Year End Summary of Commodity Options

About CommodityVol.com:

CommodityVol.com (c) is an analytics and research firm which studies the relationships between indexes, equities, futures and options. We are pleased to offer some of our analytics to the public for free at https://www.commodityvol.com. Of course, we also offer a number of subscription products around end of day marks and histories of implied volatility surfaces. Additionally, we would be delighted to offer our expertise (on a consulting basis) to anyone who has risk management or trading analytics needs. We encourage you to reach out via email: info@commodityvol.com, twitter: @CommodityImpVol, or our contact forms at https://www.commodityvol.com.

Intro:
We are pleased to welcome you to our year end report.

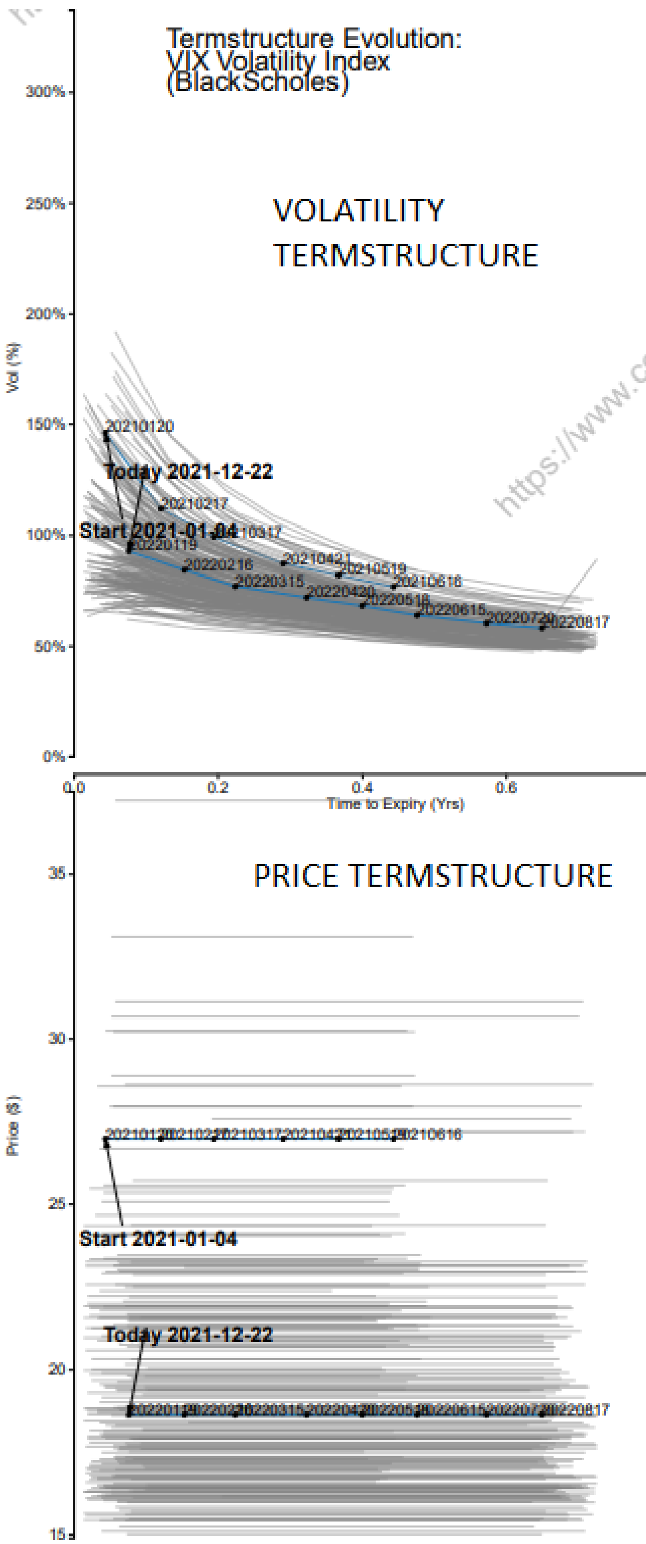
2021 was a tumultuous year in markets. The extremes ranged from quite halcyon sleep to bloody nose inducing drops in futures and bids in implied volatility. The steep increase in commodity prices finally began to spill into the treasury and fixed income markets. The fixed income prices closed on lows while vols were woken up from their slumber.

2022 has noteable overhangs. First, the fallout from the 2020 pandemic continues-complete with debates on vaccine mandates and omicron reaction or overreaction. The US political scene is riven. The current Presidency is the most unpopular in recent memory. The contenders are poorly defined. Additionally, the also disliked former president makes relection noise. On the international front, the US hegemony in Europe is getting a wake up call. There is tension in Europe over Russia and security concerns. The Europeans are facing energy costs that are astronomical. Concurrently, there are war drums beating in the Asian region. Oftentimes in history, these types of situations fizzle, though sometimes they do not (see the Archduke Ferdinand in Bosnia). However the situation unfolds, 2022 will have a boatload of changes to disentangle.

CommodityVol.com is here to serve your needs around modeling, forecasting and understanding the market. If you have needs for commodity skews, parameterized surfaces (including stochastic volatility models), please do not hesitate to contact us! info@commodityvol.com

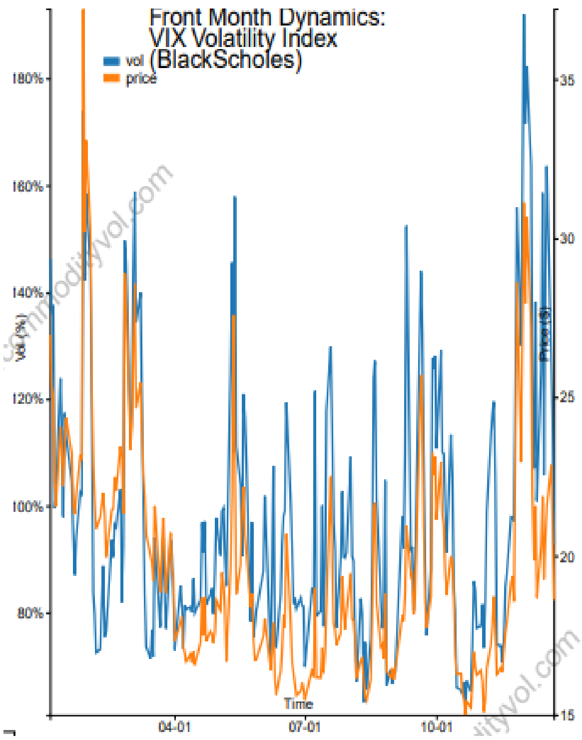
Explanation:
The plots in this document try to give a feel for the evolution of the futures and options for each product type. The skew/termstructure/xyplots are broken out by major asset classes: Indexes, Fixed Income and so on.

At the Money Volatilty and Price Term Structures:
Stacked on top of the other on the left hand side, see the termstructures of vol and the (underlying) futures contract price.



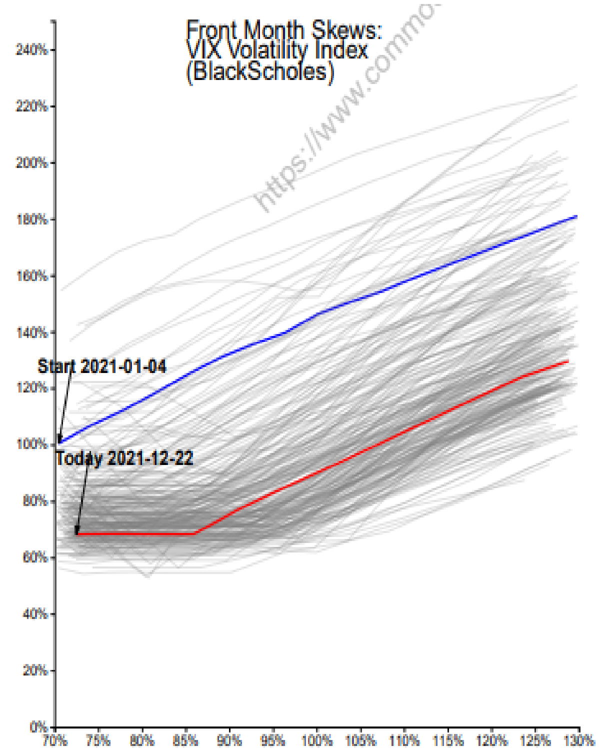
The starting curve is the termstructure at the beginning of the year. This curve is labelled start and is typically colored blue. The ending curve is typically colored red and denoted by the text: Today. The greyed out lines are the termstructures for each day of the period. The hope is that the range of movements becomes apparent.

Front Month At the Money Volatilty and Front Month Price Over the Year:
On the right hand panel we have the price and implied volatility of the front month contract.



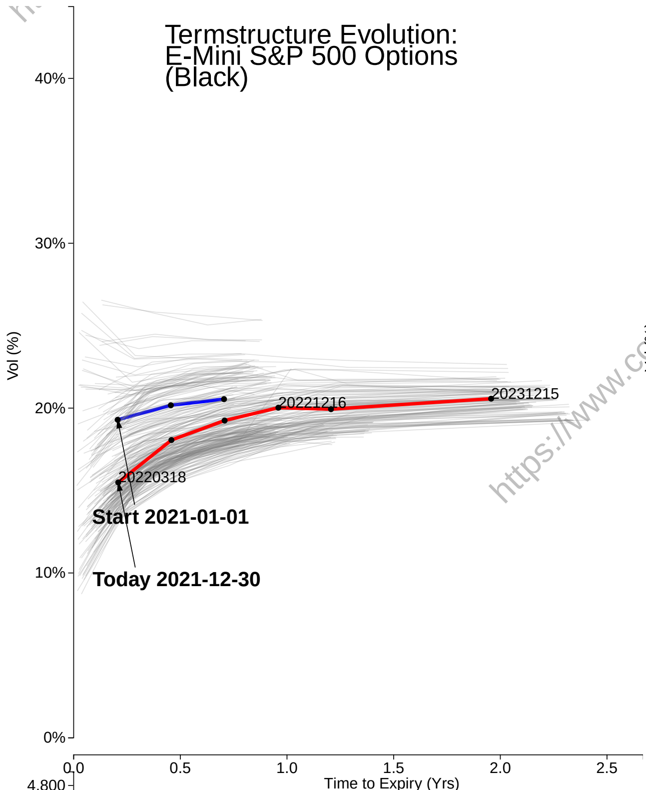
At the money implied volatility is shown in blue and the axis on the left should be used to read off the values. The front month futures price is in orange and the right hand axis is where its value can be read.

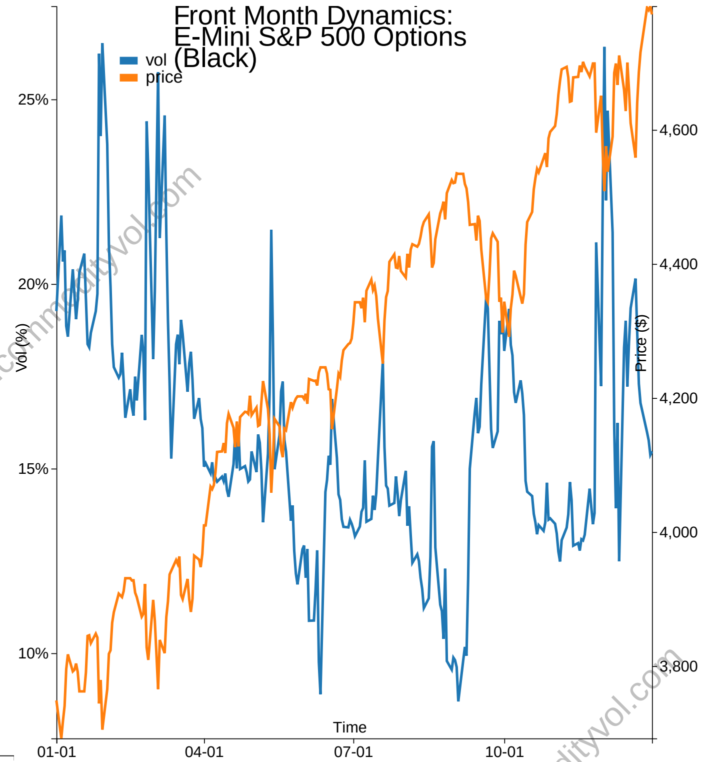
Front Month Skew:
On the right hand in the bottom panel we have the starting front month skew and the ending front month skew.

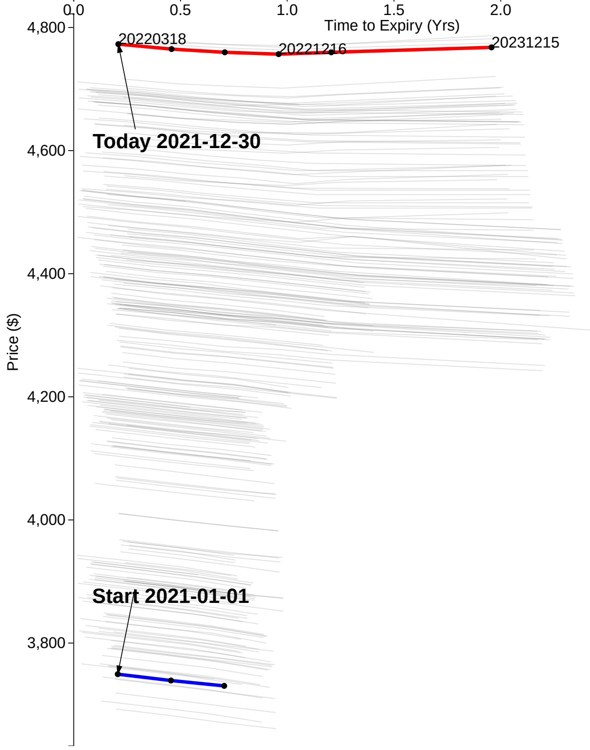


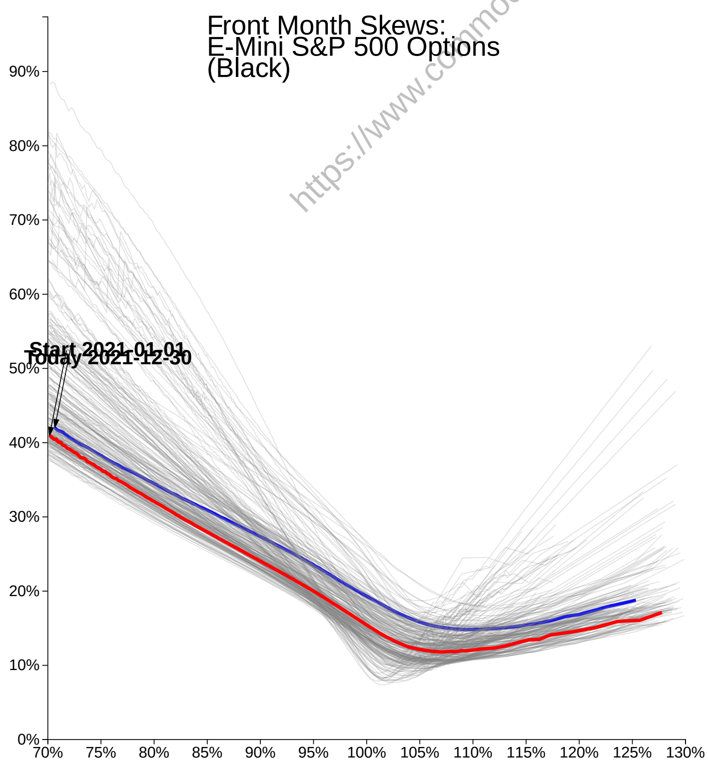
The front month skew is shown for the starting date. The starting curve is labelled as Start and captioned with the date. The starting curve is blue. Conversely, the ending curve is shown in red and labeled Today. The y-axis shows the implied volatility and the x-axis shows the moneyness. The moneyness is a way to normalize the skew so that it is comparable across time.

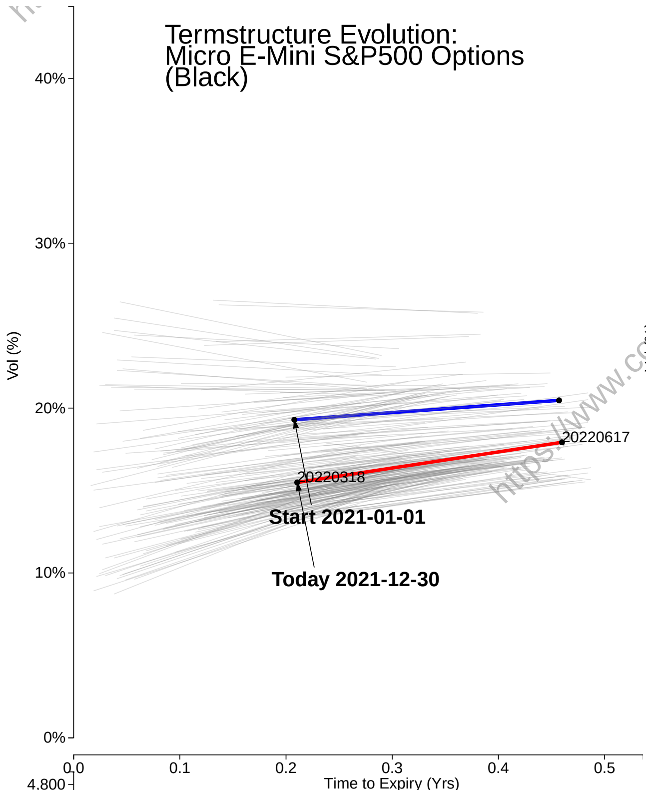
Equity Index

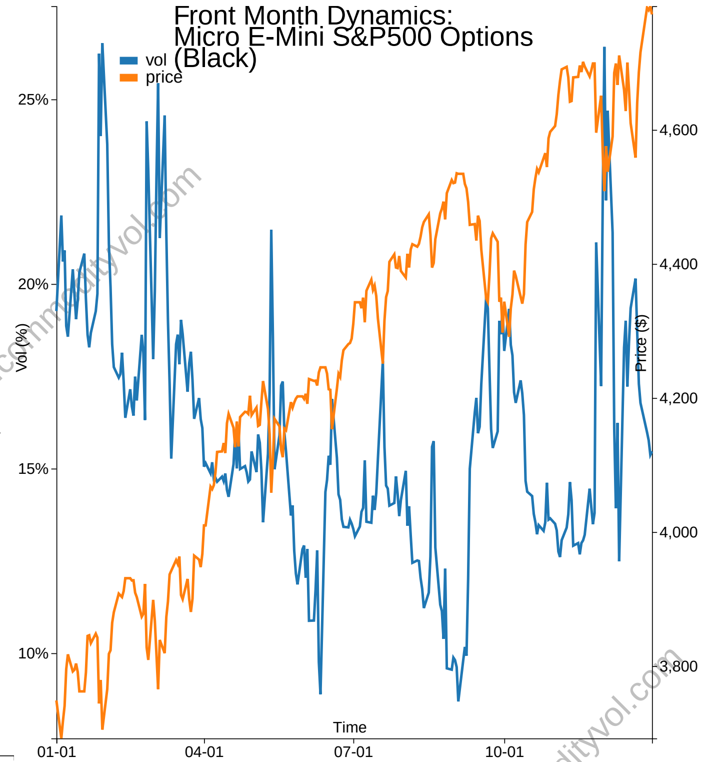

Termstructure Evolution:
E-Mini S&P 500 Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220318
20221216
20231215
Start 2021-01-01
Today 2021-12-30

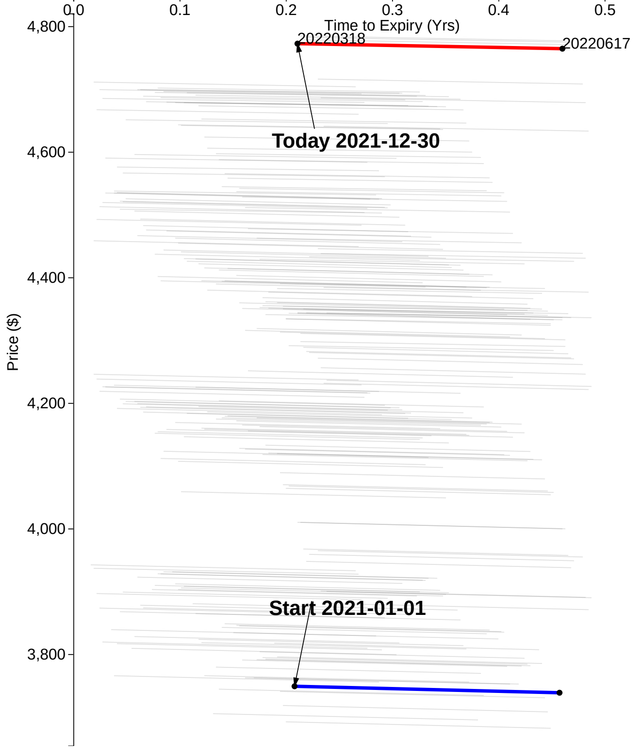

Front Month Dynamics:
E-Mini S&P 500 Options
(Black)
vol
price
Vol (%)
Price ($)
Time
01-01
04-01
07-01
10-01

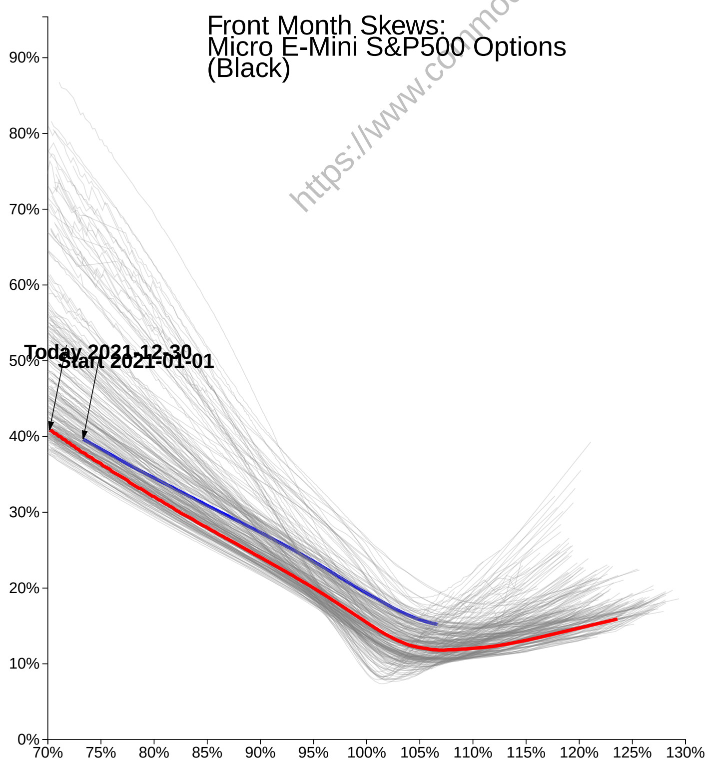

Price ($)
20220318
20221216
20231215
Today 2021-12-30
Start 2021-01-01

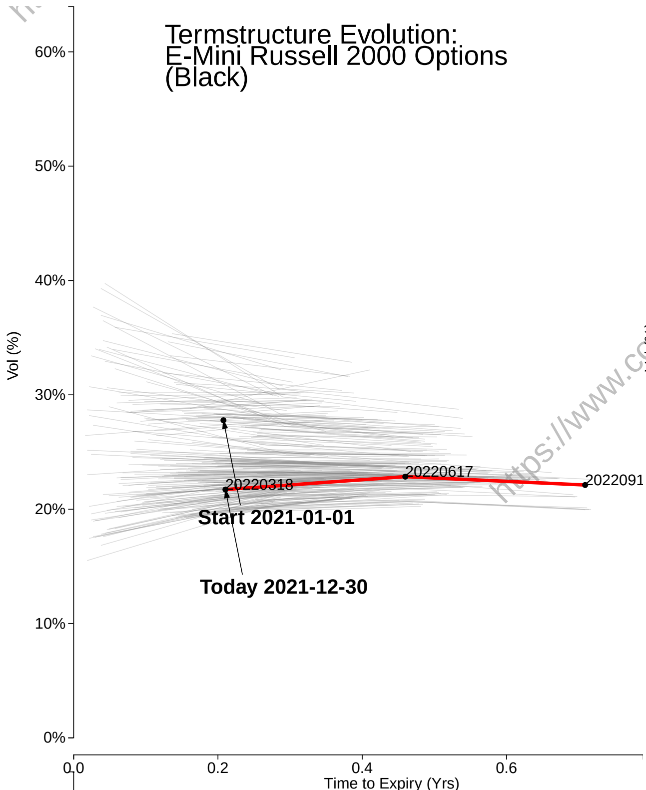

Front Month Skews:
E-Mini S&P 500 Options
(Black)
Start 2021-01-01
Today 2021-12-30

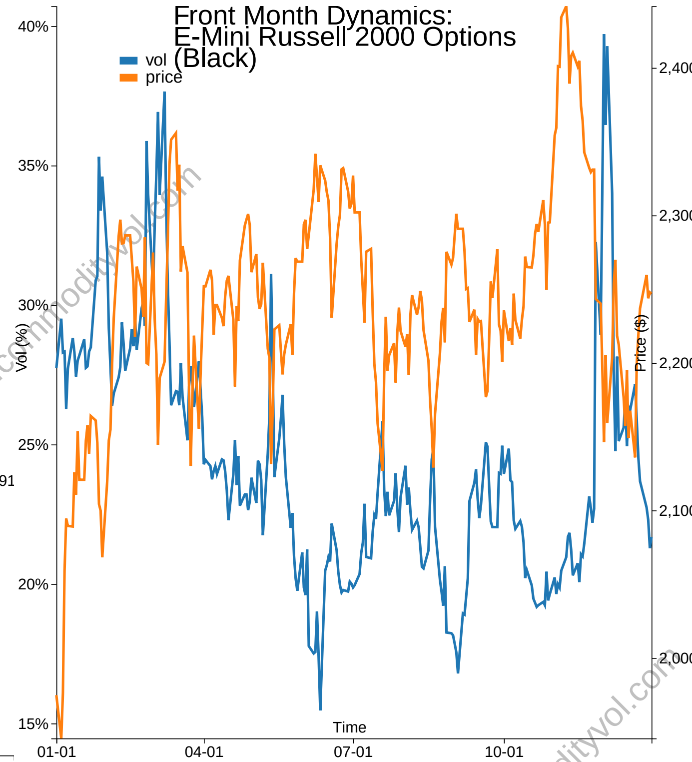

Termstructure Evolution:
Micro E-Mini S&P500 Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220318
20220617
Start 2021-01-01
Today 2021-12-30

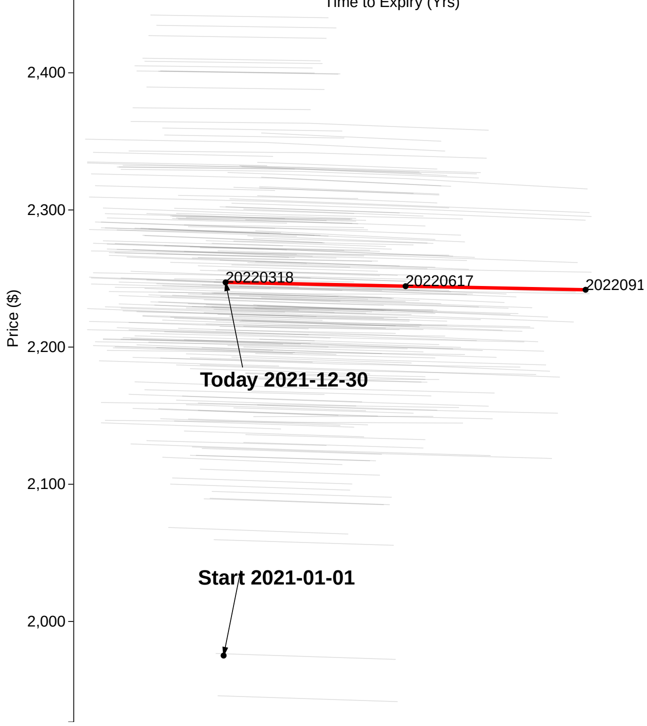

Front Month Dynamics:
Micro E-Mini S&P500 Options
(Black)
vol
price
Vol (%)
Price ($)
Time

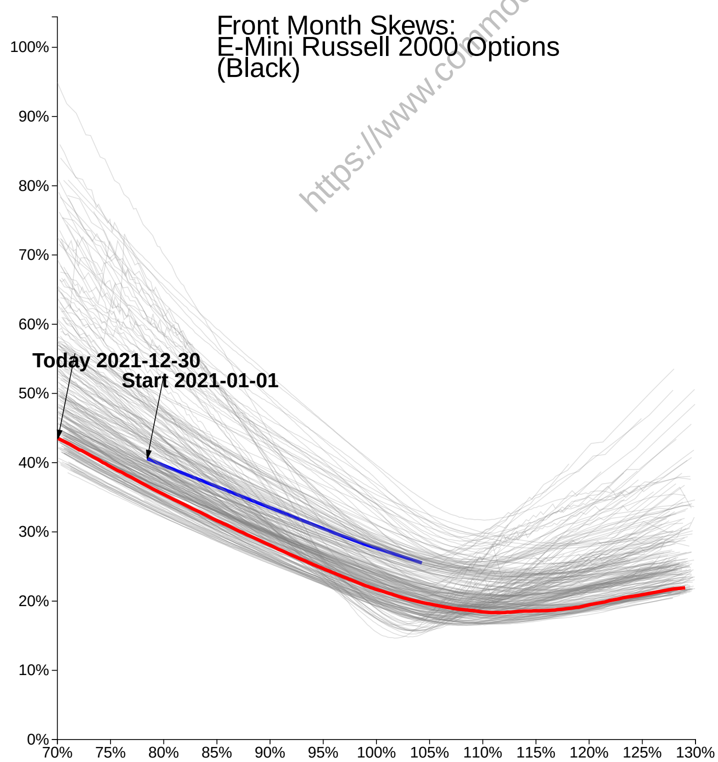

Price ($)
20220318
20220617
Today 2021-12-30
Start 2021-01-01

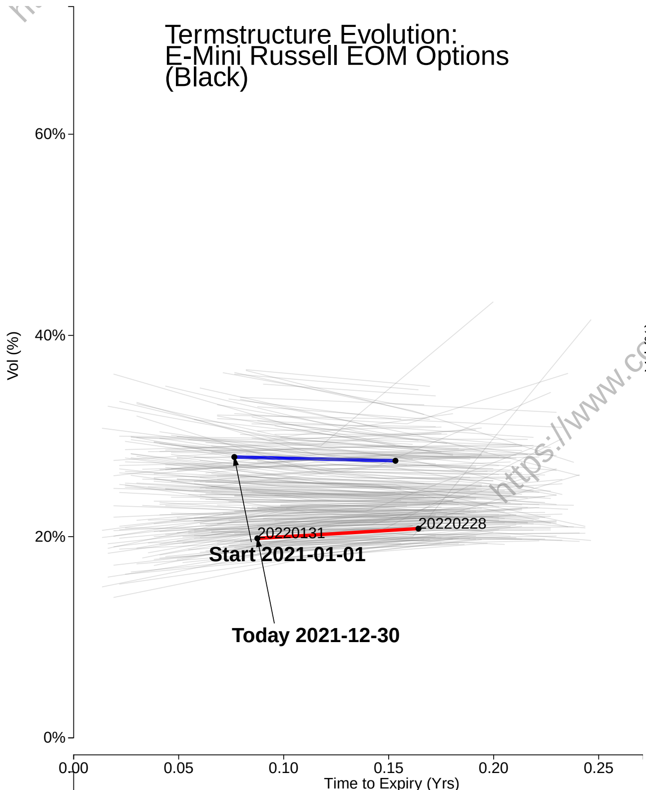

Front Month Skews:
Micro E-Mini S&P500 Options
(Black)
Today 2021-12-30
Start 2021-01-01

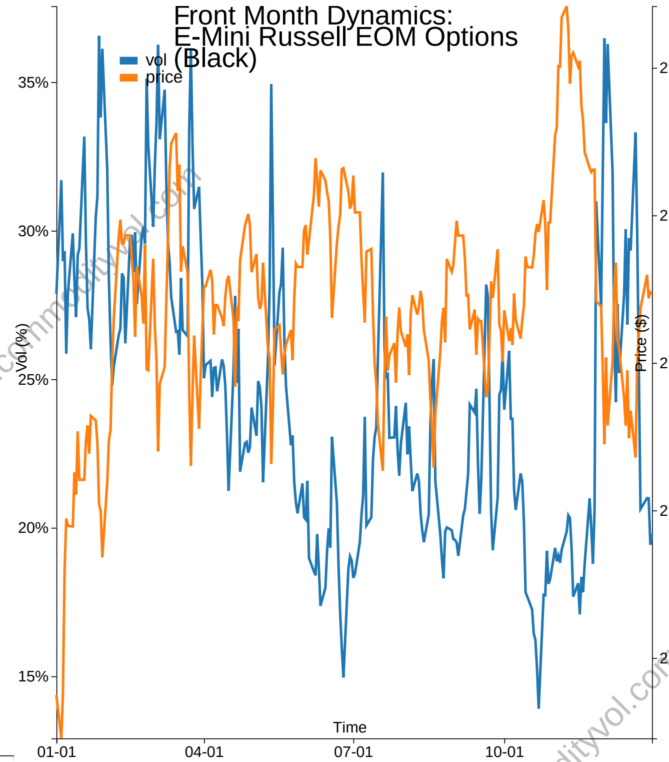

Termstructure Evolution:
E-Mini Russell 2000 Options
(Black)
Vol (%)
60%
50%
40%
30%
20%
10%
0%
20220318
20220617
2022091
Start 2021-01-01
Today 2021-12-30
0.0
0.2
0.4
0.6
Time to Expiry (Yrs)

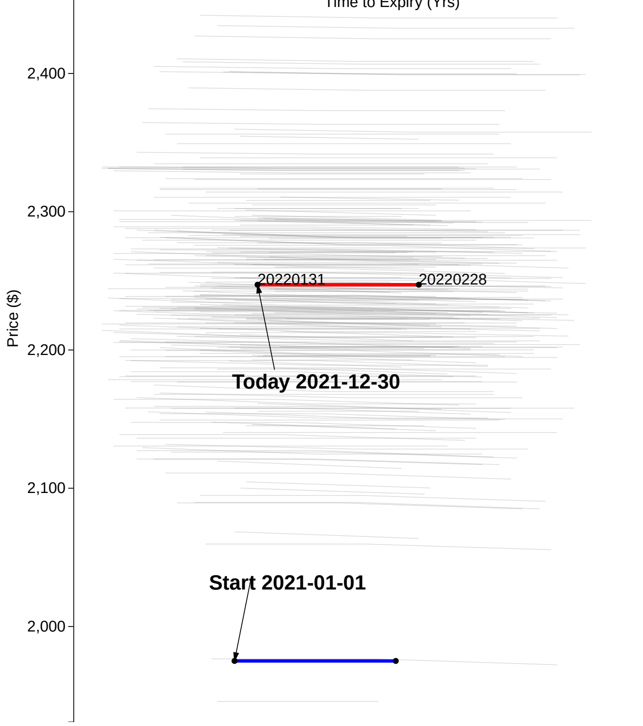

Front Month Dynamics:
E-Mini Russell 2000 Options
(Black)
vol
price
40%
35%
30%
25%
20%
15%
Vol (%)
Price ($)
2,400
2,300
2,200
2,100
2,000
Time
01-01
04-01
07-01
10-01

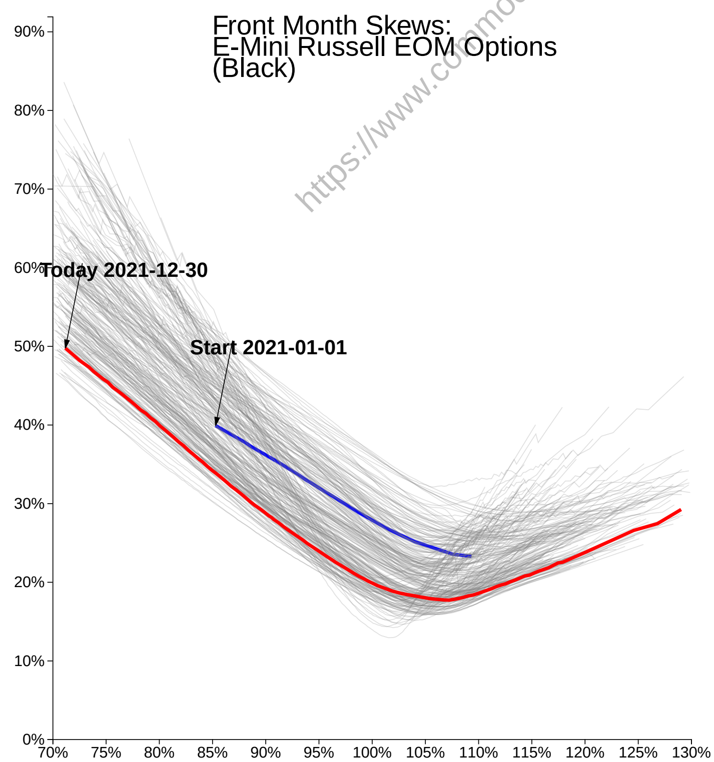

Price ($)
2,400
2,300
2,200
2,100
2,000
20220318
20220617
2022091
Today 2021-12-30
Start 2021-01-01

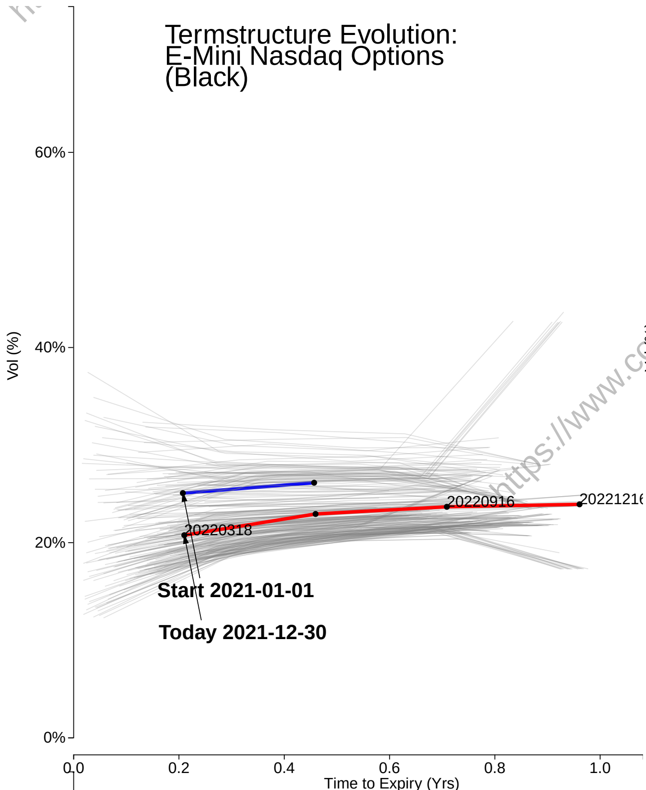

Front Month Skews:
E-Mini Russell 2000 Options
(Black)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Today 2021-12-30
Start 2021-01-01
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

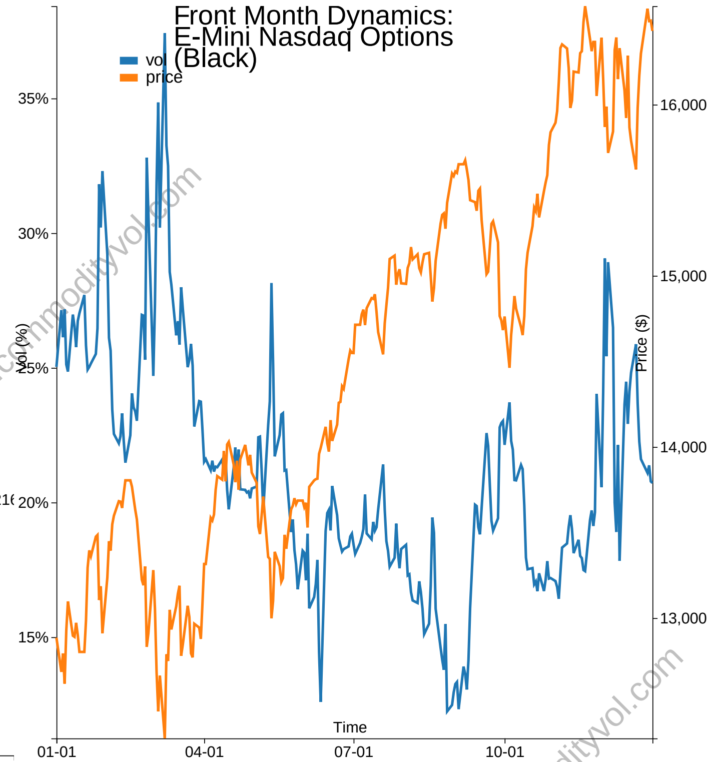

Termstructure Evolution:
E-Mini Russell EOM Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220131
20220228
Start 2021-01-01
Today 2021-12-30

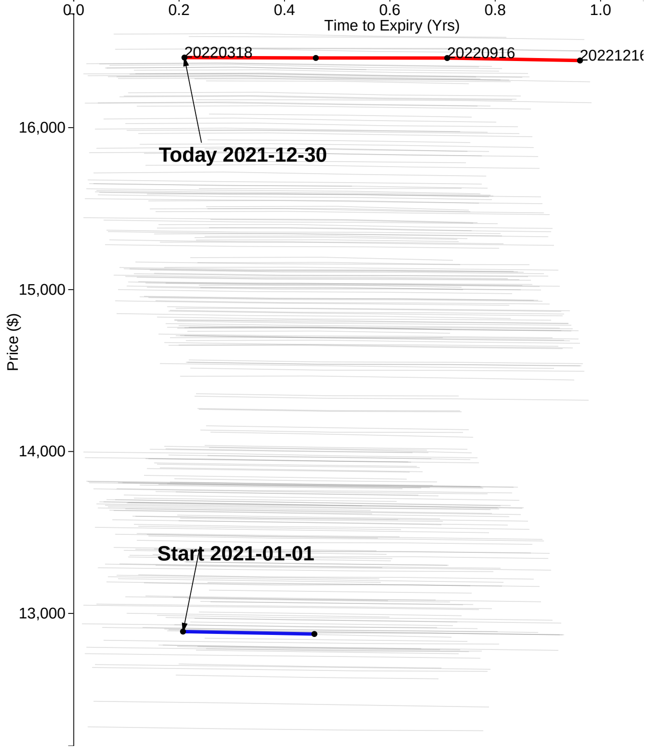

Front Month Dynamics:
E-Mini Russell EOM Options
(Black)
vol
price
Vol (%)
Price ($)
Time

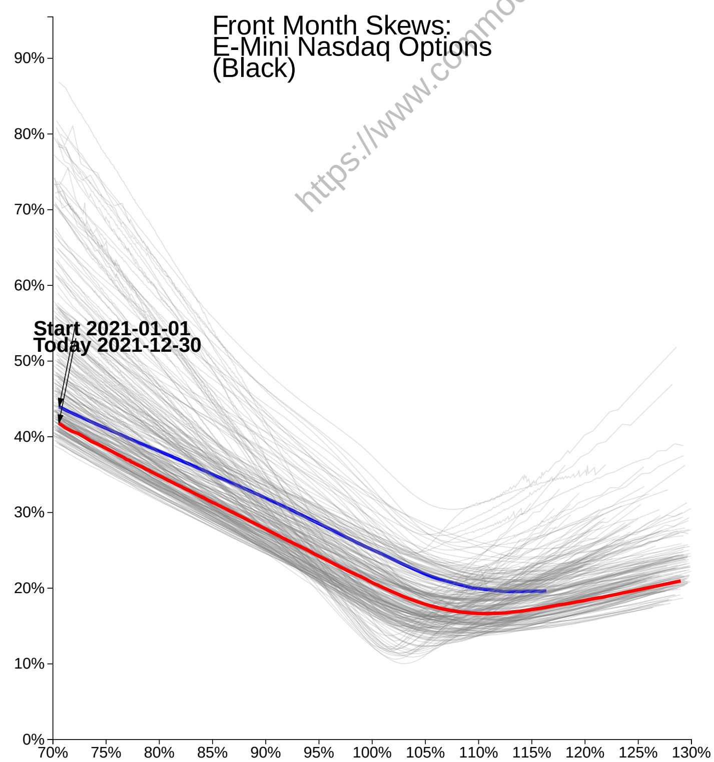

Price ($)
20220131
20220228
Today 2021-12-30
Start 2021-01-01

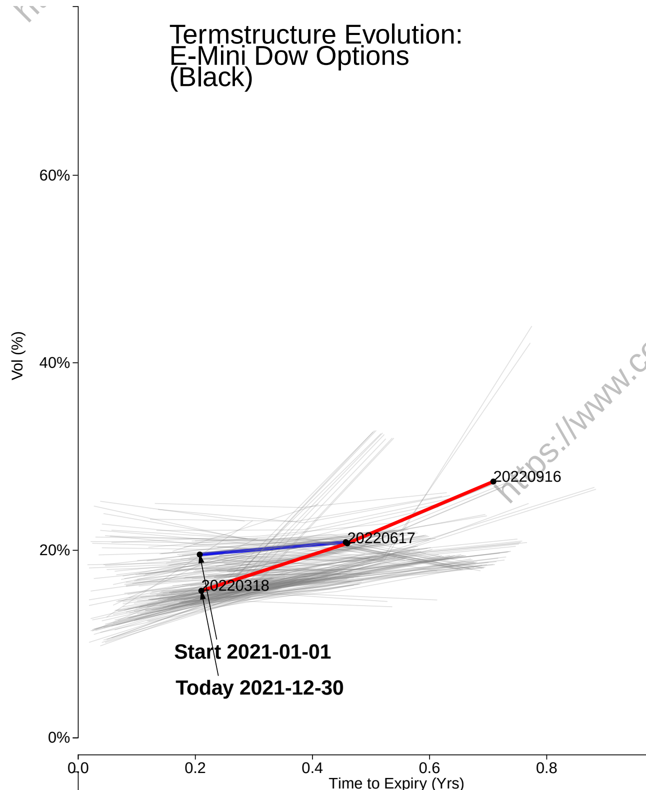

Front Month Skews:
E-Mini Russell EOM Options
(Black)
Today 2021-12-30
Start 2021-01-01

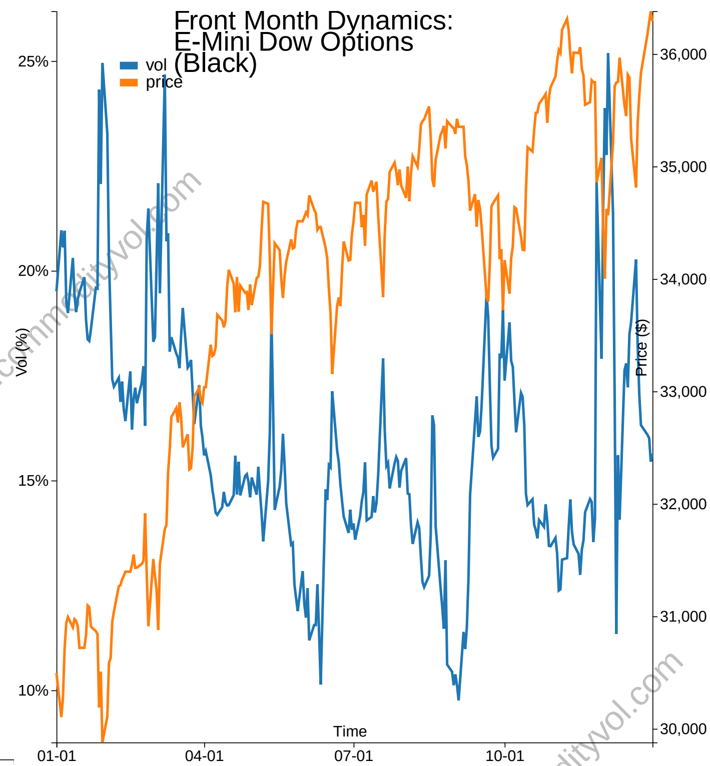

Termstructure Evolution:
E-Mini Nasdaq Options
(Black)
Vol (%)
60%
40%
20%
0%
20220318
20220916
20221216
Start 2021-01-01
Today 2021-12-30
0.0
0.2
0.4
0.6
0.8
1.0
Time to Expiry (Yrs)

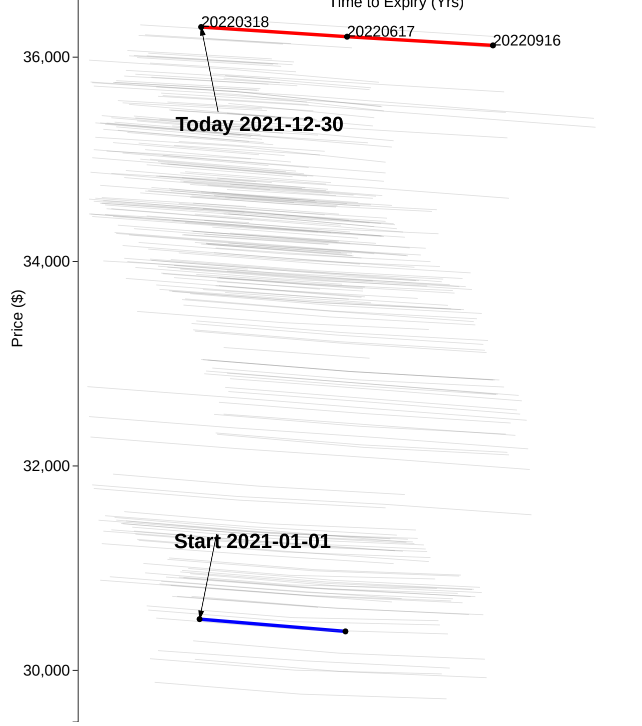

Front Month Dynamics:
E-Mini Nasdaq Options
(Black)
vol
price
35%
30%
25%
20%
15%
Vol (%)
16,000
15,000
14,000
13,000
Price ($)
Time
01-01
04-01
07-01
10-01

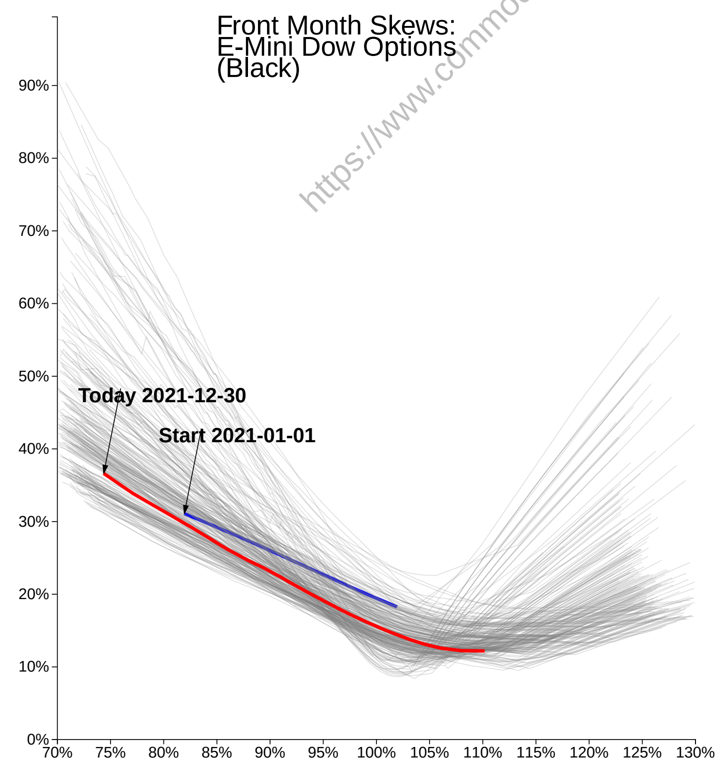

20220318
20220916
20221216
Today 2021-12-30
Start 2021-01-01
16,000
15,000
14,000
13,000
Price ($)

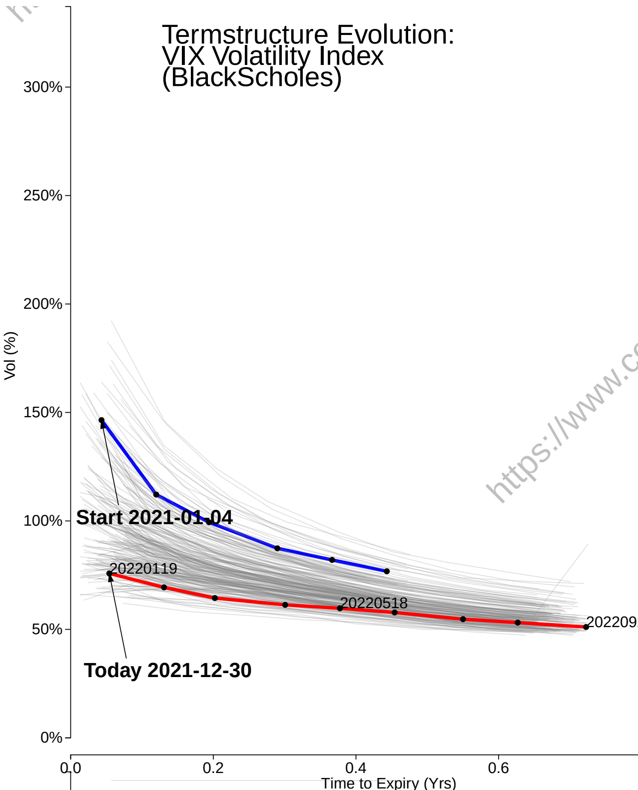

Front Month Skews:
E-Mini Nasdaq Options
(Black)
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Start 2021-01-01
Today 2021-12-30
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%


Termstructure Evolution:
E-Mini Dow Options
(Black)
Vol (%)
0%
20%
40%
60%
20220916
20220617
20220318
Start 2021-01-01
Today 2021-12-30
0.0
0.2
0.4
0.6
0.8
Time to Expiry (Yrs)

