

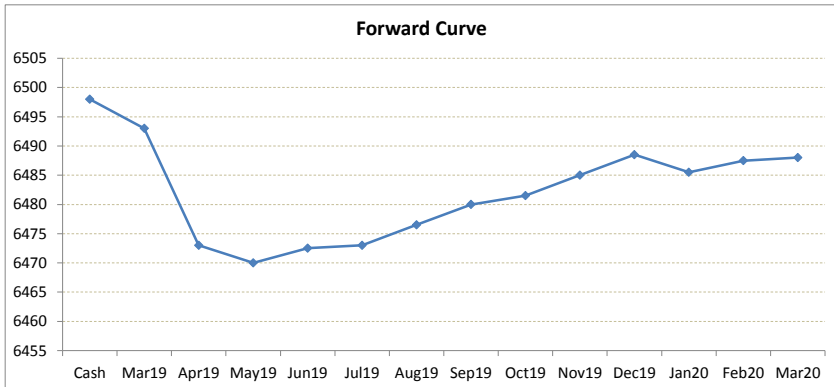
LME Valuation - Copper

Cash - 3M: **26.00b**

Date: **2019-03-12**

Cash 6498.00
3M 6472.00
 Mar19 6493.00
 Apr19 6473.00
 May19 6470.00
 Jun19 6472.50
 Jul19 6473.00
 Aug19 6476.50
 Sep19 6480.00
 Oct19 6481.50
 Nov19 6485.00
 Dec19 6488.50
 Jan20 6485.50
 Feb20 6487.50
 Mar20 6488.00

	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	5.00b	25.00b	28.00b	25.50b	25.00b	21.50b	18.00b	16.50b	13.00b	9.50b	12.50b	10.50b
	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	21.00b	1.00b	2.00c	0.50c	1.00c	4.50c	8.00c	9.50c	13.00c	16.50c	13.50c	15.50c
	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	20.00b	3.00b	2.50c	0.50c	3.50c	3.50c	1.50c	3.50c	3.50c	3.00b	2.00c	0.50c
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Mar19	20.00b	23.00b	20.50b	20.00b	16.50b	13.00b	11.50b	8.00b	4.50b	7.50b	5.50b	5.00b
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Mar19	3.00b	0.50b	0.00b	3.50c	7.00c	8.50c	12.00c	15.50c	12.50c	14.50c	15.00c	
	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20	
Mar19	2.50c	3.00c	6.50c	10.00c	11.50c	15.00c	18.50c	15.50c	17.50c	18.00c		
	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20		
Mar19	0.50c	4.00c	7.50c	9.00c	12.50c	16.00c	13.00c	15.00c	15.50c			
	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20			
Mar19	3.50c	7.00c	8.50c	12.00c	15.50c	12.50c	14.50c	15.00c				
	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20				
Mar19	3.50c	5.00c	8.50c	12.00c	9.00c	11.00c	11.50c					
	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20					
Mar19	1.50c	5.00c	8.50c	5.50c	7.50c	8.00c						
	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20						
Mar19	3.50c	7.00c	4.00c	6.00c	6.50c							
	Nov19	Dec19	Jan20	Feb20	Mar20							
Mar19	3.50c	0.50c	2.50c	3.00c								
	Dec19	Jan20	Feb20	Mar20								
Mar19	3.00b	1.00b	0.50b									
	Jan20	Feb20	Mar20									
Mar19	2.00c	2.50c	0.50c									
	Feb20	Mar20										
Mar19	0.50c											



