SaratogaRIM

2023 Quarterly Report

July 18, 2023

Q2

Moat Series Part 1: Healthcare Sector

Market Statistics						Source: FactSet (June 30), Federal Reserve, * Spot prices (June 30)	
Stocks		**Yields (%)**				**Commodities**	
DJIA	34,407.6	Fed Funds	5.25	US Tr. 3-Y	4.49	Baltic Dry Index	1,091
P/E ratio	19.16	Disc. Rate	5.25	US Tr. 5-Y	4.13	Gold ($/oz)	1,921.1
S&P 500	4,450.38	Libor 1-Mo	5.22	US Tr. 10-Y	3.81	Silver ($/oz)	22.47
P/E ratio	21.91	US Tr. 1-Y	5.42	US Tr. 30-Y	3.85	Crude ($/bbl)* (NYM Light Sweet Crude)	70.64

Contents	Page
Intro: Moats – The Underlying Force Driving Successful Investment (Connecting the Dots Between Moats, Profitability & Quality)	3
Healthcare: Innovation and Business Moats	7
Trailing 12-Month Investment Results	17
SaratogaRIM Large Cap Quality Focus - Composite Statistics	18
GIPS Composite Report: SaratogaRIM Large Cap Quality Focus	21
SaratogaRIM Large Cap Quality - Composite Statistics	22
GIPS Composite Report: SaratogaRIM Large Cap Quality	25
Disclosures	26

Intro: Moats – The Underlying Force Driving Successful Investment (Connecting the Dots Between Moats, Profitability & Quality)

By Kevin Tanner

SaratogaRIM's investment philosophy dates back nearly thirty years. Our approach has consistently emphasized *quality*, defined generally as financially-sound companies with a long-term propensity to earn above average profitability. Our insistence on quality permeates every step of our process. Consequently, elements of our approach are, by necessity, geared specifically towards the identification and study of economic moats: the sustainable competitive advantages that drive the persistence of extraordinary profitability at both the individual company and industry levels over time.

We've referenced moats frequently in our writings over the years. Our clients understand this construct as a metaphor (one popularized decades ago by Warren Buffett) which describes companies with sustainable competitive advantages – meaning the edges they possess over rivals *plus* the battlements necessary to rebuff persistent onslaughts of competition over time. Identifying and understanding them, we believe, rests at the core of the most effective active equity management strategies over the long-term. "The key to investing is not assessing how much an industry is going to affect society, or how much it will grow," Buffett himself once wrote, "but rather determining the competitive advantage of any given company and, above all, the durability of that advantage."

Per most financial textbooks, such durability should not exist. "There is no free lunch," hardcore efficient market theorists have argued for decades, insisting (mistakenly, we've always contended) that higher returns over time are always and everywhere attributable to higher risks taken. Innovation at one business, their now antiquated argument goes, quickly gets replicated by rivals with perfect information, and rapid adoption sends returns for everyone reverting to the pre-innovation mean. In general, that *is* how market capitalism functions on *most* businesses *most of the time.* Competitive forces press relentlessly onto moat-less companies throughout commodified sectors of the economy, onto makers of most products and providers of most services, as well as onto profitless unicorns pushing untested technologies from Burlingame to Bangalore. In contrast, business moats are very rare and not necessarily obvious – so much so that many scholars dismiss them as mere anomalies.

We've never believed that, and in the decades since we opened up shop, a flood of academic (and third-party) research has validated our approach (see a list of research papers that we believe either directly or indirectly support our investment philosophy following this writing). Indeed, our entire investment strategy is honed to focus on moats, quantify their effects as reflected in key performance metrics, and discern – based on data and the combined wisdom of our investment team – whether a business's competitive advantages are likely to persist far into the future. *Moats, from our perspective, are the single most important driver of long-term investment success.*

Why we believe so has been a recurring theme in our communications with clients since the beginning. To broaden that conversation, it's important to understand that most moats are not manna from heaven. That is, they're not free and they don't happen by accident. And once established, they need to be perpetually nurtured, they need to be developed, expanded, and defended. Those efforts require thoughtful planning, long-term commitment as well as continuous investment and ongoing innovation.

Over the next several quarters, we will publish a series of essays highlighting the efforts the companies that make up your portfolio holdings have taken and are taking today to nurture, fortify, and expand their own business moats. Particular emphasis will be placed on the roles of internal and external innovation. We plan to move sector by sector, beginning with our Healthcare companies as assessed by our lead analyst in that space, Joe Pollard, with assistance from his teammate, Matt Keating. We are excited to share these peeks inside what we believe are some of the world's greatest businesses.

Resist (if you can) the instinct to skip ahead. To preface Joe and Matt's outstanding work, a brief framing of business moats is in order so that readers recognize the common types of moats and fully appreciate the competitive advantages their portfolio holdings enjoy. To be clear, each company's defensive characteristics are specific to that business; some spring overwhelmingly from a single advantage, while others meld two or more moat-supporting attributes. In addition, moats vary in depth (degree of excess profitability) and width (the duration of the competitive advantage). What follows is a conceptual overview that sets a foundational context for the series.

As previously stated, an economic moat describes a company's ability to maintain a distinct, *sustainable* competitive advantage for long periods of time by fending off competitors within its industry. Ultimately, only a very small minority of companies will be able to enjoy long stretches of high relative returns that result from the structural competitive advantages they've created. Even so, the underlying factors that enable great businesses to earn persistently above average profitability have remained remarkably consistent over time.

Charlie Munger lays out the case for investing in companies with moats nicely. "In the long term," Berkshire Hathaway's legendary vice chairman once wrote, "it's difficult for a stock to earn a much better return than the business which underlies it earns. If the business earns a 6% return on capital for 40 years and you hold it for 40 years, you're not going to do much different than a 6% return, even if you buy it at a huge discount. Conversely, if a business earns 18% return on capital over 20 or 30 years, even if you pay an expensive looking price, you'll end up with one hell of a result". Translation: If you're a long-term investor, only invest in companies with moats.

As you would expect, moats derive their efficacy from a variety of sources. These may include *intangible assets* (brands, patents, proprietary technologies), *switching costs* (customers likely won't change providers unless the value proposition of doing so more than offsets a variety of costs such as price, risk, hassle), *cost advantages* (a company that produces a good or service at a lower cost than its competitors given either scale, proximity to customers, or access to low-cost raw materials), *network effects* (when the value of a particular good or service increases for both new and existing users as more customers use that good or service), and *efficient scale* (where markets of limited size are controlled by incumbents). We believe every single one of the companies within our investible universe benefits from one or more of these significant advantages. In fact, it's a prerequisite literally hardwired into our admissions/screening process.

Moat Sources (in order of prevalence)

Source: Morningstar. Note: We began studying moats more than a decade before encountering Morningstar's work, yet nevertheless recognize Morningstar as the thought leader in this field. Consequently, we subscribe to their research, have read their books and draw from Morningstar this section's framing of moat sources because we're unaware of anything better.

Intangible Assets: Intangible assets such as brands, patents, proprietary technology, and regulation represent the most common moat source. The consumer staples and healthcare sectors have the highest proportion of moats from intangibles. Comparatively, intangibles are cited about a third of the time in the industrial, financial, and technology sectors.

- Considerations: Are customers growing more or less willing to pay up for a company's brand? If the firm's moat is built around patents, how easy is it to design around the patents?

Switching Costs: Switching costs represent inconveniences that a customer incurs when changing from one product or service to another. Customers typically won't change providers unless the value proposition of doing so more than offsets a variety of costs. Price, risk, hassle, distraction, psychology, and inertia can all be part of the consideration. Switching costs manifest in a variety of industries where customers have invested time and money to adopt products or services that are important to their purpose, often seen in banking, technology, defense, and healthcare.

- Considerations: How customized is the company's product or service? Is the level of customization within the industry increasing or not? Are technological improvements disrupting the industry and lowering switching costs?

Cost Advantages: A cost advantage is present when a firm can produce a good or service at a lower cost than competitors. It is typically underpinned by scale, proximity to customers, or access to low-cost raw materials. It allows businesses to offer lower prices to secure greater volumes and/or extract higher margins than competitors. Cost advantage is the second most common moat source. It applies frequently in the communication services, consumer defensive, and financial services sectors. Cost advantages are also relatively common across the healthcare, industrials, and consumer cyclical sectors.

- Considerations: Why are the trends within a company's cost structure different than peers in the industry looking forward? Can the company pass through supplier charges in a timely and efficient manner?

Network Effect: Network effects are observed when the value of a particular good or service increases for both new and existing users as more customers use that good or service. Users include

all parties in a network, not just buyers or shoppers, but also suppliers and developers. Network effect is the rarest but most lucrative moat source. Networks can be direct where users lead to more users, or indirect, especially in data networks where Google search users feed more data, which leads to better algorithms and better future results for all users.

- Considerations: What level of engagement does each user have with the network and is this engagement increasing or decreasing? Can customers obtain similar benefits by being part of multiple networks, or is the market designed to support a single winner-take-all market? How is the company capturing the value of each incremental add to its network?

Efficient Scale: Efficient scale applies to firms that serve a market of limited size in which potential competitors have little incentive to enter because doing so would lower the industry's returns below the cost of capital. Few markets are conducive to efficient scale characteristics (regulated utilities, communication services, midstream oil and gas, REITs, railroads, etc.), so it's among the rarest moat sources.

- Considerations: Is the addressable market finite? How many companies serve the industry? What is the cost of entering the market and how much market share would a new entrant have to claim in order to recoup the cost of entry? Have competitors attempted to enter the market and ultimately failed? How is the company's relationship with its regulators? Are new technologies, markets, or other developments encouraging regulators to reconsider their original regulatory assumptions?

Moats in Two Dimensions

Moats can be characterized by depth and width. Depth measures how much excess profit and value a company's moat generates; width is a proxy for time, i.e., how long it might reasonably take for a competitor to cross the moat and steal the crown jewels. For example, imagine a single-asset pharma company with only one treatment – a true blockbuster with a novel mechanism of action that has become the standard of care – but no other products in its pipeline. This business is said to have a deep but narrow moat, given that it generates incredible profits on this breakthrough treatment, but only until the moat dries up as patent-protection afforded its intellectual property, or IP, expires, at which point generic alternatives could drive the company out of business.

In other words, moats aren't static. Rather, they are dynamic structures protecting companies that never stay still. Businesses – great ones, anyway – evolve and innovate constantly, adjust to changing circumstances in real time, often leading critical sectors in the global economy or pathfinding new technologies impacting how we live, work and play.

Being changeable and, to a large degree, idiosyncratic at the company level, studying moats involves mountains of data, advanced technologies, and years of accumulated domain knowledge specific to every company and industry we invest in – all of it updated, tested, retested, and calibrated afresh as new information appears. Our objectives with this series are to add transparency to our process as seen from the clients' perspective and hopefully to share some of the confidence and pride we take in the ownership of what we believe are some of the world's best businesses.

Kevin Tanner
Chairman | CEO | Chief Investment Officer

***

About our Healthcare Team

Between them, Joe Pollard and Matt Keating have been studying the moats of our Healthcare companies at Saratoga Research & Investment Management for over 14 years now. As analysts and portfolio managers, Joe & Matt work together as a team covering the Healthcare sector of our research coverage and have primary responsibility not just for research, but for security selection and position sizing across our various strategies.

Joe is a graduate of Harvard University with degrees in both Neurobiology and Economics. He earned his M.B.A. in Finance from the Wharton School at the University of Pennsylvania, and he is a CFA charterholder.

Matt Keating is also a CFA charterholder. He did his undergraduate work at Cal Poly, San Luis Obispo where he earned his degree in Economics with a Finance concentration. Matt is a recent graduate of Columbia Business School where he earned his M.B.A. He was one of only forty students admitted into the prestigious Value Investing program at Columbia's Heilbrunn Center for Graham & Dodd Investing. He was also selected to be one of the editors of the school's Graham & Doddsville Newsletter. ■

Research Papers

As referenced on page 3, we believe the following academic (or third-party) research papers either directly or indirectly support our investment philosophy (listed in no particular order):

- *Quality Minus Junk* by Clifford Asness, Andrea Frazzini, Lasse Pedersen (2013).
- *The Excess Returns of "Quality" Stocks: A Behavioral Anomaly* by Jean-Philippe Bouchaud, Stefano Ciliberti, Augustin Landier, Guillaume Simon, David Thesmar (2016).
- *The Other Side of Value: The Gross Profitability Premium* by Robert Novy-Marx (2012).
- *Leverage and the Beta Anomaly* by Malcolm Baker, Mathias Hoeyer, Jeffery Wurgler (2019).
- *The Low Beta Anomaly: A Decomposition into Micro and Macro Effects* by Malcolm Baker, Brendan Bradley, Ryan Taliaferro (2013).
- *Benchmarks as Limits to Arbitrage: Understanding the Low Volatility Anomaly* by Malcolm Baker, Brendan Bradley, Jeffery Wurgler (2009).
- *The Low-Risk Effect in Equities: Evidence from Industry Data in an Earlier Time,* Financial Analysts Journal by C. Mitchell Conover, Joseph D. Farizo, Andrew C. Szakmary (2023).
- *Long-term Shareholder Returns: Evidence from 64,000 Global Stocks* by Hendrik Bessembinder, Te-Feng Chen, Goeun Choi, K.C. John Wei (2023).
- *What Is Quality?* Financial Analysts Journal by Jason Hsu, Vitali Kalesnik, Engin Kose (2019).
- *Is the Low Volatility Anomaly Universal?* by Fei Mei Chen, Craig Lazzara (2019).
- *The What, Why, and How of Quality*, Morningstar by Ben Johnson (2016).

Company Overviews & Moat Synopses

On the bottom of pages 10 through 16, you will find a brief synopsis of the formal moat report for each of our healthcare companies outlined below. Full moat reports are available upon request.

Company	Subsector	Overview
Amgen (AMGN)	Biopharma	AMGN is one of the leading biotechnology companies with mature franchises ranging from inflammation to oncology to cardiometabolic as well as a strong pipeline of novel drugs. *Moat Synopsis: Pg. 10*
Becton Dickinson (BDX)	Devices, Diagnostics	BDX is the largest manufacturer of medical surgical products, such as needles and syringes. The company is also a leader in the medical device and diagnostics spaces. *Moat Synopsis: Pg. 11*
Biogen (BIIB)	Biopharma	BIIB specializes in the development of neuroscience-focused treatments with strong existing Multiple Sclerosis and Spinal Muscular Atrophy franchises and a new Alzheimer's Disease therapy. *Moat Synopsis: Pg. 12*
Johnson & Johnson (JNJ)	Biopharma, Devices	JNJ is the world's premier healthcare company with market leading pharma, device, and consumer health segments. J&J is one of only two AAA-rated companies left in the world. *Moat Synopsis: Pg. 13*
Medtronic (MDT)	Devices	MDT is the largest medical device maker with a focus on chronic diseases in acute care settings. Their portfolio is highlighted by pacemakers, defibrillators, surgical tools, and insulin pumps. *Moat Synopsis: Pg. 14*
Novo Nordisk (NVO)	Biopharma	NVO is focused on metabolic disorders, with a commanding lead in diabetes and a first mover advantage in obesity. Novo is buoyed by the powerful demographic trends of increasingly obese and ageing populations worldwide. *Moat Synopsis: Pg. 15*
Roche (RHHBY)	Biopharma, Diagnostics	RHHBY is the world's largest biotech company with a market leading oncology franchise from its Genentech subsidiary and a highly complementary diagnostics segment. *Moat Synopsis: Pg. 16*

