

### Summary

Commodity prices fell over the past month, with the complex losing steam following a stellar Q1 2019. The asset class has faced multiple headwinds. Firstly, the absence of any announcement on trade between China and the US (at least at the time of publication) has held back base metals and agriculture from performing. However, we believe it is only a matter of time before the two economic super-powers come to an agreement and we expect a continuation of the relief rally that started in January 2019 as a result. Secondly, US Dollar appreciation has muted commodity price performance (in Dollars). Thirdly, commodity markets have faded into the background in terms of market attention amid a strong rally in equities. The S&P 500 and Nasdaq posted fresh all-time highs earlier this week. In such an environment, speculative positioning in gold and silver futures have suffered substantial declines. This pattern looks eerily like what we saw last year, when investor sentiment towards gold fell in January 2018 and October 2018. When investors were reminded of market volatility in February 2018 and December 2018, gold prices rallied strongly.

We believe that a theme of short-covering could become pervasive across the commodity complex with shorts having become very elevated especially in agriculture and silver. With high supply concentration in cocoa (Africa), sugar (Brazil and India) and coffee (Brazil and Central America), a localised weather disturbance could act as a significant catalyst to unwind short positions.

The clear outlier in the commodity space has been energy, rising 3.8% over the past month, driven by supply tightness in oil. In addition to the intentional supply cuts by the Organization of Petroleum Exporting Countries (OPEC), involuntary cuts by Libya, Venezuela and Iran are leaving the market particularly tight. Waivers on US sanctions against Iran, offered by the US to consumers of Iranian oil are set to expire in a matter of days. The US has indicated it will not renew these waivers. That could remove more than 0.5 million barrels of exports from the country. Despite US President Trump's request to OPEC to loosen production policy, we don't expect OPEC to make any substantial changes before its June meeting. Given Trump's precedent of making a U-turn on Iranian policy (in November last year he announced the aforementioned waivers which were a surprise to the market given prior guidance and sent oil prices close to 33% lower at the time), OPEC are sceptical about making any policy moves before the US announces the waivers for the next set of 180 days. We expect continued volatility in oil markets over the coming month.

- Ample supply situation in most agricultural commodities weighed on prices.** Most agricultural commodities dipped lower over the period owing to the ample supply situation especially in the case of wheat, soybean, sugar, cocoa and coffee markets. Lean hog futures were the exception aided by the outbreak of the African swine fever in China.
- Likely withdrawal of US sanction waivers for buyers of Iranian oil have resulted in further tightness in the market.** Policy uncertainty continues to drive price volatility as it remains to be seen whether OPEC will increase its production to offset some of the supply tightness.
- Base metal performance loses steam after the Politburo meeting signalled less easing.** Industrial metals staged weak performance after policymakers in China signalled no urgency to stimulate the Chinese economy after macro data in Q1 showed signs of improvement. Furthermore, the prospect of further delays on the US-China trade deal weighed on sentiment.
- Risk-on rally in cyclical assets has driven speculative gold positioning down.** Gold has had a negative month on the back of recent investor confidence in risk assets. We however believe that the fundamental case for holding gold still remains strong.

**Nitesh Shah**  
Director

**Mobeen Tahir**  
Associate Director

**Aneeka Gupta**  
Associate Director

### Contents

Commodities market overview	1
Summary tables	4
CFTC net positioning	5
Inventories	9
Moving average and volumes	13
Futures curves	17
Recent publications	21

### Commodity Monthly Matrix<sup>1</sup>

	Current Price <sup>2</sup>	Returns (-1 Mth)	Price vs 200 days MA	Inventories <sup>3</sup> (-3 Mths)	Positioning <sup>4</sup> (-1 Mth)	Roll Yield <sup>5</sup>	29 Apr Score	18 Mar Score
WTI Oil	64	5.6%	4.8%	3.3%	22%	-0.1%	0	(1)
Brent Oil	72	5.3%	4.3%	0.5%	35%	0.7%	2	3
Natural Gas	2.6	-2.6%	-17.2%	-39.1%	-152%	-1.8%	(2)	(1)
Gasoline	2.1	9.9%	18.2%	-12.3%	11%	2.6%	4	0
Heating Oil	2.1	4.1%	0.1%	-0.9%	8%	0.0%	4	(2)
Carbon	26.3	22.5%	23.0%	-	-	-0.1%	0	0
Wheat	4.3	-6.8%	-14.9%	2.8%	-8%	-2.0%	(4)	(4)
Corn	3.5	-1.3%	-3.9%	1.7%	-9%	-2.7%	(4)	(1)
Soybeans	8	-4.2%	-3.8%	-6.9%	-238%	-1.5%	(2)	(1)
Sugar	0.1	-7.2%	-4.9%	-	108%	-5.7%	(1)	(2)
Cotton	0.8	-1.9%	-1.7%	4.4%	110%	-1.1%	(2)	(3)
Coffee	0.9	-3.3%	-10.7%	-	1%	-1.4%	(1)	(4)
Soybean Oil	0.3	-1.7%	-2.7%	-0.8%	-473%	-1.1%	(2)	(1)
Cocoa	2,392	4.9%	7.0%	-	93%	0.4%	4	(4)
Aluminium	1,804	-5.1%	-7.1%	-14.0%	-1%	-0.7%	(2)	(3)
Copper (COMEX)	2.9	-1.4%	4.4%	-60.3%	-77%	-0.1%	(1)	2
Copper (LME)	6,392	-1.5%	3.2%	57.3%	14%	0.0%	(1)	2
Zinc	2,871	-3.5%	8.7%	7.8%	-9%	1.4%	(1)	2
Nickel	12,351	-4.4%	0.4%	-14.5%	-2%	-0.3%	(1)	2
Lead	1,964	-2.2%	-2.4%	-1.3%	-2%	-0.3%	(2)	1
Tin	19,727	-8.0%	-0.9%	-17.6%	-15%	0.2%	0	3
Gold	1,282	-0.9%	2.4%	-	-74%	-	(2)	(2)
Silver	15	-1.8%	-0.7%	-	-112%	-	(4)	(2)
Platinum	901	6.2%	9.0%	-	27%	-	4	4
Palladium	1,362	1.5%	13.5%	-	-26%	-	0	0
Live Cattle	1.2	-0.7%	4.7%	-	4%	8.7%	3	4
Lean Hogs	0.8	9.6%	36.6%	-	40%	-3.7%	1	1
Feeder Cattle	1.4	-1.3%	-3.2%	-	18%	-5.1%	(1)	(1)

The score matrix is designed to highlight significant changes in key variables but should not be viewed as predictor of performance. Source: WisdomTree, Bloomberg

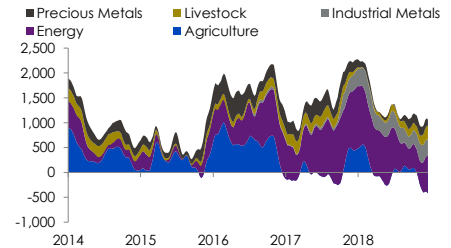
### Performance<sup>2</sup>

	- 1 Mth	- 6 Mth	- 12 Mth
All Commodities	-0.5%	-3.4%	-7.8%
Energy	3.8%	-7.1%	-1.2%
Industrial Metals	-3.1%	2.7%	-9.1%
Precious Metals	-1.2%	3.7%	-5.3%
Agriculture	-3.0%	-8.7%	-19.5%
MSCI World	3.3%	11.8%	4.6%
US Aggregate Bond	-0.1%	4.9%	5.2%

Bloomberg TR Indexes for basket returns, data to Monday 29 April 2019. Source: WisdomTree, Bloomberg

### CFTC Net Speculative Positioning

(in '000 contracts)



Source: WisdomTree, Commodity Futures Trading Commission (CFTC), Bloomberg

" - " Information not available. Green = returns positive, inventories falling, positioning rising, roll yield positive. Red = the opposite. Black = neutral. <sup>1</sup> Detailed explanation of the matrix calculations can be found at the end of this report. <sup>2</sup> All prices are futures prices to April 29, 2019. Broad sector returns based on Bloomberg Commodity Index family. <sup>3</sup> % change in inventory over the past 3 months except for sugar and coffee which are based on past 6 months as data is updated bi-annually by USDA. <sup>4</sup> CFTC futures and LME COIR net positioning as at April 23, 2019 and April 26, 2019 respectively. <sup>5</sup> Calculated as % difference between front month and second month futures prices on report date.

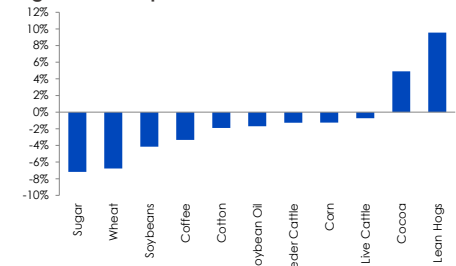
**Historical performance is not an indication of future performance and any investments may go down in value.**

# Sector Overview

## Agriculture

- Lean Hog futures led agricultural commodities, aided by the widespread outbreak of African swine fever in China which is likely to result in the death of hundreds of millions of hogs. The African swine flu is an extremely resilient virus for which there is no vaccine or treatment. It is easy to transmit and can only be controlled by blocking it from spreading via tight decontamination methods. Pork is the mainstay of China's local cuisine. China is using pork imports from the US to replace the current supply deficit. US pork imports to China hit a record high 77,000 tons as on April 4, 2019 despite the high import tariff of 62% imposed by China. The eradication of African swine fever takes about 5 years and we expect the epidemic to lend buoyancy to lean hog prices in the near term.
- Cocoa prices were up 3.5%, reflecting stronger growth in demand driven by the increase in cocoa grindings in the first quarter of 2019. According to the European Cocoa Association, 370,400 tons of cocoa beans were ground Europe-wide in the first quarter, up 3.3% over the prior year. Grinding in Malaysia grew significantly more sharply than in Europe, highlighting a 35.5% increase in the first quarter versus the prior year. The International Cocoa Organisation (ICCO) is expecting a good mid-crop, owing to good weather conditions in the Ivory coast, the world's largest growing country, which could halt further upside of cocoa prices.

## Agriculture - April Returns\*

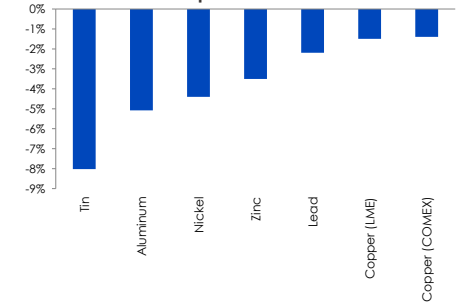


Source: Bloomberg

## Industrial Metals

- Industrial metals were amongst the weakest performers across commodity markets. The unresolved trade dispute coupled with news that Chinese officials signalled no intention to implement any additional stimulus measures and reaffirmed their commitment to deleveraging the Chinese economy halted the momentum of the industrial metal complex witnessed since the start of the year. We believe the expansionary measures taken by the government and the central bank in preceding months have been bearing fruit and investor concerns about policy tightening are premature.
- While copper prices fell over the period, we believe copper prices are likely to benefit from the copper smelter maintenance in Q2 as several large smelters undertake comprehensive maintenance that occurs once in every two years. The global copper market has begun the year with a moderate supply deficit however we expect the supply deficit to be revised higher by International Copper Study Group in May as several copper mines struggle with problems. The supply of copper concentrate will be limited throughout the year since the world's second largest mine, Grasberg in Indonesia, transitions from open-pit to underground mining. Las Bambas in Peru is also dealing with problems over the short term and outages in Chile will also result in further shortage of copper. While Chinese copper imports in March rose 26% over the prior month but were 11% down over the year, the first quarter imports were considerably more than a year earlier.

## Industrial Metals - April Returns\*

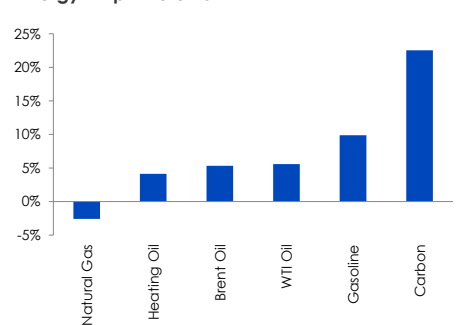


Source: Bloomberg

## Energy

- Crude oil had a positive month as both Brent and WTI extended their gains from the previous month. The US announcement that it would not extend sanction waivers to buyers of Iranian crude helped lend buoyancy to oil prices. We have long highlighted the risk of the US not renewing waivers, but as the time approached the market was clearly spooked at the prospect. We believe the supply tightness is now mostly priced in and risks to oil prices are skewed to the downside particularly if the US convinces OPEC to increase its output. The OPEC ministerial meeting in May followed by the official OPEC meeting in June will determine the course for oil prices for the rest of the year.
- Natural Gas had a negative month with mild temperatures resulting in declining demand for the commodity.
- Carbon stands out as a top performer in the category during the month. Carbon, which tends to be heavily influenced by regulation, found support this month when EU governments formally requested the European Commission to formalise its emission strategy in line with the Paris Agreement within a year. If the EU moves to further increase the price of carbon allowances, carbon prices could rise considerably further.

## Energy - April Returns\*

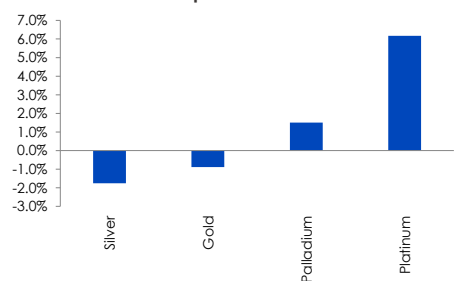


Source: Bloomberg

## Precious Metals

- Gold had a slightly negative month as speculative positioning dropped driving down spot prices. This has primarily been driven by a risk-on rally in cyclical assets as buoyant equity markets attracted investor interest. We believe that market participants remain aware that financial market volatility can return very quickly making it important to hedge against a potential downside. Moreover, macroeconomic and geopolitical risks still remain with the ongoing US-China trade talks as well as Brexit uncertainty. These risks continue to support the fundamental case for holding gold. Additionally, we expect the US Fed to remain dovish for the next year which is expected to provide further price support to gold. Our base case forecast is for gold prices to reach US\$1385/oz at the end of Q1 2020.
- Silver, which typically has a strong correlation to gold, also had a slightly negative month. An increase in industrial demand for silver however means that the metal is now in a slight supply deficit which is expected to support prices and offset some of the impact from the considerable drop in speculative positioning.
- Palladium prices have had a slight recovery following a slump at the end of March which was driven primarily by speculative positioning and easing of supply pressures. Recent weakness in palladium has coincided with strength for platinum which is now perceived by some investors as oversold and is likely to see increased demand from the automobile industry.

## Precious Metals - April Returns\*



Source: Bloomberg

**\*Note: all returns are based on front month futures prices in the month to Monday 29 April 2019. Historical performance is not an indication of future performance and any investments may go down in value.**

# Technical Overview (as of Apr 29, 2019)

## Positioning

- Speculative positioning across cotton, lean hogs, cocoa, sugar and feeder cattle improved as short positions eased considerably over the month by 39%, 51%, 31%, 9% and 26% respectively, reflecting growing positive sentiment among investors owing to improving fundamentals.
- Net short positions have hit a record high climbing to -270,560 contracts underpinning the extreme pessimism towards corn despite sizeable supply deficits expected both this and next crop year by the International Grains Council (IGC).
- Sentiment on the soybean market has been weakened evident from the reduction in net speculative positioning by 238% owing to the prospect of another very high crop in Brazil and the spread of African swine fever which is expected to reduce demand for fodder.
- Natural Gas's net speculative positioning has now fallen into negative territory reflecting the seasonal bearish sentiment on the commodity.
- Platinum has been an outlier among precious metals with its speculative positioning rising year-to-date while net positioning for gold, silver and palladium has been on the decline. This potentially reflects the price attractiveness of platinum in light of improving demand prospects.

## Inventories

- The United States Department of Agriculture's (USDA) estimate for global wheat ending stocks for 2018/19 were raised 5.1 mn tons mainly owing to higher supply and total use declining from lower Iran and EU feed and residual use.
- World ending cotton stocks in 2018/19 are forecast about 360,000 bales higher this month according to USDA as an increase in China's stocks more than offset the decline in stocks in Turkey, United States and Vietnam.
- Natural Gas inventories fell considerably over the month which is in line with expectations as inventories are typically lowest at the end of the winter season.
- Copper inventory trends are bifurcated across the exchanges. While copper inventories on the Comex Futures Exchange appear tight (down 60.3%), they appear plentiful (up 57.3%) on the LME.

