

**AIMA'S QUESTIONNAIRE FOR DUE DILIGENCE OF**

**MANAGED FUTURES FUND  
MANAGERS/COMMODITY TRADING  
ADVISORS (CTAs)**



Published by  
**The Alternative Investment Management Association (AIMA)**

# AIMA's Illustrative Questionnaire for Due Diligence Review of MANAGED FUTURES FUND MANAGERS/COMMODITY TRADING ADVISORS (CTAS)

The purpose of this document is to serve as a guide to investors in their review and assessment of managed futures fund managers/CTAs. This due diligence questionnaire is an unavoidable process that investors must follow in order to choose a manager. It is most important to understand clearly what you plan to invest in. You will also have to:

- identify the markets covered,
- understand what takes place in the portfolio,
- understand the instruments used and how they are used,
- understand how the strategy is operated,
- identify the sources of return,
- understand how ideas are generated,
- check the risk control mechanism,
- know the people you invest with professionally and, sometimes, personally.

Not all of the following questions are applicable to all managers but we recommend that you ask as many questions as possible before making a decision.

## IMPORTANT

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## DISCLAIMER

Whilst AIMA has used all reasonable efforts to produce a questionnaire of general application in connection with a due diligence appraisal of managed futures fund managers/CTAs, in any particular case an investor is likely to have his own individual requirements and each managed futures fund manager/CTA his own characteristics. As a result, prior to any individual investor sending out the questionnaire, it is strongly recommended that the questions are reviewed and, where necessary, amended to suit his own requirements and his state of knowledge of the managed futures fund manager's/CTA's operations.

In addition, responses to the questionnaire should not be relied upon without review and, where considered appropriate, further investigation. In order to obtain the best possible information on any specific managed futures fund manager additional questions should be raised to clarify any point of uncertainty, and where practicable verbal examination should be undertaken. In particular, AIMA recommends that in respect of special areas of concern, such as fund performance or risk profile, independent third party data should, if possible, be obtained in order to verify these facts.

Accordingly, none of AIMA, its officers, employees or agents make any representation or warranty, express or implied, as to the adequacy, completeness or correctness of the questionnaire. No liability whatsoever is accepted by AIMA, its officers, employees or agents for any loss howsoever arising from any use of this questionnaire or its contents or otherwise arising in connection therewith.

This questionnaire has been developed for Managed Futures Fund Managers/CTAs only and incorporates the input of leading U.S. CTAs and Commodity Pool Operators (CPOs). It is not intended for managers implementing securities-based strategies. A separate questionnaire relating to hedge fund managers is available from AIMA.

Other AIMA questionnaires available for selection of:  
Fund of Funds Custody and Administration  
Fund of Funds Managers  
Fund Administration (excl. Fund of Funds) for Investors  
Fund Administration (excl. Fund of Funds) for Managers  
Hedge Fund Managers  
Prime Brokers

# AIMA's Illustrative Questionnaire for Due Diligence Review of MANAGED FUTURES FUND MANAGERS/COMMODITY TRADING ADVISORS (CTAs)

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## BACKGROUND

### ORGANISATION

Company name:	<i>Revolution Capital Management</i>
Form of organisation (limited partnership, corporation, etc.):	<i>LLC</i>
Address:	<i>1400 16<sup>th</sup> Street, Suite 510, Denver, CO 80202</i>
Telephone:	<i>720.496.0940 (Michael Mundt's cell: 303.517.6387)</i>
Fax:	
E-mail:	<i>info@revolutionfutures.com or michael.mundt@revolutionfutures.com</i>
Internet/web-site	<i>www.revolutionfutures.com</i>

### COMPANY

How many employees does the firm currently have?	<i>6</i>
What is the greatest and least number of employees the firm has had in the last 3 years? Explain any significant employee turnover:	<i>6, 5</i>
List the names of senior managers in charge of the following areas:	
• Trading:	<i>Rob Olson, Chad Dougherty, and Jeff Perini</i>
• Research and development:	<i>Michael Mundt, Rob Olson and Jeff Perini</i>
• Marketing and business development:	<i>Michael Mundt and Mike Helmstetter</i>
• Administration:	<i>Michael Mundt and Rob Olson</i>
• Programming:	<i>Rob Olson, Chad Dougherty, Geoff Dix, and Jeff Perini</i>
• Compliance, reporting, performance:	<i>Michael Mundt, Mike Helmstetter and Rob Olson</i>
• Other (please specify):	
Provide a brief background of the registered principals and senior managers (education, career background, etc.). Have any principals or senior managers left the firm since inception? If yes, please explain:	<i>Rob Olson, Ph.D. Aerospace Engineering, 10 years experience in Managed Futures Michael Mundt, Ph.D. Aerospace Engineering, 16 years experience in Managed Futures</i>
Provide details of the firm's current ownership structure and any changes in the last 3 years. Are there any pending plans for further ownership changes?	<i>The firm is equally owned by the two principals. There are no plans for further ownership changes.</i>
What is the firm's approximate net worth? Is the firm subject to any minimum net worth requirements or covenants?	<i>The LLC itself has a net liquid worth of approximately \$2,000,000. There are no known minimum net worth requirements or covenants.</i>
List all branch or affiliated offices, if any:	<i>Jim Curley operates from an NFA-listed branch office in Chicago.</i>
List the name, location, and function of any non-employee representatives being used:	<i>Jim Curley, marketing for all programs.</i>
Has the firm ever been registered as any of the following?	
• Commodity Pool Operator (CPO):	<i>Yes</i>
• Commodity Trading Advisor (CTA):	<i>Yes</i>
• Futures Commission Merchant (FCM):	<i>No</i>
• Introducing Broker (IB):	<i>No</i>
• Registered Investment Advisor (RIA):	<i>No</i>
• Other (please specify):	<i>No</i>
Has the firm or any of its officers ever been associated or connected with any:	
• Bank:	<i>No</i>
• CPO:	<i>Yes</i>
• Other CTA:	<i>No</i>
• FCM:	<i>No</i>

