MCX
METAL & ENERGY
Trade with Trust

A Report on

Gold Mini Bullion

Derivatives and Risk Management ECON F354

Under the guidance of Professor Rammohan Menon

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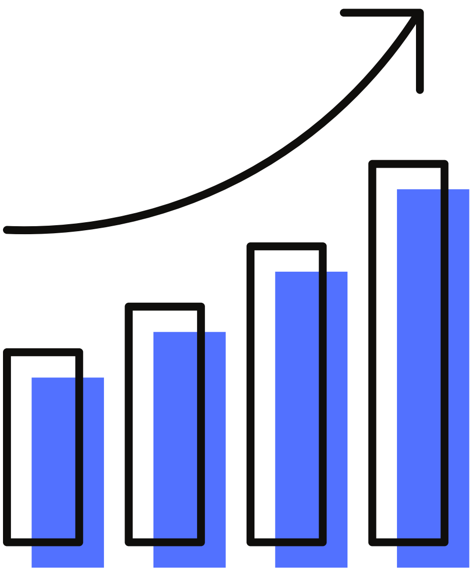
Underlying Asset

Gold is the oldest precious metal known to man and for thousands of years, it has been valued as a global currency, a commodity, an investment and simply an object of beauty.

Gold, the most sought-after of all precious metals, is acquired throughout the world for its beauty, liquidity, investment qualities, and industrial properties. As an investment vehicle, gold is typically viewed as a financial asset that maintains its value and purchasing power during inflationary periods.



Gold has a long and fascinating usage history in a diverse range of industries and applications. In each of the applications it is used, gold provides outstanding performance due to its unique properties of being one of the most malleable and ductile metals with a high melting point and easy recyclability. Gold is a material of choice in medicine and dentistry as it is biocompatible. In recent years it has emerged as a key nanomaterial. Global demand for gold is centered on four primary categories: jewelry, investment, central bank reserves, and technology.

Risk Management

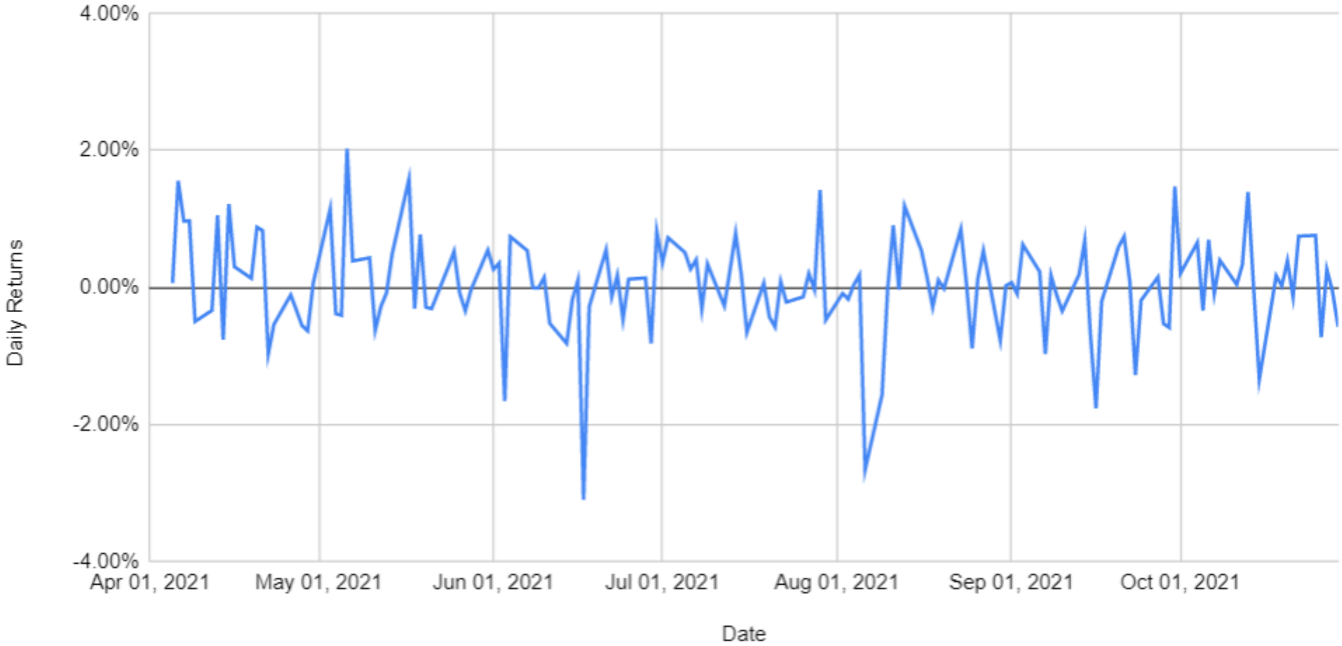
Risk management is of critical importance for gold value chain participants, such as mining companies, processors, companies dealing in gold and gold products, jewelers, and even governments which rely on the proceeds of bullion consumption and trade. Modern hedging techniques and strategies, including market-based risk management financial instruments, such as gold futures, can improve efficiencies and consolidate competitiveness.

Factors affecting gold prices

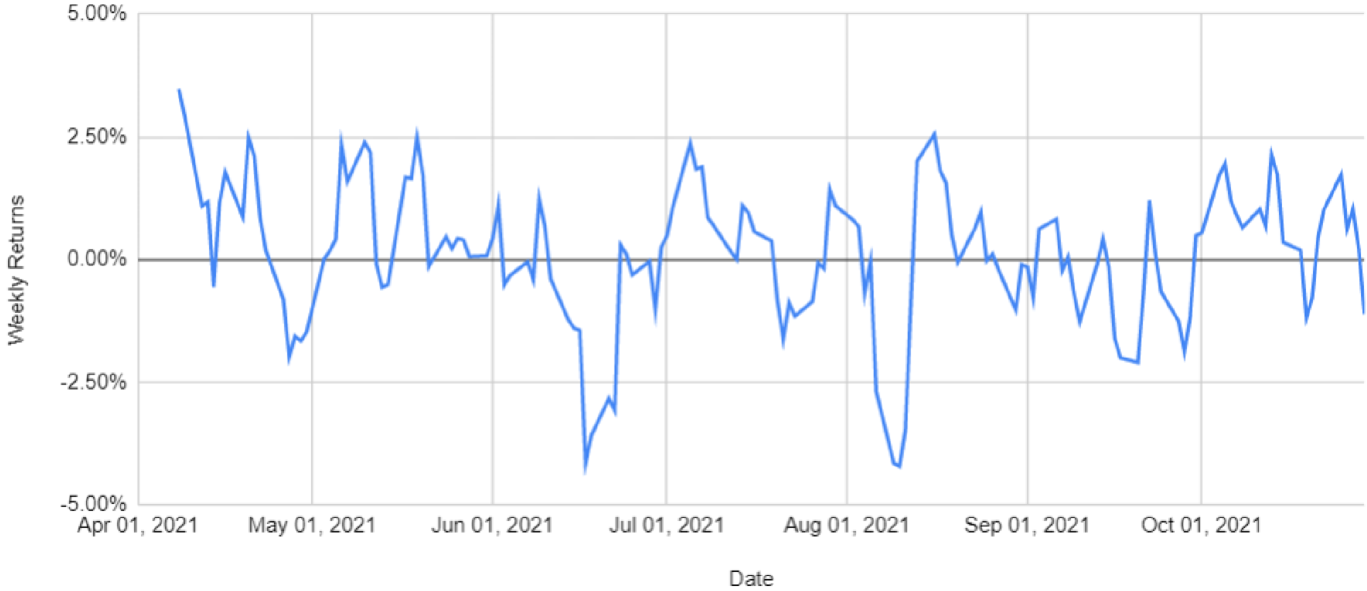
- Above-ground supply of gold from central bank sales, reclaimed scrap, and official gold loans.
- Hedging interest of producers and miners.
- World macroeconomic factors, such as movement in the dollar and interest rate, and economic events.
- In India, gold demand is also influenced by seasonality, that is, marriage and harvesting.

Return Calculations

Daily Returns vs. Date



Weekly Returns vs. Date



Return Calculations

Monthly Return vs. Date

Calculation of Standard Deviation and Risk-Adjusted Return

Daily Returns				
Mean	Max	Minimum	SD	Sharpe Ratio
0.04%	2.03%	-3.10%	0.00720	0.57524
Weekly Returns				
Mean	Max	Minimum	SD	Sharpe Ratio
0.12%	3.48%	-4.21%	0.01427	1.39289
Monthly Returns				
Mean	Max	Minimum	SD	Sharpe Ratio
0.19%	4.87%	-5.10%	0.01383	2.38692

Futures

Contract Specifications of Gold Mini

Symbol – GOLDM
Trading unit (lot size) – 100 grams
Quotation/Base Value – 10 grams
Maximum Order Size – 10kg
Tick Size – Re. 1 per 10 grams
Initial Margin – Minimum 6% or based on SPAN, whichever is higher
Extreme loss margin - Minimum 1%

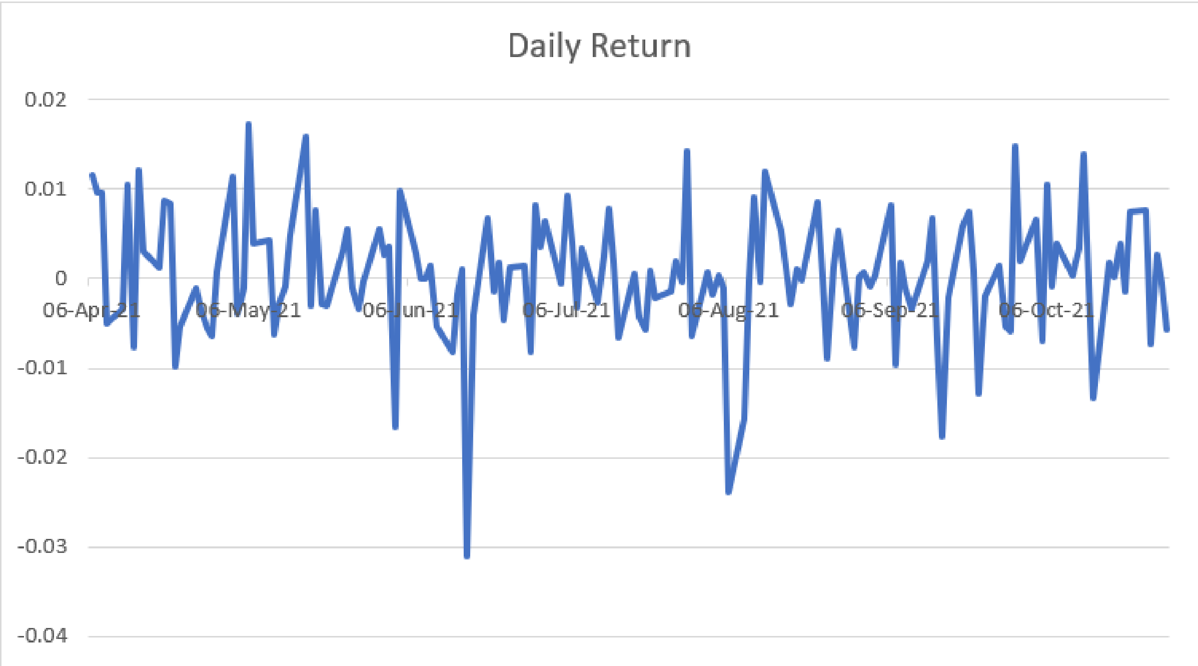
Contract Launch Calendar of Gold Mini

Contract Launch Months	Contract Expiry Months
October 2020	January 2021
November 2020	February 2021
December 2020	March 2021
January 2021	April 2021
February 2021	May 2021
March 2021	June 2021
April 2021	July 2021
May 2021	August 2021
June 2021	September 2021
July 2021	October 2021
August 2021	November 2021
September 2021	December 2021

