

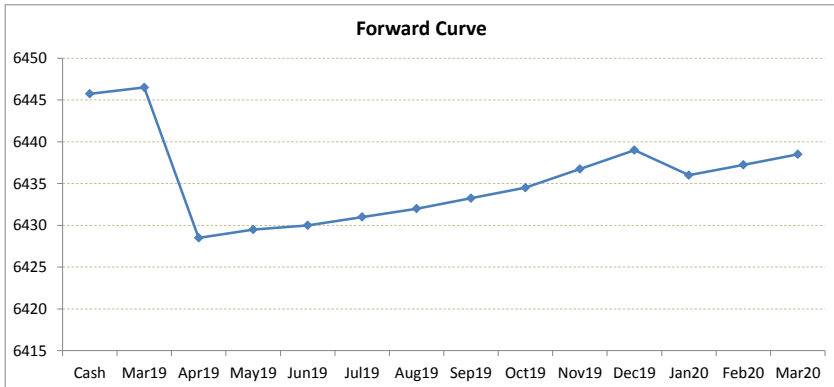
# LME Valuation - Copper

Cash - 3M: **14.75b**

Date: **2019-03-15**

**Cash 6445.75**  
**3M 6431.00**  
 Mar19 6446.50  
 Apr19 6428.50  
 May19 6429.50  
 Jun19 6430.00  
 Jul19 6431.00  
 Aug19 6432.00  
 Sep19 6433.25  
 Oct19 6434.50  
 Nov19 6436.75  
 Dec19 6439.00  
 Jan20 6436.00  
 Feb20 6437.25  
 Mar20 6438.50

	Cash-Mar19	Cash-Apr19	Cash-May19	Cash-Jun19	Cash-Jul19	Cash-Aug19	Cash-Sep19	Cash-Oct19	Cash-Nov19	Cash-Dec19	Cash-Jan20	Cash-Feb20
Cash	0.75c	17.25b	16.25b	15.75b	14.75b	13.75b	12.50b	11.25b	9.00b	6.75b	9.75b	8.50b
	Mar19-3M	Apr19-3M	May19-3M	3M-Jun19	3M-Jul19	3M-Aug19	3M-Sep19	3M-Oct19	3M-Nov19	3M-Dec19	3M-Jan20	3M-Feb20
3M	15.50b	2.50c	1.50c	1.00b	0.00b	1.00c	2.25c	3.50c	5.75c	8.00c	5.00c	6.25c
	Mar19-Apr19	Apr19-May19	May19-Jun19	Jun19-Jul19	Jul19-Aug19	Aug19-Sep19	Sep19-Oct19	Oct19-Nov19	Nov19-Dec19	Dec19-Jan20	Jan20-Feb20	Feb20-Mar20
3rd wed	18.00b	1.00c	0.50c	1.00c	1.00c	1.25c	1.25c	2.25c	2.25c	3.00b	1.25c	1.25c
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Mar19	18.00b	17.00b	16.50b	15.50b	14.50b	13.25b	12.00b	9.75b	7.50b	10.50b	9.25b	8.00b
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Mar19	1.00c	1.50c	2.50c	3.50c	4.75c	6.00c	8.25c	10.50c	7.50c	8.75c	10.00c	
	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20	
Mar19	0.50c	1.50c	2.50c	3.75c	5.00c	7.25c	9.50c	6.50c	7.75c	9.00c		
	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20		
Mar19	1.00c	2.00c	3.25c	4.50c	6.75c	9.00c	6.00c	7.25c	8.50c			
	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20				
Mar19	1.00c	2.25c	3.50c	5.75c	8.00c	5.00c	6.25c	7.50c				
	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20					
Mar19	1.25c	2.50c	4.75c	7.00c	4.00c	5.25c	6.50c					
	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20						
Mar19	1.25c	3.50c	5.75c	2.75c	4.00c	5.25c						
	Nov19	Dec19	Jan20	Feb20	Mar20							
Mar19	2.25c	4.50c	1.50c	2.75c	4.00c							
	Dec19	Jan20	Feb20	Mar20								
Mar19	2.25c	0.75b	0.50c	1.75c								
	Jan20	Feb20	Mar20									
Mar19	3.00b	1.75b	0.50b									
	Feb20	Mar20										
Mar19	1.25c	2.50c										
	Mar20											
Mar19	1.25c											



