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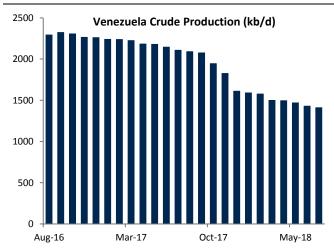
Commodity Comment: Spare Me

Geopolitics, Oil, Natural Gas and Gold

- Saturday's dramatic drone attack on Venezuelan President Nicolas Maduro serves as yet one more reminder of the chaos engulfing the world's most distressed petro-state (page 1).
- China announced tariffs on an additional \$16 billion worth of US imports, but crude was notably exempt. There are multiple ways to interpret the motives given the little signs of trade war de-escalation (page 1).
- US LNG however, was not exempt from China's tariff announcement. China proposed a 25% tariff on LNG imports from the US occurring at the same time as the US climbs up the LNG exporter leaderboard (page 2).
- Gold continues to trade below fundamentally justified levels in our view, but why? We think it is not only the dollar, but also a higher tolerance of uncertainty in the market (page 2).

Geopolitics: Venezuela – Unfriendly Skies

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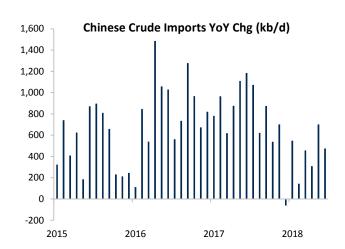


Two drones armed with explosives detonated near Maduro while he was addressing a military celebration in Caracas on live television, in what may mark the first time such technology was deployed in a presidential assassination attempt. The pace of arrests of active duty military officers has reportedly quickened in recent months, prompting some to believe that Maduro may be ousted by a military coup in the not so distant future. Even if such a scenario comes to pass, the recovery of the Venezuelan economy and oil production will likely be very protracted given the depths of the crisis and how far the country has fallen. Moreover, Robert Mugabe's 30-year tenure in Zimbabwe serves as cautionary tale for those who contend that economic collapse and severe social misery produces timely regime change.

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Oil: Spare Me

Yesterday, China's Ministry of Commerce announced tariffs on an additional \$16 billion worth of US imports, but crude was notably exempt. There are multiple ways to interpret the motives given the little signs of trade war de-escalation. Crude trade is paramount to both countries. US crude exports to China have grown from nil to levels over 450 kb/d over the past several years. Aggregate Chinese crude imports have surged with barrels sourced from an increasingly diverse set of suppliers. One interpretation is that US crude shipments to China have become too imperative and the exemption reflects concerns around the security of sourcing barrels in a market fraught with supply disruption risk. The other read suggests that crude was excused to allow previously purchased crude to arrive without additional costs. While crude has been spared, further retaliation could re-threaten tariffs, which could alter refiner consumption patterns over the coming months.



Sources (all): Chinese Customs General Administration, Petro-Logistics SA, RBC Capital Markets

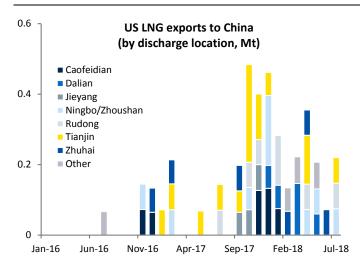
Priced as of prior trading day's market close, ET (unless otherwise stated).

All values in U.S. dollars unless otherwise noted.

For Required Conflicts Disclosures, please see page 11.

Natural Gas: China Tariff

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If China's proposed LNG tariff were in place before the winter demand period when NE Asian spot prices tend to rise, it is still possible that US gas could still be economically imported, just likely at far lower volumes (we note there are a number of options among portfolio players). China's growing need for gas (itself largely driven by domestic environmental goals) drove it to account for around half of global LNG demand growth last year. While the potential tariff timeline and process remain unclear, China does take a significant share of US LNG exports despite having lacked long-term contracts. In fact, so far in 2018 China has taken 14% of US LNG exports through 11 ports, which represents around 5% of China's 2018 LNG imports year-to-date according to ship tracking data. Other key suppliers for China are Qatar, Australia and others, any of whom would need pick up the slack if US supplies to China were to fall.