Futures:
Returns

Near month futures

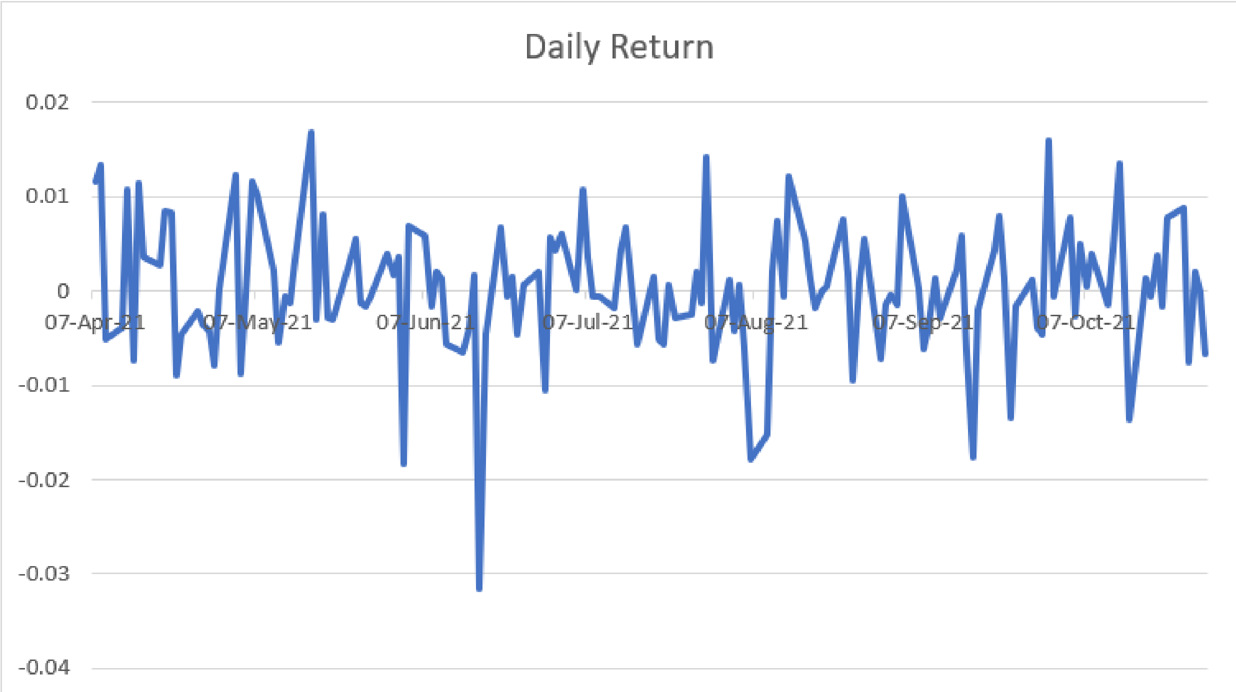
Buy and Hold		Daily	
Mean	0.048017	Mean	0.000365
Max	0.087398	Max	0.017292
Min	0.008614	Min	-0.03103
SD	0.017628	SD	0.007158
Sharpe Ratio	-0.92369	Sharpe Ratio	-8.9318



Futures:
Returns

Far month futures

Buy and Hold		Daily	
Mean	0.038261	Mean	0.000284
Max	0.080443	Max	0.016904
Min	-0.0017	Min	-0.03154
SD	0.018388	SD	0.007026
Sharpe Ratio	-1.41605	Sharpe Ratio	-9.11086



Futures:
Convenience Yield and Liquidity

Convenience Yield

The storage costs of gold are relatively low. The convenience yield of gold depends on

- Demand for jewelry
- Demand for bullion as a safe-haven store of value
- Demand for bullion to meet settlement obligations under expiring gold contracts, all of which affect the physical market.

Therefore, whenever the cost of carrying gold becomes negative, it indicates a strain in the physical market and is a strong bullish signal.

Liquidity

Instrument	Year	Traded Contract (Lots)	Quantity (000's)	Total Value (Lacs)
FUTCOM	2021	5774929	577492.900 GRMS	27348650.78

From the data available on MCX, we can clearly see the number of gold mini contracts traded is extremely high, hence giving gold mini futures high liquidity.

Futures:
Other Strategy

We have used technical analysis to analyze the graphs for both near and far month futures. Using candlestick graphs, we can identify simple candlestick patterns to book a return of 8.83% on near month futures and 12.32% on far month futures.

Near month futures

Far month futures

Options

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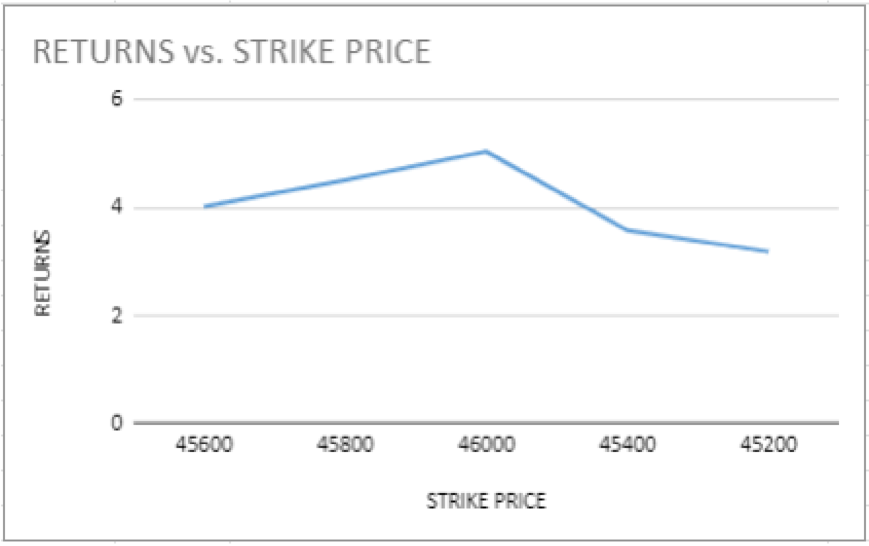
May 2021	August 2021
June 2021	September 2021
July 2021	October 2021
August 2021	November 2021
September 2021	December 2021

Options:
Buy and Hold Strategy
April Call

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
4/6/2021 5/5/2021	45600	CE	393 1973.5	1580.5	4.0216
4/6/2021 5/5/2021	45800	CE	322 1773.5	1451.5	4.5078
4/6/2021 5/5/2021	46000	CE	260.5 1573.5	1313	5.0403
4/6/2021 5/5/2021	45400	CE	475 2173.5	1698.5	3.5758
4/6/2021 5/5/2021	45200	CE	567.5 2373.5	1806	3.1824

APRIL CALL	
Maximum Returns	5.0403
Minimum Returns	3.1824
Mean Returns	4.0656
Standard Deviation	0.7361199542
Sharpe(Annualized)	19.10693782
Sharpe(Daily)	1.000102835

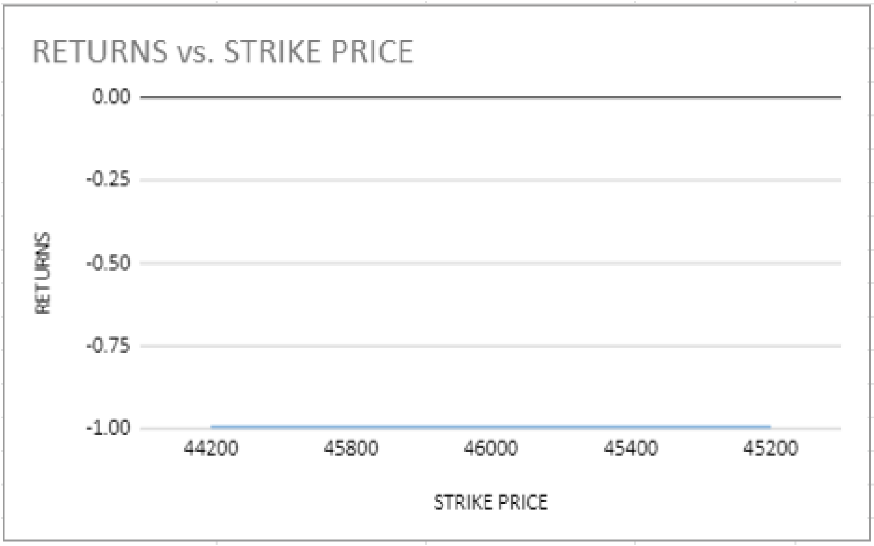


Options:

Buy and Hold Strategy
April Put

DATE	STRIKE PRICE	TYPE	PREMIUN	NET	RETURNS
4/6/2021	44200	PE	798	-797.5	-0.99937
5/5/2021			0.5		
4/6/2021	45800	PE	926	-925.5	-0.99946
5/5/2021			0.5		
4/6/2021	46000	PE	1064	-1063.5	-0.99953
5/5/2021			0.5		
4/6/2021	45400	PE	680	-679.5	-0.99926
5/5/2021			0.5		
4/6/2021	45200	PE	573.5	-573	-0.99913
5/5/2021			0.5		

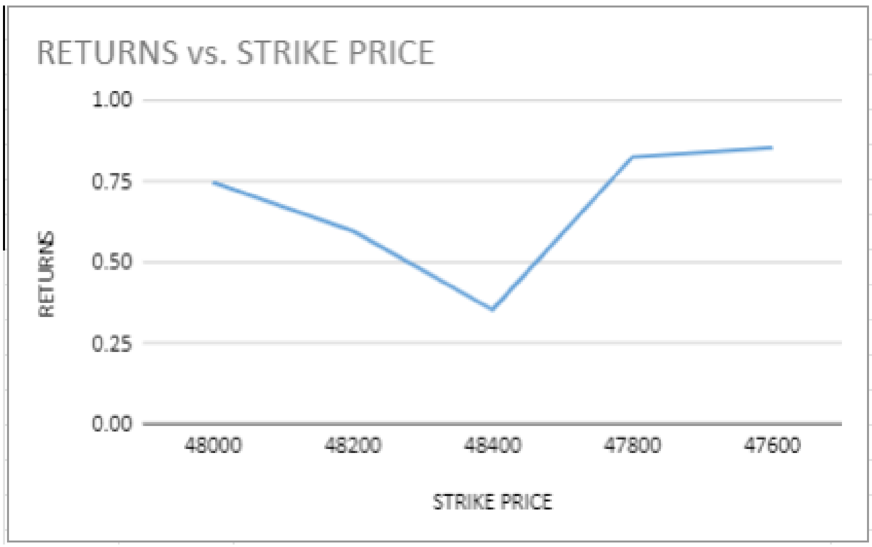
APRIL PUT	
Maximum Returns	-0.99913
Minimum Returns	-0.99953
Mean Returns	-0.99935
Standard Deviation	0.0001593466
Sharpe(Annualized	-21841.7974
Sharpe(Daily)	-1143.251927



Options:
Buy and Hold Strategy
May Call

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
5/10/2021	48000	CE	491.5	367.5	0.7477
6/4/2021			859		
5/10/2021	48200	CE	413	247	0.5981
6/4/2021			660		
5/10/2021	48400	CE	344	122	0.3547
6/4/2021			466		
5/10/2021	47800	CE	580	479	0.8259
6/4/2021			1059		
5/10/2021	47600	CE	678.5	580	0.8548
6/4/2021			1258.5		

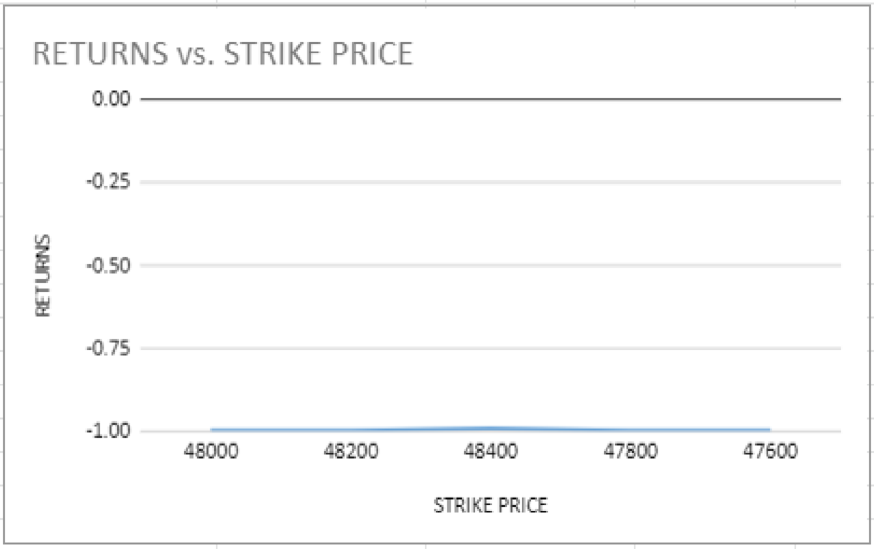
MAY CALL	
Maximum Returns	0.8548
Minimum Returns	0.3547
Mean Returns	0.6762
Standard Deviation	0.2054988826
Sharpe(Annualized)	11.30878534
Sharpe(Daily)	0.5919288782



Options:
Buy and Hold Strategy
May Put

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
5/10/2021	48000	PE	789.5	-789	-0.99937
6/4/2021			0.5		
5/10/2021	48200	PE	910.5	-909.5	-0.99890
6/4/2021			1		
5/10/2021	48400	PE	1040.5	-1033	-0.99279
6/4/2021			7.5		
5/10/2021	47800	PE	678.5	-678	-0.99926
6/4/2021			0.5		
5/10/2021	47600	PE	577.5	-577	-0.99913
6/4/2021			0.5		

