



# Baron High Growth Strategy

December 31, 2022

## DEAR INVESTOR:

### PERFORMANCE

During the fourth quarter, Baron High Growth Strategy dropped 4.43%, underperforming the Russell 3000 Growth Index, which rose 2.31%, and the S&P 500 Index, which gained 7.56%. For the trailing one-year period, the Strategy fell sharply, significantly trailing both indexes.

**Table I.**  
**Performance<sup>†</sup>**  
**Annualized for periods ended December 31, 2022**

	Baron High Growth Strategy (net) <sup>1</sup>	Baron High Growth Strategy (gross) <sup>1</sup>	Russell 3000 Growth Index <sup>1</sup>	S&P 500 Index <sup>1</sup>
Three Months <sup>2</sup>	(4.43)%	(4.20)%	2.31%	7.56%
One Year	(42.68)%	(42.12)%	(28.97)%	(18.11)%
Three Years	6.69%	7.75%	7.32%	7.66%
Five Years	13.06%	14.18%	10.45%	9.42%
Ten Years	13.16%	14.26%	13.75%	12.56%
Since Inception <sup>3</sup> (June 30, 2000)	8.36%	9.63%	5.42%	6.43%

### REVIEW & OUTLOOK

Growth stocks and the Strategy significantly underperformed the broader market in 2022. It was the second worst year of my portfolio management tenure, with only 2008 – the Great Financial Crisis – being worse. As described below, we are sticking with our repeatable and consistent

investment philosophy and processes – further honed by the relentless walk of experience and learnings – and doing the hard work to turn things around.

The entire year 2022 was dominated by macroeconomics (with an overlay of geopolitics, including the war in Ukraine, U.S. midterm elections, and the end of China's Zero-COVID policy) – less business fundamentals or secular growth trends – and proved to be a bleak environment for the Strategy and growth stocks, as well as the broader stock market. To combat spiking inflation, the Fed shelved its “transitory” stance and hiked the Federal Funds rate by 425 cumulative basis points, the fastest pace in 40-plus years and has signaled rates still need to go higher and remain there for some time. The 2022 bear market was somewhat unique: over 100% of the year's Index declines were due to multiple compression, as earnings estimates increased despite the macro backdrop. This was primarily due to the pronounced spike in rates, although some part should also be attributed to concerns about forward earnings estimates being too high. According to Credit Suisse's U.S. return decomposition study for 2022 (I addressed the study in the second quarter letter), for the full-year P/E (price-to-earnings) multiple compression accounted for 113% of the S&P 500 Index's 2022 plunge and 103% of the drop in growth stocks (they used the Russell 1000 Growth Index). The S&P 500 Index fell 19.4% (on a price return basis), with EPS growth contributing +3.1% and P/E compression of -21.9%; the Russell 1000 Growth Index dropped 29.8% (also on a price return basis), with EPS growth contributing +1.3% and P/E compression of -30.7%. Such multiple compression over the course of one year is a long-tail event in the history of the markets.

As I write in mid-January, the market (i.e., human investors and traders that personify the market) continues to gyrate as it incessantly debates whether inflation has peaked and how fast or slow might it decline; how high the Fed will go and when it might pause and/or pivot; the likelihood of a soft

*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. Gross performance figures do not reflect the deduction of investment advisory fees and any other expenses incurred in the management of the investment advisory account. 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 and one wrap account program managed by BCM. The Strategy invests mainly in growth companies of all sizes located throughout the world.*

*BAMCO and BCM claim compliance with the Global Investment Performance Standards (GIPS®). To receive a complete list and description of the Firm's Strategies or a GIPS Report please contact us at 1-800-99BARON. GIPS® is a registered trademark owned by CFA Institute. CFA Institute does not endorse, promote or warrant the accuracy or quality of the report.*

**The 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. Returns could be reduced, or losses incurred, due to currency fluctuations.**

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

<sup>1</sup> The **Russell 3000® Growth Index** measures the performance of the broad growth segment of the U.S. equity universe comprised of the largest 3000 U.S. companies representing approximately 98% of the investable U.S. equity market 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 in an index.

<sup>2</sup> Not annualized.

<sup>3</sup> The Strategy has a different inception date than its underlying portfolio, which is February 29, 2000.

# Baron High Growth Strategy

landing versus how long and deep a recession might be; and whether Street 2023 earnings estimates for the S&P 500 Index and individual companies are low enough yet. The market bottomed in mid-October and rates (the U.S. Treasury 10-Year yield) topped around the same time. Are those inflections the hoped-for peak and valley? Inflation readings have been falling and the December core CPI reading yielded an annualized rate of 3.1% over the trailing three months. Will inflation continue to drop and when will it hit the Fed's 2% target?<sup>1</sup> The Fed dot plot and member rhetoric is pointing to further increases in the Fed Funds rate to a level over 5% and staying there through year end; yet the market is pricing in cuts later this year. What will the Fed do and what impact will it have on market rates and financial conditions? Current consensus from market participants and most economists is that a recession looms. But will the economy stick a soft landing, or will a recession be short and shallow or long and deep? We don't know the answers to these questions, and don't believe anybody does. We stay well informed of the analyses and forecasts of smart and experienced experts on these issues, but the range of plausible projections and outcomes is so wide you could drive the proverbial truck through them. We are not taking that drive. While in all candor I am on the more positive side of these issues for growth investors, we continue to discipline ourselves not to make portfolio decisions based on macro projections.

