

Q3 2023 | Putnam U.S. Large Cap Growth Equity

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Investing in durable growth themes

Seeking durable growth stocks that can outperform in a variety of economic environments

The Putnam U.S. Large Cap Growth Equity strategy invests in companies with durable long-term growth prospects, high and/or improving capital returns, and a strong ownership culture. Portfolio Managers Richard Bodzy and Greg McCullough, CFA, seek businesses with the ability to grow at above-market rates and to sustain that growth.

Blending investment themes with deep fundamental research

A thematic approach is a distinctive feature of the strategy. The team analyzes global trends, as well as problems and potential solutions, to identify which themes could drive sustained growth for businesses over a multiyear time horizon.

| | | |
|---|--|--|
|  A healthier tomorrow |  Cloud infrastructure and software |  Personalized medicine |
|  Artificial intelligence |  Controlled distribution |  Increased screen time |
|  Digital marketing |  5G connectivity and the Internet of things |  Humanization of pets |
|  The experience economy |  E-commerce and payment processing |  Autonomous and electric vehicles |

These are a few examples of current themes. Themes will change over time.

“ We seek businesses that could become disruptors in their industries with innovative products and services, and significant growth potential. ”

For illustrative purposes only. These are a few examples of current themes. Themes will change over time. No assurance can be given that the investment objective will be achieved or that an investor will receive a return of all or part of their initial investment. Actual results could be materially different from the stated goals. Investors should carefully consider the risk involved before deciding to invest. As with any investment, there is a potential for profit as well as the possibility of loss. Growth stocks may be more susceptible to earnings disappointments, and the market may not favor growth-style investing.

Growth themes and companies that benefit from them



THEME | STOCK

A healthier tomorrow

Across the globe, people are embracing a comprehensive approach to health and wellness. Individuals are prioritizing exercise, diet, and environmental health, and they are seeking greater access to and control over their personal health data. While the theme is focused on individuals, large growth companies can serve as the enablers of change. As demographic trends drive increased awareness of this theme, we expect public policy to support further growth in these markets.

This theme encompasses a wide range of sectors and companies, such as hospital operators, HVAC equipment manufacturers, medical device makers, and workout apparel and skincare brands.

Lululemon Athletica (LULU)

Retailer Lululemon provides products and experiences for consumers seeking a healthy lifestyle.

- According to the CDC, the percentage of time spent on exercise expanded from 14% to 24% between 1998 and 2018. Lululemon, a leader in athletic apparel, should continue to benefit from this trend.
- The company is expanding its offerings, including footwear and men's apparel, and new categories such as hiking, golf, and tennis.



THEME | STOCK

E-commerce and payment processing

The U.S. e-commerce market has grown 16% annually since 2001, and peer-to-peer electronic money transfers have rapidly become more common. Credit card usage for consumer-to-business payments has increased at a steady pace globally. This should continue as regions with less card usage close the gap with North America and Europe.

The digitization of other large payment markets has yet to catch up with the penetration of credit cards in the consumer-to-business market.

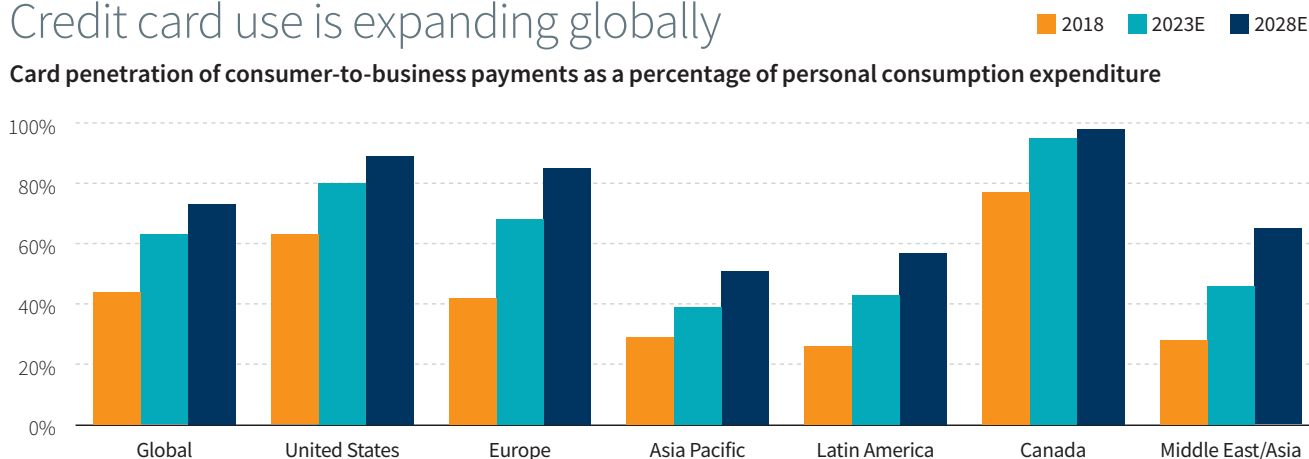
Mastercard (MA)