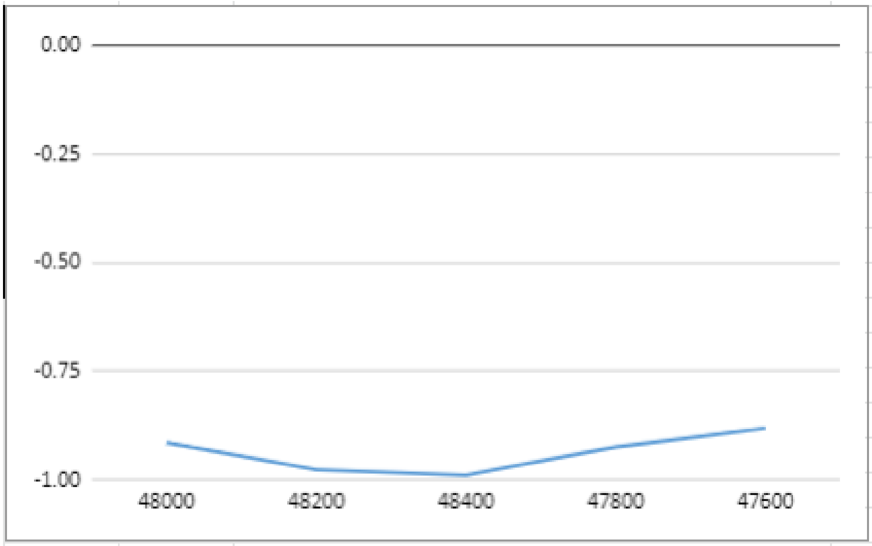
MAY PUT	
Maximum Returns	-0.99279
Minimum Returns	-0.99937
Mean Returns	-0.99789
Standard Deviation	0.0028560403
Sharpe(Annualized	-1216.845341
Sharpe(Daily)	-63.69259614



Options:
Buy and Hold Strategy
June Call

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
6/7/2021 7/5/2021	48000	CE	491.5 42	-449.5	-0.9145
6/7/2021 7/5/2021	48200	CE	830.5 19.5	-811	-0.9765
6/7/2021 7/5/2021	48400	CE	719.5 8	-711.5	-0.9889
6/7/2021 7/5/2021	47800	CE	1081 81.5	-999.5	-0.9246
6/7/2021 7/5/2021	47600	CE	1220 145	-1075	-0.8811

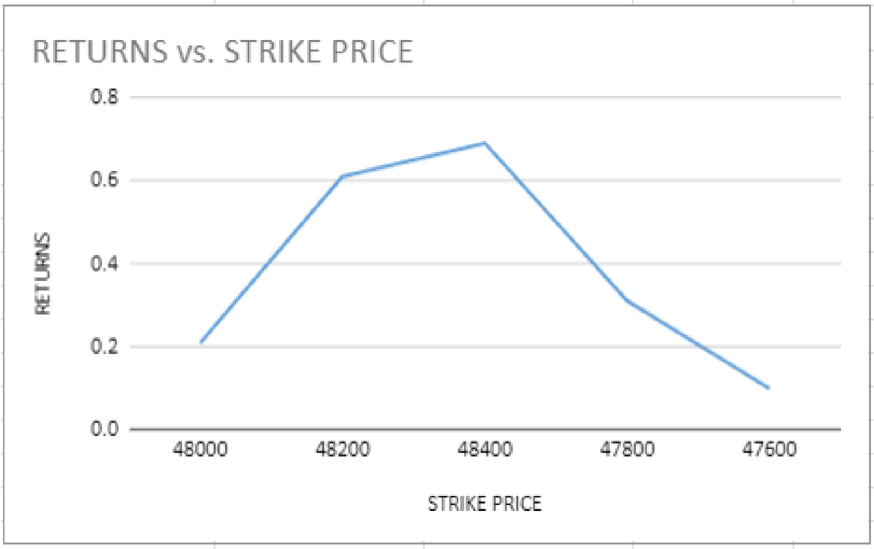
JUNE CALL	
Maximum Returns	-0.8811
Minimum Returns	-0.9889
Mean Returns	-0.9371
Standard Deviation	0.04480683938
Sharpe(Annualized)	-72.86637802
Sharpe(Daily)	-3.814000541



Options:
Buy and Hold Strategy
June Put

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
6/7/2021	48000	PE	491.5	102	0.20753
7/5/2021			593.5		
6/7/2021	48200	PE	479	292	0.60960
7/5/2021			771		
6/7/2021	48400	PE	567.5	392	0.69075
7/5/2021			959.5		
6/7/2021	47800	PE	330.5	102.5	0.31014
7/5/2021			433		
6/7/2021	47600	PE	270	26.5	0.09815
7/5/2021			296.5		

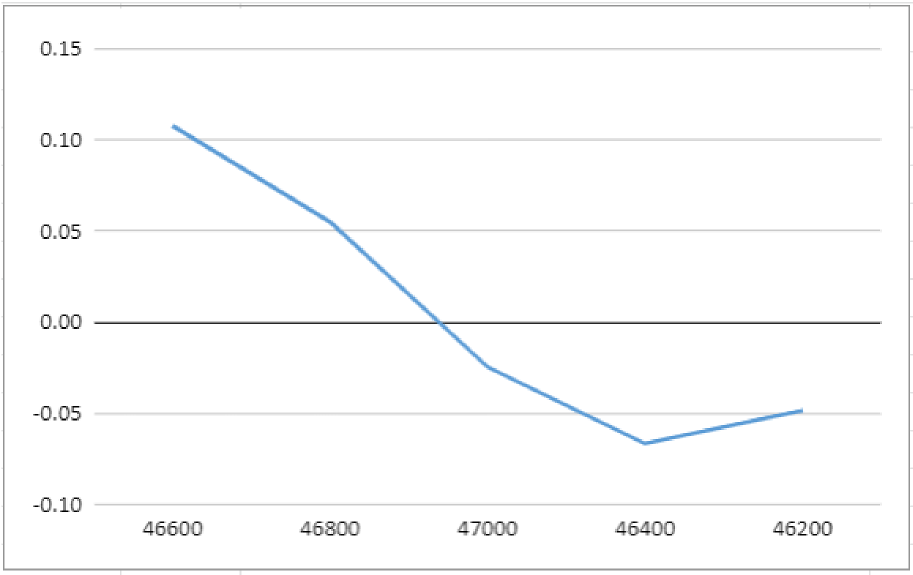
JUNE PUT	
Maximum Returns	0.69075
Minimum Returns	0.09815
Mean Returns	0.38323
Standard Deviation	0.2565630213
Sharpe(Annualized	5.102044339
Sharpe(Daily)	0.2670532061



Options:
Buy and Hold Strategy
July Call

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
7/6/2021	46600	CE	1134	122	0.1076
8/5/2021			1256		
7/6/2021	46800	CE	1001	55	0.0549
8/5/2021			1056		
7/6/2021	47000	CE	878	-21.5	-0.0245
8/5/2021			856.5		
7/6/2021	46400	CE	1560	-103.5	-0.0663
8/5/2021			1456.5		
7/6/2021	46200	CE	1740.5	-84	-0.0483
8/5/2021			1656.5		

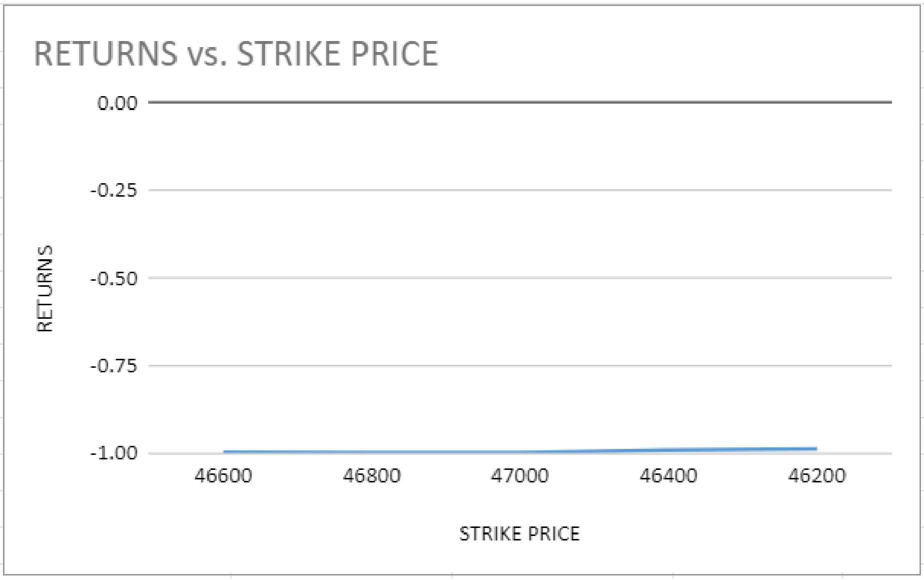
JULY CALL	
Maximum Returns	0.1076
Minimum Returns	-0.0663
Mean Returns	0.0047
Standard Deviation	0.07384793989
Sharpe(Annualized)	-0.03150808184
Sharpe(Daily)	-0.001649208379



Options:
Buy and Hold Strategy
July Put

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
7/6/2021	46600	PE	317	-316.5	-0.99842
8/5/2021			0.5		
7/6/2021	46800	PE	383.5	-383	-0.99870
8/5/2021			0.5		
7/6/2021	47000	PE	459.5	-459	-0.99891
8/5/2021			0.5		
7/6/2021	46400	PE	61.5	-61	-0.99187
8/5/2021			0.5		
7/6/2021	46200	PE	42.5	-42	-0.98824
8/5/2021			0.5		

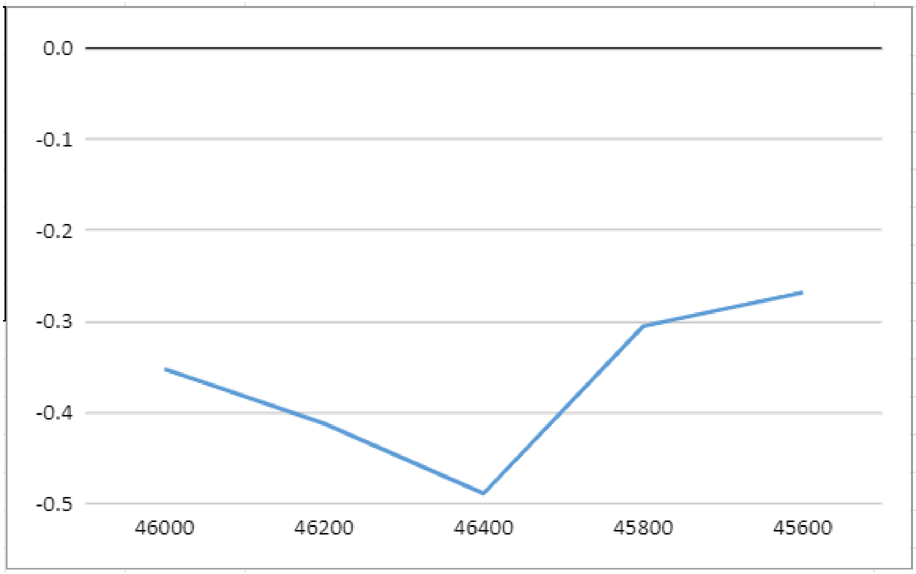
JULY PUT	
Maximum Returns	-0.98824
Minimum Returns	-0.99891
Mean Returns	-0.99523
Standard Deviation	0.0048984744
Sharpe(Annualized	-707.5937681
Sharpe(Daily)	-37.03715057



Options:
Buy and Hold Strategy
August Call

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
8/9/2021	46000	CE	1701	-598.5	-0.3519
9/3/2021			1102.5		
8/9/2021	46200	CE	1533.5	-631	-0.4115
9/3/2021			902.5		
8/9/2021	46400	CE	1373.5	-670.5	-0.4882
9/3/2021			703		
8/9/2021	45800	CE	1874	-571.5	-0.3050
9/3/2021			1302.5		
8/9/2021	45600	CE	2053	-550.5	-0.2681
9/3/2021			1502.5		

AUGUST CALL	
Maximum Returns	-0.2681
Minimum Returns	-0.4882
Mean Returns	-0.3649
Standard Deviation	0.08730559815
Sharpe(Annualized)	-14.69189821
Sharpe(Daily)	-0.7690090993

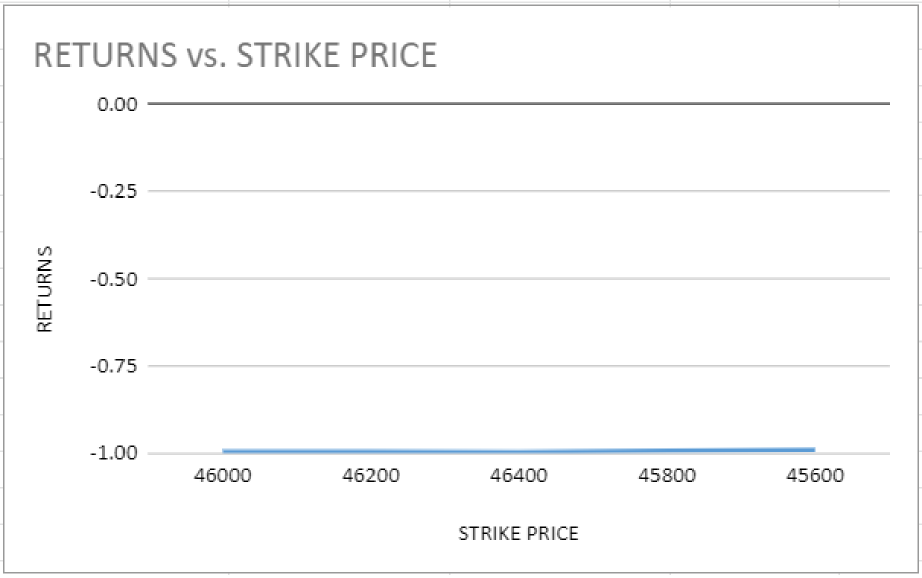


Options:

Buy and Hold Strategy
August Put

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
8/9/2021 9/3/2021	46000	PE	108 0.5	-107.5	-0.99537
8/9/2021 9/3/2021	46200	PE	140.5 0.5	-140	-0.99644
8/9/2021 9/3/2021	46400	PE	180 0.5	-179.5	-0.99722
8/9/2021 9/3/2021	45800	PE	82 0.5	-81.5	-0.99390
8/9/2021 9/3/2021	45600	PE	61.5 0.5	-61	-0.99187

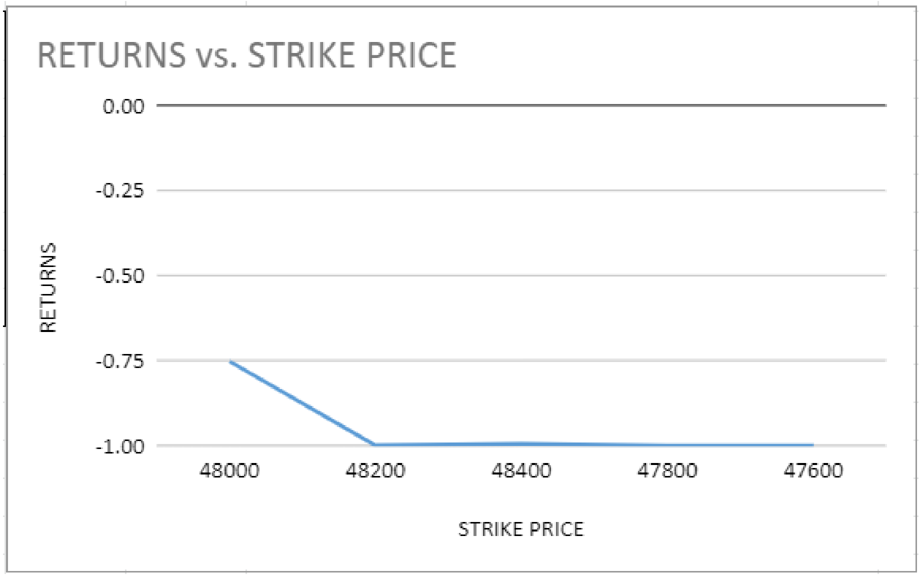
AUGUST PUT	
Maximum Returns	-0.99187
Minimum Returns	-0.99722
Mean Returns	-0.99496
Standard Deviation	0.0021299810
Sharpe(Annualized	-1626.873012
Sharpe(Daily)	-85.15442536



Options:
Buy and Hold Strategy September Call

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
9/6/2021 10/5/2021	48000	CE	495 123	-372	-0.7515
9/6/2021 10/5/2021	48200	CE	202 0.5	-201.5	-0.9975
9/6/2021 10/5/2021	48400	CE	71.5 0.5	-71	-0.9930
9/6/2021 10/5/2021	47800	CE	569 0.5	-568.5	-0.9991
9/6/2021 10/5/2021	47600	CE	650.5 0.5	-650	-0.9992

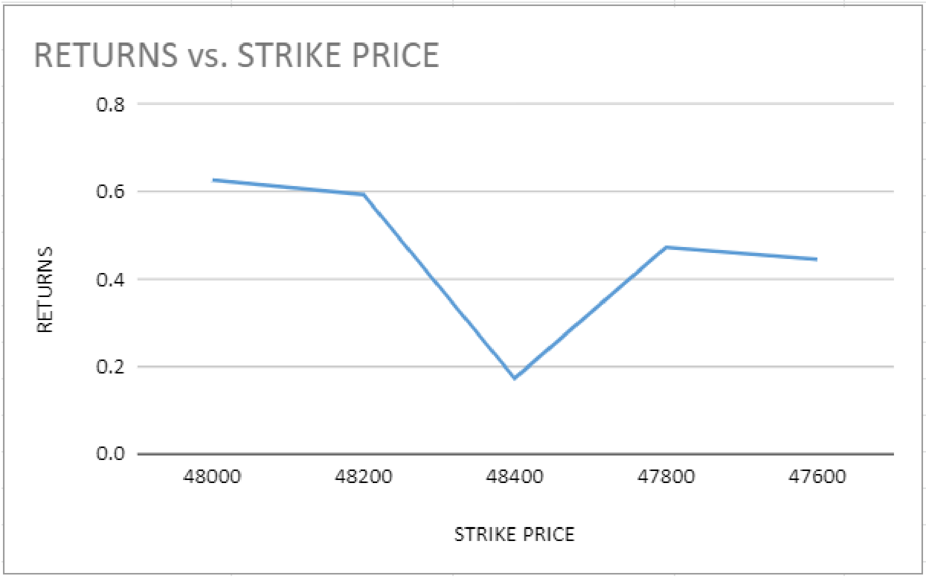
SEPTEMBER CALL	
Maximum Returns	-0.7515
Minimum Returns	-0.9992
Mean Returns	-0.9481
Standard Deviation	0.1099120448
Sharpe(Annualized)	-30.04954504
Sharpe(Daily)	-1.572865073



Options:
Buy and Hold Strategy
September Put

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
9/6/2021	48000	PE	1101	690	0.62670
10/5/2021			1791		
9/6/2021	48200	PE	1250	741	0.59280
10/5/2021			1991		
9/6/2021	48400	PE	1869	322	0.17228
10/5/2021			2191		
9/6/2021	47800	PE	1080.5	510.5	0.47247
10/5/2021			1591		
9/6/2021	47600	PE	963	428	0.44444
10/5/2021			1391		

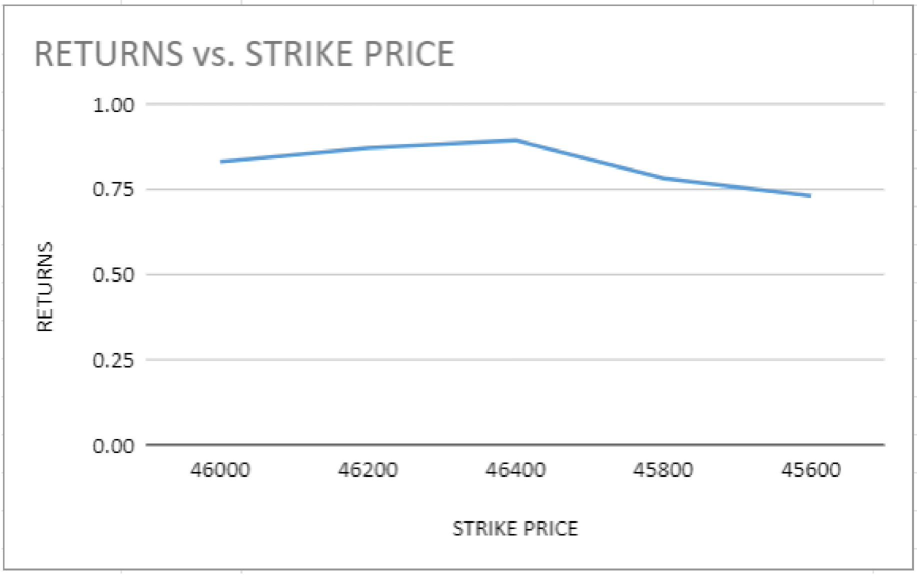
SEPTEMBER PUT	
Maximum Returns	0.62670
Minimum Returns	0.17228
Mean Returns	0.46174
Standard Deviation	0.1792959216
Sharpe(Annualized	8.817553909
Sharpe(Daily)	0.4615318655



Options:
Buy and Hold Strategy
October Call

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
10/6/2021	46000	CE	904.5	752	0.8314
11/3/2021			1656.5		
10/6/2021	46200	CE	778	678.5	0.8721
11/3/2021			1456.5		
10/6/2021	46400	CE	663	593.5	0.8952
11/3/2021			1256.5		
10/6/2021	45800	CE	1041	815.5	0.7834
11/3/2021			1856.5		
10/6/2021	45600	CE	1187.5	869	0.7318
11/3/2021			2056.5		

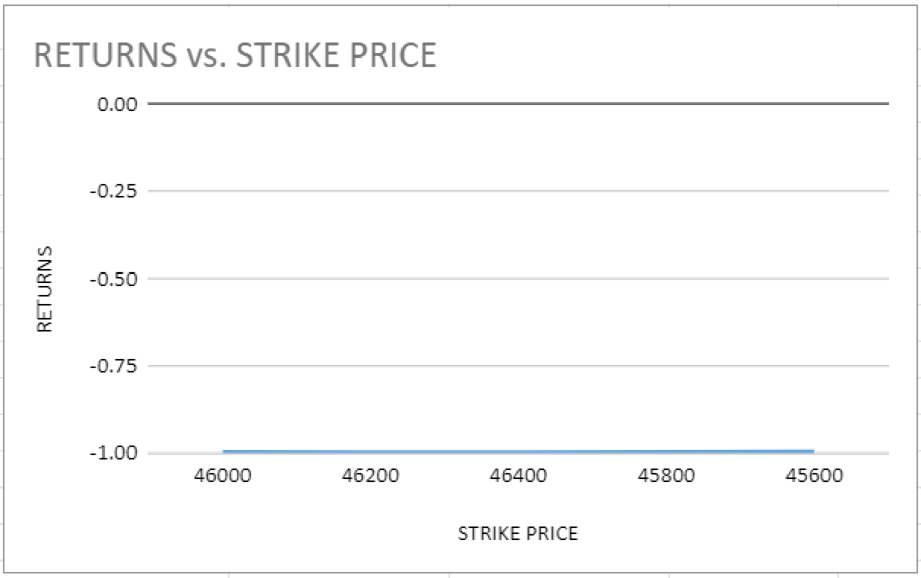
OCTOBER CALL	
Maximum Returns	0.8952
Minimum Returns	0.7318
Mean Returns	0.8228
Standard Deviation	0.06629454777
Sharpe(Annualized)	42.71237592
Sharpe(Daily)	2.235667934



Options:
Buy and Hold Strategy
October Put

DATE	STRIKE PRICE	TYPE	PREMIUM	NET	RETURNS
10/6/2021	46000	PE	309	-308.5	-0.99838
11/3/2021			0.5		
10/6/2021	46200	PE	382	-381.5	-0.99869
11/3/2021			0.5		
10/6/2021	46400	PE	466	-465.5	-0.99893
11/3/2021			0.5		
10/6/2021	45800	PE	246	-245.5	-0.99797
11/3/2021			0.5		
10/6/2021	45600	PE	193	-192.5	-0.99741
11/3/2021			0.5		

OCTOBER PUT	
Maximum Returns	-0.99741
Minimum Returns	-0.99893
Mean Returns	-0.99828
Standard Deviation	0.0006028421
Sharpe(Annualized	-5767.163209
Sharpe(Daily)	-301.8671189



Options:
Buy and Hold Strategy Overall

CALL	
Maximum Returns	5.040307102
Minimum Returns	-0.99923136
Mean Returns	0.474158825
Standard Deviation	1.649070008
Sharpe(Annualized)	0.984780836
Sharpe(Daily)	0.051545785

PUT	
Maximum Returns	0.690748899
Minimum Returns	-0.999530075
Mean Returns	-0.591533429
Standard Deviation	0.659831153
Sharpe(Annualized)	-3.133670954
Sharpe(Daily)	-0.164023834

Options:

Bear Call Spread
19 April 2021

Particular	Value
Underlying	GOLDM
Spot Price	47084
Lower Strike	47200
Higher Strike	47400
Lower strike premium	485.5
Higher Strike premium	-398
Net gain in premium	87.5
Date	19-04-2021

Relevant Period	11-01-21 to 05-05-21
Close Price on 05-05-21	46976
Gain	87.5

Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
47150	0	0	87.5	87.5
47200	0	0	87.5	87.5
47250	-50	0	87.5	37.5
47300	-100	0	87.5	-12.5
47350	-150	0	87.5	-62.5
47400	-200	0	87.5	-112.5
47450	-250	50	87.5	-112.5

Options:
Bear Call Spread
17 May 2021

Particular	Value
Underlying	GOLDM
Spot Price	48437
Lower Strike	48200
Higher Strike	48400
Lower strike premium	270.5
Higher Strike premium	-210.5
Net gain in premium	60
Date	17-05-2021

Relevant Period	17-05-21 to 04-06-21
Close Price on 04-06-21	48787
Gain	-140

Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
48150	0	0	60	60
48200	0	0	60	60
48250	-50	0	60	10
48300	-100	0	60	-40
48350	-150	0	60	-90
48400	-200	0	60	-140
48450	-250	50	60	-140

Options:
Bear Call Spread
11 June 2021

Particular	Value
Underlying	GOLDM
Spot Price	48717
Lower Strike	48600
Higher Strike	49000
Lower strike premium	588.5
Higher Strike premium	-396.5
Net gain in premium	192
Date	11-06-2021

