

# Overview of the Offshore and Global Energy Markets

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# What is C6 Capital Holdings?

Provide consulting services across the energy supply chain regarding market/industry intelligence, business line investments/divestitures, and geopolitical analysis

Private Equity small and medium investments in all forms of energy infrastructure

(renewable and fossil fuels)

Business strategy solutions for corporate planning and analysis

Partner with Primary Vision to deliver solutions for oil field service, E&P, midstream, chemical, and refining clients

Generate reports regarding frac spreads, top- and bottom-hole consumables

Market Intelligence

Port and Terminal Data for key import and export countries

Co-Founder and Host of Primary Vision Network: A YouTube Channel focusing on: Energy/ Infrastructure/ Shipping, Macro-Economics, Geo-Politics, OPEC+, and Special Updates



# Summary of Talking Points

### U.S. Production Backdrop

Global API Gravity Shifts

Refining Growth in Asia

Oversupply Across Refined Products

Slowing Activity is a Major Headwind

Geo-Political Backdrop Shifting

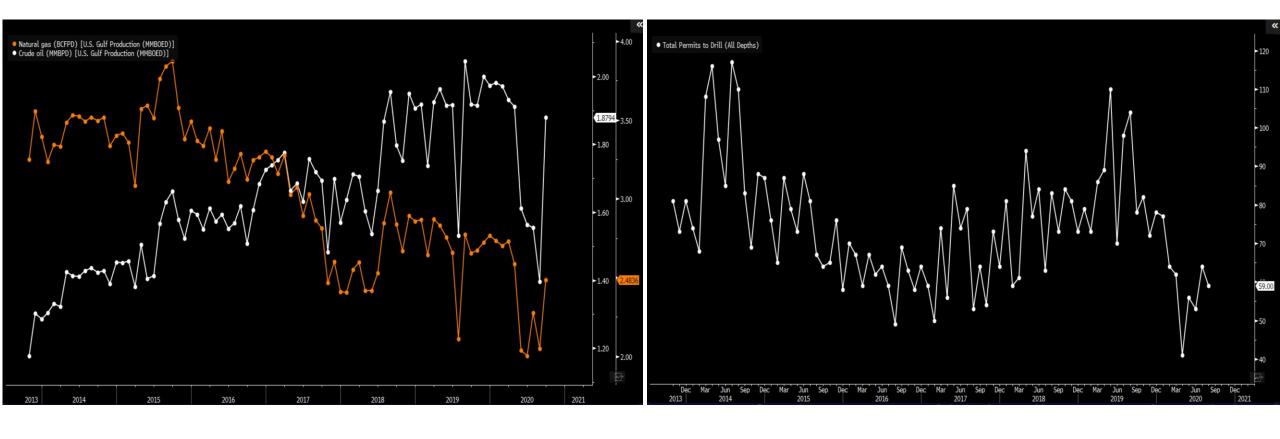


## Summary of Views

- Refiners rely on offshore oil to keep the slate of feedstock heavy enough to maintain a suite of products
- Offshore break-evens have fallen through the advancement of technology, tiebacks, and supply chain cost adjustments
- Heavier crude slates are experiencing a rise in premiums as demand increases due to new refiners coming online with cokers and other complex processes
- Premiums in offshore crude will help promote new production and exploration to capture the changing crude slate (also helps to protect the corporate decline curves that have taken a toll with shale investments)
- OPEC+ is investing to take advantage of the changes in the market
- COVID19 demand destruction is real and will last much longer versus the current consensus
- Crude pricing will vary based on location and quality, with WTI Cushing struggling to hold \$40 and average \$37

## North America Crude Pricing

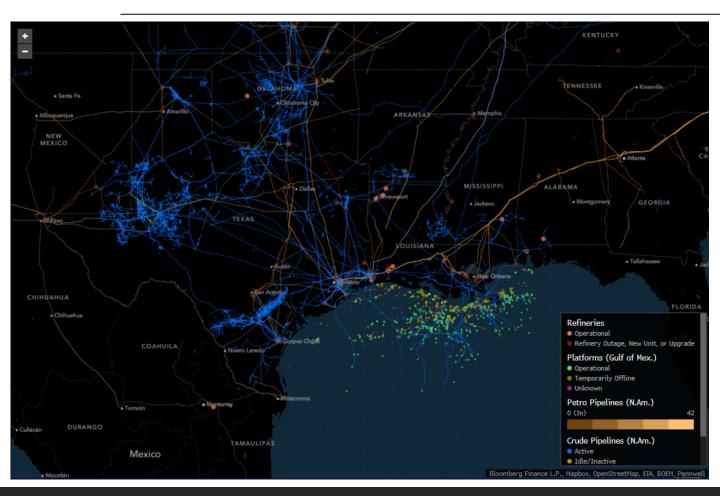
	Time	Price	Chg	Diff	Chg		Time	Price	Chg	Diff	Chg
United States						Canada					
ANS	08:54	41.19	28	.50	.00	Syncrude Sweet	08:54	39.16	41	-1.75	.00
Bakken UHC	08:54	39.29	28	-1.40	.00	Mixed Sweet	08:54	36.66	41	-4.25	.00
Bakken Guernsey	08:54	38.44	28	-2.25	.00	C5 Condensate	08:54	40.31	41	60	.00
USGC Sour	08:54	41.17	31	.48	03	WCS	08:54	29.66	41	-11.25	.00
Bonito Sour	08:54	40.69	28 28 31 38	.48 .00 32	10	Implied Bitumen	08:54	25.10	41	-15.59	.00 .00 .00 13
CMA Diff	08:54			32	.03	Mexico					
Magellan East Houston	08:54	41.44	33	.75	05	Mexican Mix	09/17	38.76	1.45		
HLS	08:54	41.49	18	.80	.10	Isthmus, Mexico					
LLS	08:54	42.34	18	1.65	.10	to Europe	10/31			-3.60	
Mars Blend	08:54	41.59	28	.90	.00	to Asia	10/31			-3.10	
Poseidon	08:54	40.64	28 28 38 28 28	05	.00	to USA	10/31			-2.05	
Southern Green	08:54	41.29	38	.60	10	to USA (Bloomberg)	08:54	39.61	36		
Thunder Horse	08:54	41.54	28	.60 .85	.00	Maya, Mexico					
WTI Cushing	08:54	40.69	28	.00	.00	to Europe	10/31			-5.90	
WTI Midland	08:54	40.84	28	.15	.00	to Asia	10/31			-4.40	
WTI Posting Diff	08:54			3.06	.03	to USA	10/31			-3.55	
WTS	08:54	40.84	28	.15	.00	to USA (Bloomberg)	08:54	39.01	36		
NYMCL Full Month	11:10	40.20	.12	40.20	.12	Olmeca, Mexico					
ICECO Full Month	11:10	42.52	.02	42.52	.02	to USA	10/31			.15	
Colombia						to USA (Bloomberg)	08:54			41.16	36
Vasconia	08:54	39.70	41	-3.75	.00	to Europe	10/31			-2.55	
Ecuador						Venezuela					
Oriente	08:54	38.45	41	-5.00	.00	Venezuela Basket	04/03	13.74			



### Gulf of Mexico Production and Permits

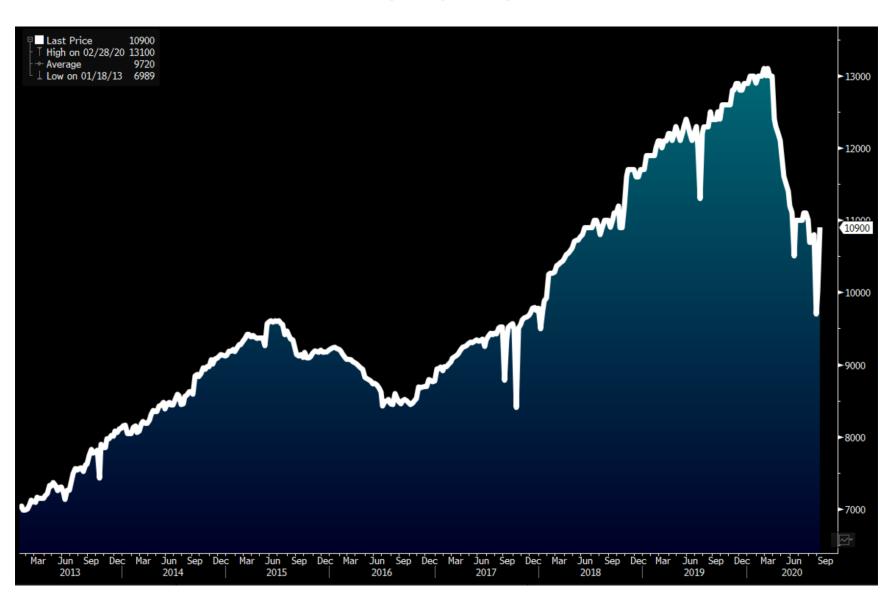
- The quality of offshore crude is paramount for effective refining into various productions
- Many Gulf assets require a heavier crude slate and can only run a limited amount of light/sweet crude

