

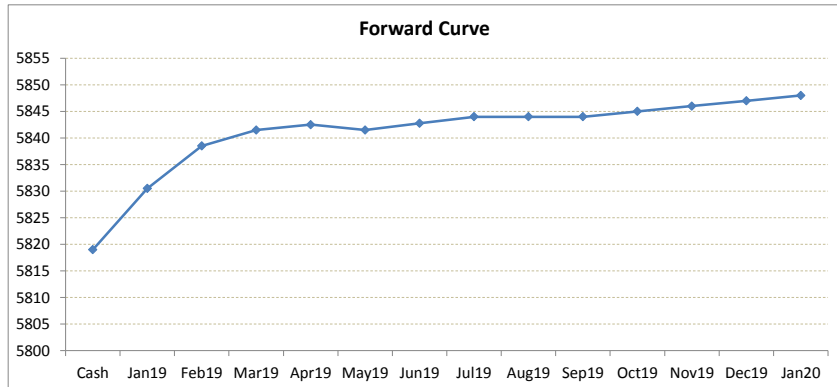
# LME Valuation - Copper

Cash - 3M: 23.00c

Date: 2019-01-02

**Cash 5819.00**  
**3M 5842.00**  
 Jan19 5830.50  
 Feb19 5838.50  
 Mar19 5841.50  
 Apr19 5842.50  
 May19 5841.50  
 Jun19 5842.75  
 Jul19 5844.00  
 Aug19 5844.00  
 Sep19 5844.00  
 Oct19 5845.00  
 Nov19 5846.00  
 Dec19 5847.00  
 Jan20 5848.00

	Cash-Jan19	Cash-Feb19	Cash-Mar19	Cash-Apr19	Cash-May19	Cash-Jun19	Cash-Jul19	Cash-Aug19	Cash-Sep19	Cash-Oct19	Cash-Nov19	Cash-Dec19	
Cash	11.50c	19.50c	22.50c	23.50c	22.50c	23.75c	25.00c	25.00c	25.00c	26.00c	27.00c	28.00c	
	Jan19-3M	Feb19-3M	Mar19-3M	3M-Apr19	3M-May19	3M-Jun19	3M-Jul19	3M-Aug19	3M-Sep19	3M-Oct19	3M-Nov19	3M-Dec19	
3M	11.50c	3.50c	0.50c	0.50c	0.50b	0.75c	2.00c	2.00c	2.00c	3.00c	4.00c	5.00c	
	Jan19-Feb19	Feb19-Mar19	Mar19-Apr19	Apr19-May19	May19-Jun19	Jun19-Jul19	Jul19-Aug19	Aug19-Sep19	Sep19-Oct19	Oct19-Nov19	Nov19-Dec19	Dec19-Jan20	
3rd wed	8.00c	3.00c	1.00c	1.00b	1.25c	1.25c	0.00b	0.00b	1.00c	1.00c	1.00c	1.00c	
	Feb19	Mar19	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	
Jan19	8.00c	11.00c	12.00c	11.00c	12.25c	13.50c	13.50c	13.50c	14.50c	15.50c	16.50c	17.50c	
	Feb19	Mar19	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	
Feb19		3.00c	4.00c	3.00c	4.25c	5.50c	5.50c	5.50c	6.50c	7.50c	8.50c	9.50c	
	Mar19	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20		
Mar19			1.00c	0.00b	1.25c	2.50c	2.50c	2.50c	3.50c	4.50c	5.50c	6.50c	
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20			
Apr19				1.00b	0.25c	1.50c	1.50c	1.50c	2.50c	3.50c	4.50c	5.50c	
	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20				
May19					1.25c	2.50c	2.50c	2.50c	3.50c	4.50c	5.50c	6.50c	
	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20					
Jun19						1.25c	1.25c	1.25c	2.25c	3.25c	4.25c	5.25c	
	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20						
Jul19							0.00b	0.00b	1.00c	2.00c	3.00c	4.00c	
	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20							
Aug19								0.00b	1.00c	2.00c	3.00c	4.00c	
	Sep19	Oct19	Nov19	Dec19	Jan20								
Sep19									1.00c	2.00c	3.00c	4.00c	
	Oct19	Nov19	Dec19	Jan20									
Oct19										1.00c	2.00c	3.00c	
	Nov19	Dec19	Jan20										
Nov19											1.00c	2.00c	
	Dec19	Jan20											
Dec19												1.00c	
	Jan20												
Jan20													1.00c



