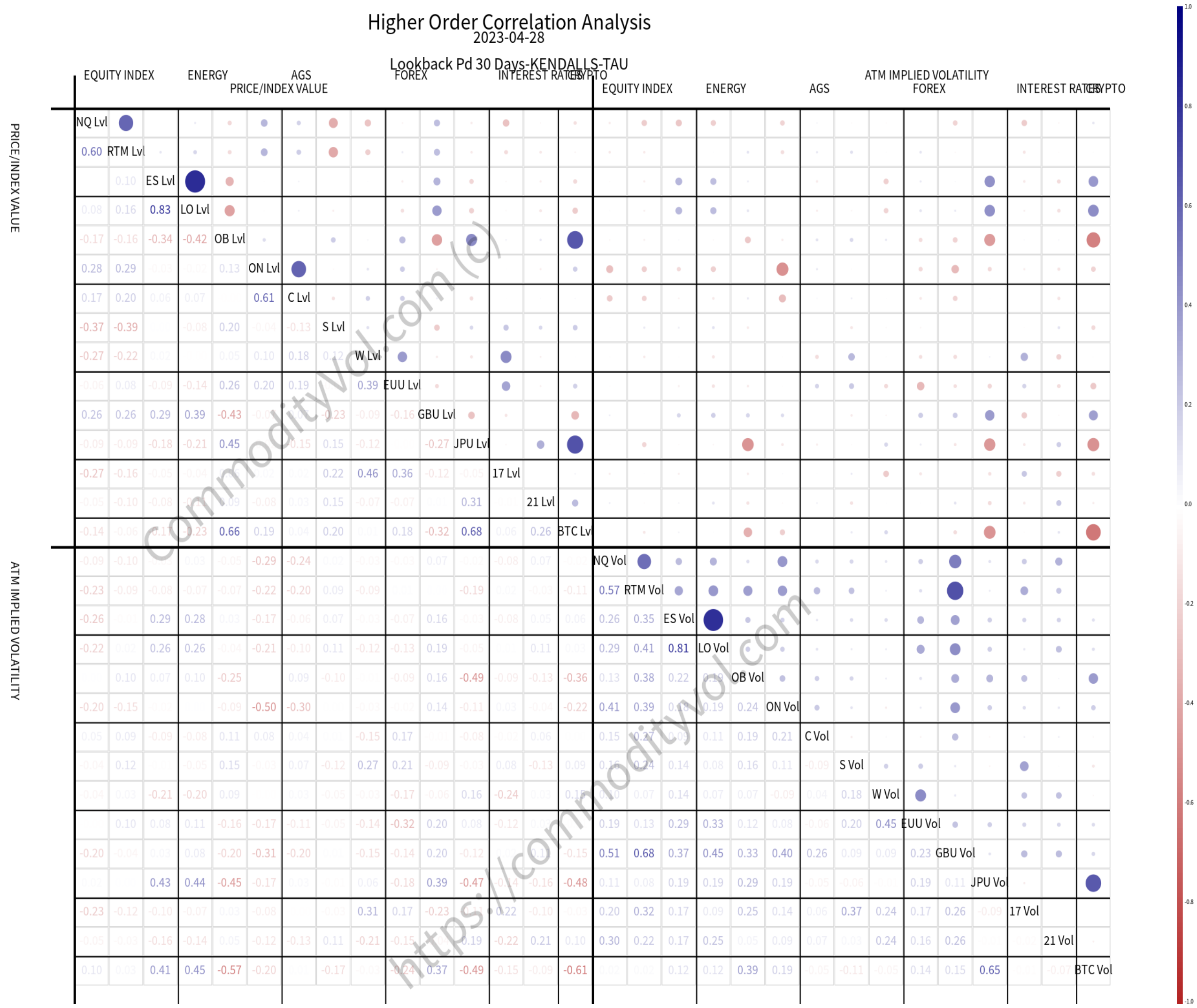
Welcome to our March 2023 Recap:

We are pleased to welcome you to our April 2023 Report.

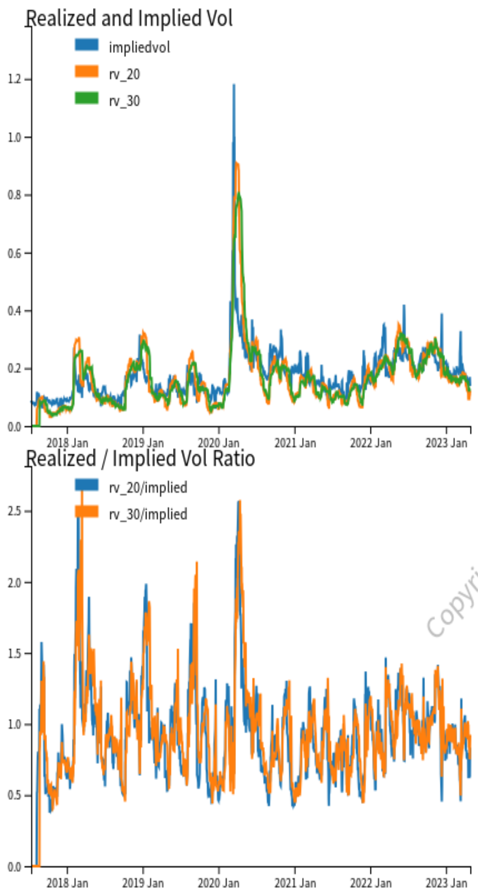
Lots of interesting things are happening in the world of finance, economy and commodities. A growing drum beat of recession talk dominates FinTwit and the financial press. There is also the back drop of earnings to the current month. The earnings reports have been, on net, good with some notable exceptions. The major banks like JP Morgan reported healthy profits. However, the bankruptcy of First Republic Bank continues this stealth banking crisis. The tightening of credit conditions for commercial lending also adds fuel to the fire of recession talk. While our view is decidedly negative on many economic aspects, we do not believe price levels will ameliorate. If the economic models typically predict reduced inflation as economic activity stumbles, we believe that there will be profound sector differences. Finished goods' demands may suffer, the price escalators still need to resolve themselves. More aggressive policies with respect to the combined West's biggest trading partner (China) will not help this. The Fed and other central banks will have a tough choice, more inflation or massive recession. History shows that they choose inflation. The Goldilocks period of Greenspan/Bernanke is gone.

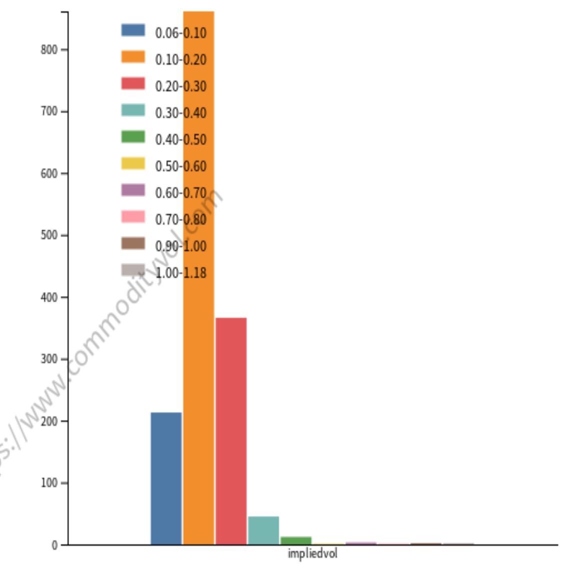
As in prior months, we briefly look at cross asset correlations over the last 30 days using Kendall's Tau statistic on price and vol differences. The colors are a bit more muted on the heat map this month. There is a pronounced correlation between Nasdaq and Russell futures. There is an unclear correlation between Oil (CL) and SP500 futures. If we go across and look at the vol to price correlation, we see a streak of correlations between different commodity futures and the vol changes of the Yen. Vol to vol correlations are strongly pronounced among indexes between themselves, indexes and energy, indexes and fx, with the British pound correlated to many different classes of vol.



In terms of indexes, we are surprised at how tranquil the index vol market has been. Looking at S&P 500 futures vol, we see low realized and implied volatility levels. If we look at the ratio of realized / implied, the number is significantly below 1. This means either the market is expecting an uptick in future vol, or long premium players are paying for an expensive lottery ticket. It isn't clear how gamma could be funding the theta of these very expensive (relatively) options.

E-Mini S&P 500 Options Front Month 50Δ

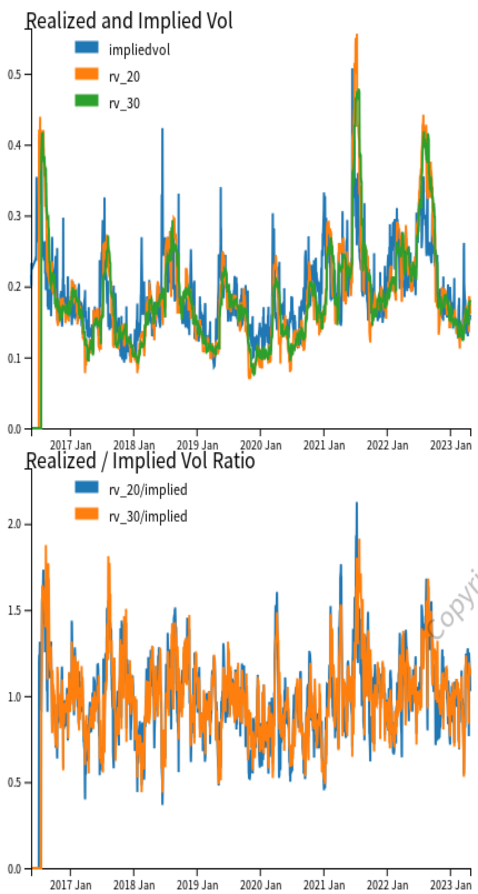


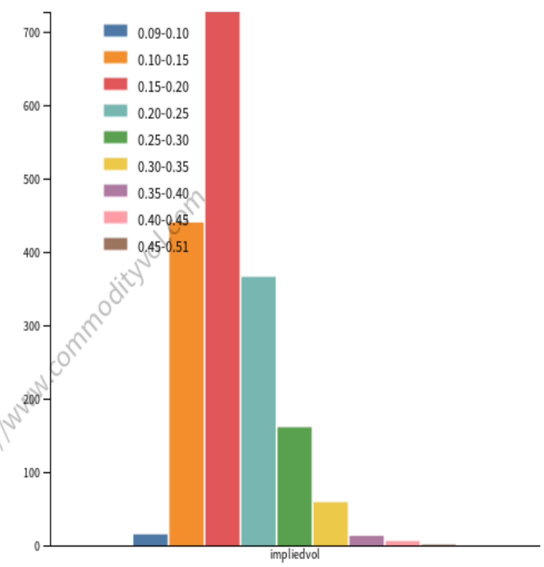


	mean	median	min	max	stddev
impliedvol	0.174	0.160	0.057	1.182	0.084
dailyreturn	0.000	0.000	-0.110	0.094	0.013
sqrt(dr*dr*252)	0.129	0.084	0.000	1.739	0.155
vol_ma_20	0.172	0.161	0.000	0.594	0.076
vol_ma_30	0.171	0.155	0.000	0.518	0.074
rv_20	0.165	0.146	0.000	0.908	0.116
rv_30	0.167	0.153	0.000	0.809	0.113

As an aside, we show Soybean vol's realized/implied statistics. The ratio meanders about 1, but the market looks much more balanced.

Soybean Options Front Month 50Δ





	mean	median	min	max	stddev
impliedvol	0.188	0.177	0.087	0.508	0.055
dailyreturn	0.000	0.000	-0.086	0.065	0.013
sqrt(dr*dr*252)	0.143	0.106	0.000	1.358	0.141
vol_ma_20	0.186	0.176	0.000	0.345	0.051
vol_ma_30	0.185	0.177	0.000	0.327	0.051
rv_20	0.183	0.170	0.000	0.557	0.078
rv_30	0.183	0.172	0.000	0.479	0.074

Energy

Energy has been more or less quiet (at least in volatility terms). Crude futures were down 5-6% and vol also was down approximately the same percentage. Heating oil and refined blended gasoline were also down 11 and 8% respectively. Perhaps the heating oil move is in relation to the end of the heating season in the northeast. This flies in the face of natural gas which added nearly 15%. The trend of declining oil prices, including its derivatives, is consistent with a growing glut in demand, coupled with more bearish outlook for the summer driving season. On the vol front, everything except Ethanol vol was down. Natty gas was down a full 28 vol points, while the other vols were down by single digits.

Energy ATM
WTI Crude Detail
Brend Crude Detail
US Natty Gas Detail
Details Energy

Equity Index

ES (E-Mini SP500) was up a bit less than one percent this month. Vol was down 3 vol points at the money. VIX, on the other hand, was down 2.7 points which corresponds to nearly 15%. Its vol was also down about 3.3 vol points. The Nasdaq100 futures were closer to unchanged, with the Russell Futures down about 2.2%. Vol was uniformly down from 2 to 3 vol points across the NQ and RUT complex.

EquityIndex ATM
SP500 Detail
VIX Detail

Interest Rates

The interest futures were all down. The magnitudes of the moves were not large, 0.1 to 0.3%. What was interesting is that typically curve moves are duration weighted. It does not appear these moves were weighted. The story with vol was also hard to understand. The Eurodollar and SOFR front month vol slipped, which looks like a big percentage move (on price based vol at a low level). However, the move in the Two Year Treasury vol was the smallest (percentage wise) change, and the biggest change was the 5 Year Treasury implied vol. This suggests some worry around the mid curve.

Interest Rates ATM
30 Year Bond Detail
10 Year Note Detail
SOFR

Foreign Exchange

Except for crypto, the FX moves were tame this month. The Yen lost some ground against the dollar. In crypto, both Bitcoin and Ethereum rallied by 4%, hopes of the end of Crypto Winter spring up like tulips after the last frost. Vol imploded everywhere, except, in the Swiss Franc. The still murky UBS/Swissbank merger cannot be a positive for the Swiss economy nor for the (once?) unimpregnable Franc.

Foreign Exchange ATM
Yen Detail
Euro Detail
Bitcoin Detail

Ethereum Detail

Metals

It was a rally in silver colored metals. Silver, Platinum and Palladium all rallied heartily. Gold was slightly down, while copper fell nearly 4%. With the West talking about stronger Russian sanctions, perhaps some of the rally in platinum and palladium is sanctions driven. The deviation between gold and silver is a bit of a puzzle. Clearly, if inflation is the worry, both should have rallied. Copper's woes are a reflection of the broader concern around economic performance. Vol was offered strongly in everything except copper.
Metals ATM
Gold Detail
Silver Detail
Copper Detail

Agriculture

Ags were a massive mixed bag (it seems like they are every month). Feeder cattle and hogs were up strong. Hogs were the biggest gainer, rising 6.9% with its vol breaking hard. Corn, wheat and the bean complex were all down in dramatic fashion. Beans, wheat and corn all experienced rising implied volatilities. Bean oil and meal vol declined sharply.
Ags ATM
Wheat Detail
Oats Detail
Corn Detail
Lean Hog
Live Cattle Detail
Ags Details

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), and analytics, please do not hesitate to contact us!
info@commodityvol.com

At The Money Roundup of Products

Ags

exch/prod	desc	futures chng [%]	vol chng [%]
CME/DK	Class IV Milk	-0.090 [-0.5%]	-0.077 [-78.0%]
CBT/C	Corn	-0.728 [-11.1%]	+0.043 [+23.5%]
CME/62	Feeder Cattle	+12.025 [+6.0%]	+0.016 [+14.9%]
CBT/KW	KC HRW Wheat	-0.990 [-11.3%]	+0.040 [+14.6%]
CME/LN	Lean Hog	+5.125 [+6.9%]	-0.036 [-20.0%]
CME/48	Live Cattle	-2.650 [-1.6%]	-0.012 [-10.8%]
CME/NF	Nonfat Dry Milk	-1.225 [-1.0%]	-0.062 [-71.1%]
CBT/O	Oats	-0.362 [-10.4%]	+0.018 [+4.2%]
CBT/14	Rough Rice	+0.295 [+1.7%]	-0.002 [-1.5%]
CBT/S	Soybean	-1.027 [-6.8%]	+0.017 [+11.8%]
CBT/06	Soybean Meal	-31.800 [-6.9%]	-0.031 [-13.4%]
CBT/07	Soybean Oil	-5.010 [-8.8%]	-0.022 [-7.4%]
CBT/W	Wheat	-0.597 [-8.6%]	+0.032 [+11.0%]

Forex

exch/prod	desc	futures chng [%]	vol chng [%]
CME/ADU	AUDUSD 2pmfix	-0.018 [-2.6%]	-0.029 [-20.9%]
CME/BTC	Bitcoin	+1210.000 [+4.3%]	-0.102 [-18.4%]
CME/CAU	CADUSD 2pmfix	-0.007 [-0.9%]	-0.014 [-17.9%]
CME/CHU	CHFUSD 2pmfix	+0.021 [+1.9%]	+0.011 [+14.2%]
CME/ETH	Ethereum Futures	+71.000 [+3.9%]	-0.118 [-20.3%]
CME/EUU	EURUSD 2pmfix	+0.011 [+1.0%]	+0.000 [+0.4%]
CME/GBU	GBPUSD 2pmfix	+0.015 [+1.2%]	-0.004 [-4.9%]
CME/JPU	JPYUSD 2pmfix	-0.000 [-3.2%]	-0.007 [-6.5%]
CME/MP	Mexican Peso	+0.001 [+1.0%]	-0.018 [-15.0%]
CME/NE	New Zealand	-0.010 [-1.7%]	-0.020 [-16.1%]

exch/prod	desc	futures chng [%]	vol chng [%]
CBT/26	2 YR US Treasury Note	-0.305 [-0.3%]	-0.003 [-8.7%]
CBT/25	5 YR US Treasury Note	-0.156 [-0.1%]	-0.013 [-17.7%]
CBT/21	10 YR US Treasury Note	-0.250 [-0.2%]	-0.013 [-14.0%]
CBT/17	30 YR US Treasury Bond	-0.281 [-0.2%]	-0.023 [-16.5%]
CME/ED	Eurodollar	-0.130 [-0.1%]	-0.006 [-35.4%]
CBT/UBE	Long Term US Treasury Bond	-0.813 [-0.6%]	-0.029 [-16.9%]
CME/S0	One-year Mid-curve Three-month SOFR	-0.070 [-0.1%]	-0.002 [-6.8%]
CME/SR3	Three-month SOFR	-0.155 [-0.2%]	-0.005 [-33.0%]

Metals

exch/prod	desc	futures chng [%]	vol chng [%]
COMEX/HX	Copper	-0.155 [-3.8%]	+0.002 [+0.8%]
COMEX/OG	Gold	-1.300 [-0.1%]	-0.010 [-6.0%]
NYMEX/PAO	Palladium	+51.900 [+3.6%]	-0.077 [-15.8%]
NYMEX/PO	Platinum	+93.700 [+9.4%]	-0.017 [-5.9%]
COMEX/SO	Silver	+1.205 [+5.0%]	-0.017 [-6.2%]

EquityIndex

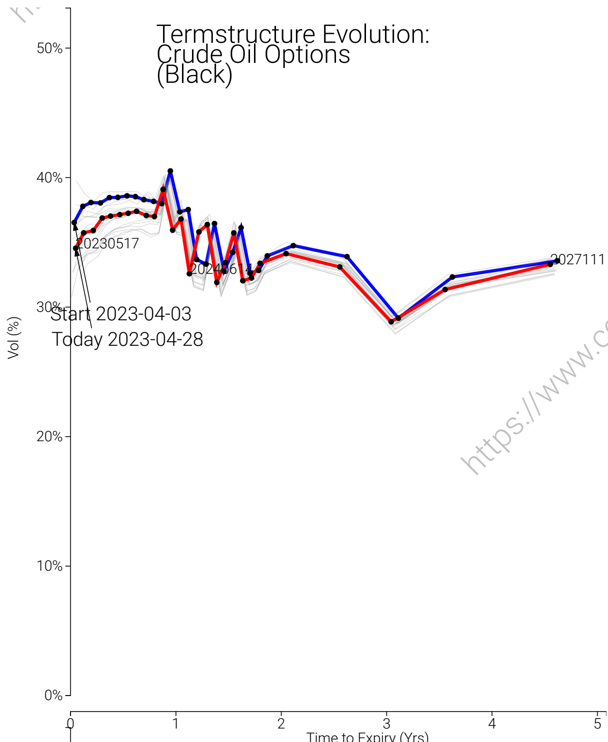
exch/prod	desc	futures chng [%]	vol chng [%]
CBT/YM	E-Mini Dow	+414.000 [+1.2%]	-0.021 [-13.7%]
CME/NQ	E-Mini Nasdaq	+50.250 [+0.4%]	-0.030 [-13.6%]
CME/RTO	E-Mini Russell 2000	-39.400 [-2.2%]	-0.031 [-14.1%]
CME/RTM	E-Mini Russell EOM	-39.400 [-2.2%]	-0.034 [-15.8%]
CME/ES	E-Mini S&P 500	+34.750 [+0.8%]	-0.031 [-18.4%]
CBOE/VIX	VIX Volatility Index	-2.770 [-14.9%]	-0.033 [-5.1%]

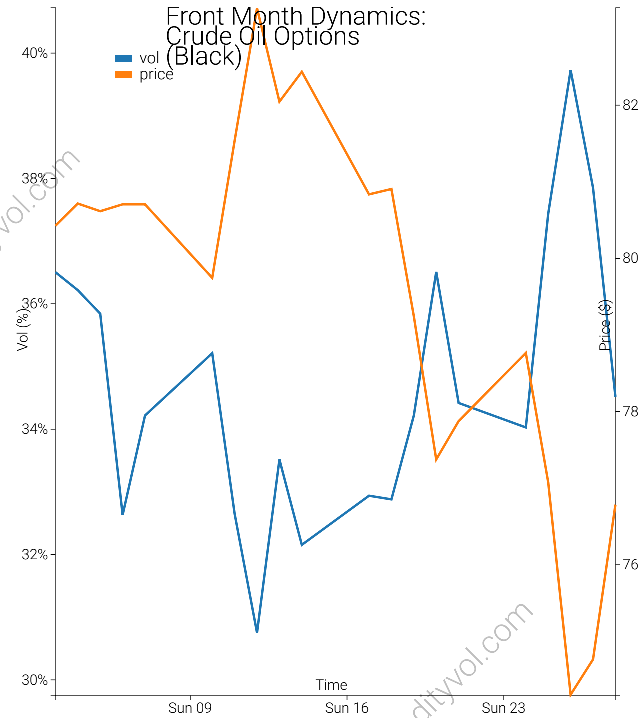
Energy

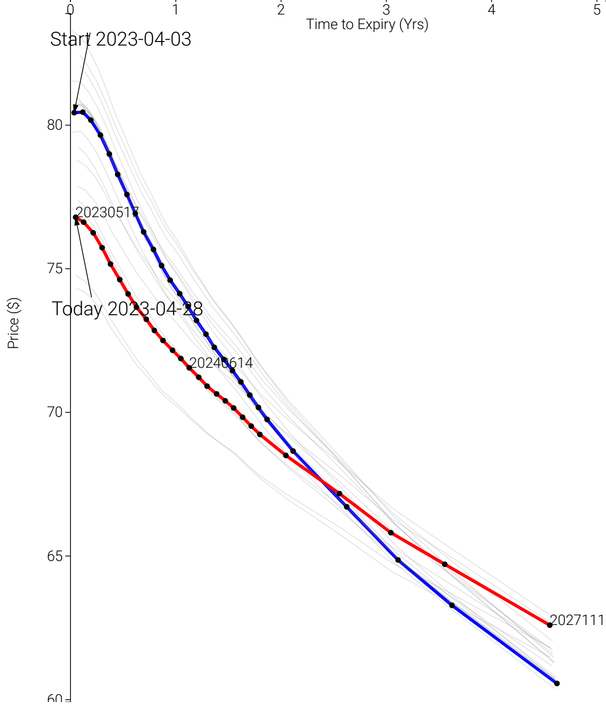
exch/prod	desc	futures chng [%]	vol chng [%]
NYMEX/BZO	Brent Crude Oil Margin	-4.600 [-5.4%]	-0.019 [-5.3%]
NYMEX/BE	Brent Euro Style	-5.010 [-5.9%]	-0.049 [-13.7%]
NYMEX/CVR	Chicago Ethanol(platts) Average Price	-0.025 [-1.0%]	+0.012 [+8.3%]
NYMEX/LO	Crude Oil	-3.640 [-4.5%]	-0.020 [-5.4%]
NYMEX/LN	European Natural Gas	+0.313 [+14.9%]	-0.280 [-29.7%]
NYMEX/E7	Henry Hub Financial Last Day	+0.313 [+14.9%]	-0.281 [-29.8%]
NYMEX/ON	Natural Gas	+0.313 [+14.9%]	-0.279 [-29.6%]
NYMEX/OH	NY Harbor ULSD	-0.285 [-10.7%]	-0.004 [-1.2%]
NYMEX/OB	RBOB	-0.227 [-8.2%]	-0.036 [-10.2%]

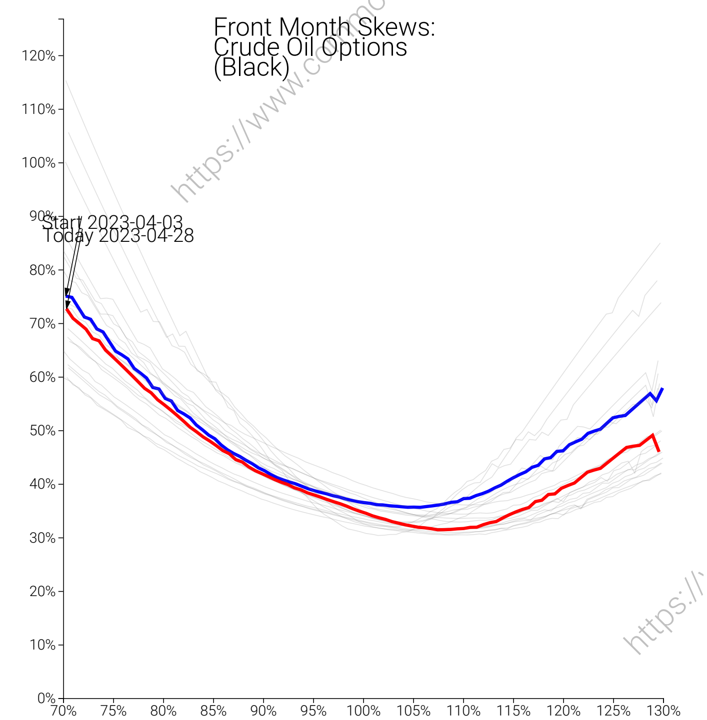
Skews, Termstructures and more

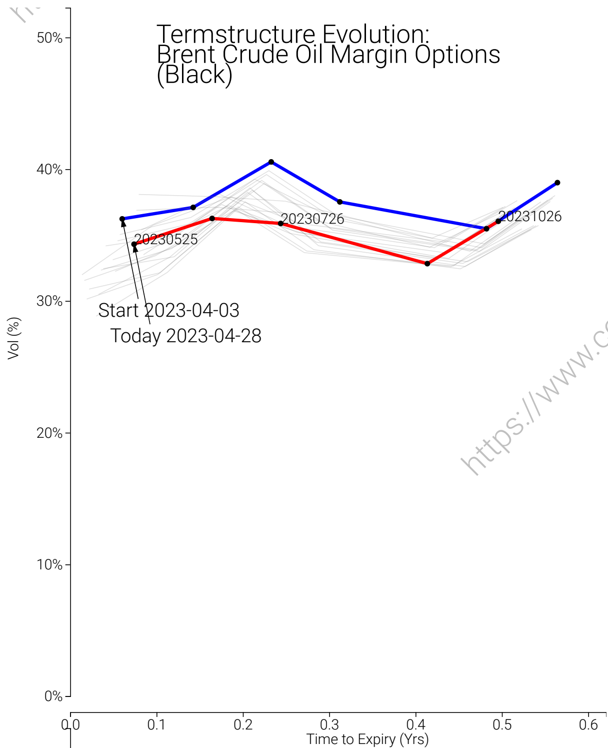
Energy: Crude and Derivatives

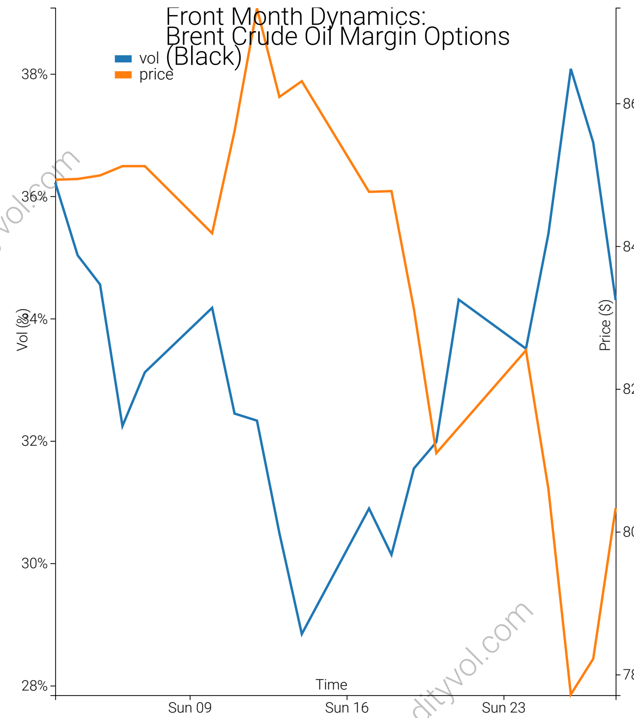

Termstructure Evolution:
Crude Oil Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20230517
2027111
Start 2023-04-03
Today 2023-04-28

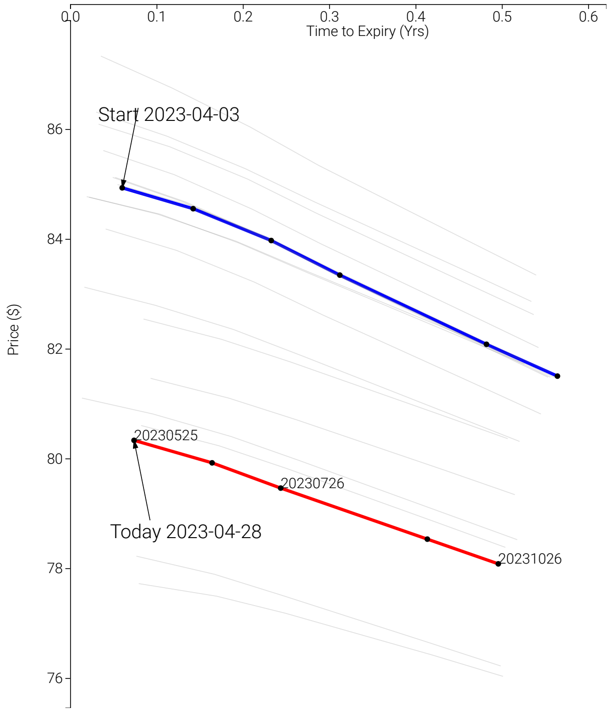

Front Month Dynamics:
Crude Oil Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

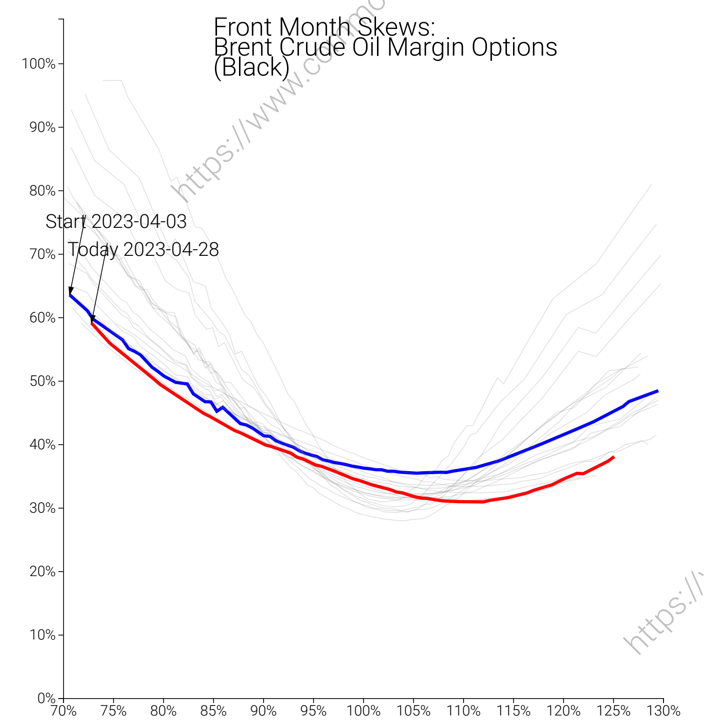

Start 2023-04-03
20230517
Today 2023-04-28
Price ($)
2027111


Front Month Skews:
Crude Oil Options
(Black)
Start 2023-04-03
Today 2023-04-28


Termstructure Evolution:
Brent Crude Oil Margin Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20230525
20230726
20231026
Start 2023-04-03
Today 2023-04-28


Front Month Dynamics:
Brent Crude Oil Margin Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23


Price ($)
Start 2023-04-03
20230525
20230726
20231026
Today 2023-04-28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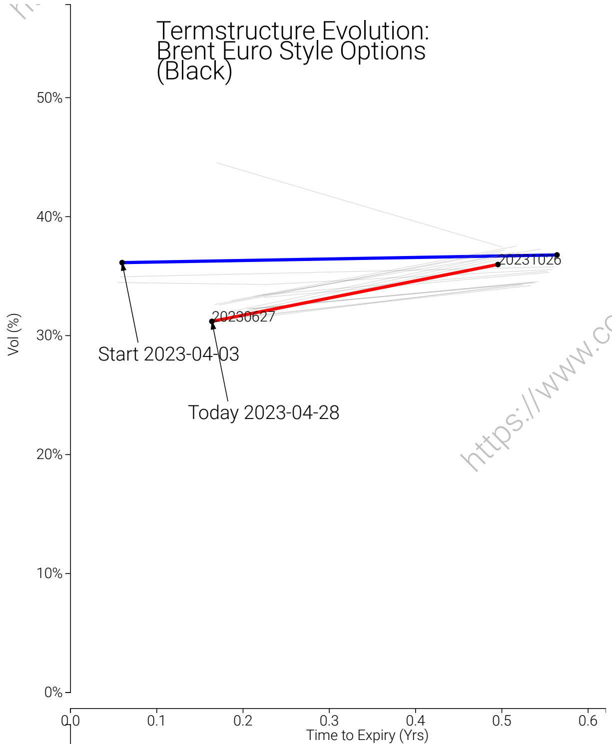
Brent Crude Oil Margin Options
(Black)
Start 2023-04-03
Today 2023-04-28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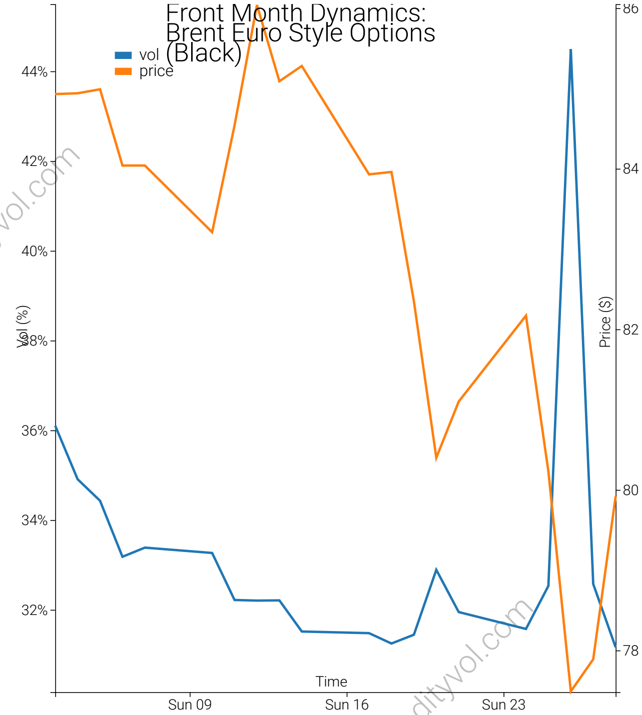
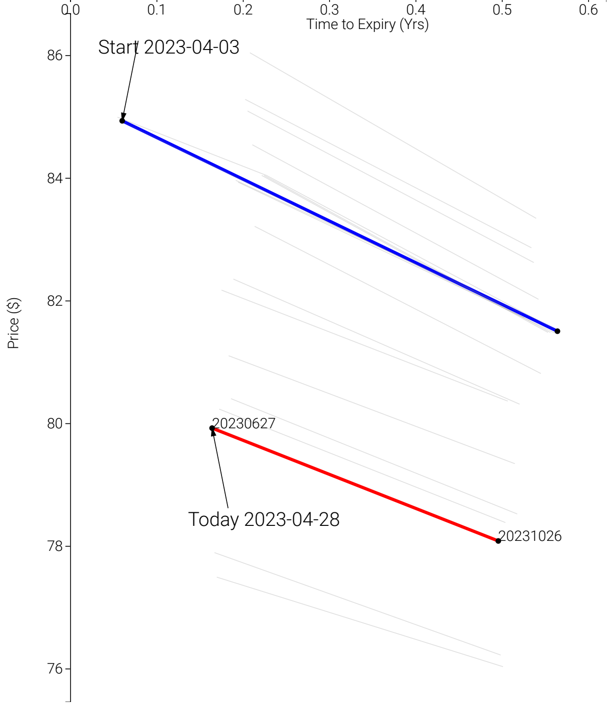
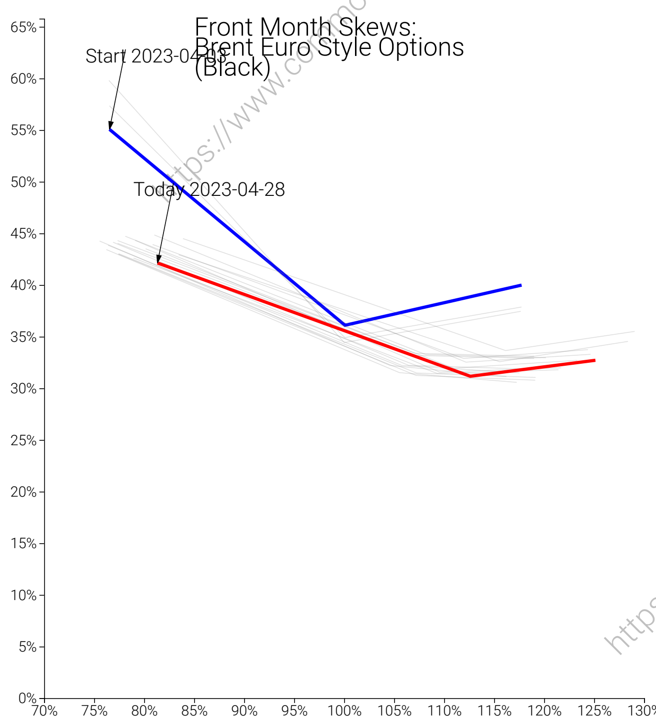
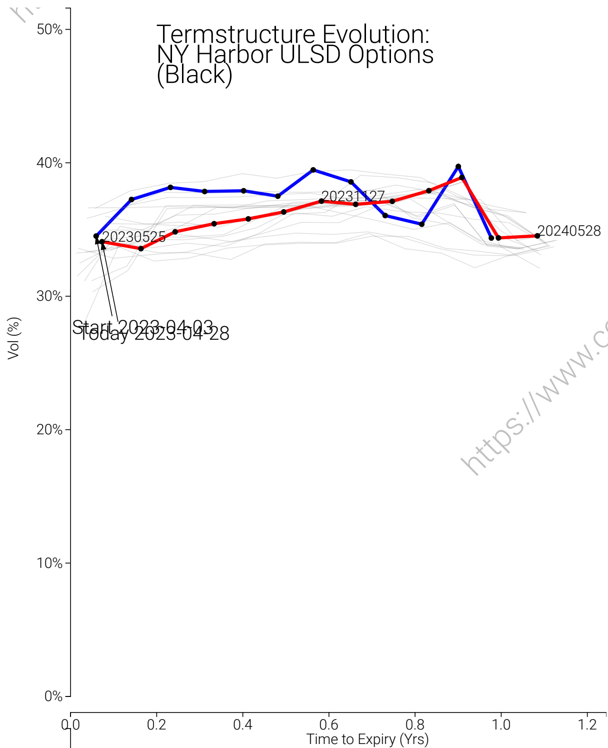
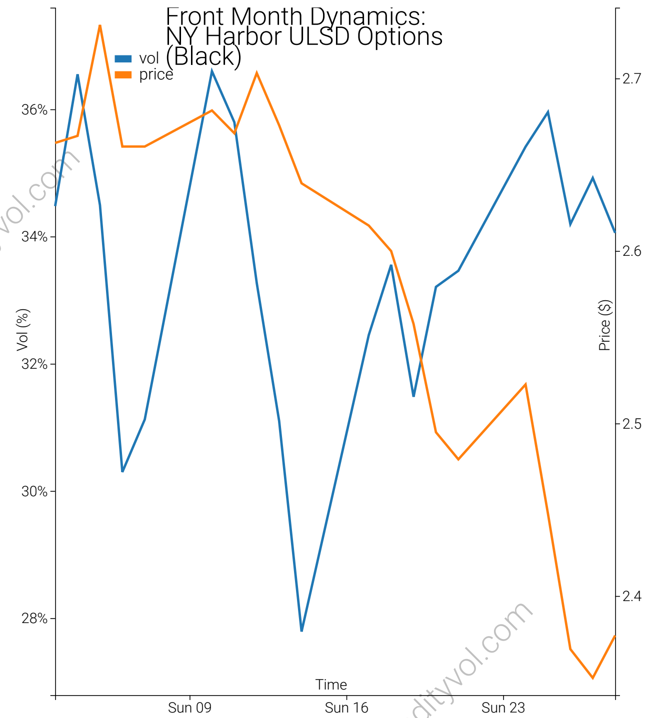
Brent Euro Style Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2023-04-03
Today 2023-04-28
20230627
20231026