Healthcare: Innovation and Business Moats

By Joe Pollard and Matt Keating

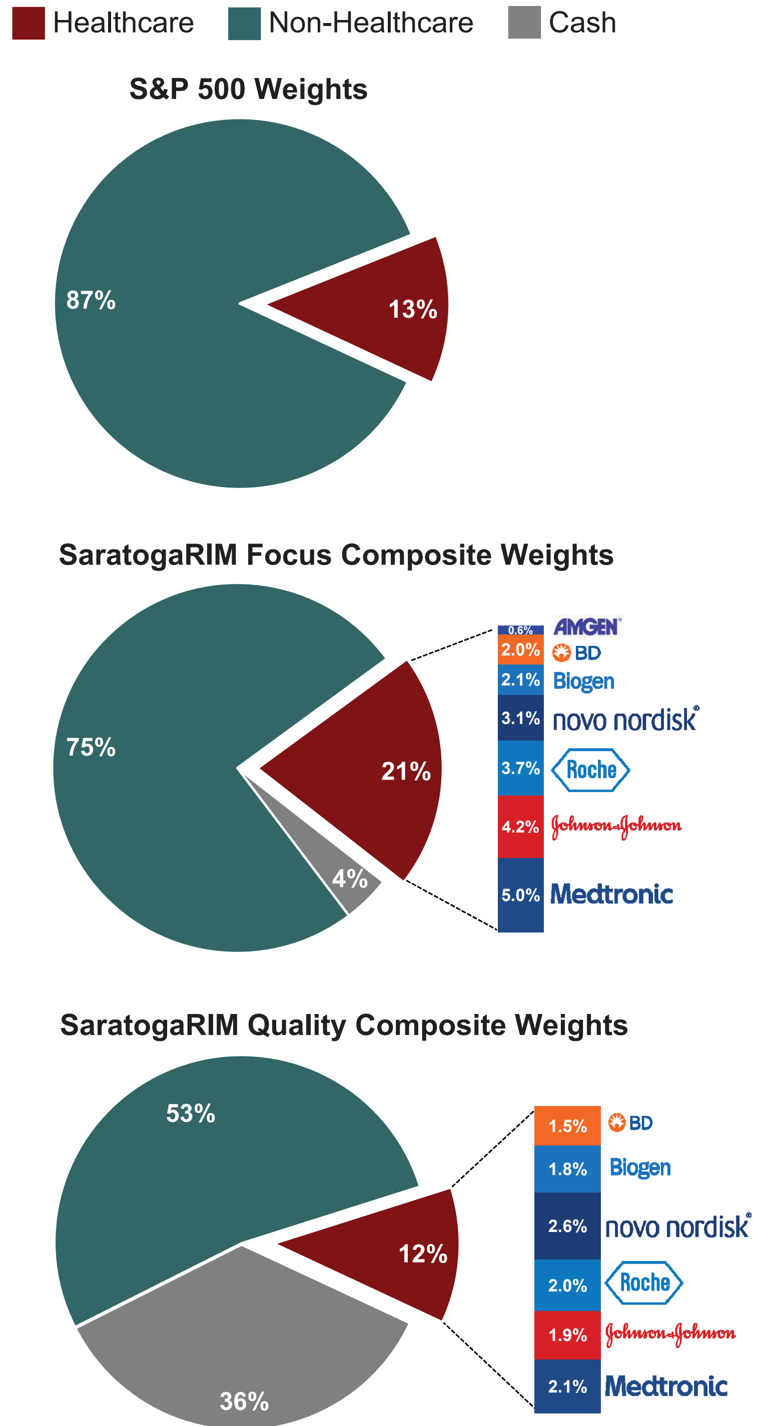
In life sciences, the study of sustainable competitive advantages and innovation go hand in hand. Innovation can be internal and science-based, such as research and development (R&D) conducted in-house to create new medications, or external in a variety of forms ranging from partnerships or licensing deals to outright mergers and acquisitions (M&A). Often, external partnerships or acquisitions are also centered around science- or technology-based innovation.

Innovation isn't confined to developing the newest, most-hyped drugs or technologies either. Sometimes it's business model innovation – such as changing how a product is inventoried, distributed or paid for. In healthcare, a simple example would be the shifting from a fee-for-service model (whereby reimbursement depends on the number of procedures performed or doses of medication administered) to a value-based system where reimbursement centers on the outcomes patients experience.

Innovation also occurs at the organizational level. Many high-quality companies constantly seek to optimize their portfolios through M&A and work to enhance product, manufacturing and supply-chain innovation where incremental upgrades are incessantly undertaken in accordance with the Japanese philosophy of *kaizen*, or continuous improvement. There are many other categories of innovation, but regardless of what label is attached, companies in our investable universe innovate constantly to protect and bolster their moats and improve their competitive positioning.

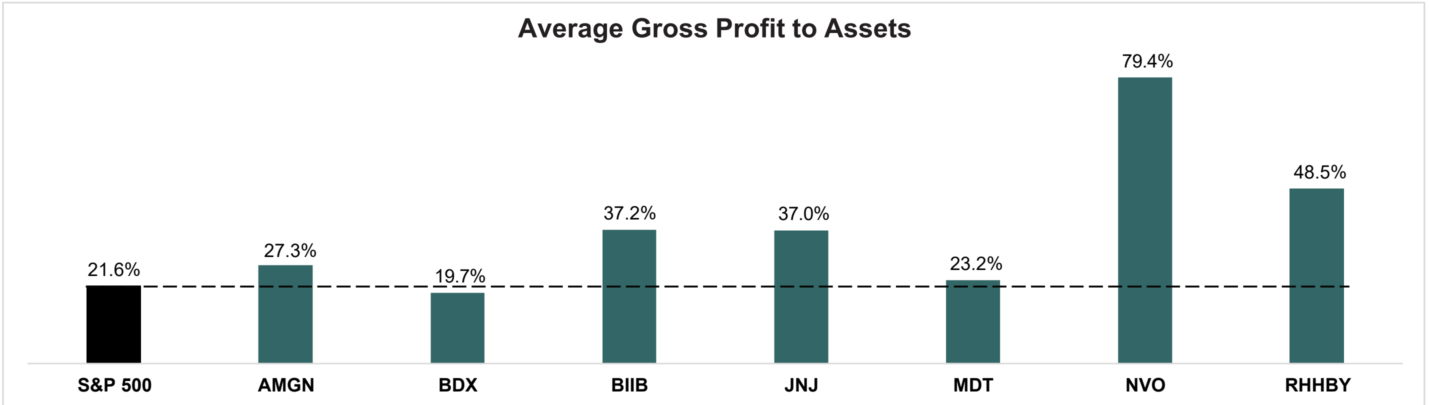
The clearest evidence of the durability of these moats (and innovation's central role) is longevity. Historically, our companies have demonstrated a propensity to earn excess returns for far longer and with far more consistency than traditional financial models would predict absent a presumption of sustainable competitive advantages. For example, Johnson & Johnson (JNJ) is 135 years old, Roche (RHHBY) is 125 years old, and even one of our younger companies – Medtronic (MDT) – is in its seventh decade since it invented the first implantable pacemaker in 1960. In all three cases, innovation and scientific research yielding new intellectual property (IP) played a central role in each company's sustained success. We attribute much of this staying power to their moats.

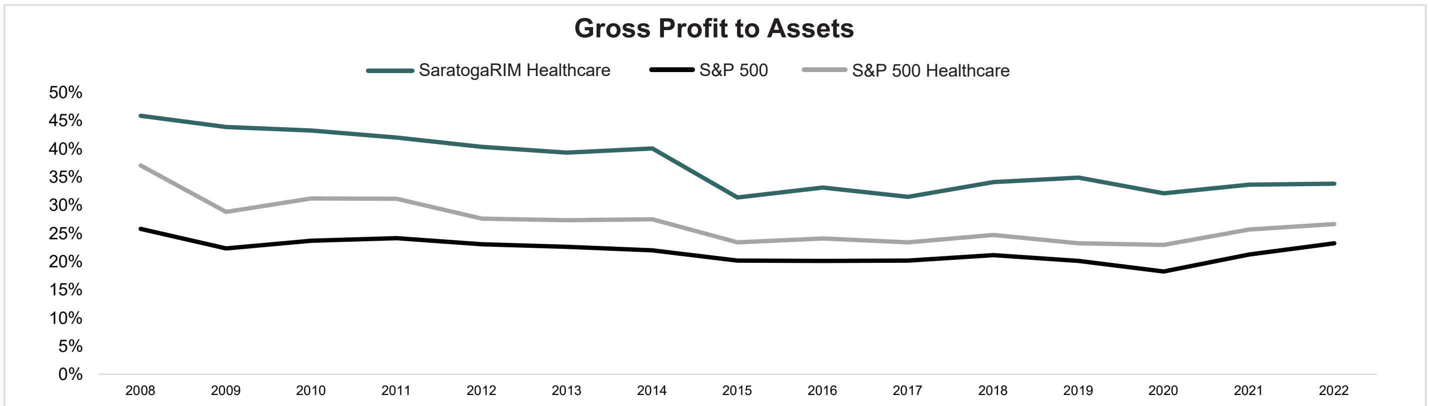
Fig. 1: Sector Weights — S&P 500 Index, SaratogaRIM Large Cap Quality Focus & SaratogaRIM Large Cap Quality Composites as of 6/30/23

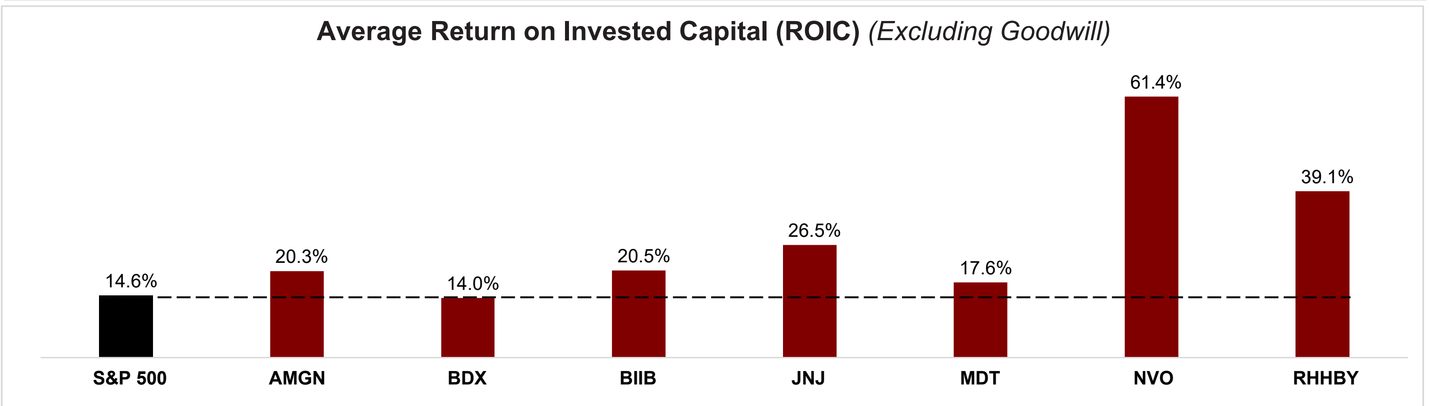


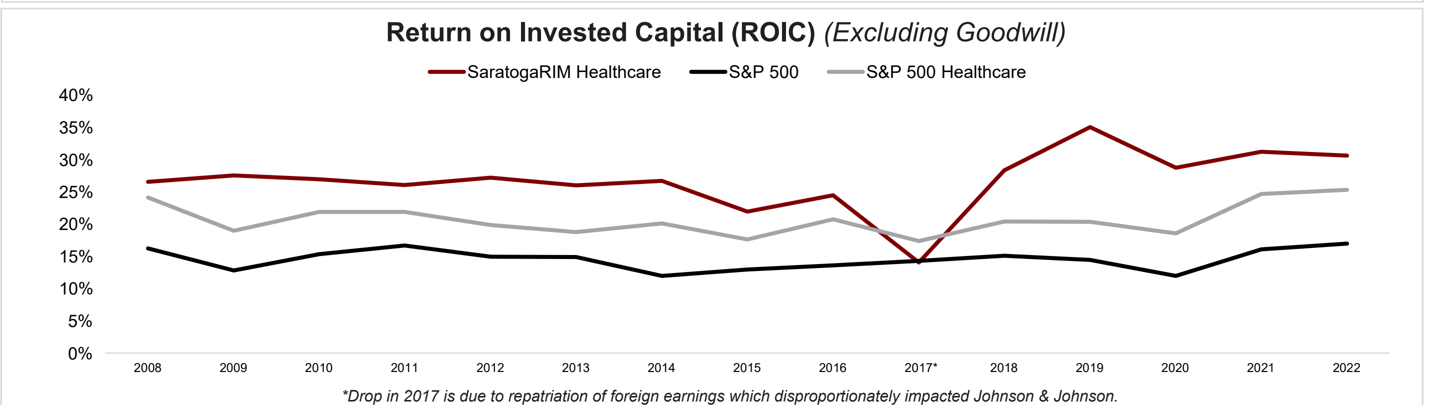
Source: FactSet, SaratogaRIM. Past investment results are no guarantee of future results. This report is incomplete without Disclosures (page 26), GIPS Composite Report: SaratogaRIM Large Cap Quality Focus (page 21) and GIPS Composite Report: SaratogaRIM Large Cap Quality (page 25).

Fig. 2: SaratogaRIM's Healthcare Sector Constituents vs. S&P 500 Index (Excluding Financials) and S&P 500 Healthcare Sector Constituents as of 6/30/23 — Profitability Metrics 2008 - 2022









Source: FactSet, SaratogaRIM. Past investment results are no guarantee of future results. The SaratogaRIM and S&P figures displayed above do not reflect actual market or composite performance and are not meant to represent any one client's investment experience. *These charts were updated on 9/1/23.* See information about the update, Gross Profit to Assets and Return on Invested Capital (ROIC) within the Disclosures on page 26. This report is incomplete without Disclosures, GIPS Composite Report: SaratogaRIM Large Cap Quality Focus (page 21) and GIPS Composite Report: SaratogaRIM Large Cap Quality (page 25).

Moat Sources in Healthcare

The healthcare sector is one where moats are quite prevalent. These stem from two primary sources – intangible assets and switching costs. Secondary sources include cost advantages and network effects.

Across the healthcare sector, the biggest single moat source is **intangible assets**, primarily IP protection in the form of patents. In exchange for the many years of expensive R&D typically required to bring a successful drug to market, governments award temporary monopolies to drug-makers. IP-protected drugs capture excess return by design and are very valuable. However, once patents expire, these drugs largely lose their competitive advantages.

Other forms of intangible assets include relationships with healthcare practitioners, as with Novo Nordisk (NVO) and its deep roots in China training physicians. Device firms forge relationships with young surgeons and have sales reps in the operating room. Hospitals often opt to select preferred vendors like JNJ, MDT and Becton Dickinson (BDX), which offer something close to one-stop shops for their respective areas of expertise. Insurers and Pharmacy Benefit Managers (PBMs) offer negotiated drug pricing in exchange for preferred placement in their networks. Regulatory entities like the Food and Drug Administration (FDA) and even government entities like the Centers for Medicare & Medicaid Services (CMS) in the U.S., and single payer entities across most other countries, forge complex and mutually-beneficial relationships with key healthcare companies. None of these are easy to replicate and all provide competitive advantages. For the most part, these secondary sources aren't enough to build a moat alone, but they can help reinforce existing moats.

The second most prevalent moat source is **switching costs**. These keep existing customers loyal and increase barriers to entry for new competitors. The classic example of switching costs is orthopedic surgeons who learn how to do hip or knee replacements using a specific brand of implant and remain loyal to that brand throughout their careers. Once these surgeons are comfortable, they rarely switch because it doesn't make financial sense to re-train on a new device or platform. According to Morningstar's equity research, surgeons stick with their preferred vendors and sales reps for over 15 years on average and use that vendor for approximately 95% of their orthopedic procedures during that time. Loyalty at that level is invaluable and forms the foundation of many wide moats.

Switching costs also exist in Pharma, but to a lesser extent than for MedTech companies. In Pharma, we usually see switching costs for chronic diseases where medication is prescribed for an indefinite length of time. If a patient's symptoms are well controlled on existing medication, there's little incentive to switch. This is most prevalent for diseases like Diabetes, Multiple Sclerosis (MS), and Hemophilia. Finally, there's also some overlap that blurs the line between switching costs and intangible assets such as relationships with physicians, insurers, and hospitals. Regardless of how we categorize them, such relationships are valuable to the extent that they increase customer stickiness and willingness to pay.

