



Options Fundamentals

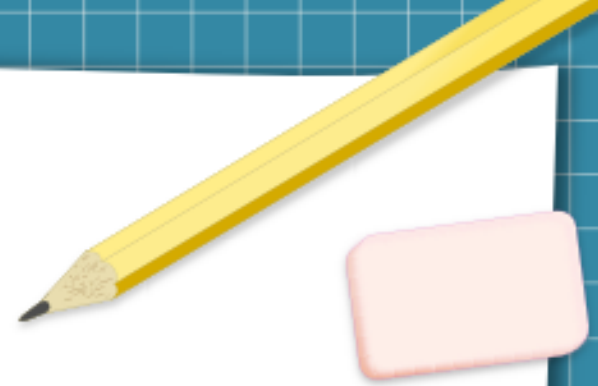
Ep 5

Demystifying the Greeks: Gamma

Gab: Finance Group
@MidwayGab
BitChute: MidwayTrades



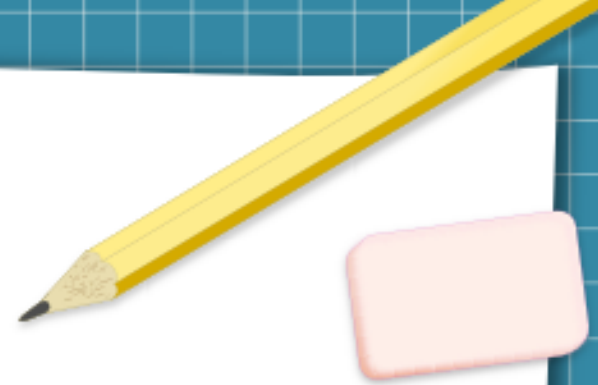
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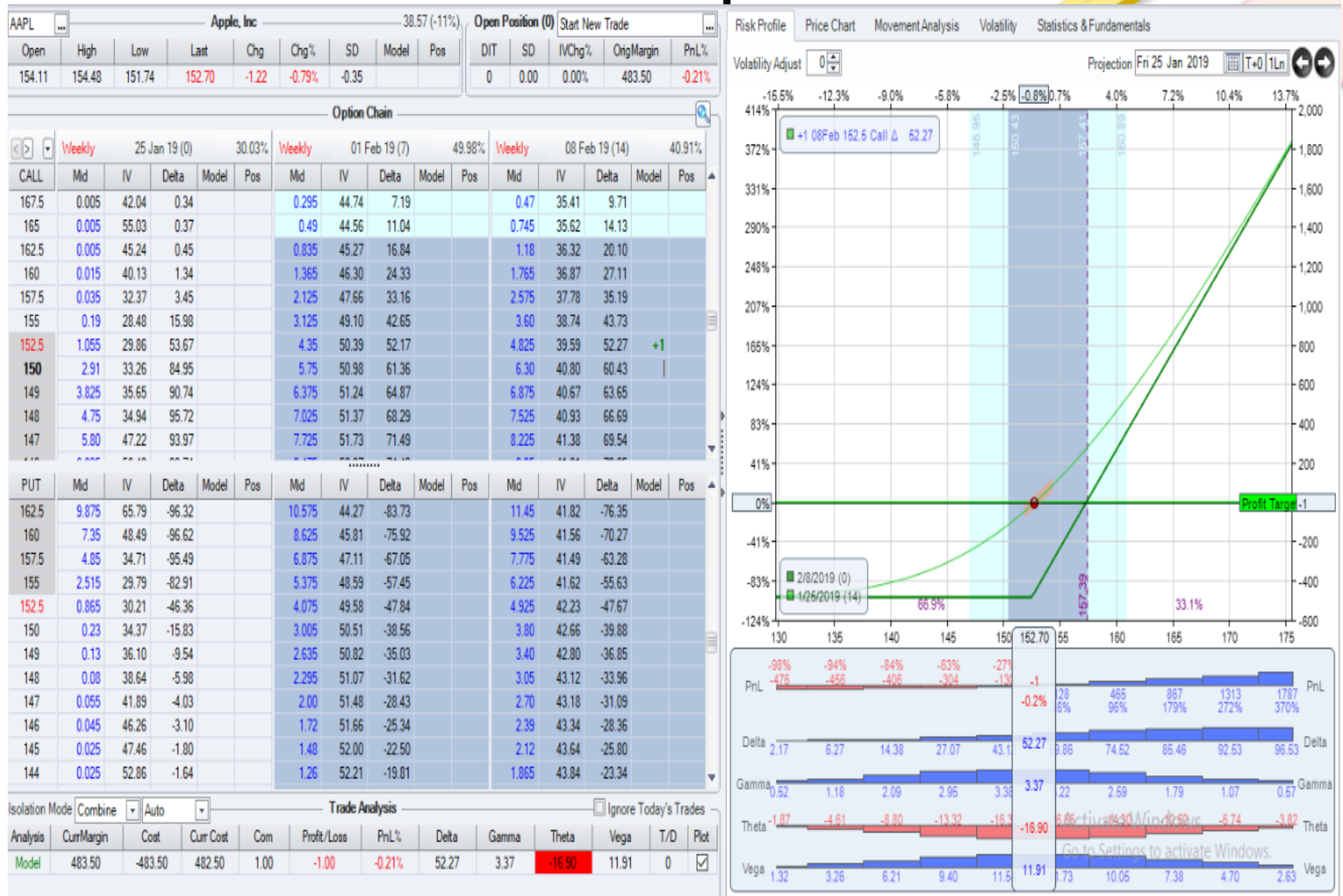