Mastercard's near-universal merchant acceptance and large consumer base sustains a two-sided network with scale advantages. Mastercard also continues to invest in emerging growth markets within payments.

- Mastercard is accelerating digitization of cash through cards and e-commerce.
- It is expanding value-added services such as fraud monitoring, authentication, and analytics.
- New flows from large payment markets can expand the total addressable market of Mastercard's traditional business.

Credit card use is expanding globally

Card penetration of consumer-to-business payments as a percentage of personal consumption expenditure



Historical volumes are adjusted for European payments regulation, and card penetration data are adjusted for domestic schemes and U.S. private-label card penetration.

Sources: Nilson Report, World Bank, IMF, and Bernstein estimates and analysis.

As of 9/30/23, Lululemon represented 1.39% and Mastercard represented 2.65% of Putnam U.S. Large Cap Growth Equity strategy assets. Exposures are for a representative account within the U.S. Large Cap Growth Equity Composite. Each account is managed individually. Accordingly, account characteristics may vary. Please see the end disclosures for important information about the references to specific investment advice and inclusion of individual companies.



THEME | STOCK

Artificial intelligence

Generative AI is advancing at a remarkable pace and leverages massive computing power. Immediate AI beneficiaries include semiconductor and cloud service companies, but there is meaningful potential for future applications across many other sectors.

AI is exciting because many of the potential winners (and losers) fit squarely in the large-cap growth investable universe.

NVIDIA (NVDA)

We believe NVIDIA is set to benefit from the huge compute capacity required to enable generative AI workloads. As of today, it is the only supplier of the graphic processing units (GPUs) that are needed to run generative AI.

- NVIDIA was already generating \$15 billion — about 50% of its total revenues — from AI demand, and we believe generative AI will act as an additional leg of the growth stool.
- One key advantage is the strength of NVIDIA's parallel processors, which will be used for both model training and inference.
- NVIDIA also has a best-in-class reputation in the gaming community and is the seller for 8 of every 10 discrete gaming GPU purchases globally.



THEME | STOCK

Autonomous and electric vehicles

Electric vehicle penetration is less than 3% of new car sales today, and self-driving vehicles are only in the testing phase. Still, the revenue opportunity for semiconductor companies that supply these end markets is already meaningful and growing at above-market rates.

Beyond autonomous driving, semiconductors are used for a range of features in cars, such as cameras, sensors, and internet connections. The rollout of 5G wireless will increase semiconductor demand for automobiles.

Cadence Design Systems (CDNS)