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 ** Source: Reuters

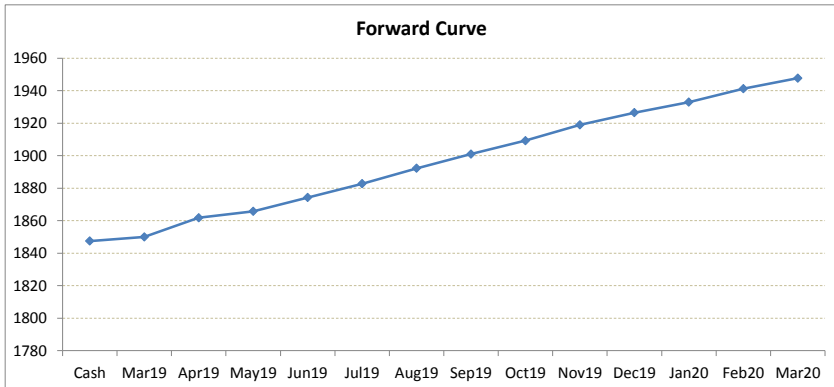
LME Valuation - Aluminium

Cash - 3M: 25.50c

Date: 2019-03-12

Cash 1847.50
3M 1873.00
 Mar19 **1850.00**
 Apr19 **1861.75**
 May19 **1865.75**
 Jun19 **1874.25**
 Jul19 **1882.75**
 Aug19 **1892.25**
 Sep19 **1901.00**
 Oct19 **1909.25**
 Nov19 **1919.00**
 Dec19 **1926.50**
 Jan20 **1933.00**
 Feb20 **1941.25**
 Mar20 **1947.75**

	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	2.50c	14.25c	18.25c	26.75c	35.25c	44.75c	53.50c	61.75c	71.50c	79.00c	85.50c	93.75c
	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	23.00c	11.25c	7.25c	1.25c	9.75c	19.25c	28.00c	36.25c	46.00c	53.50c	60.00c	68.25c
	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	11.75c	4.00c	8.50c	8.50c	9.50c	8.75c	8.25c	9.75c	7.50c	6.50c	8.25c	6.50c
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Mar19	11.75c	15.75c	24.25c	32.75c	42.25c	51.00c	59.25c	69.00c	76.50c	83.00c	91.25c	97.75c
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Apr19	4.00c	12.50c	21.00c	30.50c	39.25c	47.50c	57.25c	64.75c	71.25c	79.50c	86.00c	
	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20	
May19	8.50c	17.00c	26.50c	35.25c	43.50c	53.25c	60.75c	67.25c	75.50c	82.00c		
	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20		
Jun19	8.50c	18.00c	26.75c	35.00c	44.75c	52.25c	58.75c	67.00c	73.50c			
	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20			
Jul19	9.50c	18.25c	26.50c	36.25c	43.75c	50.25c	58.50c	65.00c				
	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20				
Aug19	8.75c	17.00c	26.75c	34.25c	40.75c	49.00c	55.50c					
	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20					
Sep19	8.25c	18.00c	25.50c	32.00c	40.25c	46.75c						
	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20						
Oct19	9.75c	17.25c	23.75c	32.00c	38.50c							
	Nov19	Dec19	Jan20	Feb20	Mar20							
Nov19	7.50c	14.00c	22.25c	28.75c								
	Dec19	Jan20	Feb20	Mar20								
Dec19	6.50c	14.75c	21.25c									
	Jan20	Feb20	Mar20									
Jan20	8.25c	14.75c										
	Feb20	Mar20										
Feb20	6.50c											
	Mar20											
Mar20												