How Delta Moves

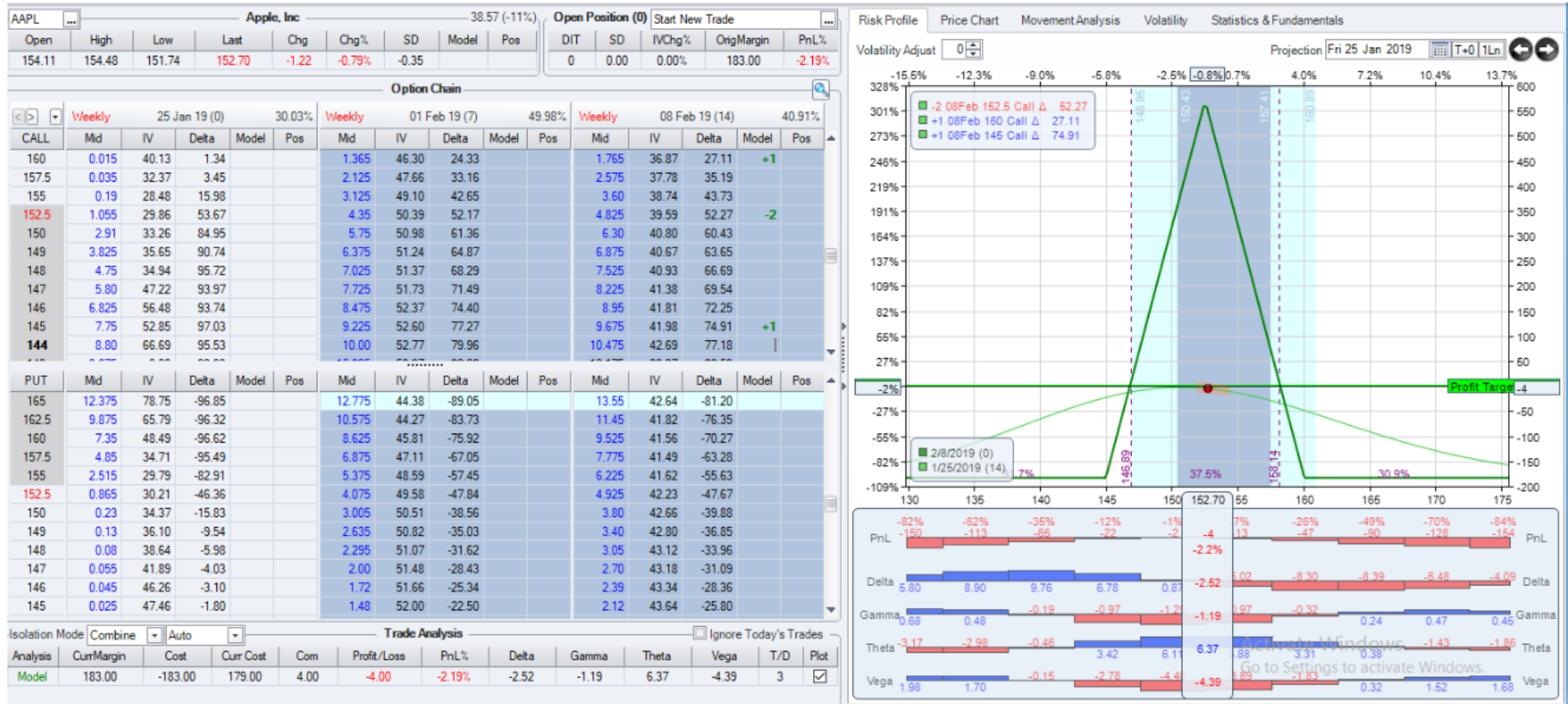


- Delta doesn't necessarily move in a straight line.
- The probability definition of delta explains this
 - As the underlying moves more ITM, the price probability gets higher and the price of the underlying goes higher

Delta Example: Calls



Positional Delta



Gamma: A Meta Greek



- Gamma is the expected change in Delta if an underlying moves 1 point up
- Like Delta:
 - Gamma is formally expressed as a decimal between 0 and 1
 - There is a concept of a positional Gamma
- Unlike Delta
 - Gamma is highest at the money

Gamma @ 45 days out

IBM

INTERNATIONAL BUS MACH CORP COM

134.38

+0.05

+0.04%

B: 134.50

A: 134.65

ETB

Company Profile

Underlying

Last X

Net Chng

Bid X

Ask X

Size

Volume

Open

High

Low

134.38 N

+0.05

134.50 P

134.65 P

1 x 2

4,500,919

134.00

135.03

133.25

Option Chain

Filter: Off

Spread: Single

Layout: Last X, Net Change, Impl Vol, Delta, Gamma

CALLS

Strikes: 30

PUTS

Last X

Net Chng

Impl Vol

Delta

Gamma

Bid X

Ask X

Exp

Strike

Bid X

Ask X

Last X

Net Chng

Impl Vol

Delta

Gamma

> 1 FEB 19 (2) 100 (Weeklys)

18.49% (±1.624)

> 8 FEB 19 (9) 100 (Weeklys)

20.09% (±3.467)

> 15 FEB 19 (16) 100

18.74% (±4.268)

> 22 FEB 19 (23) 100 (Weeklys)

16.42% (±4.465)

> 1 MAR 19 (30) 100 (Weeklys)

17.30% (±5.362)

> 8 MAR 19 (37) 100 (Weeklys)

18.23% (±6.268)

> 15 MAR 19 (44) 100

19.90% (±7.454)

