BROAD RUN
INVESTMENT MANAGEMENT, LLC

January 23, 2023

Focus Equity Client Letter
Q4 - 2022

For the year ended December 31, 2022, Broad Run's Focus Equity Separate Accounts[1] returned [redacted] net of fees[2] compared to -19.5% for the S&P Total Market Index[3]. For the fourth quarter, the Focus Equity Separate Accounts returned [redacted] net of fees compared to +7.2% for the S&P Total Market Index. The performance for your account will differ somewhat from these reported results due to variations in holdings and other client-specific circumstances. We remind you that we manage your account for long-term results, so we encourage you to evaluate its performance over a multi-year time frame. Long-term performance is presented at the end of this letter.

Commentary

2022 was a difficult year. We avoided the bubble in speculative tech and aggressive growth stocks, but own a number of consumer discretionary, real estate, and financial sector businesses that were impacted by the slowing economy and rising interest rates.

In addition, as has been the case for many years now, we did not have any exposure to the red-hot energy sector (+64% in 2022), or traditional economic "safe havens" such as consumer staples (-1% in 2022), health care (-3% in 2022), or utilities (+2% in 2022). As a reminder, we view energy companies as primarily driven by the price of underlying commodities that are inherently difficult to predict, and view utility businesses as too constrained by regulated rates of return. There are many consumer staples and health care businesses we would like to own, but have found them trading at high prices in relation to their growth prospects in recent years.

We are disappointed to deliver market lagging results, particularly in a year with the market down so much, but this is a risk in running a concentrated, benchmark-agnostic strategy. We regularly measure our portfolio's overall cyclical exposure, and attempt to manage / mitigate this exposure with a ballast of acyclical and countercyclical businesses. Unfortunately, several of these ballast positions – most notably American Tower and Encore Capital – also had a difficult year in 2022.

Importantly, despite some of our stocks being down 30, 40, 50%-plus for the year, we do not have concerns about the viability or long-term cash generative capacity of these businesses. Some are suffering from a slowdown in demand and/or rising costs, but we believe that these headwinds will prove temporary due to their advantaged competitive positions and the enduring nature of the products and services they offer. In fact, some are likely to use industry distress to consolidate market share and end up in a better place than they otherwise would have been. This is most clearly illustrated by CarMax (which we discussed at length in our third quarter letter), but is likely to be true of other holdings as well.

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1 See the end of this letter for historical performance and important disclosures.

2 Net of highest applicable fee of 1.0% per annum as described in our Form ADV, Part 2A.

3 S&P Total Market Index is a broad market index that includes 4,272 large, mid, and small cap U.S. equities (@12/31/22).

Our objective is to own a portfolio of businesses that deliver a mid-teens rate of compounding over the long term, without incurring significant risk of permanent capital loss. We remain steadfast in this pursuit, and, despite 2022's setback, believe that we are well positioned to deliver on our objective.

In the table below, we provide updates on some of our largest detractors from performance in 2022. We believe that many of these businesses have declined far in excess of what can be justified by their fundamentals, and therefore represent among the best opportunities in the market today. Indeed, some of these stocks have already rebounded sharply since the beginning of the year with only modest evidence that inflation and interest rates have crested.

	'22 Perf.	*Port. Wgt.**	*Comments*
CarMax	[redacted]	8%	In 2022, high used vehicle prices combined with rising interest rates to hurt affordability and drive industry-wide used car unit sales down an estimated 11% from 2021. This level of annual sales volume (Cox estimate of 36.2 million units) is in line with the worst rates seen over the last 35 years (36.9 million in '92, 36.5 million in '08, 35.5 million in '09, 36.9 million in '10 and '11, and 35.8 million in '13) and is about 10% below the average volume over the period. Demand weakened further toward the end of 2022 (down at a mid-teens rate) implying that 2023 volumes could be lower than 2022. Amidst this challenging industry backdrop, poorly prepared competitors such as Carvana, Vroom, and Shift, find themselves hemorrhaging cash and retrenching to survive while CarMax remains nicely profitable and continues investing in its key strategic initiatives. We believe CarMax is taking market share - as it has for nearly its entire corporate history - and will achieve record unit sales and profit when industry volume returns to normal. As a secondary market, used car prices adjust to find equilibrium between supply and demand, dampening cyclicality. Already, affordability has begun to improve with the Manheim used car price index down 13.7% in mid-January versus a year ago. Consensus calls for CarMax to earn about $3 per share in calendar 2023 (down from about $7 in 2021 and $3.50 in 2022), and we estimate normalized earning power of $6+ today (and growing over time). At a historical 17x multiple on $6 of earnings CarMax would trade at $102 per share, 52% above its latest price of $67. Longer term, with just 4% market share of late model used car sales, we see a pathway for CarMax to more than double its share as its emerging omni-channel capabilities further differentiate the company from competition.
RH	[redacted]	3%	Sales of RH's home furnishings are highly sensitive to luxury home turnover and equity markets. In 2022, the dramatic rise in mortgage rates and the decline in the stock market hurt housing affordability and consumer confidence. As a result, luxury home sales were down 38% YoY for the three months ended 11/30/22 according to Redfin (the largest decline on record). With one quarter remaining in its fiscal year, RH expects revenue for the fiscal year ending January 2023 to be down 3.5%-4.5%, implying that fiscal Q4 revenue will be down ~12%. This top line performance stands in stark contrast to the 32% revenue growth reported the prior year. There is no doubt that the pandemic and 2021's robust level of housing turnover brought forward some home furnishings demand. We expect demand for the furniture industry to slow further in 2023, but expect several company specific growth initiatives (the rollout of RH Contemporary, opening of RH England, and introduction of a large number of new products across other collections) will allow RH to report just a 5%-10% revenue decline in the upcoming fiscal year. We expect that 2023 will mark the low for housing turnover (at a level not seen since 1980) and trough earnings for RH. At quarter end, RH had more than 35% of its market capitalization in cash on the balance sheet. The company under the stewardship of CEO Gary Friedman has a history of aggressive and well-timed share repurchases (having repurchased ~60% of its shares from FY16-FY18). We know from a recent regulatory disclosure that RH repurchased ~6% of its shares between 12/15/2022 and 1/3/2023. We expect the company to use the majority of its remaining cash balance to repurchase shares. Today, shares trade for 16x our base case estimate of NTM EPS. Over the long-term, we expect RH to compound EPS at a ~20% clip as it generates 10%+ sales growth (driven by pricing power, the continued rollout of its domestic large gallery strategy, and its nascent international rollout), a 25-30% operating margin, and uses its free cash flow to opportunistically repurchase shares and make strategic acquisitions. We continue to believe that RH has the opportunity to move from a roughly $3.5B revenue business to greater than $20B as it establishes itself as the only scaled global luxury furniture brand.