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

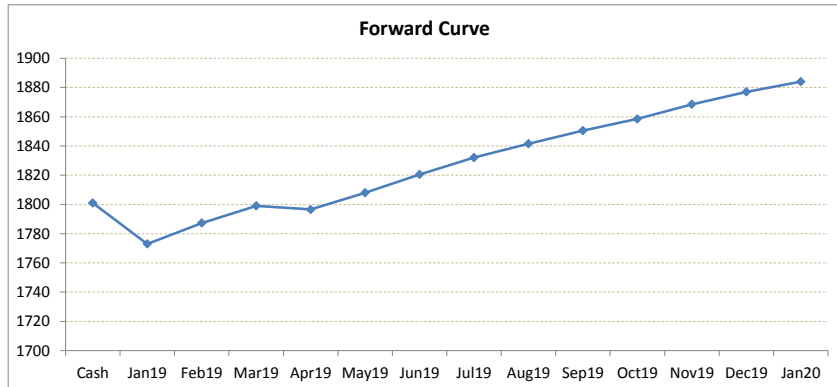
# LME Valuation - Aluminium

Cash - 3M: **4.00b**

Date: **2019-01-02**

**Cash 1801.00**  
**3M 1797.00**  
 Jan19 **1773.00**  
 Feb19 **1787.25**  
 Mar19 **1799.00**  
 Apr19 **1796.50**  
 May19 **1808.00**  
 Jun19 **1820.50**  
 Jul19 **1832.00**  
 Aug19 **1841.50**  
 Sep19 **1850.50**  
 Oct19 **1858.50**  
 Nov19 **1868.50**  
 Dec19 **1877.00**  
 Jan20 **1884.00**

	Cash-Jan19	Cash-Feb19	Cash-Mar19	Cash-Apr19	Cash-May19	Cash-Jun19	Cash-Jul19	Cash-Aug19	Cash-Sep19	Cash-Oct19	Cash-Nov19	Cash-Dec19
Cash	28.00b	13.75b	2.00b	4.50b	7.00c	19.50c	31.00c	40.50c	49.50c	57.50c	67.50c	76.00c
	Jan19-3M	Feb19-3M	Mar19-3M	3M-Apr19	3M-May19	3M-Jun19	3M-Jul19	3M-Aug19	3M-Sep19	3M-Oct19	3M-Nov19	3M-Dec19
3M	24.00c	9.75c	2.00b	0.50b	11.00c	23.50c	35.00c	44.50c	53.50c	61.50c	71.50c	80.00c
	Jan19-Feb19	Feb19-Mar19	Mar19-Apr19	Apr19-May19	May19-Jun19	Jun19-Jul19	Jul19-Aug19	Aug19-Sep19	Sep19-Oct19	Oct19-Nov19	Nov19-Dec19	Dec19-Jan20
3rd wed	14.25c	11.75c	2.50b	11.50c	12.50c	11.50c	9.50c	9.00c	8.00c	10.00c	8.50c	7.00c
	Feb19	Mar19	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20
Jan19	14.25c	26.00c	23.50c	35.00c	47.50c	59.00c	68.50c	77.50c	85.50c	95.50c	104.00c	111.00c
	Feb19	Mar19	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20
Feb19		11.75c	9.25c	20.75c	33.25c	44.75c	54.25c	63.25c	71.25c	81.25c	89.75c	96.75c
Mar19			2.50b	9.00c	21.50c	33.00c	42.50c	51.50c	59.50c	69.50c	78.00c	85.00c
Apr19				11.50c	24.00c	35.50c	45.00c	54.00c	62.00c	72.00c	80.50c	87.50c
May19					12.50c	24.00c	33.50c	42.50c	50.50c	60.50c	69.00c	76.00c
Jun19						11.50c	21.00c	30.00c	38.00c	48.00c	56.50c	63.50c
Jul19							9.50c	18.50c	26.50c	36.50c	45.00c	52.00c
Aug19								9.00c	17.00c	27.00c	35.50c	42.50c
Sep19									8.00c	18.00c	26.50c	33.50c
Oct19										10.00c	18.50c	25.50c
Nov19											8.50c	15.50c
Dec19												7.00c
Jan20												