Instead, we manage the Strategy based on what we can control: our long-term investment philosophy, processes, research, analysis, judgment, and portfolio management decisions. Our points of differentiation at Baron are our in-house research and time/duration. The second shapes and distinguishes the first, because the focus of our research and analyses is on long-term durable growth as opposed to near-term results. The second also enables us to prioritize long-term returns, rather than trying to predict and trade the short-term blowing of the market, economic, and geopolitical winds. Ron and our Firm have done this for 40 years, and I can cite the wisdom of other investor luminaries on this score. Warren Buffet, crediting his mentor Benjamin Graham, has observed "In the short run, the market is a voting machine, but in the long run, it is a weighing machine." In the same vein, Oaktree founder Howard Marks, addressing the current macro and market debates, recently warned (as we have) against trying to call "macro events" and engaging in short-term trading, stating: "[I]n the short term, the ups and downs of prices are influenced far more by swings in investor psychology than by changes in companies' long-term prospects. Because swings in psychology matter more in the near term than changes in fundamentals – and are so hard to predict – most short-term trading is a waste of time...or worse."<sup>2</sup> We subscribe to the weighing-machine approach, we believe stocks are properly viewed as ownership interests in businesses, we view time/duration as an advantage. We invest in durable growth businesses, which get larger and *gain weight* – revenues, earnings, cash flow – over time. We seek to find businesses that will grow faster for longer and generate *heavier* loads of earnings and cash flow as time goes by.

We continue to focus on undeniable and powerful underlying secular growth trends disrupting industries and driving significant growth opportunities for our investments. Our research confirms that the secular trends we emphasize are intact and will drive outsized growth even during this period of economic headwinds, but we recognize no secular trend, industry, or company is immune. So on top of our primary focus on long-term growth

opportunities and durability,<sup>3</sup> we have also been scrutinizing how macro resilient our companies will be, as well as the likelihood their businesses will accelerate once the economy turns. We have been favoring companies with the best balance of sustainable long-term growth and macro resilience, as well as business models that will turn that growth into material free cash flow (FCF) and earnings. Moreover, we are carefully checking every aspect of our financial models and projections, including running downside scenarios. We are conservatively and prudently establishing price targets (now using multiples at the lower end of what we believe are appropriate ranges, rather than median/average multiples), calculating downside cases, and seeking stocks with compelling risk/reward balances. Based on these efforts, we believe our portfolio of secularly driven, rapidly growing, competitively advantaged, cash-flow generative businesses are attractively priced against their long-term opportunities. As I have explained about our price target work in these letters many times, I color code our price targets: blue for 15% to 20% internal rates of return and green for 20%-plus. Given the recent compression in valuations and decline in stock prices, our price target sheet is flashing blue and green. Even in our downside scenarios, we see many companies offering double-digit long-term annualized returns.

We have tactically responded to the sell-off by endeavoring to optimize our portfolio carefully and pragmatically by buying or adding to businesses that possess the key criteria described above and in our recent letters. Since we are not trying to find bottoms, we are buying or adding when our target companies are in our "buy zones" based on the price target work just described – we start buying or adding at the top of our buy zone and buy/add more aggressively if our targets fall lower in the zone. For example, this year we took advantage of the significant weakness in semiconductor stocks to materially build that part of our portfolio (we ended 2022 with a semiconductor sub-industry weighting of 8.4% vs. 5.4% last year), as we believe the secular trends around cloud computing, accelerated computing, Internet of Things, including automobiles, and artificial intelligence (AI) are only accelerating and the long-term demand for powerful and efficient chips extend as far as our research eyes can see. Moreover, in market and economic environments like these, we have observed and experienced that the strong get stronger, particularly for well-managed and well-capitalized companies that continue to invest in themselves. We constantly hear that enterprises are looking to consolidate their information technology spending with larger platforms (multi-product, multi-service offerings) and fewer vendors. We have been "feeding the strongest members of our herd" and sometimes reluctantly trimming or selling the weaker members, as part of our upgrade effort. We concentrated the portfolio significantly in 2022 and ended the year with 45 unique company investments (down from 63 at the beginning of the year). Among others, during the fourth quarter we initiated or added to:

Software: **Ceridian HCM Holding Inc., GitLab Inc., Datadog, Inc., Guidewire Software, Inc., HubSpot, Inc., Cloudflare, Inc., and Workday, Inc.**

Semiconductors: **Advanced Micro Devices, Inc., indie Semiconductor, Inc., ASML Holding N.V., Monolithic Power Systems, Inc., and NVIDIA Corporation.**

Electric Vehicles: **Tesla, Inc.**

Biotechnology/Pharmaceuticals: **Rocket Pharmaceuticals, Inc.**

<sup>1</sup> Technically, the Fed's target is based on readings for PCE (the Personal Consumption Expenditures Price Index), not CPI (the Consumer Price Index).