0

0

166.81%

.88

.00

68.40 H

71.80 T

15 MAR 19

65

0 P

.06 P

0

0

77.47%

.00

.00

0

0

147.28%

.88

.00

63.60 H

66.80 T

15 MAR 19

70

0 E

.01 E

.02 C

0

59.38%

.00

.00

0

0

127.62%

.89

.00

58.45 H

61.80 T

15 MAR 19

75

0 E

.01 E

.02 H

0

53.42%

.00

.00

37.63 I

0

111.16%

.90

.00

53.40 H

56.80 T

15 MAR 19

80

0 P

.01 N

.01 I

0

47.81%

.00

.00

0

0

--

1.00

.00

48.55 H

50.05 H

15 MAR 19

85

0 C

.03 P

.01 Z

0

47.11%

.00

.00

0

0

--

1.00

.00

43.40 H

44.90 H

15 MAR 19

90

0 A

.03 N

.01 I

0

41.53%

.00

.00

26.95 I

0

73.22%

.91

.00

38.40 H

41.80 M

15 MAR 19

95

.02 N

.04 Z

.02 I

-0.05

39.13%

.00

.00

33.45 I

0

--

1.00

.00

33.35 H

34.95 H

15 MAR 19

100

.03 M

.06 Q

.07 I

0

35.53%

-.01

.00

28.70 B

0

54.13%

.91

.00

28.45 H

31.80 T

15 MAR 19

105

.07 Q

.10 H

.08 C

-0.02

32.97%

-.01

.00

23.90 Z

-0.95

38.94%

.93

.01

23.00 H

26.40 H

15 MAR 19

110

.13 N

.16 H

.14 C

-0.07

29.92%

-.03

.00

18.90 I

-0.20

29.37%

.94

.01

18.85 H

20.35 H

15 MAR 19

115

.23 Q

.27 H

.26 C

-0.05

26.81%

-.05

.01

14.57 I

-0.22

20.56%

.96

.01

13.70 H

15.35 H

15 MAR 19

120

.44 N

.49 X

.49 C

-0.13

23.99%

-.09

.01

9.70 N

-0.16

15.83%

.93

.03

9.45 N

9.75 C

15 MAR 19

125

.76 X

.99 X

.95 I

-0.25

21.08%

-.16

.02

5.30 M

-0.45

15.62%

.73

.05

5.35 W

5.50 X

15 MAR 19

130

2.01 X

2.09 X

1.98 N

-0.47

20.31%

-.32

.04

2.65 M

-0.05

15.26%

.46

.06

2.39 X

2.51 H

15 MAR 19

135

4.10 X

4.30 I

4.10 I

-0.43

19.88%

-.52

.04

.83 I

-0.18

14.75%

.21

.04

.76 X

.85 Z

15 MAR 19

140

7.25 X

7.80 P

7.36 I

-0.21

20.36%

-.71

.04

.22 C

-0.08

14.56%

.07

.02

.18 H

.21 H

15 MAR 19

145

10.00 X

13.10 H

12.51 C

+0.71

20.26%

-.85

.02

.04 C

-0.03

15.00%

.02

.01

.03 W

.06 C

15 MAR 19

150

16.00 H

17.85 H

17.02 B

0

29.76%

-.84

.02

.01 I

-0.01

16.31%

.01

.00

0 J

.03 W

15 MAR 19

155

21.05 H

22.85 H

33.95 T

0

35.73%

-.86

.01

.04 E

0

19.42%

.01

.00

0 P

.03 H

15 MAR 19

160

24.75 A

28.10 H

29.50 H

0

34.88%

-.91

.01

.01 C

0

22.39%

.00

.00

0 P

.03 P

15 MAR 19

165

29.70 X

33.10 H

0

0

39.16%

-.92

.01

Gamma @ 2 days out

IBM

INTERNATIONAL BUS MACH CORP COM

134.38

+0.05

+0.04%

B: 134.50

A: 134.65

ETB

Company Profile

Underlying

Last X

Net Chng

Bid X

Ask X

Size

Volume

Open

High

Low

134.38 N

+0.05

134.50 P

134.65 P

1 x 2

4,500,919

134.00

135.03

133.25

Option Chain

Filter: Off

Spread: Single

Layout: Last X, Net Change, Impl Vol, Delta, Gamma

Strikes: 30

CALLS

PUTS

1 FEB 19

(2)

100(Weeklys)

Last X

Net Chng

Impl Vol

Delta

Gamma

Bid X

Ask X

Exp

Strike

Bid X

Ask X

Last X

Net Chng

Impl Vol

Delta

Gamma

18.49% (±1.624)