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Disney	[redacted]	*5%*	Disney had a year of solid fundamental progress in 2022 with its theme parks continuing to recover from COVID (Parks & Experiences revenue up an estimated 70%) and continued subscriber growth at its emerging direct-to-consumer streaming services (up an estimated 25%). As expected, Disney's cable networks continued their steady subscriber declines, with pricing increases keeping cable revenue and profits roughly flat. Total company revenue, operating profit, and EPS for the calendar year are estimated to have increased 19%, 39%, and 42%, respectively. However, sentiment turned substantially negative on Disney in the first half of 2022 when Netflix - a primary competitor and key valuation comp - reported a surprise decline in subscribers compared to expectations of healthy growth. This called into question the size and health of the DTC streaming market casting a pall on Netflix, Disney, and others in the space. Netflix stock was down 51% in 2022, and we think much of Disney's underperformance for the year can be attributed to this factor. Other negative surprises have included higher than expected FQ3 losses in DTC, and lower than expected FQ3 profit in theme parks, culminating in a sudden leadership change with long-time former CEO Bob Iger returning to the helm. However, not all recent surprises were negative, with Shanghai Disney reopening after a long Covid shutdown and recent movie release Avatar: The Way of Water surpassing $2B in box office sales (making it the #6 all-time grossing film) giving hope to the post-COVID return of the theater business. By our math, the current stock price imbeds little value for Disney's DTC business, yet we believe that this business will prove to be large and enormously valuable. We believe DTC is a global scale business and we expect Disney and Netflix (and perhaps Amazon) to be the ultimate winners. Netflix already has 20% operating margins, and is on a trajectory toward 30% margins, so we have confidence that Disney, with more unique content, will ultimately achieve significant DTC profitability in time. Our sum-of-the-parts math (base case) implies a $190 share price for Disney in five years, providing roughly a doubling of value from today in one of the world's preeminent business franchises.
Alphabet	[redacted]	10%	Emerging from COVID in 2021, Alphabet's revenue recovered more quickly than the company could hire to fill open roles. As a result, Google Services margin expanded unsustainably in 2021 to nearly 40%. This dynamic reversed in 2022 as revenue growth slowed but hiring remained elevated to backfill roles. This dynamic was further exacerbated by currency changes as most costs are in the U.S., whereas most revenue comes from outside the U.S. As a result, despite Google Services revenue growing 10% YoY for the first nine months of 2022, operating income was down slightly as margins compressed from 39% last year to 35% in 2022. We expect 2023 to be a year of modest revenue growth and cost control. Along with other technology companies, it appears Google has begun to drive efficiencies in its core operations as well as reduce spend on more speculative projects. This fall Google's courtroom battle with the DOJ will begin over its position as the default search engine on both Android and Apple devices. We do not believe a judgment against Google would jeopardize the search business given Google Search's position as the highest quality search engine as well as the cognitive default in the consumer's mind for discovering information. We expect the core search business to continue to grow revenue in the high-single-digit range over the next five years driven by continued growth of ecommerce/omnichannel shopping, continued improvements in vertical search categories, and innovation in the general search experience. Combined with the continued growth of less mature businesses such as YouTube and GCP, a net cash balance sheet, and a 7% free cash flow yield we expect Google to continue to compound its per-share value at a mid-teens or better rate
App. Mat.	[redacted]	3%	2022 was a year of fears being worse than reality for Applied Materials. Revenue was up 12%, EPS was up 13%, and the year ended with record order backlog. In addition, the company returned about 8% of its market cap to investors through share repurchases and dividends. However, this fundamental performance was not enough to overcome the market's concern about a looming downturn in the semiconductor cycle. So far, we have seen weakness in the memory portion of the semiconductor market. Micron, a memory focused chip manufacturer, reported fiscal first quarter revenue down almost 50% versus the prior year as its customers curtailed orders to work through high levels of inventory. This memory downturn is making its way through the supply chain to Applied and other equipment manufacturers since Micron has guided to a 50% reduction in capex. On the other hand, TSMC, the leading global logic manufacturer, has guided for 2023 capex to only be down about 7%. All told, 2023 will certainly be a down year, but to what extent is yet to be determined. We believe that in a typical industry downturn scenario where Applied's end markets contract by 30%, the company would still produce about $6.30 of cash earnings per share. That would put the stock at a very reasonable 17x trough earnings (up from 12x in October). Additionally, unlike other members of the semiconductor market, Applied will still produce substantial free cash flow and enjoys a pristine balance sheet – both of which it can deploy during the worst of the cycle. We expect the semiconductor industry to continue growing at a mid-single-digital rate per annum over the long-term and that equipment suppliers such as Applied should