<sup>2</sup> See Howard Marks' memo to Oaktree Clients, entitled "What Really Matters?" I found this a great read and I recommend it to all long-term investors.

<sup>3</sup> Our "faster-for-longer" based on our assessments of total addressable markets (TAM); low penetration of TAMs and/or multiple TAMs (second or third acts); sustainable/durable competitive advantages; favorable competitive environments; product-market fit; go-to-market efficiency; etc.

In addition, we have persisted in our efforts to exploit market weakness in a second way: engaging in prudent tax management. By the end of the year, we had locked in \$170 million of net tax-loss carryforwards, quite material given our current assets under management, which we will be able to use to shield taxable gains in more positive market environments. For non-taxable investors, our goal and discipline in this effort was to accumulate material net tax-loss carryforwards without impacting portfolio performance.

We're often asked whether this is a good buying opportunity for our Strategies and growth stocks. Given our qualitative research, financial projections, and price target work discussed above, as I have addressed in my recent letters and Ron has done in his Letters from Ron, the answer we give is yes. The only caveat is "yes...for long-term investors," because we avoid even attempting to engage in market timing and have addressed its perils, and don't know whether improved returns will show this quarter, next quarter, in the second half, or next year. The bears in this debate point to the Fed, the recession, and earnings estimates still being too high. A couple of quick responses. First, while I have no view on S&P 500 Index earnings, the so-called technology industries we emphasize in our portfolio – software, electric vehicles (EVs), and now semiconductors – have been acting as if we've been in a recession for over a year now. Stocks have sharply retreated, multiples have compressed, and forward numbers (company guidance and Street estimates) have come down. Have multiples and numbers come down enough? Hard to say precisely. But across these technology industries, multiples have compressed below long-term average figures – before the pandemic and consistent with higher interest rates – on both absolute and growth-adjusted bases. And numbers have come down significantly – companies expected to be 50%-plus growers in 2023 are now projected to be in the low to mid-30% range; the 30% to 40% growers are now projected to be in the low to mid-20% range and even the high teens – and forward projections for 2024 and 2025 appear reasonable and even conservative. I will never call "the" bottom in short-term fundamentals or stock prices, but we have run fact-based and pragmatic scenarios across our investments, and believe we are much closer to the bottom, if not already there, and at stock-price levels where the risk/reward and upside-downside is in our favor, particularly over the long term (to be clear, by that I mean two- to three- year returns, not five or 10). Second, when you consume so-called expert opinions regarding market performance in relation to recessions, don't discount the fact that, if it happens, this recession is likely the most widely anticipated, predicted, and forecasted recession in human history, a lot is already priced into the market, and so this time might be different.

We are also often asked about our opinion on growth vs. value. First, growth has significantly underperformed value recently, particularly at the large-cap end of the spectrum. Last year, the Russell 1000 Growth Index lagged the Russell 1000 Value Index by almost 22%, and the Russell 3000 Growth Index trailed the Russell 3000 Value Index by 21%.<sup>4</sup> So the inevitable principle of "reversion to the mean" augurs well for growth.<sup>5</sup> Second, while market leadership inevitably cycles, we remain convinced that durable/secular growth will lead the market more often. Longer-term market and stock returns are driven by growth in earnings (and FCF) and dividends. Multiples

fluctuate up and down, but always revert to the mean over time. So, you need sustainable (as opposed to cyclical or one-time) expansion of a company's "E" (earnings/FCF) to yield a reliably higher P, or price. Durable expansion of a company's earnings or cash flow power can only be driven by profitable top-line growth – our "faster-for-longer" dictum. Third, the tables below are comparisons I monitor on a regular basis – a select group of our higher-scaled digital transformation winners, which account for about 41.1% of our portfolio, versus a select set of large-cap Consumer Staples and less discretionary leaders that we do not own in the Strategy. As you can see, the digital transformation leaders trade at lower enterprise value to FCF multiples despite higher growth and more profitable (cash generative) business models.

**Table II.**  
Select Digital Transformation Leaders (portfolio holdings)

	2024 Street Estimates			
	Revenue Growth	FCF Growth	FCF Margin	EV/FCF Valuation
Microsoft Corporation	14%	20%	34%	20x
Alphabet Inc.	13%	19%	27%	13x
Amazon.com, Inc.	14%	117%	7%	25x
NVIDIA Corporation	21%	42%	37%	33x
Tesla, Inc.	30%	37%	11%	29x
ASML Holding N.V.	14%	9%	24%	35x
ServiceNow, Inc.	22%	28%	32%	25x
Workday, Inc.	18%	29%	24%	20x
Electronic Arts Inc.	7%	12%	28%	14x
<b>Average</b>	<b>17%</b>	<b>25%<sup>6</sup></b>	<b>25%</b>	<b>24x</b>

Based on FactSet Estimate data as of 1/19/2023.