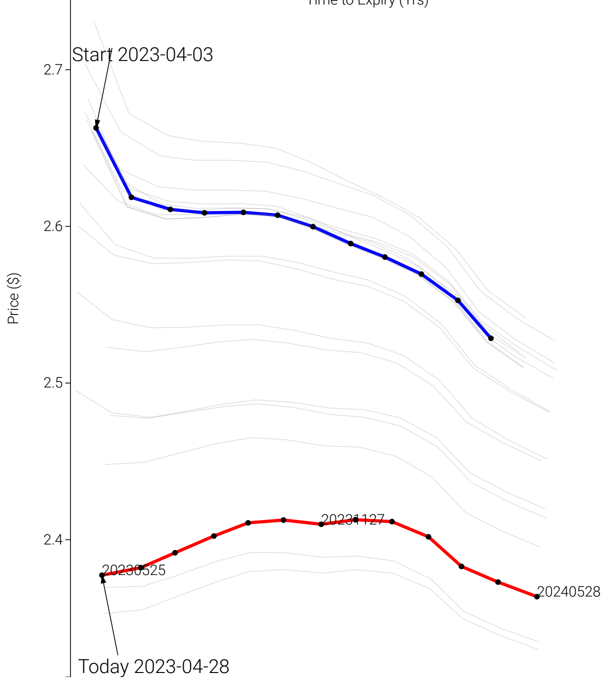

Front Month Dynamics:
Brent Euro Style Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

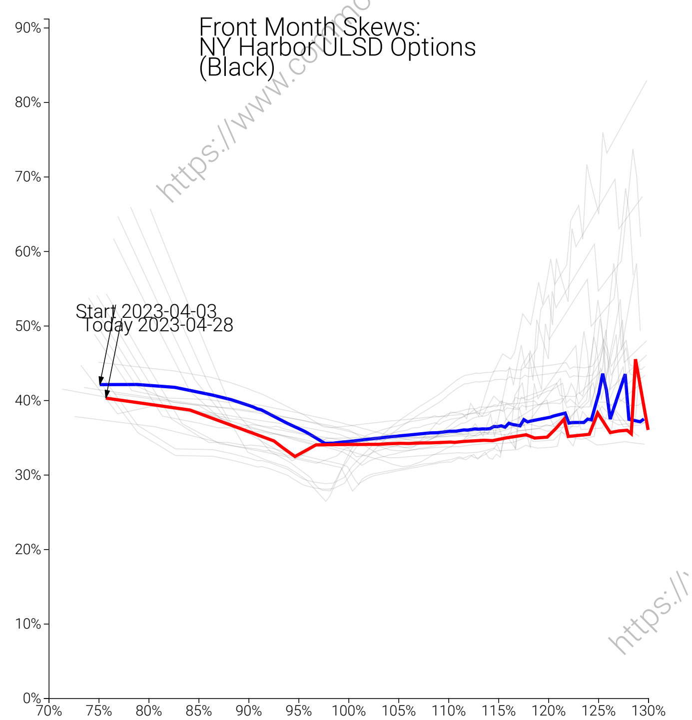

Price ($)
Start 2023-04-03
Today 2023-04-28
20230627
20231026


Front Month Skews:
Brent Euro Style Options
(Black)
Start 2023-04-03
Today 2023-04-28


Termstructure Evolution:
NY Harbor ULSD Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2023-04-03
Today 2023-04-28
20230525
20231127
20240528
0%
10%
20%
30%
40%
50%
0.0
0.2
0.4
0.6
0.8
1.0
1.2


Front Month Dynamics:
NY Harbor ULSD Options
(Black)
vol
price
Vol (%)
Price ($)
Time
28%
30%
32%
34%
36%
2.4
2.5
2.6
2.7
Sun 09
Sun 16
Sun 23


Price ($)
Start 2023-04-03
Today 2023-04-28
20230525
20231127
20240528
2.4
2.5
2.6
2.7


Front Month Skews:
NY Harbor ULSD Options
(Black)
Start 2023-04-03
Today 2023-04-28
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
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80%
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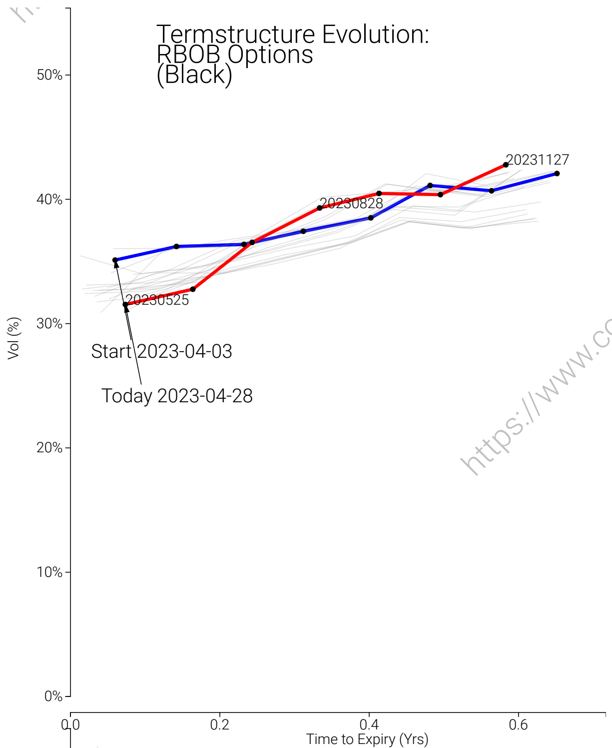
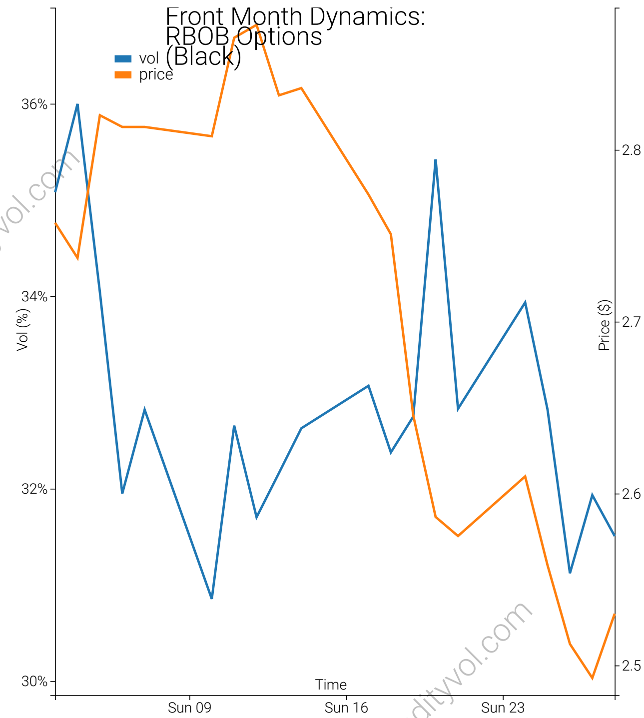
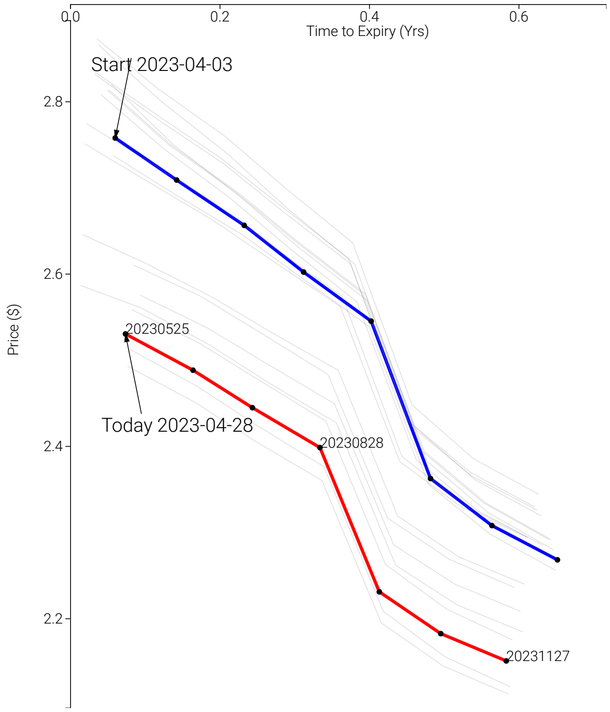
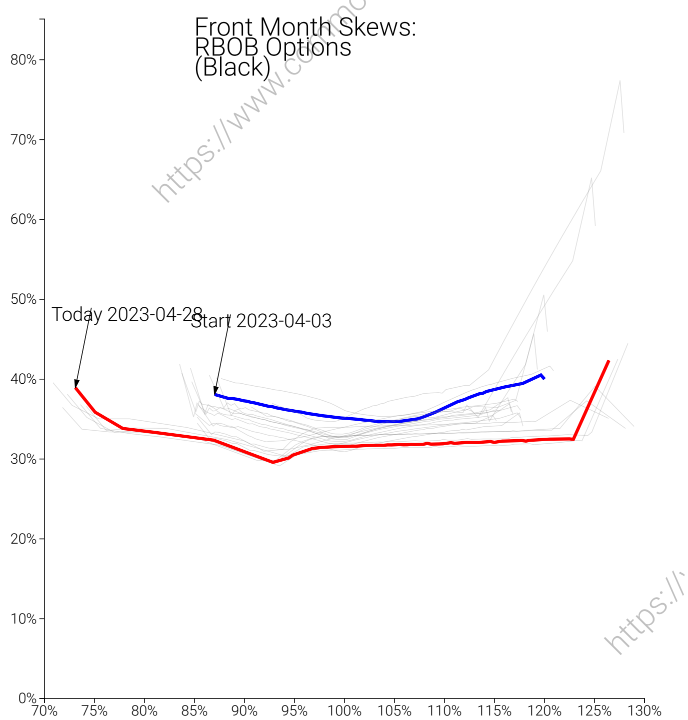
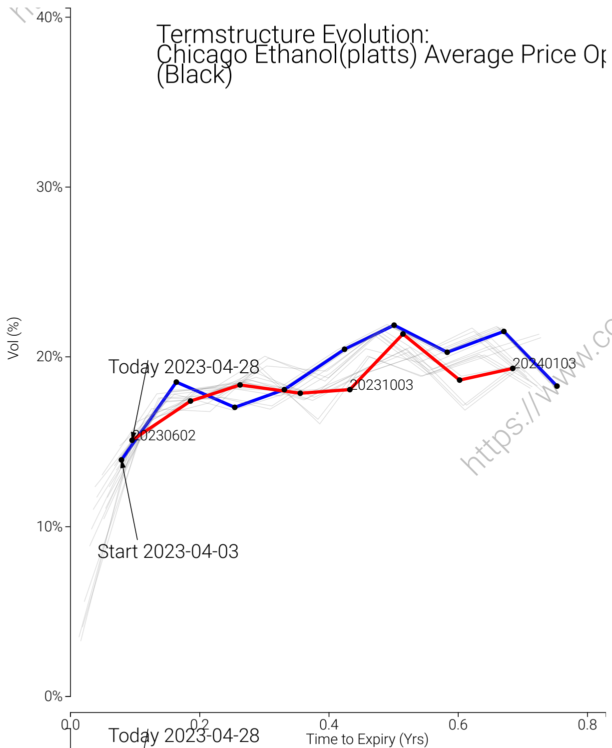
115%
120%
125%
130%

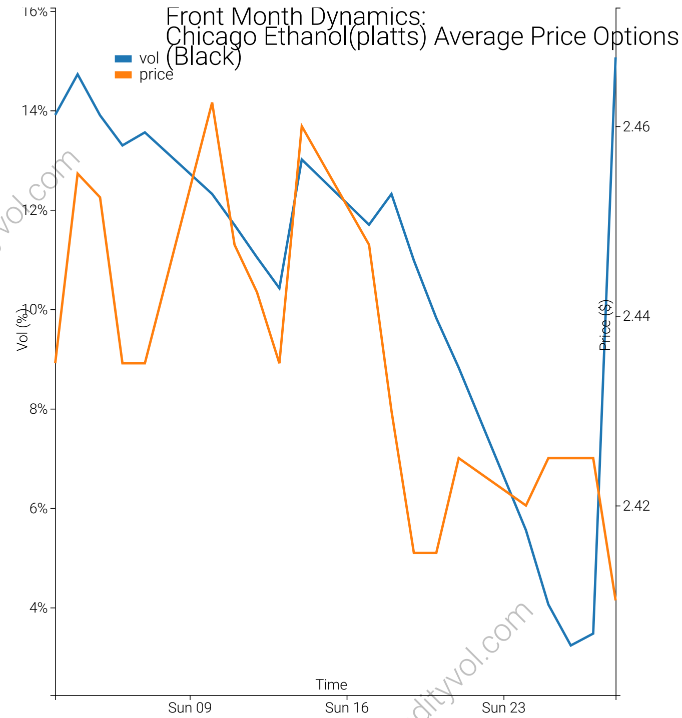

Termstructure Evolution:
RBOB Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20231127
20230828
20230525
Start 2023-04-03
Today 2023-04-28

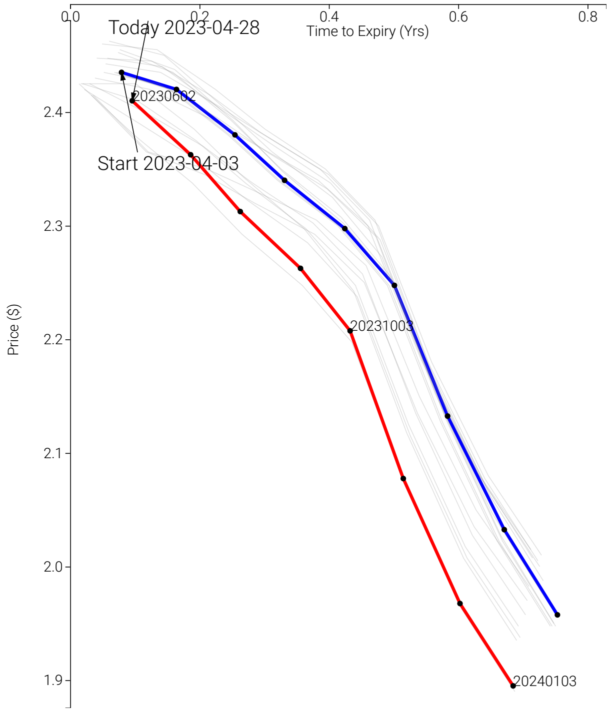

Front Month Dynamics:
RBOB Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

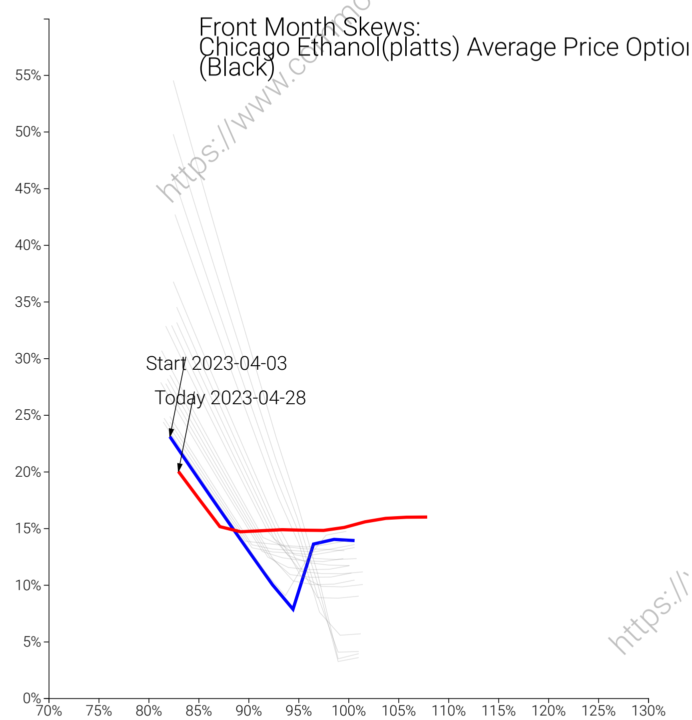

Price ($)
Start 2023-04-03
20230525
Today 2023-04-28
20230828
20231127


Front Month Skews:
RBOB Options
(Black)
Today 2023-04-28
Start 2023-04-03

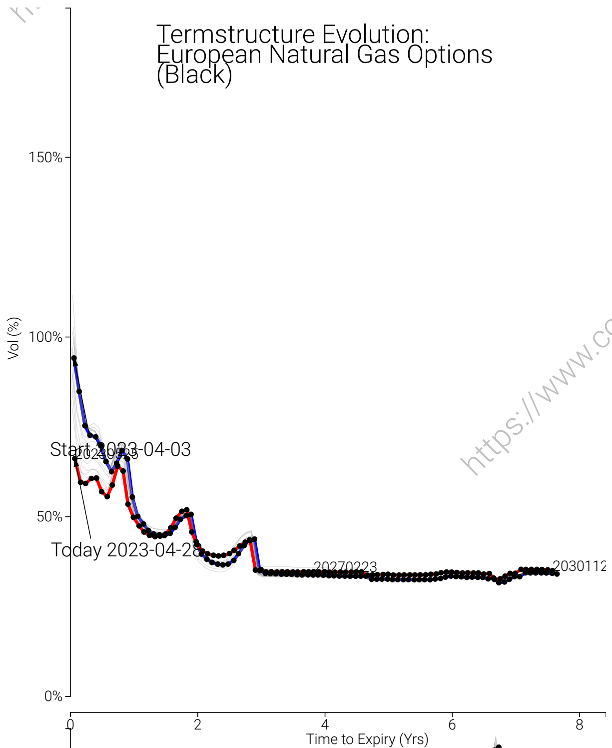

Termstructure Evolution:
Chicago Ethanol(platts) Average Price Op
(Black)
Vol (%)
Today 2023-04-28
Start 2023-04-03
20230602
20231003
20240103
Time to Expiry (Yrs)

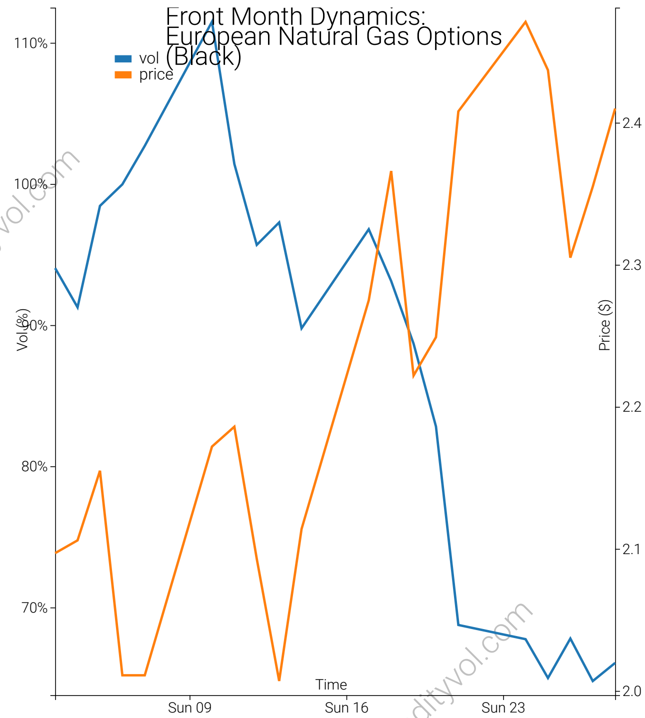

Front Month Dynamics:
Chicago Ethanol(platts) Average Price Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

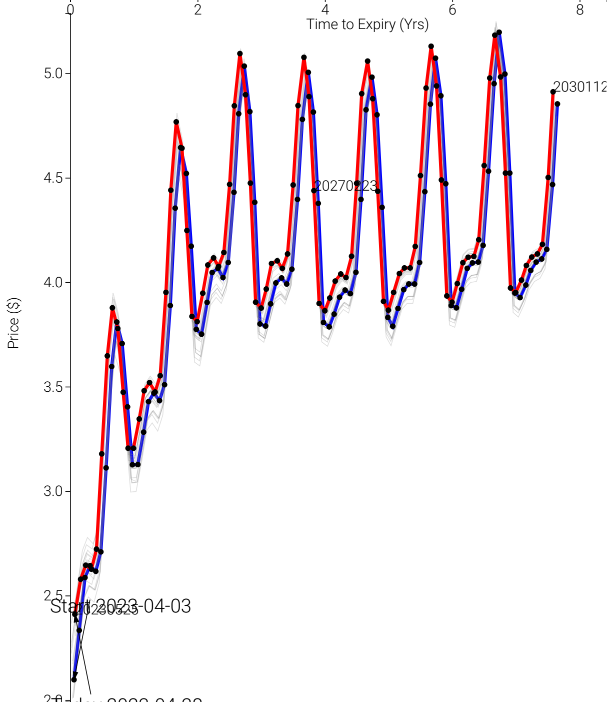

Today 2023-04-28
Start 2023-04-03
20230602
20231003
20240103
Price ($)

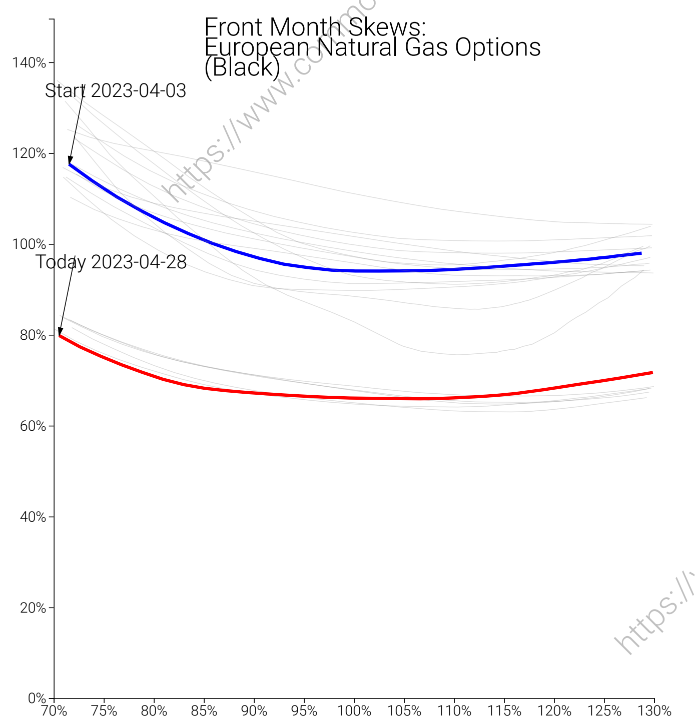

Front Month Skews:
Chicago Ethanol(platts) Average Price Optio
(Black)
Start 2023-04-03
Today 2023-04-28

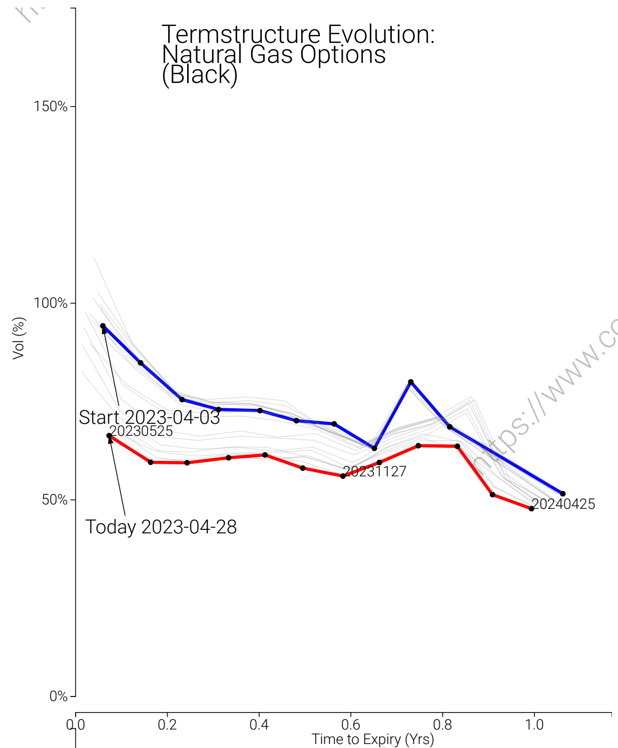
Energy: Natural Gas


Termstructure Evolution:
European Natural Gas Options
(Black)
Vol (%)
150%
100%
50%
0%
Start 2023-04-03
Today 2023-04-28
20270223
2030112
Time to Expiry (Yrs)
0
2
4
6
8

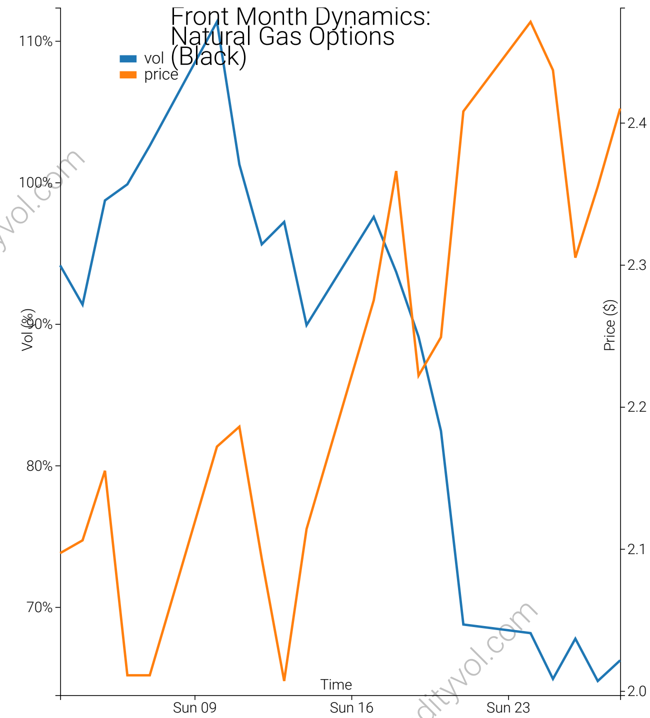

Front Month Dynamics:
European Natural Gas Options
(Black)
vol
price
Vol (%)
Price ($)
110%
100%
90%
80%
70%
2.4
2.3
2.2
2.1
2.0
Time
Sun 09
Sun 16
Sun 23


Price ($)
5.0
4.5
4.0
3.5
3.0
2.5
Start 2023-04-03
20270223
2030112

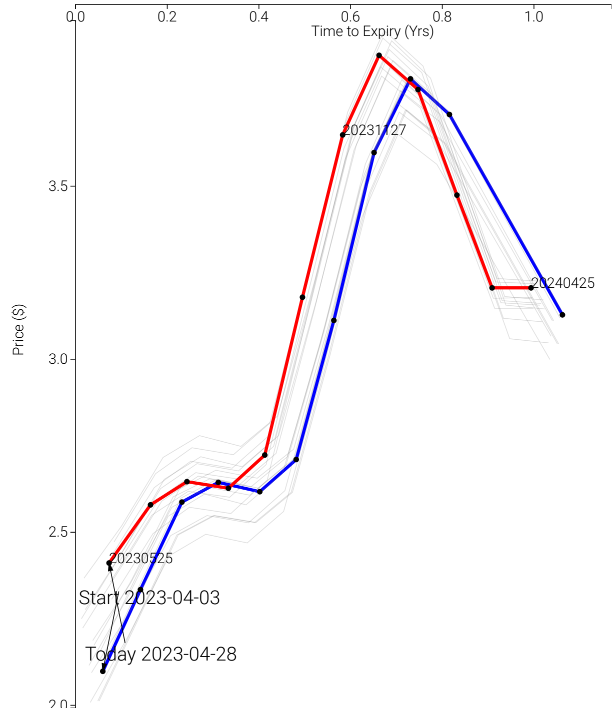

Front Month Skews:
European Natural Gas Options
(Black)
Start 2023-04-03
Today 2023-04-28
140%
120%
100%
80%
60%
40%
20%
0%
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%



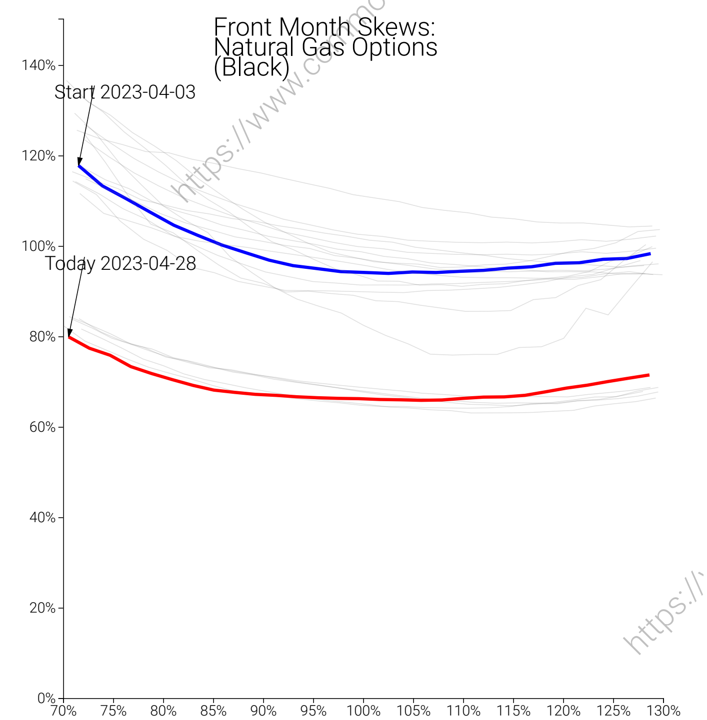
Termstructure Evolution:
Natural Gas Options
(Black)
Vol (%)
150%
100%
50%
0%
Start 2023-04-03
20230525
Today 2023-04-28
20231127
20240425
0.0
0.2
0.4
0.6
0.8
1.0
Time to Expiry (Yrs)



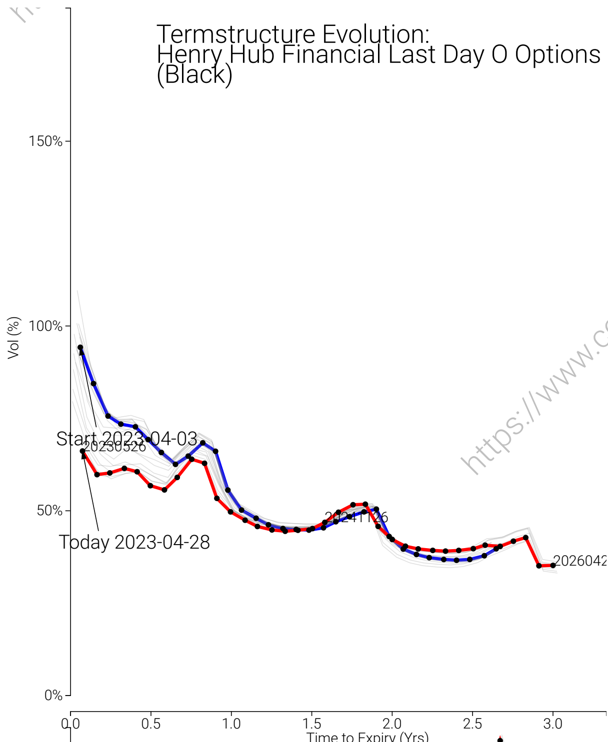
Front Month Dynamics:
Natural Gas Options
(Black)
vol
price
Vol (%)
Price ($)
110%
100%
90%
80%
70%
2.4
2.3
2.2
2.1
2.0
Time
Sun 09
Sun 16
Sun 23

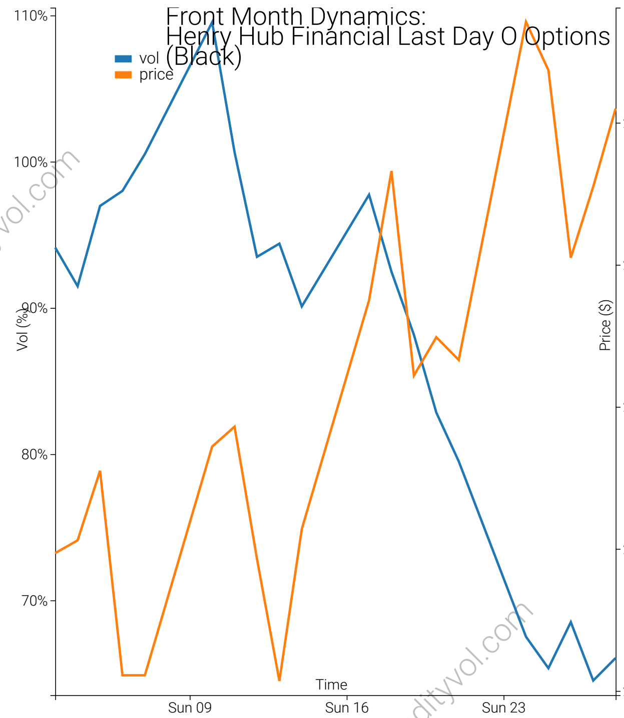


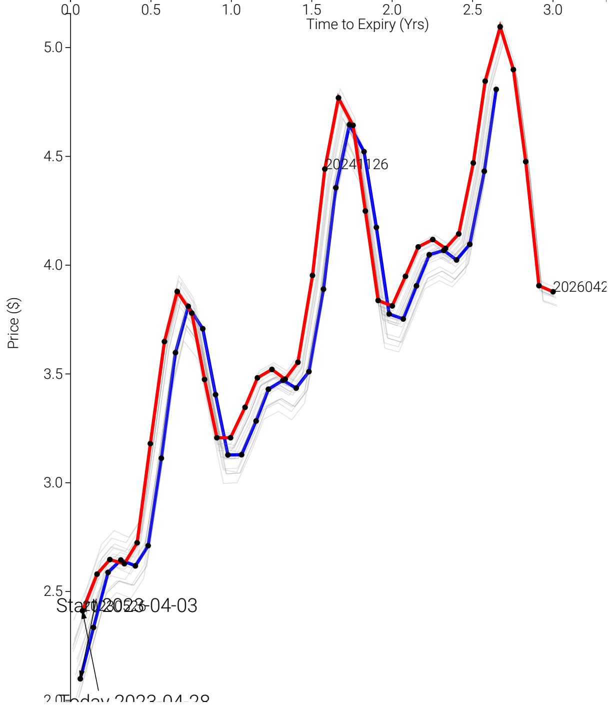
Price ($)
3.5
3.0
2.5
2.0
20231127
20240425
20230525
Start 2023-04-03
Today 2023-04-28

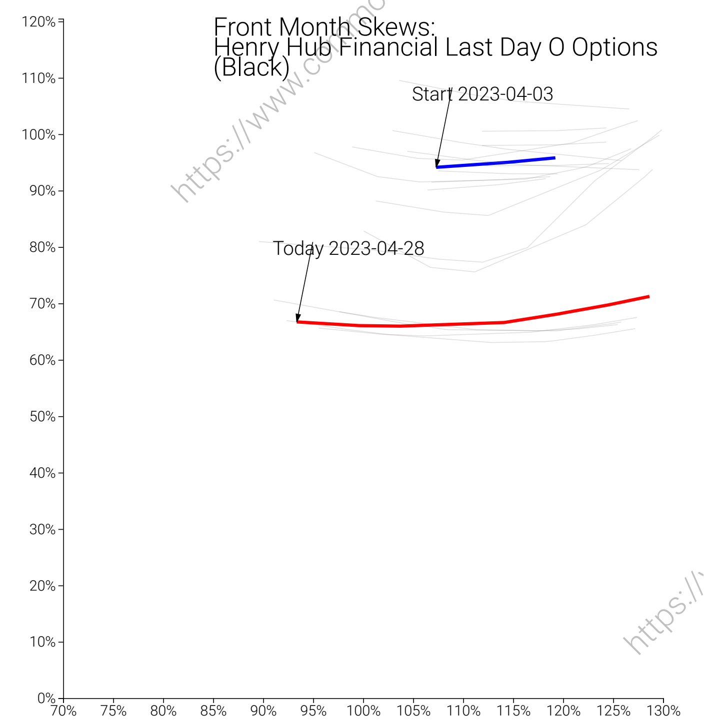


Front Month Skews:
Natural Gas Options
(Black)
Start 2023-04-03
Today 2023-04-28
140%
120%
100%
80%
60%
40%
20%
0%
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

