 89% in 2009/2010 and gained an incredible 534% until COVID-19 hit in early 2020, at which point it proceeded to decline 32% over the next five-plus weeks and then rally 133% until the end of 2021. Surely, the change in IVs of the underlying businesses was far more gradual with little resemblance to the wild ride of their stock prices.

It seems to us that investors do not feel great today. They are not focused on companies’ long-term prospects or earnings power, especially with respect to long-duration assets, and so stock prices are likely to be significantly below businesses’ IVs. Our bottom-up, company-specific models suggest that on average, the discount to IVs is the highest we have seen since at least 2014.

<sup>1</sup> Dalbar QAI VB 2022 study – <https://michaelryanmoney.com/time-in-the-market-beats-timing-the-market-dalbar-study/>

Even so, given the regime change and the new realities with increased uncertainties and wider ranges of outcomes, will companies' IVs continue to grow and compound the way they did in the past?

Over the long run, of course they will. While some of the recent tailwinds like ZIRP or even globalization may no longer be drivers of growth, innovation, progress, and disruptive change will continue to drive value creation. Understanding whether the disruption is real, material, and durable, and whether it will create and reinforce businesses' competitive advantages or cause them to be left behind will remain as important as ever. As a matter of fact, disruptive change and the rate of innovation have only been accelerating – it took 46 years for electricity to be adopted by 25% of the U.S. population, 35 for the telephone, 25 for television, 16 for PCs, seven for cell phones, and only five for the internet.<sup>2</sup> It is easier to start a business in 2023 than ever before – an entrepreneur can easily rent computing power and storage from Amazon Web Services (AWS), Azure, or Google Cloud Platform instead of having to spend millions of dollars buying hardware before having the product-market fit. Application Programming Interfaces and open-source software can be used to efficiently release products faster, then use the internet to commercialize it effectively. Distribution used to be a bottleneck. Without scale it is hard to convince distributors to sell your product, cementing the competitive advantages of large incumbents. Market leaders can also iterate and innovate faster, working on different features in parallel and with dynamic, real-time customer feedback loops thanks to the visibility enabled by the cloud. Organizational and architectural structures such as micro-services and single-threaded teams enable continuous improvement with hundreds or thousands of annual software releases being the norm today compared to just a handful per year in the past. This enables the best companies of today to achieve profitability levels that were not possible in the past.

The advancements in the fields of Artificial Intelligence (AI) and Deep Learning are profound examples of the innovation era we live in today. It took 32 years from being able to recognize digits<sup>3</sup> (Neocognitron, 1980) to being able to identify a cat from a dog (AlexNet, 2012) and only 10 years from AlexNet to ChatGPT, which is OpenAI's AI-powered chatbot capable of answering complex questions, writing essays in a way that is often indistinguishable from humans (causing havoc in high schools and universities alike) and even generating sophisticated programming code. ChatGPT reached *one million users a mere five days after it was released* in December of 2022. It is based on OpenAI's GPT 3 algorithm that has 175 billion parameters. GPT 4.0, which we expect to be released this year, is rumored to be even more capable with over one trillion parameters. We believe AI will prove to be a real tailwind for many of our businesses in the years to come. From **NVIDIA**, a key enabler of AI with its GPUs and CUDA ecosystem, to **GM Cruise** and **Tesla**, the leading enablers of autonomous driving, and to **Snowflake**, **CrowdStrike**, and **Cloudflare**, companies that are solving big data problems in order to make their customers more productive, efficient, and secure.