**Table III.**  
Select Large Cap Consumer Staples/Less Discretionary Leaders

	2024 Street Estimates			
	Revenue Growth	FCF Growth	FCF Margin	EV/FCF Valuation
Procter & Gamble Company	4%	9%	18%	25x
Coca-Cola Company	5%	0%	23%	26x
PepsiCo, Inc.	5%	15%	11%	28x
NIKE, Inc.	9%	25%	11%	32x
Starbucks Corporation	11%	12%	10%	35x
Mondelez International, Inc.	3%	7%	12%	28x
Colgate-Palmolive Company	4%	-1%	14%	26x
Hershey Company	4%	27%	16%	28x
Constellation Brands, Inc.	7%	15%	16%	32x
<b>Average</b>	<b>6%</b>	<b>12%</b>	<b>15%</b>	<b>29x</b>

Based on FactSet Estimate data as of 1/19/2023.

<sup>4</sup> In 2022, the Russell 1000 Growth Index fell 29.14% while the Russell 1000 Value Index dropped 7.54%; the Russell 3000 Growth Index fell 28.97% and the Russell 3000 Value Index dropped 7.98%.

<sup>5</sup> Credit Suisse found that the relative performance of the value factor in 2022 was "the greatest outperformance since 2000-01." The same report articulated three "major headwinds" for the value factor in 2023: (a) EPS growth for low P/E value stocks "are more depressed than normal relative to high P/E [growth] stocks"; (b) high P/E growth stocks "have corrected substantially, removing their premium valuation"; and (c) "interest rates – a major catalyst for last year's outperformance – are less likely to rise in the year ahead."

<sup>6</sup> Amazon is excluded from the FCF growth average shown in the table because it is an outlier and skews the calculation. The average including Amazon is 35%.

# Baron High Growth Strategy

The public release of ChatGPT shook the world and may prove to be a seminal/inflection point moment in the adoption of AI. Launched as a free prototype to the public on November 30, 2022, ChatGPT is a sophisticated chatbot from OpenAI, built on top of a family of large language models (LLMs), that responds to text inputs and provides articulate answers in a detailed, natural language manner never seen before by the wider public. Use cases include writing natural answers, writing “creatively” (e.g., poems in the style of your choice), auto-completing and debugging code, summarizing long text, having conversations, etc. LLM’s like ChatGPT, as well as text-to-images models like DALL-E, also from OpenAI, are a type of AI referred to as Generative AI.

ChatGPT reached one million users faster than any digital service in history. Among other things, Generative AI will lower the barriers to creation, expression, worker productivity, software development, and access to understandable information. On the other side, schools and parents are already debating how to stop their children/students from using ChatGPT to write papers and help with homework, and ChatGPT could be a risk to Google if people start to enter queries on ChatGPT instead of search.<sup>7</sup>

We have been investing in AI for years. We acknowledge there might be a little hype around ChatGPT, but we have long been believers that AI is the next major secular tectonic shift, like mobile and cloud, and will be the most compelling force to power technology innovation and impact human life over the next decade. At its most basic, AI refers to computerized systems that mimic human intelligence, such as thinking, perception, acting, and reasoning.<sup>8</sup> We have all been benefiting from AI for the last decade. Well-adopted use cases include recommendations of search results on Google; videos to watch on YouTube, Netflix, TikTok, and Reels; products to buy on Amazon and other e-commerce sites; songs or podcasts to listen to on streaming services like Spotify; and what ads to show users on mobile applications, internet sites, and connected TV services. Autonomous driving systems, like Tesla’s Autopilot and Cruise Automation’s robo-taxi service, are also based on AI.

Below is a partial list of the secular megatrends we focus on:

- Cloud computing
- Software-as-a-service (SaaS)
- Artificial Intelligence
- Mobile
- Semiconductors
- Digital media/entertainment
- Targeted, people-based digital advertising
- E-commerce
- Genomics
- Genetic medicine
- Minimally invasive surgical procedures
- Cybersecurity
- Electric-drive vehicles/autonomous driving
- Electronic payments

<sup>7</sup> Google Search, however, is globally scaled and free to billions of users, while OpenAI’s founder has described ChatGPT’s cost-per-query as “eye watering;” search results are real-time not static; and only 20% of Google searches are commercial enough to be monetized; and Google is itself an AI innovator and will likely launch its own generative AI services. But we are watching and researching carefully.

<sup>8</sup> Other terms that you may have heard, such as machine learning and deep learning, are more advanced subsets of AI. Machine learning describes systems that apply algorithms to large data pools to perform specific tasks by learning from patterns in the data. Deep learning requires less human input to target relevant data sets; rather the computerized system automatically organizes and extracts intelligence from the raw data, improving results rapidly and iteratively without human intervention.

