

# Formula Growth Alpha Fund

## Fourth Quarter 2018 Investment Results

### Highlights:

- During the fourth quarter of 2018, the FG Alpha Fund had a net return of US\$ -3.4% while the total return of the S&P 500, the Russell 2000 and the HFRI EMN was US\$ -13.5%, US\$ -20.2%, and US\$ -2.6% respectively;
- In 2018, the FG Alpha Fund had a net return of US\$ -4.1% while the S&P 500 TR, the Russell 2000 TR and the HFRI EMN returned US\$ -4.4%, US\$ -11.0%, and US\$ -1.7% respectively;
- While we are disappointed with our negative performance, we are somewhat satisfied to have mitigated market losses during the very difficult equity market periods of February/March, October and December losing cumulatively for these 3 periods -1.6% while the S&P 500 TR and the Russell 2000 TR lost a total of -23.8% and -26.3% respectively;
- Throughout the 7 year history of the FG Alpha strategy, the annualized return has been US\$ +7.1% per year, with an annualized volatility of 6.9% and a low daily correlation to the S&P 500 TR of only 0.2.

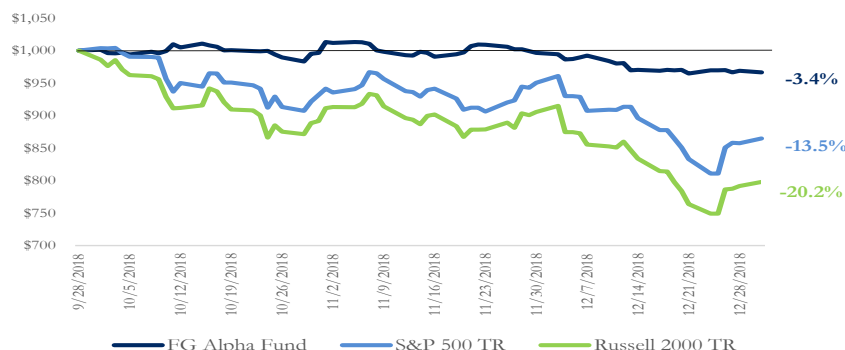
Dear Investors,

The FG Alpha Fund had a net return of US\$ -3.4% in the fourth quarter while the total return ("TR") of the S&P 500, the Russell 2000 TR, and the HFRI Equity Market Neutral ("EMN") were US\$ -13.5%, US\$ -20.2%, US\$ -2.6% respectively. For the full year of 2018, the FG Alpha Fund had a net return of US\$ -4.1% while the S&P 500 TR, the Russell 2000 TR and the HFRI EMN returned US\$ -4.4%, US\$ -11.0%, and US\$ -1.7% respectively. Throughout 2018, the Fund maintained a negative correlation to the U.S. equity market (daily correlation of -0.2 to the S&P 500 TR). More importantly, daily correlation was -0.2 during this year's negative return days for the S&P 500 TR illustrating the Fund's ability to make money when the U.S. equity market is down.

Our Q3 letter discussed the lack of volatility in the US equity markets and the fact that consumer confidence levels were reaching an 18-year peak; Q4 brought quite the reversal. Global stock markets ended 2018 as the worst year since the 2008 financial crisis. With the exception of a short lived market correction at the end of January/beginning of February, the US equity market was outperforming the rest of the world by a wide margin until the end of September. However, the fourth quarter of 2018 was one of the most difficult US equity market quarters in history. Concerns of a slowing global economy, mounting geopolitical tensions, tightening monetary policy, Brexit, and an escalating trade war between the US and China finally caught up to US equity investors. As the US equity market decline steepened in December, investors hoped for positive news from the Fed's December 19th announcement. The news of a 25 basis point Fed funds hike (the fourth increase in 2018) along with only a slightly more dovish commentary from the September announcement, accelerated the US equity market decline causing a market drawdown of -19% for the S&P 500 TR and -25% for the Russell 2000 TR between October 1st and December 24th.

Below is a graph with the estimated daily net returns of the FG Alpha Fund throughout Q4 compared to the S&P 500 TR and the Russell 2000 TR indices. The strategy performed well in October and November but had a more difficult time in December as certain of our positions exhibited important volatility most likely amplified by year end tax-loss selling.

