The Case for CTA / Managed Futures

Tim Pickering:
Lead PM and Founder,
Auspice Capital

30 YEARS OF INDUSTRY LEADERSHIP
30 YEARS
AIMA
1990 - 2020

AUSPICE

ABOUT AUSPICE

- **Auspice Capital Advisors** is an emerging alternative investment manager established in 2006
- Led by a team with an institutional pedigree and deep experience in rules-based investment management
- Offers an innovative suite of award-winning, commodity-tilted investment products in a variety of structures
- Partnered with major global institutional and retail clients including public pensions:

ATRF UNIVERSITY OF ALBERTA Direxion NYSE

GOAL - LETS ANSWER SOME QUESTIONS

- **Can we reduce risk and improve returns?**

- What is diversification?
- Which alternatives do I need?
- Are there certain strategies and return streams that do this better than others? Why?
- Can 2+2 = 5?
- What is the point of a "CTA" (Commodity Trading Advisor)?
- Do conservative investors use CTAs?

CTA / MANAGED FUTURES

- An industry of professional regulated money managers known as Commodity Trading Advisors (**CTAs**) trade strategies called Managed Futures
- Investments made directly in **liquid** global commodities and financial instruments (equity, fixed income, currencies)
- Futures are used and thus **regulated by the NFA/CFTC**.
- Risk management and capital allocation is embedded in the process (rules-based).

Agnostic and Trend Following: The ability to go long **or** short with the potential to profit from rising **and** falling markets (momentum).

HOW CTAs INVEST

Generally 2 types: Fundamental and Technical

- **Fundamental**
  - Making investment decisions based on market or company reasons that are economic in nature
    - Ex: Crude Oil storage levels
- **Technical**
  - Making investment decisions based on trends, momentum and physical properties and patterns
    - Ex: The price is moving up
    - Why are you long Crude Oil?
      - Reasons to justify versus truth
- Emotions: "The market can stay irrational longer than you can stay solvent"
- Discipline: Risk 1 to make 3

TECHNOLGY TRUMPS EVERYTHING

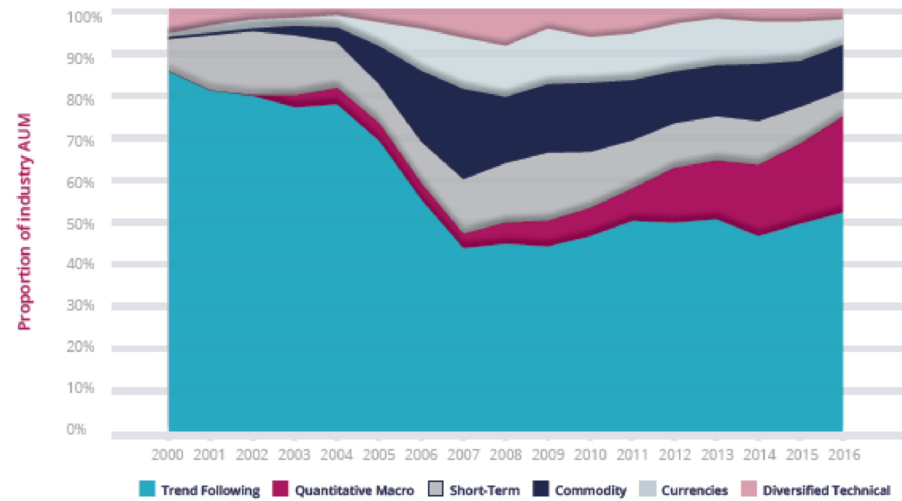
Discretionary versus Rule-based

- CTAs embrace technology, not “black-box”
- Some remain discretionary while many have gone “systematic”
- Rules-based, algorithmic, AI, Quantitative
- **Consistency is key to provide non-correlated returns and crisis alpha**

DIVERSITY OF CTA MANAGERS

Diversification of markets, decision process and execution leads to widespread diversity of managers and results

- Trend Following – various time frames short to long
- Diverse but financially tilted (more exposure to equity, fixed income, currency)
- Diverse but commodity tilted (more exposure to commodities)
- Quantitative Macro – more fundamental, discretionary
- Short Term – less than 10 day holds, intraday
- Commodity
- Currencies
- Mean Reversion
- Sector specific – Energy, Grains



Source: Societe Generale, AIMA Research

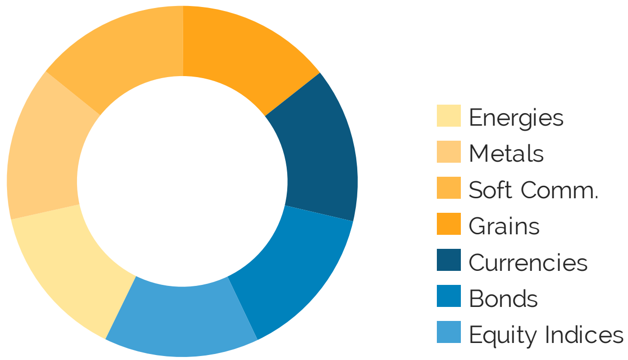
MARKETS WE TRADE

CTAs participate in a broad range of financial and commodity markets

- All commodity sectors
- Three financial sectors
- Many choices within each sector
- **Less individual stocks (starting to change)**
- **Commodity versus Financial weighting is unique by manager and leads to unique results**

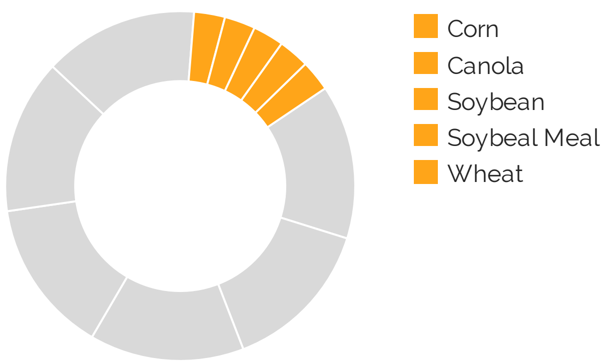
SECTOR ALLOCATION

Risk may be allocated across many sectors.