**Table IV.**

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

	Percent Impact
Gartner, Inc.	0.91%
NVIDIA Corporation	0.61
Microsoft Corporation	0.57
Mastercard Incorporated	0.49
Visa, Inc.	0.48

Shares of **Gartner, Inc.**, the world’s largest provider of syndicated research, contributed to our results in the quarter. Gartner is a business that we have been investing in for over 15 years, counting among the Strategy’s longest tenured investments, and it ended the year as our largest overweight versus our primary benchmark. Over the course of our involvement, we have witnessed Gartner expand from exclusively providing insights on the technology sector to also addressing human resources, finance, sales, marketing, and legal professionals. As a result, we estimate that Gartner’s research TAM now exceeds \$100 billion of annual recurring revenue, at least 25 times larger than its current business. Gartner sells its research on a subscription basis with annual contract terms and upfront cash payments, creating valuable recurring revenue streams with high retention rates and verifiable pricing power. Its business model carries high incremental margins, as its research can be written once but resold indefinitely with minimal incremental costs. As a result, Gartner is extremely cash generative, which management has deployed to make acquisitions and to repurchase stock. In the quarter, Gartner shares responded positively to the company’s sustained business momentum despite growing concerns over macroeconomic conditions. For the third quarter, Gartner grew its research contract value at 14.5%, including 12.7% growth in its Global Technology Services practice and 21.4% growth in its Global Business Services practice. Margins meaningfully exceeded expectations despite growing investments across the company, driven by Gartner’s strong unit economics and high incremental margins. Finally, cash flow continued to meaningfully exceed net income, with the company allocating \$1 billion to share repurchases through the first three quarters of the year.

**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 over 20% during the fourth quarter because of continued resilience in the company’s data center segment, which beat expectations and grew more than 30% year-over-year, driven by robust demand for accelerating computing graphic processing units (GPUs) to power data-intensive, AI, and cloud workloads. Along these lines, the company announced an agreement with Microsoft and Oracle, in which it will go to market together with these cloud providers, getting a revenue share for the usage by Microsoft/Oracle end customers of NVIDIA GPUs in the cloud as well as NVIDIA’s AI Enterprise software suite as a service. This strategic announcement should both reduce hurdles for AI adoption in vertical industries as well as drive incremental usage-based, high-margin revenues for NVIDIA. In addition,

OpenAI's ChatGPT uses NVIDIA GPUs to train its models and runs on NVIDIA GPUs in the Microsoft Azure cloud to provide its answers. We continue to believe that NVIDIA's end-to-end AI platform – both GPUs and increasingly high-margin software – and its leading market share in gaming, data centers, and autonomous machines, along with the size of these markets, will enable the company to grow faster-for-longer for years to come.

Shares of mega-cap software company **Microsoft Corporation** outperformed despite a mixed fiscal first quarter due to macro challenges that negatively impacted results and guidance, including foreign exchange headwinds, weakening PC demand, and a cyclical slowdown in advertising spending. Total revenue beat Street expectations at 16% constant-currency growth (vs. estimates of 14%), but its Azure cloud computing business missed analyst projections by 1% for the second straight quarter, though it still grew a robust 42% year-over-year, as Microsoft helped its customers optimize existing workloads due to the macro backdrop. While the optimization of workloads is a short-term headwind, we believe it is the right thing to do and should help drive more consumption with customers over time. Our research continues to indicate that the longer-term secular trend of cloud computing remains healthy and intact. For example, in its fourth quarter CIO survey report, Morgan Stanley showed, among other things, that cloud computing was the second highest CIO spending priority (behind only security software), that cloud application workloads were expected to increase from 27% of total workloads today to 46% by the end of 2025, and that Azure was listed as the preferred cloud vendor and likely to take share over the short and long term.<sup>9</sup> Additionally, Microsoft is positioned to be a prime beneficiary of ChatGPT. Microsoft invested \$1 billion in OpenAI in 2020 and is rumored to be considering investing an additional \$10 billion for a 49% stake in the company. Moreover, ChatGPT runs on Microsoft's Azure platform, and Microsoft recently announced the general availability of its Azure OpenAI Service enabling Azure customers to access advanced AI models, including ChatGPT itself soon. We remain bullish on Microsoft's long-term opportunity in the cloud, and believe AI has the potential to be additive to growth for years to come.

Shares of global payment network **Mastercard Incorporated** outperformed after reporting strong quarterly results with 15% revenue growth and 13% earnings 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 are lifted. Major foreign currencies strengthened toward the end of the quarter, which should support future growth. We continue to own the stock due to Mastercard's long runway for growth and significant competitive advantages.

Shares of global payment network **Visa, Inc.** outperformed after reporting strong quarterly results with 19% growth in revenue and earnings, despite currency headwinds and the suspension of operations in Russia. Payment volume grew 16% in local currency, excluding Russia and China, with notable strength in cross-border volumes as international travel rebounded. Management also provided encouraging guidance for the next fiscal year. We continue to own the stock due to Visa's long runway for growth and significant competitive advantages.