### Infrastructure in the Gulf of Mexico



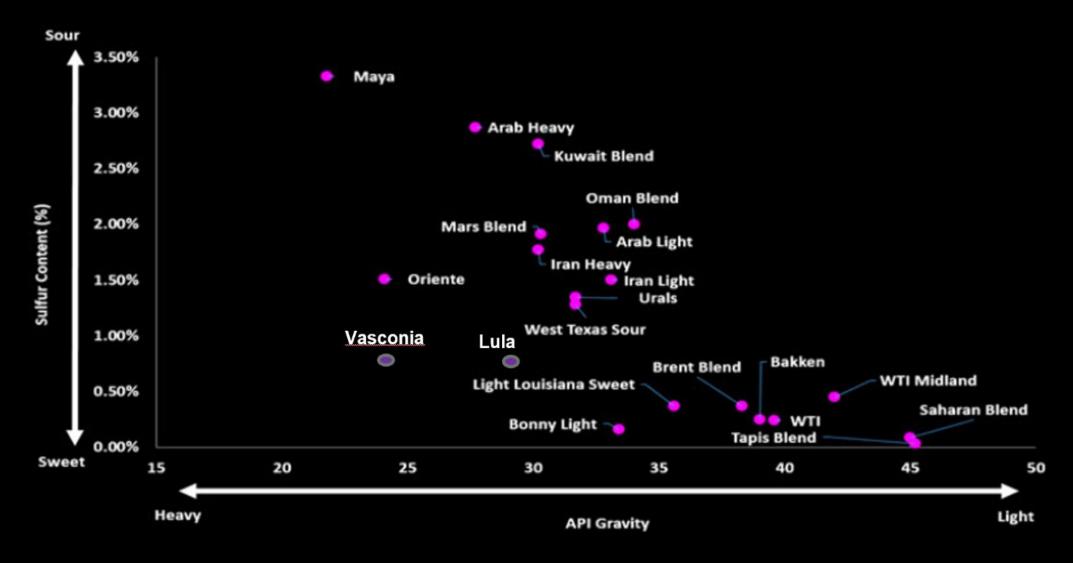
- There is a significant amount of infrastructure in the GoM that can support tiebacks and step outs
- Investments in the Gulf will be key to adjusting decline curves and filling a growing void in crude quality
- Crude quality is becoming a bigger problem in the U.S. as we are long light-sweet but short heavy-sour
- We reached a limit for the light-sweet the market could absorb and 13.1M barrels a day won't be reached again for years (or ever)

### Total U.S. Crude Production



- U.S. shale has decline curves that can range between 20%-45% making production growth labor intensive
- ★ E&Ps are struggling to manage corporate decline curves and shifting offshore provides a solution
- Technological improvements and shifting demand provides offshore opportunity
- Even at 13.1M barrels a day the U.S. was importing crude to fill the void in quality

### Crude Quality Matters: Oil Premiums are Shifting Heavier



## U.S. Crude Input Qualities for Refiners

Download Series History	Definitions, So	urces & Notes						
Show Data By: ○ Type	Graph Clear	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	View History
U.S.	<b>-</b>	33.14	33.15	32.99	32.41	32.88	32.50	1985-2020
PADD 1	<b>-</b>	35.56	36.35	36.89	34.44	34.71	36.85	1985-2020
East Coast	<b>-</b>	36.01	36.95	37.68	34.77	35.11	37.68	1985-2020
Appalachian No. 1	<b>-</b>	32.58	32.73	32.36	32.73	32.42	32.60	1985-2020
PADD 2	<b>-</b>	33.92	33.46	32.64	32.95	33.58	33.74	1985-2020
Ind., III. and Ky.	<b>-</b>	33.54	32.96	32.26	32.68	33.90	33.48	1985-2020
Minn., Wis., N. Dak., S. Dak.	<b>-</b>	27.88	27.51	26.56	26.46	25.67	24.60	1985-2020
Okla., Kans., Mo.	<b>-</b>	38.96	38.65	38.25	37.99	38.08	39.41	1985-2020
PADD 3	<b>~</b>	34.09	34.13	34.06	33.02	33.59	32.78	1985-2020
Texas Inland	<b>~</b>	39.78	39.83	39.89	39.45	40.0	40.06	1985-2020
Texas Gulf Coast	<b>~</b>	34.08	33.80	33.43	32.41	33.73	32.36	1985-2020
La. Gulf Coast	<b>~</b>	33.07	33.24	33.54	32.21	31.93	31.57	1985-2020
N. La., Ark	<b>~</b>	29.67	30.79	30.98	31.90	30.06	29.42	1985-2020
New Mexico	<b>-</b>	36.27	40.37	39.74	37.93	37.77	37.86	1985-2020
PADD 4	<b>~</b>	32.36	31.95	31.58	31.98	32.46	32.17	1985-2020
PADD 5	<b>-</b>	27.85	28.79	28.85	28.38	28.32	27.96	1985-2020

<sup>🗫</sup> Click on the source key icon to learn how to download series into Excel, or to embed a chart or map on your website.

Notes: Totals may not equal sum of components due to independent rounding. See Definitions, Sources, and Notes link above for more information on this

- API Gravity is paramount when we look at refining demand (largest buyers of oil) within the U.S. and on a global level.
- ❖ U.S. crude and refined product storage will weigh on pricing while imports will continue to flow to supply refiners with the proper slate of oil.



<sup>- =</sup> No Data Reported; -- = Not Applicable; NA = Not Available; W = Withheld to avoid disclosure of individual company data.

#### Hover over the legends on the right and the cells below to explore.

Crude quality has increased in importance following the rise of US shale and OPEC's alliance with Russia. Below is an interactive chart of 150 crudes selected by the S&P Global Platts Pricing & Market Insight team. It represents the most diverse and key streams in global oil markets.



