

Formula Growth Alpha Fund

Third Quarter 2022 Investment Results

Highlights:

- ♦ There was nowhere to hide in 2022, as markets exhibited extreme, negative behaviour likely signaling a global recession
- ♦ Global central bank inflation hawkishness is spiking interest rates, cooling demand and hurting businesses
- ♦ Technology and small-cap growth stocks were dramatically over sold with recovery in prices usually steep and swift off the bottom
- ♦ The Formula Growth Alpha Fund portfolio is conservatively positioned with a long book that is cheap and poised for a strong recovery

To all Investors,

The stock markets have been exhibiting signs of extreme behaviour this year. All market Indexes in the table below are heading towards their worst performances since at least 2008. There appears to be no place to hide from this bear market, irrespective of style, market capitalization or whether stocks or bonds. Unusually, bonds have not provided safety nor a ballast to portfolios with the Bloomberg US aggregate bond index on pace for its worst year on record going back to 1976 down 19%. A very strong USD has offset some of the losses for our Canadian investors. While an official recession has yet to be declared, one could assume it will be arriving soon if not already.

Index	Symbol	YTD Total Return
Russell 2000 Growth	RUO	-29.3%
Russell 2000	RTY	-25.1%
Nasdaq Composite	CCMP	-32.0%
Nasdaq 100	NDX	-32.4%
Nasdaq Computer	IXK	-35.5%
S&P 500	SPX	-23.9%
JPM Global Aggregate Bond	JGAGGLUD	-19.2%

Attribution and Positioning

The Formula Growth Alpha Fund was down 10.5% in US\$ or down 2.0% in CDN\$ equivalent year-to-date. Our long book was in line with the returns shown above while shorts were protective and very profitable contributing over 1750 bps of profit. Unfortunately, we covered many shorts as they hit their target prices throughout the year and with hindsight, we have been less than ideally hedged in a persistently difficult 2022 stock market.

We are not pleased with our downside capture. It has been entirely due to the long side of the book. Similar to the market, we have struggled throughout 2022 with our longs. There are two main reasons for our difficulties on the long side.

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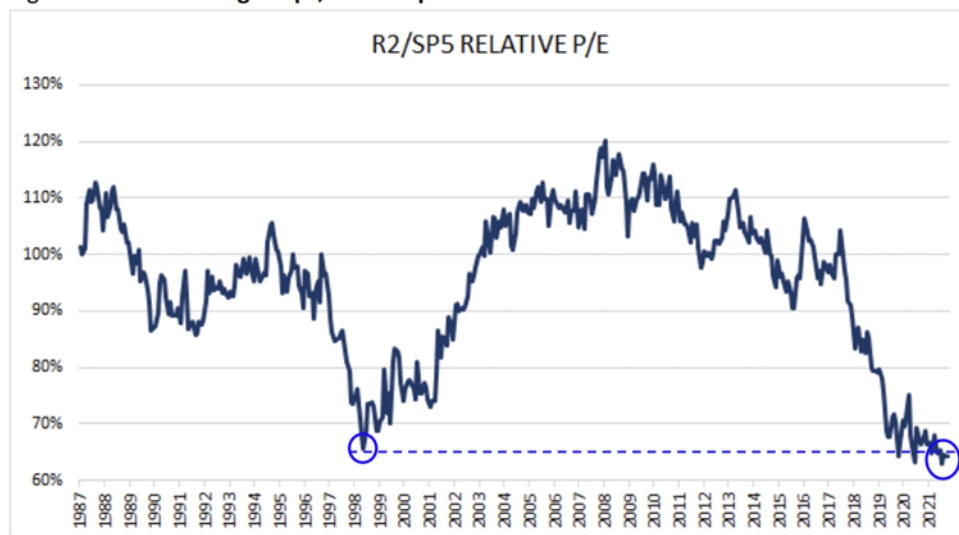
Firstly, our investment style most closely tracks small and mid-cap “growth” stocks or the Russell 2000 Growth Index shown above as well as the Nasdaq Indexes that tilt towards technology stocks. Small-cap growth stocks have been severely out of favour since the beginning of 2021. Long stock ideas that have a “value” orientation have done better. Secondly, it is our practice to overweight technology and communication stocks because of their inherent quicker growth and the recurring nature of their top line. Currently, we have approximately 32% of our gross weight in technology versus the Russell Index at 13% and the S&P 500 at 26%. The Nasdaq Indexes are higher still. We feel the technology overweight has accounted for all of this year’s lag in the Alpha Fund versus the HFRI. In fact, just a handful of stock positions account for the majority of this year’s drawdown.