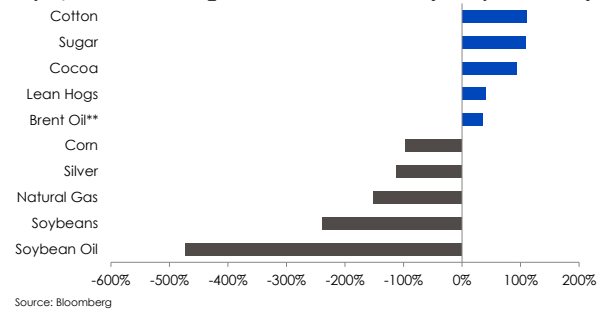
## Curve Dynamics

- Except for cocoa and live cattle, most agricultural commodities are in contango. Negative roll yields run as high as 6.3% for feeder cattle and 2.7% for corn which is usually an indication of market oversupply in the short-term.
- Gasoline is in backwardation and spot prices have risen over the month as winter blend inventories are wound down and the commodity transitions to a more expensive summer blend.
- LME zinc futures are in backwardation through the full length of the curve reflecting tightness in the metal, providing a positive 1.4% roll yield. As new capacities start going into operation, we could start to see zinc production pick up in the near term.
- Among the four precious metals, palladium is the only one in slight backwardation highlighting that the supply, despite easing a bit recently, remains tight relative to its demand.

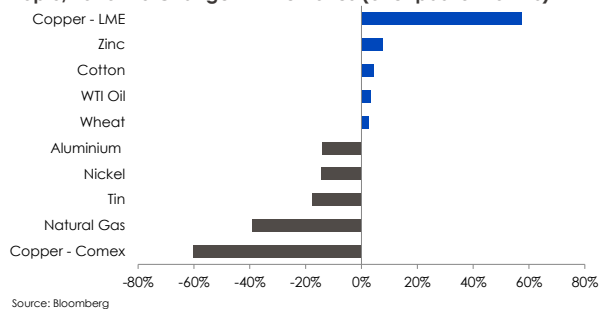
## Technicals

- Momentum for lean hogs are likely to continue owing to the outbreak of the African swine fever in China, prices have risen 36.6% above its 200-day moving average (dma) and are expected to trend higher.
- Wheat prices are trading 14.9% below its 200-dma as the global wheat supply situation is even more comfortable than previously envisaged which could continue to weigh on prices.
- Natural gas, which was trading around 10% below its 200-dma last month, is now trading at 17% below its 200-dma following the seasonal decline in price over the month.
- The International Aluminium Institute (IAI) confirmed that global aluminium production increased to 5.41 mn tons in March, marking the same level it attained a year ago in January. Its first quarter figure for aluminium production in China was higher than that released by the National Bureau of Statistics in China. Aluminium prices are trading 7.1% below their 200-dma and prices are expected to drift lower as the global aluminium market remains amply supplied.
- Palladium leads the precious metal pack with its current price around 14% above its 200-day moving average but has come down from being 38% above its 200-dma last month.

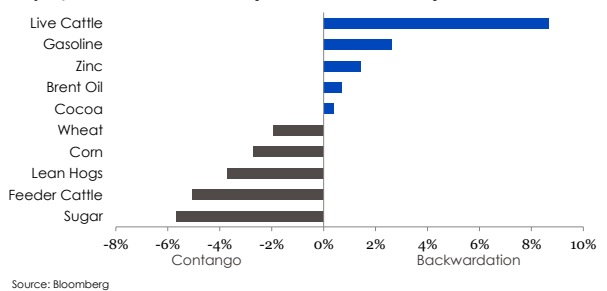
## Top 5/Bottom 5 Change in CFTC Net Positions (over past month)<sup>1</sup>



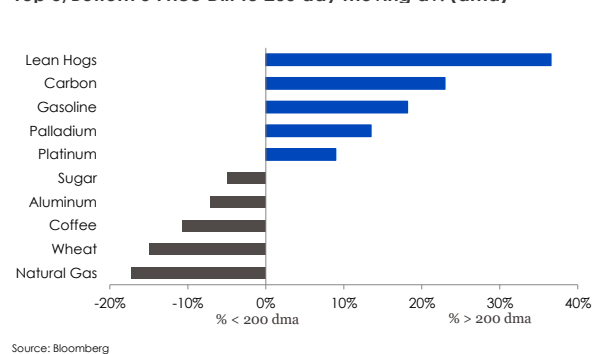
## Top 5/Bottom 5 Change in Inventories (over past 3 months)<sup>2</sup>



## Top 5/Bottom 5 Roll Yields (front to next month)<sup>3</sup>



## Top 5/Bottom 5 Price Diff to 200 day moving av. (dma)<sup>4</sup>



<sup>1</sup> CFTC futures net positioning as at report date, percent change from previous month. <sup>2</sup> Percent change in inventory based on 3 month change (in %).

<sup>3</sup> Roll yields calculated as percent change between front month futures price and next month futures price on Apr 29, 2019.

<sup>4</sup> Percent difference between the front month futures price and its 200 day moving average on Apr 29, 2019.

# Summary Tables



PRICES <sup>1</sup>	Current	Unit	1 Month	3 Month	6 Month	1 Year	ROLL YIELDS <sup>2</sup>	Unit	Exchange	29-Apr	1 Week	1 Month	3 Month
<b>Energy</b>							<b>Energy</b>						
WTI Oil	64	USD/bbl.	5.6%	19.1%	-5.3%	-6.8%	WTI Oil	USD/bbl.	NYMEX	-0.1%	0.1%	-0.2%	-0.5%
Brent Oil	72	USD/bbl.	5.3%	17.5%	-6.9%	-3.5%	Brent Oil	USD/bbl.	ICE	0.7%	0.8%	1.2%	0.2%
Natural Gas	2.6	USD/MMBtu	-2.6%	-12.1%	-18.6%	-6.4%	Natural Gas	USD/MMBtu	NYMEX	-1.8%	-1.8%	-1.9%	1.6%
Gasoline	2.1	Usd/gal.	9.9%	54.2%	14.1%	-2.1%	Gasoline	Usd/gal.	NYMEX	2.6%	2.4%	0.7%	-1.6%
Heating Oil	2.1	Usd/gal.	4.1%	8.3%	-10.0%	-4.5%	Heating Oil	Usd/gal.	NYMEX	0.0%	-0.1%	0.1%	0.2%
Carbon	26.3	EUR/MT	22.5%	13.2%	57.7%	94.5%	Carbon	EUR/MT	ICE	-0.1%	-0.1%	-0.2%	-0.2%
<b>Agriculture</b>							<b>Agriculture</b>						
Wheat	4.3	Usd/bu.	-6.8%	-16.9%	-15.9%	-13.9%	Wheat	Usd/bu.	CBOT	-2.0%	-1.4%	-1.2%	-1.2%
Corn	3.5	Usd/bu.	-1.3%	-6.7%	-4.0%	-9.6%	Corn	Usd/bu.	CBOT	-2.7%	-2.5%	-2.7%	-2.3%
Soybeans	8.5	Usd/bu.	-4.2%	-7.8%	1.0%	-18.9%	Soybeans	Usd/bu.	CBOT	-1.5%	-1.5%	-1.5%	-1.5%
Sugar	0.1	Usd/lb.	-7.2%	-8.4%	-13.9%	3.7%	Sugar	Usd/lb.	NYBOT	-5.7%	-1.6%	-0.9%	-0.8%
Cotton	0.8	Usd/lb.	-1.9%	2.7%	-1.3%	-10.8%	Cotton	Usd/lb.	NYBOT	-1.1%	-1.7%	-0.9%	-1.8%
Coffee	0.9	Usd/lb.	-3.3%	-11.0%	-20.0%	-24.1%	Coffee	Usd/lb.	NYBOT	-1.4%	-1.9%	-2.6%	-3.0%
Soybean Oil	0.3	Usd/lb.	-1.7%	-7.4%	0.0%	-8.4%	Soybean Oil	Usd/lb.	CBOT	-1.1%	-1.1%	-1.2%	-1.1%
Cocoa	2,392	USD/MT	4.9%	8.0%	9.0%	-16.1%	Cocoa	USD/MT	NYBOT	0.4%	0.5%	0.4%	-1.6%
<b>Industrial Metals</b>							<b>Industrial Metals</b>						
Aluminum	1,804	USD/MT	-5.1%	-4.2%	-8.7%	-19.0%	Aluminum	USD/MT	LME	-0.7%	-0.7%	-0.1%	-0.5%
Copper	2.9	Usd/lb.	-1.4%	6.2%	5.6%	-5.0%	Copper	Usd/lb.	COMEX	-0.1%	-0.2%	-0.2%	-0.3%
Copper (LME)	6,392	USD/MT	-1.5%	5.8%	3.5%	-5.6%	Copper (LME)	USD/MT	LME	0.0%	-0.1%	0.0%	-0.1%
Zinc	2,871	USD/MT	-3.5%	7.5%	7.3%	-8.2%	Zinc	USD/MT	LME	1.4%	1.0%	0.7%	0.0%
Nickel	12,351	USD/MT	-4.4%	2.4%	5.6%	-10.8%	Nickel	USD/MT	LME	-0.3%	-0.3%	-0.2%	-0.2%
Lead	1,964	USD/MT	-2.2%	-5.1%	0.6%	-16.4%	Lead	USD/MT	LME	-0.3%	-0.4%	-0.3%	-0.2%
Tin	19,727	USD/MT	-8.0%	-5.2%	2.8%	-6.0%	Tin	USD/MT	LME	0.2%	0.2%	0.0%	0.1%
<b>Precious Metals</b>							<b>Precious Metals</b>						
Gold	1,282	USD/t oz.	-0.9%	-2.1%	4.7%	-3.2%	Gold	USD/t oz.	COMEX	-0.5%	-0.3%	-0.4%	-0.5%
Silver	14.8	USD/t oz.	-1.8%	-6.3%	2.8%	-9.5%	Silver	USD/t oz.	COMEX	-0.6%	-0.5%	-0.6%	-0.6%
Platinum	901	USD/t oz.	6.2%	11.3%	8.3%	-1.6%	Platinum	USD/t oz.	NYMEX	-0.6%	-0.5%	-0.6%	-0.7%
Palladium	1,362	USD/t oz.	1.5%	4.5%	26.2%	41.4%	Palladium	USD/t oz.	NYMEX	0.2%	0.3%	0.7%	0.8%
<b>Livestock</b>							<b>Livestock</b>						
Live Cattle	1.2	Usd/lb.	-0.7%	-1.3%	9.2%	0.3%	Live Cattle	Usd/lb.	CME	8.7%	5.9%	5.6%	-1.0%
Lean Hogs	0.8	Usd/lb.	9.6%	47.9%	44.1%	28.3%	Lean Hogs	Usd/lb.	CME	-3.7%	-4.9%	-4.9%	-8.4%
Feeder Cattle	1.4	Usd/lb.	-1.3%	0.5%	-6.8%	1.0%	Feeder Cattle	Usd/lb.	CME	-5.1%	-6.3%	-2.4%	-1.1%
CFTC NET POSITIONING <sup>3</sup>	Current	5 Yr Average	1 Month	6 Month	1 Year	INVENTORY LEVELS <sup>4</sup>	Current	5 Yr Average	1 Month	3 Month	6 Month		
<b>Energy</b>						<b>Energy</b>							
WTI Oil	581,229	429,515	474,644	482,706	755,241	Oil - US	460,633	0.7%	2%	3%	8%		
Brent Oil**	185,639	170,654	137,641	246,947	508,872	Oil - OECD Europe**	329	-2%	3%	1%	-7%		
Natural Gas	-60,595	-113,997	-24,043	-14,801	-99,258	Natural Gas - DOE	1,339	-25%	18%	-39%	-57%		
Gasoline	98,956	70,342	88,950	93,673	87,051	Gasoline - DOE	225,826	-2%	-5%	-12%	0%		
Heating Oil	-12,192	11,986	-13,209	37,935	24,816	Heating Oil - DOE	11,507	0%	10%	-1%	10%		
<b>Agriculture</b>						<b>Industrial Metals</b>							
Wheat	-56,260	-44,877	-51,868	-15,418	-28,417	<b>Aluminum</b>	<b>1,707,105</b>	<b>-41%</b>	<b>-8%</b>	<b>-14%</b>	<b>-8%</b>		
Corn	-270,560	73,439	-137,983	87,295	263,600	Aluminum - LME	1,069,075	-57%	-5%	-18%	2%		
Soybeans	-110,318	43,017	-32,618	-33,353	190,817	Aluminum - SHFE	638,030	44%	-13%	-7%	-22%		
Sugar	5,144	66,056	-65,837	67,901	-111,945	<b>Copper</b>	<b>486,635</b>	<b>-7%</b>	<b>3%</b>	<b>37%</b>	<b>8%</b>		
Cotton	42,548	57,391	20,237	56,116	99,224	Copper - LME	232,225	-5%	38%	57%	62%		
Coffee	-66,070	-6,579	-66,410	-38,341	-50,188	Copper - SHFE	219,679	24%	-16%	83%	47%		
Soybean Oil	-29,628	35,230	7,947	-2,844	-1,518	Copper - COMEX	34,731	-66%	-20%	-60%	-78%		
Cocoa	-2,345	24,852	-31,483	-22,679	60,297	<b>Nickel - LME</b>	<b>173,634</b>	<b>-51%</b>	<b>-5%</b>	<b>-14%</b>	<b>-21%</b>		
<b>Industrial Metals<sup>5</sup></b>						<b>Zinc</b>							
Copper (COMEX)	869	3,616	3,795	8,648	40,918	Zinc - LME	81,325	-79%	55%	-29%	-47%		
Copper (LME)	42,659	40,065	37,356	48,070	50,486	Zinc - SHFE	79,399	-42%	-28%	130%	64%		
Aluminum	157,722	157,477	159,311	187,331	140,759	<b>Lead</b>	<b>104,029</b>	<b>-49%</b>	<b>-10%</b>	<b>-1%</b>	<b>-12%</b>		
Nickel	20,523	13,389	20,947	3,709	21,781	Lead - LME	74,700	-55%	-5%	-4%	-33%		
Zinc	59,078	46,207	64,620	45,153	55,483	Lead - SHFE	29,329	-20%	-21%	7%	378%		
Lead	45,788	51,295	46,698	45,946	55,793	<b>Tin</b>	<b>8,334</b>	<b>-13%</b>	<b>-9%</b>	<b>-18%</b>	<b>-21%</b>		
Tin	7,947	7,858	9,375	7,035	7,991	Tin - LME	905	-82%	-10%	-52%	-71%		
<b>Precious Metals</b>						<b>Tin - SHFE</b>							
Gold	36,022	134,276	137,125	28,404	141,913	7,429	68%	-9%	-10%	0%			
Silver	-3,071	36,219	26,627	-5,651	10,307	<b>Agriculture</b>							
Platinum	32,468	25,344	25,619	12,840	17,714	Wheat - USDA	275,610	40.6%	1.9%	2.8%	5.9%		
Palladium	8,962	14,832	12,193	13,600	11,178	Corn - USDA	314,010	115%	1.8%	1.7%	97.1%		
<b>Livestock</b>						<b>Soybeans - USDA</b>							
Live Cattle	183,134	87,964	175,308	97,625	29,202	Soybeans - USDA	107,360	70%	0.2%	-6.9%	-2%		
Lean Hogs	97,769	43,385	69,591	26,838	5,772	Sugar - USDA	52,850	47%	-	-	8%		
Feeder Cattle	10,928	7,792	9,256	2,527	-526	Cotton - USDA	76,440	7%	0.5%	4.4%	2.7%		
						Coffee - USDA	37,056	3%	-	-	13%		
						Soybean Oil - USDA	3,700	-11%	-0.3%	-1%	2%		

<sup>1</sup>Performance of front month futures from 29 Apr 18 (1 Year), 29 Oct 18 (6 Month), 29 Jan 19 (3 Month) and 29 Mar 19 (1 Month) to 29 Apr 19.  
<sup>2</sup>Roll return non-annualised from front month futures into second "1" month on 29 Jan 19 (3 Month), 29 Mar 19 (1 Month), 23 Apr 19 (1 Week), 29 Apr 19.

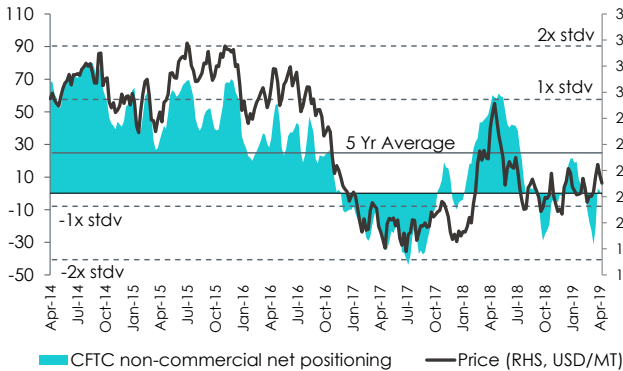
<sup>3</sup>Net positions in number of contracts. <sup>4</sup>Current inventories relative to 1, 3, 6 months ago. Under the column "5 yr average" is the current inventory level relative to 5 year average inventory. For energy, 5 yr average is the average of the same month as report month over the past 5 years. SHFE started reporting inventory data from April 2015. <sup>5</sup>All industrial metals positioning data (excluding copper) is sourced from LME COIR data in Bloomberg from 30 January 2018 (first available date) under post-MIFID rules. \*\*Brent 5 Yr average of net positions from January 2011 as positions were not reported by CFTC before then and inventory data (OECD) reported with 3 month lag with current = Jan 2019.

