



# Due Diligence Questionnaire

Savernake Management Limited | Last Updated: April 2019 | Private & Confidential

This document, and the information provided within, has been compiled to serve as a guide to potential investors in their review and assessment of our investment offerings. The document follows the outline in AIMA's Illustrative Questionnaire for Due Diligence Review of Managed Futures Fund Managers / Commodity Trading Advisors (CTAs).

The information provided is correct as at the date shown. Please contact [katie@savernakecapital.com](mailto:katie@savernakecapital.com) with any further questions.

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## SECTION ONE: COMPANY & BACKGROUND

### 1a. COMPANY INFORMATION

Name:	Savernake Management Limited
Type of company:	Limited Company
Registration number:	62121
Regulation status:	Licensed Investment Manager (Guernsey Financial Services Commission, registration no. 2269051)
Date of incorporation:	09/06/2016
Registered address:	Kingsway House, Havilland Street St Peter Port, Guernsey GY1 2QE
Contact:	<a href="mailto:katie@savernakecapital.com">katie@savernakecapital.com</a>
Website:	<a href="http://www.savernakecapital.com">www.savernakecapital.com</a>

### 1b. EMPLOYEES & PRINCIPALS

Number of employees:	Savernake Management Limited does not have any employed staff. All trading is 100% systematic, and the oversight of the investment management is provided by the Board. The underlying technology utilised by Savernake Management Limited is owned by its parent company, Savernake Capital Limited, and developed by a separate UK company (Savernake Technology Limited) via a Services Agreement. Savernake Technology Limited currently employs 6 staff in the following areas: 2x R&D, 2x Infrastructure, 1x Admin/Operations, 1x Marketing/PR.
Background of directors:	<p><u>Sam Barry (Founder and CIO/CEO):</u> Sam is a specialist in trading and AI, and has more than ten years' experience managing external capital through various trading systems and strategies. Prior to founding the Savernake Group, Sam spent several years in back office roles at Barclays, ultimately becoming Chief of Staff to the COO/CAO and having direct accountability for internal control functions. Sam has a first-class honours degree in Mathematics and Computer Science from Manchester University.</p> <p><u>Mark Rollingson (Co-Founder and Head of Development):</u> Mark is a software developer specialising in artificially intelligent systems and algorithmic trading. Mark has designed and built numerous trading platforms, as well as multi-broker support and solutions for the trading desks of Government Bonds, High Grade, High Yield and Structured Credit. He was a Credit Derivatives Developer at Lehman Brothers and a Trading Systems Developer at Bloomberg. Mark has a first-class honours degree in Computer Science from King's College, London.</p> <p><u>Carla Stent (Chair):</u> Carla has held several senior positions in banking, retail and private equity industries. She has had direct responsibility for corporate finance and post-merger integration, strategy, business operations, brand development &amp; management and business transformation. Carla has operated at Board level for organisations including Virgin, Barclays and Thomas Cook. She is currently Chair of Marex Spectron Limited and a non-executive director for JP Morgan Elect plc, the Post Office and Power to Change Trust. Carla is a qualified chartered accountant and was born and educated in South Africa.</p> <p><u>Patrick Earle (Chair, Investment Committee):</u> Patrick started his career with 18 years in investment banks including JP Morgan and UBS, in a broad range of finance roles including Operations Management, Corporate Finance, Mergers &amp; Acquisitions Advisory and Equity. Subsequently, he worked extensively in the hedge fund management industry, including at Tiger Management and De Putron Fund Management; and also founded \$1bn fund Kicap Management. His particular</p>