14.15 Q

+15

--

1.00

.00

13.90 C

14.75 N

1 FEB 19

120

0 A

.02 N

.01 M

0

49.68%

-.01

.00

12.76 E

-.67

--

1.00

.00

13.10 C

13.75 H

1 FEB 19

121

0 M

.03 N

.02 C

0

48.36%

-.01

.00

11.75 M

-.69

--

1.00

.00

12.10 X

12.75 B

1 FEB 19

122

0 M

.03 N

.02 Q

0

44.91%

-.01

.00

10.75 M

-.68

--

1.00

.00

11.05 C

11.75 N

1 FEB 19

123

0 M

.03 N

.02 I

+0.01

41.74%

-.01

.00

9.59 C

-.94

--

1.00

.00

10.10 C

10.75 N

1 FEB 19

124

0 P

.01 N

.01 C

-.01

33.81%

.00

.00

9.35 C

-.22

--

1.00

.00

9.10 C

9.75 I

1 FEB 19

125

0 M

.03 N

.01 C

-.03

35.13%

-.01

.01

8.95 T

+60

--

1.00

.00

7.85 C

8.75 X

1 FEB 19

126

0 M

.03 N

.02 M

-.03

31.61%

-.01

.01

7.95 C

+38

--

1.00

.00

7.05 X

7.75 X

1 FEB 19

127

.01 N

.04 X

.02 C

-.05

30.48%

-.02

.01

6.42 I

-.14

--

1.00

.00

6.05 C

6.75 I

1 FEB 19

128

0 B

.05 C

.01 A

-.04

26.90%

-.02

.02

5.50 Q

+10

--

1.00

.00

4.90 C

5.55 C

1 FEB 19

129

0 B

.04 H