Gold: Wounded Bulls

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With wounded bulls roaming the market, gold remains below where fundamentals justify in our view. Our reasoning is twofold. First, the dollar remains in the driver's seat and has stuck to a stubborn gold-negative range, a headwind which we have covered at length previously. Secondly, gold has disappointed as a potential 'safe-haven' due to a couple of factors. 1) Gold only performs relatively well after an economic or financial crisis; 2) right now the market's tolerance of uncertainty has risen and risk in and of itself is not enough for gold to react, and 3) either that has to change, or risk needs to turn into an actuality to get real 'safe haven' flows and price moves. In our view, gold's current weakness is waiting for a catalyst to break down, but the apparent size and importance of that catalyst has grown. The question remains, how long can gold remain fundamentally undervalued? We think it could persist but that upside risk to prices remains.



Note: TW\$ is trade-weighted dollar. Source (all): Thomson Reuters, Bloomberg, RBC Capital Markets

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Recent Commodity Strategy Research:

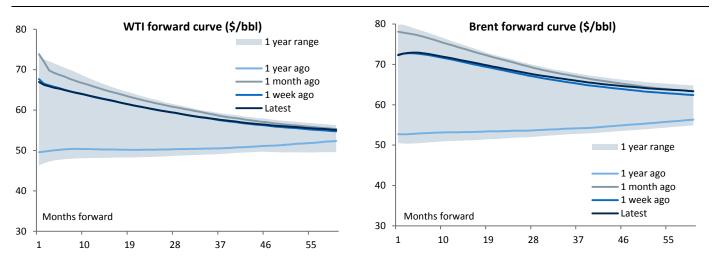
Saudi Arabia: Redlines in the Sand

Iran: Sanctions Sequel

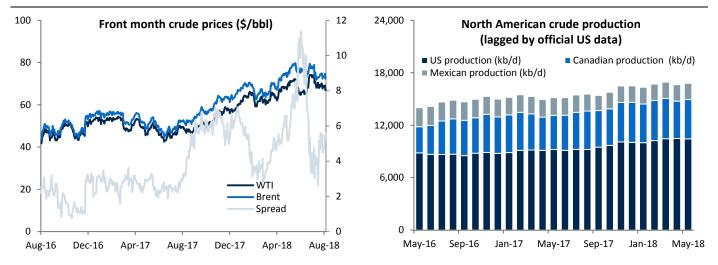
Commodity Surveyor: Cumulatively Speaking

Oil charts

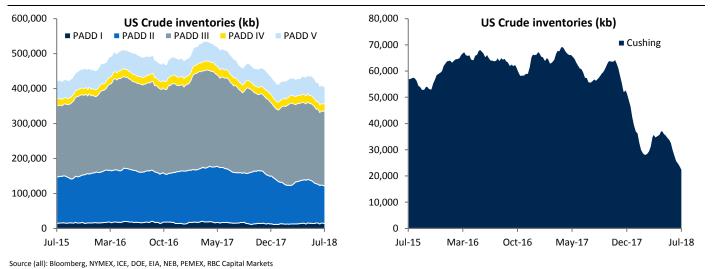
Figures 1 & 2: WTI forward curve, Brent forward curves