MARKET ALLOCATION

Individual markets within a sector may receive equal or unique risk allocation.

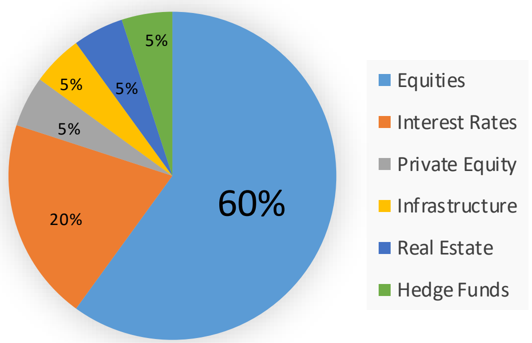


THE PROBLEM WITH MOST PORTFOLIOS

Capital Allocation and Risk Allocation are not the same.
Case Study with XYZ Pension shows high equity risk:

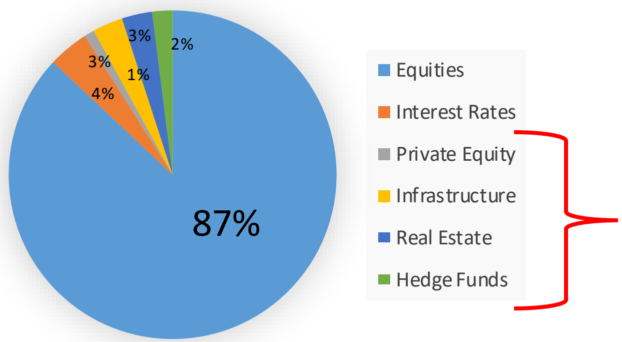
- Portfolio diversification is often looked at through capital allocation.
- Balanced asset allocation does not necessarily mean diversified risk.
- Investors are often making a concentrated bet on equity performance despite asset diversification due to high correlation of these “alternative” assets.

Capital Allocation



The example illustrates diversification of assets but a significant concentration of equity risk.

Risk Allocation



Despite including “alternatives” including hedge funds, the portfolio remains highly correlated to equity.

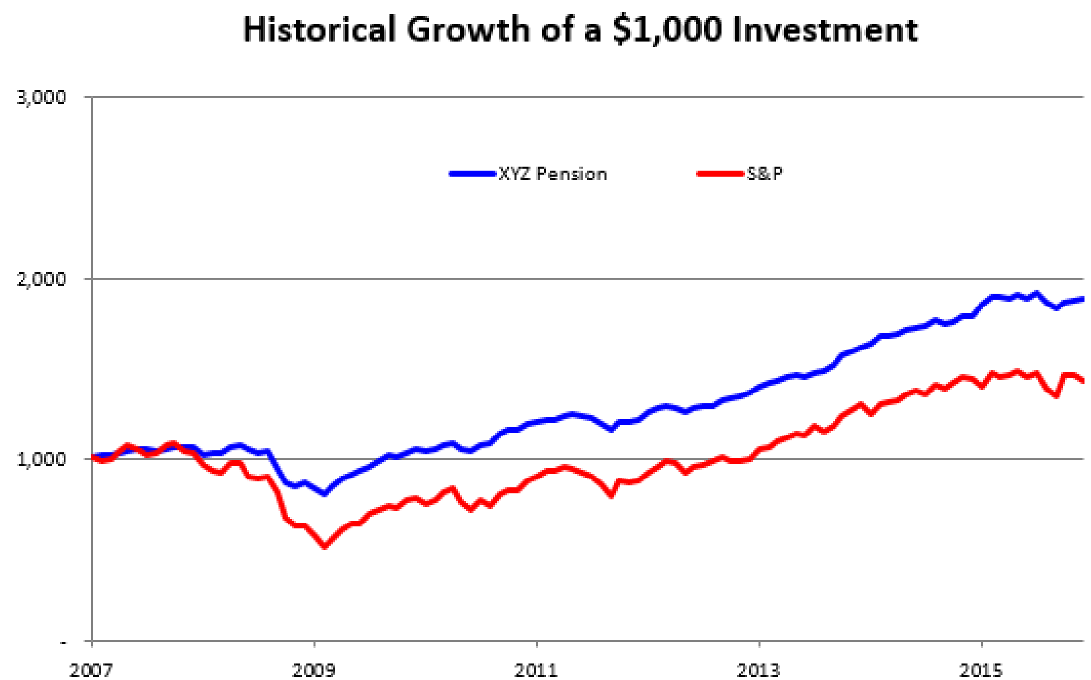
Risk Definition: Risk exposures based on Auspice estimated volatility and meant for illustration purposes only

TOO MUCH EQUITY RISK AND CORRELATION

While diverse capital allocation, the exposure and correlation to equity is very high.

Correlation of Pension and S&P 500

- High correlation: The Pension has lost and made money at the same time as the S&P despite a diversity of capital allocation. The correlation is 0.85 from 2007 to 2015.



DIVERSIFICATION?