Relevant Period	11-06-21 to 05-07-21
Close Price on 05-07-21	47304
Gain	192

Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
48600	0	0	192	192
48650	-50	0	192	142
48700	-100	0	192	92
48750	-150	0	192	42
48800	-200	0	192	-8
48850	-250	0	192	-58
48900	-300	0	192	-108
48950	-350	0	192	-158
49000	-400	0	192	-208
49050	-450	50	192	-208

Options:

Bear Call Spread
23 August 2021

Particular	Value
Underlying	GOLDM
Spot Price	47511
Lower Strike	47400
Higher Strike	47600
Lower strike premium	293
Higher Strike premium	-221
Net gain in premium	72
Date	23-08-2021

Relevant Period	23-08-21 to 03-09-21
Close Price on 03-09-21	47534
Gain	-62

Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
47350	0	0	72	72
47400	0	0	72	72
47450	-50	0	72	22
47500	-100	0	72	-28
47550	-150	0	72	-78
47600	-200	0	72	-128
47650	-250	50	72	-128
47700	-300	100	72	-128

Options:
Bear Call Spread
6 September 2021

Particular	Value
Underlying	GOLDM
Spot Price	47450
Lower Strike	47200
Higher Strike	47600
Lower strike premium	550.5
Higher Strike premium	-381
Net gain in premium	169.5
Date	06-09-2021

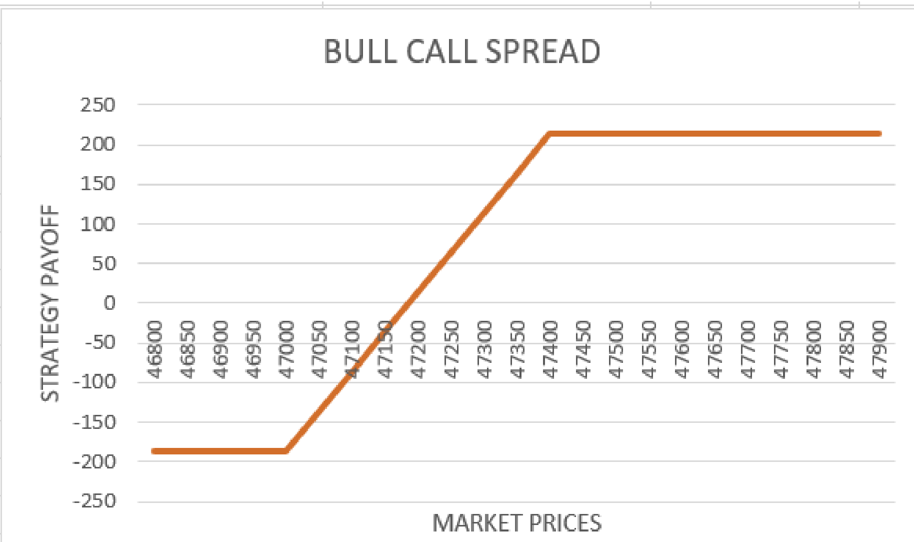
Relevant Period	06-09-21 to 05-10-21
Close Price on 05-10-21	46644
Gain	169.5

Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
47150	0	0	169.5	169.5
47200	0	0	169.5	169.5
47250	-50	0	169.5	119.5
47300	-100	0	169.5	69.5
47350	-150	0	169.5	19.5
47400	-200	0	169.5	-30.5
47450	-250	0	169.5	-80.5
47500	-300	0	169.5	-130.5
47550	-350	0	169.5	-180.5
47600	-400	0	169.5	-230.5
47650	-450	50	169.5	-230.5

Options:
Bull Call Spread
19 April 2021

Particular	Value
Underlying	GOLDM
Spot Price	47084
Lower Strike	47000
Higher Strike	47400
Lower strike premium	-584.5
Higher Strike premium	398
Net gain in premium	-186.5
Date	19-04-2021

Relevant Period	19-04-21 to 05-05-21
Close Price on 05-05-21	46976
gain	-102.5

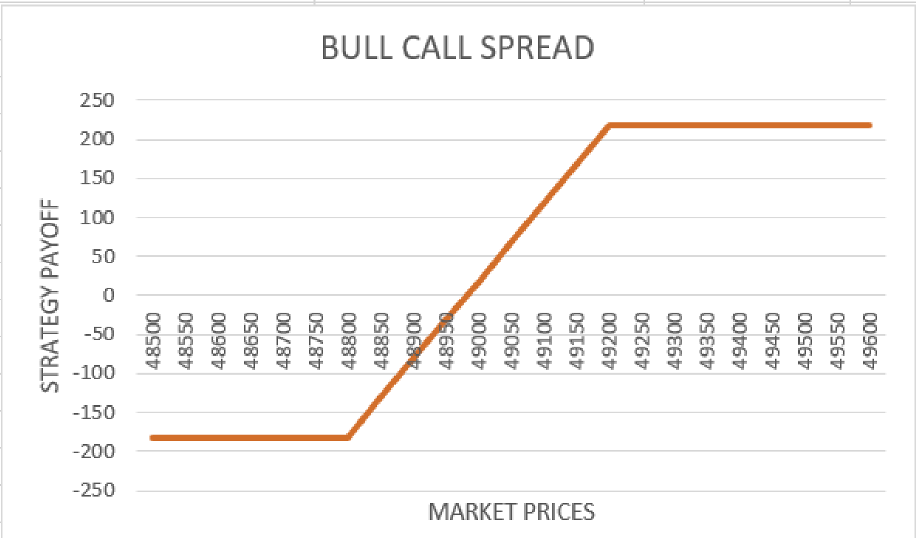


Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
47000	0	0	-186.5	-186.5
47050	50	0	-186.5	-136.5
47100	100	0	-186.5	-86.5
47150	150	0	-186.5	-36.5
47200	200	0	-186.5	13.5
47250	250	0	-186.5	63.5
47300	300	0	-186.5	113.5
47350	350	0	-186.5	163.5
47400	400	0	-186.5	213.5
47450	450	-50	-186.5	213.5

Options:
Bull Call Spread
10 June 2021

Particular	Value
Underlying	GOLDM
Spot Price	48975
Lower Strike	48800
Higher Strike	49200
Lower strike premium	-569.5
Higher Strike premium	388
Net gain in premium	-181.5
Date	10-06-2021

Relevant Period	10-06-21 to 05-07-21
Close Price on 05-07-21	358.15
gain	-19.6

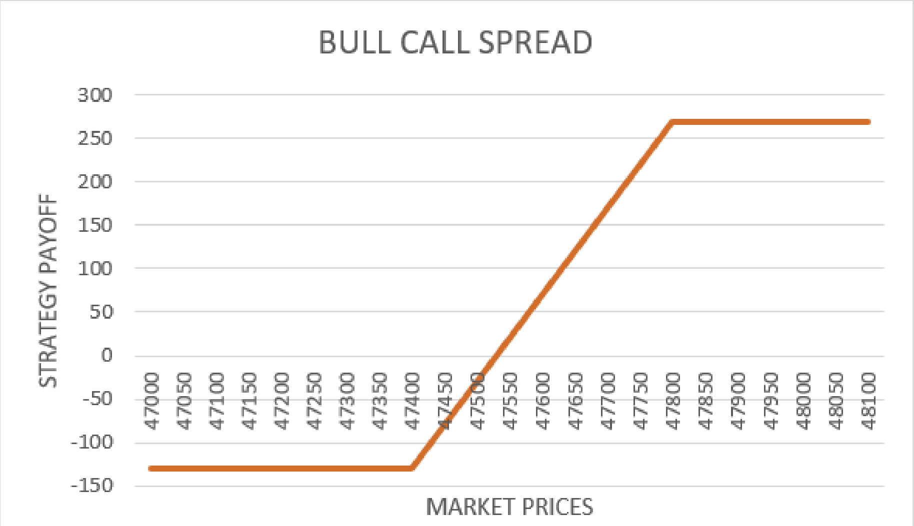


Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
48750	0	0	-181.5	-181.5
48800	0	0	-181.5	-181.5
48850	50	0	-181.5	-131.5
48900	100	0	-181.5	-81.5
48950	150	0	-181.5	-31.5
49000	200	0	-181.5	18.5
49050	250	0	-181.5	68.5
49100	300	0	-181.5	118.5
49150	350	0	-181.5	168.5
49200	400	0	-181.5	218.5
49250	450	-50	-181.5	218.5

Options:
Bull Call Spread
23 August 2021

Particular	Value
Underlying	GOLDM
Spot Price	47521
Lower Strike	47400
Higher Strike	47800
Lower strike premium	-293
Higher Strike premium	163
Net gain in premium	-130
Date	23-08-2021

Relevant Period	23-08-21 to 03-09-21
Close Price on 03-09-21	47534
gain	4

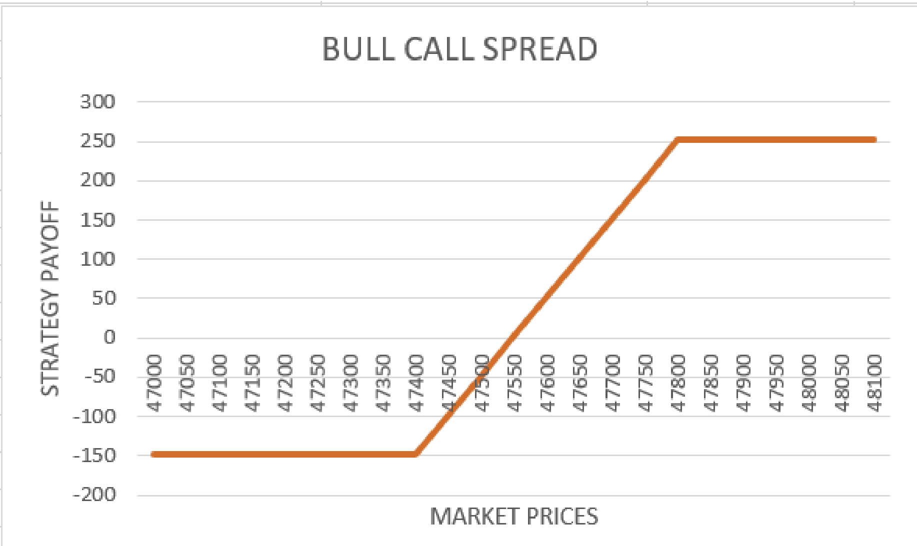


Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
47350	0	0	-130	-130
47400	0	0	-130	-130
47450	50	0	-130	-80
47500	100	0	-130	-30
47550	150	0	-130	20
47600	200	0	-130	70
47650	250	0	-130	120
47700	300	0	-130	170
47750	350	0	-130	220
47800	400	0	-130	270
47850	450	-50	-130	270

Options:
Bull Call Spread
6 September 2021

Particular	Value
Underlying	GOLDM
Spot Price	47450
Lower Strike	47400
Higher Strike	47800
Lower strike premium	-460.5
Higher Strike premium	312
Net gain in premium	-148.5
Date	06-09-2021

Relevant Period	06-09-21 to 05-10-21
Close Price on 05-10-21	46644
gain	-148.5



Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
47350	0	0	-148.5	-148.5
47400	0	0	-148.5	-148.5
47450	50	0	-148.5	-98.5
47500	100	0	-148.5	-48.5
47550	150	0	-148.5	1.5
47600	200	0	-148.5	51.5
47650	250	0	-148.5	101.5
47700	300	0	-148.5	151.5
47750	350	0	-148.5	201.5
47800	400	0	-148.5	251.5
47850	450	-50	-148.5	251.5

Options:
Bear Put Spread
19 April 2021

Particular	Value
Underlying	GOLDM
Spot Price	47084
Lower Strike	47200
Higher Strike	47400
Lower strike premium	575
Higher Strike premium	-687.5
Net gain in premium	-112.5
Date	19-04-2021

Relevant Period	19-04-21 to 05-05-21
Close Price on 05-05-21	46976
Gain	87.5

Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
47150	-50	250	-112.5	87.5
47200	0	200	-112.5	87.5
47250	0	150	-112.5	37.5
47300	0	100	-112.5	-12.5
47350	0	50	-112.5	-62.5
47400	0	0	-112.5	-112.5
47450	0	0	-112.5	-112.5

Options:
Bear Put Spread
17 May 2021

Particular	Value
Underlying	GOLDM
Spot Price	48437
Lower Strike	48200
Higher Strike	48400
Lower strike premium	801
Higher Strike premium	-941
Net gain in premium	-140
Date	17-05-2021

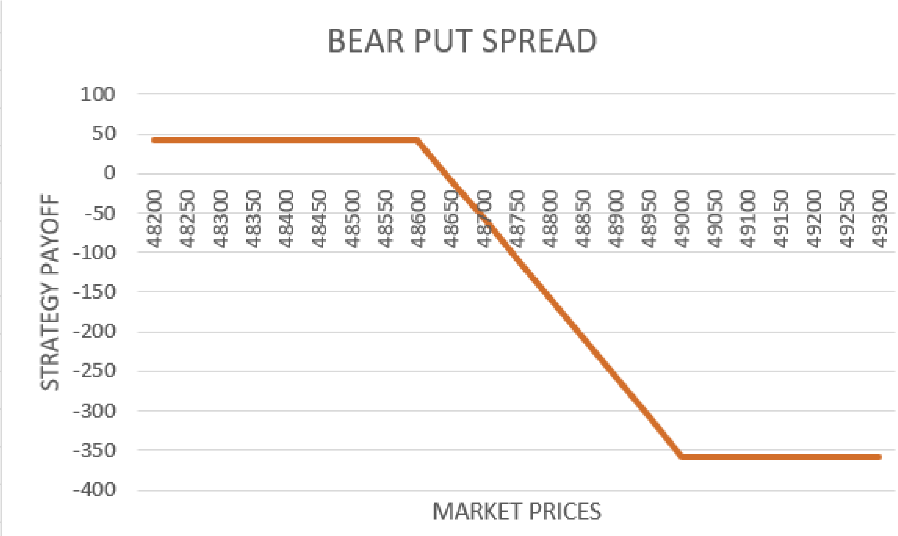
Relevant Period	17-05-21 to 04-06-21
Close Price on 04-06-21	48787
Gain	-140

Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
48150	-50	250	-140	60
48200	0	200	-140	60
48250	0	150	-140	10
48300	0	100	-140	-40
48350	0	50	-140	-90
48400	0	0	-140	-140
48450	0	0	-140	-140

Options:
Bear Put Spread
11 June 2021

Particular	Value
Underlying	GOLDM
Spot Price	48717
Lower Strike	48600
Higher Strike	49000
Lower strike premium	1578.5
Higher Strike premium	-1936
Net gain in premium	-357.5
Date	11-06-2021

Relevant Period	11-06-21 to 05-07-21
Close Price on 05-07-21	47304
Gain	42.5



Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
48550	-50	450	-357.5	42.5
48600	0	400	-357.5	42.5
48650	0	350	-357.5	-7.5
48700	0	300	-357.5	-57.5
48750	0	250	-357.5	-107.5
48800	0	200	-357.5	-157.5
48850	0	150	-357.5	-207.5
48900	0	100	-357.5	-257.5
48950	0	50	-357.5	-307.5
49000	0	0	-357.5	-357.5
49050	0	0	-357.5	-357.5

Options:
Bear Put Spread
23 August 2021

Particular	Value
Underlying	GOLDM
Spot Price	47511
Lower Strike	47400
Higher Strike	47600
Lower strike premium	548
Higher Strike premium	-676.5
Net gain in premium	-128.5
Date	23-08-2021

Relevant Period	23-08-21 to 03-09-21
Close Price on 03-09-21	47534
Gain	-62.5

Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
47350	-50	250	-128.5	71.5
47400	0	200	-128.5	71.5
47450	0	150	-128.5	21.5
47500	0	100	-128.5	-28.5
47550	0	50	-128.5	-78.5
47600	0	0	-128.5	-128.5
47650	0	0	-128.5	-128.5

Options:
Bear Put Spread
6 September 2021

Particular	Value
Underlying	GOLDM
Spot Price	47450
Lower Strike	47200
Higher Strike	47600
Lower strike premium	602
Higher Strike premium	-831
Net gain in premium	-229
Date	06-09-2021

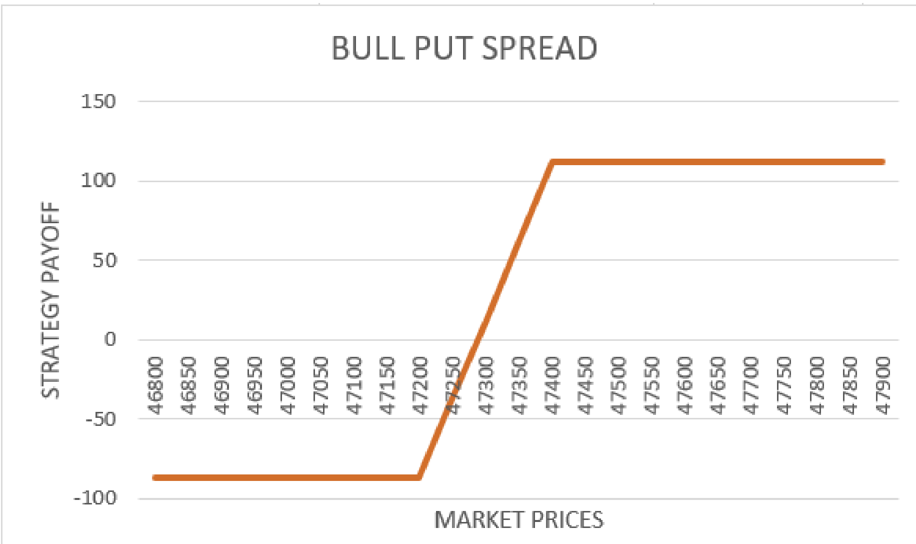
Relevant Period	06-09-21 to 05-10-21
Close Price on 05-10-21	46644
Gain	171

Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
47150	-50	450	-229	171
47200	0	400	-229	171
47250	0	350	-229	121
47300	0	300	-229	71
47350	0	250	-229	21
47400	0	200	-229	-29
47450	0	150	-229	-79
47500	0	100	-229	-129
47550	0	50	-229	-179
47600	0	0	-229	-229
47650	0	0	-229	-229

Options:
Bull Put Spread
19 April 2021

Particular	Value
Underlying	GOLDM
Spot Price	47084
Lower Strike	47200
Higher Strike	47400
Lower strike premium	-575
Higher Strike premium	687.5
Net gain in premium	112.5
Date	19-04-2021

Relevant Period	19-04-21 to 05-05-21
Close Price on 05-05-21	46976
Gain	-87.5



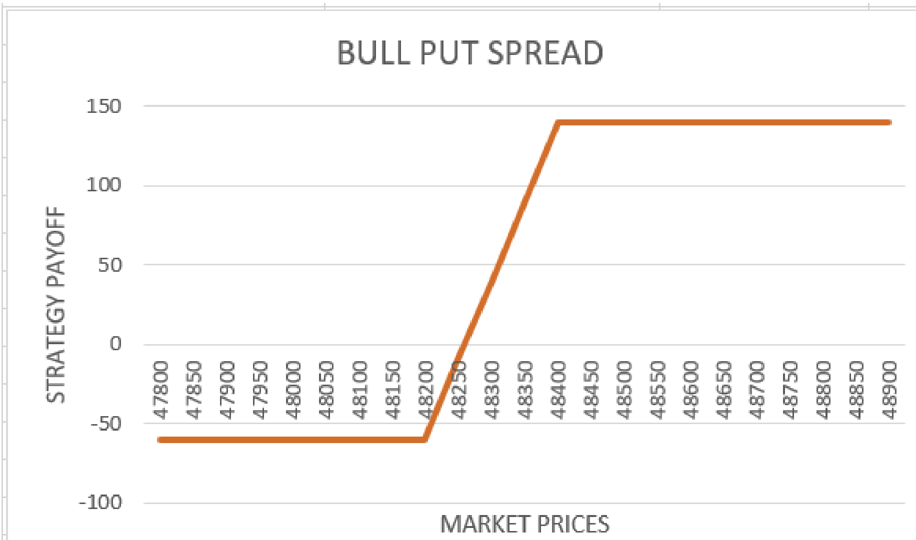
Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
47150	50	-250	112.5	-87.5
47200	0	-200	112.5	-87.5
47250	0	-150	112.5	-37.5
47300	0	-100	112.5	12.5
47350	0	-50	112.5	62.5
47400	0	0	112.5	112.5
47450	0	0	112.5	112.5

Options:

Bull Put Spread
17 May 2021

Particular	Value
Underlying	GOLDM
Spot Price	48437
Lower Strike	48200
Higher Strike	48400
Lower strike premium	-801
Higher Strike premium	941
Net gain in premium	140
Date	17-05-2021

Relevant Period	17-05-21 to 04-06-21
Close Price on 04-06-21	48787
Gain	140

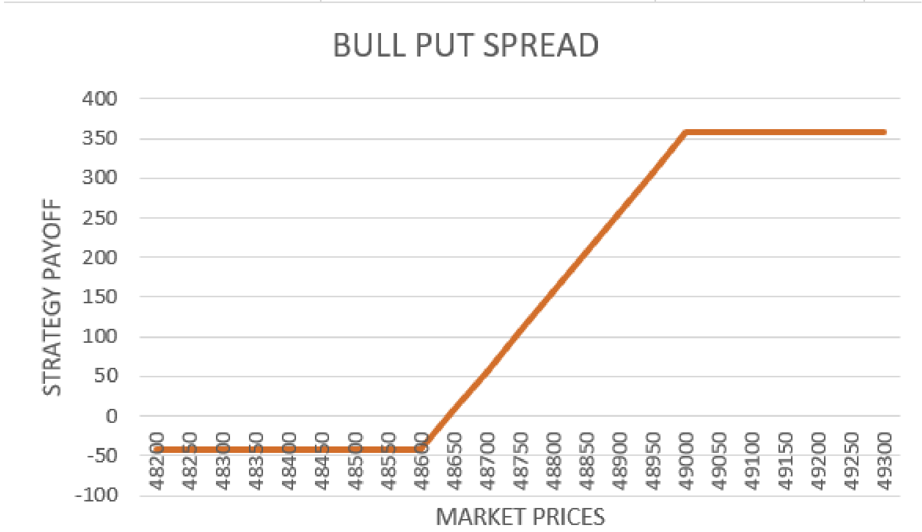


Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
48150	50	-250	140	-60
48200	0	-200	140	-60
48250	0	-150	140	-10
48300	0	-100	140	40
48350	0	-50	140	90
48400	0	0	140	140
48450	0	0	140	140

Options:
Bull Put Spread
11 June 2021

Particular	Value
Underlying	GOLDM
Spot Price	48717
Lower Strike	48600
Higher Strike	49000
Lower strike premium	-1578.5
Higher Strike premium	1936
Net gain in premium	357.5
Date	11-06-2021

Relevant Period	11-06-21 to 05-07-21
Close Price on 05-07-21	47304
Gain	42.5

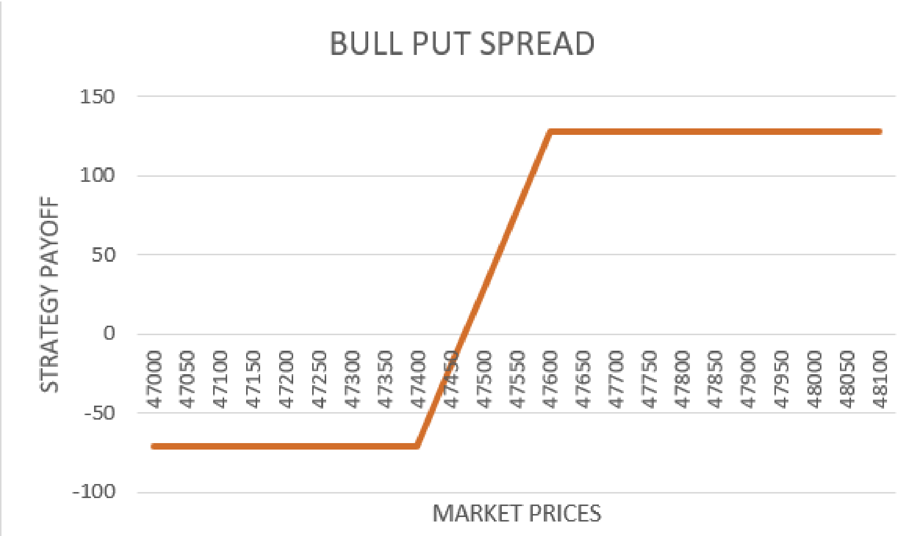


Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
48550	50	-450	357.5	-42.5
48600	0	-400	357.5	-42.5
48650	0	-350	357.5	7.5
48700	0	-300	357.5	57.5
48750	0	-250	357.5	107.5
48800	0	-200	357.5	157.5
48850	0	-150	357.5	207.5
48900	0	-100	357.5	257.5
48950	0	-50	357.5	307.5
49000	0	0	357.5	357.5
49050	0	0	357.5	357.5

Options:
Bull Put Spread
23 August 2021

Particular	Value
Underlying	GOLDM
Spot Price	47511
Lower Strike	47400
Higher Strike	47600
Lower strike premium	-548
Higher Strike premium	676.5
Net gain in premium	128.5
Date	23-08-2021

Relevant Period	23-08-21 to 03-09-21
Close Price on 03-09-21	47534
Gain	62.5



Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
47350	50	-250	128.5	-71.5
47400	0	-200	128.5	-71.5
47450	0	-150	128.5	-21.5
47500	0	-100	128.5	28.5
47550	0	-50	128.5	78.5
47600	0	0	128.5	128.5
47650	0	0	128.5	128.5

Options:
Bull Put Spread
6 September 2021

Particular	Value
Underlying	GOLDM
Spot Price	47450
Lower Strike	47200
Higher Strike	47600
Lower strike premium	-602
Higher Strike premium	831
Net gain in premium	229
Date	06-09-2021

Relevant Period	06-09-21 to 05-10-21
Close Price on 05-10-21	46644
Gain	-171

Market Price	Gain in Lower strike option	Gain in Higher strike option	Gain in premium	Net gain in strategy
47150	50	-450	229	-171
47200	0	-400	229	-171
47250	0	-350	229	-121
47300	0	-300	229	-71
47350	0	-250	229	-21
47400	0	-200	229	29
47450	0	-150	229	79
47500	0	-100	229	129
47550	0	-50	229	179
47600	0	0	229	229
47650	0	0	229	229