Figures 3 & 4: Front month crude prices, North American crude oil production

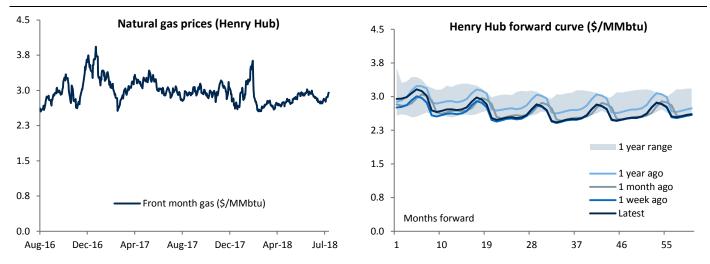


Figures 5 & 6: US crude inventories by PADD, Crude inventories at Cushing



US Natural Gas charts

Figures 7 & 8: Front month Natural Gas prices, Natural Gas forward curve



Figures 9 & 10: US Natural Gas working storage, US production in major shales

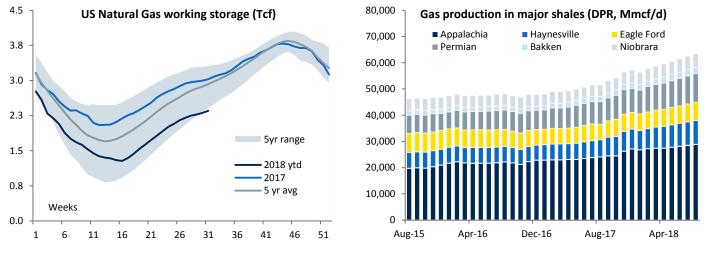
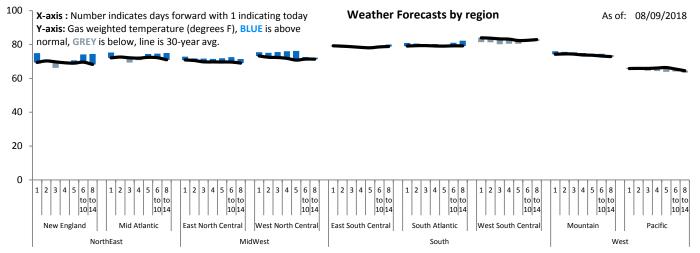


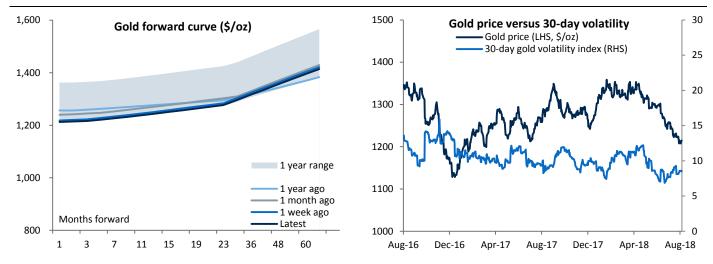
Figure 11: Two-week US weather forecasts by region



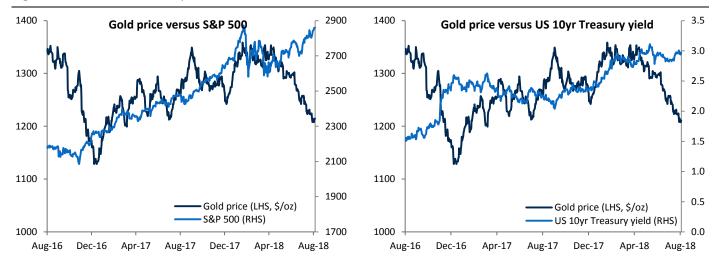
Source (all): Bloomberg (including weather chart), NYMEX, DOE, EIA, RBC Capital Markets

Gold charts

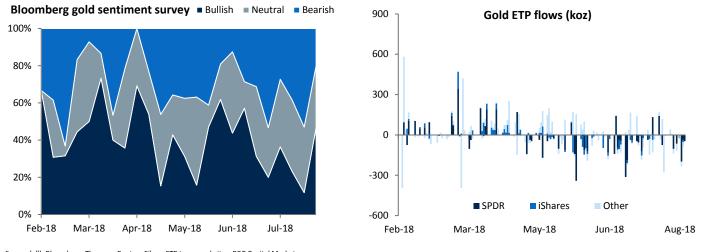
Figures 12 & 13: Gold forward curve, Gold price versus gold volatility



Figures 14 & 15: Gold versus equities, Gold versus US rates



Figures 16 & 17: Bloomberg sentiment indicators, Monthly gold ETP holdings



Source (all): Bloomberg, Thomson Reuters Eikon, ETP issuer websites, RBC Capital Markets

CFTC positioning (managed money and swap dealers)