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 ** Source: Reuters

LME Valuation - Nickel

Cash - 3M: 90.00c

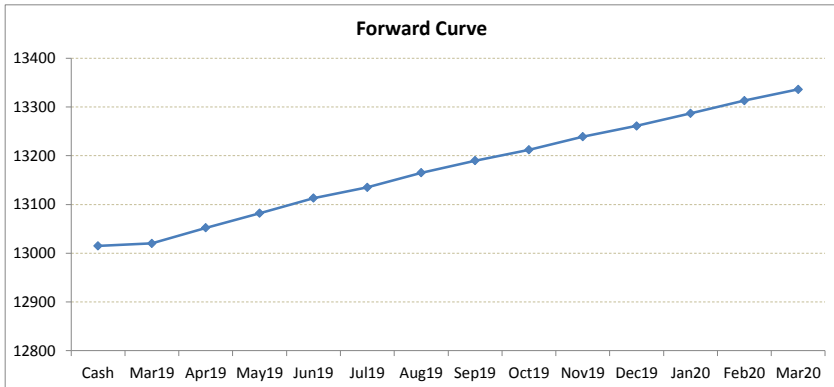
Date: 2019-03-12

	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	13015.00											
3M	13105.00											
Mar19	13020.00											
Apr19	13052.00											
May19	13082.00											
Jun19	13113.00											
Jul19	13135.00											
Aug19	13165.00											
Sep19	13190.00											
Oct19	13212.00											
Nov19	13239.00											
Dec19	13261.00											
Jan20	13287.00											
Feb20	13313.00											
Mar20	13336.00											

	Mar19-3M	Apr19-3M	May19-3M	3M-Jun19	3M-Jul19	3M-Aug19	3M-Sep19	3M-Oct19	3M-Nov19	3M-Dec19	3M-Jan20	3M-Feb20
Cash	5.00c	37.00c	67.00c	98.00c	120.00c	150.00c	175.00c	197.00c	224.00c	246.00c	272.00c	298.00c
3M	85.00c	53.00c	23.00c	8.00c	30.00c	60.00c	85.00c	107.00c	134.00c	156.00c	182.00c	208.00c

	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	32.00c	30.00c	31.00c	22.00c	30.00c	25.00c	22.00c	27.00c	22.00c	26.00c	26.00c	23.00c

	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Mar19	32.00c	62.00c	93.00c	115.00c	145.00c	170.00c	192.00c	219.00c	241.00c	267.00c	293.00c	316.00c
	Apr19	30.00c	61.00c	83.00c	113.00c	138.00c	160.00c	187.00c	209.00c	235.00c	261.00c	284.00c
		May19	31.00c	53.00c	83.00c	108.00c	130.00c	157.00c	179.00c	205.00c	231.00c	254.00c
			Jun19	22.00c	52.00c	77.00c	99.00c	126.00c	148.00c	174.00c	200.00c	223.00c
				Jul19	30.00c	55.00c	77.00c	104.00c	126.00c	152.00c	178.00c	201.00c
					Aug19	25.00c	47.00c	74.00c	96.00c	122.00c	148.00c	171.00c
						Sep19	22.00c	49.00c	71.00c	97.00c	123.00c	146.00c
							Oct19	27.00c	49.00c	75.00c	101.00c	124.00c
								Nov19	22.00c	48.00c	74.00c	97.00c
									Dec19	26.00c	52.00c	75.00c
										Jan20	26.00c	49.00c
											Feb20	23.00c
												Mar20



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 ** Source: Reuters

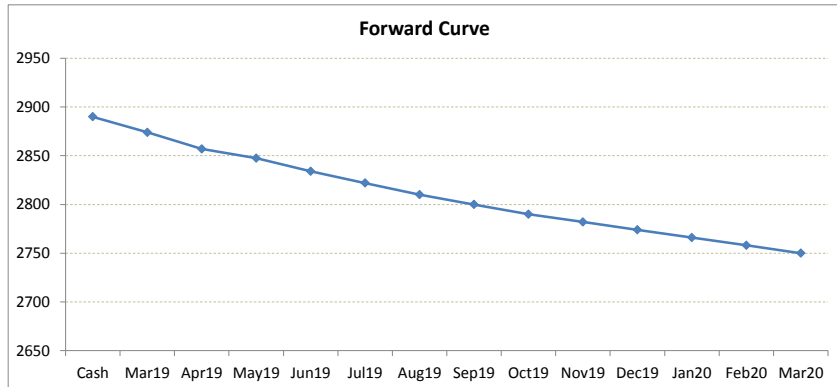
LME Valuation - Zinc

Cash - 3M: **52.00b**

Date: **2019-03-12**

Cash 2890.00
3M 2838.00
 Mar19 **2874.00**
 Apr19 **2857.00**
 May19 **2847.50**
 Jun19 **2834.00**
 Jul19 **2822.00**
 Aug19 **2810.00**
 Sep19 **2800.00**
 Oct19 **2790.00**
 Nov19 **2782.00**
 Dec19 **2774.00**
 Jan20 **2766.00**
 Feb20 **2758.00**
 Mar20 **2750.00**

