FOCUSED GROWTH

Portfolio Comments
December 31, 2022

Last year was a very rough year for almost all asset classes. Both stocks and bonds were down double digits - a brutal combination that has not occurred in the past 80 years. For equities, 2022 was the worst year since 2008 during the Global Financial Crisis. The Granahan Focused Growth portfolio fell -30.7%, in comparison to the Russell 2000 Growth benchmark which was down -26.4%. This was the second worst return since the strategy's inception. The worst was 2008.

We've written in prior 2022 quarterly letters about what led investors to shun equities, most notably the spike in interest rates (see Figure 1), higher inflation (see Figure 2), the war in Ukraine and fears of a recession. It is notable that for both the benchmark and the portfolio the losses came in the first half of the year. The Russell 2000 Growth Index bottomed on June 16th and then proceeded to gyrate for the remainder of the year closing up about 11% from the lows (Figure 3). The Focused Growth strategy underperformed the index in the first part of the year (-40.0% vs. -29.5% from 12/31/21 - 6/30/22) and outperformed in the second part of the year (+15.5% vs. +4.4% from 6/30/22-12/31/22). This is not to minimize in any way the extreme drawdown, just to point out its timing - and what has occurred over the past 6 1/2 months. Below, I discuss attribution in a bit more detail for both 2022 and Q4.

Figure 1. 2-Year US Treasury Bonds

Figure 2. U.S. Consumer Price Index

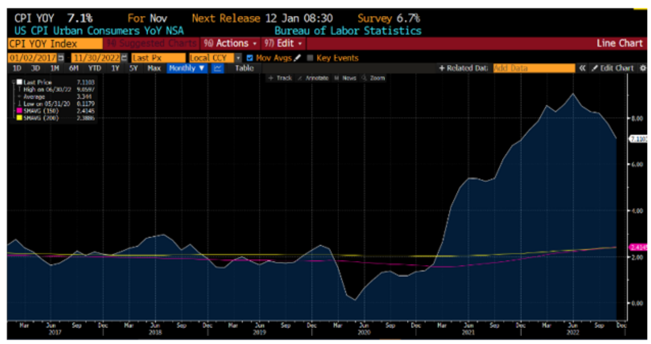

Figure 3. Russell 2000 Growth Index

Source: Bloomberg

Attribution for the Year 2022

Granahan's Focused Growth strategy declined -30.7% in 2022 compared to the benchmark's -26.4% decline. As noted above, there was virtually nowhere to hide in terms of asset classes or equity sectors (an exception were Commodities, which rose sharply in 2022). Stock selection in the portfolio was overall modestly positive, with strong selection in Technology, Real Estate, and Health Care being partially offset with weak selection in Industrials, Consumer Discretionary and Financials.

Below is more detail on the largest contributors and detractors. However, a couple of broad observations first. The companies' earnings (i.e., the "E" in the "P/E" equation) rose and beat consensus expectations for each of the three winners, whereas the opposite was true for the three largest detractors. It is also noteworthy that there was multiple contraction in each of the six stocks--i.e., the winners were not unscathed. However, the multiple contraction was much more severe for the detractors. I'll have more to say on this topic when I discuss the "Outlook" below, but for now here is a bit more detail on the individual stock standouts.

Largest Relative Contributors:

- Enphase (ENPH) - Enphase is a leading provider of complete solar systems primarily for the residential power market. ENPH shares rose 47% in 2022 and contributed 218 basis points to relative performance. The company is executing well, has an excellent position and a very large opportunity. While we trimmed our position, we continue to hold a large position in ENPH shares.

- Axon (AXON) - Axon is a mission-driven company which sells products, platforms, and services designed to improve law-enforcement efficiency and efficacy, reduce social conflict, enable a fair and effective justice system, and aspirationally with its Taser non-lethal weapon to "obsolete the bullet." AXON shares rose 6% in 2022 contributing 199 basis points to performance. The company is well positioned and going after a very large opportunity, and we maintain a large position in AXON shares.

- CoStar Group (CSGP) - CoStar Group has three broad operating segments: 1) Commercial Real Estate Information Services (CRE); 2) Multi-Family Residential Services (MFR - the most recognizable being the Apartments.com website); 3) A newer entry into Single Family Residential real estate (SFR) under the Homes.com umbrella site. CSGP shares fell 6% in 2022, but due to the fact that the broad markets fell considerably more than that, the stock contributed 163 basis points to relative performance for the year. We believe CoStar's two core businesses (CRE and MFR) have very solid prospects for sustainable growth in revenue and cash flows. Meanwhile, CoStar is investing heavily in its residential initiative which negatively impacted operating earnings by over $100 Million in 2022 and will likely do so to an even greater extent again in 2023. However, we believe this is a win/win. On the one hand we like CoStar's approach and odds of winning a large piece of the residential market, which would yield significant future earnings and cash flow. On the other hand, we believe that if after two or three years the company is not meeting its objectives in the residential business it would exit that business--and the $100+ Million "drain" on cash flow would disappear. Net, we have trimmed the position, but continue to hold a large position in CSGP shares.