	<p>specialism was global equities in the Telecommunications, Media and Technology industries. Patrick has a degree in Economics from the University of Cambridge.</p> <p><u>Fiona Bateson (Non-Executive Director)</u>: Fiona studied Economics at Durham University and started her career in the city, firstly in commodity broking then in the Eurocurrency market, and finally in merchant banking. She then completed a modular MBA at Henley Management College and spent 10 years in management consulting before setting up her own management consultancy business, specialising in finance organisations. Clients included BP, Coopers &amp; Lybrand, Zurich and the Cabinet Office. Fiona is also a UKCP accredited psychotherapist with an MA in psychotherapy and holds a diploma in Company Direction.</p> <p><u>Chris van Vliet (Non-Executive Director)</u>: Chris is a Fund Administration Manager at Savernake's Administrator, Cannon Asset Management. Chris is a chartered accountant with extensive experience in Fund and Company Administration.</p>
Company principal associations:	<p><u>Investment Banks</u>:</p> <ul style="list-style-type: none"> <li>● JP Morgan Elect (Carla Stent and Patrick Earle)</li> <li>● UBS (Patrick Earle)</li> </ul> <p><u>Hedge Funds</u>:</p> <ul style="list-style-type: none"> <li>● Tiger Management (Patrick Earle)</li> <li>● De Putron Fund Management (Patrick Earle)</li> <li>● Kicap Management (Patrick Earle)</li> </ul> <p><u>Brokers</u>:</p> <ul style="list-style-type: none"> <li>● Marex Spectron LLP (Carla Stent)</li> </ul> <p><u>Accountancy Associations</u>:</p> <ul style="list-style-type: none"> <li>● ICAEW (Carla Stent)</li> <li>● ACCA (Chris van Vliet)</li> </ul>
Did one or more of the current principals develop the company's trading methodology?	Yes, the company's trading methodology was developed by CEO Sam Barry in conjunction with Head of Development Mark Rollingson.
Could the unavailability of any of the company's principals influence the trading methodology?	No
Does the company own the trading methodology?	Yes
Are there any patents, trademarks etc.?	No, as it is not possible to register patents or trademarks for the trading methodology or infrastructure without compromising sensitive elements of Intellectual Property.
<b>1c. THIRD PARTY SUPPLIERS</b>	
Accountant:	Cannon Asset Management, Kingsway House, Havilland Street, St Peter Port, Guernsey, GY1 2QE. Tel: +44 1481 726141
Administrators:	Cannon Asset Management, Kingsway House, Havilland Street, St Peter Port, Guernsey, GY1 2QE. Tel: +44 1481 726141
Auditors:	Moore Stephens LLP, PO Box 146, Town Mills South, La Rue de Pre, St Peter Port, Guernsey, GY1 3HX. Tel: +44 1481 721769

Legal advisors:	Collas Crill, Glatengy Court, PO Box 140, Glatengy Esplanade, St Peter Port, Guernsey, GY1 4EW. Tel: +44 1481 723191
<b>1d. COMMUNICATIONS</b>	
Has the performance record been included in any public fund prospectus in the past five years?	No
Are there any outstanding issues from a regulatory review?	No
Do you have a current CFTC Reg. 4.21 Disclosure Document or Reg. 4.7 Disclosure Document?	No
Do you publish any newsletters or other communications?	No

## SECTION TWO: AUM & PERFORMANCE

### 2a. ASSETS UNDER MANAGEMENT

Current accounts managed:	Account:	AUM:	% of AUM:
	Managed Account 1	\$2 m	30%
	Managed Account 2	\$2m	30%
	Managed Account 3	\$2.5m	40%
Investor groups targeted:	High net worth individuals, family offices, funds of funds and seeders.		
Capacity commitments:	\$100m for one family office.		
Projected growth in AUM over the next 12 months:	£25m+		
Do you manage accounts for government pension plans?	No		
Do you permit "feeder funds" into own investment products?	Yes		
Peak of assets under management:	\$6.5m (current)		
Have you ever voluntarily returned funds to investors?	No		
What is the maximum amount of equity that you estimate can be traded?	Estimated capacity is \$1bn+		
What is the minimum account size?	\$1m		
Are new investments currently being accepted?	Yes		
Is the client free to choose a clearing firm and negotiate the account terms directly with them?	Yes (subject to minimum AUM requirements)		
Which clearing firms do you currently use?	360t (Deutsche Boerse Group) and ADM Investor Services.		
What fees do you charge?	Management fee: average of 1.5% per annum.		