	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	16.00b	33.00b	42.50b	56.00b	68.00b	80.00b	90.00b	100.00b	108.00b	116.00b	124.00b	132.00b
	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	36.00b	19.00b	9.50b	4.00b	16.00b	28.00b	38.00b	48.00b	56.00b	64.00b	72.00b	80.00b
	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	17.00b	9.50b	13.50b	12.00b	12.00b	10.00b	10.00b	8.00b	8.00b	8.00b	8.00b	8.00b
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Mar19	17.00b	26.50b	40.00b	52.00b	64.00b	74.00b	84.00b	92.00b	100.00b	108.00b	116.00b	124.00b
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Mar19	9.50b	23.00b	35.00b	47.00b	57.00b	67.00b	75.00b	83.00b	91.00b	99.00b	107.00b	
	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20	
Mar19	13.50b	25.50b	37.50b	47.50b	57.50b	65.50b	73.50b	81.50b	89.50b	97.50b		
	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20		
Mar19	12.00b	24.00b	34.00b	44.00b	52.00b	60.00b	68.00b	76.00b	84.00b			
	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20			
Mar19	12.00b	22.00b	32.00b	40.00b	48.00b	56.00b	64.00b	72.00b				
	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20				
Mar19	10.00b	20.00b	28.00b	36.00b	44.00b	52.00b	60.00b					
	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20					
Mar19	10.00b	18.00b	26.00b	34.00b	42.00b	50.00b						
	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20						
Mar19	8.00b	16.00b	24.00b	32.00b	40.00b							
	Nov19	Dec19	Jan20	Feb20	Mar20							
Mar19	8.00b	16.00b	24.00b	32.00b								
	Dec19	Jan20	Feb20	Mar20								
Mar19	8.00b	16.00b	24.00b									
	Jan20	Feb20	Mar20									
Mar19	8.00b	16.00b										
	Feb20	Mar20										
Mar19	8.00b											
	Mar20											
Mar19	8.00b											