Largest Relative Detractors:

- Kornit (KRNT) - Kornit has a suite of products leading the shift from analogue to digital printing in the garment, apparel and textile industries. The shares were hit extremely hard in 2023 (-84% impacting performance by -480 basis points). The company's business was very strong in 2020 and 2021, but in the first half of 2022 it become apparent that Kornit benefitted from pandemic tailwinds significantly more than we realized. As a result, several of the company's customers cut back or pushed out orders of both new machines and ink, and the company's strong profits turned into losses. While we expect another 2-3 quarters of losses, Kornit's solid balance can withstand such losses, and we believe the company remains well-positioned to capture a large share of a growing market. We currently hold a mid-sized position in the stock.

- Etsy (ETSY) - Etsy operates a global online marketplace connecting sellers and consumers of unique and creative goods. ETSY shares fell 44% in 2023 impacting performance by -167 basis points. The company reported decent Q1 results but guided for a lower Q2 than consensus after which analysts cut estimates by about 10%. It is now apparent that Etsy's strong 2020 and 2021 results benefitted materially from pandemic-related trends which has makes earnings comparisons for most of 2022 and into Q1 2023 very difficult. That said, Etsy is doing a very impressive job retaining the large number of new customers earned during that period, and these new customers are largely behaving in a manner similar to the customers the company added pre-pandemic. Etsy has yet to report Q4 results, but at this juncture, we estimate Etsy will meet or exceed the estimates analysts forecasted after the first quarter. However, the multiple on ETSY shares has contracted significantly. We are maintaining a large position in ETSY shares believing the company is well positioned to generate strong earnings and free cash flow growth for the next several years, and that the stock's risk/reward is attractive.

- Porch (PRCH) - Porch provides software, insurance and other services for the residential housing market. PRCH shares lost -88% of their value in 2022 contributing -132 basis points to performance. The spike in interest rates led to an unprecedented decline in housing sales, which impacted Porch's results. The stock further suffered from investors turning sour on unprofitable companies and those that went public via a de-SPAC (as Porch did in 2020). This has been a very painful period for the stock, but despite these three strikes we don't believe PRCH shares should be out. The company has $322 Million of cash and investments which we believe can carry it to free cash flow positive as early as Q3 2023. Further, while the near-term outlook for residential housing remains very bleak, the risk/reward in PRCH shares from current levels is attractive and we retain a small position in the stock.

Attribution from Q4 2022

Granahan's Focused Growth strategy rose +5.7% in Q4 compared to the benchmark's +4.1% return. Stock selection across sectors was mostly positive for the quarter, with the exceptions being modest drags in Energy and Healthcare. In terms of individual stocks, the standouts for Q4 2022 were as follows:

Largest Relative Contributors:

- Axon (AXON) - Axon is a mission-driven company which sells products, platforms, and services designed to improve law-enforcement efficiency and efficacy, reduce social conflict, enable a fair and effective justice system, and aspirationally with its Taser non-lethal weapon to "obsolete the bullet". AXON shares rose 44% in Q4 contributing 271 basis points to performance in the wake of very strong Q3 results and forward guidance. We maintain a large position in AXON shares.

- Azenta (AZTA) - Azenta provides instruments, consumables, and services for the life sciences industry. AZTA shares rose 35% in Q4, contributing 96 basis points to performance in the quarter. AZTA shares were very weak going into the company's Q4 (Sept) report. While there was uncertainty regarding the company's near-term prospects were adding to our position believe in the company's fundamental prospects and buoyed by a balance sheet with more than $2 Billion of cash. On November 15 Azenta reported an OK quarter, decent FY 9/2023 guidance, and announced a $1.5 Billion share buyback and AZTA shares rallied sharply. We maintain a mid-sized position in the stock.

- Etsy (ETSY) - Etsy operates a global online marketplace connecting sellers and consumers of unique and creative goods. As noted above, ETSY shares had a difficult 2022 overall, but the shares rebounded 11% in Q4 adding + 88 basis points to performance. The company reported decent Q3 results and Q4 guidance. Also as noted above, estimates have been cut but the stock's multiple has been cut even more. We are maintaining a large position in ETSY shares believing the company is well positioned to generate strong earnings and free cash flow growth for the next several years, and that the stock's risk/reward is attractive.

Largest Relative Detractors:

- Evolent Health Inc. (EVH) - Evolent Health provides solutions to healthcare payers and providers which aim to improve outcomes and lower costs particularly in areas of specialty care. EVH shares fell 22% in Q4, negatively impacting performance by 86 basis points. Investors were unsettled by a change in its expected future business with a large client (BHG, which was expected to be a significant growth driver in 2023), some shifting in shared-savings revenue which muddied the Q3 report, muted near-term margin expansion, and the announcement of the acquisition of Magellan Specialty Health (NIA) from Centene--the company's third and largest acquisition over the past few months. We believe the pullback in the stock together with the logical and accretive M&A make the shares more attractive and we have added to our position in EVH shares.