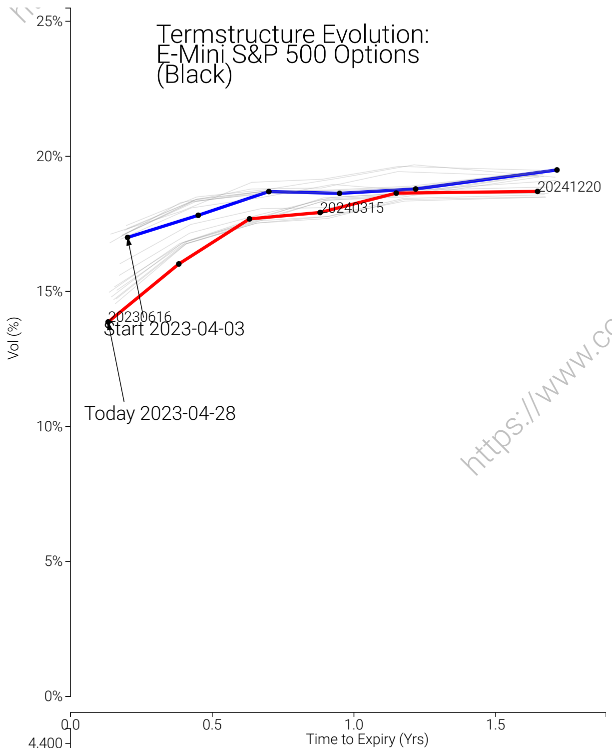

Termstructure Evolution:
Henry Hub Financial Last Day O Options
(Black)
Vol (%)
150%
100%
50%
0%
Start 2023-04-03
20230526
Today 2023-04-28
20241126
2026042
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time to Expiry (Yrs)
https://www.commodityvol.com


Front Month Dynamics:
Henry Hub Financial Last Day O Options
(Black)
vol
price
110%
100%
90%
80%
70%
Vol (%)
Price ($)
2.4
2.3
2.2
2.1
2.0
Time
Sun 09
Sun 16
Sun 23
https://www.commodityvol.com

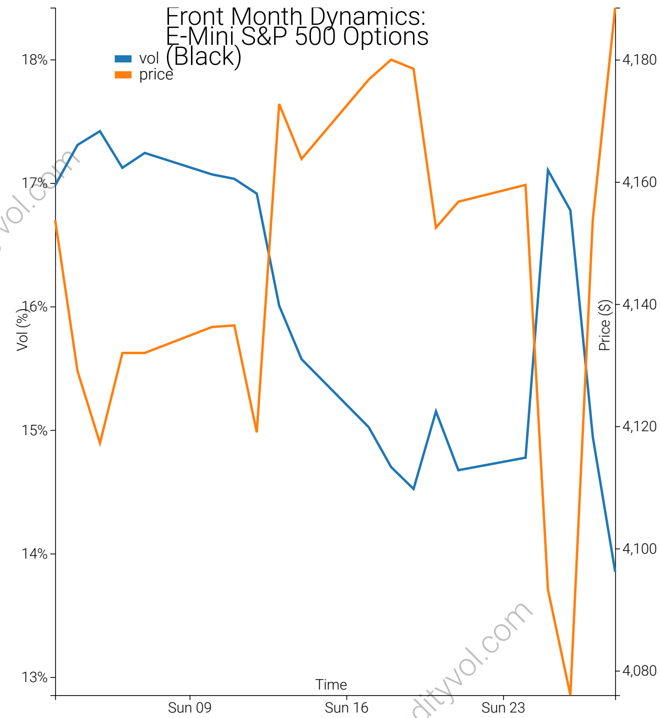

Price ($)
5.0
4.5
4.0
3.5
3.0
2.5
20241126
2026042
Start 2023-04-03
Today 2023-04-28


Front Month Skews:
Henry Hub Financial Last Day O Options
(Black)
Start 2023-04-03
Today 2023-04-28
120%
110%
100%
90%
80%
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

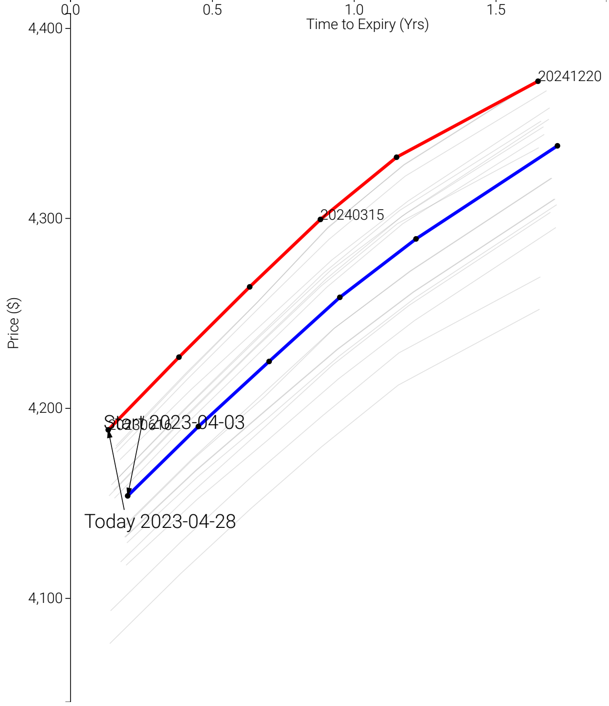
EquityIndex



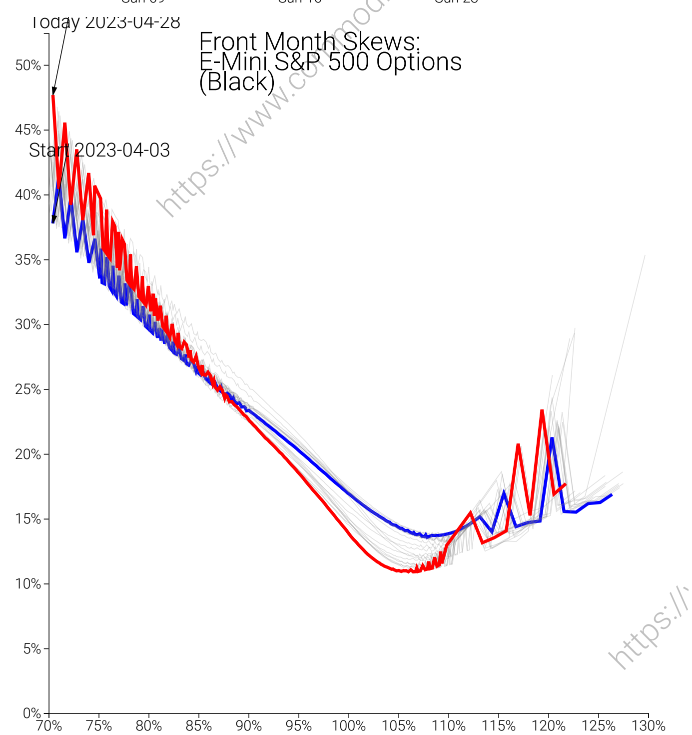
Termstructure Evolution:
E-Mini S&P 500 Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20230616
20240315
20241220
Start 2023-04-03
Today 2023-04-28



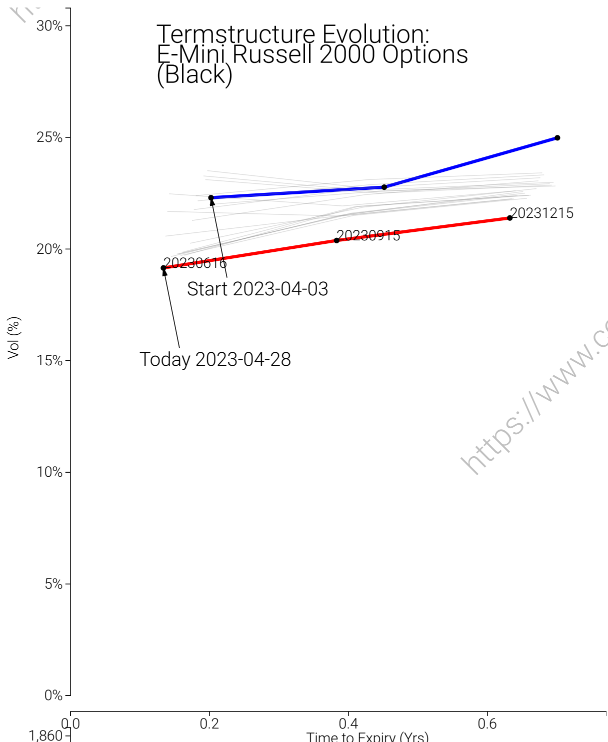
Front Month Dynamics:
E-Mini S&P 500 Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

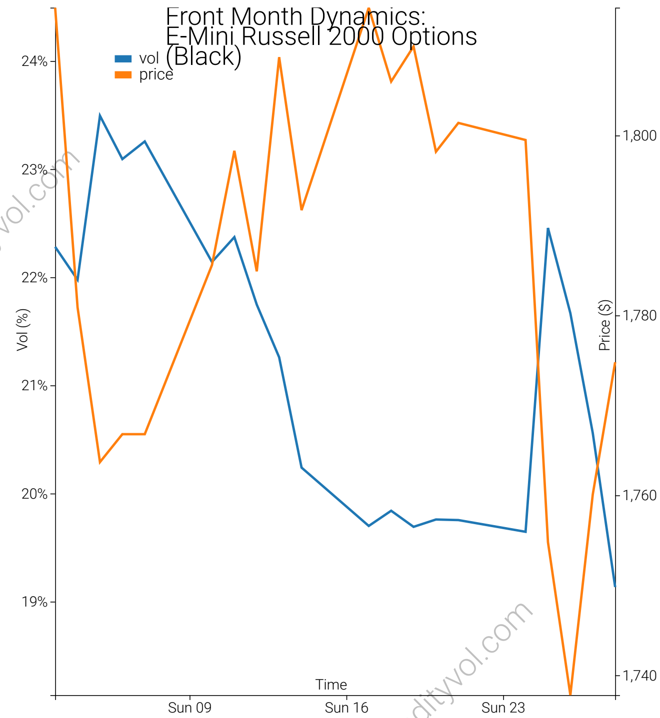


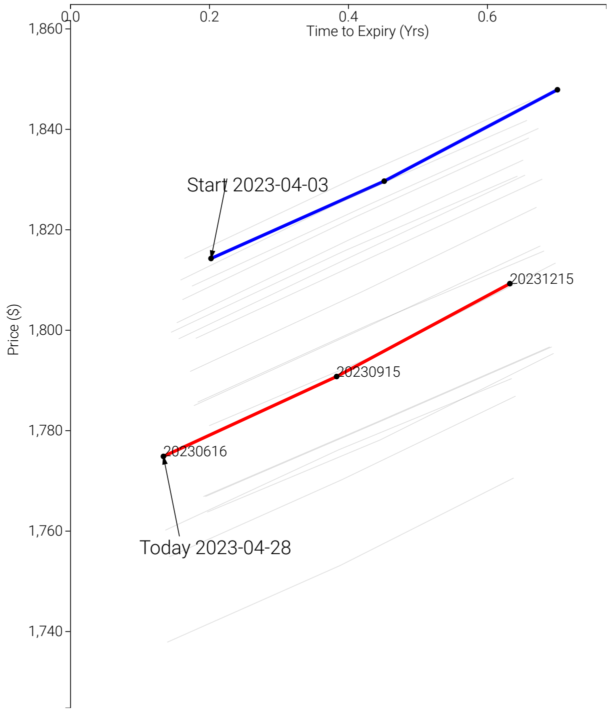
Price ($)
20230616
20240315
20241220
Start 2023-04-03
Today 2023-04-28

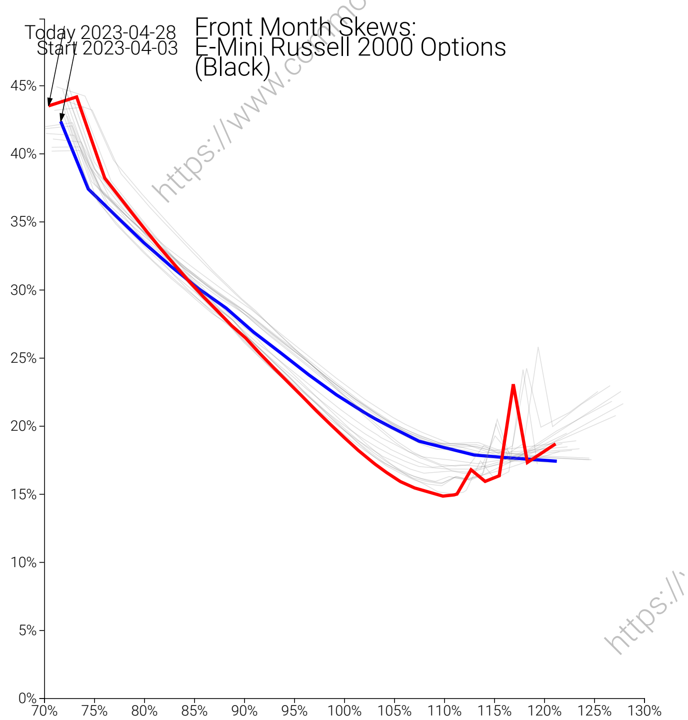


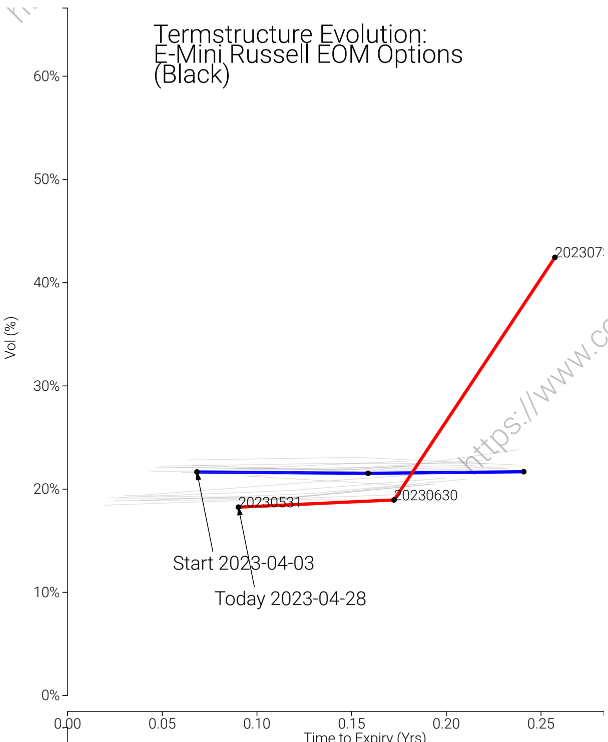
Front Month Skews:
E-Mini S&P 500 Options
(Black)
Today 2023-04-28
Start 2023-04-03

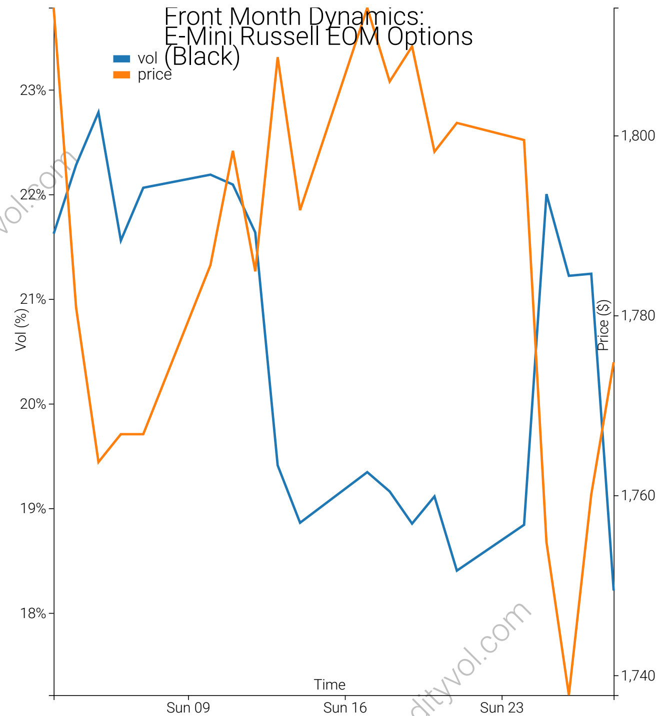

Termstructure Evolution:
E-Mini Russell 2000 Options
(Black)
Vol (%)
30%
25%
20%
15%
10%
5%
0%
20230616
20230915
20231215
Start 2023-04-03
Today 2023-04-28
0.0
0.2
0.4
0.6
Time to Expiry (Yrs)
https://www.commodityvol.com

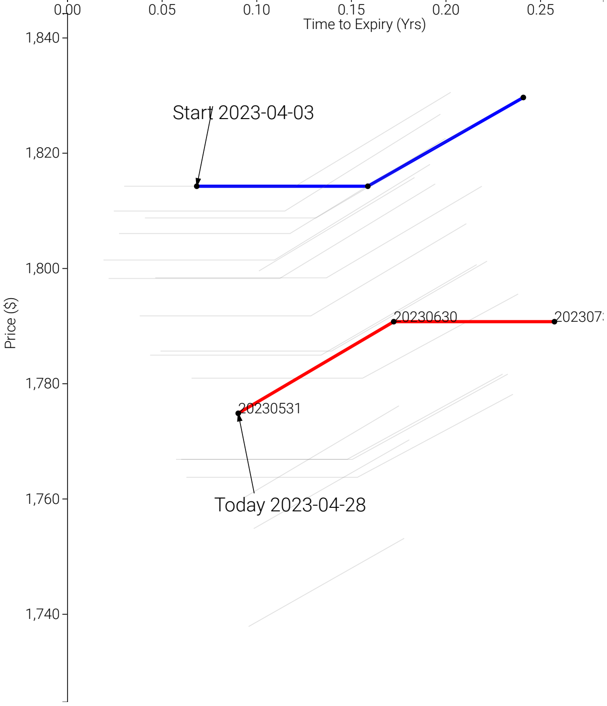

Front Month Dynamics:
E-Mini Russell 2000 Options
(Black)
vol
price
Vol (%)
24%
23%
22%
21%
20%
19%
Price ($)
1,800
1,780
1,760
1,740
Time
Sun 09
Sun 16
Sun 23
https://www.commodityvol.com

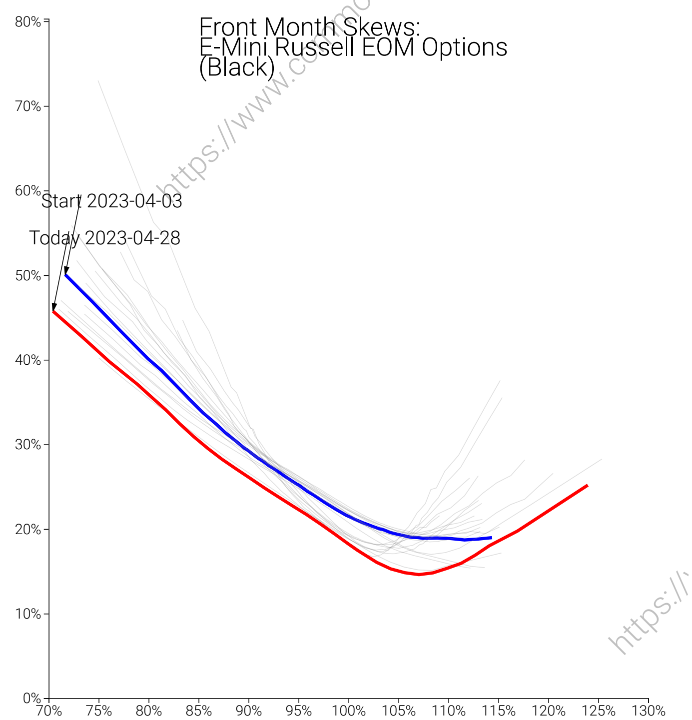

Price ($)
1,860
1,840
1,820
1,800
1,780
1,760
1,740
Start 2023-04-03
20231215
20230915
20230616
Today 2023-04-28

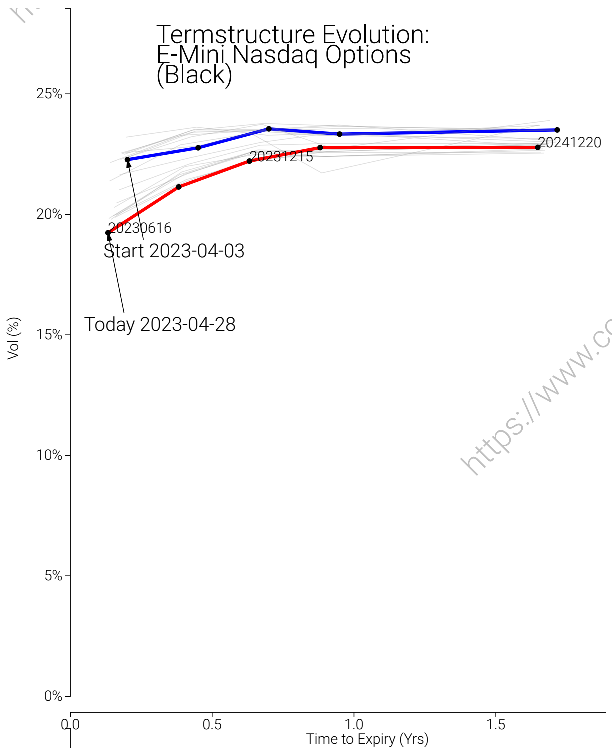

Today 2023-04-28
Start 2023-04-03
Front Month Skews:
E-Mini Russell 2000 Options
(Black)
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%
https://www.commodityvol.com

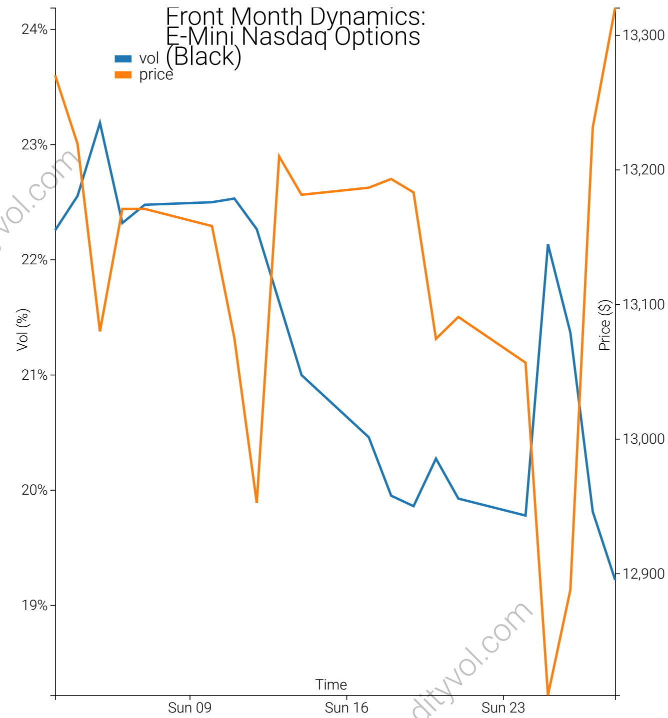

Termstructure Evolution:
E-Mini Russell EOM Options
(Black)
Vol (%)
60%
50%
40%
30%
20%
10%
0%
202307
20230531
20230630
Start 2023-04-03
Today 2023-04-28
0.00
0.05
0.10
0.15
0.20
0.25
Time to Expiry (Yrs)

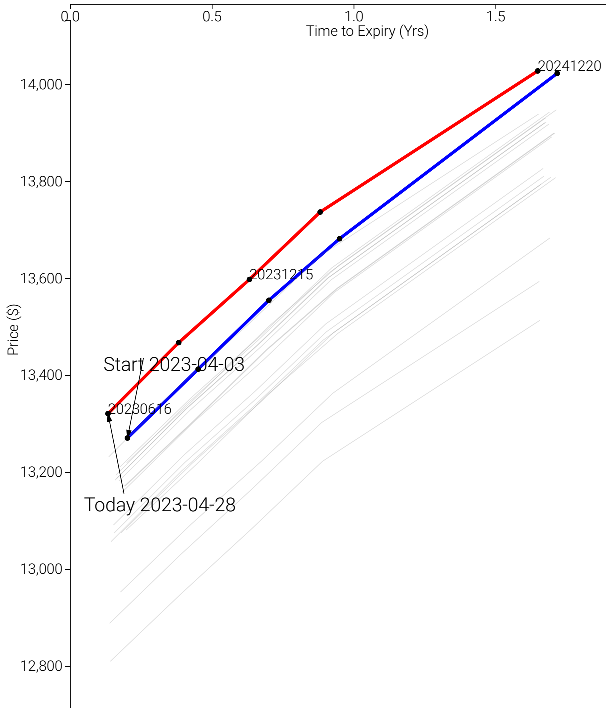

Front Month Dynamics:
E-Mini Russell EOM Options
(Black)
vol
price
Vol (%)
23%
22%
21%
20%
19%
18%
Price ($)
1,800
1,780
1,760
1,740
Time
Sun 09
Sun 16
Sun 23

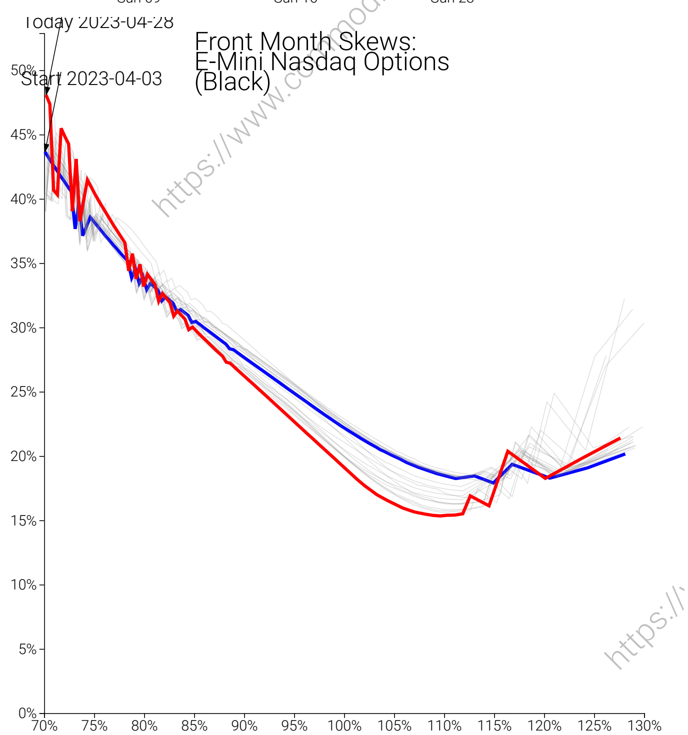

Price ($)
1,840
1,820
1,800
1,780
1,760
1,740
Start 2023-04-03
20230630
202307
20230531
Today 2023-04-28

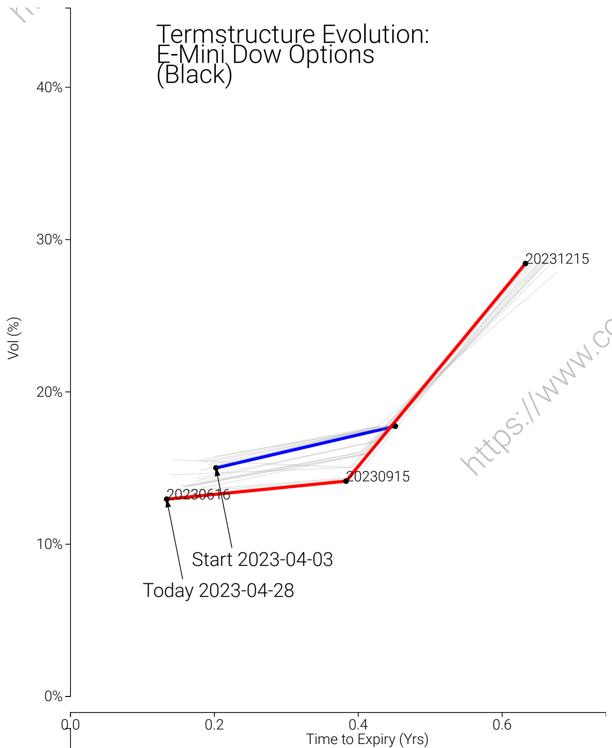

Front Month Skews:
E-Mini Russell EOM Options
(Black)
80%
70%
60%
50%
40%
30%
20%
10%
0%
Start 2023-04-03
Today 2023-04-28
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

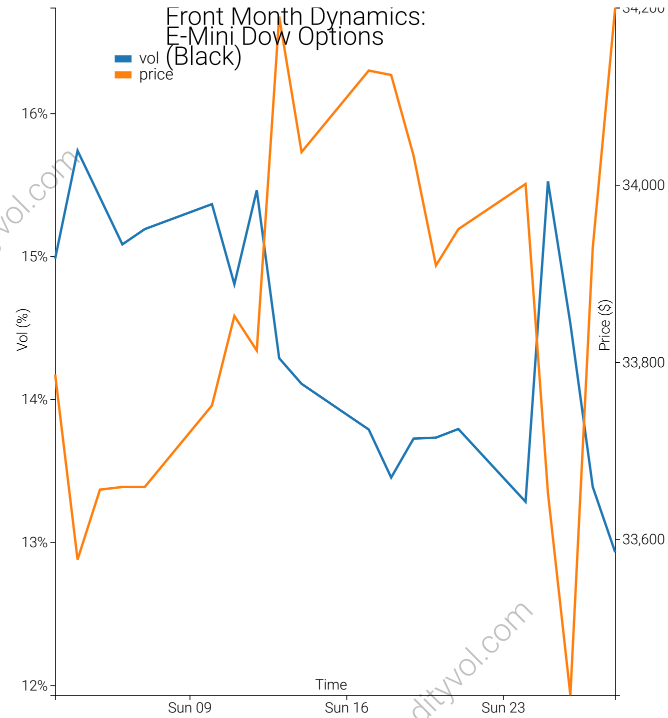

Termstructure Evolution:
E-Mini Nasdaq Options
(Black)
20230616
20231215
20241220
Start 2023-04-03
Today 2023-04-28
Vol (%)
Time to Expiry (Yrs)

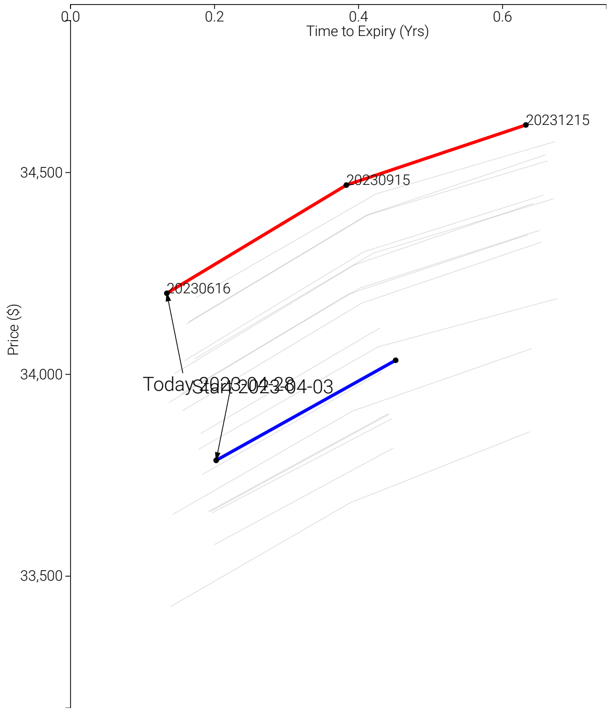

Front Month Dynamics:
E-Mini Nasdaq Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

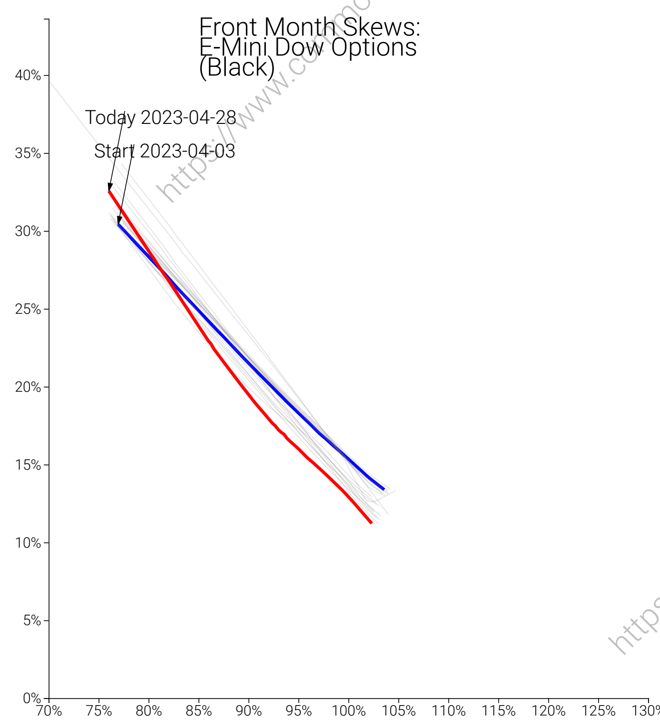

20241220
20231215
Start 2023-04-03
20230616
Today 2023-04-28
Price ($)

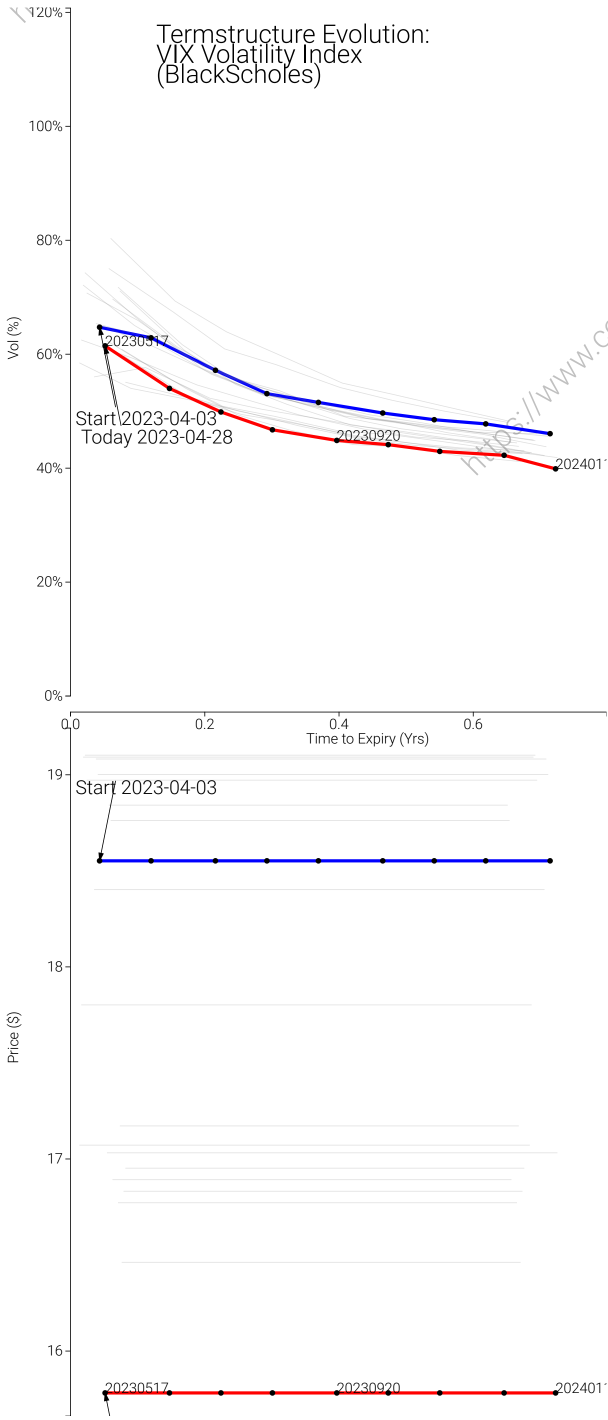

Today 2023-04-28
Start 2023-04-03
Front Month Skews:
E-Mini Nasdaq Options
(Black)

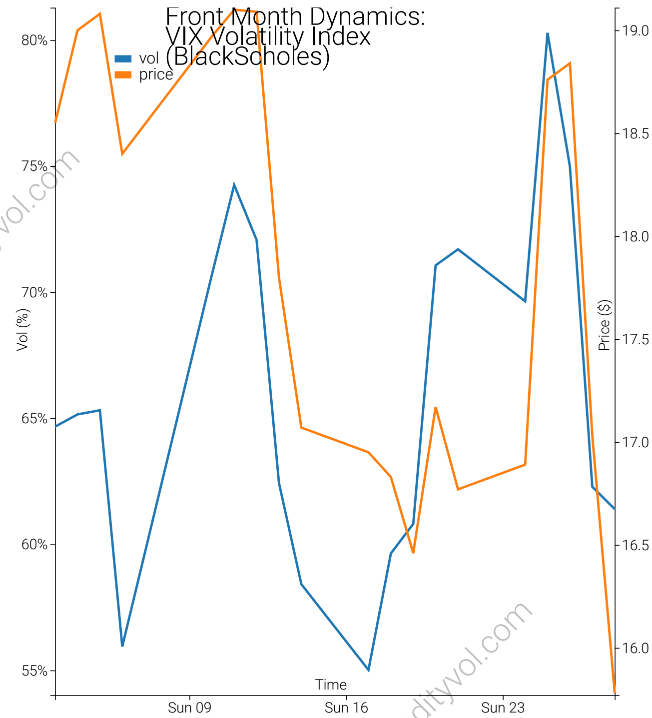

Termstructure Evolution:
E-Mini Dow Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20230616
20230915
20231215
Start 2023-04-03
Today 2023-04-28

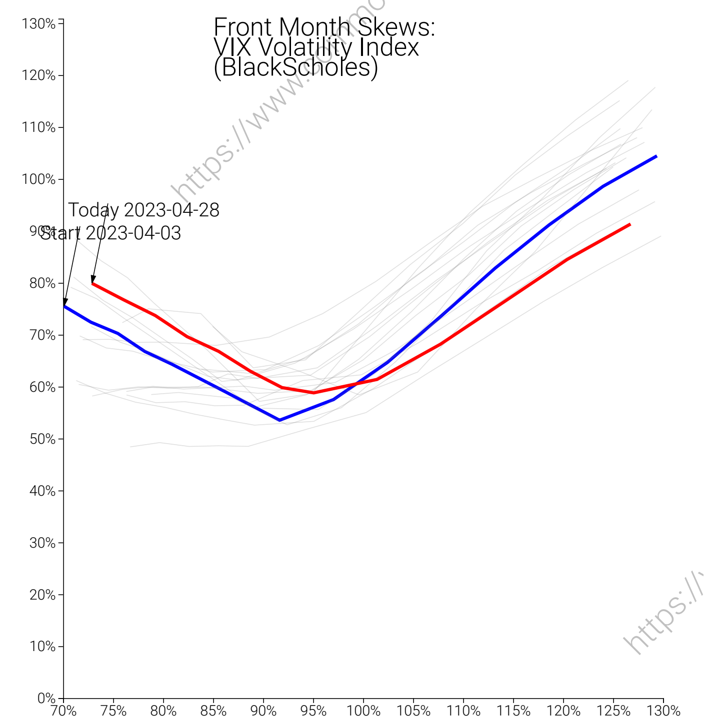

Front Month Dynamics:
E-Mini Dow Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23


