Abe Sheikh, FSA MAAA
Chief Investment Officer and Portfolio Manager

- 17+ years of global capital markets experience, including 11 at J.P. Morgan
- Publications on asset allocation and downside risk in Institutional Investor Journals®
- Fellow of the Society of Actuaries and Member of the American Academy of Actuaries
- Master’s in Computational Finance, Carnegie Mellon University
- Bachelor’s in Actuarial Science, London School of Economics and Political Science

Abe is Chief Investment Officer and Portfolio Manager at Cougar Global.

Abe joined Cougar Global in 2017, after 11 years at J.P. Morgan Asset Management. He has spent the majority of his career developing frameworks designed to generate optimal strategic and tactical asset allocations for a range of sophisticated institutional and retail clients. He has researched and published in a range of peer-reviewed journals, such as the Journal of Portfolio Management, Journal of Investing and Journal of Alternative Investments, on topics including downside “fat-tail” risks in financial markets, macroeconomic regime-based investing, and managing assets pre- and post-retirement. Prior to joining J.P. Morgan Asset Management, Abe was an actuarial analyst for four years at Willis Towers Watson.

Abe earned a bachelor’s degree in actuarial science from the London School of Economics and Political Science and a master’s in computational finance from Carnegie Mellon University. He is a fellow of the Society of Actuaries (FSA) and a Member of the American Academy of Actuaries (MAAA). Abe is also a registered Portfolio Manager – Advising Representative with the Ontario Securities Commission.
COUGAR GLOBAL INVESTMENTS:
Seeking Compound Growth While Managing Downside Risk

Founded in 1993 in Toronto, Canada, Cougar Global Investments is a global macro-oriented, tactical asset allocation manager. We practice a strict discipline of downside risk management, striving to participate in bull markets while avoiding, if possible, the downside in bear markets. Cougar Global Investments is an affiliate of Carillon Tower Advisers, an LPL Funds Participating Partner.

Key takeaways:

• **Why Cougar Global?** Our guiding belief is that the key to achieving attractive long-term compound returns is to avoid large intermittent losses. We apply a dynamic top-down global macro asset allocation process that has a strong focus on downside risk management.

• **Post-Modern Portfolio Theory (PMPT):** We apply a variation of PMPT that recognizes that individuals feel significantly more “pain” from a dollar lost than “pleasure” from a dollar gained. We focus on the “Probability of Loss” at the total portfolio level to capture risk, rather than the more industry standard “Volatility,” as measured by standard deviation of returns.

• **Macroeconomic Scenario (MES) Analysis:** Our framework looks ahead 12 months and attaches probabilities to five economic scenarios, namely: Growth, Stagnation, Inflation, Recession and Chaos (or “Black Swans”). We then apply advanced statistical techniques — and our professional judgment — to develop four robust downside risk constrained portfolios. Our four mandates cater to clients with different risk tolerances and investment objectives.
**WHY Cougar Global?**

At Cougar Global Investments, our guiding belief is that the key to achieving attractive long-term compound returns is to avoid large intermittent losses. We apply a dynamic three-step global macro-oriented asset allocation process, shown in Exhibit 1, which has a strong focus on downside risk management.

Exhibit 1: Cougar Global’s three-step investment process

- Utilizing a macroeconomic-driven investment process, the team establishes an outlook for the U.S. economy over the next 12 months.

- Cougar Global uses an advanced statistical sampling technique to estimate how each asset class may perform over the forecast horizon using our Macro Economic Scenario Analysis.

- Cougar Global analyzes the probability distributions for each asset class and the correlations among them to generate the most suitable asset mix for each investment mandate.

In constructing portfolios, we apply a variation of Post Modern Portfolio Theory. We focus on the “Probability of Loss” at the total portfolio level as our preferred measure of risk, rather than the more industry standard “Volatility,” as measured by standard deviation of returns. We believe “Probability of Loss” recognizes a key behavioral finding that individuals have an asymmetrical attitude towards gains and losses, feeling significantly more “pain” from a dollar lost than “pleasure” from a dollar gained. Exhibit 2 below illustrates this asymmetric attitude towards gains and losses.

Exhibit 2: Our process incorporates individuals’ asymmetric attitude towards gains and losses

Source: Prospect Theory by Daniel Kahneman and Amos Tversky
Our macroeconomic scenario (MES) analysis framework looks ahead 12 months and attaches probabilities to five U.S. economic scenarios, namely: Growth, Stagnation, Inflation, Recession and Chaos (or “Black Swans”).

Exhibit 3 captures a recent 12-month economic outlook for the U.S. economy. In this outlook, we expect the U.S. economy to continue to grow at a moderate pace in 2019. This is captured in our MES. We believe that over the next 12 months, the probability of above-trend real GDP Growth in the United States stands at about 9 percent, Stagnation at 74 percent, Inflation at 3 percent, Recession at 6 percent, and Chaos at 8 percent. Each month we also report whether our probabilities have changed and by what percentage. Then, through our use of Exchange Traded Funds (ETFs), we adapt to changing market and economic condition and typically rebalance each strategy monthly.