- Diversification ≠ Different stock and bonds

✓ Diversification = Different Return Drivers

Traditional:

- Market exposure
- Long (only) exposure to Equity, Fixed Income, Cash, Commodities, Rates.
- Credit

Alternative:

- Value
- Carry
- **Trend and Momentum**
- Volatility
- Event
- Liquidity
- Position Size
- Quality
- Commodity Hedge
- Roll Yield
- Term Structure

MARKET PERFORMANCE

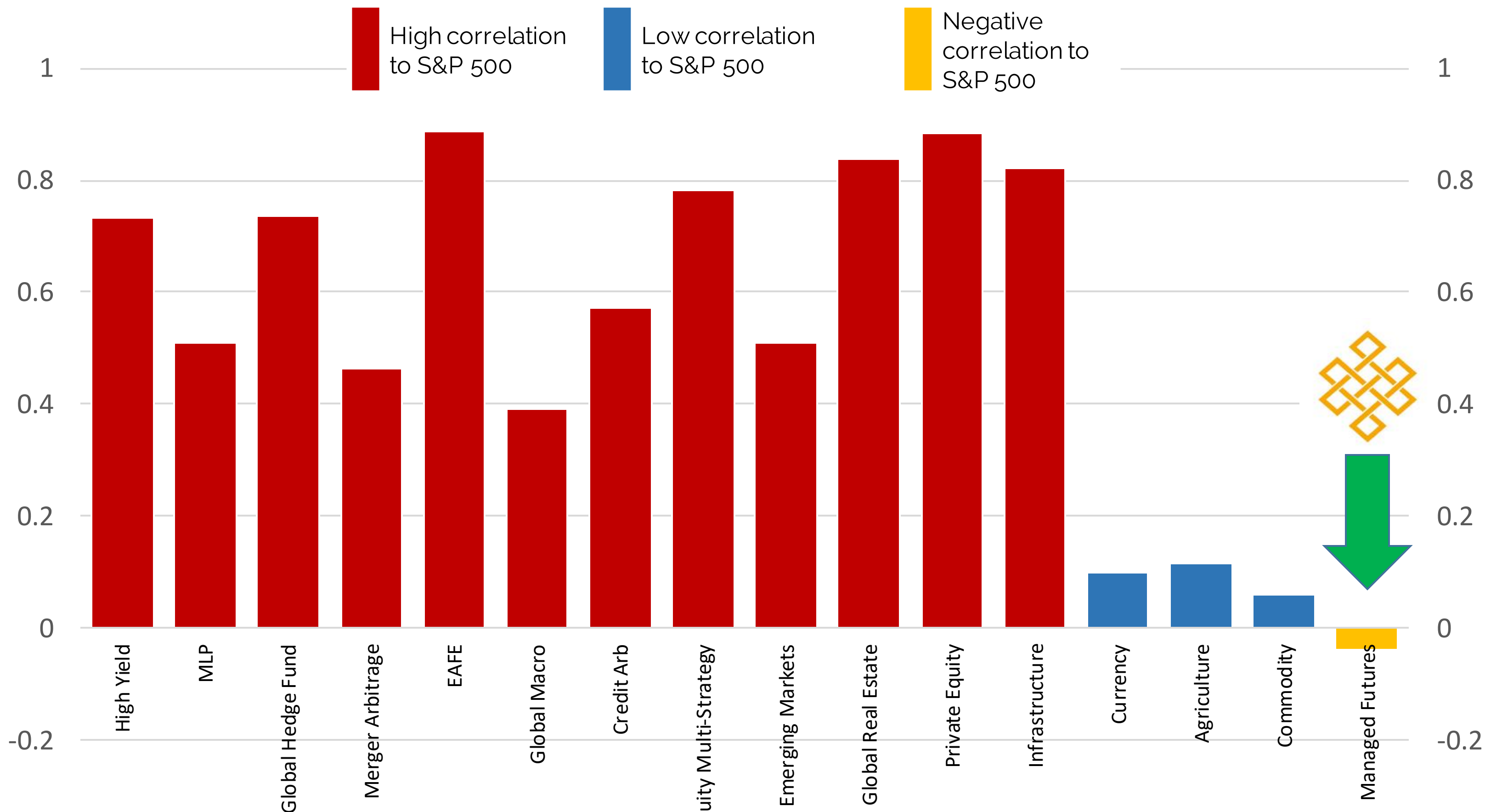
Trend Following using CTA/Managed Futures often generates returns at key times

Index Name	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
MSCI EM	Mgd Futures 14.09%	EM Markets 78.51%	REITs 27.95%	REITs 8.28%	REITs 19.70%	U.S. Equities 32.39%	REITs 28.03%	Currencies 9.04%	U.S. Equities 11.96%	EM Markets 37.28%
FTSE Nareit All Equity REITs	Currencies 6.70%	Intnl Equity 31.78%	EM Markets 18.88%	Fixed Income 7.84%	EM Markets 18.22%	Intnl Equity 22.78%	U.S. Equities 13.69%	REITs 2.83%	Commdty 11.77%	Intnl Equity 25.03%
MSCI EAFE	Fixed Income 5.24%	REITs 27.99%	Commdty 16.83%	U.S. Equities 2.11%	Intnl Equity 17.32%	Hedge Funds 9.13%	Currencies [illegible].64%	U.S. Equities 1.38%	EM Markets 11.19%	U.S. Equities 21.83%
Bloomberg Commodity Index	Hedge Funds -19.03%	U.S. Equities 26.46%	U.S. Equities 15.06%	Currencies 1.46%	U.S. Equities 16.00%	Currencies 3.58%	Mgd Futures 7.61%	Fixed Income 0.55%	REITs 8.63%	REITs 8.67%
S&P 500®	Commdty -35.65%	Hedge Funds 19.98%	Hedge Funds 10.25%	Mgd Futures -3.09%	Hedge Funds 6.36%	REITs 2.86%	Fixed Income 5.97%	Intnl Equity -0.81%	Hedge Funds 5.44%	Hedge Funds 7.45%
Barclays CTA Index	U.S. Equities -37.00%	Commdty 18.91%	Intnl Equity 7.75%	Hedge Funds -5.25%	Fixed Income 4.22%	Mgd Futures -1.42%	Hedge Funds 2.98%	Hedge Funds -1.12%	Currencies 4.83%	Fixed Income 3.54%
HFRI Fund Weighted Hedge Fund Index	REITs -37.73%	Fixed Income 5.93%	Mgd Futures 7.05%	Intnl Equity -12.14%	Commdty -1.06%	Fixed Income -2.02%	EM Markets -2.19%	Mgd Futures -1.50%	Fixed Income 2.65%	Commdty 1.70%
J.P. Morgan USD Tradeable Currency	Intnl Equity -43.38%	Mgd Futures -0.10%	Fixed Income 6.54%	Commdty -13.32%	Currencies -1.13%	EM Markets -2.60%	Intnl Equity -4.90%	EM Markets -14.92%	Intnl Equity 1.00%	Mgd Futures 0.16%
Barclays Capital U.S. Aggregate	EM Markets -53.33%	Currencies 04.46%	Currencies -3.05%	EM Markets -18.42%	Mgd Futures -1.70%	Commdty -9.52%	Commdty -17.01%	Commdty -24.66%	Mgd Futures -1.23%	Currencies -7.36%