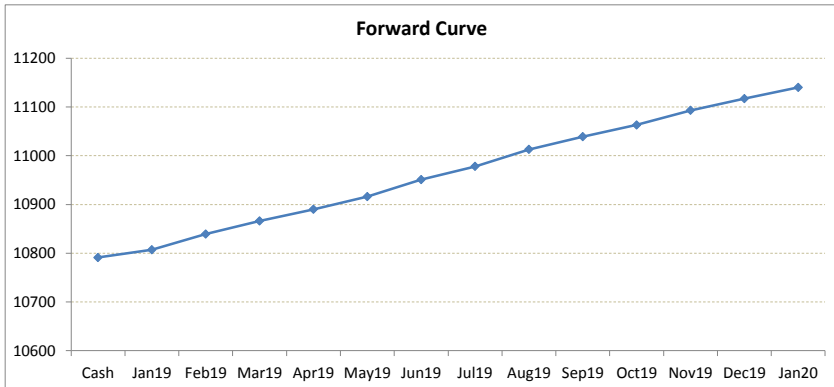
\*본 자료는 LME에서 공시하는 Valuation을 토대로 작성된 것으로 실제 거래 시의 스프레드와는 무관합니다.  
 \*\* Source: Reuters

# LME Valuation - Nickel

Cash - 3M: 84.00c

Date: 2019-01-02

	Cash-Jan19	Cash-Feb19	Cash-Mar19	Cash-Apr19	Cash-May19	Cash-Jun19	Cash-Jul19	Cash-Aug19	Cash-Sep19	Cash-Oct19	Cash-Nov19	Cash-Dec19	
<b>Cash</b>	<b>10791.00</b>												
<b>3M</b>	<b>10875.00</b>												
Jan19	<b>10807.00</b>												
Feb19	<b>10839.00</b>												
Mar19	<b>10866.00</b>												
Apr19	<b>10890.00</b>												
May19	<b>10916.00</b>												
Jun19	<b>10951.00</b>												
Jul19	<b>10978.00</b>												
Aug19	<b>11013.00</b>												
Sep19	<b>11039.00</b>												
Oct19	<b>11063.00</b>												
Nov19	<b>11093.00</b>												
Dec19	<b>11117.00</b>												
Jan20	<b>11140.00</b>												
		Cash	Cash	Cash	Cash	Cash	Cash	Cash	Cash	Cash	Cash	Cash	
		16.00c	48.00c	75.00c	99.00c	125.00c	160.00c	187.00c	222.00c	248.00c	272.00c	302.00c	326.00c
		3M	3M	3M	3M	3M	3M	3M	3M	3M	3M	3M	
		68.00c	36.00c	9.00c	15.00c	41.00c	76.00c	103.00c	138.00c	164.00c	188.00c	218.00c	242.00c
		3rd wed	3rd wed	3rd wed	3rd wed	3rd wed	3rd wed	3rd wed	3rd wed	3rd wed	3rd wed	3rd wed	
		32.00c	27.00c	24.00c	26.00c	35.00c	27.00c	35.00c	26.00c	24.00c	30.00c	24.00c	23.00c
		Jan19	Jan19	Jan19	Jan19	Jan19	Jan19	Jan19	Jan19	Jan19	Jan19	Jan19	Jan20
		32.00c	59.00c	83.00c	109.00c	144.00c	171.00c	206.00c	232.00c	256.00c	286.00c	310.00c	333.00c
		Feb19	Feb19	Feb19	Feb19	Feb19	Feb19	Feb19	Feb19	Feb19	Feb19	Feb19	Feb19