\*본 자료는 LME에서 공시하는 Valuation을 토대로 작성된 것으로 실제 거래 시의 스프레드와는 무관합니다.  
 \*\* Source: Reuters

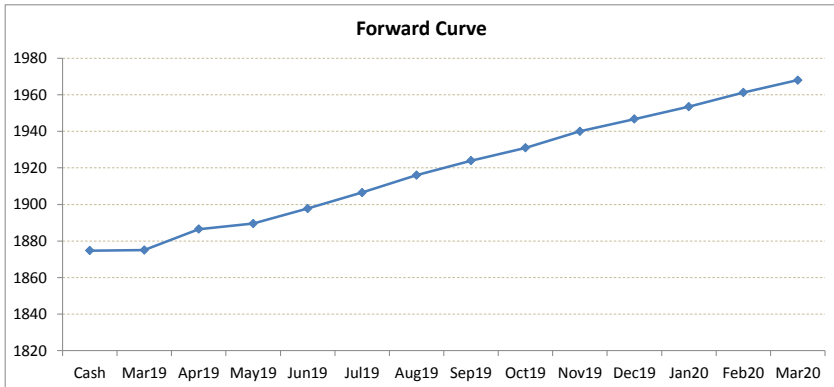
# LME Valuation - Aluminium

Cash - 3M: 22.25c

Date: 2019-03-15

**Cash 1874.75**  
**3M 1897.00**  
 Mar19 **1875.00**  
 Apr19 **1886.50**  
 May19 **1889.50**  
 Jun19 **1897.75**  
 Jul19 **1906.50**  
 Aug19 **1916.00**  
 Sep19 **1924.00**  
 Oct19 **1931.00**  
 Nov19 **1940.00**  
 Dec19 **1946.75**  
 Jan20 **1953.50**  
 Feb20 **1961.25**  
 Mar20 **1968.00**

	Cash-Mar19	Cash-Apr19	Cash-May19	Cash-Jun19	Cash-Jul19	Cash-Aug19	Cash-Sep19	Cash-Oct19	Cash-Nov19	Cash-Dec19	Cash-Jan20	Cash-Feb20
Cash	0.25c	11.75c	14.75c	23.00c	31.75c	41.25c	49.25c	56.25c	65.25c	72.00c	78.75c	86.50c
	Mar19-3M	Apr19-3M	May19-3M	3M-Jun19	3M-Jul19	3M-Aug19	3M-Sep19	3M-Oct19	3M-Nov19	3M-Dec19	3M-Jan20	3M-Feb20
3M	22.00c	10.50c	7.50c	0.75c	9.50c	19.00c	27.00c	34.00c	43.00c	49.75c	56.50c	64.25c
	Mar19-Apr19	Apr19-May19	May19-Jun19	Jun19-Jul19	Jul19-Aug19	Aug19-Sep19	Sep19-Oct19	Oct19-Nov19	Nov19-Dec19	Dec19-Jan20	Jan20-Feb20	Feb20-Mar20
3rd wed	11.50c	3.00c	8.25c	8.75c	9.50c	8.00c	7.00c	9.00c	6.75c	6.75c	7.75c	6.75c
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Mar19	11.50c	14.50c	22.75c	31.50c	41.00c	49.00c	56.00c	65.00c	71.75c	78.50c	86.25c	93.00c
	Apr19	3.00c	11.25c	20.00c	29.50c	37.50c	44.50c	53.50c	60.25c	67.00c	74.75c	81.50c
		May19	8.25c	17.00c	26.50c	34.50c	41.50c	50.50c	57.25c	64.00c	71.75c	78.50c
			Jun19	8.75c	18.25c	26.25c	33.25c	42.25c	49.00c	55.75c	63.50c	70.25c
				Jul19	9.50c	17.50c	24.50c	33.50c	40.25c	47.00c	54.75c	61.50c
					Aug19	8.00c	15.00c	24.00c	30.75c	37.50c	45.25c	52.00c
						Sep19	7.00c	16.00c	22.75c	29.50c	37.25c	44.00c
							Oct19	9.00c	15.75c	22.50c	30.25c	37.00c
								Nov19	6.75c	13.50c	21.25c	28.00c
									Dec19	6.75c	14.50c	21.25c
										Jan20	7.75c	14.50c
											Feb20	6.75c
												Mar20