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			grow about 1.5x faster driven by increasing capital intensity in the manufacturing process. Combined with margin expansion and the ability to return 6-7% of capital annually, we expect Applied to compound earnings per share at a mid-teens or better rate over a full cycle.
SS&C	[redacted]	4%	In 2022, SS&C was impacted by slowing revenue growth, labor cost pressure, and rising interest expense. In its GlobeOp business, market volatility pushed hedge fund redemption requests to a multi-year high resulting in flattish AuA and revenue for the year. Other key business units, including Alts, Eze, Intralinks, and ALPS all saw revenue growth slow sequentially in Q3'22 and likely Q4'22, leading to company-wide revenue growth of an estimated 4% for the year versus an initial expectation of high single-digits. EBITDA margin for 2022 is expected to contract about three percentage points to 37.6% due to labor cost inflation and the mix effect of adding Blue Prism which had negative EBITDA margin at the time of acquisition. Additionally, rising interest rates pushed up the borrowing cost on the company's revolver by several hundred basis points. Overall, EBITDA is on pace to decline 4% for the year and cash earnings per share about 7%. For 2023, we expect EBITDA and cash EPS to each grow about 7%. Management continues to work diligently to improve Blue Prism's margins and believes its integration into internal SS&C processes will result in substantial labor savings. Acquisitions (a key ingredient in SS&C's value creation formula) have remained hard to find, but rising debt cost and declining valuations have increased the chances of targets meeting the company's underwriting standards. Against this backdrop, and the broader software industry sell off, SS&C has seen its valuation multiple contract from about 12.5x NTM EBITDA to about 9.5x. In response, the company will direct about half its free cash flow to share repurchases which are particularly attractive now with the stock at just 10.5x 2023 cash earnings. SS&C provides mission critical, utility-like software and services to its clients with high switching costs and low churn. We expect organic revenue growth to trough in 2023 then reaccelerate as new product introductions and pricing actions take hold. We also expect margin pressure to abate as wage inflation eases in the technology industry and Blue Prism begins to replace low value-add internal labor. Overall, we think SS&C is safe and cheap, with a high probability of 10%-plus compounding over the next five years, and a very good chance of mid-teens-plus compounding with the right acquisition(s).
Ashtead	[redacted]	8%	Ashtead continued to produce stellar financial results in 2022, including revenue, EBITDA, and adjusted EPS up 28%, 26%, and 31% YoY in the most recently reported quarter. Despite the strong results, shares declined for the year as fears of a recession, and related decline in non-residential construction, increased. However, we believe these fears are based upon the market's backward-looking understanding of Ashtead and miss some critical considerations. First, and perhaps most important, Ashtead has significantly diversified its business since the last recession. Today, because of its push into specialty rental categories (e.g., Power and HVAC, Climate Control & Air Quality, Flooring Solutions), less than 45% of end market exposure is to construction related markets compared to 55% heading into the GFC. Second, this non-residential construction cycle is likely to be very different from the last one because (a) government funded programs (the Infrastructure, CHIPS, and Inflation Reduction Acts) should add nearly $150 billion of demand per year, on average, over the next five years, on the existing non-residential construction market base of $900 billion, and (b) there are an abundance of megaprojects (projects > $400 million in value) in the planning and pre-bid phases (including data centers, airports, LNG plants, and EV battery plants). These megaprojects are highly likely to move forward despite the current macroeconomic environment and represent about 30% of construction starts value today, more than double what they were pre-GFC. Finally, we observe that interest rates have risen for more than a year now, yet, despite that, the Dodge Momentum Index, which measures future projects in planning, is at its highest level ever. We believe these considerations, combined with Ashtead's continued steady market share gains, will power the business through a recession. We continue to expect Ashtead to compound its earnings per share at a mid-teens or higher rate per annum over the next decade as its market share increases from about 12% today to more than 20%. Trading at about 15x our estimate of NTM EPS, we believe that shares offer a compelling value.
Am Wood	[redacted]	2%	American Woodmark's business had a good year, with 2022 sales up an estimated 10% and EPS up 35%. Much of this improvement was driven by successful price increases passed along to home center, builder, and dealer-distributor customers. EBITDA margins increased to about 10% from 9% in the prior year. Longer term we expect EBITDA margins to return to the low- to mid-teens, where they were for many years prior to the recent inflationary surge. However, industry demand is waning as new home construction (about 45% of end market demand) slows due to affordability issues. Remodeling activity (about 55% of end market demand) has slowed as well but we expect it to be more resilient than new home sales due to an aging housing stock, record high home equity, and consumers "locked-in" to their existing home due to ultra-low mortgage rates at their time of