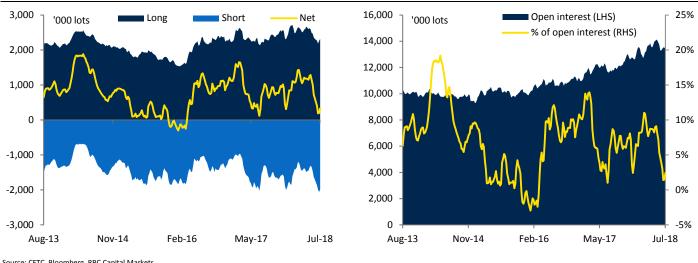
Figure 18: Managed money positioning ('000 lots)

Managed money			ong) as % of open erest	Open interes	st (futures)	Futures	(net long)	Futures & Opt	ions (net long)
As of:	31-Jul-18	Current	week ago	Current	w/w	Current	w/w	Current	w/w
Orange Juice	ICE	38.4%	38.5%	15.55	0.01	5.97	(0.01)	5.97	(0.01)
Cotton	NYBOT	31.6%	29.5%	268.55	8.36	84.83	8.17	88.79	7.33
Gasoline	Nymex	22.4%	20.9%	470.30	37.79	105.43	14.87	105.43	14.80
Live cattle	CME	16.6%	14.4%	309.82	(3.49)	51.46	6.36	54.27	5.72
Crude	Nymex	16.4%	16.2%	2,349.17	(11.89)	384.45	0.80	386.76	(5.38)
Heating oil	Nymex	15.0%	14.4%	395.73	4.99	59.17	2.97	59.17	2.97
Wheat	KBOT	13.4%	7.1%	284.06	3.34	37.98	18.16	39.94	17.88
Palladium	Nymex	12.9%	8.1%	22.21	0.75	2.85	1.11	3.10	1.30
Wheat	CBOT	10.4%	5.0%	490.81	38.68	51.28	28.67	52.93	28.99
Soybean meal	CBOT	9.7%	9.2%	514.54	(7.20)	49.99	2.12	52.61	2.67
Rice	CBOT	9.1%	6.7%	8.42	0.35	0.77	0.23	0.77	0.23
Lumber	CME	4.9%	7.3%	5.20	(0.21)	0.26	(0.14)	0.26	(0.14)
Cocoa	ICE	3.9%	9.0%	249.36	7.90	9.73	(11.92)	13.16	(10.77)
Feeder cattle	CME	3.6%	7.3%	54.75	1.49	1.95	(1.96)	2.24	(1.95)
Crude	ICE	3.5%	3.5%	632.14	17.71	22.20	0.70	20.24	0.09
Natural Gas	Nymex	2.8%	1.6%	1,540.75	18.15	43.42	19.07	42.51	17.53
Lean hogs	CME	-3.2%	-0.9%	240.32	2.61	(7.63)	(5.61)	(7.84)	(4.84)
Silver	Comex	-3.5%	-5.9%	226.51	11.92	(7.94)	4.69	(6.68)	4.67
Corn	СВОТ	-5.2%	-8.7%	1,851.25	(55.04)	(95.61)	69.31	(52.20)	78.00
Copper	Comex	-8.0%	-8.6%	300.52	(15.06)	(23.90)	3.21	(23.39)	2.96
Soybeans	СВОТ	-8.3%	-8.5%	804.57	(55.71)	(66.56)	6.80	(58.67)	2.64
Gold	Comex	-9.4%	-7.3%	452.66	(43.97)	(42.53)	(6.11)	(41.09)	(13.93)
Wheat	MGEX	-10.2%	-20.9%	62.19	0.63	(6.33)	6.54	(6.29)	6.57
Sugar	ICE	-12.0%	-8.5%	1,030.19	53.26	(123.81)	(41.14)	(118.96)	(39.02)
Soybean oil	СВОТ	-17.7%	-17.0%	517.69	(12.20)	(91.40)	(1.33)	(91.77)	(1.82)
Oats	СВОТ	-18.8%	-18.8%	5.12	0.05	(0.96)	(0.01)	(0.96)	(0.01)
Coffee	ICE	-28.0%	-27.9%	326.25	3.61	(91.25)	(1.28)	(90.24)	(0.64)
Platinum	Nymex	-32.5%	-34.4%	82.14	2.12	(26.67)	0.88	(25.84)	1.23
Total/average		2.1%	1.1%	13,510.73	8.94	327.11	125.14	404.21	117.08