• Hedge Fund:	No
• IB:	No
• RIA:	No
• Other investment management activity (please specify):	No
If yes, please explain:	
With which regulatory authority is the firm registered?	National Futures Association
• Date of registration:	December 27, 2004
• Are all employees registered with the same authority?	Michael Mundt and Rob Olson are Associated Persons registered with the NFA.
List any professional affiliations and memberships of the firm and its principals:	N/A
List the firm's accountant/CPA, auditors, and attorneys:	CPA: Ramin Karimi of Jensen Burcham Stelmack Karimi (Longmont, CO), Auditor: Joseph Mazza of Compliance Supervisors Inc. (New York), Attorney: Justin Konrad and Brendan Chatham of Hutchinson Black and Cook (Boulder, CO)
Do any of the firm's principals have other significant business involvements? If yes, please describe them and indicate how much professional time is dedicated to each?	No.
Has an independent auditor ever reviewed the performance record? If yes, please enclose a copy of the most recent Audit Report.	Yes. Futures Accounting and Compliance audited the firm's managed pool account (Alpha program) for the years 2005 and 2006. Joseph Mazza audited the firm's managed pool account (Alpha program) for 2007-present. These results are on file with the NFA as part of reporting requirements. In addition, Joseph Mazza audited the managed account track record for the Mosaic program from inception through September 2010.
Has the performance record been included in any public fund prospectus in the past five years? Was there a "comfort letter" given in respect of the record?	Yes. No "comfort letter" was given.
Are there any issues from the firm's most recent regulatory review (NFA, SEC, CFTC, etc.) currently unresolved? If yes, please provide a detailed explanation:	No.
Does the firm have a current CFTC Reg. 4.21 Disclosure Document or a Reg. 4.7 Disclosure Document? If yes, please provide a copy:	Yes.
How soon is the next update due to the firm's Disclosure Document? Are any material disclosure changes anticipated?	July 2015. No material changes are anticipated, only performance updates.
Does the firm publish any newsletters or other publications? If yes, please provide copies.	Nothing for public distribution.
Provide two samples of reports typically sent to clients:	N/A
If not confidential, please provide a partial list of existing clients with an indication of how long they have been clients. Please also show the amount of assets managed for them currently, as well as at the beginning of the last four fiscal years:	N/A
Provide three client references:	N/A
What is the greatest percentage of assets under management represented by any single client?	N/A
Does the firm manage an account for any government pension plans or entities?	N/A
Which investor groups does the firm primarily target?	High net-worth individuals, FOFs and institutional investors.
Does the firm permit "feeder funds" into its own investment products?	Not at this time.
Has the firm made any future capacity commitments in terms of the right to place additional assets under the firm's management?	No.

## PERFORMANCE & STATISTICS

Attach 13-column composite performance tables for all accounts traded pursuant to each of the firm's programmes (if available – see below):	See external document.
List assets under management (and percentage of total assets) for each of the following: <ul style="list-style-type: none"> <li>Public funds:</li> <li>Private pools:</li> <li>Individual accounts:</li> <li>Institutional accounts:</li> <li>Proprietary accounts:</li> <li>Total assets under management:</li> </ul>	Mosaic/Mosaic Institutional: 0%, Alpha: 25% Mosaic/Mosaic Institutional: ~9%, Alpha: ~10% Mosaic/Mosaic Institutional: 0%, Alpha: ~25% Mosaic/Mosaic Institutional: ~91%, Alpha: ~40% Mosaic/Mosaic Institutional: 0%, Alpha: 0% Mosaic+Mosaic Institutional: \$400,000,000 (as of October 1, 2014), Alpha: \$175,000,000 (as of October 1, 2014)
If 13-column tables are not attached, attach a schedule showing month-end assets under management for each programme since inception. <u>Note:</u> indicate any notional funding and any non-standard leverage applied, if any.	
Is the performance record actual or hypothetical?	Actual
Is the performance record in any respect derived or excerpted?	The performance represents a composite with the actual fees applied.
Is proprietary (and, presumably, non-fee-paying) capital included in the performance record? If yes, what amount?	No
Are there any material differences among the accounts included in the composite tables?	No.
Are "exempt accounts" included or excluded from the performance record?	N/A.
Does the performance record reflect the full brokerage charged to the client or have certain fund sponsors identified a portion of such brokerage as excludable from the firm's performance calculations?	Yes, the results include full brokerage costs.
List all markets now traded which are not included in the past five years' performance:	None.
What was the peak of assets under management? <ul style="list-style-type: none"> <li>US\$:</li> <li>Date:</li> </ul>	\$1,037,000,000 August 1, 2011
Has the firm ever voluntarily returned assets to investors? If so, when, how much and why?	No.
How many separately managed accounts are currently open, grouped by size? <ul style="list-style-type: none"> <li>\$0 to \$250,000:</li> <li>\$250,001 to \$1,000,000:</li> <li>\$1,000,001 to \$5,000,000:</li> <li>\$5,000,001 to \$10,000,000:</li> <li>\$10,000,001 to \$20,000,000:</li> <li>\$20,000,001 +:</li> <li>Total:</li> </ul>	None. None. Mosaic/Mosaic Institutional: 2, Alpha: 12 Mosaic/Mosaic Institutional: 2, Alpha: 3 Mosaic/Mosaic Institutional: 1, Alpha: 4 Mosaic/Mosaic Institutional: 2, Alpha: 1 Mosaic/Mosaic Institutional: 7, Alpha: 20
What percentage of the assets under management consists of "notional equity"?	Unknown.
What is the current equity value and starting date of the oldest continuously traded account?	\$3,500,000, January 2005 (for the Alpha pool).
Does the performance record include interest income? If yes, explain basis of inclusion.	Yes for the Alpha pool, included on an accrual basis. No for managed accounts. NOTE: The Mosaic track record includes an extremely small amount of interest income because much of the performance history, until recently, was based on notional trading. Monthly interest income for the Mosaic system, on an accrual basis, has averaged 0.042% since September 2007 when the program first had interest-bearing assets.
Have any agreements or understandings been reached with the CFTC/NFA regarding any aspects of the performance record?	No.
Are there any <i>pro forma</i> adjustments included in the performance record? If so, how are these calculated?	The composite managed account performance is presented using a 0%/25% fee structure for Mosaic/Mosaic Institutional and a mixed 0/25, 2/20 fee structure for Alpha.