		32.00c	27.00c	51.00c	77.00c	112.00c	139.00c	174.00c	200.00c	224.00c	254.00c	278.00c	301.00c
		Mar19	Mar19	Mar19	Mar19	Mar19	Mar19	Mar19	Mar19	Mar19	Mar19	Mar19	Mar19
				24.00c	50.00c	85.00c	112.00c	147.00c	173.00c	197.00c	227.00c	251.00c	274.00c
		Apr19	Apr19	Apr19	Apr19	Apr19	Apr19	Apr19	Apr19	Apr19	Apr19	Apr19	Apr19
					26.00c	61.00c	88.00c	123.00c	149.00c	173.00c	203.00c	227.00c	250.00c
		May19	May19	May19	May19	May19	May19	May19	May19	May19	May19	May19	May19
					35.00c	62.00c	97.00c	123.00c	147.00c	177.00c	201.00c	224.00c	224.00c
		Jun19	Jun19	Jun19	Jun19	Jun19	Jun19	Jun19	Jun19	Jun19	Jun19	Jun19	Jun19
					27.00c	62.00c	88.00c	112.00c	142.00c	166.00c	189.00c	189.00c	189.00c
		Jul19	Jul19	Jul19	Jul19	Jul19	Jul19	Jul19	Jul19	Jul19	Jul19	Jul19	Jul19
							35.00c	61.00c	85.00c	115.00c	139.00c	162.00c	162.00c
		Aug19	Aug19	Aug19	Aug19	Aug19	Aug19	Aug19	Aug19	Aug19	Aug19	Aug19	Aug19
								26.00c	50.00c	80.00c	104.00c	127.00c	127.00c
		Sep19	Sep19	Sep19	Sep19	Sep19	Sep19	Sep19	Sep19	Sep19	Sep19	Sep19	Sep19
									24.00c	54.00c	78.00c	101.00c	101.00c
		Oct19	Oct19	Oct19	Oct19	Oct19	Oct19	Oct19	Oct19	Oct19	Oct19	Oct19	Oct19
										30.00c	54.00c	77.00c	77.00c
		Nov19	Nov19	Nov19	Nov19	Nov19	Nov19	Nov19	Nov19	Nov19	Nov19	Nov19	Nov19
											24.00c	47.00c	47.00c
		Dec19	Dec19	Dec19	Dec19	Dec19	Dec19	Dec19	Dec19	Dec19	Dec19	Dec19	Dec19
												23.00c	23.00c
		Jan20	Jan20	Jan20	Jan20	Jan20	Jan20	Jan20	Jan20	Jan20	Jan20	Jan20	Jan20
													23.00c