At this stage we feel the Alpha Fund is full of good ideas including those unprofitable longs that have not been stopped out of the portfolio. We have reached out to management teams, re-scrubbed our models and re-scripted our theses on our positions. Our conviction is high that the long book is poised to rebound strongly to more reasonable valuation levels which will produce very strong upside in that side of the portfolio. Quite simply when the long portfolio is this dramatically over sold, the recovery is usually swift and steep from the lows.

We closed the 3rd quarter at 76% long and 77% short for a gross book of 153% and a net book of -1%. We are remaining conservatively positioned with similar levels of gross and net exposure as we begin the month of October. We believe caution must be exercised, long and short, until there are clearer signs we have put in a durable bottom.

Importantly, as we begin Q4, small-cap stocks (Russell 2000) have rarely been as cheap as they are now relative to the large-cap (S&P 500). It feels to us at this point that much of the bad news is reflected in stock prices.

Fig 90. Relative to large-caps, small-caps have never been more attractive than of late



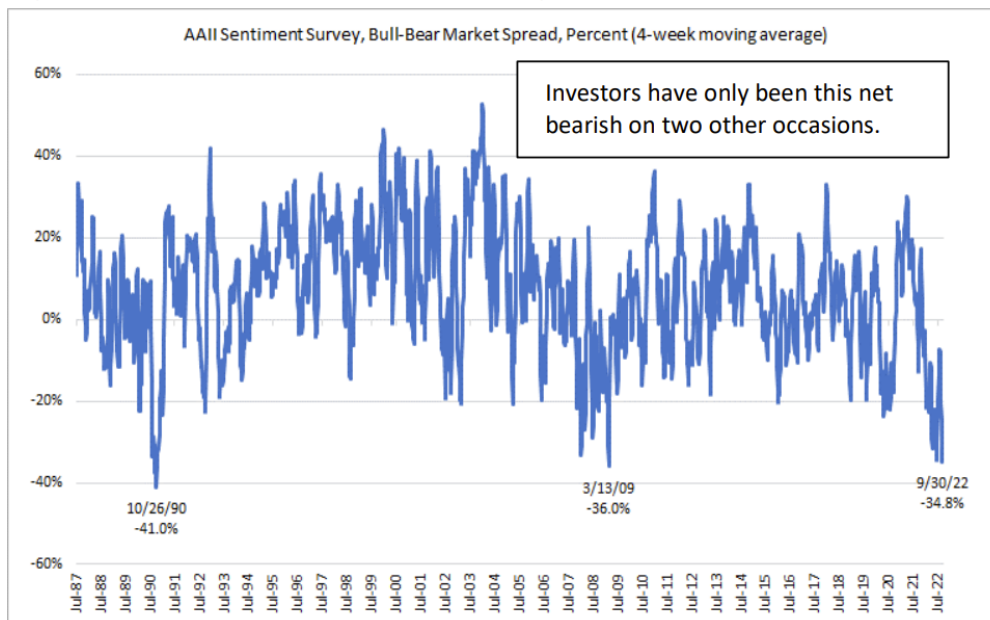
Source: Furey Research Partners and FactSet. Data as of 9/30/22. Represents median P/E using latest available trailing 12-month earnings. Profitable companies only.

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The end of the quarter also presents an opportunity given the depth of despair in investor sentiment. Generally, it is a good time to be long well managed companies with solid business models that have been unfairly re-rated lower by the Street. This tumultuous environment also gives rise to opportunities on the short side, unmasking companies with flawed or over hyped business models.