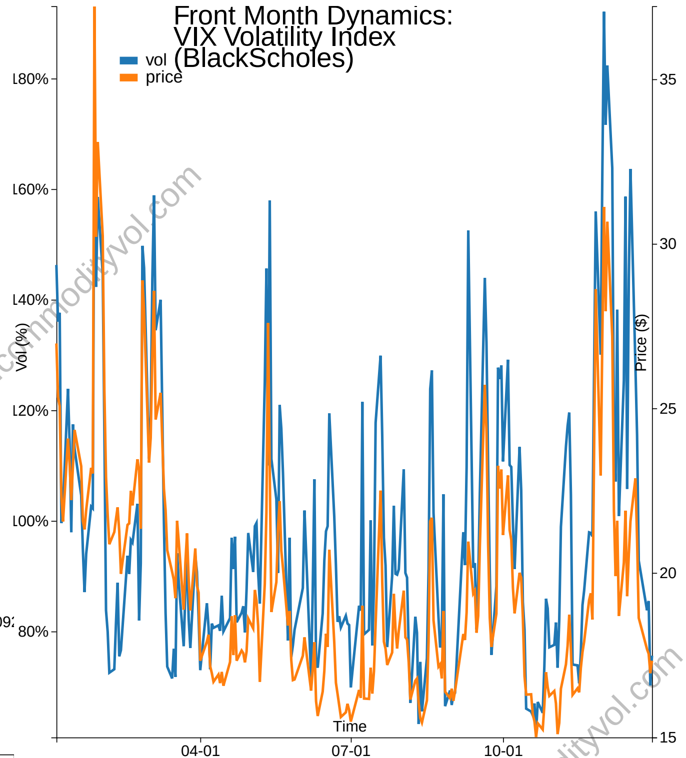

Front Month Dynamics:
E-Mini Dow Options
(Black)
vol
price
Vol (%)
10%
15%
20%
25%
Price ($)
30,000
31,000
32,000
33,000
34,000
35,000
36,000
Time
01-01
04-01
07-01
10-01
https://www.commodityvol.com


Price ($)
30,000
32,000
34,000
36,000
20220318
20220617
20220916
Today 2021-12-30
Start 2021-01-01

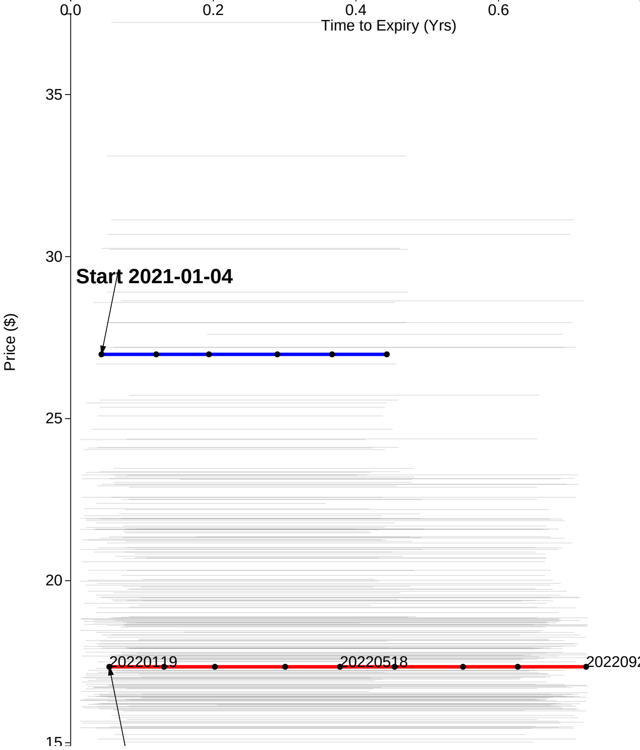

Front Month Skews:
E-Mini Dow Options
(Black)
https://www.commodityvol.com
Today 2021-12-30
Start 2021-01-01
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%



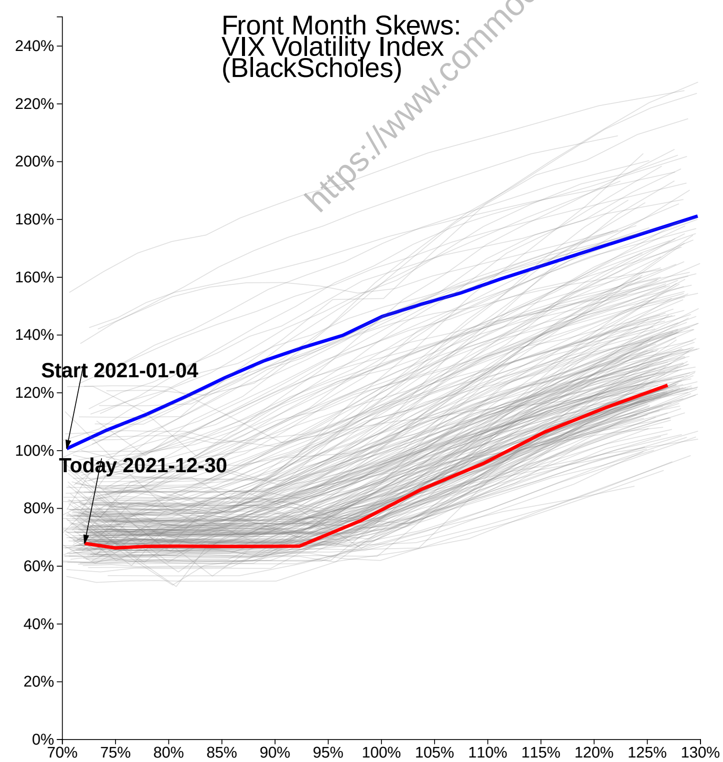
Termstructure Evolution:
VIX Volatility Index
(BlackScholes)
Vol (%)
Start 2021-01-04
Today 2021-12-30
20220119
20220518
Time to Expiry (Yrs)



Front Month Dynamics:
VIX Volatility Index
(BlackScholes)
vol
price
Vol (%)
Price ($)
Time
04-01
07-01
10-01

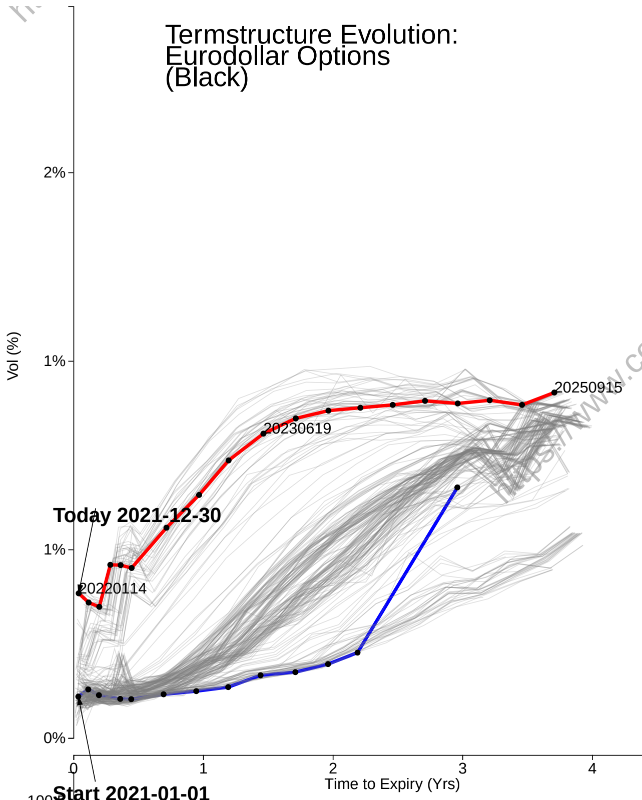


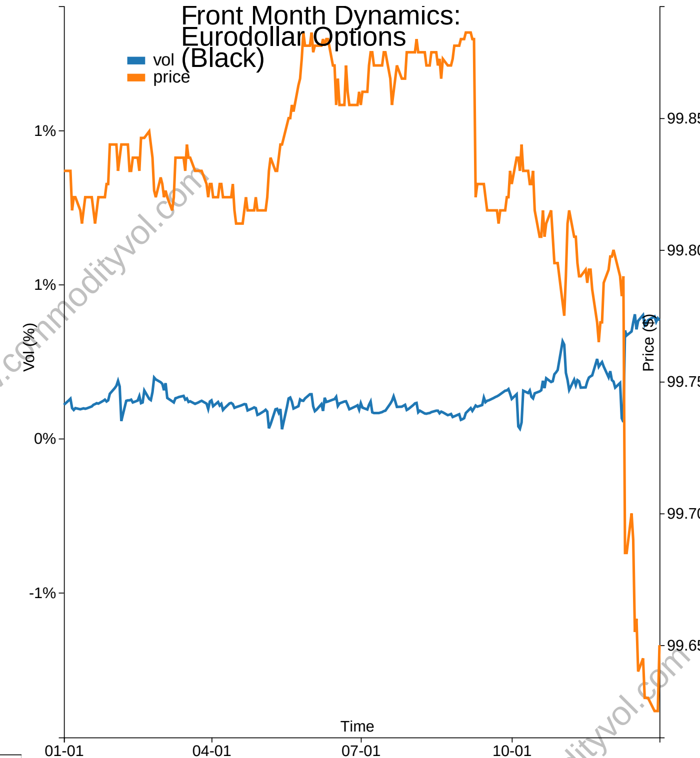
Price ($)
Start 2021-01-04
20220119
20220518

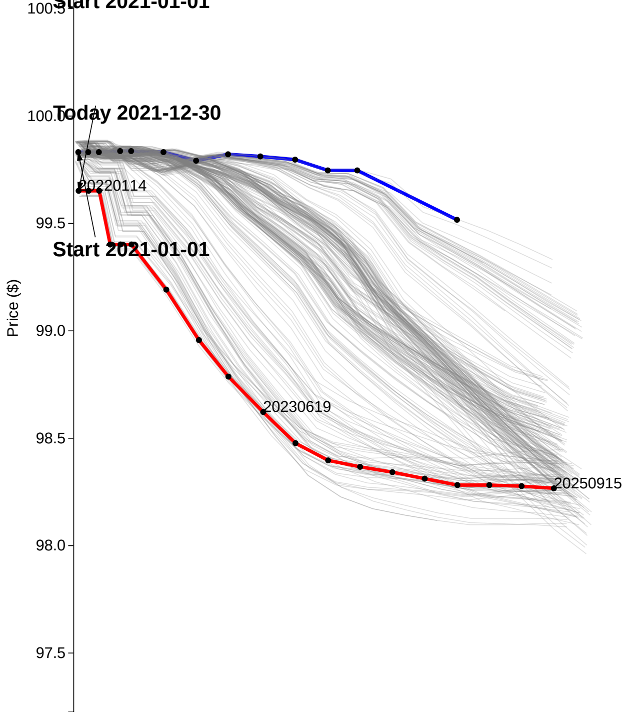


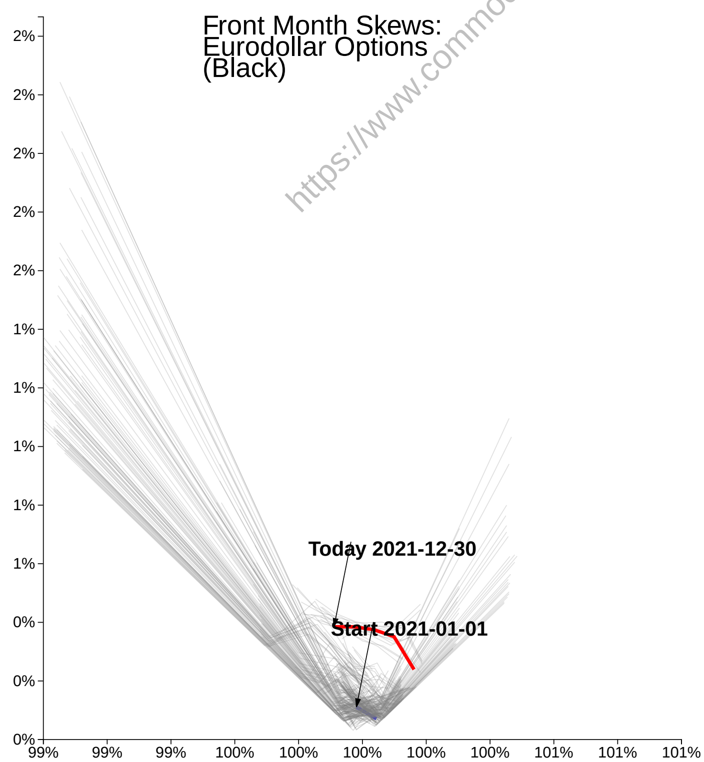
Front Month Skews:
VIX Volatility Index
(BlackScholes)
Start 2021-01-04
Today 2021-12-30

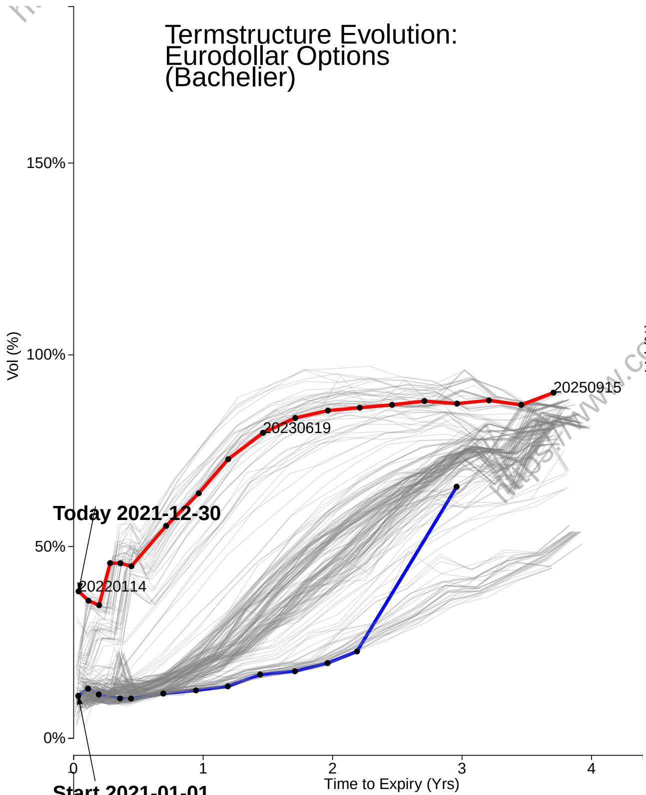
Fixed Income and STIRS


Termstructure Evolution:
Eurodollar Options
(Black)
Vol (%)
2%
1%
1%
0%
Time to Expiry (Yrs)
0
1
2
3
4
Today 2021-12-30
Start 2021-01-01
20220114
20230619
20250915

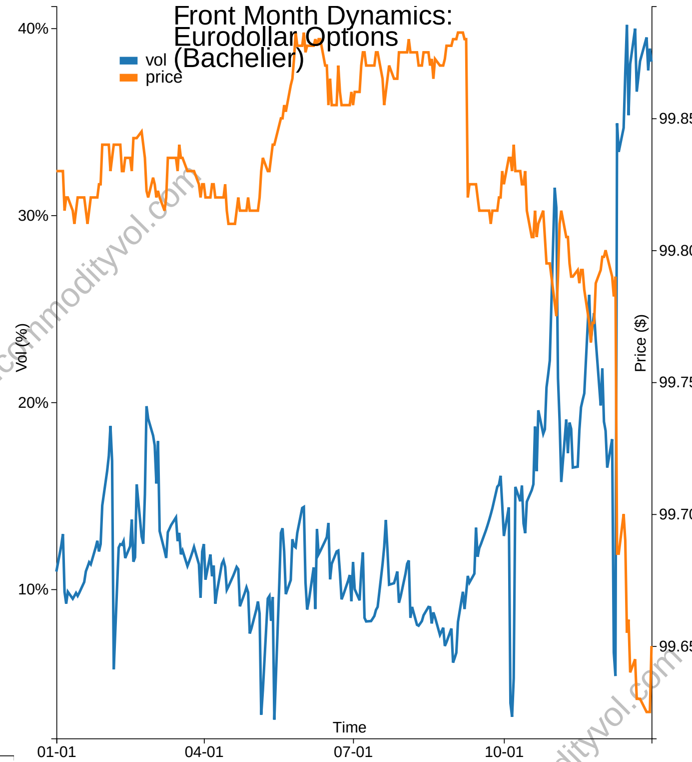

Front Month Dynamics:
Eurodollar Options
(Black)
vol
price
Vol (%)
Price ($)
1%
1%
0%
-1%
-1%
99.85
99.80
99.75
99.70
99.65
Time
01-01
04-01
07-01
10-01


Price ($)
100.5
100.0
99.5
99.0
98.5
98.0
97.5
Today 2021-12-30
Start 2021-01-01
20220114
20230619
20250915

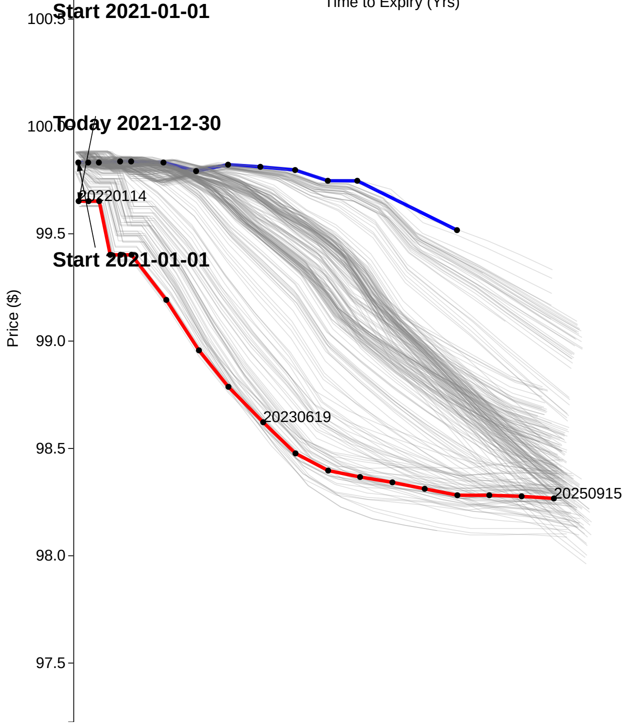

Front Month Skews:
Eurodollar Options
(Black)
2%
2%
2%
2%
2%
1%
1%
1%
1%
1%
0%
0%
0%
99%
99%
99%
100%
100%
100%
100%
100%
101%
101%
101%
Today 2021-12-30
Start 2021-01-01



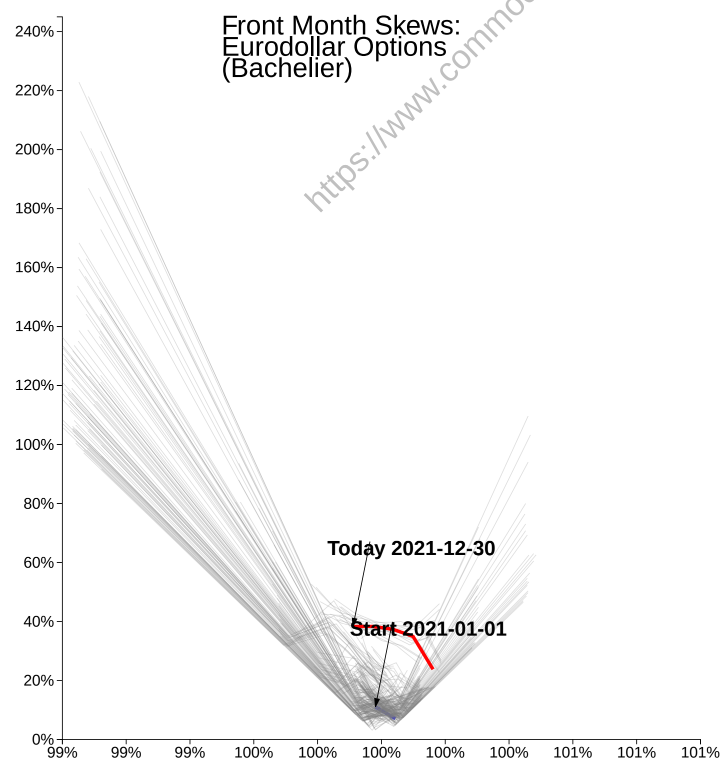
Termstructure Evolution: Eurodollar Options (Bachelier)
Vol (%)
Time to Expiry (Yrs)
Today 2021-12-30
Start 2021-01-01
20220114
20230619
20250915



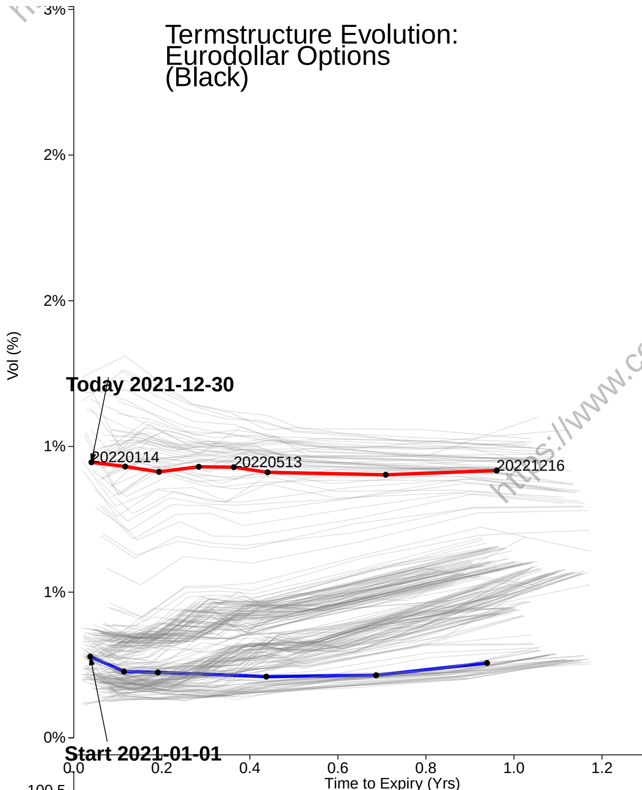
Front Month Dynamics: Eurodollar Options (Bachelier)
vol
price
Vol (%)
Price ($)
Time

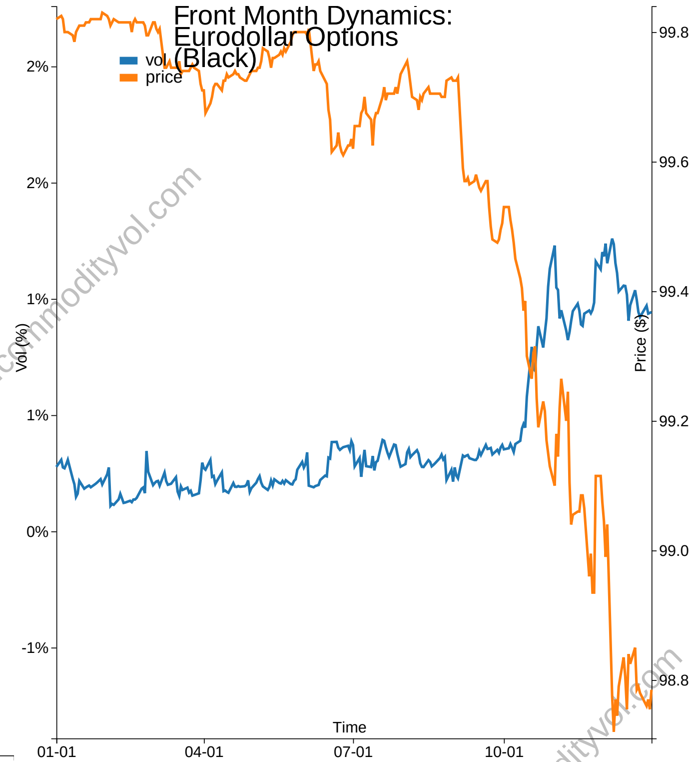


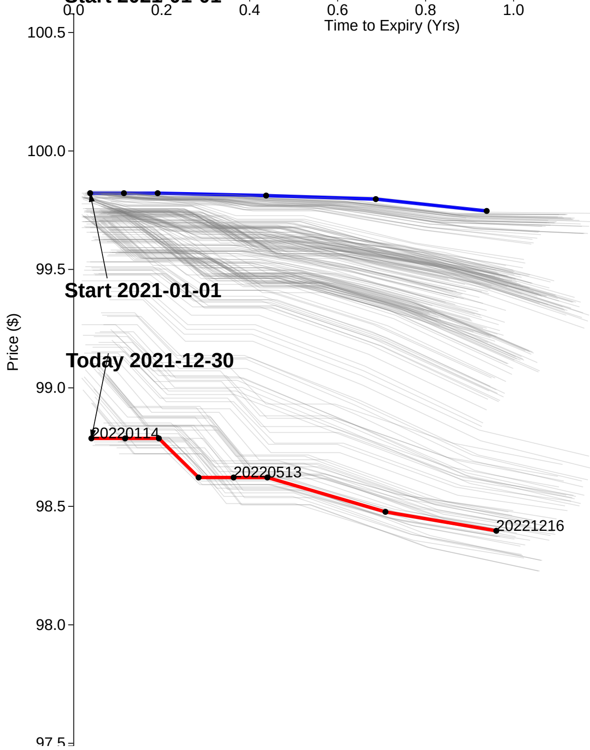
Price ($)
Today 2021-12-30
Start 2021-01-01
20220114
20230619
20250915

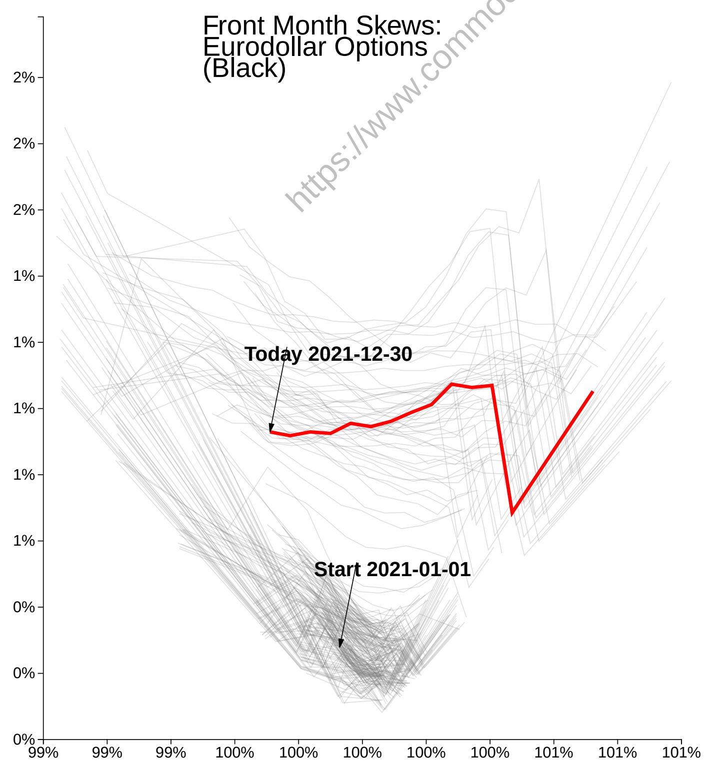


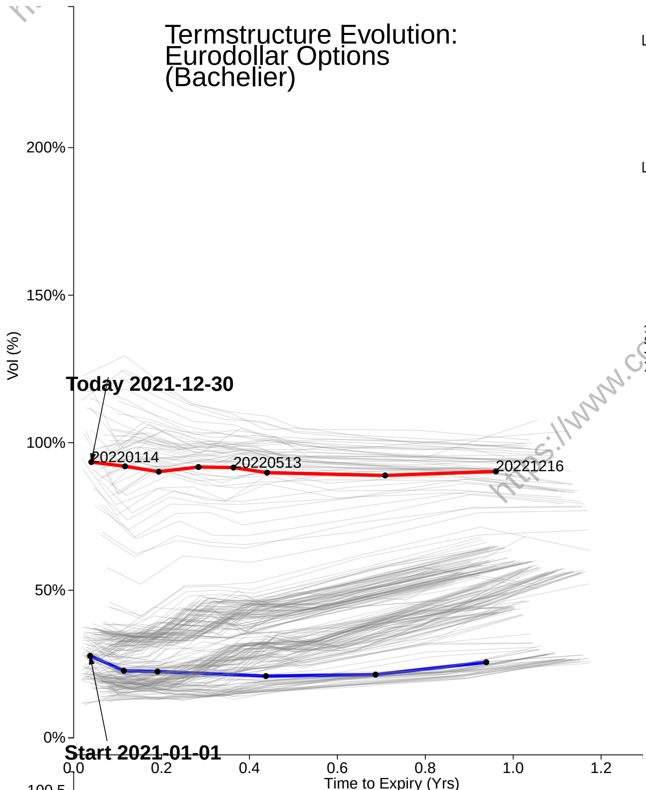
Front Month Skews: Eurodollar Options (Bachelier)
Today 2021-12-30
Start 2021-01-01

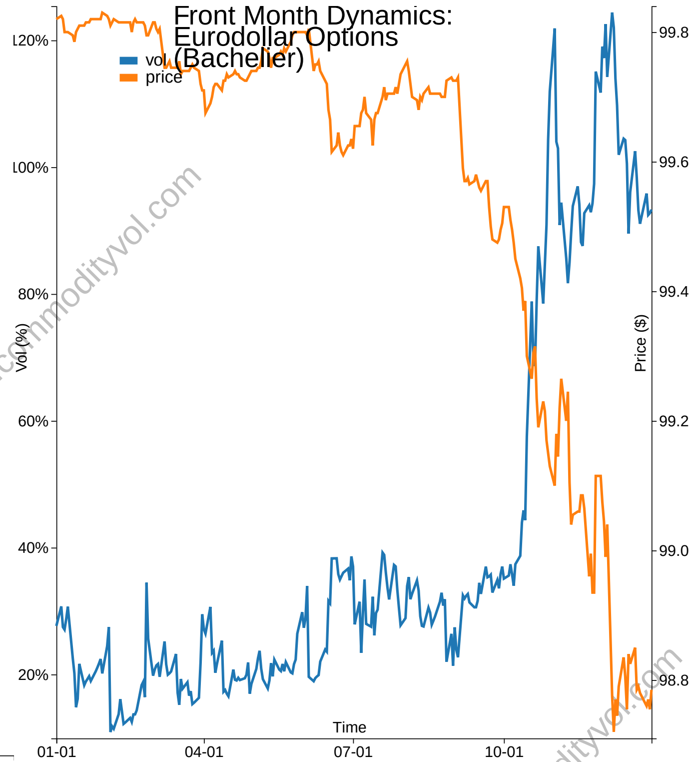

Termstructure Evolution:
Eurodollar Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Today 2021-12-30
Start 2021-01-01
20220114
20220513
20221216
3%
2%
2%
2%
1%
1%
0%
0.0
0.2
0.4
0.6
0.8
1.0
1.2

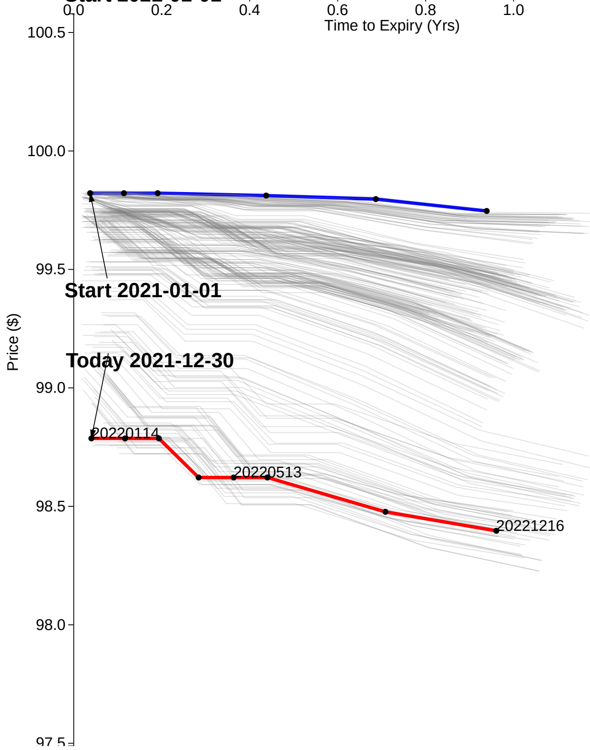

Front Month Dynamics:
Eurodollar Options
(Black)
vol
price
Vol (%)
Price ($)
Time
2%
2%
1%
1%
0%
-1%
99.8
99.6
99.4
99.2
99.0
98.8
01-01
04-01
07-01
10-01

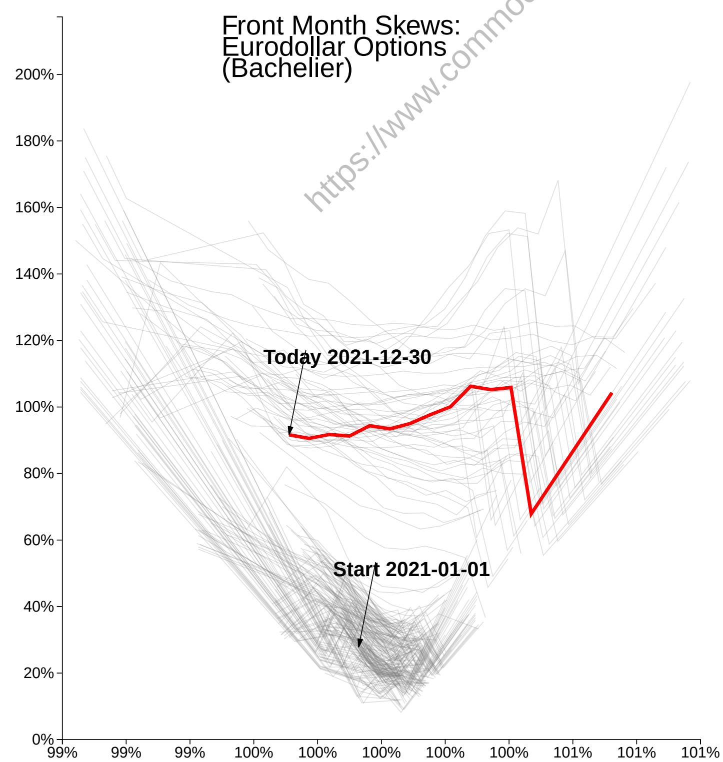

Price ($)
Start 2021-01-01
Today 2021-12-30
20220114
20220513
20221216
100.5
100.0
99.5
99.0
98.5
98.0
97.5

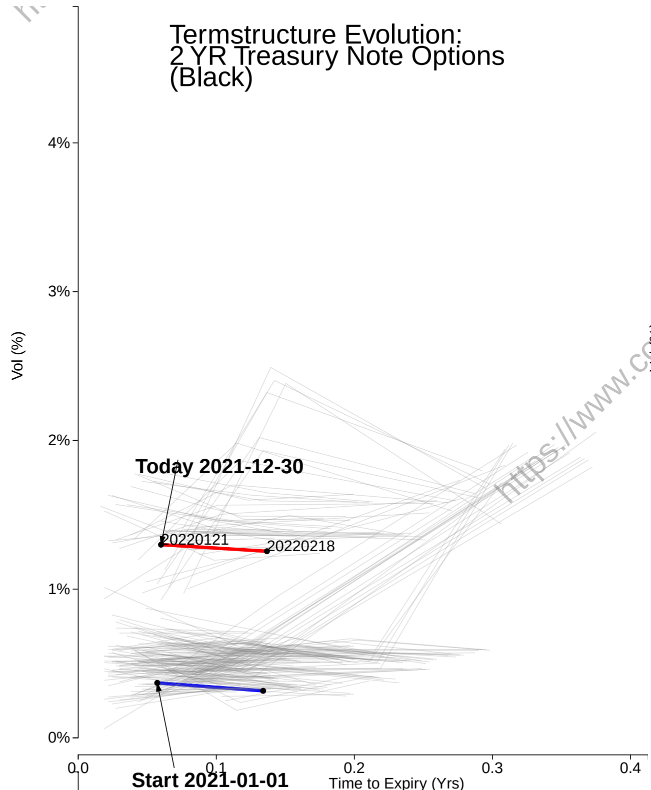

Front Month Skews:
Eurodollar Options
(Black)
Today 2021-12-30
Start 2021-01-01
2%
2%
2%
1%
1%
1%
1%
1%
0%
0%
0%
99%
99%
99%
100%
100%
100%
100%
100%
101%
101%
101%

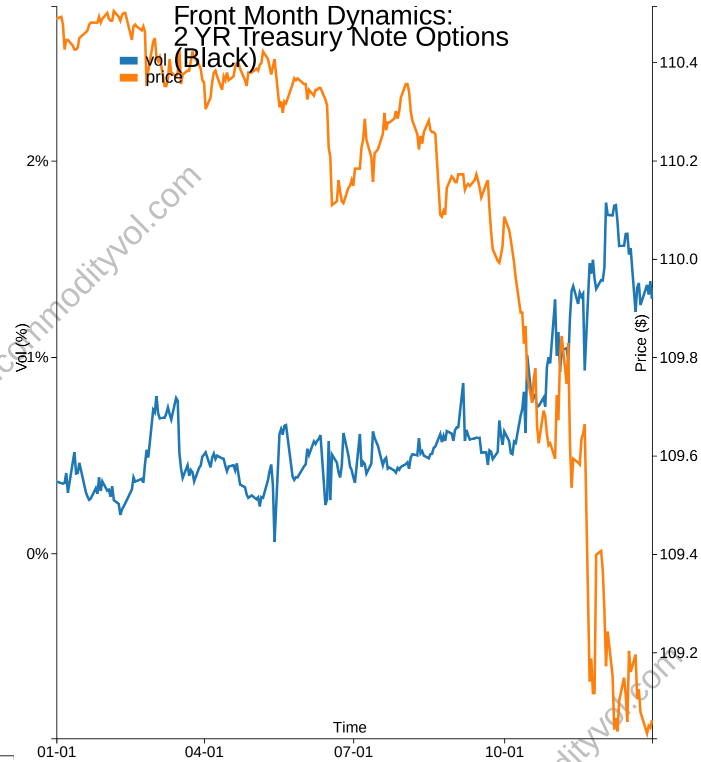

Termstructure Evolution:
Eurodollar Options
(Bachelier)
Vol (%)
Today 2021-12-30
Start 2021-01-01
20220114
20220513
20221216
Time to Expiry (Yrs)

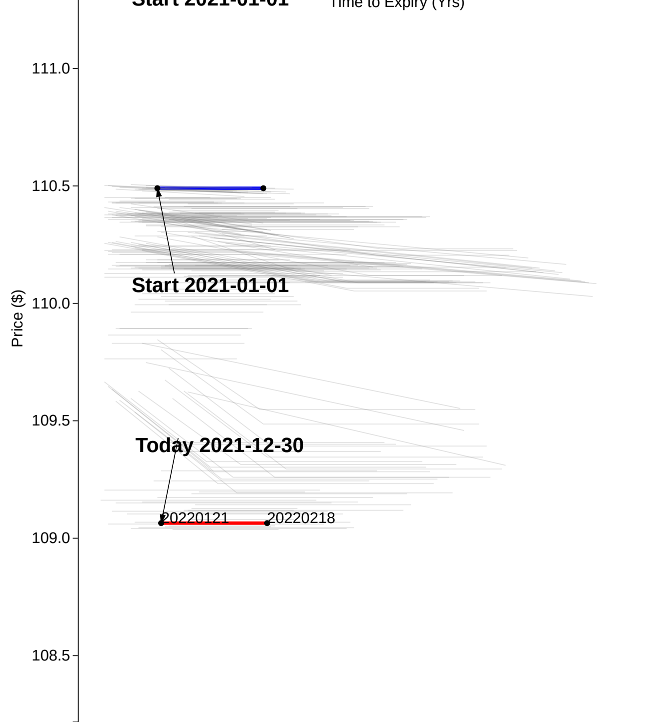

Front Month Dynamics:
Eurodollar Options
(Bachelier)
vol
price
Vol (%)
Price ($)
Time
01-01
04-01
07-01
10-01

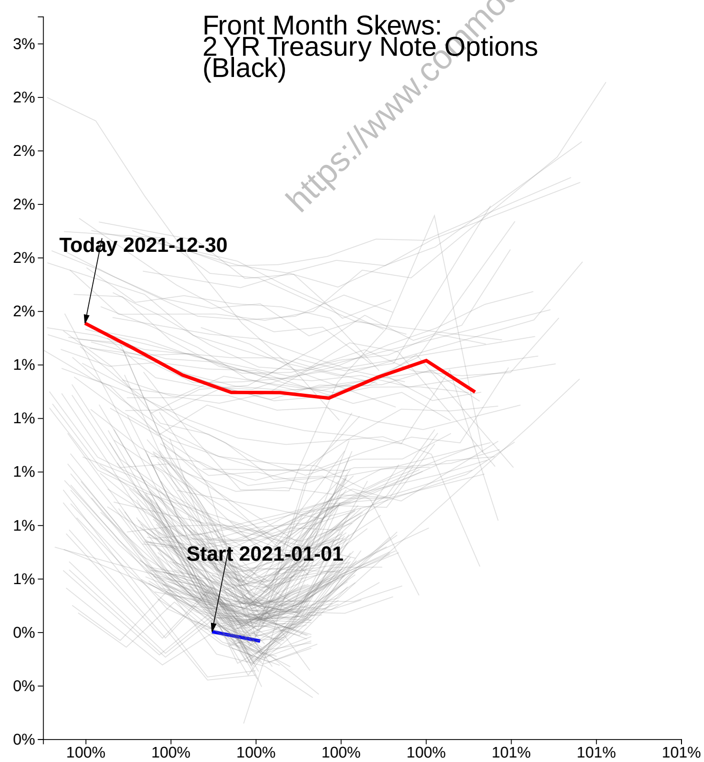

Price ($)
Start 2021-01-01
Today 2021-12-30
20220114
20220513
20221216

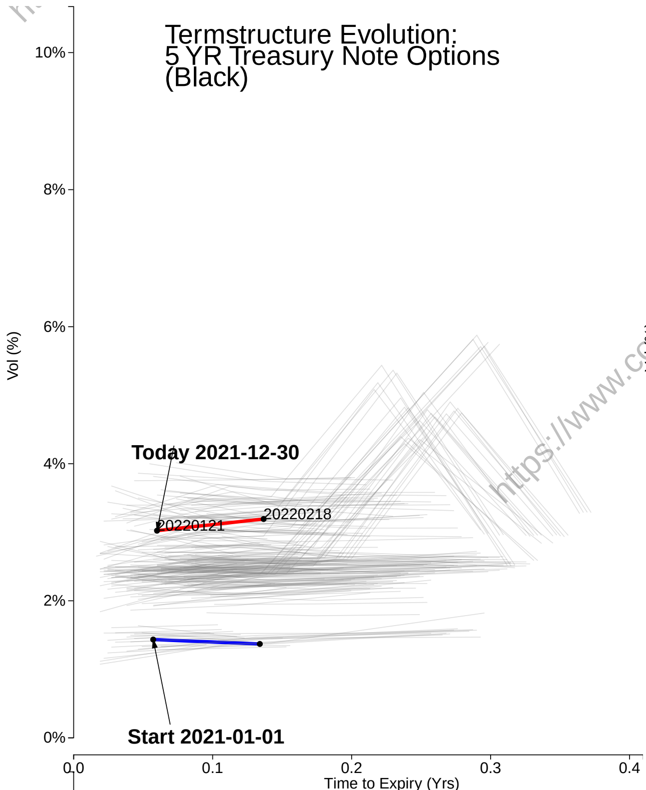

Front Month Skews:
Eurodollar Options
(Bachelier)
Today 2021-12-30
Start 2021-01-01

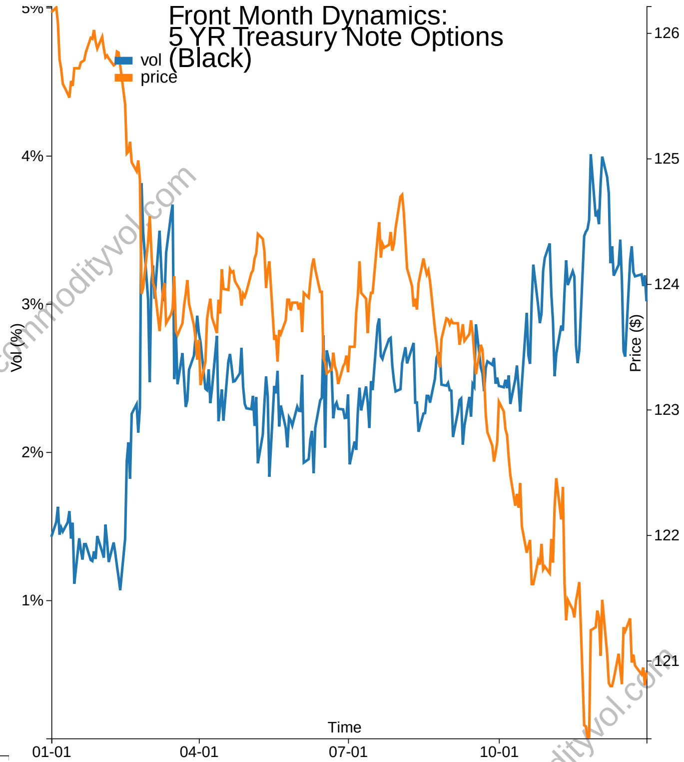

Termstructure Evolution:
2 YR Treasury Note Options
(Black)
Today 2021-12-30
20220121
20220218
Start 2021-01-01
Vol (%)
Time to Expiry (Yrs)
4%
3%
2%
1%
0%
0.0
0.1
0.2
0.3
0.4

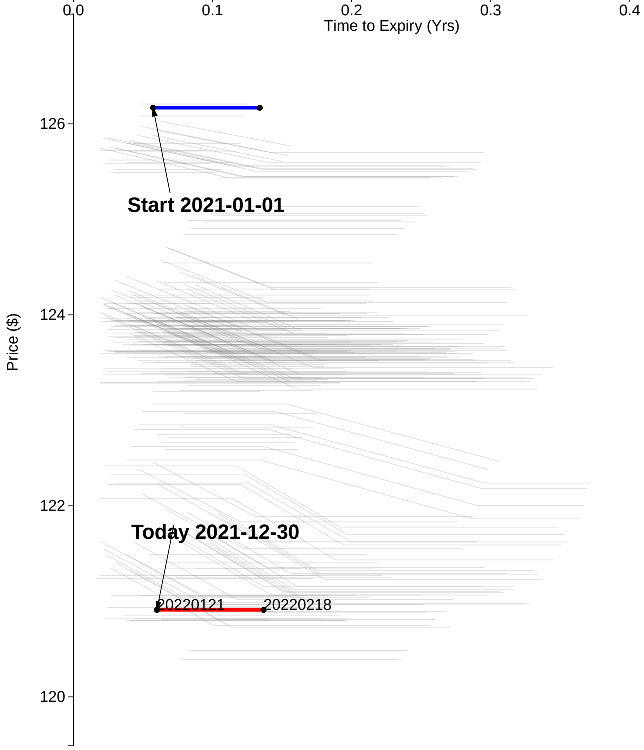

Front Month Dynamics:
2 YR Treasury Note Options
(Black)
vol
price
Vol (%)
Price ($)
Time
2%
1%
0%
110.4
110.2
110.0
109.8
109.6
109.4
109.2
01-01
04-01
07-01
10-01

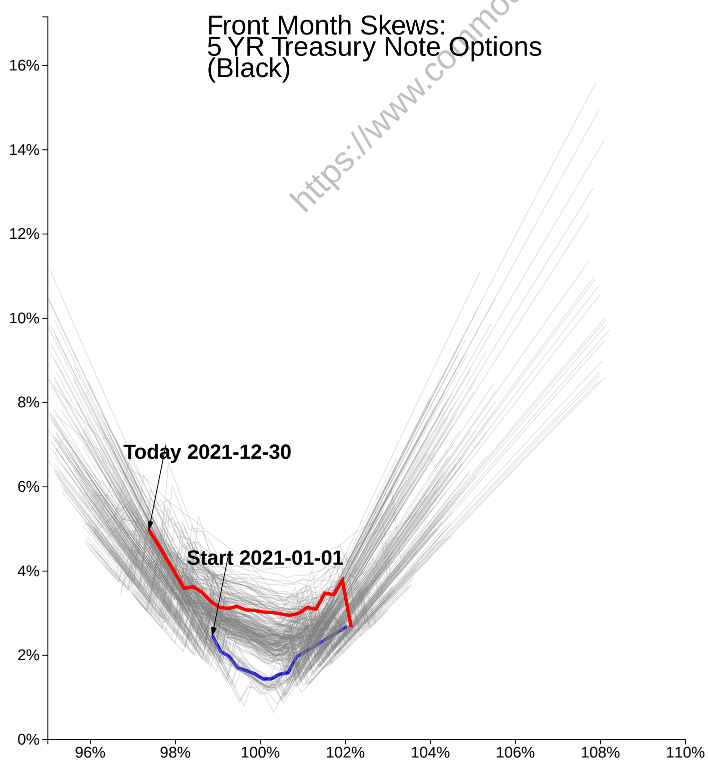

Price ($)
Start 2021-01-01
Today 2021-12-30
20220121
20220218
111.0
110.5
110.0
109.5
109.0
108.5

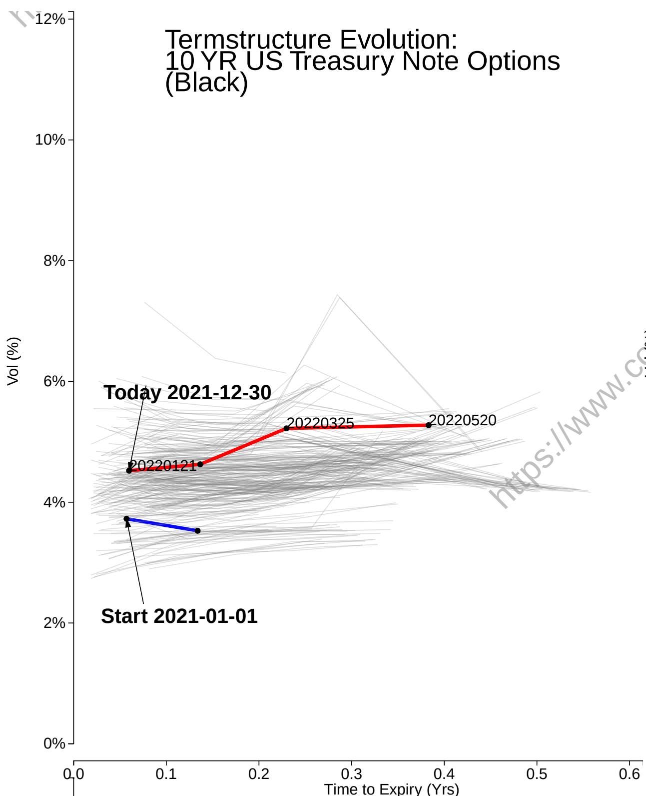

Front Month Skews:
2 YR Treasury Note Options
(Black)
Today 2021-12-30
Start 2021-01-01
3%
2%
1%
0%
100%
101%

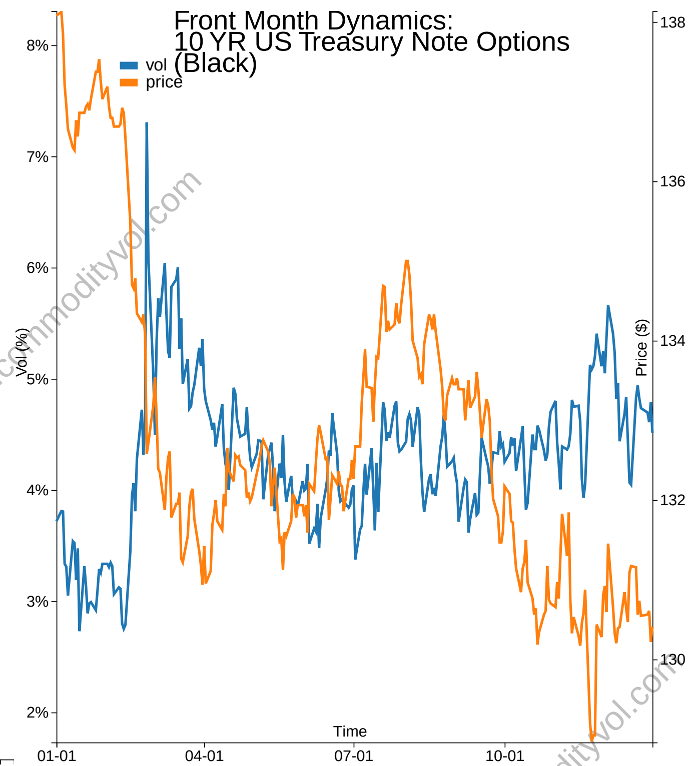

Termstructure Evolution:
5 YR Treasury Note Options
(Black)
Vol (%)
Today 2021-12-30
20220121
20220218
Start 2021-01-01
Time to Expiry (Yrs)

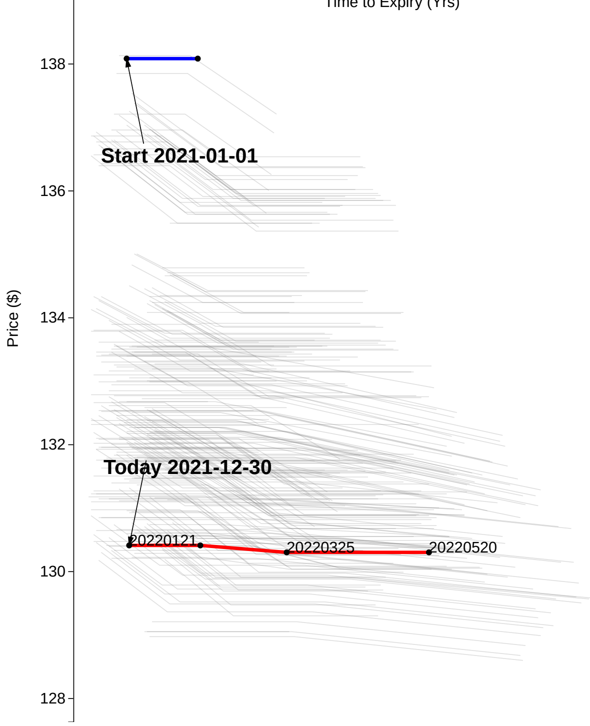

Front Month Dynamics:
5 YR Treasury Note Options
(Black)
vol
price
Vol (%)
Price ($)
Time