Historical performance is not an indication of future performance and any investments may go down in value.

# CFTC Speculative Net Long Futures Positions

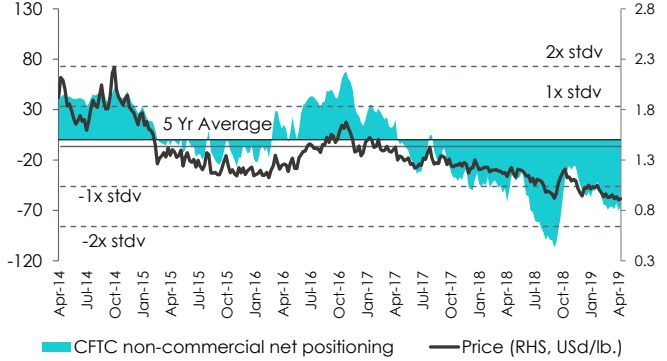
## Agriculture

### Cocoa



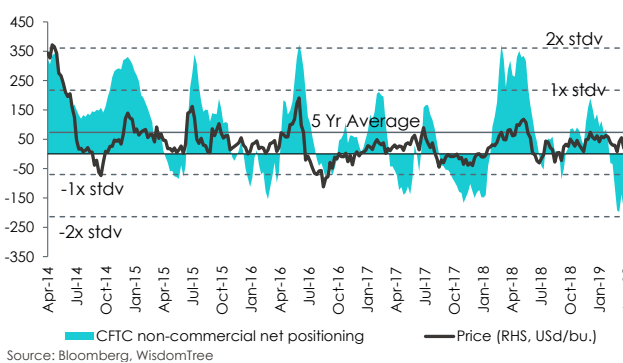
Source: Bloomberg, WisdomTree

### Coffee



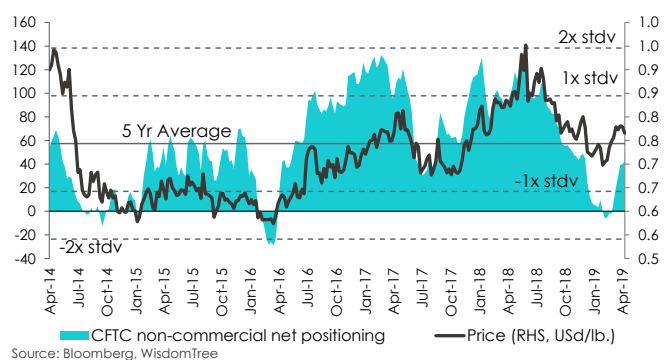
Source: Bloomberg, WisdomTree

### Corn



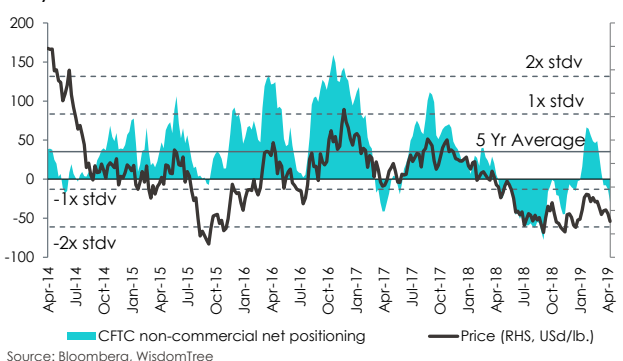
Source: Bloomberg, WisdomTree

### Cotton



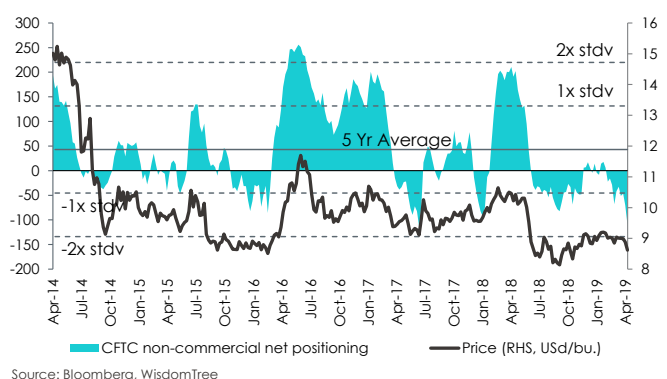
Source: Bloomberg, WisdomTree

### Soybean Oil



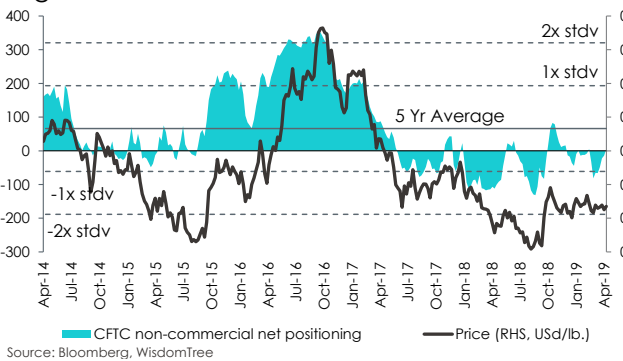
Source: Bloomberg, WisdomTree

### Soybeans



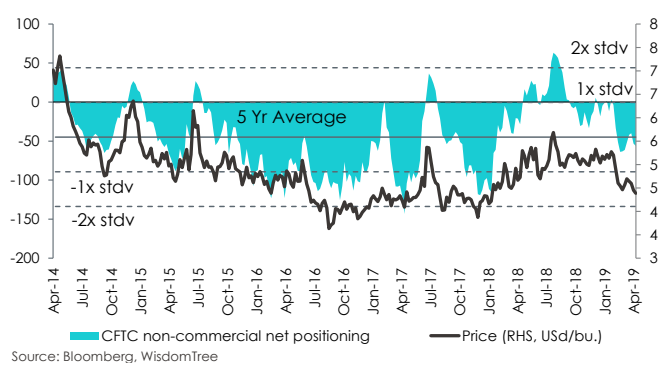
Source: Bloomberg, WisdomTree

### Sugar



Source: Bloomberg, WisdomTree

### Wheat

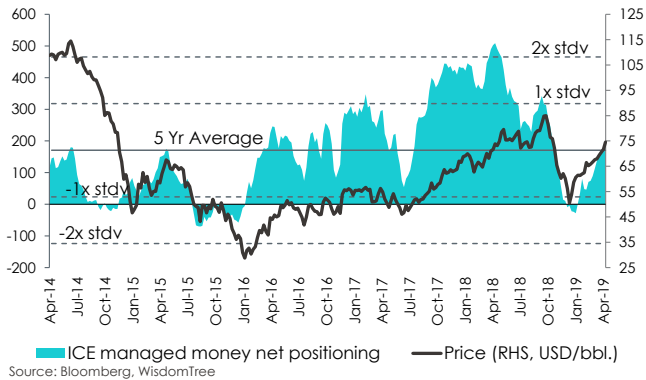


Source: Bloomberg, WisdomTree

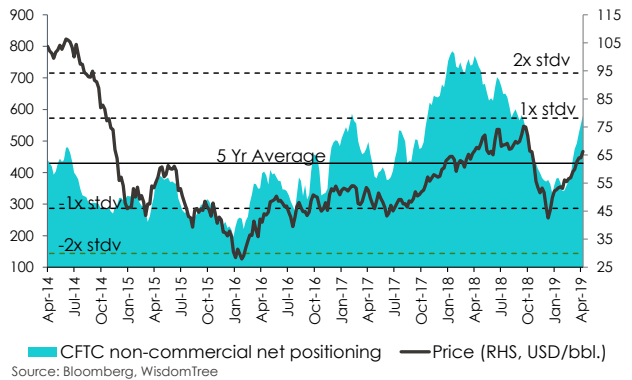
Note: positioning in '000 contracts. Standard deviation based on 5 year average CFTC non-commercial net positioning  
All commodity futures price data is denominated in USD unless otherwise indicated.  
Historical performance is not an indication of future performance and any investments may go down in value.

## Energy

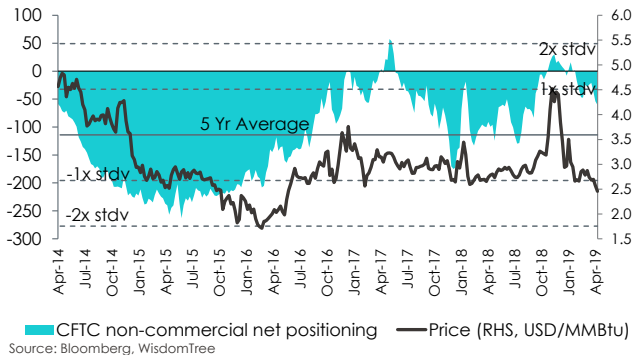
### Brent Oil



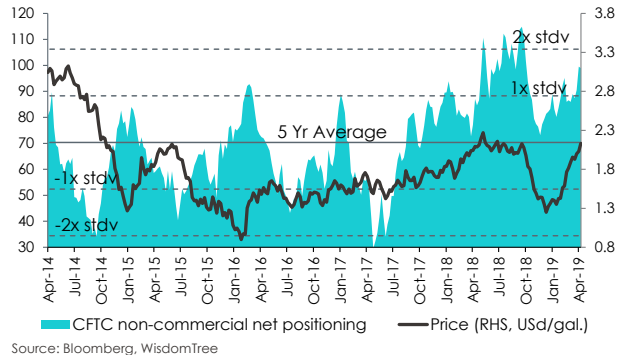
### WTI Oil



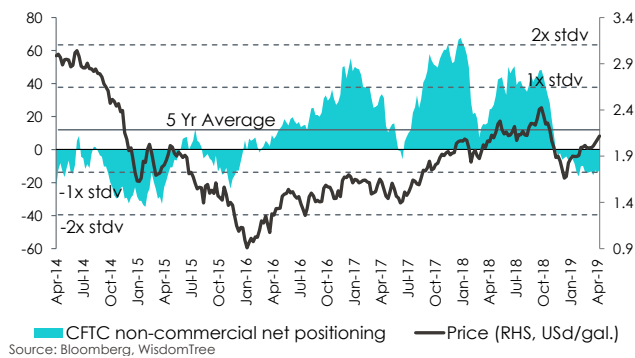
### Natural Gas



### Gasoline



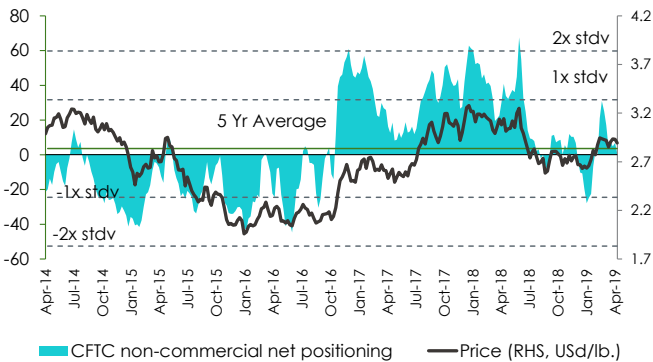
### Heating Oil





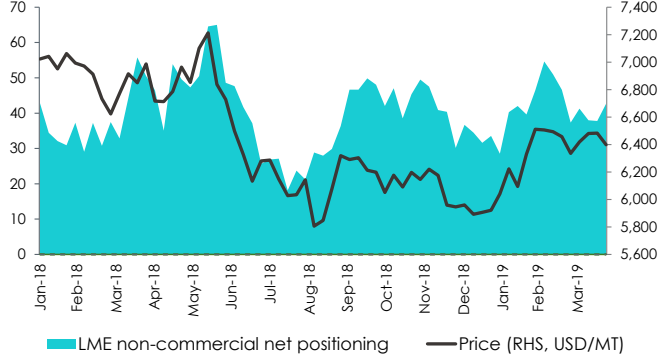
## Industrial Metals

### Copper (COMEX)



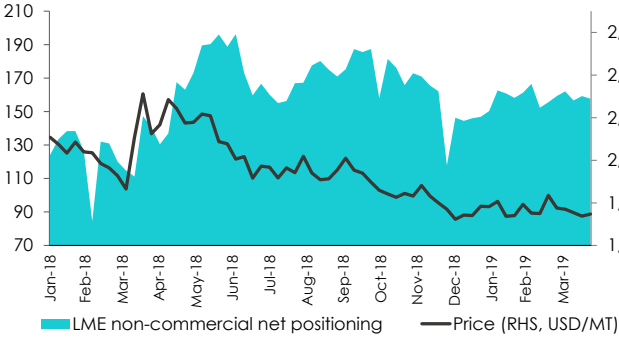
Source: Bloomberg, WisdomTree

### Copper (LME)



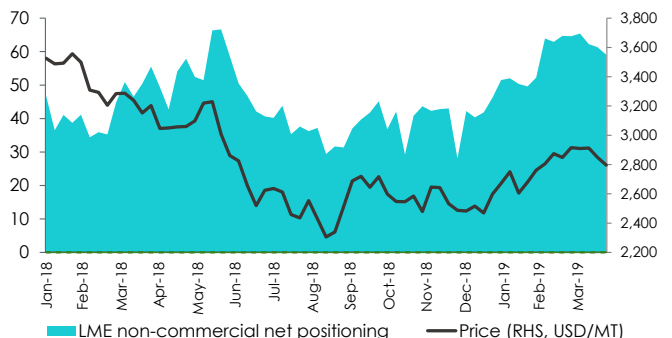
Source: Bloomberg, WisdomTree

### Aluminum



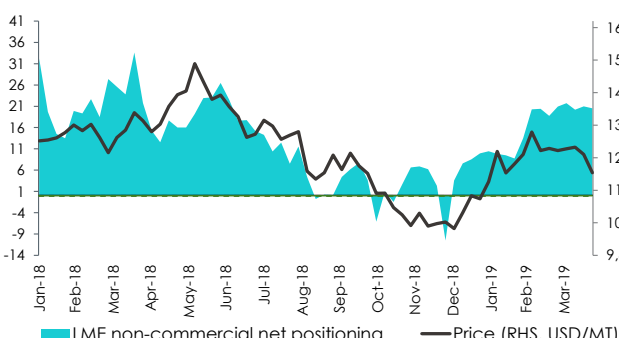
Source: Bloomberg, WisdomTree

### Zinc



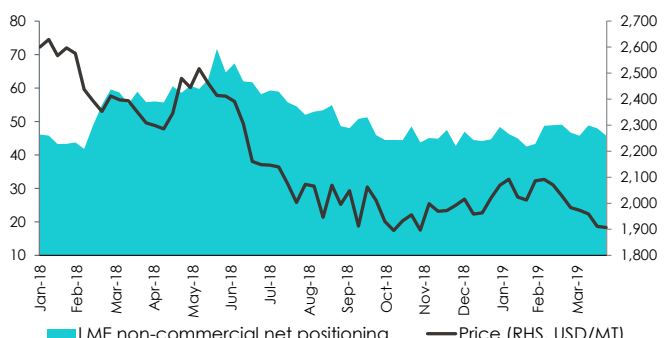
Source: Bloomberg, WisdomTree

### Nickel



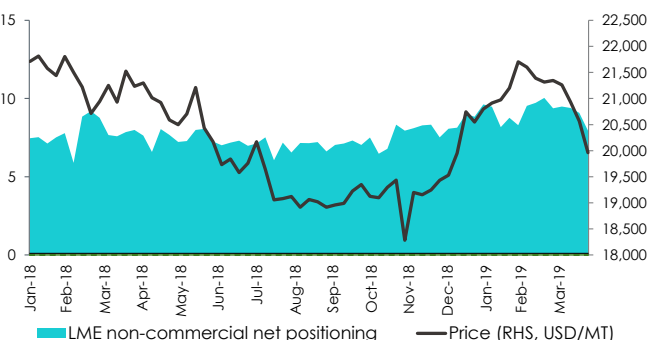
Source: Bloomberg, WisdomTree

### Lead



Source: Bloomberg, WisdomTree

### Tin



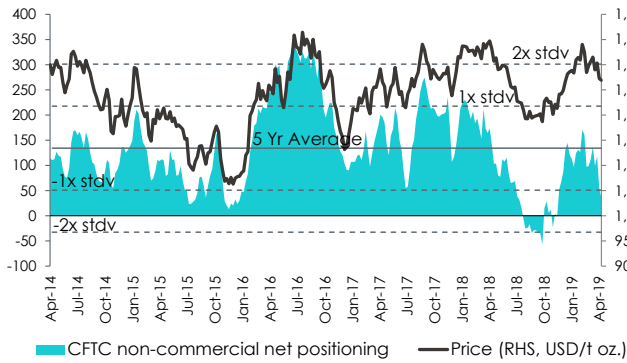
Source: Bloomberg, WisdomTree

Note: positioning in '000 contracts. Standard deviation based on 5 year average CFTC non-commercial net positioning. LME non-commercial net positions from 30 January 2018 post MiFID II data and respective graphs represent daily data. All commodity futures price data is denominated in USD unless otherwise indicated.

