Small Cap Core Growth
Portfolio Commentary
4th Quarter 2019

In 2019, US stocks rallied strongly off the steep declines of the 4th quarter 2018, and the markets posted another great year for equities. Results in the fourth quarter were buoyed by falling inflation, the continued strength of the US consumer, and a slight upward revision of the US third quarter GDP growth number, which together outweighed worries over trade wars and political issues. For the quarter, the Granahan Small Cap Core Growth portfolio returned +14.7%, net-of-fees, outperforming the Russell 2000 Growth Index' return of +11.4%, and adding to our already robust annual gains. For the year, the Granahan Investment Management portfolio strongly outperformed the Russell 2000 Growth Index, posting a return of +39.3%, net of fees, versus the Index' +28.5%.

In the quarter, the top five contributors included three healthcare stocks – Medicines Company and argenx SE (both Pioneers), and NeoGenomics (Core Growth). Medicines was also the top contributor last quarter due to positive phase III results for its cardiovascular drug, and subsequently had an offer to be purchased by Novartis; we have been selling the stock. Argenx SE's stock traded higher, as the company has a pipeline of potential best-in-class inhibitors to treat various cancers and auto-immune diseases. NeoGenomics is a uniquely positioned one-stop oncology testing provider that exceeded expectations in the most recent quarter, while at the same time investing in growth. The company's recent Genoptix acquisition adds hematological testing to their offerings and may provide opportunities for cross selling. We are maintaining our positions in both argenx SE and NeoGenomics. Two Special Situation holdings round out the top five – Newmark Group (real estate) and Ring Energy (energy). Newmark posted solid results throughout the year, and in the 4th quarter, the stock traded higher along with the Real Estate Services group due to improved sentiment. Ring Energy's stock rebounded in the 4th quarter; investors had systematically sold smaller energy companies with debt earlier in the year. Ring posted solid operating results, and oil prices have improved. We continue to hold both Newmark and Ring.

Consumer discretionary names hurt performance in the quarter, with three of the bottom five contributors from this sector – Etsy (Core Growth), Rubicon Project (Pioneer), and Modine Manufacturing (Special Situation). Etsy (online marketplace with a focus on unique craft items) traded lower in the quarter due to transient headwinds around tax collections on new sales; we are holding our position. Rubicon Project (technology solutions to automate the purchase and sale of digital advertising inventory) was one of the portfolio's top performers last quarter, though the stock was down this quarter as the company reported slightly lower-than-expected revenues on profits that were well ahead of estimates; we added to our position. Modine Manufacturing (automotive heat transfer systems) reported a weak quarter and reported a delay in selling its auto parts business. We have lost confidence in the management's ability to execute a turnaround for the company and are selling the stock. Vonage (cloud communications services for businesses and consumers) was the largest detractor in the quarter. Vonage, a Special Situation holding in the communication services sector, experienced slower growth in its Unified Communications as a Service business during the 3rd quarter and the stock retreated; we are holding our position. Rounding out the detractors is Dropbox, a Core Growth holding in the info tech sector that reported a good quarter, though with lower cash flow, as the company pays for a new corporate headquarters; we are maintaining our position.

For the year 2019, the top relative performers were Medicines Company, and two info tech holdings – Enphase Energy (solar micro-inverters, Core Growth) and Digital Turbine (developer of software enabling content distribution for mobile operators, Pioneer). Ring Energy, Evolent Health (value-based, technology-enabled healthcare service platforms, Pioneer), and Stamps.com (consumer discretionary, Core Growth) were the largest detractors for the year.

<u>Attribution</u>

In the fourth quarter, stock selection attributed for the portfolio's outperformance. Info tech and healthcare selection led performance, assisted by good selection in real estate, industrials, energy, and financials. Selection in consumer discretionary and communication services weighed on performance. The portfolio's overweighting of healthcare boosted relative performance, as did our underweighting of industrials. The overweight position in the info tech sector slightly offset the strong selection here. The portfolio's lack of exposure to the consumer staples and utilities sectors was a positive. The materials sector was neutral.

The portfolio's Pioneer holdings drove performance in the quarter, while the Core Growth and Special Situation LifeCycle categories both slightly underperformed the overall benchmark.

For the year 2019, stock selection has driven the outperformance. The portfolio had positive stock selection in all sectors except consumer discretionary. The info tech, healthcare and industrials sectors were the largest contributors for the year. All three LifeCycle categories soundly outperformed the benchmark for the year, led by Pioneer holdings.

<u>Weightings</u>

Since the end of last year, Pioneers have increased from 21% to 35% of the portfolio, a result of strong relative performance and an increase in our weightings to healthcare and info tech. The Core Growth and Special Situation weightings have both decreased; Core Growth from 48% to 38%, and Special Situations from 32% to 26%. We continue to make portfolio adjustments across LifeCycles based on valuation, conviction, and risk/reward.

GIM's bottom-up process leads us to continue our significant overweight in information technology (33% versus 17%), and we are also overweight versus the benchmark in energy (3.5% versus 0.5%). Healthcare and communication services are each less than 1% overweight against the Index. Industrials is now our largest underweight position versus the benchmark (13% versus 19%), followed by consumer discretionary (8% versus 12%). We also remain underweighted versus the Index in materials, real estate, and financials, each by 2% or less. The portfolio currently has no exposure in the consumer staples and utilities sectors.