**FG Alpha Fund Daily Cumulative Value in Q4 2018**



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### Fund Positioning & Attribution

With the Russell 2000 TR losing over 20% in Q4, our defensive positioning, portfolio construction and risk management tools allowed the FG Alpha Fund to limit losses for the period. During the quarter, FG Alpha Fund generated gains from shorts and hedges while the long portfolio suffered. Similarly, for the entire 2018 year, the Fund generated gains on Alpha shorts (+2.2%) and portfolio hedges (+4.6%), but our stock selection was relatively weak on long positions, detracting -10.4% from gross returns. Sectors contributing the most for the year were information technology (+2.9%) and healthcare (+1.6%) while the portfolio suffered losses in materials (-4.6%), energy (-1.6%) and industrials (-1.5%). The equity markets in Q4 gave us the opportunity to take profits on short positions and find new long opportunities, resulting in the net market exposure increasing from -8.2% at the end of the third quarter to +7.2% at the end of the year.

While we are disappointed that our FG Alpha Fund was down for the year, we were somewhat satisfied to see our US equity market neutral strategy mitigate market losses during the multiple market corrections of 2018. The strategy performed relatively well in the volatile months of February and March (FGAF +2% while S&P 500 TR lost -10% and Russell 2000 TR lost -6% from January 29th through March 23rd) and again in the volatile month of October (FGAF lost -0.5% while the Russell 2000 TR lost -11% and the S&P 500 TR lost -7%) before giving up some returns in December (FGAF lost -3.0% while the Russell 2000 TR lost -11.9% and the S&P 500 TR lost -9.0%). Throughout these three periods, the FGAF lost a total return of -1.6% cumulatively, while the S&P 500 TR lost a total of -23.8% and the Russell 2000 TR lost a total of -26.3%.

Our risk management and loss mitigation tools helped to contain losing positions, but our stock picking was unfortunately subpar for 2018 with not enough meaningful winners. Periods of weak stock picking have occurred in the past and can happen regardless of the direction of the overall market. Historically, in times when our stock picking has experienced a difficult period, we tend to bounce back with above average stock picking statistically reverting to our long-term average. Although there are no guarantees, we believe that this time will be no different.

The FG Alpha strategy generally maintains limited net market exposure (typically between +10%/-10%), and we attempt to remain dynamic adjusting our position depending on market opportunities. The market correction in Q4 gave us the opportunity to add and find new long opportunities while taking profits on some short positions. The net exposure of the strategy therefore increased from net short -8.2% at the beginning of October to net long +7.2% at the end of the year. We aim to maintain relatively high liquidity in the portfolio as we expect US equity market volatility to persist throughout 2019.

The end of 2018 marks the 7th anniversary of the FG Alpha strategy. In establishing the FG Alpha strategy, our objectives were threefold: target a net annualized return of 5% to 7% through a full market cycle, offer returns that are less correlated to the US equity market and protect capital in difficult equity markets. Although we fell short of our return objective in 2018, we believe we have delivered all of these objectives since inception:

1. Since inception, the FG Alpha Fund generated an annualized net return of +7.1% in line with our objective of 5-7% per year. Our annualized return has outperformed our peers as illustrated by the HFRI EMN index (+3.1%) and bonds represented by the JPM GABI (+1.1%).
2. A low correlation to US equity indices is important as it provides diversification benefits to our clients. The FG Alpha Fund strives to achieve low correlation to US equities by maintaining a low dollar exposure, a low beta exposure and by monitoring other relevant risk factors. Since inception of the strategy the daily correlation to the S&P 500 TR is 0.2 and, more importantly, a daily correlation of 0.1 during negative return days of the S&P 500 TR.

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3. Finally, the third objective of the Fund is to protect capital in periods of equity market corrections. There were many difficult months in the market since we launched the strategy in 2012. If we define a “bad month” for the U.S. equity market as one where the S&P 500 TR or the Russell 2000 TR lost more than 1%, there were 27 bad months for the equity market since we launched the strategy. While the objective of the FG Alpha Fund is not to generate returns in all market environments (a zero correlation to U.S. equity indices effectively means we would make money half the time and lose money half the time), the Fund was positive during more than half of these months. Also, the Fund was effective at protecting the majority of the capital when stocks were down with a net cumulative return of -3% compared to -99% for the Russell 2000 TR over those 27 “bad months” as explained in the following calculation table:

### Performance of FG Alpha when US stock indices lost more than 1% in a month

	Stocks		Bonds	FG Alpha
	S&P 500 TR	Russell 2000 TR	JPM GABI	
April 2012	-0.6%	-1.9%	1.2%	-1.0%
May 2012	-6.0%	-6.6%	-0.8%	-1.3%
July 2012	1.4%	-1.4%	1.1%	0.3%
October 2012	-1.8%	-2.2%	-0.1%	0.9%
June 2013	-1.3%	-0.5%	-1.1%	1.1%
August 2013	-2.9%	-3.2%	-0.5%	1.1%
January 2014	-3.5%	-2.8%	1.2%	1.6%
April 2014	0.7%	-3.9%	1.1%	1.4%
July 2014	-1.4%	-6.1%	-0.8%	-1.3%
September 2014	-1.4%	-6.0%	-2.6%	-1.2%
January 2015	-3.0%	-3.2%	0.2%	0.1%
March 2015	-1.6%	1.7%	-0.8%	1.4%
April 2015	1.0%	-2.6%	0.9%	2.3%
June 2015	-1.9%	0.7%	-0.6%	-0.7%
July 2015	2.1%	-1.2%	0.4%	-1.1%
August 2015	-6.0%	-6.3%	0.3%	1.4%
September 2015	-2.5%	-4.9%	0.6%	-1.3%
December 2015	-1.6%	-5.0%	0.5%	-0.4%
January 2016	-5.0%	-8.8%	1.2%	-5.4%
October 2016	-1.8%	-4.8%	-2.6%	0.0%
May 2017	1.4%	-2.0%	1.3%	1.7%
August 2017	0.3%	-1.3%	1.0%	0.7%
February 2018	-3.7%	-3.9%	-1.0%	1.0%
March 2018	-2.5%	1.3%	1.2%	1.2%
September 2018	0.0%	-2.4%	-0.9%	-1.3%
October 2018	-6.8%	-10.9%	-1.2%	-0.5%
December 2018	-8.0%	-11.9%	1.9%	-3.2%
<b>Cumulative</b>	<b>-57%</b>	<b>-99%</b>	<b>1%</b>	<b>-3%</b>
<b>% of downside vs. Russell 2000 TR</b>				<b>3%</b>
<b>% of downside vs. S&amp;P 500 TR</b>				<b>6%</b>

### Outlook

As we begin a new year, we will remain disciplined respecting our fundamental bottom-up stock picking approach. A meticulous price target process helps to keep us balanced in both overly enthusiastic and overly pessimistic stock market environments. Company management meetings along with earnings announcements, beginning later this month, will give us a better idea of the health of the US economy and we will adjust our portfolio accordingly. In the meantime, we are comfortable with our positioning and our investment thesis for the stocks that we hold long and short. Our long track record (FG Fund since 1960, FG Hedge Fund since 2002 and FG Alpha since 2012) gives us confidence that our stock picking abilities on both the long and short side will likely revert to our long-term average in 2019. We are happy to report that we are so far experiencing a strong start in 2019.

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On a personal note, effective December 31, 2018, our great friend and partner Michael Gentile will be retiring from his role at Formula Growth. After the recent birth of his 4th and 5th (twin) daughters Mike has decided to devote himself entirely to his family and the raising of the new born twins and his 3 other daughters aged 7, 5 and 3 with his wife Ellie. As most of you know, Mike started at Formula in 2001 as a student intern during two different terms while attending Concordia University as an inaugural member of the prestigious Kenneth Woods Portfolio Management Program. After graduation he began full time employment with us in 2002 becoming a Shareholder Partner in 2010. Mike has contributed enormously to the success of Formula Growth over this period of time. We wish to acknowledge the unique and valuable contribution Mike has made to Formula over these many years. He was instrumental in the development and growth of our business and especially the FG Alpha platform. After 16 years we will miss his sage advice and his presence at FG. His main sector concentration was North American natural resource stocks. To help ease the transition Mike has agreed to remain involved with the firm as a consultant for the next 12 months. He will also remain investor in our funds. We know you join us in wishing him and his family nothing but the very best.

For more information regarding our firm and products, please visit our website at [www.formulagrowth.com](http://www.formulagrowth.com).

On behalf of the team at Formula Growth, please allow us to take this opportunity to sincerely thank you for your continued support. Wishing you and your family a happy, healthy, prosperous new year.