#### Grades

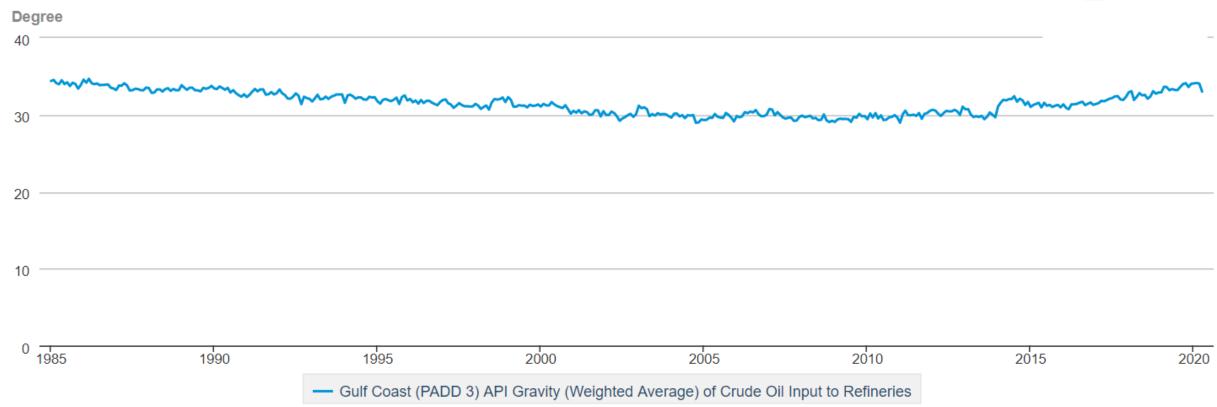
Light sweet

Medium sweet

<b>Trg</b> 0.00% 73.10°	Cos 0.04% 48.20°	Sah 0.10% 43.20°	ADCo 0.11% 58.40°	EF 0.17% 45.20°	As 0.18% 48.50°												<b>QtL</b> 1.22% 41.30°	IrL 1.46% 33.60°	Pos 1.67% 31.50°	Lav 1.93% 34.00°	Kir 2.23% 34.30°	Kw 2.52% 31.00°
Alg 0.00% 68.70°	<b>Ag</b> 0.04% 47.90°	Ba 0.10% 42.80°	Nio 0.13% 40.00°	BH 0.17% 39.30°	Ose 0.20% 39.60°	Nem 0.21% 39.80°	SP 0.26% 58.40°	0.33% 36.70°	ES 0.37% 36.70°	WTI 0.42% 40.80°	Mas 0.51% 34.10°	CPC 0.54% 46.20°	Fo 0.54% 37.30°	UmL 0.70% 38.90°	Mb 0.79% 40.20°	Ol 0.89% 38.70°	ArEL 1.00% 39.20°	Ur 1.44% 31.10°	Ma 1.82% 30.00°	UZa 1.84% 33.90°	<b>Ban</b> 2.45% 31.80°	ArM 2.54% 30.90°
0.01% 63.00°	P44 0.05% 44.00°	Sha 0.09% 42.20°	Aga 0.10% 37.40°	<b>Az</b> 0.14% 35.00°	<b>Tro</b> 0.18% 34.50°	Eko 0.21% 38.90°	QDFC 0.26% 57.00°	Dr 0.29% 33.00°	Pl 0.37% 33.20°	BNB 0.40% 37.50°	TEN 0.43% 33.80°	TN 0.52% 34.20°	SiL 0.57% 35.10°	FG 0.66% 36.70°	BUr 0.87% 32.30°	Ji 0.87% 32.30°	Das 1.11% 39.20°	Om 1.38% 30.50°	Sue 1.64% 29.90°	ArL 1.96% 33.30°	<b>Db</b> 2.13% 30.40°	BasL 3.16% 28.80°
EFC 0.04% 55.00°	Nk 0.04% 42.40°	<b>Dul</b> 0.08% 37.60°	QI 0.13% 36.00°	Er 0.16% 34.80°	Escr 0.17% 33.50°	<b>Jb</b> 0.25% 37.60°	CLOV 0.25% 32.80°	WR 0.31% 30.00°	Ko 0.37% 31.70°	<b>Gir</b> 0.42% 29.70°	Med 0.47% 32.90°	Hi 0.53% 33.00°	ESP0 0.55% 34.70°	Og 0.75% 35.60°	JSv 0.80% 28.00°	Th 0.90% 32.30°	Eu 1.03% 35.40°	<b>Cu</b> 1.38% 28.80°	IrHvy 1.77% 29.50°	VnMdm 1.85% 27.00°	AIS 2.37% 28.10°	ArH 2.75% 27.80°
Alb 0.02% 51.70°	BHo 0.04% 38.60°	Se 0.09% 34.50°	Cab 0.12% 32.60°	Co 0.14% 30.70°	BL 0.18% 32.80°	<b>Gal</b> 0.23% 36.30°	<b>Zaf</b> 0.25% 30.90°	VG 0.33% 17.00°	Esp 0.33% 32.20°	Lul 0.35% 30.50°	Paz 0.41% 25.60°	Lz 0.51% 32.10°	<b>Gr</b> 0.59% 29.00°	<b>Hu</b> 0.64% 28.30°	Sat 0.81% 27.00°	Mos 0.87% 28.30°	HBI 1.15% 35.20°	<b>Ca</b> 1.41% 17.50°	Or 1.63% 23.30°	VH1 1.85% 23.50°	RGh 2.50% 24.00°	Miss 2.95% 27.60°
ArSL 0.04% 50.60°	P35 0.05% 35.00°	Min 0.09% 33.90°	<b>Daq</b> 0.11% 32.30°	Chm 0.13% 26.90°	Eg 0.17% 27.30°	Bo 0.24% 30.60°	For 0.28% 30.30°	Boz 0.29% 16.90°	<b>Dj</b> 0.34% 27.60°	Eb 0,40% 19.80°	Sch 0.44% 24.90°	Hd 0.53% 24.40°	RnHvy 0.61% 22.80°	Cpt 0.70% 19.10°	Vs 0.83% 24.30°	Lo 0.87% 23.30°	Al 1.27% 19.60°	Rub 1.33% 12.70°	Per 1.79% 13.50°	Na 1.96% 19.00°	VH2 2.50% 16.00°	My 3.33% 21.80°
<b>Tap</b> 0.03% 44.60°	Rab 0.07% 33.40°	Dob 0.09% 21.40°	Dar 0.12% 25.00°	Py 0.13% 19.30°	Esc 0.19% 24.10°	CS 0.20% 26.30°	Us 0.27% 29.00°	Qin 0.28% 16.50°	Yom 0.34% 16.70°	Vnc 0.37% 17.40°	Cl 0.47% 23.30°	Dal 0.51% 23.20°	Juba 0.56% 17.10°	Kr 0.70% 14.00°	Sh 0.84% 24.20°	Li 0.90% 22.50°	<b>Sq</b> 3.50% 9.00°	D16 4.10% 16.00°	Sor 3.38% 19.20°	WCS 3.59% 20.90°	KL 3.89% 21.30°	BasHvy 4.20% 23.60°

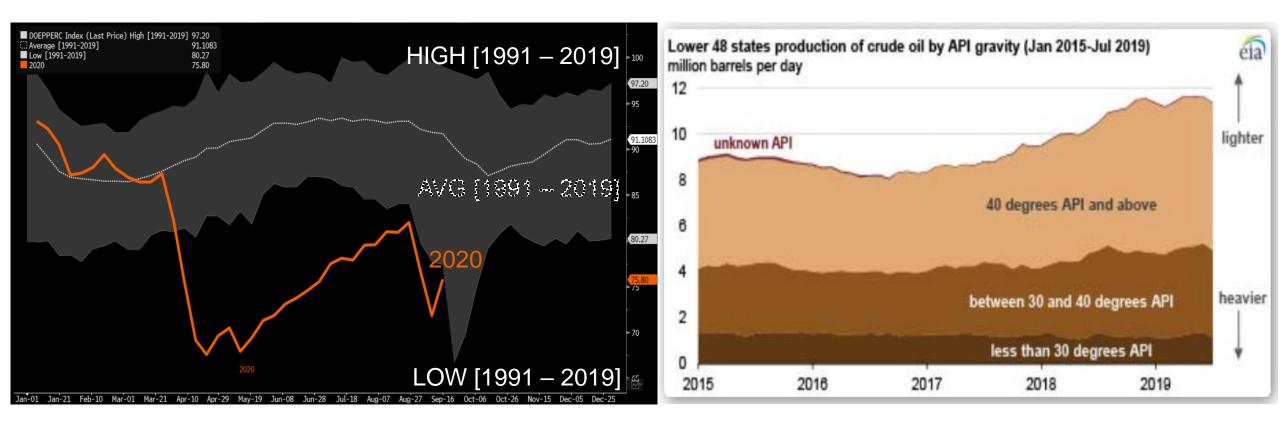
#### Gulf Coast (PADD 3) API Gravity (Weighted Average) of Crude Oil Input to Refineries