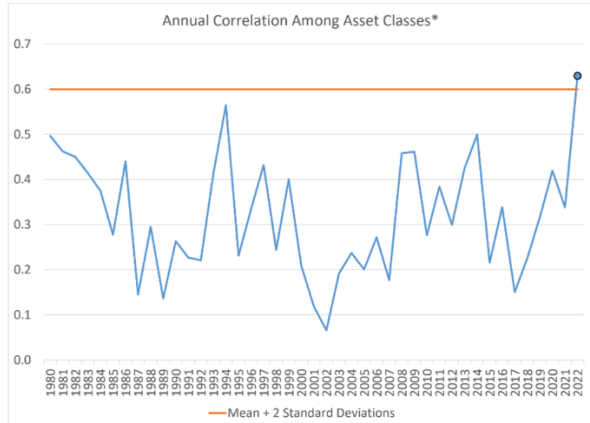
Fig 27. Investor sentiment is extremely bearish...



Source: Furey Research Partners and FactSet. Data as of 9/30/22. 4-week moving average

Considering the ugly backdrop for equities, perhaps it comes as some consolation that there was no place to hide. The two charts below show correlations across asset classes are the highest they have been in 40 years and highlight how nearly 90% of main asset classes tracked were down by at least -10% year-to-date.

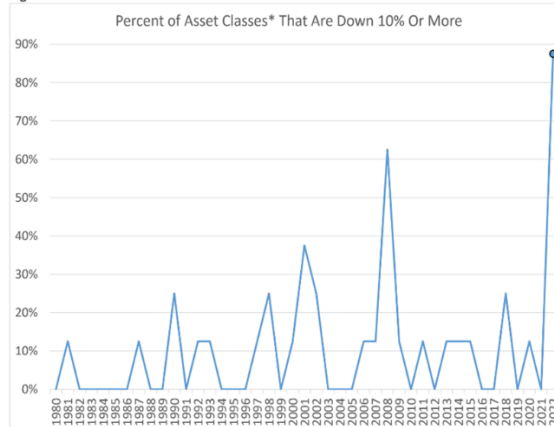
Fig. 4. Correlations in 2022 are the highest in 40+ years



Source: FRP, FactSet, Morningstar, as of 9/30/22

*Asset classes include U.S. Equity, Foreign Equity, U.S. Govt Bonds, U.S. Corp Bonds, U.S. HY Bonds, Commodities and REITs

Fig. 1. There's been nowhere to hide in 2022



Source: FRP, FactSet, Morningstar, as of 9/30/22

*Asset classes include U.S. Equity, Foreign Equity, U.S. LT Govt Bonds, U.S. IT Govt Bonds, U.S. Corp Bonds, U.S. HY Bonds, Commodities and REITs

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The Markets

Fed hawkishness contributed to a very difficult Q3 and year-to-date performance numbers, as surprise inflation readings (CPI) in August and September are driving interest rate expectations even higher. The expectations are now for the Fed Funds rate to top out in the 5.0% range for 2023 (from 3.5% previously). The market had been hoping for some signs of moderation from the Federal Reserve, but was clearly disappointed as the selling turned downright hostile into the end of Q3. The rapidity of the Fed's pivot upward and its a late start to hiking is causing global turmoil. Of course, this depresses those economies who are net importers from the US and helps depress inflation in the US to a degree.

This year, we have witnessed one of the most volatile markets in history. In fact, 63% of the trading days thus far in 2022 have either risen or fallen over 1%. The last time we had such wild swings was in 2008, in the midst of the potentially economy ending "great financial crisis."

For the moment, US employment and wages remain strong (5.1% rise) and consumers are putting higher wages and savings from covid to work. Unfortunately, some cracks are manifesting at the lower end of the economic spectrum. We are seeing more consumers falling behind on loan payments and rising delinquency rates. Doubling mortgage rates have finally broken the relentless strength in the housing market. Leading indicators such as housing permits recently declined 14.4% year-over-year in September. Outside of rate-sensitive areas such as housing, there are signs of only modest declines to growth at the moment.