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

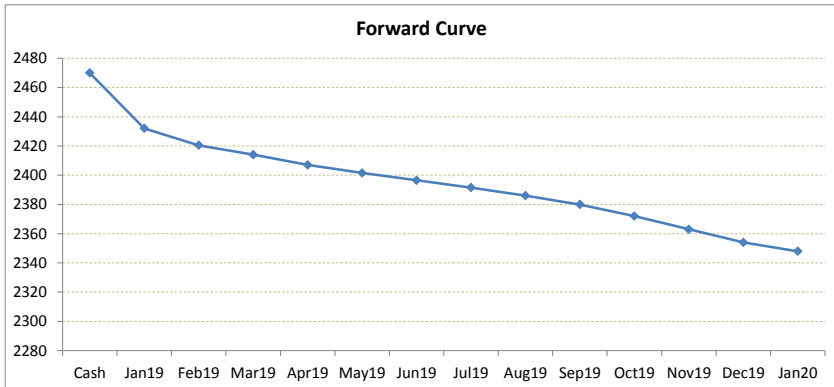
# LME Valuation - Zinc

Cash - 3M: **60.00b**

Date: **2019-01-02**

<b>Cash</b>	<b>2470.00</b>	Cash-Jan19	Cash-Feb19	Cash-Mar19	Cash-Apr19	Cash-May19	Cash-Jun19	Cash-Jul19	Cash-Aug19	Cash-Sep19	Cash-Oct19	Cash-Nov19	Cash-Dec19
<b>3M</b>	<b>2410.00</b>	3M-Jan19-3M	3M-Feb19-3M	3M-Mar19-3M	3M-Apr19	3M-May19	3M-Jun19	3M-Jul19	3M-Aug19	3M-Sep19	3M-Oct19	3M-Nov19	3M-Dec19
Jan19	<b>2432.00</b>												
Feb19	<b>2420.50</b>												
Mar19	<b>2414.00</b>												
Apr19	<b>2407.00</b>												
May19	<b>2401.50</b>												
Jun19	<b>2396.50</b>												
Jul19	<b>2391.50</b>												
Aug19	<b>2386.00</b>												
Sep19	<b>2380.00</b>												
Oct19	<b>2372.00</b>												
Nov19	<b>2363.00</b>												
Dec19	<b>2354.00</b>												
Jan20	<b>2348.00</b>												

Cash	38.00b	49.50b	56.00b	63.00b	68.50b	73.50b	78.50b	84.00b	90.00b	98.00b	107.00b	116.00b
3M	22.00b	10.50b	4.00b	3.00b	8.50b	13.50b	18.50b	24.00b	30.00b	38.00b	47.00b	56.00b
3rd wed	11.50b	6.50b	7.00b	5.50b	5.00b	5.00b	5.50b	6.00b	8.00b	9.00b	9.00b	6.00b
Jan19	11.50b	18.00b	25.00b	30.50b	35.50b	40.50b	46.00b	52.00b	60.00b	69.00b	78.00b	84.00b
	Feb19	6.50b	13.50b	19.00b	24.00b	29.00b	34.50b	40.50b	48.50b	57.50b	66.50b	72.50b
		Mar19	7.00b	12.50b	17.50b	22.50b	28.00b	34.00b	42.00b	51.00b	60.00b	66.00b
			Apr19	5.50b	10.50b	15.50b	21.00b	27.00b	35.00b	44.00b	53.00b	59.00b
				May19	5.00b	10.00b	15.50b	21.50b	29.50b	38.50b	47.50b	53.50b
					Jun19	5.00b	10.50b	16.50b	24.50b	33.50b	42.50b	48.50b
						Jul19	5.50b	11.50b	19.50b	28.50b	37.50b	43.50b
							Aug19	6.00b	14.00b	23.00b	32.00b	38.00b
								Sep19	8.00b	17.00b	26.00b	32.00b
									Oct19	9.00b	18.00b	24.00b
										Nov19	9.00b	15.00b
											Dec19	6.00b
												Jan20



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

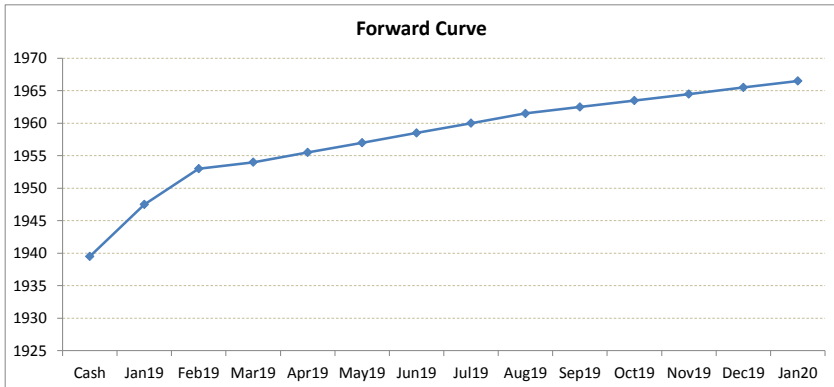
# LME Valuation - Lead

Cash - 3M: 15.50c

Date: 2019-01-02

**Cash 1939.50**  
**3M 1955.00**  
 Jan19 **1947.50**  
 Feb19 **1953.00**  
 Mar19 **1954.00**  
 Apr19 **1955.50**  
 May19 **1957.00**  
 Jun19 **1958.50**  
 Jul19 **1960.00**  
 Aug19 **1961.50**  
 Sep19 **1962.50**  
 Oct19 **1963.50**  
 Nov19 **1964.50**  
 Dec19 **1965.50**  
 Jan20 **1966.50**