Source: Bloomberg. Date range: 1/1/2008-12/31/2017. Past performance does not guarantee future results. Index returns are historical and are not representative of any fund performance. Total returns of the Index include reinvested dividends. One cannot invest directly in an index.

NOT ALL ALTERNATIVES ARE THE SAME

Correlations of most Alternative strategies to the S&P500 is high. Consider the implication in your capital/risk allocation approach:

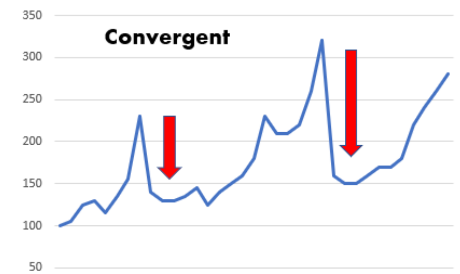


Term Dec 2005 to Nov 2016.
Representative indexes: BAML High Yield Index (H0A0), S&P MLP Index (SPMLP), HFR Global Hedge Fund Index (HFRXGL), HFR Merger Arbitrage Index (HFRXMA), MSCI EAFE Index (MXEA), FTSE EPRA/NAREIT Global Real Estate Index (RUGL), S&P Listed Private Equity (SPLPEQTR), S&P Global Infrastructure Index (SPGTIND), HFRX Currency (HFRXCUR), HFRX Macros Multi Strat (HFRXMMS), HFRX Credit Arb (HFRXCRED), HFRX (Equity Hedge)Multi Strategy (HFRXEHMS), HFRX Emerging Markets (HFRXEMC), HFRX Agriculture (HFRXAGRI), HFRX Commodity (HFRXCOM), Barclay CTA Index (BARCCTA).

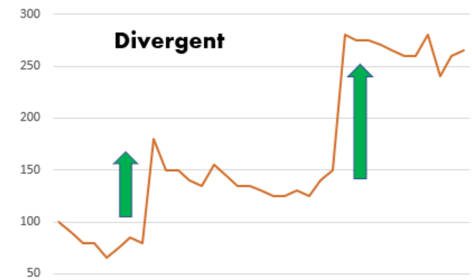
RISK TAKING STRATEGIES ARE OF 2 TYPES

Divergent returns are rare but may be most valuable to compliment the Convergent returns of most traditional and alternative assets.

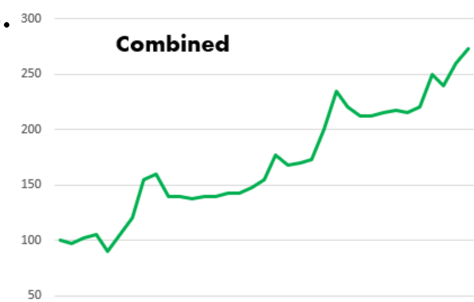
Convergent
- Many small gains
- “Human” feel good strategy that gives investors constant gratification
- Occasional devastating loss **(negatively skewed with positive returns)**
- Based in fundamentals, human tendency for logical sense
- Looks like the equity markets
- Most active and passive investment strategies, most alternatives!



Divergent
- Many small losses
- Occasional big win **(positive skew with positive returns)**
- Based in repeatable process, systematic, no bias
- Crisis alpha, episodic.
- **Derived from trend following, most common strategy in Managed Futures.**



Combined
- **Improved return stream with all around better risk metrics**



TREND FOLLOWING IS DIVERGENT

2 things makes it an attractive return driver to any portfolio:

1. "…every other risk taking strategy is convergent."

2. "…uncorrelated, and sometimes negatively correlated to every other risk taking strategy."

- *Reference: 2015- Brennan Basnicki, Investment Officer - Teachers' Retirement System of Illinois*

WHY DIVERGENT STRATEGIES LESS KNOWN

- **People want constant gratification – constant reinforcement**
  - They look past losses because they go against fundamental beliefs. Double up?

- Investors find it easier to hold an investment that is going against them based on long term beliefs and a story over an agnostic price taking approach.

- Agnostic: Goes against the "norm" as not focused on emotional conviction
  - People like to have an opinion, reasons, logic, fundamental explanation
  - Easier to invest in a good story versus good math and risk management

- ***Get over it…***

WHY MANAGED FUTURES / CTA?

CTAs can be an important allocation for investors looking to reduce portfolio risk, drawdowns and enhance returns in times of traditional market correction.

TREND FOLLOWING | Primary return driver is trend and divergent. Strategy is direction agnostic thus able to potentially profit in rising and falling markets.

PORTFOLIO DIVERSIFICATION | Low negative correlation to equity, fixed income and other alternatives can lead to enhanced risk-adjusted returns.

RISK MANAGEMENT | Portfolio and position risk management as well as capital allocation are rules based and embedded in the transparent investment process.

CRISIS ALPHA | History of generating positive returns and negative correlation at critical times of traditional market downturn and volatility.