Despite analysts slashing Q3 growth estimates from 9.8% to just 3.2%, the US economy is proving to be the best home in a bad neighborhood yet there is little doubt economic activity and earnings are slowing.

The Outlook

To sum up our view, a lot of negative news is already priced into the stock market, especially growth and technology stocks. We are probably in a recession or soon will be in 2023. Typically, the market bottoms near the announcement of a recession and the promise of an easing in interest rates.

The market is looking for signs that the Fed can ease off their tightening program with a dovish pivot. Their mandate includes "financial stability" which one could question over the past weeks. The impact of their extremely rapid pace of rate hikes to the global economic system is now being felt broadly, in mostly negative ways. Further risks could emerge as leveraged players get squeezed by interest rates or foreign exchange.

We invite you to reach out to us to discuss your investments with our team including discussing our returns including our portfolio positioning and attribution.

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On behalf of the officers and employees of Formula Growth, allow us to take this opportunity to sincerely thank you for your continued support.

Yours truly,

Formula Growth Ltd.

Formula Growth Alpha Fund Class F (US\$) - Monthly and Year-To-Date Net Returns (US\$ Returns)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2022	2.0%	(0.2%)	1.1%	(3.0%)	(1.8%)	(4.4%)	(1.3%)	0.1%	(3.2%)				(10.5%)
2021	2.9%	3.3%	1.4%	(0.4%)	0.8%	2.9%	(1.8%)	(1.0%)	0.1%	(3.5%)	(3.1%)	(1.2%)	0.2%
2020	0.1%	(1.2%)	(8.2%)	4.9%	0.8%	0.2%	0.5%	(2.4%)	(0.1%)	1.6%	1.3%	(1.4%)	(4.4%)
2019	5.6%	0.7%	(1.1%)	0.7%	(1.6%)	(0.1%)	(1.7%)	(0.7%)	4.3%	1.0%	(0.3%)	(0.5%)	6.2%
2018	(1.3%)	1.0%	1.2%	2.1%	(0.2%)	(0.1%)	(0.8%)	(1.4%)	(1.3%)	(0.5%)	0.1%	(3.0%)	(4.1%)
2017	1.0%	(0.4%)	1.3%	(0.6%)	1.7%	1.3%	(0.2%)	0.7%	1.1%	(0.9%)	(2.0%)	0.8%	3.9%
2016	(5.4%)	1.4%	5.2%	0.2%	0.7%	(0.6%)	1.3%	1.8%	2.4%	0.0%	(0.8%)	2.2%	8.4%
2015	0.1%	2.5%	1.4%	2.3%	1.0%	(0.7%)	(1.1%)	1.4%	(1.3%)	0.6%	1.2%	(0.4%)	7.1%
2014	1.6%	2.2%	1.4%	1.4%	3.4%	0.0%	(1.3%)	1.1%	(1.2%)	(4.4%)	(1.2%)	0.0%	2.7%
2013	1.1%	(1.1%)	0.8%	(0.8%)	2.1%	1.1%	1.8%	1.1%	1.5%	4.6%	(0.9%)	0.3%	11.9%
2012	7.0%	6.6%	0.9%	(1.6%)	(1.5%)	(1.8%)	0.1%	0.7%	1.4%	0.9%	2.2%	5.5%	21.9%

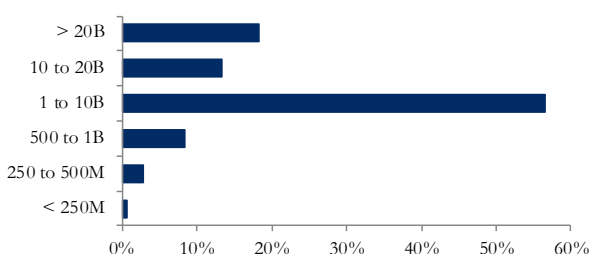
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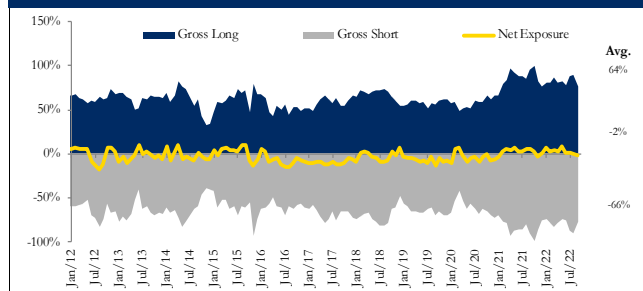
Market and Beta Exposure