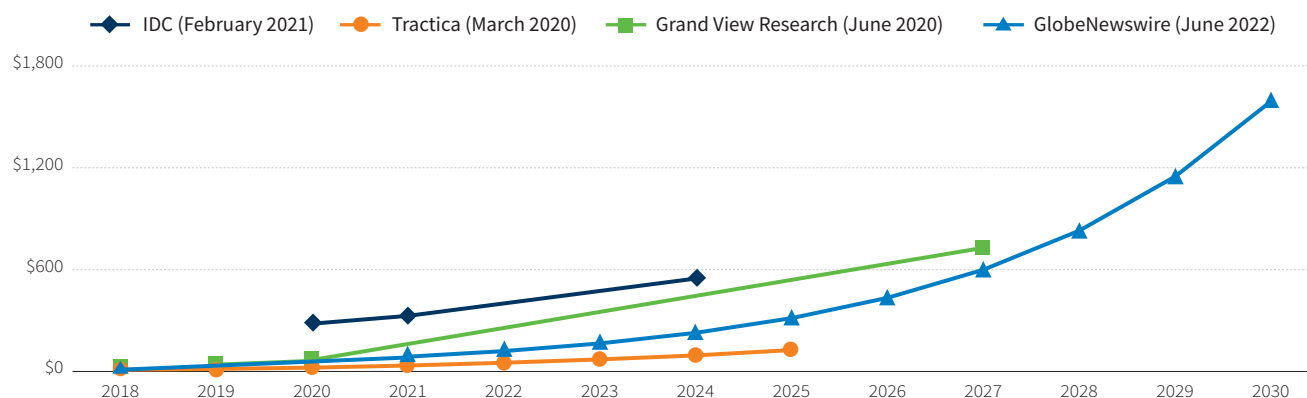
Cadence is the second-largest player in the electronic design automation (EDA) market. The company produces hardware, software, and silicon used to facilitate and enable chip design.

- We expect Cadence to benefit from secular growth trends such as the internet of things, machine learning, autonomous vehicles, and artificial intelligence.
- Cadence stock has been resilient in a variety of market conditions — notably in 2022 — as revenues grew ahead of consensus on strong demand for its software and chip designs.

We believe we are at the start of a multiyear, potentially a decade-long, shift in growth rates for EDA companies.

Artificial intelligence market size/revenue comparisons

Market size and revenue comparison for AI worldwide (actual and projected, 2018 to 2030, in \$B USD)



Sources: IDC, Tractica, Grand View Research, Statista, GlobeNewswire. For illustrative purposes only. This data is not intended to forecast or predict future events and is not intended to be projections of performance. Like the output of any model, this analysis may be subject to limitations, is not guaranteed, and may produce results that diverge from any past or future results.

As of 9/30/23, NVIDIA represented 6.14% and Cadence Design Systems represented 1.87% of Putnam U.S. Large Cap Growth Equity strategy assets. Exposures are for a representative account within the U.S. Large Cap Growth Equity Composite. Each account is managed individually. Accordingly, account characteristics may vary. Please see the end disclosures for important information about the references to specific investment advice and inclusion of individual companies.



THEME | STOCK

Digital marketing

Digital marketing — promoting products or services through electronic devices — is imperative for success in many industries. It enables companies to capture and use customer data to achieve goals such as sales conversions and building brand awareness. Spending on digital marketing has risen as attention has shifted from traditional media to digital platforms.

Companies know the increasing importance of social media, mobile applications, email, search engines, and websites for driving the growth of their businesses.

CoStar Group (CSGP)

CoStar, the dominant information provider for the commercial real estate industry, offers data, tools, listings, and online marketplaces.

- CoStar is used for 80% of all commercial real estate transactions.
- Its top-line growth has been in the mid- to high-teens (primarily organic), with projected earnings growth of 20% over the next two years.
- Its balance sheet has \$4.5 billion in net cash earmarked for M&A.
- We have conviction in the durability of growth and underlying fundamentals of the business.



THEME | STOCK

Increased screen time

People are spending considerably more time consuming content on electronic devices. Mobile device usage is growing rapidly as streaming platforms, newly created apps, social media, gaming, and targeted advertising campaigns increasingly cater to consumers outside the home.

In 2019, for the first time, U.S. consumers spent more time with their mobile devices than they did watching TV, according to eMarketer. Smartphones account for 70% of that mobile time.