Source: U.S. Energy Information Administration



# Refiners are Struggling with Low Demand and Negative Margins

# Oil Price Competition is Heating Up in the Global Market

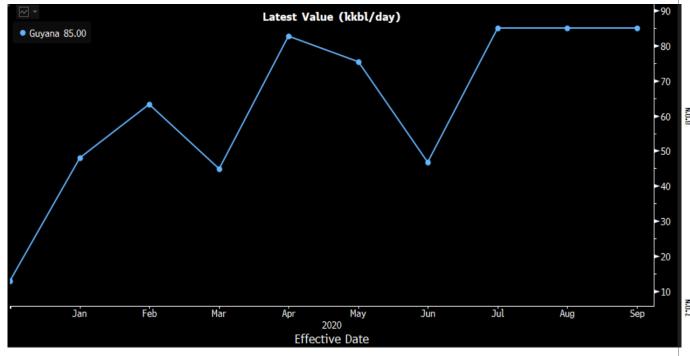
- Heavy-Sour grades are trading tighter vs historically selling at steep discounts
- Medium-Sweet characteristics still maintain the best return in the market, which is found in the Gulf of Mexico, Latin America, North Sea and West Africa
- Nigeria: Bonny Light OSP set at 37c/bbl discount to Dated vs +20c/bbl in September (lowest price since June)

	Month	OSP	Chg
Saudi Arabia			
to Asia (vs (	Oman/Duba	i)	
Super Light	10/31	<b>.</b> 55	-1.50
Extra Light	10/31	80	-1.50
Light	10/31	50	-1.40
Medium	10/31	30	-1.20
Heavy	10/31	<b></b> 30	90
to Med FOB S	Sidi Kerir (v	vs BWave)	
Extra Light	10/31	60	65
Light			45
Medium	10/31	-1.00	25
Heavy	10/31	-1.20	.25
to USA (vs A			
Extra Light	10/31	1.50	70
	10/31	1.05	60
Medium	10/31	<b>.</b> 35	50
Heavy	10/31	.00	50
to Europe (v	s BWave)		
Extra Light	10/31	-1.90	60
Light	10/31	-2.00	20
Medium	10/31	-1.90 -2.00	.00
Heavy	10/31	-2.00	.30

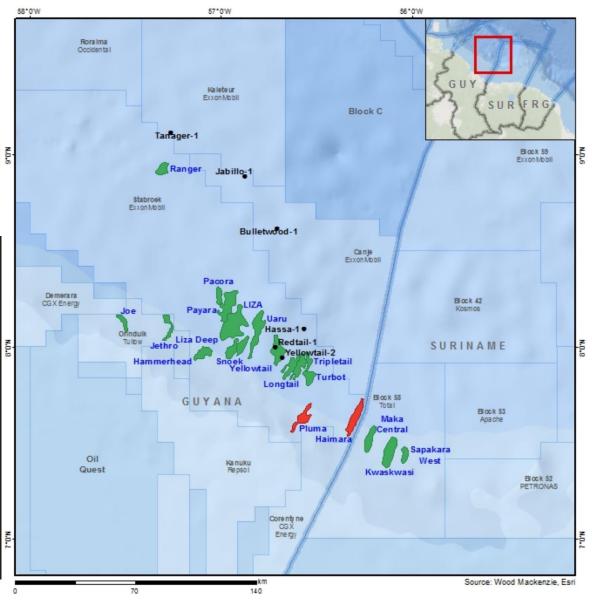
	Month	OSP	Chg
Nigeria			
(vs Dated Brent)			
Abo Blend	09/30	.12	- <b>.</b> 31
Agbami	09/30	-1.09	- <b>.</b> 25
Akpo	09/30	-1.31	- <b>.</b> 72
Amenam Blend	09/30	- <b>.</b> 33	.09
Antan Blend	09/30	.42	.13
Bonga	09/30	.43	29
Bonny Light	09/30	.20	- <b>.</b> 41
Brass Blend	09/30	.03	- <b>.</b> 33
EA Blend	09/30	1.61	<b>.</b> 05
Ebok	09/30	.59	- <b>.</b> 32
Erha	09/30	.89	29
Escravos Light	09/30	.64	- <b>.</b> 32
Forcados Blend	09/30	<b>.</b> 53	- <b>.</b> 28
Ima	09/30	-1.30	- <b>.</b> 73
0be	09/30	24	- <b>.</b> 33
Okono Blend	09/30	.18	- <b>.</b> 39
0koro	09/30	1.62	74
0kwori	09/30	.89	14
0kwuibome	09/30	.16	- <b>.</b> 49
OSO Condensate	12/31	- <b>.</b> 25	- <b>.</b> 25
OYO	09/30	1.28	- <b>.</b> 05
Pennington Light	09/30	.22	- <b>.</b> 34
Qua Iboe Light	09/30	.16	49
Ukpokiti	09/30	.18	44

## Guyana and Suriname Oil Growth Set to Rise

#### **Guyana Production Levels**



### **Guyana and Suriname Oil and Gas**



## OPEC Crude Production Remains Elevated: Cheaters are Going to Cheat

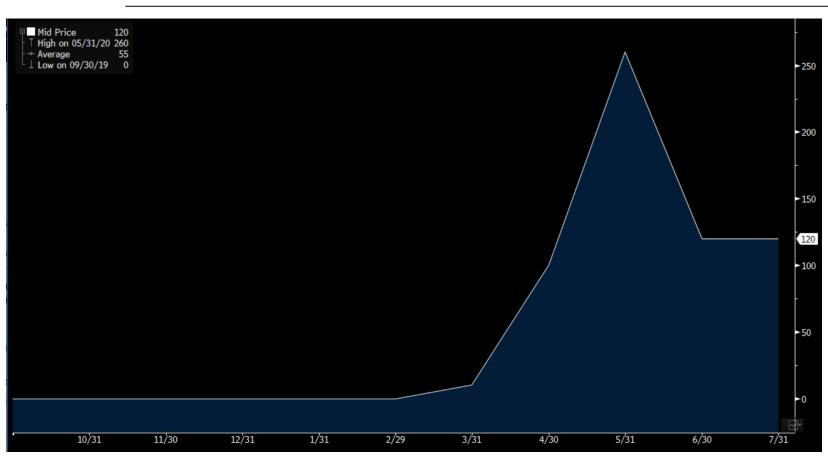
Tubic o o. o. Lo	rade on pr	oddotion	Duocu on	occomadi	y ocurec	o, cora			
Secondary									Change
sources	2018	2019	4Q19	1Q20	2Q20	Jun 20	Jul 20	Aug 20	Aug/Jul
Algeria	1,042	1,022	1,022	1,016	878	810	808	855	47
Angola	1,505	1,401	1,350	1,388	1,270	1,223	1,186	1,210	24
Congo	317	324	313	295	292	298	285	277	-8
Equatorial Guinea	125	117	122	122	111	117	106	118	11
Gabon	187	208	210	195	198	203	186	181	-5
Iran, I.R.	3,553	2,356	2,113	2,059	1,958	1,947	1,930	1,940	10
Iraq	4,550	4,678	4,633	4,560	4,127	3,715	3,752	3,652	-100
Kuwait	2,745	2,687	2,688	2,741	2,464	2,085	2,161	2,288	127
Libya	951	1,097	1,163	348	84	90	108	106	-2
Nigeria	1,718	1,786	1,777	1,800	1,617	1,492	1,480	1,482	2
Saudi Arabia	10,311	9,771	9,846	9,796	9,212	7,540	8,417	8,892	475
UAE	2,986	3,094	3,135	3,226	2,893	2,387	2,525	2,705	180
Venezuela	1,354	796	724	730	506	337	339	340	1
Total OPEC	31,344	29,337	29,095	28,276	25,610	22,243	23,283	24,045	763

- Nigeria and Iraq remain non-compliant to the OPEC+ agreement
- Even countries that are production compliant have been able to maintain most exports
- UAE is now non-compliant with a big rise in exports
- Global floating storage remains elevated globally, especially in Asia

Notes: Totals may not add up due to independent rounding.

Source: OPEC.