What is the average number of round-turns traded per \$1million per year in each programme?	3,500 for Alpha, 7,500 for Mosaic Institutional, 22,500 for Mosaic.
Approximately how many trades are made in each market, each year, in each programme?	88 round-turns for Alpha, 144 round-turns for Mosaic Institutional, 360 round-turns for Mosaic.
Does trading frequency tend to increase/decrease during profitable/unprofitable periods?	Algorithmically driven, not related directly to profitability.
What is the average annual commission as a percentage of assets included in the performance record for each programme? Does this vary significantly from year to year?	Approximately 2% for Alpha; 4% for Mosaic Institutional; 10% for Mosaic. Stable year over year.
What is the average management and performance fee structure included in the performance record?	0% management, 25% performance for Mosaic/Mosaic Institutional. Alpha uses a 0/25 fee structure prior to January 2014 and a 2/20 structure for January 2014 onward.
Do fees and/or commissions vary significantly from year to year? If so, by how much?	No.
What is the average percentage of winning and losing trades in each programme since inception? Are these percentages materially different to the past 12 months? If yes, please explain:	Not relevant due to multi-strategy approach.
What is the average gain per winning trade and average loss per losing trade?	
<ul style="list-style-type: none"> <li>\$ per contract:</li> <li>As a % of equity:</li> </ul>	Not relevant due to multi-strategy approach. Not relevant due to multi-strategy approach.
What is the average holding period for:	
<ul style="list-style-type: none"> <li>All trades:</li> <li>Winning trades:</li> <li>Losing trades:</li> </ul>	Mosaic/Mosaic Institutional: 3 days, Alpha: 6 days. Not relevant due to multi-strategy approach. Not relevant due to multi-strategy approach.
What is the maximum amount of equity that the firm estimates can be traded in each programme?	Mosaic/Mosaic Institutional: >\$1 billion at 1x leverage, Alpha: >\$2 billion.
What is the annualised standard deviation, Sharpe Ratio and compound annual rate of return for each programme? How do these compare with the firm's objectives?	Alpha Program: 9.7%, 1.06, 10.3% Mosaic Program: 30.8%, 0.40, 7.9% Mosaic Institutional Program: 11.9%, 0.44, 4.6% All performance is consistent with expectations.
List the three <u>largest</u> drawdowns as percentages of equity for each programme. Please also explain why each drawdown occurred, and show the recovery periods:	Please see track records for details regarding depth and length of drawdowns. All drawdowns have been well within the risk profiles of the programs.
What were the three <u>longest</u> drawdowns for each programme? Please explain:	Please see track records for details regarding depth and length of drawdowns. All drawdowns have been well within the risk profiles of the program.
What were the largest withdrawals in each programme since inception?	
<ul style="list-style-type: none"> <li>Date:</li> <li>% of equity:</li> <li>Reasons:</li> </ul>	Mosaic: February 2010 --- Alpha: December 2011. Mosaic: 10.5% of 3x program --- Alpha: 40%. Mosaic: Unknown --- Alpha: shutdown of master FOF (of which Alpha was a component).
Has the firm ever permitted a client to intervene during the course of a relationship to adjust leverage or portfolio structure? If yes, please explain:	N/A.
What do you believe is the most important performance measurement with respect to each programme?	De-correlation of returns relative to both industry benchmarks (e.g. Barclay CTA index) and also to equity index benchmarks (e.g. S&P 500).
What is the projected growth in assets under management over the next twelve months?	Unknown.
Have there been any material leverage or other adjustments in the past five years, and how have such adjustments affected the performance record?	Program improvements are made on an ongoing basis. These are outlined in the disclosure document.
<b>METHODOLOGY</b>	
How would you characterise the firm's basic trading approach (in %)?	