Now, back to performance attribution. Stock selection was responsible for 664 basis points of our 928 basis points of underperformance in the fourth quarter. Sector allocation detracted 244 (excluding the impact of fees) basis points largely due to not owning any Consumer Staples, Financials, Energy, or Materials and not owning enough Industrials. Overweights in Consumer Discretionary and Communication Services, which were the only sectors in

the Russell 1000 Growth Index with negative returns in the quarter, also detracted. From a stock-specific perspective, while the quarter was relatively balanced with 13 contributors against 17 detractors, too many of our detractors were larger positions such as **Amazon**, which detracted 210 basis points on the back of growing concerns over a slowdown in the economy leading to headwinds in cloud and consumer spending; and Tesla, where Elon Musk's acquisition of Twitter and broader economic concerns led to a remarkable 54% decline in the price of the stock. We take the long-term view on these best-in-class disruptive businesses. While few companies will be immune from broad economic slowdowns, let alone recessions, we believe their IVs will continue to compound (even if at slower rates in the short term) and the recent declines in their share prices are extremely unlikely to result in a permanent loss of capital.

From a full-year perspective, all but three of our investments were down for the year, with the exceptions being **argenx**, the leading auto-immune focused biotechnology company, **Mobileye** a leading ADAS and autonomous driving supplier, and **SpaceX**, a private company that designs, manufactures, and launches rockets, satellites, and spacecraft. Our trading in shares of **Mastercard** resulted in the stock being a modest contributor despite the stock declining 2.7% in 2022. On the other side of the performance spectrum, we had 20 holdings that detracted at least 100 basis points from results each, 10 of which detracted at least 200 basis points each, and two of them (**Rivian** and Amazon) detracting 400 basis points or more.

Despite brutal recent results, the conviction in our investment philosophy and process has not changed. We believe the companies in which we have invested are resilient and will come out of this economic slowdown stronger than they were before. We do not expect this pullback to result in a significant permanent loss of capital over the long term. We have no insight into how long the current bear market will go on for or what needs to happen in order for the investor psychology to change. However, we do believe that now will prove to be a good entry point for investors.

**Table II.**

**Top contributors to performance for the quarter ended December 31, 2022**

	Quarter End Market Cap (billions)	Percent Impact
Intuitive Surgical, Inc.	\$ 93.8	1.39%
Mastercard Incorporated	334.3	1.21
ASML Holding N.V.	217.4	0.75
NVIDIA Corporation	359.5	0.71
Shopify Inc.	37.5	0.56

**Intuitive Surgical, Inc.** is a medical device company that sells the da Vinci robotic surgical system. The stock rose 41.6% during the fourth quarter in response to solid third quarter financial results, highlighted by 20% procedure growth, well ahead of investor expectations. The company also completed another \$1 billion accelerated share repurchase program, signaling management's and the board's view that the stock is undervalued. We continue to believe Intuitive Surgical has a long runway for growth as more procedures are performed using the da Vinci robotic surgical system.

<sup>2</sup> <https://www.pewresearch.org/fact-tank/2014/03/14/chart-of-the-week-the-ever-accelerating-rate-of-technology-adoption/>

<sup>3</sup> <https://www.rctn.org/bruno/public/papers/Fukushima1980.pdf>

# Baron Large Cap Growth Strategy

Shares of global payment network **Mastercard Incorporated** outperformed, appreciating 22.3% in the quarter after the company reported strong quarterly results, with 15% revenue growth and 13% EPS growth despite significant headwinds from currency movements and the suspension of operations in Russia. Payment volume grew 21% in local currency (excluding Russia), as consumer spending remained resilient and international travel continued to recover as border restrictions were lifted. Major foreign currencies strengthened toward the end of the quarter, which should also support near-term growth. We continue to own the stock due to Mastercard's long runway for growth underpinned by the continued migration from cash to card/digital, and significant competitive advantages, operating in a duopoly with Visa.

**ASML Holding N.V.** designs and manufactures semiconductor production equipment and has a leading market share in photolithography. Shares rose 31.9% during the quarter after the company maintained its strong near-term outlook despite expected industry weakness and increased its longer-term outlook, with sales expected to grow to €30 billion to €40 billion in 2025 and €44 billion to €60 billion by 2030 (from €18.6 billion in 2021). ASML has a monopoly in Extreme-Ultra-Violet equipment, which is critical for advanced semiconductor chip manufacturing, and remains well positioned as its customers continue to build out capacity to support growing demand for leading-edge semiconductors.