# Neutral Zone is Operational: The Area Produces a Heavy-Sour Blend of Crude

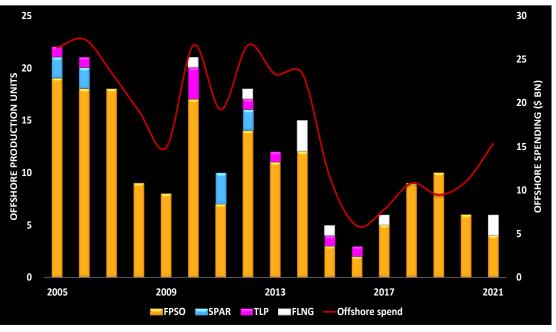


- The Gulf Cooperation Countries (GCC) are investing offshore and onshore to capture a heavier blend of oil
- Middle East countries have also invested in refiners in order to capture a higher valued hydrocarbon chain
- Political instability and weak balance sheets will remain a problem throughout the Middle East
- Watch dwindling foreign reserves in the region

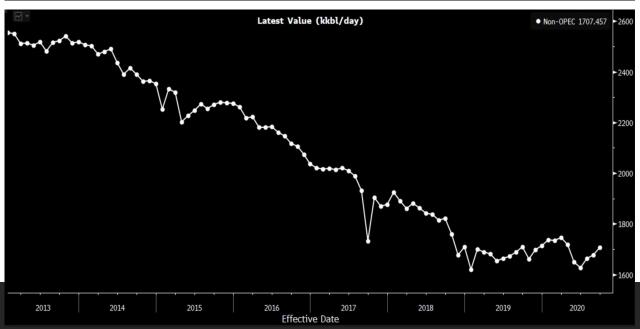
### Latin America Oil Production Growth Driven by Brazil

- ❖ Latin America will continue to see investment due to the prolific finds and quality of crude
- Crude will keep flowing into Asia, but the U.S. will be a natural buyer as Mexican crude flow shifts and Venezuela remains under sanctions



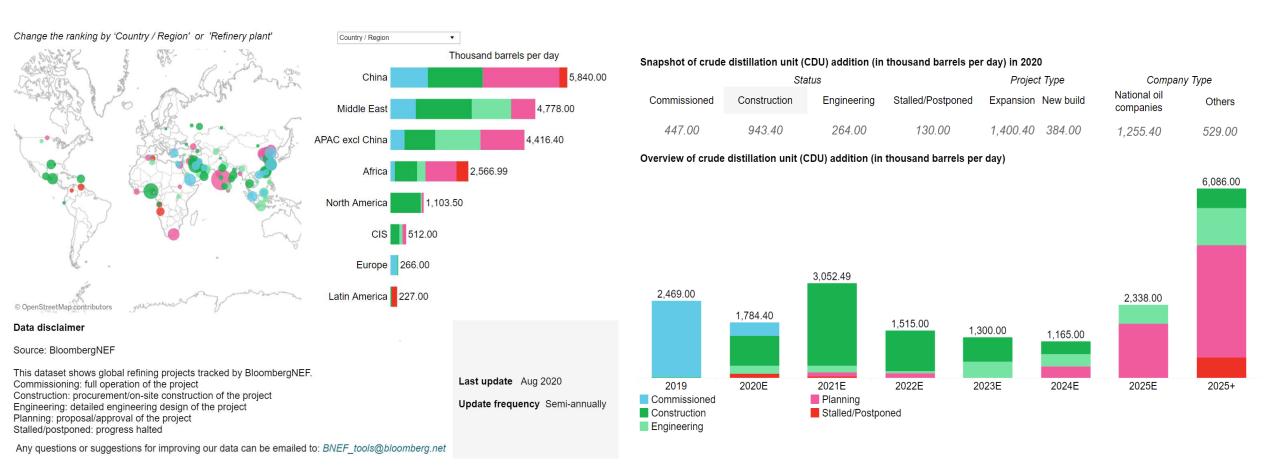


### **Mexico Shipments** Maya crude exports may face drop in the years ahead ■ Monthly shipments of Maya 1.5M B/d Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Jan Mar Mav 2018 2019 2020 Source: Bloomberg ship-tracking data, U.S. customs and shipping reports Bloomberg



# Mexico to Cut Exports as AMLO Refinery Comes Online

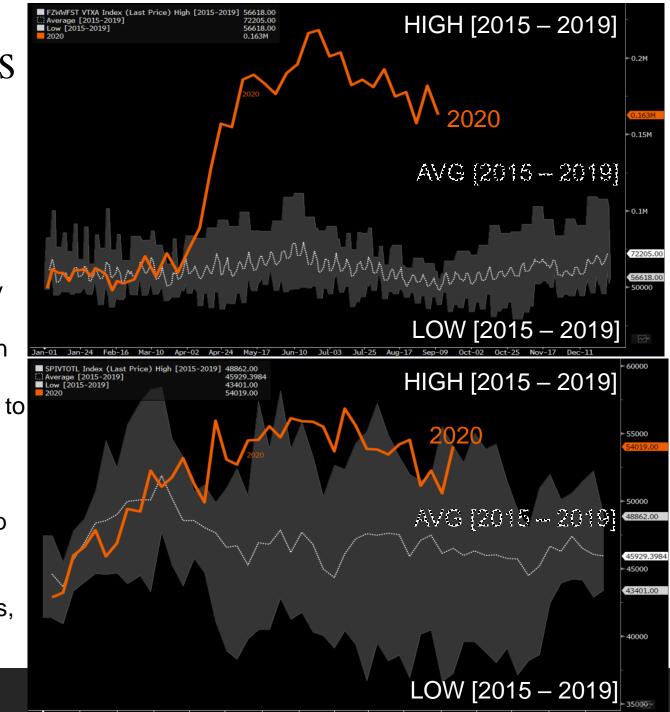
"Pemex, as the state oil company is also called, is forecasting a reduction of almost 70% in exports of its flagship heavy crude known as Maya between 2021 and 2023, according to two people familiar with the situation. It expects to cut Maya exports by almost half between next year and 2022 and lower them again between 2022 and 2023, said the people, who asked not to be identified because the information hasn't been made public."