	30-Jun	Q3 Avg.	30-Sep	2022 Avg.
Gross Long	77.5%	87.1%	75.9%	83.2%
Gross Short	-75.8%	-82.8%	-77.3%	-75.7%
Net	1.7%	4.3%	-1.4%	7.5%
Total Gross	153.3%	169.9%	153.2%	158.9%
Net Beta	0.11	0.13	0.05	0.17

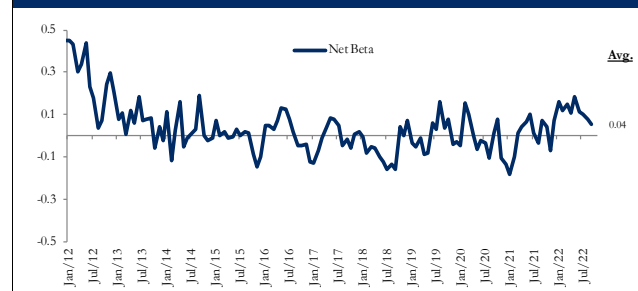
Market Capitalization Exposure Breakdown



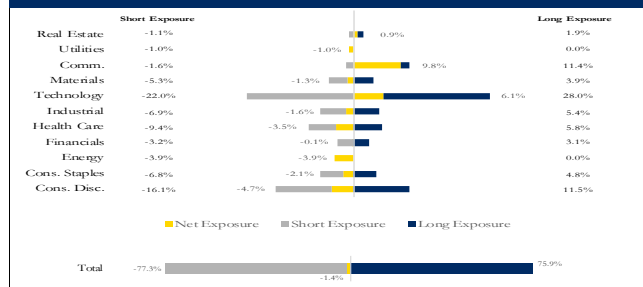
Portfolio Neutrality in Terms of Dollar Exposure



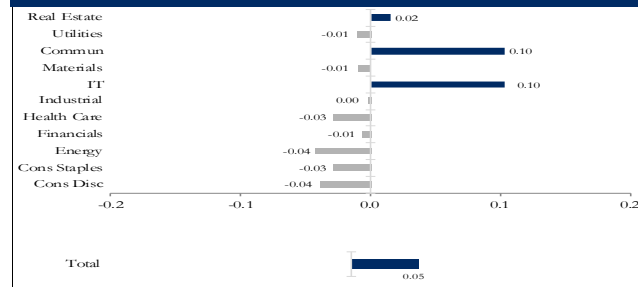
Portfolio Neutrality in Terms of Beta Exposure



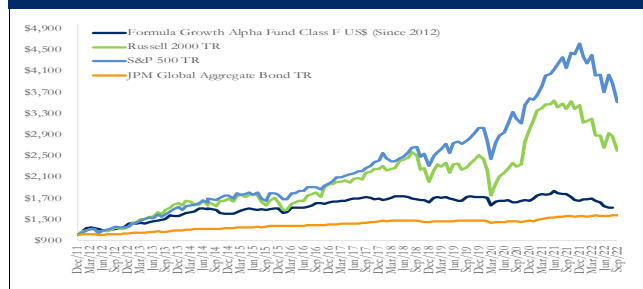
Sector Neutrality in Terms of Dollar Exposure