**Historical performance is not an indication of future performance and any investments may go down in value.**

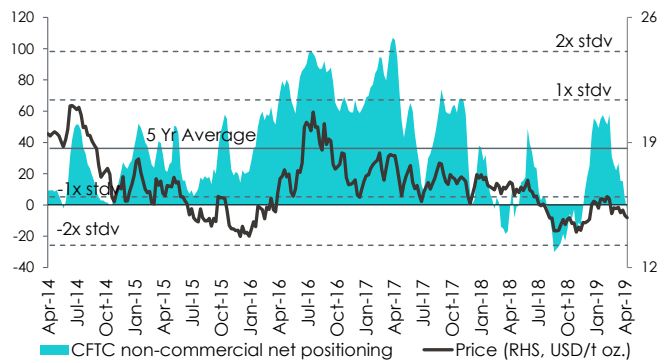
## Precious Metals

### Gold



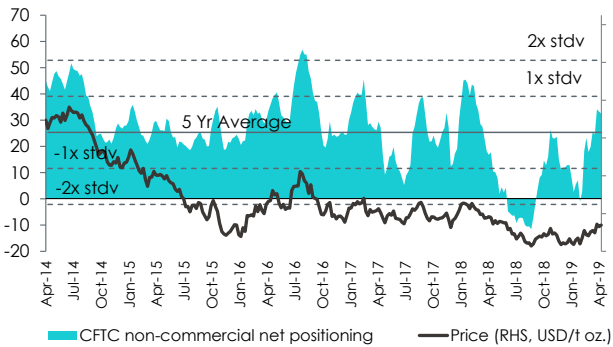
Source: Bloomberg, WisdomTree

### Silver



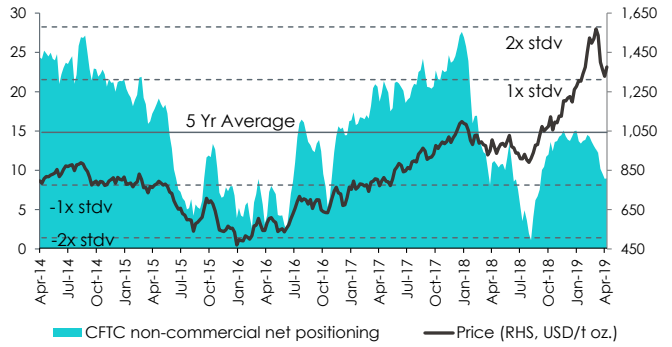
Source: Bloomberg, WisdomTree

### Platinum



Source: Bloomberg, WisdomTree

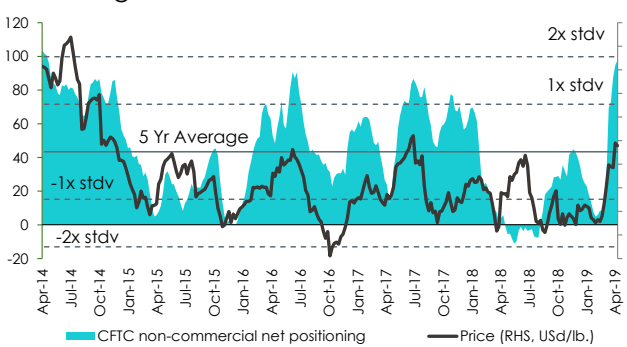
### Palladium



Source: Bloomberg, WisdomTree

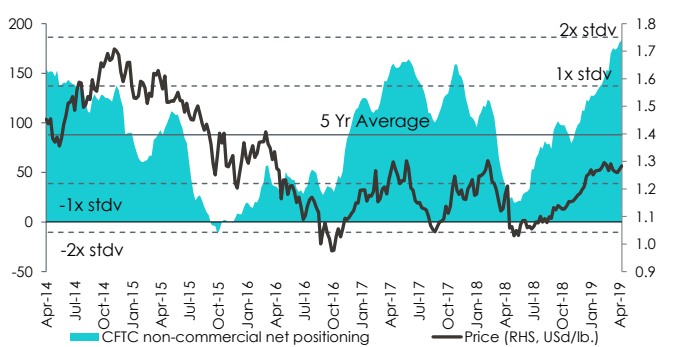
## Livestock

### Lean Hogs



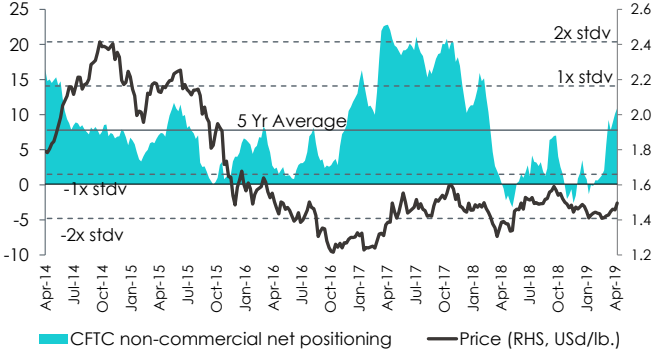
Source: Bloomberg, WisdomTree

### Live Cattle



Source: Bloomberg, WisdomTree

### Feeder Cattle



Source: Bloomberg, WisdomTree

Note: positioning in '000 contracts. Standard deviation based on 5 year average CFTC non-commercial net positioning, respective graphs represent daily data. All commodity futures price data is denominated in USD unless otherwise indicated.

Historical performance is not an indication of future performance and any investments may go down in value.

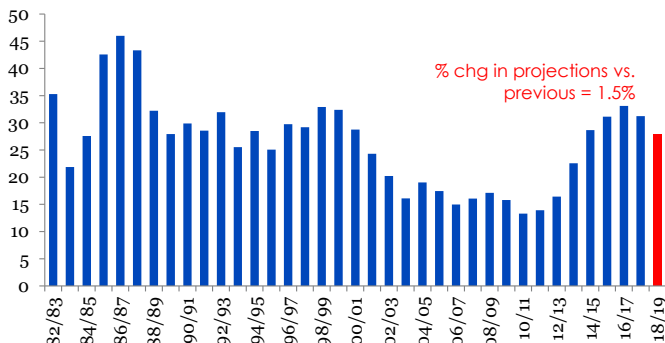


# Inventories

## Agriculture

### Corn - Stock to Use

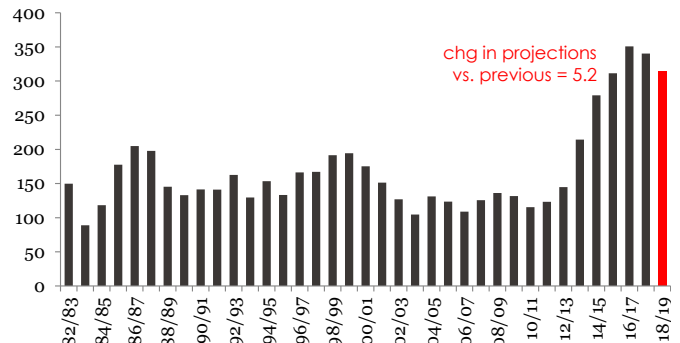
Annual data in %, from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Corn - Ending Stocks

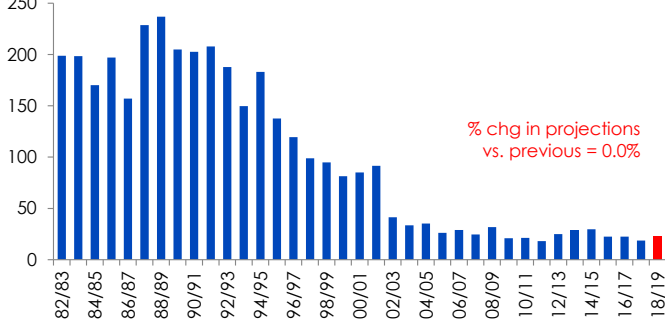
Annual data in mln tons, from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Coffee - Stock to Use

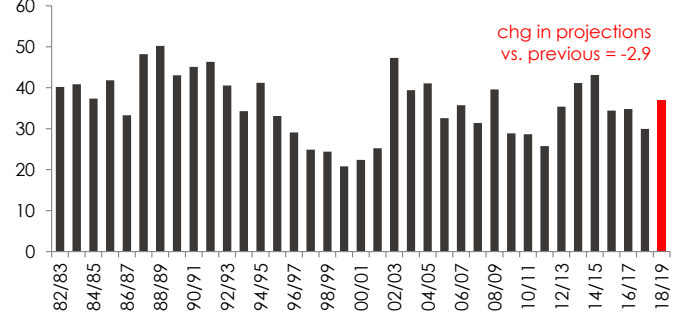
Annual data in %, from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Coffee - Ending Stocks

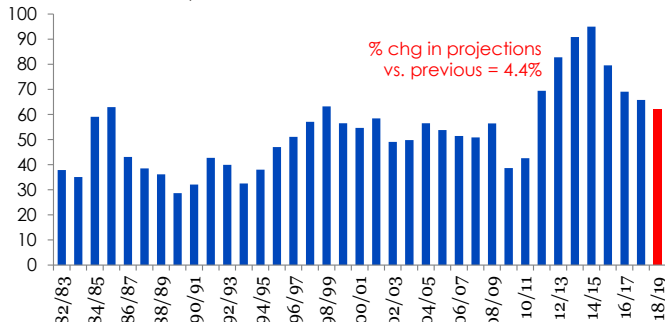
Annual data in mln bags (60 kg), from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Cotton - Stock to Use

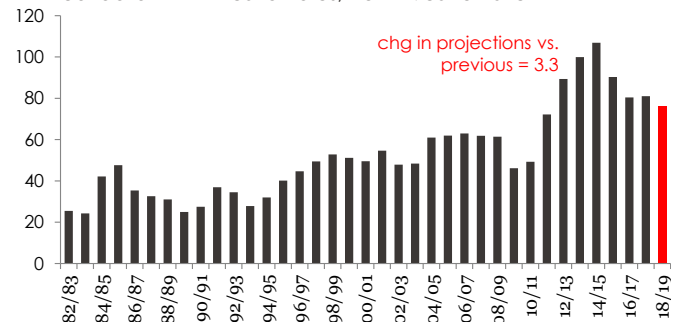
Annual data in %, from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Cotton - Ending Stocks

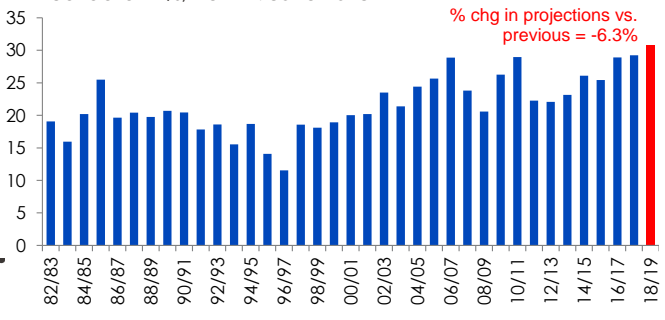
Annual data in mln 480 lb Bales, from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Soybeans - Stock to Use

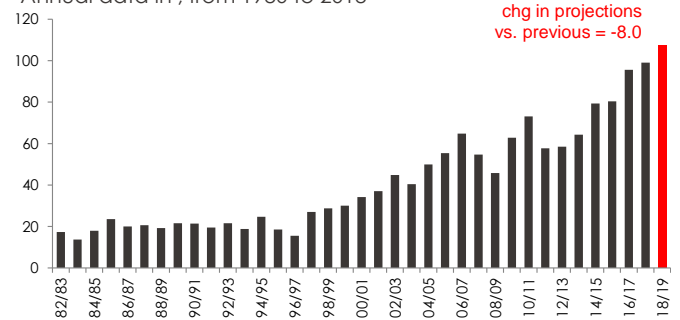
Annual data in %, from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Soybeans - Ending Stocks

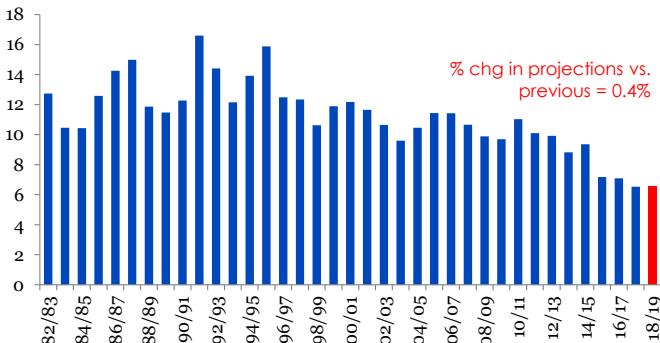
Annual data in , from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Soybean Oil - Stock to Use

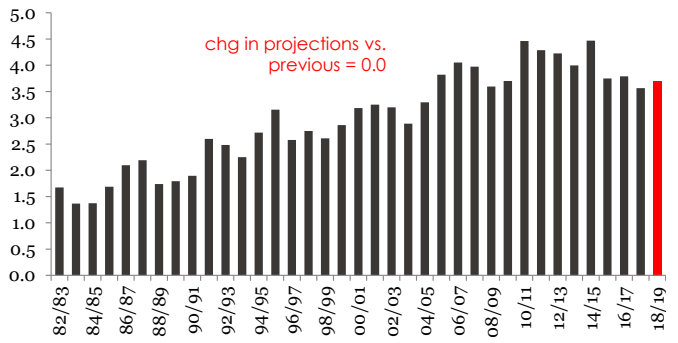
Annual data in %, from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Soybean Oil - Ending Stocks

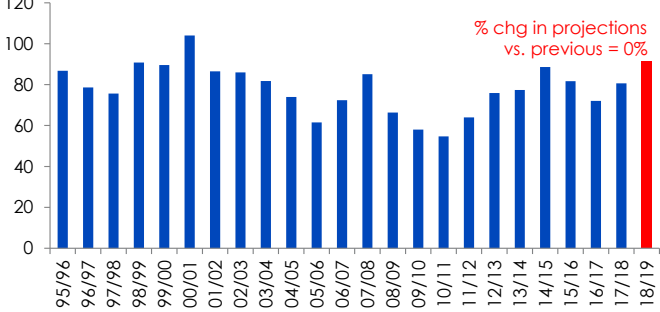
Annual data in mln Metric Tons, from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Sugar - Stock to Use

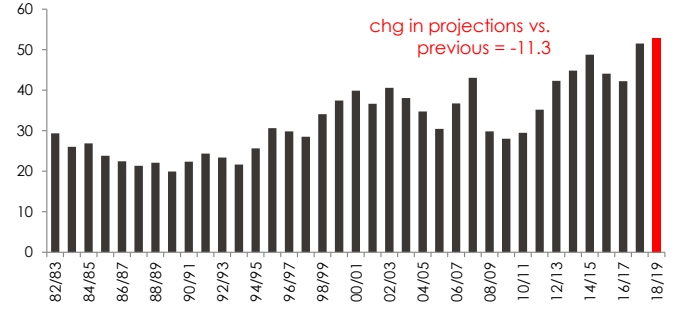
Annual data in %, from 1998 to 2018



Source: USDA, Bloomberg, WisdomTree

### Sugar - Ending Stocks

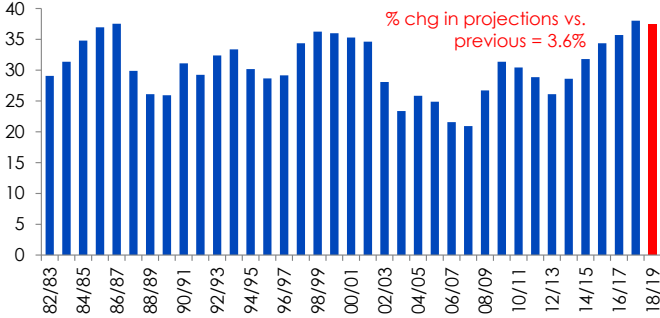
Annual data in mln Metric Tons, from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Wheat - Stock to Use

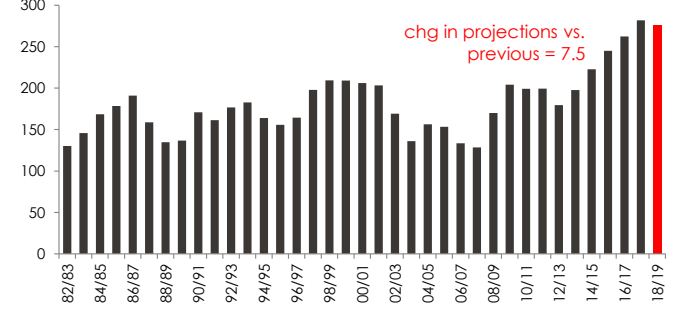
Annual data in %, from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Wheat - Ending Stocks