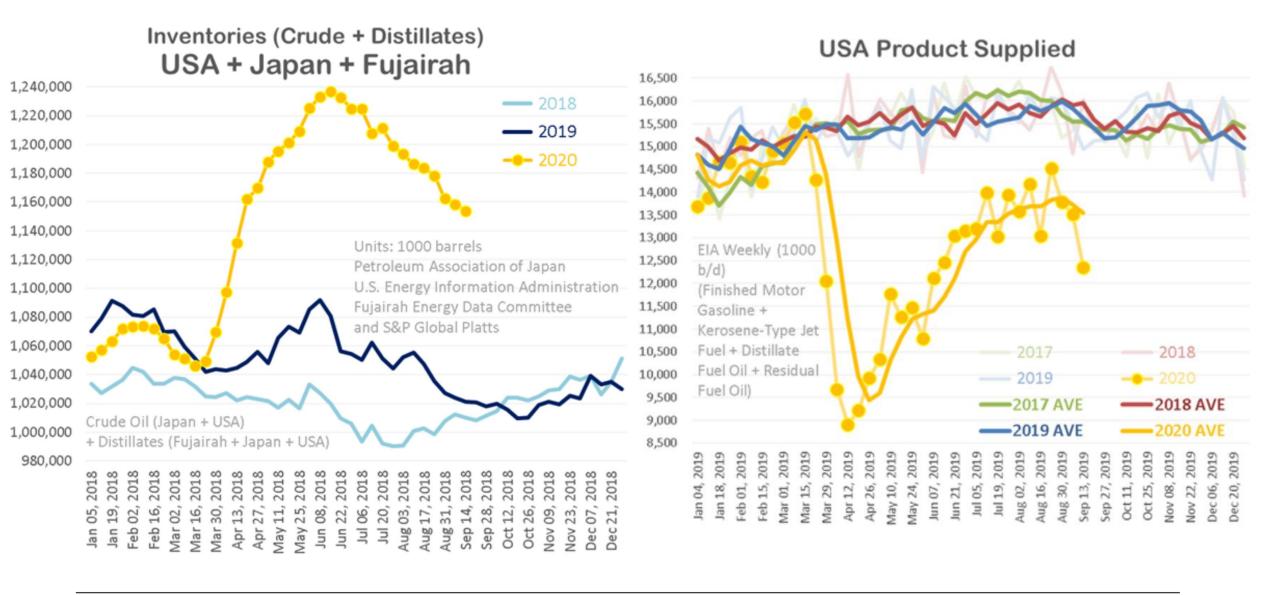


# Build-Out of Refiners will Cause Older Facilities to Either Shut Down or Cut Runs

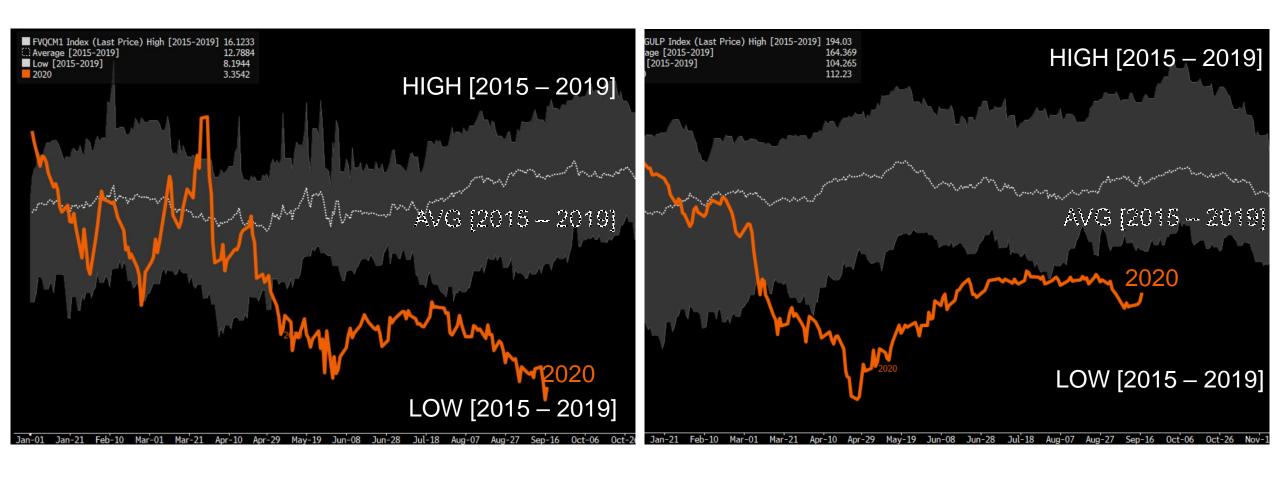
# Floating Storage Remains at Record Highs in Oil and Refined Products

- Global diesel demand, storage, and pricing points to persistent economic declines that started back in July 2019
- Refinery margins are under pressure, which will be an overhang for total oil demand
- Until the refined product glut is cleared, it will be hard to see oil have a sustained rally
- Margins / cracks in the refinery space highlight the economic weakness and changing spending patterns
- Consumer trends are changing due to COVID and job losses
- Refinery Run rates are being cut globally well above seasonal norms driven by low demand, weak margins, and filling storage

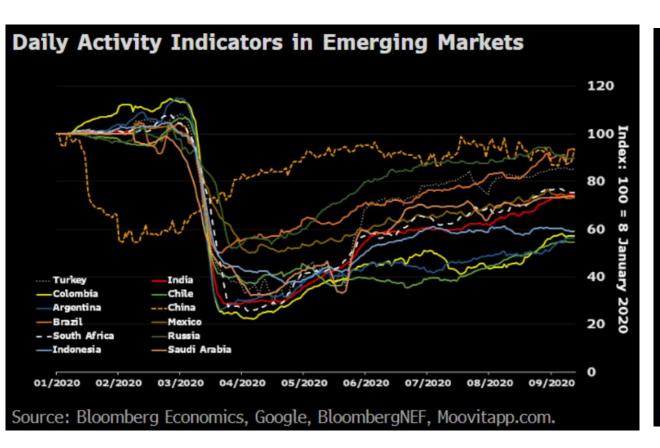


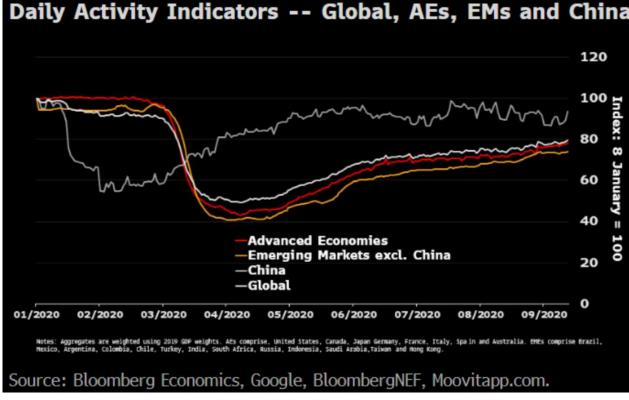


Global Storage Rises as Demand Dwindles

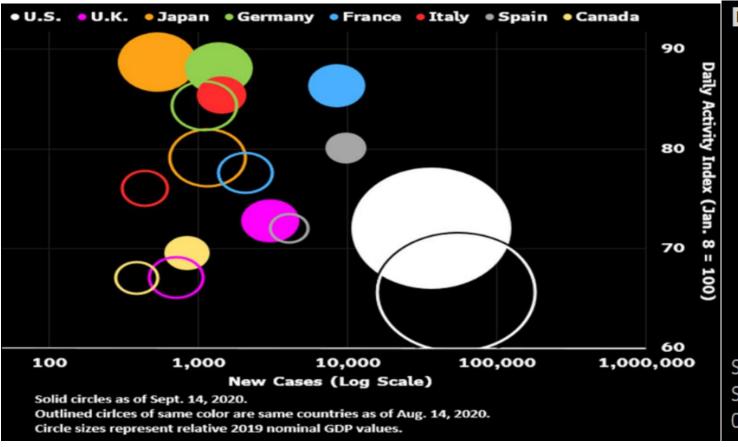


# Example of Some Product Pricing Weighing on Total Refiner Margins

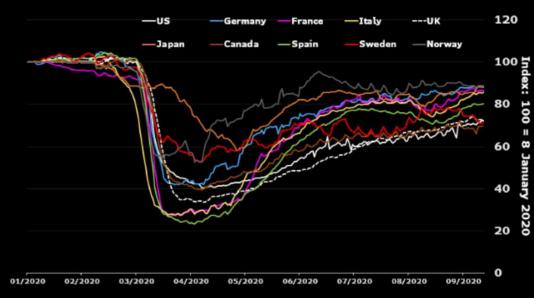




## Daily Activity Remains Weak Globally



### **Daily Activity Indicators**



Source: Bloomberg Economics, Google, Moovitapp.com, German Statistical Office, BNEF.com, Indeed.com, Shoppertrak.com, Opportunity Insights

## Recovery Slowdown Hits Demand

## GDP Headwinds Persist Capping Oil Demand

#### **Oil Demand Impacts Across Top Consumers**

	Average Demand by Country	Demand in Shutdown (30% loss)	Difference
United States	20,500,000	14,350,000	6,150,000.00
<b>European Union</b>	15,000,000	10,500,000	4,500,000.00
China	14,000,000	9,800,000	4,200,000.00
India	5,000,000	3,500,000	1,500,000.00
Japan	4,000,000	2,800,000	1,200,000.00
Korea	2,900,000	2,030,000	870,000.00
Total	61,400,000	42,980,000	18,420,000.00

- 1) China (2<sup>nd</sup> largest economy in 2019)
- 2) United States (Largest Economy)
- 3) India (5<sup>th</sup>)
- 4) Japan (3<sup>rd</sup>)
- 5) South Korea (12th)
- 6) Netherlands (17<sup>th</sup>)
- 7) Germany (4<sup>th</sup>)
- 8) Spain (13<sup>th</sup>)
- 9) Italy (8<sup>th</sup>)