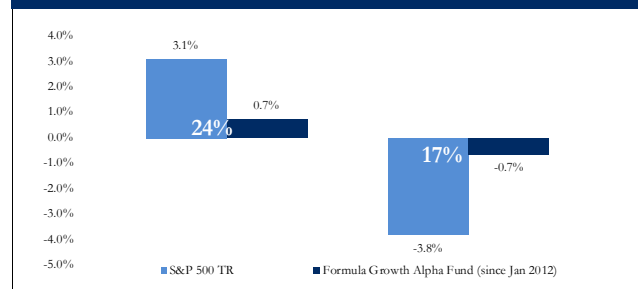
Sector Neutrality in Terms of Beta Exposure



Cumulative Return vs Peers, Stocks and Bonds



Participation in Market Upside & Downside



Graphs above are either as at September 30th, 2022 or since inception of the strategy. Please see Notes & Disclaimers on page 5. Do not hesitate to contact us should you have any questions.

Glossary of Terms

- ♦ Alpha longs: An investment strategy which involves taking long positions in stocks that are expected (in the opinion of the managers) to increase in value by more than 30% over approximately 12 to 18 months.
- ♦ Alpha shorts: An investment strategy which involves taking short positions in stocks that are expected (in the opinion of the managers) to decrease in value by more than 20% over approximately 12 to 18 months.
- ♦ Short positions: The sale of a borrowed security, with the expectation that the stock/security will fall in value and the re-purchase will result in a positive investment result.
- ♦ Pair trades: An investment strategy whereby an initial investment is made in a stock/security either long or short with a corresponding direct offset, or hedge, against the primary risk of the initial investment.
- ♦ Hedges: Hedging is the practice of taking a position in one market or stock/security to offset and balance against the risk adopted by assuming a position in a contrary or opposing market or stock/security.
- ♦ Correlation: Correlation in the investment industry is a statistic that measures the degree to which two securities move in relation to each other. Correlation is computed into what is known as the correlation coefficient, which has a value that must fall between -1 and 1. A perfect, positive correlation means that the correlation coefficient is exactly 1. This implies that as one security moves, either up or down, the other security moves in lockstep, in the same direction. A perfect, negative correlation of -1 means that two assets move in opposite directions, while a zero correlation implies no relationship at all.
- ♦ Sharpe ratio: The ratio measures the excess return (or risk premium) per unit of deviation in an investment asset or a trading strategy, typically referred to as risk.
- ♦ Batting average: Number of positions on which we have a positive return divided by the total number of positions we held during the period.
- ♦ Slugging average: Average contribution of positions on which we have a positive return divided by the average contribution of positions on which we have a negative return for the period.
- ♦ Upside/Downside Capture: Upside market participation since inception is calculated as the average performance of the fund when the benchmark has a positive month while the downside market participation is calculated as the average performance of the fund when the benchmark has a negative month.