**NVIDIA Corporation** is a fabless semiconductor mega cap that is a global leader in gaming cards and accelerated computing hardware and software. Despite the ongoing inventory correction in gaming, shares rose 20.4% during the fourth quarter as a result of continued resiliency in the company's data center segment, which beat Street expectations. In addition, the company announced an agreement with Microsoft and Oracle that will enable it to sell together with the cloud providers, getting a revenue share for the usage of their GPUs by end customers in exchange for providing access to NVIDIA's Enterprise Software stack—this strategic announcement should reduce hurdles for AI adoption in vertical industries as well as drive incremental usage-based, high-margin revenues for NVIDIA. We continue to believe that NVIDIA's end-to-end AI platform and its leading market share in gaming, data centers, and autonomous machines, along with the size of these markets, will enable the company to benefit from durable growth for years to come.

**Shopify Inc.** is a cloud-based software provider for multi-channel commerce. Shares rose 28.6% in the fourth quarter, reversing some of the declines from earlier in the year, as preliminary holiday results suggested a rebound in e-commerce activity. The company also reported solid third quarter financial results showing an increase in take rates, which points to a deeper adoption of its platform by merchants. We remain shareholders due to Shopify's strong competitive positioning, innovative culture, and long runway for growth (it has less than 2% share of global commerce spending).

**Table III.**

**Top detractors from performance for the quarter ended December 31, 2022**

	Quarter End Market Cap (billions)	Percent Impact
Tesla, Inc.	\$389.0	-2.91%
Amazon.com, Inc.	856.9	-2.10
CrowdStrike Holdings, Inc.	24.9	-1.82
Rivian Automotive, Inc.	17.0	-1.06
ZoomInfo Technologies Inc.	12.2	-0.98

**Tesla, Inc.** manufactures EVs, related software and components, and solar and energy storage products. Shares fell 53.5% during the quarter due to growing investor concerns regarding the impact of a potential economic slowdown on demand, volume, and pricing. CEO Elon Musk sold part of his Tesla stake to fund his Twitter acquisition and then dedicated a significant amount of his time to Twitter's business, causing investors to question his dedication to Tesla. We remain confident in Tesla's fundamentals and management team and believe that with still less than 2% market share, the company remains well positioned to enjoy a long runway of growth as the market shifts to EVs.

**Amazon.com, Inc.** is the world's largest retailer and cloud services provider. Shares of Amazon were down 25.7% in the quarter, as the company guided to relative weakness in margins and a slowdown in AWS as a result of the weakening economy. Despite the increased near-term uncertainty and the potential macro headwinds, Amazon remains one of our largest holdings due to its durable competitive advantages, with a leadership position in multiple trillion-dollar markets that exhibit durable growth characteristics. According to the U.S. Census Bureau, domestic e-commerce was only 14.8% of retail (as of the third quarter of 2022).<sup>4</sup> Internationally, the opportunity is even earlier as Amazon still has less than 5% market share of international retail spending. Its advertising share is roughly 5% and growing, underpinned by its structural closed loop, which enables accurate targeting and measurement. AWS remains the leading cloud provider, while cloud computing is still only 11% of the \$4.4 trillion market for global IT spending according to Gartner in 2022.<sup>5</sup> Areas such as logistics and health care present additional optionality.

**CrowdStrike Holdings, Inc.** provides cloud-delivered, next generation security solutions via its Falcon platform consisting of end-point protection, advanced persistent threat, security information, event management, and cloud workload protection. Shares declined 36.1% during the quarter after the company reported net new Annual Recurring Revenues that missed Street expectations as a result of elongated sales cycles that impacted deals with small- and medium-sized businesses (SMBs) and phased subscription billing terms with customers opting for delayed start dates. While the macro slowdown is impacting near-term results, the business remains resilient, with gross retention rates still at record levels, net retention rates at the highest level in seven quarters, and the company's competitive

<sup>4</sup> <https://www.census.gov/retail/ecommerce.html>

<sup>5</sup> <https://www.gartner.com/en/newsroom/press-releases/2022-10-31-gartner-forecasts-worldwide-public-cloud-end-user-spending-to-reach-nearly-600-billion-in-2023>

<https://www.gartner.com/en/newsroom/press-releases/2022-10-19-gartner-forecasts-worldwide-it-spending-to-grow-5-percent-in-2023>



positioning improving with increasing win rates in SMB and consistent win rates in its enterprise segment. With more workloads migrating to or starting in the cloud, we believe CrowdStrike is well positioned to compound at high growth rates for years given its unique product platform and attractive business model.