## **Latest World Economic Outlook Growth Projections**

		PROJEC	ECTIONS	
(real GDP, annual percent change)	2019	2020	2021	
World Output	2.9	-4.9	5.4	
Advanced Economies	1.7	-8.0	4.8	
United States	2.3	-8.0	4.5	
Euro Area	1.3	-10.2	6.0	
Germany	0.6	-7.8	5.4	
France	1.5	-12.5	7.3	
Italy	0.3	-12.8	6.3	
Spain	2.0	-12.8	6.3	
Japan	0.7	-5.8	2.4	
United Kingdom	1.4	-10.2	6.3	
Canada	1.7	-8.4	4.9	
Other Advanced Economies	1.7	-4.8	4.2	
Emerging Markets and Developing Economies	3.7	-3.0	5.9	
Emerging and Developing Asia	5.5	-0.8	7.4	
China	6.1	1.0	8.2	
India	4.2	-4.5	6.0	
ASEAN-5	4.9	-2.0	6.2	
Emerging and Developing Europe	2.1	-5.8	4.3	
Russia	1.3	-6.6	4.1	
Latin America and the Caribbean	0.1	-9.4	3.7	
Brazil	1.1	-9.1	3.6	
Mexico	-0.3	-10.5	3.3	
Middle East and Central Asia	1.0	-4.7	3.3	
Saudi Arabia	0.3	-6.8	3.1	
Sub-Saharan Africa	3.1	-3.2	3.4	
Nigeria	2.2	-5.4	2.6	
South Africa	0.2	-8.0	3.5	
Low-Income Developing Countries	5.2	-1.0	5.2	

Source: IMF, World Economic Outlook Update, June 2020

## Driving Data Remains Below Normal Globally

									Qui	eter Ro	ads	Ţ		į	Busi	ier Roa	ds								
	17-Jan	24-Jan	7-Feb	14-Feb	28-Feb	6-Mar	20-Mar	27-Mar	10-Apr	17-Apr	1-Mag	8-Mag	22-Mag	29-Mag	12-Jun	19-Jun	3-Jul	10-Jul	24-Jul	31-Jul	14-Aug	21-Aug	28-Aug	4-Sep	11-Sep
U.S.	7	-8	-18	-7	-16	-11	-57	-63	-63	-62	-57	-58	-56	-55	-45	-42	-51	-44	-43	-41	-39	-40	-40	-33	-37
China	1	-59	-66	-56	-38	-22	-17	-16	-30	-13	-40	-27	-5	0	5	1	-4	0	-12	-6	-9	-6	-5	-1	4
Japan	-18	-21	-22	-17	-19	-22	-28	-20	-39	-41	-46	-42	-40	-35	-31	-25	-26	-24	-45	-30	-48	-16	-21	-20	-23
Germany	0	-9	-17	-5	-4	-6	-31	-38	-30	-27	-6	-10	6	-3	2	-4	10	3	-10	-7	0	5	10	8	6
India	-11	-16	-12	-6	-31	5	-56	-90	-90	-88	-84	-80	-74	-62	-64	-68	-62	-57	-47	-43	-29	-24	-33	-35	-41
U.K.	-4	-6	-12	-3	-13	4	-27	-57	-56	-55	-51	-50	-50	-41	-39	-38	-28	-29	-24	-23	-18	-23	-5	-13	-11
France	25	10	-6	-24	12	-8	-65	-71	-72	-71	-69	-65	-54	-50	-39	-31	-18	-19	-27	-35	-61	-62	-37	-35	-4
Italy	-18	-9	-14	-10	-12	-1	-71	-71	-71	-67	-71	-65	-62	-61	-62	-59	-53	-51	-54	-49	-71	-76	-71	-55	-43
Brazil	-31	-22	-14	-13	-19	-15	-64	-78	-92	-73	-90	-63	-76	-66	-60	-60	-53	-53	-53	-48	-53	-44	-48	-40	-47
Canada	-11	-11	-37	-16	-32	-11	-59	-64	-62	-64	-63	-61	-57	-54	-55	-49	-51	-48	-45	-41	-42	-40	-42	-38	-38
Russia	-31	-20	-8	-11	-1	-2	-27	-27	-98	-105	-86	-99	-80	-71	-9	-13	-2	-27	-34	-31	-22	-27	-13	-14	-1
Spain	-3	0	-11	-6	-10	-11	-55	-56	-55	-51	-55	-54	-58	-57	-54	-53	-49	-43	-49	-52	-56	-56	-55	-46	-41
Australia	-29	-21	-1	12	16	12	-11	-36	-45	-47	-43	-44	-32	-19	-19	-22	-30	-45	-17	-13	-22	-21	-18	-18	-16
Mexico	-11	-14	-16	-15	-22	-22	-51	-71	-84	-80	-74	-84	-87	-81	-83	-78	-70	-61	-70	-62	-65	-60	-58	-63	-53
Indonesia	-21	-3	-21	-23	-5	-21	-50	-79	-85	-79	-82	-67	-81	-81	-57	-53	-48	-50	-50	-36	-46	-80	-50	-51	-53
Saudi Arabia	-5	-9	-5	-9	-12	-2	-38	-41	-38	-31	-44	-43	-43	-44	-36	-34	-28	-35	-34	-27	-33	-32	-28	-21	-28
Turkey	-11	-22	-24	-10	-25	-17	-51	-54	-54	-48	-68	-38	-19	-31	-25	-21	-22	-23	-27	-49	-30	-29	-31	-34	-38
Argentina	-34	-35	-21	-31	-22	-22	-52	-53	-68	-49	-66	-49	-50	-50	-48	-47	-51	-58	-45	-45	-45	-44	-43	-41	-39
S. Africa	-31	-5	7	-5	-12	-6	-22	-51	-63	-67	-67	-58	-59	-63	-57	-58	-56	-54	-54	-57	-67	-50	-45	-43	-38
G-20 Index	-3	-20	-26	-19	-18	-12	-41	-48	-54	-49	-53	-48	-41	-38	-31	-32	-32	-29	-33	-29	-32	-29	-27	-23	-22

Note: The data compares rush-hour traffic congestion for major cities in G20 countries (X YoY). No data available for South Korea. Spain is included as a permanent guest of the G20. Countries are in order of economic size. For the US, the average of New York, Chicago and Los Angeles is taken. For China, it's the average of Beijing, Shanghai, Shenzhen. Other major cities included are: Tokyo, Berlin, New Delhi, London, Paris, Rome, Sao Paulo, Toronto, Moscow, Madrid, Sydney, Mexico City, Jakarta, Riyadh, Ankara, Buenos Aires, Johannesburg. The G-20 Index is a weighted sum of individual countries' indices. The weight is proportional to the size of GDP.

# The New Flow of Hydrocarbons

- Over the last several years, Asia has been purchasing a growing amount of hydrocarbons ranging in API Gravity as coking assets require heavier blends and lighter crudes price themselves into chemical processing
- Asia remains a key growth spot for oil flow, but the onset of a slowly global economy mixed with COVID has reduced total consumption
- Refined product exports from the area has changed trading lanes forever

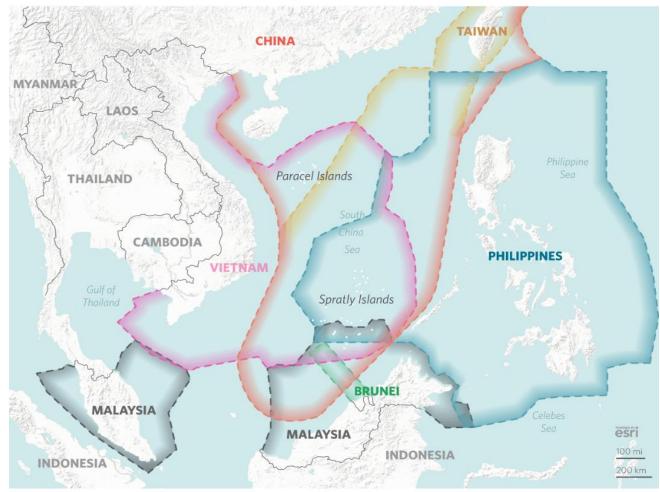


# "Belt and Road" Initiative is Complex and Intertwined with "Made in China 2025"



#### **Territorial Claims in the South China Sea**





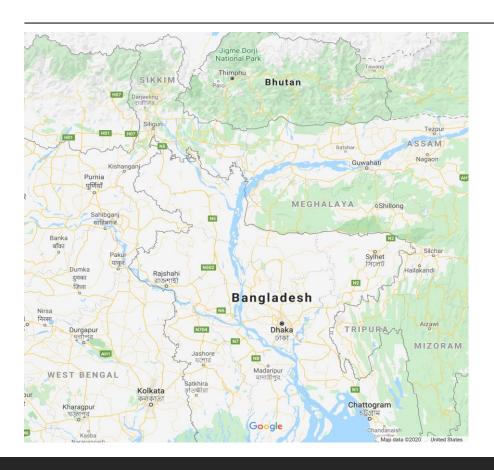
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# The 9-Dash Line Captures Food and Oil / Gas

