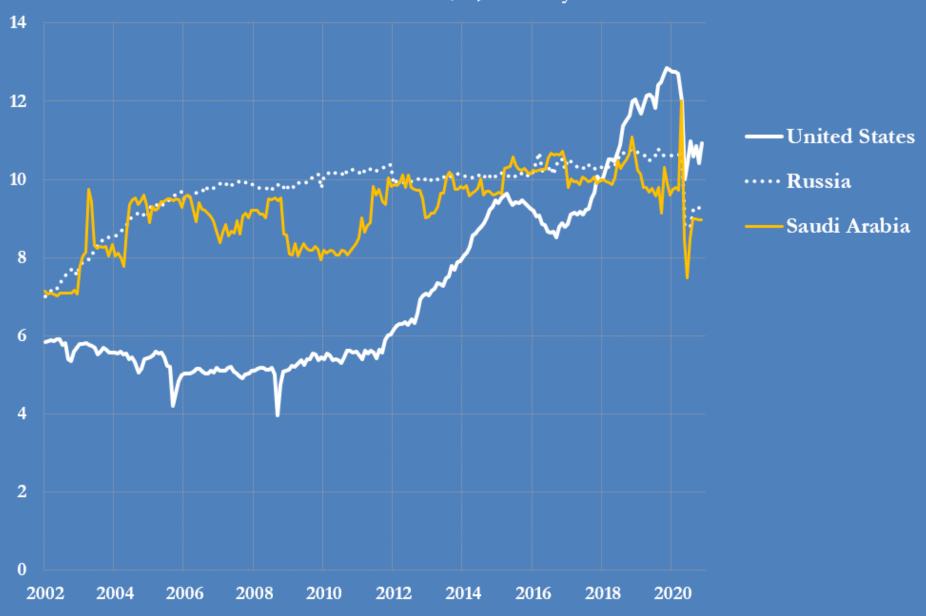
Oil prices, spreads, inventories and OPEC output policy Selected indicators