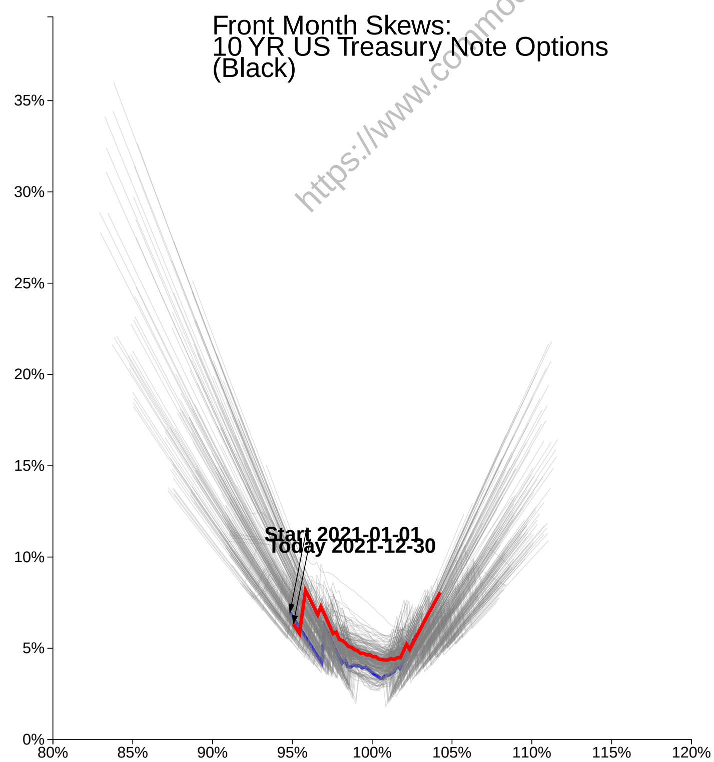

Price ($)
Start 2021-01-01
Today 2021-12-30
20220121
20220218

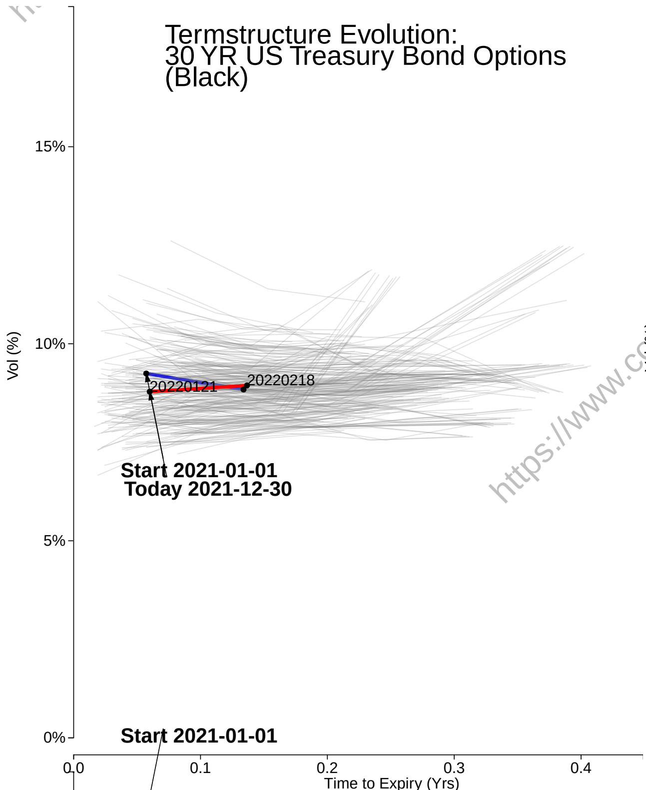

Front Month Skews:
5 YR Treasury Note Options
(Black)
Today 2021-12-30
Start 2021-01-01

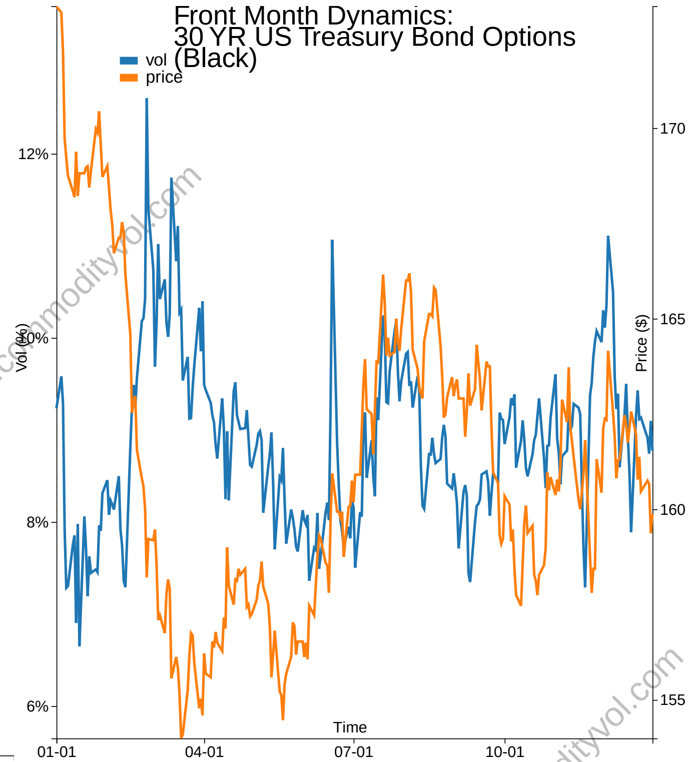

Termstructure Evolution:
10 YR US Treasury Note Options
(Black)
Today 2021-12-30
Start 2021-01-01
20220121
20220325
20220520
Vol (%)
Time to Expiry (Yrs)
0%
2%
4%
6%
8%
10%
12%
0.0
0.1
0.2
0.3
0.4
0.5
0.6

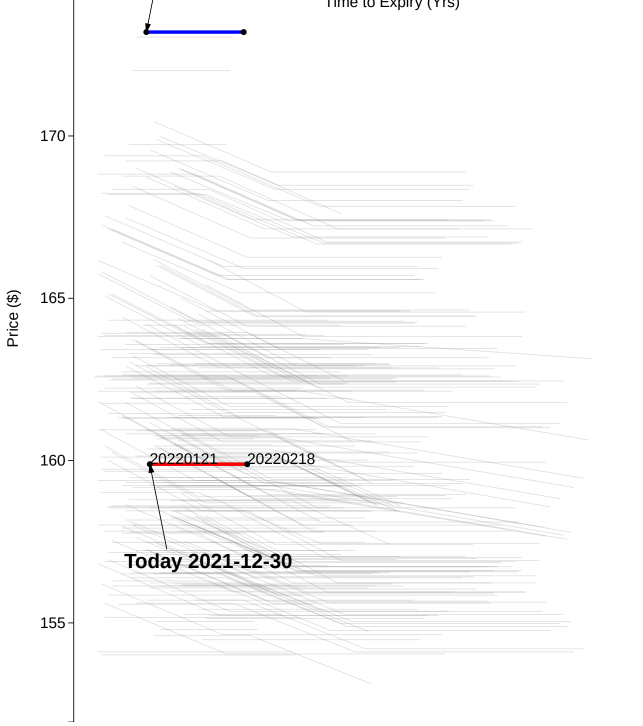

Front Month Dynamics:
10 YR US Treasury Note Options
(Black)
vol
price
Vol (%)
Price ($)
Time
01-01
04-01
07-01
10-01
2%
3%
4%
5%
6%
7%
8%
130
132
134
136
138

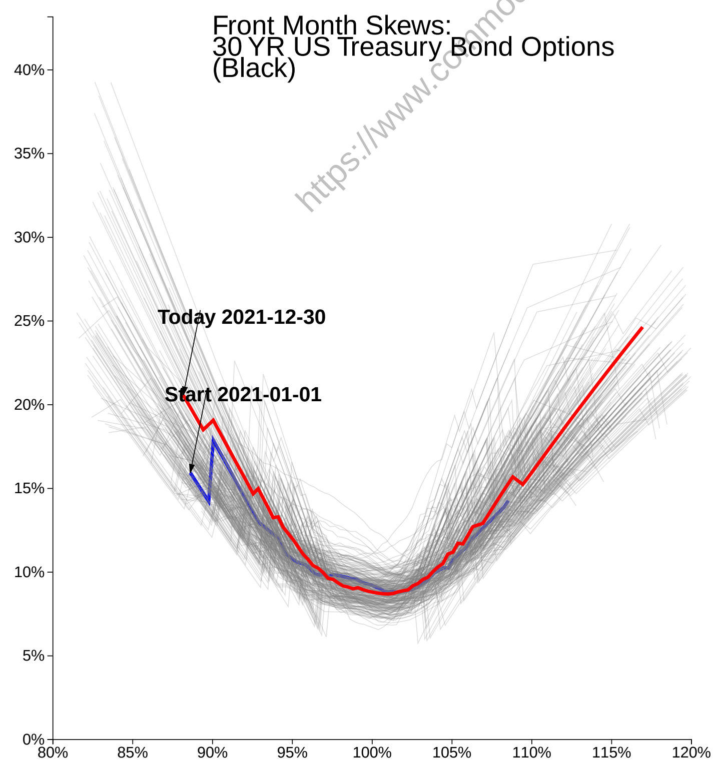

Start 2021-01-01
Today 2021-12-30
20220121
20220325
20220520
Price ($)
128
130
132
134
136
138

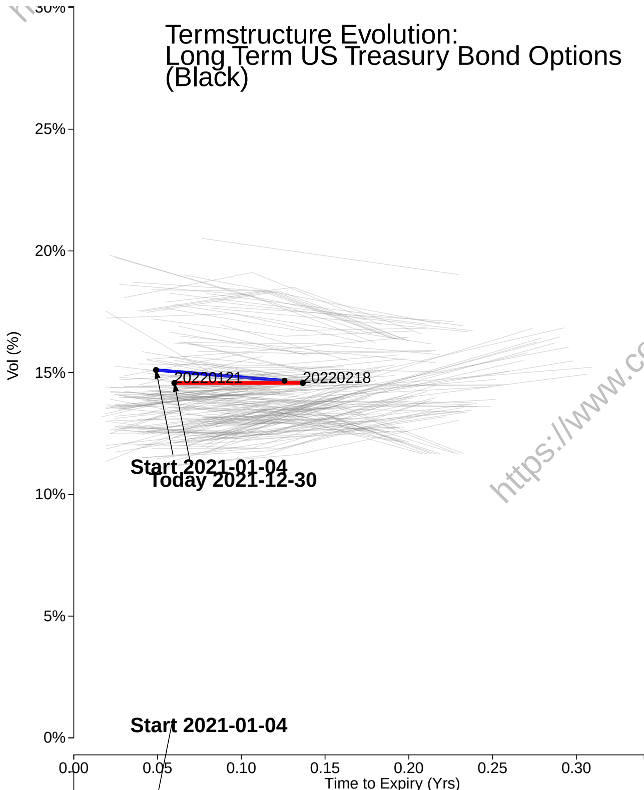

Front Month Skews:
10 YR US Treasury Note Options
(Black)
Start 2021-01-01
Today 2021-12-30
0%
5%
10%
15%
20%
25%
30%
35%
80%
85%
90%
95%
100%
105%
110%
115%
120%


Termstructure Evolution:
30 YR US Treasury Bond Options
(Black)
Vol (%)
15%
10%
5%
0%
20220121
20220218
Start 2021-01-01
Today 2021-12-30
0.0
0.1
0.2
0.3
0.4
Time to Expiry (Yrs)

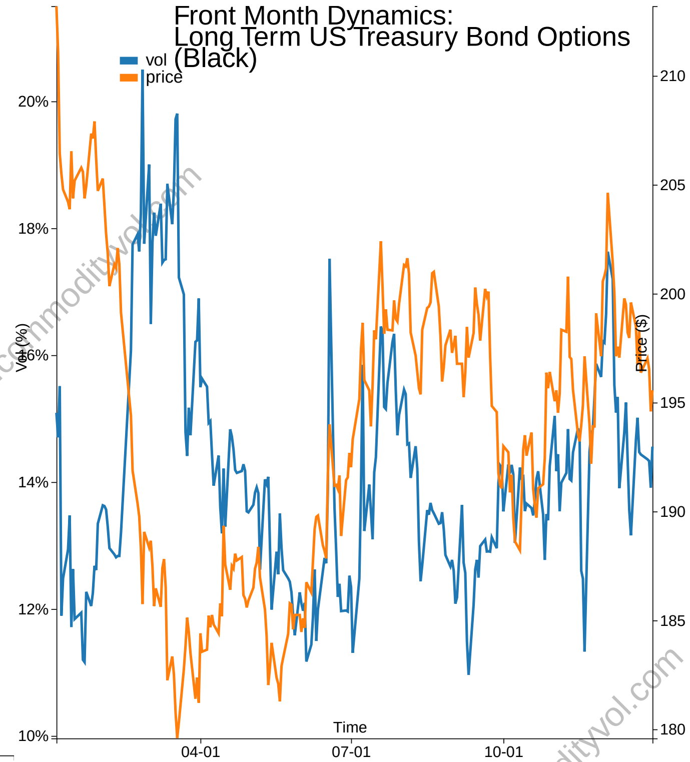

Front Month Dynamics:
30 YR US Treasury Bond Options
(Black)
vol
price
Vol (%)
12%
10%
8%
6%
Price ($)
170
165
160
155
Time
01-01
04-01
07-01
10-01


Price ($)
170
165
160
155
20220121
20220218
Today 2021-12-30

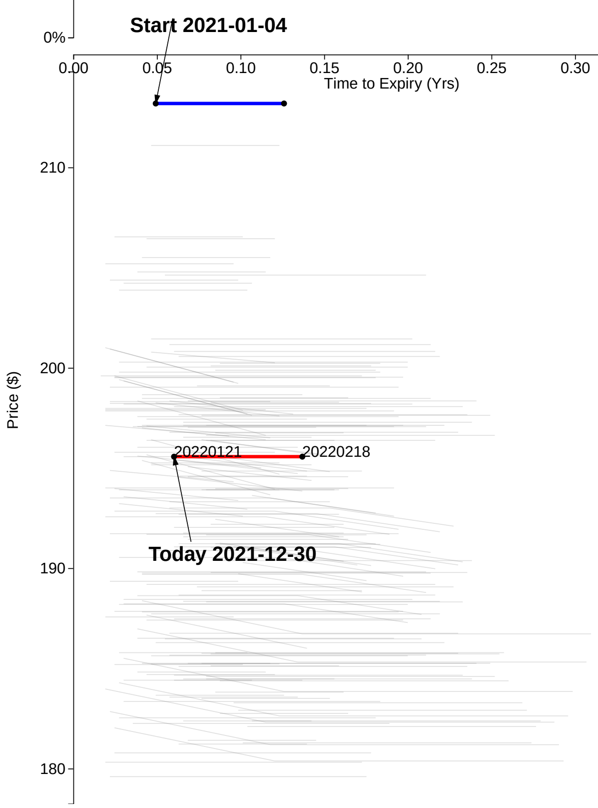

Front Month Skews:
30 YR US Treasury Bond Options
(Black)
40%
35%
30%
25%
20%
15%
10%
5%
0%
Today 2021-12-30
Start 2021-01-01
80%
85%
90%
95%
100%
105%
110%
115%
120%



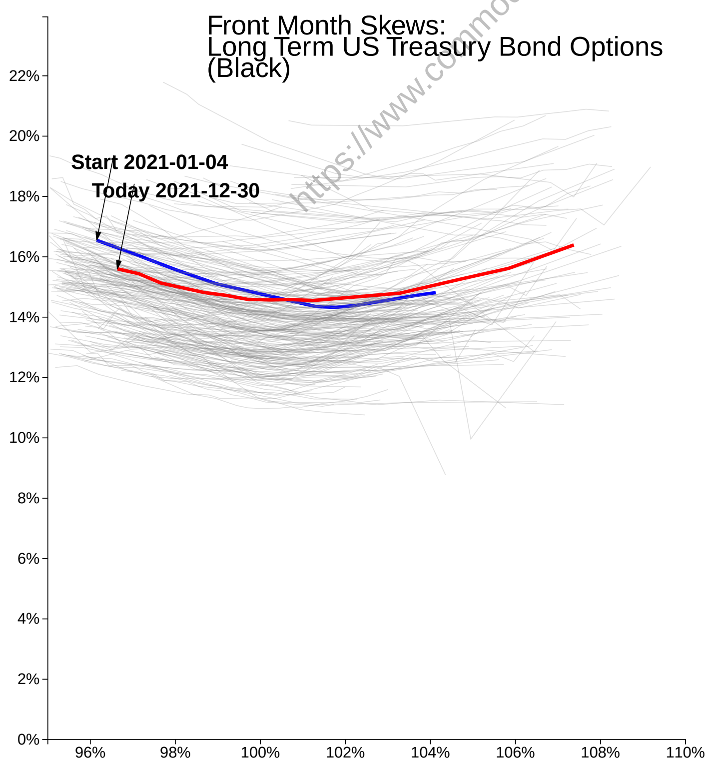
Termstructure Evolution:
Long Term US Treasury Bond Options
(Black)
Vol (%)
30%
25%
20%
15%
10%
5%
0%
20220121
20220218
Start 2021-01-04
Today 2021-12-30
0.00
0.05
0.10
0.15
0.20
0.25
0.30
Time to Expiry (Yrs)



Front Month Dynamics:
Long Term US Treasury Bond Options
(Black)
vol
price
Vol (%)
Price ($)
20%
18%
16%
14%
12%
10%
210
205
200
195
190
185
180
04-01
07-01
10-01
Time

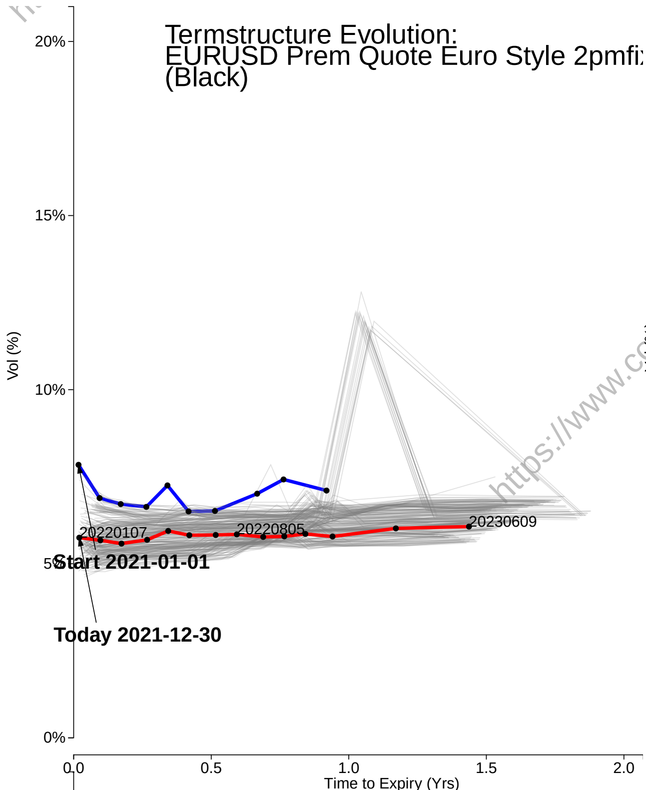


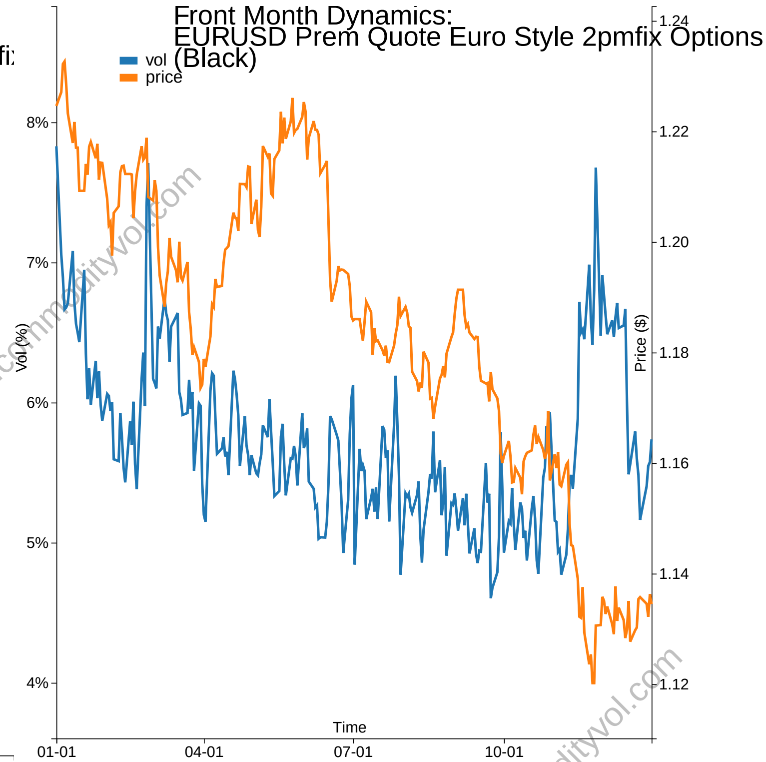
Price ($)
210
200
190
180
Start 2021-01-04
20220121
20220218
Today 2021-12-30

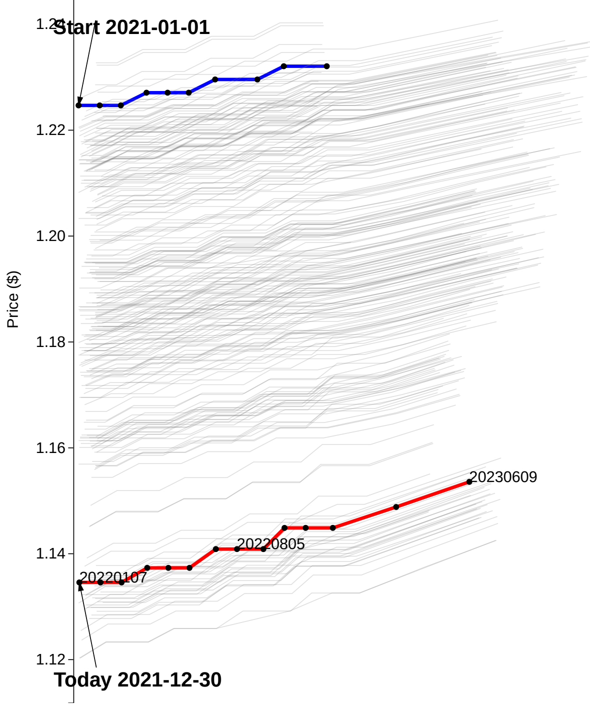


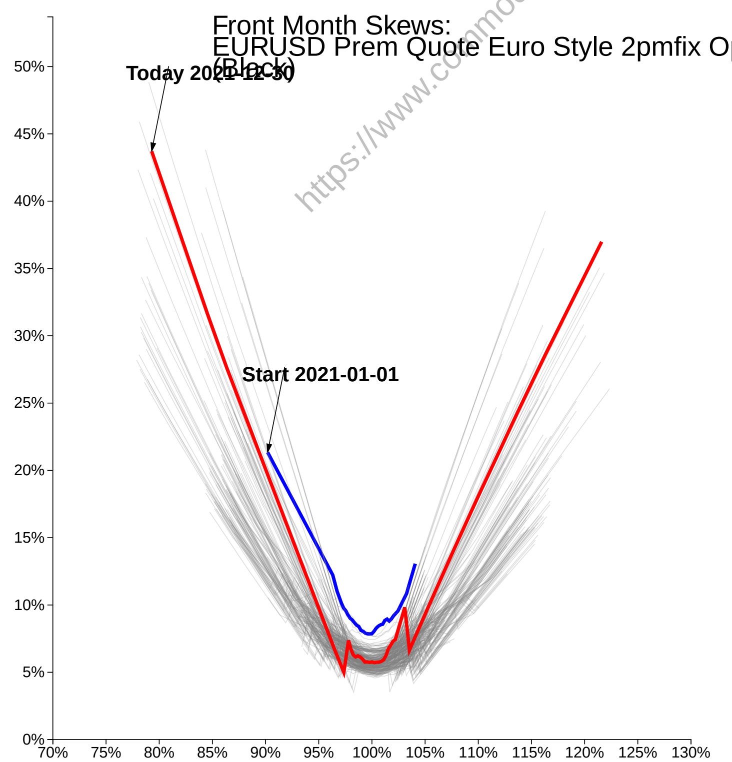
Front Month Skews:
Long Term US Treasury Bond Options
(Black)
Start 2021-01-04
Today 2021-12-30
22%
20%
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
96%
98%
100%
102%
104%
106%
108%
110%

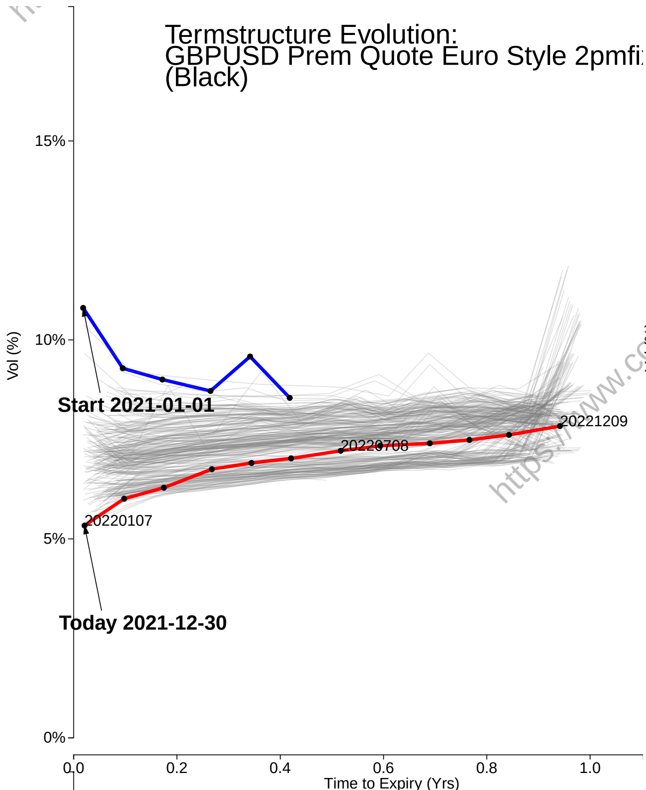
Foreign Exchange


Termstructure Evolution:
EURUSD Prem Quote Euro Style 2pmfi
(Black)
Vol (%)
Time to Expiry (Yrs)
20220107
20220805
20230609
Start 2021-01-01
Today 2021-12-30

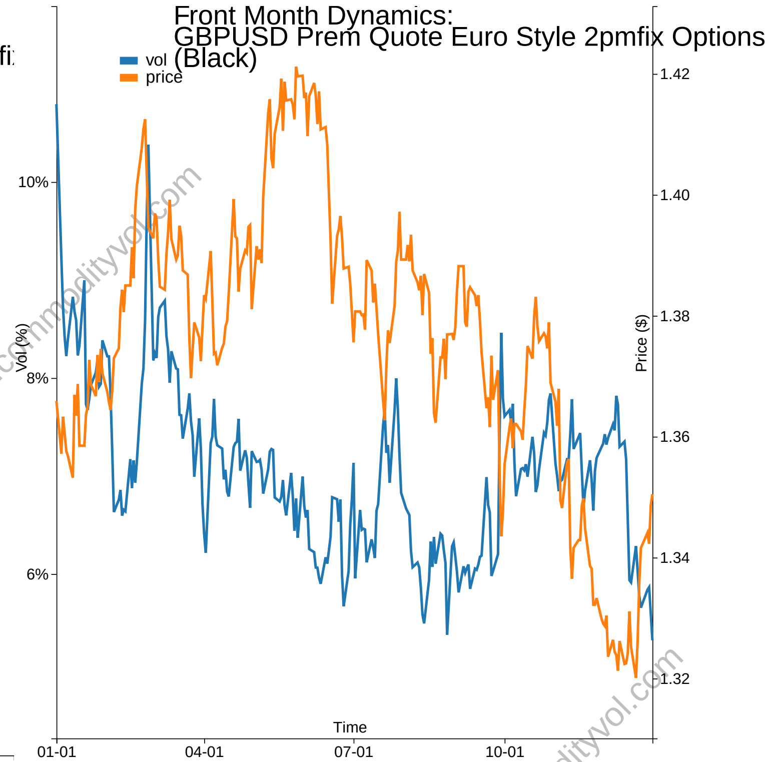

Front Month Dynamics:
EURUSD Prem Quote Euro Style 2pmfix Options
(Black)
vol
price
Vol (%)
Price ($)
Time


Price ($)
Start 2021-01-01
20230609
20220805
20220107
Today 2021-12-30

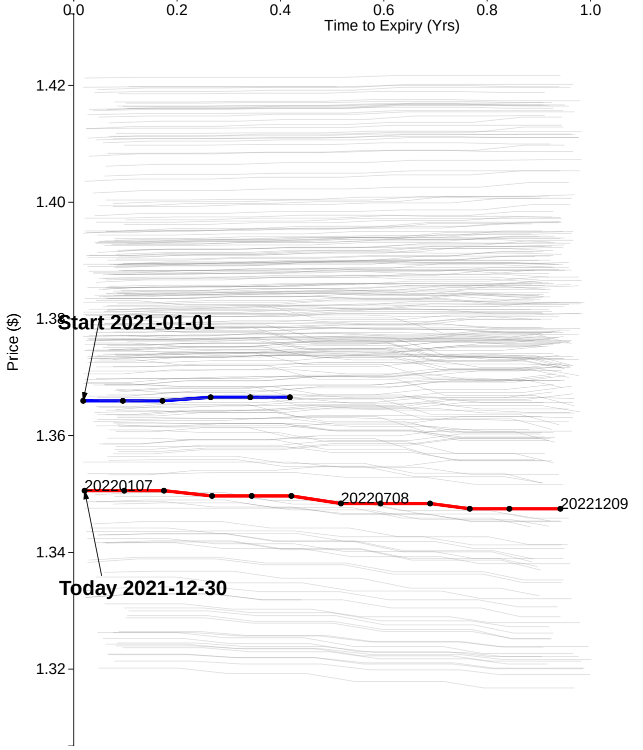

Front Month Skews:
EURUSD Prem Quote Euro Style 2pmfix O
(Black)
Today 2021-12-30
Start 2021-01-01



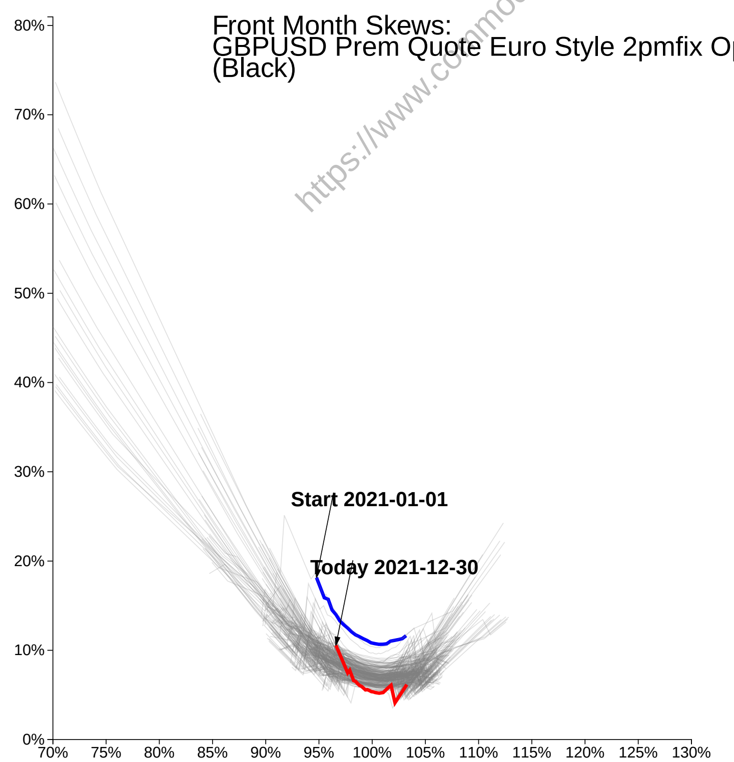
Termstructure Evolution:
GBPUSD Prem Quote Euro Style 2pmfi
(Black)
Vol (%)
15%
10%
5%
0%
Start 2021-01-01
Today 2021-12-30
20220107
20220708
20221209
0.0
0.2
0.4
0.6
0.8
1.0
Time to Expiry (Yrs)



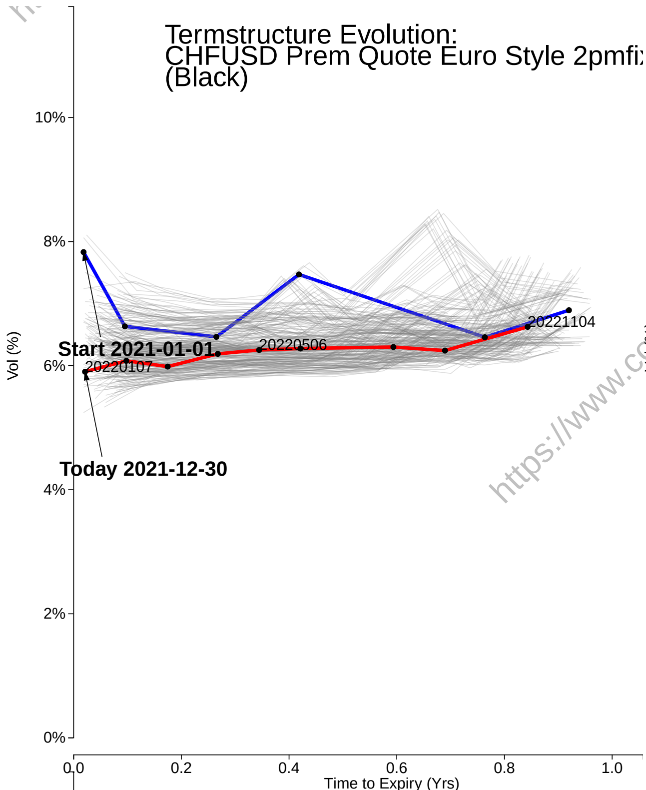
Front Month Dynamics:
GBPUSD Prem Quote Euro Style 2pmfix Options
(Black)
vol
price
Vol (%)
Price ($)
10%
8%
6%
1.42
1.40
1.38
1.36
1.34
1.32
Time
01-01
04-01
07-01
10-01

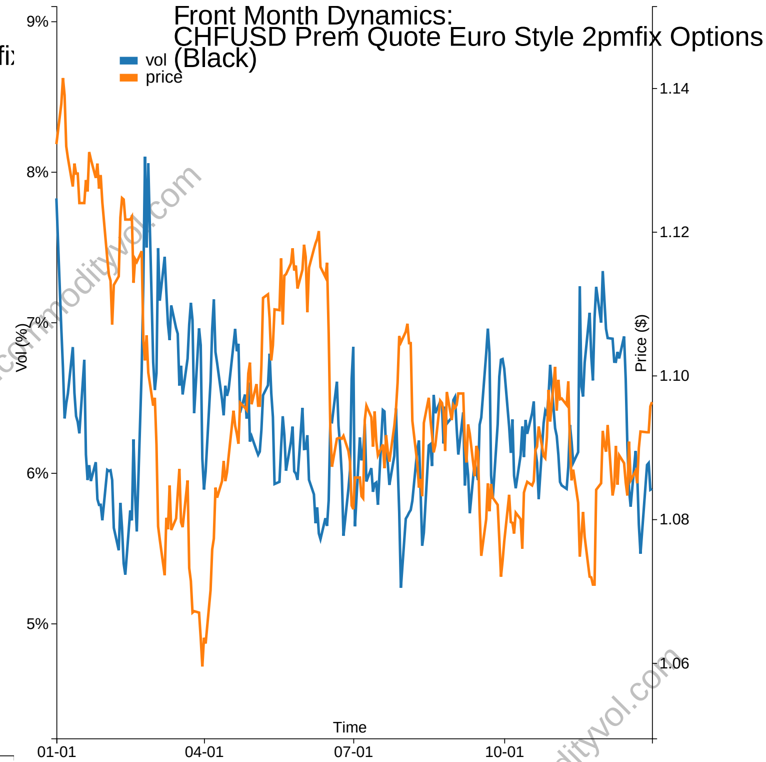


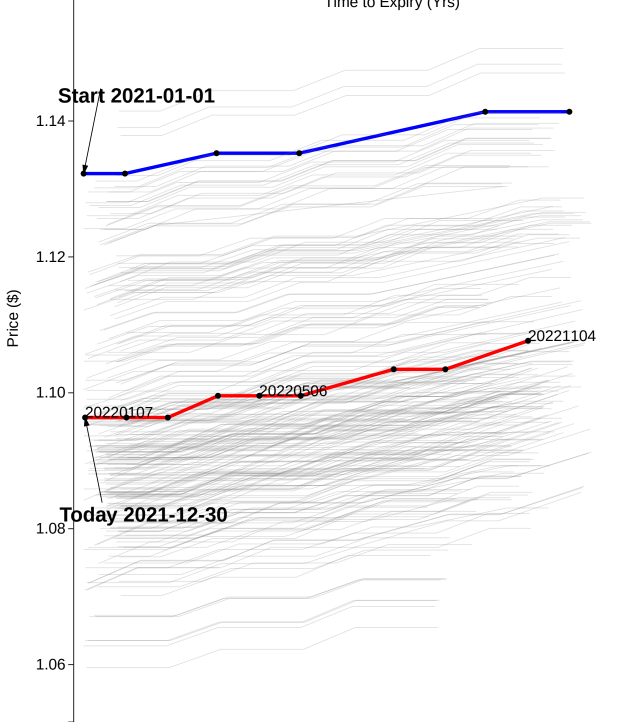
Price ($)
1.42
1.40
1.38
1.36
1.34
1.32
Start 2021-01-01
Today 2021-12-30
20220107
20220708
20221209

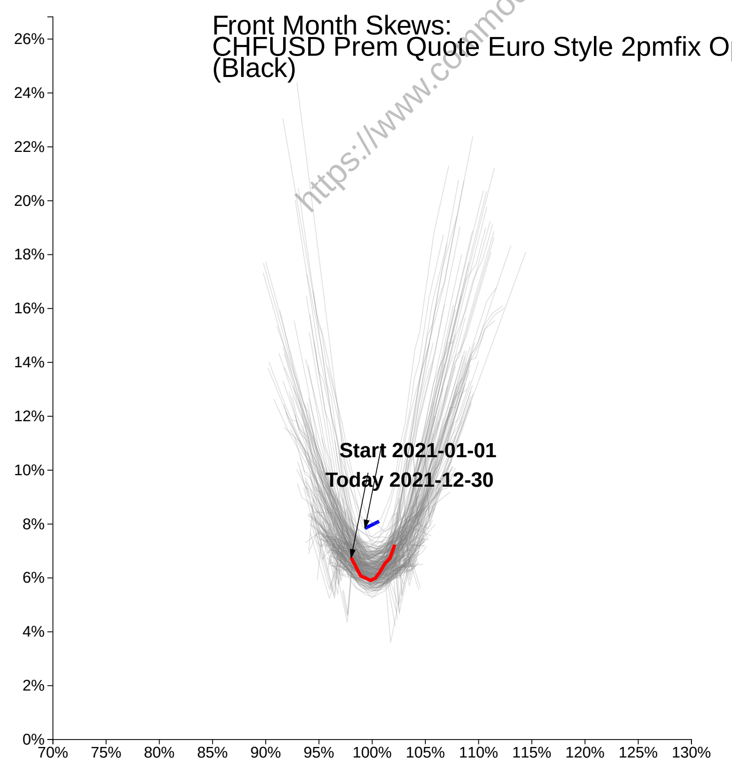


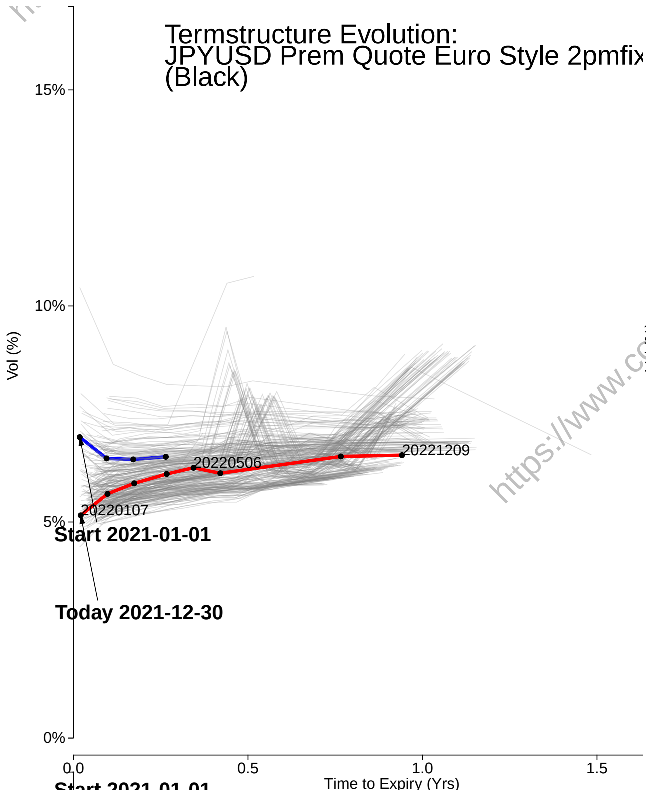
Front Month Skews:
GBPUSD Prem Quote Euro Style 2pmfix O
(Black)
80%
70%
60%
50%
40%
30%
20%
10%
0%
Start 2021-01-01
Today 2021-12-30
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

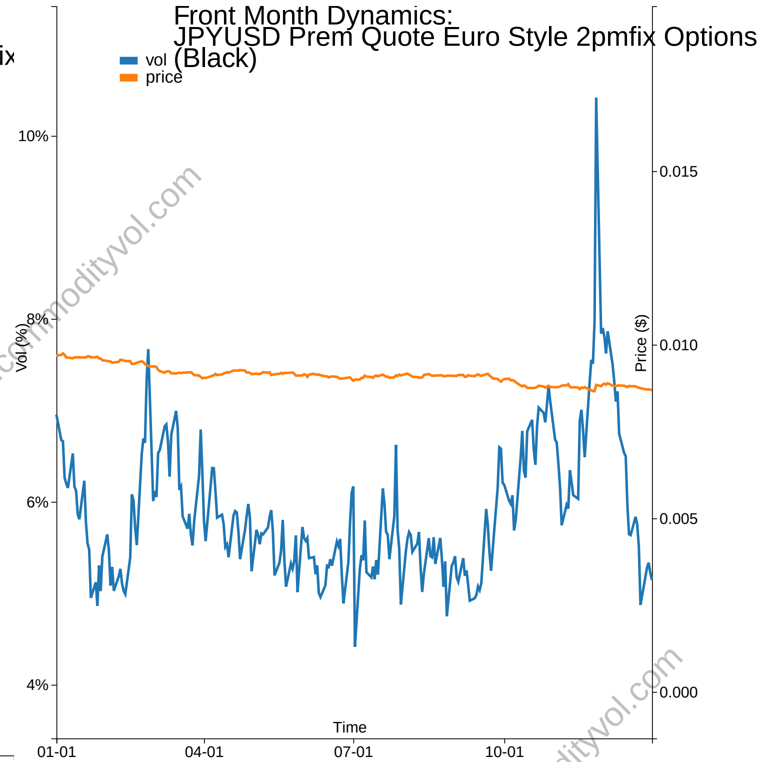

Termstructure Evolution:
CHFUSD Prem Quote Euro Style 2pmfi:
(Black)
Vol (%)
10%
8%
6%
4%
2%
0%
Start 2021-01-01
Today 2021-12-30
20220107
20220506
20221104
0.0
0.2
0.4
0.6
0.8
1.0
Time to Expiry (Yrs)

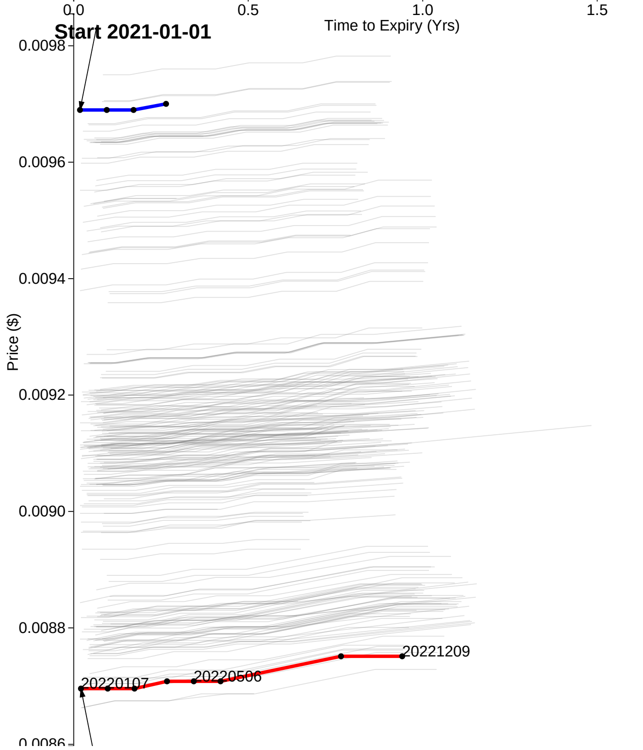

Front Month Dynamics:
CHFUSD Prem Quote Euro Style 2pmfix Options
(Black)
vol
price
Vol (%)
Price ($)
9%
8%
7%
6%
5%
1.14
1.12
1.10
1.08
1.06
Time
01-01
04-01
07-01
10-01

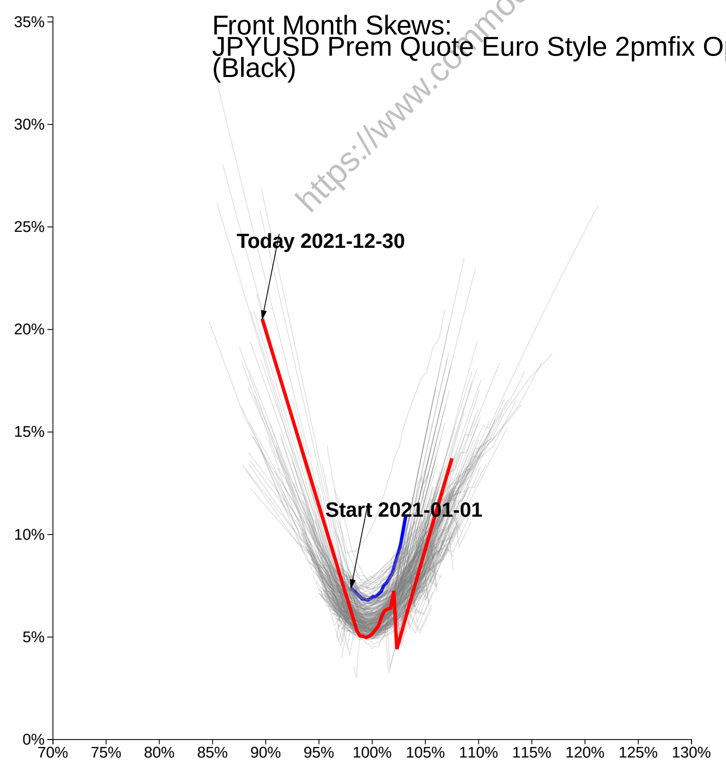

Price ($)
1.14
1.12
1.10
1.08
1.06
Start 2021-01-01
Today 2021-12-30
20220107
20220506
20221104

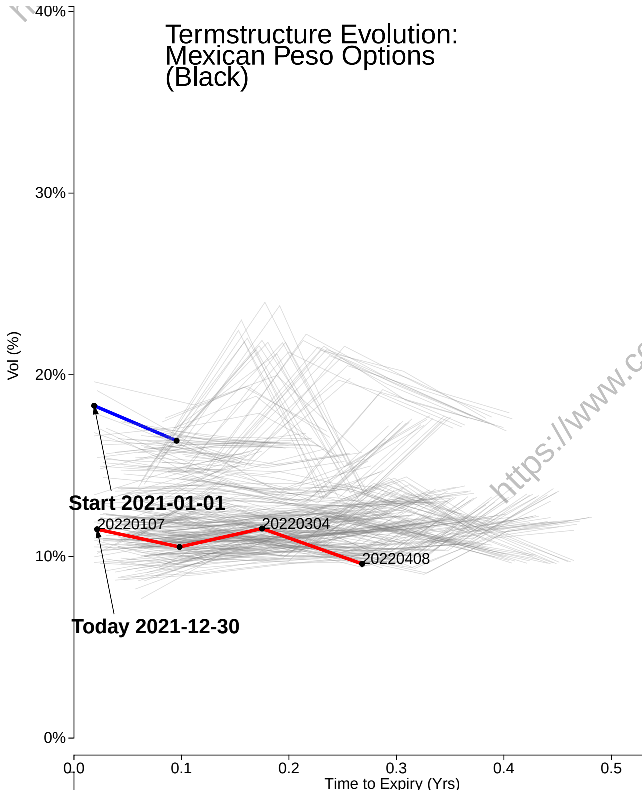

Front Month Skews:
CHFUSD Prem Quote Euro Style 2pmfix O
(Black)
26%
24%
22%
20%
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
Start 2021-01-01
Today 2021-12-30
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

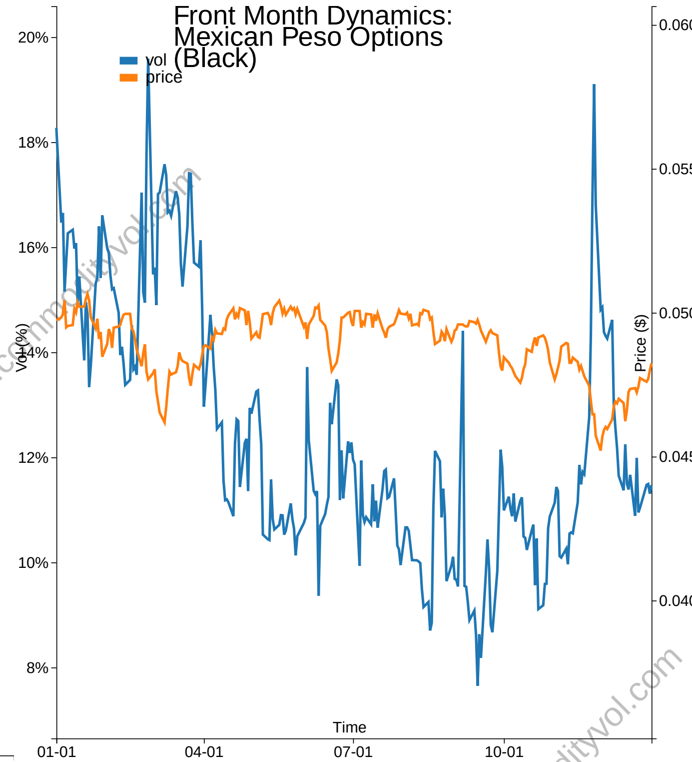

Termstructure Evolution:
JPYUSD Prem Quote Euro Style 2pmfix
(Black)
Vol (%)
Time to Expiry (Yrs)
20220506
20221209
20220107
Start 2021-01-01
Today 2021-12-30

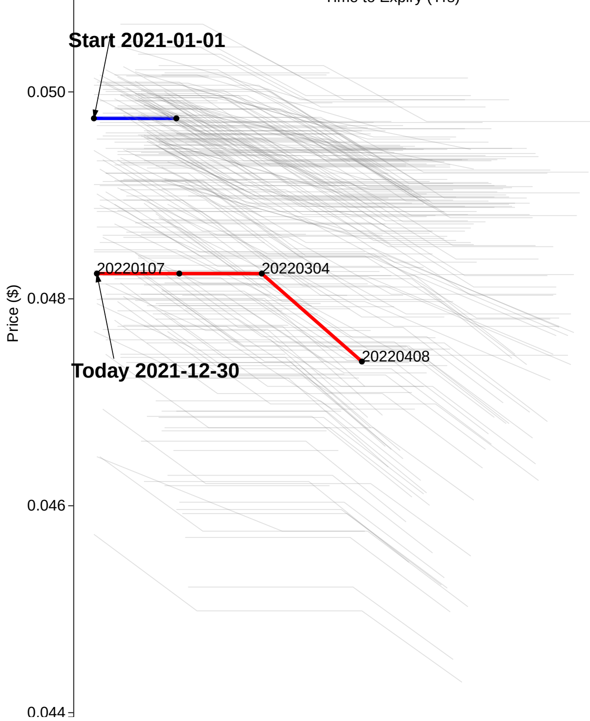

Front Month Dynamics:
JPYUSD Prem Quote Euro Style 2pmfix Options
(Black)
vol
price
Vol (%)
Price ($)
Time

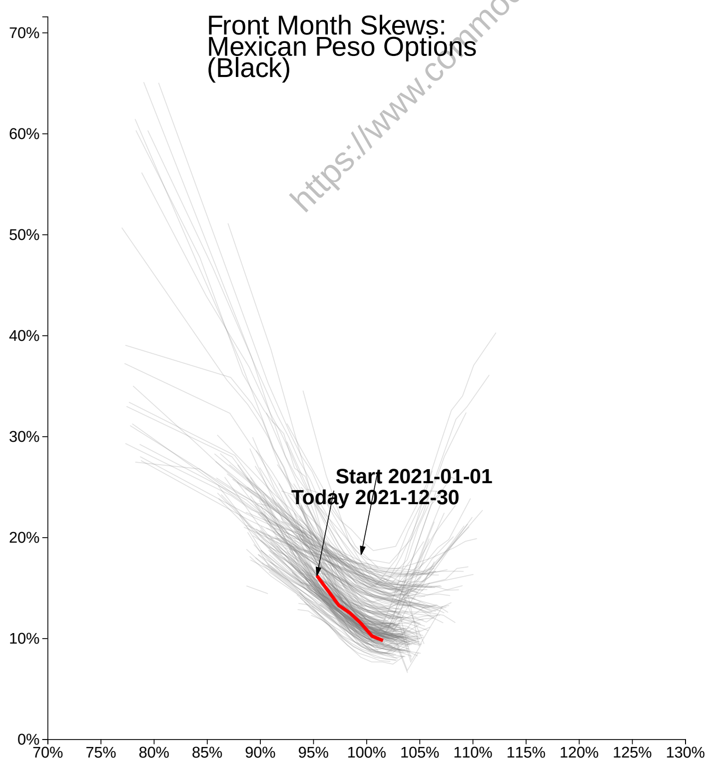

Start 2021-01-01
Price ($)
20220107
20220506
20221209

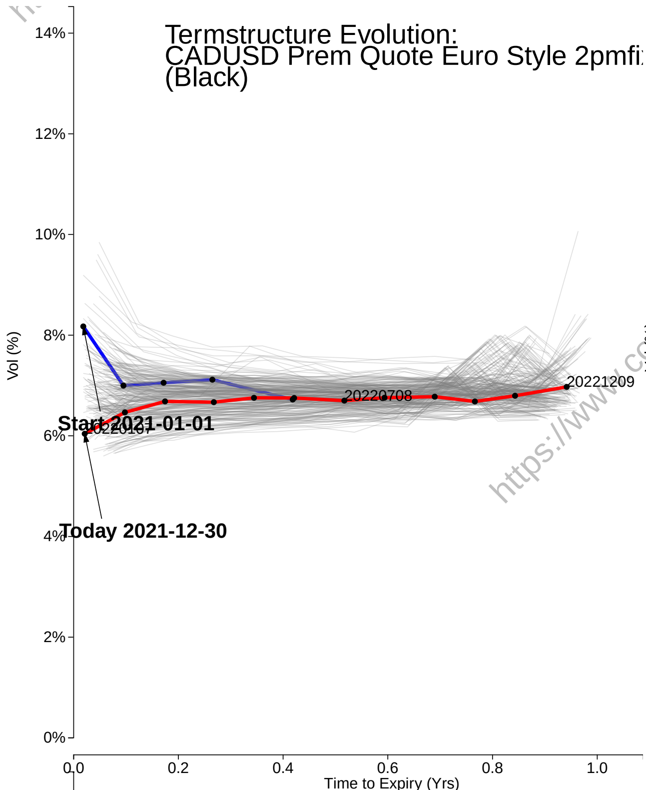

Front Month Skews:
JPYUSD Prem Quote Euro Style 2pmfix Op
(Black)
Today 2021-12-30
Start 2021-01-01