At Cougar Global, we look ahead, not back.

**Exhibit 3: An example of Cougar Global’s 12-month economic outlook for the U.S. economy, from July 2019**

**Source**: Cougar Global Investments

Cougar Global’s Macro Economic Scenario Analysis assigns probabilities to each of the 5 economic scenarios over the next 12 months.

- **Growth** — U.S. economy is growing at or above its potential growth rate
- **Inflation** — Consumer Price Index (CPI) inflation rate is higher than U.S. Economy’s potential growth rate
- **Stagnation** — U.S. economy is growing at lower than its potential growth rate
- **Chaos** — A high impact, low probability event (“Black Swan”)
- **Recession** — U.S. economy is shrinking (negative quarter over quarter growth rate)

Macroeconomic Scenarios are based on quantitative data sourced from independent research firms and then weighted and may be adjusted based upon Cougar Global Investments’ investment team judgements. MES are subject to change.

**NOTE**: These are hypothetical examples and are not representative of any specific situation. Actual economic results may vary. Economic forecasts set forth may not develop as Cougar Global MES or Current Consensus indicates.
We then apply advanced statistical techniques — and our professional judgment — to develop four robust downside risk constrained portfolios, shown in Exhibit 4.

Our four mandates cater to clients with different risk tolerances and investment objectives. Our stock-bond allocation stands as follows in our portfolios: Global Tactical Strategy - Conservative, 10/90; Global Tactical Strategy - Conservative Growth, 20/80; Global Tactical Strategy - Moderate Growth, 50/50; and Global Tactical Strategy - Growth, 70/30. We are, however, able to deviate significantly from these allocations if we believe our macroeconomic outlook warrants such a move. As new opportunities emerge or if new threats are on the horizon, Cougar Global has the ability to adjust the asset mix accordingly. For all our portfolios, we typically hold a mix of investment grade and non-investment grade bonds, and stocks across different regions and market capitalizations.

Exhibit 4: An example of how Cougar Global’s four downside-risk constrained portfolios cater to clients with different risk tolerances and investment objectives

No matter which portfolio investors choose, they can be confident it is managed with the same guiding principles that Cougar Global Investments has followed since its beginning in 1993: a focus on capital preservation and downside risk tailored to the long-term investor’s needs and goals.
ABOUT COUGAR GLOBAL Investments

Cougar Global Investments, an affiliate of Carillon Tower Advisers, is a macro-driven, global tactical asset allocation strategist. Cougar Global Investments believes the goal of investing is to generate compound growth that seeks to achieve clients’ investment objectives. The primary means of pursuing adequate compound growth is to avoid losing money.

Our research team conducts ongoing macroeconomic and asset class analysis, reviewing the asset mix for each mandate monthly and rebalancing as required. As new opportunities emerge or if new threats are on the horizon, Cougar Global Investments has the ability to adjust the asset mix accordingly with no restrictions. We are registered and regulated by the Ontario Securities Commission (OSC) as a Portfolio Manager and registered as a “non-resident” investment advisor with the United States Securities and Exchange Commission (SEC).

ABOUT CARILLON TOWER Advisers

Carillon Tower Advisers is a global asset management company that combines the exceptional insight and agility of individual investment teams with the strength and stability of a full-service firm. Together with our partner affiliates — ClariVest Asset Management, Cougar Global Investments, Eagle Asset Management, Reams Asset Management (a division of Scout Investments) and Scout Investments — we offer a range of investment strategies and asset classes, each with a focus on risk-adjusted returns and alpha generation. Carillon Tower Advisers believes providing a lineup of institutional-class portfolio managers — spanning a wide range of disciplines and investing vehicles — is the best way to help investors seek their long-term financial goals.

Investment Team

Abe Sheikh, FSA MAAA
Chief Investment Officer and Portfolio Manager
• 17+ years of global capital markets experience, including 11 at J.P. Morgan
• Publications on asset allocation and downside risk in Institutional Investor Journals®
• Fellow of the Society of Actuaries and Member of the American Academy of Actuaries
• Master’s in Computational Finance, Carnegie Mellon University
• Bachelor’s in Actuarial Science, London School of Economics and Political Science

Amy Steciuk, CFA
Senior Research Analyst
• Nine years of financial markets and investment experience
• Earned BSc (Honors), University of Western Ontario
• CFA Charterholder since 2014

Irina Dorogan, CIM®
Senior Research Analyst
• Nine years investment experience
• Five years of experience in economics
• Earned degree in Economics at Academy of Economic Studies of Moldova

Jason Richey, CFA
Senior Research Analyst
• 13 years of financial markets and investment experience
• Earned BA in Math and Economics at Ithaca College
• Earned MBA in Finance at the University of South Florida
• CFA Charterholder since 2004
An investment in Exchange Traded Funds (ETFs) involves the risk of losing money and should be considered as part of an overall program, not a complete investment program. An investment in ETFs involves additional risks: non-diversified, the risk of price volatility, competitive industry pressure, international political and economic developments, possible trading halts and index tracking error. Performance is directly related to the performance of underlying ETFs and the ability of each strategy to achieve its investment objective is directly related to the ability of the underlying ETFs to meet their investment objectives.