<ul style="list-style-type: none"> <li>Discretionary:</li> </ul>	0%
<ul style="list-style-type: none"> <li>Systematic:</li> </ul>	100%
<ul style="list-style-type: none"> <li>Other, please explain:</li> </ul>	
How would you characterise the firm's main decision-making inputs (in %)?	
<ul style="list-style-type: none"> <li>Fundamental:</li> </ul>	0%
<ul style="list-style-type: none"> <li>Technical:</li> </ul>	0%
<ul style="list-style-type: none"> <li>Other, please explain:</li> </ul>	100% (statistical pattern recognition is used to identify historically-profitable trading opportunities)
Do you believe that one trader can have materially better systems than another? Please explain:	Yes. To the extent that markets are inefficient, performance is related to skill.
What other advisors would you compare your firm to as most similar? In what respects?	N/A.
Which components of the firm's system, if any, do you regard as proprietary (no details necessary)?	All components.
Why are major financial institutions, with their extensive resources, not implementing the same programmes as the firm in their proprietary trading?	N/A.
Are there any "relative value" or "arbitrage" aspects to the programme?	No.
Are calendar spreads or inter-market spreads used?	No.
How would you characterise the firm's trading methodology (in %)?	
<ul style="list-style-type: none"> <li>Trend Following <ul style="list-style-type: none"> <li>1.Regression analysis:</li> <li>2.Moving Average:</li> <li>3.Breakout systems:</li> <li>4.Pattern recognition:</li> <li>5.Oscillators;</li> <li>6.Other (please explain):</li> </ul> </li> <li>Cyclical:</li> <li>Countertrend:</li> <li>Special Situation:</li> <li>Arbitrage:</li> <li>Market Neutral:</li> <li>Other (please explain):</li> </ul>	
	pattern recognition (100%).
How, if at all, is "game theory" incorporated into the firm's trading strategies?	It is not.
If the firm operates different programmes, are they managed by "independent account control" or are positions aggregated for Speculative Position Limit purposes?	Independent account control.
Do all the programmes use the same trading methodology? If not, please explain.	Mosaic targets a 0 correlation to trend following; Alpha targets a low correlation to trend following. Hence, the blend of algorithms is different in each program.
Describe the firm's broad trading philosophy, strategy and core principles in as much detail as possible.	Systematic, data-driven, algorithmic, multi-time scale, statistical.
Describe the development of the firm's trading methodology. Please include all material modifications made to the methodology over the period of the performance record:	Short and medium-term models were added to the Alpha program in August 2006. Mosaic added additional model classes in December 2007 and again in December 2009. Intra-day strategies were added to Mosaic in February 2012. Intra-day strategies were added to Alpha in September 2012.
What do you believe gives the firm a competitive advantage or an "edge"?	Rigorous development methods, sophisticated mathematical/numerical analysis.
What are the strengths and weaknesses of the firm's trading methodology?	Strengths: consistent, unemotional. Weaknesses: doesn't factor in fundamental events such as war, drought, etc.
What makes the firm's trading methodology different from other CTAs?	More emphasis on quantitative, computer-intensive algorithms and statistical rigor, as well as short-term trading strategies.
How do you determine the programmes' commitment to different market sectors?	Fully diversified (no sector takes priority) unless product is sector-based by design.
How frequently do you alter the programmes'	Never.

commitment to different market sectors?	
Do you alter the programme during drawdowns? As a result of drawdowns?	No.
During drawdowns, does the firm tend to increase or decrease the scope of its discretionary decision-making and non-systematic responses?	No.
Did one or more of the current principals develop the firm's trading methodology? If not, who did?	Yes.
Could the unavailability of any of the firm's principals influence the trading methodology?	No.
Does the firm own the trading methodology currently being used? If not, who does?	Yes.
Are there any patents, trademarks, etc. held by the firm or any of its principals?	Yes, patents are held by Michael Mundt in the area of hard disk drives.
Describe the three worst trading experiences the firm has had, and explain how they influenced the evolution of the firm's trading methodology.	<i>The single worst experience was at the start of our trading with the Alpha fund, when we were validating our basic operations. There was nothing wrong with our system per se, but the combination of limited domestic markets and now-outdated models combined to give us a 14.78% loss in our first four months of operation. However, it encouraged us to a) finalize our new long-term model suite, b) diversify into foreign markets, and c) devote considerable effort into developing short-term algorithms that can profit in market conditions not well suited to long-term, trend-exploiting models. The next worst experience happened in January 2010 with the Mosaic (3x) program. After 39 months of real-time trading, we experienced a -30% month (in a program that currently targets a 40% annualized volatility). This is not impossible but is an unlikely outlier event. This prompted us to diligently revisit the model implementation and the risk management. In the end, we found nothing wrong with our system deployment, but it is a proper reminder that the low-probability events do eventually occur, and it is thus important to make the short-term risk extremely clear to potential and current investors.</i>
<p>If the firm's trading methodology is computerised and systematic:</p> <ul style="list-style-type: none"> <li>Is the trading system ever overridden? If yes, under what circumstances?</li> <li>Does the trading system ever add to or reduce profitable or losing positions? If yes, under what circumstances? Are there maximum additions? If so, how is the maximum determined?</li> <li>Are multiple trading systems used? If yes, please explain:</li> <li>Does the firm apply the same system to all markets or are there different systems for each?</li> <li>What technical or fundamental information is considered important for a trade entry signal?</li> <li>Are entry and exit signals generated by the same trading system? If not, please explain how they are generated differently.</li> <li>Does the trading methodology differ from market to market? If yes, please describe what the difference is based on?</li> <li>Is the trading system always with long or short, or is there also a neutral zone? Please explain:</li> <li>How frequently are changes made to the trading system? Please explain the development and implementation process:</li> <li>Is the firm's research focused on developing new trading systems or on further refining the existing systems?</li> </ul>	
	<i>Only in case of unforeseen circumstances (it has never been overridden to date).</i>
	<i>Trading strengths change on a daily basis as a result of the normal algorithmic influence.</i>
	<i>Yes. Short-term (event-driven, pattern-based) as well as long-term (trend-exploiting)</i>
	<i>Same for all markets.</i>
	<i>Price/volume/open interest/volatility/other.</i>
	<i>Yes.</i>
	<i>No.</i>
	<i>Trading strength can vary continuously and can be 0 (i.e. neutral).</i>
	<i>Additions are made only after rigorous development and test periods. Additions are implemented only if the overall system performance and risk profile improve as a result.</i>