<sup>9</sup> Microsoft Azure was the top vendor "you are using or likely to use in managing your hybrid cloud environment" at 46%; as well as the top "preferred public cloud vendor" today and for the next three years at 38% and 48%, respectively; and the top vendor "with largest gain or loss of incremental share of IT budget as a result of the shift to the cloud in 2023" at a net figure of 40%. Amazon was the second ranked vendor on all these surveys at 17%, 31%, 34%, and 24% net, respectively.

**Table V.**

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

	Percent Impact
Tesla, Inc.	-3.13%
Amazon.com, Inc.	-1.53
Rivian Automotive, Inc.	-1.10
ZoomInfo Technologies Inc.	-0.86
CrowdStrike Holdings, Inc.	-0.70

**Tesla, Inc.** designs, manufactures, and sells EVs, related software and components, and solar and energy storage products. Shares underperformed due to growing concerns regarding delivery volumes and vehicle pricing dynamics, as global demand appeared to be impacted by widespread macro weakness, COVID outbreaks in China, and higher interest rates (impacting vehicle financing). In addition, following the closing of CEO Elon Musk's acquisition of Twitter, Elon has dedicated a material portion of his time to that business, sold Tesla shares to fund the transaction, and attracted controversy regarding his public tweets and management of Twitter. Moreover, following a couple of years in which the industry, and Tesla, benefited from elevated prices due to robust demand in a supply-constrained environment, Tesla recently reduced prices across all key geographies. Despite these issues and concerns, which we take seriously and are carefully researching, our long-term investment conviction in Tesla remains intact, we believe Tesla's stock has been oversold and the current valuation is compelling, and we added to our position during the fourth quarter. Several points:

(1) We remain confident in Elon as Tesla's CEO and leader, and the highly capable and trusted management team working alongside him. While we don't align with everything Elon says and does, given our long-term investments in Tesla and SpaceX, we know him to be a leader and visionary, and to possess a unique skillset and mission-driven perspective to drive amazing innovations others thought impossible, across rocket launches and landings, EVs, battery storage, autonomous driving, robotics, and more.

(2) Tesla ended the third quarter with just under \$22 billion of cash with effectively no recourse debt, it is expected (by the Street) to generate over \$4 of run-rate earnings in the fourth quarter, it has generated \$9 billion of FCF over the trailing 12 months, its near- and long-term earnings and cash flow power remains robust, and it has proven EV unit economics with its Model 3/Y line of vehicles achieving a high of \$15,000 of gross profit per vehicle (ex all credits). Tesla will exit 2022 with a production rate of approximately two million vehicles and will end 2023 at a far higher level with the ramp of its new, localized, and more efficient factories in Texas and Berlin. In 2022 EV sales accounted for 10% of the global automotive market, and Elon's public target for Tesla is to sell 20 million EVs by 2030. With its scale, brand, direct-to-consumer model, unit level economics, balance sheet, superior product lineup, manufacturing efficiencies, Cybertruck launching later this year, and a lower-priced model with a \$20,000 production cost launching next year, we think Tesla's management made the correct aggressive and disruptive move to lower prices and take market share, capitalizing on the relative weakness of its legacy automotive and far smaller EV competitors, as well as substantial consumer incentives in the U.S. under the Inflation Reduction Act (IRA). We always expected

# Baron High Growth Strategy

Tesla to reduce pricing as driving volume is a key strategy for the company, and the high-margin software (autonomous driving) and robo-taxi opportunities inside of a larger fleet are substantial. We believe Tesla should be able to sell approximately four to five million EVs by mid-decade. Already, reports from all around the world of spiking consumer orders for Tesla vehicles abound.

(3) We believe the IRA will materially benefit Tesla's U.S. operations. Tesla currently holds roughly 60% of the EV market share in the U.S., making it by far the largest EV producer in the region. The IRA will offer 10% to 15% price reductions (tax rebates) for eligible consumers on eligible vehicles, and potentially even more for commercial customers. On top of that, the IRA's production tax credit of \$45 per kilowatt hour can imply a roughly 30% cost reduction in the battery, the most expensive component in Tesla's cost of production.

(4) Tesla has several long-term growth drivers viewed as not much more than options by the Street, including full self-driving, robo-taxis, commercial battery storage, and autonomous robots.

**Amazon.com, Inc.** is the world's largest retailer and cloud services provider. Shares of Amazon were down in the quarter, as the company guided to relative weakness in margins and its cloud business, due to the same macro headwinds and optimization trends impacting Microsoft Azure. We believe that Amazon is well positioned to improve profitability back to historical levels, particularly in its core North American retail division. We have already seen some of this play out with reports of Amazon's increased cost discipline and broad-based layoffs. Particularly within the internet and software sectors, we believe Amazon can sustain premium growth compared to the rest of the market, given its competitive strengths and scale. Longer term, Amazon has substantially more room to grow in e-commerce, where it has less than 15% penetration in its TAM, and cloud, where it is a clear leader in the vast and growing cloud infrastructure market.