Cost advantages comprise the third source, which for most healthcare companies means economies of scale. Many of the businesses we own are amongst the largest in the world and often command leading market shares which allows them to operate on a more efficient scale than much smaller competitors. For example, as the largest device maker with a truly global infrastructure and the widest distribution, MDT can make and distribute its devices more cheaply than smaller competitors. Others like BDX with sharps (needles and syringes) and NVO with insulin hold commanding market share leads which enable them to produce at lower costs than smaller firms. Cost advantages can also be structural, as with Amgen (AMGN), which enjoys a cost advantage due to tax benefits derived from locating its primary manufacturing facility in Puerto Rico to capitalize on a now closed tax loophole. Overall, these advantages allow our companies to insulate themselves to some degree from competition eager to eat away at their enviable profitability.

Finally, **network effect** is an emerging moat source in healthcare that Morningstar calls the rarest but most lucrative. Currently, of the roughly 1,500 companies Morningstar follows, they deem only about 7% (100 companies) to have network effects. The only Device or Pharma company they believe has a network effect is Intuitive Surgical (IRSG), which is the leader in robotic surgery. Importantly, ISRG is part of our investable universe, but it has yet to be priced attractively enough to make it into our portfolios. To date, network effects have largely centered in the technology space, with famous examples of platform companies like eBay that match buyers and sellers. The network effect is such a powerful moat source because its value compounds exponentially for both buyers and sellers as the size of the network expands. As innovation advances in the MedTech market, specifically on the technology side with the rollout of connected care and the continued expansion of robotic surgery, we could see

the network effect become a more prevalent moat source in healthcare.

Innovation and Healthcare Moats

Healthcare is a particularly moat-heavy sector, one that we have been overweight in historically compared to the broader market. To be clear, we do not target sector exposure, and our higher weighting in healthcare is solely due to the abundance of high-quality companies with sound moats. Within healthcare, we tend to focus primarily on two areas: Pharmaceuticals/Biotechnology and Medical Device or MedTech companies. We've found these two areas have the strongest moats primarily driven by intangible assets, with MedTech also benefiting from switching costs.

We tend to have less exposure to Diagnostics companies. We believe Diagnostics can be a very nice complement to other parts of a business, as with BDX and its Device business or RHHBY and its Pharma business. But we tend to avoid pure-play Diagnostics companies because, historically, they've struggled to generate persistently above average profitability. That's probably because IP protection isn't quite as durable in diagnostics which allows for quicker and easier imitation. Finally, we tend to avoid the Healthcare Services sector, particularly the hospital and insurer spaces. Hospitals tend to be more capital intensive and less profitable than we prefer, and we've never been comfortable with the regulatory risks surrounding health insurance companies.

As a whole, healthcare companies must operate on a fast-moving innovation treadmill. Every year countless new medications and devices are approved, and companies in this sector must invest heavily in R&D to keep up with the constant barrage of newly-generated, patent-protected innovations. On average, the healthcare companies we currently own invest about 15% of sales in R&D (our Pharma companies spend a little more, at 18% of sales, and our MedTech companies a bit less, at 10%). In contrast, for companies that comprise the S&P 500, the median annual R&D investment is only 5% of sales.

All of this makes sense. Medicine is driven by constant innovation – there's always a newer, better drug or device around the corner. The only way to keep up, let alone stay ahead, is to keep investing in the innovation process. It also makes sense for Pharma to spend more on R&D than Device companies. In general, Pharma companies are more vulnerable to being leapfrogged by a competitor with a novel approach, while Device companies have the added benefit of higher switching costs that tend to promote stickiness.

Internal, research-based innovations are just a part of this picture. A second strategy for staying ahead centers on external innovation through partnerships, investments, and acquisitions. Our companies tend to be very active market participants, continually optimizing their portfolios by divesting lagging business units and acquiring cutting-edge technologies. Our MedTech firms, for example, are particularly acquisitive of promising IP. The business case is simple: acquire the best next-generation technology and boost its impact via existing worldwide infrastructure. This works because it's difficult for an upstart to compete directly with MDT by selling, say, a new heart device, or with JNJ by offering a new and improved hip implant. In these cases, acquisitions offer companies both offensive capabilities in the form of new products in their pipelines and defensive benefits by denying potential competitors tools to compete.

Our Pharma companies actively invest in innovation in the M&A market as well, but in a wider range of

Amgen (AMGN) – Moat Synopsis

AMGN is one of the leading biotechnology companies with a long history of outstanding profitability and a wide range of products with mature franchises ranging from inflammation to oncology to bone health as well as a strong pipeline of novel drugs. Amgen's primary source of economic moat is **intangible assets** led by strong intellectual property (IP), namely a deep portfolio of patents protecting the existing franchises, and R&D expertise. Amgen's leading franchises provide a healthy, well-diversified base for a strong moat. **Cost advantages** provide a secondary source of moat that enables Amgen to be a low-cost producer of both innovative and biosimilar biologic drugs.

Amgen predominantly makes biologics which provides a more defensible base compared to the more easily replicated small molecule drugs. The generic version of a biologic is called a biosimilar which is not an exact replication of the original drug. When faced with generic competition, sales of small molecule drugs on average decline by about 75% in the first year and ultimately fall by over 90%. Biosimilars tend to capture share more gradually with biologics only losing about 25% of sales in year one and with declines stabilizing in the 33-67% range. The biologic versus small molecule difference is important since it enhances both sources of Amgen's moat. It helps protect their existing drugs from generic competition while also allowing the company an opportunity to leverage their low-cost R&D, production, and distribution to be a leader in biosimilars.

potential deals. The best example is JNJ, which runs what it terms a “full innovation ecosystem” spanning a startup incubator at JLabs, a venture investing arm known as JJDC which has been investing for over 50 years, plus many partnership deals and outright acquisitions. Together these involve every stage of healthcare innovation and help JNJ align with new advances and evolve in any way necessary.

Innovation isn’t always a positive for moats – especially in a field so dynamic as healthcare. There’s an inherent tradeoff between the increasing rate of innovation and the risk of technological obsolescence. As the time between technological advances decreases, the risk of being leapfrogged increases. Leading companies mitigate this risk in two ways. First, they keep investing to stay on the cutting edge. Second, they focus on what doesn’t change and build competitive advantages in those areas. For example, focusing on secondary moat sources of intangible assets like relationships with prescribers and payers. Similarly, companies might focus on building ancillary services around core innovations to increase customer stickiness and decrease the risks presented by technological obsolescence. To mitigate these risks in our process, we look for healthy franchises, powerful demographic tailwinds, ancillary services, and budding connected-care and technology platforms. More on this below.

Innovation and Pharma/Biotech Moats

Biopharma companies are in a unique position relative to innovation. With rapid product cycles, they need to innovate constantly to keep the conveyor belt of fresh IP chugging along with breakthroughs that reset the countdown to patent expiration.

This, in part, underscores our preference for stickiness as displayed by NVO’s diabetes and AMGN’s inflammation franchises. It’s also why we’ve owned many companies with leading Hemophilia treatments over the years, including NVO, RHHBY, Biogen (BIIB), and Baxter (BAX). These businesses have many characteristics we look for, such as a focus on chronic disease, recurring cash flow, and highly-loyal patients. Still, we minimize our exposure to single-asset companies where the loss of IP protection could devastate the company’s moat and sap its financial strength. For example, NVO offers multiple types of insulin and GLP-1 drugs; similarly, AMGN has many treatments spanning multiple inflammatory diseases. Stables of drugs targeted at different segments of the market allow for cross-selling and insulate such franchises overall.

Innovation in Pharma is as much defense as offense. Our companies fend off competition in many ways. RHHBY combines a muscular Diagnostics arm with its Pharma segment and is working on companion diagnostics and better identifying medication targets. JNJ combines the second largest MedTech company with its Pharma segment to diversify away from innovation risks. NVO focuses on two of the most attractive segments in the market – diabetes and obesity – that stand to benefit from two powerful demographic trends, ageing and obesity. BIIB focuses on neuroscience disorders, which are among the most challenging ailments to treat and are also on the rise for demographic reasons.

Below are some of the most exciting innovations our Pharma companies are working on in their never-ending efforts to protect their business moats.

Roche: The company uses innovation to make its drugs more valuable, its R&D cheaper, and its relationships with payers/patients stronger. RHHBY is the global leader in Personalized Healthcare (PHC), a concept hailed as the next generation of healthcare which combines pharmaceuticals, diag-

Biogen (BIIB) – Moat Synopsis

BIIB is a biotech company that specializes in the development of neuroscience-focused pharmaceuticals, with strong existing Multiple Sclerosis (MS) and Spinal Muscular Atrophy (SMA) franchises. Biogen’s primary source of economic moat is **intangible assets** led by strong IP and R&D experience with some of the most debilitating and hard to treat neuroscience diseases. BIIB has a pipeline of high upside assets in addition to their entrenched franchises. MS drugs represent two-thirds of Biogen’s revenue and provide consistent cash flow to help fund the upcoming launch of Leqembi, the first disease modifying Alzheimer’s Disease (AD) treatment. Biogen targets highly complex conditions like MS, AD, SMA, and Amyotrophic Lateral Sclerosis (ALS). A focus on such challenging diseases with significant unmet needs also allows for strong pricing power and increased receptivity by the FDA.

A secondary moat source is relatively high **switching costs** associated with their medicines. If patients with hard to treat, chronic diseases are well-managed, there is little incentive to switch treatments. Biogen mostly makes biologics which provides a more defensible base compared to the more easily replicated small molecule drugs. The generic version of a biologic is called a biosimilar which is not an exact replication of the original drug. When faced with generic competition sales of small molecule drugs on average decline by about 75% in the first year and ultimately fall by over 90%. Biosimilars tend to capture share more gradually with biologics only losing about 25% of sales in year one and with declines stabilizing in the 33-67% range.

nostics, and predictive analytics in an attempt to create treatment plans tailored for specific patients. Although executing on this vision at scale may prove daunting, RHHBY appears uniquely positioned to potentially bridge the gap. Its most immediate opportunity is to expand the use of companion diagnostics, which, put simply, are diagnostics utilized alongside a specific therapeutic. This form of PHC saves insurers the cost of ineffective medications, saves cancer patients the horrible side effects of chemotherapy that may not work for them, and saves oncologists the time spent administering ineffective treatments. These benefits are so valuable that, for patients identified as promising candidates, all players are happier and RHHBY is able to charge a premium for therapies more likely to result in successful outcomes.

The next steps entail moving beyond companion diagnostics into true PHC. The scale of this opportunity is revealed in a study of cancer patients currently undergoing treatments, which found that only half benefit while the remainder either experience no positive effects or serious side effects from their current treatments. This is the tip of a potentially massive iceberg, and it explains RHHBY's acquisitions like Flatiron Health, which is building the world's largest cancer clinical trials database, and Foundation Medicine, which is building the world's largest cancer genomic database. RHHBY is utilizing these datasets in combination with its own advanced analytic capabilities to build better, more targeted treatments, run shorter clinical trials, and advance precision medicine. Practically speaking, if these efforts prove even moderately successful, the company would be positioned to: 1) decrease R&D expenditures, 2) increase pricing power, 3) grow operating margins, and 4) extend the effective duration of its patents. In other words, such innovations would both widen and deepen the company's business moat.

Novo Nordisk: Its focus on developing innovative medicines that treat metabolic diseases, diabetes and obesity, ride two worldwide demographic trends – ageing and increased rates of obesity. The links between obesity, ageing, and diabetes are well documented, as obesity is the leading cause of Type 2 Diabetes, accounting for over 90% of cases due to loss of insulin sensitivity. Diabetes incidence is expected to grow from roughly 400 million people today to over 600 million by 2035, approaching 10% of the worldwide population. Obesity is even more prevalent, with the Centers for Disease Control and Prevention (CDC) finding that 42% of U.S. adults are obese, with associated annual medical costs estimated at $173 billion in 2019 dollars.

NVO is working to fight both diabetes and obesity with the development of its Glucagon-Like-Peptide-1 (GLP-1) franchise (see table below). Novo has a full portfolio of GLP-1 treatments centered around Semaglutide, one of the most important molecules in all of medicine today.

Drug Name	Administration	Diabetes Brand Name	Year Approved by FDA	Obesity Brand Name	Year Approved by FDA
Liraglutide	Daily injection	Victoza	2010	Saxenda	2014
Semaglutide	Weekly injection	Ozempic	2017	Wegovy	2021
Semaglutide	Daily oral	Rybelsus	2019	–	–

Becton Dickinson (BDX) – Moat Synopsis

BDX is a mainstay in the healthcare industry with approximately 90% of hospital inpatients interacting with one of their products. BDX's economies of scale for its basic surgical products have led to significant **cost advantages** while high **switching costs** across its wide range of medically necessary products further bolsters its moat. **Intangible assets** in the form of IP, relationships with hospitals, and persistent innovation round out the Company's economic moat.

Unmatched scale in the sharps market (needles and syringes) is the bedrock of BD's success and provides a durable cost advantage. The Company leads the market for medical syringes and other vascular access devices with an estimated market share of nearly 50% in the U.S.

In terms of switching costs, it is seldom worth the hassle to retrain the entire staff on basic but crucial devices such as an infusion pump or diagnostics systems. The net result is a highly sticky revenue base with roughly 85% of total sales being recurring in nature.

Intangible assets round out BDX's moat. In addition to a deep patent portfolio, the Company has a proven track record of developing market leading products which is exhibited by the fact that BDX generates 90% of its revenue from products that hold a #1 share position. Lastly, being the "one-stop shop" for a wide range of hospital necessities deeply embeds BDX in hospital operations and procurement decisions.

Semaglutide, more commonly known as Ozempic or Wegovy, has captured the public's attention like few drugs ever have before. One impressive aspect of GLP-1 treatments is how effective and safe they have proven thus far across a range of indications. For example, after running several large-scale clinical trials to demonstrate efficacy in diabetes (including seven Phase 3 trials with over 4,000 patients), Novo noticed positive side effects in the form of decreasing obesity rates, fewer cardiovascular events, and less cognitive decline. Today, NVO's GLP-1 treatments are FDA approved specifically for weight loss with the cardiovascular benefits added to the label. Novo is currently conducting a Phase 3 trial to test Semgalutide's ability to slow Alzheimer's Disease.

Semaglutide has repeatedly delivered the positive side effect of weight loss in diabetes trials. In Phase 3 trials on roughly 24,000 patients, subjects lost nearly 20% of their body weight on average from weekly Semaglutide injections. These results truly were revolutionary – and they've helped spur other developments in a market for anti-obesity treatments that, until recently, had largely shunned anti-obesity medications as ineffective. Not surprisingly, sales of Semaglutide have skyrocketed. And growth is only accelerating, with demand now so overwhelming that Novo struggles to maintain supply.

A key differentiator of Semaglutide is how safe it has proven to be over time. The FDA sets an incredibly high safety bar for diabetes treatments since they will be used by millions of people. Semaglutide and its predecessor Liraglutide have been studied in tens of thousands of patients and used by millions of patients for over 10 years. The long-term safety of these drugs is particularly important for the broader market reception since this is not a new, so-called miracle diet drug that might be unsafe. The obesity treatment market in the past was marred by prior medications and over-the-counter supplements deemed dangerous and even banned by the FDA. NVO's 10+ years of clear efficacy and relatively clean safety profile present an incredibly high bar for a competing treatment to match. This is one way the company is defending its GLP-1 franchise from the threat of being leapfrogged by next-generation treatments.

Biogen: Long focused on the neuroscience market, BIIB has gained several key advantages. First, its area of focus is neuroscience diseases with significant unmet needs, which allows for strong pricing power and increased receptivity by the FDA despite side effects or suboptimal efficacy. Second, like NVO, BIIB is riding a major demographic tailwind. Recently, the FDA approved its first-ever disease modifying drug to treat Alzheimer's Disease (AD). It is called Lecanemab or by its brand name Leqembi. As populations worldwide age, the unmet burden from AD will only grow. The burden of caring for the elderly is expected to soar even more as population growth rates slow or turn negative in many countries. According to the Alzheimer's Association, nearly 7 million people in the U.S. suffer from AD today, including about 1 in 9 people (11%) age 65 or older. By 2050, the Alzheimer's Association expects that number to nearly double to about 13 million patients. Currently, 1 in 3 seniors dies with AD or another form of dementia.