			purchase. New home building permits are down 28% versus a year ago, and single-family building permits are pacing about 730,000 units per year now, well below the 1.1 to 1.2 million units needed to support population growth. American Woodmark earned an estimated $6 per share in 2022, and is expected to earn $6-plus in 2023 despite the demand slowdown (it also earned $6+ in 2018, 2019, and 2020). With the stock at $53, this is less than 9x 2023 EPS, equating to an 11% earnings yield on what should be near trough earnings. Normalizing housing starts and EBITDA margins would drive EPS to around $9, and we think company specific improvement initiatives should be additive from there. This business is cash generative and should repurchase significant shares outstanding over the next several years at what we believe to be bargain prices.
Encore	[redacted]	5%	After a stellar 2021 (appreciating [redacted]), Encore gave up some of its prior year gain in 2022. In order to understand the forward opportunity for this countercyclical business, it is helpful to summarize the events of the last few years. In 2020/2021, the personal savings rate spiked as historic levels of government transfers boosted household income while consumer spending was severely curtailed by social distancing. As a result, Encore's cash collections benefited as many consumers used a portion of their excess savings to pay off debts. This dynamic had both positive and negative effects on Encore. In 2021, Encore's cash generation reached exceptional levels allowing the company to repurchase 23% of its shares outstanding while reducing its leverage ratio to the low end of its target range. At the same time, the credit card charge-off rate fell to half its long-term average level, reducing the supply of paper available to purchase. Heading into 2022, we thought the company was well positioned to take advantage of an eventual normalization of the charge-off rate on credit cards loans. To our surprise, the build in delinquencies and eventual charge-offs has taken longer to develop because of accumulated consumer savings and low unemployment. The data is clear that Americans are now growing more reliant on credit cards amid inflation and depleted savings. We expect the charge-off rate to rise from 1.9% today to 3%-4% by year end 2023. With a limited number of buyers of freshly charged-off credit card paper and an influx of supply, prices of portfolios should decline over the coming years resulting in higher returns and earnings for Encore. Encore has one of the strongest balance sheets in its industry, low borrowing costs, and one of the most efficient collections platforms, so we think it is poised to deploy capital at excellent returns for the next several years. Shares trade at a very modest 7.5x our estimate of NTM owner EPS, despite earnings being suppressed at what we think is the bottom of the charge-off cycle.
NVR	[redacted]	3%	After years of home price appreciation, a near doubling of mortgage rates in 2022 severely impacted housing affordability and buyer confidence. As a result, the pace of single-family new home sales has fallen 28% versus a year ago to 730,000 annualized units, well below the estimated 1.1 to 1.2 million units needed to accommodate population growth. We like the setup from here as homebuilders are an early cycle industry and we expect mortgage rates to ease as inflation subsides and spreads normalize. We have already seen some progress toward this with the latest 30-year mortgage rate at 6.15% compared to about 7.08% at the peak in November of 2022. Over a full housing cycle, we expect NVR to expand revenue about 7-12% per annum, composed of 5-10% organic unit growth and about 2% pricing growth. With a 35%-plus ROE, NVR should have significant free cash flow to direct toward share repurchases, pushing total earnings-per-share growth to about 13-16% per annum. We think housing production will begin to return to a normalized level in 2023, and that pricing in NVR's all-important Washington, D.C. metro market will not be down as much as feared. Shares trade for 10x TTM EPS and about 15x 2023 EPS (on what we think should be trough earnings), a premium multiple to other homebuilders, but more than fully justified, in our view, given the much better economics of its flexible and asset-light business model.

**Portfolio weight as of 12/31/21.*

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Portfolio Changes

During the fourth quarter, we established a new position in Cogent Communications at a 1% weighting, roughly doubled the Applied Materials position to about 4% of assets, and exited the Drive Shack position. We added further to the Cogent Communications position in early January bringing it to a 2% weighting in most accounts. We discuss these portfolio changes below.

New Position: Cogent Communications

Cogent Communications is a provider of fiber-based internet services to businesses. It provides two primary flavors of such service today: "direct internet access", and "transit".

Direct internet access connects businesses in large multi-tenant high-rise office buildings to the internet with enhanced speed, reliability, and security. Cogent, with its fiber-based network, typically competes in a building with one other fiber-based provider and the incumbent telco (AT&T, Verizon, etc.) that relies on copper-based technology. Cogent, unlike the competition, prewired these buildings enabling much faster install times (days instead of weeks or months) and lower marginal install cost. In addition, compared to the copper-based telco, Cogent's fiber can offer far faster data speeds (30-60x faster). This is a very steady business since customers have long-term office leases and rarely change their internet service provider. In this market, Cogent competes by charging a similar price as the competition but offering a far superior service. Cogent has about 15% customer penetration in its buildings, with a long history of steady share gains as tenants become aware of its value proposition.

The internet is a network of smaller networks, and if the smaller networks want to exchange data with one another they need to physically connect in some manner. Transit is a service providing that physical connection for the 5,000 or so smaller networks as well as the 4,000 or so largest content companies that need to deliver their content around the world. Cogent has established one of the most complete and efficient transit networks through opportunistic fiber acquisition and lease arrangements (IRUs). A low-cost position allows Cogent to go to market with a comparable service to others but with much lower pricing. This strategy has enabled Cogent to grow from 0% market share 15 years ago to about 15% revenue market share today (and about 24% volume share), with prospects for further gains ahead.

These are two good businesses that combine to make a great financial profile. From 2005 through 2019 Cogent's revenue compounded at 11% without a single down year, and EBITDA margins expanded from 8% to 34%. The pandemic has been a net negative for Cogent, with the direct internet access business hurt by an increase in office vacancy rates, partially offset by huge volume increases in transit with Zoom and DTC streaming video adoption. Overall, revenue growth decelerated to the low single digits the last three years with modest margin expansion. Over the next several years we expect a gradual recovery in direct internet access growth and deceleration in transit growth leading to combined company growth rising to the high single digits (below the long-term historical 11% rate).

We find these two existing businesses attractive, but they are not core to our thesis on Cogent. To understand the opportunity driving our interest, it is important to take a step back to understand Cogent's origin story. Dave Schaeffer, founder and CEO, built the company through opportunistic acquisition in the aftermath of the telecom bubble in the early 2000's. Dave made numerous acquisitions of distressed businesses and assets at that time. In total, he acquired about $14 billion of assets (at original cost) for only $60 million. In other words, Dave bought these assets for less than a penny on the dollar. However, since 2004, Cogent has not completed a single additional acquisition despite reviewing many prospects.

In September 2022, that story changed. Cogent announced it would be making its first acquisition in 18 years, acquiring Sprint's enormous wireline network for the princely sum of $1.00. Further, T-Mobile (parent company of Sprint) will pay Cogent $700 million over the next four years for taking this old Sprint

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asset off its hands. Why would T-Mobile pay Cogent nearly $700 million to take this asset? Because revenue has been in decline for twenty years and the asset is losing $280 million of EBITDA per year. This asset is strategically non-core, and T-Mobile is ill equipped to fix it on its own. Regulatory oversight and overlapping corporate customers make it impractical to shut the business down.