- Paycom (PAYC) - Paycom sells payroll services and human capital management (HCM) software to small and medium enterprises. PAYC shares fell 6% in Q4 which hurt the portfolio's performance by 80 basis points. Although Paycom reported very strong Q3 results and guidance, investors are concerned that the company's growth will slow in upcoming quarters due to recessionary and employment headwinds. We believe such concerns are overblown and hold a large position in the stock.

- Paylocity PCTY) - Similar to Paycom, Paylocity also sells payroll services and human capital management (HCM) software to small and medium enterprises. Also similar to PAYC, PCTY shares fell 19% in Q4 which hurt the portfolio's performance by 71 basis points. Although Paylocity reported very strong their FY Q1 (September) results and guidance, investors are concerned that Paylocity's growth will slow in upcoming quarters due to recessionary and employment headwinds. We believe such concerns are overblown and hold a medium-size position in the stock.

2022 Was About the P/E, 2023 Will Be About the E

After very strong returns for the Focused Growth portfolio in 2019 (+49.5%) and 2020 (+82.7%), the past two years have been difficult for secular growth stocks and the Focused Growth portfolio (-0.7% in 2021 and -30.7% in 2022).

Investors shunned most asset classes in 2022 for the reasons noted above - higher interest rates and inflation, war, recession fears. All of these factors raise the discount rate investors require to own equities, particularly, long-duration equities such as those owned in the Focused Growth portfolio. Put another way, in 2022 the big story was mainly about the P/E (i.e., a significant contraction in the multiples that investors are willing to apply to most stocks). That was the bad news for 2022. But there is good news.

The first piece of good news is that unless interest rates rise materially above current expectations, I suspect that most of the broad multiple contraction has occurred. Thus, my guess is that 2023 will mainly be about the "E" - that is companies' earnings. So, what about the "E"? Consensus earnings estimates have come down, but it is hard to say whether or not they come down enough. I suspect not and that we'll see further reductions during the Q4 earnings reporting season over the next few weeks.

The second piece of good news is that for the stocks in the Focused Growth portfolio we are not counting on multiple expansion to generate solid investment returns. Rather we are largely basing our expected return valuation cases on forecasted growth in the E (earnings).

As a reminder, the Focused Growth investment philosophy anchors on investing in secular growth companies. I'm reminded of the classic recruitment commercial for the US Marines which ends with the tag line: The Few. The Proud. The Marines. We are not investing in *just any companies*. Not even *just any small/medium growth companies*. We are investing in companies we believe are desert-island worthy—such that if you sent us to a desert island for 5+ years the companies would be much bigger when we return. That is not to say these companies are immune to macro factors. They are not. However, if in five years we were to return from the desert island, whether or not the companies have compounded at a high rate is mainly within their control.

Thus, during these choppy and uncertain periods, we remain focused on executing our process of identifying companies we believe have the characteristics necessary to be desert island worthy, and then applying our valuation, portfolio construction and risk management disciplines to assemble the portfolio. And while this is indeed an uncertain time, and one cannot predict the future, the contraction in multiples has resulted in expected returns which I believe gives the portfolio a good chance at generating strong prospective returns over most intermediate and long-term environments.

A Few Pieces of Content to Consider

A Podcast
Sequoia Capital partner Ravi Gupta interviews Shane Battier on Invest with the Best. In 2009, Michael Lewis published a cover story in the New York Times Magazine about all the "little things" basketball player Shane Battier does which makes everyone on his teams better. The article - like just about anything Michael Lewis writes - is a must read. Much has happened in the 13 years since, and Gupta, a classmate of Battier's at Duke, covers new and old ground with Battier in an entertaining and informative interview.

An Op-Ed
Jamie Dimon Wall Street Journal Op-Ed on what U.S. leaders should be doing now. I've been following Jamie Dimon for a long-time and have long thought he'd make an excellent U.S. President. Dimon has dismissed such speculation repeatedly saying he wouldn't mind the job but would never put up with having to run for it. It is probably wishful thinking, but I may be detecting a slightly more open posture in this Op-Ed. Regardless, it's good reading and good advice.

Two Biographies
Neither are new, but over the last few weeks I just listened to two biographies (books) written by A Scott Berg. I recommend both:

- Kate Remembered - A biography about Katharine Hepburn which has the unique element of Berg's special relationship with the legendary star.

- Lindbergh - The definitive biography of covering the fascinating rise, fall, and rerise of one of America's best known, but enigmatic individuals.

As always, on behalf of the entire team at Granahan Investment Management, thank you for entrusting us with the management of your capital. Please note that it is managed alongside our own.

Sincerely,

Drew

Drew Beja, CFA
Portfolio Manager

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