Lethame Capital Management

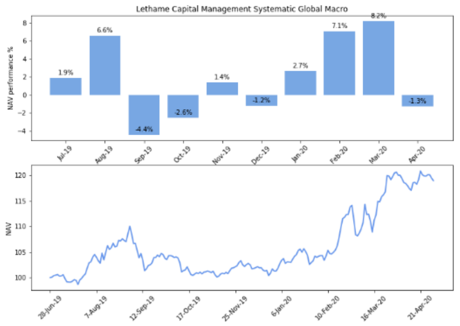
Technology : Research : Investing

Program Update April 2020

	1 month	3 month	YTD	Inception*
Lethame Capital Management	-1.3%	14.4%	18.0%	19.0%

This commentary refers to the performance of the strategy of my personal investment vehicle, please see disclaimer. *Live trading from 1st July 2019.

The substantial movement higher in risk assets during the month was somewhat overshadowed by unprecedented activity in the crude oil market. Market participants were stunned when the May West Texas Intermediate (W.T.I.) futures contract printed a low of -$40.32, on 20th April, the day prior to the expiry. Terry Duffy, Chairman and Chief Executive of the CME Group on which the WTI



contracts trades, pointed out on CNBC that market participants should indeed expect a small but non-zero chance that physically settled commodity contracts can trade below zero, pointing out previous episodes in markets such as Natural Gas and Electricity.

The Exchange Traded Product, The United States Oil Fund (U.S.O.), held almost a quarter of the open interest in the expiring W.T.I. contract up to a few weeks before expiry. Given the unprecedented nature of the economic destruction caused by the virus it is possible that the clearing mechanism of the market may be challenged by a confluence of events.

The U.S.O is a financial participant and cannot take physical delivery of the commodity the holder of the futures contract at expiry is obliged to take. The assumption therefore, is that it will find a buyer to take those contracts off its hands prior to expiry. This buying interest would normally come from other 'financial speculators' holding an offsetting short position and who also need to find a long to offset their position with. The potential challenge to the system comes from the possibility that shorts may be represented by an unusally large number of physical holders of the commodity who intend to deliver as they have run out of storage. A confluence of events such as this could have been what caused the negative print in the May contract. In the absence of some kind of government intervention, the severe economic dislocation combined with the very large positioning of financial players on the long side and the possibility of motivated physical holders on the short side, could paint a picture where negative prices occur in another expiring contract.

The strategy was designed and tested so that it closes or rolls its futures contracts well before expiry and in physically settled commodity contracts never holds the expiring month. The system therefore wouldn't be in a position of holding a contract that is about to expire. Nonetheless, we are monitoring the situation in the market very closely.

Movement in the metals complex was particularly difficult for the strategy during the month. The strong countertrend moves in Copper and Platinum hurt short positions while a negative return from Palladium hurt its long which was stopped out during the month. The Gold market was the one area of positive performance as it performed strongly during April.

Significant weakness in agricultural commodities was beneficial to strategy performance. The corn contract in particular saw new contract lows in April. It is estmated that approximated one third of the corn crop is used in the production of Ethanol which is used in gasoline. Some estimates suggest gasoline demand is down in the order of 40% on the same period last year, largely as a result less miles being driven by US consumers under lockdown.

Major FX pairs were mixed with significant strength in the Australian dollar, weakness in the Euro and little change in the Yen over the month. The system has no Equity Index exposure having exited its long positition and is waiting for a signal on either the long or short side.

For more Lethame Capital insights please visit www.lethamecapital.com

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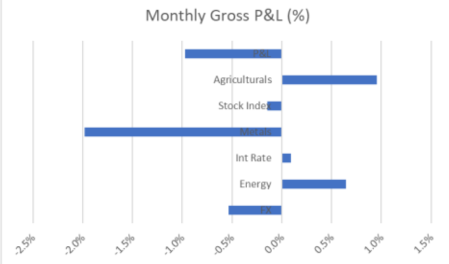


Winning positions

West Texas Intermediate

Corn

Wheat

Losing Positions

Palladium

Australian Dollar

Copper

Month End Risk Overview	
30 Day VaR at 99% Confidence	7.24%
Margin to Equity	15.15%
Max Drawdown	9.0%

System Management

Lethame Capital's systematic investment program is designed to provide exposure to a diversified range of return streams. The program is calibrated so that it scales back the risk it takes should the instruments it trades exhibit an unusually high level of co-movement indicating that markets are being driven by a single underlying factor and making the program more vulnerable to a reversal of that single factor.

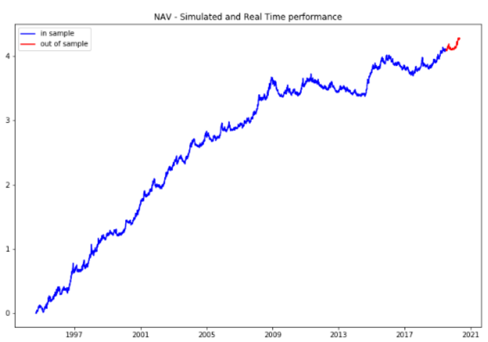
The danger of reversal has been graphically highlighted by the proxy basket of risk assets that we track. This basket took 56 days to fall peak to trough 37.6% and then 42 days to rally 31.8% meaning that the basket retraced just under 50% of its previous decline. The system was designed and tested to try and identify periods when its positions were prone to such a violent retracement in order that it could reduce the amount of risk taken leaving it less vulnerable to giving back gains.