As diseases go, AD is incredibly costly. According to the Joint Economic Committee of the U.S. Congress, it currently costs the U.S. economy $321 billion annually, split between $50 billion in direct

Johnson & Johnson (JNJ) – Moat Synopsis

JNJ is the world's premier healthcare company and is one of the last two AAA-rated companies in the world. JNJ's diversified business was built to weather all economic cycles. Each segment derives its moat differently, but each demonstrates strong pricing power whether customers pay for the brand (Consumer Health), pay for convenience (MedTech), or pay for results (Pharma).

The Pharma segment derives its moat through strong **intangible assets** and intellectual property protection. Pharmaceuticals is the largest and most profitable segment, representing over 50% of total revenue and nearly 70% of operating profit. The portfolio entails over 100 marketed drugs including 12 blockbusters with a focus on immunology, oncology, cardiovascular, and neuroscience.

The MedTech segment generates its moat through high **switching costs** and intangible assets. Surgeons who learn JNJ's devices become loyal clients. The device segment focuses primarily on acute care settings with general surgery, orthopedics and cardiovascular comprising the majority of device sales. JNJ's sales land just behind rival Medtronic as the second largest medical device maker globally.

The Consumer Health segment's moat entails **intangible assets** from their well-developed brands. Despite being the smallest segment, this unit includes many of JNJ's best known brands such as Tylenol, Neutrogena, Listerine, Band-Aid and Johnson's Baby.

costs and $271 billion in unpaid caregiving. By 2050, that total cost to the U.S. economy is expected to reach $1 trillion annually. Finally, per an article in the *American Journal of Managed Care*, the annual cost to Medicare for patients with AD or dementia is $41,757 (in 2021 dollars), which is nearly three times higher than those without AD at $14,026. Clearly, AD is a huge, costly, and growing problem – and Biogen currently offers the only FDA approved hope of a solution.

Before BIIB's breakthroughs no AD treatment existed. And while its treatment only slows disease progression instead of curing it, Leqembi represents a big step forward. This innovation is truly groundbreaking and has enormous market potential.

BIIB's experience highlights one additional benefit of innovating for hard-to-treat diseases lacking treatment options: regulators are very receptive to new and pioneering drugs. BIIB has seen this multiple times, first with AD and currently with its treatment for Amyotrophic Lateral Sclerosis (ALS), called Qalsody, which garnered FDA approval in late April. ALS ranks among the most debilitating diseases and currently lacks true treatment options. Qalsody is the first approved treatment for ALS that targets a genetic cause of the disease. While its use is limited to patients with a specific mutation seen in a small percentage of the ALS population, this approval potentially opens the door for the development of new treatments using a similar mechanism of action. For example, the company is developing BIIB105, a similar treatment that targets a protein found in almost all ALS patients.

BIIB also has an intriguing pipeline drug (currently under FDA review) called Zuranolone that treats both Major Depressive Disorder (MDD) and Postpartum Depression (PPD). Zuranolone has a novel mechanism of action that shows effects in as few as three days, compared to traditional depression treatments that can take weeks to months to deliver results to patients. In cases of severe depression, near immediate improvement could prove invaluable. The ability to help manage depression with an acute course of treatment offers a dramatic improvement relative to the chronic approaches available today.

Johnson & Johnson: Another exciting area of development is JNJ's Multiple Myeloma (MM) franchise. MM is a cancer of plasma cells, which are a type of white blood cell. "This portfolio enables us to do something very significant, which is changing the treatment paradigm from treating to progression to treating to cure," said JNJ's CEO Joaquin Duato. "And we'll see these medicines being used in combination and in different sequences in order to achieve these treating to cure." He considers JNJ's Multiple Myeloma drugs the company's single most important growth driver going forward.

JNJ's MM franchise encompasses a range of technologies from Darzalex, a standard monoclonal antibody, to Carvykti, a cutting-edge chimeric antigen receptor T-cell (CAR-T) therapy where the treatment is personalized for each patient. CAR-T involves taking a patient's immune cells called T-cells, modifying the T-cells by adding a gene for a receptor that will bind to cancer cells, and re-injecting them into the patient. Taking a patient's own immune cell and manufacturing a personalized cancer cure is technology so advanced it almost sounds like science fiction.

Innovation in Devices/MedTech

Makers of medical devices also rely on innovation to sustain their competitive advantages. Yet, due mainly to the nature of their products and business models, changes in this market move just a bit

Medtronic (MDT) – Moat Synopsis

MDT is the world's largest standalone medical device company, with a wide-ranging product portfolio focused on chronic diseases in acute care settings. Medtronic's moat is built primarily on the strength of its **intangible assets** of industry leading IP and R&D, **switching costs** that prevent doctors from leaving devices they are very comfortable with, and **cost advantages** derived from its economies of scale.

Intangible assets comprise the core of Medtronic's economic moat. Medtronic's IP protection, consistent record of innovation and long-term relationships with physicians and hospitals combine to generate significant protection from competitors. Medtronic has been especially effective at leveraging a few key technologies for use in solving other needs (e.g., the use of implantable electronic stimulation originally developed for pacemakers is now utilized for chronic pain and high blood pressure). With the 2015 acquisition of Covidien, Medtronic combined their historical focus on chronic conditions with Covidien's wide range of hospital products and sizable presence in emerging markets.

Additionally, Medtronic has developed close relationships with physicians utilizing the devices and hospitals who purchase them, increasing switching costs. Given Medtronic's size, scope of product offerings, presence in over 150 countries and worldwide infrastructure, the company also enjoys a cost advantage.

slower – braked by high switching costs and customer loyalty. This reality makes investments in leading MedTech firms especially attractive.

One example of this played out during a recent interaction between two of our companies, JNJ and MDT. Both firms are dominant players in the surgical instruments, tools, and monitors corner of the MedTech market that increasingly resembles a duopoly. Since the pandemic, JNJ has proven able to maintain more consistent supply chains; consequently, it has gained market share from MDT. However, as supply chains are now flowing more freely, MDT is experiencing a rebound in market share – the key factor being that both companies enjoy very strong relationships with hospitals that, time and time again, demonstrate product loyalty and a high propensity to return to their preferred supplier in the aftermath of product shortages. Multiple times in the past both JNJ and MDT have implemented product recalls. During these recalls, volume/market share invariably shifted – sometimes dramatically – but these changes have consistently proven temporary. In the aftermath of prior recalls, market shares have quickly reverted to the prior status quo.

Which begs the question: If product availability or even recalls don't cause permanent losses in market share, what could? It is hard, we conclude, to imagine that a marginal innovation from an unfamiliar competitor would sway customers. The surgical tools and instruments market displays substantial barriers to entry and is controlled by two dominant and very profitable players. We're happy to own both of them.

Still, two areas present a substantial opportunity for innovation: robotic surgery and connected devices/care platforms. Both offer new avenues to leverage technological advances that make existing devices or procedures smarter using data, analytics, and increased connectivity. Examples include MDT's addition of procedure planning, simulation, and advanced imaging to their devices, or "putting the tech in MedTech," as CEO Geoff Martha put it. Yes, that's a cheesy statement, but it's also right.

Robotic surgery requires a significant training period, and once surgeons learn on a specific platform they have powerful incentives to remain loyal. Currently, the market leader ISRG has a nearly two-decade head start with a wide and healthy moat. However, overall penetration of robotic surgery remains relatively low, with U.S. rates in the mid-to-high single digits and worldwide rates of just 1-2%. Despite ISRG's first-mover advantage, the robotic surgery race is underway, and experts see plenty of room for multiple platforms to flourish.

MDT and JNJ are approaching this market from different angles. MDT's Hugo Robotic Assisted Surgery system centers on a general surgery robot designed to compete directly with ISRG's platform. Hugo's key differentiator is its interoperability with MDT's existing tools, devices, and services – a compelling value proposition for hospitals evaluating which new platform to adopt. JNJ has taken a dual approach with a general surgery platform called Ottava, simultaneously targeting specific niches with, for example, the Velys system for hip and knee replacements and the Monarch robot which performs bronchoscopies to treat lung cancer.

Automation technologies represent a second battleground for innovation – one defined by a chronic labor shortage impacting hospitals. For years a shortfall of clinical staff had been building, then the Covid-19 pandemic dramatically accelerated this trend. Today, we find ourselves with a healthcare industry plagued by burnout. It's gotten so bad that

Novo Nordisk (NVO) – Moat Synopsis

NVO is the premier diabetes drug-maker and has a first mover advantage in the burgeoning obesity treatment market. Novo Nordisk's moat primarily arises from its **intangible assets** (IP and R&D experience), with secondary sources of high **switching costs** and **cost advantages**. Novo is riding incredibly favorable demographic trends and has built a very healthy moat with commanding market share and consistently high profitability.

Novo's primary source of moat comes from intangible assets that protect their market-leading drugs. Since its founding in 1923, Novo has almost exclusively focused on the diabetes market and has garnered a trusted reputation among physicians and patients alike. Diabetes is not a curable disease and switching costs are inherent to diabetes medication. Patients requiring medication will take it indefinitely and typically require specialized dosing which helps generate an incumbent advantage for Novo Nordisk. As the world's leading insulin producer, Novo Nordisk maintains a cost advantage with wide-ranging infrastructure, local manufacturing and deep roots in emerging markets, all of which make it challenging for competitors to undercut pricing given Novo's premium product and their low-cost production.

Novo's GLP-1 franchise has been one of the most impressive franchises in healthcare. Sales are skyrocketing as the drug is now used to control diabetes, treat obesity, and lower rates of cardiovascular events.

a recent McKinsey survey of registered nurses in the U.S. found that a staggering 32% are considering leaving direct patient care altogether within the next year. A related study in the journal *Academic Medicine* found that roughly a quarter of physicians' time is now spent on administrative tasks. Two underlying forces (nurse burnout and a shortage of incoming replacements) have diverted physicians from patient care. The situation is acute – and ripe for MedTech solutions.

Outside of healthcare, factories across the country are investing in automation technologies to increase productivity. Not surprisingly, hospitals have begun to do the same by adopting devices that are smarter and interconnected. They champion "connected care" and "digital health ecosystems," buzz phrases for an increasing reliance on big data and AI to increase the utility of existing devices and design better next-generation ones. This means devices that communicate with staff and with each other, all while working to overlay actionable insights. The result: closer and more continuous monitoring of patients that can catch problems before they arise, both within the hospital walls and for outpatients.

The labor shortage presents an interesting challenge to MedTech companies. On the one hand, it has clearly dampened near term results to the extent that staffing shortages within hospitals have imposed limits on many procedures. On the other, fixing the problem presents such a big opportunity that non-healthcare giants are getting in on the action. For example, JNJ has partnered with both Microsoft and Verily, the life sciences arm of Alphabet (Google). With Verily, JNJ is working to enable robotic surgery by developing ultra-secure private connectivity. With Microsoft, JNJ aims:

> *"[T]o further develop a secure and compliant digital ecosystem with the goal of connecting devices across the entire portfolio. This collaboration will help enhance the use of artificial intelligence and machine learning in order to generate insights leading to smarter, less invasive and more personalized solutions across the entire patient care continuum."*

Intriguing, but vague. For now, we know JNJ will build its digital health ecosystem on the Microsoft Cloud. No device or connected cloud could or should fully replace a nurse, but an interconnected digital health ecosystem offers significant benefits that would relieve today's labor-constrained health systems.

Likewise, BDX is investing heavily to reach its goal of being a one-stop shop for hospitals with connected devices ranging from sharps to diagnostics to monitors. For example, it has developed catheters that provide continuous monitoring of patients' urine and directly transmits results to medical charts and notifies hospital staff of potential issues. This seemingly small advancement saves staff time collecting samples, ordering tests, inputting data, and updating electronic health records – and it all interconnects with BDX's full portfolio of devices.

Conclusions

- In life sciences, the study of sustainable competitive advantages and innovation go hand in hand. Innovation can be internal and science-based, or external in a variety of forms ranging from partnerships or licensing deals to M&A.

Roche (RHHBY) – Moat Synopsis

RHHBY is one of the world's largest biotech companies and has market leading positions in oncology therapeutics and In Vitro Diagnostics (IVD). Roche's primary moat sources are **intangible assets** derived from its intellectual property and **switching costs** from both the necessity of its drugs and the stickiness of its diagnostics platform.

Roche is made up of two segments: pharmaceuticals (80% of sales) and diagnostics (20% of sales). The most notable feature of Roche's pharma business is that 80% of its sales are generated by biologics which provides a more defensible base compared to the more easily replicated small molecule drugs. The generic version for a biologic is called biosimilar which is not an exact replication of the original drug. When faced with generic competition, sales of small molecule drugs decline by about 75% in the first year and ultimately fall by over 90%. Biosimilars tend to capture share more gradually with biologics only losing about 25% of sales in year one and with declines stabilizing in the 33-67% range.

On switching costs, Roche's core drugs are deeply ingrained as the standard of care treatments and impose moderate switching costs. Additionally, many of Roche's newer offerings focus on chronic conditions which results in high switching costs if the patient's symptoms are well-managed.

Roche's diagnostic platform also imposes high switching costs. Healthcare professionals prefer to use what they know and are unlikely to switch to another platform unless there is a significant catalyst. Lastly, Roche is the leader in the nascent market of personalized healthcare where diagnostics are leveraged to develop a specific treatment regimen. Developments on this front have the potential to significantly bolster its moat.

- Innovation isn't confined to developing the newest, most-hyped drugs or technologies. It comprises business model innovation, organizational innovation and supply-chain management innovation undertaken in accordance with the Japanese philosophy of *kaizen*, or continuous improvement.

- Healthcare companies we own innovate constantly to protect and bolster their business moats and improve their competitive positioning. ■

Trailing 12-Month Investment Results

Fig. 3: SaratogaRIM Large Cap Quality & Focus vs. S&P 500 TR Trailing 12-Months (6/30/22 - 6/30/23)

Trailing 12-Month Net Performance (%)

(Line chart, y-axis -10.00 to 25.00; x-axis 6/30/2022 to 6/30/2023. End values: S&P 500 19.59; SaratogaRIM Large Cap Quality Focus (Net) 15.48; SaratogaRIM Large Cap Quality Focus (Net Max) 14.95; SaratogaRIM Large Cap Quality (Net) 10.64; SaratogaRIM Large Cap Quality (Net Max) 10.41.)

— SaratogaRIM Large Cap Quality (Net) — SaratogaRIM Large Cap Quality Focus (Net) ···· S&P 500
--- SaratogaRIM Large Cap Quality (Net Max) --- SaratogaRIM Large Cap Quality Focus (Net Max)

Source: FactSet, SaratogaRIM. Past investment results are not a guarantee of future results. Data presented net-of-fees. See full disclosures at the end of this report. This report is incomplete without Disclosures (page 26), GIPS Composite Report: SaratogaRIM Large Cap Quality Focus (page 21) and GIPS Composite Report: SaratogaRIM Large Cap Quality (page 25).

Over the 12 months that ended June 30th, net of fees, the SaratogaRIM Large Cap Quality Focus and Large Cap Quality composites earned 15.48% and 10.64% respectively. Net of maximum fees (which we refer to as Net Max), Focus and Quality returned 14.95% and 10.41% respectively. Over the same period, the S&P 500 Total Return Index was up 19.59%. These results were consistent with what we would expect at this phase in the economic and market cycles. As with any discussion of investment results, the SEC requires that we remind you that past performance is no guarantee of future returns. Please see the Large Cap Quality Focus and Large Cap Quality Composite Statistics and GIPS Composite Reports in addition to the full disclosures at the end of this report.

SaratogaRIM Large Cap Quality Focus

Composite Statistics

Q2 2023

Saratoga Research & Investment Management | SaratogaRIM.com | (408) 741-2330 | 14471 Big Basin Way, Suite E, Saratoga, CA 95070

Firm Overview: Saratoga Research & Investment Management, founded in 1995, is an SEC Registered Investment Advisor specializing in the construction and management of equity portfolios composed of high caliber businesses utilizing common sense investment principles for individual and institutional investors.

Composite Overview: The SaratogaRIM Large Cap Quality Focus Composite includes all discretionary portfolios that invest in what the Firm believes to be high-quality companies with low balance sheet, business model (including capital intensity) and valuation risk. This composite will likely have a greater turnover ratio than other composites as it typically restricts cash to no more than 5% of the total portfolio value. See the GIPS Composite Report (Page 4) for the complete composite description.