Shares of **Rivian Automotive, Inc.**, a U.S.-based EV manufacturer, fell 44.0% during the fourth quarter as a result of growing investor concerns around the potential headwinds from a slowing economy. Rivian is still in the early stages of a production ramp, which requires significant cash outflows. In addition, the uncertainty around unit economics and execution remains top of mind for investors, especially in this environment. We retain conviction. Despite supply-chain complexities, Rivian's monthly production rate has grown seven-fold since late 2021. Positive product reviews, a vertically integrated technology approach, and unique partnerships are key for an attractive long-term opportunity, in our view, and hence we remain shareholders.

**ZoomInfo Technologies Inc.** operates a cloud-based business-to-business (B2B) platform that provides sales, marketing, and HR teams with comprehensive business intelligence, enabling shorter sales cycles and higher win rates. Shares of ZoomInfo declined 27.7% during the fourth quarter after the company shared a weaker top-line outlook for 2023. While ZoomInfo is seeing near-term headwinds due to increased deal scrutiny by customers and longer sales cycles as a result of the macro environment, we believe that its competitive positioning is as strong as it has ever been and that our long-term thesis remains intact. We remain Investors and believe that ZoomInfo will benefit from long duration growth, as it has only about 35,000 customers out of a 700,000 B2B opportunity. Additionally, new products continue building momentum, and we believe ZoomInfo can become a much larger company over time as it grows into its \$100 billion total addressable market.

## PORTFOLIO STRUCTURE<sup>6</sup>

The Strategy's portfolio is constructed on a bottom-up basis with the quality of ideas and conviction level determining the size of each investment. Sector weights tend to be an outcome of the portfolio construction process and are not meant to indicate a positive or a negative "view." As of December 31, 2022, our top 10 positions represented 54.5% and our top 20 represented 86.2% of the Strategy's, respectively. This compares to weightings of 51.6% and 78.0%, respectively, as of December 31, 2021. While some investors will try to mitigate the impact of volatility by diversifying their portfolio, we believe that over-diversification is alpha-destructive over the long term, especially in an efficient asset class such as large cap, and therefore, we took advantage of market volatility in order to further consolidate the portfolio in our highest conviction ideas.

Information Technology, Health Care, Consumer Discretionary, and Communication Services made up 98.3% of net assets. The remaining 1.7% was made up of SpaceX and GM Cruise, our two private investments classified in Industrials.

The Strategy's turnover was 30.3% in 2022, compared to average turnover of 21.2% over the last three years, and 19.8% average turnover over the last five years.

Table IV.

Top 10 holdings as of December 31, 2022

	Quarter End Market Cap (billions)	Quarter End Investment Value (millions)	Percent of Net Assets
Amazon.com, Inc.	\$856.9	\$24.2	7.4%
Mastercard Incorporated	334.3	24.1	7.3
ServiceNow, Inc.	78.4	21.3	6.5
Intuitive Surgical, Inc.	93.8	19.4	5.9
Snowflake Inc.	46.2	18.7	5.7
NVIDIA Corporation	359.5	18.2	5.5
argenx SE	21.0	14.6	4.4
Datadog, Inc.	23.3	14.0	4.2
Veeva Systems Inc.	25.1	12.5	3.8
ASML Holding N.V.	217.4	12.3	3.7