In 'normal' times, which we estimate at approximately 90% of the time, the system takes a standard amount of risk every day. It registered such elevated co-movement during March and so automatically scaled back the level of risk at the portfolio system level. Eventually the system scaled back by the maximum amount, a very unusual situation. We believe this has meant the system has given back a relatively small proportion of the gains it made, which is evident from the current drawdown from its peak NAV of approximately 1.5% and the resulting 18% YTD return.

The positively skewed expectation of strategies of this nature is many small losses and a smaller number of large profits. As such our observation is the system will suffer losses as much as half of the time. The dynamic nature of the strategy introduces a convexity to the payoff which has similarities to an option position. The observation so far of larger monthly profits than the smaller monthly losses is encouraging in that it consistent with the profile we set out to achieve.

By the end of April It appeared that markets are returning to a more normal trading pattern and for the moment at least the system is gradually scaling back into a higher level of risk taking.

Complete Time Series of Backtested and Live Performance



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
1994									2.55%	6.44%	2.78%	-1.89%	10.07%
1995	-6.22%	1.26%	3.89%	-0.86%	11.91%	3.73%	-3.36%	1.40%	2.05%	5.03%	6.04%	5.13%	32.95%
1996	1.24%	-10.70%	2.95%	2.94%	0.06%	0.86%	-6.01%	6.72%	10.75%	14.04%	14.16%	-11.82%	23.32%
1997	5.97%	-6.37%	3.65%	-0.55%	-0.11%	0.23%	15.02%	-11.34%	2.19%	4.16%	7.84%	7.30%	28.61%
1998	2.24%	-3.39%	5.53%	0.79%	7.55%	3.52%	1.94%	9.77%	-1.57%	-2.77%	-0.91%	8.44%	34.61%
1999	0.20%	3.76%	-3.35%	-2.48%	5.46%	-3.52%	-2.55%	-0.80%	1.16%	0.49%	1.60%	4.96%	4.49%
2000	4.02%	10.30%	-1.80%	2.04%	-2.40%	-1.64%	6.62%	0.83%	4.48%	5.90%	5.15%	6.24%	46.64%
2001	6.37%	2.46%	12.99%	-8.17%	1.32%	1.82%	6.26%	1.23%	10.07%	6.16%	-12.06%	3.84%	33.89%
2002	-1.64%	0.23%	-3.68%	3.40%	0.86%	10.37%	4.48%	4.76%	7.58%	-4.05%	0.48%	10.70%	37.35%
2003	2.48%	2.91%	-3.93%	4.06%	1.68%	0.02%	-5.52%	0.09%	3.99%	2.31%	3.09%	9.73%	22.03%
2004	4.55%	7.22%	3.33%	-9.04%	-1.03%	-0.71%	0.21%	1.44%	2.50%	4.57%	7.43%	5.91%	28.33%
2005	-4.04%	-3.37%	-4.62%	-1.88%	5.48%	2.03%	-3.42%	3.17%	-1.45%	4.85%	11.99%	-5.48%	1.77%
2006	3.31%	-5.19%	1.58%	5.94%	-0.27%	-5.69%	-0.05%	2.98%	-1.23%	1.56%	5.30%	-1.76%	5.91%
2007	0.92%	0.17%	-1.81%	7.17%	-0.94%	2.51%	0.14%	-1.84%	7.40%	4.16%	1.16%	0.07%	20.24%
2008	7.61%	19.59%	-3.82%	-1.38%	-0.12%	5.42%	-5.84%	2.52%	9.53%	7.28%	6.74%	2.94%	60.19%
2009	-3.78%	0.74%	-8.21%	-4.56%	-4.77%	-1.90%	-1.67%	1.96%	4.56%	-1.60%	11.02%	-6.96%	-15.47%
2010	-3.64%	-2.30%	5.89%	1.62%	-6.05%	1.07%	-1.24%	0.97%	7.03%	8.05%	-5.21%	8.90%	14.49%
2011	2.35%	-0.34%	-1.11%	10.41%	-9.68%	-3.67%	3.87%	-2.30%	0.74%	-6.58%	-1.76%	-1.29%	-10.25%
2012	-1.72%	2.73%	-3.48%	-2.04%	6.59%	-2.05%	6.77%	-5.25%	-3.20%	-4.24%	-1.88%	1.87%	-6.57%
2013	4.67%	-2.55%	2.27%	0.02%	-2.23%	0.58%	-2.96%	-0.28%	-3.39%	-1.58%	2.87%	4.16%	1.16%
2014	-6.10%	-1.04%	-0.61%	-0.76%	2.43%	-0.14%	-1.86%	3.92%	16.43%	3.98%	9.81%	1.36%	28.85%
2015	10.92%	-5.01%	4.61%	-4.37%	2.66%	-2.29%	12.73%	-2.38%	0.03%	-4.05%	11.60%	-5.73%	17.48%
2016	3.72%	1.16%	-5.27%	-5.68%	-0.41%	-0.20%	3.01%	-0.22%	-5.25%	-3.68%	1.80%	0.05%	-10.99%
2017	-4.77%	3.15%	-4.84%	-2.14%	-1.51%	-1.15%	3.78%	5.90%	-4.30%	3.01%	1.13%	4.37%	1.84%
2018	9.30%	-7.91%	-1.52%	-0.88%	-3.02%	1.38%	-1.37%	5.56%	5.28%	2.46%	-2.98%	8.19%	13.87%
2019	-4.00%	8.61%	1.90%	4.96%	-2.39%	0.49%	1.90%	6.60%	-4.40%	-2.60%	1.40%	-1.20%	10.84%
2020	2.70%	7.10%	8.20%	-1.30%									18.00%

Simulated

Real Time

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