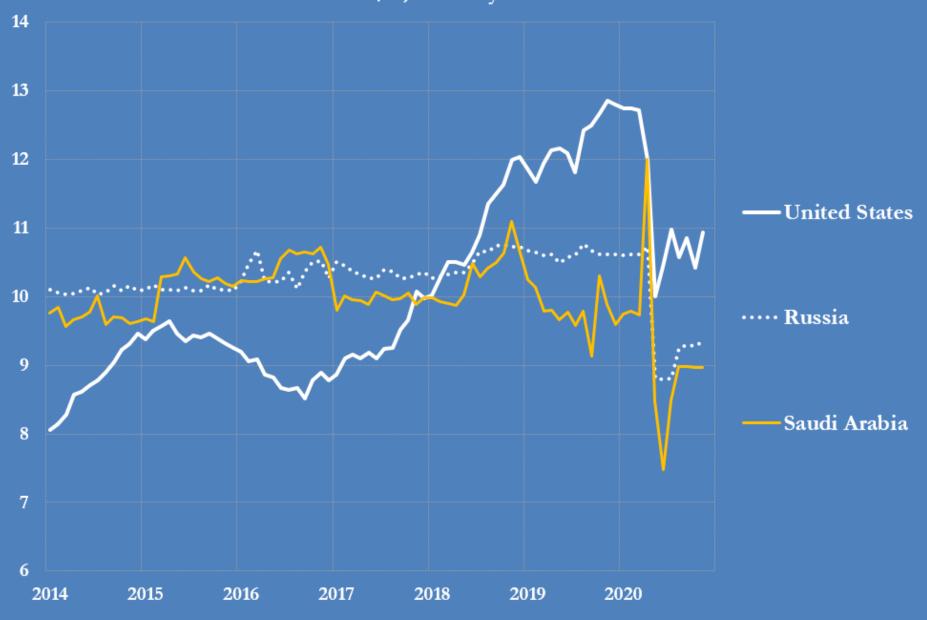
JOHN KEMP REUTERS 12 Feb 2021

Global crude oil output by top three producers, 2002-2020 million b/d, monthly



Source: Joint Organisations Data Initiative

Global crude oil output by top three producers, 2014-2020 million b/d, monthly



Source: Joint Organisations Data Initiative

Global petroleum market 2010-2019

Annual percent growth rates

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010-2019 Avg
EIA	U.S. liquids production	6.1	4.6	9.8	11.2	14.3	7.0	-2.0	5.5	14.6	8.4	7.8
	Global liquids production	3.1	0.5	2.3	0.6	2.8	3.0	0.5	0.5	2.8	-0.2	1.6
	Global liquids consumption	3.4	0.8	1.5	1.7	1.5	2.2	1.2	2.1	1.3	0.8	1.6
	U.S. captures market share (production side)?	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
	U.S. captures market share (consumption-side)?	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
BP	U.S. liquids production (tonnes)	3.3	3.9	14.1	13.5	16.9	8.1	-4.3	5.8	17.0	11.2	8.8
	Global liquids production (tonnes)	2.0	0.8	2.8	0.2	2.3	3.1	0.4	0.3	2.4	-0.3	1.4
	Global liquids consumption (tonnes)	3.0	1.0	1.3	1.0	0.6	1.7	2.0	1.2	1.1	0.8	1.4
	U.S. captures market share (production side)?	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
	U.S. captures market share (consumption-side)?	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
BP	U.S. liquids production (barrels)	4.0	4.3	13.2	13.1	16.9	8.3	-3.4	6.4	16.9	11.0	8.9
	Global liquids production (barrels)	2.2	0.9	2.6	0.5	2.4	3.2	0.4	0.8	2.6	-0.1	1.6
	Global liquids consumption (barrels)	3.5	1.2	1.1	1.7	1.0	1.9	2.0	1.7	1.5	1.1	1.7
	U.S. captures market share (production side)?	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
	U.S. captures market share (consumption-side)?	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
BP	U.S. crude and condensates production (barrels)	2.4	3.3	15.0	15.0	17.3	7.4	-6.4	5.8	17.5	11.3	8.6
	Global crude and condensates production (barrels)	1.8	0.4	2.4	0.4	2.0	3.0	-0.2	0.4	2.2	-0.7	1.2
	U.S. captures market share (production side)?	YES	YES	YES	YE8	YES	YES	NO	YES	YES	YES	YES
Real Brent crude oil price		93	126	124	119	107	57	47	57	73	64	87

Sources: U.S. Energy Information Administration (Short-Term Energy Outlook), BP (Statistical Review of World Energy) @[KempEnergy

Global petroleum liquids production, 2009-2019 Annual percent growth

	Annual production growth (%)		United States captures	Real Brent price		
	United States	Rest of World	producers' market	2019 U.\$.\$/bbl		
2009	6.78	-0.91	YES	73		
2010	6.13	3.14	YES	93		
2011	4.64	0.54	YES	126		
2012	9.75	2.31	YES	124		
2013	11.22	0.65	YES	119		
2014	14.29	2.84	YES	107		
2015	6.99	2.99	YES	57		
2016	-2.05	0.48	NO	47		
2017	5.46	0.54	YES	57		
2018	14.63	2.75	YES	73		
2019	8.42	-0.16	YES	64		
10-yr avg	7.84	0.57	YES	85		