	<i>Mainly new development, but some refinement of current systems is done as well.</i>
Is the “cost of carry” a factor in the current methodology?	No.
Which of the following activities are influenced by subjective judgement? Please answer by Yes or No, and indicate a % where applicable:	
• Portfolio structure:	No.
• Trade entry:	No.
• Trade exit:	No.
• Stops:	No.
• Position size:	No.
• Overall leverage:	No.
• Selection of contract maturity:	No.
• Addition to or reduction of winning or losing positions:	No.
• Decision to halt trading:	<i>Only in emergency situations.</i>
• Other (please specify):	
If fundamental information is used, what are its sources?	<i>None is used.</i>
How would the firm approach sudden and unexpected illiquidity in any of the markets traded?	<i>We would pare down our in-house position limits.</i>
Do you permit fundamental factors to influence risk management (e.g. liquidating or reducing certain positions before a G-7 meeting)?	<i>No influence.</i>
Are any filters used when selecting trades? If yes, please explain:	No.
Has the firm made any leverage adjustments in the past? If yes, why? When and how were they implemented?	No.
Has the firm made any specific modifications intended to reduce volatility? If yes, why? When and how were they implemented?	No.
Will the firm modify a trading methodology or portfolio at particular clients' request? If yes, please explain:	<i>Yes. We will modify a portfolio (i.e. remove markets) at a particular client's request. We will also adjust the risk profile of the portfolio at a client's request.</i>
Of the techniques below, which are used in the firm's trading methodology?	
• Moving averages of prices:	<i>Information not provided due to proprietary nature of algorithms.</i>
• Chart patterns (head & shoulders, triangles, flags, etc.):	<i>Information not provided due to proprietary nature of algorithms.</i>
• Momentum oscillators (rate of change of price or volume):	<i>Information not provided due to proprietary nature of algorithms.</i>
• Point and figure;	<i>Information not provided due to proprietary nature of algorithms.</i>
• Support and resistance:	<i>Information not provided due to proprietary nature of algorithms.</i>
• Volume or open interest:	<i>Information not provided due to proprietary nature of algorithms.</i>
• Spread relationships:	<i>Information not provided due to proprietary nature of algorithms.</i>
• Statistical probabilities:	<i>Information not provided due to proprietary nature of algorithms.</i>
• Penetration identification:	<i>Information not provided due to proprietary nature of algorithms.</i>
• Overbought/oversold indicators:	<i>Information not provided due to proprietary nature of algorithms.</i>
• Cyclical analysis:	No.
• Seasonal analysis:	No.
• Fundamental or economic analysis:	No.
• Bottom up analysis:	No.
• Top down analysis:	No.
If the trading methodology involves a neural network, what are its main inputs?	NA.

<p>Are any of the methods below used to close out profitable positions? Please indicate by Yes or No, and %:</p> <ul style="list-style-type: none"> <li>Trend reversal:</li> <li>Trailing stops:</li> <li>Overbought/oversold indicators:</li> <li>Volatility:</li> <li>Price patterns:</li> <li>Volume/open interest:</li> <li>Spread relationships:</li> <li>Change in fundamentals:</li> <li>Other (please explain):</li> </ul>	
	Trading directives are purely driven by algorithms, which in turn are driven by market dynamics (and thus implicitly include all of the above items).
Does the trading system have a long or short bias?	No.
Has the trading method been adjusted, or have the markets traded changed due to increased assets under management? If yes, please explain:	No. However, less-liquid markets have exposure caps that are more likely to be observed as AUM increases in a particular program. This tends to underweight less-liquid markets in the portfolio.
Do you believe that the firm's performance is likely to be non-correlated with other trading advisors? If yes, please explain:	Yes, the short-term algorithms will generate a return profile that is uncorrelated to long-term trend followers.
What are the firm's rate or return, volatility, and Sharpe Ratio objectives?	We are targeting Sharpe >1.0 (post-fee, monthly basis).
What is the firm's S&P non-correlation objective?	Roughly 0.
Does the trading methodology work better in some markets than in others? If yes, please explain:	The trading systems work less well in choppy markets driven by competing fundamental/news inputs.
Are certain markets excluded from the portfolios? If yes, please explain:	No.
Are there liquidity, regulatory or other requirements for the inclusion of markets in the firm's portfolios? If yes, please explain:	Markets must be sufficiently liquid to support desired position sizes with minimal slippage during execution.
<p>In which kind of markets does the trading methodology perform best and worst?</p> <ul style="list-style-type: none"> <li>Bull markets</li> <li>Bear markets</li> <li>Congested markets</li> <li>Bull and bear markets, but not congested markets:</li> <li>The same in all market conditions:</li> <li>High volatility markets:</li> <li>Low volatility markets:</li> <li>Other (please explain):</li> </ul>	
	N/A
Are agricultural commodities a significant component in any of the firm's portfolios?	Yes.
Does the firm's methodology permit or require making or taking delivery of physical commodities?	No.
Does the firm trade "cash" securities (stocks and bonds)? Why would or would not the firm's programme be effective in doing so?	No.
What was the firm's response to the introduction of the Euro?	The Euro pre-dates the inception of our programs.
Will increasingly competitive markets affect the performance of firm's programmes? Will they affect managed futures in general?	N/A.
Do you perceive any basic and significant changes in the managed futures industry over the past five years?	The markets have exhibited fewer long-term trends, necessitating different strategies to ensure consistent yearly profits.
Does the firm offer "overlay" as well as "standard" programmes? If so, please explain the difference:	Not at this time.
Does the firm use third-party research or valuation	No.