## RECENT ACTIVITY

During the fourth quarter, we bought one new investment – the leading driving ADAS and autonomous driving supplier, **Mobileye**. We also added to nine existing positions, including continuing to build our newer position in the connected TV (CTV) leader, **Trade Desk**, while also adding to **Meta Platforms**, which we thought became oversold on near-term concerns and its long-term risk-reward profile had skewed positively. In addition, in order to meet investor redemptions and further consolidate the portfolio in our highest conviction ideas, we reduced six positions and sold our investment in **Alphabet** (the owner of Google). Our exit from Alphabet is an instructive example for one of the main reasons we would sell a stock. While we still view Alphabet as a great business, the company, as it has evolved and progressed along its growth S-Curve, has become more mature and less of a Big Idea, and we saw better risk-reward in other ideas to which we reallocated.

Table V.

Top net purchases for the quarter ended December 31, 2022

	Quarter End Market Cap (billions)	Amount Purchased (millions)
Mobileye Global Inc.	\$ 28.1	\$3.0
The Trade Desk	21.9	2.3
Meta Platforms, Inc.	315.6	2.0
Block, Inc.	37.6	1.9
Cloudflare, Inc.	14.9	1.1

During the fourth quarter, we participated in **Mobileye Global Inc.**'s IPO. Mobileye is a leading ADAS and autonomous driving technologies and solutions provider with over 125 million vehicles across 800 models that have incorporated its products to date across 50-plus vehicle manufacturers (OEMs) including 13 of the top 15 global OEMs. The company was founded in 1999 and effectively pioneered the ADAS market, introducing its first EyeQ system-on-chip (SoC) in 2007, enabling the vehicle to gain ADAS capabilities (such as real-time detection of vehicles, pedestrians, and lane markings) for a price of around \$50. While the company remains a leader in ADAS today (with an approximate 70% market share), we believe the

<sup>6</sup> Portfolio characteristics, top 10 and 20 holdings, sector exposures, top net purchases, and top net sales are based on a representative account. Such data may vary for each client in the Strategy due to asset size, market conditions, client guidelines, and diversity of portfolio holdings. The representative account is the account in the Strategy that we believe most closely reflects the current portfolio management style for the Strategy. Representative account data is supplemental information.

# Baron Large Cap Growth Strategy

bigger opportunity is in leading the autonomous driving revolution. This would, in our view, significantly improve safety; meaningfully increase the vehicle utilization rate, which today is only around 4%; and dramatically grow the company's content per vehicle. Mobileye's SuperVision, a fully operational point-to-point assisted driving navigation solution, is the next step in the company's progress towards autonomous driving, and it has a price tag of over 20 times that of its basic ADAS SoC. At the last Consumer Electronics Conference, the company announced a \$3.5 billion backlog for its SuperVision solution across six OEMs and nine vehicle models. In addition, the company announced a \$1.5 billion design win for its consumer AV program and a \$3.5 billion backlog for its Mobility-as-a-Service or robotaxi solution. CEO and Founder, Amnon Shashua discussed his long-term vision in the company's shareholder letter<sup>6</sup>:

*"More than two decades ago, I founded Mobileye on the belief that computer vision technology could help prevent automobile crashes and save lives. From that simple idea, a global industry was born... By 2030, we expect Mobileye driver-assistance systems to be deployed in another 270 million vehicles globally... We believe that we will be positioned to deliver an autonomous driving solution that can enable the mass adoption of AVs [Autonomous Vehicles] including both Mobileye-powered robotaxis and consumer-owned autonomous driving vehicles. And Mobileye will be well on the way to delivering the future I first envisioned more than two decades ago."*

During the fourth quarter, we also continued building our newer position in **The Trade Desk**. Trade Desk is the leading internet advertising demand-side platform, enabling agencies and companies to buy and track digital advertising. The company is benefiting from the growth in advertising on CTV and advertisers' desire to work with Trade Desk, as a neutral provider, as opposed to Google that also purchases ads for its own publishers (such as YouTube). While the company is likely to see headwinds in a tough macro environment, driven by a broad slowdown in advertising spending, it continues executing at the highest level, with 31% year-over-year revenue growth and 41% EBITDA margins for its most recently reported quarter. We believe Trade Desk's founder-led executive team has historically managed the business well and expect the company to continue benefiting from the growth in programmatic and CTV for years to come.