Sources: U.S. Energy Information Administration, Thomson Reuters @JKempEnergy

U.S. petroleum liquids production and global liquids consumption, 2009-2019

Annual percent growth

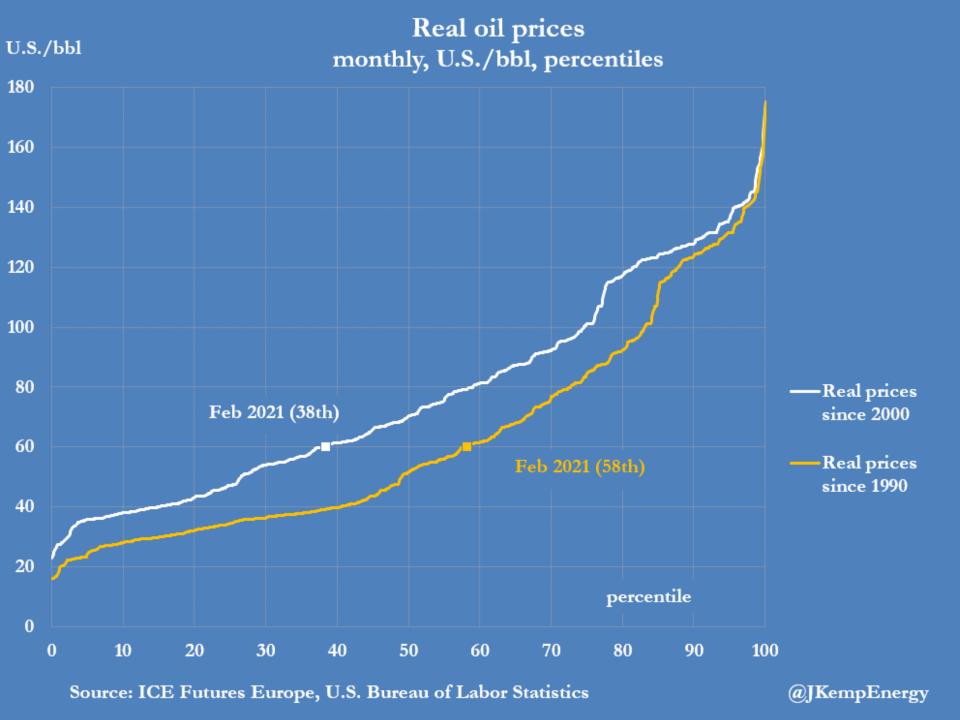
	U.S. production annual percent change	Global consumption annual percent change	United States captures all global growth?	Real Brent price 2019 U.\$.\$/bbl
2009	6.78	-0.96	YES	73
2010	6.13	3.40	YES	93
2011	4.64	0.77	YES	126
2012	9.75	1.53	YES	124
2013	11.22	1.74	YES	119
2014	14.29	1.46	YES	107
2015	6.99	2.21	YES	57
2016	-2.05	1.16	NO	47
2017	5.46	2.07	YES	57
2018	14.63	1.31	YES	73
2019	8.42	0.83	YES	64
10-yr avg	7.84	1.65	YES	85

Sources: U.S. Energy Information Administration, Thomson Reuters @JKempEnergy

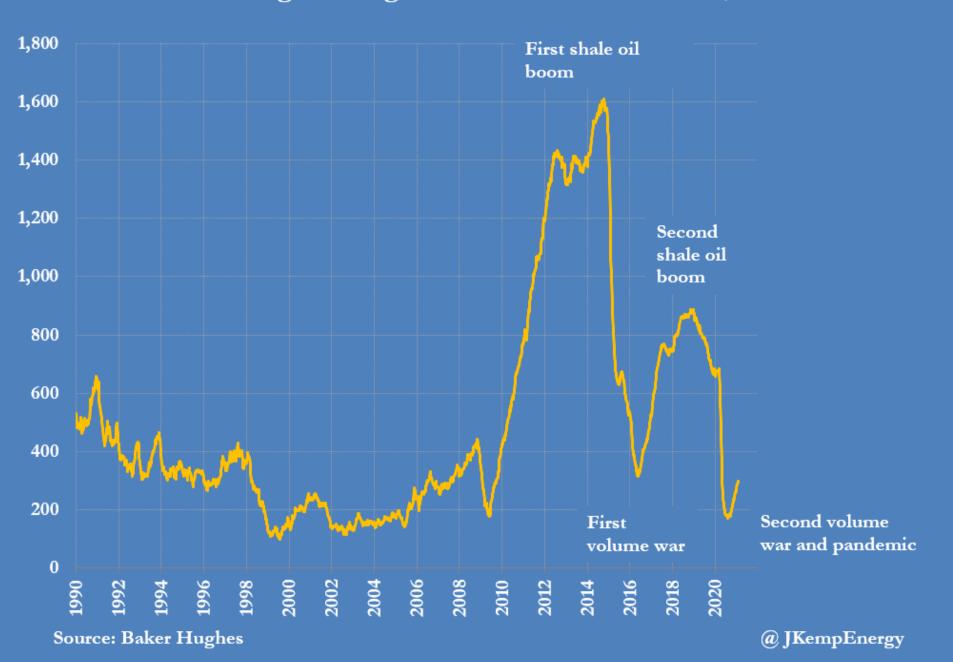
Real oil price, U.S./bbl, monthly, 1990-2021 Front month Brent futures adjusted by U.S. CPI ex food and energy