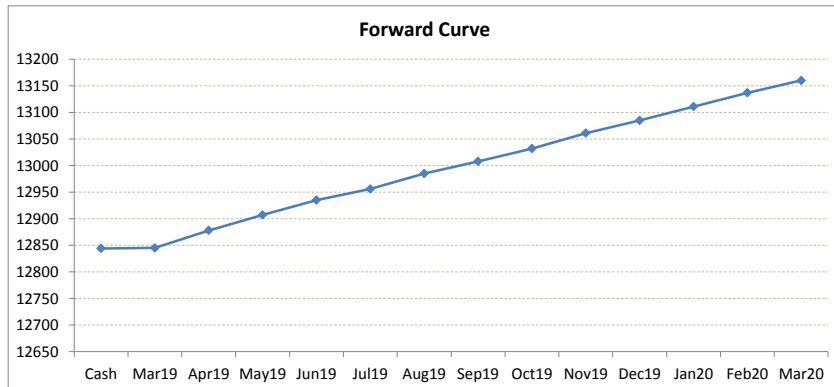
\*본 자료는 LME에서 공시하는 Valuation을 토대로 작성된 것으로 실제 거래 시의 스프레드와는 무관합니다.  
 \*\* Source: Reuters

# LME Valuation - Nickel

Cash - 3M: 85.75c

Date: 2019-03-15

<b>Cash</b>	<b>12844.25</b>	Cash-Mar19	Cash-Apr19	Cash-May19	Cash-Jun19	Cash-Jul19	Cash-Aug19	Cash-Sep19	Cash-Oct19	Cash-Nov19	Cash-Dec19	Cash-Jan20	Cash-Feb20
<b>3M</b>	<b>12930.00</b>	0.75c	33.75c	62.75c	90.75c	111.75c	140.75c	163.75c	187.75c	216.75c	240.75c	266.75c	292.75c
Mar19	<b>12845.00</b>												
Apr19	<b>12878.00</b>	Mar19-3M	Apr19-3M	May19-3M	3M-Jun19	3M-Jul19	3M-Aug19	3M-Sep19	3M-Oct19	3M-Nov19	3M-Dec19	3M-Jan20	3M-Feb20
May19	<b>12907.00</b>	85.00c	52.00c	23.00c	5.00c	26.00c	55.00c	78.00c	102.00c	131.00c	155.00c	181.00c	207.00c
Jun19	<b>12935.00</b>												
Jul19	<b>12956.00</b>	Mar19-Apr19	Apr19-May19	May19-Jun19	Jun19-Jul19	Jul19-Aug19	Aug19-Sep19	Sep19-Oct19	Oct19-Nov19	Nov19-Dec19	Dec19-Jan20	Jan20-Feb20	Feb20-Mar20
Aug19	<b>12985.00</b>	33.00c	29.00c	28.00c	21.00c	29.00c	23.00c	24.00c	29.00c	24.00c	26.00c	26.00c	23.00c
Sep19	<b>13008.00</b>												
Oct19	<b>13032.00</b>	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Nov19	<b>13061.00</b>	33.00c	62.00c	90.00c	111.00c	140.00c	163.00c	187.00c	216.00c	240.00c	266.00c	292.00c	315.00c
Dec19	<b>13085.00</b>	Apr19	29.00c	57.00c	78.00c	107.00c	130.00c	154.00c	183.00c	207.00c	233.00c	259.00c	282.00c
Jan20	<b>13111.00</b>		May19	28.00c	49.00c	78.00c	101.00c	125.00c	154.00c	178.00c	204.00c	230.00c	253.00c
Feb20	<b>13137.00</b>			Jun19	21.00c	50.00c	73.00c	97.00c	126.00c	150.00c	176.00c	202.00c	225.00c
Mar20	<b>13160.00</b>				Jul19	29.00c	52.00c	76.00c	105.00c	129.00c	155.00c	181.00c	204.00c
						Aug19	23.00c	47.00c	76.00c	100.00c	126.00c	152.00c	175.00c
							Sep19	24.00c	53.00c	77.00c	103.00c	129.00c	152.00c
								Oct19	29.00c	53.00c	79.00c	105.00c	128.00c
									Nov19	24.00c	50.00c	76.00c	99.00c
										Dec19	26.00c	52.00c	75.00c
											Jan20	26.00c	49.00c
												Feb20	23.00c
													Mar20