.03 W

-.04

22.36%

-.02

.02

4.80 Q

+25

0.00%

1.00

.00

4.20 C

4.80 B

1 FEB 19

130

.03 Z

.11 Q

.05 C

-.08

23.70%

-.06

.04

3.89 E

+06

--

1.00

.00

3.15 X

3.80 X

1 FEB 19

131

.06 X

.09 Q

.09 Q

-.11

19.72%

-.07

.06

3.00 Z

+11

14.39%

.93

.08

2.36 X

2.72 X

1 FEB 19

132

.10 I

.18 M

.16 A

-.18

18.08%

-.13

.09

1.89 Q

+06

15.99%

.78

.15

1.68 Z

1.77 W

1 FEB 19

133

.27 Z

.31 Z

.30 Q

-.26

17.08%

-.24

.15

1.02 M

-.24

15.22%

.60

.21

.94 X

1.06 I

1 FEB 19

134

.54 Z

.63 X

.50 C

-.40

16.47%

-.40

.19

.51 Z

-.28

14.41%

.39

.22

.44 Z

.50 W

1 FEB 19

135

1.01 C

1.14 C

.91 N

-.53

16.09%

-.60

.20

.19 C

-.24

14.14%

.19

.16

.15 N

.21 H

1 FEB 19

136

1.62 X

1.87 X

1.81 A

+0.04

15.26%

-.79

.15

.08 A

-.14

14.35%

.08

.08

.04 X

.08 H

1 FEB 19

137

2.51 M

2.83 M

2.54 A

-.14

18.16%

-.87

.10

.03 C

-.08

17.77%

.05

.05

0 J

.10 Q

1 FEB 19

138

2.50 H

3.90 B

4.60 E

0

--

-1.00

.00

.03 M

-.08