So, why does Cogent want this asset? In short, one man's trash is another man's treasure. On its own, the Sprint network is not valuable (indeed, it has negative value), but when combined with Cogent's existing network and other capabilities, it has the potential to create extraordinary value. This value creation will come from both cost and revenue synergies.

At the time the deal was announced, Sprint's wireline network sold 28 services, of which 24 were gross margin negative. Eliminating these 24 services will reduce revenue by $120 million, but also reduce EBITDA losses by $100 million. The remaining Sprint business will generate revenue of about $440 million with EBITDA losses of $180 million. This Sprint wireline network is predominantly long-distance fiber, requiring Sprint to lease 93% of its local fiber connections from third parties to provide service. Cogent's network has extensive local fiber with excess capacity. Migrating Sprint traffic off of third-party routes and onto Cogent's network will save $180 million in lease expense and bring the Sprint asset to near EBITDA breakeven. Further network rationalization and head count eliminations should save an additional $40-$50 million allowing Cogent to bring the Sprint network to about $45 million of positive EBITDA in three or four years.

However, the largest value creation lever comes from Cogent's ability to enter the North American wavelength services market. Wavelengths are a form of high capacity, point-to-point data transfer used by large corporations (Google, Amazon, Microsoft, Charter, Comcast, etc.) to move massive amounts of data between their data centers. On its own Sprint could not compete in this market because of its lack of local fiber and data center connections (Sprint is in only eight carrier neutral data centers). Cogent solves this problem by bringing a dense local fiber footprint and connections to over 800 carrier neutral data centers. Cogent on its own could not compete in the wavelength market due to its lack of long-distance fiber capacity. Sprint solves this by providing Cogent with 19,000 miles of long-distance fiber networks along unique pathways. Separately, neither company possessed the assets to compete in the wavelength market, but together they have the capabilities to be a substantial player.

Leaders in the wavelength market today include Lumen and Zayo, followed by dozens of competitors each with low market share. Similar to its transit business, to win market share Cogent will probably offer a comparable service to the market at a substantially reduced price. Additionally, Sprint's network was originally built along rail lines so it has many unique routes with no overlapping wavelength provider. These unique routes will be appealing to network engineers who seek redundancy in the event that one network pathway is cut – which happens surprisingly often.

Cogent is targeting 25% wavelength market share within about seven years of closing the Sprint deal. This would equate to about $500 million of incremental revenue. The marginal cost to provide this service is low, so the company expects incremental EBITDA margins exceeding 90%. This incremental $450 million-plus EBITDA from wavelength is an enormous opportunity compared to Cogent's $230 million base of EBITDA today.

Cogent is still led by its founder, Dave Shaeffer, who owns about 10% of the business. Big picture, we view an investment in Cogent as a way to partner with Dave, one of the most accomplished capital allocators we know of, as he embarks on perhaps his biggest acquisition ever. That is measured by network size and assets, and not the acquisition purchase price of $1.00! However, we have also conducted many channel checks with competitors, consultants, and former employees to validate the asset quality, cost synergy, and wavelength opportunity ourselves.

We think Cogent's established businesses of transit and direct internet access can earn about $480 million of EBITDA in 2030 compared to $230 million in 2022. Cost synergies from the Sprint wireline transaction should add an additional $45 million of run rate EBITDA by 2030. Lastly, we assume in our model that Cogent realizes about half of its revenue goal in the wavelength market, achieving 12% market share which translates into about $220 million of incremental EBITDA. Combining these three items, we believe Cogent can compound EBITDA at 16% from $230 million today to $750 million by 2030. With the addition of Cogent's roughly 6% dividend yield we believe we can earn a 20% annualized return, or better, from our purchase price.

Other portfolio changes

During the fourth quarter we also added to our position in Applied Materials, roughly doubling the position size from 2.3% to 3.9% of assets. As our understanding of the semiconductor industry has grown, we have strengthened our conviction in our Applied thesis. The market helped by presenting us an opportunity to add shares at a significant discount from our initial purchase price, and near historical trough valuation levels. Our Applied Materials purchase was largely funded with proceeds from our sale of Meta Platforms, Inc. in the third quarter.

We also fully exited our position in Drive Shack in the fourth quarter. Drive Shack was a "special situation" investment for us. It was a traditional deep value investment purchased in 2017 at a steep discount to our appraisal of liquidation value. Our thesis was that a new management team and new business plan would convert idle balance sheet assets into productive cash flowing assets with attractive economic returns. Unfortunately, management bungled opportunity after opportunity, depleting most of the balance sheet value in the process. Drive Shack was always a small position size (2.3% at cost), but it resulted in nearly a full loss. We pride ourselves on avoiding permanent losses of capital, and think we have a good track record on that account, but we got it wrong here.

The lessons learned from this investment are many, but perhaps the most important is to avoid marginal ideas. From the beginning, we recognized that the Drive Shack investment was unlikely to ever become a medium- or large-sized allocation because we viewed its management team and business model as average, at best. When the stock moved against us, and we did not have conviction to add to the position, it should have been a signal to cut our losses and exit entirely, despite the stock appearing very inexpensive. This is a learning we are increasingly trying to incorporate into our decision making and recently applied with the exit of our Meta position in the third quarter of 2022 (discussed in our third quarter letter).

Portfolio Earnings Update

As we have discussed before, investment returns for equities can be broken down into three factors: growth in earnings, dividends, and change in valuation. In the short term, change in valuation can have a meaningful impact on investment results, but in the long term, change in valuation becomes much less important as growth in earnings and dividends accumulate to drive the majority of results.

For this reason, as long-term investors, our analytical focus is on trying to understand a business's future earnings and dividends. We track how these metrics develop at each business we own, in aggregate across all the businesses we own, and at the portfolio level taking into account the impact of cash. This analysis helps us understand how these businesses are performing by providing a measure of progress independent of the vicissitudes of the stock market. At the end of each year, we report a summary of this information to give you additional perspective on your investment with us.