Price ($)
20230616
20230915
20231215
Today 2023-04-28
Start 2023-04-03

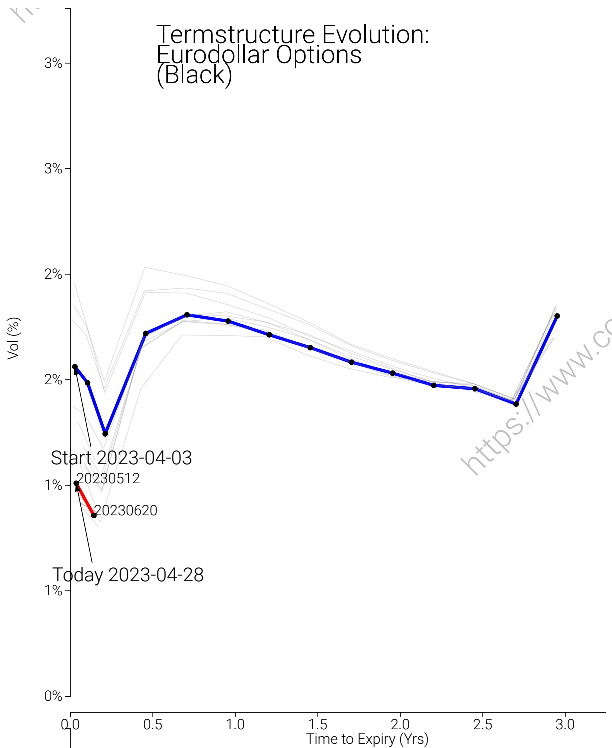

Front Month Skews:
E-Mini Dow Options
(Black)
Today 2023-04-28
Start 2023-04-03

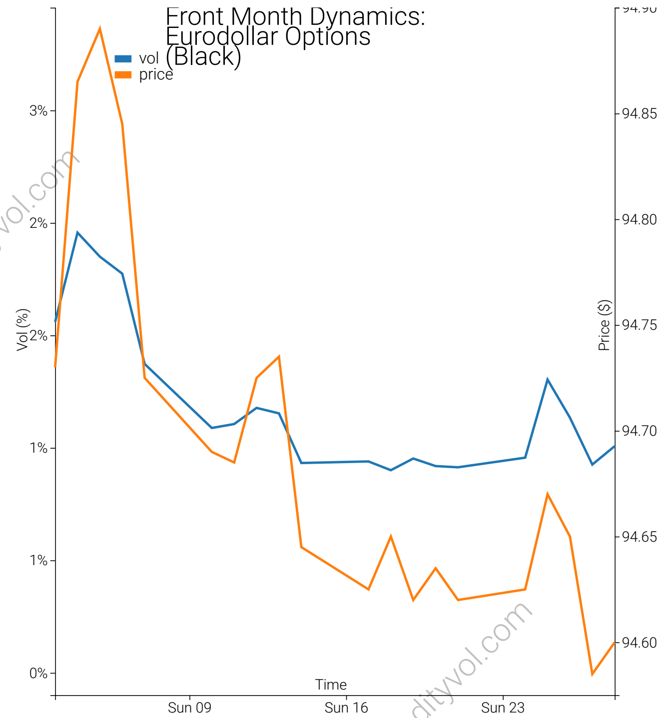

Termstructure Evolution:
VIX Volatility Index
(BlackScholes)
Vol (%)
Start 2023-04-03
Today 2023-04-28
20230517
20230920
202401
Time to Expiry (Yrs)
Price ($)
https://www.commodityvol.com

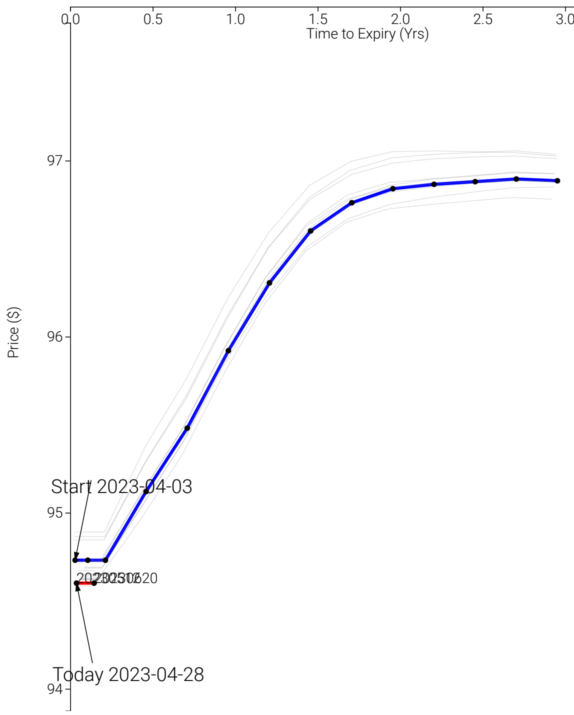

Front Month Dynamics:
VIX Volatility Index
(BlackScholes)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23
https://www.commodityvol.com

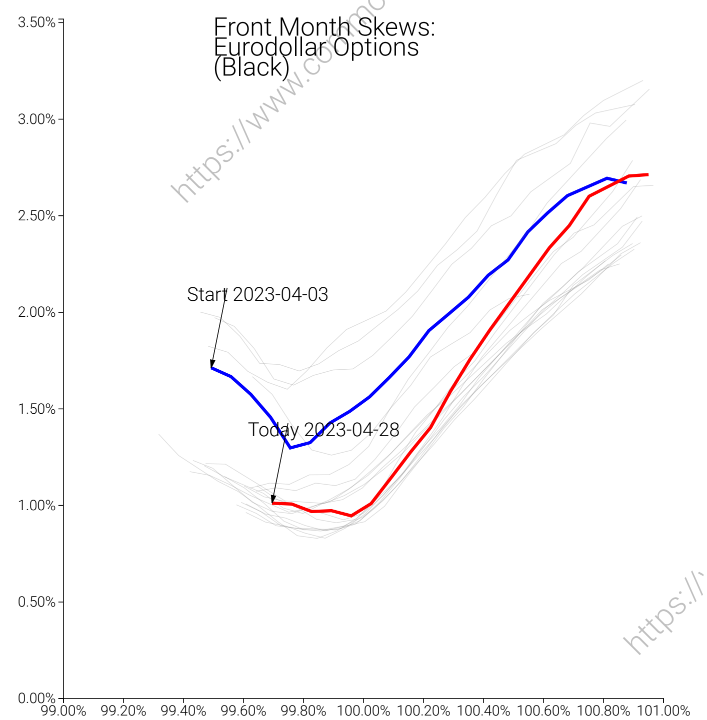

Front Month Skews:
VIX Volatility Index
(BlackScholes)
Today 2023-04-28
Start 2023-04-03
https://www.commodityvol.com

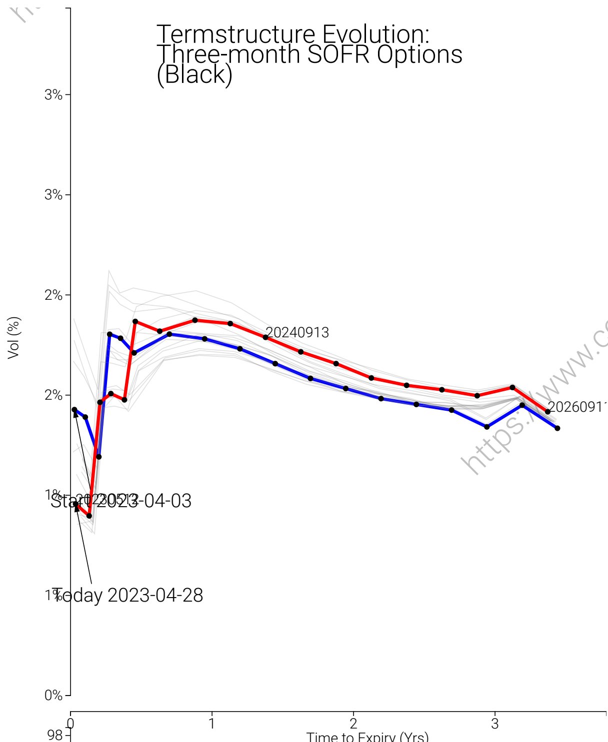
InterestRates: Fixed Income and STIRS

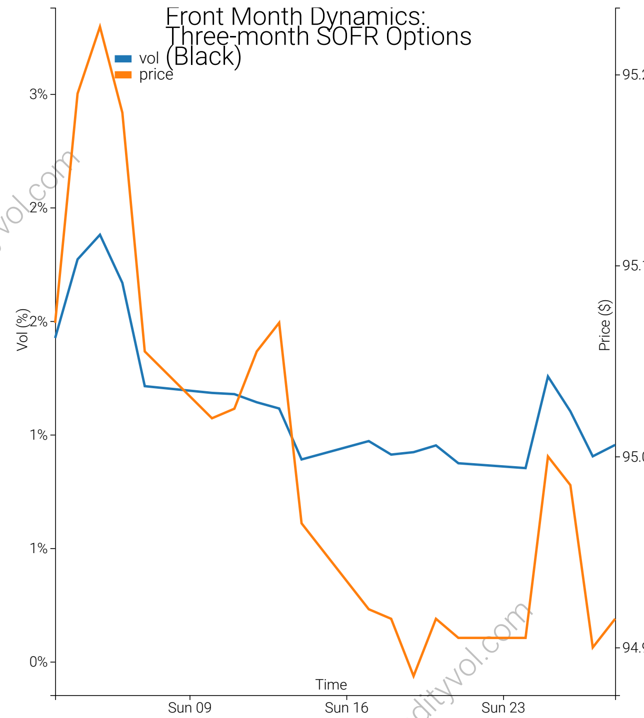

Termstructure Evolution:
Eurodollar Options
(Black)
Vol (%)
Start 2023-04-03
20230512
20230620
Today 2023-04-28
Time to Expiry (Yrs)

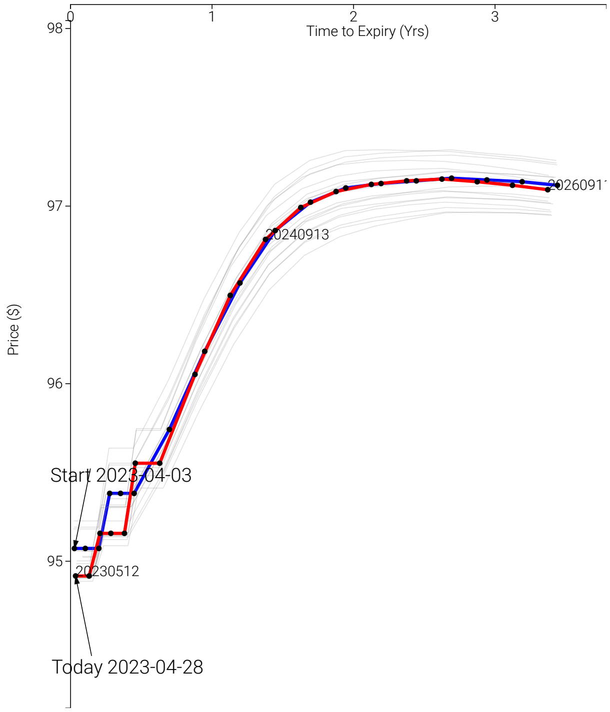

Front Month Dynamics:
Eurodollar Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

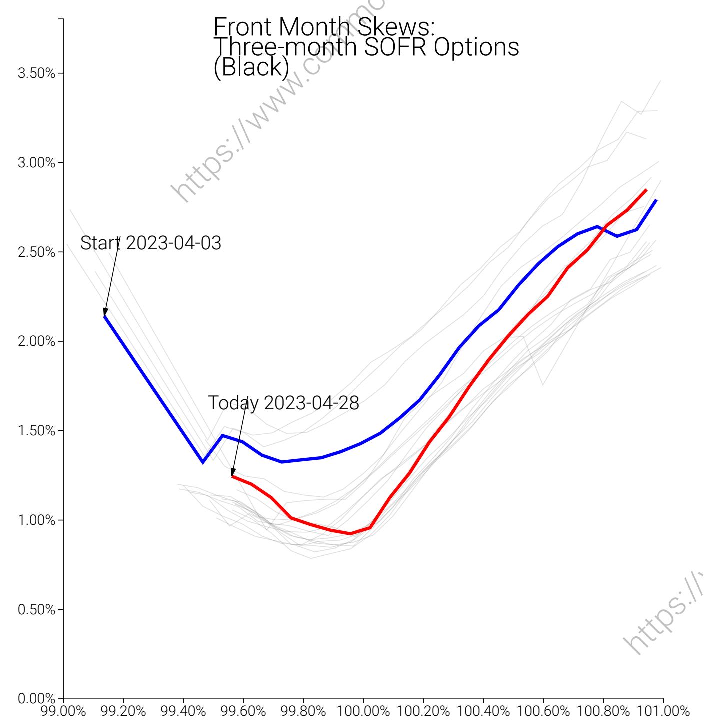

Price ($)
Start 2023-04-03
Today 2023-04-28

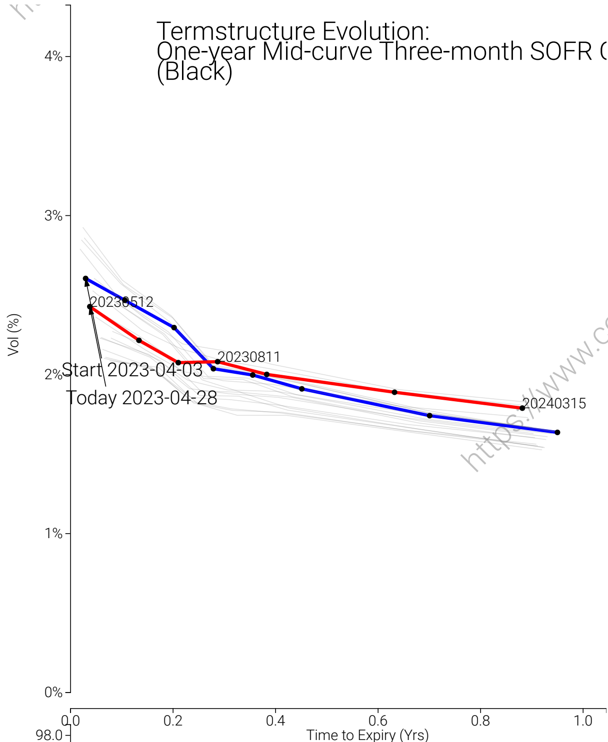

Front Month Skews:
Eurodollar Options
(Black)
Start 2023-04-03
Today 2023-04-28

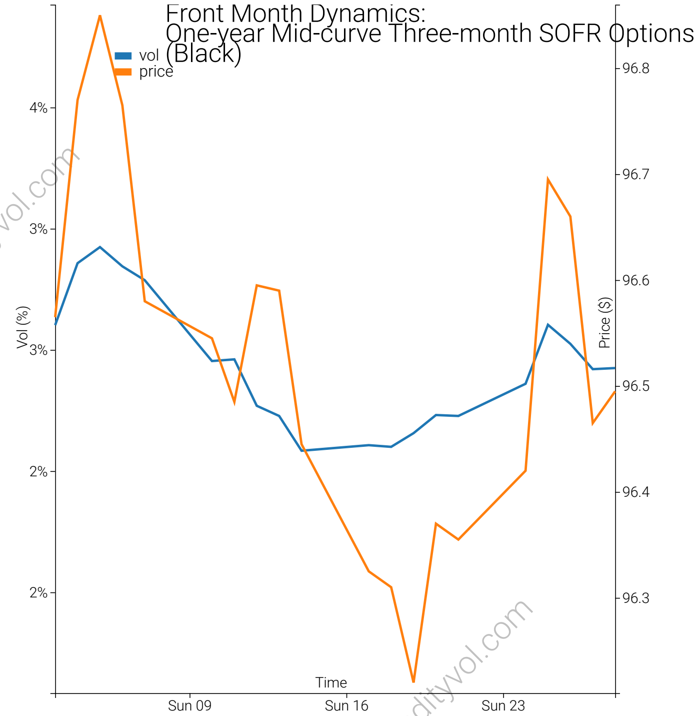

Termstructure Evolution:
Three-month SOFR Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20240913
2026091
Start 2023-04-03
Today 2023-04-28

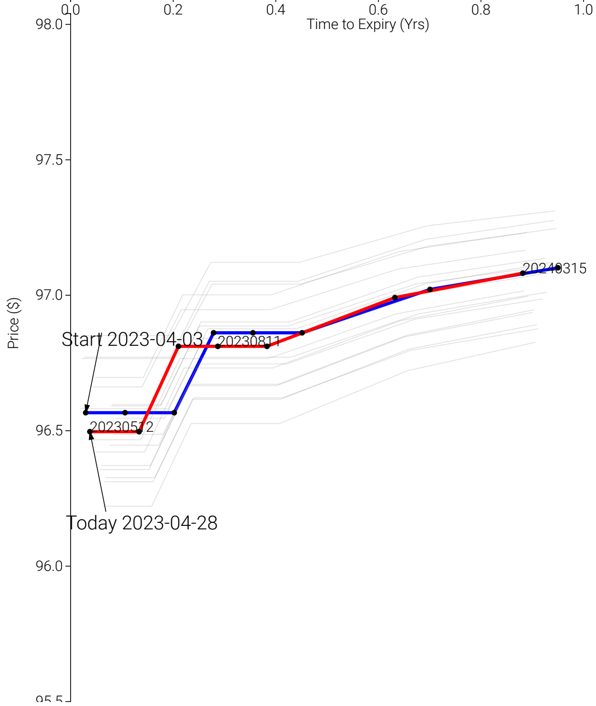

Front Month Dynamics:
Three-month SOFR Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

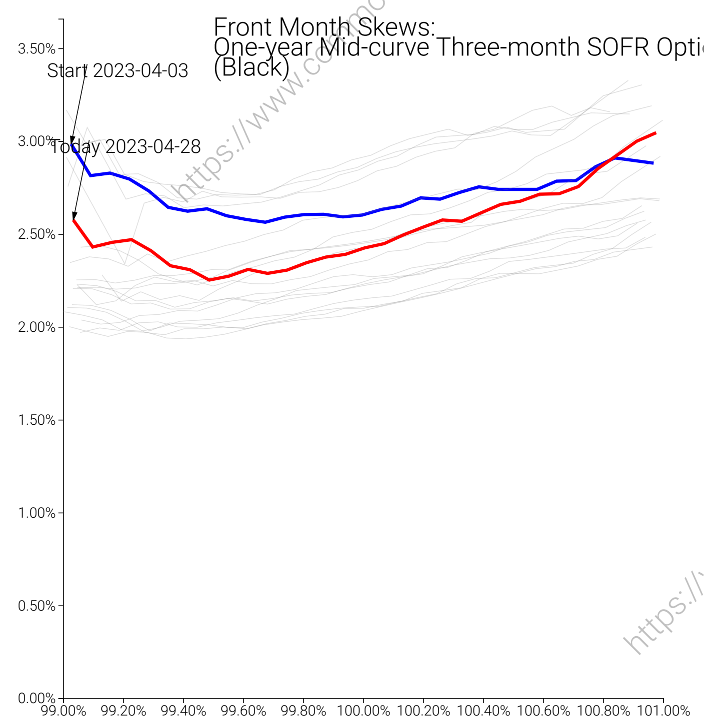

Price ($)
20240913
2026091
20230512
Start 2023-04-03
Today 2023-04-28

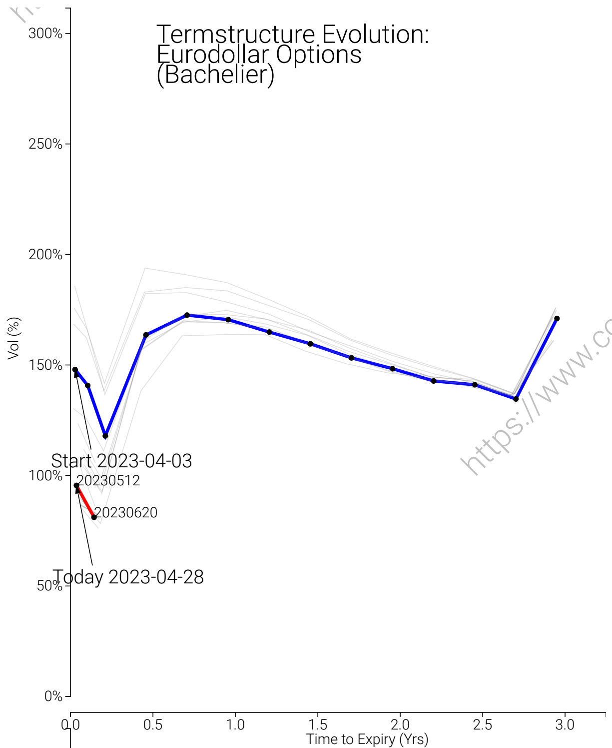

Front Month Skews:
Three-month SOFR Options
(Black)
Start 2023-04-03
Today 2023-04-28

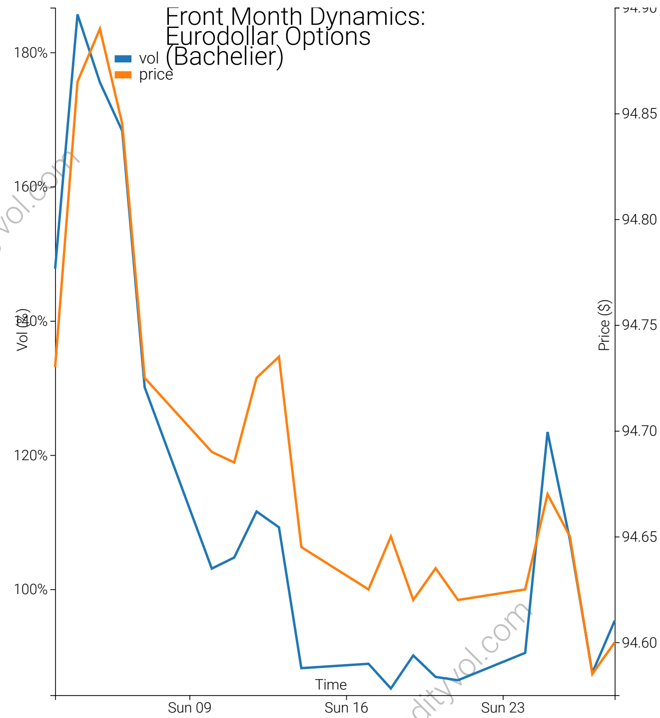

Termstructure Evolution:
One-year Mid-curve Three-month SOFR (
(Black)
Vol (%)
Time to Expiry (Yrs)
20230512
20230811
20240315
Start 2023-04-03
Today 2023-04-28

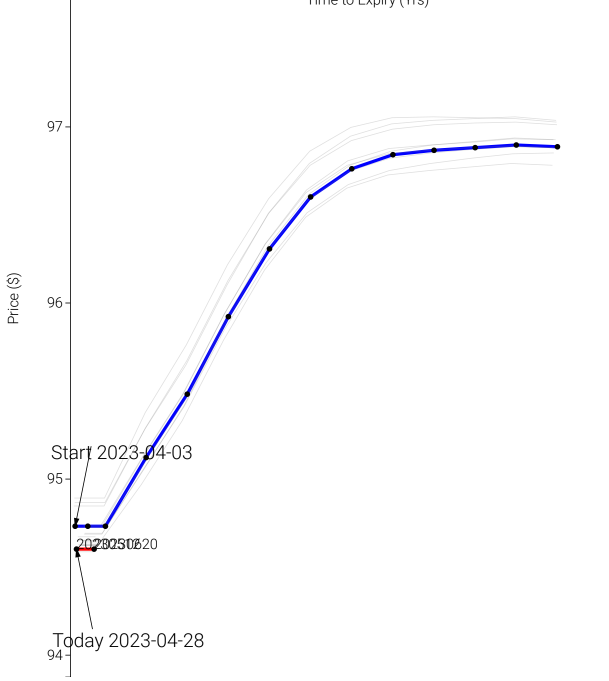

Front Month Dynamics:
One-year Mid-curve Three-month SOFR Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

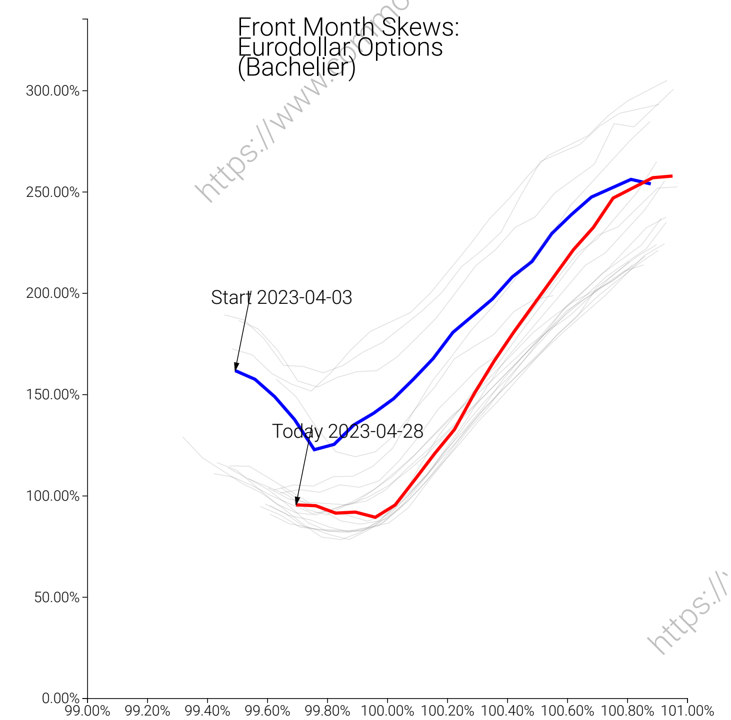

Price ($)
20230512
20230811
20240315
Start 2023-04-03
Today 2023-04-28

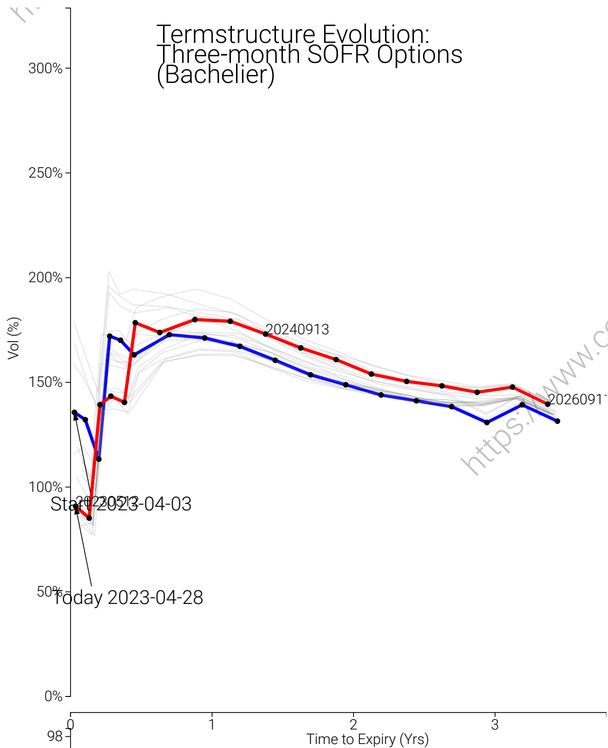

Front Month Skews:
One-year Mid-curve Three-month SOFR Opti
(Black)
Start 2023-04-03
Today 2023-04-28

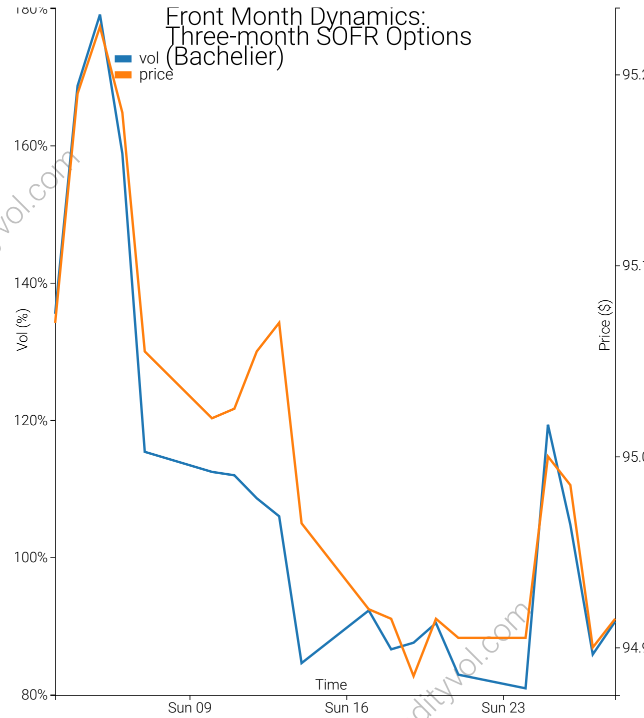

Termstructure Evolution:
Eurodollar Options
(Bachelier)
Vol (%)
300%
250%
200%
150%
100%
50%
0%
Start 2023-04-03
20230512
20230620
Today 2023-04-28
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time to Expiry (Yrs)

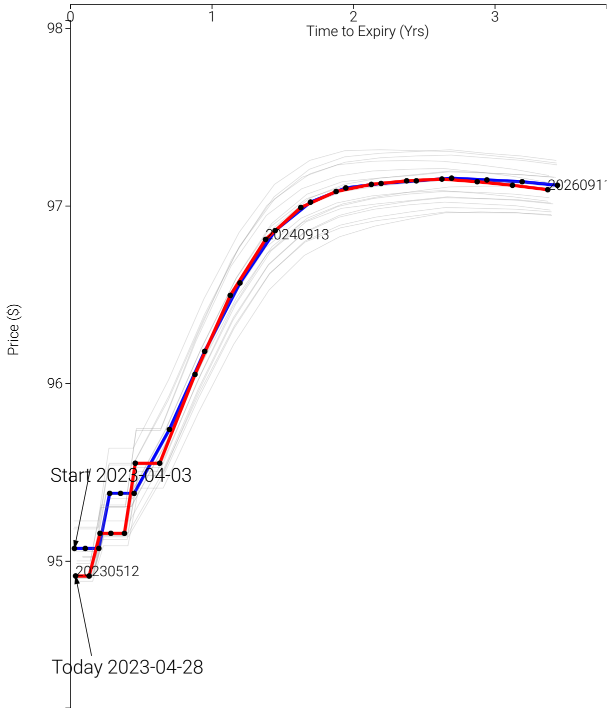

Front Month Dynamics:
Eurodollar Options
(Bachelier)
vol
price
Vol (%)
Price ($)
180%
160%
140%
120%
100%
94.85
94.80
94.75
94.70
94.65
94.60
Sun 09
Sun 16
Sun 23
Time

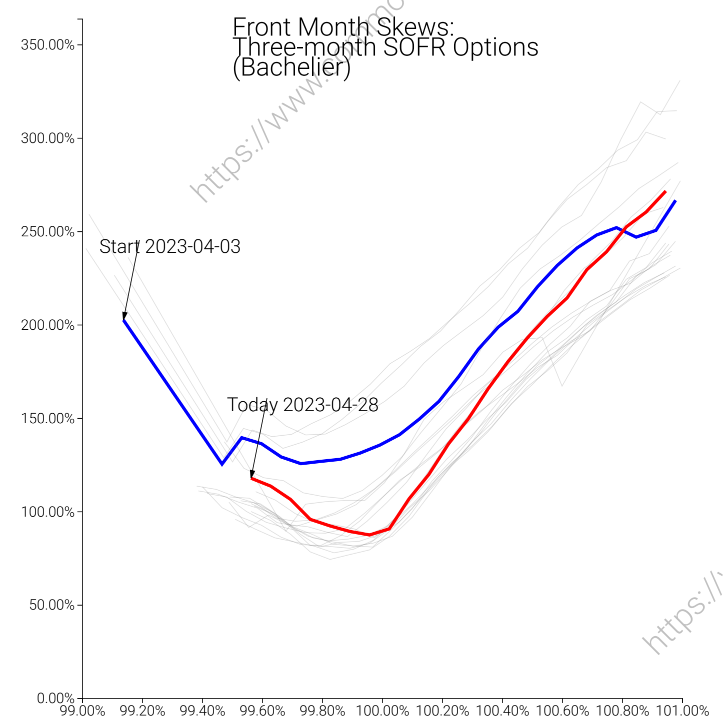

Price ($)
97
96
95
94
Start 2023-04-03
Today 2023-04-28

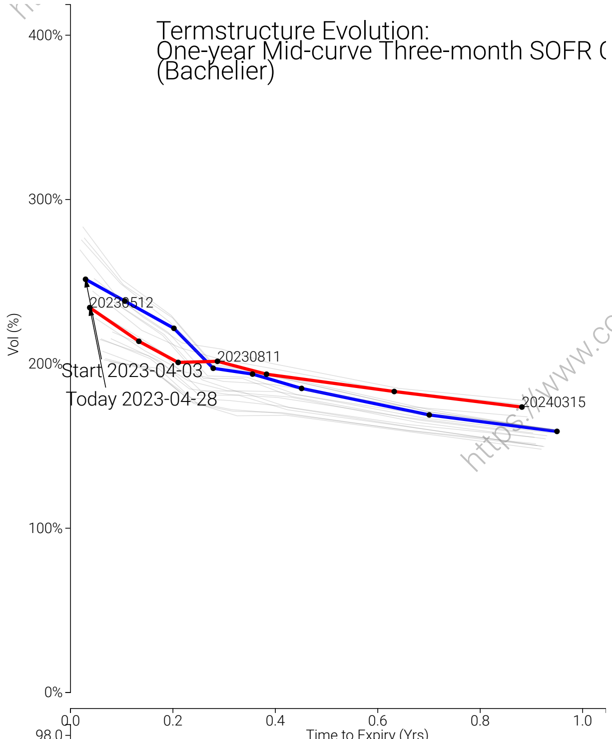

Front Month Skews:
Eurodollar Options
(Bachelier)
300.00%
250.00%
200.00%
150.00%
100.00%
50.00%
0.00%
Start 2023-04-03
Today 2023-04-28
99.00%
99.20%
99.40%
99.60%
99.80%
100.00%
100.20%
100.40%
100.60%
100.80%
101.00%

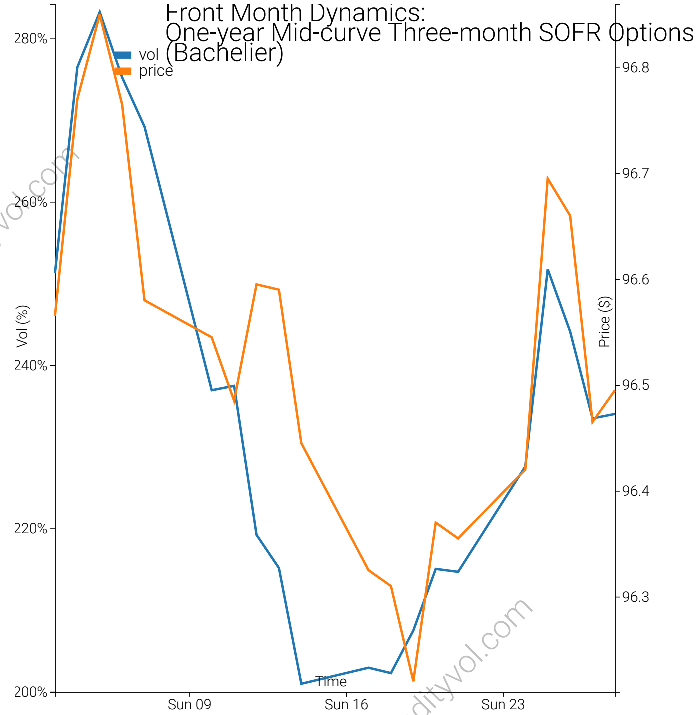

Termstructure Evolution:
Three-month SOFR Options
(Bachelier)
Vol (%)
Time to Expiry (Yrs)
20240913
Start 2023-04-03
Today 2023-04-28

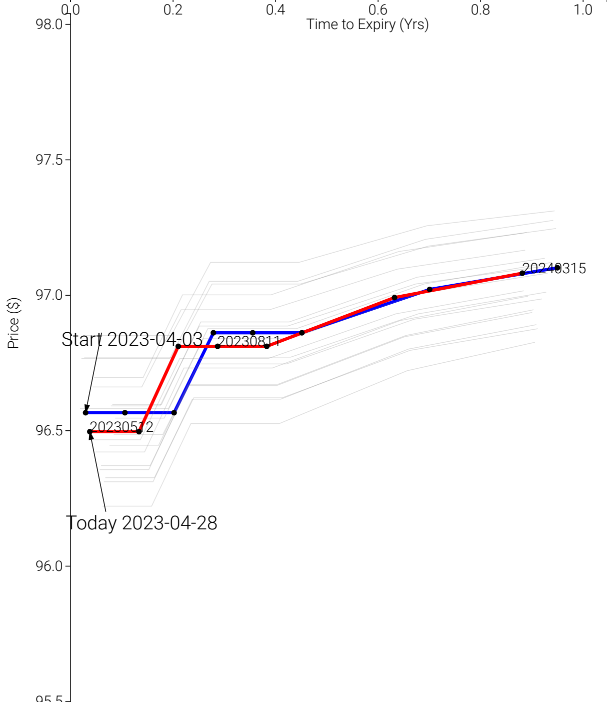

Front Month Dynamics:
Three-month SOFR Options
(Bachelier)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

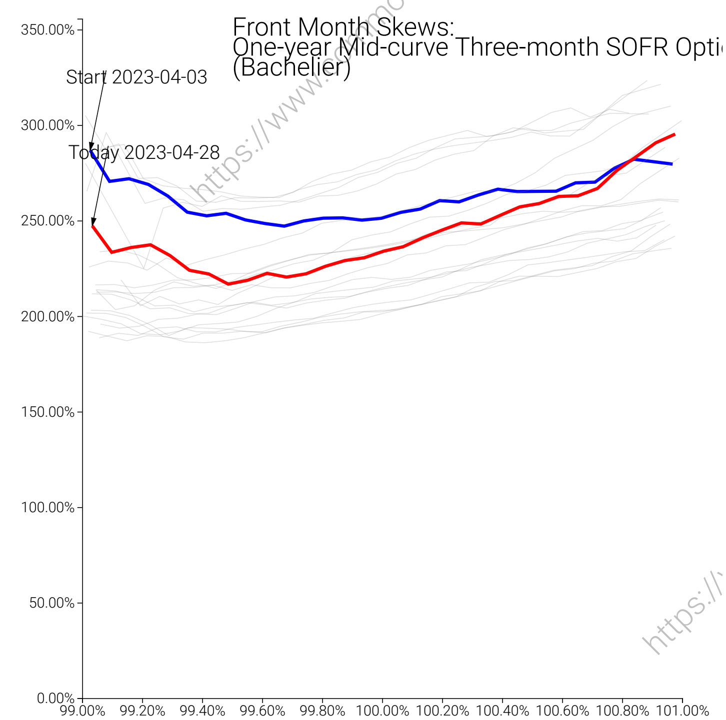

Price ($)
20240913
20230512
Start 2023-04-03
Today 2023-04-28

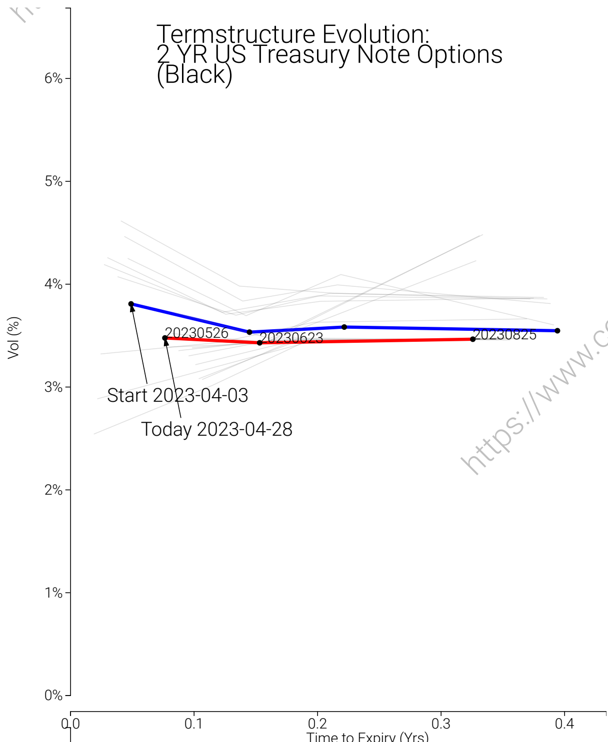

Front Month Skews:
Three-month SOFR Options
(Bachelier)
Start 2023-04-03
Today 2023-04-28