18.35%

.02

.02

.01 N

.03 N

1 FEB 19

139

4.30 B

4.90 B

0

0

23.42%

-.94

.04

.01 N

-.01

20.69%

.02

.02

0 M

.03 P

1 FEB 19

140

4.20 X

6.10 I

8.30 N

0

--

-1.00

.00

.01 H

-.06

23.80%

.01

.01

0 M

.03 Z

1 FEB 19

141

5.95 X

7.15 M

8.25 C

0

25.72%

-.98

.02

.03 P

0

26.84%

.01

.01

0 M

.03 Z

1 FEB 19

142

6.95 I

7.90 B

0

0

--

-1.00

.00

.01 H

0

29.82%

.01

.01

0 C

.03 Z

1 FEB 19

143

8.25 X

8.90 B

0

0

35.73%

-.97

.02

.03 I

0

32.74%

.01

.01

0 C

.03 Z

1 FEB 19

144

9.30 X

9.90 B

0

0

41.91%

-.96

.02

0

0

35.76%

.01

.01

0 P

.03 Z

1 FEB 19

145

10.30 X

10.90 B

0

0

45.32%

-.96

.01

0

0

38.53%

.01

.01

0 P

.03 Z

1 FEB 19

146

11.25 X

11.90 B

0

0

45.55%

-.98

.01

0

0

41.24%

.01

.00

0 P

.03 Z

1 FEB 19

147

12.30 X

12.90 B

0

0

52.05%

-.97

.01

0

0

43.95%

.01

.00

0 P

.03 Z

1 FEB 19

148

13.25 X

13.90 B

15.45 C

0

51.88%

-.98

.01

0

0

46.50%

.01

.00

0 P

.03 Z

1 FEB 19

149