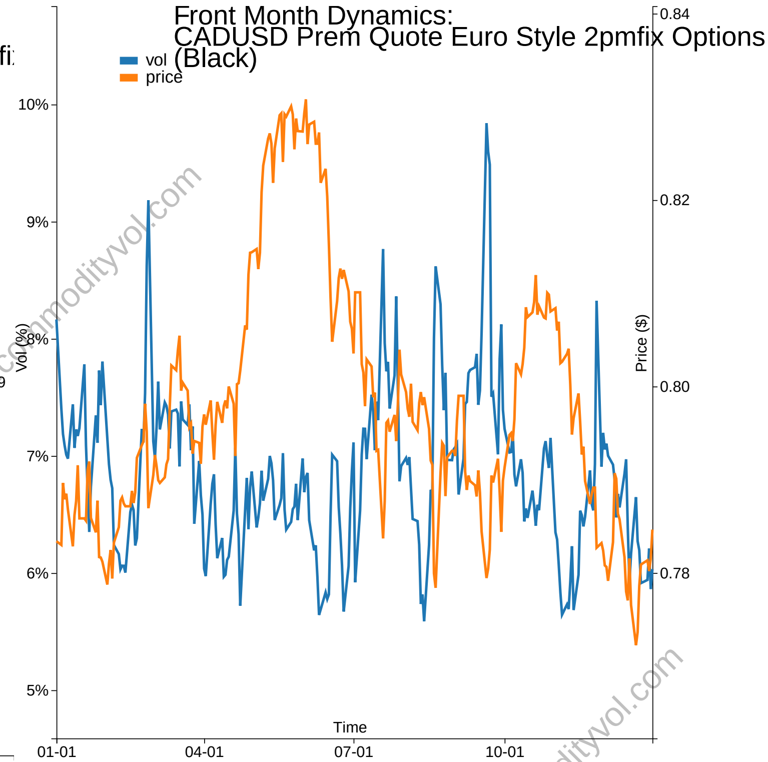

Termstructure Evolution:
Mexican Peso Options
(Black)
Vol (%)
40%
30%
20%
10%
0%
Start 2021-01-01
Today 2021-12-30
20220107
20220304
20220408
0.0
0.1
0.2
0.3
0.4
0.5
Time to Expiry (Yrs)

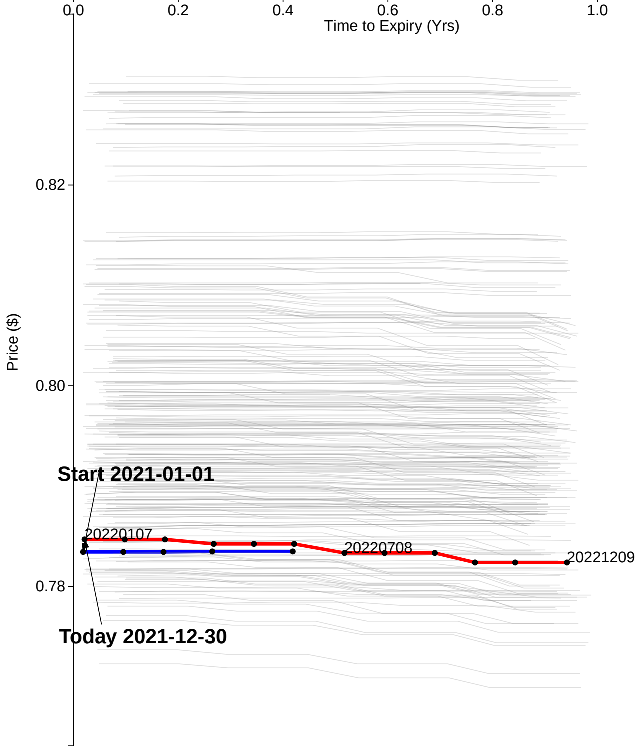

Front Month Dynamics:
Mexican Peso Options
(Black)
vol
price
Vol (%)
20%
18%
16%
14%
12%
10%
8%
Price ($)
0.060
0.055
0.050
0.045
0.040
Time
01-01
04-01
07-01
10-01
https://www.commodityvol.com

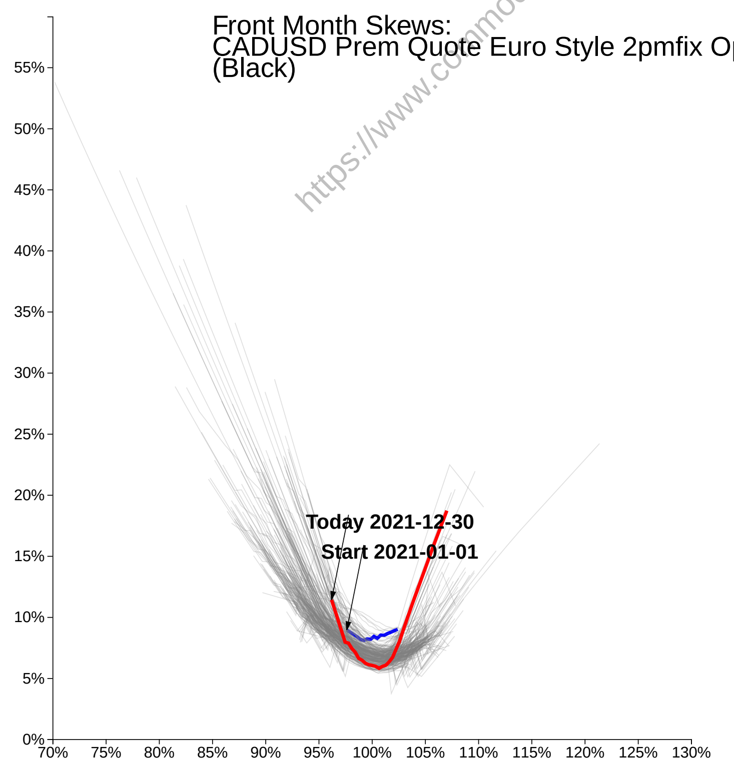

Start 2021-01-01
Today 2021-12-30
20220107
20220304
20220408
Price ($)
0.050
0.048
0.046
0.044

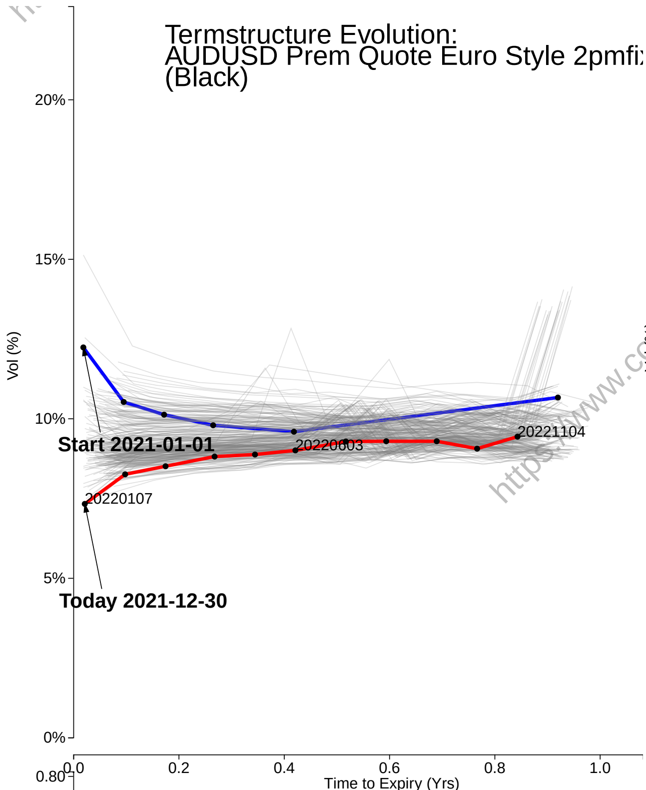

Front Month Skews:
Mexican Peso Options
(Black)
Start 2021-01-01
Today 2021-12-30
70%
60%
50%
40%
30%
20%
10%
0%
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%
https://www.commodityvol.com

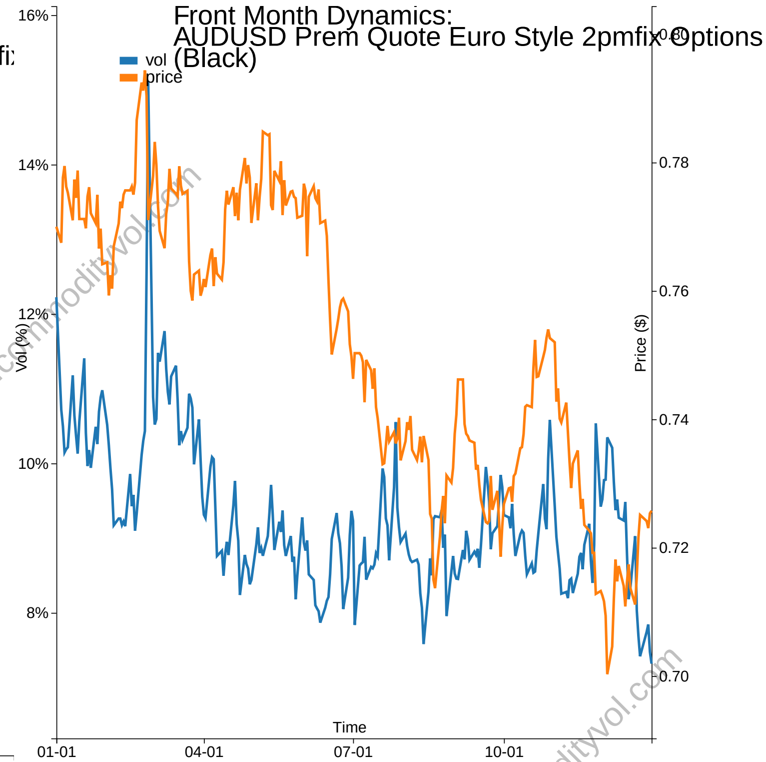

Termstructure Evolution:
CADUSD Prem Quote Euro Style 2pmfi
(Black)
Vol (%)
Time to Expiry (Yrs)
20220107
20220708
20221209
Start 2021-01-01
Today 2021-12-30

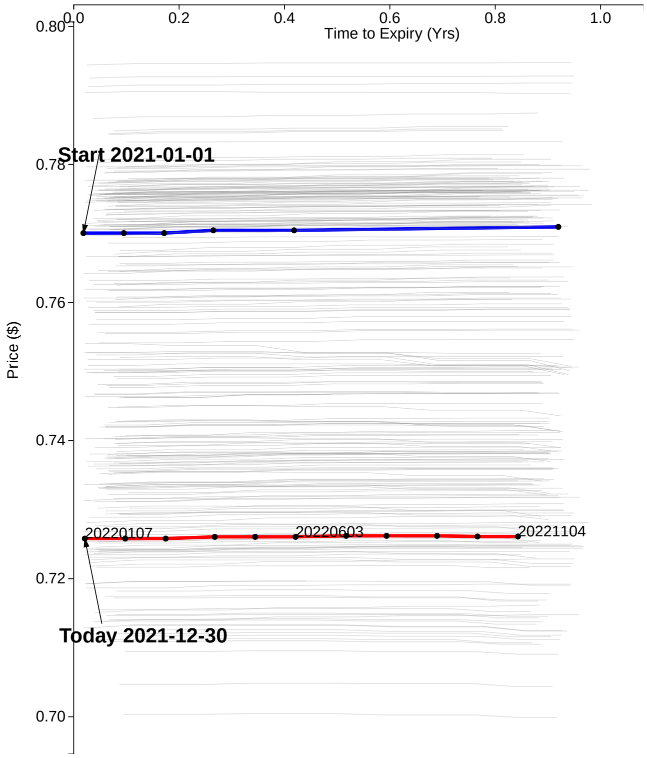

Front Month Dynamics:
CADUSD Prem Quote Euro Style 2pmfix Options
(Black)
vol
price
Vol (%)
Price ($)
Time
01-01
04-01
07-01
10-01

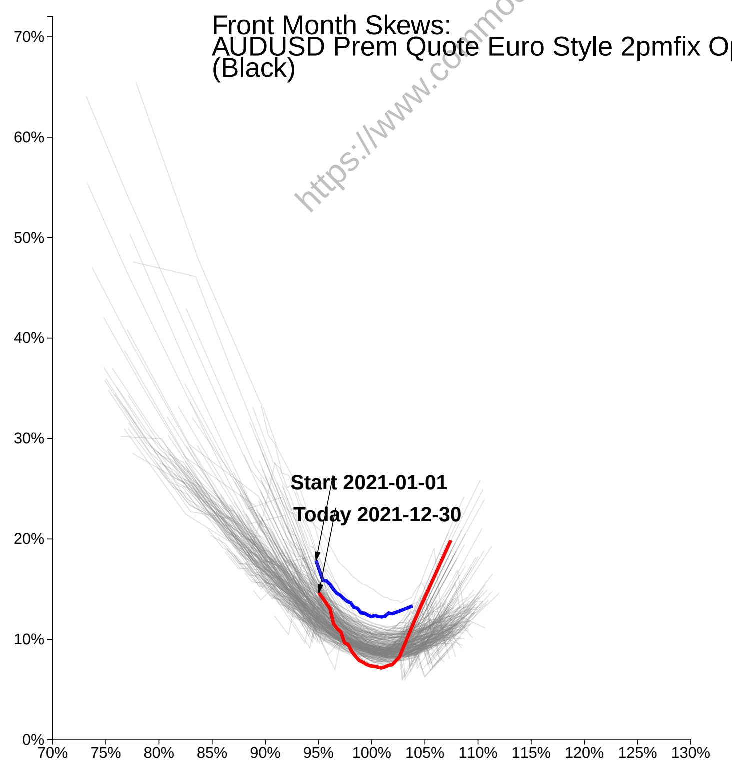

Price ($)
20220107
20220708
20221209
Start 2021-01-01
Today 2021-12-30

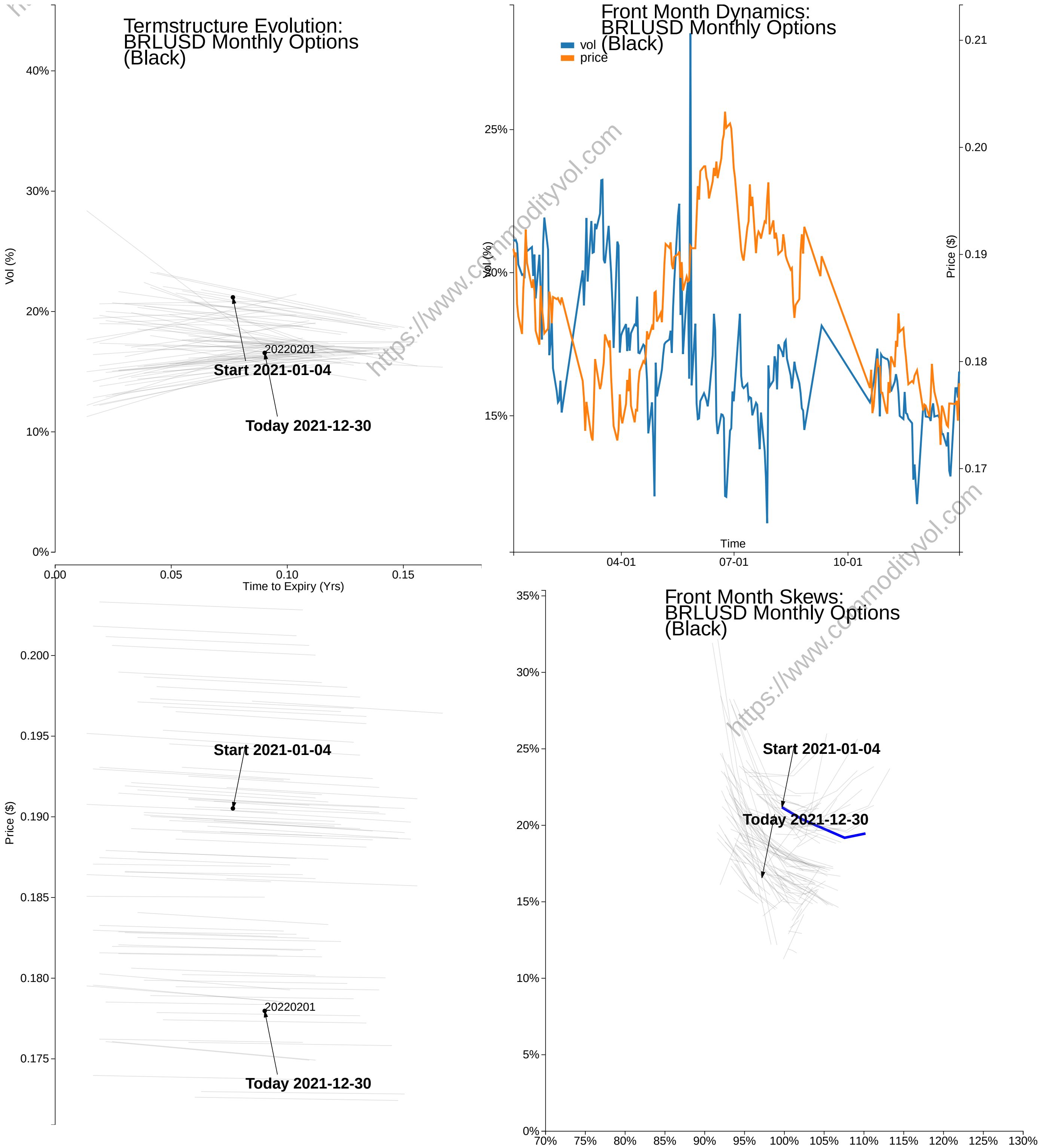

Front Month Skews:
CADUSD Prem Quote Euro Style 2pmfix O
(Black)
Today 2021-12-30
Start 2021-01-01

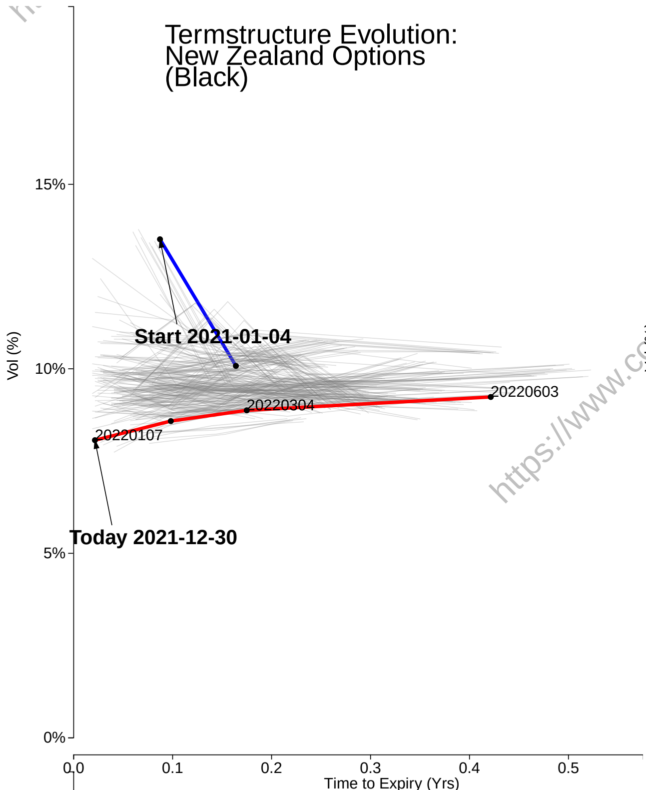

Termstructure Evolution:
AUDUSD Prem Quote Euro Style 2pmfi
(Black)
Vol (%)
Start 2021-01-01
Today 2021-12-30
20220107
20220603
20221104
Time to Expiry (Yrs)

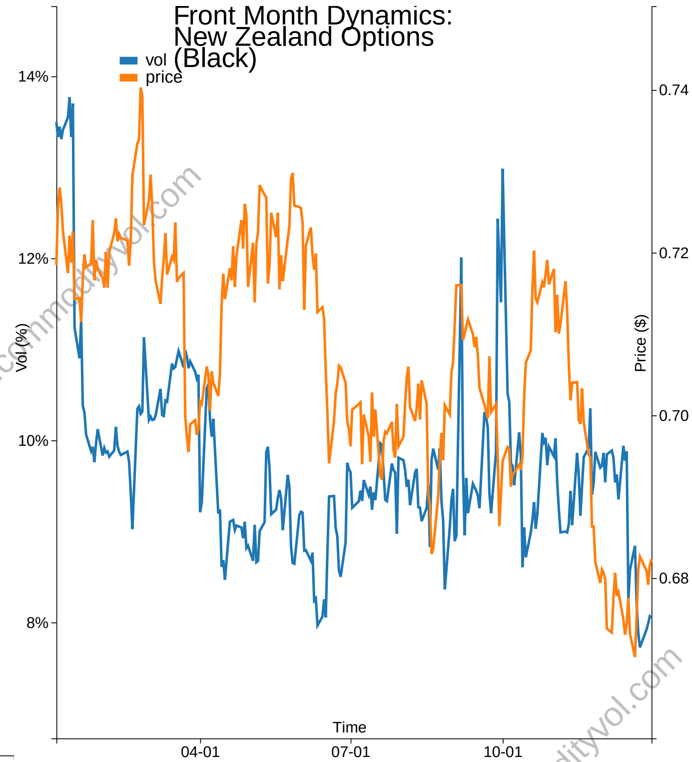

Front Month Dynamics:
AUDUSD Prem Quote Euro Style 2pmfix Options
(Black)
vol
price
Vol (%)
Price ($)
Time

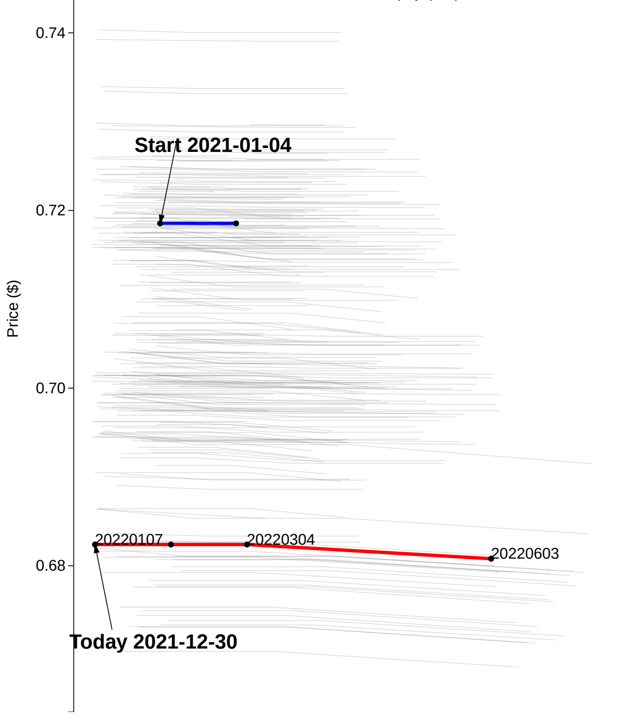

Price ($)
Start 2021-01-01
Today 2021-12-30
20220107
20220603
20221104

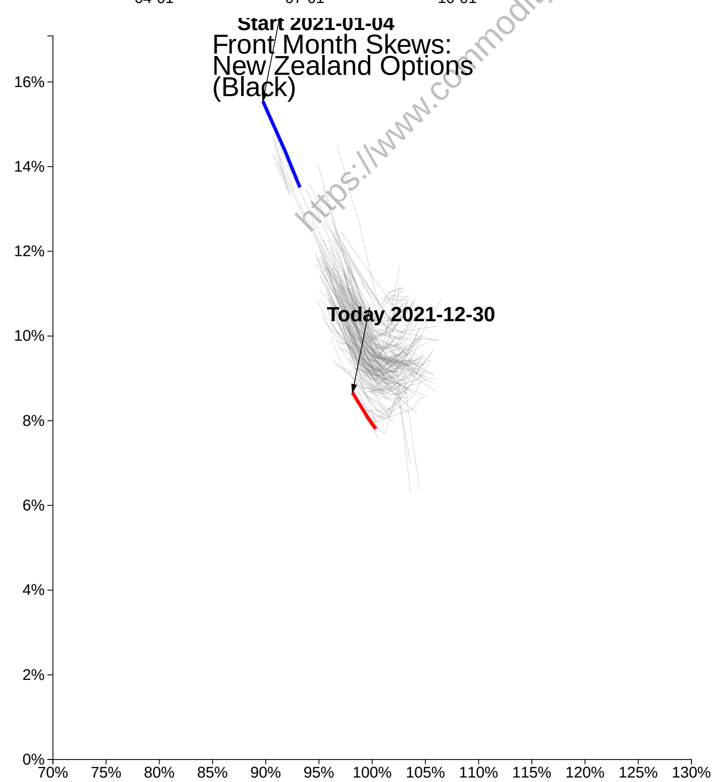

Front Month Skews:
AUDUSD Prem Quote Euro Style 2pmfix O
(Black)
Start 2021-01-01
Today 2021-12-30

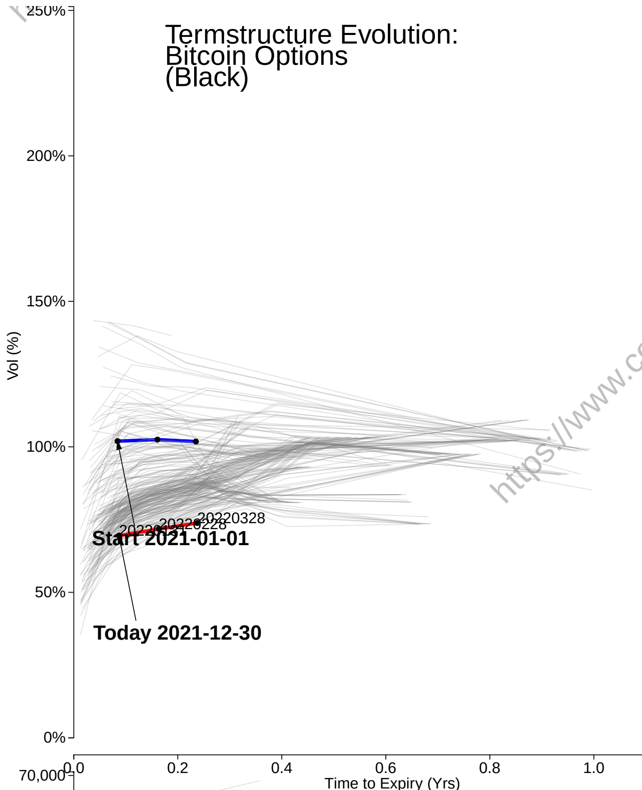

Termstructure Evolution:
BRLUSD Monthly Options
(Black)
Vol (%)
40%
30%
20%
10%
0%
20220201
Start 2021-01-04
Today 2021-12-30
0.00
0.05
0.10
0.15
Time to Expiry (Yrs)
Front Month Dynamics:
BRLUSD Monthly Options
(Black)
vol
price
25%
20%
15%
Price ($)
0.21
0.20
0.19
0.18
0.17
Time
04-01
07-01
10-01
0.200
0.195
0.190
0.185
0.180
0.175
Front Month Skews:
BRLUSD Monthly Options
(Black)
35%
30%
25%
20%
15%
10%
5%
0%
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%
https://www.commodityvol.com

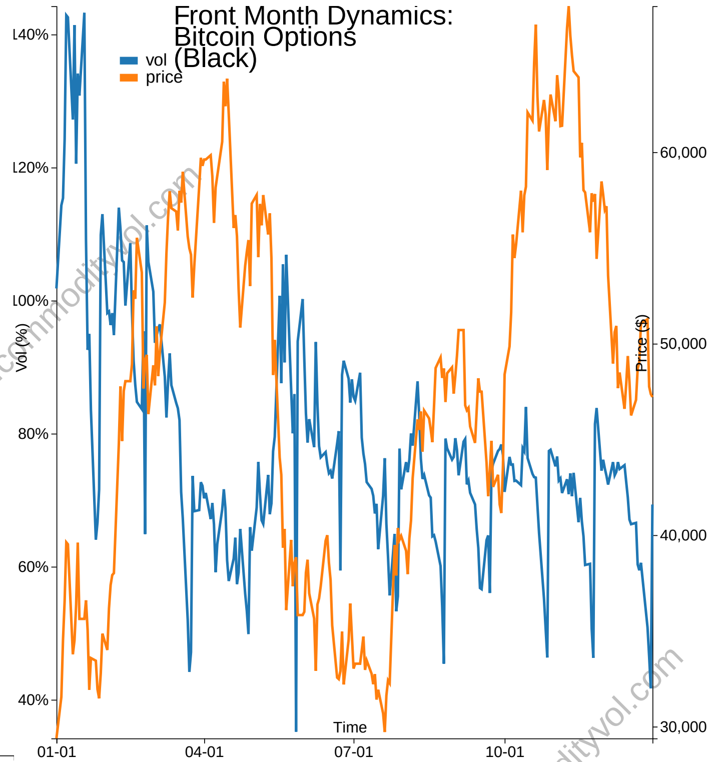

Termstructure Evolution:
New Zealand Options
(Black)
Start 2021-01-04
Today 2021-12-30
20220107
20220304
20220603
Vol (%)
Time to Expiry (Yrs)

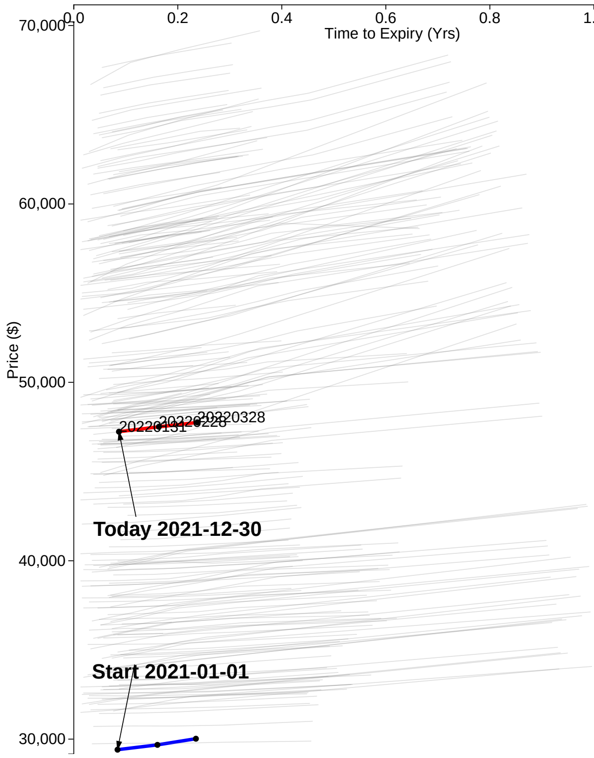

Front Month Dynamics:
New Zealand Options
(Black)
vol
price
Vol (%)
Price ($)
Time
04-01
07-01
10-01

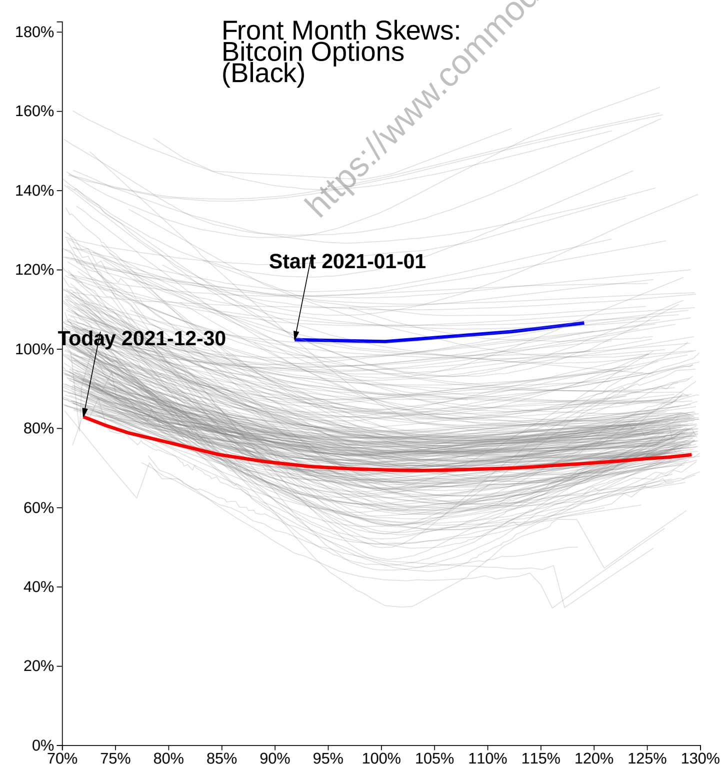

Start 2021-01-04
Today 2021-12-30
20220107
20220304
20220603
Price ($)


Front Month Skews:
New Zealand Options
(Black)
Start 2021-01-04
Today 2021-12-30

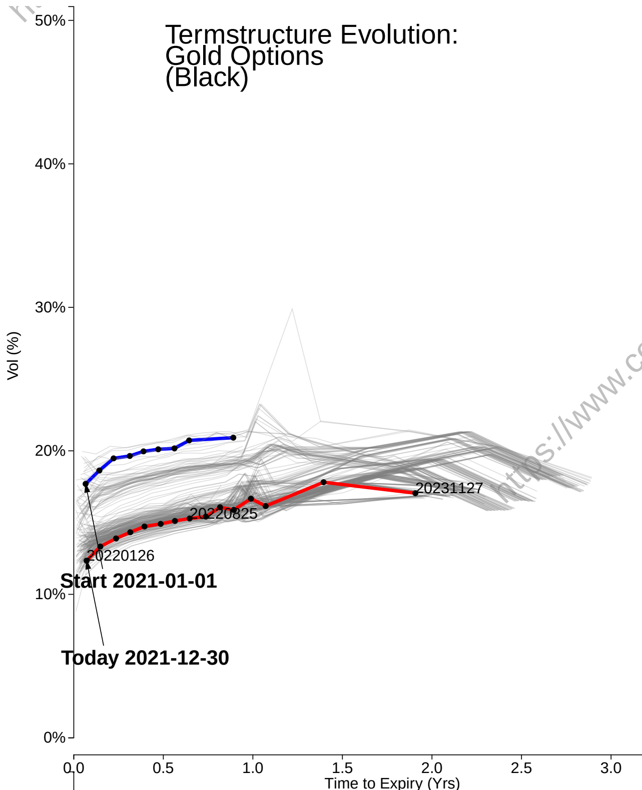

Termstructure Evolution:
Bitcoin Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2021-01-01
Today 2021-12-30
20220131
20220228
20220328

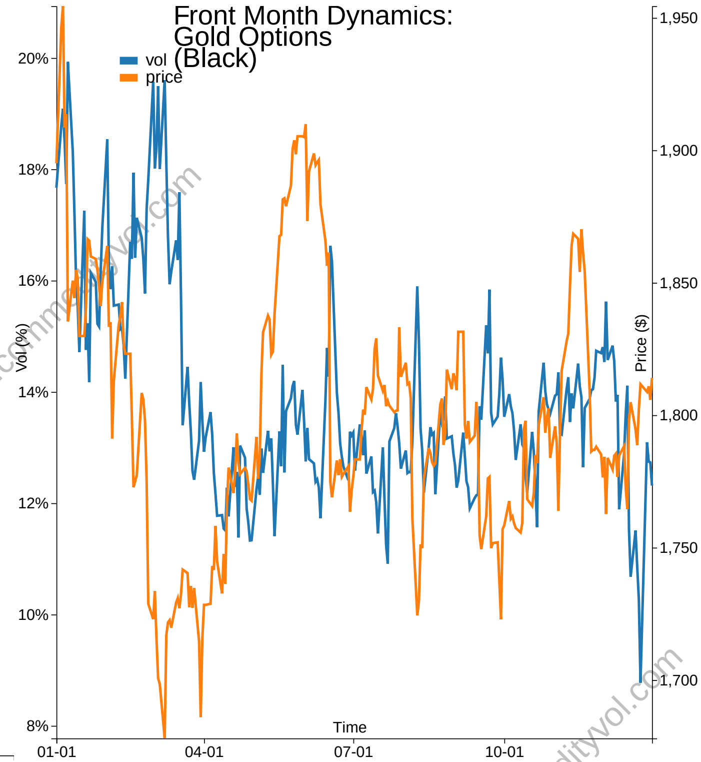

Front Month Dynamics:
Bitcoin Options
(Black)
vol
price
Vol (%)
Price ($)
Time

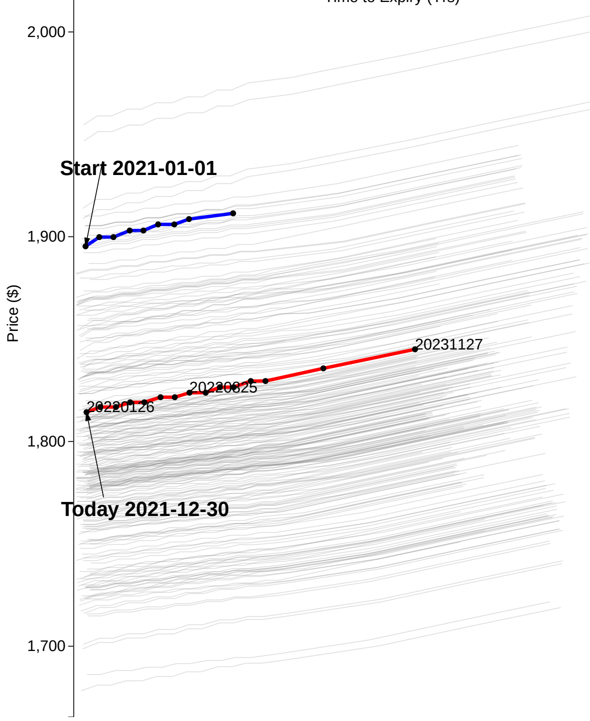

Price ($)
Today 2021-12-30
Start 2021-01-01
20220131
20220228
20220328

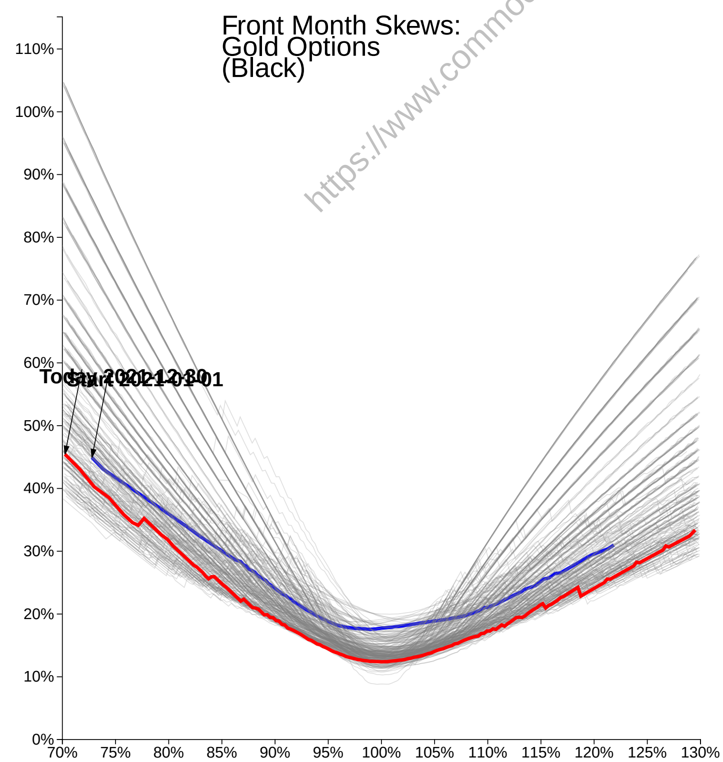

Front Month Skews:
Bitcoin Options
(Black)
Start 2021-01-01
Today 2021-12-30

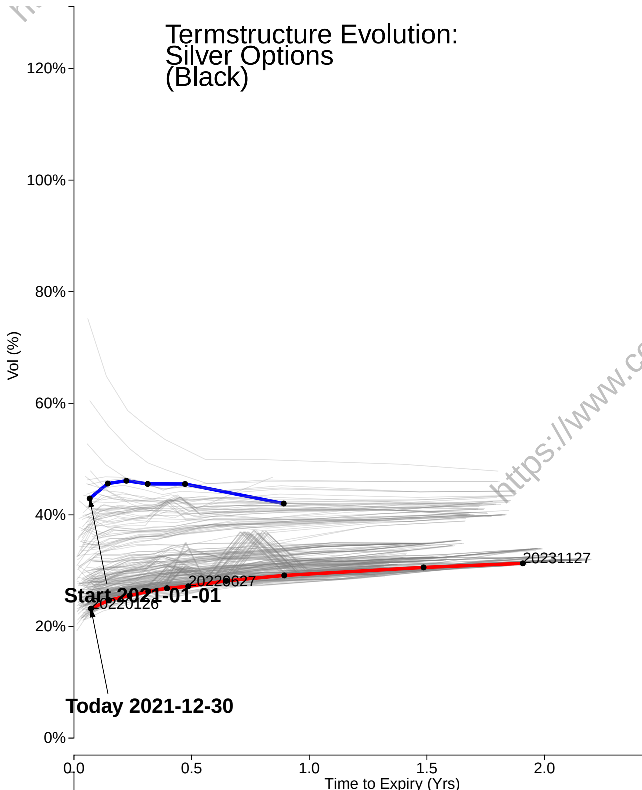
Metals, Materials and so forth

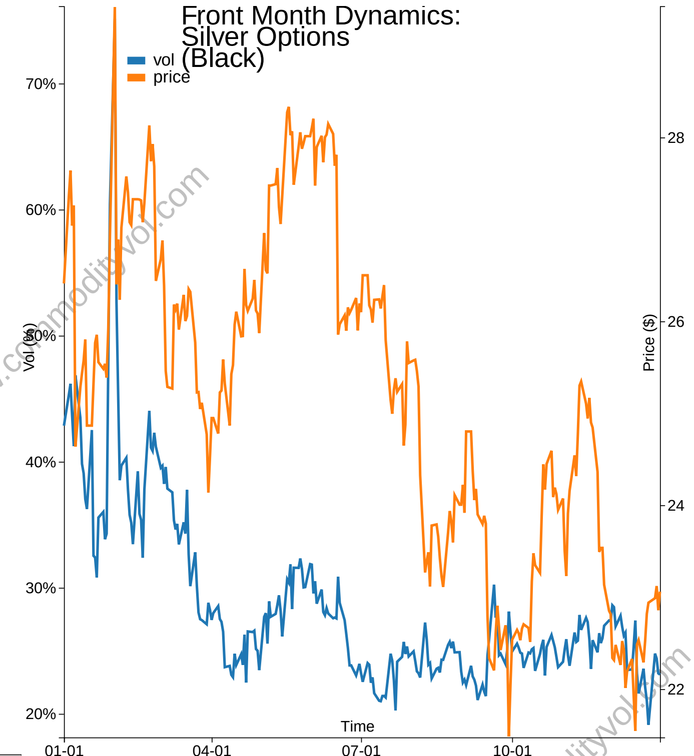

Termstructure Evolution:
Gold Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220126
20220825
20231127
Start 2021-01-01
Today 2021-12-30

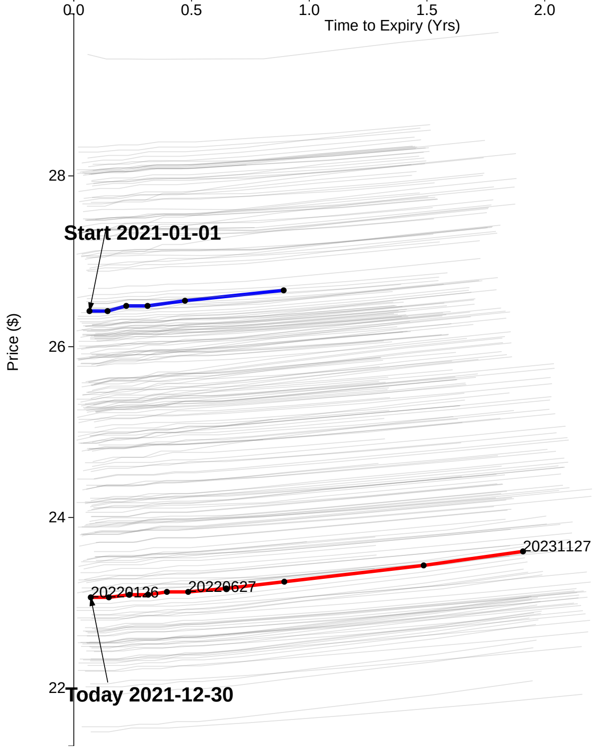

Front Month Dynamics:
Gold Options
(Black)
vol
price
Vol (%)
Price ($)
Time

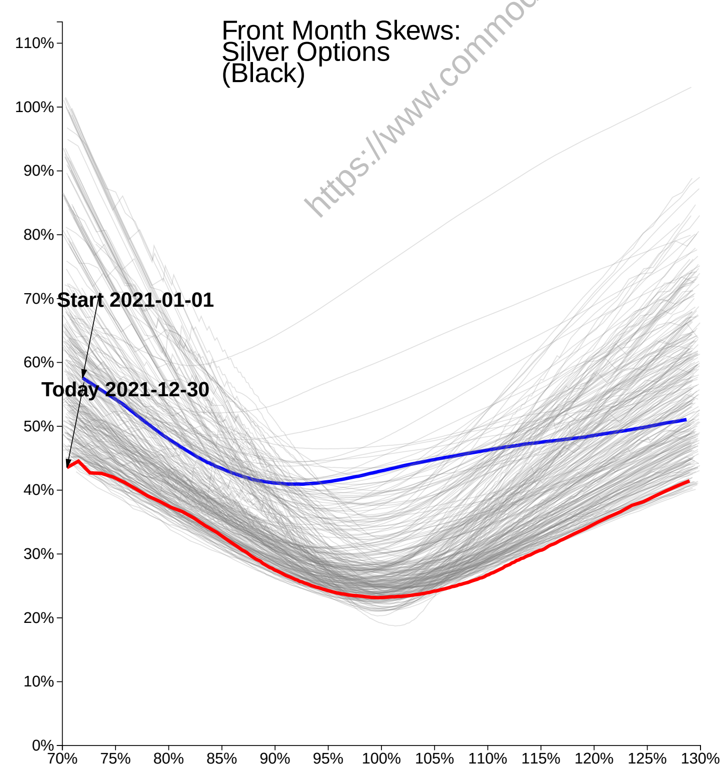

Price ($)
Start 2021-01-01
20220126
20220825
20231127
Today 2021-12-30

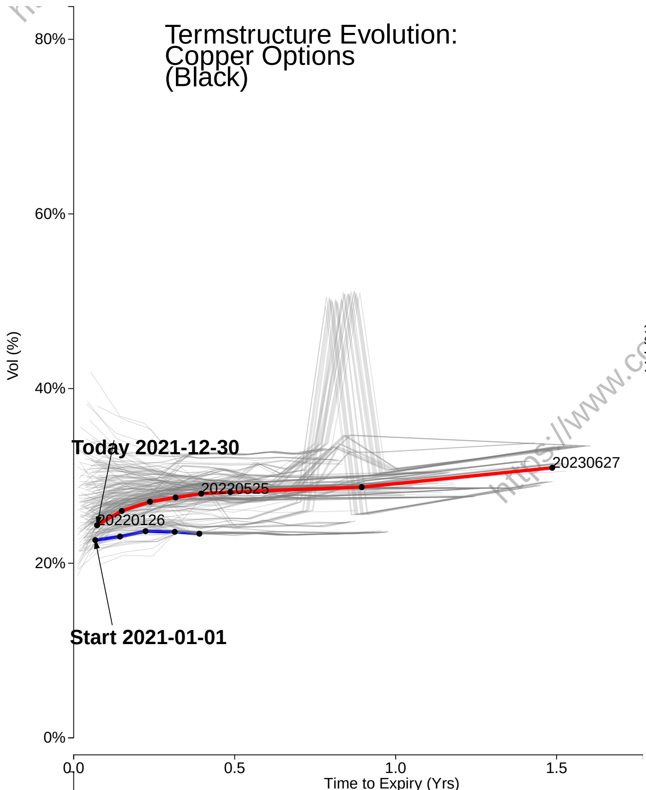

Front Month Skews:
Gold Options
(Black)
Today 2021-12-30
Start 2021-01-01

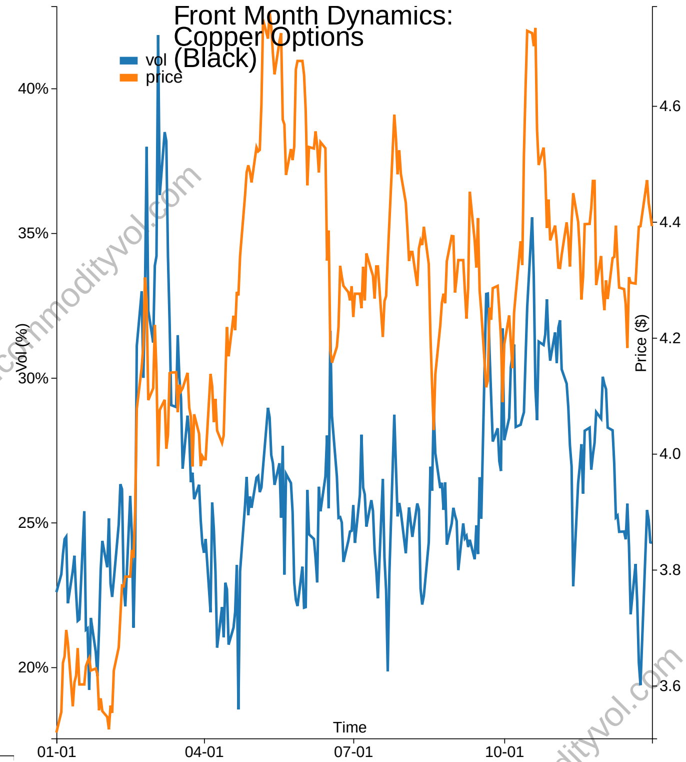

Termstructure Evolution:
Silver Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2021-01-01
Today 2021-12-30
20220126
20220627
20231127