	Performance fee: average of 15%, charged monthly. Performance fee is subject to a High Water Mark, which will be the previous highest equity value. No further performance fees will be payable until the High Water Mark is exceeded.	
Do you charge all clients the same fees?	No, we will offer reduced fees for large AUM deposits.	
Do you share your fees with any third parties?	Yes – some fees are shared with introducers.	
Do you have a lockup period or special requirements for withdrawal?	No	
2b. PERFORMANCE		
Attach 13-column composite performance tables:	See attached.	
Is the performance record actual or hypothetical?	Actual.	
Is any proprietary capital included in the performance record?	Yes, \$600k from November 2016 – August 2017, before being drawn down for working capital.	
Does the performance record include broker commissions?	Yes, the performance record reflects all broker commissions charged to clients.	
Has there been any change to the markets traded since the performance record?	Yes, we added a Futures product in August 2019.	
Does the performance record include interest income?	No	
Are there any pro forma adjustments included in the performance record?	No	
2c. STATISTICS		
	FX Programme	Futures Programme
Current equity value:	\$2m	\$4.5m
Starting date:	04/01/2016	04/08/2018
Compound annual return:	7.33%	15.30%
Annualised standard deviation:	13.75%	10.63%
Sharpe ratio:	0.57	1.31
Average volume per \$m per month:	\$179,714,000	\$40,195,000
Average number of round turn trades per \$m per year:	8,100	2,400
Average annual commission as a percentage of AUM:	8.58%	1.45%
Average management and performance fees:	1.5% management fee 15% performance fee	
Average percentage of winning and losing trades:	Winning: 44.24% Losing: 55.76%	Winning: 43.76% Losing: 56.24%
Average gain per winning trade and loss per losing trade:	Gain per winning trade: \$455.79 / 0.046% Loss per losing trade: -\$337.86 / -0.034%	Gain per winning trade: \$1,233.27 / 0.123% Loss per losing trade: -\$818.75 / -0.082%
Average holding period:	All trades: 15.41 hours	All trades: 23.93 hours

	Winning trades: 18.63 hours Losing trades: 12.86 hours	Winning trades: 29.84 hours Losing trades: 19.29 hours
Three largest drawdowns:	There have only been two drawdowns to date, both as a result of periods of low market volatility.  1. March 2016 – November 2016 a. Peak: August 2016 b. Max loss: -5.43% c. Duration: 6 months  2. February 2017 – March 2019 a. Peak: November 2018 b. Max loss: -15.38% c. Duration: 26 months	There has only been one drawdown to date.  1. October 2018 – March 2019 a. Peak: December 2018 b. Max loss: -7.09% c. Duration: 6 months
Three longest drawdowns:	As above	As above
Largest withdrawal since inception:	In August 2017, 1.94% of equity was withdrawn. This was proprietary capital that was withdrawn in order to fund operational expenses.	There have been no withdrawals since inception.
Have there been any material leverage adjustments since inception?	The system is able to dynamically reduce leverage during unprofitable periods (typically, periods of low volume and low volatility in the markets, which offer fewer profitable opportunities).	

## SECTION THREE: TRADING METHODOLOGY

### 3a. TRADING APPROACH

Describe your broad trading philosophy, strategy and core principles in as much detail as possible:	<p>Savernake operates a fully systematic and algorithmic approach with no manual intervention, aimed at creating positive skew, cutting losers early and running winners in order to produce positively skewed distribution curves. Our trading philosophy focuses on risk-adjusted returns and reducing factor and leverage exposures for a standard level of return. We look at uncorrelated performance and distributions in order to provide hedging potential within wider portfolios.</p> <p>Another key focus of our trading philosophy is to operate strategy and risk management protocols and dynamic portfolio allocation models. This allows us to consider individual investments and strategies, either separately or as part of a total portfolio when considering risk and return.</p> <p>Our systems are entirely instrument and market agnostic, meaning they can be applied to the majority of underlying asset classes. Maintaining this flexibility is another key philosophy behind the development of all of our systems.</p>
Describe the development of your trading methodology:	<p>Savernake's founders started to develop trading systems over a decade ago, originally focused on sports betting markets. From the outset, the system development was focused on solving a very specific challenge – how to build a system capable of predicting and adapting to changes in market conditions.</p> <p>Due to limited upside and rising margins in sports betting markets, the system was then applied to financial markets, with a focus on its ability to generate returns per risk level, which resulted in a focus towards positively skewed distribution and maximising the ability to capture upside and volatility.</p> <p>Next, the framework and supporting infrastructure for the development and construction of models to support these principles was built out.</p>