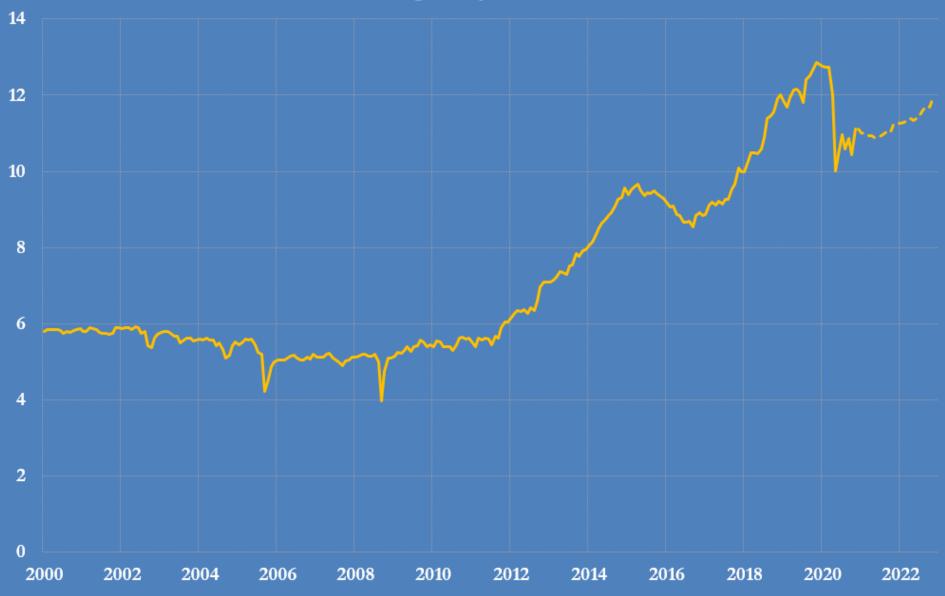
Sources: ICE Futures Europe, U.S. Bureau of Labor Statistics



Number of rigs drilling for oil in the United States, 1990-2021

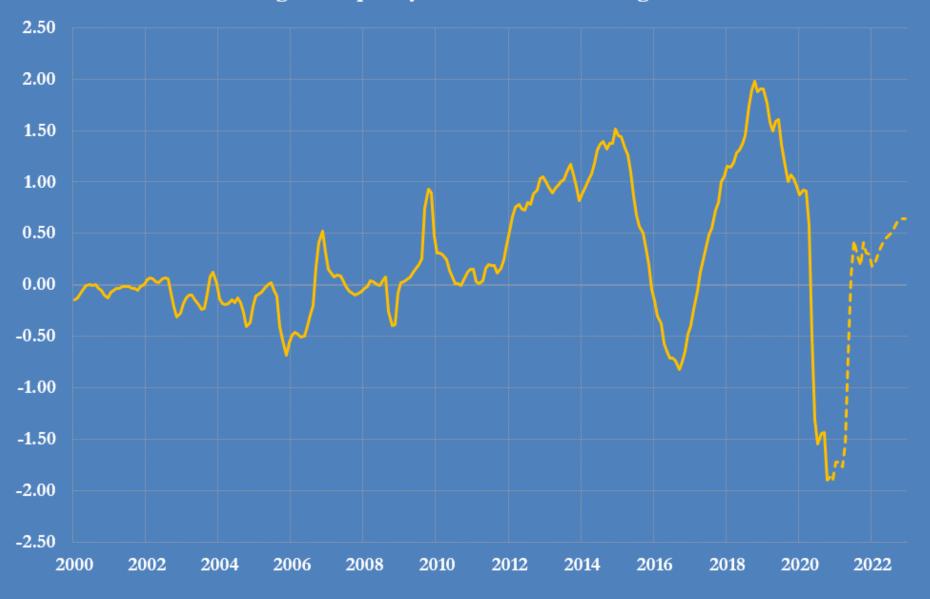


U.S. crude oil production, 2000-2022 million barrels per day, actual and forecast