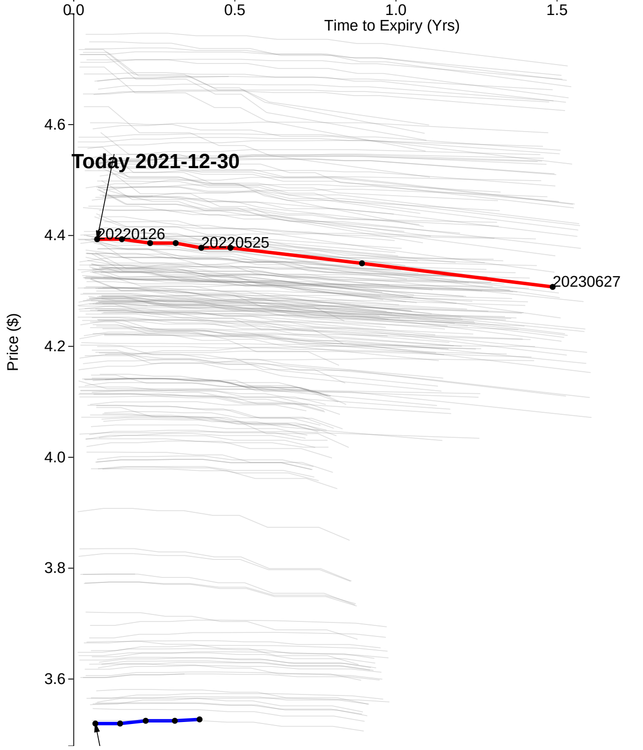

Front Month Dynamics:
Silver Options
(Black)
vol
price
Vol (%)
Price ($)
Time

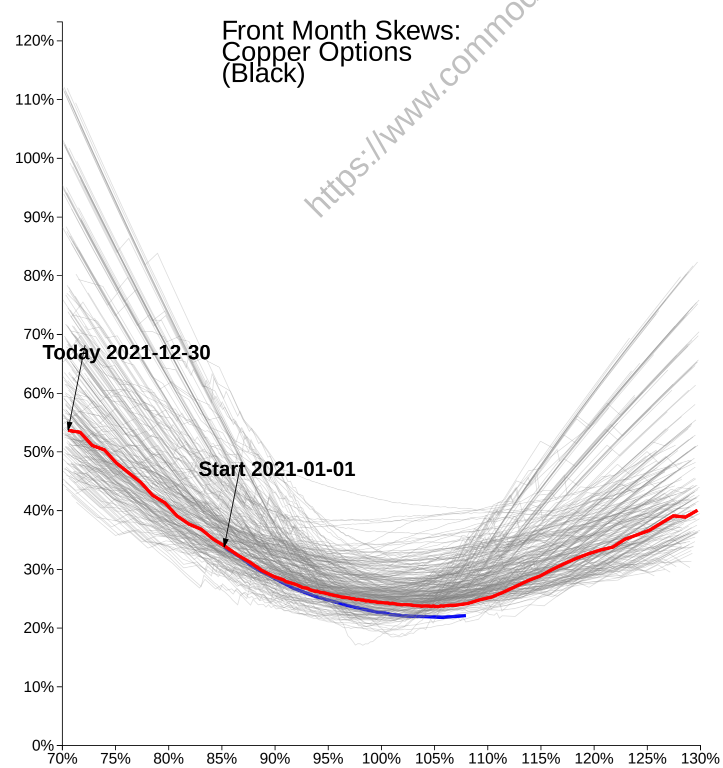

Price ($)
Start 2021-01-01
Today 2021-12-30
20220126
20220627
20231127

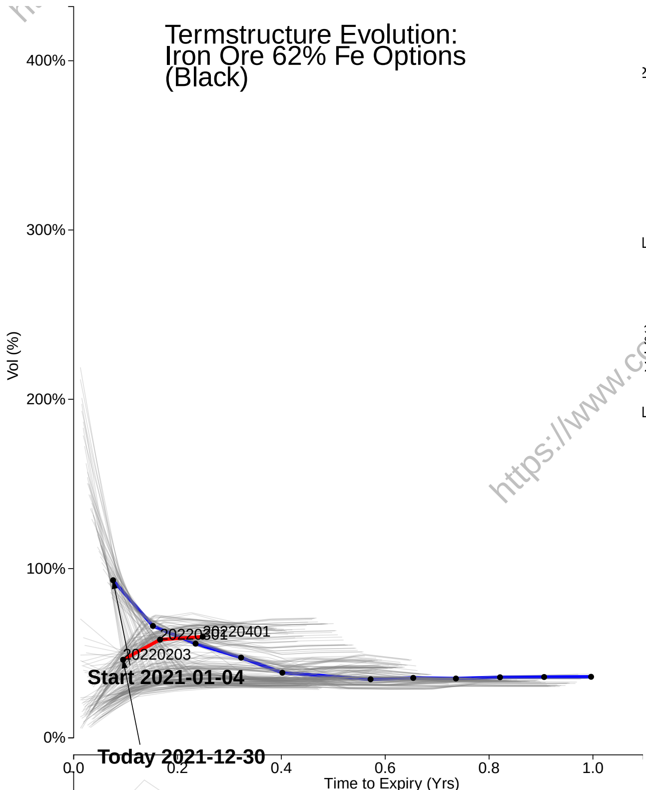

Front Month Skews:
Silver Options
(Black)
Start 2021-01-01
Today 2021-12-30

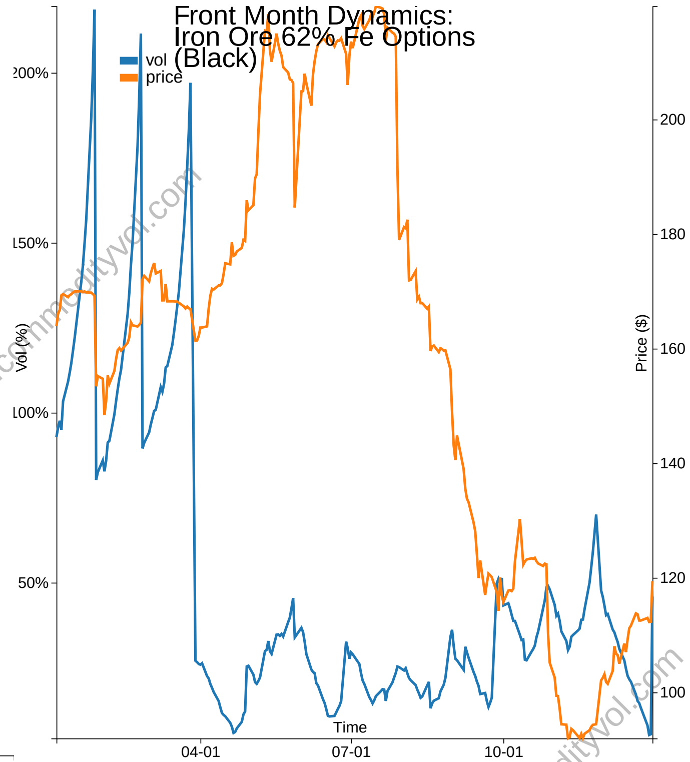

Termstructure Evolution:
Copper Options
(Black)
Vol (%)
Today 2021-12-30
Start 2021-01-01
20220126
20220525
20230627
Time to Expiry (Yrs)

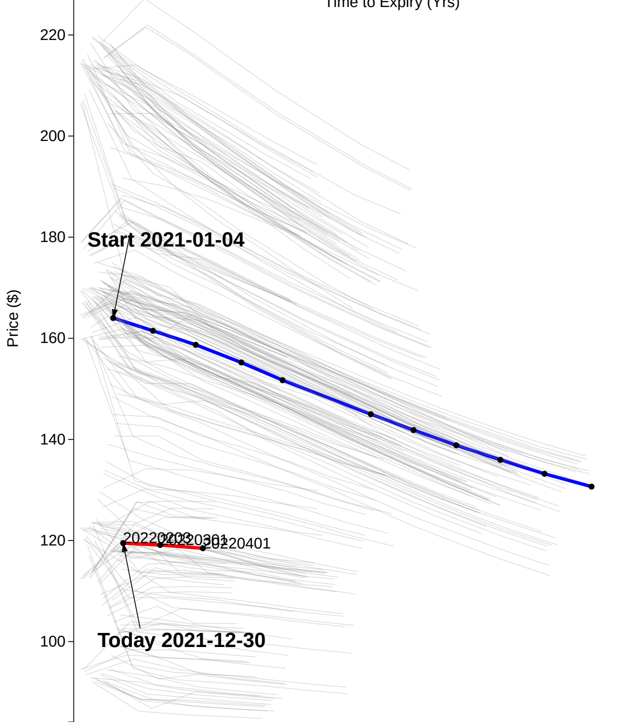

Front Month Dynamics:
Copper Options
(Black)
vol
price
Vol (%)
Price ($)
Time

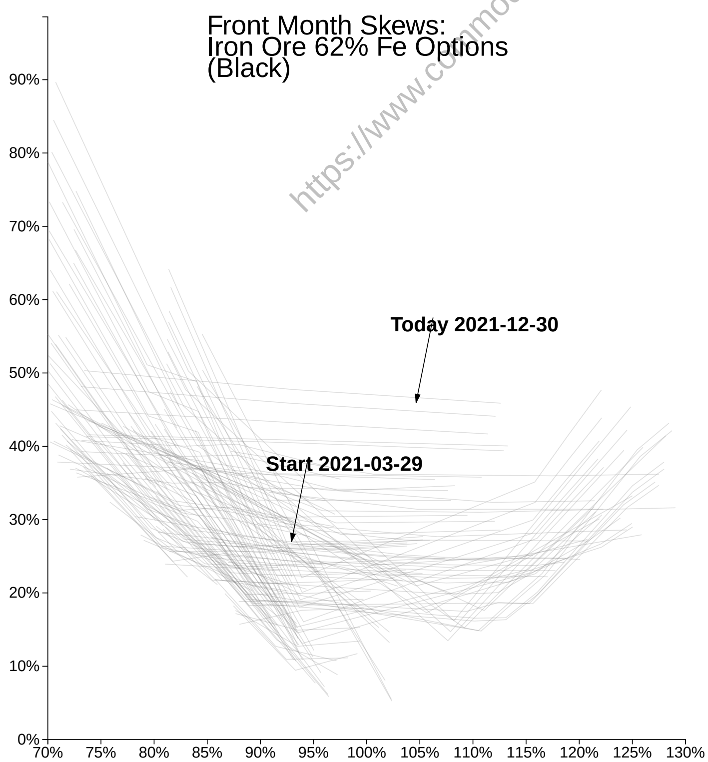

Price ($)
Today 2021-12-30
20220126
20220525
20230627

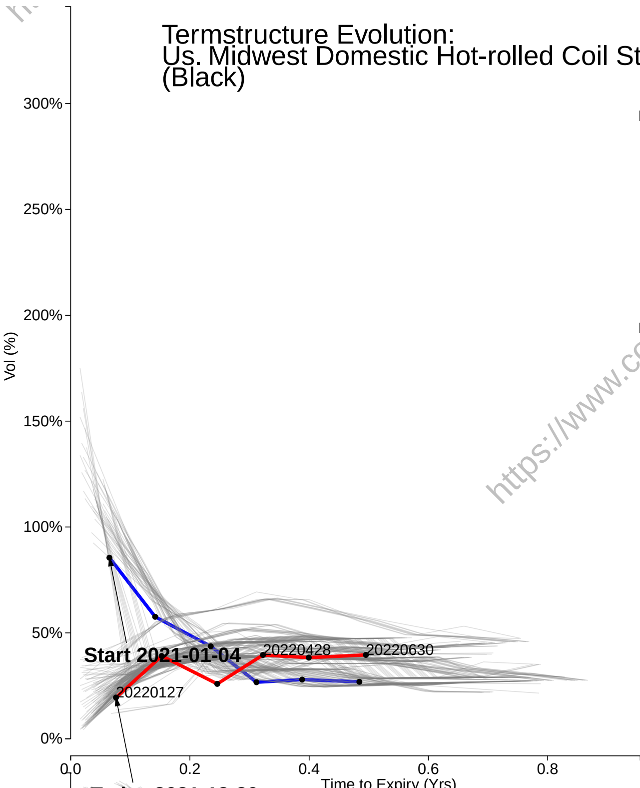

Front Month Skews:
Copper Options
(Black)
Today 2021-12-30
Start 2021-01-01

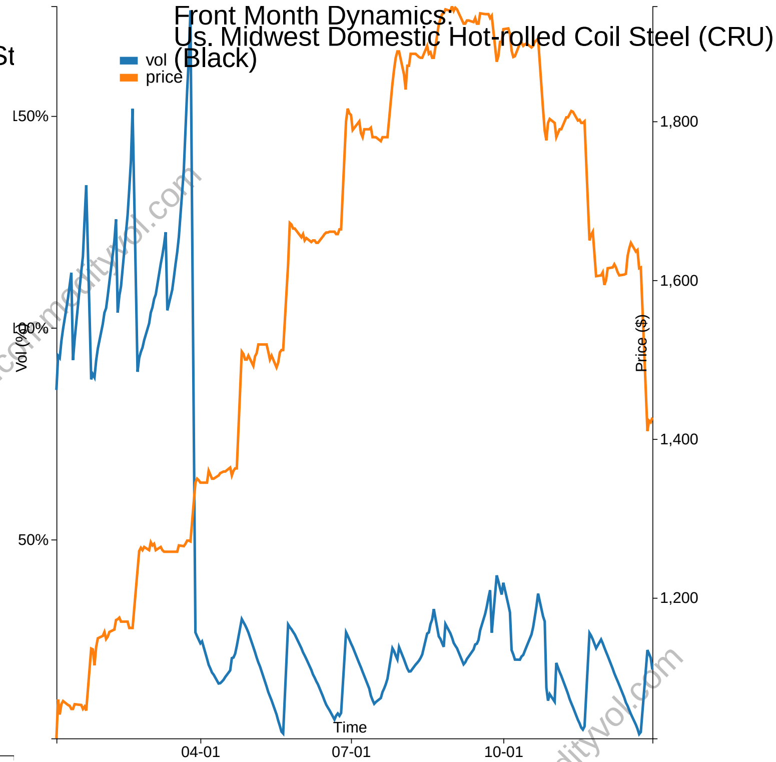

Termstructure Evolution:
Iron Ore 62% Fe Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220203
20220301
20220401
Start 2021-01-04
Today 2021-12-30

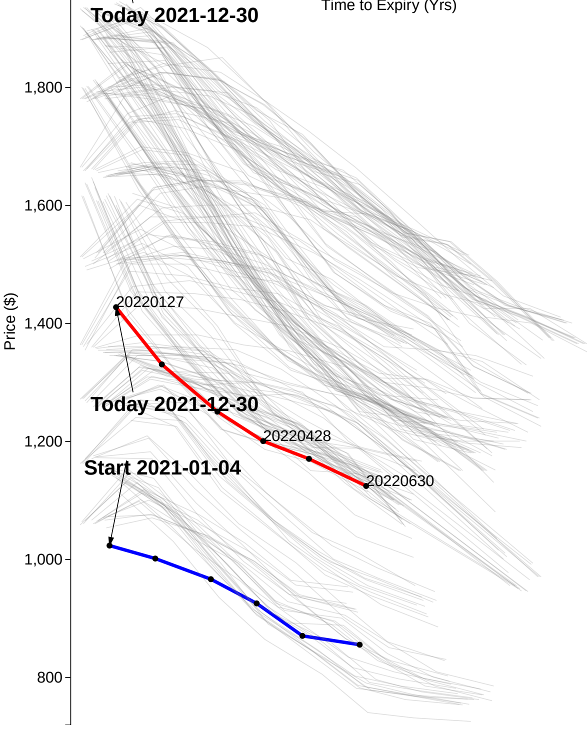

Front Month Dynamics:
Iron Ore 62% Fe Options
(Black)
vol
price
Vol (%)
Price ($)
Time
04-01
07-01
10-01

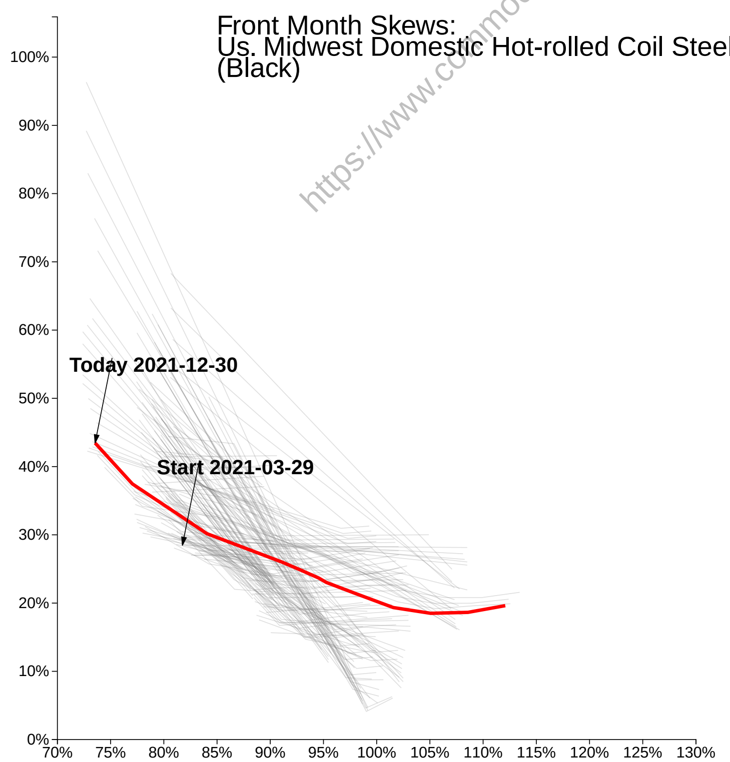

Price ($)
Start 2021-01-04
20220203
20220301
20220401
Today 2021-12-30

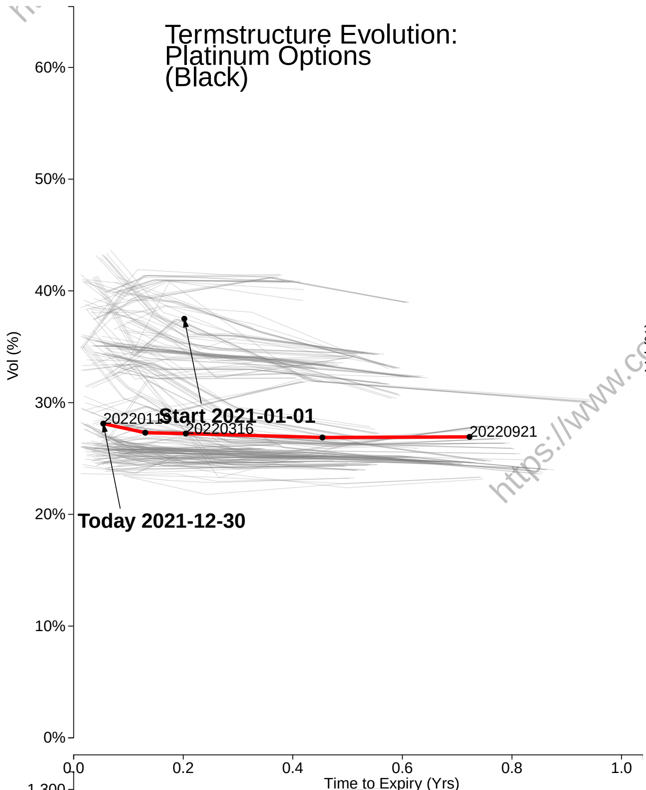

Front Month Skews:
Iron Ore 62% Fe Options
(Black)
Today 2021-12-30
Start 2021-03-29

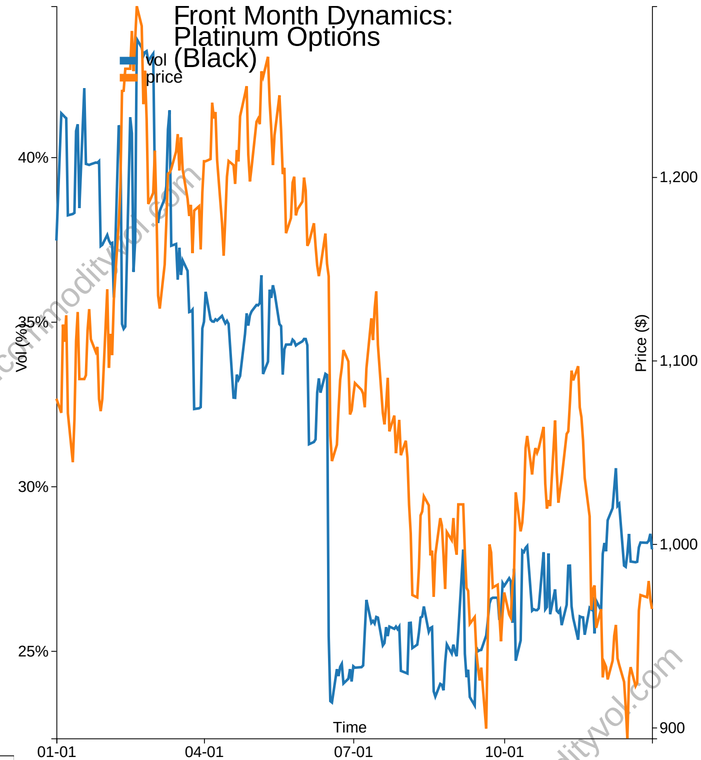

Termstructure Evolution:
Us. Midwest Domestic Hot-rolled Coil St
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2021-01-04
20220127
20220428
20220630

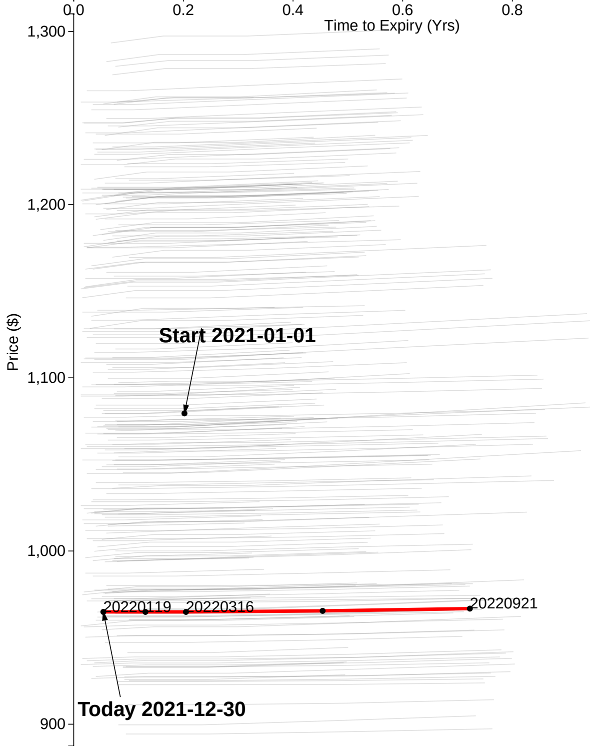

Front Month Dynamics:
Us. Midwest Domestic Hot-rolled Coil Steel (CRU)
(Black)
vol
price
Vol (%)
Price ($)
Time
04-01
07-01
10-01

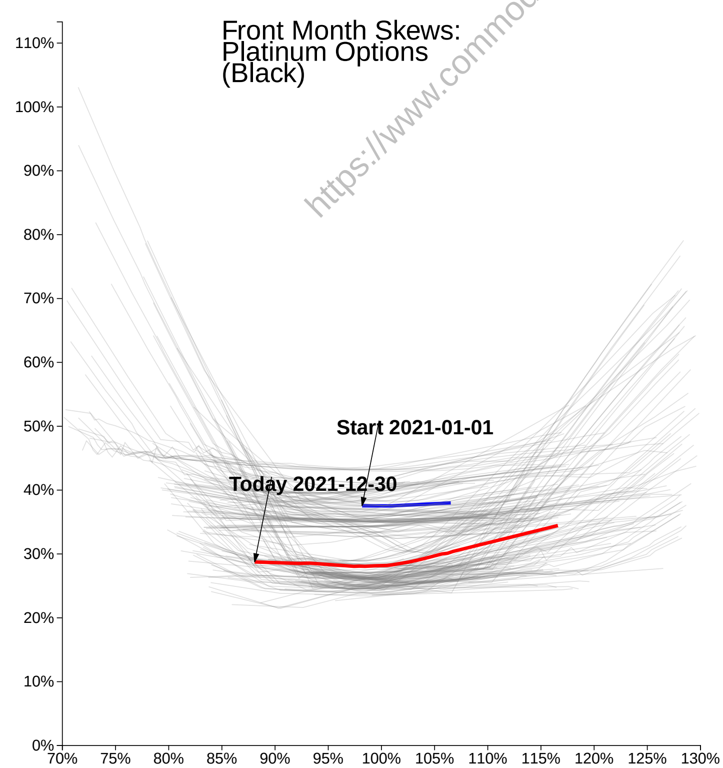

Today 2021-12-30
Price ($)
20220127
Today 2021-12-30
20220428
Start 2021-01-04
20220630

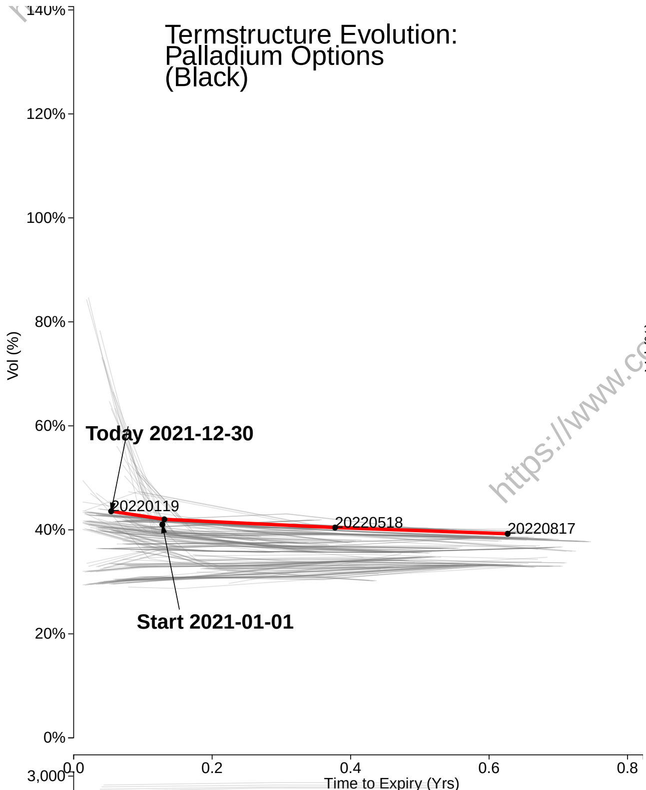

Front Month Skews:
Us. Midwest Domestic Hot-rolled Coil Steel
(Black)
Today 2021-12-30
Start 2021-03-29

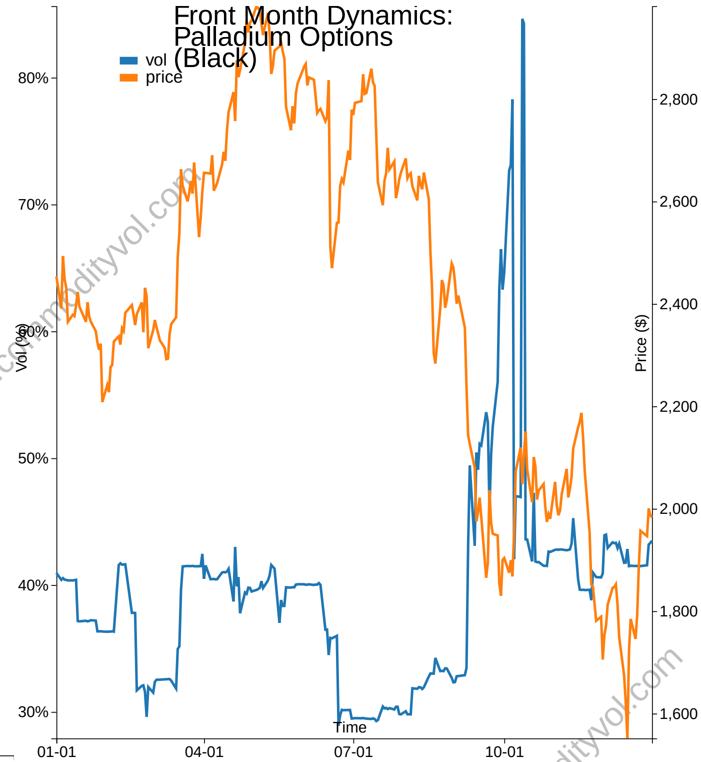

Termstructure Evolution:
Platinum Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2021-01-01
Today 2021-12-30
20220119
20220316
20220921

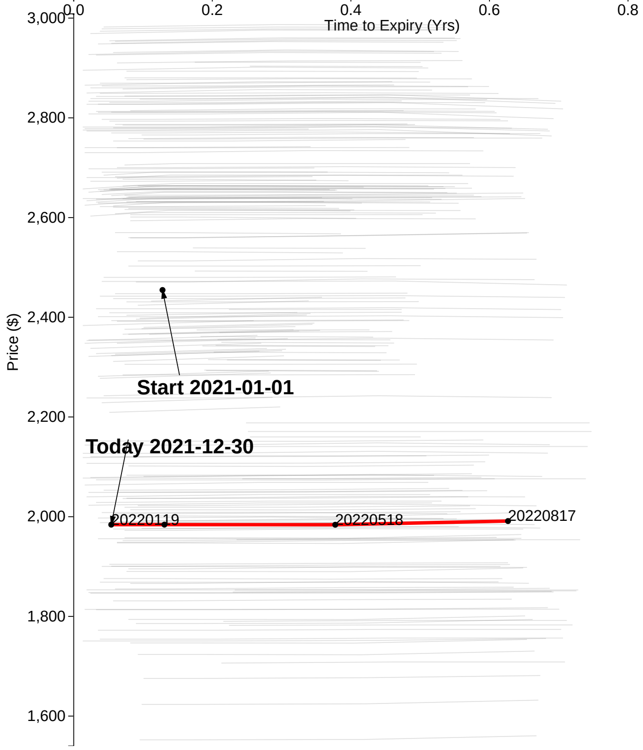

Front Month Dynamics:
Platinum Options
(Black)
vol
price
Vol (%)
Price ($)
Time

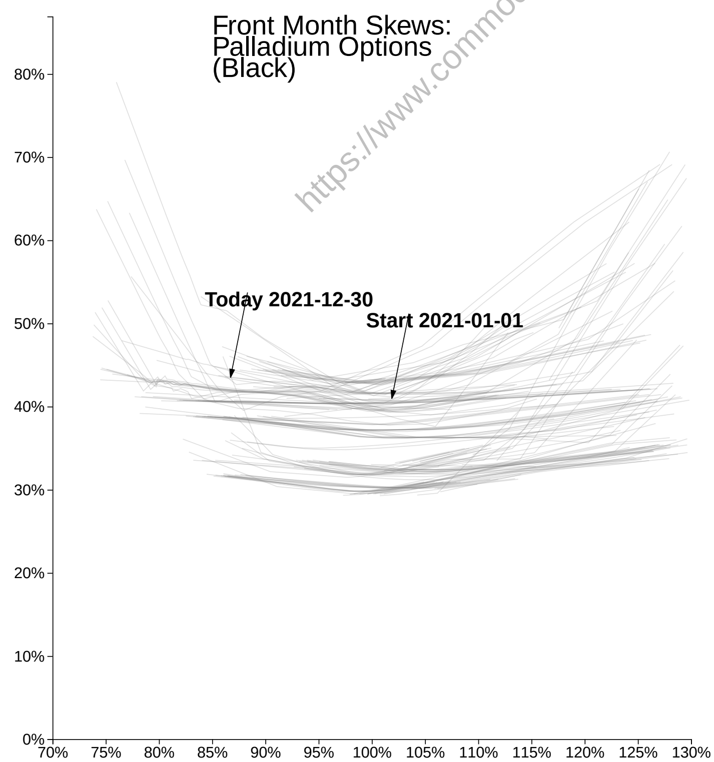

Price ($)
Start 2021-01-01
Today 2021-12-30
20220119
20220316
20220921

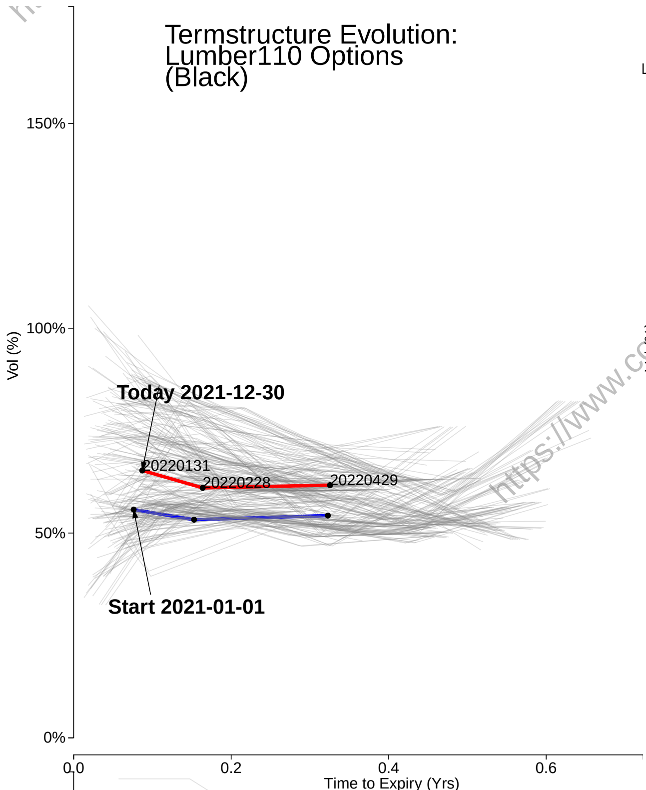

Front Month Skews:
Platinum Options
(Black)
Start 2021-01-01
Today 2021-12-30

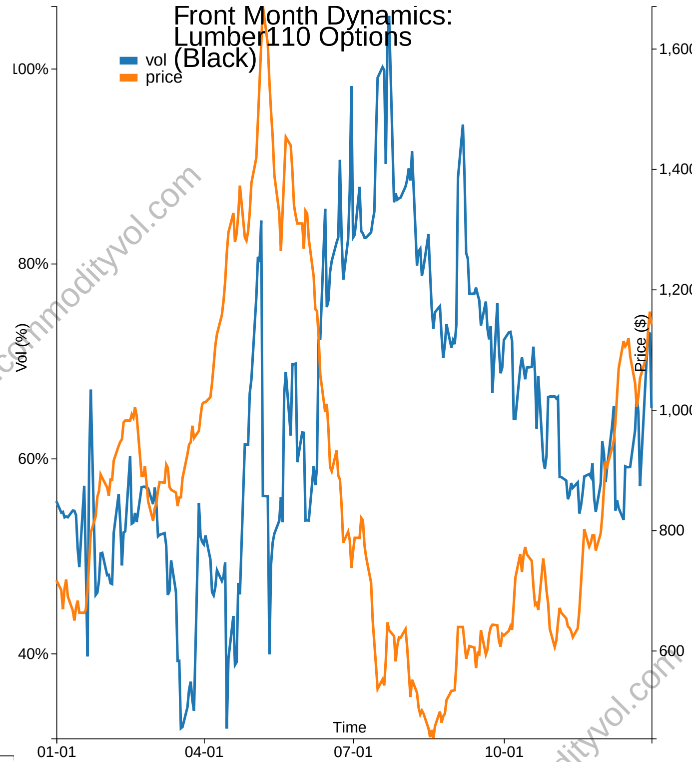

Termstructure Evolution:
Palladium Options
(Black)
Today 2021-12-30
Start 2021-01-01
20220119
20220518
20220817
Vol (%)
Time to Expiry (Yrs)
https://www.commodityvol.com

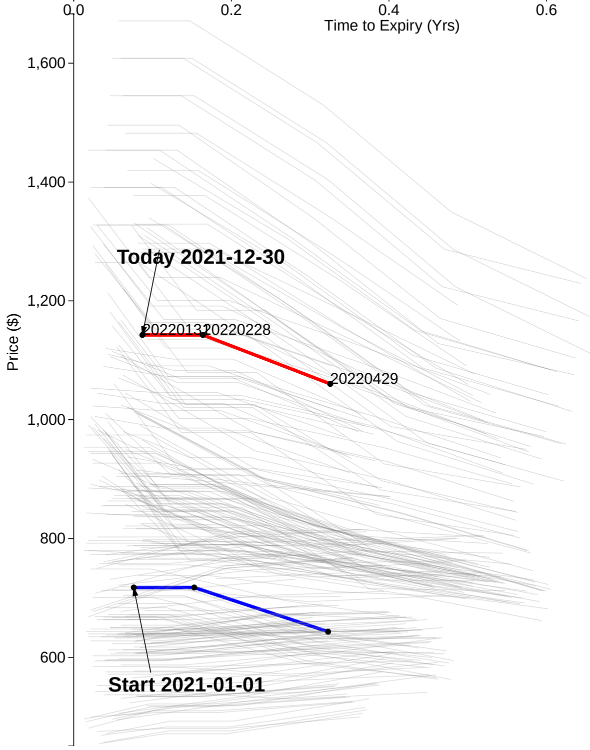

Front Month Dynamics:
Palladium Options
(Black)
vol
price
Vol (%)
Price ($)
Time
01-01
04-01
07-01
10-01

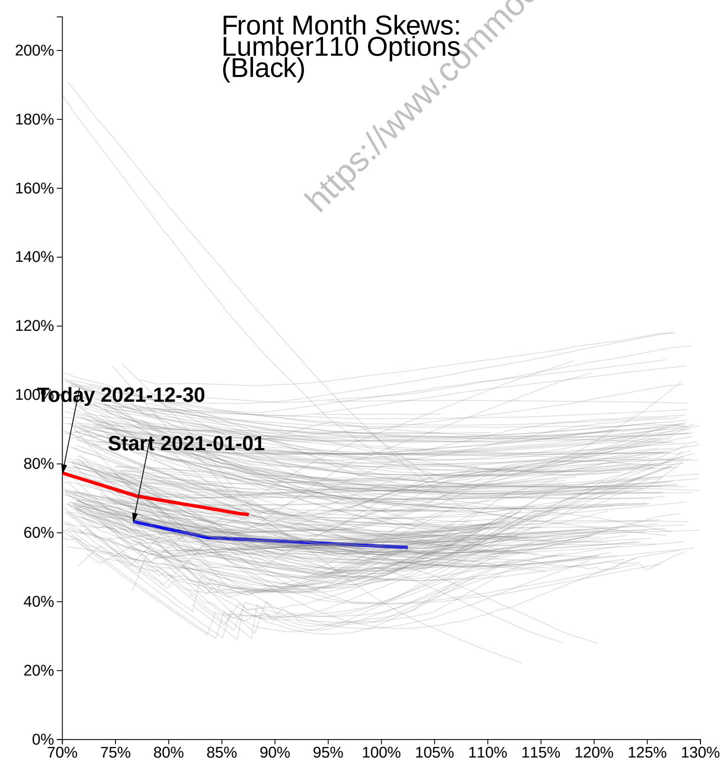

Start 2021-01-01
Today 2021-12-30
20220119
20220518
20220817
Price ($)


Front Month Skews:
Palladium Options
(Black)
Today 2021-12-30
Start 2021-01-01
https://www.commodityvol.com

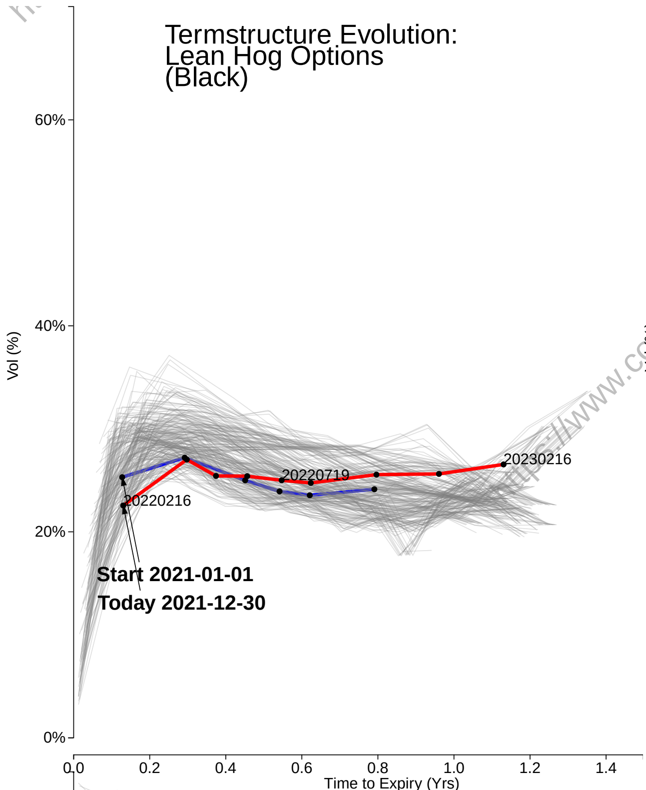

Termstructure Evolution:
Lumber110 Options
(Black)
Vol (%)
150%
100%
50%
0%
Today 2021-12-30
20220131
20220228
20220429
Start 2021-01-01
0.0
0.2
0.4
0.6
Time to Expiry (Yrs)

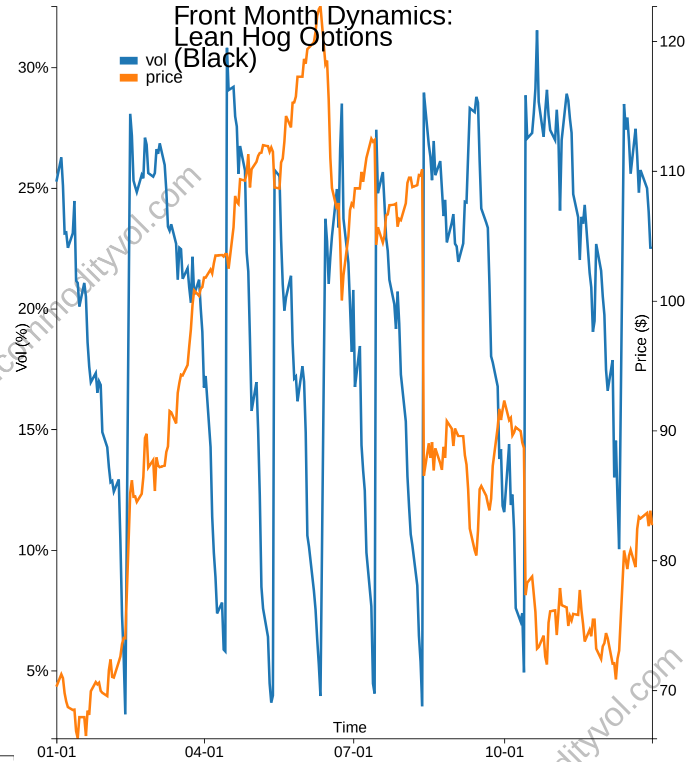

Front Month Dynamics:
Lumber110 Options
(Black)
vol
price
Vol (%)
Price ($)
100%
80%
60%
40%
1,600
1,400
1,200
1,000
800
600
Time
01-01
04-01
07-01
10-01

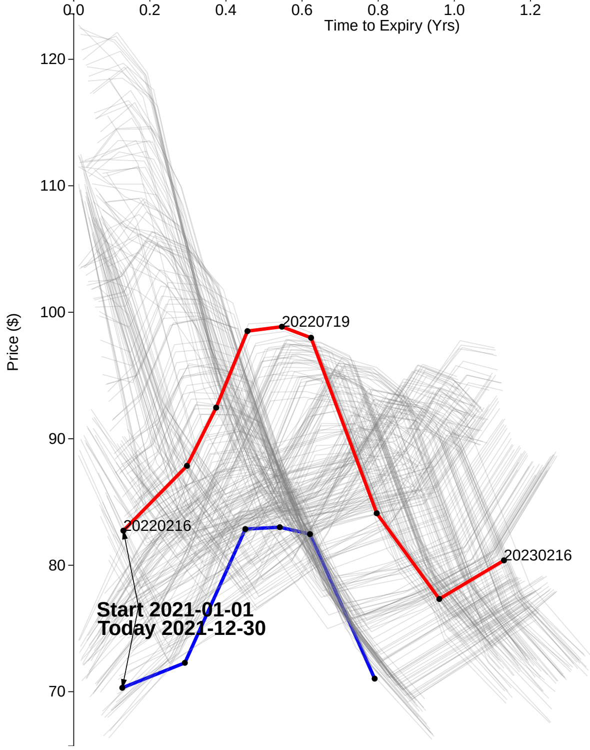

Price ($)
1,600
1,400
1,200
1,000
800
600
Today 2021-12-30
20220131
20220228
20220429
Start 2021-01-01

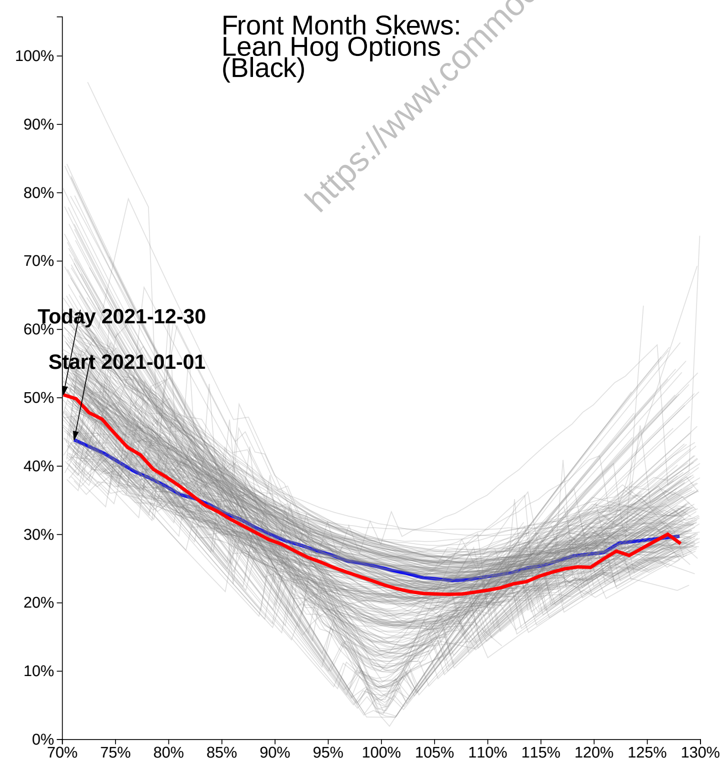

Front Month Skews:
Lumber110 Options
(Black)
200%
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
Today 2021-12-30
Start 2021-01-01
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

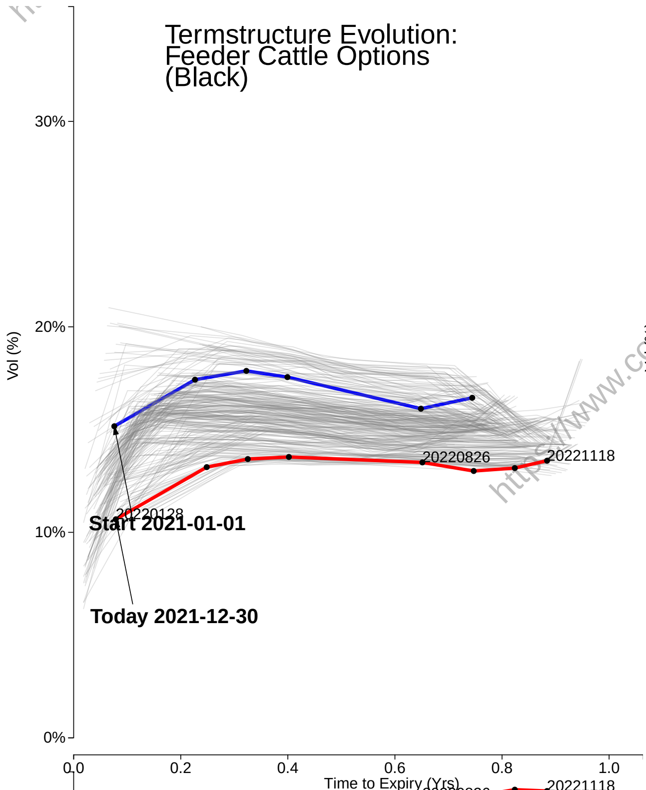
Proteins, Meats and so forth

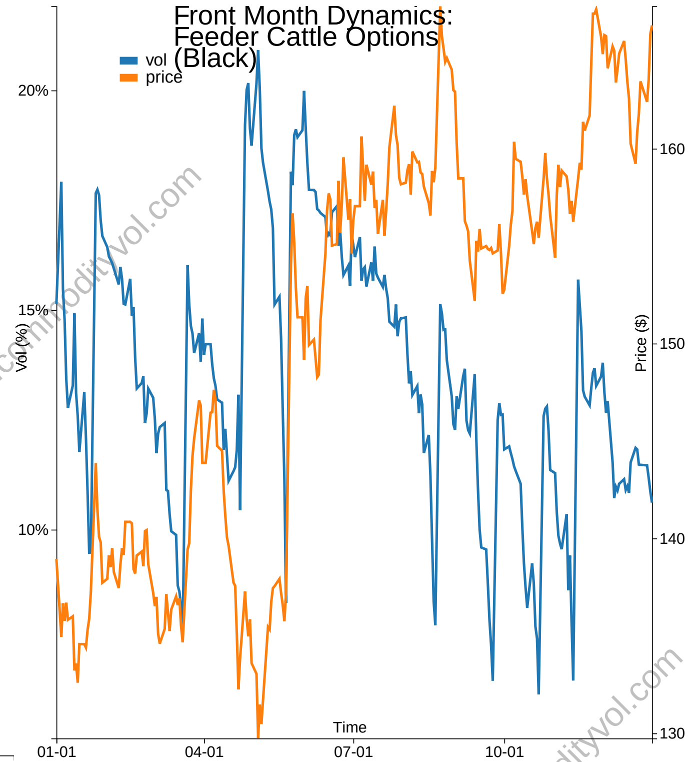

Termstructure Evolution:
Lean Hog Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220216
20220719
20230216
Start 2021-01-01
Today 2021-12-30

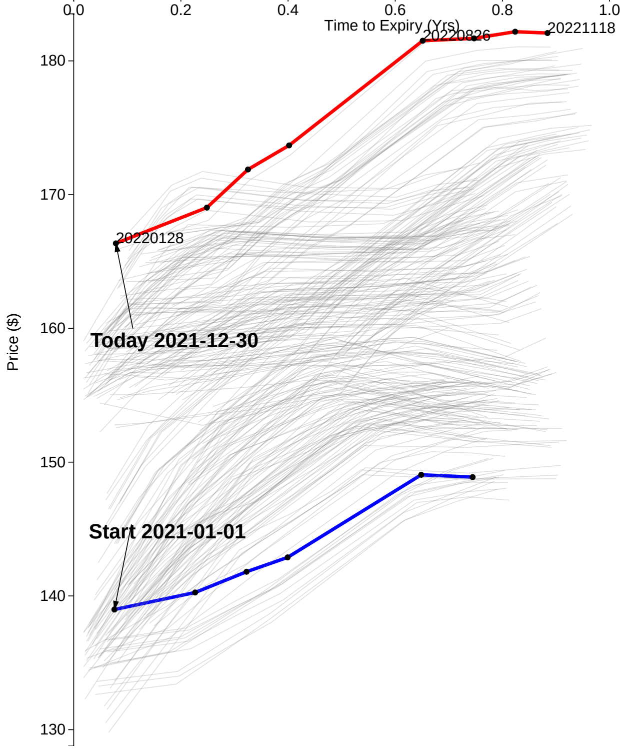

Front Month Dynamics:
Lean Hog Options
(Black)
vol
price
Vol (%)
Price ($)
Time

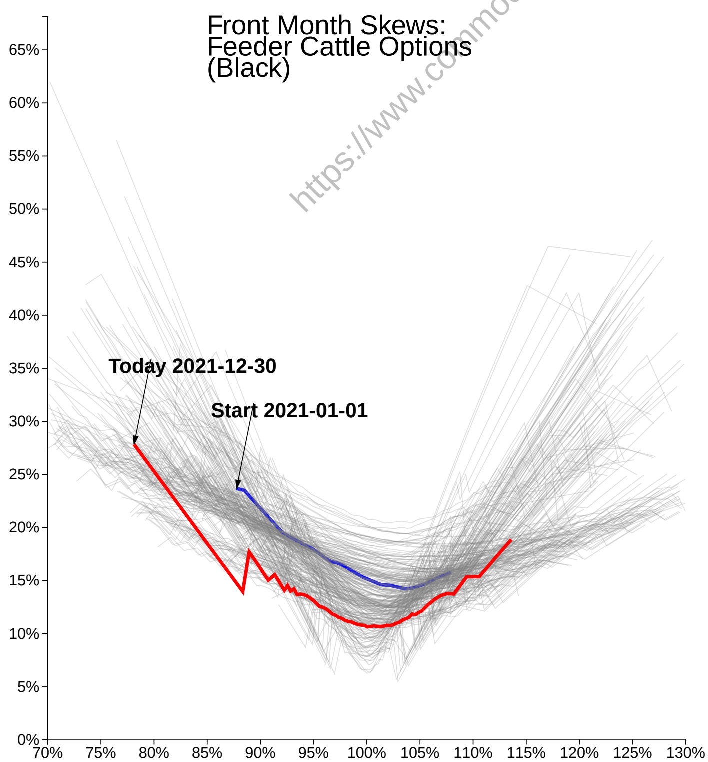

Price ($)
20220216
20220719
20230216
Start 2021-01-01
Today 2021-12-30

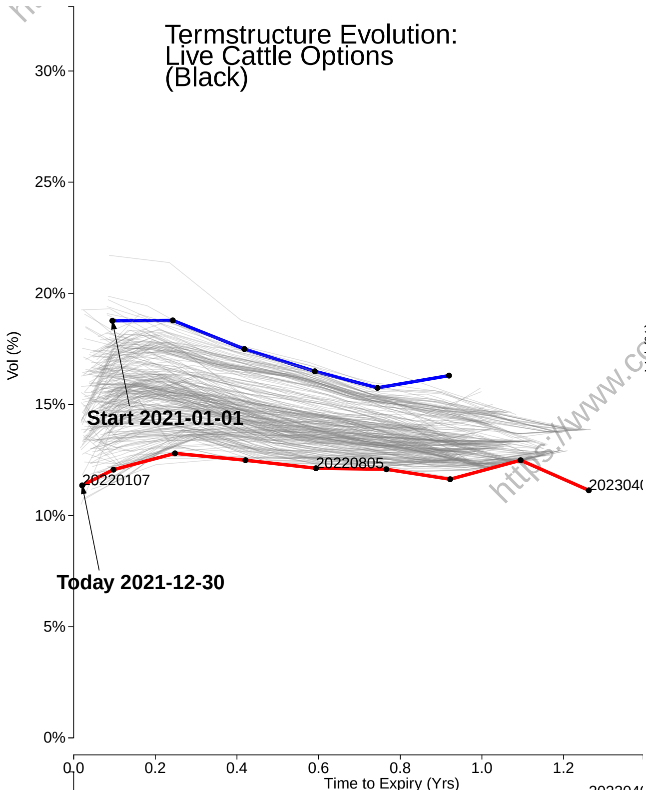

Front Month Skews:
Lean Hog Options
(Black)
Today 2021-12-30
Start 2021-01-01

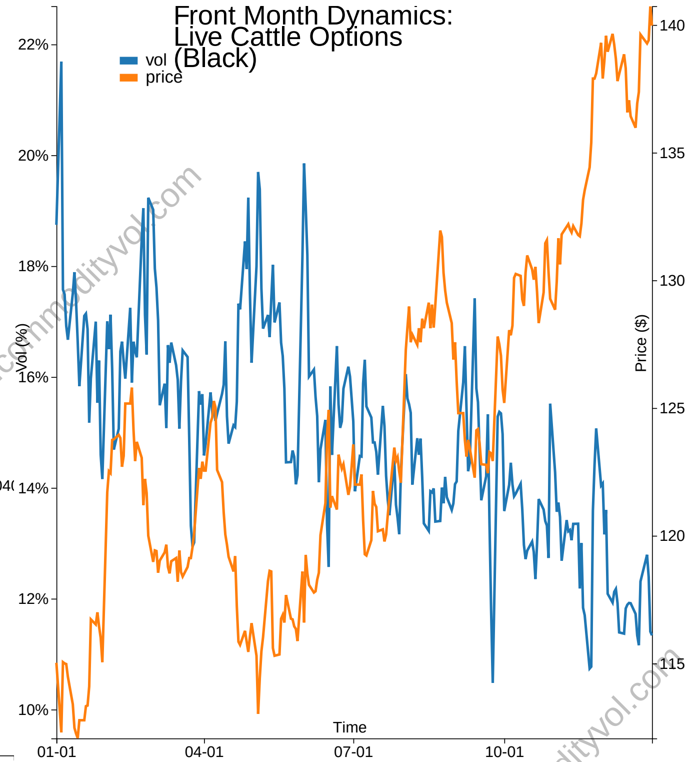

Termstructure Evolution:
Feeder Cattle Options
(Black)
Vol (%)
30%
20%
10%
0%
0.0
0.2
0.4
0.6
0.8
1.0
Time to Expiry (Yrs)
20220128
20220826
20221118
Start 2021-01-01
Today 2021-12-30