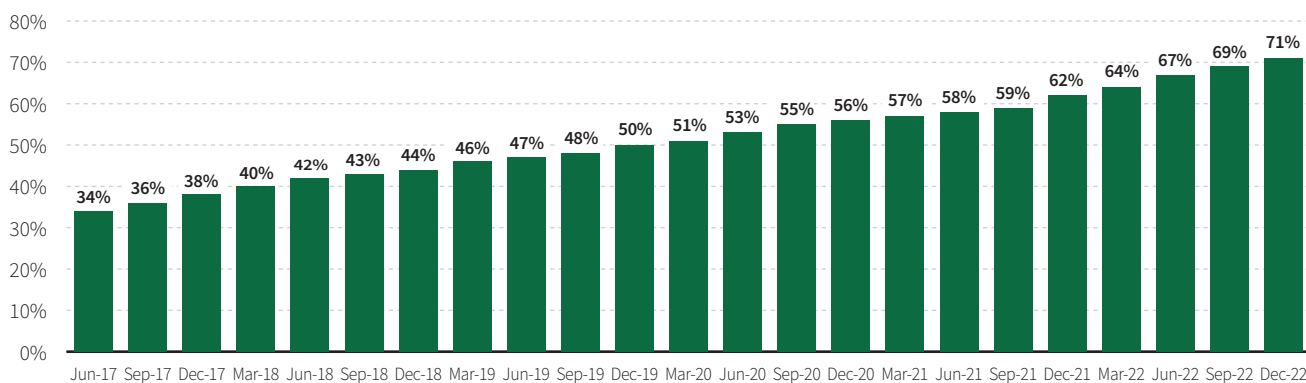
Microsoft (MSFT)

We believe its leadership in operating systems and productivity software creates a long-term structural advantage for Microsoft.

- Over 95% of Fortune 500 companies are Microsoft customers across its PC, productivity, and cloud businesses.
- Its Windows operating system is the largest in the world, currently active on over 1.4 billion enterprise and consumer devices globally. MSFT is estimated to have over 350 million active and paying users of Microsoft and Office 365.
- Its industry-leading user base gives it a tangible advantage as it rolls out generative AI-enabled M365 Copilot and Viva productivity tools.

Microsoft's revenue stream may become more predictable

Recurring revenue as a percentage of sales



Source: Microsoft, most recent data available. Past performance is not a guarantee of future results.

As of 9/30/23, CoStar represented 0.51% and Microsoft represented 12.17% of Putnam U.S. Large Cap Growth Equity strategy assets. Exposures are for a representative account within the U.S. Large Cap Growth Equity Composite. Each account is managed individually. Accordingly, account characteristics may vary. Please see the end disclosures for important information about the references to specific investment advice and inclusion of individual companies.

**THEME | STOCK****Humanization of pets**

Pets have become an increasingly important part of the typical household, receiving the same level of attention, care, and health maintenance as human family members do. Preventative-care treatments and testing for companion animals are growing, along with overall pet ownership levels. Consumer demand for these services is unwavering, and the diagnostic market outside the United States provides another long-term opportunity for growth.

With this theme, we seek to capitalize on the strong and rapidly growing demand for quality pet care.

IDEXX Laboratories (IDXX)

IDEXX is an animal health care company specializing in diagnostic testing, including in-office testing kits for veterinarians.

- The company has a 70% share of point-of-care veterinary facilities, and has been growing its earnings at double-digit rates.
- IDEXX's testing kits, components, and supplies — many of which are disposable items — generate a healthy level of recurring revenue.
- IDEXX operates in a three-player oligopoly market, and the company has spent more on R&D over the past five years than its competitors combined.

**THEME | STOCK****Personalized medicine**

We are in the very early innings of a shift toward a broader application of personalized medicine, where therapies will be targeted to a particular patient based on that individual's DNA, RNA, and genetic composition. Many companies are making great strides in cell and gene therapy to help in the diagnosis and treatment of cancers and genetic diseases.

A patient's genetic makeup will become increasingly more important in the therapy and treatment they receive.

Lonza (LONN SW)

Lonza manufactures small- and large-molecule therapies, and opened the world's largest dedicated cell and gene therapy facility in 2018.

- There are hundreds of cell and gene therapy treatments in various phases of development.
- In order to ramp production and ultimately commercialize these therapies, biopharma companies need contract development manufacturing organizations (CDMOs).
- Rather than trying to forecast at this stage which individual businesses will be successful, we are invested in Lonza, which has a solid CDMO business.

The cell and gene therapy market was valued at \$5 billion in 2021. It is expected to reach \$37 billion by 2027, growing at a compound annual growth rate of 40%.