Please note, in this letter when we refer to "earnings" or "EPS" for our businesses, we mean earnings on a per-share basis, adjusted for certain items. We make these adjustments to arrive at what we believe to be a better measure of the true economic earnings of the businesses.

2022 Business Results

In 2022 our businesses faced headwinds posed by inflation, rising interest rates, and declining affordability. In aggregate, we estimate they grew EPS 0.3% and paid a 0.6% dividend. The broader market is estimated to have done modestly better with 3.3% EPS growth and a 1.6% dividend for the S&P Total Market Index.

	2022 EPS Growth		2022 Dividend Yield		EPS Growth + Dividend Yield
Our Businesses	0.3%	+	0.6%	=	0.9%
S&P Total Market Index	3.3%	+	1.6%	=	4.9%

*Consensus FactSet operating EPS except for Markel (BV/shr), Brookfield (Broad Run estimates), and American Tower (AFFO). Results for the most recent year are preliminary, subject to adjustment as annual reporting is finalized.

As a reminder, we underwrite our investments to target a mid-teens rate of return. We seek this return via the compounding of earnings per share over time rather than a change in valuation or clever trading in or out of a stock. As a result, our long-term portfolio performance is primarily driven by the earnings per share growth of the underlying businesses that we own[4]. You can see this relationship in the table below. Over the last thirteen years, our portfolio level earnings per share CAGR is 13.4%, inclusive of dividends and cash drag [column C], compared to a realized total return of [redacted], gross of fees [column D]. Please note that there is a loose relationship between earnings power and price performance in any given year, but that relationship strengthens considerably over longer periods of time.

	Focus Equity Separate Accounts					S&P Total Market Index	
	A	B	C	D	E	F	G
Year	Business Level EPS Growth + Dividend Yield*	Impact of Cash Balance	Portfolio Level EPS Growth + Dividend Yield*	Total Return Gross of Fees	Total Return Net of 1% Fee	EPS Growth + Dividend Yield	Total Return
2010	25%	-0.8%	24%	[redacted]	[redacted]	42%	17%
2011	16%	-1.0%	15%			15%	1%
2012	16%	-1.5%	15%			9%	16%
2013	16%	-1.0%	15%			8%	33%
2014	17%	-0.7%	17%			9%	12%
2015	11%	-0.3%	11%			-2%	0%
2016	4%	-0.2%	3%			3%	13%
2017	13%	-0.5%	12%			14%	21%
2018	20%	-0.5%	20%			24%	-5%
2019	13%	-0.2%	13%			1%	31%
2020	1%	0.0%	1%			-15%	21%
2021	33%	-0.4%	32%			55%	26%
2022	1%	0.0%	1%			5%	-20%
Cumulative:	447%		415%			321%	329%
Annualized:	14.0%		13.4%			11.7%	11.9%

** For the Focus Equity Separate Accounts, EPS growth is a Broad Run estimate based upon reported results for the first three quarters of the most recent year and projections for the final quarter. For prior years, EPS growth has been updated to reflect actual reported results for the year. May not sum due to rounding.*

[4] This is axiomatic, if there is no change in valuation and no dividends, stock performance will match the change in earnings per share. While earnings per share growth is not particularly useful to measuring progress at many types of investment strategies - for example, a high valuation-high growth strategy, a slow/no growth-deep value strategy, or a high turnover strategy - it is instructive for our type of strategy.

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Investment Outlook

As we stated earlier, some of our businesses are suffering from a slowdown in demand and/or rising costs. We believe that most of these headwinds will prove temporary due to the advantaged competitive positions of the businesses we own and the enduring nature of the products and services they offer. 2022 was a year of below target earnings growth for our portfolio, and 2023 is shaping up to be subdued as well. We forecast a 6% rate of earnings growth in 2023 (7% inclusive of dividends) for our portfolio, which is roughly in line with consensus forecasts for the broader market. We expect 2023 to be a year of adjustment, and potentially recession, for the economy as consumers and businesses acclimate to higher inflation and interest rates. We believe that the fundamentals for our businesses will strengthen and move back toward our mid-teens expected compounding in the intermediate term after this period of economic adjustment.

At year end, our portfolio valuation of 15.2x our 2023 earnings estimates (compared to 17.0x for the broader market), is at or below where it has been over most of the last 13 years reflecting the macroeconomic uncertainty and expectations for subdued near-term growth. From this valuation level we expect portfolio returns will meet or exceed the rate of earnings growth produced by our portfolio over the next five years.

Focus Equity Separate Accounts - Beginning of Year Projection

Beginning of Year	Business Level Price to 1yr EPS Est.*	Business Level 1yr Est. EPS Growth Rate*	Business Level 5yr Est. EPS Growth Rate*
2010	14.9x	20%	mid-teens
2011	15.4x	16%	mid-teens
2012	14.1x	16%	mid-teens
2013	15.5x	17%	mid-teens
2014	17.9x	17%	mid-teens
2015	17.0x	17%	mid-teens
2016	16.6x	18%	mid-teens
2017	16.1x	14%	mid-teens
2018	16.4x	24%	mid-teens
2019	15.2x	14%	mid-teens
2020	18.3x	13%	mid-teens
2021	19.3x	12%	mid-teens
2022	20.6x	15%	mid-teens
2023	15.2x	6%	mid-teens

* *Based upon Broad Run internal estimates (may differ materially from consensus estimates), weighted by position size, excluding the impact of any portfolio level cash.*

Conclusion

We thank you for entrusting your capital to us. We will continue to do our best to protect and grow your investment over time.

Please let us know if there have been any changes to your financial circumstances or investment objectives that might impact how we manage your account, let us know if your contact information changes, and let us know if you would like to add or modify any reasonable restrictions to our investment advisory services.