Shares of **Rivian Automotive, Inc.**, a U.S.-based EV manufacturer, negatively impacted our results in the fourth quarter. Regardless of seven-fold growth in its monthly production rate between late 2021 and the fourth quarter, the stock remained under pressure. This was due, in part, to overall market dynamics, and Tesla's decline impacting recent trading across the entire EV category. Moreover, despite an attractive long-term opportunity and favorable product reviews by customers and industry experts, investors remain concerned about liquidity risks as the company burns cash during its early production stage while unit economics remains challenged. Vehicle sales through the end of 2023 will be at Rivian's legacy vehicle pricing, which was set before inflationary and supply-chain pressures emerged last year across the entire automotive space. New pricing and improved unit economics should be realized in 2024, and Rivian is slated to launch its R2 vehicle line in 2026. We have adjusted Rivian to a smaller position in our portfolio. Despite near-term macro and execution risks, we do believe that Rivian's current valuation offers attractive long-term returns. During the year, we will remain focused on Rivian's

production ramp, vehicle demand, unit-level economics, cost controls, as well as progress on its R2 vehicle platform, its next-gen Enduro electric motor, and its battery system advancements.

**ZoomInfo Technologies Inc.** provides go-to-market business intelligence software. Shares of ZoomInfo detracted from performance after the company shared a weaker top-line outlook driven by meaningful macro weakness compounded by exposure to certain verticals, like software. We have researched and spoken to the company and industry experts in detail last quarter to assess short-term macro risks versus our longer-term growth thesis. We continue to closely monitor ZoomInfo's progress in overcoming elongated sales cycles in the current environment and test our conviction that they will be able to drive premium growth over time as it continues to innovate and make smart acquisitions to establish the company as the only broad platform vendor in its space.

**CrowdStrike Holdings, Inc.** is a market leading cloud-native cybersecurity vendor. Shares declined on the back of a weaker-than-expected earnings report, in which revenue beat Street expectations but net new annual recurring revenue (ARR) slightly missed consensus due to elongated sales cycles that impacted deals with small- and medium-sized businesses (SMB) and phased start dates with larger customers. For example, instead of 100,000 end-points starting on day 1, start 75,000 on day 1 and 25,000 six months later. For fuller context, in the fiscal third quarter, revenue grew 53%, ARR grew 54%, net new ARR was \$198 million vs. expectations about \$20 million higher, and the business generated 30% FCF margins. Accounting for the net new ARR miss, the company offered conservative initial guidance for fiscal year 2024 (ending January 2024), with ARR growth in the low 30s, subscription revenue growth in the low-to-mid 30s, and FCF margins around the 30% level. While this was a painful reset, CrowdStrike noted its SMB win rates had improved, enterprise win rates remained constant, its gross and net retention rates are at best-in-class levels, and its emerging products were experiencing rapid adoption. Despite short-term weakness, Morgan Stanley's fourth quarter CIO survey showed security software projects remained the top CIO priority, and our research continues to indicate that CrowdStrike is one of the few true platforms in the security space.

## PORTFOLIO STRUCTURE<sup>10</sup>

The Strategy invests in secular growth and innovative businesses across all market capitalizations, with the bulk of the portfolio landing in the large-cap zone. The Strategy is categorized as U.S. Large Growth by Morningstar. As of the end of the fourth quarter, the largest market cap holding in the Strategy was \$1.8 trillion and the smallest was \$866 million. The median market cap of the Strategy was \$31.8 billion.

To end the year, the Strategy had \$808.8 million of assets under management. The Strategy had investments in 45 unique companies. The Strategy's top 10 positions accounted for 53.1% of net assets.

Given the market backdrop, flows were negative for the year, a reversal from 2020 and 2021.

<sup>10</sup> Portfolio characteristics, top 10 holdings, 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.

**Table VI.**  
Top 10 holdings as of December 31, 2022

	Quarter End Market Cap (billions)	Quarter End Investment Value (millions)	Percent of Net Assets
Microsoft Corporation	\$1,787.7	\$107.9	14.1%
Alphabet Inc.	1,145.2	49.6	6.5
Amazon.com, Inc.	856.9	40.8	5.3
Gartner, Inc.	26.6	39.5	5.2
NVIDIA Corporation	359.5	33.2	4.3
argenx SE	21.0	30.6	4.0
Visa, Inc.	442.2	27.3	3.6
CoStar Group, Inc.	31.4	26.1	3.4
Tesla, Inc.	389.0	25.9	3.4
Mastercard Incorporated	334.3	24.3	3.2

## RECENT ACTIVITY

**Table VII.**  
Top net purchases for the quarter ended December 31, 2022

	Quarter End Market Cap (billions)	Amount Purchased (millions)
Tesla, Inc.	\$389.0	\$9.4
Rocket Pharmaceuticals, Inc.	1.5	7.2
Advanced Micro Devices, Inc.	104.4	6.0
indie Semiconductor, Inc.	0.9	5.2
X Holdings I, Inc.	–	5.0

For **Tesla, Inc.** see our discussion above.