	Cash-Jan19	Cash-Feb19	Cash-Mar19	Cash-Apr19	Cash-May19	Cash-Jun19	Cash-Jul19	Cash-Aug19	Cash-Sep19	Cash-Oct19	Cash-Nov19	Cash-Dec19	
Cash	8.00c	13.50c	14.50c	16.00c	17.50c	19.00c	20.50c	22.00c	23.00c	24.00c	25.00c	26.00c	
	Jan19-3M	Feb19-3M	Mar19-3M	3M-Apr19	3M-May19	3M-Jun19	3M-Jul19	3M-Aug19	3M-Sep19	3M-Oct19	3M-Nov19	3M-Dec19	
3M	7.50c	2.00c	1.00c	0.50c	2.00c	3.50c	5.00c	6.50c	7.50c	8.50c	9.50c	10.50c	
	Jan19-Feb19	Feb19-Mar19	Mar19-Apr19	Apr19-May19	May19-Jun19	Jun19-Jul19	Jul19-Aug19	Aug19-Sep19	Sep19-Oct19	Oct19-Nov19	Nov19-Dec19	Dec19-Jan20	
3rd wed	5.50c	1.00c	1.50c	1.50c	1.50c	1.50c	1.50c	1.00c	1.00c	1.00c	1.00c	1.00c	
	Feb19	Mar19	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	
Jan19	5.50c	6.50c	8.00c	9.50c	11.00c	12.50c	14.00c	15.00c	16.00c	17.00c	18.00c	19.00c	
	Feb19	Mar19	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	
Feb19		1.00c	2.50c	4.00c	5.50c	7.00c	8.50c	9.50c	10.50c	11.50c	12.50c	13.50c	
	Mar19	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20		
Mar19			1.50c	3.00c	4.50c	6.00c	7.50c	8.50c	9.50c	10.50c	11.50c	12.50c	
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20			
Apr19				1.50c	3.00c	4.50c	6.00c	7.00c	8.00c	9.00c	10.00c	11.00c	
	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20				
May19					1.50c	3.00c	4.50c	5.50c	6.50c	7.50c	8.50c	9.50c	
	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20					
Jun19						1.50c	3.00c	4.00c	5.00c	6.00c	7.00c	8.00c	
	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20						
Jul19							1.50c	2.50c	3.50c	4.50c	5.50c	6.50c	
	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20							
Aug19								1.00c	2.00c	3.00c	4.00c	5.00c	
	Sep19	Oct19	Nov19	Dec19	Jan20								
Sep19									1.00c	2.00c	3.00c	4.00c	
	Oct19	Nov19	Dec19	Jan20									
Oct19										1.00c	2.00c	3.00c	
	Nov19	Dec19	Jan20										
Nov19											1.00c	2.00c	
	Dec19	Jan20											
Dec19												1.00c	
	Jan20												
Jan20													1.00c