Sincerely,

Broad Run Investment Management, LLC

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Disclaimer: *The specific securities identified and discussed in this commentary pertain to the beneficial owner of this account and should not be considered a recommendation to purchase or sell any particular security. Rather, this commentary is presented solely for the purpose of illustrating Broad Run's investment philosophy and analytical approach. These commentaries contain our views and opinions at the time they were written, they do not represent a formal research report and are subject to change thereafter. The securities discussed do not represent an account's entire portfolio and in the aggregate may represent only a small percentage of an account's portfolio holdings. These commentaries may include "forward looking statements" which may or may not be accurate in the long-term. It should not be assumed that any of the securities transactions or holdings discussed were or will prove to be profitable.* ***Past performance is not indicative of future results. All investments involve risk and may decrease in value.***

Additional Disclaimer: *This reprint is furnished for general information purposes in order to provide some of the thought process and analysis used by Broad Run Investment Management, LLC. It is provided for illustrative purposes only. This material is not intended to be a formal research report and should not, under any circumstance, be construed as an offer or recommendation to buy or sell any security, nor should information contained herein be relied upon as investment advice. Opinions and information provided are as of the date indicated and are subject to change without notice to the reader.*

There is no assurance that the specific securities identified and described in this reprint are currently held in advisory client portfolios or will be purchased in the future. The reader should not assume that investments in the securities identified and discussed were or will be profitable. The specific securities identified and described do not represent all of the securities purchased, sold, or recommended for advisory clients. To request a complete list of all recommendations made within the past year, contact the firm's Chief Compliance Officer 703-260-1260.

Focus Equity Separate Accounts (FE-SA) Historical Performance and Disclosure

[redacted]

	4Q'22	1 YEAR	3 YEARS	5 YEARS	10 YEARS	SINCE INCEPTION (09.01.09)
FE-SA (*Gross*)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
FE-SA (*Net of 1% fee*)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
S&P Total Market Index	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

FE-SA Disclosures: *Broad Run presents these investment results (a subset of the Focus Equity Composite results) because it believes they are most relevant to institutional separate account investors in the Focus Equity Strategy; this information is supplemental to the GIPS® compliant presentation provided on the following page of this document. Returns presented consist of representative portfolios from the Focus Equity Composite. The representative portfolios are: (i) for the period September 1, 2009 to February 28, 2013 the sole portfolio in the composite, which is a single equity mutual fund; and (ii) for the period after February 28, 2013 (Broad Run accepted its first separate account in February of 2013) all of the separate account portfolios, which excludes any equity mutual fund(s), UCITS fund(s), and private fund(s). Broad Run believes this supplemental presentation approximates the return stream an investor in a Focus Equity separate account would have achieved for the period presented (data supporting this assertion is available upon request). Gross of fees returns are calculated gross of management and custodial fees and net of transaction costs. Net of fees returns are calculated by deducting the monthly-equivalent amount of Broad Run's highest applicable annual management fee of 1.00% ("Model Net Fee"), as described in the firm's Form ADV, Part 2A (without the benefit of breakpoints) from the monthly gross returns. Other Disclosures: Returns for time periods greater than one year are annualized. All results presented above (including the S&P Total Market Index) include the reinvestment of dividends, interest income, and capital gains. All other statistics referenced in this document for Focus Equity Separate Accounts or FE-SA were compiled using the same representative portfolios described above.* ***Past performance is not indicative of future results.***

Broad Run Investment Management, LLC
Focus Equity Composite GIPS Report

Reporting Date December 31, 2022
Composite Inception September 1, 2009

GIPS Compliance and Verification Status. Broad Run Investment Management, LLC (Broad Run) claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Broad Run has been independently verified for the periods October 27, 2012 through December 31, 2022. The verification report is available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation.

Policies for valuing portfolios, calculating performance and preparing compliant presentations are available upon request. A list of composite descriptions is available upon request.

Firm Information. Broad Run is an investment advisor registered with the U.S. Securities and Exchange Commission under the Investment Advisers Act of 1940, as amended. Broad Run is defined as an independent investment advisor that is not affiliated with any parent organization.

Composite Description. The Focus Equity Composite contains all fee-paying, discre ionary accounts that are managed according to Broad Run's Focus Equity Strategy. The Focus Equity Strategy invests primarily in U.S equity securities—regardless of capitalization—and seeks long-term capital appreciation while incurring a low risk of permanent capital loss. The Strategy uses a concentrated and low turnover investment approach, and generally seeks to invest in what the firm believes are high-quality growth-oriented companies trading at discounts to Broad Run's assessment of their intrinsic value. The strategy holds a portfolio of approximately 20 securities. Broad Run has determined that no appropriate benchmark for the composite exists because the Focus Equity Strategy has minimal exposure to a number of sectors and invests across the market capitalization spectrum. The Focus Equity Composite was created in October 2012; its inception date is September 1, 2009. From September 1, 2009 to October 26, 2012, the composite is composed solely of an equity mutual fund. Broad Run's managing members served as portfolio managers for this equity mutual fund while employed at the fund's advisor. From October 27, 2012 to February 28, 2013, the composite is composed solely of the successor equity mutual fund to the aforementioned equity mutual fund. Broad Run is engaged as he sole sub-advisor of the successor equity mutual fund (managing 100% of its assets) by its new advisor, and the firm's managing members serve as portfolio managers for the successor equity mutual fund. Broad Run has met the GIPS portability requirements to link the returns of the equity mutual fund and the successor equity mutual fund. For the time period after February 28, 2013, the composite is composed of the successor equity mutual fund and separate accounts. Currently, the assets in the mutual fund comprise a significant majority of the composite's assets.