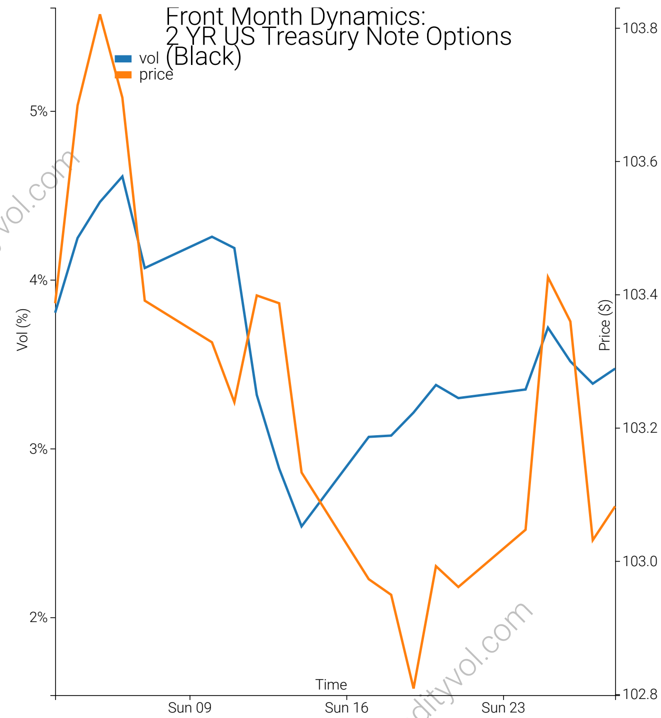

Termstructure Evolution:
One-year Mid-curve Three-month SOFR (
(Bachelier)
400%
300%
200%
100%
0%
Vol (%)
20230512
20230811
20240315
Start 2023-04-03
Today 2023-04-28
0.0
0.2
0.4
0.6
0.8
1.0
Time to Expiry (Yrs)

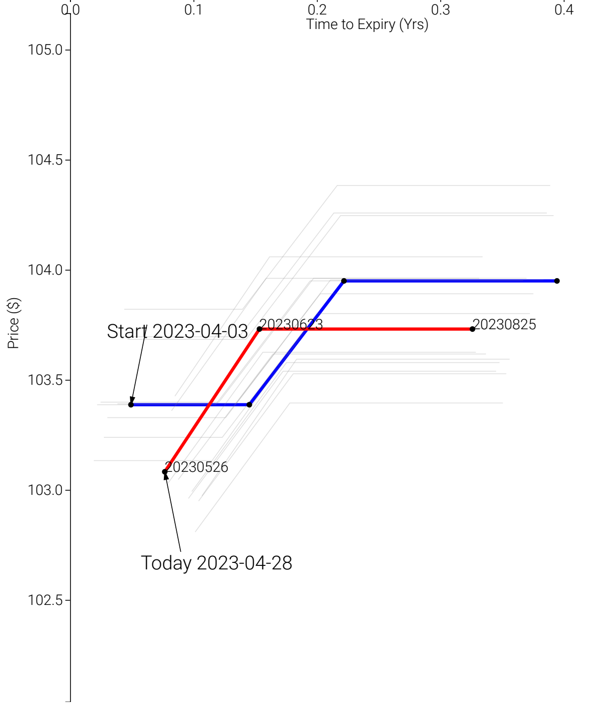

Front Month Dynamics:
One-year Mid-curve Three-month SOFR Options
(Bachelier)
vol
price
280%
260%
240%
220%
200%
Vol (%)
96.8
96.7
96.6
96.5
96.4
96.3
Price ($)
Sun 09
Sun 16
Sun 23
Time

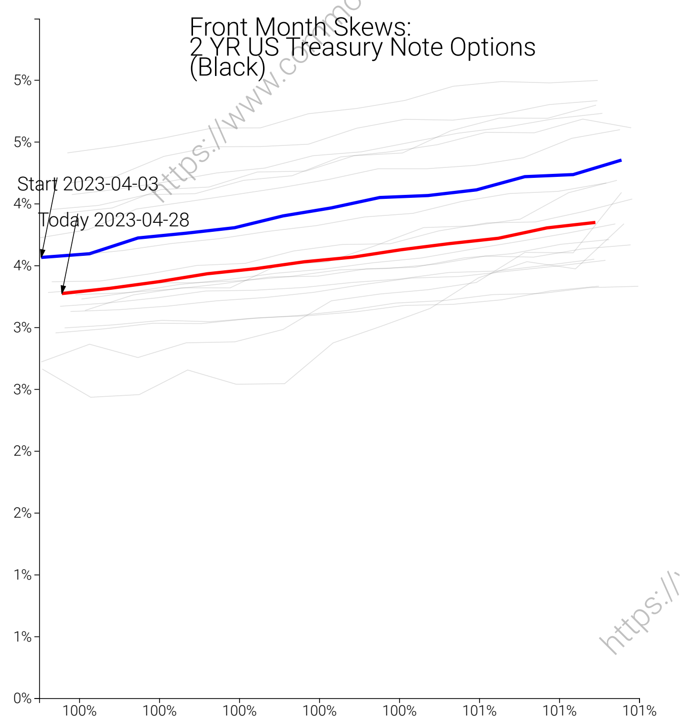

98.0
97.5
97.0
96.5
96.0
95.5
Price ($)
Start 2023-04-03
20230811
20230512
20240315
Today 2023-04-28

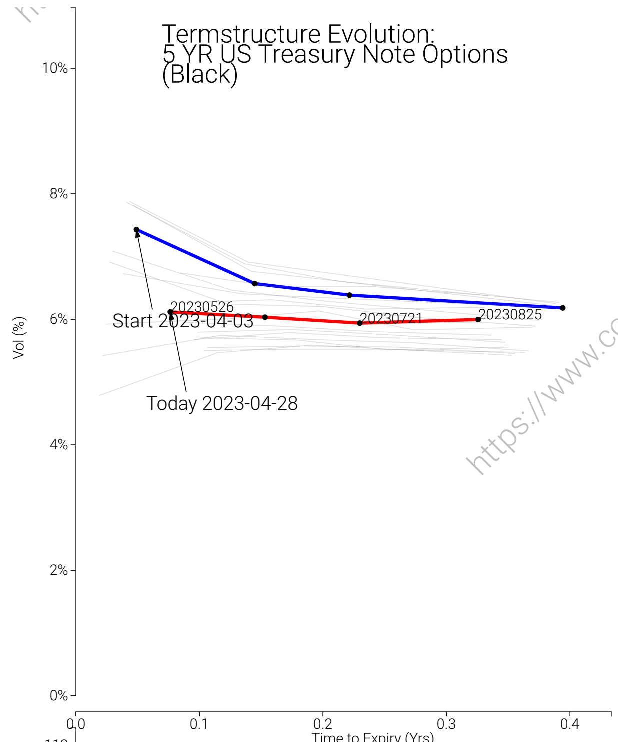

Front Month Skews:
One-year Mid-curve Three-month SOFR Opti
(Bachelier)
Start 2023-04-03
Today 2023-04-28
350.00%
300.00%
250.00%
200.00%
150.00%
100.00%
50.00%
0.00%
99.00%
99.20%
99.40%
99.60%
99.80%
100.00%
100.20%
100.40%
100.60%
100.80%
101.00%

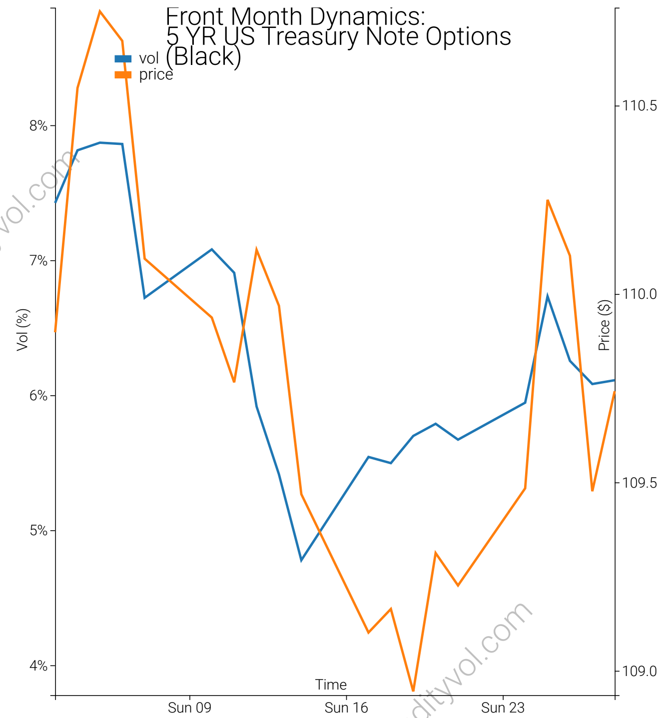

Termstructure Evolution:
2 YR US Treasury Note Options
(Black)
Vol (%)
6%
5%
4%
3%
2%
1%
0%
20230526
20230623
20230825
Start 2023-04-03
Today 2023-04-28
0.0
0.1
0.2
0.3
0.4
Time to Expiry (Yrs)

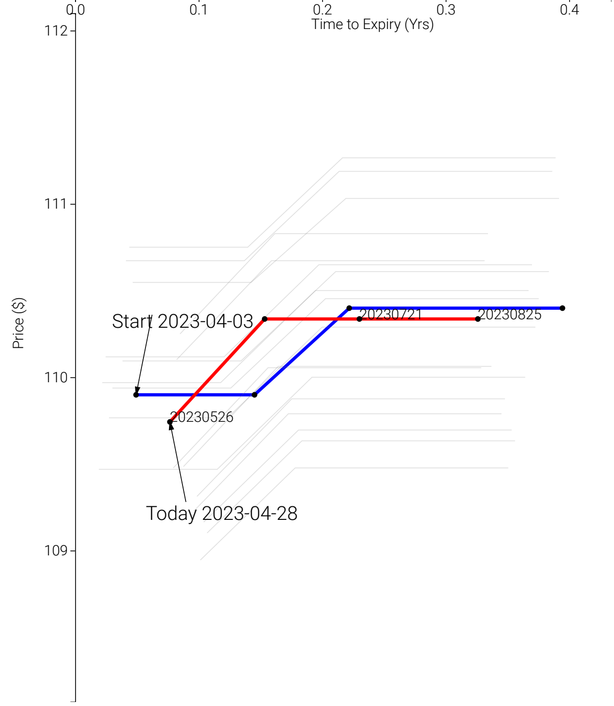

Front Month Dynamics:
2 YR US Treasury Note Options
(Black)
vol
price
Vol (%)
5%
4%
3%
2%
Price ($)
103.8
103.6
103.4
103.2
103.0
102.8
Time
Sun 09
Sun 16
Sun 23

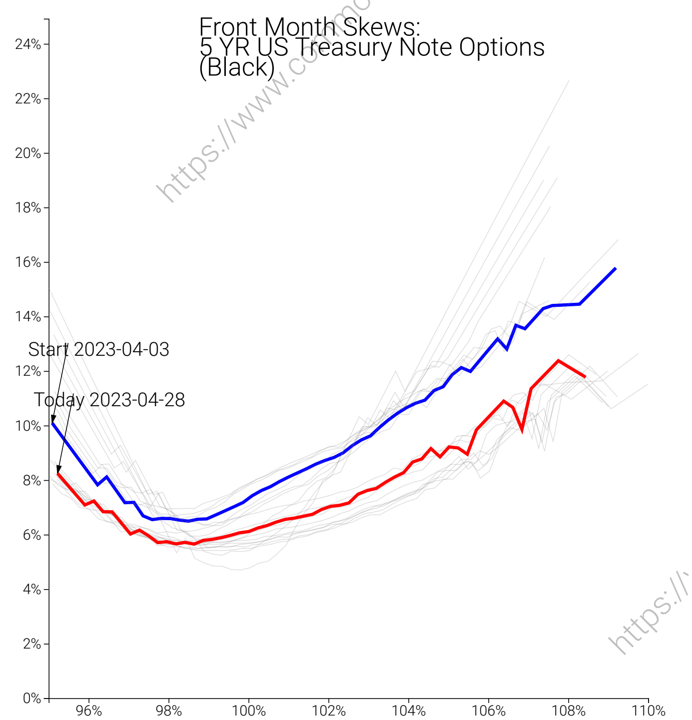

Price ($)
105.0
104.5
104.0
103.5
103.0
102.5
Start 2023-04-03
20230623
20230825
20230526
Today 2023-04-28

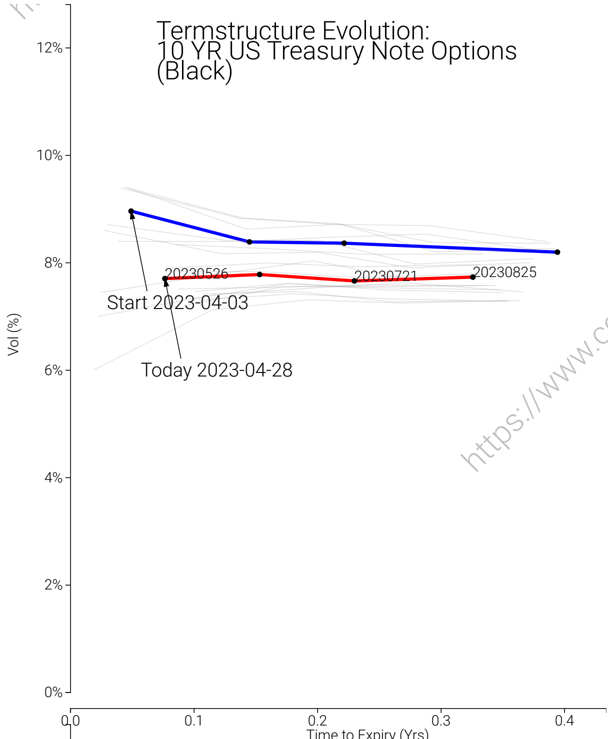

Front Month Skews:
2 YR US Treasury Note Options
(Black)
5%
5%
4%
4%
3%
3%
2%
2%
1%
1%
0%
Start 2023-04-03
Today 2023-04-28
100%
100%
100%
100%
100%
101%
101%
101%

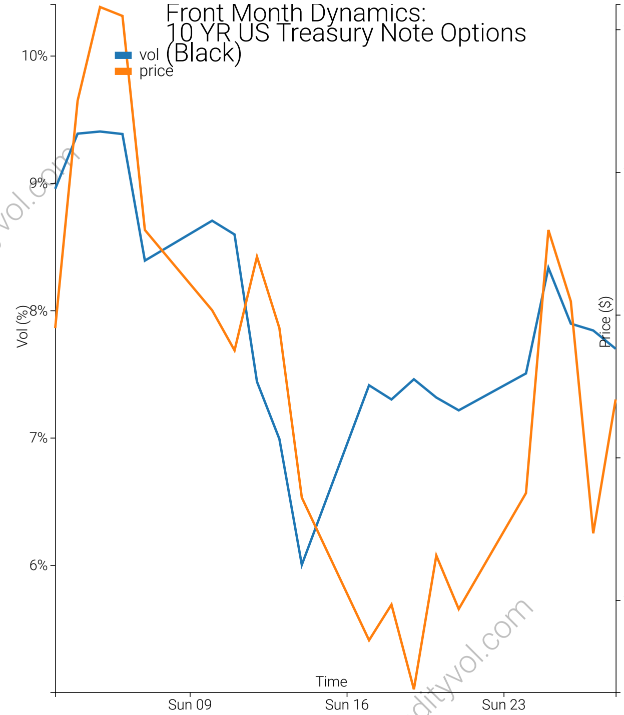

Termstructure Evolution:
5 YR US Treasury Note Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2023-04-03
Today 2023-04-28
20230526
20230721
20230825

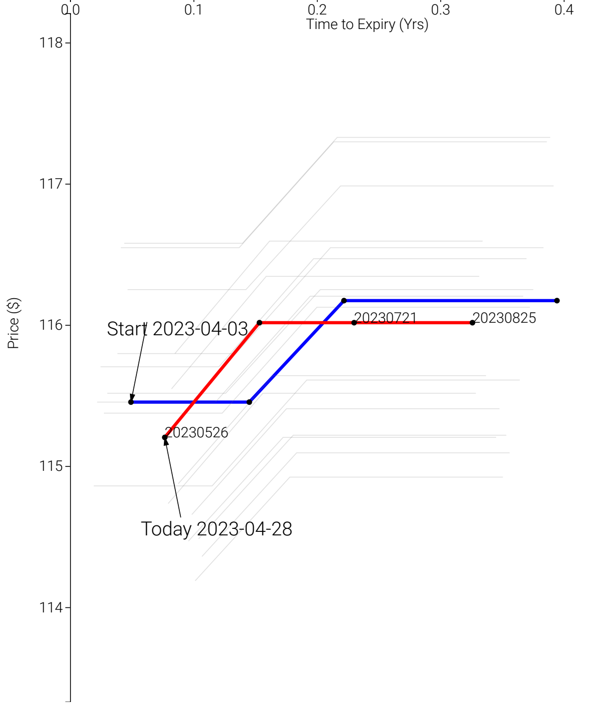

Front Month Dynamics:
5 YR US Treasury Note Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

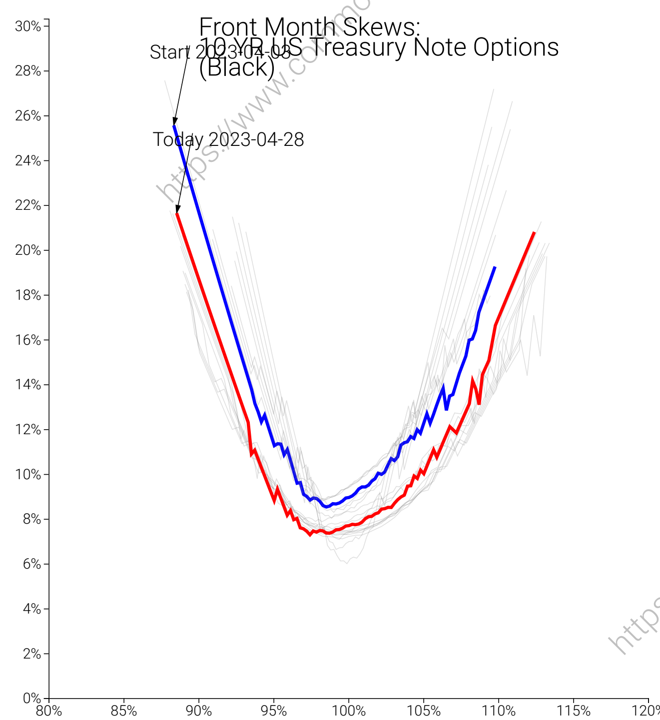

Price ($)
Start 2023-04-03
Today 2023-04-28
20230526
20230721
20230825

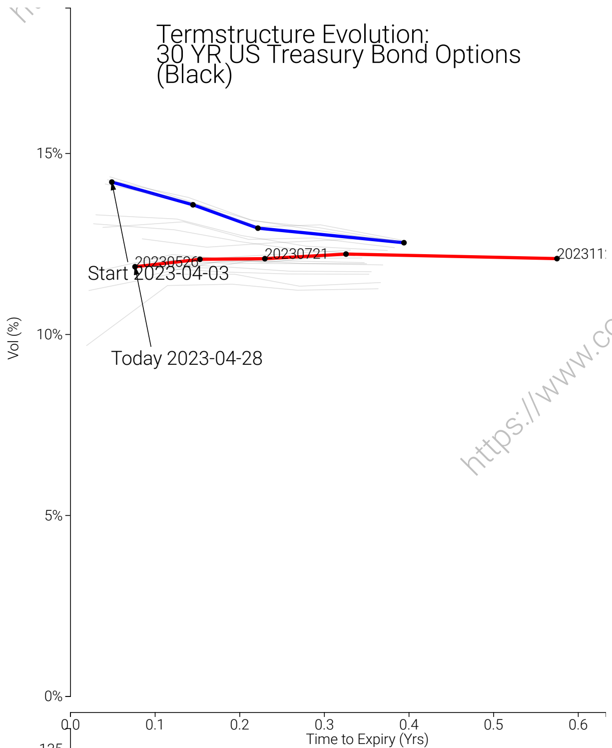

Front Month Skews:
5 YR US Treasury Note Options
(Black)
Start 2023-04-03
Today 2023-04-28

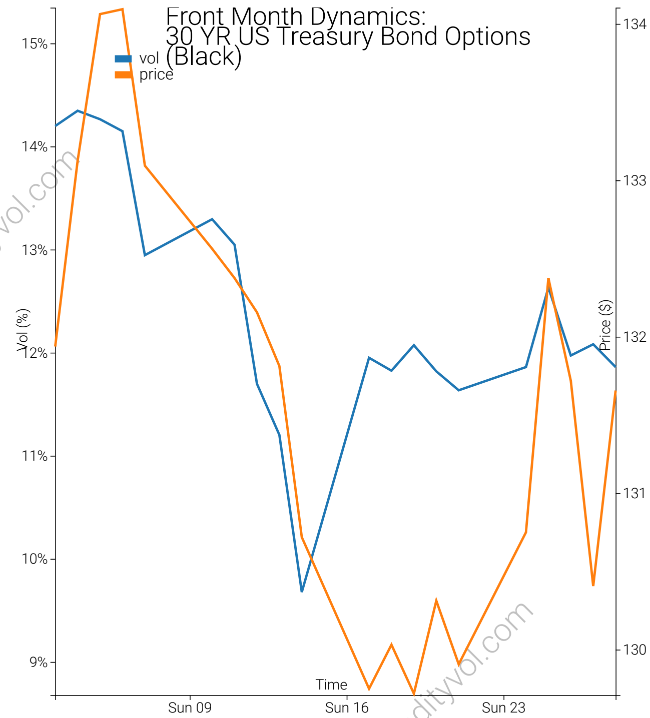

Termstructure Evolution:
10 YR US Treasury Note Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20230526
20230721
20230825
Start 2023-04-03
Today 2023-04-28

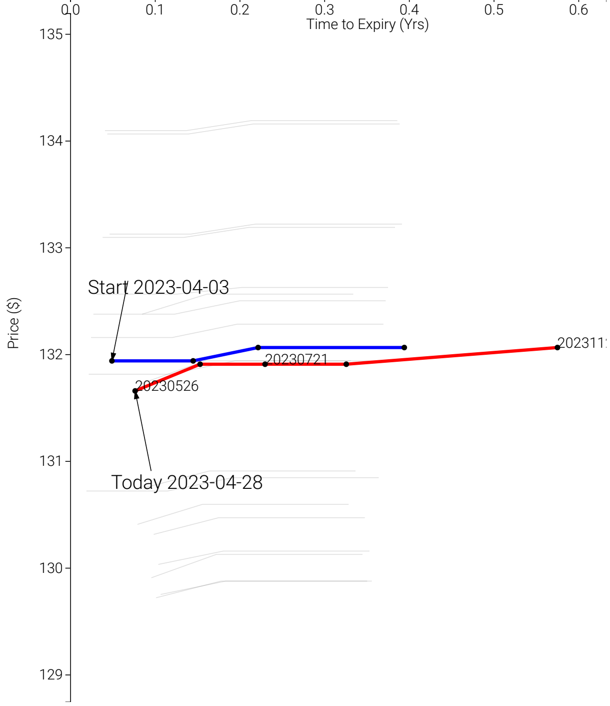

Front Month Dynamics:
10 YR US Treasury Note Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

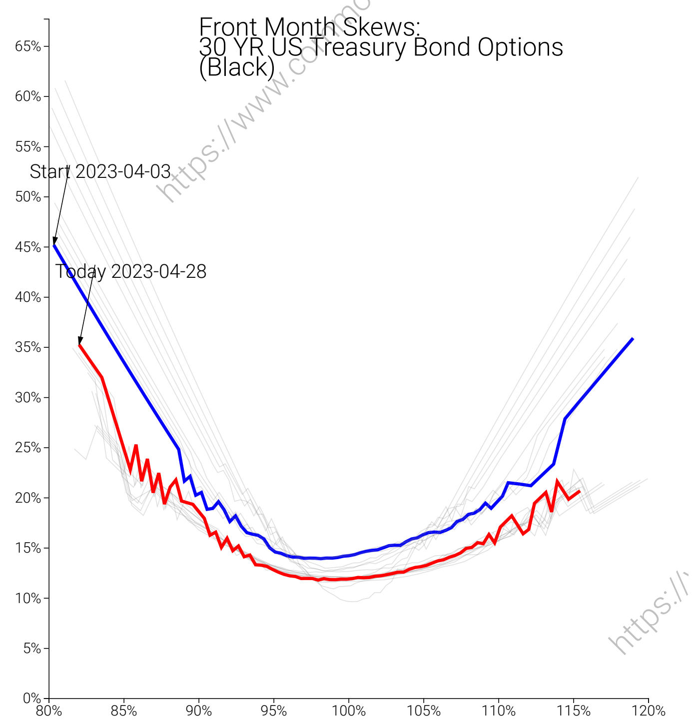

Price ($)
20230526
20230721
20230825
Start 2023-04-03
Today 2023-04-28

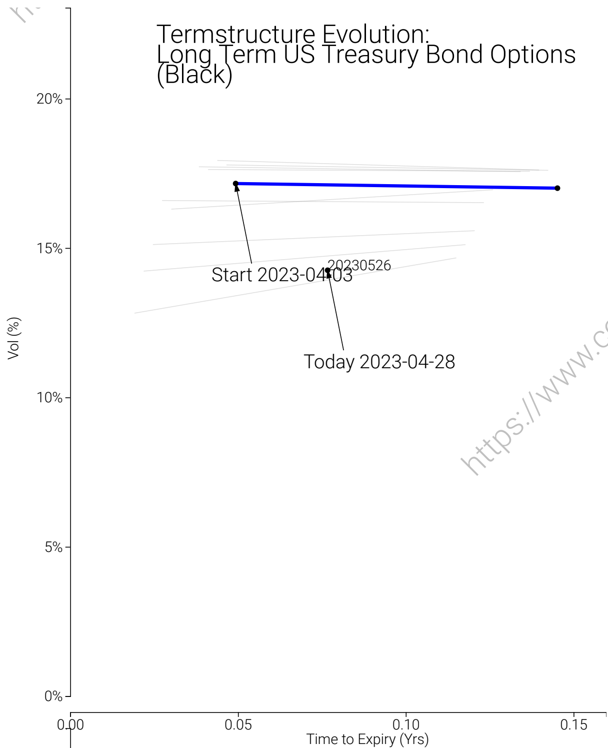

Front Month Skews:
10 YR US Treasury Note Options
(Black)
Start 2023-04-03
Today 2023-04-28

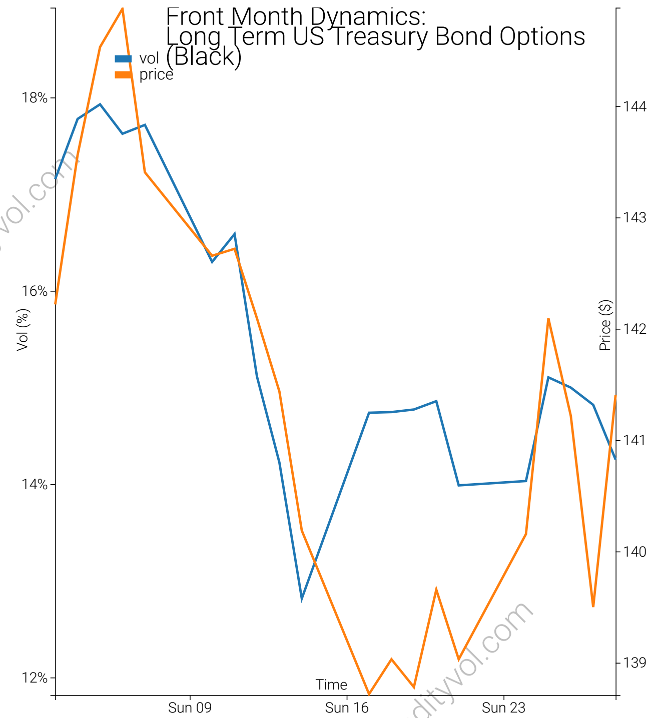

Termstructure Evolution:
30 YR US Treasury Bond Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2023-04-03
Today 2023-04-28
20230526
20230721

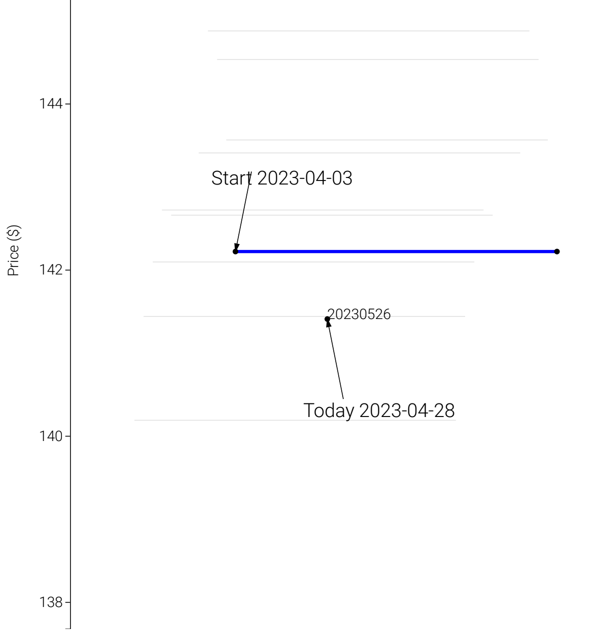

Front Month Dynamics:
30 YR US Treasury Bond Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

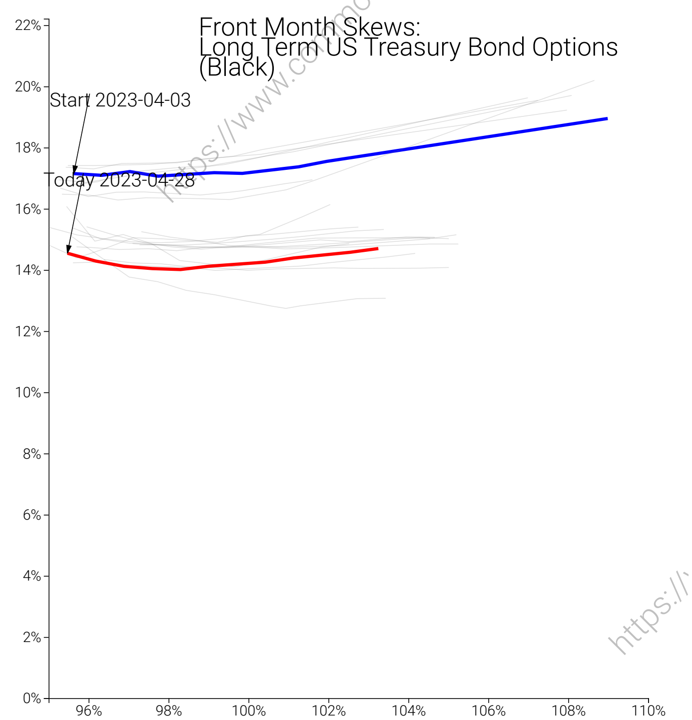

Price ($)
Start 2023-04-03
Today 2023-04-28
20230526
20230721


Front Month Skews:
30 YR US Treasury Bond Options
(Black)
Start 2023-04-03
Today 2023-04-28

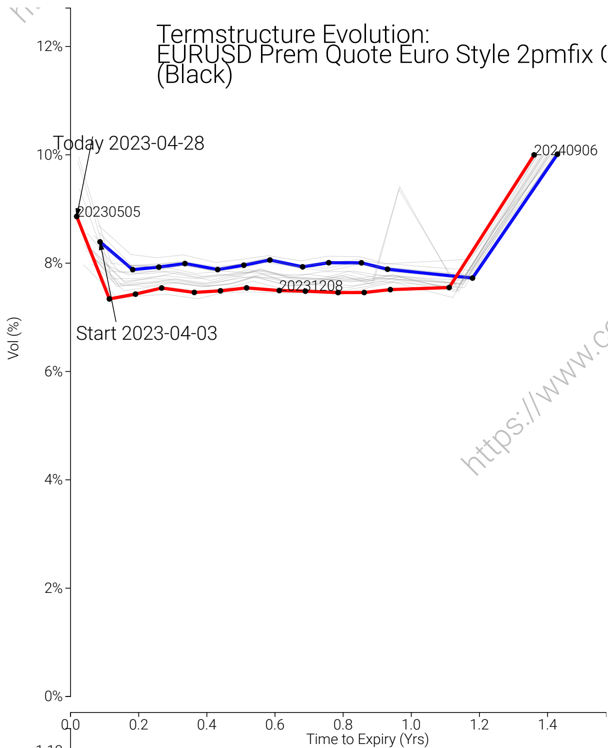

Termstructure Evolution:
Long Term US Treasury Bond Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2023-04-03
20230526
Today 2023-04-28

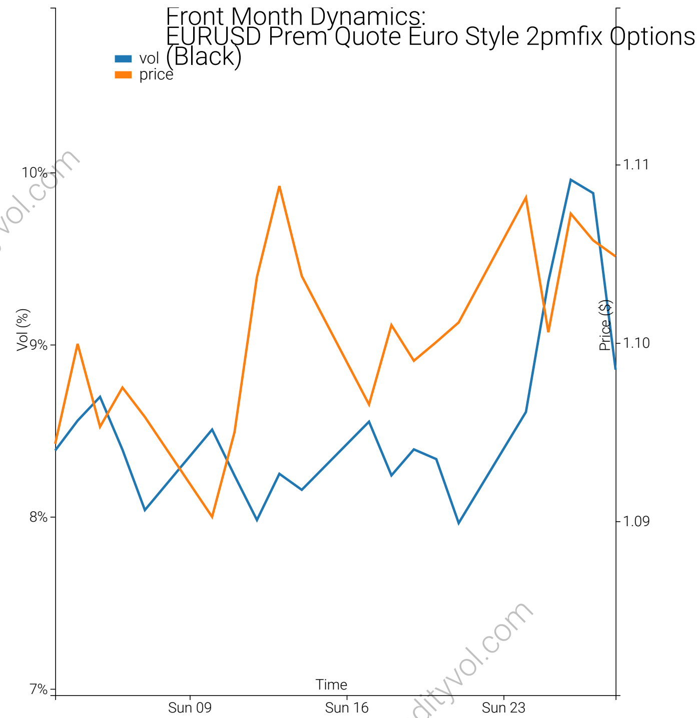

Front Month Dynamics:
Long Term US Treasury Bond Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

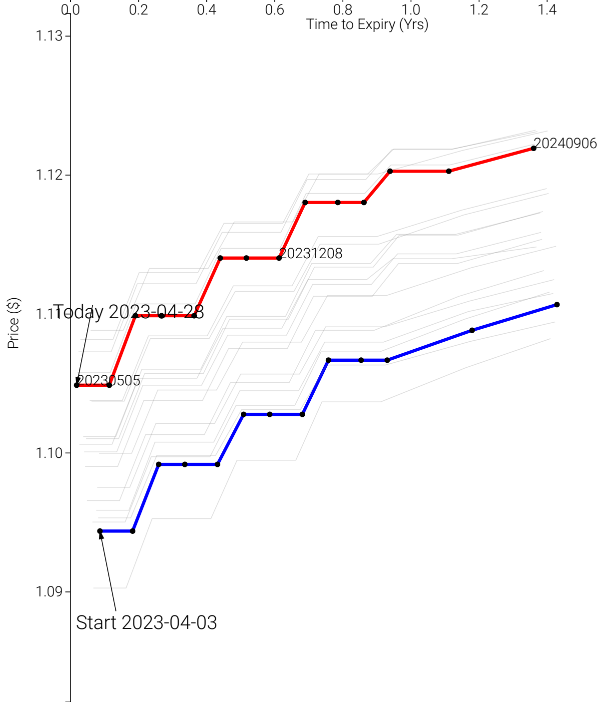

Price ($)
Start 2023-04-03
20230526
Today 2023-04-28

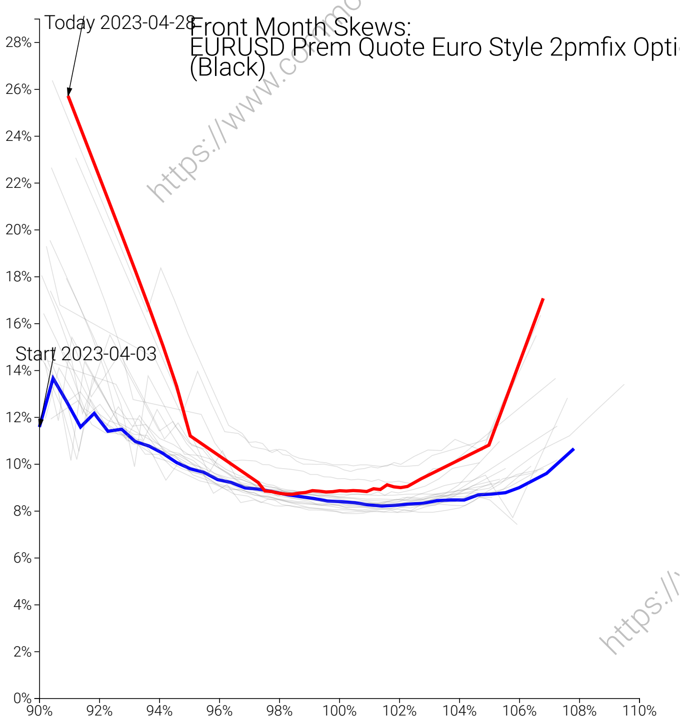

Front Month Skews:
Long Term US Treasury Bond Options
(Black)
Start 2023-04-03
Today 2023-04-28