service providers?	
<b>PORTFOLIO &amp; ACCOUNTS</b>	
Which of the following instruments are traded and in what percentages?	
• Exchange-traded futures:	100%
• Exchange-traded options:	0%
• EFPs:	0%
• OTC forwards:	0%
• OTC options:	0%
• Swaps:	0%
• Cash debt instruments:	0%
• Cash equities:	0%
Attach a complete list of all markets traded in each of the above categories. With respect to all OTC, swap, and cash markets, please list the counterparts used in each market:	Please see disclosure document for market list.
If options are traded, please explain which types:	
• Covered only, naked, as part of a hedging strategy, "exotic", etc.:	N/A
• How they are used:	N/A
• How they are revalued:	N/A
If options are traded, what option-related volatility measures are incorporated into the programme?	N/A
Do the markets traded vary according to the account size? If yes, please explain:	No.
How are the markets included in each portfolio selected?	Maximal diversification and liquidity.
Can a portfolio be customised according to specific customer requirements?	TBD.
Do customised accounts appear in the firm's composite performance record?	No.
What is the minimum account size? What is the minimum optimal account size?	\$10,000,000 is the minimum for a managed account in the Mosaic (3x) program. The minimum optimal size is \$10,000,000. \$25,000,000 is the minimum for a managed account in the Mosaic Institutional (1x) program. The minimum optimal size is \$25,000,000 for Mosaic Institutional (1x). The minimum and minimum optimal size for Alpha are \$5,000,000.
For each programme, what would a \$1 million portfolio look like? For example,	
• Which markets would be included?	See disclosure document for market list.
• How many contracts of each market would be included?	This varies according to multiple factors.
Which criteria are considered in portfolio selection (risk, performance, liquidity, volume, open interest, etc.)?	Diversification, liquidity.
Position limits:	
• Describe any past problems with Position Limits. Which markets or exchanges were involved?	N/A.
• How much money could be managed under the current trading methodology without being restricted by Position Limits?	N/A.
• If, or when, Position Limits are reached, how will the firm modify its methodology?	N/A.
Do you believe that most trading advisors' rates of return decrease as assets under management increase? Why? What about your firm's programmes?	At very large AUM values, managers may lose the ability to modify positions without incurring significant "slippage" losses. This will be a challenge for us as well as our assets grow, and we are actively pursuing mitigation strategies.
<b>EXECUTION &amp; TRADING</b>	
How are positions established for new accounts,	Proprietary.

liquidated for terminating accounts, or adjusted for existing accounts to reflect material changes in account equity? Please explain in detail:	
Does the firm's trading staff trade 24 hours per day? If yes, please explain. Do they trade from the office premises or elsewhere? How many staff are involved in each shift, and what are their functions?	<i>For the Mosaic Institutional (1x) and Mosaic (3x) programs, trades are monitored by us and also by an external 24-hour desk in Chicago. Algorithmic trading was introduced into Mosaic in May 2011 and into Alpha in October 2011; all trading is done algorithmically. For Alpha, trades are also monitored by us and by an external 24-hour desk in Chicago.</i>
How are executed trades allocated to accounts? Please explain in detail, particularly with respect to split fills. Are any positions allocated as of the end of the trading day rather than prior to or at the time of order entry?	<i>Trades are allocated pro rata once an order is complete.</i>
What is the firm's policy with respect to trading and system errors? Please explain in detail.	<i>An error is covered immediately and allocated to the accounts on the order ticket pro rata.</i>
Have there been any major "out-trades"? If so, please describe.	<i>Mosaic had one incident with the Topix and Nikkei where contracts were inadvertently bought and had to be re-sold the next day. Customers were credited for the error.</i>
<b>Trading Orders:</b> <ul style="list-style-type: none"> <li>What types of trading orders are used?</li> <li>Are different types of orders used for entry and exit? Please explain:</li> <li>Are orders entered onto a trading desk or relayed directly to the exchange floor?</li> <li>Are large orders broken up? If yes, please explain how:</li> <li>Does the firm use give-ups for futures? If yes, please provide a complete list of executing brokers used and give-up fees charged by those brokers. If no, please provide a complete list of executing brokers used:</li> <li>If the firm uses a Prime Broker for FX, please describe the structure and any fees charged:</li> </ul>	<i>Market orders, limit orders, Market-on-open orders.</i>
	<i>No.</i>
	<i>A trading desk is used if necessary, but trades are done algorithmically by default.</i>
	<i>Yes. Large orders are broken up into different sizes depending on liquidity. Mosaic is using algorithmic trading, resulting in many small orders, as of May 2011. Alpha is using algorithmic trading as of October 2011.</i>
	<i>Yes.</i>
	<i>N/A.</i>
<b>What is the firm's policy with respect to trading by:</b> <ul style="list-style-type: none"> <li>Staff:</li> <li>Principals:</li> <li>The firm itself:</li> </ul>	<i>N/A.</i>
	<i>N/A.</i>
	<i>N/A.</i>
Does the firm have any special relationship or affiliation with any FCM?	<i>No.</i>
If the firm trades EFPs, describe the manner in which appropriate documentation is maintained:	<i>N/A.</i>
If the firm trades EFPs, please list all markets in which they are traded. Please also list the counterparts with whom they are traded:	<i>N/A.</i>