**Rocket Pharmaceuticals, Inc.** is a biotechnology company focused on the treatment of non-oncological genetic diseases via gene therapy. We are bullish on the company for the four clinical programs in Danon disease, LAL-D, Fanconi Anemia, and Pyruvate Kinase Disorders. We think each program has a high probability of success and can underwrite a few billion in sales for the company during the next few years given the high unmet need for treatment of these diseases.

During the quarter, we added to our position in **Advanced Micro Devices, Inc.** (AMD), a global fabless semiconductor company focusing on high-performance computing technology, software, and products. AMD designs leading high-performance central and graphics processing units (known as CPUs and GPUs) and integrates them with hardware and software to build differentiated solutions for customers. While the company is seeing weakness in its PC business in the short term, we continue to believe AMD will be one of the lead beneficiaries of growing data center infrastructure spending driven by expanded use cases for AI and cloud computing across its product portfolio. AMD's largest share gain opportunity is in its data-center-server CPUs, which continue to take share from incumbent Intel given a superior total cost of ownership proposition driven by better performance per watt of energy consumption across many computing workloads. We also believe Xilinx, a recent acquisition, offers AMD diversification opportunities through which it can benefit from the broader proliferation of semiconductors into all aspects of the industrial and consumer economies.

**Indie Semiconductor, Inc.** is a fabless designer, developer, and marketer of automotive semiconductors for advanced driver assistance systems and connected car, user experience, and electrification applications. We added to our position in the quarter, taking advantage of a sell-off in the stock when the company announced a capital raise to fund future acquisitions. We continue to believe that the automotive semiconductor vertical is attractive as silicon content in cars increases over time and that indie remains on track to deliver profitability by the end of this year while sustaining its rapid pace of growth. Given their track record, we also trust indie's management to deploy its recently raised capital into an accretive acquisition that enhances the company's long-term growth prospects.

We acquired a small position in holding company **X Holdings I, Inc.** in connection with Elon Musk's acquisition of Twitter. We have been closely analyzing and investing in the digital and social media space for years and have interacted with prior Twitter management teams many times. We believe Twitter is a differentiated platform with the real opportunity to become the global (ex-China) "digital town square." We appreciate the current public debate and media discourse around Twitter and Elon. We do not view the investment opportunity in Twitter as short term in any way, but even longer term than our typical investments.

If the Twitter opportunity is executed upon correctly – and we appreciate the weight of that "if" – we believe Twitter should become a materially larger and significantly more profitable business.

**Table VIII.**  
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	\$13.5
Gartner, Inc.	26.6	7.7
Microsoft Corporation	1,787.7	7.7
PAR Technology Corporation	0.8	6.9
argenx SE	21.0	6.6

Our sales of **Gartner, Inc.**, **Microsoft Corporation**, and **argenx SE** were all trims because these stocks performed relatively better than the rest of the portfolio for the year and increased in position size. As you can see in Table IV, each remains a top six position in the portfolio, with Gartner and Microsoft our top two overweights versus our primary index.

**Alphabet Inc.** remains the second largest position in the portfolio, and we continue to be positive on its growth opportunities with search, YouTube, and cloud computing, but we decided to slightly reduce the position size to fund other investments in software, semiconductors, and digital media, and because ChatGPT and/or similar AI-based services present a hard to measure risk to Google's virtual search monopoly.

We sold **PAR Technology Corporation** to fund other software investments.

# Baron High Growth Strategy

## CONCLUSION

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Despite the current uncertain macroeconomic environment, I remain confident in and committed to the Strategy: durable growth based on powerful, long-term, innovation-driven secular growth trends. We continue to believe that non-cyclical, durable, and resilient growth should be part of investors' portfolios and that our strategy will deliver solid long-term returns for our investors.

Sincerely,



Michael A. Lippert  
Portfolio Manager

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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.*

**Risks:** Past performance is not a guide to future performance. The value of investments and income from them may go down as well as up. Your capital is at risk. Securities issued by small and medium sized companies may be thinly traded and may be more difficult to sell during market downturns. Companies propelled by innovation, including technology advances and new business models, may present the risk of rapid change and product obsolescence, and their success may be difficult to predict for the long term. Even though the Strategy is diversified, it may establish significant positions where the Adviser has the greatest conviction. This could increase volatility of the Strategy's returns.

Portfolio holdings are subject to change. Current and future portfolio holdings are subject to risk.

The discussions of the companies herein are not intended as advice to any person regarding the advisability of investing in any particular security. The views expressed in this report reflect those of the respective portfolio managers only through the end of the period stated in this report. The portfolio manager's views are not intended as recommendations or investment advice to any person reading this report and are subject to change at any time based on market and other conditions and Baron has no obligation to update them.