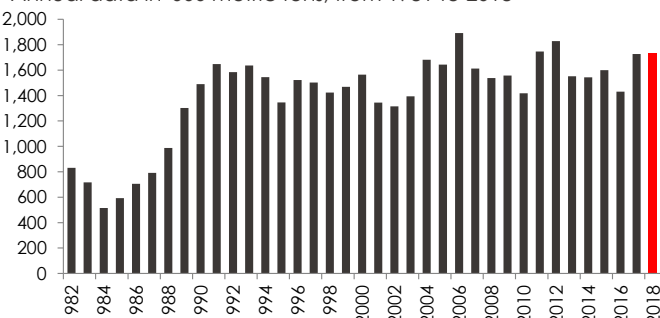
Annual data in mln tons, from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Cocoa - Inventory

Annual data in '000 metric tons, from 1981 to 2018

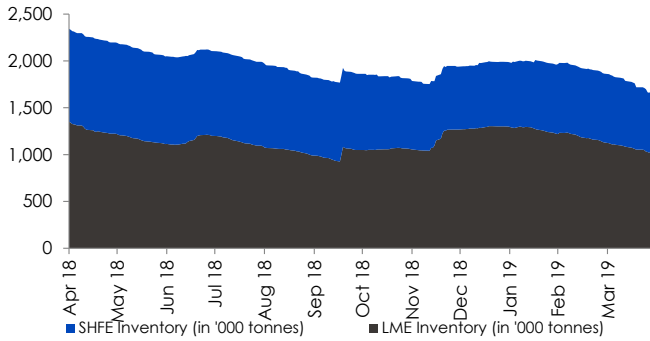


Source: International Cocoa Organisation, Bloomberg, WisdomTree

## Industrial Metals

### Aluminum Inventory

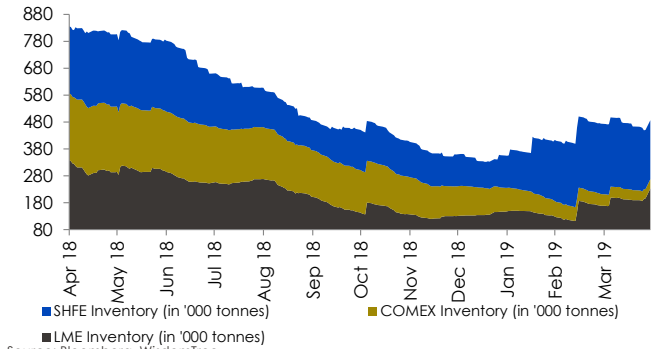
Daily data, from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### Copper Inventory

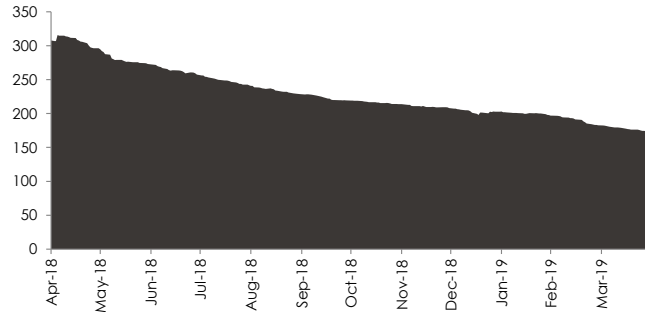
Daily data, from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### Nickel Inventory

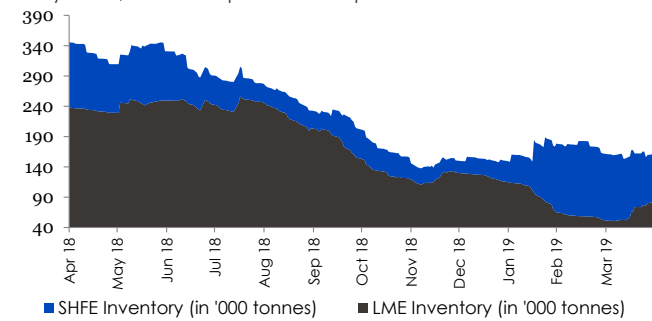
Daily data in '000 MT, from 29 Apr 18 to 29 Apr 19



Source: LME, Bloomberg, WisdomTree

### Zinc Inventory

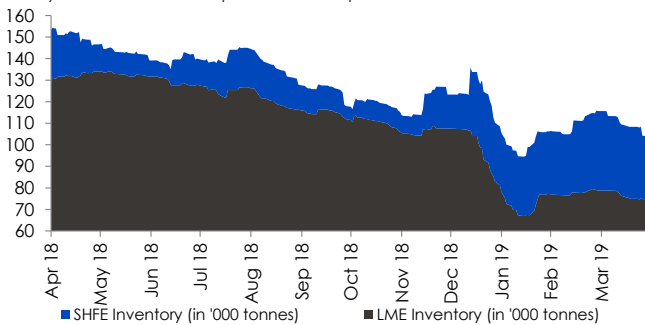
Daily data, from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### Lead Inventory

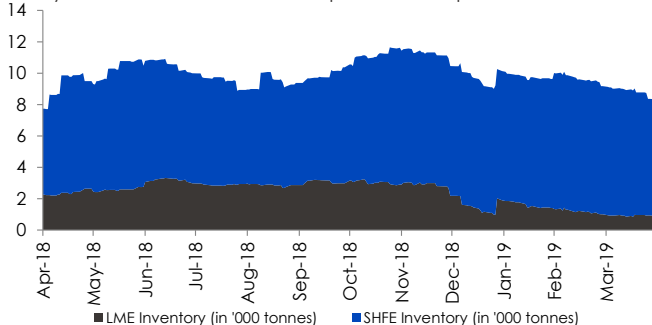
Daily data, from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### Tin Inventory

Daily data in '000 MT, from 29 Apr 18 to 29 Apr 19

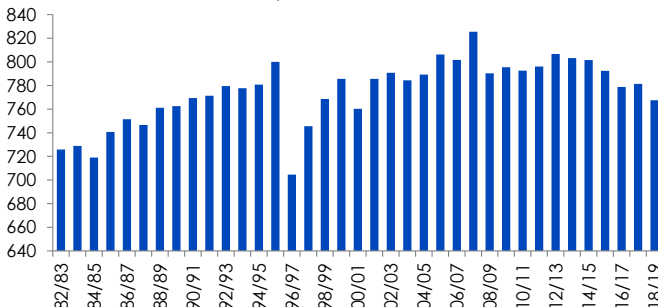


Source: LME, Bloomberg, WisdomTree

## Livestock

### Lean Hogs Inventory

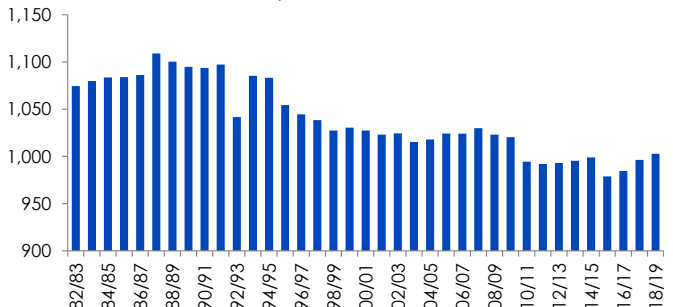
Annual data in mln Heads, from 1980 to 2018



Source: USDA, Bloomberg, WisdomTree

### Live Cattle Inventory

Annual data in mln Heads, from 1980 to 2018

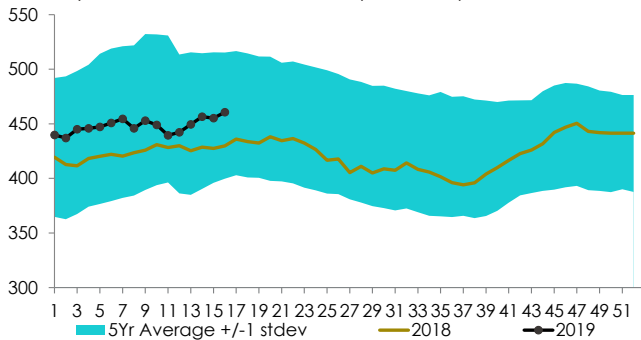


Source: USDA, Bloomberg, WisdomTree

## Energy

### US Oil Inventory

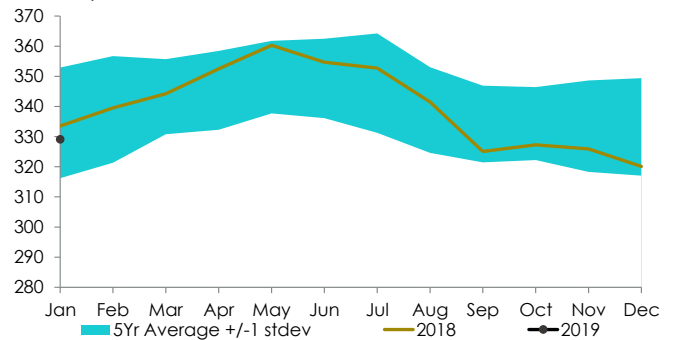
Weekly data in mln barrels, from Apr 14 to Apr 19



Source: DOE, Bloomberg, WisdomTree

### OECD Europe Oil Industry Inventory

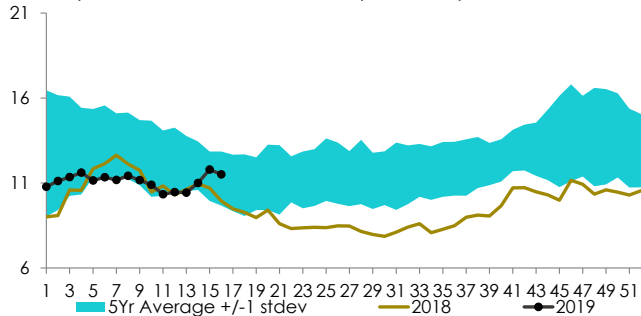
Monthly data in mln barrels, from Jan 14 to Oct 18



Source: IEA, Bloomberg, WisdomTree

### Heating Oil Inventory

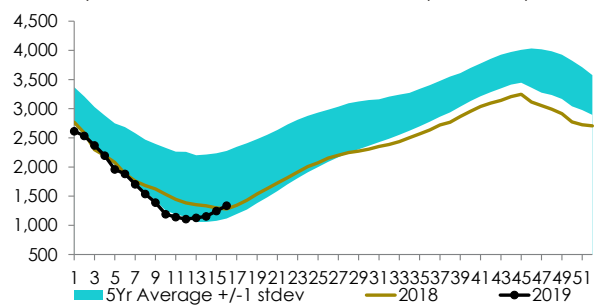
Weekly data in mln barrels, from Apr 14 to Apr 19



Source: DOE, Bloomberg, WisdomTree

### Natural Gas Inventory

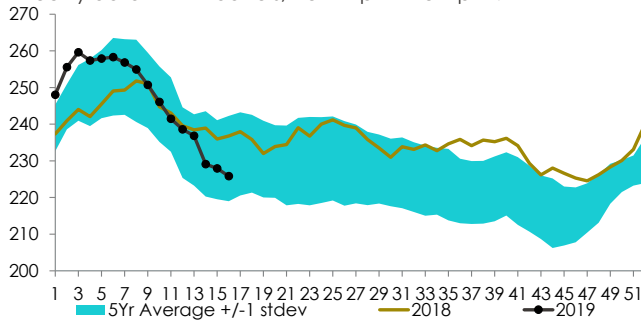
Weekly data in billion cubic feet, from Apr 14 to Apr 19



Source: DOE, Bloomberg, WisdomTree

### Gasoline Inventory

Weekly data in mln barrels, from Apr 14 to Apr 19



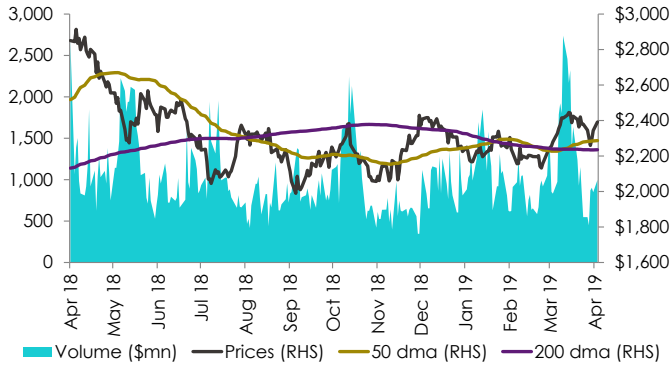
Source: DOE, Bloomberg, WisdomTree

# Commodities Front Month Futures and Trading Volumes

## Agriculture

Cocoa Front Month Futures Price

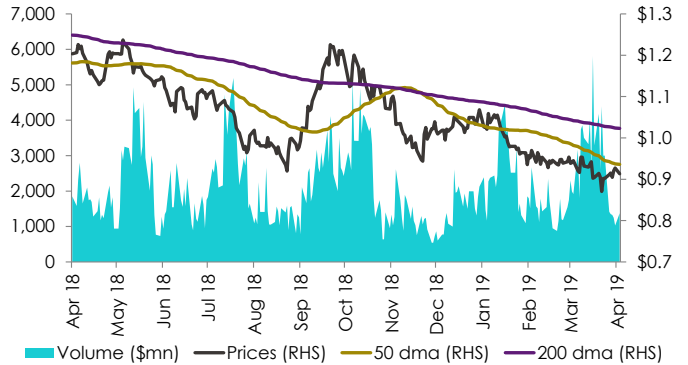
Daily data in USD/MT, from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Coffee Front Month Futures Price

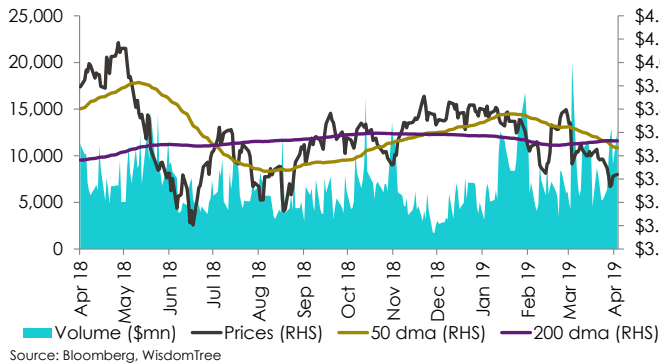
Daily data in USD/lb., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Corn Front Month Futures Price

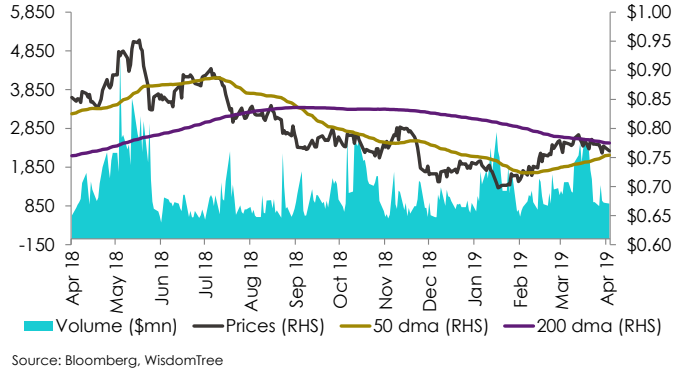
Daily data in USD/bu., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Cotton Front Month Futures Price

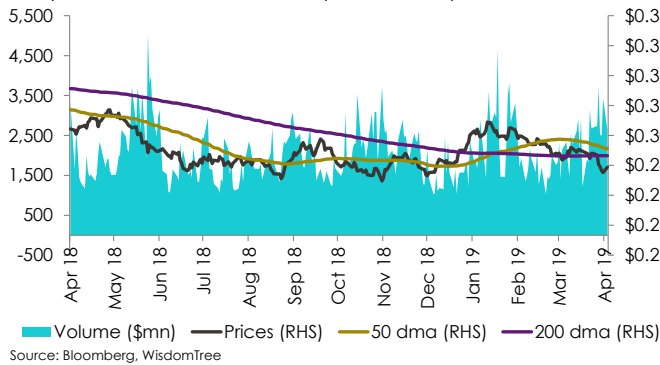
Daily data in USD/lb., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Soybean Oil Front Month Futures Price

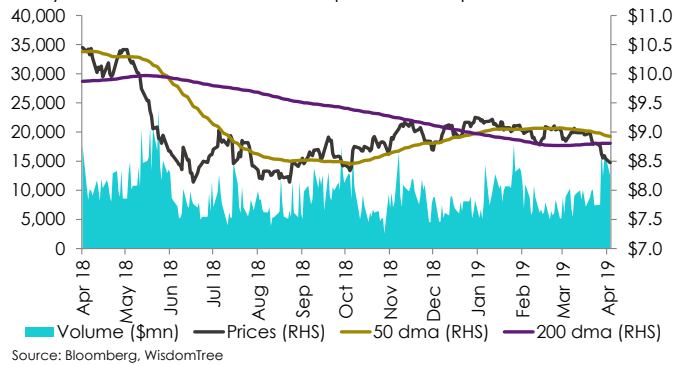
Daily data in USD/lb., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Soybeans Front Month Futures Price