ASSET ALLLOCATION: DOES 2+2 = 5 ? YES!

- You can create a return stream with better characteristics than the parts if…
  - Non-correlated
  - Negatively correlated at the right times

- Leads to better…
  - Risk-adjusted return
  - Absolute return
  - Higher Sharpe
  - Lower Volatility
  - Lower drawdown

- ***only Free Lunch…***

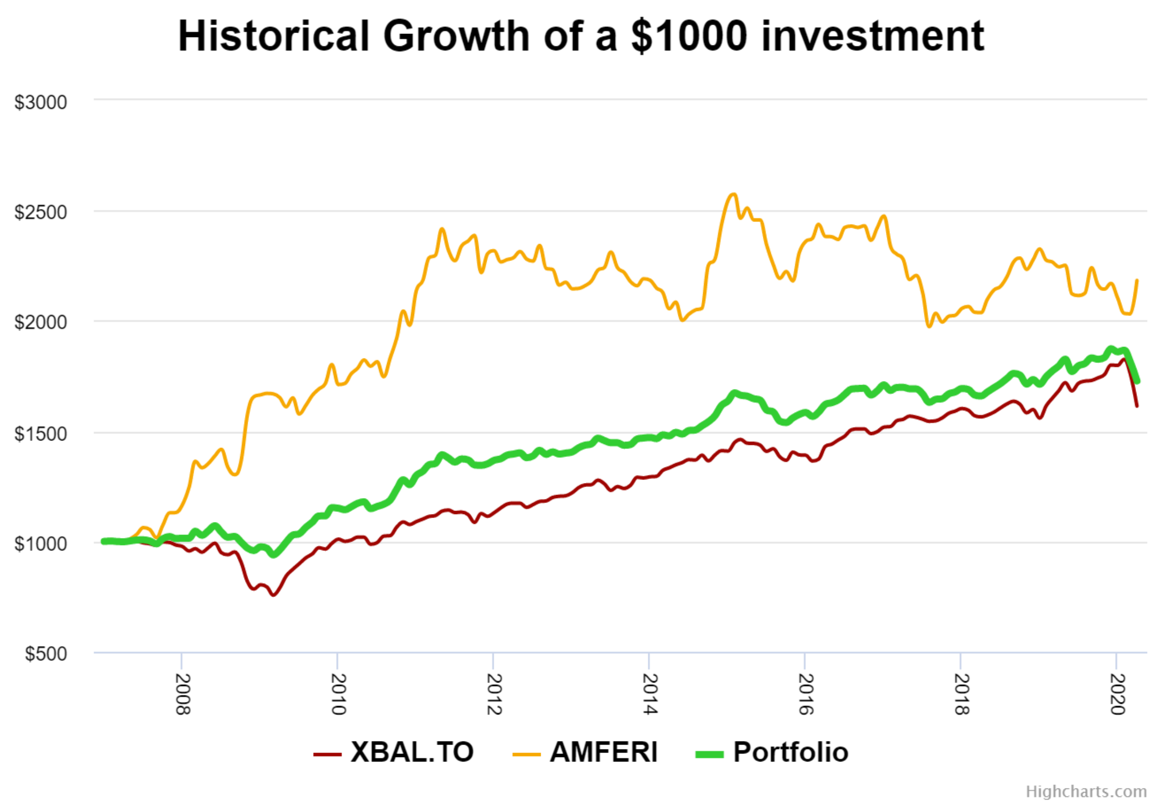
POINT OF A "CTA"?

Enables you to keep doing what you are doing but have some piece of mind: Upside Opportunity and Downside Protection.

- **Adding CTA to "Balanced" portfolio adds value.**
- **Risk Management: Improves the portfolio risk metrics over time.**
  - **Less volatility and risk**
- **Bonus is improved absolute returns.**
- Makes offsetting gains at times of correction, crisis, or downtrend in equity.
- Significant gains in 2008 (Crisis), 2010 (Recovery), 2014 (Volatility), 2018 (Correction), 2020 Q1 (COVID)

✓ **20%** allocation provides combined portfolio benefits (relative):

  - ✓ Annualized Return +15%, Sharpe +41%
  - ✓ Volatility -25%, Drawdown -49%



CORE ALLOCATION FOR INSTITUTIONS

Background

- More assets have gone into CTAs than any other Hedge Fund strategy since 2008.
- #1 Allocated to Alternative strategy in Europe.
- Making up almost 20% of $USD 382 billion European market.