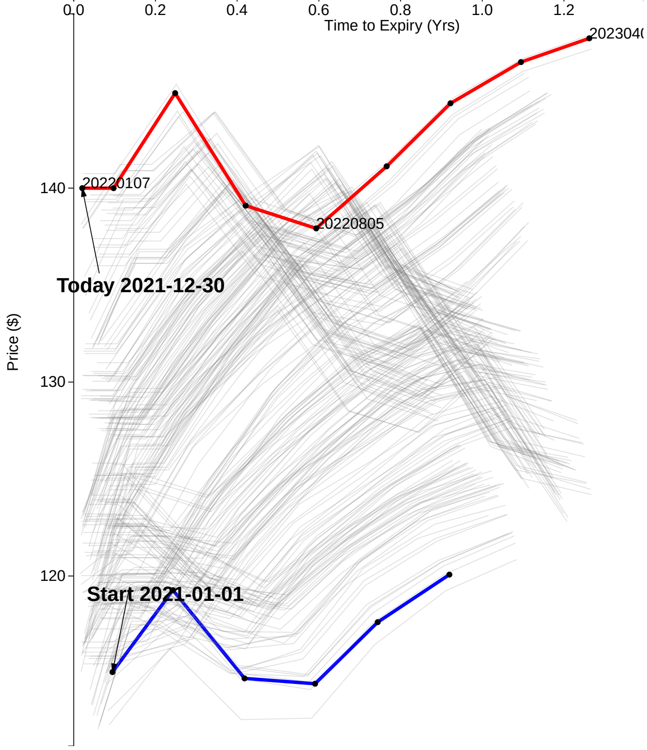

Front Month Dynamics:
Feeder Cattle Options
(Black)
vol
price
Vol (%)
Price ($)
20%
15%
10%
160
150
140
130
01-01
04-01
07-01
10-01
Time

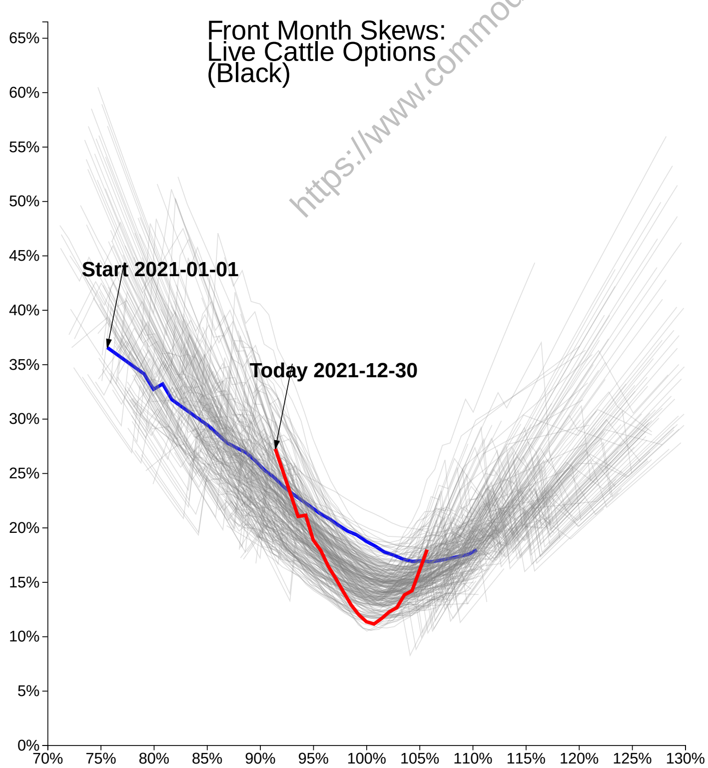

Price ($)
180
170
160
150
140
130
20220128
20220826
20221118
Today 2021-12-30
Start 2021-01-01

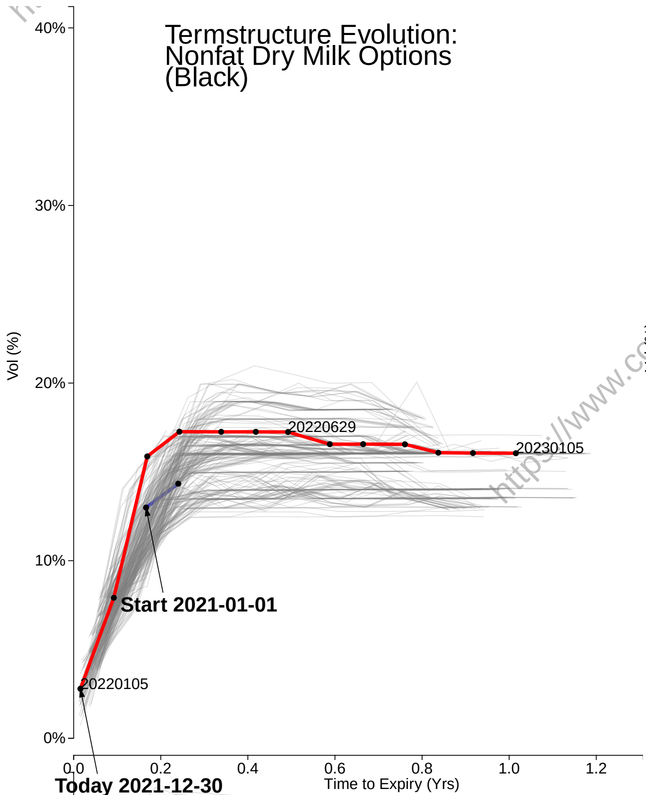

Front Month Skews:
Feeder Cattle Options
(Black)
65%
60%
55%
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%
Today 2021-12-30
Start 2021-01-01

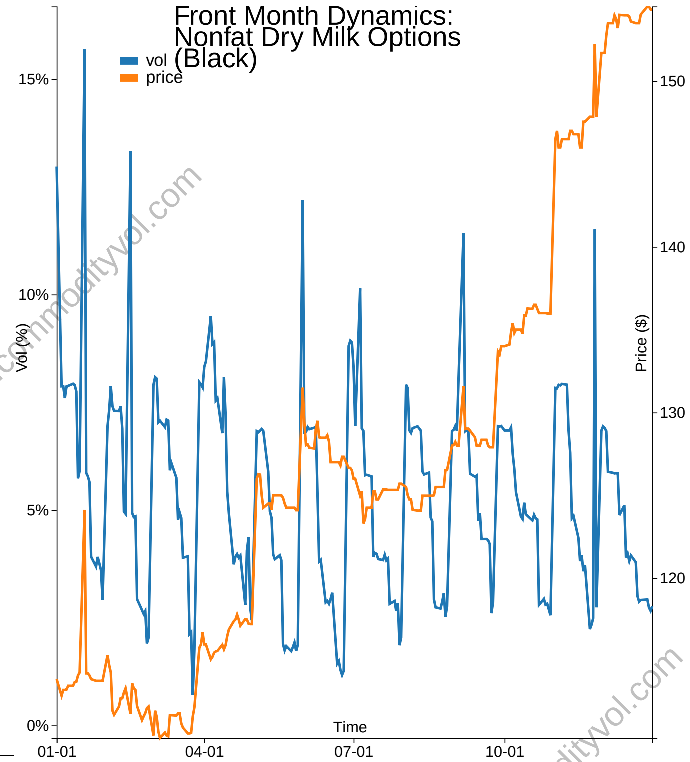

Termstructure Evolution:
Live Cattle Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2021-01-01
Today 2021-12-30
20220107
20220805

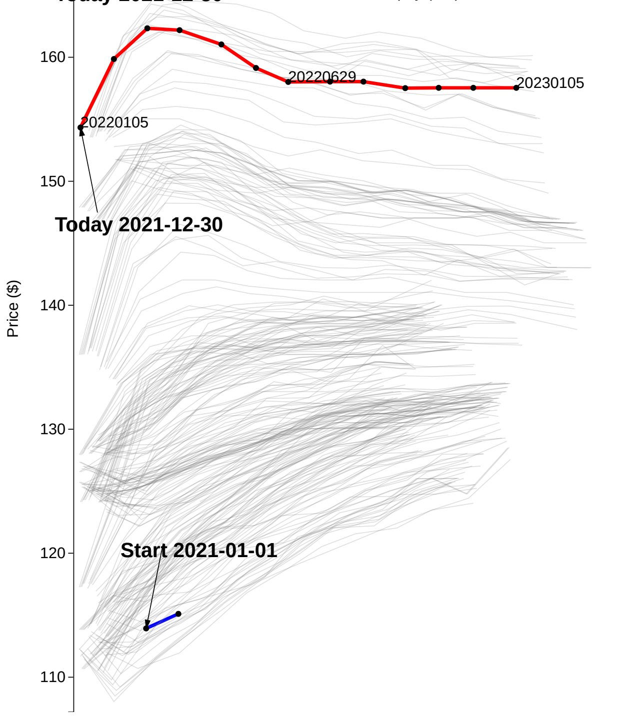

Front Month Dynamics:
Live Cattle Options
(Black)
vol
price
Vol (%)
Price ($)
Time
https://www.commodityvol.com

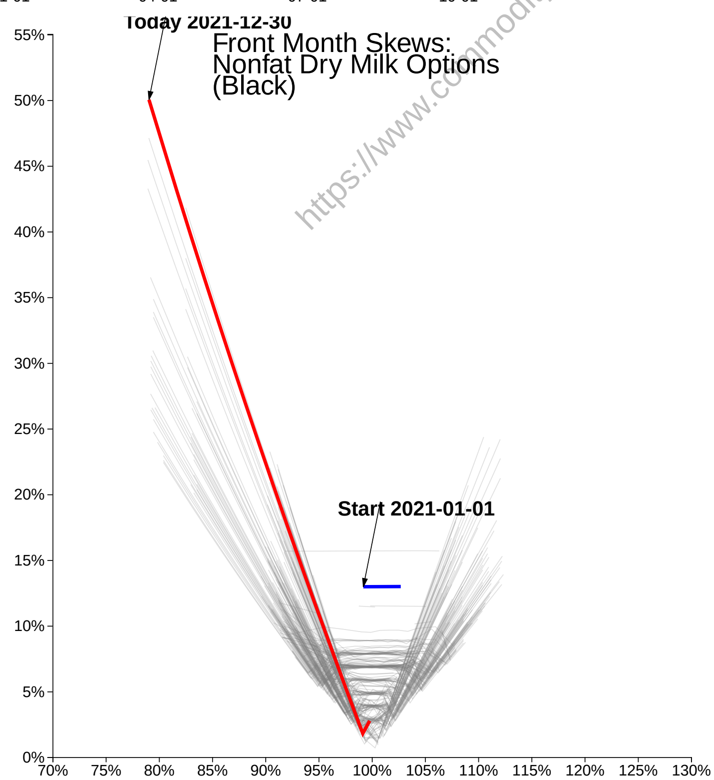

Price ($)
20220107
20220805
Today 2021-12-30
Start 2021-01-01

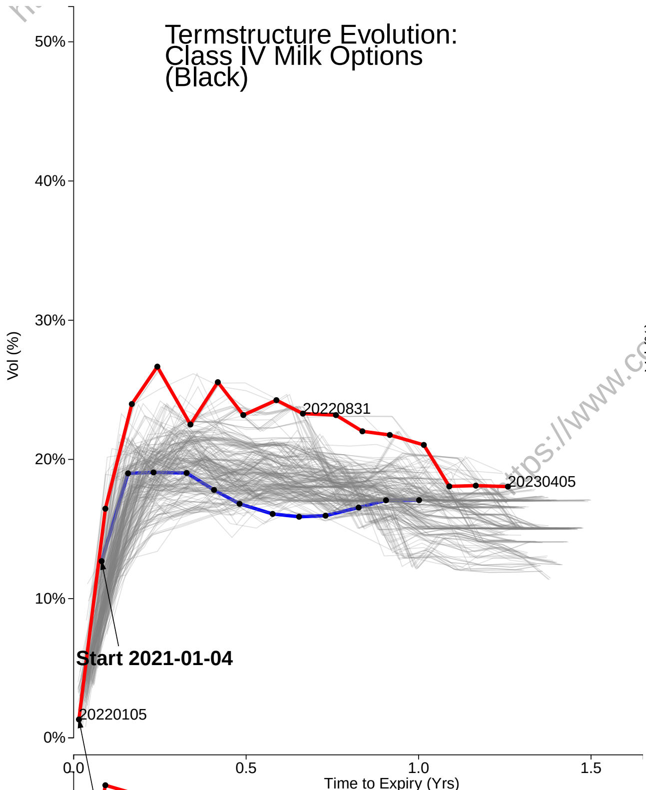

Front Month Skews:
Live Cattle Options
(Black)
Start 2021-01-01
Today 2021-12-30
https://www.commodityvol.com

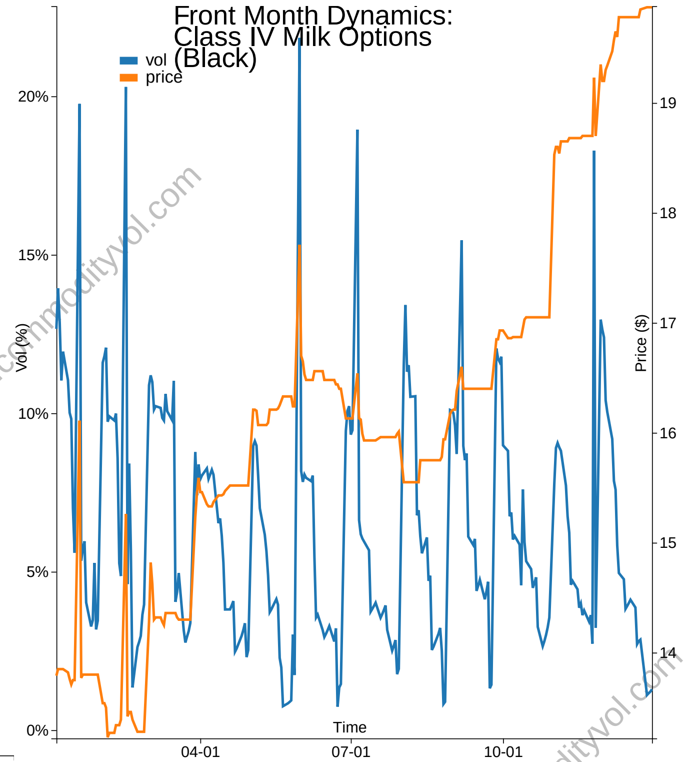

Termstructure Evolution:
Nonfat Dry Milk Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220629
20230105
20220105
Start 2021-01-01
Today 2021-12-30

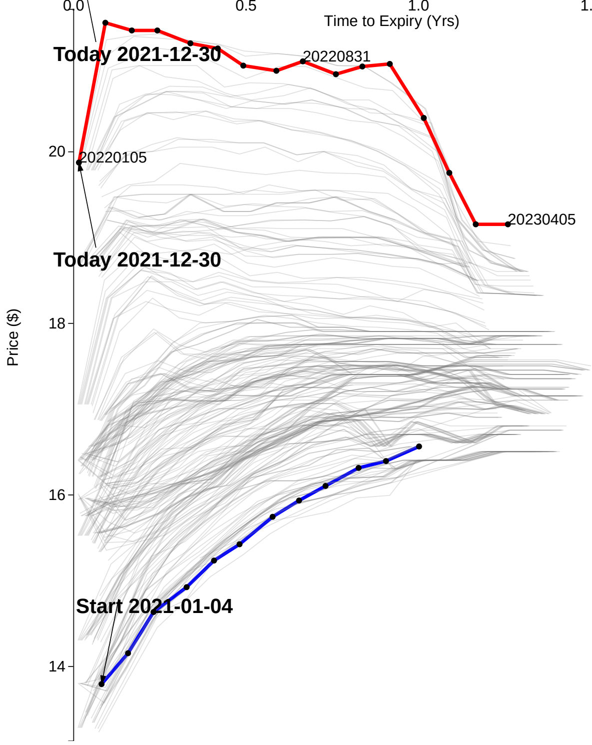

Front Month Dynamics:
Nonfat Dry Milk Options
(Black)
vol
price
Vol (%)
Price ($)
Time
01-01
04-01
07-01
10-01

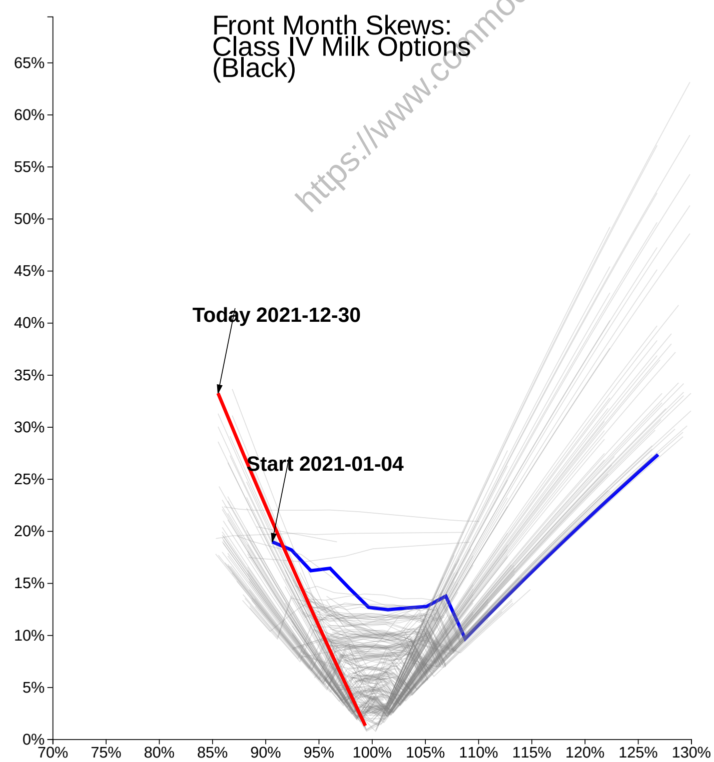

Price ($)
20220629
20230105
20220105
Today 2021-12-30
Start 2021-01-01


Today 2021-12-30
Front Month Skews:
Nonfat Dry Milk Options
(Black)
Start 2021-01-01

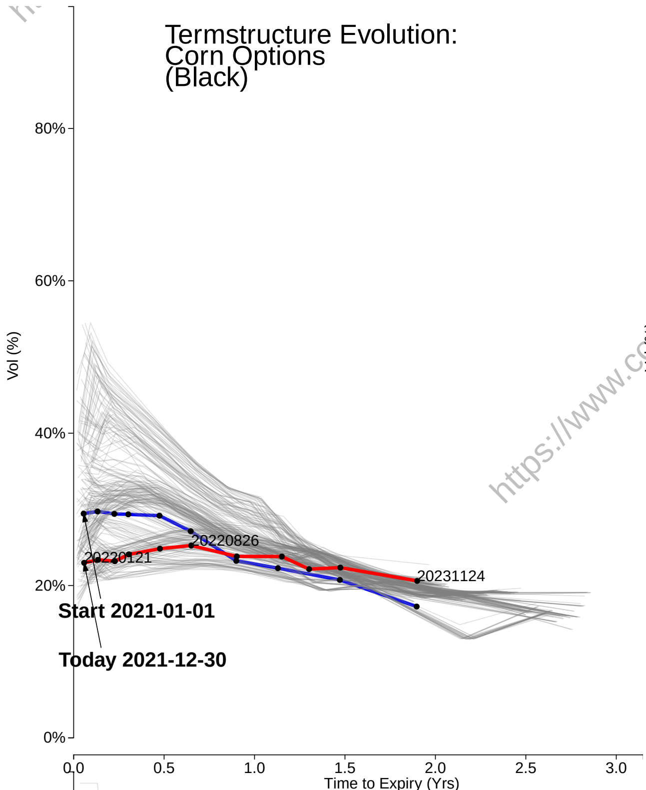

Termstructure Evolution:
Class IV Milk Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220831
20230405
20220105
Start 2021-01-04
Today 2021-12-30

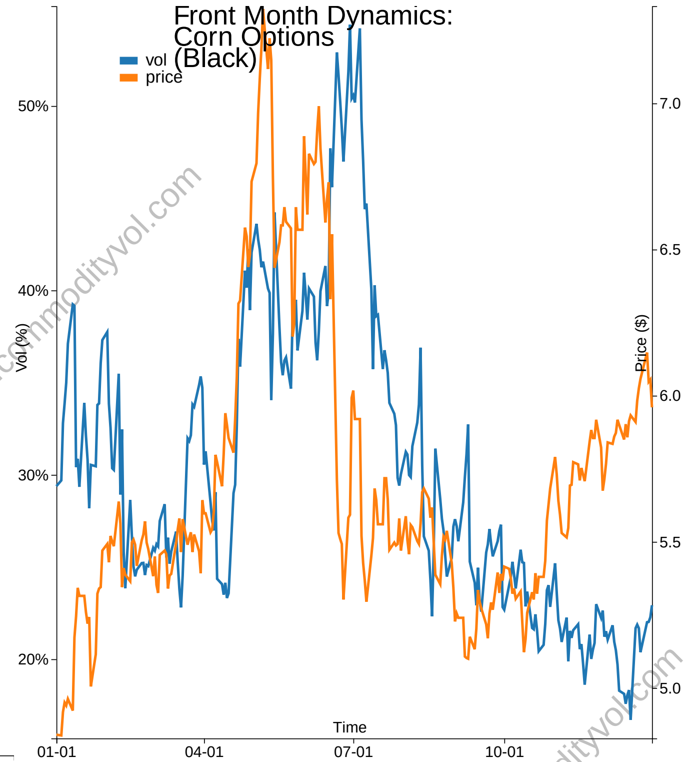

Front Month Dynamics:
Class IV Milk Options
(Black)
vol
price
Vol (%)
Price ($)
Time
04-01
07-01
10-01

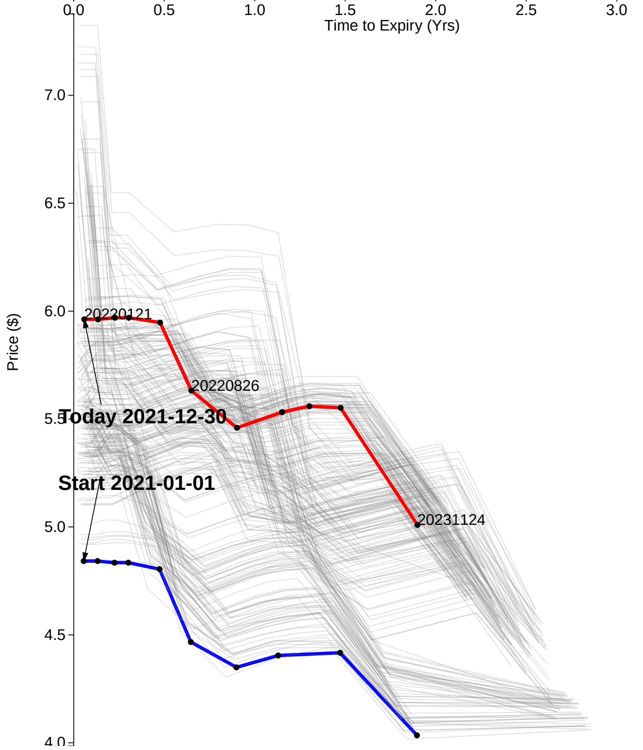

Price ($)
20220831
20220105
20230405
Today 2021-12-30
Start 2021-01-04

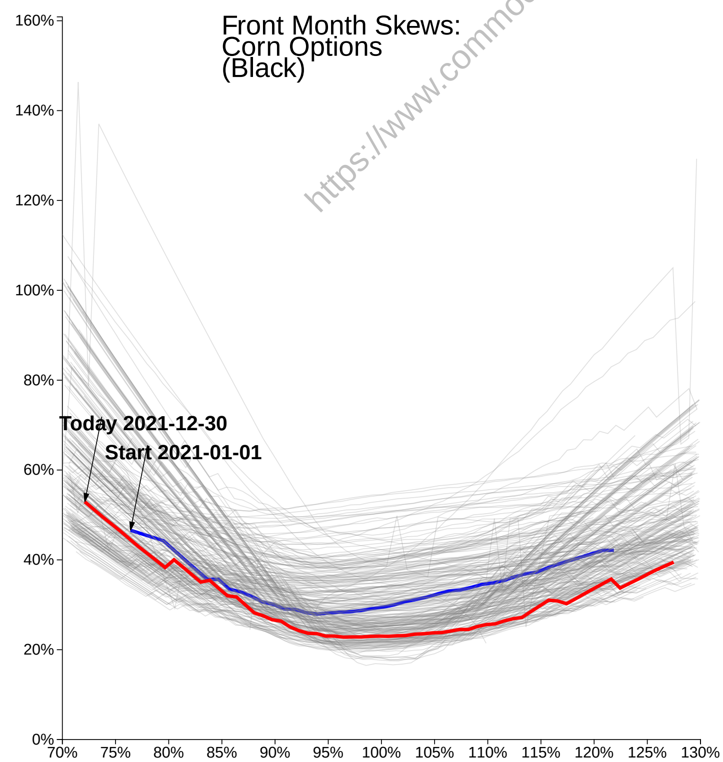

Front Month Skews:
Class IV Milk Options
(Black)
Today 2021-12-30
Start 2021-01-04

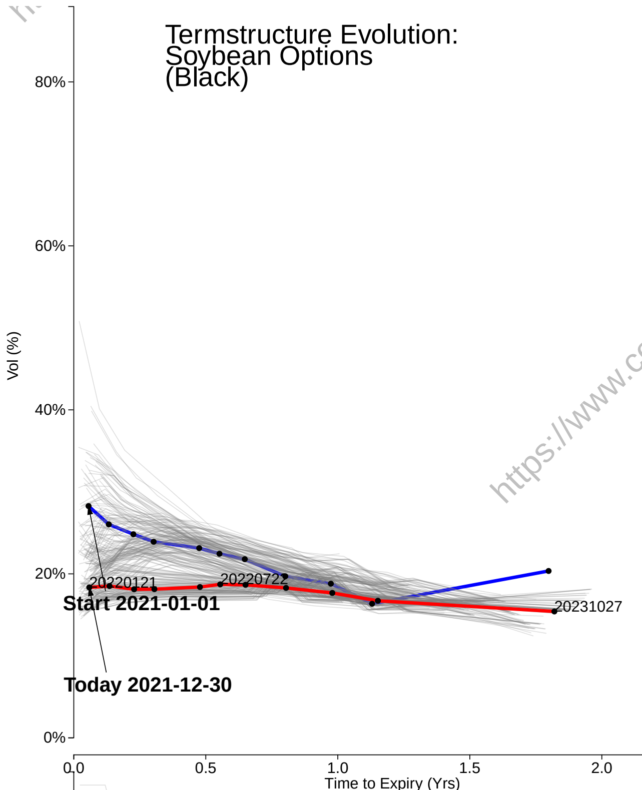
Ags, Grains, Softs and so forth

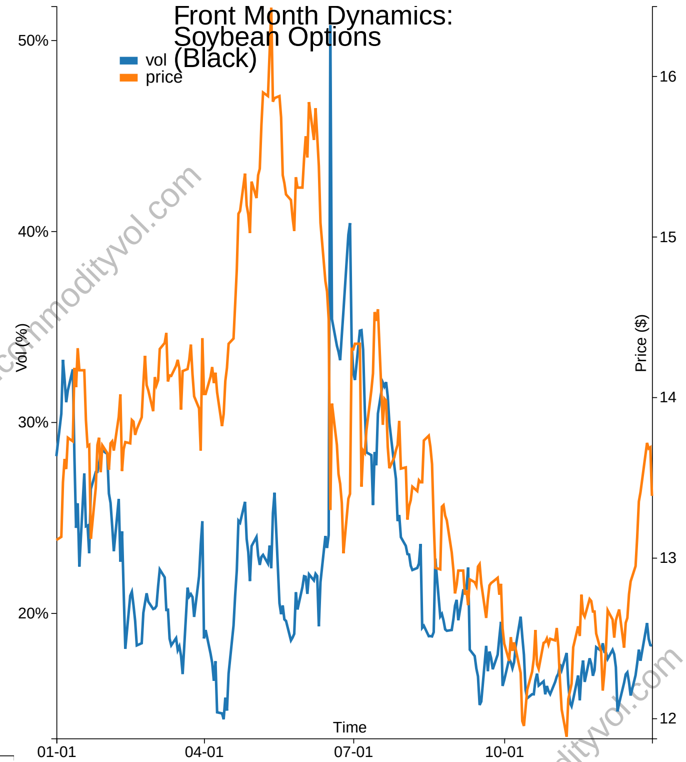

Termstructure Evolution:
Corn Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220121
20220826
20231124
Start 2021-01-01
Today 2021-12-30

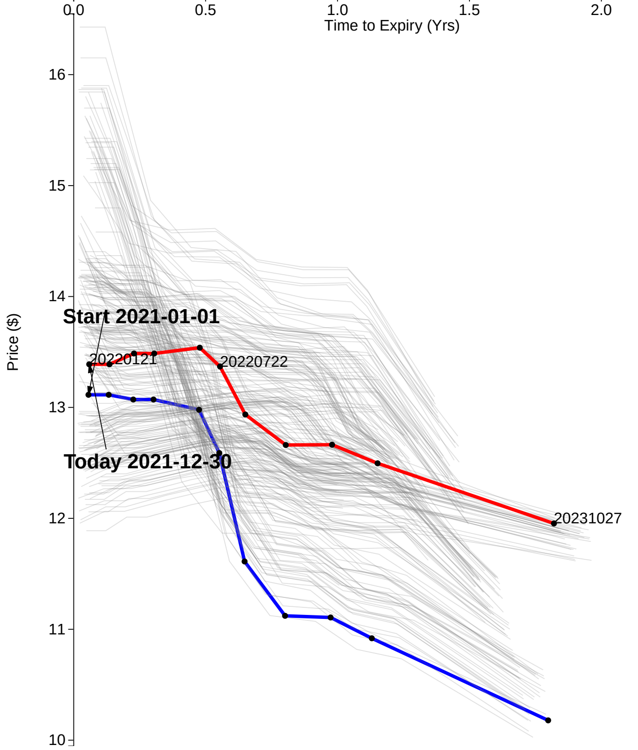

Front Month Dynamics:
Corn Options
(Black)
vol
price
Vol (%)
Price ($)
Time

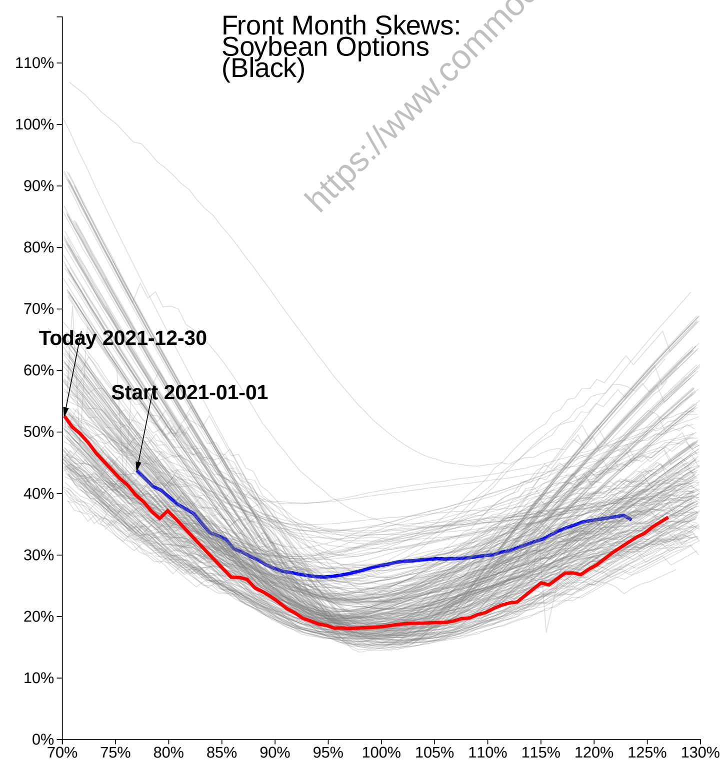

Price ($)
20220121
20220826
20231124
Today 2021-12-30
Start 2021-01-01

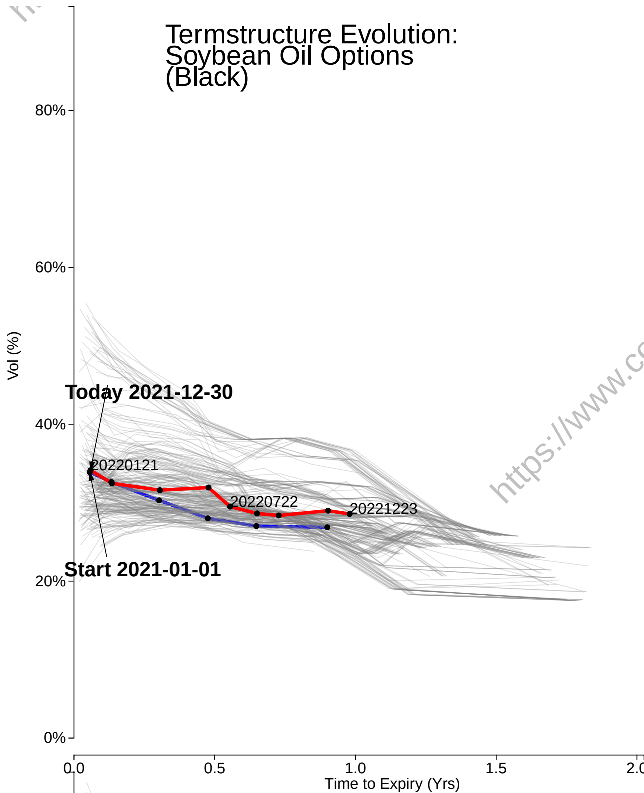

Front Month Skews:
Corn Options
(Black)
Today 2021-12-30
Start 2021-01-01

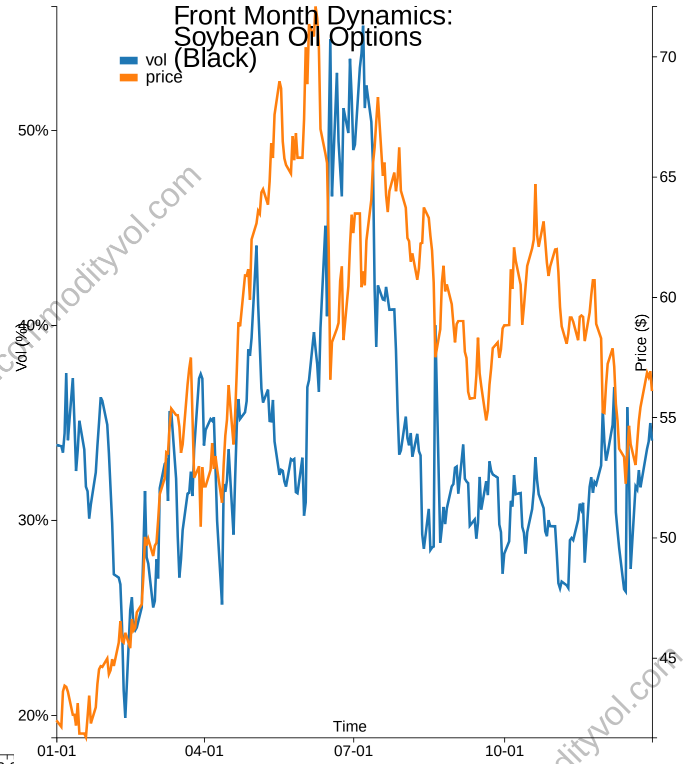

Termstructure Evolution:
Soybean Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220121
20220722
20231027
Start 2021-01-01
Today 2021-12-30

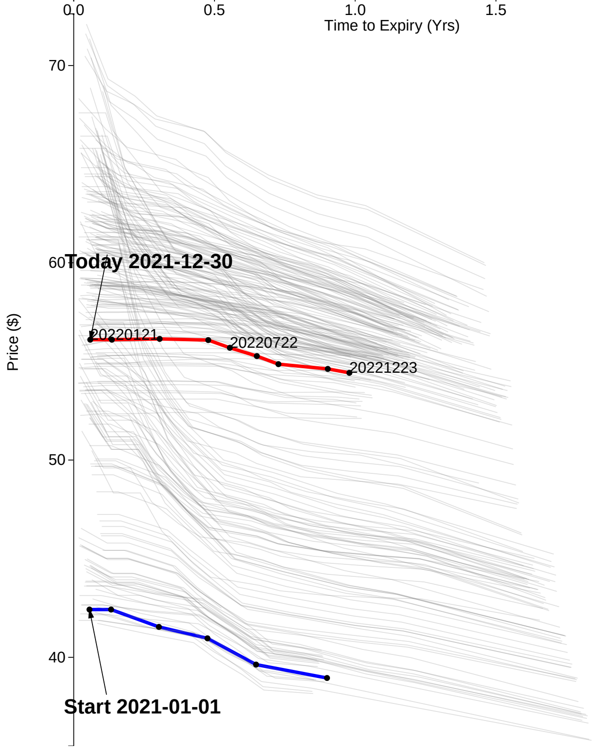

Front Month Dynamics:
Soybean Options
(Black)
vol
price
Vol (%)
Price ($)
Time

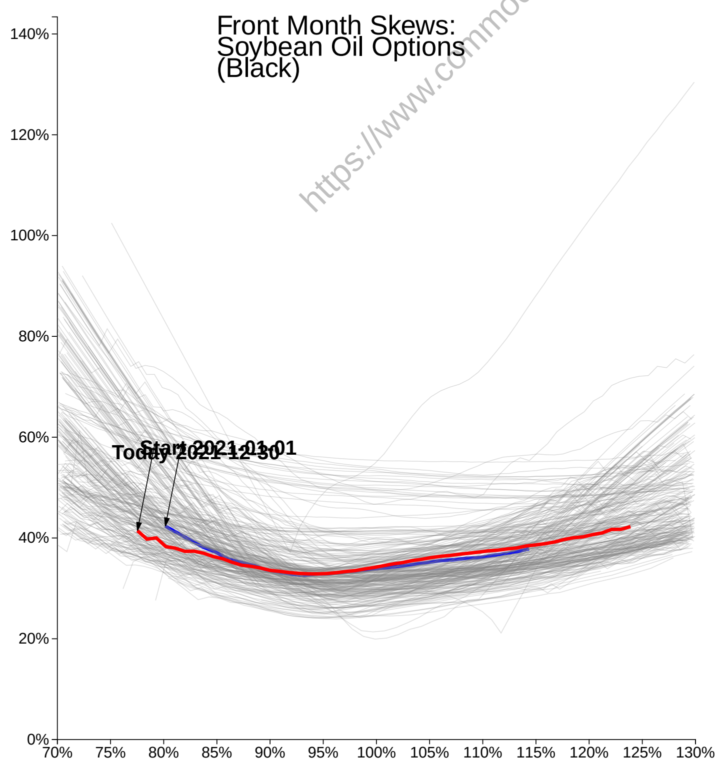

Price ($)
Start 2021-01-01
20220121
20220722
20231027
Today 2021-12-30

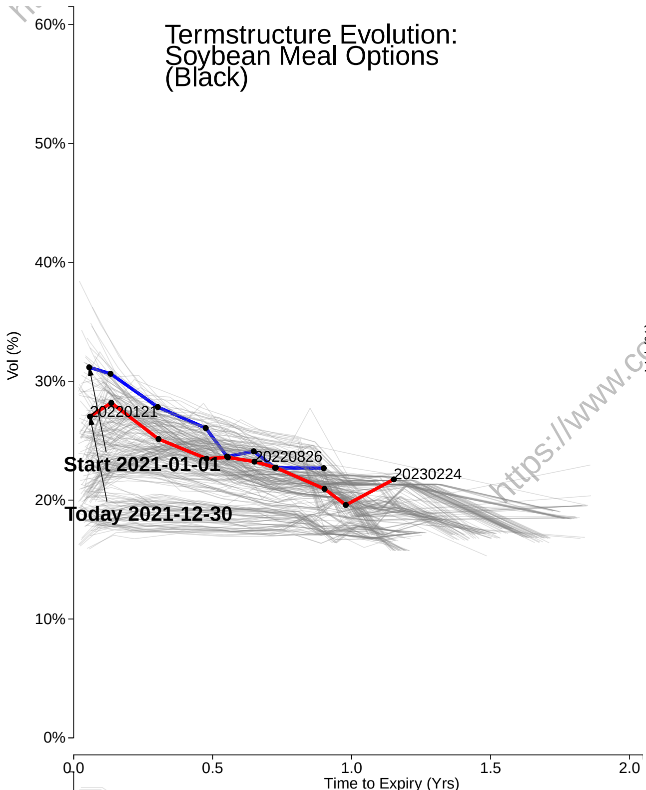

Front Month Skews:
Soybean Options
(Black)
Today 2021-12-30
Start 2021-01-01

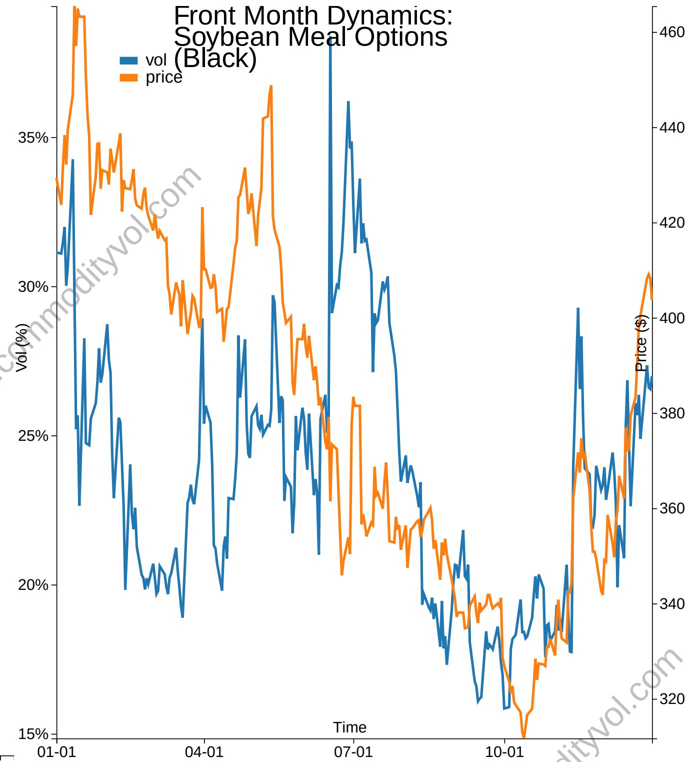

Termstructure Evolution:
Soybean Oil Options
(Black)
Vol (%)
Today 2021-12-30
Start 2021-01-01
20220121
20220722
20221223
Time to Expiry (Yrs)
https://www.commodityvol.com

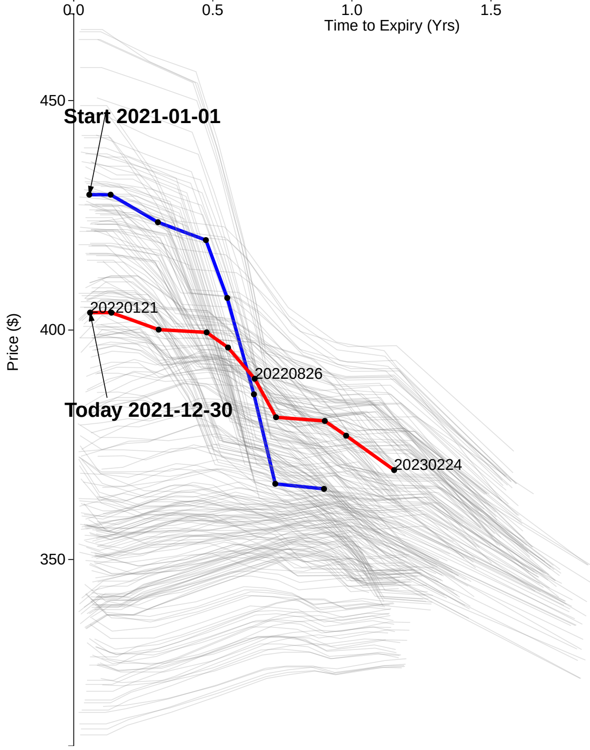

Front Month Dynamics:
Soybean Oil Options
(Black)
vol
price
Vol (%)
Price ($)
Time
01-01
04-01
07-01
10-01
https://www.commodityvol.com

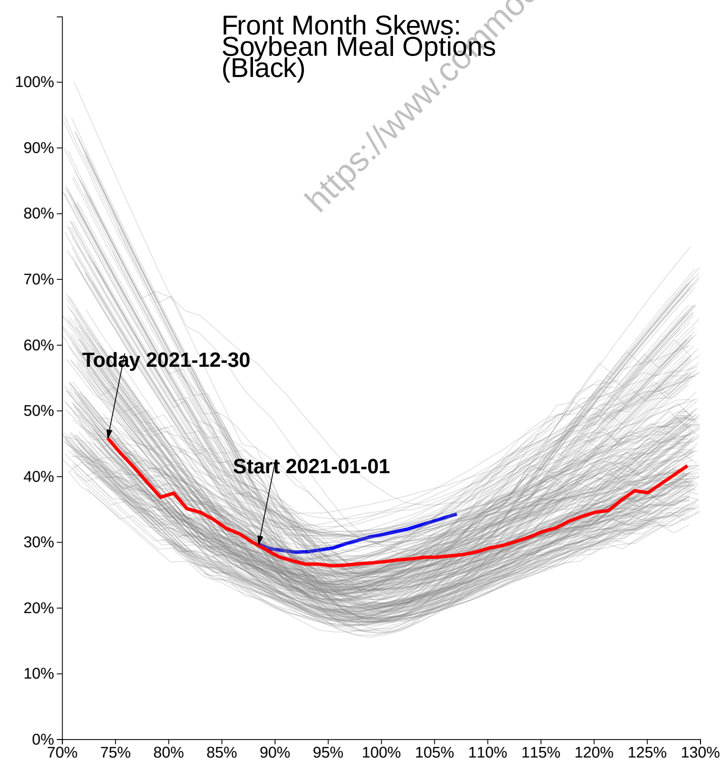

Price ($)
Today 2021-12-30
Start 2021-01-01
20220121
20220722
20221223

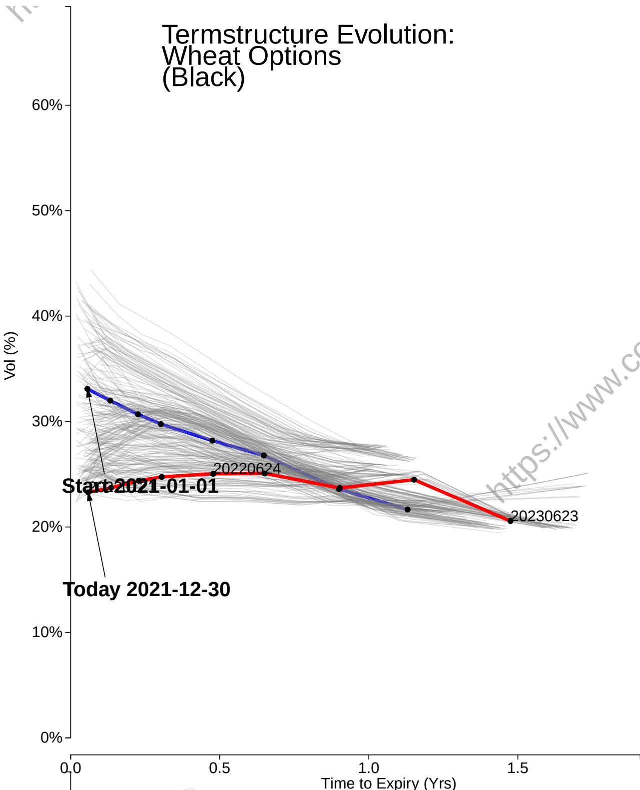

Front Month Skews:
Soybean Oil Options
(Black)
Start 2021-01-01
Today 2021-12-30
https://www.commodityvol.com

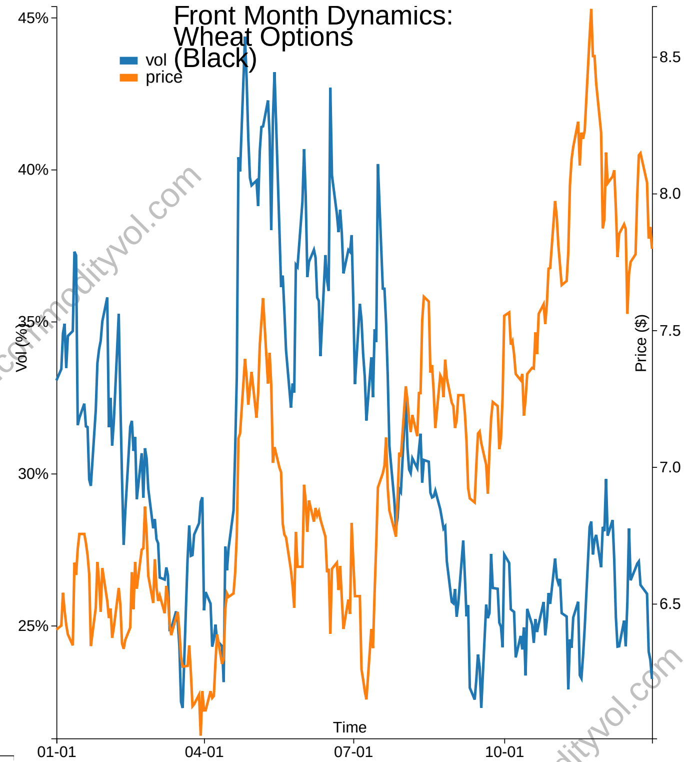

Termstructure Evolution:
Soybean Meal Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220121
20220826
20230224
Start 2021-01-01
Today 2021-12-30

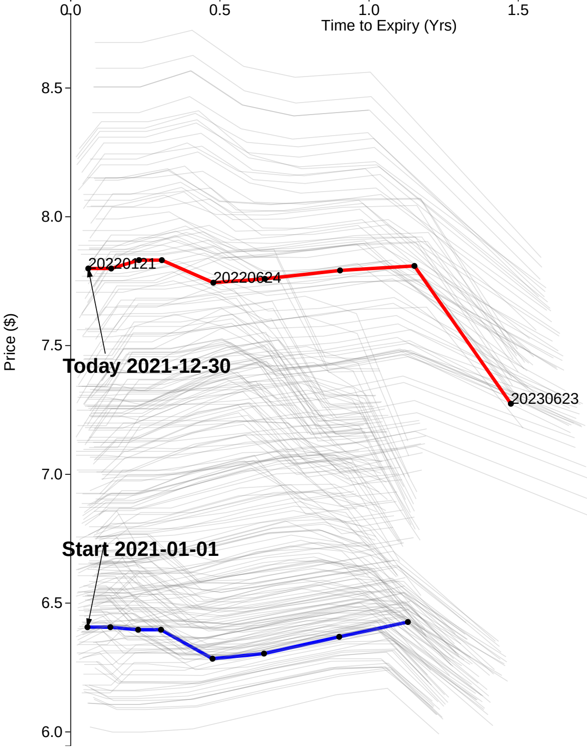

Front Month Dynamics:
Soybean Meal Options
(Black)
vol
price
Vol (%)
Price ($)
Time

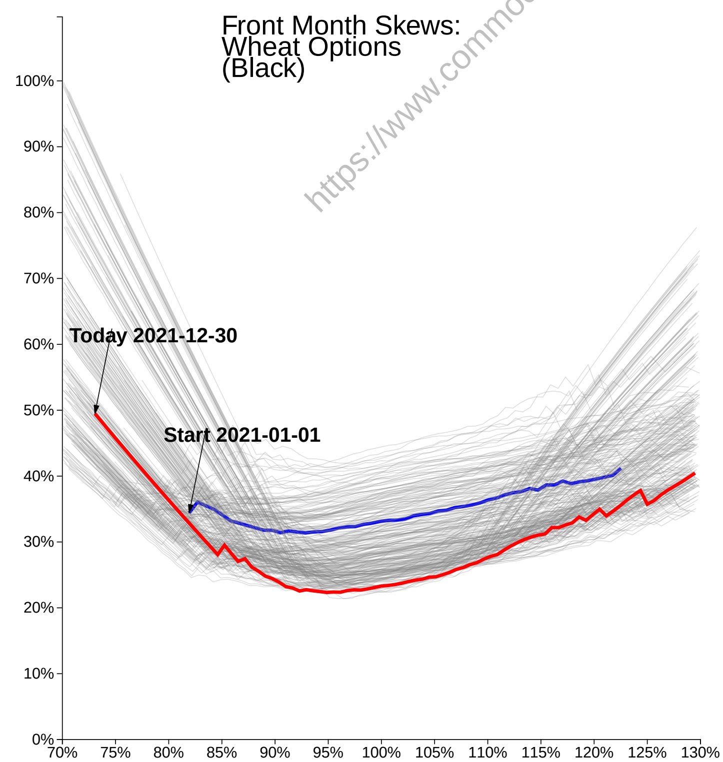

Price ($)
Start 2021-01-01
20220121
20220826
Today 2021-12-30
20230224

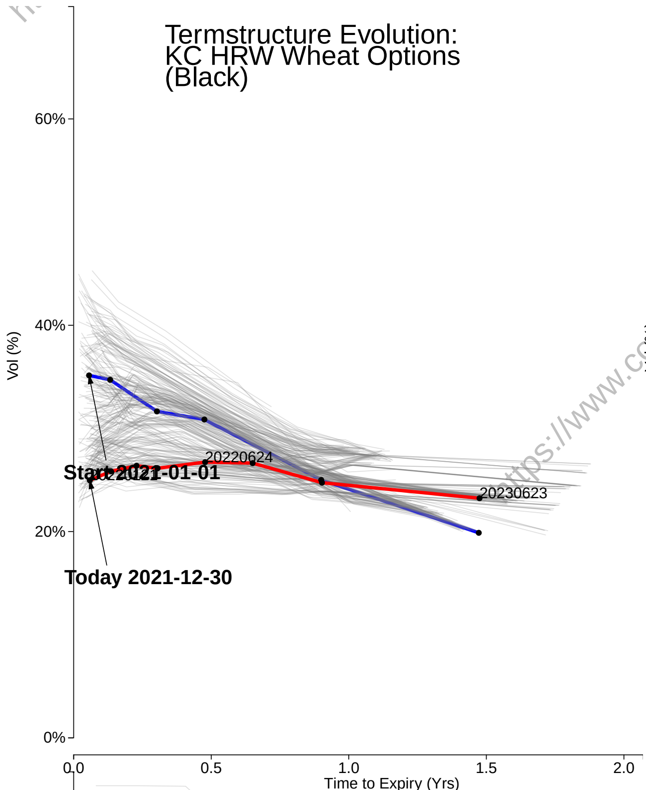

Front Month Skews:
Soybean Meal Options
(Black)
Today 2021-12-30
Start 2021-01-01