Asset allocation and diversification do not ensure a profit or protect against a loss. All investments are subject to risk. There is no assurance that any investment strategy will be successful or that any securities transaction, holdings, sectors or allocations discussed will be profitable. Strategies discussed are subject to change at any time due to market conditions or opportunities. Past performance does not guarantee or indicate future results. There is no guarantee that these investment strategies will work under all market conditions.

Cougar Global Investments calculates the Macro Economic Scenario Analysis (MES) by assigning probabilities to each of the five economic scenarios (Growth, Stagnation, Inflation, Chaos and Recession) over a one-year forecast horizon. The MES is based on quantitative data sourced from various firms and then weighted and may be adjusted based upon Cougar Global Investments thought capital. MES is subject to change. Macro Economic Scenarios: Growth - U.S. economy is growing at or above its potential growth rate, Recession - U.S. economy is shrinking (negative quarter over quarter growth rate), Stagnation - U.S. economy is growing more slowly than its potential growth rate, Inflation - Consumer Price Index (CPI) inflation rate is higher than U.S. economy's potential growth rate, Chaos - A high-impact, low-probability event (aka “black swan”). Current Consensus: Wall Street Journal Economic Forecasting Survey – a survey of quarterly U.S. Real GDP forecasts over the next 12 months. Cougar Global Investments MES Source: Cougar Global Investments. Opinions and estimates offered constitute Cougar’s judgment and are subject to change without notice, as are statements of financial market trends, which are based on current market conditions.

The conversion dates from sub-advisors to ETFs are April 30, 2008, for GTS - Conservative; February 29, 2008 for GTS – Moderate Growth; and October 31, 2007 for GTS – Conservative Growth. As of December 31, 2008, Cougar Global stopped using sub-advisors.

Tactical allocation investing presents specific risks, such as currency fluctuations, differences in financial accounting standards as well as potential political and economic instability. As with all equity investing, there is the risk that an unexpected change in the market or an ETF’s holdings may have an adverse effect on its value and total return. The biggest risk of equity investing is that returns can fluctuate and investors can lose money. Because these strategies normally will hold a focused portfolio of fewer holdings than many other diversified strategies, the increase or decrease of the value of a single security may have a greater impact on the total return. Investing in small and mid-cap stocks generally involves greater risks, and therefore, may not be appropriate for every investor. Stocks of smaller or newer or mid-sized companies may be more likely to realize more substantial growth as well as suffer more significant losses than larger or more established issuers. Small and mid-cap companies generally involve greater risks than investing in larger capitalization companies. They often have narrower commercial markets, more limited managerial and financial resources, and more volatile trading than larger, more established companies. International investing involves special risks, including currency fluctuations, different financial accounting standards, and possible political and economic volatility. Stock investing involves risk, including the risk of loss. The prices of small and mid-cap stocks are generally more volatile than large cap stocks.

Investing in emerging markets can be riskier than investing in well-established foreign markets. Emerging and developing markets may be less liquid and more volatile because they tend to reflect economic structures that are generally less diverse and mature and political systems that may be less stable than those in more developed countries.

High-yield (below investment grade) bonds are not suitable for all investors and may present greater credit risk than other bonds. High Yield/Junk Bonds are not investment grade securities, involve substantial risks and generally should be part of the diversified portfolio of sophisticated investors. Corporate bonds are considered higher risk than government bonds but normally offer a higher yield and are subject to market, interest rate and credit risk as well as additional risks based on the quality of issuer coupon rate, price, yield, maturity and redemption features. Bonds are subject to market and interest rate risk if sold prior to maturity. Bond values will decline as interest rates rise and are subject to availability and change in price. Mortgage-Backed Securities are subject to credit, default risk, prepayment risk that acts much like call risk when you get your principal back sooner than the stated maturity, extensions risk, the opposite of prepayment risk, and interest rate risk. Government bonds and Treasury bills are guaranteed by the U.S. Government as to the timely payment of principal and interest and, if held to maturity, offer a fixed rate of return and fixed principal value. There is an inverse relationship between interest rate movements and fixed income prices. Generally, when interest rates rise, fixed income prices fall and when interest rates fall, fixed income prices generally rise. Bond investors should carefully consider risks such as: interest rate risk, credit risk, liquidity risk and inflation risk.

Commodities risk is the risk that investments in commodities, such as gold, or in commodity-linked instruments, will subject an underlying fund’s portfolio to volatility that may also deviate from price movements in equity and fixed income securities. Commodities trading is generally considered speculative because of the significant potential for investment loss. Among the factors that could affect the value of the fund’s investments in commodities are cyclical economic conditions, sudden political changes, events in sectors affecting a particular industry or commodity, and adverse international monetary policies. Markets for precious metals and other commodities are likely to be volatile and there may be sharp price fluctuations even during periods when prices overall are rising.