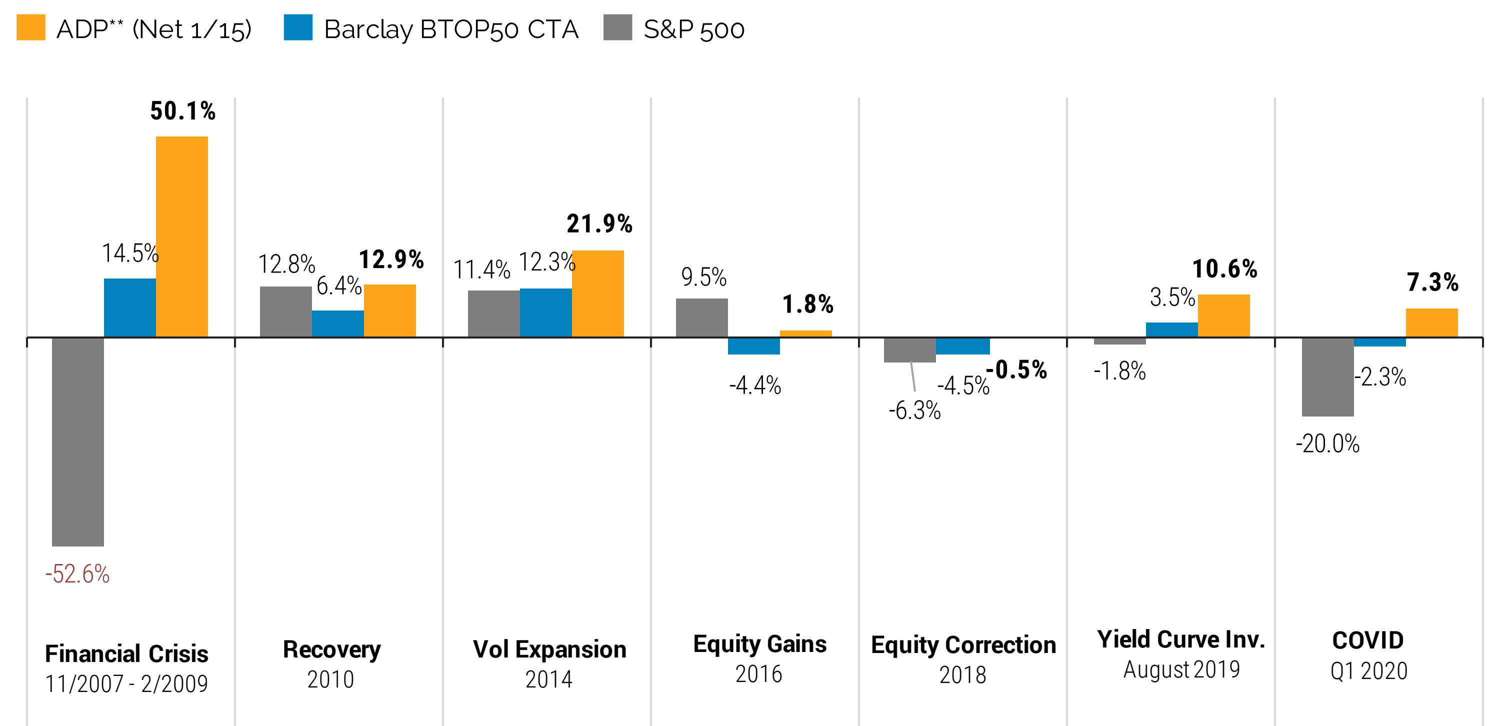
Who Invests?

- Pension Plans: Texas Teachers, CalPERS, OTPP, San Diego County, TRS Illinois, **Alberta Teachers' Retirement Fund,**
- Endowments: Northwestern, U Texas, U Oregon, UTAM, **University of Alberta Endowment**.
- Others: Foundations – R Woods, Sovereign – ADIA.
- Retail: Investment Advisors, Family Offices, HNW Investors.

CRISIS ALPHA

CTAs have a track record of delivering outsized, non-correlated returns during critical periods.

PERFORMANCE DURING CRITICAL PERIODS

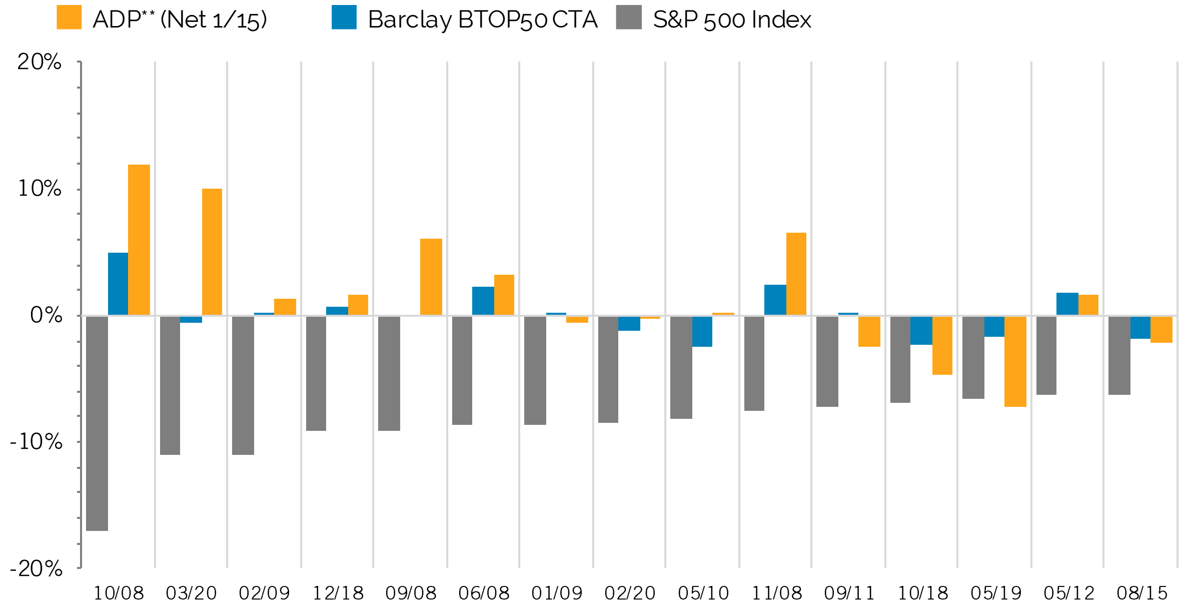


**The returns for Auspice Diversified Program ("ADP") are estimates using 1% management fee and 15% performance fee for analysis purposes. The returns are based on actual "gross" returns (less management and performance fees, interest and expenses) plus illustrated management and performance fee similar to the Series X fund structure which started in July 2014.

RETURN DISTRIBUTION

CTAs have delivered higher returns during months when U.S. equities are negative. Some CTAs standout in this regard.

Performance during <u>Worst 15</u> S&P 500 Monthly Returns



Average Monthly Return
when S&P 500 is Negative

-0.11% **Barclay BTOP50 CTA**

+0.70% **Auspice Diversified**

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There is a substantial risk of loss in trading futures and options. Past performance is not necessarily indicative of future results.