SaratogaRIM Large Cap Quality Focus (LCQF) - Snapshot

Composite Name	SaratogaRIM Large Cap Quality Focus
Inception Date	8/29/2014
Firm Total Assets	$ 2,819,827,000
Composite Assets	$ 1,076,288,000
GIPS Compliance	Yes

Investment Results

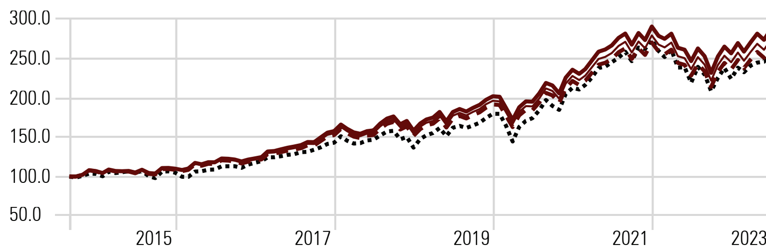
As of Date: 6/30/2023 Source Data: Total, Monthly Return

	Quarter to Date	Year to Date	1 Year	3 Years	5 Years	7 Years	Since Inception
SaratogaRIM LCQF (Gross)	5.79	11.63	16.11	13.65	12.54	13.50	12.66
SaratogaRIM LCQF (Net)	5.65	11.35	15.48	13.04	11.95	12.89	12.06
SaratogaRIM LCQF (Net Max)	5.52	11.07	14.95	12.52	11.43	12.38	11.55
S&P 500 TR USD	8.74	16.89	19.59	14.60	12.31	13.38	11.54

Investment Growth Relative to Benchmark

Time Period: 9/1/2014 to 6/30/2023

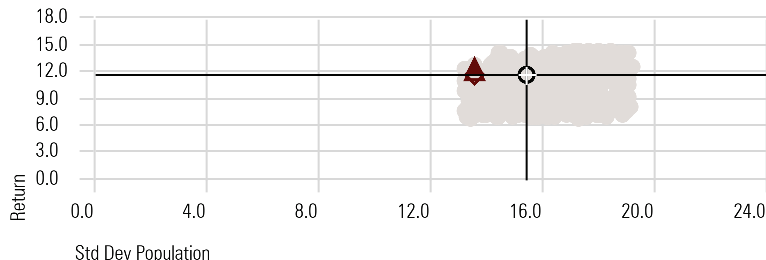
Source Data: Total Return



Standard Deviation vs. Annualized Rate of Return Relative to Benchmark & Peer Group

Time Period: 9/1/2014 to 6/30/2023

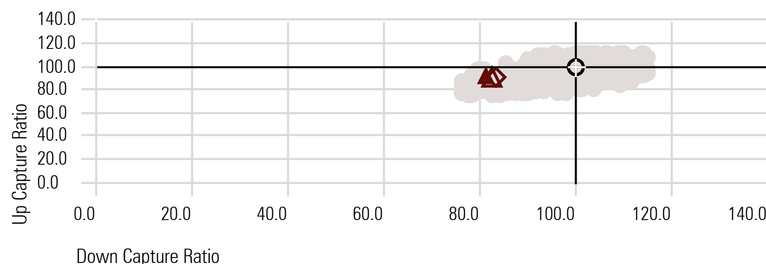
Peer Group (5-95%): Large Cap SA Source Data: Total, Monthly Return



Market Capture Relative to Benchmark & Peer Group

Time Period: 9/1/2014 to 6/30/2023

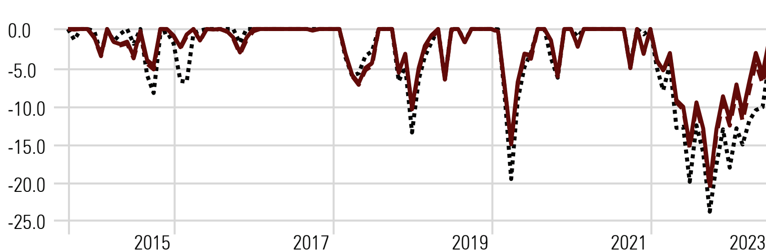
Peer Group (5-95%): Large Cap SA Source Data: Total, Monthly Return



Drawdown Relative to Benchmark

Time Period: 9/1/2014 to 6/30/2023

Source Data: Total, Monthly Return



Sector Weightings - GICS

Portfolio Date: 6/30/2023

	LCQF	S&P 500
Consumer Discretionary %	9.54	10.66
Consumer Staples %	11.33	6.67
Energy %	0.00	4.11
Financials %	8.83	12.42
Healthcare %	21.51	13.42
Industrials %	11.29	8.49
Information Technology %	25.17	28.26
Materials %	1.69	2.50
Communication Services %	10.63	8.39
Utilities %	0.00	2.58

Holding Fundamentals

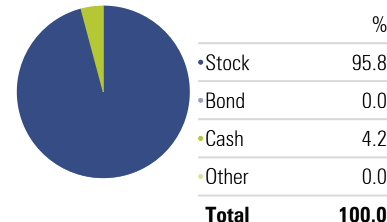
Dividend Yield	1.67
P/E Ratio (TTM)	27.03
P/CF Ratio (TTM)	19.29
P/B Ratio (TTM)	4.09
ROE % (TTM)	28.36
ROA % (TTM)	11.35
Net Margin %	15.47
Est. LT EPS Growth	9.03
Historical EPS Growth	15.29

Market Capitalization

Average Market Cap (mil)	255,880.13
Market Cap Giant %	48.74
Market Cap Large %	43.59
Market Cap Mid %	7.67

Asset Allocation

Portfolio Date: 6/30/2023



	%
Stock	95.8
Bond	0.0
Cash	4.2
Other	0.0
Total	**100.0**

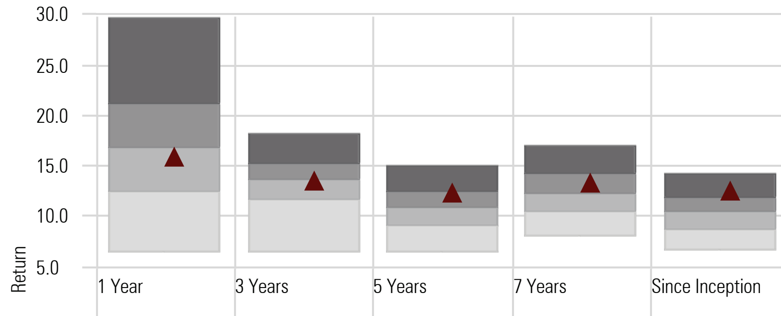
GICS Sector Weightings, Holding Fundamentals, and Market Capitalization statistics reflect the weightings of the stock portion of the portfolio. Results of Morningstar's calculations may vary slightly from SaratogaRIM's own reported statistics within the GIPS Composite Report due to rounding. See Disclosures and Definitions (Page 3) and the GIPS Composite Report: SaratogaRIM Large Cap Quality Focus (Page 4).

Investment Results Relative to Peer Group (Gross)

As of Date: 6/30/2023 Peer Group (5-95%): Large Cap SA Source Data: Gross, Monthly Return

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

SaratogaRIM LCQF (Gross)



Investment Results Relative to Peer Group (Gross)

As of Date: 6/30/2023 Source Data: Gross, Monthly Return Peer Group: Large Cap SA

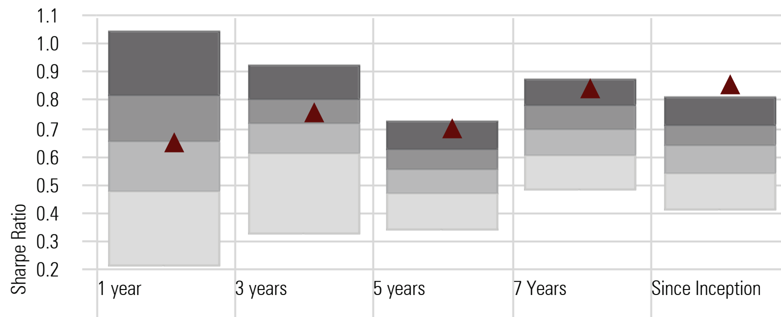
	1 Year	3 Years	5 Years	7 Years	Since Inception
SaratogaRIM LCQF (Gross)	16.11	13.65	12.54	13.50	12.66
S&P 500 TR USD	19.59	14.60	12.31	13.38	11.54
Median	16.87	13.64	10.86	12.27	10.52
Average	17.21	13.18	10.79	12.35	10.39
Count	1,537	1,458	1,374	1,258	1,141
5th Percentile	29.65	18.25	15.04	17.00	14.29
25th Percentile	21.13	15.23	12.47	14.16	11.88
50th Percentile	16.87	13.64	10.86	12.27	10.52
75th Percentile	12.46	11.65	9.15	10.42	8.79
95th Percentile	6.63	6.60	6.56	8.14	6.75

Sharpe Ratio Relative to Peer Group (Gross)

As of Date: 6/30/2023 Peer Group (5-95%): Large Cap SA Source Data: Gross, Monthly Return

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

SaratogaRIM LCQF (Gross)



Sharpe Ratio Relative to Peer Group (Gross)

As of Date: 6/30/2023 Source Data: Gross, Monthly Return Peer Group: Large Cap SA

	1 Year	3 Years	5 Years	7 Years	Since Inception
SaratogaRIM LCQF (Gross)	0.65	0.76	0.70	0.85	0.86
S&P 500 TR USD	0.76	0.75	0.62	0.76	0.71
Median	0.66	0.72	0.55	0.70	0.64
Average	0.64	0.69	0.54	0.69	0.63
Count	1,537	1,458	1,374	1,258	1,141
5th Percentile	1.04	0.93	0.72	0.88	0.81
25th Percentile	0.82	0.80	0.63	0.78	0.71
50th Percentile	0.66	0.72	0.55	0.70	0.64
75th Percentile	0.47	0.61	0.47	0.60	0.54
95th Percentile	0.21	0.33	0.34	0.49	0.41

Investment Results Relative to Peer Group (Net)

As of Date: 6/30/2023 Peer Group (5-95%): Large Cap SA Source Data: Net, Monthly Return

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

SaratogaRIM LCQF (Net) SaratogaRIM LCQF (Net Max)

Investment Results Relative to Peer Group (Net)

As of Date: 6/30/2023 Source Data: Net, Monthly Return Peer Group: Large Cap SA

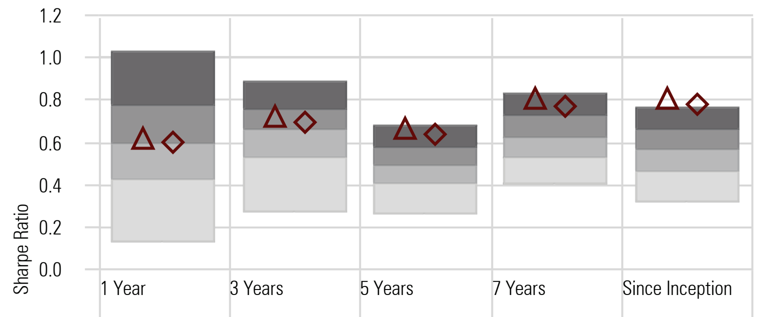
	1 Year	3 Years	5 Years	7 Years	Since Inception
SaratogaRIM LCQF (Net)	15.48	13.04	11.95	12.89	12.06
SaratogaRIM LCQF (Net Max)	14.95	12.52	11.43	12.38	11.55
S&P 500 TR USD	19.59	14.60	12.31	13.38	11.54
Median	15.54	12.39	9.66	11.06	9.18
Average	16.19	11.98	9.60	11.13	9.21
Count	1,496	1,427	1,344	1,229	1,120
5th Percentile	28.92	17.39	14.08	16.18	13.36
25th Percentile	20.19	14.32	11.51	13.06	10.93
50th Percentile	15.54	12.39	9.66	11.06	9.18
75th Percentile	11.19	10.07	7.76	9.08	7.44
95th Percentile	5.16	5.16	4.95	6.75	5.11

Sharpe Ratio Relative to Peer Group (Net)

As of Date: 6/30/2023 Peer Group (5-95%): Large Cap SA Source Data: Net, Monthly Return

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

SaratogaRIM LCQF (Net) SaratogaRIM LCQF (Net Max)



Sharpe Ratio Relative to Peer Group (Net)

As of Date: 6/30/2023 Source Data: Net, Monthly Return Peer Group: Large Cap SA

	1 Year	3 Years	5 Years	7 Years	Since Inception
SaratogaRIM LCQF (Net)	0.63	0.73	0.67	0.81	0.82
SaratogaRIM Focus (Net Max)	0.60	0.70	0.64	0.78	0.78
S&P 500 TR USD	0.76	0.75	0.62	0.76	0.71
Median	0.60	0.66	0.49	0.63	0.57
Average	0.59	0.63	0.49	0.62	0.56
Count	1,496	1,427	1,344	1,229	1,120
5th Percentile	1.03	0.89	0.69	0.83	0.77
25th Percentile	0.78	0.76	0.58	0.73	0.66
50th Percentile	0.60	0.66	0.49	0.63	0.57
75th Percentile	0.42	0.53	0.41	0.53	0.46
95th Percentile	0.13	0.28	0.27	0.40	0.32

Results of Morningstar's calculations may vary slightly from SaratogaRIM's own reported statistics within the GIPS Composite Report due to rounding.
See Disclosures & Definitions (Page 3) and the GIPS Composite Report: SaratogaRIM Large Cap Quality Focus (Page 4).

Disclosures & Definitions

See additional important disclosures and composite-specific information within the GIPS Composite Report (Page 4).

Saratoga Research & Investment Management ("SaratogaRIM" or "the Firm") is an SEC Registered Investment Advisor. SEC Registration does not constitute an endorsement of the Firm by the Commission, nor does it indicate the advisor has attained a particular level of skill or ability. Advisory services are not made available in any jurisdiction in which SaratogaRIM is not registered or otherwise exempt from registration.

This report was generated by SaratogaRIM through Morningstar Direct's Presentation Studio using data from Morningstar Direct and Advent Axys. SaratogaRIM composite performance statistics are based off gross-of-fee or net-of-fee monthly performance data uploaded to Morningstar. Results of Morningstar's calculations may vary slightly from SaratogaRIM's own reported statistics within the GIPS Composite Report due to rounding. The Peer Group statistics within this report contain U.S. Large Cap separate account managers that appear in the Morningstar database for the relevant periods shown as of the report generated date. The information and statistical data contained herein have been obtained from sources that SaratogaRIM believes to be reliable but in no way are warranted by the Firm as to accuracy or completeness.

Results of the SaratogaRIM Large Cap Quality Focus Composite do not reflect the results of any one portfolio in the composite. Performance figures are based on historical information and do not guarantee future results. Actual current performance may be higher or lower than the performance presented. All investing entails the risk of loss. This summary is for informational purposes only and does not constitute an offer to sell or a solicitation of an offer to buy any securities and may not be relied upon in connection with any offer or sale of securities. It is not intended to serve as a substitute for personalized investment advice. Prospective clients should recognize the limitations inherent in the composite strategy and should consider all information presented regarding the Firm's investment management capabilities. The contents of this report are only a portion of the original material and research and should not be relied upon in making investment decisions.

Gross-of-fee returns are calculated gross of management, custodial and external consultant or advisory fees and net of transaction costs. Net-of-fee returns are calculated net of actual management fees and transaction costs and gross of custodian fees and external consultant or advisory fees. Prior to October 31, 2022, non-fee-paying accounts were included in composite net-of-fee return calculations without a fee rate; per the SEC Marketing Rule effective November 4, 2022, net-of-fee returns labeled "Net" now include a model fee rate of 1.00% for all non-fee-paying accounts. Additionally, a separate net-of-fee return calculation has been added to SaratogaRIM marketing materials using the current maximum fee rate charged by SaratogaRIM for the SaratogaRIM Large Cap Quality Focus Composite (1.00%, labeled "Net Max"). Calculations are available upon request. Information pertaining to the Firm's advisory fees is set forth in SaratogaRIM's current disclosure statement, which is available upon request.