## RISK MANAGEMENT

Describe the firm's overall risk management principles and approach:	<i>For Alpha and Mosaic Institutional, we target an annualized volatility of approximately 12% based on daily returns. For Mosaic, our risk target is a 1 in 100 chance of losing 20% or more in a rolling one-month period; this equates to a 36% annualized volatility (or a 3x program relative to the Mosaic Institutional program at 1x).</i>
How does the firm calculate risk?	<i>We perform out-of-sample simulations and observe the frequency and magnitude of adverse returns. Many more details about our risk management are available in a stand-alone presentation.</i>
Is the risk calculated for each trade? If yes, please explain:	<i>Every market has the same maximum risk allocation, which is determined as a function of the overall risk-targeting process.</i>
Do all the programmes use the same risk management methodology? If not, please explain:	<i>No. Mosaic (3x) targets a risk exposure, while Alpha and Mosaic Institutional (1x) target an annualized volatility.</i>
Is "value at risk" used in the firm's programme? If so, how do you assess the value at risk of your different	<i>Our approach is similar but not identical to the VAR methodology. Risk is assessed using a combination of long-term and short-term volatility on a per-market basis. Position sizes are adjusted accordingly on a</i>

market positions and what confidence level do you use?	<i>daily basis. Fat-tailed return distributions and serial correlation of daily returns are implicitly included in risk budgeting and analysis.</i>
What determines the amount of leverage used?	<i>Return targets coupled with historical drawdown statistics on a portfolio basis. On a per-market basis, position sizes also incorporate short-term and long-term volatility estimates.</i>
How much leverage (% of margin to equity) is used in each programme? <ul style="list-style-type: none"> <li>Highest:</li> <li>Lowest:</li> <li>Average:</li> </ul>	<i>60% (for Mosaic), 20% (for Mosaic Institutional), 25% (for Alpha)</i> <i>3% (for all programs)</i> <i>18% (for Mosaic), 7.2% (for Mosaic Institutional), 8% (for Alpha)</i>
What is the percentage of risk invested in any single market? <ul style="list-style-type: none"> <li>Highest:</li> <li>Lowest:</li> <li>Average:</li> </ul>	<i>Highly variable.</i>
How is this percentage determined?	
Are “higher leverage” and “lower leverage” versions of the same programme offered? If yes, please explain how they are structured?	<i>In general, leverage can be targeted per specific requests from a client. Mosaic Institutional (1x) and Mosaic (3x) are explicit low and high leverage versions of the same program.</i>
Does the firm impose limits on the amount of margin committed to different markets, sectors, or portfolios?	<i>No.</i>
How does the firm react if the volume and/or open interest of a market in which a position is held are suddenly reduced significantly?	<i>We will first reduce maximum allowed exposure in that market and may additionally consider no longer trading that market.</i>
Does adding or reducing a position in one market ever influence the size of positions held in other markets? If yes, please explain:	<i>No.</i>
Does the firm calculate and analyse the historical or contemporary correlation between markets? If yes, how does such analysis influence portfolio design?	<i>Yes, the historical correlations are implicitly included in our volatility targeting. The long-term averages are re-assessed periodically so that any secular drifts can be incorporated. Some short-term measures are also used for tactical risk management.</i>
Does the firm establish position limits for correlated market groups? If yes, please explain:	<i>No.</i>
Are there a minimum number of markets in which the firm always holds positions in order to achieve a minimal portfolio diversification effect?	<i>No.</i>
If stops are used, please answer the following questions: <ul style="list-style-type: none"> <li>On what principles are stops calculated?</li> <li>How often are stops adjusted?</li> <li>Is the method of establishing stops based on any of the following?  <ol style="list-style-type: none"> <li>Price stops:</li> <li>Time stops:</li> <li>Volatility stops:</li> <li>Money management stops:</li> <li>Other (please specify):</li> </ol> </li> <li>If a stop is reached, is the entire position closed out at one time, or is the position reduced gradually?</li> </ul>	<i>Stops are not used.</i> <i>N/A</i> <i>N/A</i> <i>N/A</i> <i>N/A</i> <i>N/A</i> <i>N/A</i> <i>N/A</i> <i>N/A</i>
How are positions adjusted when there is a significant increase or decrease in equity due to trading profits or losses?	<i>Positions are adjusted on a daily basis and include the latest marked-to-market equity as a primary input.</i>
Are there any circumstances under which all positions in the portfolio will be closed?	<i>When there is an upcoming major and potentially-disruptive event that we know about that the models have not previously encountered either in actual trading or in simulation (e.g. Y2K).</i>
At what percent drawdown would the firm either stop trading or recommend that an account be closed?	<i>We would not stop trading or recommend that an account be closed unless we believed that the system was not working correctly and/or the drawdown has reached a level that is not statistically feasible via simulation and testing.</i>
Does the methodology react to volatility changes in the markets? If yes, please explain how.	<i>Yes, positions are adjusted to keep the volatility or risk target constant.</i>