We also added to **Meta Platforms, Inc.** in the fourth quarter. Foreign currency movements and the weakening macro environment have impacted Meta's revenue growth rates in the near term (revenues declined 4% year-over-year in the most recently reported third quarter), while investors continue to be focused on the company's growing expenses and capital expenditures, which create a double-whammy impact on margins and free-cash-flow. This hyper-focus on the near term (driving the stock down 25% the day after earnings) overlooks the company's long-term prospects, in our view. First, Meta has 2.9 billion daily active users and is growing (it was up 4% year-over-year). Second, Meta is already seeing significant user engagement for its Reels product that competes with TikTok. Reels reached 140 billion daily views across Facebook and Instagram, a 50% increase over the last six months, and, as importantly, Reels engagement has been incremental to time spent on the platform. Third, Reels is rapidly scaling its monetization, hitting a \$3 billion revenue run-rate during the third quarter, up from \$1 billion in the second quarter, and, based on rumored numbers for TikTok in 2022, likely already has a 15% to 25% market share since its standing start in 2021. Fourth, while the company continues growing its expenses, we are encouraged by the recent

cost cutting announcements and believe that continued investment in AI-infrastructure will pay off, as the company works to regain the lost signal from Apple's IDFA and ATT changes. Lastly, the sell-off in the shares resulted in a deeply undervalued stock for those investors willing to look out a few years, with its next-12-months earnings yield climbing above 9% during the quarter. This yield also compares to about 6% for the S&P 500 Index.

Lastly, we added to seven additional holdings in which we saw a more heavily skewed risk/reward opportunity for the long term, as we continued consolidating the portfolio in our highest conviction ideas.

**Table VI.**  
Top net sales for the quarter ended December 31, 2022

	Quarter End Market Cap or Market Cap When Sold (billions)	Amount Sold (millions)
Alphabet Inc.	\$1,145.2	\$28.9
Mastercard Incorporated	334.3	3.4
Amazon.com, Inc.	856.9	2.4
EPAM Systems, Inc.	18.8	2.0
argenx SE	21.0	0.5

Our biggest sale during the fourth quarter was **Alphabet Inc.** As mentioned above, while we continue to view the company as a great business, we decided to sell our shares because it is no longer as big of an idea as it was in the past when digital advertising penetration was at an earlier stage. Additionally, in order to reallocate to our highest conviction ideas and fund redemptions, we reduced six existing holdings including: **Mastercard Incorporated, Amazon.com, Inc., EPAM Systems, Inc., and argenx SE.**

## OUTLOOK

This is the time of the year when our inboxes get filled with e-mails from different strategists, analysts, and market experts regarding their outlooks for next year. The following is a random sampling of quotes from some of their predictions for 2023:

- *A Hard Landing Is Coming In Late 2023 ... And It's Not Priced In!*
- *Valuations to remain under pressure in 1H23 as fundamentals trough and consensus cut numbers further.*
- *Expect software to outperform in 2H23, driven by focus shifting to reacceleration at some point in '24 on easier comps and compressed multiples.*
- *We project a U.S. recession is likely to start around the beginning of 2023 and last through mid-year.*
- *We see a sustained deterioration in earnings, which is associated with the worst bear markets across history.*
- *Earnings revisions will push stocks lower in the first quarter, before seeing the S&P 500 Index rally back to current levels by year end.*

It would seem that the majority of "expert" forecasts range from pretty bad to really bad. Be that as it may, the quote that resonated the most with us is attributed to John Kenneth Galbraith:

*"There are two kinds of forecasters: those who don't know, and those who don't know they don't know."*

<sup>6</sup> As appears in the company's S-1 filing.