Fee Schedule. Broad Run's standard annual asset-based management fee schedule is 1% of the account's total assets on the first $5 million and 0.85% thereafter. Gross performance results do not reflect the deduction of Broad Run's investment advisory fee, which will affect a client's total return.

Gross of fees returns are calculated gross of management and custodial fees and net of transaction costs. Net of fees returns are calculated by deducting the monthly-equivalent amount of Broad Run's highest applicable annual management fee of 1.00% ("Model Net Fee"), as described in the firm's Form ADV, Part 2A (without the benefit of breakpoints) from the monthly composite gross return.

Reference Index Disclosure. The S&P Total Market Index (TMI) is designed to track the broad U.S. equity market, including large-, mid-, small-, and micro-cap stocks. The index is market-value weighted. Index figures reflect the reinvestment of dividends and capital gains. Index figures do not reflect deductions for any fees, expenses, or taxes. Investors cannot invest directly in an index. The index's performance returns are included to illustrate the general trend of the U.S. equity market and are not intended as a benchmark for the composite.

Other. All returns presented in the table below (including the reference index) include the reinvestment of dividends, interest income, and capital gains. Valuations are computed and performance is reported in U.S. dollars. 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. ***Past performance is not indicative of future results.***

	Focus Equity Composite			S&P Total Market Index (TMI)					
	Gross Return (%)	Net Return (%)	Standard Deviation [2]	Return (%)	Standard Deviation [2]	Number of Portfolios	Internal Dispersion [5]	Composite Assets (USD millions)	Firm Assets (USD millions)
Calendar Year									
2022	-25.02	-25.79	27.40	-19 53	21 53	181	1.66	908.9	914.9
2021	33.37	32.07	22.68	25 66	17 95	190	0.64	1,678.2	1,757.2
2020	7.91	6.83	23.25	20.79	19.44	175	0.92	1,569.7	1,574.5
2019	36.22	34.89	11.35	30 90	12 22	170	1.16	2,576.9	2,579.0
2018	-9.09	-10.01	11.25	-5 30	11 21	155	0.64	2,326.8	2,330.3
2017	21.43	20.24	10.31	21.16	10 09	137	0.96	3,309.6	3,311.2
2016	8.83	7.76	12.06	12 65	10 89	101	0.31	2,671.8	2,794.1
2015	4.40	3.37	11.30	0.47	10 57	52	0.13	2 266.5	2 268.6
2014	11.76	10.66	9.44	12.46	9 32	41	0.10	1,618.5	1,619.5
2013	37.18	35.85	12.52	33.40	12 58	30	n.m.	1 454.0	1 459.8
2012	18.27	17.11	16.80	16.44	15.75	1	n.m.	781.2	781.2
2011	5.13	4.08	- [3]	0 92	- [3]	1	n.m.	672.2	N/A
2010	26.40	25.16	- [3]	17 30	- [3]	1	n.m.	772.8	N/A
Sep – Dec 2009 [1]	8.64	8.29	- [3]	10.22	- [3]	1	n.m.	812.5	N/A
Annualized (12/31/22)									
1 Year	-25.02	-25.79	n.m. [4]	-19.53	n m. [4]				
3 Years	2.57	1.54	27.40	6.89	21 53				
5 Years	5.97	4.91	22.91	8.65	19 09				
10 Years	10.95	9.85	17.78	12.03	15.15				
Since Inception	12.52	11.41	17.46	12.36	15 21				

1: Annual Performance Results reflect partial period performance. The returns presented are calculated from September 1, 2009 to December 31, 2009. **2:** Standard deviation measures the variability of the gross returns of the composite and the reference index. All standard deviation figures are calculated using monthly gross performance numbers. Figures presented for calendar year and YTD periods are three-year annualized standard deviations. **3:** The three-year annualized standard deviation is not shown due to having less than 36 months of composite returns. **4:** n.m. - Not statistically meaningful for periods less than 3 years. **5:** The annual composite dispersion presented is a dollar-weighted standard deviation of the gross returns for all accounts in the composite for the entire year, using beginning of period values; not statistically meaningful (n m.) for periods less than one year, or when there are five or fewer accounts in the composite for the entire year.

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Other Disclosures

Additional Composite Details. The Focus Equity Composite includes a mutual fund for which we charge a sub-advisory fee that is lower than the model net fee. However, the mutual fund's total operating expenses, which are not applicable to you, are in excess of the model net fee. Therefore, the actual performance of the mutual fund in the composite on a net-fee basis will be different, and will normally be lower, than the model net fee performance. However, the model net fee performance is intended to provide the most appropriate example of the impact management fees would have by applying management fees relevant to you to the gross performance of the composite. Actual fees and expenses in client accounts may differ from those reflected in this composite presentation and would cause actual performance to differ. The performance figures do not reflect the deduction of any taxes an investor might pay on distributions or redemptions.

Investing Involves Risk. Investing involves risk, including the possible loss of principal. Past performance is no guarantee of future results and client accounts may not achieve the Focus Equity Strategy's investment objective. There may be market, economic, or other conditions that affect client account performance, or the performance of the referenced market index. Therefore, it should not be assumed that the future performance of any specific investment or investment strategy (including the investments and/or investment strategies recommended and/or undertaken by Broad Run Investment Management, LLC) made reference to directly or indirectly in this commentary will be profitable, equal any corresponding indicated historical performance level(s), be suitable for your portfolio or individual situation, or prove successful. The Strategy invests in small- and medium-size companies. Investments in these companies, especially smaller companies, carry greater risk than is customarily associated with larger companies for various reasons such as increased volatility of earnings and business prospects, narrower markets, limited financial resources and less liquid stock. A client account invested in the Focus Equity Strategy will hold fewer securities and have less diversification across industries and sectors than a diversified portfolio, such as a portfolio based on an index. Consequently, a client account and/or the composite performance may diverge significantly from the referenced market index, positively or negatively.

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