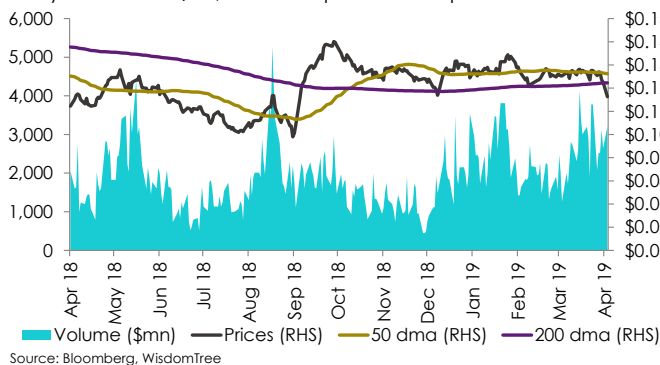
Daily data in USD/bu., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Sugar Front Month Futures Price

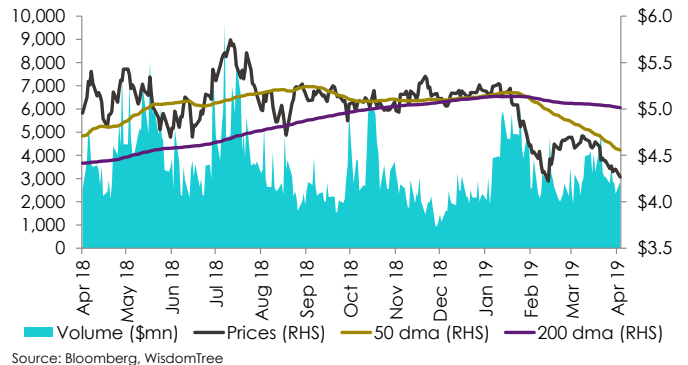
Daily data in USD/lb., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Wheat Front Month Futures Price

Daily data in USD/bu., from 29 Apr 18 to 29 Apr 19



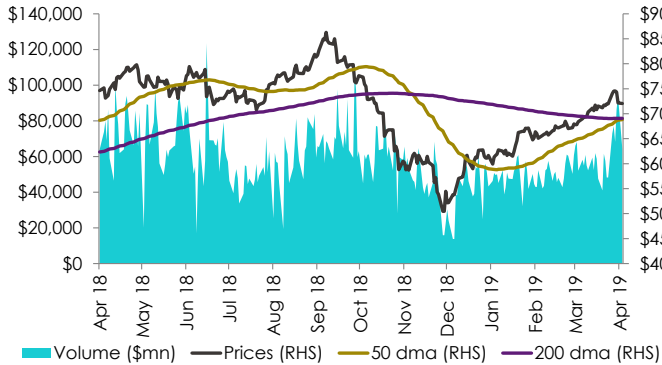
Source: Bloomberg, WisdomTree

Note: all commodity futures trading volume and price data is denominated in USD unless otherwise indicated.  
**Historical performance is not an indication of future performance and any investments may go down in value.**

## Energy

### Brent Oil Front Month Futures Price

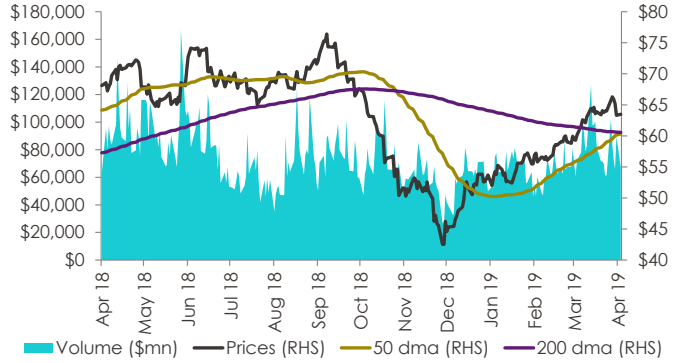
Daily data in USD/bbl., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### WTI Oil Front Month Futures Price

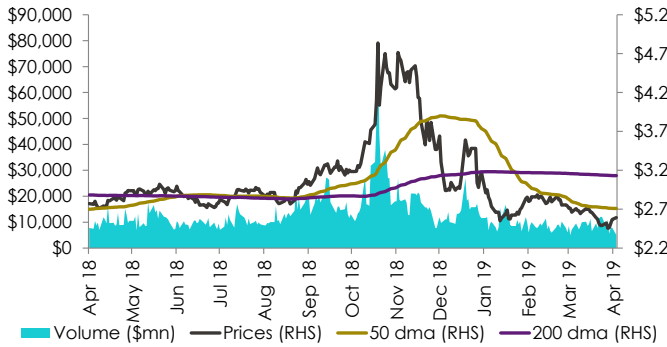
Daily data in USD/bbl., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### Natural Gas Front Month Futures Price

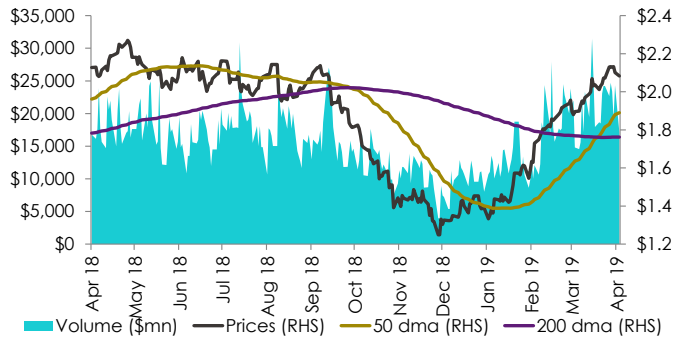
Daily data in USD/MMBtu, from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### Gasoline Front Month Futures Price

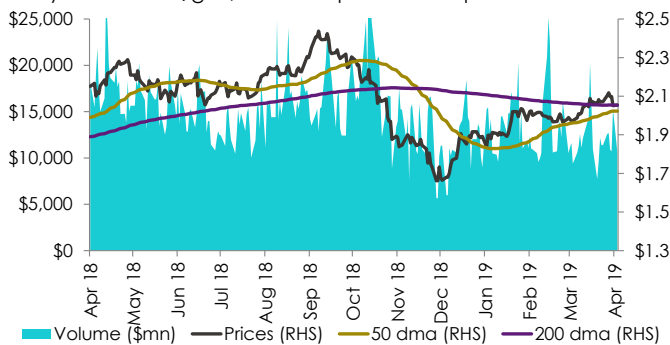
Daily data in USD/gal., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### Heating Oil Front Month Futures Price

Daily data in USD/gal., from 29 Apr 18 to 29 Apr 19

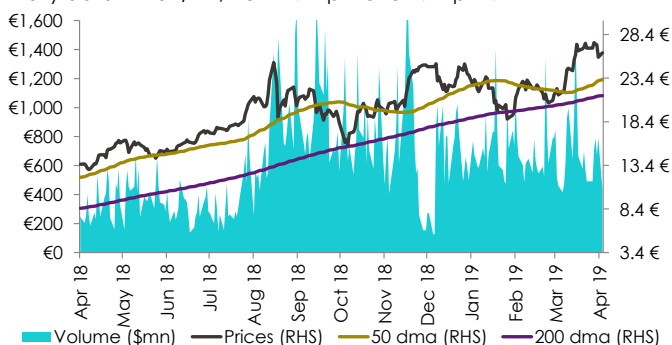


Source: Bloomberg, WisdomTree

## Carbon

### Carbon Front Month Futures Price

Daily data in EUR/MT, from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

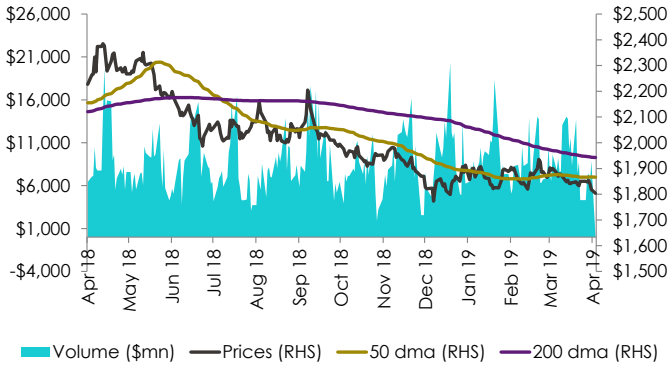
Note: all commodity futures trading volume and price data is denominated in USD unless otherwise indicated.  
**Historical performance is not an indication of future performance and any investments may go down in value.**



## Industrial Metals

Aluminum Front Month Futures Price

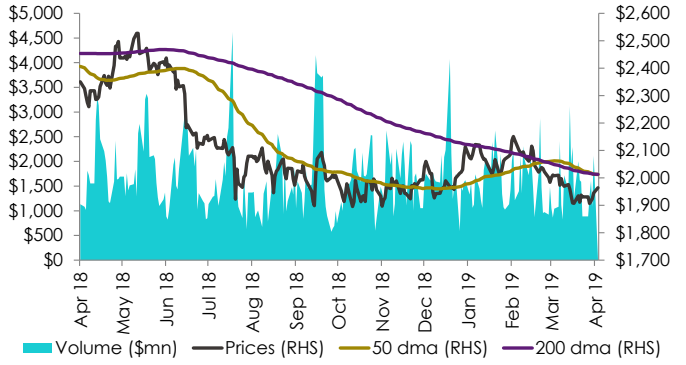
Daily data in USD/MT, from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Lead Front Month Futures Price

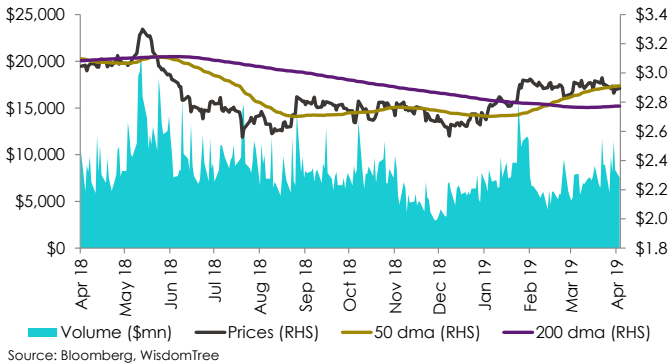
Daily data in USD/MT, from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Copper (COMEX) Front Month Futures Price

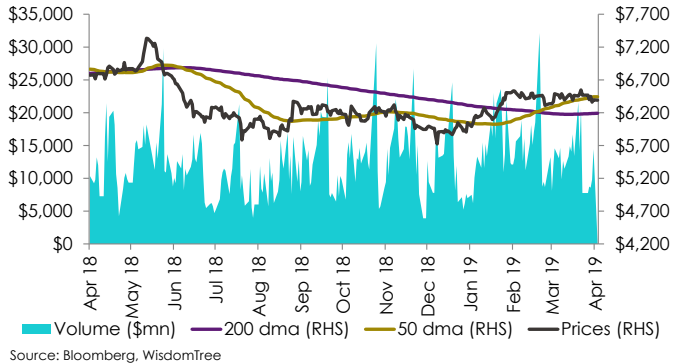
Daily data in USD/lb., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Copper (LME) Front Month Futures Price

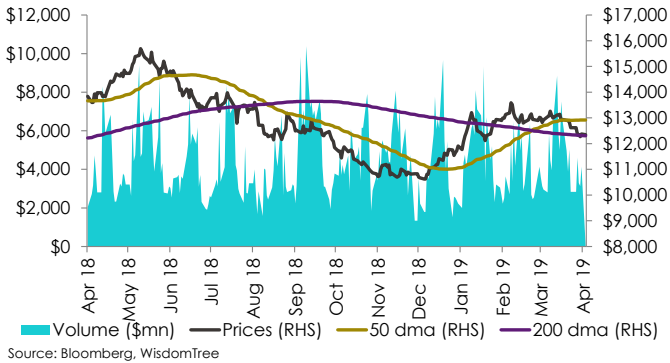
Daily data in USD/MT, from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Nickel Front Month Futures Price

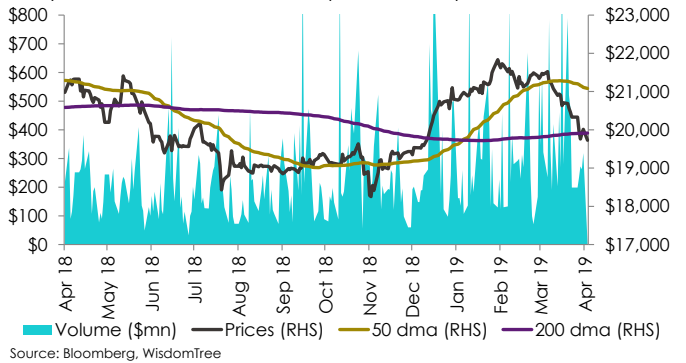
Daily data in USD/MT, from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Tin Front Month Futures Price

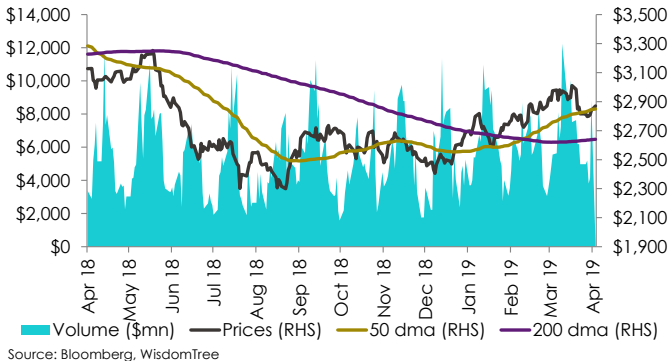
Daily data in USD/MT, from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

Zinc Front Month Futures Price

Daily data in USD/MT, from 29 Apr 18 to 29 Apr 19



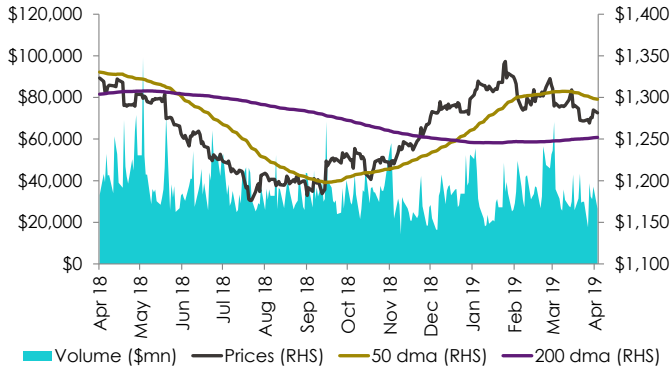
Source: Bloomberg, WisdomTree

Note: all commodity futures trading volume and price data is denominated in USD unless otherwise indicated.  
**Historical performance is not an indication of future performance and any investments may go down in value.**

## Precious Metals

### Gold Front Month Futures Price

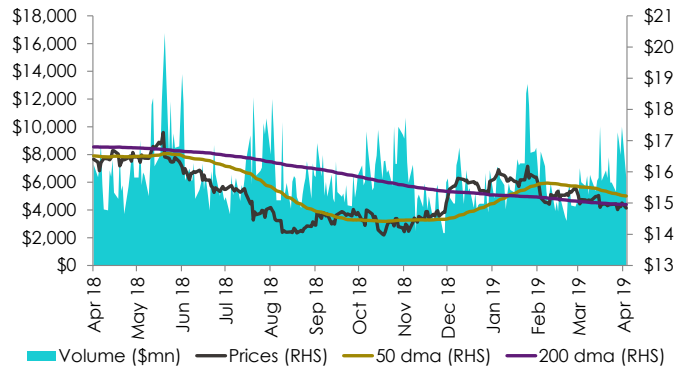
Daily data in USD/t oz., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### Silver Front Month Futures Price

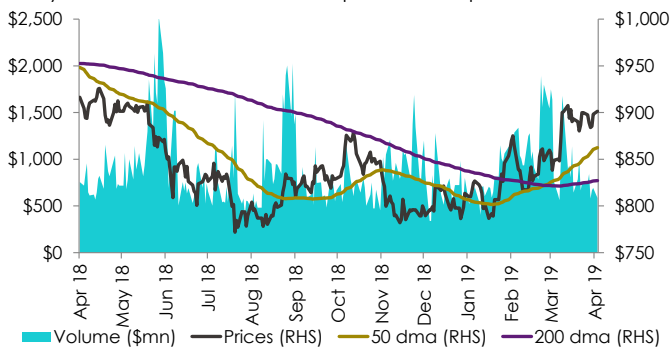
Daily data in USD/t oz., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### Platinum Front Month Futures Price

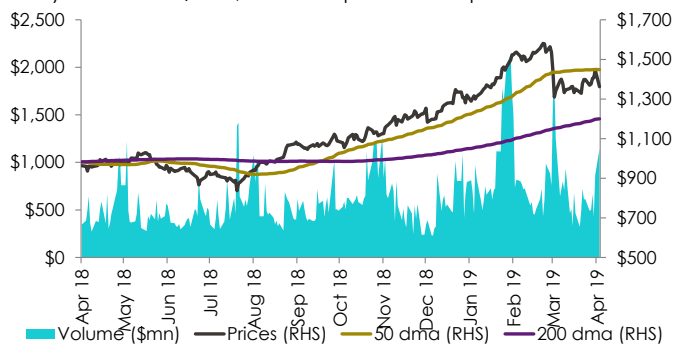
Daily data in USD/t oz., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### Palladium Front Month Futures Price