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

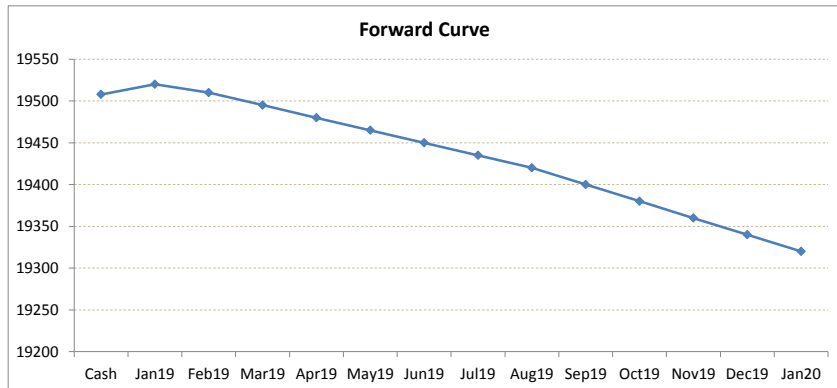
# LME Valuation - Tin

Cash - 3M: **28.00b**

Date: **2019-01-02**

**Cash 19508.00**  
**3M 19480.00**  
 Jan19 **19520.00**  
 Feb19 **19510.00**  
 Mar19 **19495.00**  
 Apr19 **19480.00**  
 May19 **19465.00**  
 Jun19 **19450.00**  
 Jul19 **19435.00**  
 Aug19 **19420.00**  
 Sep19 **19400.00**  
 Oct19 **19380.00**  
 Nov19 **19360.00**  
 Dec19 **19340.00**  
 Jan20 **19320.00**

	Cash-Jan19	Cash-Feb19	Cash-Mar19	Cash-Apr19	Cash-May19	Cash-Jun19	Cash-Jul19	Cash-Aug19	Cash-Sep19	Cash-Oct19	Cash-Nov19	Cash-Dec19	
Cash	12.00c	2.00c	13.00b	28.00b	43.00b	58.00b	73.00b	88.00b	108.00b	128.00b	148.00b	168.00b	
	Jan19-3M	Feb19-3M	Mar19-3M	3M-Apr19	3M-May19	3M-Jun19	3M-Jul19	3M-Aug19	3M-Sep19	3M-Oct19	3M-Nov19	3M-Dec19	
3M	40.00b	30.00b	15.00b	0.00b	15.00b	30.00b	45.00b	60.00b	80.00b	100.00b	120.00b	140.00b	
	Jan19-Feb19	Feb19-Mar19	Mar19-Apr19	Apr19-May19	May19-Jun19	Jun19-Jul19	Jul19-Aug19	Aug19-Sep19	Sep19-Oct19	Oct19-Nov19	Nov19-Dec19	Dec19-Jan20	
3rd wed	10.00b	15.00b	15.00b	15.00b	15.00b	15.00b	15.00b	20.00b	20.00b	20.00b	20.00b	20.00b	
	Feb19	Mar19	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	
Jan19	10.00b	25.00b	40.00b	55.00b	70.00b	85.00b	100.00b	120.00b	140.00b	160.00b	180.00b	200.00b	
	Feb19	Mar19	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	
Feb19		15.00b	30.00b	45.00b	60.00b	75.00b	90.00b	110.00b	130.00b	150.00b	170.00b	190.00b	
	Mar19	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20		
Mar19			15.00b	30.00b	45.00b	60.00b	75.00b	95.00b	115.00b	135.00b	155.00b	175.00b	
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20			
Apr19				15.00b	30.00b	45.00b	60.00b	80.00b	100.00b	120.00b	140.00b	160.00b	
	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20				
May19					15.00b	30.00b	45.00b	65.00b	85.00b	105.00b	125.00b	145.00b	
	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20					
Jun19						15.00b	30.00b	50.00b	70.00b	90.00b	110.00b	130.00b	
	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20						
Jul19							15.00b	35.00b	55.00b	75.00b	95.00b	115.00b	
	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20							
Aug19								20.00b	40.00b	60.00b	80.00b	100.00b	
	Sep19	Oct19	Nov19	Dec19	Jan20								
Sep19									20.00b	40.00b	60.00b	80.00b	
	Oct19	Nov19	Dec19	Jan20									
Oct19										20.00b	40.00b	60.00b	
	Nov19	Dec19	Jan20										
Nov19											20.00b	40.00b	
	Dec19	Jan20											
Dec19												20.00b	
	Jan20												
Jan20													20.00b



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