Definitions: Standard Deviation measures the dispersion of a dataset relative to its mean. Sharpe Ratio is a risk-adjusted measure that is calculated by using excess return and standard deviation to determine reward per unit of risk. The higher the Sharpe Ratio, the better the portfolio's historical risk-adjusted performance. Excess Return measures the difference in return, cumulative or annualized, between the strategy and a benchmark. Market Capture Ratios measure the extent to which a strategy participates in market moves over time; Up (Down) Market Capture measures relative performance in months which the benchmark generates positive (negative) returns over time. Drawdown is a measure of peak-to-trough decline over the period of time until a new high is reached.

Benchmark Disclosures: Benchmarks are unmanaged and provided to represent the investment environment in existence during the time periods shown. The S&P 500® Total Return Index has been selected as the benchmark for comparison purposes. The S&P Total Return Index assumes that all dividends and distributions are reinvested. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization. Portfolios are managed according to their respective strategies which may differ significantly in terms of security holdings, industry weightings, and asset allocation from those of benchmarks. An index is not available for direct investment, and does not reflect any of the costs associated with buying and selling individual securities or any other fees, expenses, or charges. | The S&P 500 Index is a product of S&P Dow Jones Indices LLC ("SPDJI"), and has been licensed for use by SaratogaRIM. Standard & Poor's®, S&P®, and S&P 500® are registered trademarks of Standard & Poor's Financial Services LLC ("S&P"); Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"); and these trademarks have been licensed for use by SPDJI and sublicensed for certain purposes by SaratogaRIM. SaratogaRIM's products are not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, their respective affiliates, and none of such parties make any representation regarding the advisability of investing in such product(s) nor do they have any liability for any errors, omissions, or interruptions of the S&P 500 Index.

© 2023 Morningstar, Inc. All Rights Reserved. The information contained herein: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information.

GIPS Composite Report

SaratogaRIM Large Cap Quality Focus

Q2 2023

Saratoga Research & Investment Management | SaratogaRIM.com | (408) 741-2330 | 14471 Big Basin Way, Suite E, Saratoga, CA 95070

Composite Performance Statistics

Year	Composite Gross TWR	Composite Net TWR	Composite Net Max TWR	S&P 500 Total Return	Standard Deviation	3 Yr Ann Standard Dev: Composite Net TWR	3 Yr Ann Standard Dev: S&P 500 Total Return	# of Portfolios in Composite	End of Period Composite Assets	End of Period Total Firm Assets
2014 (8/31)	6.95	6.71	6.59	3.46	n/a	-	-	31	59,408,640.33	1,614,090,418.39
2015	2.85	2.29	1.83	1.38	0.18	-	-	88	122,809,323.37	1,638,083,262.32
2016	11.96	11.35	10.83	11.96	0.63	-	-	151	198,406,977.89	1,800,890,893.30
2017	28.23	27.52	26.96	21.83	0.49	8.70	9.92	287	362,440,319.53	2,113,160,549.13
2018	0.38	-0.18	-0.62	-4.38	0.60	10.30	10.80	303	316,630,422.08	2,013,567,458.02
2019	27.67	26.98	26.39	31.49	0.63	11.41	11.93	403	533,438,674.16	2,333,608,905.18
2020	16.71	16.08	15.56	18.40	1.00	15.84	18.53	626	793,063,147.30	2,631,534,466.80
2021	23.31	22.64	22.09	28.71	0.67	15.07	17.17	924	1,039,079,017.33	2,957,751,865.10
2022	-11.74	-12.22	-12.62	-18.11	0.52	17.57	20.87	913	853,935,678.90	2,603,780,552.47
06/30/23	11.64	11.34	11.08	16.89	n/a	16.23	17.93	1,010	1,076,287,966.78	2,819,827,128.60

Trailing Annualized Returns as of 06/30/23

	Composite Gross TWR	Composite Net TWR	Composite Net Max TWR	S&P 500 Total Return
1 Year	16.11	15.48	14.95	19.59
5 Year	12.55	11.95	11.43	12.31
10 Year				
Composite Inception	12.67	12.06	11.55	11.55

Firm Description: Saratoga Research & Investment Management ("SaratogaRIM" or "the Firm") is an SEC Registered Investment Advisor specializing in the construction and management of equity portfolios composed of high caliber businesses utilizing common sense investment principles. SEC Registration does not constitute an endorsement of the firm by the Commission, nor does it indicate the advisor has attained a particular level of skill or ability. The Firm's investment process is designed to meet the long-term needs of conservative individual and institutional investors. Advisory services are not made available in any jurisdiction in which SaratogaRIM is not registered or otherwise exempt from registration. The Firm was founded in 1995; prior to March 7, 2007, Saratoga Research & Investment Management was known as Tanner & Associates Asset Management.

Composite Description: The SaratogaRIM Large Cap Quality Focus Composite includes all discretionary portfolios that invest in what the Firm believes to be high-quality companies with low balance sheet, business model (including capital intensity) and valuation risk. This composite will likely have a greater turnover ratio than other composites as it typically restricts cash to no more than 5% of the total portfolio value. Individual position sizes typically range from 1% to 10% of the total portfolio value, but there is no maximum size for an individual position. This composite has higher levels of concentration, particularly in the top 10 positions; collectively, the top 10 positions make up at least 50% of the portfolio. While the investment criteria for this composite narrows the investable universe to predominantly large-cap companies based in the U.S., the composite has no restrictions on market cap size or where the company is domiciled. Investment ideas that do not meet the stated composite criteria ("outside the box ideas") are allowed so long as they do not cumulatively represent more than 10% of the total portfolio value. The minimum requirement to establish a new account is $100,000 (reduced from $250,000, effective May 1, 2019). The minimum asset level is $75,000 (reduced from $225,000, effective May 1, 2019). Inception date: August 31, 2014. Creation date for GIPS: August 31, 2014.

GIPS Compliance: SaratogaRIM claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. SaratogaRIM has been independently verified by The Spaulding Group for the periods March 1, 2000 through December 31, 2022. | A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. The SaratogaRIM Large Cap Quality Focus Composite has had a performance examination for the periods September 1, 2014 through December 31, 2022. The verification and performance examination reports are available upon request. | GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein. | A list of SaratogaRIM's composite descriptions is available upon request. Policies for valuing investments, calculating performance, and preparing GIPS reports are available upon request. To obtain GIPS-compliant performance information for SaratogaRIM's strategies and products, please contact Marc Crosby, President, at (408) 741-2332 or Marc@SaratogaRIM.com.

Disclosures: Results of the SaratogaRIM Large Cap Quality Focus Composite do not reflect the results of any one portfolio in the composite. Valuations are computed and performance is reported in U.S. dollars based on trade dates as of month-end, net-of-fees, while accounting for dividend reinvestment. Aggregate composite returns are calculated using the Average Capital Base equation (also known as the Modified Dietz method), which utilizes the beginning asset value plus weighted cash flows. Gross and Net TWRs are calculated based on the geometric linking of the monthly internal rate of return for portfolios present for the entire month. Individual portfolios are revalued monthly; portfolios are also revalued intra-month when large external cash flows occur in excess of 10% of the portfolio's fair value. Daily reconciliation is performed between the Firm's records and the custodian and broker records through Advent to verify client assets. Gross-of-fee returns are calculated gross of management, custodial and external consultant or advisory fees and net of transaction costs. Net-of-fee returns are calculated net of actual management fees and transaction costs and gross of custodian fees and external consultant or advisory fees. Prior to October 31, 2022, non-fee-paying accounts were included in composite net-of-fee return calculations without a fee rate; per the SEC Marketing Rule effective November 4, 2022, net-of-fee returns labeled "Net" now include a model fee rate of 1.00% for all non-fee-paying accounts. The model fee rate for non-fee-paying portfolios was applied quarterly until October 2022, when the Firm switched to deducting monthly. Additionally, a separate net-of-fee return calculation has been added to SaratogaRIM marketing materials using the current maximum fee rate charged by SaratogaRIM for the SaratogaRIM Large Cap Quality Focus Composite (1.00%, labeled "Net Max"). The "Net Max" return fee data represents the reduction of the gross of fee composite returns by the monthly portion of the annual model fee rate of 1.00%. The SaratogaRIM fee is normally 1.00% for the SaratogaRIM Large Cap Quality Focus Composite; may be negotiated, as warranted by special circumstances. Dispersion is calculated as the asset-weighted standard deviation of annual net-of-fee portfolio returns around the median net-of-fee portfolio return in the composite. Dispersion is based only on portfolios that were in the composite for the full annual period and is only shown for the annual periods where the composite had more than 5 portfolios for the full year. The 3-year annual standard deviation (external dispersion) is based on net-of-fee returns.

Benchmark Disclosures: Benchmarks are unmanaged and provided to represent the investment environment in existence during the time periods shown. The S&P 500® Total Return Index has been selected as the benchmark for comparison purposes. The S&P Total Return Index assumes that all dividends and distributions are reinvested. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization. Portfolios are managed according to their respective strategies which may differ significantly in terms of security holdings, industry weightings, and asset allocation from those of benchmarks. An index is not available for direct investment, and does not reflect any of the costs associated with buying and selling individual securities or any other fees, expenses, or charges. | The S&P 500 Index is a product of S&P Dow Jones Indices LLC ("SPDJI"), and has been licensed for use by SaratogaRIM. Standard & Poor's®, S&P®, and S&P 500® are registered trademarks of Standard & Poor's Financial Services LLC ("S&P"); Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"); and these trademarks have been licensed for use by SPDJI and sublicensed for certain purposes by SaratogaRIM. SaratogaRIM's products are not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, their respective affiliates, and none of such parties make any representation regarding the advisability of investing in such product(s) nor do they have any liability for any errors, omissions, or interruptions of the S&P 500 Index.

SaratogaRIM Large Cap Quality

Composite Statistics

Q2 2023

Saratoga Research & Investment Management | SaratogaRIM.com | (408) 741-2330 | 14471 Big Basin Way, Suite E, Saratoga, CA 95070

Firm Overview: Saratoga Research & Investment Management, founded in 1995, is an SEC Registered Investment Advisor specializing in the construction and management of equity portfolios composed of high caliber businesses utilizing common sense investment principles for individual and institutional investors.

Composite Overview: The SaratogaRIM Large Cap Quality Composite includes all discretionary portfolios that invest in what the Firm believes to be high-quality companies with low balance sheet, business model (including capital intensity) and valuation risk. This composite allows cash to accumulate at certain stages of the market cycle and has no maximum cash position size. See the GIPS Composite Report (Page 4) for the complete composite description.

SaratogaRIM Large Cap Quality (LCQ) - Snapshot

Composite Name	SaratogaRIM Large Cap Quality
Inception Date	2/29/2000
Firm Total Assets	$ 2,819,827,000
Composite Assets	$ 1,253,067,000
GIPS Compliance	Yes

Investment Results

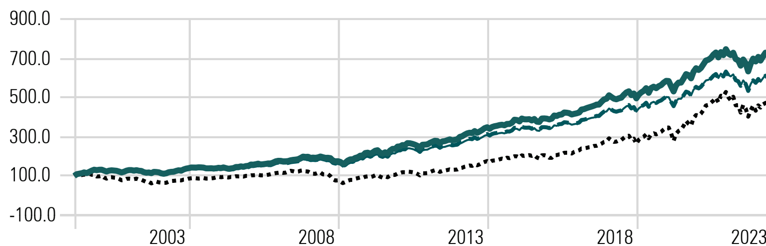
As of Date: 6/30/2023 Source Data: Total, Monthly Return

	Quarter to Date	Year to Date	1 Year	3 Years	5 Years	7 Years	10 Years	15 Years	20 Years	Since Inception
SaratogaRIM LCQ (Gross)	3.76	7.79	11.25	8.57	8.12	8.63	8.77	9.27	9.46	8.96
SaratogaRIM LCQ (Net)	3.62	7.51	10.64	7.97	7.52	8.02	8.17	8.61	8.71	8.16
SaratogaRIM LCQ (Net Max)	3.56	7.39	10.41	7.76	7.31	7.81	7.95	8.45	8.64	8.13
S&P 500 TR USD	8.74	16.89	19.59	14.60	12.31	13.38	12.86	10.88	10.04	7.21

Investment Growth Relative to Benchmark

Time Period: 3/1/2000 to 6/30/2023

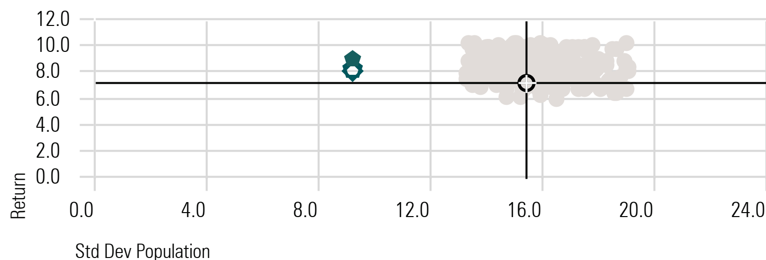
Source Data: Total Return



Standard Deviation vs. Annualized Rate of Return Relative to Benchmark & Peer Group

Time Period: 3/1/2000 to 6/30/2023

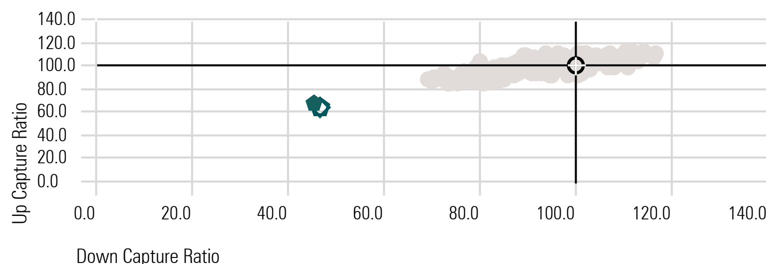
Peer Group (5-95%): Large Cap SA Source Data: Total, Monthly Return



Market Capture Relative to Benchmark & Peer Group

Time Period: 3/1/2000 to 6/30/2023

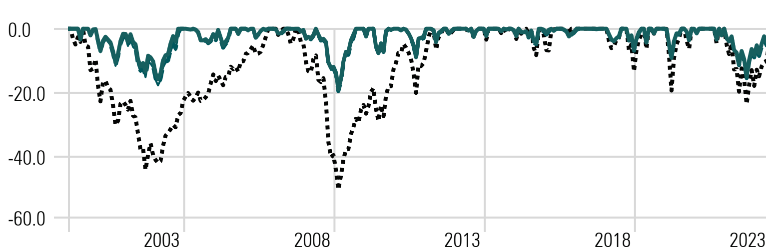
Peer Group (5-95%): Large Cap SA Source Data: Total, Monthly Return



Drawdown Relative to Benchmark

Time Period: 3/1/2000 to 6/30/2023

Source Data: Total, Monthly Return



Sector Weightings - GICS

Portfolio Date: 6/30/2023

	LCQ	S&P 500
Consumer Discretionary %	9.91	10.66
Consumer Staples %	13.11	6.67
Energy %	0.00	4.11
Financials %	8.22	12.42
Healthcare %	18.40	13.42
Industrials %	12.57	8.49
Information Technology %	26.67	28.26
Materials %	2.24	2.50
Communication Services %	8.88	8.39
Utilities %	0.00	2.58

Holding Fundamentals

Dividend Yield	1.70
P/E Ratio (TTM)	26.05
P/CF Ratio (TTM)	18.77
P/B Ratio (TTM)	4.24
ROE % (TTM)	29.01
ROA % (TTM)	11.67
Net Margin %	15.60
Est. LT EPS Growth	8.93
Historical EPS Growth	14.46

Market Capitalization

Average Market Cap (mil)	237,762.05
Market Cap Giant %	51.14
Market Cap Large %	38.56
Market Cap Mid %	10.31

Asset Allocation

Portfolio Date: 6/30/2023

	%
Stock	64.4
Bond	0.0
Cash	35.6
Other	0.0
Total	**100.0**

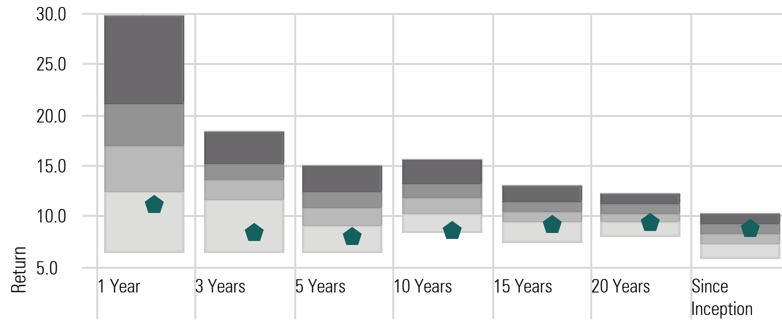
GICS Sector Weightings, Holding Fundamentals, and Market Capitalization statistics reflect the weightings of the stock portion of the portfolio. Results of Morningstar's calculations may vary slightly from SaratogaRIM's own reported statistics within the GIPS Composite Report due to rounding. See Disclosures and Definitions (Page 3) and the GIPS Composite Report: SaratogaRIM Large Cap Quality (Page 4).