	<p>Following this, the team focused on the system's ability to generate portfolios to support future returns, not historic returns, aimed at solving the initial challenge. Prior to the formation of Savernake, data capacity, infrastructure resilience, failsafes and security were improved as the final step in a ten-year development cycle prior to the inception of Savernake.</p>
What do you believe gives you a competitive advantage or "edge"?	<p>Over the past decade, the accelerating pace of strategy decay and changes to market conditions, predominantly due to technological advances, has made it increasingly challenging for CTAs to generate consistent returns. We address this issue by utilising a sophisticated self learning portfolio system, combined with access to thousands of potential trading strategies, to ensure that our clients are always trading the portfolio with the greatest likelihood of future returns. Our portfolio system is continuously self learning and improving. It considers all conditions it has seen to date, across all time windows, and optimises for the conditions that we are experiencing. This ability to dynamically adapt as markets change, and learn from new experiences, is our edge.</p>
What are the strengths and weaknesses of your trading methodology?	<p>The strengths of our trading methodology are:</p> <ul style="list-style-type: none"> <li>● Resilience of our trading systems;</li> <li>● Ability to limit risk exposure while allowing for upside gains;</li> <li>● Ability to execute with a high degree of accuracy; and</li> <li>● Ability of our systems to predict and adapt to changing markets.</li> </ul> <p>The weaknesses of our trading methodology are that the system does not operate well in low volume, low volatility environments, as developing positively skewed distributions in these environments is extremely challenging. In addition, the system will operate at optimum on large AUM levels, as this will allow the system to consider more underlying components and manage risk more effectively.</p>
Is your trading approach systematic or discretionary?	100% systematic
How would you characterise your main decision-making inputs– fundamental, technical or other?	Our decision-making processes consider both fundamental and technical inputs, as well as Order Book information.
What other advisors would you company your company to as most similar?	<p>Savernake is similar in terms of trading approach to systematic CTAs such as AQR Capital Management (Applied Quantitative Research), Renaissance Technologies and Systematica Investments, in that it carries out quantitative research utilising multiple underlying models for trading. Savernake also uses a set of machine learning algorithms, which is characteristic of high-end systematic funds.</p>
Which components of the company's system, if any, do you regard as proprietary?	<p>All of the underlying architecture, models and scoring functions utilised by Savernake are entirely proprietary. This technology has been developed from the ground up for quantitative analysis and systematic trading. The key capabilities of this architecture include sub-millisecond latency, multi-server resilience and advanced analytics.</p> <p>For full details of our proprietary architecture, please refer to our marketing materials.</p>
How, if at all, is "game theory" incorporated into your trading strategies?	<p>Mathematics, and concepts behind the order book, overlay in the system and as such many of Savernake's strategies could be considered applying "game theory concepts". However, this is more in the form of the truer mathematical sense of game theory, i.e. how markets react to news and information and how the order book positions itself prior to and subsequent to data releases. Often, market participants react to other market participants as opposed to the underlying fundamental drivers, and it is this element of game theory that we are able to capitalise upon.</p>

What are the programme's rate of return, volatility and Sharpe Ratio objectives?	The programme operates based on return objectives based on level of risk exposed and does not have a singular volatility objective, as downside and upside volatility are considered separately. Downside volatility is capped at specific risk levels within the system. Our standard programme targets 2% (FX) and 2.5% (Futures) as a maximum daily loss, and a peak to trough drawdown of 15-20% with 10% low vol and 20% high vol returns. We are also able to set bespoke limits in line with client requirements.
What is the programme's S&P non-correlation objective?	The programme does not have a specific objective relating to S&P non-correlation, however due to the nature of our trading methodology the system is uncorrelated to all major market indices including the S&P500.
Which criteria are considered in portfolio selection?	In order to select a portfolio, the system uses a dynamic set of bespoke scoring systems to develop specific portfolios. These scoring systems will consider a wide range of criteria including risk level and market conditions and are part of our Intellectual Property.
Describe any past problems with Position Limits:	There have not been any problems with Position Limits to date.
How much money could be managed under the current methodology without being restricted by Position Limits?	AUM to \$1bn+ could be managed under the current trading methodology without being restricted by Position Limits. Position Limits are built into the system and dynamically managed.
How are positions established for new accounts, liquidated for terminating accounts, or adjusted for existing accounts to reflect material changes in account equity?	The system marks to market on a daily basis, which means that we can add new accounts, liquidate accounts or adjust existing accounts on a daily basis to reflect changes in account equity.
How are executed trades allocated to accounts?	Executed trades are dynamically split by % allocation at the time of order entry for separately managed accounts. The system randomises the order of accounts and trades to ensure that there is no bias between clients.
Have there been any major "out-trades"?	No
<b>3b. TRADING ORDERS</b>	
What types of trading orders are used?	Primarily limit and market order executions. Depending on the liquidity pull in exchange, stop or pegging orders can be utilised as required.
Are different types of orders used for entry and exit?	Typically (and dependent on order types allowed by the liquidity pool), all exit orders will be market or aggressive stop orders, however the system is able to switch between market and limit orders for entry and exit to protect pricing depending on market conditions.
Are orders entered onto a trading desk or relayed directly to the exchange floor?	Orders are not entered onto a trading desk or exchange floor. All orders are connected via API directly to brokers and liquidity pools.
Are large orders broken up?	We dynamically break up large orders across liquidity pools in order to minimise market impact.
Do you use give-ups for futures?	Not currently.
If you use a Prime Broker for FX, please describe the structure and any fees charged:	N/A
Do you have any special relationship or affiliation with any FCM?	No