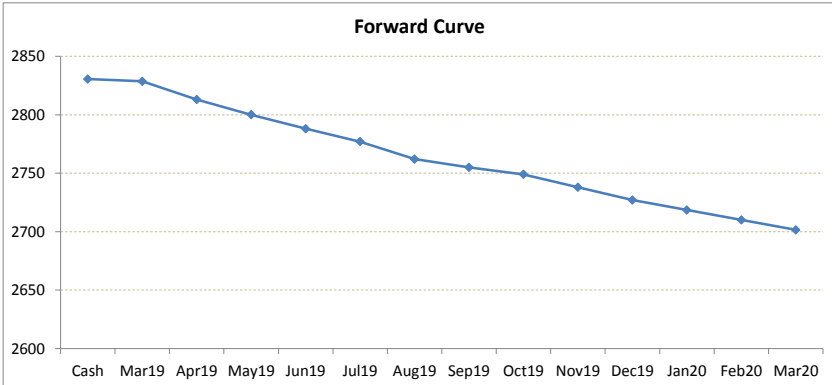
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 \*\* Source: Reuters

# LME Valuation - Zinc

Cash - 3M: **40.50b**

Date: **2019-03-15**

<b>Cash</b>	<b>2830.50</b>	Cash-Mar19	Cash-Apr19	Cash-May19	Cash-Jun19	Cash-Jul19	Cash-Aug19	Cash-Sep19	Cash-Oct19	Cash-Nov19	Cash-Dec19	Cash-Jan20	Cash-Feb20
<b>3M</b>	<b>2790.00</b>	2.00b	17.50b	30.50b	42.50b	53.50b	68.50b	75.50b	81.50b	92.50b	103.50b	112.00b	120.50b
Mar19	<b>2828.50</b>												
Apr19	<b>2813.00</b>	Mar19-3M	Apr19-3M	May19-3M	3M-Jun19	3M-Jul19	3M-Aug19	3M-Sep19	3M-Oct19	3M-Nov19	3M-Dec19	3M-Jan20	3M-Feb20
May19	<b>2800.00</b>	38.50b	23.00b	10.00b	2.00b	13.00b	28.00b	35.00b	41.00b	52.00b	63.00b	71.50b	80.00b
Jun19	<b>2788.00</b>												
Jul19	<b>2777.00</b>	Mar19-Apr19	Apr19-May19	May19-Jun19	Jun19-Jul19	Jul19-Aug19	Aug19-Sep19	Sep19-Oct19	Oct19-Nov19	Nov19-Dec19	Dec19-Jan20	Jan20-Feb20	Feb20-Mar20
Aug19	<b>2762.00</b>	3rd wed	15.50b	13.00b	12.00b	11.00b	15.00b	7.00b	6.00b	11.00b	11.00b	8.50b	8.50b
Sep19	<b>2755.00</b>												
Oct19	<b>2749.00</b>	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Nov19	<b>2738.00</b>	Mar19	15.50b	28.50b	40.50b	51.50b	66.50b	73.50b	79.50b	90.50b	101.50b	110.00b	118.50b
Dec19	<b>2727.00</b>	Apr19	13.00b	25.00b	36.00b	51.00b	58.00b	64.00b	75.00b	86.00b	94.50b	103.00b	111.50b
Jan20	<b>2718.50</b>	May19	12.00b	23.00b	38.00b	45.00b	51.00b	62.00b	73.00b	81.50b	90.00b	98.50b	
Feb20	<b>2710.00</b>	Jun19	11.00b	26.00b	33.00b	39.00b	50.00b	61.00b	69.50b	78.00b	86.50b		
Mar20	<b>2701.50</b>	Jul19	15.00b	22.00b	28.00b	39.00b	50.00b	58.50b	67.00b	75.50b			
		Aug19	7.00b	13.00b	24.00b	35.00b	43.50b	52.00b	60.50b				
		Sep19	6.00b	17.00b	28.00b	36.50b	45.00b	53.50b					
		Oct19	11.00b	22.00b	30.50b	39.00b	47.50b						
		Nov19	11.00b	19.50b	28.00b	36.50b							
		Dec19	8.50b	17.00b	25.50b								
		Jan20	8.50b	17.00b									
		Feb20	8.50b										
		Mar20											