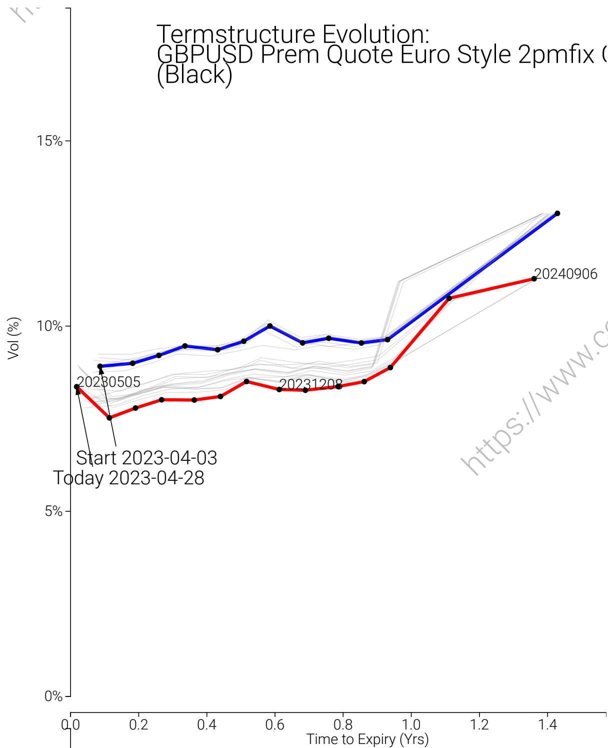
Forex

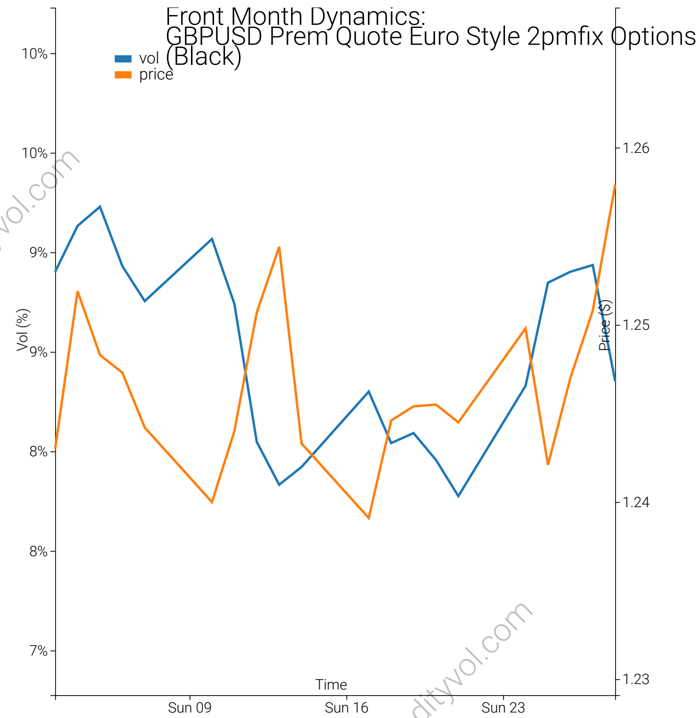

Termstructure Evolution:
EURUSD Prem Quote Euro Style 2pmfix (
(Black)
Today 2023-04-28
20230505
20231208
20240906
Start 2023-04-03
Vol (%)
Time to Expiry (Yrs)

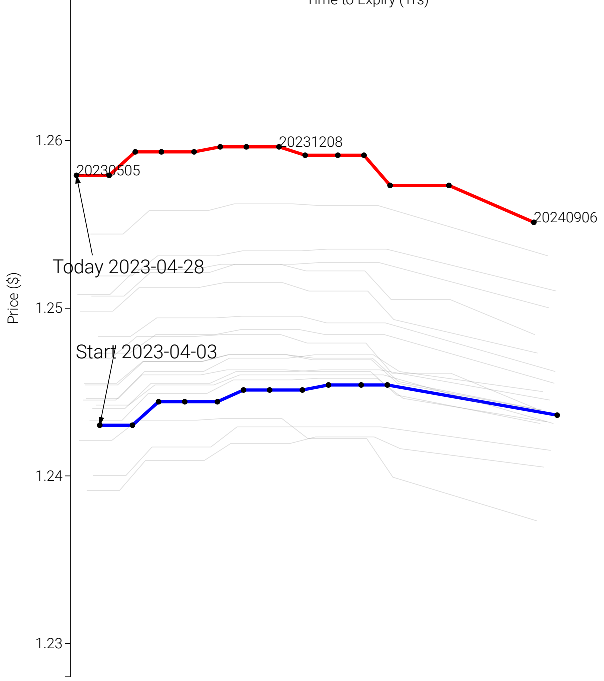

Front Month Dynamics:
EURUSD Prem Quote Euro Style 2pmfix Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

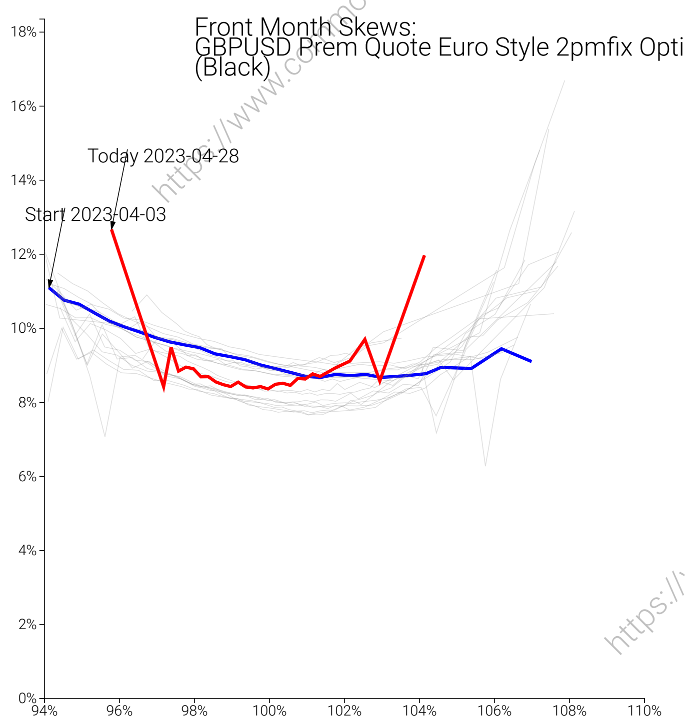

Today 2023-04-28
20230505
20231208
20240906
Start 2023-04-03
Price ($)

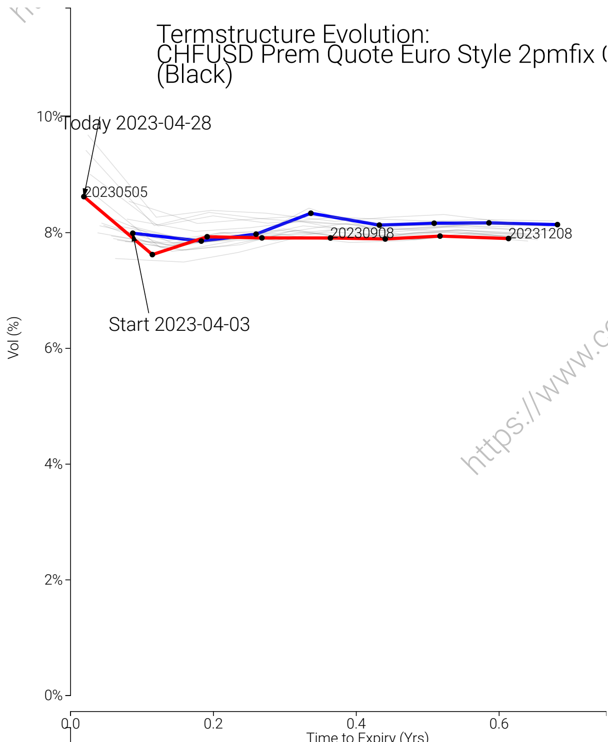

Today 2023-04-28
Front Month Skews:
EURUSD Prem Quote Euro Style 2pmfix Opti
(Black)
Start 2023-04-03

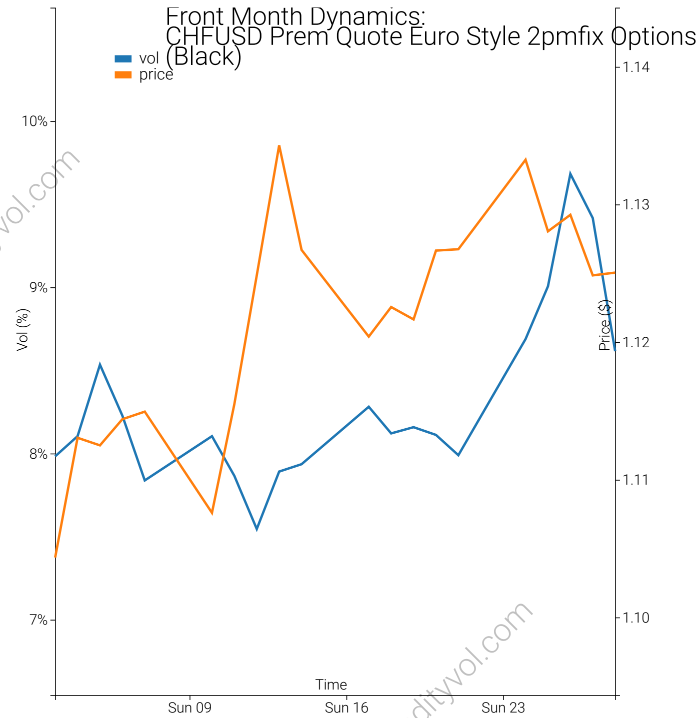

Termstructure Evolution:
GBPUSD Prem Quote Euro Style 2pmfix (
(Black)
Vol (%)
Time to Expiry (Yrs)
20230505
20231208
20240906
Start 2023-04-03
Today 2023-04-28

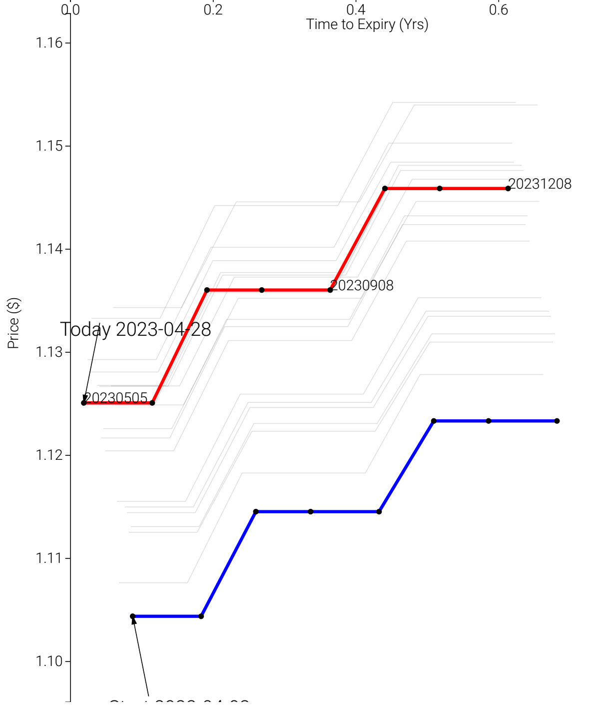

Front Month Dynamics:
GBPUSD Prem Quote Euro Style 2pmfix Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

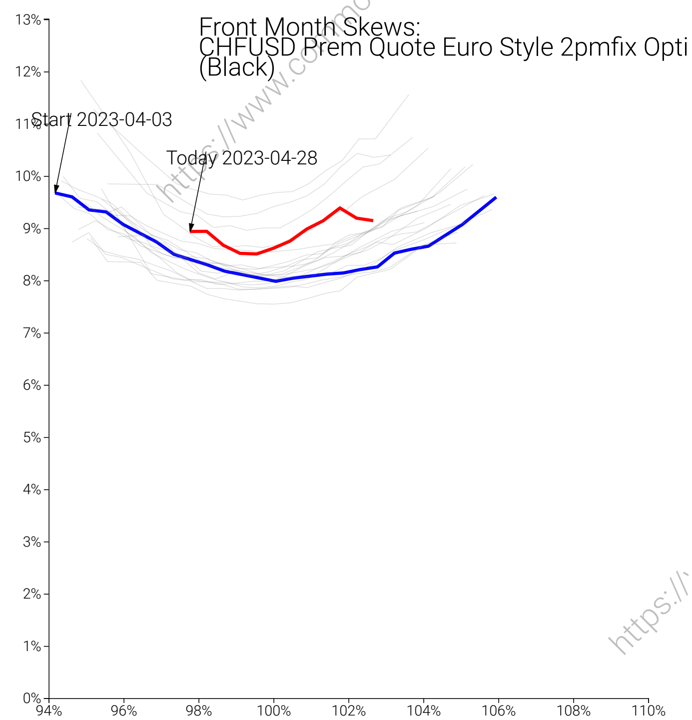

Price ($)
20230505
20231208
20240906
Today 2023-04-28
Start 2023-04-03

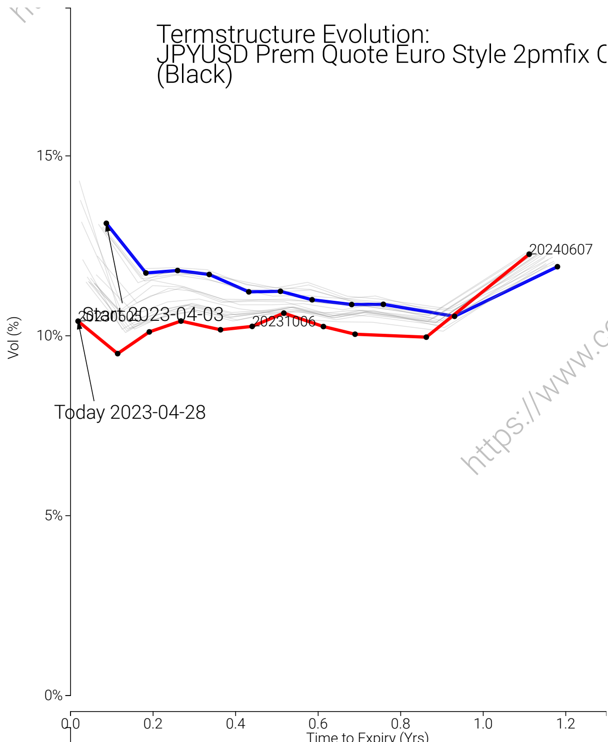

Front Month Skews:
GBPUSD Prem Quote Euro Style 2pmfix Opti
(Black)
Today 2023-04-28
Start 2023-04-03

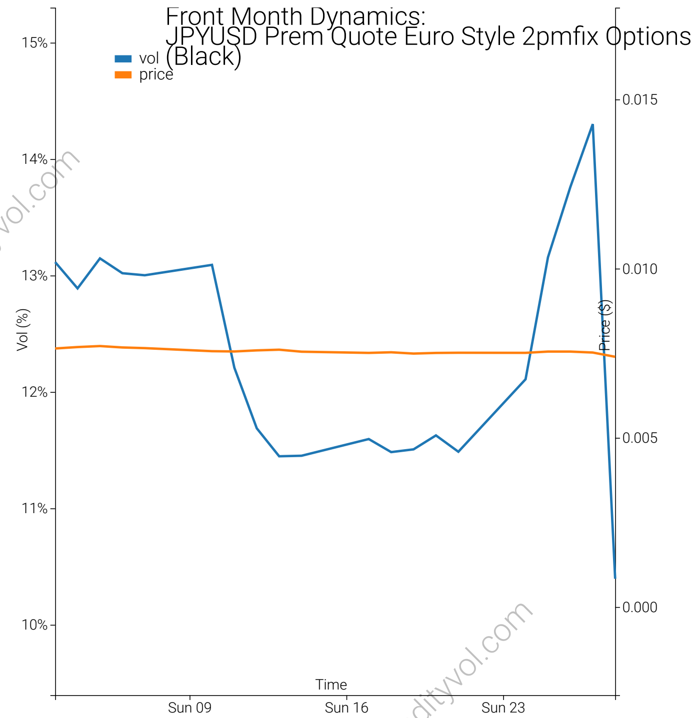

Termstructure Evolution:
CHFUSD Prem Quote Euro Style 2pmfix (
(Black)
Today 2023-04-28
20230505
20230908
20231208
Start 2023-04-03
Vol (%)
Time to Expiry (Yrs)

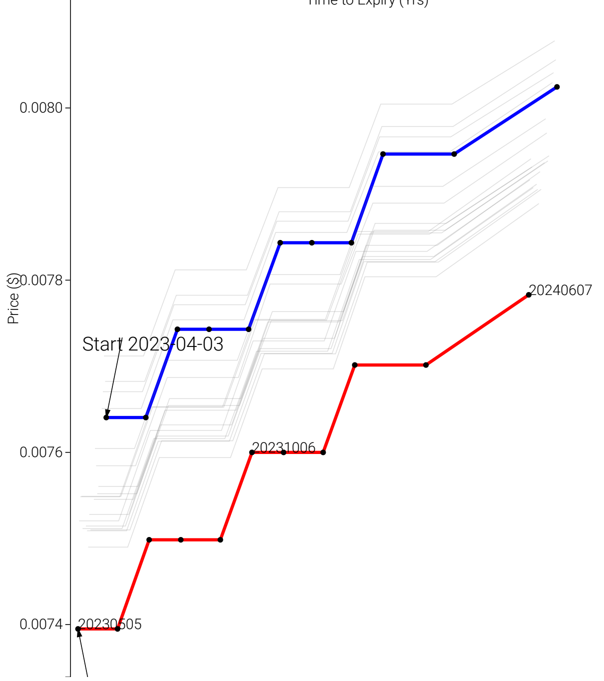

Front Month Dynamics:
CHFUSD Prem Quote Euro Style 2pmfix Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

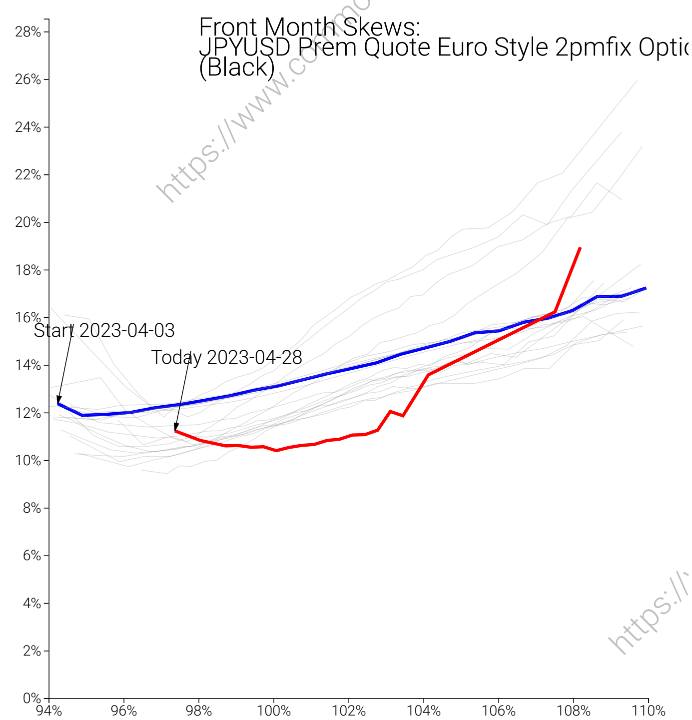

Today 2023-04-28
20230505
20230908
20231208
Price ($)

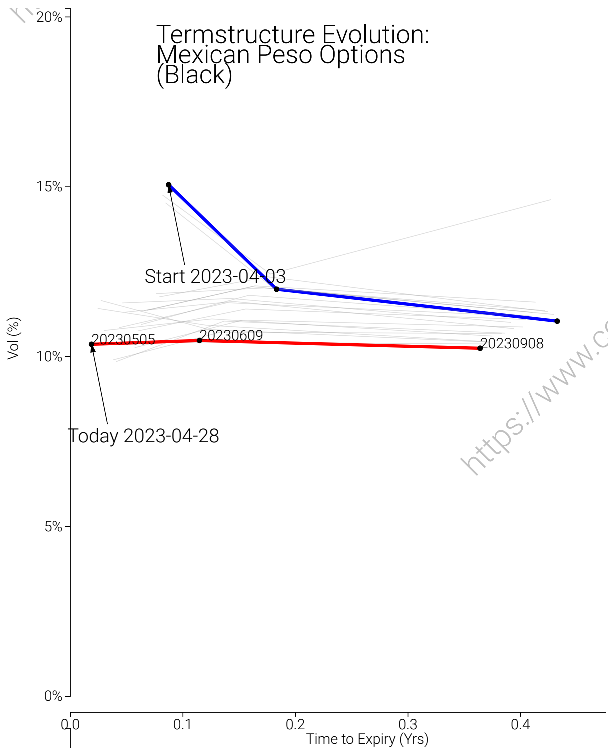

Front Month Skews:
CHFUSD Prem Quote Euro Style 2pmfix Opti
(Black)
Start 2023-04-03
Today 2023-04-28

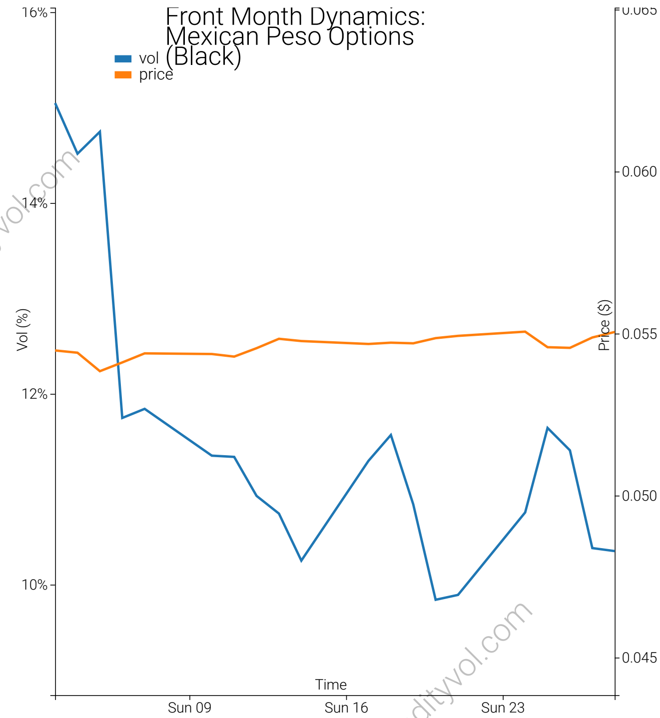

Termstructure Evolution:
JPYUSD Prem Quote Euro Style 2pmfix C
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2023-04-03
Today 2023-04-28
20231006
20240607

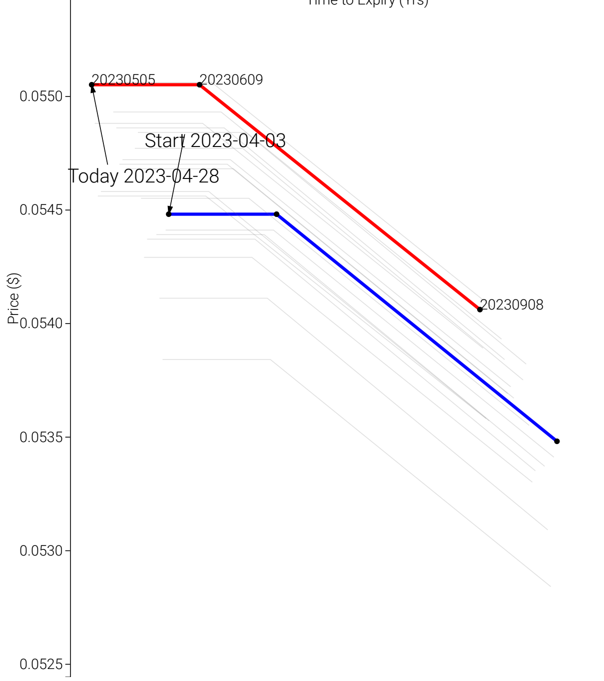

Front Month Dynamics:
JPYUSD Prem Quote Euro Style 2pmfix Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

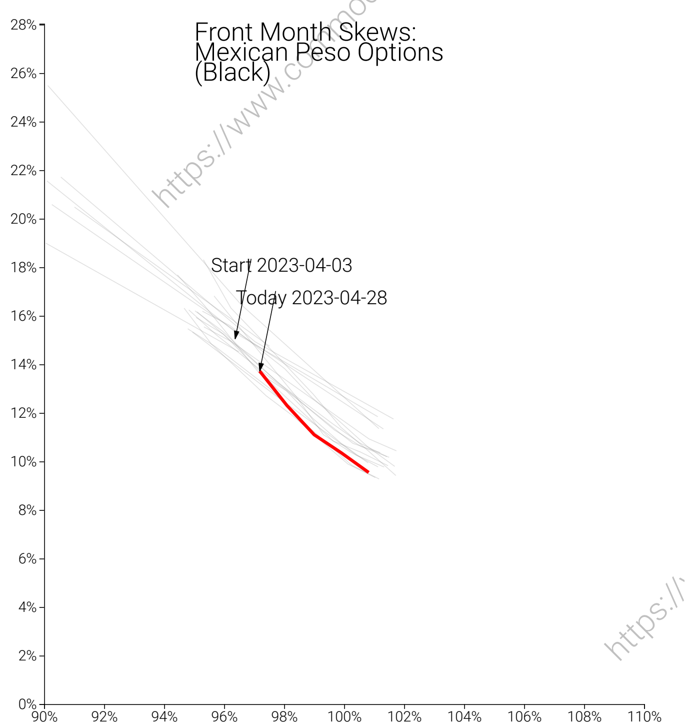

Price ($)
Start 2023-04-03
20230505
20231006
20240607

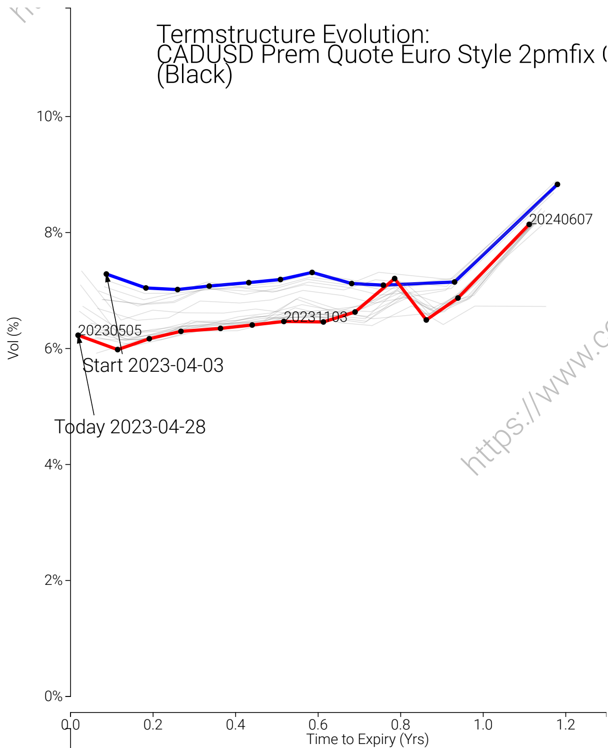

Front Month Skews:
JPYUSD Prem Quote Euro Style 2pmfix Optic
(Black)
Start 2023-04-03
Today 2023-04-28

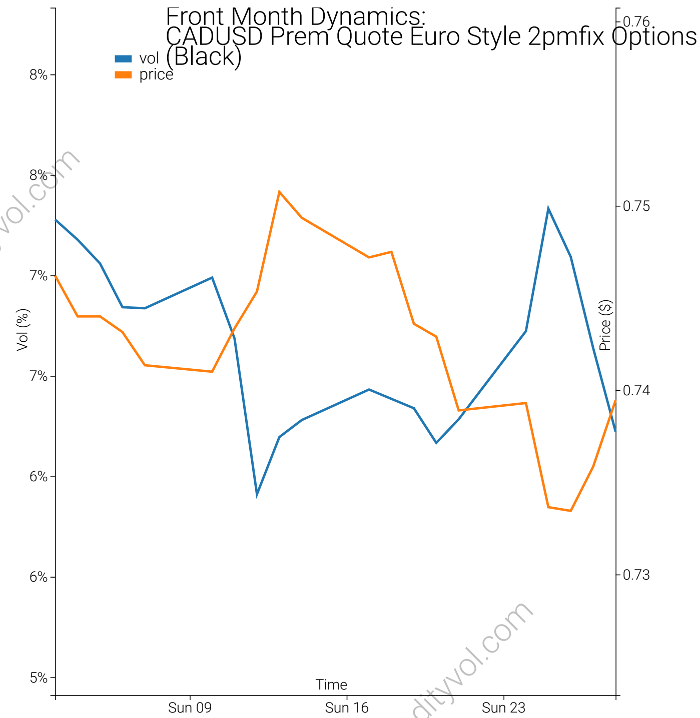

Termstructure Evolution:
Mexican Peso Options
(Black)
Vol (%)
20%
15%
10%
5%
0%
Start 2023-04-03
Today 2023-04-28
20230505
20230609
20230908
0.0
0.1
0.2
0.3
0.4
Time to Expiry (Yrs)

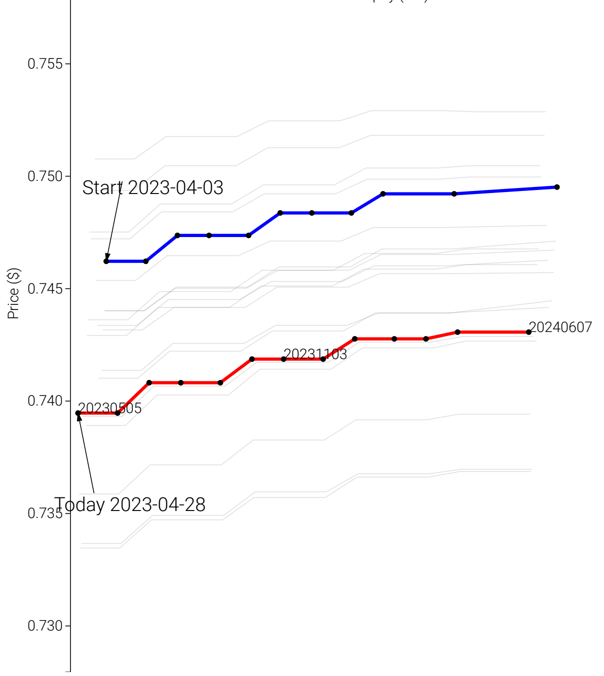

Front Month Dynamics:
Mexican Peso Options
(Black)
vol
price
Vol (%)
16%
14%
12%
10%
Price ($)
0.065
0.060
0.055
0.050
0.045
Time
Sun 09
Sun 16
Sun 23

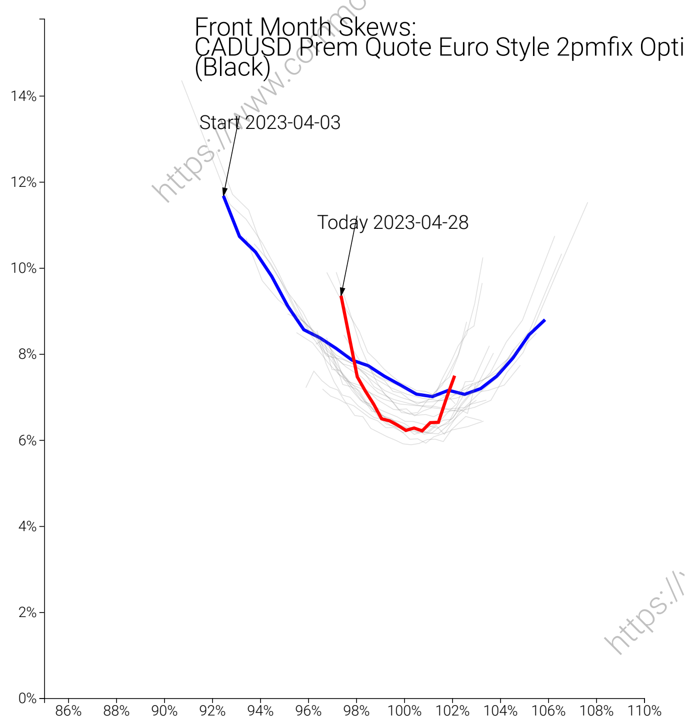

Price ($)
0.0550
0.0545
0.0540
0.0535
0.0530
0.0525
20230505
20230609
20230908
Start 2023-04-03
Today 2023-04-28

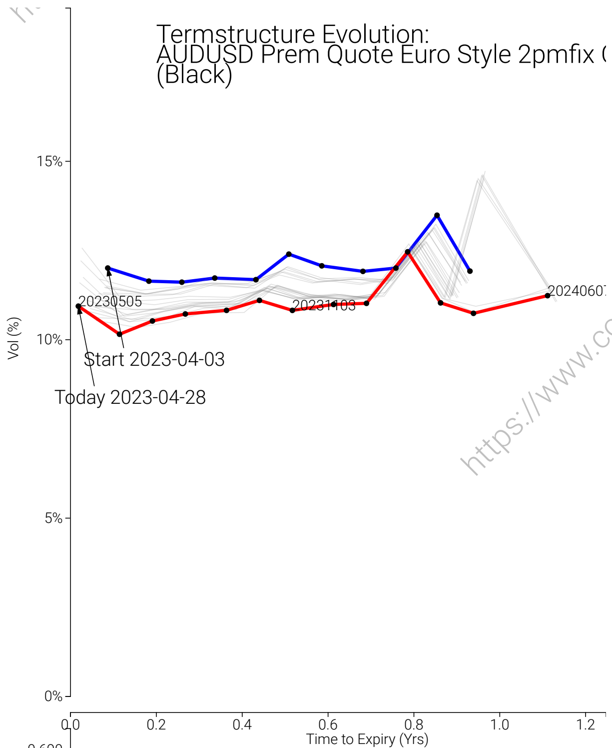

Front Month Skews:
Mexican Peso Options
(Black)
28%
26%
24%
22%
20%
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
Start 2023-04-03
Today 2023-04-28
90%
92%
94%
96%
98%
100%
102%
104%
106%
108%
110%

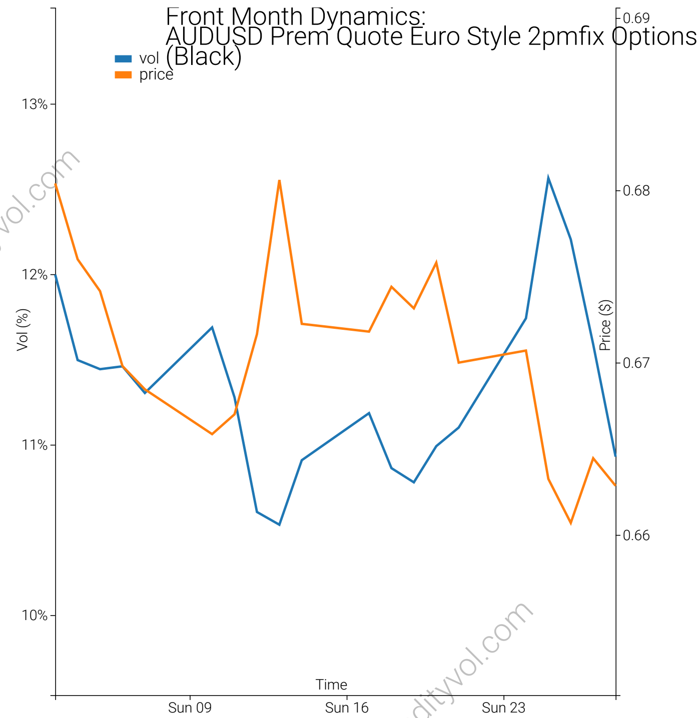

Termstructure Evolution:
CADUSD Prem Quote Euro Style 2pmfix (
(Black)
Vol (%)
10%
8%
6%
4%
2%
0%
20240607
20230505
20231103
Start 2023-04-03
Today 2023-04-28
0.0
0.2
0.4
0.6
0.8
1.0
1.2
Time to Expiry (Yrs)
https://www.commodityvol.com

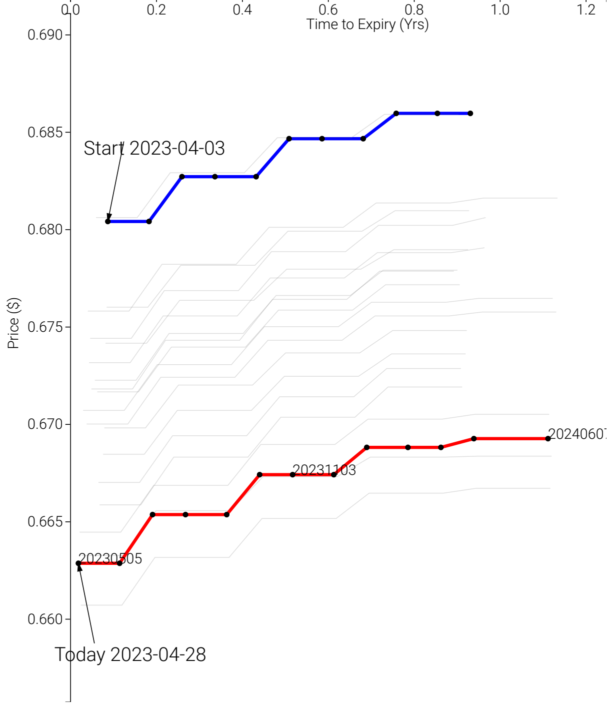

Front Month Dynamics:
CADUSD Prem Quote Euro Style 2pmfix Options
(Black)
vol
price
Vol (%)
Price ($)
8%
8%
7%
7%
6%
6%
5%
0.76
0.75
0.74
0.73
Time
Sun 09
Sun 16
Sun 23

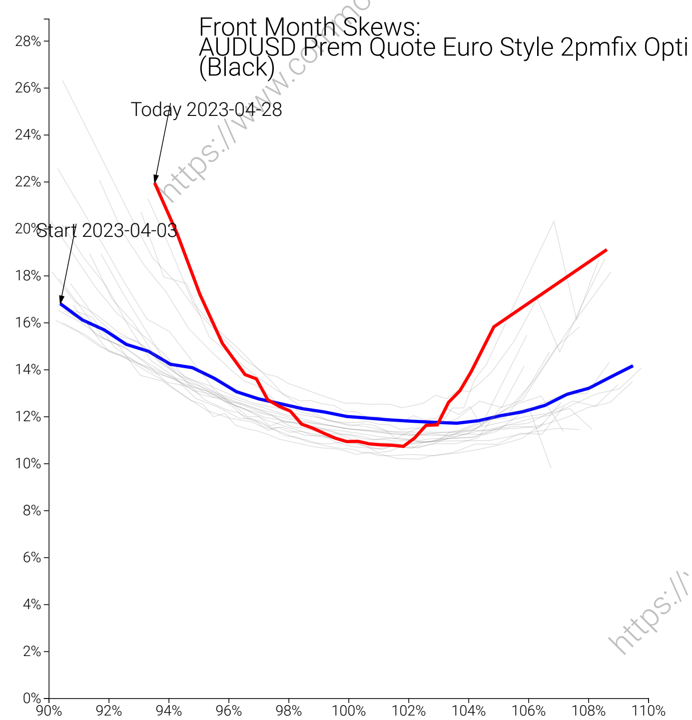

Price ($)
0.755
0.750
0.745
0.740
0.735
0.730
Start 2023-04-03
Today 2023-04-28
20230505
20231103
20240607