Source for gene therapy market data: ReportLinker.

As of 9/30/23, IDEXX represented 0.44% and Lonza represented 0.26% of Putnam U.S. Large Cap Growth Equity strategy assets. Exposures are for a representative account within the U.S. Large Cap Growth Equity Composite. Each account is managed individually. Accordingly, account characteristics may vary. Please see the end disclosures for important information about the references to specific investment advice and inclusion of individual companies.



THEME | STOCK

Controlled distribution

An increasing number of retail brand owners are favoring direct distribution — selling their products solely through their own stores or websites. These companies have few, if any, third-party distributors or indirect sales. They rarely have markdowns or outlet stores, and their products won't be found at online retailers like Amazon. The advantage of this business model is that it allows businesses to better control inventory, pricing, promotion, and brand presentation. It also leads to a better, more comprehensive relationship with end customers. As a result, direct sales typically yield higher margins than wholesale, with higher conversion rates.

In our research, one key question we ask is how companies sell and distribute their products and services. Controlled distribution can offer a distinct advantage and is our preferred go-to-market strategy.

Sherwin-Williams (SHW)

Sherwin-Williams's largest segment, The Americas Group, is the leading paint retailer serving U.S. professional paint contractors.

- It employs a direct distribution model, reaching consumers through its 4,000-store network and some large retail partners.
- The company is known for its ability to develop relationships with its customers and offering comprehensive tools and services for professional painters.



THEME | STOCK

The experience economy

This theme is based on a growing preference for experiences over material possessions. More consumers are seeking to spend money on live entertainment and events, luxury travel and destinations, or interactions within social communities.

We believe the appeal of experiences has become more widespread after the pandemic lockdowns in 2020.

This demand, combined with higher levels of personal savings, should help a number of businesses grow at above-market rates for an extended period of time.

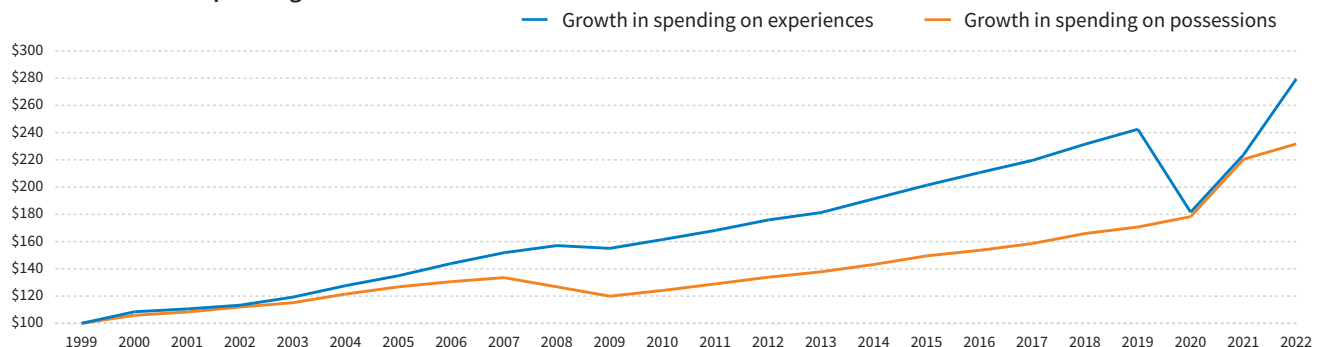
Live Nation Entertainment (LYV)

Live Nation promotes, operates, and manages ticket sales for live entertainment.

- The company sits in an enviable spot as the global leader and toll-taker in a market that grows materially every year.
- It has over 20 of the top 25 global tours, a secondary-ticketing market, double-digit sponsorship and advertising growth, and on-site fan monetization opportunities.
- It was in the eye of the pandemic storm, but we expect it to emerge stronger, with a higher level of profitability and an even greater competitive moat.

Consumers are spending more on experiences

Growth of \$100 in spending



Sources: Baird Research, Bureau of Economic Analysis. Past performance is not a guarantee of future results.