Options:
Short Put Butterfly Spread
8th April

Sell ITM PUT

LEG 1	
OPTION TYPE	PUT
QUANTITY	-1
STRIKE PRICE	46000
PREMIUM	626.5
SPOT PRICE	46576

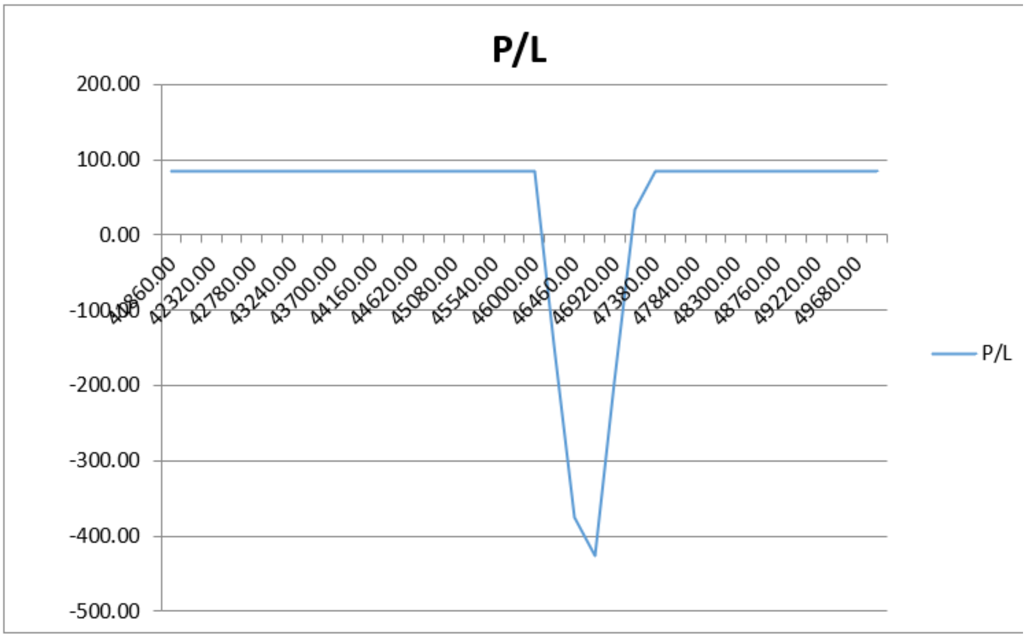
Buy 2 ATM PUTs

LEG 2	
OPTION TYPE	PUT
QUANTITY	2
STRIKE PRICE	46600
PREMIUM	982
SPOT PRICE	46576

Sell OTM PUT

LEG 3	
OPTION TYPE	PUT
QUANTITY	-1
STRIKE PRICE	47200
PREMIUM	1421.5
SPOT PRICE	46756

Payoff Graph



45770.00		84.00
46000.00		84.00
46230.00		-146.00
46460.00		-376.00
46690.00		-426.00
46920.00		-196.00
47150.00		34.00
47380.00		84.00
47610.00		84.00

Net Premium Flow: Rs.84
Maximum Profit Potential: Rs.84
Maximum Loss Possible: Rs.-426

Expiry Price: Rs.46976.00

Returns: Rs.-140

Options:
Long Call Butterfly Spread 17th August

Buy ITM CALL

LEG 1

OPTION TYPE	CALL
QUANTITY	1
STRIKE PRICE	46800
PREMIUM	585
SPOT PRICE	47206

Sell 2 ATM CALLS

LEG 2

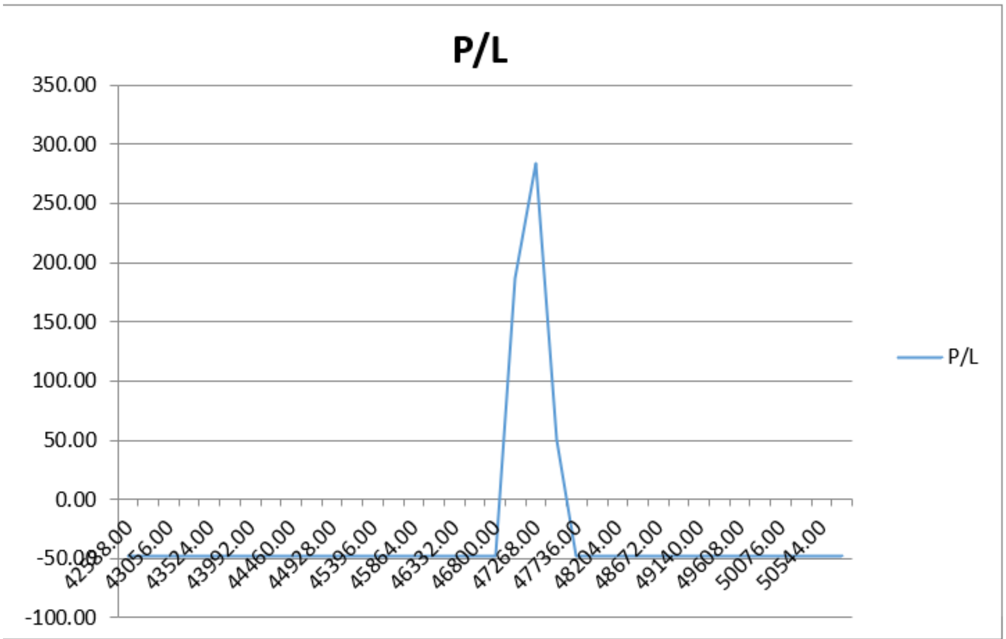
OPTION TYPE	CALL
QUANTITY	-2
STRIKE PRICE	47200
PREMIUM	395
SPOT PRICE	47206

Buy OTM CALL

LEG 3

OPTION TYPE	CALL
QUANTITY	1
STRIKE PRICE	47600
PREMIUM	252.5
SPOT PRICE	47206

Payoff Graph



46566.00		-47.50
46800.00		-47.50
47034.00		186.50
47268.00		284.50
47502.00		50.50
47736.00		-47.50
47970.00		-47.50

Net Premium Flow: Rs.-47.5
Maximum Profit Potential: Rs.284.5
Maximum Loss Possible: Rs.-47.5

Expiry Price: Rs.47534.00

Returns: Rs.18.5

Options:
Mock Trade

Capital: Rs. 10,00,000
Lot: 100gm
Lot Size: 10
Lots purchased: 3703

BUY ITM CALL				SELL 2 ATM CALL				BUY OTM CALL					
Date	Option Type	Strike Price	Close	Date	Option Type	Strike Price	Close	Date	Option Type	Strike Price	Close	Premium	PnL
07-Jul-21	CE	47400.00	1284.50	07-Jul-21	CE	47800.00	1057.00	07-Jul-21	CE	48200.00	856.50		
08-Jul-21	CE	47400.00	1285.50	08-Jul-21	CE	47800.00	1054.00	08-Jul-21	CE	48200.00	851.00	-1.5	55560
09-Jul-21	CE	47400.00	1431.50	09-Jul-21	CE	47800.00	1181.00	09-Jul-21	CE	48200.00	959.00	-1.5	55560
12-Jul-21	CE	47400.00	1163.50	12-Jul-21	CE	47800.00	939.00	12-Jul-21	CE	48200.00	744.50	-3	111120
13-Jul-21	CE	47400.00	1110.00	13-Jul-21	CE	47800.00	884.50	13-Jul-21	CE	48200.00	690.50	-4.5	166680
14-Jul-21	CE	47400.00	1097.50	14-Jul-21	CE	47800.00	868.50	14-Jul-21	CE	48200.00	672.00	-5.5	203720
15-Jul-21	CE	47400.00	1230.50	15-Jul-21	CE	47800.00	985.00	15-Jul-21	CE	48200.00	772.00	-5.5	203720
16-Jul-21	CE	47400.00	1361.50	16-Jul-21	CE	47800.00	1095.50	16-Jul-21	CE	48200.00	862.00	-5.5	203720
19-Jul-21	CE	47400.00	1339.50	19-Jul-21	CE	47800.00	1074.50	19-Jul-21	CE	48200.00	842.50	-6	222240
20-Jul-21	CE	47400.00	1113.00	20-Jul-21	CE	47800.00	866.00	20-Jul-21	CE	48200.00	655.50	-9.5	351880
21-Jul-21	CE	47400.00	1166.00	21-Jul-21	CE	47800.00	909.00	21-Jul-21	CE	48200.00	689.00	-10	370400
22-Jul-21	CE	47400.00	1156.50	22-Jul-21	CE	47800.00	899.00	22-Jul-21	CE	48200.00	679.00	-10.5	388920
23-Jul-21	CE	47400.00	770.00	23-Jul-21	CE	47800.00	566.00	23-Jul-21	CE	48200.00	401.50	-12.5	463000
26-Jul-21	CE	47400.00	796.00	26-Jul-21	CE	47800.00	582.50	26-Jul-21	CE	48200.00	411.00	-15	555600
27-Jul-21	CE	47400.00	878.00	27-Jul-21	CE	47800.00	642.50	27-Jul-21	CE	48200.00	451.00	-17	629680
28-Jul-21	CE	47400.00	725.00	28-Jul-21	CE	47800.00	511.50	28-Jul-21	CE	48200.00	344.00	-19	703760
29-Jul-21	CE	47400.00	732.50	29-Jul-21	CE	47800.00	512.00	29-Jul-21	CE	48200.00	339.50	-21	777840
30-Jul-21	CE	47400.00	1160.00	30-Jul-21	CE	47800.00	889.00	30-Jul-21	CE	48200.00	658.00	-13	481520
02-Aug-21	CE	47400.00	1225.50	02-Aug-21	CE	47800.00	944.50	02-Aug-21	CE	48200.00	703.00	-12.5	463000
03-Aug-21	CE	47400.00	892.50	03-Aug-21	CE	47800.00	649.50	03-Aug-21	CE	48200.00	452.00	-18.5	685240
04-Aug-21	CE	47400.00	869.50	04-Aug-21	CE	47800.00	624.50	04-Aug-21	CE	48200.00	427.00	-20.5	759320
05-Aug-21	CE	47400.00	847.00	05-Aug-21	CE	47800.00	600.00	05-Aug-21	CE	48200.00	403.00	-23	851920
06-Aug-21	CE	47400.00	776.50	06-Aug-21	CE	47800.00	540.50	06-Aug-21	CE	48200.00	355.50	-24	888960
09-Aug-21	CE	47400.00	706.00	09-Aug-21	CE	47800.00	509.00	09-Aug-21	CE	48200.00	353.50	-14.5	537080
10-Aug-21	CE	47400.00	261.50	10-Aug-21	CE	47800.00	170.50	10-Aug-21	CE	48200.00	106.50	0	0
11-Aug-21	CE	47400.00	166.00	11-Aug-21	CE	47800.00	101.00	11-Aug-21	CE	48200.00	58.50	4.5	-166680
12-Aug-21	CE	47400.00	181.50	12-Aug-21	CE	47800.00	111.00	12-Aug-21	CE	48200.00	64.50	3	-111120
13-Aug-21	CE	47400.00	223.00	13-Aug-21	CE	47800.00	136.50	13-Aug-21	CE	48200.00	79.50	-2.5	92600
16-Aug-21	CE	47400.00	267.00	16-Aug-21	CE	47800.00	168.00	16-Aug-21	CE	48200.00	101.00	-5	185200
17-Aug-21	CE	47400.00	318.00	17-Aug-21	CE	47800.00	197.50	17-Aug-21	CE	48200.00	116.00	-12	444480
18-Aug-21	CE	47400.00	530.00	18-Aug-21	CE	47800.00	347.50	18-Aug-21	CE	48200.00	214.00	-22	814880
19-Aug-21	CE	47400.00	373.00	19-Aug-21	CE	47800.00	227.50	19-Aug-21	CE	48200.00	129.50	-20.5	759320
20-Aug-21	CE	47400.00	344.50	20-Aug-21	CE	47800.00	202.50	20-Aug-21	CE	48200.00	110.00	-22.5	833400
23-Aug-21	CE	47400.00	293.00	23-Aug-21	CE	47800.00	163.00	23-Aug-21	CE	48200.00	82.50	-22.5	833400
24-Aug-21	CE	47400.00	296.50	24-Aug-21	CE	47800.00	156.50	24-Aug-21	CE	48200.00	73.50	-30	1111200
25-Aug-21	CE	47400.00	419.50	25-Aug-21	CE	47800.00	230.50	25-Aug-21	CE	48200.00	111.00	-42.5	1574200
26-Aug-21	CE	47400.00	294.00	26-Aug-21	CE	47800.00	146.50	26-Aug-21	CE	48200.00	63.00	-37	1370480
27-Aug-21	CE	47400.00	188.50	27-Aug-21	CE	47800.00	80.00	27-Aug-21	CE	48200.00	28.00	-29.5	1092680
30-Aug-21	CE	47400.00	138.50	30-Aug-21	CE	47800.00	51.00	30-Aug-21	CE	48200.00	15.00	-24.5	907480
31-Aug-21	CE	47400.00	79.50	31-Aug-21	CE	47800.00	18.50	31-Aug-21	CE	48200.00	3.00	-18.5	685240
01-Sep-21	CE	47400.00	71.50	01-Sep-21	CE	47800.00	12.50	01-Sep-21	CE	48200.00	1.00	-20.5	759320
02-Sep-21	CE	47400.00	38.50	02-Sep-21	CE	47800.00	3.00	02-Sep-21	CE	48200.00	0.50	-6	222240
03-Sep-21	CE	47400.00	12.50	03-Sep-21	CE	47800.00	0.50	03-Sep-21	CE	48200.00	0.50	15	-555600