Does the firm trade on exchanges that are open outside local office hours? If yes:	
<ul style="list-style-type: none"> <li>How is the time difference managed?</li> <li>Are there routines in place to minimise the risk of adverse price movements, or price gaps which are due to price movements that occur outside local office hours?</li> </ul>	<p><i>A 24-hour trading desk monitors the automatically-submitted orders.</i></p> <p><i>N/A.</i></p>
What is the estimated maximum risk on a total portfolio? Please describe the method by which such risk is measured:	<i>For Mosaic (3x), there is a 1% chance of a 20% drawdown or greater in any rolling one-month period. For Mosaic Institutional (1x) and Alpha, there is about a 1% chance of a 6.7% drawdown or greater in any rolling one-month period. These are estimated from empirical data and historical modeling.</i>
What is the firm's cash management method? Does this create an additional source of risk?	<i>Investors with managed accounts are responsible for satisfying margin calls and managing their excess cash (e.g., the traded NAV less margin requirements).</i>

## RESEARCH

Describe the firm's efforts to improve its trading methodology through on-going research?	<i>There is a concerted and ongoing effort to develop more short-term trading models, most notably intra-day systems. Risk management and mitigation is also an area of continual focus.</i>
What is the firm's current annual research budget?	<i>N/A.</i>
How much money has the firm invested in research since its inception?	<i>N/A.</i>
Has the firm or any of its research staff published any research or academic papers? If yes, please provide details:	<i>No.</i>
Does the firm use any external parties or resources for research? If yes, please explain.	<i>No.</i>

## ADMINISTRATION, OPERATIONS AND FEES

Describe detailed backup procedures in the event that the firm's offices, trading facilities or computer system became unexpectedly non-operational or inaccessible.	<i>Outlined in separate document.</i>
Does the firm maintain a detailed Operations Manual?	<i>Yes.</i>
What insurance coverage does the firm maintain? Please provide a schedule showing coverage:	<i>N/A.</i>
Are the operations of the firm dependent on one person or a limited number of people?	<i>Yes.</i>
Is there a minimum number of personnel needed for the firm's operations?	<i>Yes.</i>
Have there been any significant operational or administrative "bottlenecks" or difficulties in the past five years?	<i>No.</i>
Are new investments currently being accepted in the form of:	
<ul style="list-style-type: none"> <li>Separately managed accounts:</li> <li>Pools and funds:</li> <li>Both of the above:</li> </ul>	<i>Yes.</i>
Is the client free to choose a clearing firm and to negotiate the account terms directly with them?	<i>Yes.</i>
Which clearing firms does the firm currently use?	<i>RJ O'Brien, ADM, Rand Financial, UBS, Newedge, JP Morgan, Deutsche Bank, Credit Suisse, EDF Man, BAML.</i>
What fees do the firm charge? Do they vary? If so, please explain:	
<ul style="list-style-type: none"> <li>Management fee (include frequency of payment):</li> <li>Performance fee (include frequency of payment):</li> <li>If a "hurdle rate" is included in the Performance fee calculation, is it a "hard" or a "soft" hurdle?</li> </ul>	<p><i>0% monthly for Mosaic/Mosaic Institutional, 2% monthly for Alpha.</i></p> <p><i>25% monthly for Mosaic/Mosaic Institutional, 20% monthly for Alpha.</i></p> <p><i>N/A.</i></p>
Does the firm charge all customers the same fees? If	<i>No.</i>



not, on what basis are fees waived or modified?	
Does the firm share its fees with any third parties?	Yes.
Are there any present plans to relocate the firm's offices	No.
Does the firm have a lockup period or any special requirements for withdrawal?	No.
Does the firm or any of its officers or employees receive, directly or indirectly, any rebate on brokerage commissions? If yes, please explain on what basis, and from which brokerage firms:	No.
Has the firm ever been required to restate NAVs, fees or other calculations? If yes, please explain:	Small changes to the NAV (increases) were made when we moved from cash-based accounting to accrual-based accounting. The effect was to improve the average monthly return by < 0.1%.

## LEGAL

Does the firm hire traders from other investment management firms?	N/A.
Has the firm had any disputes over non-compete, non-disclosure or similar covenants?	No.
Are any of the firm's employees subject to non-competes, "golden handcuffs", etc.?	No, but all intellectual property remains exclusively with Revolution Capital Management LLC.
Does the firm have any existing marketing or consulting agreements?	Yes.
Has the firm appeared in any recent advertisement or newspaper or magazine articles?	No.
Have there ever been any criminal, civil or administrative proceedings against the firm or any of its principals, or any similar such matters including reparations, arbitrations and negotiated settlements?	The CME has determined that a position held by Mosaic/Mosaic Institutional in May 2012 violated NYMEX Rule 562. More specifically, DUNN Capital (as service provider for Mosaic) rolled from the June 2012 Natural Gas contract to the July 2012 contract one day late due to a misinterpretation of the exchange rules regarding holidays. Eventually, the CME determined that both DUNN and Revolution are responsible for this misinterpretation. The enforcement action was finalized in July 2014 and required Revolution to pay a fine of \$15,000 plus \$4,020 in profits as a result of the trade. DUNN's enforcement action is being handled as a separate matter.
Does the firm maintain a written Compliance Manual? If yes, please provide a copy.	Yes.
Does the firm or any affiliate ever take "custody" of client assets?	No.
Does the firm or any affiliate ever deduct its fees directly from any client accounts?	No.
What is the firm's liability/indemnity standard?	N/A.
Does the firm make use of "soft dollars"?	No.

Please attach copies of the following documents and forms where applicable:

- Management/Advisory Agreement
- Corporate brochure, and other marketing literature
- Disclosure Document
- Newsletters or other publications
- Client Reports
- Client References
- 13-Column Performance Tables
- Compliance Manual

Please state the name and title of the officer at your firm who has prepared and reviewed this questionnaire.

Signature:	
Name:	Michael Mundt
Date:	October 17, 2014
Position:	Principal, Managing Member of Revolution Capital Management LLC