Unfortunately for us, the volume of requests for near-term predictions seems to be inversely correlated with our performance, so we've been getting a lot of these lately. The problem is that we have a lot more conviction in trying to predict the next five and 10 years (we are quite optimistic) than we have in trying to predict the next three to six months. This has always been the case, and the current level of market uncertainty has little to do with that.

So instead of trying (and likely failing) to provide a useful outlook, we offer several observations instead for the reasons behind our long-term optimism:

- The businesses we own are resilient. While it is likely that most companies will be impacted by a slowing economy, our businesses have favorable characteristics that make them more resilient in a downturn – most have little or no leverage, are capital-light, have recurring revenues, and sell critical products or services to their customers, which makes them difficult to replace.
- Disruptive change and innovation have been accelerating. The enablers and beneficiaries of disruptive change sometimes turn into the Big Ideas of tomorrow. While out of favor today, many of these companies present truly compelling long-term opportunities at attractive valuations. They continue to innovate, introduce new offerings, enter new product categories and geographies, and increase their “end-games.”
- Successful platform businesses under the Power Law distribution will continue to accrue the majority of the economic value (winner-take-most dynamic) – we believe we own a collection of these from **Veeva** to **Shopify** to **CrowdStrike**.
- Terminal growth rates are as important as discount rates in calculating IVs – were inflation to remain higher for longer, companies with pricing power will see an increase in their terminal growth rates. Many of our companies are leaders in their industries and critical to their customers and have a proven ability to pass on the cost of inflation (**Adyen** is a great example, as its revenues are directly tied to the payments volume going through its platform, therefore inflationary pressures are directly passed on).
- We expect many of our companies to experience market share gains coming out of the slowdown – leading businesses with durable competitive advantages tend to expand their lead over competitors during times of stress as customers consolidate spending on their best, most important vendors. Examples of commentary from recent earnings calls:
  - Veeva: *“Times like these are long-term positives for high-quality and profitable companies like Veeva, as we continue to benefit*

*from a flight to quality both competitively and in hiring. This is a great time for us to invest to address our large and growing market opportunity.”*

- CrowdStrike: *“We’re seeing consistent win rates, they remain high and in fact, in the smaller customers, we’ve actually seen them significantly improve.”*
- Cloudflare: *“Organizations are looking for strategic partners who can help them consolidate their spend. They don’t want 70, 80, 100 vendors setup. They were saying, hey, how do we reduce the number of vendors? How do we do more? How do we consolidate our costs? Absolutely, we hear that all the time...we will increasingly take share...to become the network for our customers.”*
- The margin of safety or the discount to our estimate of business’ IVs has expanded significantly – the weighted average multiple of our portfolio is down 53% from last year and many more of our companies now have a near-term free-cash-flow valuation support.

We therefore have a lot of confidence that once the environment turns, our businesses will come out of the downturn in stronger market positions, driving a recovery in their stock prices as investors’ psychology improves and their time horizons expand again.

Every day we live and invest in an uncertain world. Well-known conditions and widely anticipated events, such as Federal Reserve rate changes, ongoing trade disputes, government shutdowns, and the unpredictable behavior of important politicians the world over, are shrugged off by the financial markets one day and seem to drive them up or down the next. We often find it difficult to know why market participants do what they do over the short term. The constant challenges we face are real and serious, with clearly uncertain outcomes. History would suggest that most will prove passing or manageable. The business of capital allocation (or investing) is the business of taking risk, managing the uncertainty, and taking advantage of the long-term opportunities that those risks and uncertainties create.

We are optimistic about the long-term prospects of the companies in which we are invested and continue to search for new ideas and investment opportunities while remaining patient and investing only when we believe target companies are trading at attractive prices relative to their IVs.

Sincerely,

Alex Umansky  
Portfolio Manager

# Baron Large Cap Growth Strategy

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*The performance of accounts in the Strategy may be materially different at any given time. Differences that may affect investment performance include cash flows, inception dates, and historical prices. Positions may not be the same or may be traded at different times. In addition, accounts in the Strategy may be pursuing similar investment strategies, but may have different investment restrictions.*

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