Daily data in USD/t oz., from 29 Apr 18 to 29 Apr 19

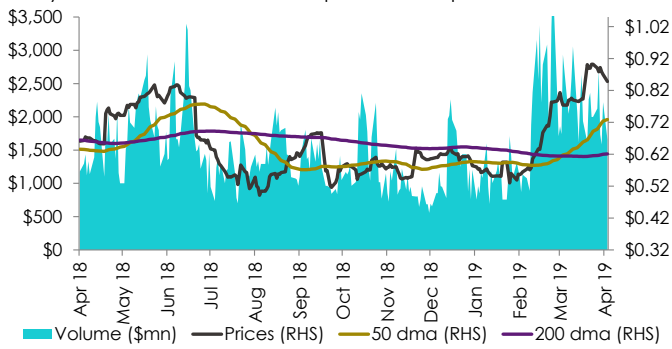


Source: Bloomberg, WisdomTree

## Livestock

### Lean Hogs Front Month Futures Price

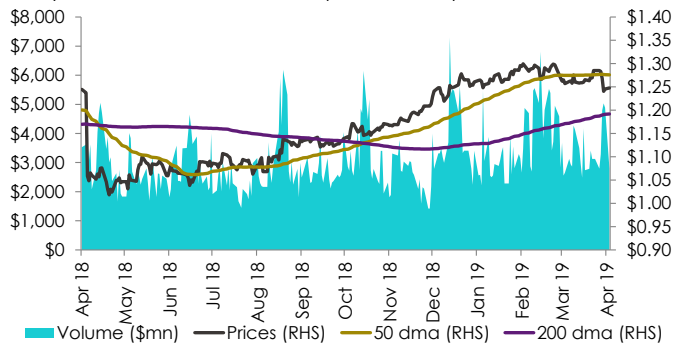
Daily data in USD/lb., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### Live Cattle Front Month Futures Price

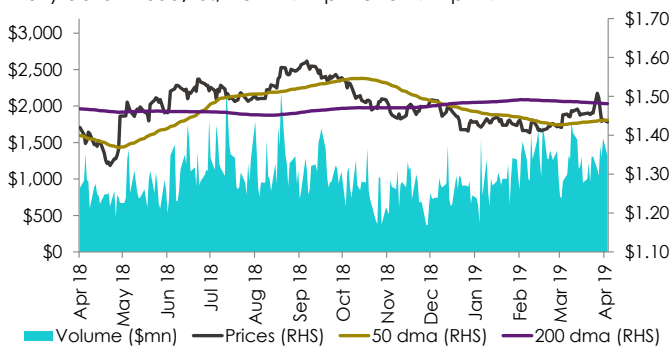
Daily data in USD/lb., from 29 Apr 18 to 29 Apr 19



Source: Bloomberg, WisdomTree

### Feeder Cattle Front Month Futures Price

Daily data in USD/lb., from 29 Apr 18 to 29 Apr 19



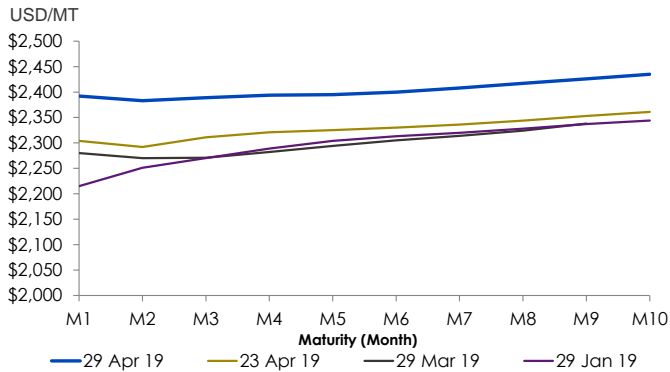
Source: Bloomberg, WisdomTree

Note: all commodity futures trading volume and price data is denominated in USD unless otherwise indicated.  
**Historical performance is not an indication of future performance and any investments may go down in value.**

# Futures Curves

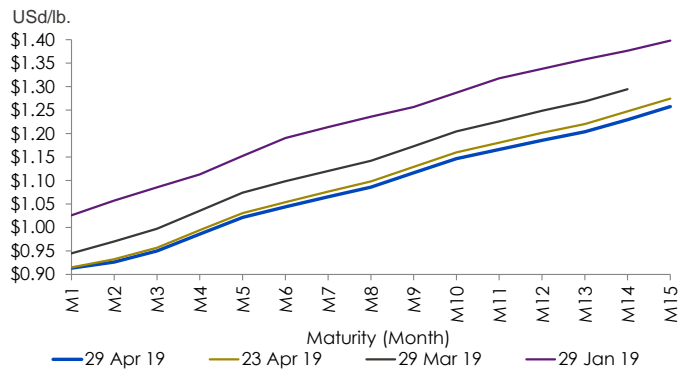
## Agriculture

Cocoa Futures



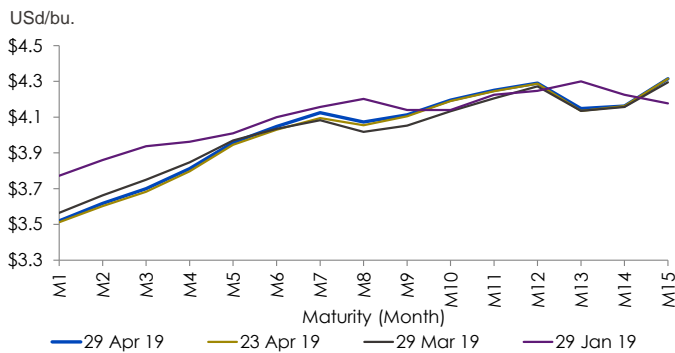
Source: Bloomberg, WisdomTree

Coffee Futures



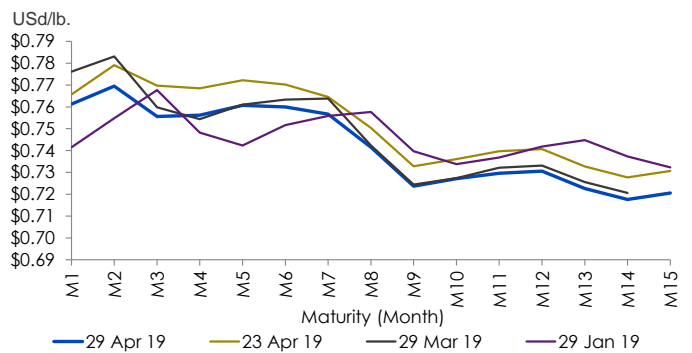
Source: Bloomberg, WisdomTree

Corn Futures



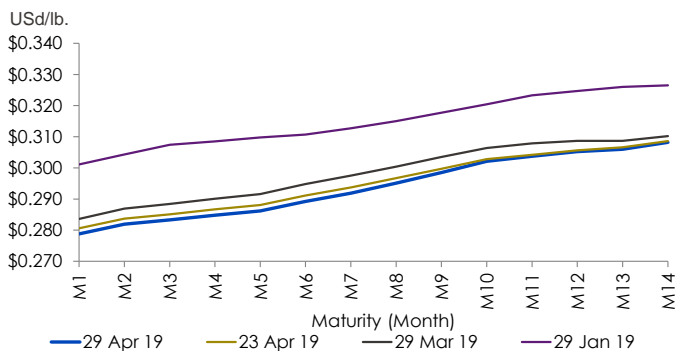
Source: Bloomberg, WisdomTree

Cotton Futures



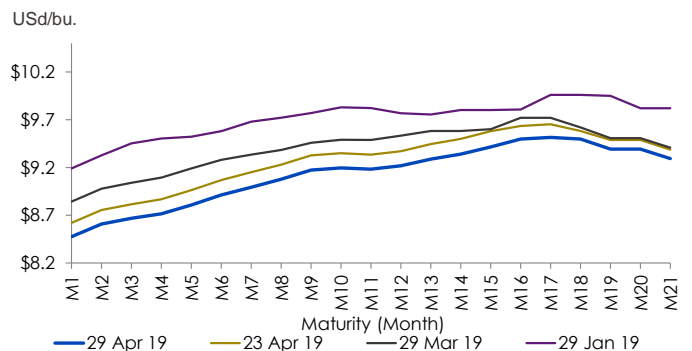
Source: Bloomberg, WisdomTree

Soybean Oil Futures



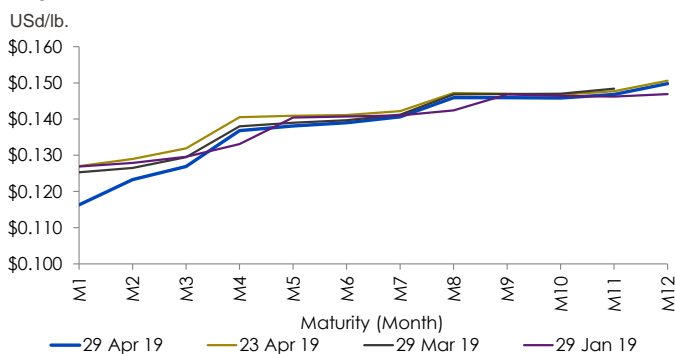
Source: Bloomberg, WisdomTree

Soybeans Futures



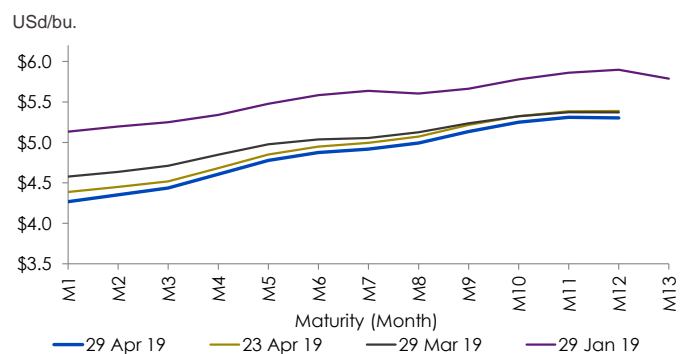
Source: Bloomberg, WisdomTree

Sugar Futures



Source: Bloomberg, WisdomTree

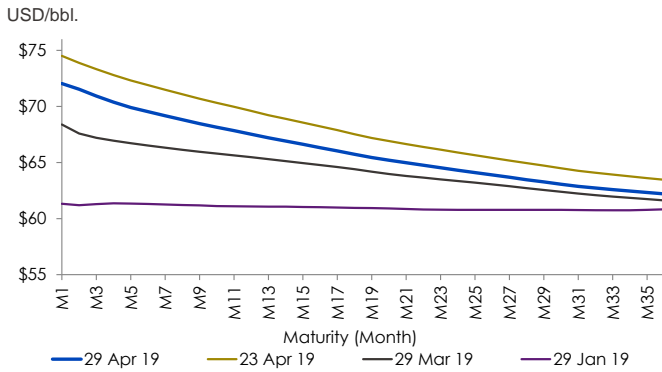
Wheat Futures



Source: Bloomberg, WisdomTree

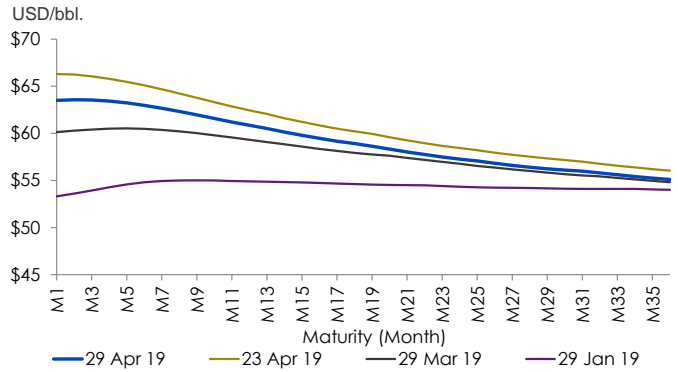
## Energy

### Brent Oil Futures



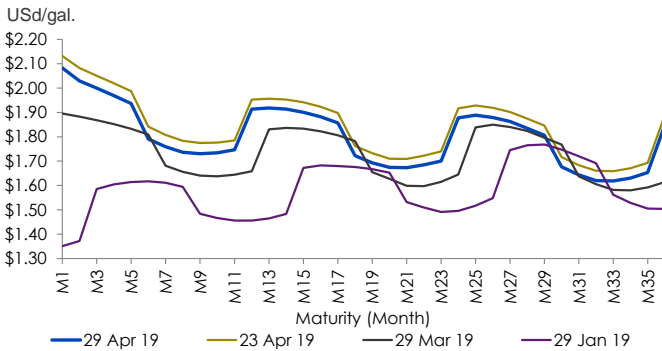
Source: Bloomberg, WisdomTree

### WTI Oil Futures



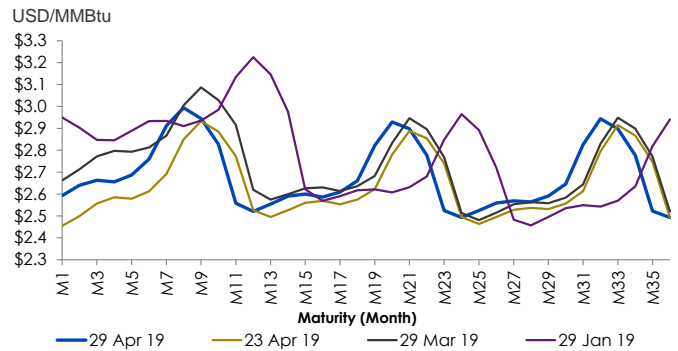
Source: Bloomberg, WisdomTree

### Gasoline Futures



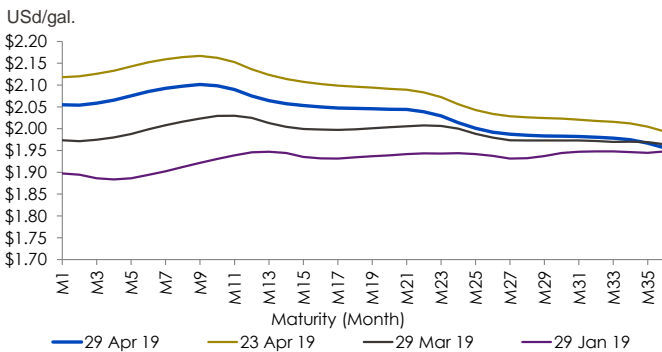
Source: Bloomberg, WisdomTree

### Natural Gas Futures



Source: Bloomberg, WisdomTree

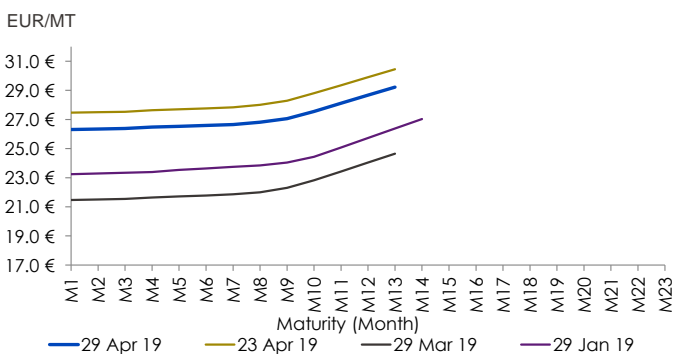
### Heating Oil Futures



Source: Bloomberg, WisdomTree

## Carbon

### Carbon Futures



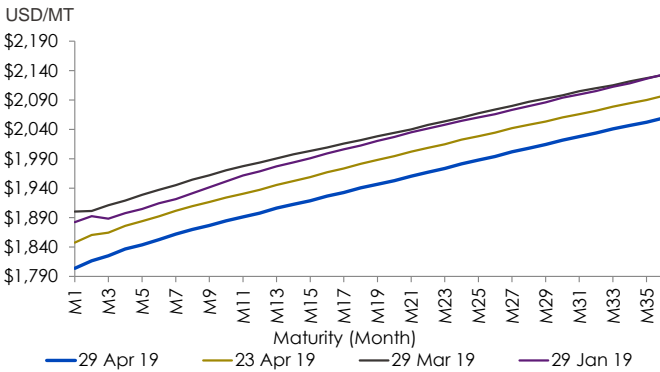
Source: Bloomberg, WisdomTree

Note: all commodity futures price data is denominated in USD unless otherwise indicated.

Historical performance is not an indication of future performance and any investments may go down in value.