As of 9/30/23, Sherwin-Williams represented 0.94% and Live Nation represented 0.65% of Putnam U.S. Large Cap Growth Equity strategy assets. Exposures are for a representative account within the U.S. Large Cap Growth Equity Composite. Each account is managed individually. Accordingly, account characteristics may vary. Please see the end disclosures for important information about the references to specific investment advice and inclusion of individual companies. Revenue growth does not necessarily translate into positive returns. Securities prices fluctuate in value unpredictably, and returns cannot be predicted with certainty. As with any investment, there is a potential for profit as well as the possibility of loss.

**THEME | STOCK****5G connectivity and the Internet of things**

5G stands for fifth-generation wireless technology, which increases speed and responsiveness and allows users to connect to more devices at once. The transition to 5G will play out in waves globally over the next 15 years. The “Internet of things” is a term that describes the growing number of devices, from phones to wearable products to home security systems, that are connected to the internet and to one another.

The rapid growth in connected devices and systems will drive carriers to invest rapidly in 5G networks.

American Tower (AMT)

This company rents space on towers and rooftop antennas to wireless carriers and broadcasters.

- We believe American Tower offers strong growth potential as companies make the transition to 5G. Also, as demand for 5G accelerates in the health care, consumer, and industrials sectors, even more equipment and tower space will be required.

**THEME | STOCK****Cloud infrastructure and software**

Businesses are increasingly shifting their information technology systems from on-premise databases to cloud storage. The benefits are widely recognized and include reduced costs, enhanced data security, better collaboration, and greater flexibility for employees accessing company documents and data.

The demand for cloud computing is on the rise as more businesses find it essential to transition their on-site data systems.

Oracle (ORCL)

We believe Oracle is poised to benefit from accelerating growth, driven by its Oracle Cloud Infrastructure (OCI) business.

- We believe Oracle is a credible number-four player in cloud infrastructure, with the ability to take share at its current growth rate. Our view was supported by the recent promotion of OCI from “niche” to “visionary” in Gartner’s annual cloud report quadrant.
- Acceleration in OCI is expected to be a double-digit tailwind to organic cloud revenue growth over the next few years.
- The business is also seeing strong momentum from traditional Oracle workloads shifting from on-premise to OCI. This shift is currently less than 50% of new revenues, but the transition is still in the early innings.
- OCI’s network fabric architecture has proven itself in marquee contract wins with leading generative AI startups.

As of 9/30/23, American Tower represented 1.25% and Oracle represented 1.67% of Putnam U.S. Large Cap Growth Equity strategy assets. Exposures are for a representative account within the U.S. Large Cap Growth Equity Composite. Each account is managed individually. Accordingly, account characteristics may vary. Please see the end disclosures for important information about the references to specific investment advice and inclusion of individual companies.

U.S. Large Cap Growth Equity

Annualized composite performance

| | Q3 | YTD | 1 year | 3 years | 5 years | 10 years |
|---------------------------|-----------|------------|---------------|----------------|----------------|-----------------|
| Gross | -4.04% | 26.30% | 28.51% | 5.87% | 12.56% | 15.06% |
| Net | -4.17 | 25.78 | 27.81 | 5.29 | 11.94 | 14.39 |
| Russell 1000 Growth Index | -3.13 | 24.98 | 27.72 | 7.97 | 12.42 | 14.48 |
| Relative return (gross) | -0.91 | 1.32 | 0.79 | -2.10 | 0.14 | 0.58 |
| Relative return (net) | -1.04 | 0.80 | 0.09 | -2.68 | -0.48 | -0.09 |

Composite inception: January 31, 2009.