14.30 X

14.90 B

0

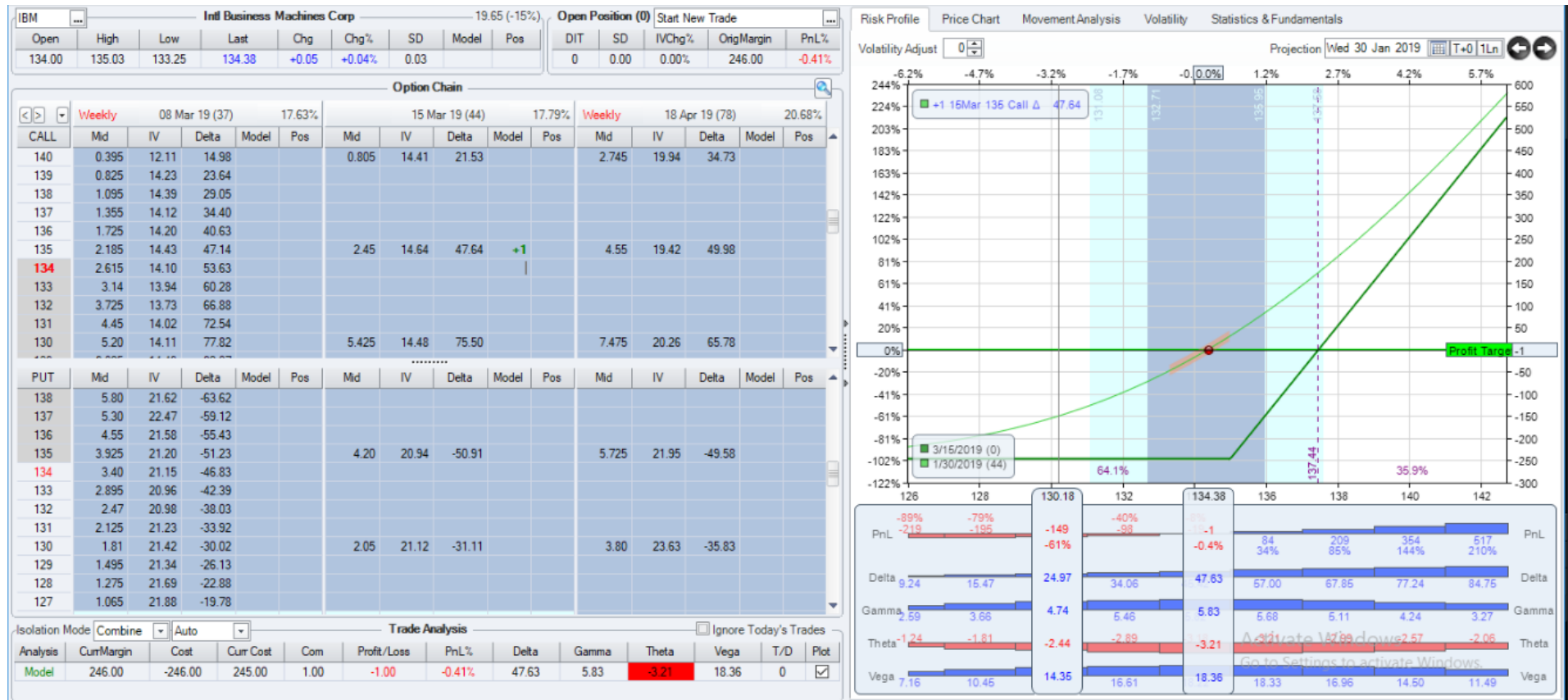
0

58.53%

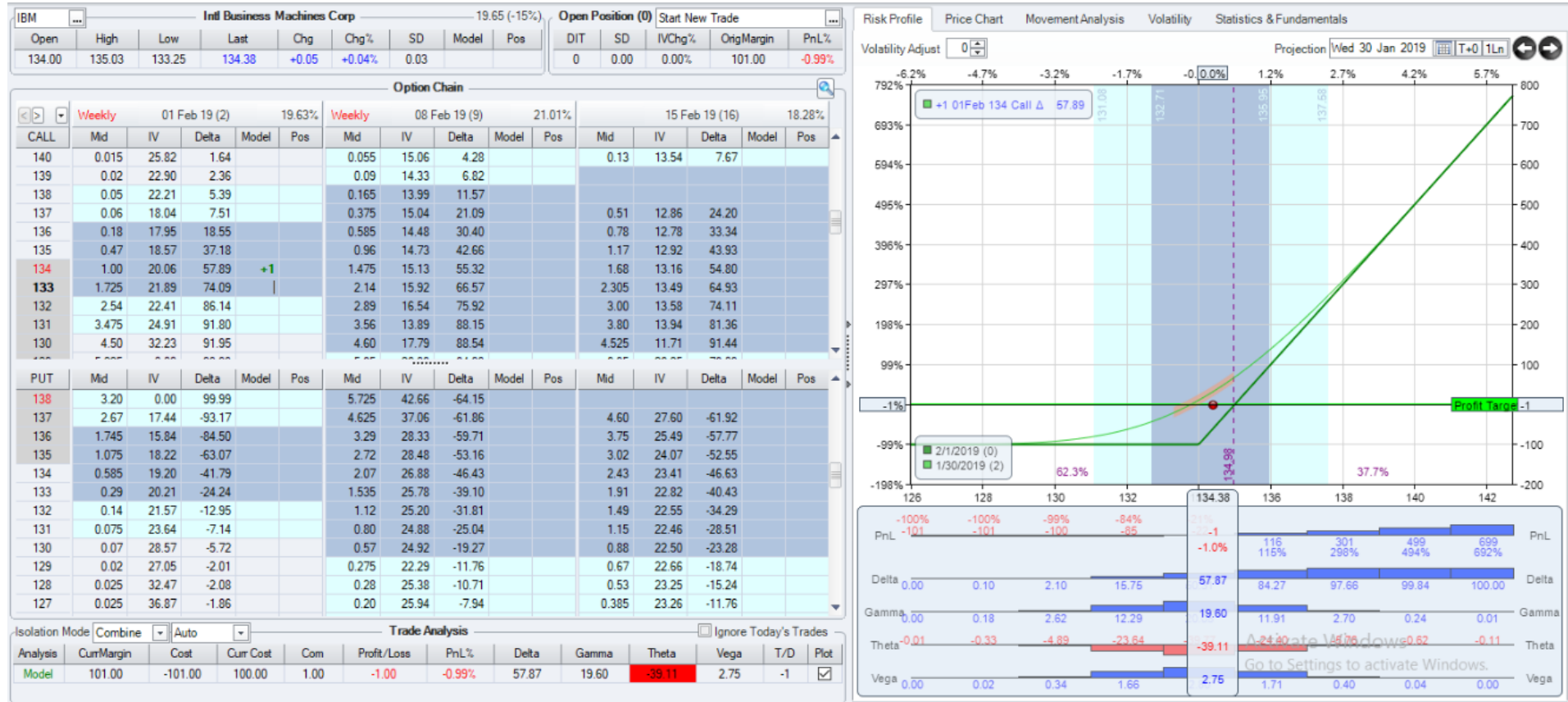
-.97

.01

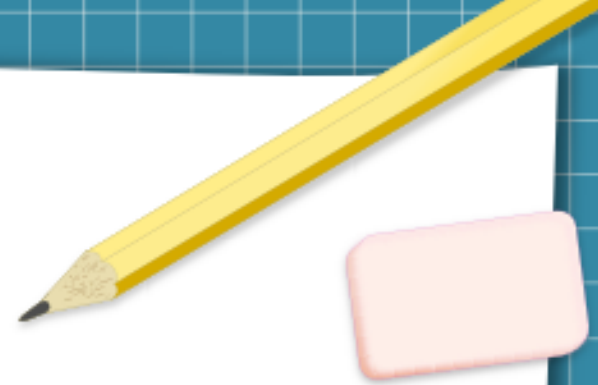
Gamma @ 45 days out



Gamma @ 2 days out

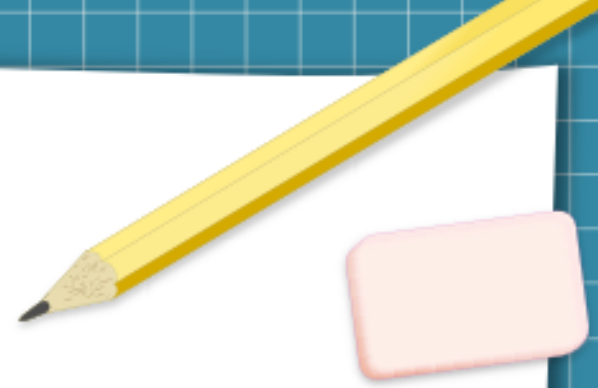


“Gamma Week”



- Near the money, Gamma gets very high as expiration gets nearer
- This can introduce a much higher price risk to a trade
 - Higher Gamma can greatly accelerate Delta
- For this reason, many traders do not hold until expiration unless the trade is far away from the money.

Gamma




Lab

Summary



- Gamma shows how much delta moves as the underlying moves
- It is highest ATM
- It gets more extreme as options approach expiration
- The last week of an options trade is known as “Gamma Week” and can be dangerous for trades near the money.
- Gamma should be taken into account when thinking about the price risk of a trade



Thank you for your time. Let's keep talking!
Gab: Finance Group
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