Formula Growth Limited

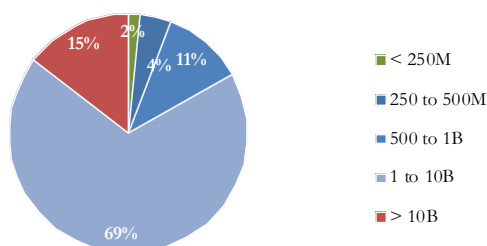
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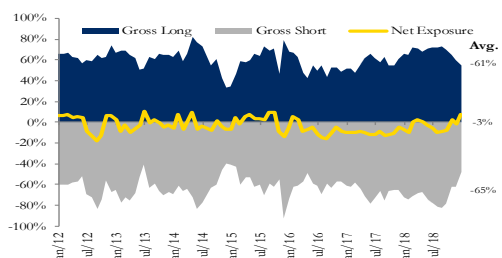
### Market and Beta Exposure

	Sep-30	Q4 Avg.	Dec-31	2018 Avg.
Gross Long	70.1%	59.3%	54.7%	67.0%
Gross Short	(78.3%)	(60.0%)	(47.5%)	(70.2%)
Net	(8.2%)	(0.7%)	7.2%	(3.2%)
Total Gross	148.4%	119.3%	102.2%	137.2%
Net Beta	-0.16	-0.01	0.07	-0.06

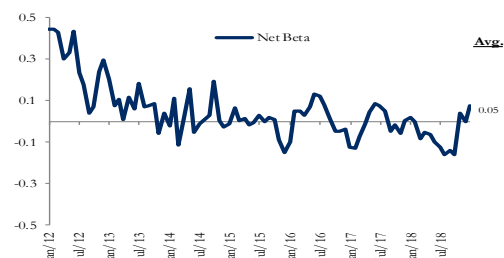
### Market Capitalization Exposure Breakdown



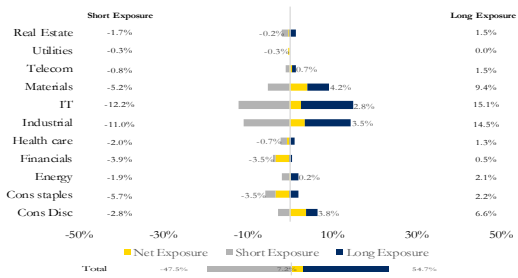
### Portfolio Neutrality in Terms of Dollar Exposure



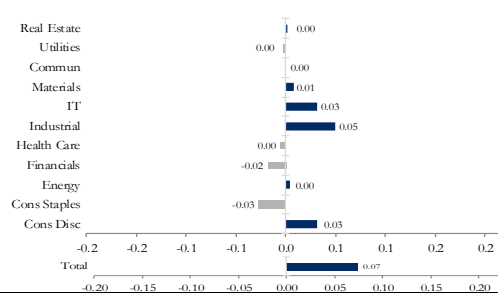
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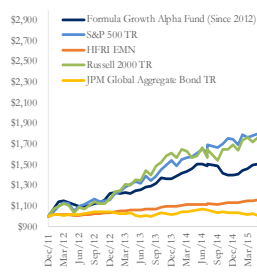
### Sector Neutrality in Terms of Dollar Exposure



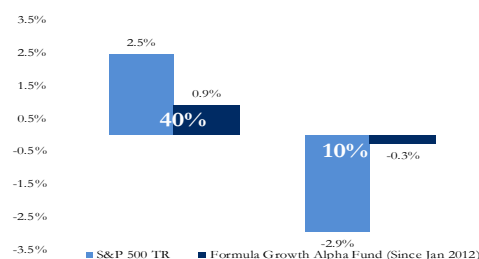
### Sector Neutrality in Terms of Beta Exposure



### Cumulative Return vs Peers, Stocks and Bonds



### Participation in Market Upside & Downside



Please see Notes & Disclaimers on page 5. Do not hesitate to contact us should you have any questions.

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- ◆ 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.
- ◆ HFRI Equity Market Neutral Index: The HFRI Equity Market Neutral Index consists of funds with net equity market exposure no greater than 10% long or short on average and it is denominated in U.S. dollar. Chicago-based Hedge Fund Research Inc. is a global leader in the creation of indexation and analysis of hedge funds.
- ◆ JPM Aggregate Global Bond Index: The JPM GABI consists of the JPM GABI US, a U.S. dollar denominated, investment-grade index spanning asset classes from developed to emerging markets, and the JPM GABI extends the U.S. index to also include multi-currency, investment-grade instruments. JP Morgan is a global financial services bank.

- ◆ 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/allocation. Performance attributions should be considered approximations calculated to the best of our knowledge.
- ◆ Individual securities selected for discussions are not meant as a complete attribution of portfolio returns. The Manager can be contacted for more complete attribution.



- ◆ 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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