Annual composite performance

| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 |
|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Gross | -29.72% | 23.69% | 39.77% | 37.94% | 3.13% | 32.13% | 7.50% |
| Net | -30.11 | 23.01 | 39.00 | 37.18 | 2.56 | 31.40 | 6.91 |
| Russell 1000 Growth Index | -29.14 | 27.60 | 38.49 | 36.39 | -1.51 | 30.21 | 7.08 |
| Relative return (gross) | -0.58 | -3.91 | 1.28 | 1.55 | 4.64 | 1.92 | 0.42 |
| Relative return (net) | -0.97 | -4.59 | 0.51 | 0.79 | 4.07 | 1.19 | -0.17 |

Past performance is not a guarantee of future results. An investment in these strategies can lose value. Periods less than one year are not annualized. Performance is stated in U.S. dollars and includes the reinvestment of dividends and interest. Gross performance includes the deduction of transaction costs but does not include the deduction of management fees and other expenses that may be incurred in managing an investment account. A portfolio's return will be reduced by advisory and other fees. Net performance reflects the deduction of a model fee, equal to the actual management fee incurred by a portfolio in the composite or the highest management fee charged to a prospect of the strategy, whichever is higher. Actual advisory fees may vary among clients with the same investment strategy. A composite includes all actual, fully discretionary accounts with substantially similar investment policies and objectives managed to the composite's investment strategy.

Risk characteristics*

| | Portfolio | Benchmark |
|--------------------|------------------|------------------|
| Standard deviation | 20.70% | 21.13% |
| Beta | 0.97 | — |
| Tracking error | 2.67% | — |
| Up capture ratio | 98.64% | — |
| Down capture ratio | 97.57% | — |

* Based on a simple regression of monthly gross returns for past five years versus the benchmark.

Risk statistics are calculated using composite month-end return values.

Portfolio characteristics are for a representative account and are shown for illustrative purposes only. Each account is managed individually. Accordingly, account characteristics may vary.

U.S. Large Cap Growth Equity Concentrated

Annualized composite performance

| | Q3 | YTD | 1 year | 3 years | 5 years | Since inception |
|---------------------------|-----------|------------|---------------|----------------|----------------|------------------------|
| Gross | -4.38% | 25.79% | 26.13% | 4.71% | 12.40% | 16.02% |
| Net | -4.51 | 25.27 | 25.43 | 4.18 | 11.90 | 15.53 |
| Russell 1000 Growth Index | -3.13 | 24.98 | 27.72 | 7.97 | 12.42 | 15.23 |
| Relative return (gross) | -1.25 | 0.81 | -1.59 | -3.26 | -0.02 | 0.79 |
| Relative return (net) | -1.38 | 0.29 | -2.29 | -3.79 | -0.52 | 0.30 |

Composite inception: March 31, 2017.

Annual composite performance

| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017* |
|---------------------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Gross | -31.06% | 24.08% | 37.62% | 40.09% | 6.84% | 18.55% |
| Net | -31.44 | 23.49 | 37.13 | 39.60 | 6.46 | 18.24 |
| Russell 1000 Growth Index | -29.14 | 27.60 | 38.49 | 36.39 | -1.51 | 19.56 |
| Relative return (gross) | -1.92 | -3.52 | -0.87 | 3.70 | 8.35 | -1.01 |
| Relative return (net) | -2.30 | -4.11 | -1.36 | 3.21 | 7.97 | -1.32 |

*Represents performance for the period since inception through December 31, 2017.

Past performance is not a guarantee of future results. An investment in these strategies can lose value. Periods less than one year are not annualized. Performance is stated in U.S. dollars and includes the reinvestment of dividends and interest. Gross performance includes the deduction of transaction costs but does not include the deduction of management fees and other expenses that may be incurred in managing an investment account. A portfolio's return will be reduced by advisory and other fees. Net performance reflects the deduction of a model fee, equal to the actual management fee incurred by a portfolio in the composite or the highest management fee charged to a prospect of the strategy, whichever is higher. Actual advisory fees may vary among clients with the same investment strategy. A composite includes all actual, fully discretionary accounts with substantially similar investment policies and objectives managed to the composite's investment strategy.

Risk characteristics*

| | Portfolio | Benchmark |
|--------------------|------------------|------------------|
| Standard deviation | 20.55% | 21.13% |
| Beta | 0.96 | — |
| Tracking error | 3.48% | — |
| Up capture ratio | 98.25% | — |
| Down capture ratio | 97.57% | — |

* Based on a simple regression of monthly gross returns for past five years versus the benchmark.

Risk statistics are calculated using composite month-end return values.

Portfolio characteristics are for a representative account and are shown for illustrative purposes only. Each account is managed individually. Accordingly, account characteristics may vary.

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