Year-over-year, the most significant change in the portfolio sector allocations is the reduction in industrials – now 13%, down from 22% at the end of 2018. From this sector we have eliminated Genesee and Wyoming (buy out), Hawaiian Airlines (competition headwinds), Knight Transportation (acquisition integration). Other shifts in weightings include increases in communication services (up 1% to 2.5%), healthcare (up 2.5% to 31%), information technology (up 2% to 33%), and consumer discretionary (up 1.5% to 7.5%). The portfolio's materials sector went from no exposure to a 1% weighting.

Themes

Rick Smith, CEO of Axon, has written a thought-provoking, insightful book titled, *The End of Killing*. Smith writes, "the path of almost all transformative technology goes from resistance to reluctance to acceptance to dependence." We have seen that happen repeatedly with our portfolio companies. Examples include Red Hat (open-sourced software that was originally labelled an 'academic exercise'), Salesforce.com (selling software-as-a-service, 'a model that would never last') and Tesla (mocked as a company that 'wouldn't sell many niche electric cars especially without dealerships'). Red Hat transformed the way software is developed, Salesforce.com's software-as-a-service business model (SaaS) is standard today, and Tesla, well, they proved everyone wrong. Axon (a portfolio holding) has set out to disrupt the defense industry with the goal of eliminating bullets and creating a world where non-lethal force is used to keep peace. The technologies they hold in their portfolio today, combined with artificial intelligence and niche products like those of Shotspotter (another portfolio company), may very well achieve that goal in our lifetime.

The human genome project (HGP) was a global research effort that took 14 years (1990 – 2003) to complete with the goal of 1) providing a complete and accurate sequence of the 3 billion DNA base pairs that make up the human genome, and 2) finding all of the estimated 20,000 – 25,000 human genes. While this massive project took only 13 years to complete, advances in DNA sequencing technology during this time period accelerated the completion of the project. In the first 7 years of the project only 1% of the genome was mapped, however sequencing technology was on the exponential growth curve, first exemplified by semiconductor capability doubling every 18 months while prices halved (Moore's Law). Doubling the amount sequenced each year over the next 7 years – 2%, 4%, 8%, 16%, 32%, 64% and then at 128% -- the project was completed. The cost of this project was in the billions of dollars, and just as in Moore's law, the cost for genomic testing today is minuscule in comparison.

The HGP has spawned many medical advances in the diagnosis and treatment of cancer, as this disease is basically genomic in origin. For example, patients with metastatic melanoma who specifically carry the BRAF gene mutation respond to treatment with vemurafenib, a BRAF inhibitor. Portfolio companies that have benefited from the HGP include NeoGenomics (leading oncology diagnostic company), Immunomedics (oncology company developing a treatment for breast cancer), and MacroGenics (oncology company targeting blood cancers.

In a recent article from *The Economist* titled, "Chips with Everything," the author talks about the slow revolution where computers found their way into cars, telephones and televisions, and how now the revolution is about to go into overdrive with the internet-of-things, or "the second phase of the internet." With this next phase, ownership becomes unnecessary, or the traditional lines of ownership are blurred. Examples include Zipcar, Uber and Lyft, Amazon Kindle, Software-as-a-Service, and medical implants that monitor and modify heartbeats and insulin levels – technically anything that is delivered through the cloud. Companies that are selling products that are on the cutting edge here must, of course, maximize the benefits while minimizing harm, all while protecting customers. Portfolio companies involved in this next phase include Adesto Technologies (chips for machines to connect to the IOT), PTC (software that monitors machinery for maintenance), and Dexcom and Insulet (both monitor insulin levels for clients).

<u>Macro</u>

Currently, US/Iran tensions and fear of broader escalation, the Institute of Supply Management readings declining and worry that tariffs will cause a recession are on the negative side of the economic radar screen. The "phase one" trade deal between America and China can be considered a marginal positive because more tariff hikes were avoided and some existing tariffs were moderated. Cash flows out of equity funds in 2019 were a net negative and "when trailing year fund flows have been this low in the past 10 years, forward stock market performance has been quite good." (Furey Research Partners, 4Q19 quarter-end letter).

<u>Outlook</u>

Perhaps the most obvious market risks in 2020 are the US election and the risk of profit-taking after the large stock market gains seen in 2019. Earnings growth in our portfolios continues to be very strong – particularly in healthcare, producer durables and technology. Even as growth has moderated from the extremely high rates we saw in our portfolios mid-2019, it still remains higher than historical levels. That said, there are indications that earnings growth for the Russell 2000 Growth Index troughed in the third quarter, perhaps precipitating the rally at year's end. While in 2019 the valuations for small cap stocks moved up, their valuations relative to large cap stocks are much more attractive, particularly when excluding loss-making companies.

The last two quarters highlighted how investor sentiment can shift dramatically in a short time period. We frequently comment that we have no crystal ball (nor do we believe that there is a reliable one out there). Instead, we are focused on executing our process as tightly as possible – separating companies from stocks, and seeking to buy strong, well-positioned companies when risk/reward is attractive. As bottom up investors, our stock selection drives performance across sectors and LifeCycles.