Source: CFTC, Bloomberg, RBC Capital Markets

This page provides a breakdown of managed money positioning in major commodity futures (and options) as defined by the CFTC Commitment of Traders Report. The table above ranks commodities by net long futures position as a percentage of futures open interest versus the same a month prior. A money manager is defined by the CFTC as "a registered commodity trading advisor (CTA); a registered commodity pool operator (CPO); or an unregistered fund identified by CFTC. These traders are engaged in managing and conducting organized futures trading on behalf of clients."

Figures 19 & 20: Managed money positions in major futures markets, Net long as a percentage of futures open interest



Source: CFTC, Bloomberg, RBC Capital Markets

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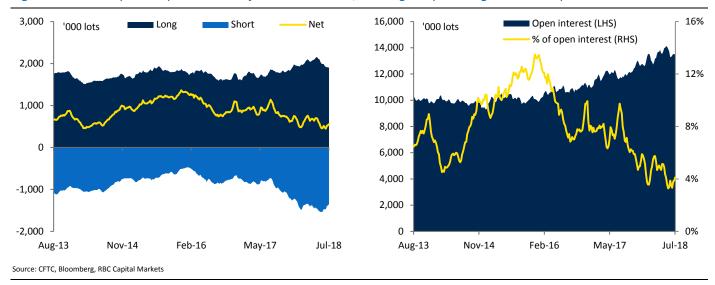
Figure 21: Swap dealer positioning ('000 lots)

Swap dealers			ng) as % of open erest	Open inter	est (futures)	Futures (net long)	Futures & Op	tions (net long)
As of:	31-Jul-18	Current	week ago	Current	w/w	Current	w/w	Current	w/w
Lean hogs	CME	33.8%	34.0%	240.32	2.61	81.20	0.44	81.20	0.58
Live cattle	CME	27.0%	26.4%	309.82	(3.49)	83.74	0.89	84.03	1.11
Cotton	NYBOT	20.1%	20.7%	268.55	8.36	53.86	(0.13)	52.69	(0.04)
Feeder cattle	CME	18.7%	19.8%	54.75	1.49	10.25	(0.28)	10.48	0.36
Soybean oil	СВОТ	18.6%	18.6%	517.69	(12.20)	96.25	(2.15)	96.60	(1.87)
Wheat	СВОТ	17.6%	19.5%	490.81	38.68	86.57	(1.38)	98.64	(4.13)
Sugar	ICE	16.8%	17.3%	1,030.19	53.26	173.29	4.44	179.96	8.61
Wheat	КВОТ	15.1%	15.2%	284.06	3.34	42.99	0.42	42.17	(0.11)
Soybeans	СВОТ	14.7%	13.0%	804.57	(55.71)	118.09	6.60	119.91	3.20
Soybean meal	СВОТ	14.4%	14.4%	514.54	(7.20)	74.14	(0.93)	72.16	(2.20)
Copper	Comex	13.8%	12.2%	300.52	(15.06)	41.45	2.95	41.20	2.56
Coffee	ICE	13.1%	13.6%	326.25	3.61	42.80	(1.08)	53.52	0.08
Heating oil	Nymex	12.8%	12.8%	395.73	4.99	50.75	0.64	51.61	0.29
Platinum	Nymex	12.0%	12.2%	82.14	2.12	9.82	0.06	9.38	(0.08)
Palladium	Nymex	11.0%	15.0%	22.21	0.75	2.43	(0.80)	2.19	(0.94)
Corn	СВОТ	9.4%	8.5%	1,851.25	(55.04)	174.89	13.67	193.63	(6.83)
Cocoa	ICE	9.0%	10.6%	249.36	7.90	22.46	(3.26)	19.99	(3.61)
Gasoline	Nymex	8.7%	9.6%	470.30	37.79	41.02	(0.31)	40.81	(0.66)
Orange Juice	ICE	6.6%	7.0%	15.55	0.01	1.02	(0.07)	1.02	(0.07)
Natural Gas	Nymex	5.1%	4.7%	1,540.75	18.15	79.00	7.96	80.25	8.11
Oats	СВОТ	4.4%	4.4%	5.12	0.05	0.22	0.00	0.22	0.00
Silver	Comex	4.0%	5.6%	226.51	11.92	9.04	(3.05)	9.30	(2.71)
Wheat	MGEX	3.9%	4.6%	62.19	0.63	2.42	(0.41)	2.08	(0.64)
Lumber	CME	2.2%	1.7%	5.20	(0.21)	0.11	0.02	0.11	0.02
Rice	СВОТ	2.0%	2.2%	8.42	0.35	0.17	(0.00)	0.17	(0.00)
Gold	Comex	1.1%	-1.7%	452.66	(43.97)	4.85	13.21	18.04	11.67
Crude	ICE	-24.4%	-24.4%	632.14	17.71	(154.22)	(4.25)	(155.59)	(4.36)
Crude	Nymex	-25.2%	-25.0%	2,349.17	(11.89)	(592.29)	(1.70)	(687.02)	(2.20)
Total/average		9.5%	9.7%	13,510.73	8.94	556.31	31.51	518.74	6.14