### 3c. MARKET SECTORS / INSTRUMENTS

How do you determine the programme's commitment to different market sectors?	The system will dynamically optimise its commitment to different market sectors based on risk vs return characteristics including exposure, leverage and future potential returns.
Does the programme work better in some markets than others?	No, the major limitation to operating the system in different markets is principally the cost of trading, not the system's ability to operate.
Are certain markets excluded from the portfolios?	Currently, the system operates on FX and Futures only.
How frequently do you alter the programme's commitment to different market sectors?	The system's commitment to different market sectors is altered dynamically, but changes are relatively infrequent.
Are there liquidity, regulatory or other requirements for the inclusion of markets in your portfolios?	No
In which kind of markets does the trading methodology perform best and worst?	The trading methodology performs best in high volatility or trending markets, and less well in low volatility, low volume markets (primarily due to trading costs).
Are agricultural/soft commodities a significant component in your portfolio?	No
Does your methodology permit or require delivery of physical commodities?	No
Do you trade "cash" securities (stocks and bonds)?	No, however we can hold cash securities as an additional level of protection. The trading methodology is equally adept at trading cash securities and could potentially do so in future.
Will increasingly competitive markets affect the performance of your programme?	No – in theory, increasing competition will increase volume, which supports the behaviour of our system. The other advantage we have in a highly competitive situation is our ability to dynamically switch to strategies that perform well in specific market conditions, giving us a flexibility that many other CTAs may not have.
What instruments are traded?	Spot FX and Futures.
If options are traded, what option-related volatility measures are incorporated?	N/A – the system will consider the underlying volatility measure for each market.
Do the markets traded vary according to the account size?	Currently no, however there are opportunities of scale with large AUM.

### 3d. PROGRAMME ALTERATIONS

Do you alter the programme during or as a result of drawdowns?	The system is able to adapt dynamically during and as a result of drawdowns.
Describe the company's three worst trading experiences and how they influenced the evolution of your trading methodology?	The company's three worst trading experiences were all encountered during periods of low volatility. In these periods, the system behaved as expected, reducing scaling and leverage to manage the situation and minimise risk. No amends have been made to the trading methodology as a result, although expanding the strategies and instruments available to the system will help improve performance in low volatility.
Have you made any leverage adjustments in the past?	Leverage adjustments are made by the system relatively frequently (on an intraday basis).