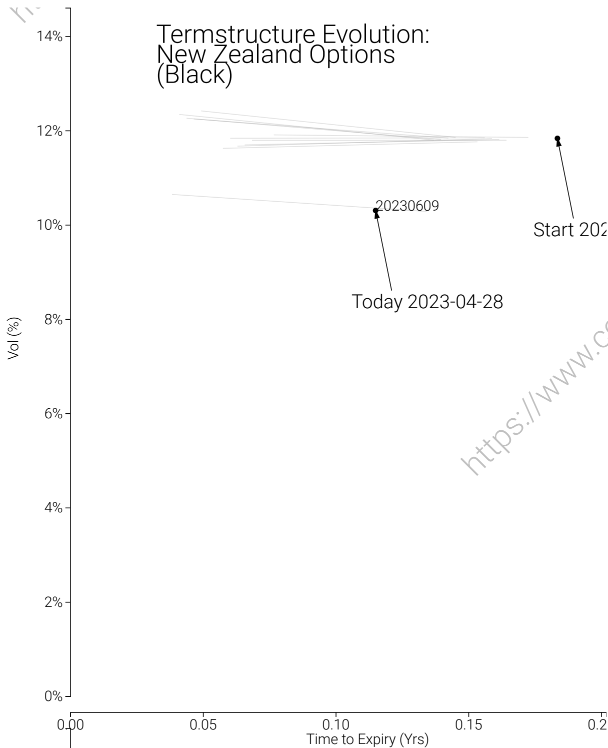

Front Month Skews:
CADUSD Prem Quote Euro Style 2pmfix Opti
(Black)
Start 2023-04-03
Today 2023-04-28
14%
12%
10%
8%
6%
4%
2%
0%
86%
88%
90%
92%
94%
96%
98%
100%
102%
104%
106%
108%
110%
https://www.commodityvol.com

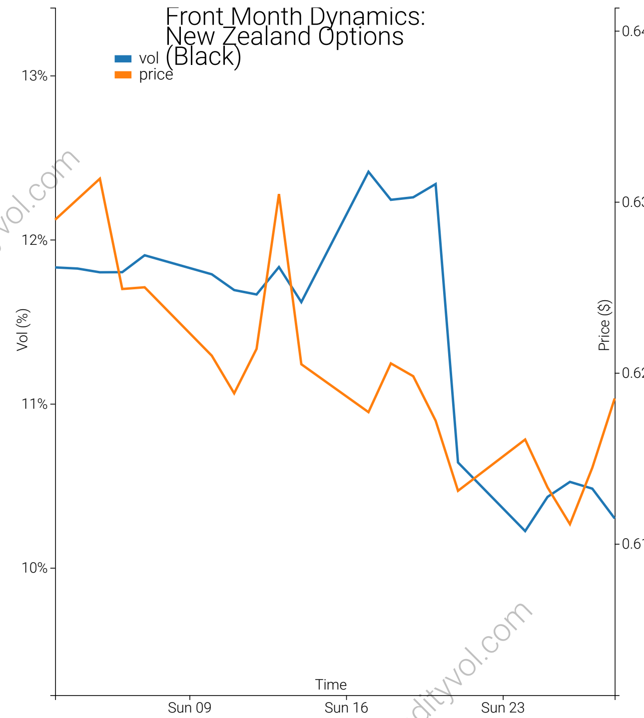

Termstructure Evolution:
AUDUSD Prem Quote Euro Style 2pmfix (
(Black)
Vol (%)
15%
10%
5%
0%
20230505
20231103
2024060
Start 2023-04-03
Today 2023-04-28
0.0
0.2
0.4
0.6
0.8
1.0
1.2
Time to Expiry (Yrs)

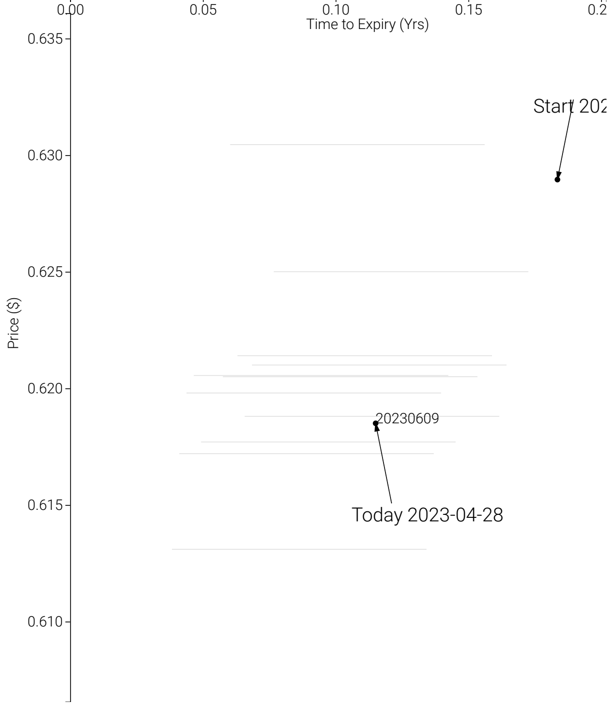

Front Month Dynamics:
AUDUSD Prem Quote Euro Style 2pmfix Options
(Black)
vol
price
Vol (%)
13%
12%
11%
10%
Price ($)
0.69
0.68
0.67
0.66
Time
Sun 09
Sun 16
Sun 23

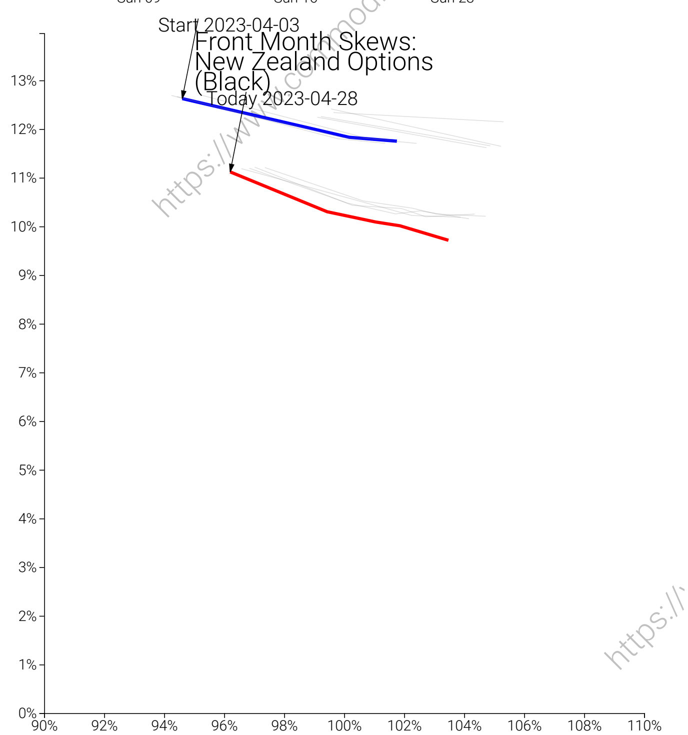

Price ($)
0.690
0.685
0.680
0.675
0.670
0.665
0.660
Start 2023-04-03
2024060
20231103
20230505
Today 2023-04-28

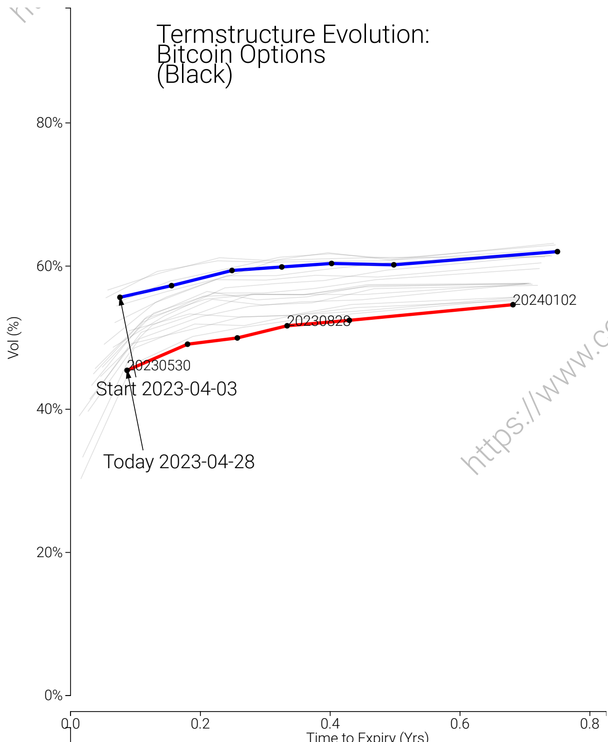

Front Month Skews:
AUDUSD Prem Quote Euro Style 2pmfix Opti
(Black)
Today 2023-04-28
Start 2023-04-03
28%
26%
24%
22%
20%
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
90%
92%
94%
96%
98%
100%
102%
104%
106%
108%
110%

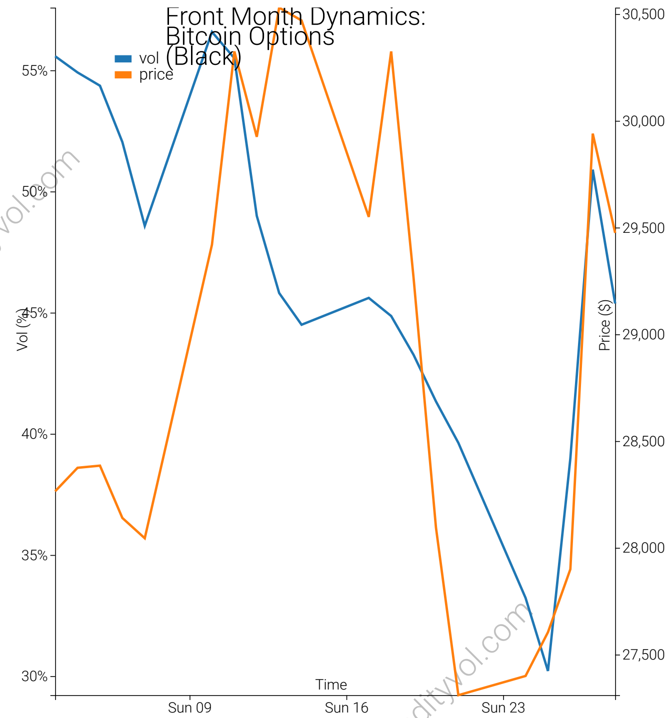

Termstructure Evolution:
New Zealand Options
(Black)
20230609
Start 202
Today 2023-04-28
Vol (%)
Time to Expiry (Yrs)

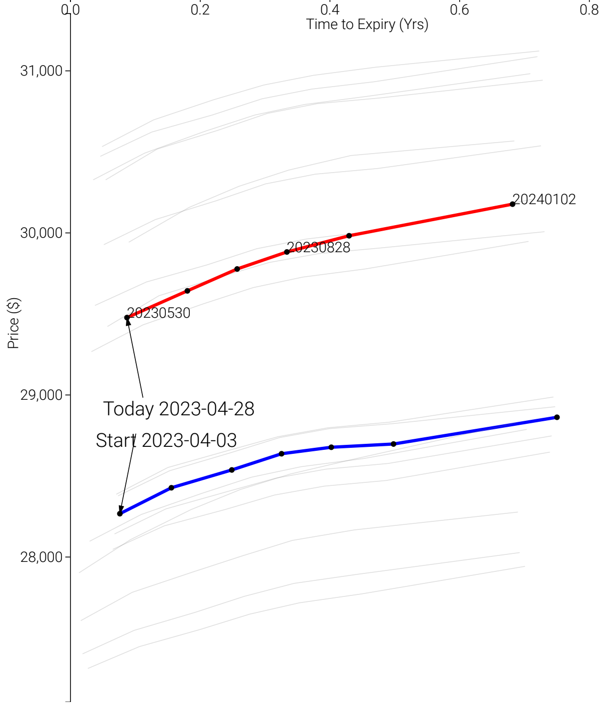

Front Month Dynamics:
New Zealand Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

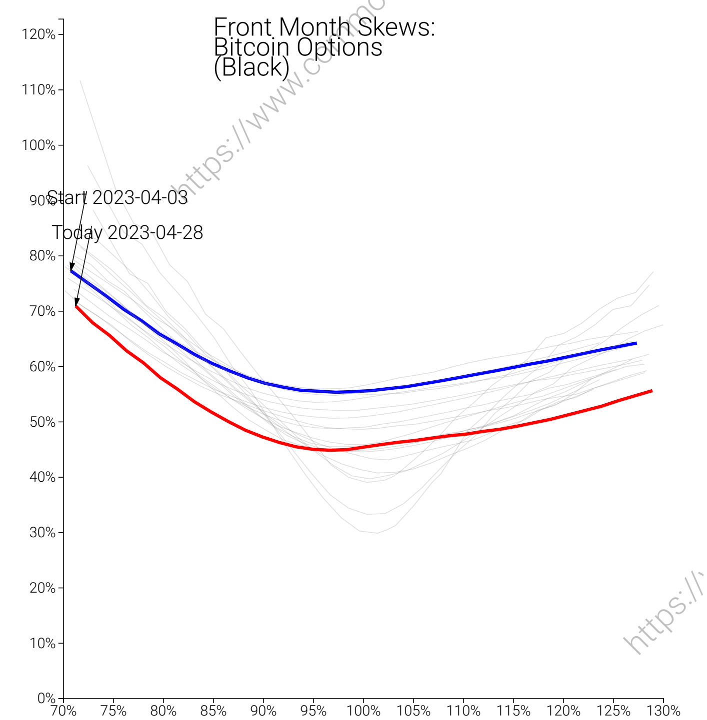

Start 202
20230609
Today 2023-04-28
Price ($)

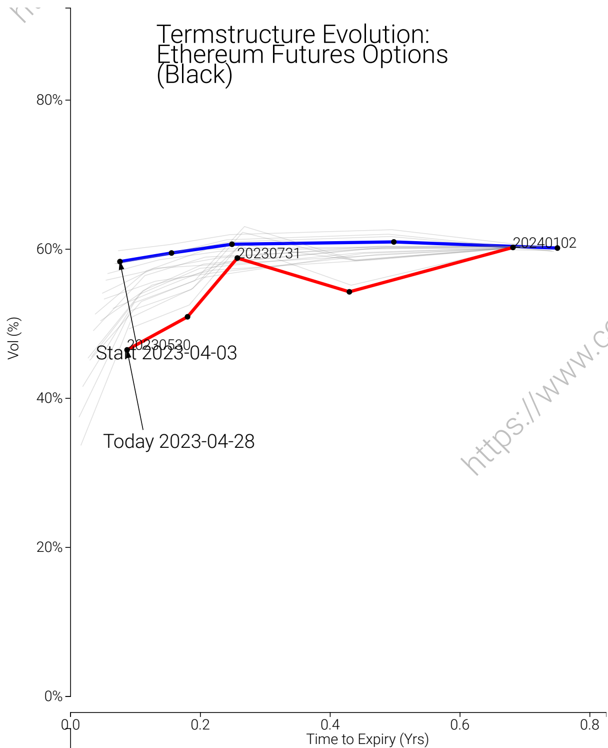

Start 2023-04-03
Front Month Skews:
New Zealand Options
(Black)
Today 2023-04-28

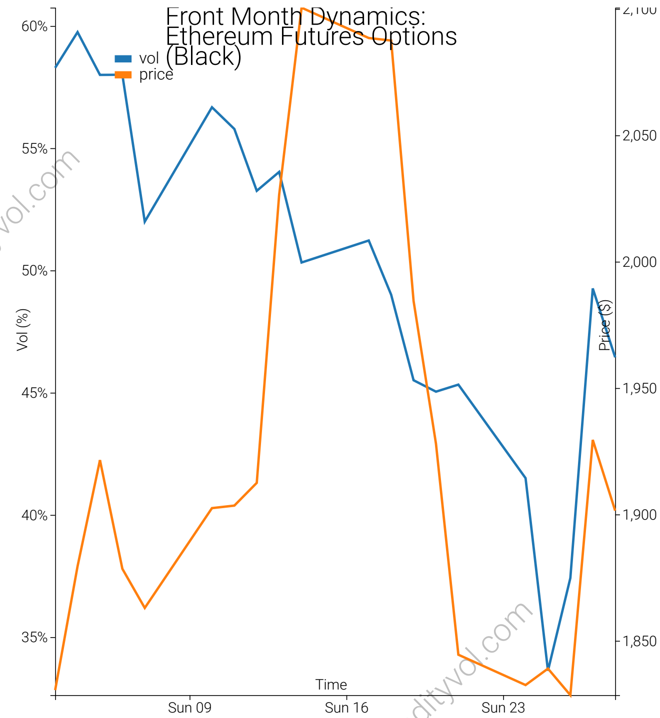

Termstructure Evolution:
Bitcoin Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20230530
20230828
20240102
Start 2023-04-03
Today 2023-04-28

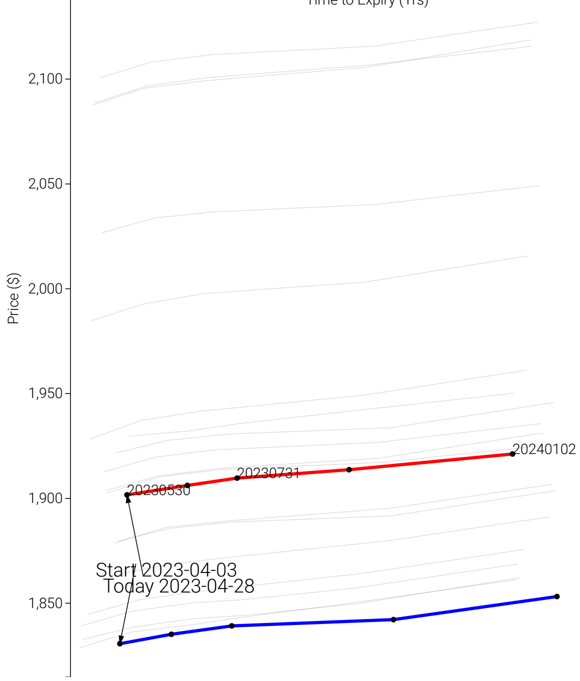

Front Month Dynamics:
Bitcoin Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

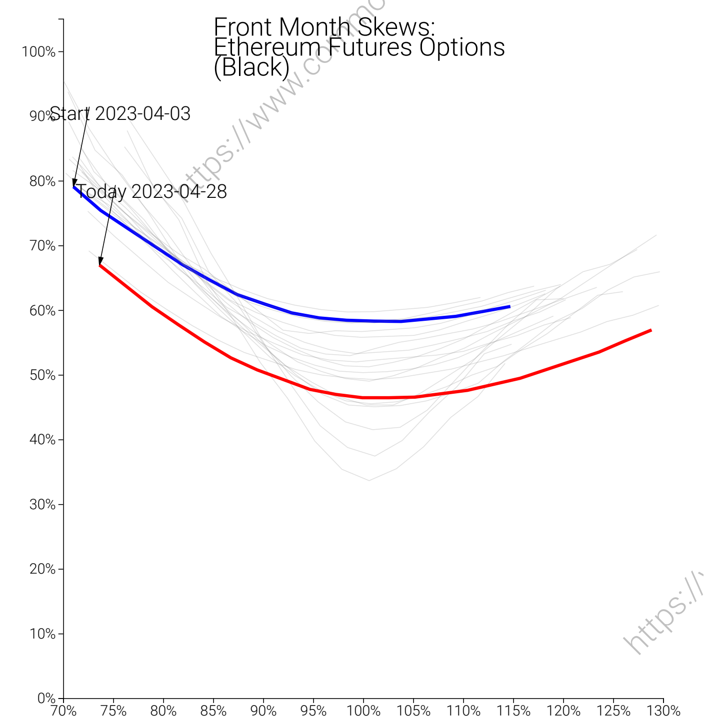

Price ($)
20230530
20230828
20240102
Today 2023-04-28
Start 2023-04-03


Front Month Skews:
Bitcoin Options
(Black)
Start 2023-04-03
Today 2023-04-28

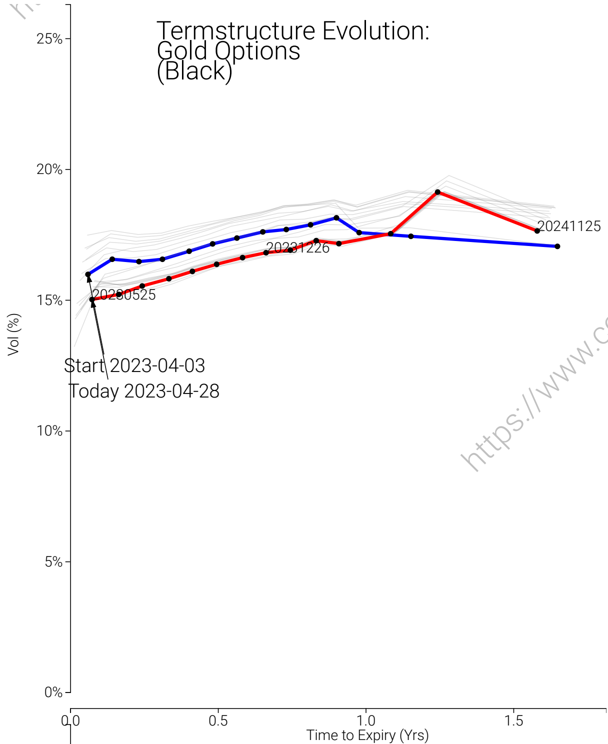

Termstructure Evolution:
Ethereum Futures Options
(Black)
Vol (%)
80%
60%
40%
20%
0%
20240102
20230731
20230530
Start 2023-04-03
Today 2023-04-28
0.0
0.2
0.4
0.6
0.8
Time to Expiry (Yrs)

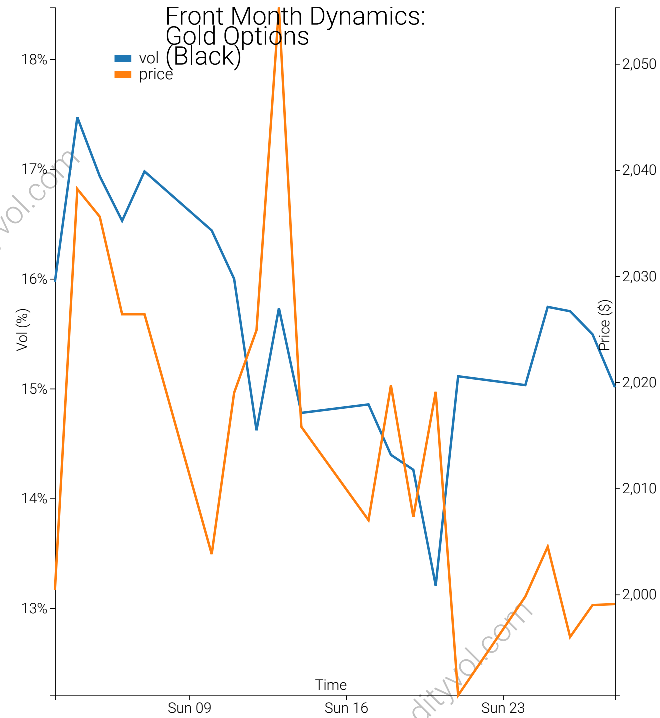

Front Month Dynamics:
Ethereum Futures Options
(Black)
vol
price
Vol (%)
Price ($)
60%
55%
50%
45%
40%
35%
2,100
2,050
2,000
1,950
1,900
1,850
Time
Sun 09
Sun 16
Sun 23

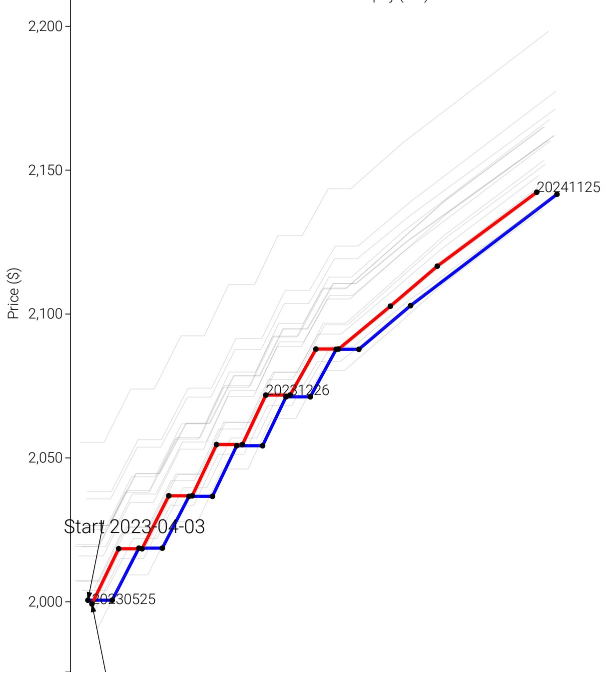

Price ($)
2,100
2,050
2,000
1,950
1,900
1,850
20240102
20230731
20230530
Start 2023-04-03
Today 2023-04-28

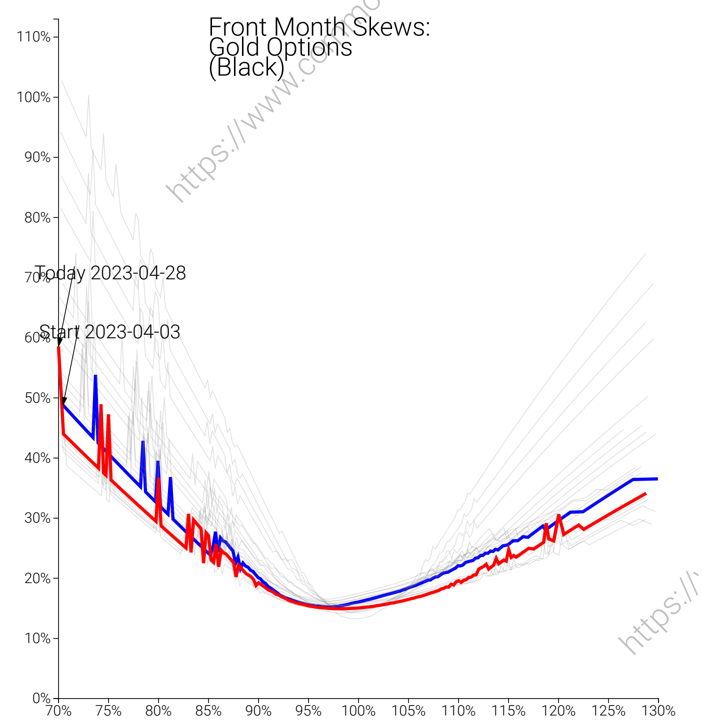

Front Month Skews:
Ethereum Futures Options
(Black)
Start 2023-04-03
Today 2023-04-28
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

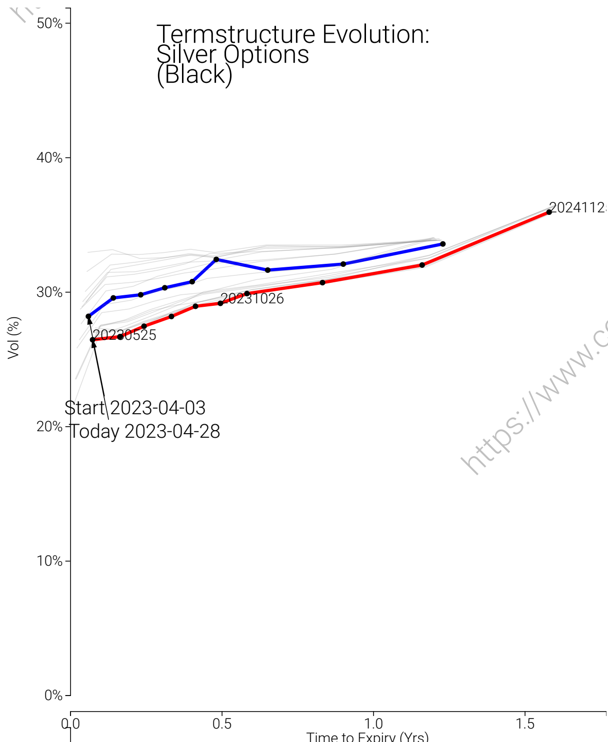
Metals

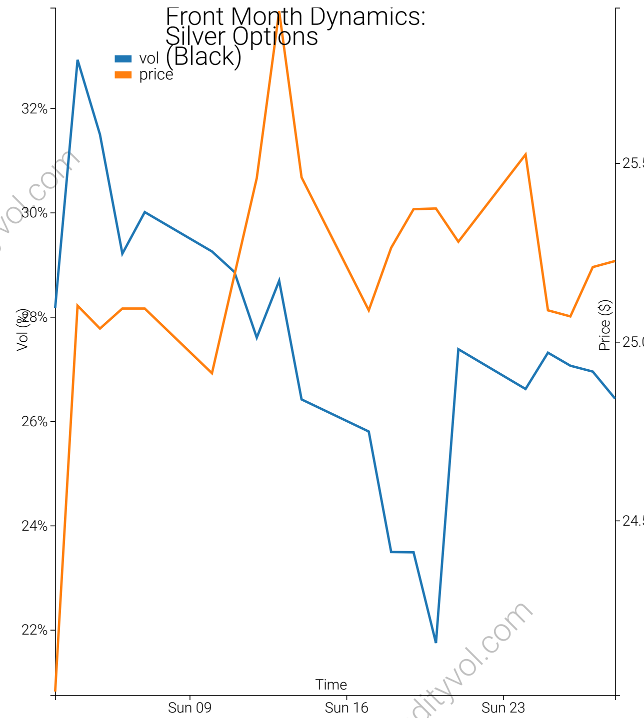

Termstructure Evolution:
Gold Options
(Black)
20241125
20231226
20230525
Start 2023-04-03
Today 2023-04-28
Vol (%)
Time to Expiry (Yrs)

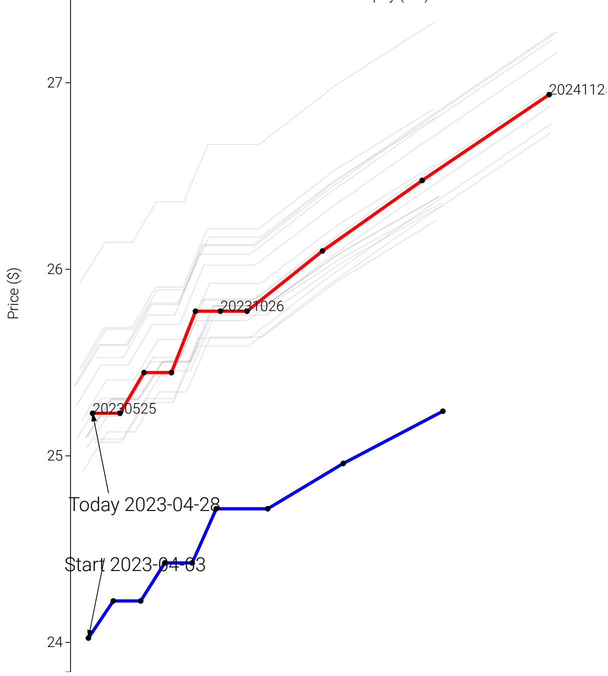

Front Month Dynamics:
Gold Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

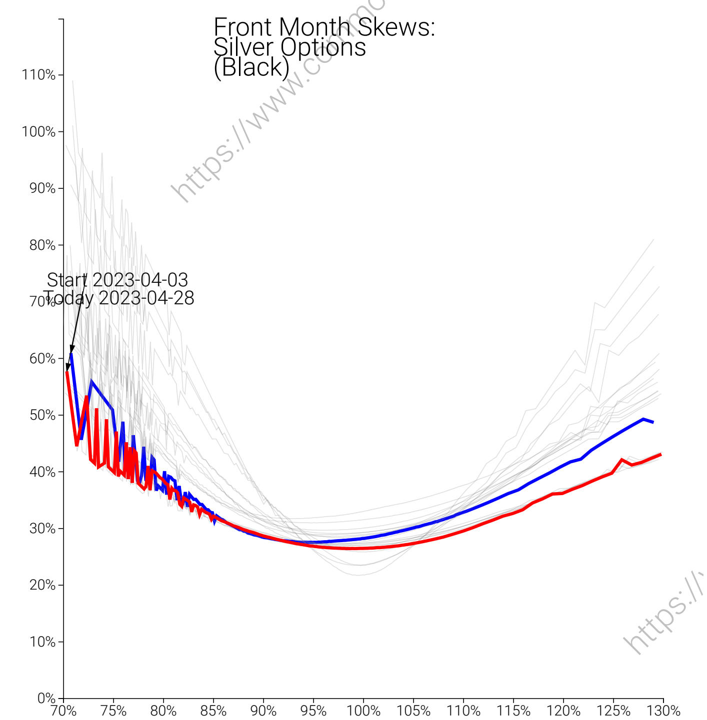

20241125
20231226
Start 2023-04-03
20230525
Price ($)

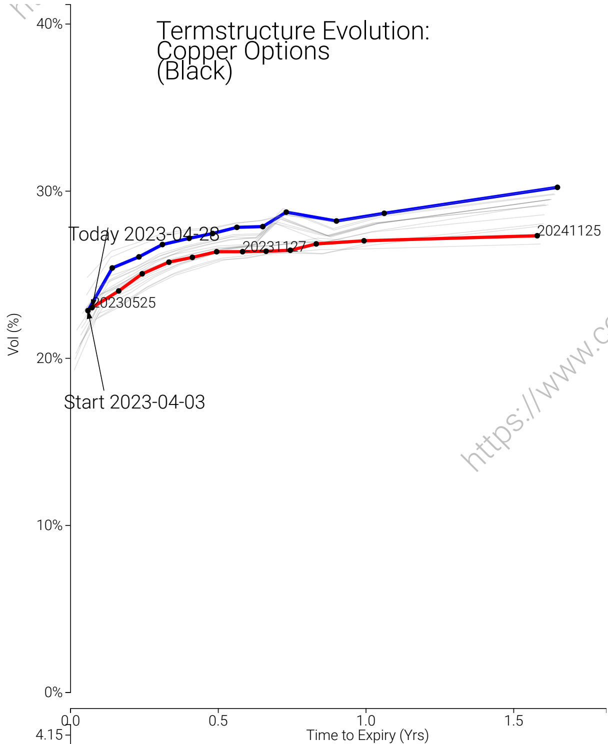

Front Month Skews:
Gold Options
(Black)
Today 2023-04-28
Start 2023-04-03

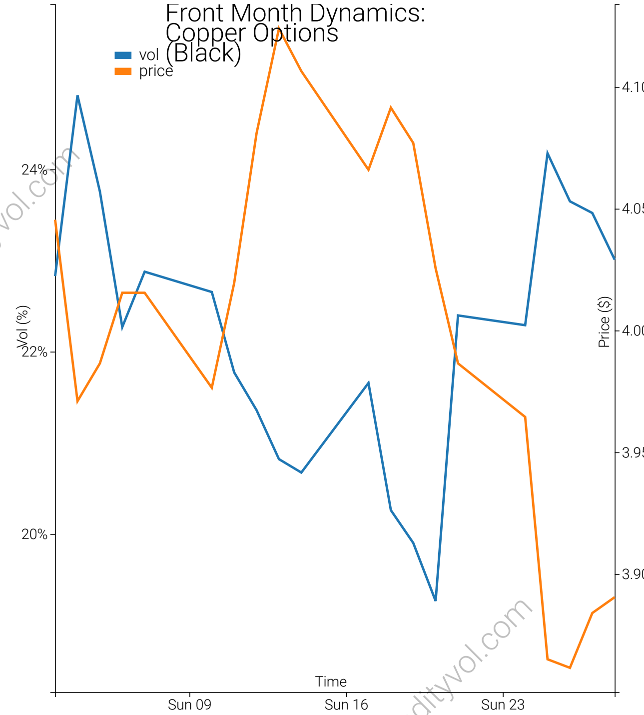

Termstructure Evolution:
Silver Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20241125
20231026
20230525
Start 2023-04-03
Today 2023-04-28

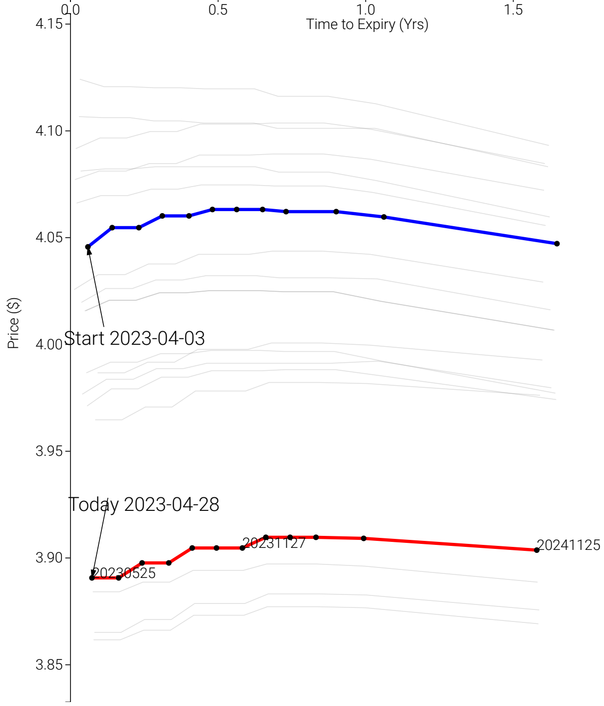

Front Month Dynamics:
Silver Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

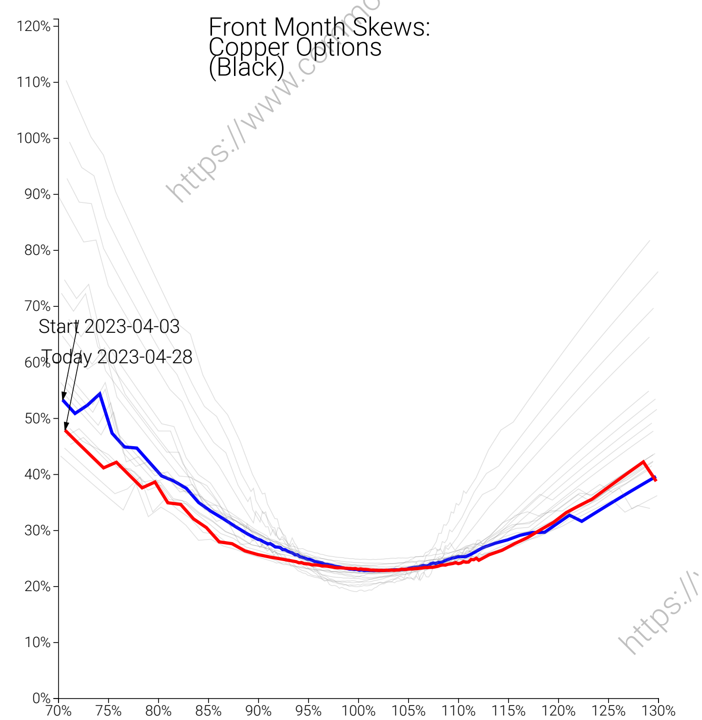

Price ($)
20241125
20231026
20230525
Today 2023-04-28
Start 2023-04-03

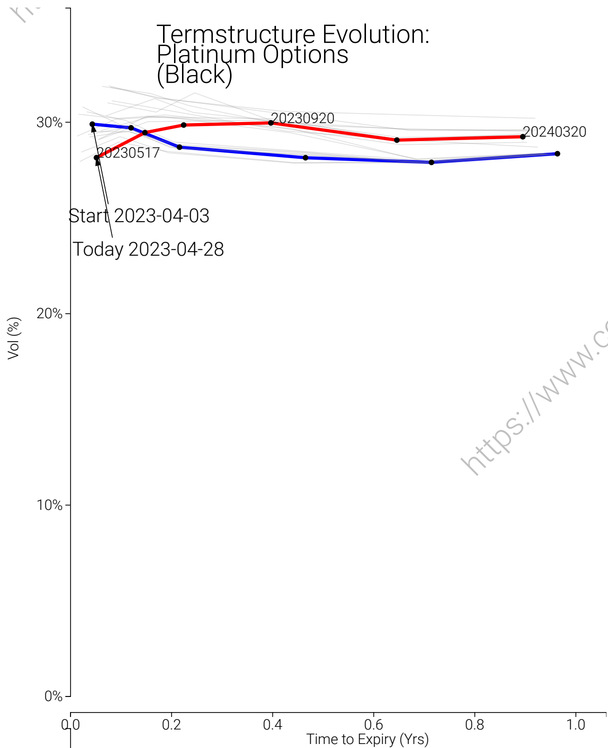

Front Month Skews:
Silver Options
(Black)
Start 2023-04-03
Today 2023-04-28

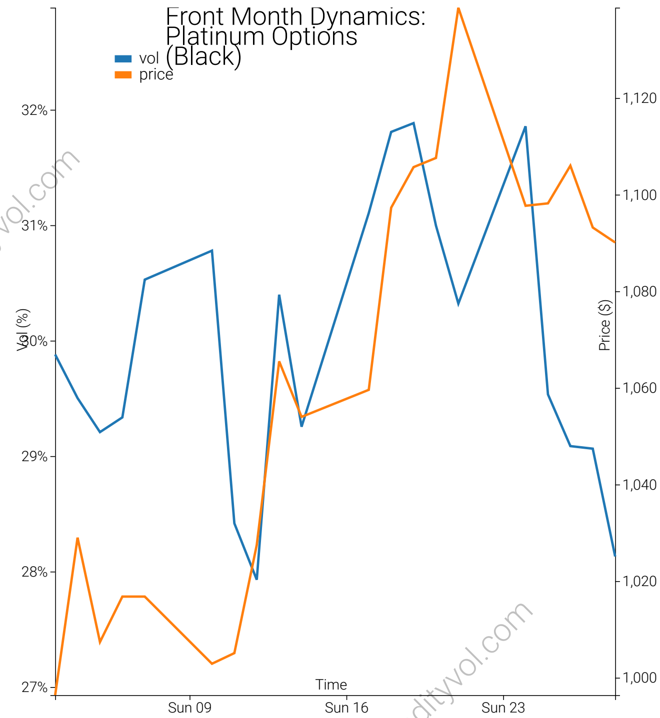

Termstructure Evolution:
Copper Options
(Black)
Today 2023-04-28
Start 2023-04-03
20230525
20231127
20241125
Vol (%)
Time to Expiry (Yrs)