Investment Results Relative to Peer Group (Gross)

As of Date: 6/30/2023 Peer Group (5-95%): Large Cap SA Source Data: Gross, Monthly Return

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

SaratogaRIM LCQ (Gross)



Investment Results Relative to Peer Group (Gross)

As of Date: 6/30/2023 Source Data: Gross, Monthly Return Peer Group: Large Cap SA

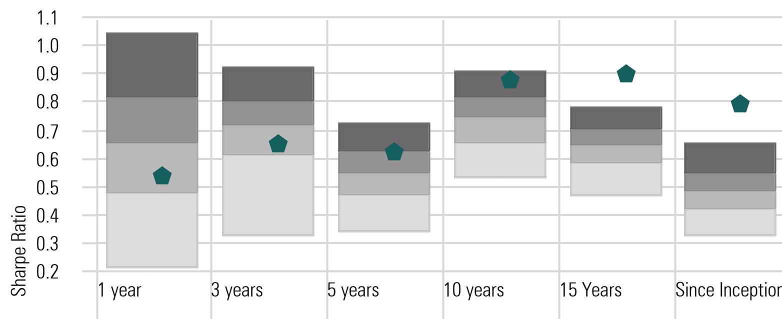
	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	Since Inception
SaratogaRIM LCQ (Gross)	11.25	8.57	8.12	8.77	9.27	9.46	8.96
Median	16.87	13.63	10.86	11.87	10.49	10.26	8.23
Average	17.20	13.18	10.79	11.82	10.41	10.28	8.28
Count	1,533	1,454	1,371	1,101	865	578	388
5th Percentile	29.67	18.26	15.04	15.63	13.00	12.21	10.27
25th Percentile	21.13	15.23	12.47	13.22	11.49	11.14	9.29
50th Percentile	16.87	13.63	10.86	11.87	10.49	10.26	8.23
75th Percentile	12.46	11.65	9.15	10.23	9.40	9.56	7.38
95th Percentile	6.59	6.60	6.56	8.40	7.50	8.12	5.89

Sharpe Ratio Relative to Peer Group (Gross)

As of Date: 6/30/2023 Peer Group (5-95%): Large Cap SA Source Data: Gross, Monthly Return

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

SaratogaRIM LCQ (Gross)



Sharpe Ratio Relative to Peer Group (Gross)

As of Date: 6/30/2023 Source Data: Gross, Monthly Return Peer Group: Large Cap SA

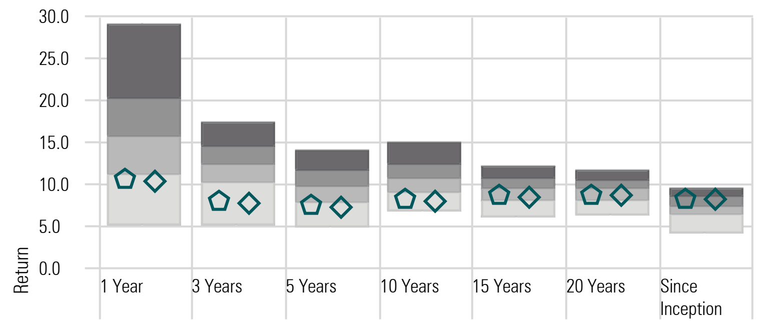
	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	Since Inception
SaratogaRIM LCQ (Gross)	0.54	0.65	0.62	0.88	0.91	0.92	0.80
Median	0.66	0.72	0.55	0.75	0.65	0.64	0.48
Average	0.64	0.69	0.54	0.73	0.64	0.63	0.49
Count	1,533	1,454	1,371	1,101	865	578	388
5th Percentile	1.04	0.93	0.72	0.91	0.78	0.75	0.65
25th Percentile	0.82	0.80	0.63	0.82	0.70	0.68	0.54
50th Percentile	0.66	0.72	0.55	0.75	0.65	0.64	0.48
75th Percentile	0.47	0.61	0.47	0.65	0.58	0.59	0.42
95th Percentile	0.21	0.33	0.34	0.53	0.47	0.50	0.32

Investment Results Relative to Peer Group (Net)

As of Date: 6/30/2023 Peer Group (5-95%): Large Cap SA Source Data: Net, Monthly Return

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

SaratogaRIM LCQ (Net) SaratogaRIM LCQ (Net Max)



Investment Results Relative to Peer Group (Net)

As of Date: 6/30/2023 Source Data: Net, Monthly Return Peer Group: Large Cap SA

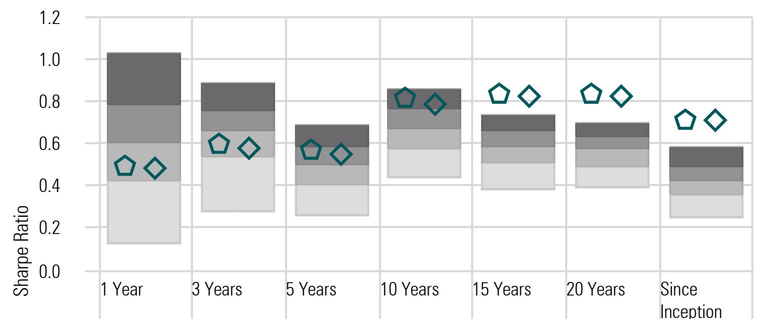
	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	Since Inception
SaratogaRIM LCQ (Net)	10.64	7.97	7.52	8.17	8.61	8.71	8.16
SaratogaRIM LCQ (Net Max)	10.41	7.76	7.31	7.95	8.45	8.64	8.13
Median	15.54	12.39	9.66	10.53	9.36	9.38	7.26
Average	16.19	11.97	9.60	10.62	9.26	9.11	7.22
Count	1,492	1,423	1,341	1,080	853	570	381
5th Percentile	28.92	17.39	14.03	14.86	12.14	11.51	9.51
25th Percentile	20.19	14.32	11.49	12.25	10.58	10.27	8.46
50th Percentile	15.54	12.39	9.66	10.53	9.36	9.38	7.26
75th Percentile	11.19	10.06	7.76	8.88	7.97	8.00	6.24
95th Percentile	5.15	5.16	4.95	6.75	6.04	6.32	4.23

Sharpe Ratio Relative to Peer Group (Net)

As of Date: 6/30/2023 Peer Group (5-95%): Large Cap SA Source Data: Net, Monthly Return

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

SaratogaRIM LCQ (Net) SaratogaRIM LCQ (Net Max)



Sharpe Ratio Relative to Peer Group (Net)

As of Date: 6/30/2023 Source Data: Net, Monthly Return Peer Group: Large Cap SA

	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	Since Inception
SaratogaRIM LCQ (Net)	0.50	0.60	0.57	0.82	0.84	0.84	0.72
SaratogaRIM LCQ (Net Max)	0.49	0.58	0.55	0.79	0.83	0.83	0.72
Median	0.60	0.66	0.49	0.67	0.58	0.57	0.42
Average	0.59	0.63	0.49	0.66	0.57	0.56	0.42
Count	1,492	1,423	1,341	1,080	853	570	381
5th Percentile	1.03	0.89	0.68	0.86	0.73	0.69	0.59
25th Percentile	0.78	0.76	0.58	0.76	0.65	0.63	0.49
50th Percentile	0.60	0.66	0.49	0.67	0.58	0.57	0.42
75th Percentile	0.42	0.53	0.41	0.57	0.51	0.49	0.36
95th Percentile	0.13	0.28	0.27	0.44	0.39	0.39	0.25

Results of Morningstar's calculations may vary slightly from SaratogaRIM's own reported statistics within the GIPS Composite Report due to rounding.
See Disclosures and Definitions (Page 3) and the GIPS Composite Report: SaratogaRIM Large Cap Quality (Page 4).

Disclosures & Definitions

See additional important disclosures and composite-specific information within the GIPS Composite Report (Page 4).

Saratoga Research & Investment Management ("SaratogaRIM" or the "Firm") is an SEC Registered Investment Advisor. SEC Registration does not constitute an endorsement of the Firm by the Commission, nor does it indicate the advisor has attained a particular level of skill or ability. Advisory services are not made available in any jurisdiction in which SaratogaRIM is not registered or otherwise exempt from registration.

This report was generated by SaratogaRIM through Morningstar Direct's Presentation Studio using data from Morningstar Direct and Advent Axys. SaratogaRIM composite performance statistics are based off gross-of-fee or net-of-fee monthly performance data uploaded to Morningstar. Results of Morningstar's calculations may vary slightly from SaratogaRIM's own reported statistics within the GIPS Composite Report due to rounding. The Peer Group statistics within this report contain U.S. Large Cap separate account managers that appear in the Morningstar database for the relevant periods shown as of the report generated date. The information and statistical data contained herein have been obtained from sources that SaratogaRIM believes to be reliable but in no way are warranted by the Firm as to accuracy or completeness.

Results of the SaratogaRIM Large Cap Quality Composite do not reflect the results of any one portfolio in the composite. Performance figures are based on historical information and do not guarantee future results. Actual current performance may be higher or lower than the performance presented. All investing entails the risk of loss. This summary is for informational purposes only and does not constitute an offer to sell or a solicitation of an offer to buy any securities and may not be relied upon in connection with any offer or sale of securities. It is not intended to serve as a substitute for personalized investment advice. Prospective clients should recognize the limitations inherent in the composite strategy and should consider all information presented regarding the Firm's investment management capabilities. The contents of this report are only a portion of the original material and research and should not be relied upon in making investment decisions.

Gross-of-fee returns are calculated gross of management, custodial and external consultant or advisory fees and net of transaction costs. Net-of-fee returns are calculated net of actual management fees and transaction costs and gross of custodian fees and external consultant or advisory fees. Prior to October 31, 2022, non-fee-paying accounts were included in composite net-of-fee return calculations without a fee rate; per the SEC Marketing Rule effective November 4, 2022, net-of-fee returns labeled "Net" now include a model fee rate of 0.75% for all non-fee-paying accounts. Additionally, a separate net-of-fee return calculation has been added to SaratogaRIM marketing materials using the current maximum fee rate charged by SaratogaRIM for the SaratogaRIM Large Cap Quality Composite (0.75%, labeled "Net Max"). Calculations are available upon request. Information pertaining to the Firm's advisory fees is set forth in SaratogaRIM's current disclosure statement, which is available upon request.

Definitions: Standard Deviation measures the dispersion of a dataset relative to its mean. Sharpe Ratio is a risk-adjusted measure that is calculated by using excess return and standard deviation to determine reward per unit of risk. The higher the Sharpe Ratio, the better the portfolio's historical risk-adjusted performance. Excess Return measures the difference in return, cumulative or annualized, between the strategy and a benchmark. Market Capture Ratios measure the extent to which a strategy participates in market moves over time; Up (Down) Market Capture measures relative performance in months which the benchmark generates positive (negative) returns over time. Drawdown is a measure of peak-to-trough decline over the period of time until a new high is reached.

Benchmark Disclosures: Benchmarks are unmanaged and provided to represent the investment environment in existence during the time periods shown. The S&P 500® Total Return Index has been selected as the benchmark for comparison purposes. The S&P Total Return Index assumes that all dividends and distributions are reinvested. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization. Portfolios are managed according to their respective strategies which may differ significantly in terms of security holdings, industry weightings, and asset allocation from those of benchmarks. An index is not available for direct investment, and does not reflect any of the costs associated with buying and selling individual securities or any other fees, expenses, or charges. | The S&P 500 Index is a product of S&P Dow Jones Indices LLC ("SPDJI"), and has been licensed for use by SaratogaRIM. Standard & Poor's®, S&P®, and S&P 500® are registered trademarks of Standard & Poor's Financial Services LLC ("S&P"); Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"); and these trademarks have been licensed for use by SPDJI and sublicensed for certain purposes by SaratogaRIM. SaratogaRIM's products are not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, their respective affiliates, and none of such parties make any representation regarding the advisability of investing in such product(s) nor do they have any liability for any errors, omissions, or interruptions of the S&P 500 Index.

© 2023 Morningstar, Inc. All Rights Reserved. The information contained herein: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information.

GIPS Composite Report

SaratogaRIM Large Cap Quality

Q2 2023

Saratoga Research & Investment Management | SaratogaRIM.com | (408) 741-2330 | 14471 Big Basin Way, Suite E, Saratoga, CA 95070

Composite Performance Statistics

						3 Yr Ann Standard Dev				
Year	Composite Gross TWR	Composite Net TWR	Composite Net Max TWR	S&P 500 Total Return	Standard Deviation	Composite Net TWR	S&P 500 Total Return	# of Portfolios in Composite	End of Period Composite Assets	End of Period Total Firm Assets
2000 (2/29)	31.62	30.58	30.82*	-2.45	n/a	-	-	44	13,012,273.41	26,739,562.04
2001	-1.54	-2.51	-2.27*	-11.93	2.87	-	-	56	24,787,551.38	36,880,632.99
2002	-8.93	-9.74	-9.60*	-22.06	1.84	-	-	79	28,949,501.66	39,231,009.25
2003	18.16	17.09	17.27*	28.68	2.09	-	-	87	37,399,754.37	52,738,112.73
2004	1.33	0.40	0.56*	10.88	2.06	-	-	90	39,743,734.02	58,324,543.15
2005	7.02	6.02	6.21*	4.91	2.29	-	-	88	39,293,990.53	61,636,483.18
2006	17.03	15.93	16.17*	15.80	3.14	-	-	83	44,027,113.77	73,239,570.18
2007	11.68	10.62	10.86*	5.49	2.86	-	-	84	48,997,165.75	79,207,247.76
2008	-11.48	-12.34	-12.15*	-37.00	3.24	-	-	112	50,664,984.48	80,940,276.87
2009	25.04	23.91	24.05*	26.46	2.60	-	-	260	149,105,345.03	183,475,714.03
2010	14.26	13.42	13.42*	15.06	0.79	-	-	491	308,291,988.80	419,588,547.25
2011	4.32	3.70	3.53	2.11	0.53	11.86	18.71	1,176	675,883,971.31	758,793,592.13
2012	9.93	9.31	9.11	16.00	0.61	9.98	15.09	1,540	950,046,377.00	1,044,968,031.90
2013	21.65	20.98	20.75	32.39	1.63	7.85	11.94	1,823	1,259,241,527.31	1,403,561,332.55
2014	10.59	9.99	9.76	13.69	0.94	6.30	8.97	1,913	1,338,659,044.57	1,614,090,418.39
2015	1.84	1.28	1.07	1.38	1.00	6.96	10.47	1,983	1,266,678,096.48	1,638,083,262.32
2016	6.95	6.35	6.15	11.96	0.89	6.48	10.59	2,196	1,329,320,194.32	1,800,890,893.30
2017	17.72	17.07	16.85	21.83	1.52	6.15	9.92	2,383	1,481,531,427.12	2,113,160,549.13
2018	0.41	-0.14	-0.34	-4.38	0.48	6.54	10.80	2,480	1,401,704,942.18	2,013,567,458.02
2019	18.03	17.38	17.14	31.49	2.08	7.39	11.93	2,583	1,505,375,555.14	2,333,608,905.18
2020	11.05	10.44	10.22	18.40	0.95	9.93	18.53	2,428	1,458,530,696.52	2,631,534,466.80
2021	14.96	14.32	14.09	28.71	1.15	9.56	17.17	1,921	1,439,757,287.98	2,957,751,865.10
2022	-8.41	-8.92	-9.10	-18.11	0.78	11.63	20.87	1,739	1,156,118,739.10	2,603,780,552.47
06/30/23	7.79	7.51	7.39	16.89	n/a	10.97	17.93	1,728	1,253,067,172.61	2,819,827,128.60
Trailing Annualized Returns as of 06/30/23										
1 Year	11.25	10.64	10.41	19.59						
5 Year	8.12	7.52	7.31	12.31						
10 Year	8.77	8.17	7.95	12.87						
Composite Inception	8.95	8.16	8.13	7.21						

**The highest potential fee rate for existing and prospective clients is currently 0.75%. Actual fee rates charged in prior years may have been higher and as a result cause the Composite Net Max TWR to be higher than the Composite Net TWR.*

Firm Description: Saratoga Research & Investment Management ("SaratogaRIM" or "the Firm") is an SEC Registered Investment Advisor specializing in the construction and management of equity portfolios composed of high caliber businesses utilizing common sense investment principles. SEC Registration does not constitute an endorsement of the Firm by the Commission, nor does it indicate the advisor has attained a particular level of skill or ability. The Firm's investment process is designed to meet the long-term needs of conservative individual and institutional investors. Advisory services are not made available in any jurisdiction in which SaratogaRIM is not registered or otherwise exempt from registration. The Firm was founded in 1995; prior to March 7, 2007, Saratoga Research & Investment Management was known as Tanner & Associates Asset Management.