Have you made any specific modification intended to reduce volatility?	No specific modifications have been made to reduce volatility, however our portfolio construction modules and AI scoring systems will consistently look to reduce volatility as part of their matrix of scores.
Will you modify a trading methodology or portfolio at particular clients' request?	We will not modify our overall trading methodology, however we are able to adapt the system to modify a portfolio depending on individual client requirements in separately managed accounts.
Has the trading method been adjusted, or markets traded changed due to increased AUM?	No
Do you offer "overlay" as well as standard programmes?	We can offer bespoke models under separately managed accounts, subject to minimum AUM requirements.
Can a portfolio be customised according to specific customer requirements?	We can offer bespoke portfolios via separately managed accounts, subject to minimum AUM requirements.
Do customised accounts appear in your composite performance record?	No
<b>3e. SYSTEMATIC TRADING</b>	
Is the trading system ever overridden?	No
Does the trading system ever add to or reduce profitable or losing positions?	Yes, the system is able to increase or reduce positions in order to balance itself for the underlying currency it is trading in, in order to manage factor and leverage exposure across multiple currencies. The system is designed to cut losing trades early, so it will reduce trades as quickly as possible as profitability decreases. The system is also able to add to profitable positions, typically due to the system being rebalanced on a risk basis, or if it has been able to lock in profit through a hedge or targeted stops.
What methods are used to close out profitable positions?	The system dynamically closes out profitable positions based on numerous data points. As an example, spread relationships will be considered and the system is able to close a trade if the spread becomes prohibitive to profit.
Are multiple trading systems used?	No.
Do you apply the same system to all markets or are there different systems for each?	We apply the same systems to all markets, although the system is able to change which strategies it operates based on markets traded and current market conditions.
What technical or fundamental information is considered important for a trade entry signal?	The system utilises technical and price information alongside order book information, risk parameters and current market data to generate trade signals.
Are entry and exit signals generated by the same trading system?	Yes
Does the trading methodology differ from market to market?	No
Does the system have a long or short bias?	No
Is the trading system always long or short, or is there also a neutral zone?	The system can be long, short or neutral depending on market conditions and the system's ability to capture risk-adjusted returns.
How frequently are changes made to the trading system?	The system is able to dynamically change the underlying strategies and portfolios intraday (although in practice these changes are far less frequent). The system itself has not been significantly modified since its inception (further strategies are continually being developed).

Is your research focused on developing new trading systems or on further refining the existing systems?	The key focus of our research is developing additional strategies to input for inclusion in future portfolios and additional risk models to maximise return per level of risk, as well as developing our portfolio construction methodologies.
Is “cost of carry” a factor in the current methodology?	Downside carry cost is built into the system, but upside is not (the system does not consider carrying trading as an overall benefit).
Are any activities influenced by subjective judgement?	No
If fundamental information is used, what are its sources?	We utilise fundamental information via APIs from data sources including Reuters, CFTC, brokers, Trading Economics and Market Factory.
How would you approach sudden and unexpected illiquidity in any of the markets traded?	In periods of sudden and unexpected illiquidity, the system's built-in capital preservation methods will be triggered. The system will automatically deleverage and derisk itself and will not place any further new trades. The system will look to become market neutral as quickly as possible, prioritising preservation of client capital.
Do you permit fundamental factors to influence risk management?	Regular high risk events are automatically considered by the risk management component of the system, and the system will take appropriate actions prior to and subsequent to the event.
Are any filters used when selecting trades?	No
If the trading methodology involves a neural network, what are its main inputs?	Our portfolio selection and scoring systems utilise neural networks and genetic algorithms. The main inputs for portfolio selection are potential strategies, supporting data and performance information, while the scoring system will receive various price information related to the underlying order book and economic data used in order to produce the scoring systems used.
Which of the below techniques are used in your trading methodology?	
Moving averages of prices:	No
Chart patterns:	Yes, dynamically generated patterns
Momentum oscillators:	No, however we do track in-house momentum
Point and figure:	No
Support and resistance:	Yes, in relation to order book information
Volume or open interest:	Yes, in relation to order book information
Spread relationships:	Yes, the system uses spread information dynamically in order to consider costs and risks associated to an individual trade
Statistical probabilities:	Yes
Penetration identification:	No
Overbought/oversold indicators:	No
Cyclical/seasonal analysis:	Yes, if statistically relevant
Fundamental or economic analysis:	Yes, the system uses fundamental/economic data points, but it does not consider them as a singular reason for trading (i.e. these will only support trade signals if backed up by additional data)
Bottom up analysis:	No
Top down analysis:	No
<b>3f. RISK MANAGEMENT</b>	
Describe your overall risk management principles and approach:	Savernake's risk management principles focus on reducing factor leverage and risk exposure whilst maximising return potential. This principle has led to our focus on positive skew and capping