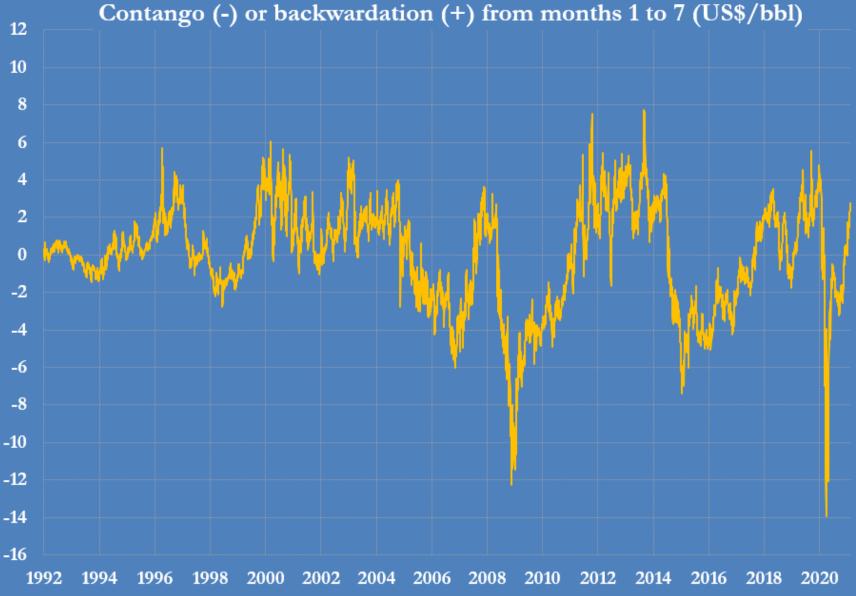
Source: U.S. Energy Information Administration ("Short-Term Energy Outlook", Feb 2021) @JKempEnergy

U.S. crude oil production, 2000-2022 million b/d, change from prior year, three-month average, actual and forecast

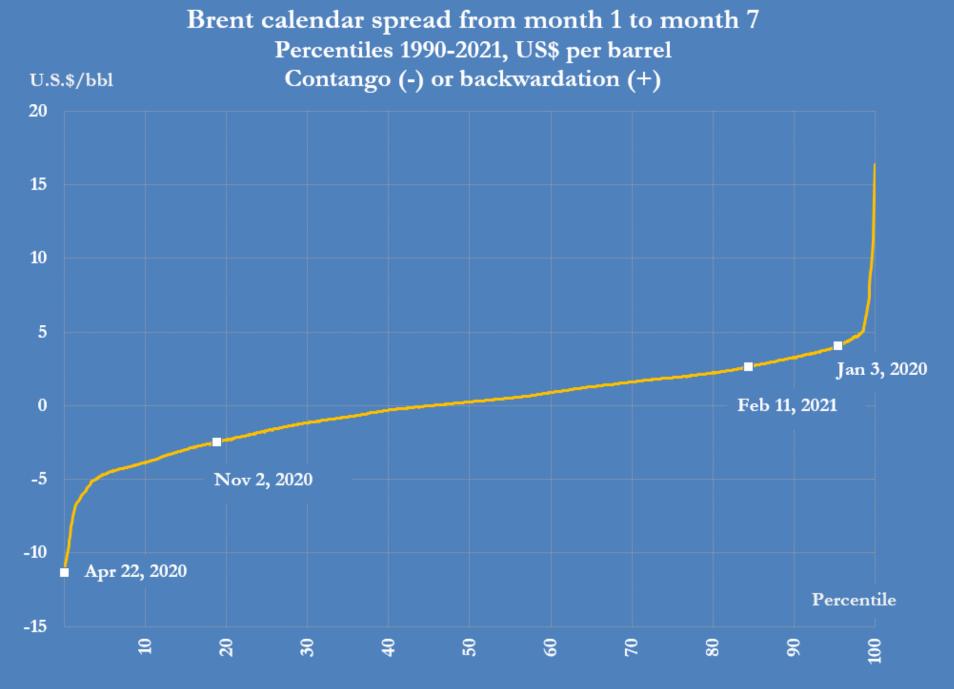


Source: U.S. Energy Information Administration ("Short-Term Energy Outlook", Feb 2021) @JKempEnergy