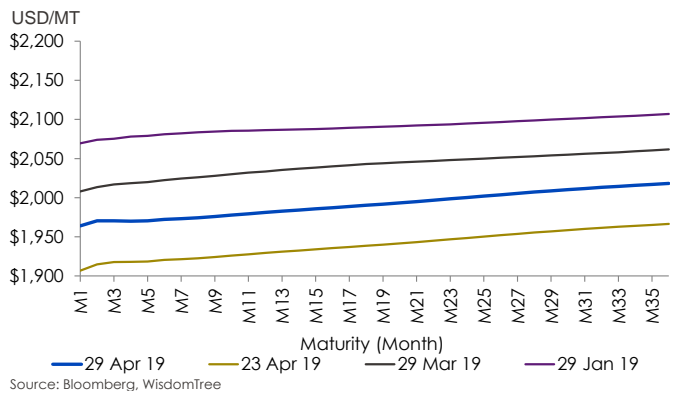
## Industrial Metals

### Aluminum Futures



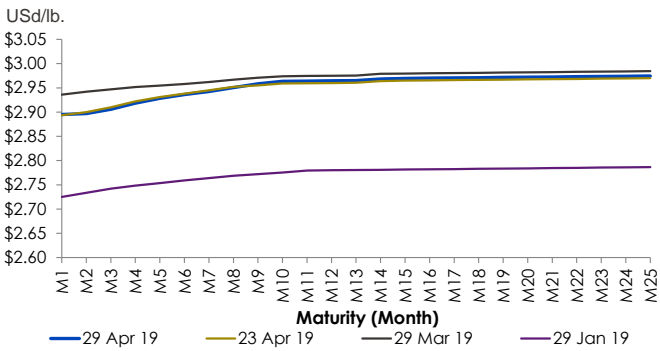
Source: Bloomberg, WisdomTree

### Lead Futures



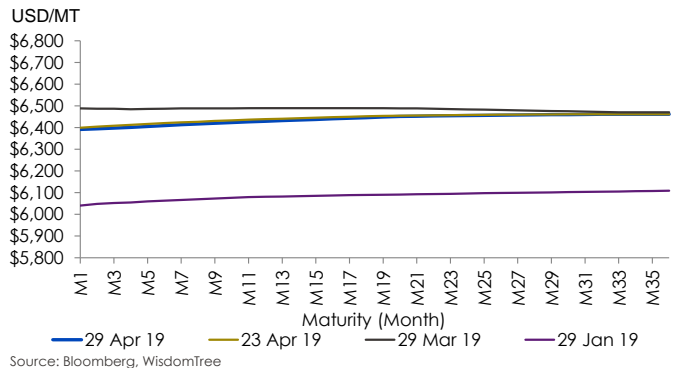
Source: Bloomberg, WisdomTree

### Copper (COMEX) Futures



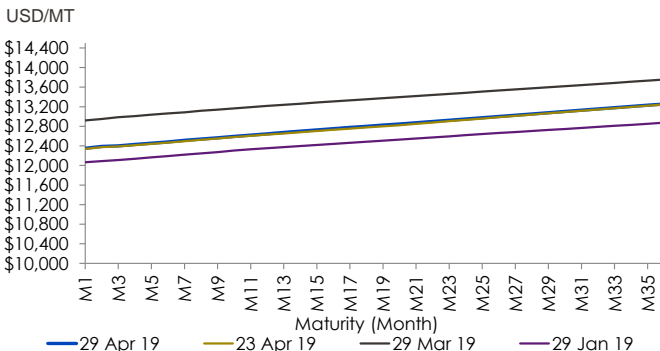
Source: Bloomberg, WisdomTree

### Copper (LME) Futures



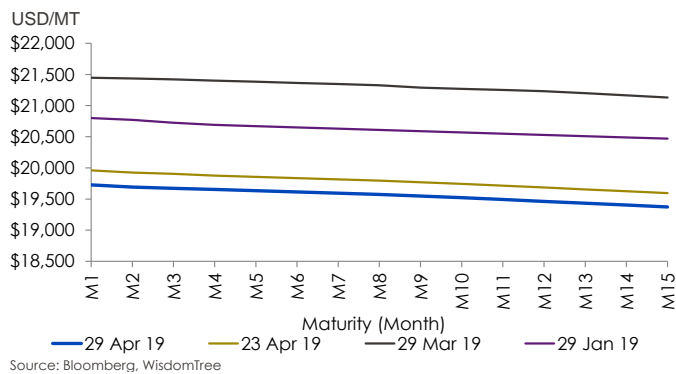
Source: Bloomberg, WisdomTree

### Nickel Futures



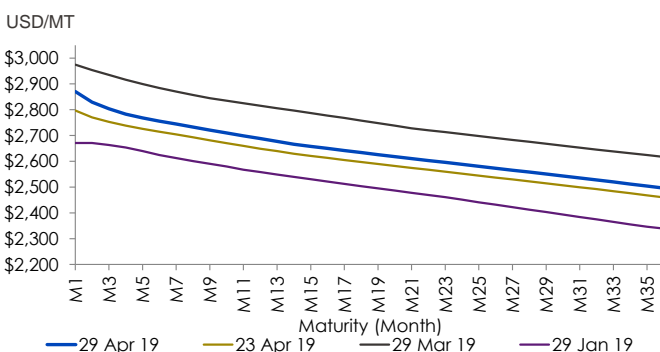
Source: Bloomberg, WisdomTree

### Tin Futures



Source: Bloomberg, WisdomTree

### Zinc Futures

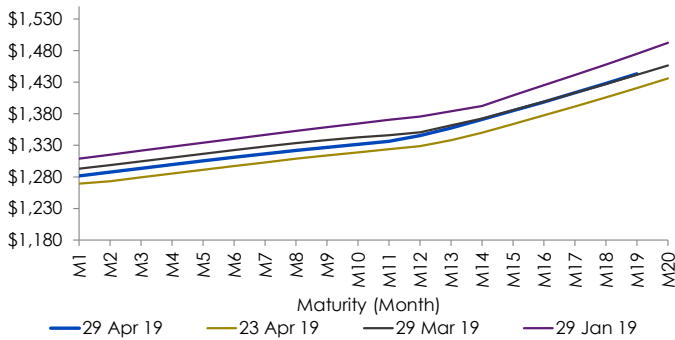


Source: Bloomberg, WisdomTree

## Precious Metals

### Gold Futures

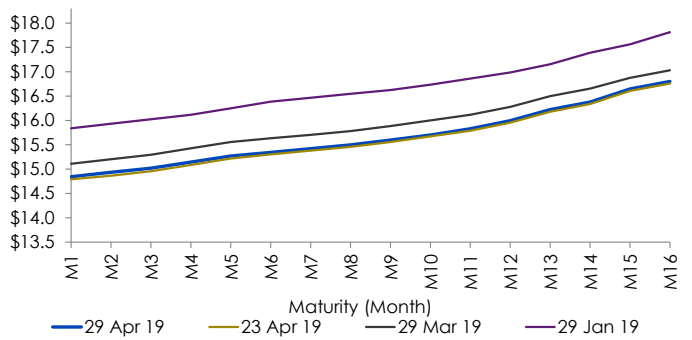
USD/t oz.



Source: Bloomberg, WisdomTree

### Silver Futures

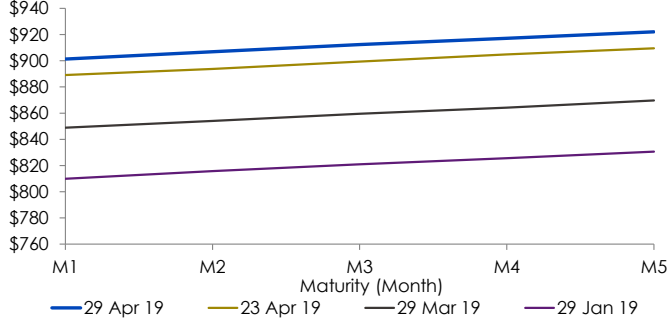
USD/t oz.



Source: Bloomberg, WisdomTree

### Platinum Futures

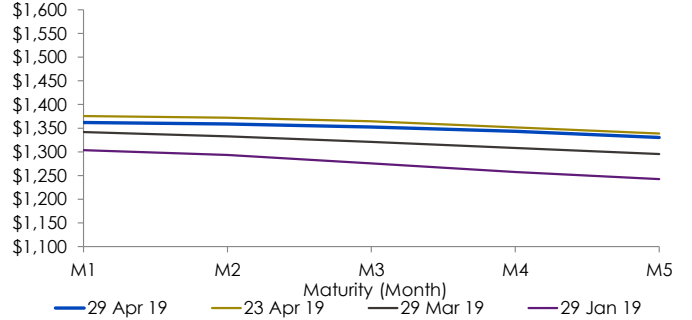
USD/t oz.



Source: Bloomberg, WisdomTree

### Palladium Futures

USD/t oz.

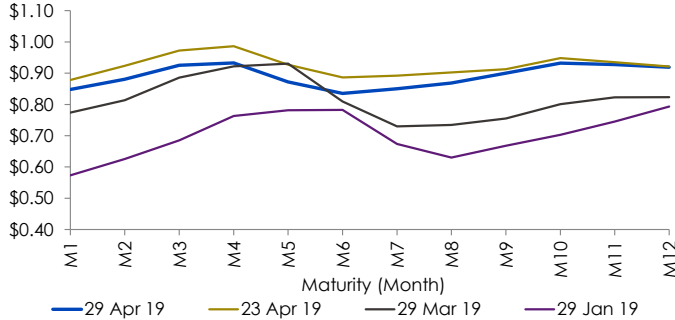


Source: Bloomberg, WisdomTree

## Livestock

### Lean Hogs Futures

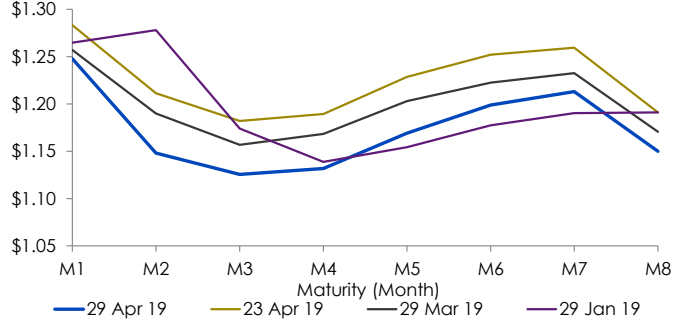
USD/lb.



Source: Bloomberg, WisdomTree

### Live Cattle Futures

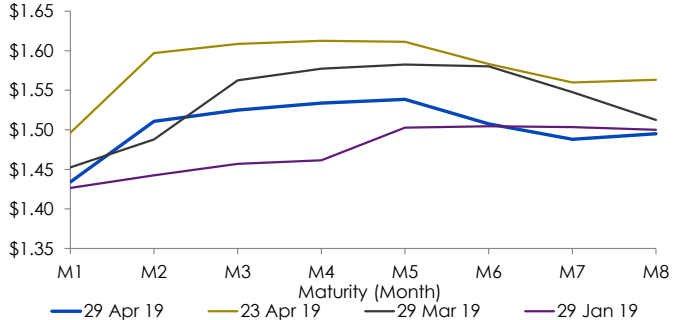
USD/lb.



Source: Bloomberg, WisdomTree

### Feeder Cattle Futures

USD/lb.



Source: Bloomberg, WisdomTree



## Commodity Monthly Matrix Explained

Score based on unweighted sum of four fundamental/technical measures detailed below with each measure awarded a possible score of -1, 0, or 1 depending on whether variable is viewed as fundamentally negative, neutral or positive. Score ranging from -4 to +4. For commodities where data is not available or not relevant, scores are calculated on remaining variables and adjusted to the -4 to +4 scale. The score matrix is designed to highlight significant changes in key variables but should not be viewed as predictor of performance.

The four fundamental/technical measures are as follow:

- price vs. 200 days moving average: 1 when price is above 200dma and return is positive, -1 when price is below 200dma and return is negative, 0 otherwise
- % change in net positioning over the past month: 1 when % change is positive, -1 when % change is negative, 0 when no change
- % change in inventory level over the past 3 months: 1 when % is negative, -1 when % is positive, 0 when no change
- roll yield between the front and second month futures contracts: 1 when in backwardation, -1 when in contango, 0 when no change

## CALENDAR

### WisdomTree - Recent Blogs

30-Apr-19	Lidia Treiber	<a href="#">Turning the coin over on negative bond yields with yield enhancing solutions</a>
23-Apr-19	Aneeka Gupta	<a href="#">Electric Vehicle adoption to augment commodity demand</a>
17-Apr-19	Gaurav Sinha	<a href="#">India: Observations from the ground</a>
15-Apr-19	Nitesh Shah	<a href="#">Gold: how we value the precious metal</a>
10-Apr-19	Lidia Treiber	<a href="#">The rise of floating rate notes</a>
08-Apr-19	Aneeka Gupta	<a href="#">Electric Vehicles are ICEing traditional cars</a>
04-Apr-19	Aneeka Gupta	<a href="#">Coffee Outlook: Plentiful supply and prices down</a>
01-Apr-19	Christopher Gannatti	<a href="#">Fixed income investors have a problem</a>
27-Mar-19	Christopher Gannatti	<a href="#">Brexit's impact for equity investors</a>
19-Mar-19	Lidia Treiber	<a href="#">Can AT1 CoCos be the better way to play the European bank trade?</a>
13-Mar-19	Kevin Flanagan	<a href="#">Manufacturing a slowdown</a>
11-Mar-19	Christopher Gannatti	<a href="#">China's supremacy in Artificial Intelligence may be greatly exaggerated</a>
06-Mar-19	WisdomTree	<a href="#">Take your currency bets off the table</a>

### WisdomTree - Past Issues of Commodity Monthly Monitor

Feb - Mar 2019	Research Team	<a href="#">Dovish Fed counters a delayed trade deal</a>
Nov - Feb 2019	Research Team	<a href="#">Commodities – a phoenix rising from the ashes</a>
Oct - Nov 2018	Research Team	<a href="#">G-20 sets tone for further upside</a>
Sept - Oct 2018	Research Team	<a href="#">Past peak bearishness</a>
Aug - Sept 2018	Research Team	<a href="#">Supply tightness aids cyclical commodities</a>

The research notes are for qualified investors only.

### Key Reports

Current	Next release		
09-Apr-19	10-May-19	USDA	<a href="#">World Agricultural Supply and Demand Estimates</a>
09-Apr-19	07-May-19	EIA	<a href="#">Short-Term Energy Outlook</a>
10-Apr-19	14-May-19	OPEC	<a href="#">OPEC Oil Market Report</a>
11-Apr-19	15-May-19	IEA	<a href="#">IEA Oil Market Report</a>

## DISCLAIMER

### Important Information

**Communications issued in the European Economic Area ("EEA"):** This document has been issued and approved by WisdomTree Ireland Limited, which is authorised and regulated by the Central Bank of Ireland.

**Communications issued in jurisdictions outside of the EEA:** This document has been issued and approved by WisdomTree UK Limited, which is authorised and regulated by the United Kingdom Financial Conduct Authority.

WisdomTree Ireland Limited and WisdomTree UK Limited are each referred to as "WisdomTree" (as applicable). Our Conflicts of Interest Policy and Inventory are available on request.

**For professional clients only. The information contained in this document is for your general information only and is neither an offer for sale nor a solicitation of an offer to buy securities or shares. This document should not be used as the basis for any investment decision. Investments may go up or down in value and you may lose some or all of the amount invested. Past performance is not necessarily a guide to future performance. Any decision to invest should be based on the information contained in the appropriate prospectus and after seeking independent investment, tax and legal advice.**

This document is not, and under no circumstances is to be construed as, an advertisement or any other step in furtherance of a public offering of shares or securities in the United States or any province or territory thereof. Neither this document nor any copy hereof should be taken, transmitted or distributed (directly or indirectly) into the United States.

This document may contain independent market commentary prepared by WisdomTree based on publicly available information. Although WisdomTree endeavours to ensure the accuracy of the content in this document, WisdomTree does not warrant or guarantee its accuracy or correctness. Any third party data providers used to source the information in this document make no warranties or representation of any kind relating to such data. Where WisdomTree has expressed its own opinions related to product or market activity, these views may change. Neither WisdomTree, nor any affiliate, nor any of their respective officers, directors, partners, or employees accepts any liability whatsoever for any direct or consequential loss arising from any use of this document or its contents.

This document may contain forward looking statements including statements regarding current expectations or beliefs with regards to the performance of certain assets classes and/or sectors. Forward looking statements are subject to certain risks, uncertainties and assumptions. There can be no assurance that such statements will be accurate and actual results could differ materially from those anticipated in such statements. WisdomTree strongly recommends that you do not place undue reliance on these forward-looking statements.

Any historical performance included in this document may be based on back testing. Back testing is the process of evaluating an investment strategy by applying it to historical data to simulate what the performance of such strategy would have been. However, back tested performance is purely hypothetical and is provided in this document solely for informational purposes. Back tested data does not represent actual performance and should not be interpreted as an indication of actual or future performance.

---

**CONTACT DETAILS**

**E** [europeresearch@wisdomtree.com](mailto:europeresearch@wisdomtree.com)

**T** +44 20 7448 4330

**F** +44 20 7448 4366

WisdomTree UK Limited

3 Lombard Street

London EC3V 9AA

United Kingdom

---