Composite Description: The SaratogaRIM Large Cap Quality Composite (SaratogaRIM Equity Composite) includes all discretionary portfolios that invest in what the Firm believes to be high-quality companies with low balance sheet, business model (including capital intensity) and valuation risk. This composite allows cash to accumulate at certain stages of the market cycle and has no maximum cash position size. Individual position sizes typically range from 1.5% to 6% of the total portfolio value, but there is no maximum size for an individual position. While the investment criteria for this composite narrows the investable universe to predominantly large-cap companies based in the U.S., the composite has no restrictions on market cap size or where the company is domiciled. Investment ideas that do not meet the stated composite criteria ("outside the box ideas") are allowed so long as they do not cumulatively represent more than 10% of the total portfolio value. Prior to December 31, 2009, client-directed securities may have been permitted so long as they did not represent more than 10% of the total portfolio value. The minimum requirement to establish a new account is $100,000. The minimum asset level is $50,000 (prior to August 30, 2010, there was no account minimum). Inception date: February 29, 2000. Creation date for GIPS: August 30, 2010.

GIPS Compliance: SaratogaRIM claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. SaratogaRIM has been independently verified by The Spaulding Group for the periods March 1, 2000 through December 31, 2022. | A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. The SaratogaRIM Large Cap Quality Composite has had a performance examination for the periods February 29, 2000 through December 31, 2022. The verification and performance examination reports are available upon request. | GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein. | A list of SaratogaRIM's composite descriptions is available upon request. Policies for valuing investments, calculating performance, and preparing GIPS reports are available upon request. To obtain GIPS-compliant performance information for SaratogaRIM's strategies and products, please contact Marc Crosby, President, at (408) 741-2332 or Marc@SaratogaRIM.com.

Disclosures: Results of the SaratogaRIM Large Cap Quality Composite do not reflect the results of any one portfolio in the composite. Valuations are computed and performance is reported in U.S. dollars based on trade dates as of month-end, net-of-fees, while accounting for dividend reinvestment. Aggregate composite returns are calculated using the Average Capital Base equation (also known as the Modified Dietz method), which utilizes the beginning asset value plus weighted cash flows. Gross and Net TWRs are calculated based on the geometric linking of the monthly internal rate of return for portfolios present for the entire month. Individual portfolios are revalued monthly; portfolios are also revalued intra-month when large external cash flows occur in excess of 10% of the portfolio's fair value. Daily reconciliation is performed between the Firm's records and the custodian and broker records through Advent to verify client assets. Gross-of-fee returns are calculated gross of management, custodial and external consultant or advisory fees and net of transaction costs. Net-of-fee returns are calculated net of actual management fees and transaction costs and gross of custodian fees and external consultant or advisory fees. Prior to October 31, 2022, non-fee-paying accounts were included in composite net-of-fee return calculations without a fee rate; per the SEC Marketing Rule effective November 4, 2022, net-of-fee returns labeled "Net" now include a model fee rate of 0.75% for all non-fee-paying accounts. The model fee rate for non-fee-paying portfolios was applied quarterly until October 2022, when the Firm switched to deducting monthly. Additionally, a separate net-of-fee return calculation has been added to SaratogaRIM marketing materials using the current maximum fee rate charged by SaratogaRIM for the SaratogaRIM Large Cap Quality Composite (0.75%, labeled "Net Max"). The "Net Max" return fee data represents the reduction of the gross of fee composite returns by the monthly portion of the annual model fee rate of 0.75%. SaratogaRIM fee is normally 0.75% for the SaratogaRIM Large Cap Quality Composite; may be negotiated, as warranted by special circumstances. Dispersion is calculated as the asset-weighted standard deviation of annual net-of-fee portfolio returns around the median net-of-fee portfolio return in the composite. Dispersion is based only on portfolios that were in the composite for the full annual period and is only shown for the annual periods where the composite had more than 5 portfolios for the full year. The 3-year annual standard deviation (external dispersion) is based on net-of-fee returns. As of January 2022, SaratogaRIM's composite descriptions have been revised to better reflect the criteria used in determining composite inclusion/exclusion. The resultant updates to composite constituents for the SaratogaRIM Large Cap Quality Composite caused performance differentials that modestly exceeded the Firm's materiality threshold in four years (two years being positive and two years being negative). However, since inception annualized performance was affected by an immaterial amount (0.0026%). For additional information and calculation details, please contact Marc Crosby (Marc@SaratogaRIM.com).

Benchmark Disclosures: Benchmarks are unmanaged and provided to represent the investment environment in existence during the time periods shown. The S&P 500® Total Return Index has been selected as the benchmark for comparison purposes. The S&P Total Return Index assumes that all dividends and distributions are reinvested. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization. Portfolios are managed according to their respective strategies which may differ significantly in terms of security holdings, industry weightings, and asset allocation from those of benchmarks. An index is not available for direct investment, and does not reflect any of the costs associated with buying and selling individual securities or any other fees, expenses, or charges. | The S&P 500 Index is a product of S&P Dow Jones Indices LLC ("SPDJI"), and has been licensed for use by SaratogaRIM. Standard & Poor's®, S&P®, and S&P 500® are registered trademarks of Standard & Poor's Financial Services LLC ("S&P"); Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"); and these trademarks have been licensed for use by SPDJI and sublicensed for certain purposes by SaratogaRIM. SaratogaRIM's products are not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, their respective affiliates, and none of such parties make any representation regarding the advisability of investing in such product(s) nor do they have any liability for any errors, omissions, or interruptions of the S&P 500 Index.

Disclosures

See additional important disclosures and composite-specific information within the GIPS Composite Reports for SaratogaRIM Large Cap Quality Focus (page 21) and Large Cap Quality (page 25).

Saratoga Research & Investment Management ("SaratogaRIM" and "the Firm"), founded in 1995, is an SEC Registered Investment Advisor specializing in the construction and management of equity portfolios composed of high caliber businesses utilizing an investment process built on common sense investment principles for individual and institutional investors. SEC Registration does not constitute an endorsement of the Firm by the Commission, nor does it indicate the advisor has attained a particular level of skill or ability. Advisory services are not made available in any jurisdiction in which SaratogaRIM is not registered or otherwise exempt from registration.

The opinions herein are those of Saratoga Research & Investment Management. The contents of this report are only a portion of the original material and research and should not be relied upon in making investment decisions. The Firm's quarterly reports focus primarily on its equity strategies. Under no circumstance is this an offer to sell or a solicitation to buy securities. This material is not a recommendation as defined in Regulation Best Interest adopted by the Securities and Exchange Commission. All data, information and opinions are subject to change without notice. Opinions and statements of a fundamental nature are geared towards the long-term investor. SaratogaRIM is not a tax/legal advisor and therefore assumes no liability for any tax/legal research. Any information that is furnished to you should be thoroughly examined by a professional tax/legal advisor.

As additional peer group comparison data for the relevant period becomes available through Morningstar, statistics within the Composite Statistics pages may be updated and subsequently replaced within the version of this quarterly report that is published to SaratogaRIM.com. The Composite Statistics report generation date can be found within the footers of each Composite Statistics report. The original Quarterly Report publish date is located on the upper right hand corner of the Quarterly Report cover page and the main report page footers.

2023 Q2 Report Charts: All charts and tables within this report are created by SaratogaRIM. **Fig. 1** displays quarter-end sector weightings for the SaratogaRIM Large Cap Quality Focus and Large Cap Quality composites along with the S&P 500 Index using FactSet data. **Fig. 2** contains four charts displaying different profitability metrics for SaratogaRIM's healthcare sector constituents (individually and combined), S&P 500's healthcare constituents, and the S&P 500 Index (excluding Financials) from 2008 through 2022 (using data from FactSet). The SaratogaRIM and S&P figures displayed within the charts do not reflect actual market or composite performance, rather the metrics as labeled in the corresponding chart title. Gross profit to assets (GPA) is a ratio used to determine how efficiently a firm uses its assets to generate gross profits. It is calculated as gross profits divided by the firm's total assets. Gross profits is calculated as revenues minus cost of goods sold. Total assets is the sum of all current and long-term assets. Return on invested capital (ROIC) excluding goodwill is a calculation used to assess the profitability of internal investments made by a company. It is calculated by dividing net operating profit after tax (NOPAT) by invested capital (excluding goodwill). *A previous version of these charts understated Gross Profit to Assets (GP/A) and Return on Invested Capital (ROIC) for the S&P 500. The reason for this understatement was the inclusion of financial and insurance firms which do not report gross and operating profits in a comparable way to firms outside of these industries. This updated version (published 9/1/23) removes firms from these industries, and we believe results in a more accurate comparison to the companies we are invested in.* **Fig. 3** illustrates cumulative daily return estimates calculated by FactSet utilizing month-end holdings data for the relevant period shown and may differ from actual performance. Ending label data points represent actual net performance and net max performance. Past investment results are not a guarantee of future results. For further information or clarification regarding any of the charts or concepts within this report, please email your *specific* questions to InvestorRelations@SaratogaRIM.com.

Gross-of-fee returns are calculated gross of management, custodial and external consultant or advisory fees and net of transaction costs. Net-of-fee returns are calculated net of actual management fees and transaction costs and gross of custodian fees and external consultant or advisory fees. Prior to October 31, 2022, non-fee-paying accounts were included in composite net-of-fee return calculations without a fee rate; per the SEC

Marketing Rule effective November 4, 2022, net-of-fee returns labeled "Net" now include a model fee rate of 0.75% for all non-fee-paying accounts in the SaratogaRIM Large Cap Quality composite/1.00% in the SaratogaRIM Large Cap Quality Focus composite. Additionally, a separate net-of-fee return calculation has been added to SaratogaRIM marketing materials using the current maximum fee rate charged by SaratogaRIM for the corresponding composite, labeled "Net Max" (0.75% for the SaratogaRIM Large Cap Quality Composite/1.00% for the SaratogaRIM Large Cap Quality Focus Composite). Calculations are available upon request. Information pertaining to the Firm's advisory fees is set forth in SaratogaRIM's current disclosure statement, which is available upon request. Results of the SaratogaRIM Large Cap Quality Composite & the SaratogaRIM Large Cap Quality Focus Composite do not reflect the results of any one portfolio in those composites.

Benchmarks are selected based upon similarity to the investment style of the Firm's composites and accepted norms within the industry. Benchmarks are provided for comparative purposes only and holdings of the Firm's clients' portfolios will differ from actual holdings of the benchmark indexes. Benchmarks are unmanaged and provided to represent the investment environment in existence during the time periods shown. The benchmarks presented were obtained from third-party sources deemed reliable but not guaranteed for accuracy or completeness. Indices are unmanaged, hypothetical portfolios of securities that are often used as a benchmark in evaluating the relative performance of a particular investment. An index should only be compared with a mandate that has a similar investment objective. An index is not available for direct investment, and does not reflect any of the costs associated with buying and selling individual securities or management fees.

The S&P 500 Total Return is the total return version of the S&P 500 Index, which has been widely regarded as the best single gauge of large-cap U.S. equities since 1957. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization. (Note: A total return index assumes that all dividends and distributions are reinvested.) The S&P 500 Index is a product of S&P Dow Jones Indices LLC ("SPDJI"), and has been licensed for use by SaratogaRIM. Standard & Poor's®, S&P® and S&P 500® are registered trademarks of Standard & Poor's Financial Services LLC ("S&P"); Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"); and these trademarks have been licensed for use by SPDJI and sublicensed for certain purposes by SaratogaRIM. SaratogaRIM's products are not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, their respective affiliates, and none of such parties make any representation regarding the advisability of investing in such product(s) nor do they have any liability for any errors, omissions, or interruptions of the S&P 500 Index.

Direct clients may access their portfolio information and reports including client-specific information through SaratogaRIM's Client Portal. If you are a direct client needing Client Portal access or assistance, please call (408) 741-2330 or email ClientService@SaratogaRIM.com. The Firm recommends that you compare your Saratoga Research & Investment Management reports with the ones you receive from your custodian(s). The custodian of record is required under current law to provide separate account statements. Market values reflected in the custodian's statement and those cited in this report may differ due to the use of different reporting methods. To the extent that any discrepancies exist between the custody statement and this report, the custody statement will take precedence. Values may vary slightly because of situations such as rounding, accrued interest or the timing of information reporting. A fee statement showing the amount of the Asset-Based fee, the value of clients' assets on which the Asset-Based fee is based and the specific manner in which the Asset-Based fee was calculated are available from SaratogaRIM upon request. As a general rule, SaratogaRIM does not disclose private information regarding clients' accounts unless the Firm relies on certain third parties for services that enable the Firm to provide its investment services to their clients. The Firm may also disclose nonpublic information where required to do so under law.

If you wish to become a client of SaratogaRIM, you will be required to sign an Investment Advisory Agreement that exclusively governs the relationship between you and SaratogaRIM. You will also be required to review SaratogaRIM's most recent Privacy Notice, Form CRS, and Form ADV, which are publicly available on SaratogaRIM.com/documents. To receive a printed copy of the Firm's Privacy Notice, Form CRS, or Form ADV, please contact Marc Crosby, President, at (408) 741-2332 or Marc@SaratogaRIM.com.

© 2023 Saratoga Research & Investment Management. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system without permission of copyright holder. Request for permission to make copies of any part of the work should be mailed to SaratogaRIM, Attn: Marc Crosby, P.O. Box 3552, Saratoga, CA 95070. *Cover page artwork by Scott Pollack*

SaratogaRIM.com

Matt Casas, CFA: Analyst & Portfolio Manager

Marc Crosby, CFA, CFP, CPA: President | Analyst & Portfolio Manager

Tracey Devine: Director of Investment Team Communications | Generalist Portfolio Manager

Andrew Early, CFA: Analyst & Portfolio Manager

Stephen Fung, MBA: Operations Specialist | Analyst

Jordan Hamilton: Operations Associate

Travis Hanson, MBA: Chief Financial Officer | Operations Specialist

Maria Harrington: Director of Client Service | Operations Specialist

Madeline Hedges, CFP: Chief Compliance Officer

Matt Keating, CFA, MBA: Analyst & Portfolio Manager

John Lapava: Office Manager

Adrena Lauti: Client Service & Operations Specialist

Mark McClenahan, CFP: Director of Investor Relations

Tierney McClenahan: Investor Relations & Operations Specialist

Robert Meng, CFA: Analyst & Portfolio Manager

Adam Oreglia, CISM, GSEC: Director of Information Technology | Operations Specialist

Joe Pollard: CFA, MBA: Analyst & Portfolio Manager

Adam Sato: Analyst & Portfolio Manager

Mathew Spencer, CFA: Analyst & Portfolio Manager

Phil Spencer, CFA: Director of Research | Analyst & Portfolio Manager

Jim Tanner: Director of Operations

Kevin Tanner: Chairman | CEO | Chief Investment Officer

Samantha Tanner: Investor Relations Specialist

George Wehrfritz: Editor | International Advisor to the Investment Team

Saratoga Research & Investment Management
14471 Big Basin Way, Suite E | Saratoga, CA 95070
(408) 741-2330 | Contact@SaratogaRIM.com