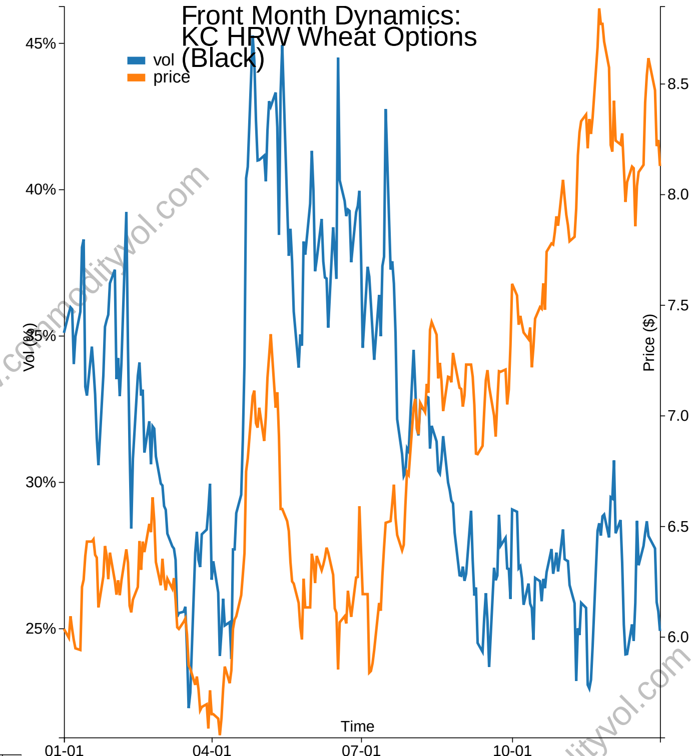

Termstructure Evolution:
Wheat Options
(Black)
Vol (%)
60%
50%
40%
30%
20%
10%
0%
0.0
0.5
1.0
1.5
Time to Expiry (Yrs)
Start 2021-01-01
Today 2021-12-30
20220624
20230623

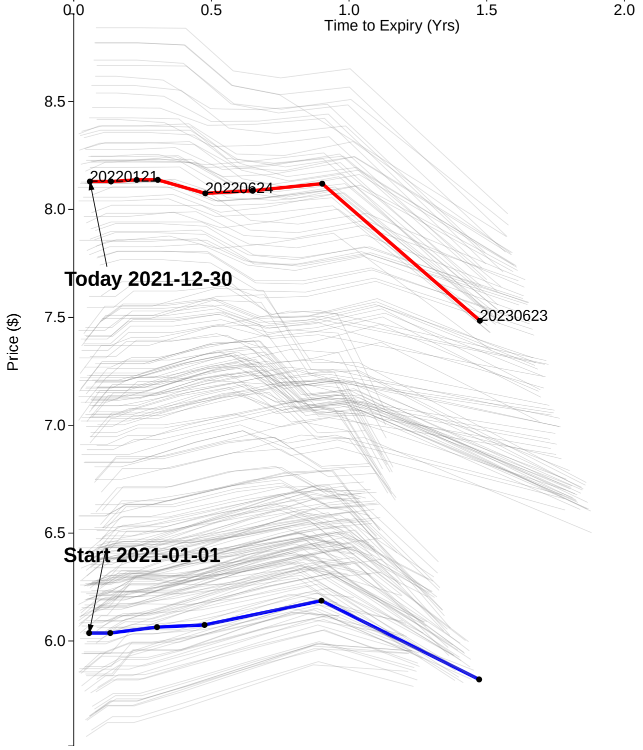

Front Month Dynamics:
Wheat Options
(Black)
vol
price
Vol (%)
Price ($)
45%
40%
35%
30%
25%
8.5
8.0
7.5
7.0
6.5
Time
01-01
04-01
07-01
10-01

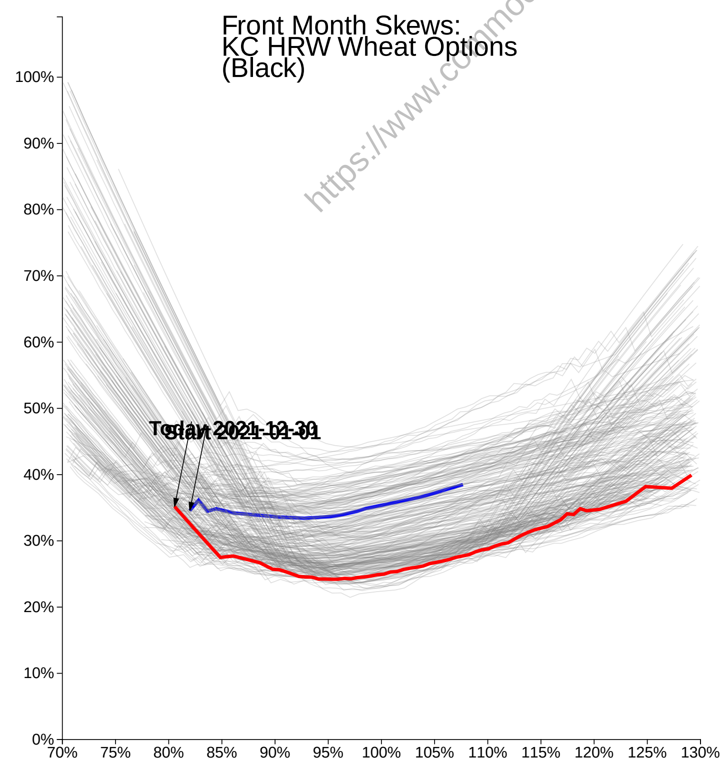

Price ($)
8.5
8.0
7.5
7.0
6.5
6.0
20220121
20220624
20230623
Today 2021-12-30
Start 2021-01-01

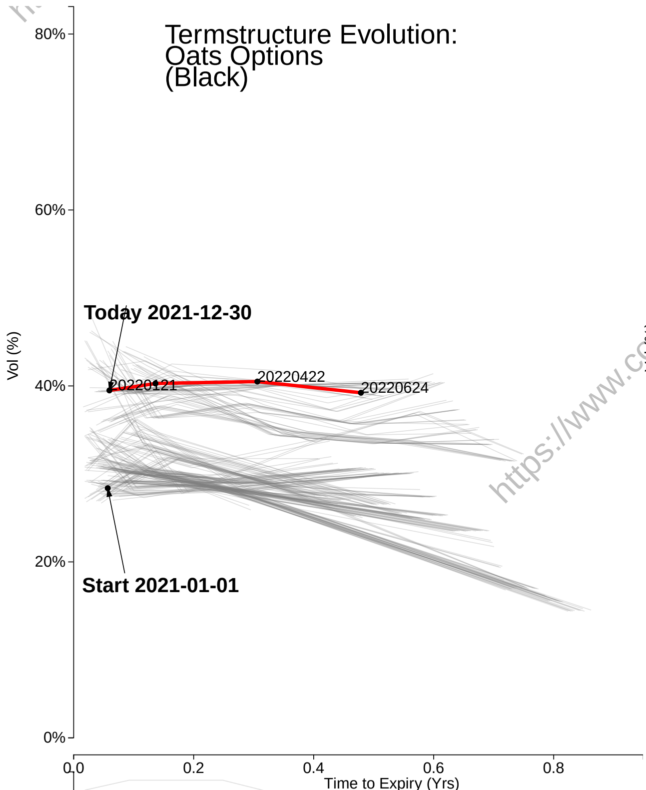

Front Month Skews:
Wheat Options
(Black)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%
Today 2021-12-30
Start 2021-01-01

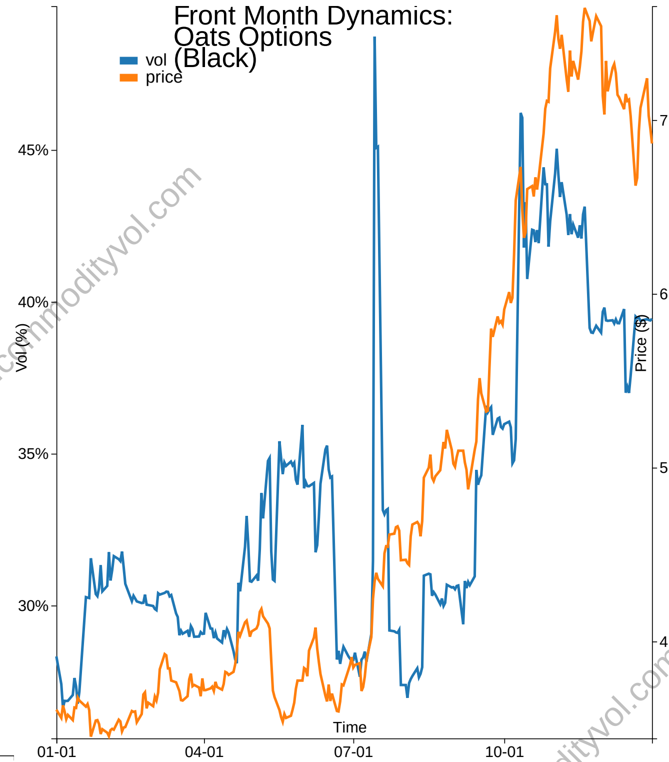

Termstructure Evolution:
KC HRW Wheat Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220624
20230623
Start 2021-01-01
Today 2021-12-30

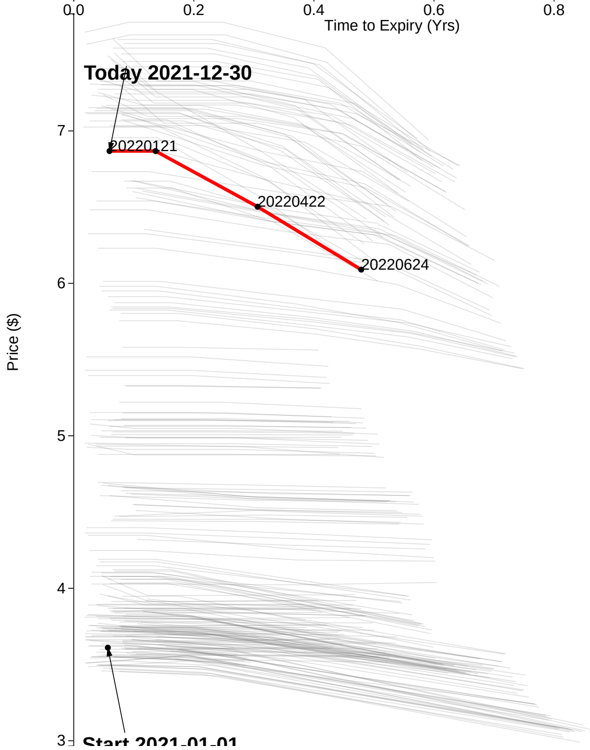

Front Month Dynamics:
KC HRW Wheat Options
(Black)
vol
price
Vol (%)
Price ($)
Time
01-01
04-01
07-01
10-01

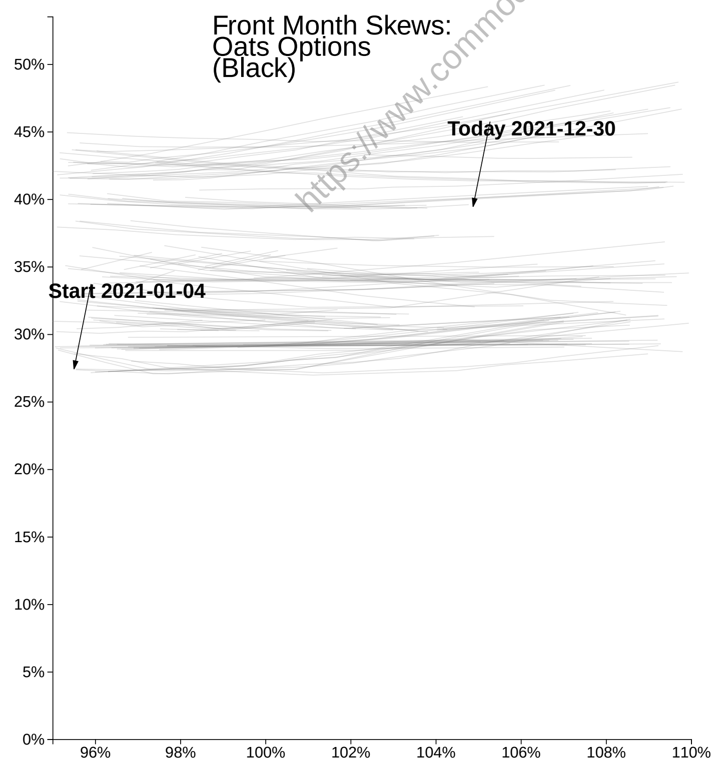

Price ($)
20220121
20220624
20230623
Today 2021-12-30
Start 2021-01-01

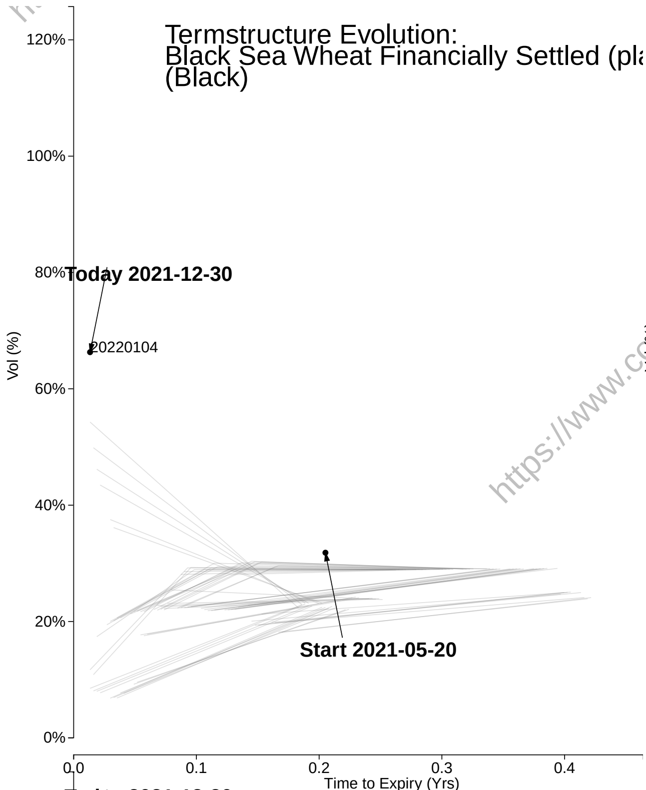

Front Month Skews:
KC HRW Wheat Options
(Black)
Today 2021-12-30
Start 2021-01-01

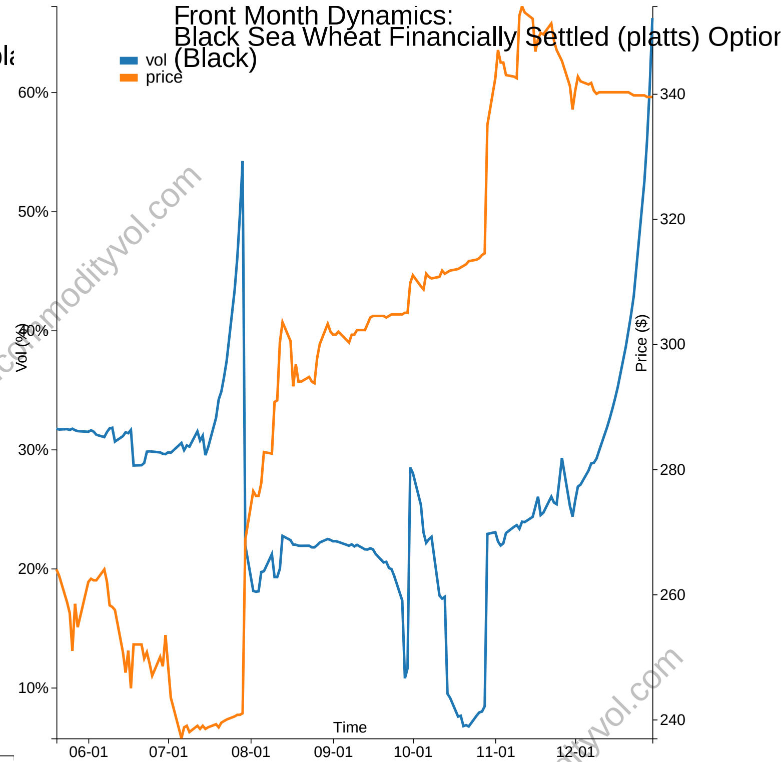

Termstructure Evolution:
Oats Options
(Black)
Today 2021-12-30
Start 2021-01-01
20220121
20220422
20220624
Vol (%)
Time to Expiry (Yrs)
0%
20%
40%
60%
80%
0.0
0.2
0.4
0.6
0.8

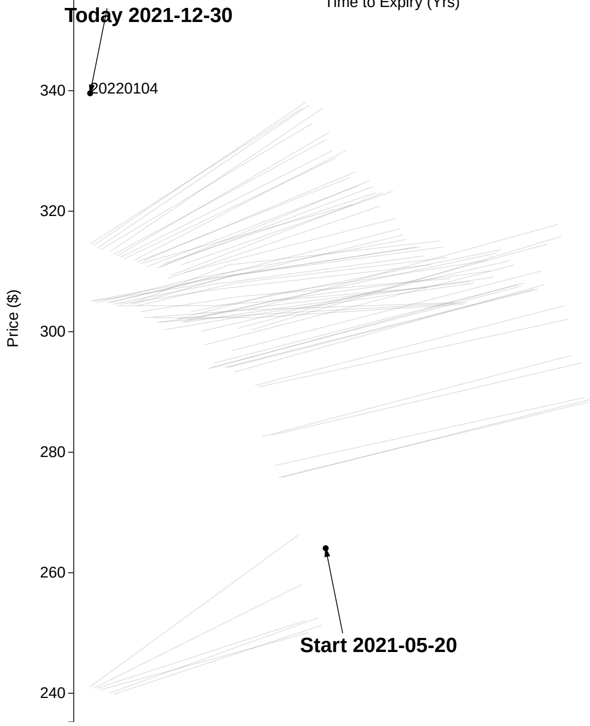

Front Month Dynamics:
Oats Options
(Black)
vol
price
Vol (%)
Price ($)
Time
30%
35%
40%
45%
4
5
6
7
01-01
04-01
07-01
10-01
https://www.commodityvol.com

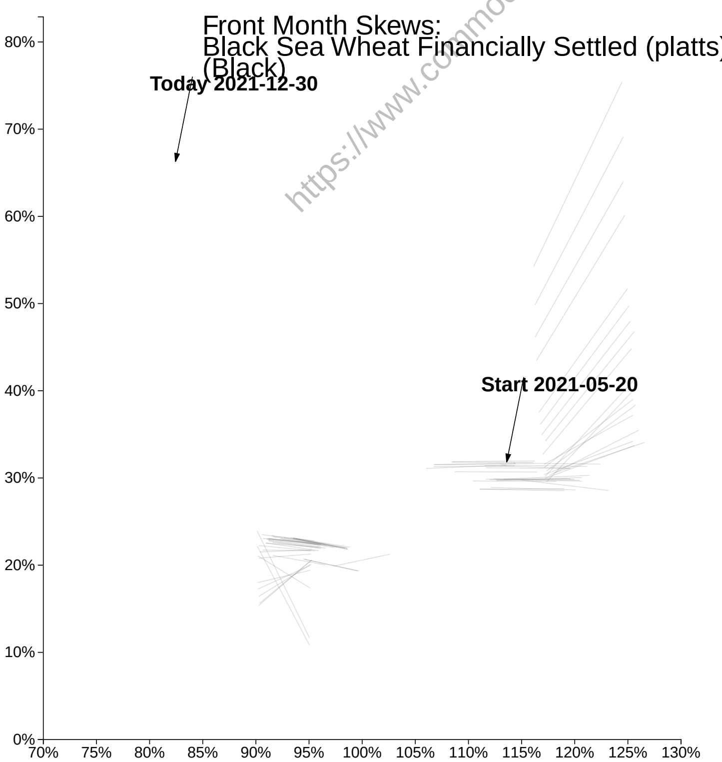

Today 2021-12-30
Start 2021-01-01
20220121
20220422
20220624
Price ($)
3
4
5
6
7

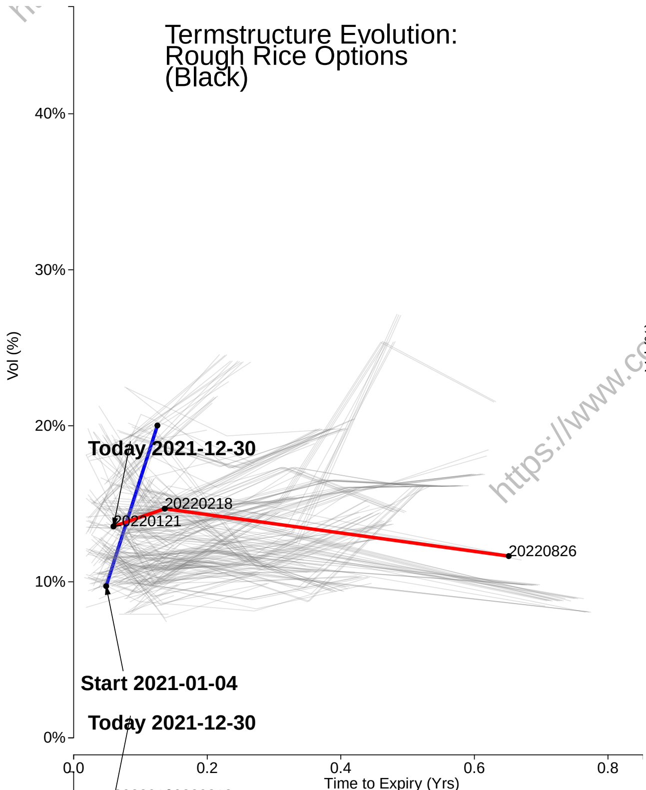

Front Month Skews:
Oats Options
(Black)
Today 2021-12-30
Start 2021-01-04
0%
5%
10%
15%
20%
25%
30%
35%
40%
45%
50%
96%
98%
100%
102%
104%
106%
108%
110%
https://www.commodityvol.com

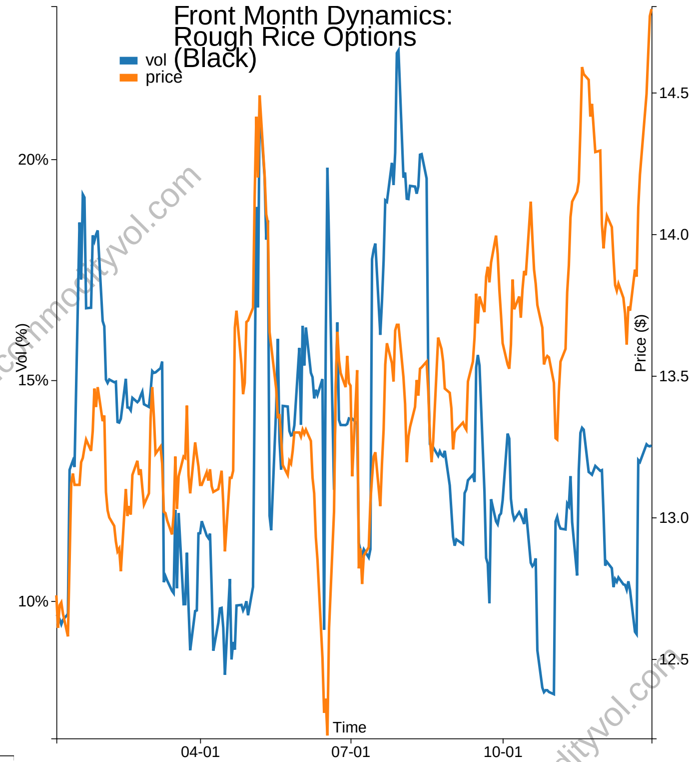

Termstructure Evolution:
Black Sea Wheat Financially Settled (pla
(Black)
Today 2021-12-30
20220104
Start 2021-05-20
Vol (%)
Time to Expiry (Yrs)
0%
20%
40%
60%
80%
100%
120%
0.0
0.1
0.2
0.3
0.4

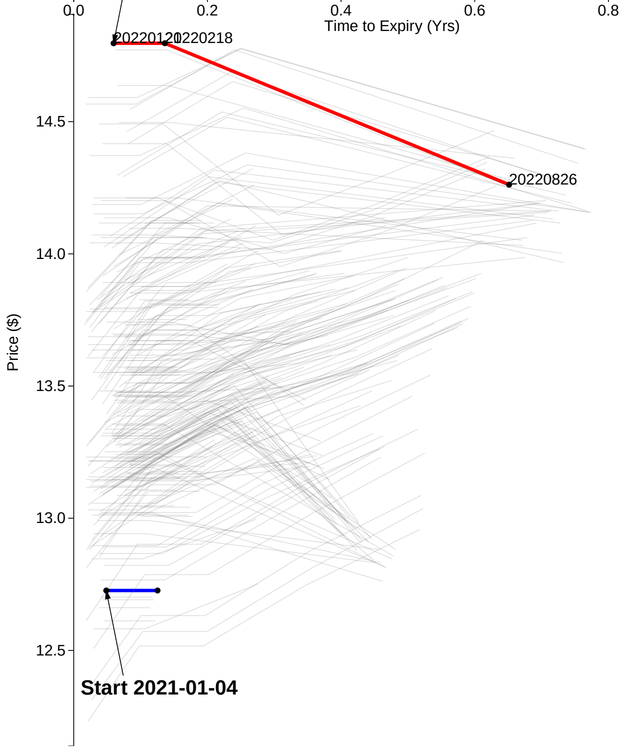

Front Month Dynamics:
Black Sea Wheat Financially Settled (platts) Optior
(Black)
vol
price
Vol (%)
Price ($)
Time
10%
20%
30%
40%
50%
60%
240
260
280
300
320
340
06-01
07-01
08-01
09-01
10-01
11-01
12-01

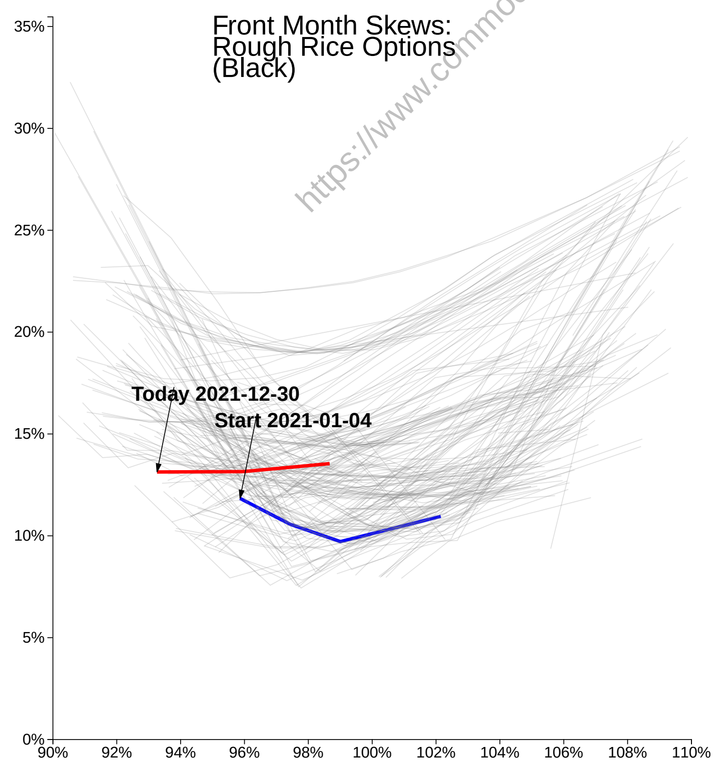

Today 2021-12-30
20220104
Start 2021-05-20
Price ($)
240
260
280
300
320
340

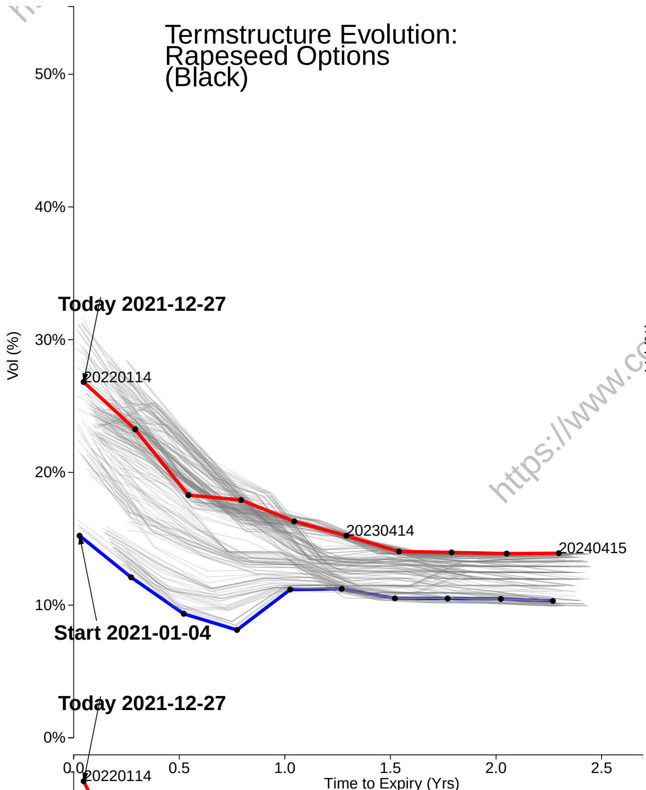

Front Month Skews:
Black Sea Wheat Financially Settled (platts)
(Black)
Today 2021-12-30
Start 2021-05-20
0%
10%
20%
30%
40%
50%
60%
70%
80%
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

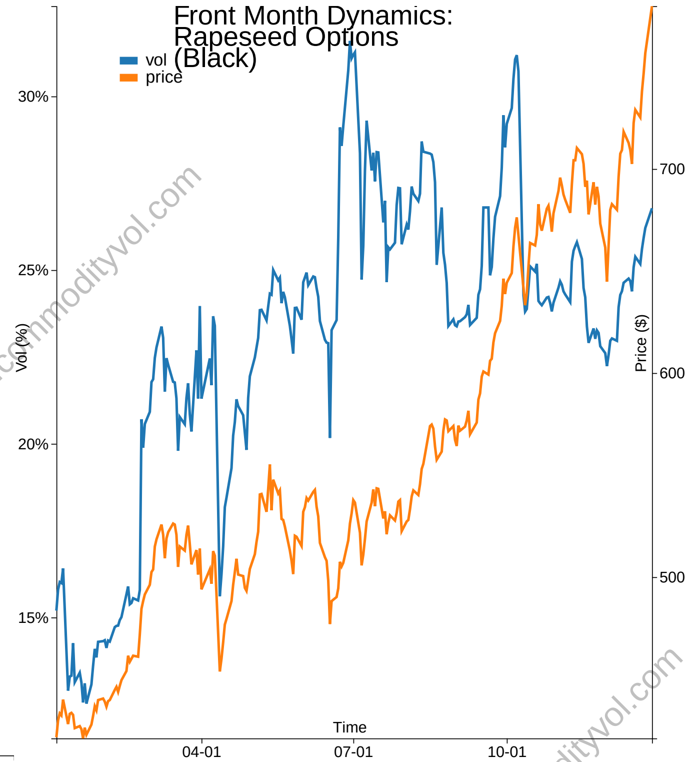

Termstructure Evolution:
Rough Rice Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Today 2021-12-30
Start 2021-01-04
20220121
20220218
20220826

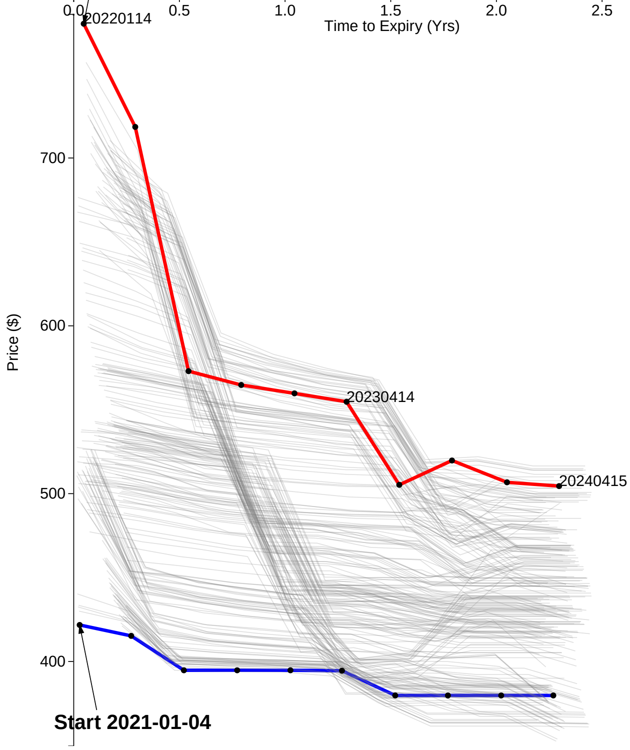

Front Month Dynamics:
Rough Rice Options
(Black)
vol
price
Vol (%)
Price ($)
Time
04-01
07-01
10-01

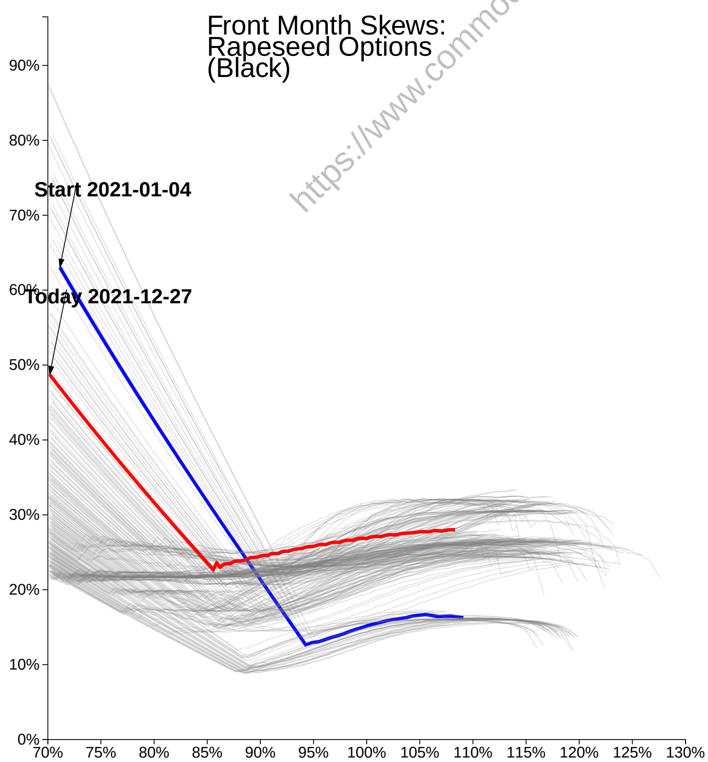

Price ($)
Today 2021-12-30
Start 2021-01-04
20220121
20220218
20220826


Front Month Skews:
Rough Rice Options
(Black)
Today 2021-12-30
Start 2021-01-04

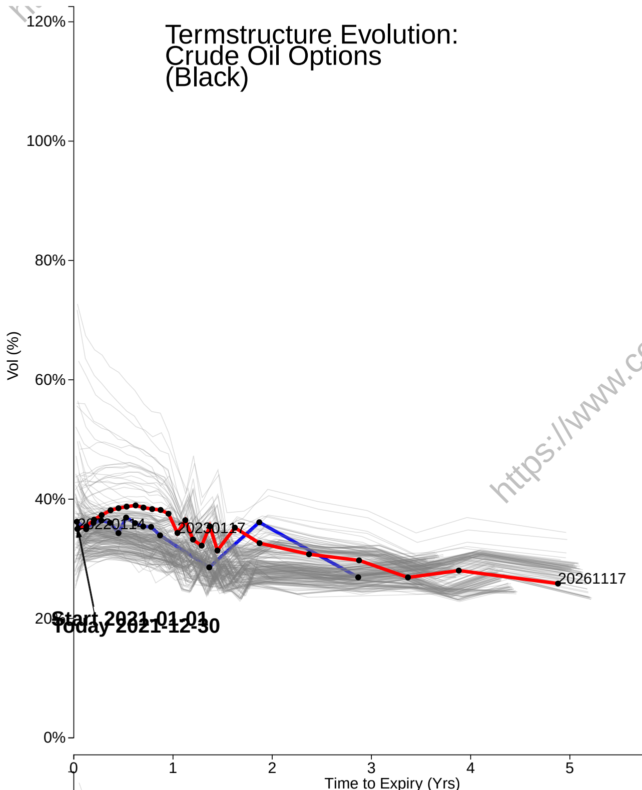

Termstructure Evolution:
Rapeseed Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Today 2021-12-27
Start 2021-01-04
20220114
20230414
20240415
0%
10%
20%
30%
40%
50%
0.0
0.5
1.0
1.5
2.0
2.5

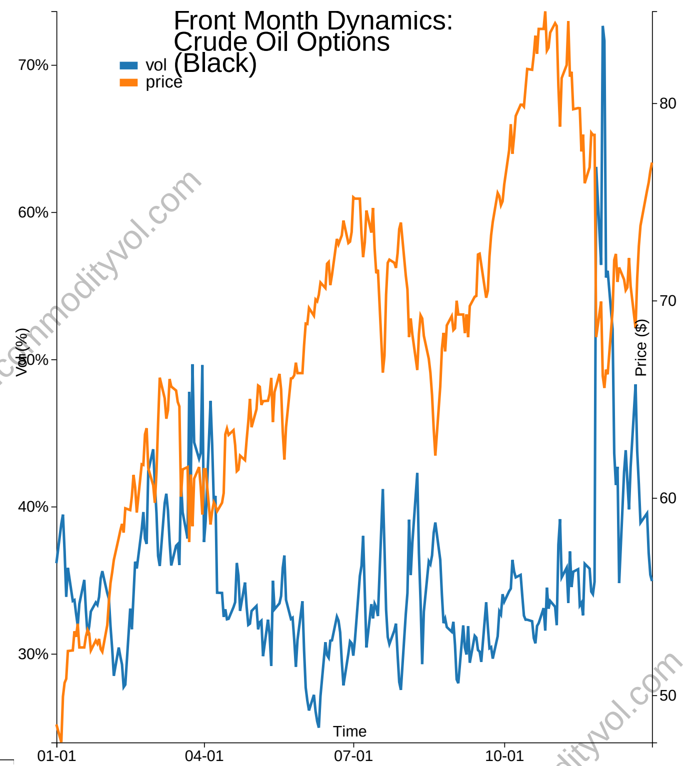

Front Month Dynamics:
Rapeseed Options
(Black)
vol
price
Vol (%)
Price ($)
Time
15%
20%
25%
30%
500
600
700
04-01
07-01
10-01

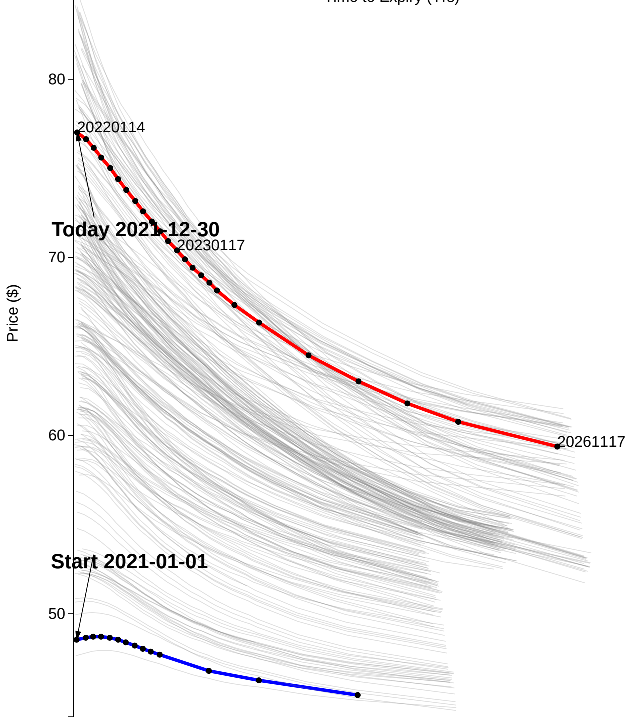

Price ($)
Today 2021-12-27
Start 2021-01-04
20220114
20230414
20240415
400
500
600
700

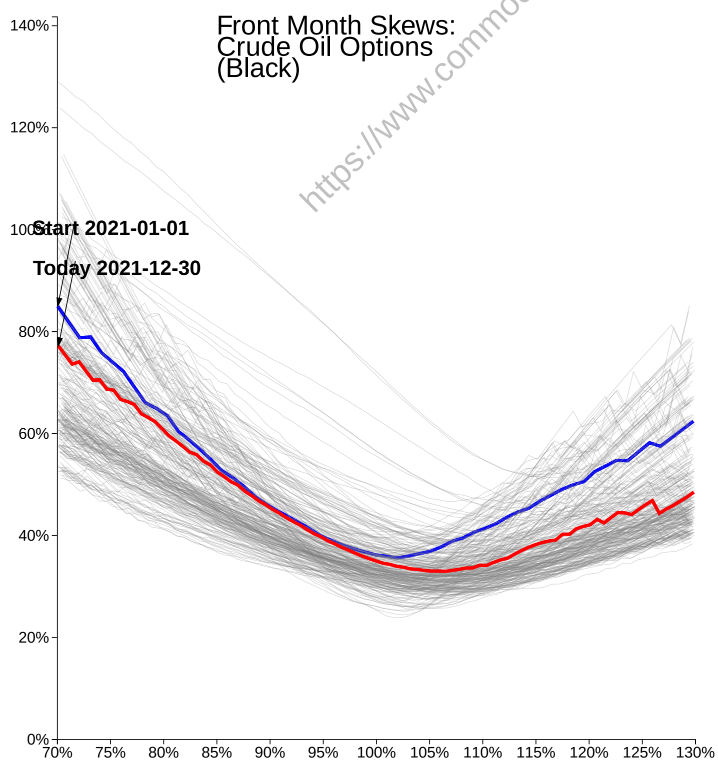

Front Month Skews:
Rapeseed Options
(Black)
Start 2021-01-04
Today 2021-12-27
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

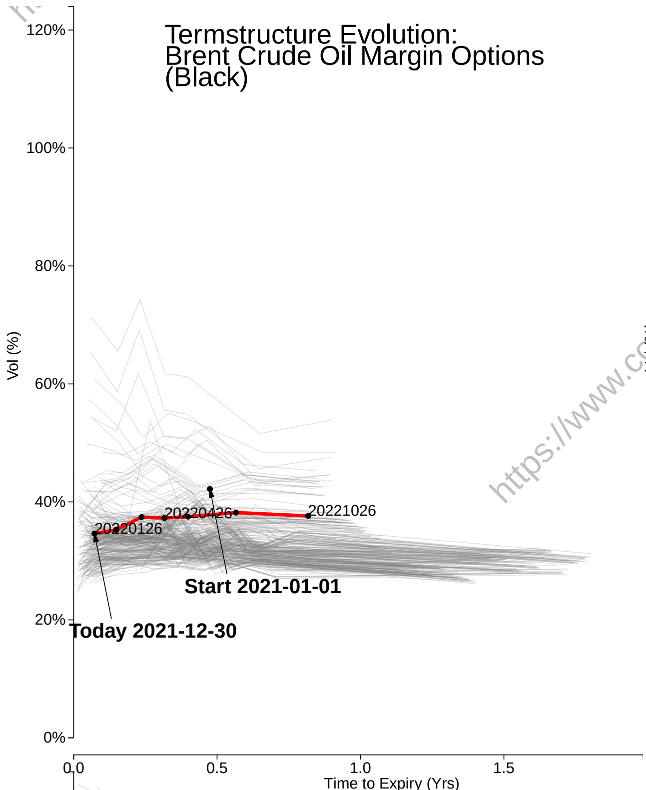
Crude and Derivatives


Termstructure Evolution:
Crude Oil Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220114
20230117
20261117
Start 2021-01-01
Today 2021-12-30
0%
20%
40%
60%
80%
100%
120%
0
1
2
3
4
5

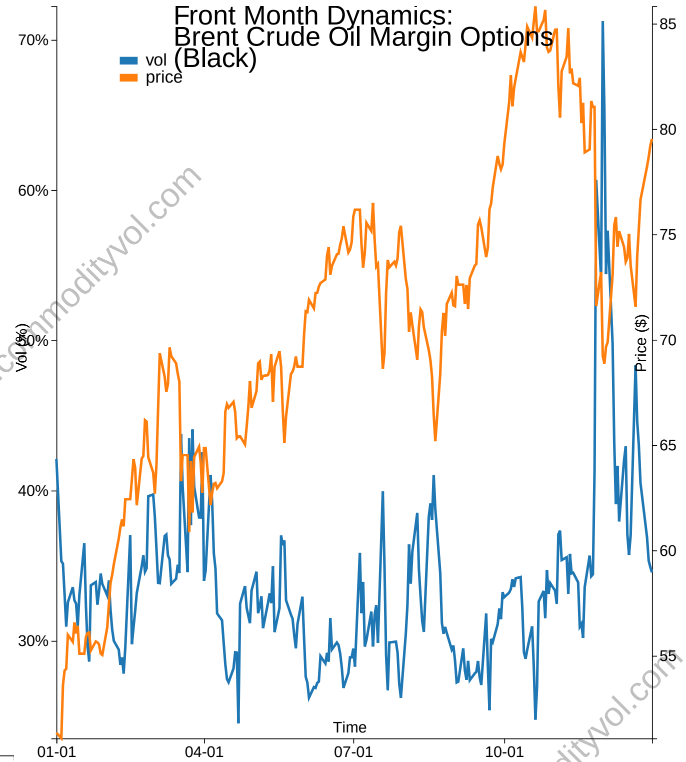

Front Month Dynamics:
Crude Oil Options
(Black)
vol
price
Vol (%)
Price ($)
Time
30%
40%
50%
60%
70%
50
60
70
80
01-01
04-01
07-01
10-01


Price ($)
20220114
20230117
20261117
Today 2021-12-30
Start 2021-01-01
50
60
70
80

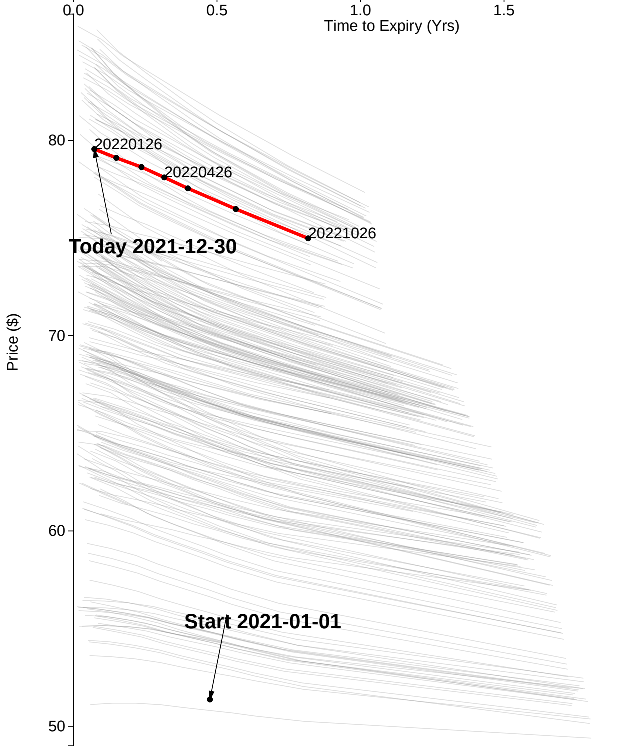

Front Month Skews:
Crude Oil Options
(Black)
Start 2021-01-01
Today 2021-12-30
0%
20%
40%
60%
80%
100%
120%
140%
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%



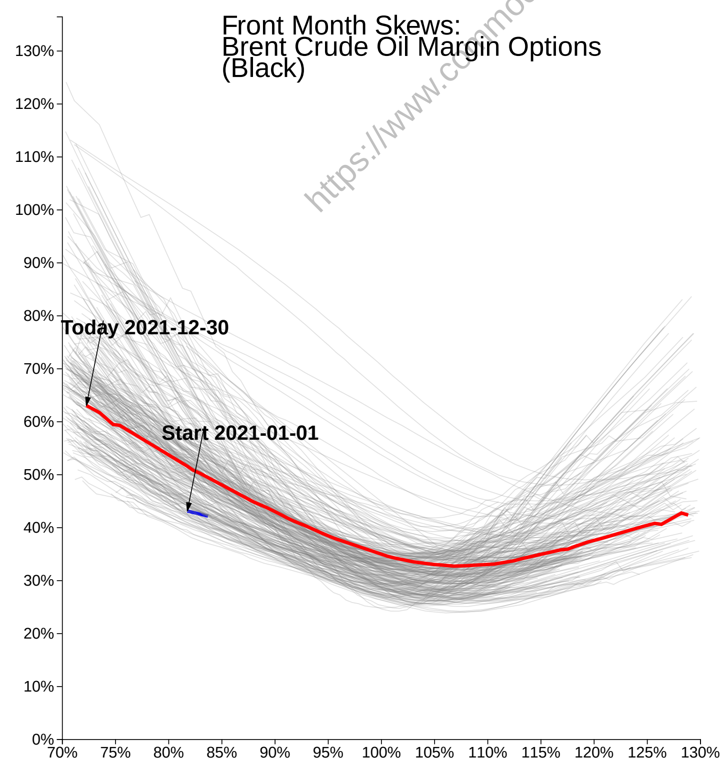
Termstructure Evolution:
Brent Crude Oil Margin Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220126
20220426
20221026
Start 2021-01-01
Today 2021-12-30



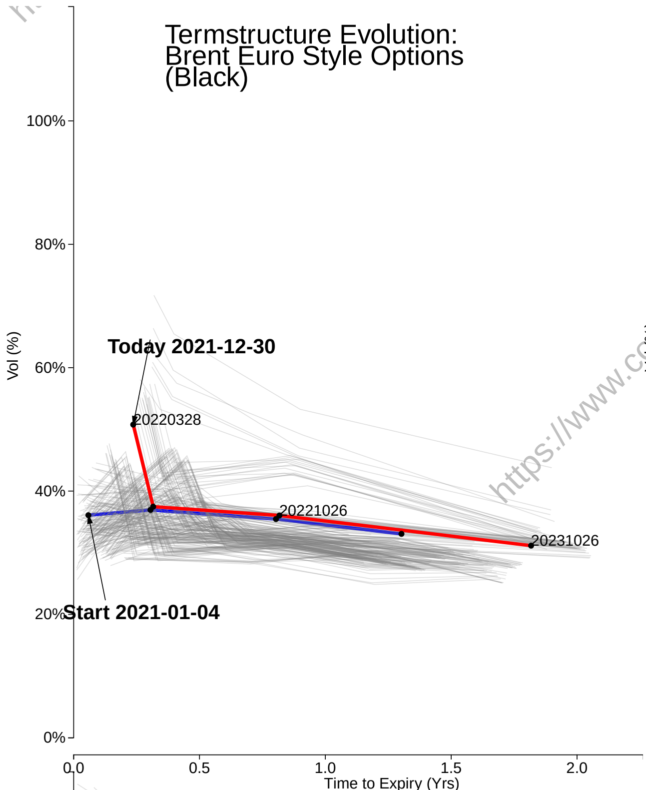
Front Month Dynamics:
Brent Crude Oil Margin Options
(Black)
vol
price
Vol (%)
Price ($)
Time
01-01
04-01
07-01
10-01

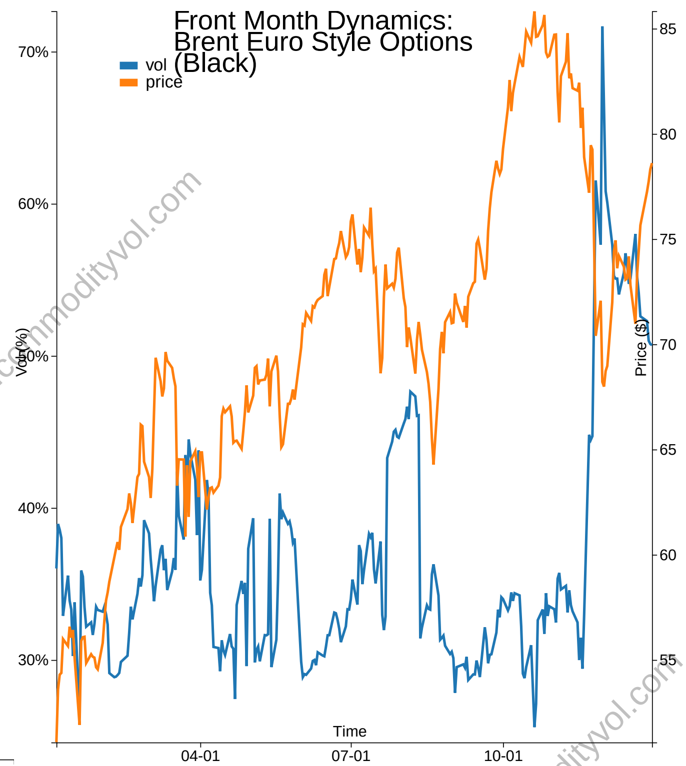


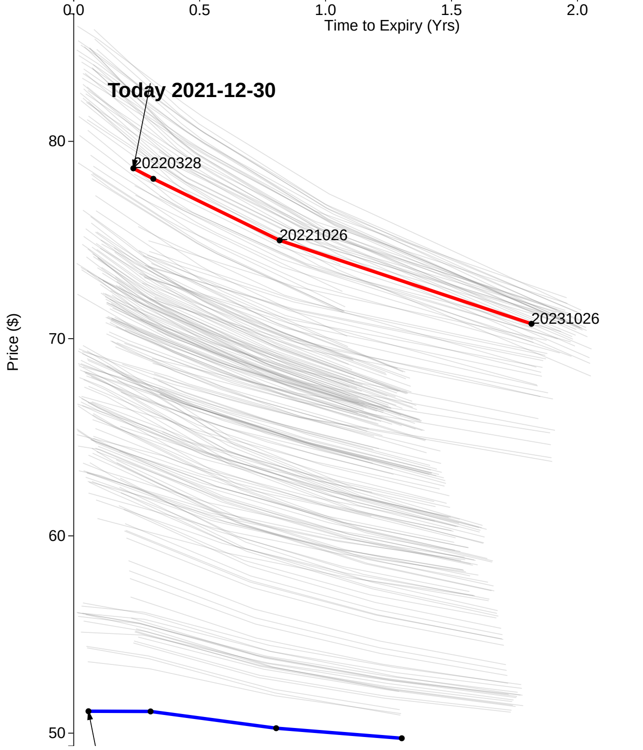
Price ($)
20220126
20220426
20221026
Today 2021-12-30
Start 2021-01-01