- The U.N. unanimously rejected China's claim across various islands and reefs that fall in neighboring country Sovereign waters
- China has harassed many vessels in Vietnam and Malaysia; sinking another Vietnamese fishing vessel
- The islands have been built up with antiship missiles, radar, and advanced communications to extend China's reach

# Tensions Between India and China Are Increasing

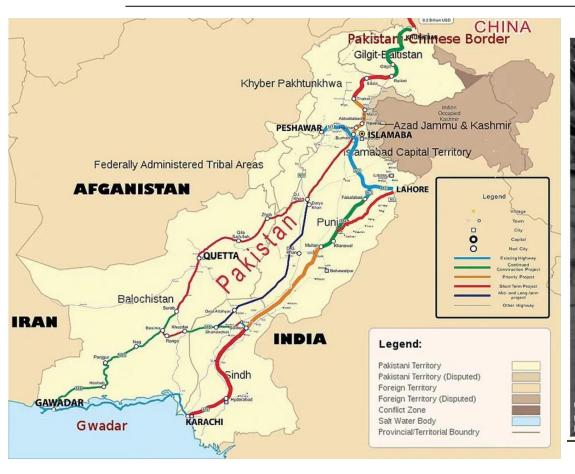


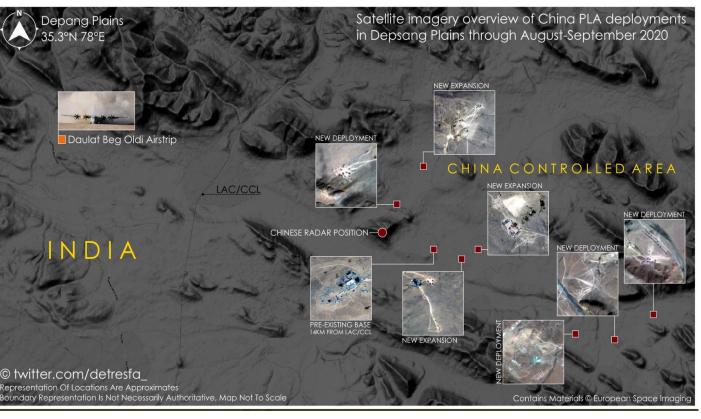


- China and India have clashed at the Doklam Plateau over the last few years
- Sikkim has been a new area of clashes over the last 2 weeks
  - Both India and China have built assets along roads/airports due to the strategic nature of the area
  - It is the thinnest part of India and a gateway to a large swath of farming
  - It allows for the movement of heavy machinery over the Himalayas

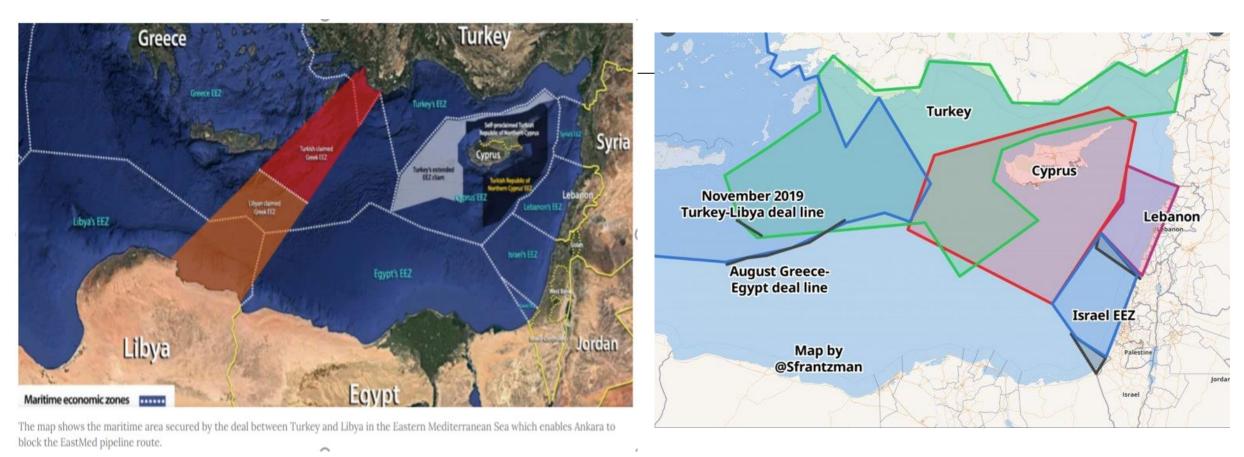
## India and China Shifting Military Equipment and Personnel

- ❖ Ladakh has become a battle ground between China and India
- ❖ India and China remain in a tense stand-off across the shared borders in Ladakh and Sikkim



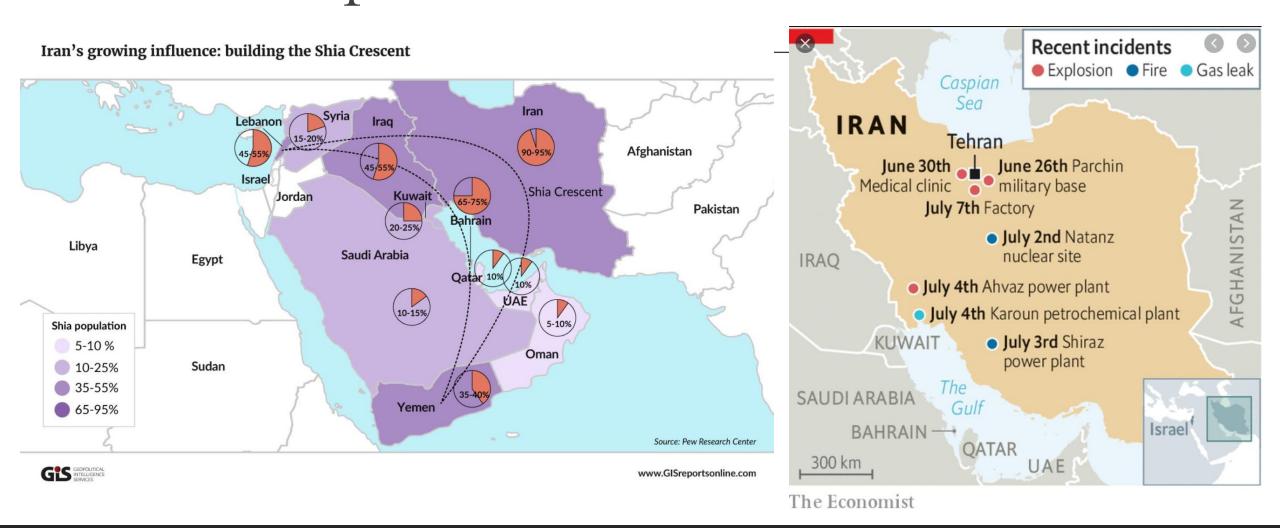


### Exclusive Economic Zone in the Mediterranean



The GNA (Government of National Accord) and the LNA (Libya National Army - led by General Haftar) have been engaged in a battle for control even before the last ISIS stronghold was eliminated, as the GNA was formed in 2015

# Iran Influence is Fading, and Regime Change is Closer vs Expectations





# Summary of Key Points

- U.S. production will struggle to get back to 2019 highs due to decline rates, lack of new completions, and saturated demand domestically and abroad.
  The new normal will be 10M barrels a day going forward
- Oil demand will continue to struggle and remain down 10-15m barrels year over year. The view that we will close out Q4 with only a 4M barrel a day loss makes a lot of assumptions that currently go against the economic backdrop
- We are facing a new normal over the coming several quarters with stagnate economies that were already struggling and only supported by monetary policy
- New refiners and shifting crude slates will require more investment in the offshore market to help fill a growing void
- Geo-political instability is rising in some key areas around the world (specifically China). The issues growing around India / China, the U.S. / China Trade War, and tensions in the South China Sea won't be resolved quickly or peacefully
- ❖ Iran and Libya remain the unknowns in the Middle East, but some of the production can come back quickly, hurting an already precarious supply/demand situation