	downside volatility. The system has specific caps and limits for single factor main exposures as well as generic leverage exposures and limits based on strategy instrument, market and portfolio risk.	
How do you calculate risk?	Risk is calculated by strategy, instrument, market and portfolio across leverage, factor, exchange rate, loss, volatility, deviation and on a value at risk (VAR) basis.	
Is risk calculated for every trade?	Yes – risk is calculated on a tick-by-tick basis for all aspects of the system. Each individual data point received results in a recalculation of the system's risk.	
Is "value at risk" used in your programme?	Yes, value at risk (VAR) is one of the key elements of our risk calculations. We report on 99.9% and 95% confidence levels, and dynamically utilise the full range of the distribution curve.	
What determines the amount of leverage used?	Below leverage caps, the amount of leverage used is determined by the system's ability to generate excess return for the level of risk.	
How much leverage (% of margin to equity) is used?	FX	Futures
	Average: 2.08 : 1	Average: 1.67 : 1
	Max: 9.31 : 1	Max: 4.16 : 1
How do you react if the volume and/or open interest of a market in which a position is held are suddenly reduced significantly?	If volume and/or open interest of a market in which a position is held is suddenly significantly reduced, the system will automatically derisk itself.	
Do you impose limits on the amount of margin committed to different markets, sectors or portfolios?	Yes, the system utilises margin limits.	
Does adding or reducing a position in one market ever influence the size of positions held in other markets?	Yes, as the system will rebalance on a risk adjusted basis across all markets. This does not only happen when positions are added or reduced, but also as market prices change across all positions.	
Do you calculate or analyse the historical or contemporary correlation between markets? If yes, how does such analysis influence portfolio design?	No, the system does not typically utilise historical correlations between markets due to the length of our typical holding periods and the system's ability to allocate risk dynamically.	
Are there a minimum number of markets in which you always hold positions in order to achieve a minimal portfolio diversification effect?	The system does have underlying diversification restrictions in order to ensure it is not overexposed to single factor exposures.	
On what principles are stops calculated?	Stops are calculated based on the level of risk and operate on both a trade level and a portfolio level.	
How often are stops adjusted?	Stops are adjusted on a tick-by-tick basis and on the data input level as each new data point is received (although there are also hard stops in place to protect client capital).	
What is the method of establishing stops based on?	Stops are calculated based on a matrix of risk principles and scoring systems.	
If a stop is reached, is the entire position closed out at one time, or is the position reduced gradually?	When a stop is reached, the position will be closed in its entirety. However, the system may also utilise stop orders to reduce a position size in order to reduce risk.	
How are positions adjusted when there is a significant increase or decrease in equity due to trading profits or losses?	When equity increases or decreases due to trading profits or losses, the system will dynamically rebalance in order to manage the risk portfolio.	

Are there any circumstances in which all positions in the portfolio will be closed?	All positions can be closed out in extreme circumstances, for example if market conditions become so unfavourable that the system is unable to identify trading opportunities or believes that the risk level is too high.
At what percent drawdown would you either stop trading or recommend that an account be closed?	We would recommend that all trading be stopped at a 25% drawdown, however internally we operate alerts at 10%, 15% and 25% drawdown in order to allow us to monitor market conditions and protect client capital. Depending on the situation, we may advise amends to risk levels or closing of the portfolio at these lower levels. Preservation of client capital is always prioritised.
Does the methodology react to volatility changes in the markets?	Yes, volatility changes are a key part of the dynamic scoring systems used to determine how risk is allocated.
Do you trade on exchanges that are open outside local office hours?	The system trades OTC 24 hours a day, 5 days a week in the FX markets. The system dynamically manages time differences and risk of adverse price movements / price gaps.
What is the estimated total loss per day?	We have system protection in place that caps maximum loss on a single day to 2% (FX) and 2.5% (Futures).

#### SECTION FOUR: RESEARCH & DEVELOPMENT

Describe your efforts to improve trading methodology through ongoing research?	Savernake has a dedicated R&D team who are focused on various improvements across all aspects of the system. This includes strategy development, risk management and portfolio construction.
What is your current annual research budget?	Savernake's current annual budget for technology development and R&D is circa £500k, with the majority of revenue earned to date having been reinvested into ongoing system improvements and developments.
How much money have you invested in research since inception?	£2m+
Has the company or any of its research staff published any research or academic papers?	No.
Do you use any external parties or resources for research?	Yes, Savernake currently has a sponsorship agreement in place with Cambridge University's Algorithmic Trading Society for strategy development and idea generation.