Source: CFTC, Bloomberg, RBC Capital Markets

This page provides a breakdown of swap dealer positioning in major commodity futures (and options) as defined by the CFTC Commitment of Traders Report. The table above ranks commodities by net long futures position as a percentage of futures open interest versus the same a month prior. A swap dealer is defined by the CFTC as "an entity that deals primarily in swaps for a commodity and uses the futures markets to manage or hedge the risk associated with those swaps transactions. The swap dealer's counterparties may be speculative traders, like hedge funds, or traditional commercial clients that are managing risk arising from their dealings in the physical commodity."

Figure 22 & 23: Swap dealer positions in major futures markets, Net long as a percentage of futures open interest





Correlation Matrix

Figure 24: Cross asset correlation matrix covering major commodities, equity, yield and foreign exchange marks

Correlation Matrix	¢																ı	As of:		9-Au	g-18	
1 month	WTI Crude	Brent Crude	Natural Gas	Gold	Platinum	Copper	Aluminum	Corn	Wheat	Soybeans	S&P 500	TSX Index	Nikkei Index	Shanghai Comp.	US Inflat. Index	US 10yr	Canadian 10yr	Japan 10yr	USD Index	EUR/USD	USD/JPY	USD/CAD
WTI Crude		0.85	-0.09	0.20	0.22	0.34		0.06	0.36	0.03	0.28	0.23	0.28	0.23				-0.32	-0.23	0.22		
Brent Crude	0.81		-0.28	0.30	0.40	0.52		0.12	0.27	0.17	0.47	0.37	0.31	0.45					-0.17	0.16		
Natural Gas	-0.01	-0.09		0.09	0.09	-0.08		0.11		0.08	-0.14	-0.18	-0.31	-0.31								0.1
Gold	0.14		0.00		0.79	0.70	0.23	0.29	0.27	0.43	0.38	0.14	0.30	0.56		-0.01	0.27		-0.72	0.68	-0.48	
Platinum	0.23		0.13	0.71		0.68	0.25	0.43	0.32	0.51	0.48	0.14	-0.02	0.59		0.10	0.34		-0.51	0.51		
Copper	0.16			0.53	0.54		0.30	0.22	0.13	0.54	0.49	0.17	0.32	0.65		-0.06	0.12		-0.40	0.35		
Aluminum	-0.05				0.24	0.27		0.26	0.10	0.23	-0.18	-0.22	-0.32	0.14	0.22	0.27		0.14	-0.37	0.32		
Corn	0.07					0.05	0.15		0.67	0.63	0.21	0.19			0.21			-0.25	-0.26	0.32		
Wheat	0.11						0.13	0.70		0.23	0.36	0.22				0.21	0.36		-0.41	0.44		
Soybeans	0.15							0.57	0.30		0.23		0.05	0.35		-0.01	-0.01		-0.25	0.34		
S&P 500	0.17									0.22		0.51	0.34	0.29					-0.01	0.01		
TSX Index	0.38									0.25	0.54		0.20	0.04		-0.50	-0.38	-0.16	0.28	-0.26	0.21	
Nikkei Index	0.07										0.15	0.21		0.23				-0.16	-0.26	0.28	-0.06	
Shanghai Comp.	0.15											0.23	0.50		0.13	0.29	0.20		-0.45	0.49		
US 10yr Tips	-0.10												0.06	0.09		0.91	0.65	0.61	-0.08	0.06		
US 10yr	0.03													0.15	0.93		0.82	0.55	-0.36	0.33		
Canadian 10yr	0.18													0.15	0.79	0.84		0.39	-0.42	0.32		
Japan 10yr	-0.19															0.37	0.31		0.17	-0.27	-0.06	0.2
USD Index	-0.14																-0.31	0.00		-0.96	0.71	0.6
EUR/USD	0.11																	-0.02	-0.97		-0.57	-0.5
USD/JPY	-0.06																			-0.22		0.4
USD/CAD	-0.30																		0.63	-0.58	0.14	
			Scale:				3 r	nonth cor	relation (I	oottom)	Positi	/e -> Nega	ative				1 month	correlatio	on (top):	Positi	ve -> Nega	ative