MISCONCEPTIONS

Given the name, diversity, unique and range of results, the sector has instilled many misconceptions

- **Highly leveraged**
  - Futures are levered which means the amount of capital required is small (<20%). It is not borrowed money leverage in a traditional sense.
- **High Turnover / high frequency**
  - The bulk of CTAs are trying to capture medium to long term trends
- **Capacity constrained sector**
  - All strategies have a capacity. Some very large CTAs may have issues and have tilted to more liquid markets as a result. Manager selection is key.
- **Black Box**
  - CTA embrace technology and science to create a ruled-based process for consistency.
- **Good area to time**
  - Statistically very difficult to do. Better to maintain an exposure and weight in and out.

REFERENCE MATERIAL

There are many great sources including AIMA, CME and much independent academic research

- **AIMA**
  - Managed Futures: Riding the Wave
    - Strong piece by AIMA, CAIA, SocGen.
- **CME (Chicago Mercantile Exchange):**https://www.cmegroup.com/education/
  - In Search of Crisis Alpha - A short Guide to Investing in Managed Futures (K. Kaminski)
  - 10 Reasons to considers adding Managed Futures
  - Managed Futures: Portfolio Diversification Opportunities
  - Litner Revisited – The Benefits of Managed Futures 25 Years later
- **Academic/Independent**
  - Two Centuries of Trend Following
  - A Century of Evidence on Trend Following Investing (AQR)
  - Do alternative investments belong in pension fund portfolios? (CalSTRS, Efficient Capital)
- **Auspice Capital: under Resources/Education**