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 ** Source: Reuters

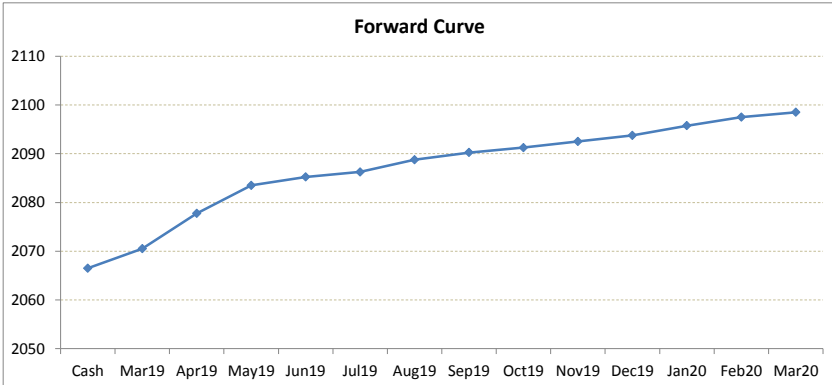


LME Valuation - Lead

Cash - 3M: 18.50c

Date: 2019-03-12

	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	2066.50												
3M	2085.00												
Mar19	2070.50												
Apr19	2077.75												
May19	2083.50												
Jun19	2085.25												
Jul19	2086.25												
Aug19	2088.75												
Sep19	2090.25												
Oct19	2091.25												
Nov19	2092.50												
Dec19	2093.75												
Jan20	2095.75												
Feb20	2097.50												
Mar20	2098.50												
	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	4.00c	11.25c	17.00c	18.75c	19.75c	22.25c	23.75c	24.75c	26.00c	27.25c	29.25c	31.00c	
	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	14.50c	7.25c	1.50c	0.25c	1.25c	3.75c	5.25c	6.25c	7.50c	8.75c	10.75c	12.50c	
	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	7.25c	5.75c	1.75c	1.00c	2.50c	1.50c	1.00c	1.25c	1.25c	2.00c	1.75c	1.00c	
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20	
Mar19	7.25c	13.00c	14.75c	15.75c	18.25c	19.75c	20.75c	22.00c	23.25c	25.25c	27.00c	28.00c	
	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20	
		5.75c	7.50c	8.50c	11.00c	12.50c	13.50c	14.75c	16.00c	18.00c	19.75c	20.75c	
			1.75c	2.75c	5.25c	6.75c	7.75c	9.00c	10.25c	12.25c	14.00c	15.00c	
				1.00c	3.50c	5.00c	6.00c	7.25c	8.50c	10.50c	12.25c	13.25c	
					1.00c	2.50c	4.00c	5.00c	6.25c	7.50c	9.50c	11.25c	12.25c
						1.50c	2.50c	3.75c	5.00c	7.00c	8.75c	9.75c	
							1.00c	2.25c	3.50c	5.50c	7.25c	8.25c	
								1.25c	2.50c	4.50c	6.25c	7.25c	
									1.25c	3.25c	5.00c	6.00c	
										2.00c	3.75c	4.75c	
											1.75c	2.75c	
												1.00c	
													1.00c



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 ** Source: Reuters

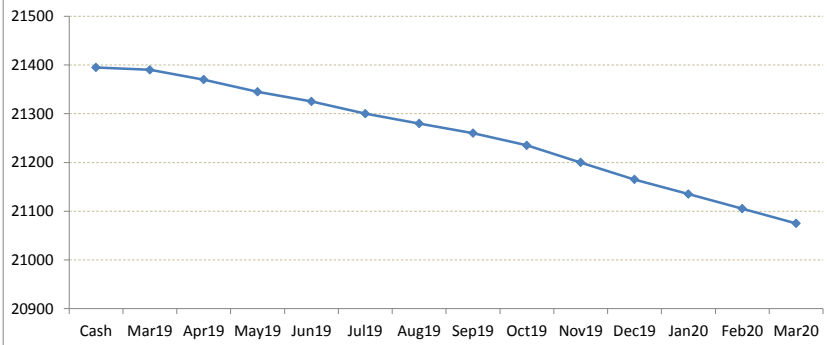
LME Valuation - Tin

Cash - 3M: **70.00b**

Date: **2019-03-12**

Cash	21395.00	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	21325.00	5.00b	25.00b	50.00b	70.00b	95.00b	115.00b	135.00b	160.00b	195.00b	230.00b	260.00b	290.00b
Mar19	21390.00												
Apr19	21370.00	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	21345.00	65.00b	45.00b	20.00b	0.00b	25.00b	45.00b	65.00b	90.00b	125.00b	160.00b	190.00b	220.00b
Jun19	21325.00												
Jul19	21300.00	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	21280.00	20.00b	25.00b	20.00b	25.00b	20.00b	20.00b	25.00b	35.00b	35.00b	30.00b	30.00b	30.00b
Sep19	21260.00												
Oct19	21235.00	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	Jan20	Feb20	Mar20
Nov19	21200.00	20.00b	45.00b	65.00b	90.00b	110.00b	130.00b	155.00b	190.00b	225.00b	255.00b	285.00b	315.00b
Dec19	21165.00	Apr19	25.00b	45.00b	70.00b	90.00b	110.00b	135.00b	170.00b	205.00b	235.00b	265.00b	295.00b
Jan20	21135.00		May19	20.00b	45.00b	65.00b	85.00b	110.00b	145.00b	180.00b	210.00b	240.00b	270.00b
Feb20	21105.00			Jun19	25.00b	45.00b	65.00b	90.00b	125.00b	160.00b	190.00b	220.00b	250.00b
Mar20	21075.00				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



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