- ◆ Performance figures reported from January 1st 2014 onwards represent the US\$ net performance of the Formula Growth Alpha Fund (the "Fund") after all fees and other Fund expenses. Prior returns represent the US\$ net performance of the Formula Growth Alpha II L.P. and are based on an investment in the Fund made on January 1, 2012, the date of the Strategy's inception. The Formula Growth Alpha II L.P. was launched in May 2011. In January 2012, significant changes were made to the risk management and portfolio management guidelines. As risk management and portfolio management guidelines established in January 2012 are relevant only to the current strategy of the Formula Growth Alpha Fund, the statistics do not include the 2011 performance figures which are available upon request. In January 2014, the Formula Growth Alpha II Fund structure was changed from a Canadian Limited Partnership to a Canadian Mutual Fund Trust and the name of the fund was changed to the Formula Growth Alpha Fund.
- ◆ Gross portfolio returns discussed are presented after reduction for any investment and Fund accounting related expenses, net interest, other expenses and the reinvestment of dividends, and include any gains or losses from "new issue" securities. Per the Fund's High Water Mark provisions, net performance figures take into account a 1% Management Fee and a 20% incentive allocation. Performance results for particular investors may vary from the performance stated herein as a result of, among other things, the timing of their investment(s) in the Fund, different management and incentive allocation terms and the respective investor's eligibility to participate in "new issue" securities.
- ◆ All performance figures contained herein are unaudited estimates and subject to change. Certain information contained herein may have been provided by third party sources including Bloomberg, and, although believed to be reliable, has not been independently verified and cannot be guaranteed. Performance estimates are presented only as of the date referenced above and may have changed materially since such date.
- ◆ Market index information shown herein, such as that of the S&P 500 TR, Russell 2000 TR, JPM GABI and HFRI EMN Indices, are included to show relative market performance for the periods indicated and not as standards of comparison, since these are unmanaged, broadly-based indices which differ in numerous respects from the portfolio composition of the Fund. Market index information was compiled from sources that Formula Growth believes to be reliable. No representation or guarantee is made hereby with respect to the accuracy or completeness of such data. The current month's HFRI EH: EMN return is that of the HFRX EH: EMN which is used as a proxy for the HFRI. For more information regarding the indices, please consult <https://www.hedgefundresearch.com>.
- ◆ The analyses, opinions, and conclusions of Formula Growth contained in this report include certain statements, assumptions, estimates and projections that reflect various assumptions by Formula Growth concerning anticipated results that are inherently subject to significant economic, competitive, and other uncertainties and contingencies and have been included solely for illustrative purposes. No representations, express or implied, are made as to the accuracy or completeness of such statements, assumptions, estimates or projections or with respect to any other materials herein.
- ◆ Performance attribution figures and returns for individual securities, including ETFs, reflect summations of the respective profits and losses divided by the average of the beginning and end of month total gross Fund assets, and are not inclusive of expenses, management, and incentive fees/allocations. Performance attributions should be considered approximations calculated to the best of our knowledge.

Notes & Disclaimers

- ◆ Beta is calculated by Formula Growth Ltd. using the Bloomberg system and is the trailing 6 months daily returns versus the S&P 500 unadjusted (raw).
- ◆ Exposure represents the market value of all equity securities and single-equity-backed instruments (i.e. derivatives) as of the date of this letter/report. Exposure numbers exclude currency hedges.
- ◆ Sector and industry classifications are determined by Formula Growth Ltd. using available sources such as Bloomberg. Exposures based on these figures include ETFs and should be considered as approximations calculated to the best of our knowledge.
- ◆ Market Capitalization represents the relative market capitalization of long and short positions on a United States dollar adjusted basis using available sources such as Bloomberg. Exposures based on these figures do not include ETFs and should be considered as approximations calculated to the best of our knowledge.
- ◆ Formula Growth Ltd. serves as the investment manager for the Fund. Investors should consult the Offering Memorandum (the "Memoranda"), which is available upon request, for more information on the investment strategy, complete disclosures and the terms and conditions relating to an investment in each Fund.
- ◆ Any investment in the Fund is speculative and involves substantial risk, including the risk of losing all or substantially all of such investment. No representation is made that the Fund will or is likely to achieve their objectives, that any investor will or is likely to achieve results comparable to the estimated performance shown, will make any profit at all or will be able to avoid incurring substantial losses. Past performance is not necessarily indicative of future results.
- ◆ The Fund has monthly liquidity provisions for redemptions and subscriptions. There is no secondary market for the interests in the Fund and none is expected to develop. There are restrictions on transferring interests in the Fund. Formula Growth Ltd. has total trading authority of assets within the Formula Growth Alpha Fund.
- ◆ The Fund's fees and expenses may offset its trading profits. The fact that Formula Growth Ltd. is eligible to receive an incentive fee or allocation may create an incentive to make investments on behalf of the Fund that are riskier or more speculative than would be the case in the absence of such priority allocation of profits.
- ◆ The Fund may be denominated in a currency that is not the currency of your own jurisdiction and thus may be subject to any fluctuation in exchange rates between your investment in the Fund and the currency of your own jurisdiction. Such fluctuations may have an adverse effect on the value, price or income return of your investment.
- ◆ The Fund is subject to conflicts of interest. Please review the "Risk Factors" and "Conflicts of Interest" sections in the Memoranda.
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