#### SECTION FIVE: OPERATIONS

What is your policy with respect to trading and system errors?	We operate numerous Technology policies, each based on specific circumstances that have the potential to result in trading or system errors. Each of these policies contains detailed guidelines for how to address each specific circumstance, in addition to detailed logs which must be completed. Due to the systematic nature of our trading, there are detailed plans in place for various types of failure and BCM plans in place within all components of the underlying infrastructure.
Describe backup procedures in the event that your offices, trading facilities or computer systems become unexpectedly non-operational or inaccessible:	The resilience of the trading system is entirely independent of staff location, so inaccessibility of offices or facilities would not impact trading (although we have detailed BCM and Disaster Recovery plans and policies in place for staff to ensure normal business operations are resumed at optimum speed under various scenarios). Our computer systems are hosted on independently resilient servers with on-site, off-site and off-shore redundancy and have built-in ability for automated failover between multiple global locations. All code and infrastructure is backed up on a weekly basis (daily for specific areas), while trade executions are mirrored live across multiple servers. Therefore, in the event that our primary server became unexpectedly non-operational or inaccessible, the automated

	failover would switch to a backup server which would have had all trading information mirrored live, so that trading could be continued with minimal disruption.
Do you have a formal disaster recovery plan?	<p>Yes – basic provisions are:</p> <ul style="list-style-type: none"> <li>• Service Recovery Targets</li> <li>• Backup Strategy</li> <li>• Action Plan for Server Failure</li> <li>• Action Plan for Unavailability of Premises</li> <li>• Emergency Premises / Alternate Work Locations</li> <li>• DR Resources (insurance policies, technology policies and procedures, emergency contact details)</li> <li>• Individual BCM plans for staff and systematic infrastructure (infrastructure has detailed failovers and resilience within it)</li> </ul>
Do you maintain a detailed Operations manual?	Yes, we have detailed documentation relating to all individual components of the system in addition to individual policies relating to all elements of maintaining and developing the Technology system and associated logs.
What insurance coverage do you maintain?	Business Indemnity Insurance, Directors' and Officers' Insurance, Key Man Insurance.
Are the operations of the company dependent on one person or a limited number of people?	No
Are there a minimum number of personnel needed for the company's operations?	No
Have there been any significant operational or administrative "bottlenecks" or difficulties?	Issues with the administration of the Fund structure due to our administrator utilising software that was not optimised for our dual share class structure, resulting in a repricing exercise in July 2017. This was independently audited. However, due to this issue and the cost of maintaining the Fund at low AUM levels, the decision was taken to close the existing Fund structure in February 2018.
Are there any present plans to relocate your offices?	No
Have you ever been required to restate NAVs, fees or other calculations?	We were required to restate NAVs from the period inclusive of February – July 2017. This was required due to a complication with the Fund accounting software used by our Administrators, which was inaccurately reporting some of the costs applied to the Fund. This has now been independently audited and resolved.
Do you hire traders from other investment management companies?	No
Have you ever had any disputes over non-compete, non-disclosure or similar covenants?	No
Are any of your employees subject to non-competes, "golden handcuffs" etc.?	No
Do you have any existing marketing or consulting agreements?	No

Have you appeared in any recent advertisement or newspaper or magazine article?	Savernake Capital was featured in the 2017 Annual Parliamentary Review – copy available <a href="#">here</a> .
Have there been any criminal, civil or administrative proceedings against the company or any of its principals?	No
Do you maintain a written Compliance manual?	Yes
Does the company or any affiliate ever take custody of client assets?	No
Will the company or any affiliate ever deduct fees directly from its client accounts?	No
Do you make use of “soft dollars”?	No
Does the company have established Anti-Money Laundering (AML) procedures?	Yes, all client AML documentation is handled and processed by Cannon Asset Management in line with their AML procedures. All client documentation is reviewed by Cannon Asset Management directly.
Which jurisdiction's regulations do you comply with?	Bailiwick of Guernsey
Who is your MLRO (Money Laundering Reporting Officer)?	Kevin George Wakeham (Cannon Asset Management)