Source: Bloomberg, RBC Capital Markets

This page provides cross asset correlations. Source data is from Bloomberg as of the date indicated in the table. Darker colors indicate more positive correlations while lighter colors indicate more negative correlations. The top right section indicates one-month correlations of daily changes while the bottom left indicates three-month correlations of daily changes. Yield markets were calculated on the yields themselves. This table covers the major commodity markets (energy, precious metals, base metals and agriculture), major global equity indexes, major yield markets, and major FX indexes and crosses.



OPEC Watch List, Supply & Demand Balances, and Price Forecasts

Figure 25: OPEC Watch List - Relative risk scale

	Oil product	tion (mb/d)	Geopolit	tical risk	
Country	2017 avg	Last month	Past year	This year	Comment
Saudi Arabia	9.97	10.30	6	7	Ambitious economic reforms; confrontational foreign policy
Iraq	4.44	4.50	9	8	Security, economic and political challenges still persist
Iran	3.79	3.78	6	9	Economic gains are imperiled by sanctions snapback
UAE	2.91	2.89			Best in class in OPEC but high foreign policy expenditures
Kuwait	2.71	2.76			Financially flush but the population does not want austerity
Venezuela	1.94	1.38	10	10	With few economic options left, oil production is plummeting
Nigeria	1.71	1.62	10	8	The oil region remains restive and 2019 elections pose a key risk
Angola	1.66	1.41			Angola continues to face strong economic headwinds
Algeria	1.04	1.05	8	7	Algeria is seeking to boost investment but faces challenges
Libya	0.83	0.69	9	8	The country remains at risk for an unfavorable reversal of fortune
Qatar	0.61	0.61	2		Qatar has proven more resilient than expected, blockade still bites
Ecuador	0.53	0.52			Courting new investment but lies in the middle of our risk spectrum
Gabon	0.20	0.19	6	6	Low production amid increased political turmoil
Scale:			High -> Low	High -> Low	

Figure 26: Global Oil Supply & Demand Balance and Price Forecasts (Commodity Strategy)

Oil balance (mb/d)	Q1 18 E	Q2 18 F	Q3 18 F	Q4 18 F	2018 F	Q1 19 F	Q2 19 F	Q3 19 F	Q4 19 F	2019 F
Total Supply	98.2	98.6	99.4	99.7	99.0	99.3	99.7	100.2	100.7	100.0
Total Demand	98.1	98.9	99.6	100.2	99.2	99.1	100.3	100.8	101.6	100.4
Stock Change	0.1	-0.3	-0.1	-0.4		0.2	-0.5	-0.6	-0.9	
Call on OPEC	32.1	32.3	32.5	32.6	32.4	31.4	32.2	32.1	32.2	32.0
WTI (\$/bbl)	63	68	69	72	68	71	74	77	82	76
Brent (\$/bbl)	67	75	78	82	76	83	86	86	88	86

Figure 27: US Natural Gas Supply & Demand Balance and Price Forecasts (Commodity Strategy)