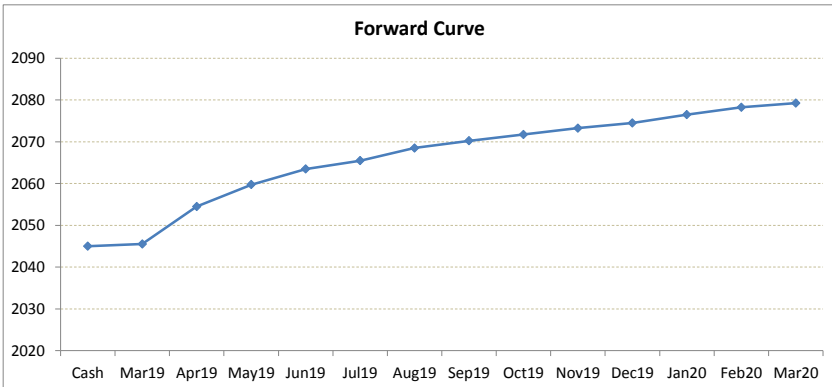
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 \*\* Source: Reuters

# LME Valuation - Lead

Cash - 3M: 17.00c

Date: 2019-03-15

Cash	2045.00	Cash-Mar19	Cash-Apr19	Cash-May19	Cash-Jun19	Cash-Jul19	Cash-Aug19	Cash-Sep19	Cash-Oct19	Cash-Nov19	Cash-Dec19	Cash-Jan20	Cash-Feb20
3M	2062.00	0.50c	9.50c	14.75c	18.50c	20.50c	23.50c	25.25c	26.75c	28.25c	29.50c	31.50c	33.25c
Mar19	2045.50												
Apr19	2054.50	Mar19-3M	Apr19-3M	May19-3M	3M-Jun19	3M-Jul19	3M-Aug19	3M-Sep19	3M-Oct19	3M-Nov19	3M-Dec19	3M-Jan20	3M-Feb20
May19	2059.75	16.50c	7.50c	2.25c	1.50c	3.50c	6.50c	8.25c	9.75c	11.25c	12.50c	14.50c	16.25c
Jun19	2063.50												
Jul19	2065.50	Mar19-Apr19	Apr19-May19	May19-Jun19	Jun19-Jul19	Jul19-Aug19	Aug19-Sep19	Sep19-Oct19	Oct19-Nov19	Nov19-Dec19	Dec19-Jan20	Jan20-Feb20	Feb20-Mar20
Aug19	2068.50	9.00c	5.25c	3.75c	2.00c	3.00c	1.75c	1.50c	1.50c	1.25c	2.00c	1.75c	1.00c
Sep19	2070.25												
Oct19	2071.75	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Nov19	2073.25	9.00c	14.25c	18.00c	20.00c	23.00c	24.75c	26.25c	27.75c	29.00c	31.00c	32.75c	33.75c
Dec19	2074.50	Apr19	5.25c	9.00c	11.00c	14.00c	15.75c	17.25c	18.75c	20.00c	22.00c	23.75c	24.75c
Jan20	2076.50		May19	3.75c	5.75c	8.75c	10.50c	12.00c	13.50c	14.75c	16.75c	18.50c	19.50c
Feb20	2078.25			Jun19	2.00c	5.00c	6.75c	8.25c	9.75c	11.00c	13.00c	14.75c	15.75c
Mar20	2079.25				Jul19	3.00c	4.75c	6.25c	7.75c	9.00c	11.00c	12.75c	13.75c
						Aug19	1.75c	3.25c	4.75c	6.00c	8.00c	9.75c	10.75c
							Sep19	1.50c	3.00c	4.25c	6.25c	8.00c	9.00c
								Oct19	1.50c	2.75c	4.75c	6.50c	7.50c
									Nov19	1.25c	3.25c	5.00c	6.00c
										Dec19	2.00c	3.75c	4.75c
											Jan20	1.75c	2.75c
												Feb20	1.00c
													Mar20