Options:
Mock Trading

Buy ITM CALL

	LEG 1	
OPTION TYPE		CALL
QUANTITY		1
STRIKE PRICE		47400
PREMIUM		1284.5
SPOT PRICE		47887

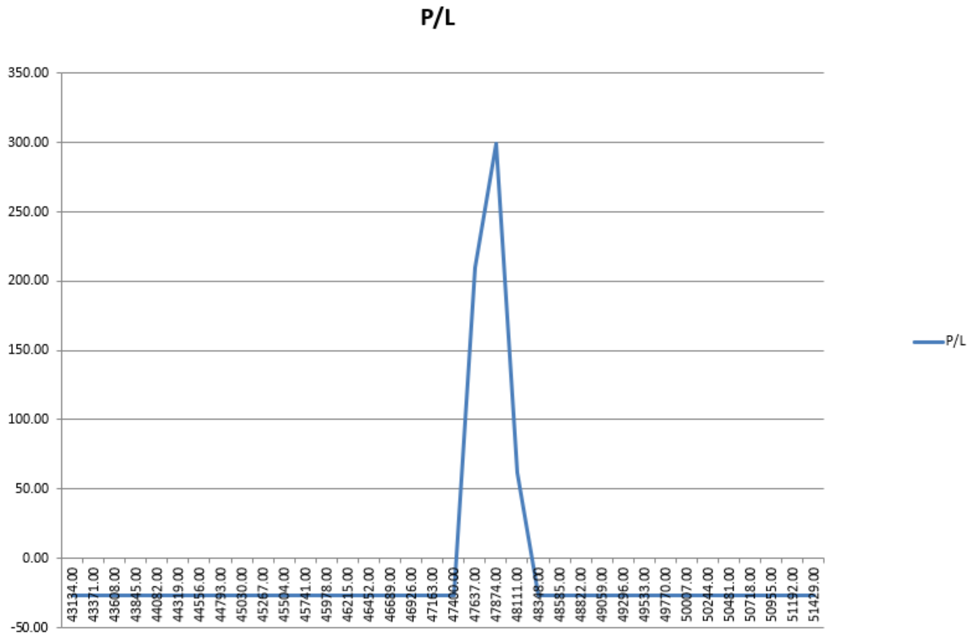
Sell 2 ATM CALLS

	LEG 2	
OPTION TYPE		CALL
QUANTITY		-2
STRIKE PRICE		47800
PREMIUM		1057
SPOT PRICE		47887

Buy OTM CALL

	LEG 3	
OPTION TYPE		CALL
QUANTITY		1
STRIKE PRICE		48200
PREMIUM		856.5
SPOT PRICE		47887

Payoff Graph



46452.00		-27.00
46689.00		-27.00
46926.00		-27.00
47163.00		-27.00
47400.00		-27.00
47637.00		210.00
47874.00		299.00
48111.00		62.00
48348.00		-27.00
48585.00		-27.00

Net Premium Flow: Rs.-27
Maximum Profit Potential: Rs.299
Maximum Loss Possible: Rs.-27

Expiry Price: Rs.47534.00
Premium: Rs.107.00
Profit/Loss: Rs.5963440

Options:
Option Greeks - Delta

April
Expiry Ser 5th May 2021

Strike	CE Price at month begin	CE Price at month mid	Underlying price at begin	Underlying price at month mid	Change in option price	Change in asset price	Delta
45200	567.5	1611.5	45685	47022	1044	1337	0.78085266
45400	475	1442	45685	47022	967	1337	0.72326103
45600	393	1280	45685	47022	887	1337	0.66342558
45800	322	1127	45685	47022	805	1337	0.60209424
46000	260.5	983	45685	47022	722.5	1337	0.54038893
						Average Delta	0.66200449

May
Expiry Ser 4th June 2021

Strike	CE Price at month begin	CE Price at month mid	Underlying price at begin	Underlying price at month mid	Change in option price	Change in asset price	Delta
47600	678.5	547	47915	47682	-131.5	-233	0.56437768
47800	580	450	47915	47682	-130	-233	0.55793991
48000	491.5	365.5	47915	47682	-126	-233	0.54077253
48200	413	292.5	47915	47682	-120.5	-233	0.51716738
48400	344	231	47915	47682	-113	-233	0.48497854
						Average Delta	0.53304721

June
Expiry Ser 5th July 2021

Strike	CE Price at month begin	CE Price at month mid	Underlying price at begin	Underlying price at month mid	Change in option price	Change in asset price	Delta
47600	1220	589	48911	46592	-631	-2319	0.27210004
47800	1081	501.5	48911	46592	-579.5	-2319	0.24989219
48000	491.5	423	48911	46592	-68.5	-2319	0.02953859
48200	830.5	354	48911	46592	-476.5	-2319	0.2054765
48400	719.5	294	48911	46592	-425.5	-2319	0.18348426
						Average Delta	0.18809832

July
Expiry Ser 5th August 2021

Strike	CE Price at month begin	CE Price at month mid	Underlying price at begin	Underlying price at month mid	Change in option price	Change in asset price	Delta
46200	1740.5	2013	47694	48040	272.5	346	0.78757225
46400	1560	1804	47694	48040	244	346	0.70520231
46600	1134	1335	47694	48040	201	346	0.58092486
46800	1001	1168	47694	48040	167	346	0.48265896
47000	878	1019	47694	48040	141	346	0.40751445
						Average Delta	0.59277457

August
Expiry Ser 3rd September 2021

Strike	CE Price at month begin	CE Price at month mid	Underlying price at begin	Underlying price at month mid	Change in option price	Change in asset price	Delta
45600	2053	1633	47842	46886	-420	-956	0.43933054
45800	1874	1450	47842	46886	-424	-956	0.44351464
46000	1701	1273	47842	46886	-428	-956	0.44769874
46200	1533.5	1104.5	47842	46886	-429	-956	0.44874477
46400	1373.5	946	47842	46886	-427.5	-956	0.44717573
						Average Delta	0.44529289

September
Expiry Ser 5th October 2021

Strike	CE Price at month begin	CE Price at month mid	Underlying price at begin	Underlying price at month mid	Change in option price	Change in asset price	Delta
47600	650.5	136	47021	46025	-514.5	-996	0.51656627
47800	569	102	47021	46025	-467	-996	0.4688755
48000	495	72	47021	46025	-423	-996	0.4246988
48200	202	54.5	47021	46025	-147.5	-996	0.14809237
48400	71.5	38.5	47021	46025	-33	-996	0.03313253
						Average Delta	0.31827309

Options:

Option Greeks - Theta

April														
Expiry 5th May 2021														
Strike	CE Price at month begin	CE Price at month mid	PE Price at month begin	PE Price at month mid	Underlying price at begin	Underlying price at month mid	Change in CE price	Change in PE price	Change in asset price	Number of days	Theta of CE	Theta of PE	Theta of underlying	Theta at strike
45200	567.5	1611.5	573.5	89.5	45685	47022	1044	-484	1337	9	116.00	-53.78	148.56	389.00
45400	475	1442	680	119.5	45685	47022	967	-560.5	1337	9	107.44	-62.28	148.56	346.33
45600	393	1280	798	157.5	45685	47022	887	-640.5	1337	9	98.56	-71.17	148.56	301.89
45800	322	1127	926	203.5	45685	47022	805	-722.5	1337	9	89.44	-80.28	148.56	256.33
46000	260.5	983	1064	259	45685	47022	722.5	-805	1337	9	80.28	-89.44	148.56	210.50
													Portfolio Theta	300.8111111

May														
Expiry 4th June 2021														
Strike	CE Price at month begin	CE Price at month mid	PE Price at month begin	PE Price at month mid	Underlying price at begin	Underlying price at month mid	Change in CE price	Change in PE price	Change in asset price	Number of days	Theta of CE	Theta of PE	Theta of underlying	Theta at strike
47600	678.5	547	577.5	431.5	47915	47682		-146	-233	10	0	-14.6	-23.3	-52.5
47800	580	450	678.5	536.5	47915	47682	-130	-142	-233	10	-13	-14.2	-23.3	-90.7
48000	491.5	365.5	789.5	655	47915	47682	-126	-134.5	-233	10	-12.6	-13.45	-23.3	-88
48200	413	292.5	910.5	787	47915	47682	-120.5	-123.5	-233	10	-12.05	-12.35	-23.3	-84.15
48400	344	231	1040.5	931.5	47915	47682	-113	-109	-233	10	-11.3	-10.9	-23.3	-79
													Portfolio Theta	-78.87

June														
Expiry 5th July 2021														
Strike	CE Price at month begin	CE Price at month mid	PE Price at month begin	PE Price at month mid	Underlying price at begin	Underlying price at month mid	Change in CE price	Change in PE price	Change in asset price	Number of days	Theta of CE	Theta of PE	Theta of underlying	Theta at strike
47600	1220	589	270	710.5	48911	46592	-631	440.5	-2319	10	-63.1	44.05	-231.9	-333.1
47800	1081	501.5	330.5	822.5	48911	46592	-579.5	492	-2319	10	-57.95	49.2	-231.9	-307.35
48000	491.5	423	491.5	944	48911	46592	-68.5	452.5	-2319	10	-6.85	45.25	-231.9	-161.95
48200	830.5	354	479	1074.5	48911	46592	-476.5	595.5	-2319	10	-47.65	59.55	-231.9	-255.75
48400	719.5	294	567.5	1213.5	48911	46592	-425.5	646	-2319	10	-42.55	64.6	-231.9	-230.35
													Portfolio Theta	-257.7

July														
Expiry 5th August 2021														
Strike	CE Price at month begin	CE Price at month mid	PE Price at month begin	PE Price at month mid	Underlying price at begin	Underlying price at month mid	Change in CE price	Change in PE price	Change in asset price	Number of days	Theta of CE	Theta of PE	Theta of underlying	Theta at strike
46200	1740.5	2013	42.5	17.5	47694	48040	272.5	-25	346	9	30.28	-2.78	38.44	123.72
46400	1560	1804	61.5	26.5	47694	48040	244	-35	346	9	27.11	-3.89	38.44	112.00
46600	1134	1335	317	39.5	47694	48040	201	-277.5	346	9	22.33	-30.83	38.44	43.78
46800	1001	1168	383.5	57.5	47694	48040	167	-326	346	9	18.56	-36.22	38.44	21.67
47000	878	1019	459.5	81.5	47694	48040	141	-378	346	9	15.67	-42.00	38.44	1.44
													Portfolio Theta	60.52222222

August														
Expiry 3rd September 2021														
Strike	CE Price at month begin	CE Price at month mid	PE Price at month begin	PE Price at month mid	Underlying price at begin	Underlying price at month mid	Change in CE price	Change in PE price	Change in asset price	Number of days	Theta of CE	Theta of PE	Theta of underlying	Theta at strike
45600	2053	1633	61.5	31.5	47842	46886	-420	-30	-956	10	-42	-3	-95.6	-227.6
45800	1874	1450	82	48	47842	46886	-424	-34	-956	10	-42.4	-3.4	-95.6	-229.6
46000	1701	1273	108	71.5	47842	46886	-428	-36.5	-956	10	-42.8	-3.65	-95.6	-231.3
46200	1533.5	1104.5	140.5	102.5	47842	46886	-429	-38	-956	10	-42.9	-3.8	-95.6	-231.9
46400	1373.5	946	180	143.5	47842	46886	-427.5	-36.5	-956	10	-42.75	-3.65	-95.6	-231.15
													Portfolio Theta	-230.31

September														
Expiry 5th October 2021														
Strike	CE Price at month begin	CE Price at month mid	PE Price at month begin	PE Price at month mid	Underlying price at begin	Underlying price at month mid	Change in CE price	Change in PE price	Change in asset price	Number of days	Theta of CE	Theta of PE	Theta of underlying	Theta at strike
48000	495	72	1101	1554	47021	46025	-423	453	-996	10	-42.3	45.3	-99.6	-135.9
48200	202	54.5	1250	1733	47021	46025	-147.5	483	-996	10	-14.75	48.3	-99.6	-47.25
48400	71.5	38.5	1869	1917	47021	46025	-33	48	-996	10	-3.3	4.8	-99.6	-99.9
47800	569	102	1080.5	1381	47021	46025	-467	300.5	-996	10	-46.7	30.05	-99.6	-179.6
47600	650.5	136	963	1215.5	47021	46025	-514.5	252.5	-996	10	-51.45	25.25	-99.6	-203.45
													Portfolio Theta	-133.22

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