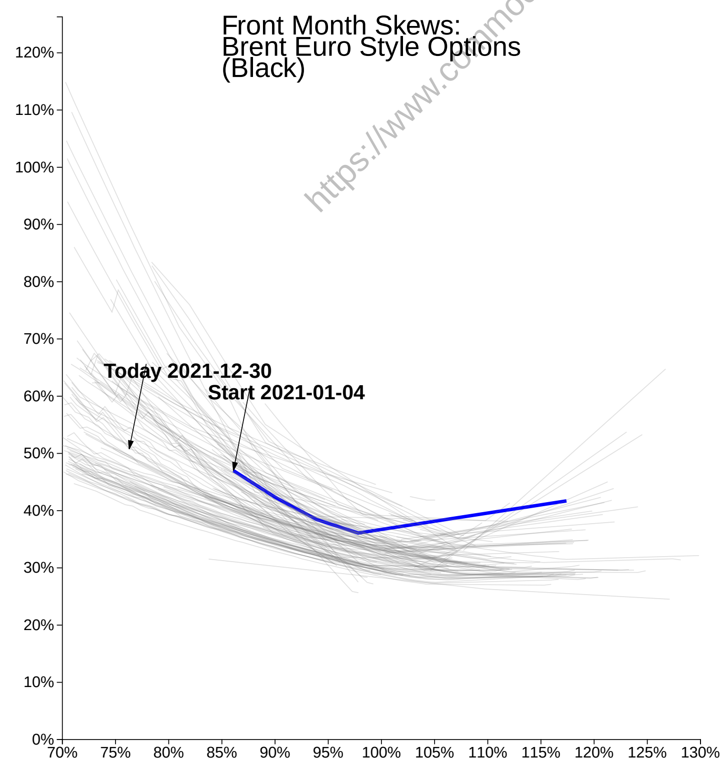


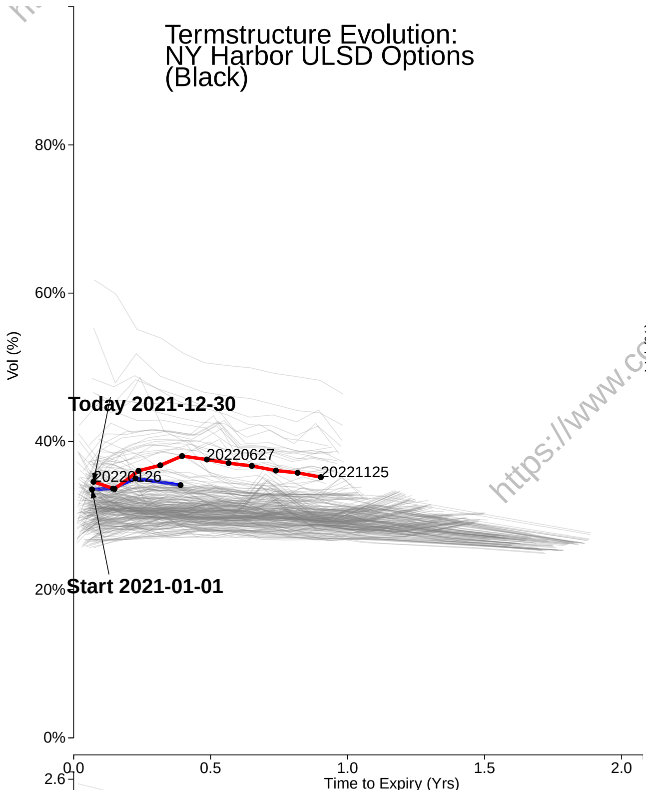
Front Month Skews:
Brent Crude Oil Margin Options
(Black)
Today 2021-12-30
Start 2021-01-01

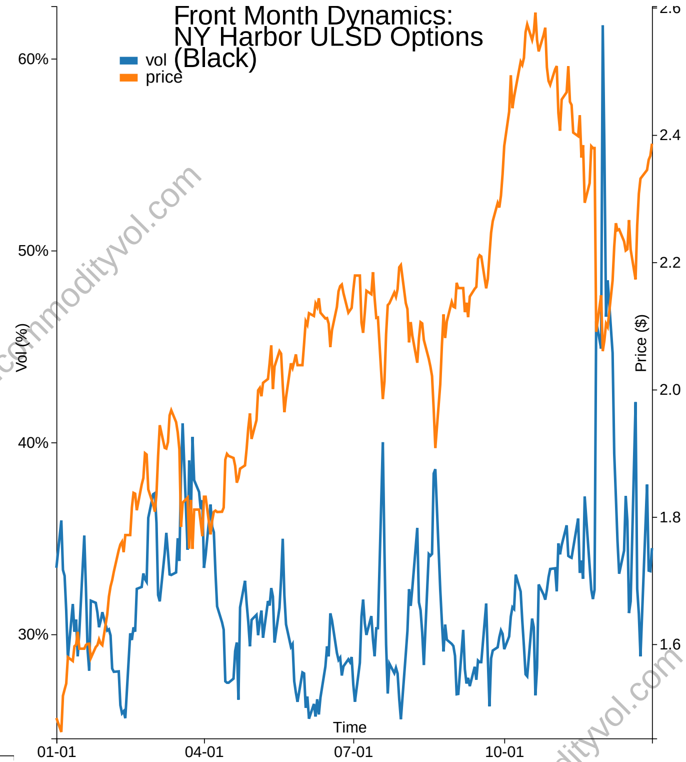

Termstructure Evolution:
Brent Euro Style Options
(Black)
Today 2021-12-30
20220328
20221026
20231026
Start 2021-01-04
Vol (%)
Time to Expiry (Yrs)

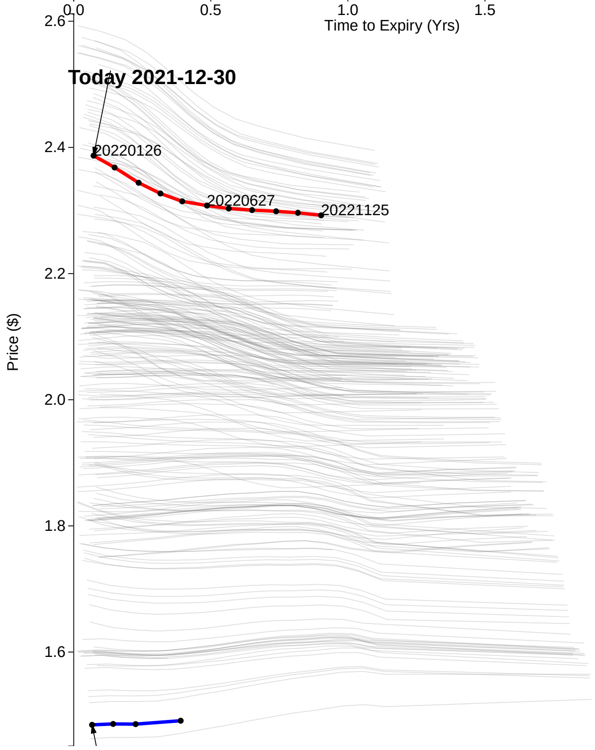

Front Month Dynamics:
Brent Euro Style Options
(Black)
vol
price
Vol (%)
Price ($)
Time
04-01
07-01
10-01

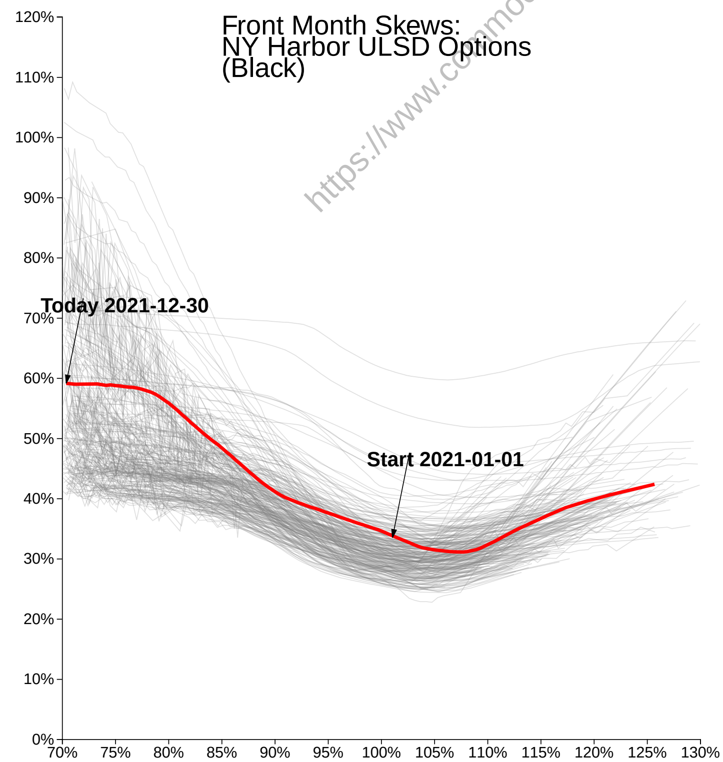

Today 2021-12-30
20220328
20221026
20231026
Price ($)

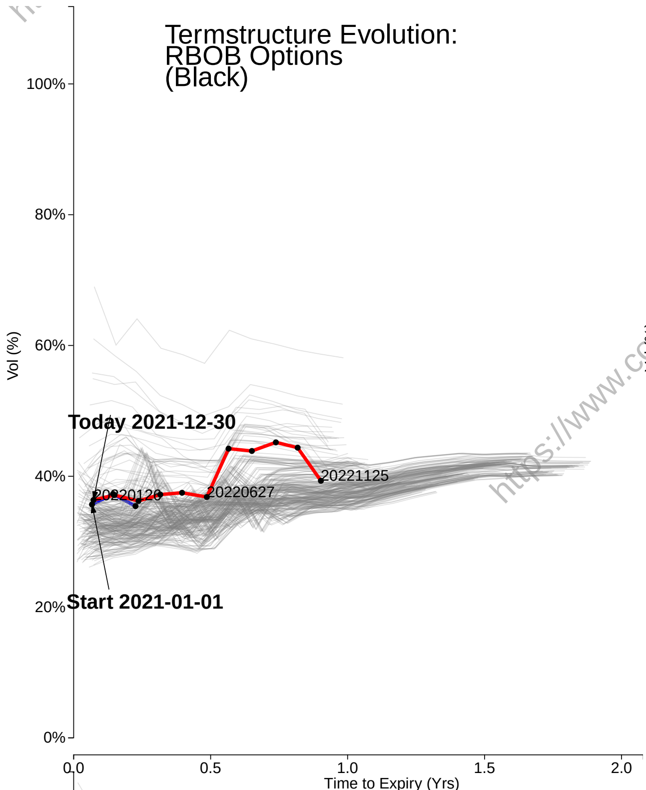

Front Month Skews:
Brent Euro Style Options
(Black)
Today 2021-12-30
Start 2021-01-04

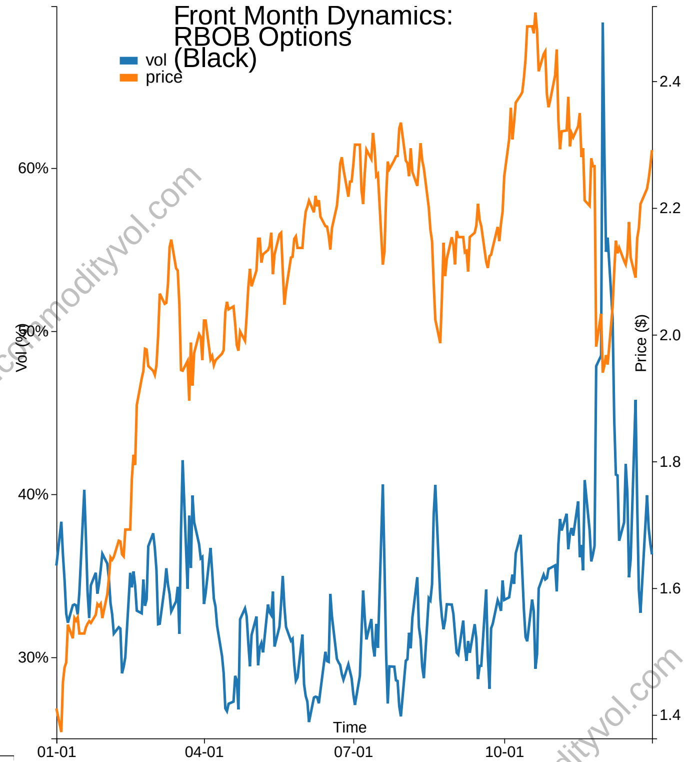

Termstructure Evolution:
NY Harbor ULSD Options
(Black)
Vol (%)
Today 2021-12-30
Start 2021-01-01
20220126
20220627
20221125
Time to Expiry (Yrs)

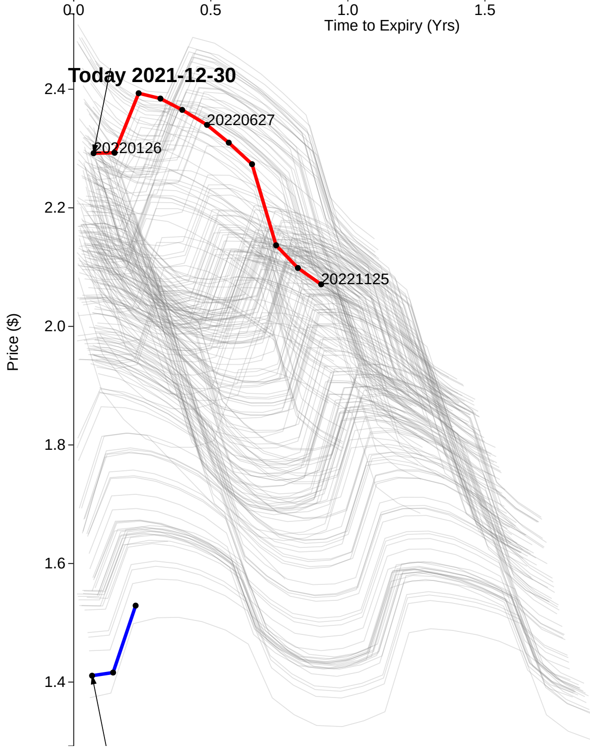

Front Month Dynamics:
NY Harbor ULSD Options
(Black)
vol
price
Vol (%)
Price ($)
Time

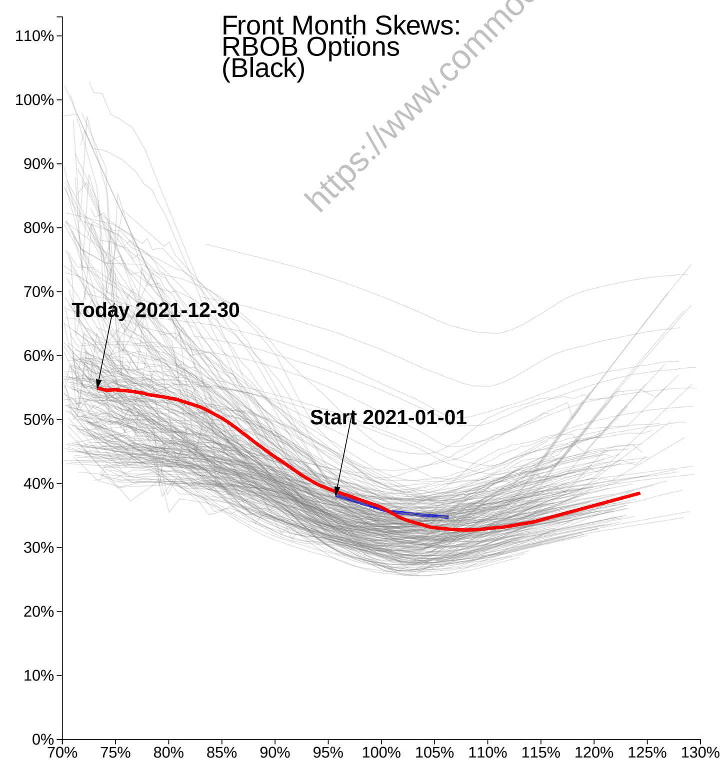

Price ($)
Today 2021-12-30
20220126
20220627
20221125

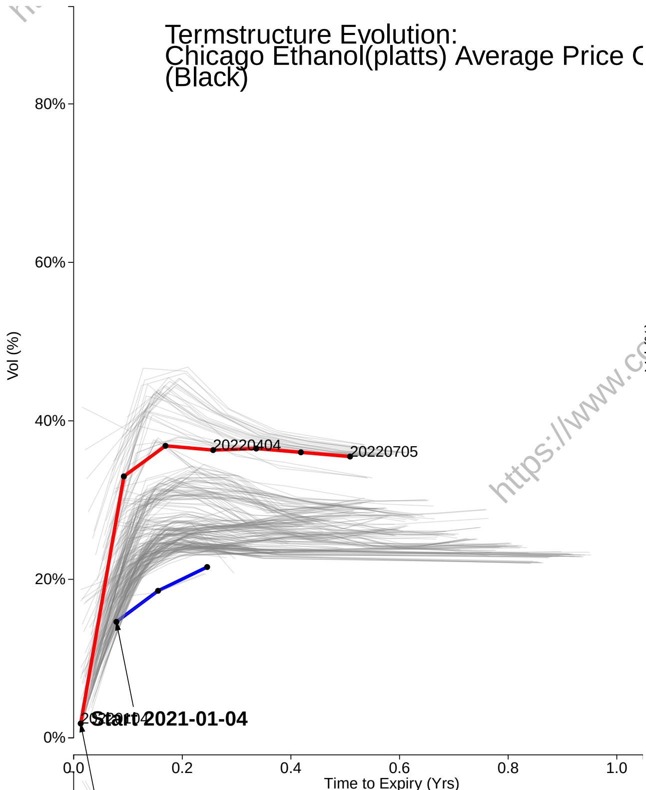

Front Month Skews:
NY Harbor ULSD Options
(Black)
Today 2021-12-30
Start 2021-01-01

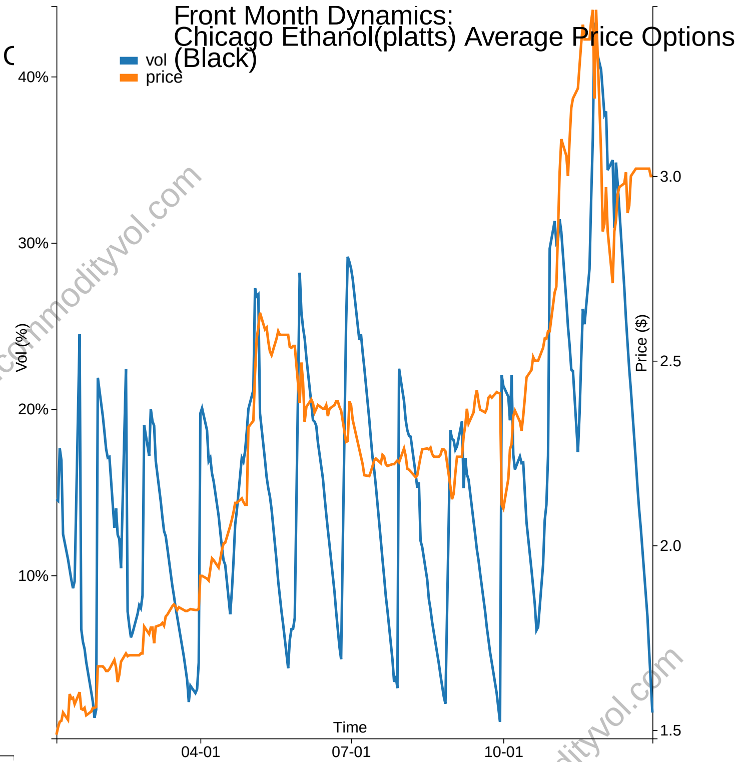

Termstructure Evolution:
RBOB Options
(Black)
Vol (%)
Today 2021-12-30
Start 2021-01-01
20220126
20220627
20221125
Time to Expiry (Yrs)

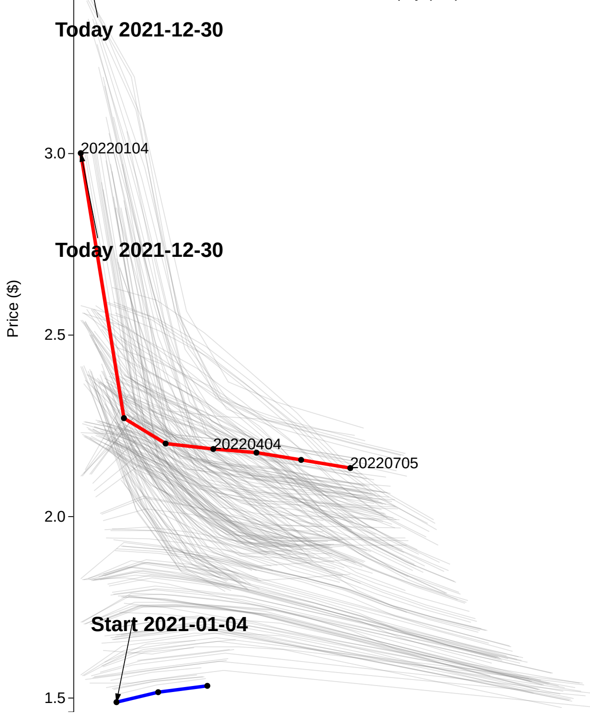

Front Month Dynamics:
RBOB Options
(Black)
vol
price
Vol (%)
Price ($)
Time

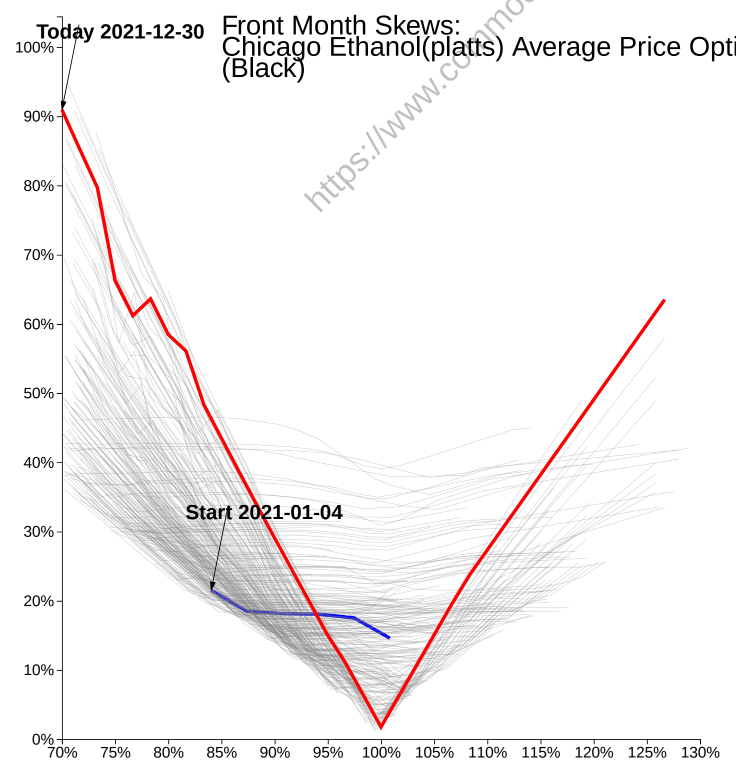

Today 2021-12-30
20220126
20220627
20221125
Price ($)


Front Month Skews:
RBOB Options
(Black)
Today 2021-12-30
Start 2021-01-01

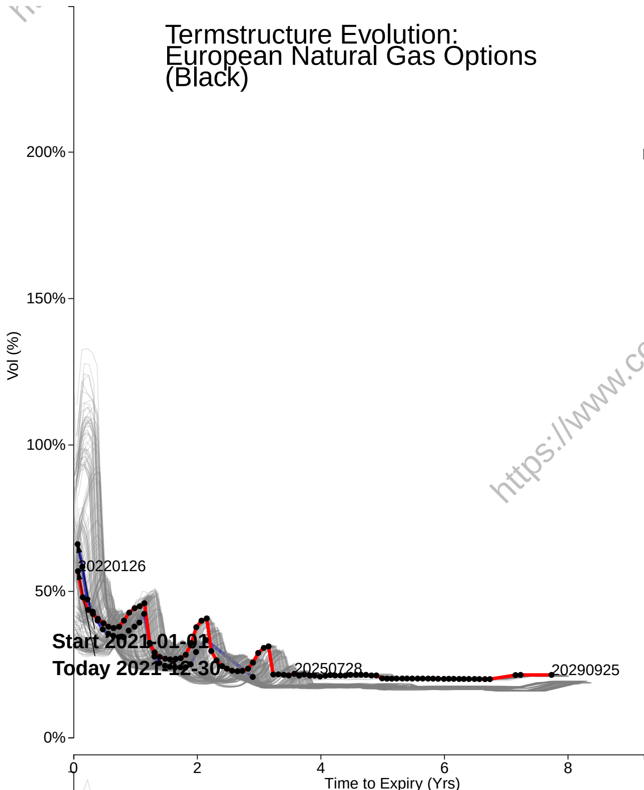

Termstructure Evolution:
Chicago Ethanol(platts) Average Price C
(Black)
Vol (%)
Time to Expiry (Yrs)
20220404
20220705
Start 2021-01-04
Today 2021-12-30

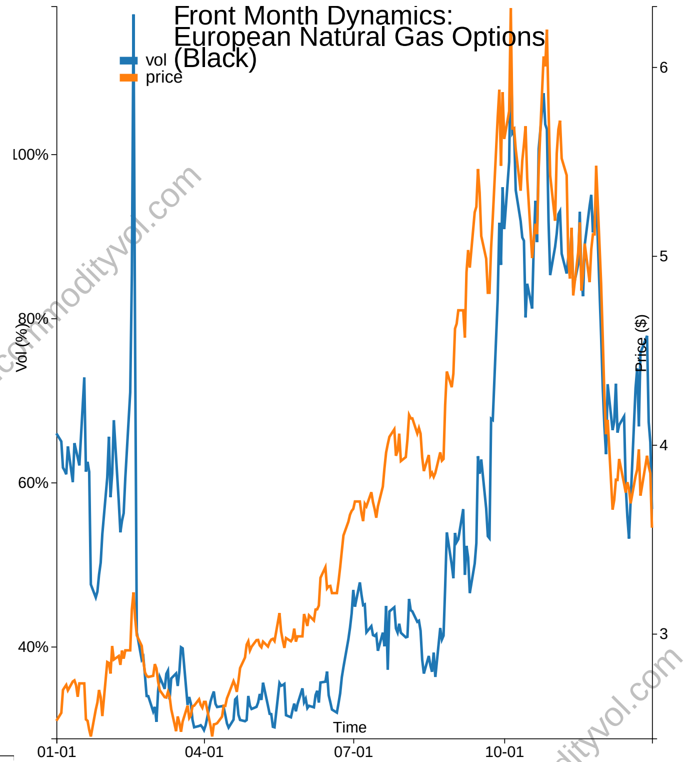

Front Month Dynamics:
Chicago Ethanol(platts) Average Price Options
(Black)
vol
price
Vol (%)
Price ($)
Time
04-01
07-01
10-01

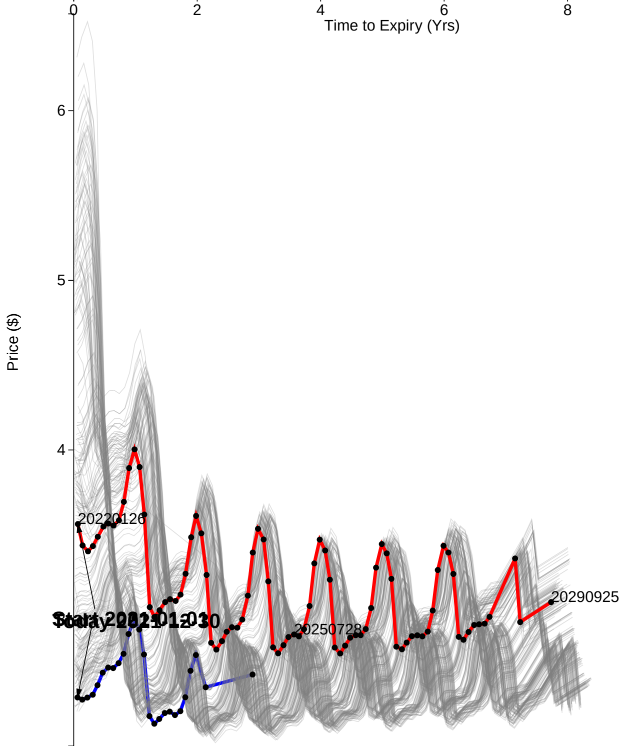

Price ($)
20220104
Today 2021-12-30
20220404
20220705
Start 2021-01-04

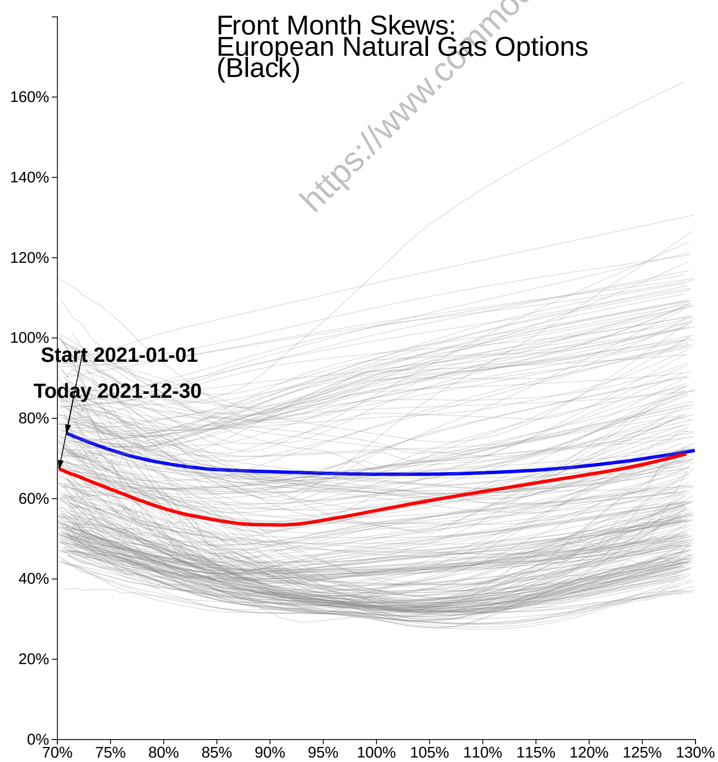

Today 2021-12-30
Front Month Skews:
Chicago Ethanol(platts) Average Price Optio
(Black)
Start 2021-01-04

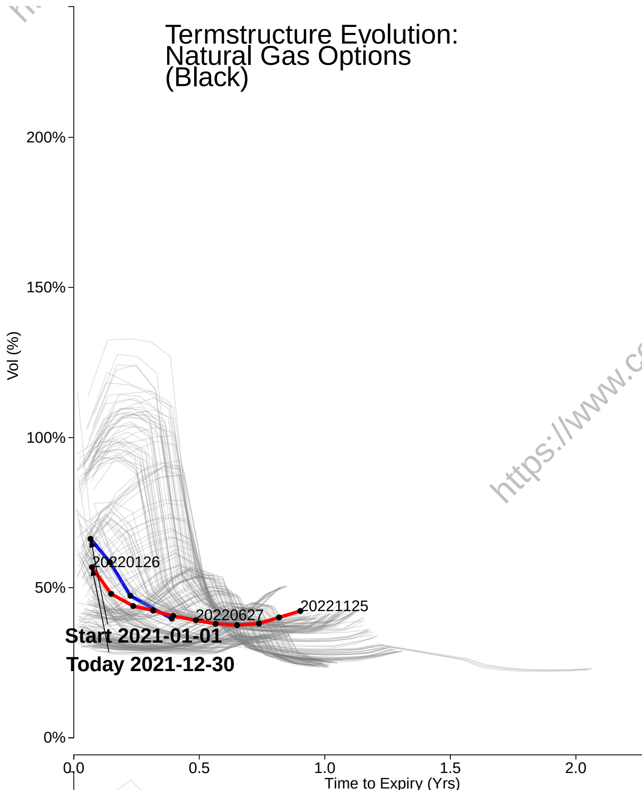
Natural Gas

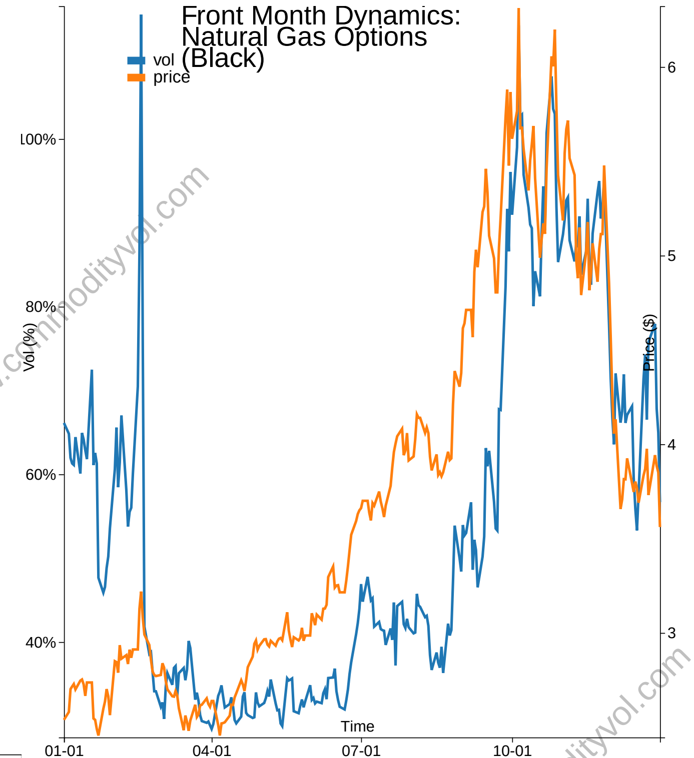

Termstructure Evolution:
European Natural Gas Options
(Black)
Vol (%)
200%
150%
100%
50%
0%
20220126
Start 2021-01-01
Today 2021-12-30
20250728
20290925
0
2
4
6
8
Time to Expiry (Yrs)

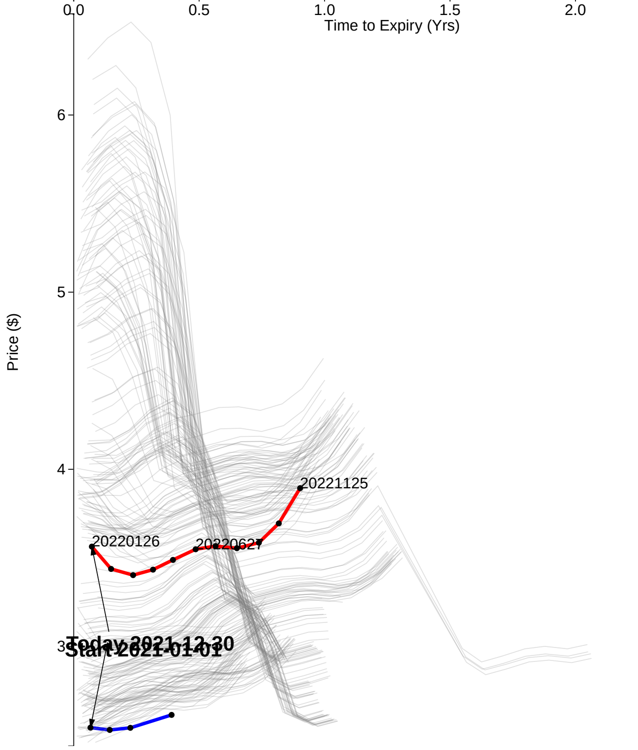

Front Month Dynamics:
European Natural Gas Options
(Black)
vol
price
Vol (%)
Price ($)
100%
80%
60%
40%
6
5
4
3
Time
01-01
04-01
07-01
10-01

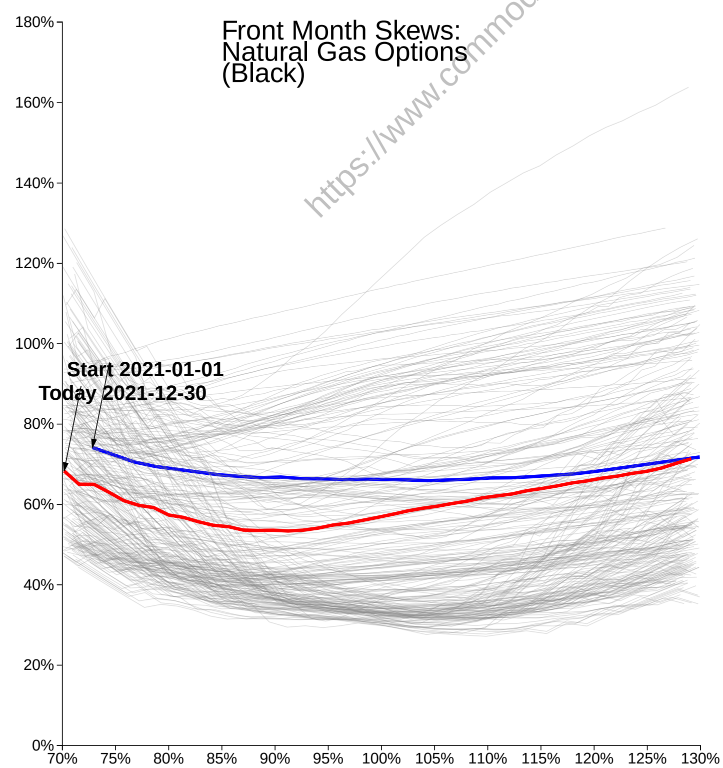

Price ($)
6
5
4
20220126
Start 2021-01-01
Today 2021-12-30
20250728
20290925

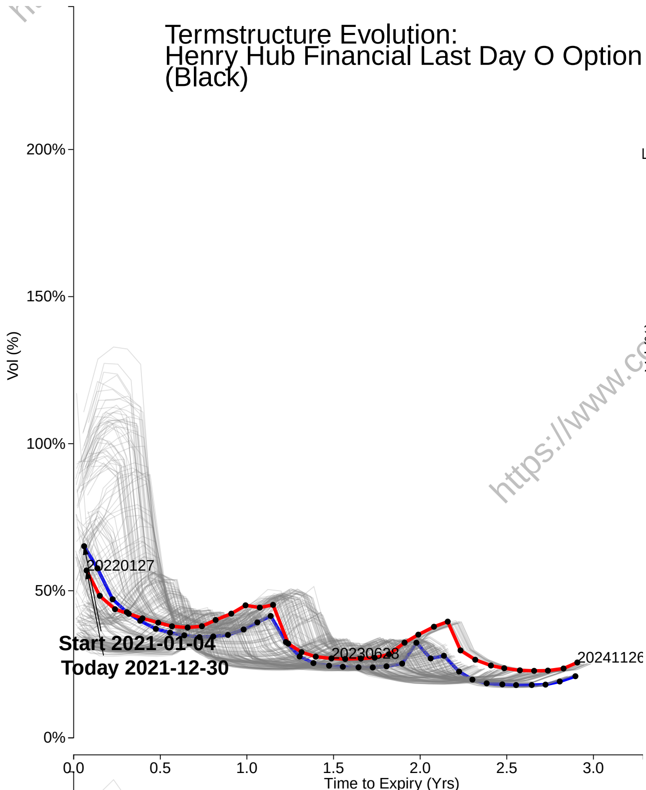

Front Month Skews:
European Natural Gas Options
(Black)
160%
140%
120%
100%
80%
60%
40%
20%
0%
Start 2021-01-01
Today 2021-12-30
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

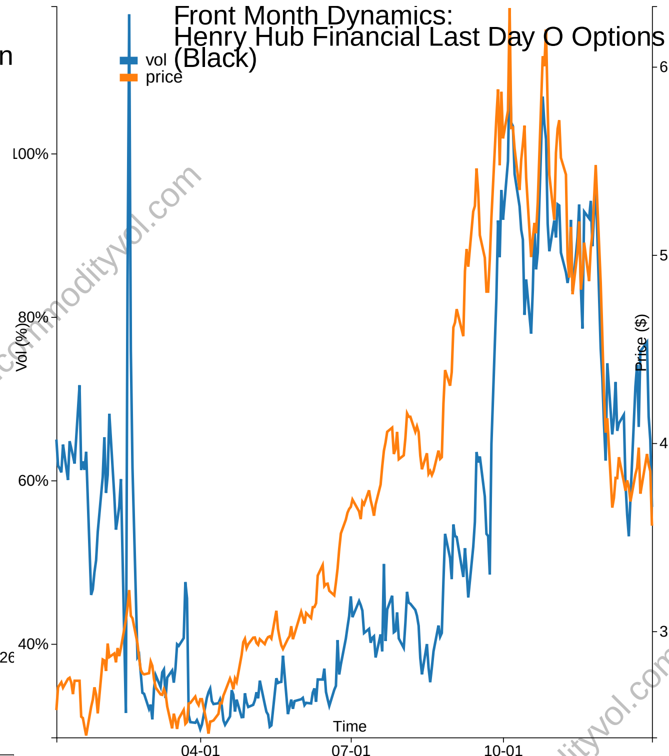

Termstructure Evolution:
Natural Gas Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20220126
20220627
20221125
Start 2021-01-01
Today 2021-12-30

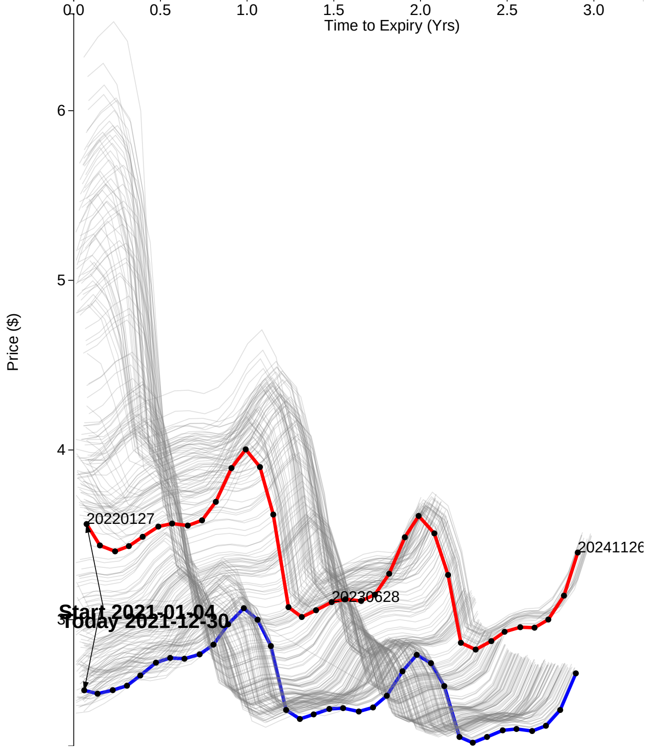

Front Month Dynamics:
Natural Gas Options
(Black)
vol
price
Vol (%)
Price ($)
Time
https://www.commodityvol.com

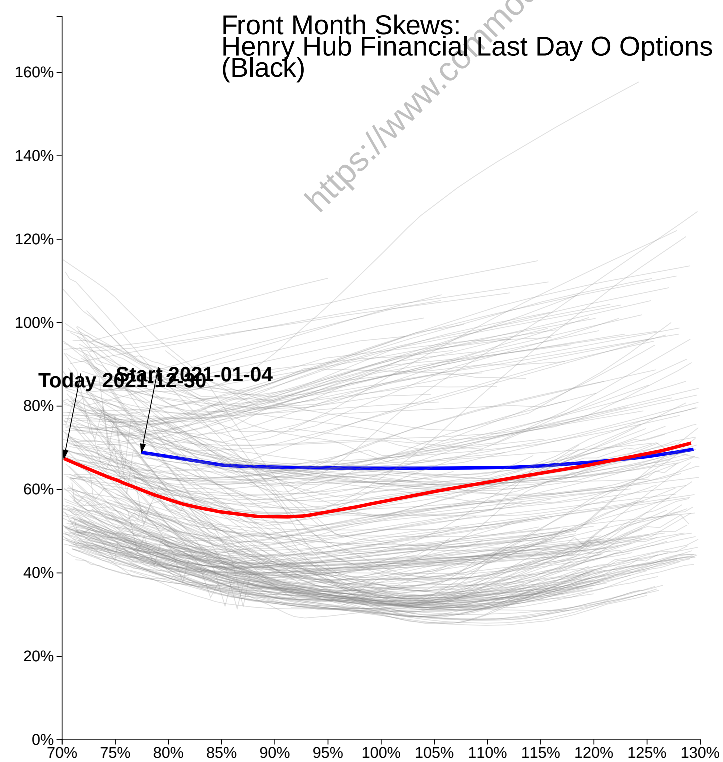

Price ($)
20220126
20220627
20221125
Today 2021-12-30
Start 2021-01-01

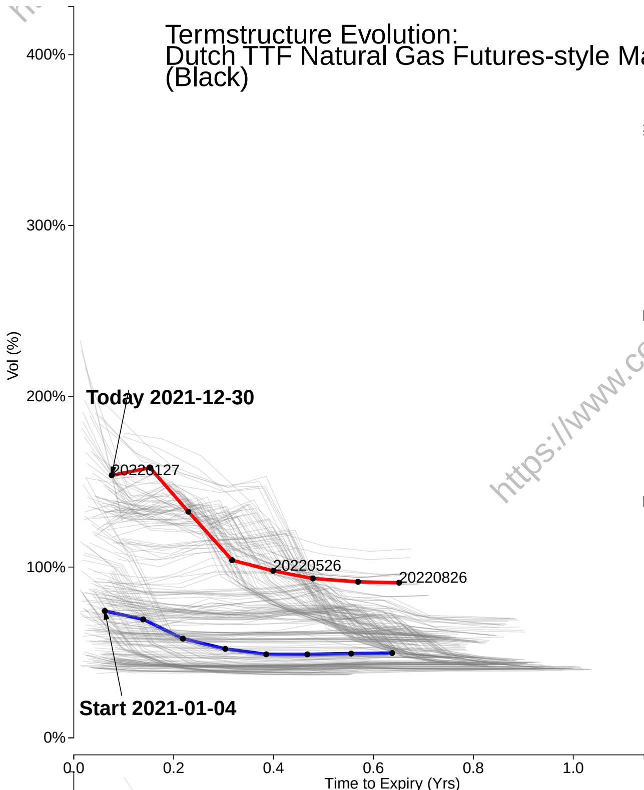

Front Month Skews:
Natural Gas Options
(Black)
Start 2021-01-01
Today 2021-12-30
https://www.commodityvol.com

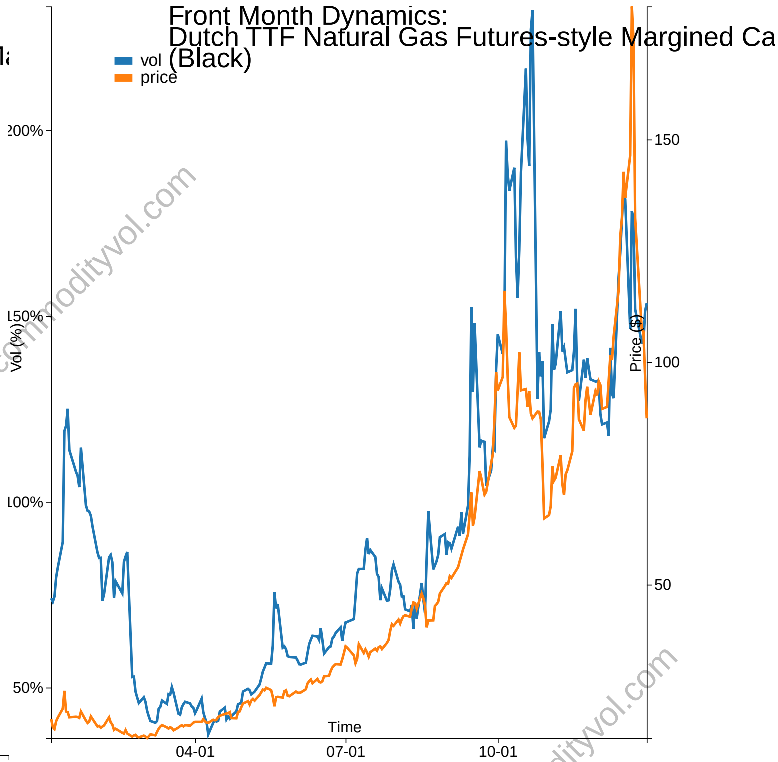

Termstructure Evolution:
Henry Hub Financial Last Day O Option
(Black)
Vol (%)
200%
150%
100%
50%
0%
20220127
Start 2021-01-04
Today 2021-12-30
20230628
20241126
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time to Expiry (Yrs)

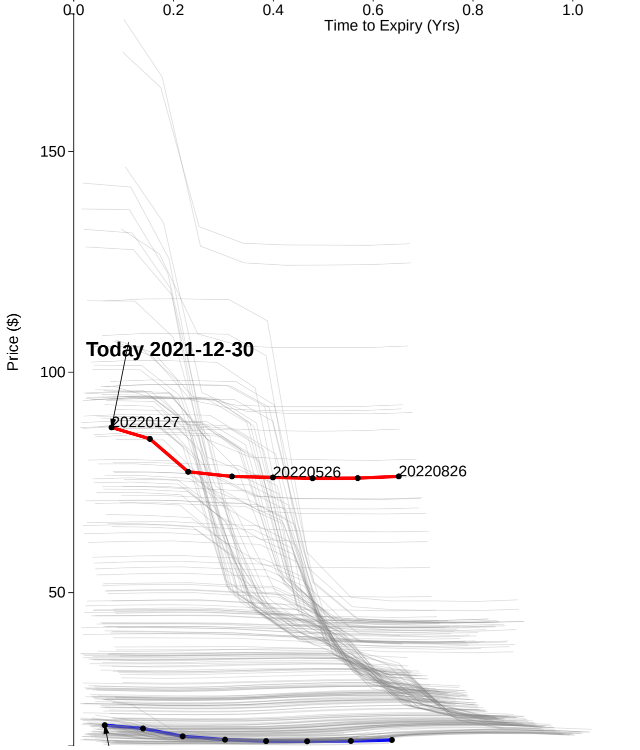

Front Month Dynamics:
Henry Hub Financial Last Day O Options
(Black)
vol
price
Vol (%)
Price ($)
100%
80%
60%
40%
6
5
4
3
Time
04-01
07-01
10-01

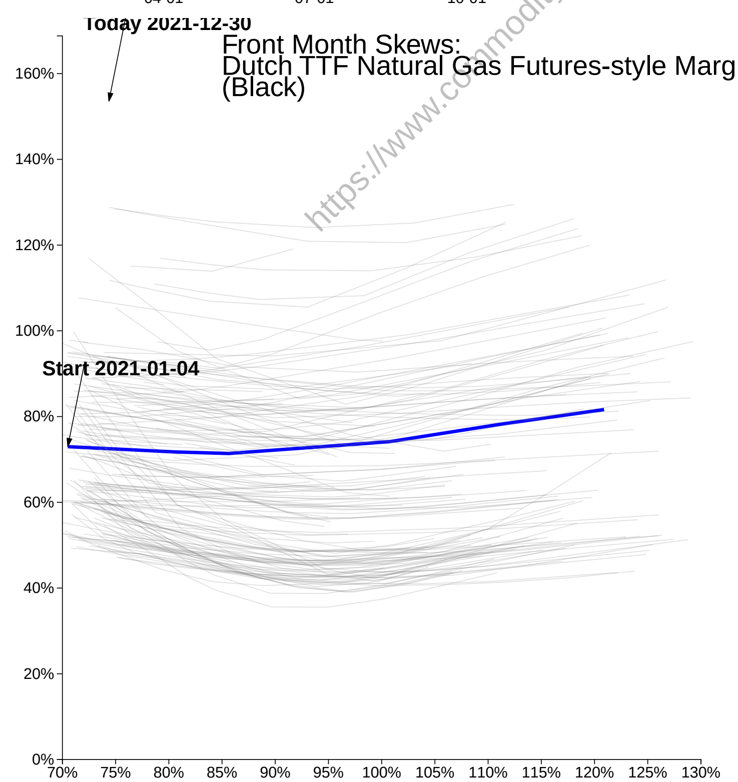

Price ($)
6
5
4
20220127
Start 2021-01-04
Today 2021-12-30
20230628
20241126


Front Month Skews:
Henry Hub Financial Last Day O Options
(Black)
160%
140%
120%
100%
80%
60%
40%
20%
0%
Today 2021-12-30
Start 2021-01-04
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%


Termstructure Evolution:
Dutch TTF Natural Gas Futures-style Ma
(Black)
Vol (%)
Today 2021-12-30
Start 2021-01-04
20220127
20220526
20220826
Time to Expiry (Yrs)


Front Month Dynamics:
Dutch TTF Natural Gas Futures-style Margined Ca
(Black)
vol
price
Vol (%)
Price ($)
Time
04-01
07-01
10-01


Price ($)
Today 2021-12-30
20220127
20220526
20220826


Today 2021-12-30
Front Month Skews:
Dutch TTF Natural Gas Futures-style Margi
(Black)
Start 2021-01-04

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