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 \*\* Source: Reuters

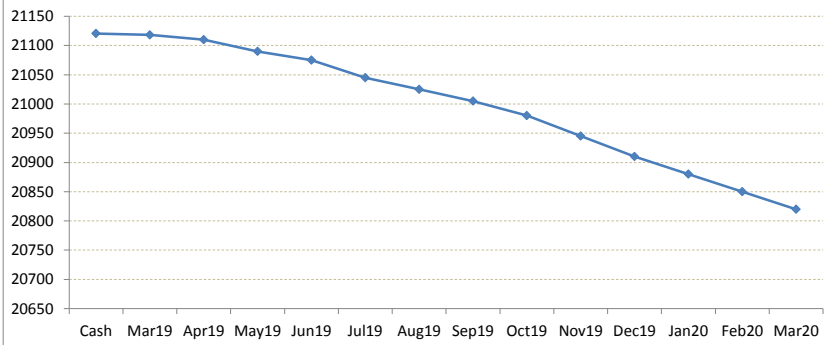
# LME Valuation - Tin

Cash - 3M: **45.50b**

Date: **2019-03-15**

<b>Cash</b>	<b>21120.50</b>	Cash-Mar19	Cash-Apr19	Cash-May19	Cash-Jun19	Cash-Jul19	Cash-Aug19	Cash-Sep19	Cash-Oct19	Cash-Nov19	Cash-Dec19	Cash-Jan20	Cash-Feb20
<b>3M</b>	<b>21075.00</b>	2.50b	10.50b	30.50b	45.50b	75.50b	95.50b	115.50b	140.50b	175.50b	210.50b	240.50b	270.50b
Mar19	<b>21118.00</b>												
Apr19	<b>21110.00</b>	Mar19-3M	Apr19-3M	May19-3M	3M-Jun19	3M-Jul19	3M-Aug19	3M-Sep19	3M-Oct19	3M-Nov19	3M-Dec19	3M-Jan20	3M-Feb20
May19	<b>21090.00</b>	43.00b	35.00b	15.00b	0.00b	30.00b	50.00b	70.00b	95.00b	130.00b	165.00b	195.00b	225.00b
Jun19	<b>21075.00</b>												
Jul19	<b>21045.00</b>	Mar19-Apr19	Apr19-May19	May19-Jun19	Jun19-Jul19	Jul19-Aug19	Aug19-Sep19	Sep19-Oct19	Oct19-Nov19	Nov19-Dec19	Dec19-Jan20	Jan20-Feb20	Feb20-Mar20
Aug19	<b>21025.00</b>	8.00b	20.00b	15.00b	30.00b	20.00b	20.00b	25.00b	35.00b	35.00b	30.00b	30.00b	30.00b
Sep19	<b>21005.00</b>												
Oct19	<b>20980.00</b>	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Nov19	<b>20945.00</b>	8.00b	28.00b	43.00b	73.00b	93.00b	113.00b	138.00b	173.00b	208.00b	238.00b	268.00b	298.00b
Dec19	<b>20910.00</b>	Apr19	20.00b	35.00b	65.00b	85.00b	105.00b	130.00b	165.00b	200.00b	230.00b	260.00b	290.00b
Jan20	<b>20880.00</b>		May19	15.00b	45.00b	65.00b	85.00b	110.00b	145.00b	180.00b	210.00b	240.00b	270.00b
Feb20	<b>20850.00</b>			Jun19	30.00b	50.00b	70.00b	95.00b	130.00b	165.00b	195.00b	225.00b	255.00b
Mar20	<b>20820.00</b>				Jul19	20.00b	40.00b	65.00b	100.00b	135.00b	165.00b	195.00b	225.00b
						Aug19	20.00b	45.00b	80.00b	115.00b	145.00b	175.00b	205.00b
							Sep19	25.00b	60.00b	95.00b	125.00b	155.00b	185.00b
								Oct19	35.00b	70.00b	100.00b	130.00b	160.00b
									Nov19	35.00b	65.00b	95.00b	125.00b
										Dec19	30.00b	60.00b	90.00b
											Jan20	30.00b	60.00b
												Feb20	30.00b
													Mar20

Forward Curve



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 \*\* Source: Reuters