Shape of the futures price curve in Brent crude



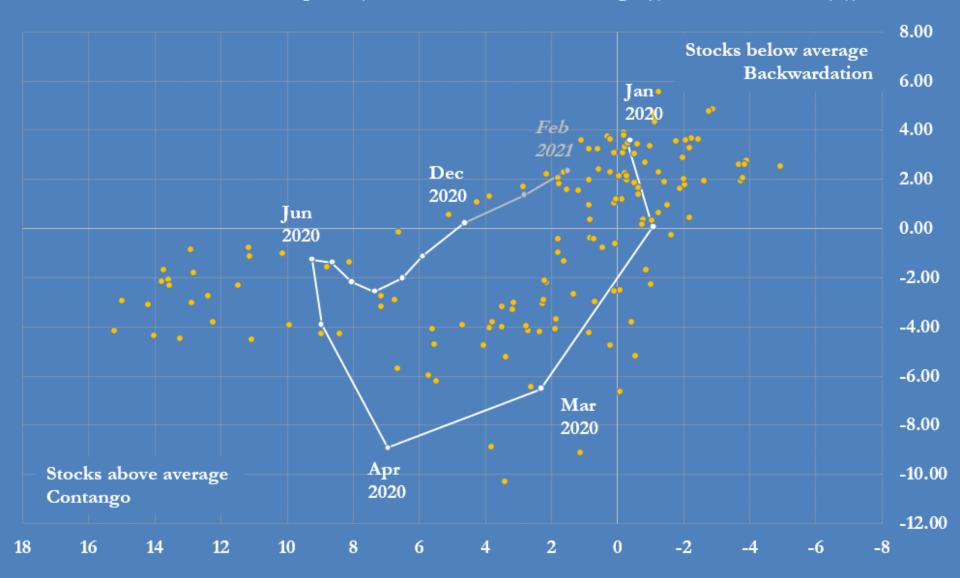
Price difference Brent month 1 and month 7 (U.S.\$/bbl) Source: ICE Futures, @JKempEnergy Contango (-) or backwardation (+)



Source: ICE Futures Europe

Global petroleum market, monthly data, 2008-2021

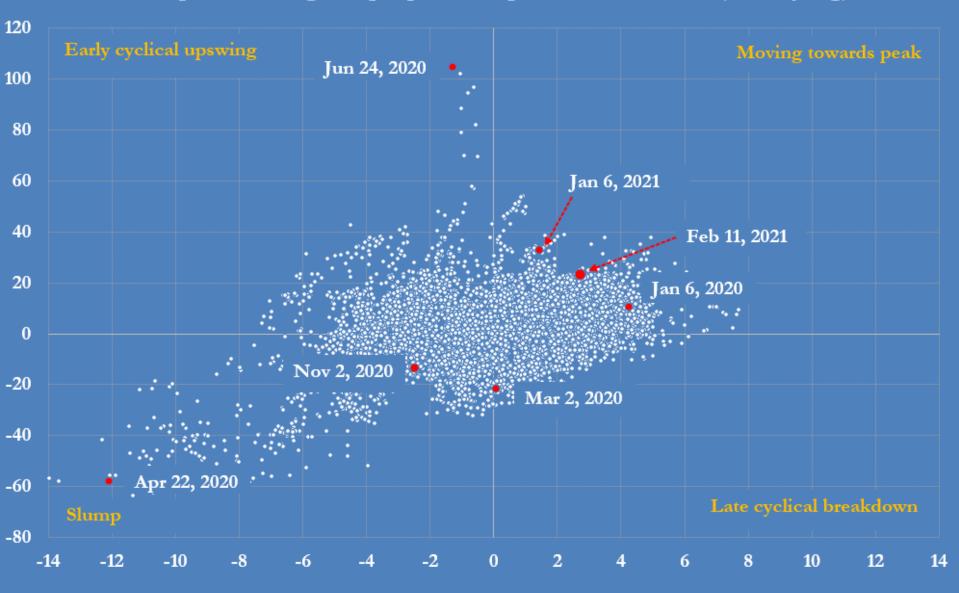
X-axis: OECD commercial inventories (percent change from prior five-year average)
Y-axis: Brent calendar spread (six-months, U.S\$/bbl, contango (-) or backwardation (+))



Sources: U.S Energy Information Administration (Short-Term Energy Outlook), ICE Futures Europe @JKempEnergy

Brent spot prices and calendar spread, 1993-2021

X-axis: six-month calendar spread (M1-M7) (U.S\$ per barrel)
Y-axis: percent change in spot price over previous two months (five-day avg)



Source: ICE Futures Europe