Natural Gas balance (Bcf/	d) 2012	2013	2014	2015	2016	2017 E	2018 F	2019 F
Net Supply & Trade	6	8.8 69	.0 73.2	2 75.8	73.7	72.1	76.5	77.9
Total Demand	6	9.6 71	.9 72.2	74.1	74.4	74.4	76.8	77.3
Storage end of withdrawal (Tcf)		2.5 1	.7 0.9	9 1.5	2.5	2.1	1.3	1.5
Storage end of injection (Tcf)		3.9	.8 3.6	3.9	4.0	3.8	3.5	3.7
Price (\$/Mmbtu)	2.	82 3.7	3 4.28	2.63	2.55	3.02	2.93	3.05
Quarterly Q1	18 Q2 1	8 Q3 18 F	Q4 18 F	2018 F C	1 19 F Q2	19 F Q3 19	F Q4 19 F	2019 F
Price (\$/Mmbtu)	2.85	2.83 2.95	3.10	2.93	3.05	2.95	3.00 3.20	3.05

Figure 28: Global Gold Supply & Demand Balance and Price Forecasts (Commodity Strategy)

Gold balance (t)	Q1 18 E	Q2 18 E	Q3 18 F	Q4 18 F	2018 F	Q1 19 F	Q2 19 F	Q3 19 F	Q4 19 F	2019 F
Total Supply	1074	1142	1217	1193	4627	1083	1136	1214	1197	4629
Total Demand	1009	987	1070	969	4035	1157	1039	1122	1047	4365
Balance	65	156	147	224	592	-74	97	91	150	264
Price (\$/oz)	1330	1306	1324	1281	1310	1355	1338	1364	1347	1351

Notes: Figure 25 - Geopolitical risk rankings are based on our own in-house RBC Commodity Strategy methodology based on both quantitative and qualitative factors. All rankings are updated as deemed necessary and all numbers are subject to revision. Figures 26 - 27: Price forecasts (published as averages) draw from RBC Commodity Strategy's in-house fundamental methodology. Annuals in these tables are published as averages. All inputs and outputs are subject to revision and other adjustments as deemed necessary. Figure 28: Price forecasts (published as averages) draw from two primary methodologies, 1) a macroeconomic model and 2) physical balance forecasts. Price forecasts are at least partially based on a standard OLS regression which utilizes a number of macroeconomic variables sourced from RBC forecasts, market consensus forecasts, and official forecasts. All inputs and outputs are subject to revision and other adjustments as deemed necessary.

Source (all): Petro-Logistics SA, IEA, EIA, JODI, company and government sources, DOE, Bloomberg, Thomson Reuters Eikon, GFMS, WGC, Commodity Strategy methodologies, RBC Capital Markets



Global Economic Calendar

Figure 29: Major commodity-relevant economic data releases

6-Aug	7-Aug	8-Aug	9-Aug	10-Aug
ID GDP	RBA Interest Rate Decision	EIA Petroleum Status Report BZ , CN CPI	EIA Natural Gas Report US Jobless Claims MX CPI	Baker-Hughes rig count
13-Aug	14-Aug	15-Aug	16-Aug	17-Aug
OPEC Monthly Report IT, IN CPI CN Industrial Production	GE, SP CPI EUR GDP	EIA Petroleum Status Report GB CPI	EIA Natural Gas Report US Jobless Claims	Baker-Hughes rig count EUR Current Account
20-Aug	21-Aug	22-Aug	23-Aug	24-Aug
	НК СРІ	EIA Petroleum Status Report	EIA Natural Gas Report US Jobless Claims NO GDP	Baker-Hughes rig count
27-Aug	28-Aug	29-Aug	30-Aug	31-Aug
UK Summer Bank Holiday	US CB Consumer Confidence	EIA Petroleum Status Report US GDP	EIA Natural Gas Report US Jobless Claims GE CPI CA GDP	Baker-Hughes rig count
Source: WSJ, Econoday, Bloomberg, I	Reuters, World Economic Calendar, RBC Ca	pital Markets	1	•



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Commodity Comment: Spare Me

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