TRADE EXAMPLE 1

Short Swiss Franc

TRADE EXAMPLE 2

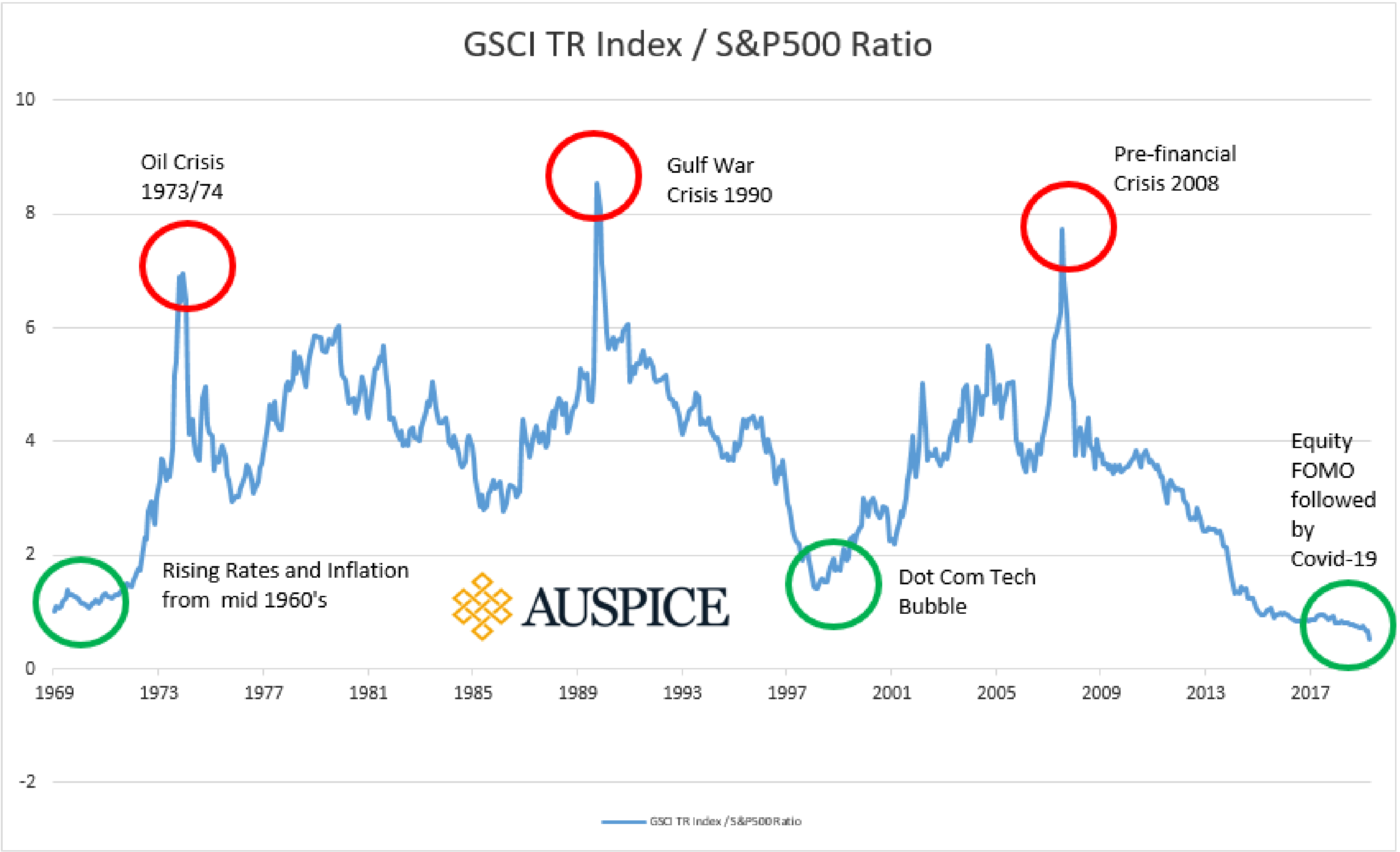
Long Palladium

TRADE EXAMPLE 3

Gold whip Q1 2020

COMMODITY TO EQUITY RATIO

Current ratio is low in front of a typical long term cycle



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FOUNDER BIOGRAPHIES

Tim Pickering – President & Chief Investment Officer

UNIVERSITY OF CALGARY
HASKAYNE SCHOOL OF BUSINESS

Tim Pickering is Founder, President and CIO of Auspice. Tim leads strategic decision making and the vision for Auspice's diverse suite rules-based quantitative investment strategies. Tim believes that in the future, non-correlated alternative investments will be a core holding in all portfolios, regardless of investor size or sophistication. Alternatives will no longer be viewed as risky, but as conservative and prudent, given the measurable value to investment portfolios. He is passionate about creating innovative investment strategies and products that the market needs with distribution through reputable partners at a fair price. In 2015, Tim was selected by Alberta Venture Magazine, one of Alberta's most widely respected business publications, as one of Alberta's 50 most influential people. In 2017, Tim was named to the University of Calgary Accounting and Finance Advisory Council and in 2019 became Chair of the Finance Advisory Council at the Haskayne School of Business.

Prior to forming Auspice, Tim was VP of Trading at Shell (North America). He began his career at TD Securities (Toronto) in their elite trading development program ultimately holding the Senior PM position for the Energy Derivatives portfolio. Outside of Auspice, Tim has been involved in grain farming in Western Canada. Through the founding of Auspice, Tim ties together a career in commodity and financial risk and portfolio management that has spanned institutional experience along with entrepreneurial vision.

Ken Corner – Director of Research & Operations, PM

Ken is a Co-founder of Auspice, and he leads the Research and Operations groups at Auspice. His educational background is in Mechanical Engineering and he is passionate about applying a scientific approach to the emotionally driven world of trading. Prior to founding Auspice with Tim, Ken worked as design engineer for the ATCO group of companies and from there moved into financial modeling and commodity trading. Following his time with ATCO, Ken traded natural gas derivatives for Shell, and then went on to become the Vice President of Options Trading for TD Securities in Calgary.

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PERFORMANCE NOTES
The Equity benchmarks used in this material are intended to reflect the general equity market performance. They are shown to illustrate the non-correlated attributes versus other assets such as the Barclay CTA Index and the Auspice Diversified Program. Adding non-correlated assets within a portfolio has the potential to reduce portfolio volatility and drawdowns.

QUALIFIED INVESTORS
For U.S. investors, any reference to the Auspice Diversified Strategy or Program, "ADP", is only available to Qualified Eligible Persons "QEP's" as defined by CFTC Regulation 4.7. For Canadian investors, any reference to the Auspice Diversified Strategy or Program, "ADP", is only available to "Accredited Investors" as defined by CSA NI 45-106.

COMPARABLE INDICES

*Returns for **Auspice Diversified or "ADP"** represent the performance of the Auspice Managed Futures LP Series 1 in Canadian Dollars. Performance is calculated net of all fees using a non-resetting high watermark.

The **Barclay BTOP50 CTA Index** seeks to replicate the overall composition of the managed futures industry with regard to trading style and overall market exposure. The largest investable trading advisor programs, as measured by assets under management, are selected for inclusion in the BTOP50. The index does not encompass the whole universe of CTAs. The CTAs that comprise the index have submitted their information voluntarily and the performance has not been verified by the index publisher.

The **S&P/TSX 60 Index** is designed to represent leading companies in leading industries. Its 60 stocks make it ideal for coverage of companies with large market capitalizations and a cost-efficient way to achieve Canadian equity exposure. Price Return data is used (not including dividends).

The **S&P 500** is an index of 500 stocks chosen for market size, liquidity and industry grouping, among other factors. The S&P 500 is designed to be a leading indicator of U.S. equities and is meant to reflect the risk/return characteristics of the large cap universe. Price Return data is used (not including dividends).

The **(MSCI) World Index**, Morgan Stanley Capital International, is designed to measure equity market performance large and mid-cap equity performance across 23 developed markets countries, covering approximately 85% of the free float-adjusted market capitalization in each. This index offers a broad global equity benchmark, without emerging markets exposure.

The **Bloomberg Commodity (Excess Return) Index (BCOM ER)**, is a broadly diversified index that allows investors to track 19 commodity futures through a single, simple measure. **Excess Return (ER)** Indexes do not include collateral return.

The **SG CTA Index** provides the market with a reliable daily performance benchmark of major commodity trading advisors (CTAs). The SG CTA Index calculates the daily rate of return for a pool of CTAs selected from the larger managers that are open to new investment.

The **S&P DTI ER** is a long/short rules-based index constructed of 24 liquid commodity and financial futures contracts grouped into 18 sectors, with 50% exposure to commodity futures and 50% exposure to financial futures.

The **S&P Goldman Sachs Commodity Excess Return Index (S&P GSCI ER)**, is a composite index of commodity sector returns representing an unleveraged, long-only investment in commodity futures that is broadly diversified across the spectrum of commodities.

The **Bloomberg Commodity (Excess Return) Index (BCOM ER)**, is a broadly diversified index that allows investors to track 19 commodity futures through a single, simple measure.

The **Deutsche Bank Liquid Commodity Optimum Yield Index (DB LCI OY)**, is an index composed of futures contracts on 14 of the most heavily traded and important physical commodities in the world.

The **Bloomberg Commodity Energy SubIndex**: reflects the returns that are potentially available through an unleveraged investment in the futures contracts on energy commodities. The Index currently consists of five energy-related commodities futures contracts (Natural Gas, WTI Crude Oil, Brent Crude Oil, Heating Oil and Unleaded Gasoline) which are included in the Bloomberg Commodity Index

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DISCLAIMER

Trading futures can be speculative and the risk of loss may be significant. Past results are not indicative of future results. There is no assurance that any of the strategy's investment objectives will be met. Please read the offering memorandum before investing.

The use of futures contacts, options and swaps are subject to market risk that cause the price to fluctuate over time. Please read the prospectus before investing.

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