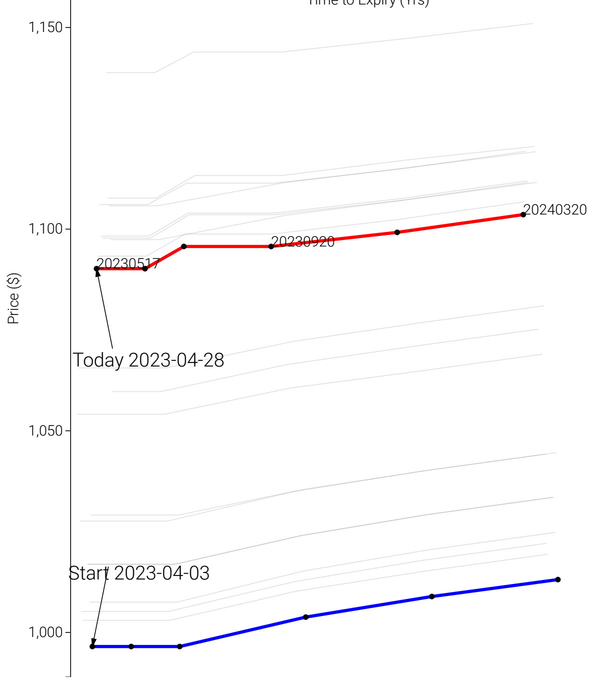

Front Month Dynamics:
Copper Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

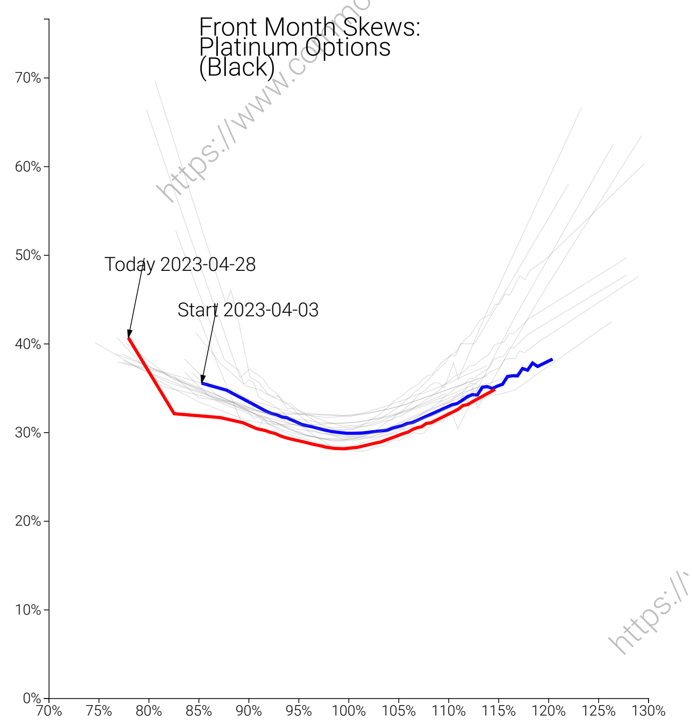

Start 2023-04-03
Today 2023-04-28
20230525
20231127
20241125
Price ($)

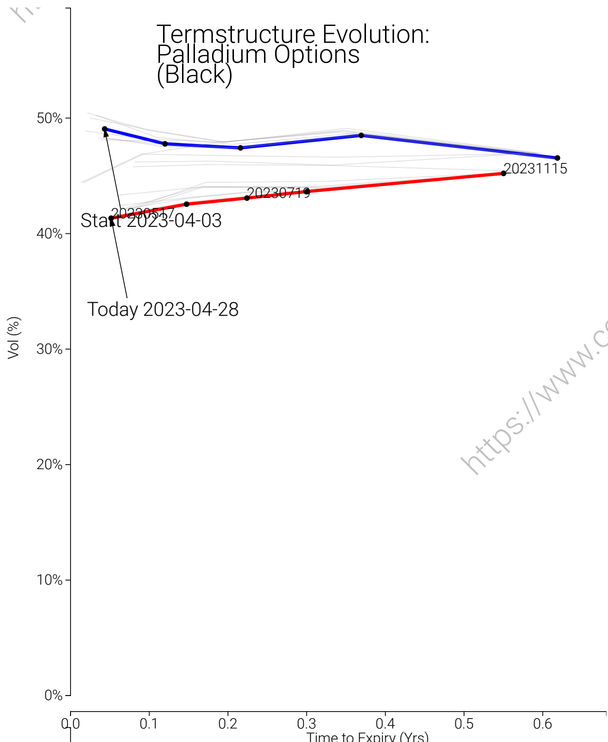

Front Month Skews:
Copper Options
(Black)
Start 2023-04-03
Today 2023-04-28

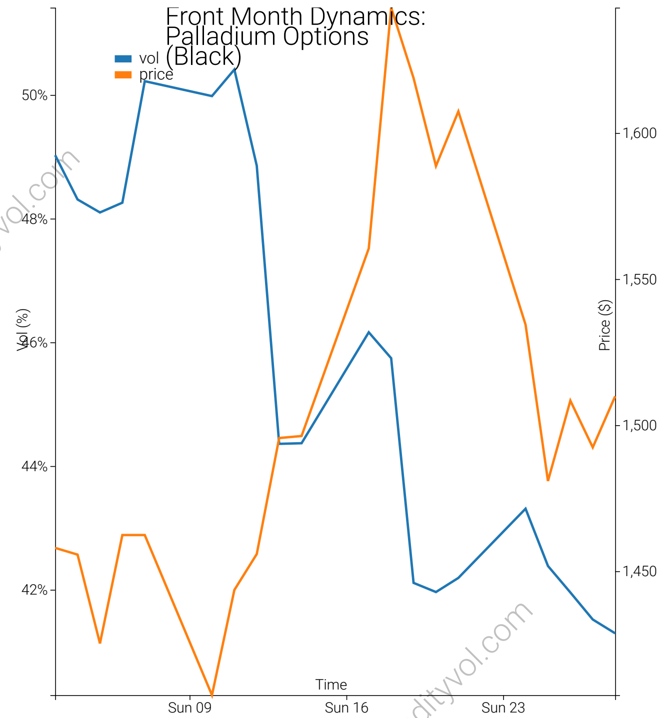

Termstructure Evolution:
Platinum Options
(Black)
Vol (%)
30%
20%
10%
0%
20230920
20240320
20230517
Start 2023-04-03
Today 2023-04-28
0.0
0.2
0.4
0.6
0.8
1.0
Time to Expiry (Yrs)

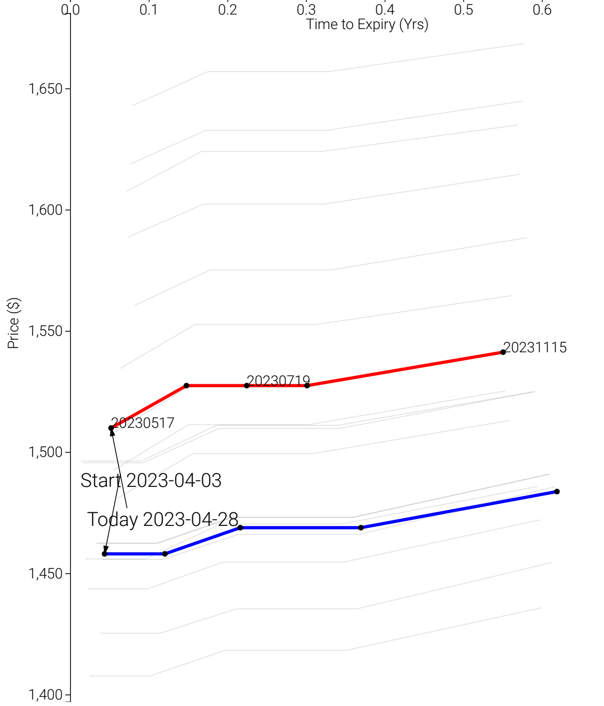

Front Month Dynamics:
Platinum Options
(Black)
vol
price
Vol (%)
Price ($)
32%
31%
30%
29%
28%
27%
1,120
1,100
1,080
1,060
1,040
1,020
1,000
Time
Sun 09
Sun 16
Sun 23

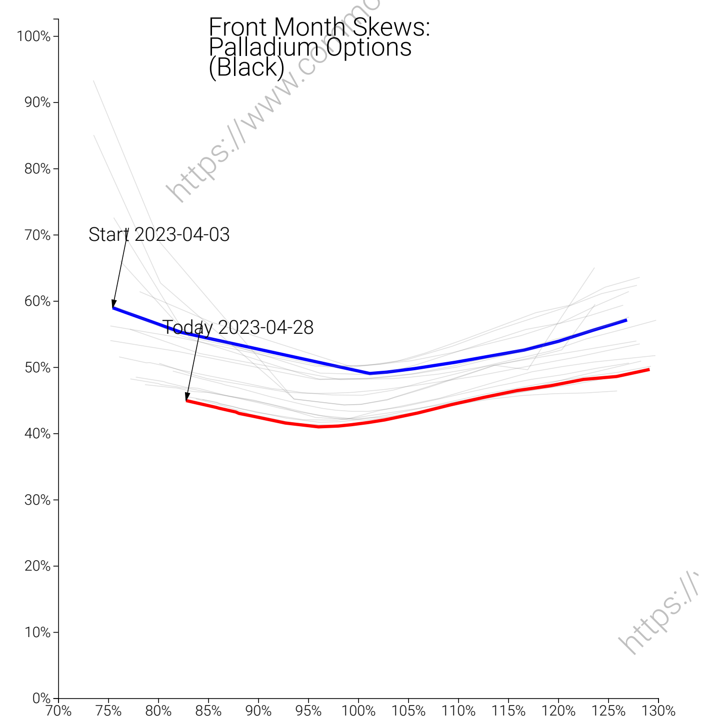

Price ($)
1,150
1,100
1,050
1,000
20240320
20230920
20230517
Today 2023-04-28
Start 2023-04-03


Front Month Skews:
Platinum Options
(Black)
70%
60%
50%
40%
30%
20%
10%
0%
Today 2023-04-28
Start 2023-04-03
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

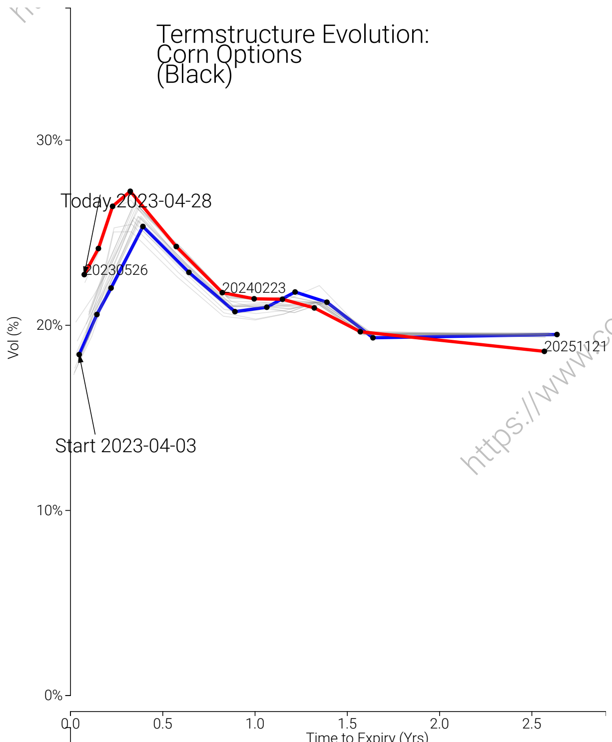

Termstructure Evolution:
Palladium Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20230517
20230719
20231115
Start 2023-04-03
Today 2023-04-28
https://www.commodityvol.com

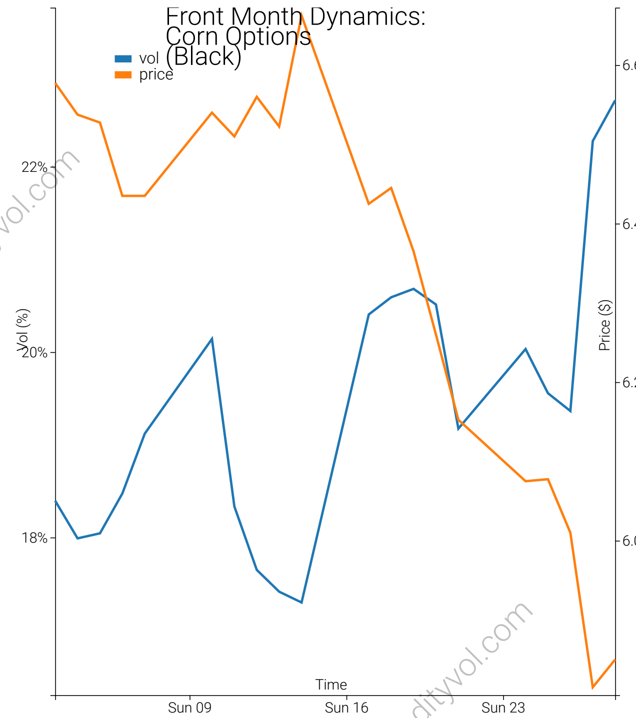

Front Month Dynamics:
Palladium Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

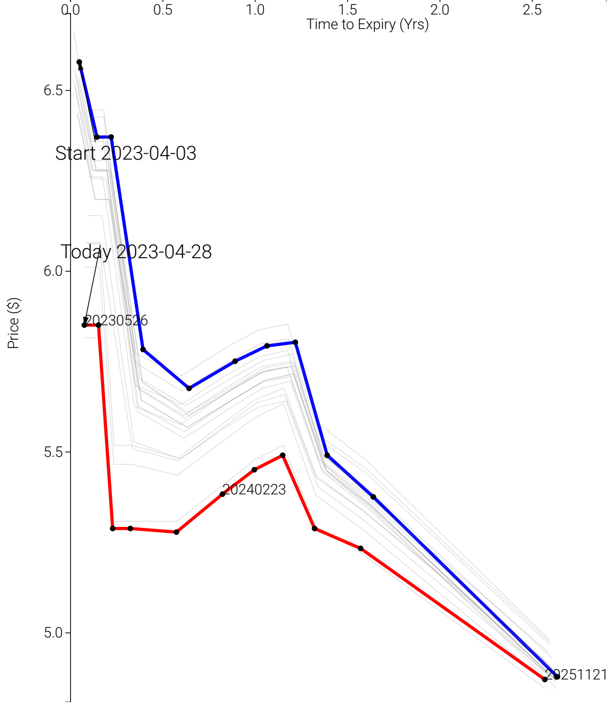

Price ($)
20230517
20230719
20231115
Start 2023-04-03
Today 2023-04-28

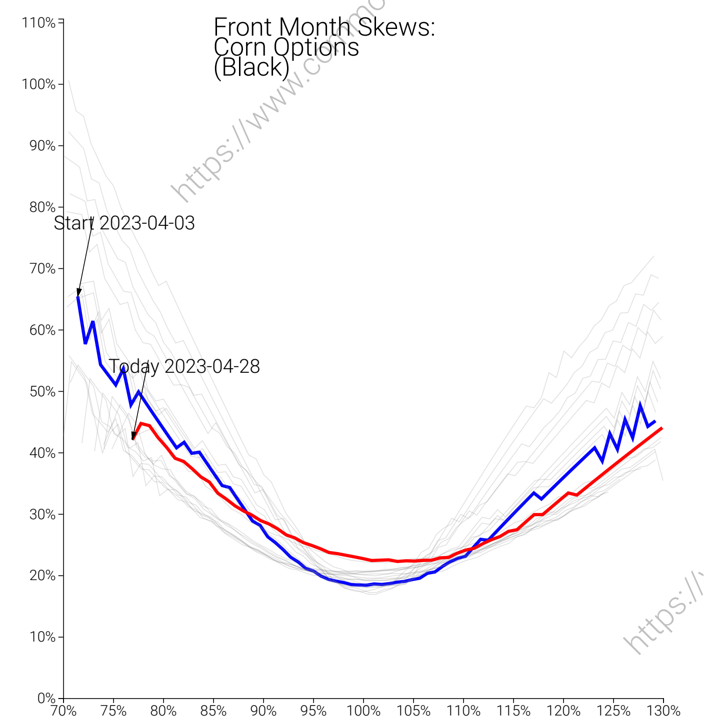

Front Month Skews:
Palladium Options
(Black)
Start 2023-04-03
Today 2023-04-28
https://www.commodityvol.com

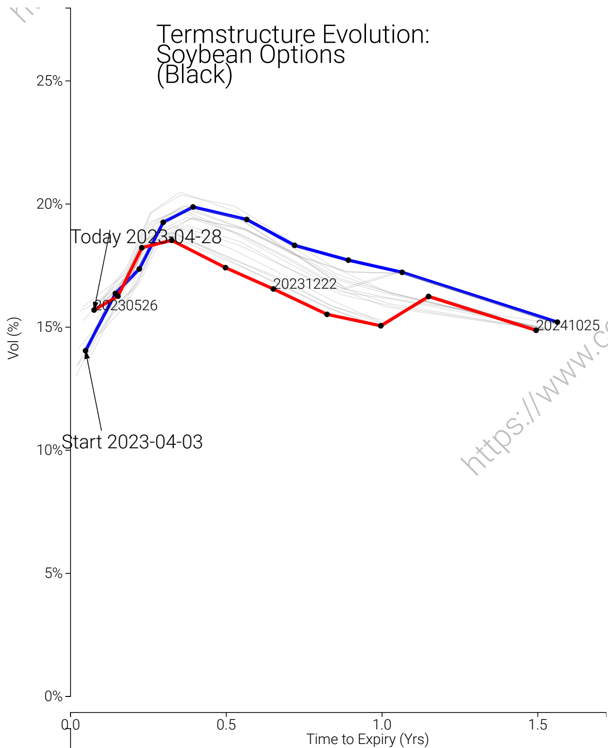
Ags: Grains, Oilseeds, and so forth

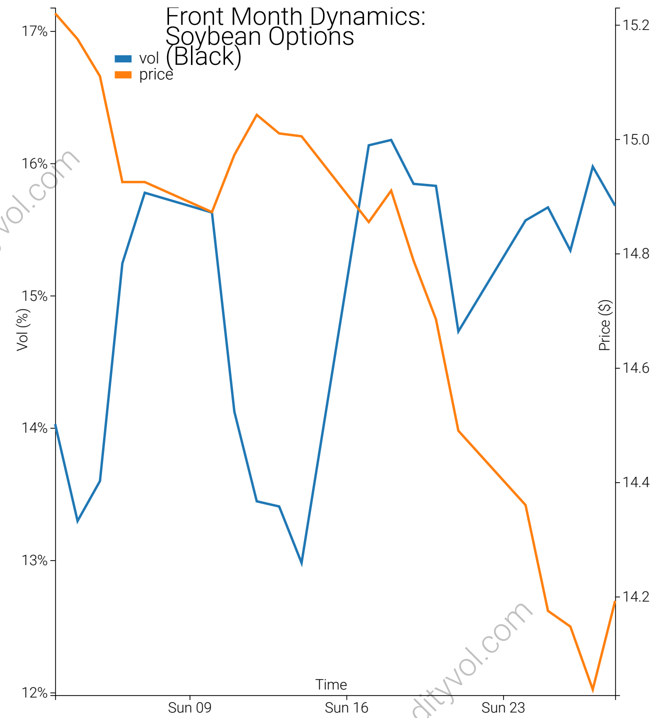

Termstructure Evolution:
Corn Options
(Black)
Today 2023-04-28
20230526
20240223
20251121
Start 2023-04-03
Vol (%)
Time to Expiry (Yrs)

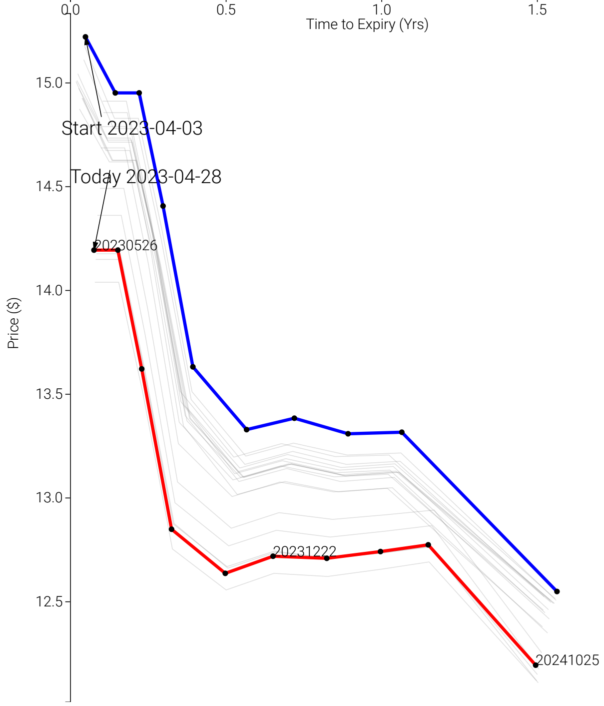

Front Month Dynamics:
Corn Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

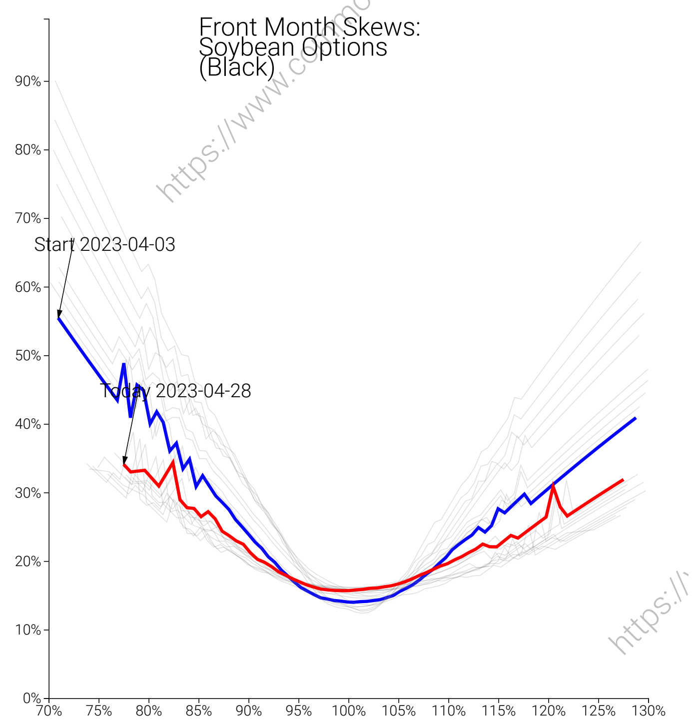

Start 2023-04-03
Today 2023-04-28
20230526
20240223
20251121
Price ($)

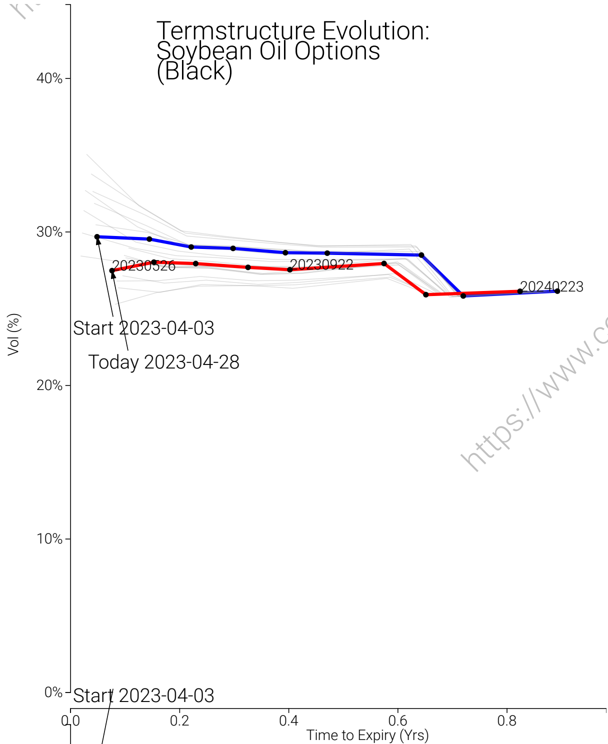

Front Month Skews:
Corn Options
(Black)
Start 2023-04-03
Today 2023-04-28

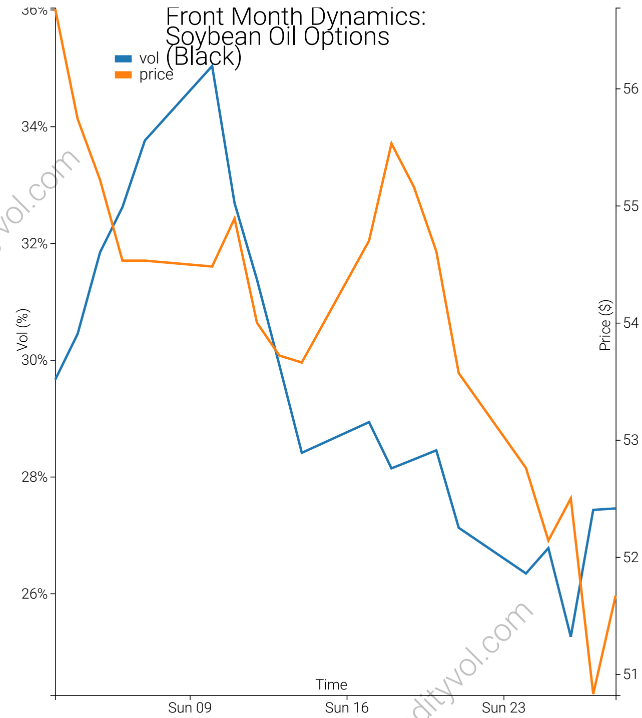

Termstructure Evolution:
Soybean Options
(Black)
Today 2023-04-28
20230526
20231222
20241025
Start 2023-04-03
Vol (%)
Time to Expiry (Yrs)

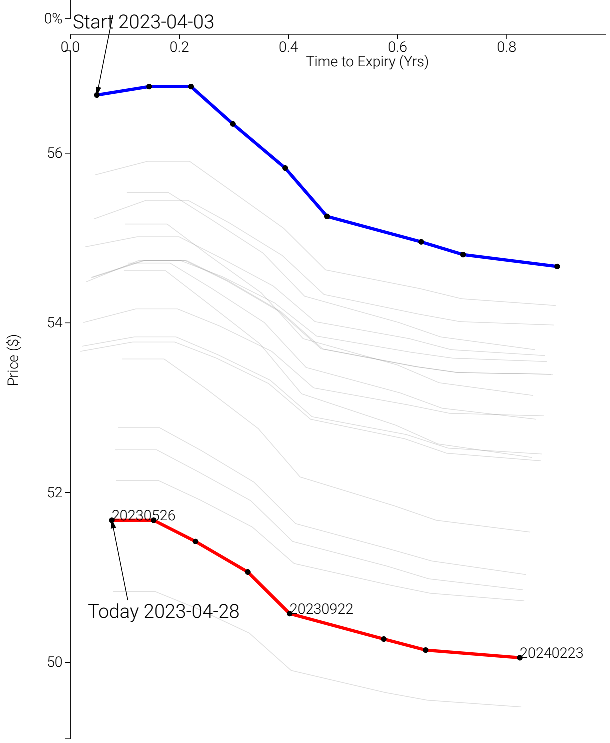

Front Month Dynamics:
Soybean Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

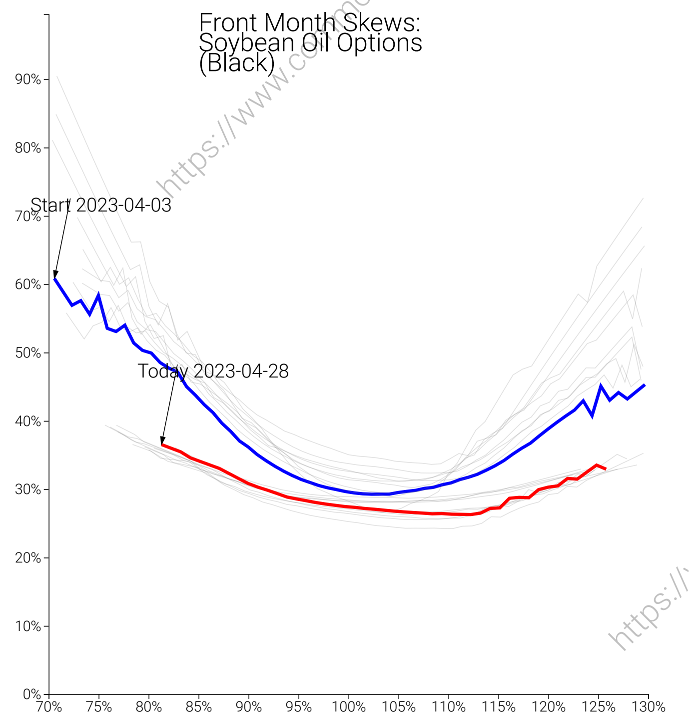

Start 2023-04-03
Today 2023-04-28
20230526
20231222
20241025
Price ($)

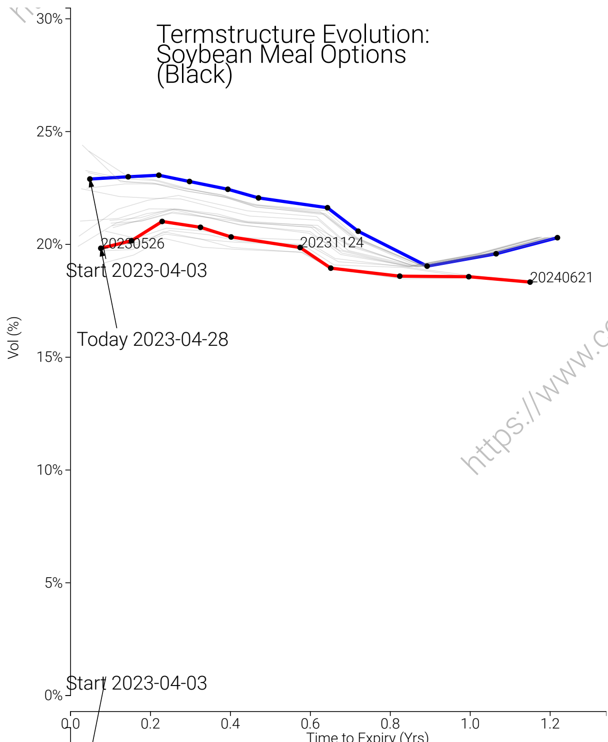

Front Month Skews:
Soybean Options
(Black)
Start 2023-04-03
Today 2023-04-28

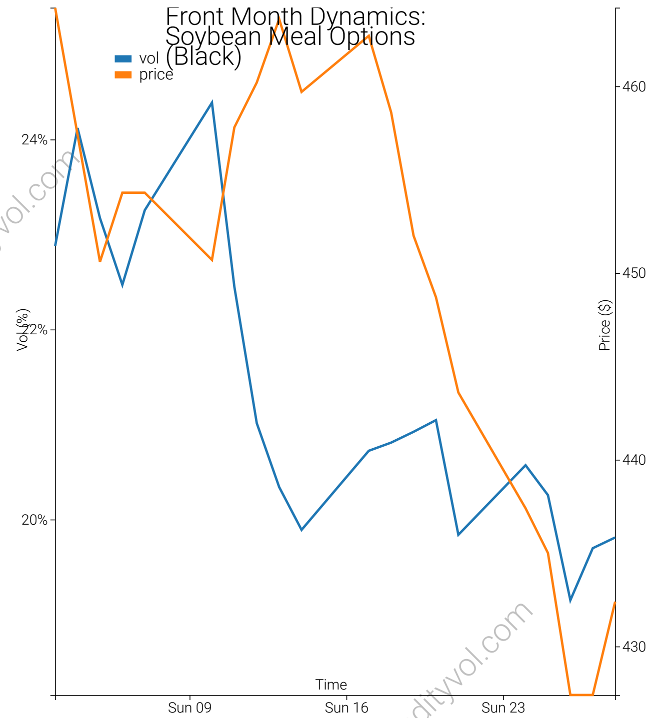

Termstructure Evolution:
Soybean Oil Options
(Black)
Vol (%)
Start 2023-04-03
Today 2023-04-28
20230526
20230922
20240223
Time to Expiry (Yrs)

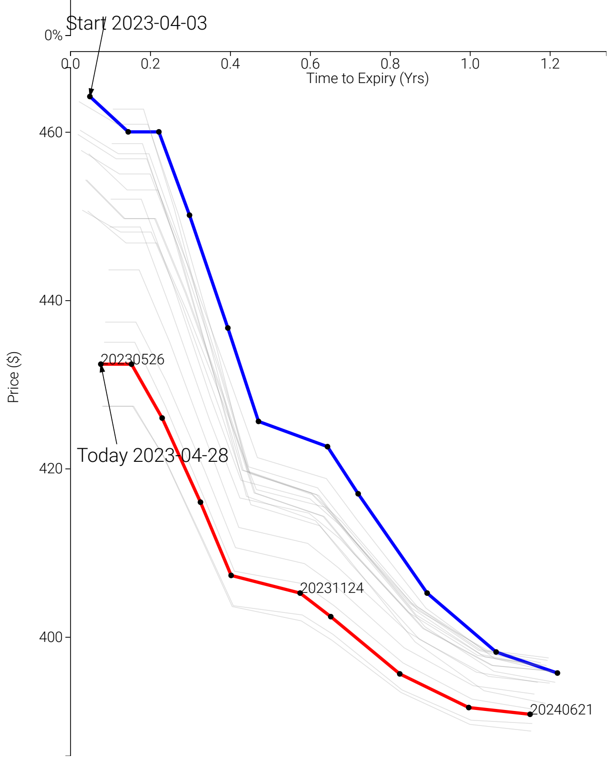

Front Month Dynamics:
Soybean Oil Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

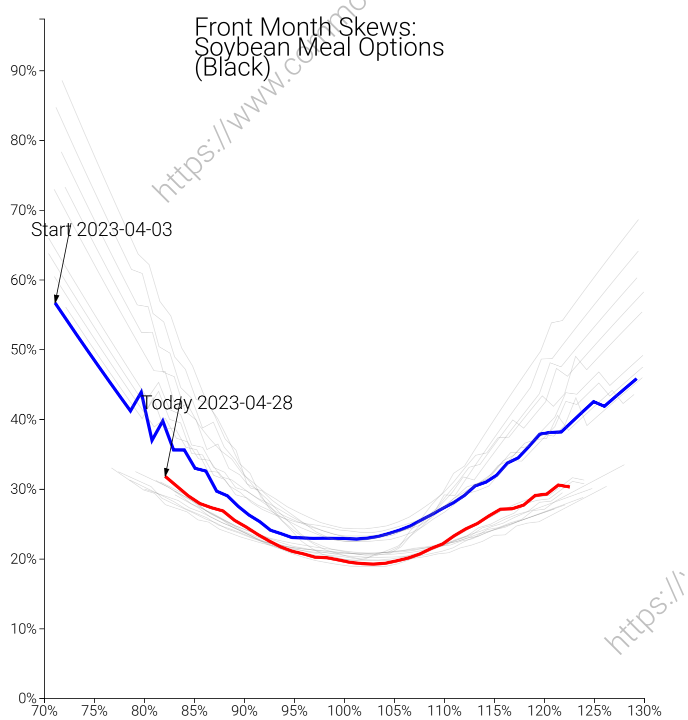

Price ($)
Start 2023-04-03
Today 2023-04-28
20230526
20230922
20240223

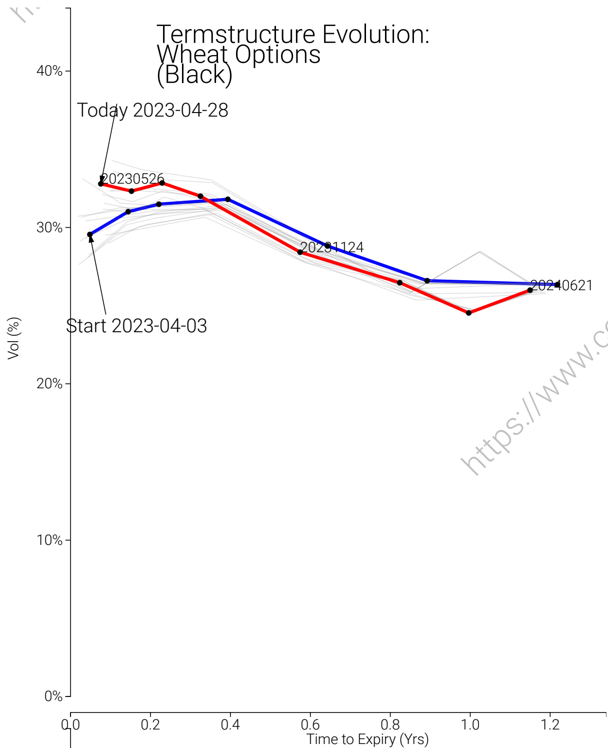

Front Month Skews:
Soybean Oil Options
(Black)
Start 2023-04-03
Today 2023-04-28

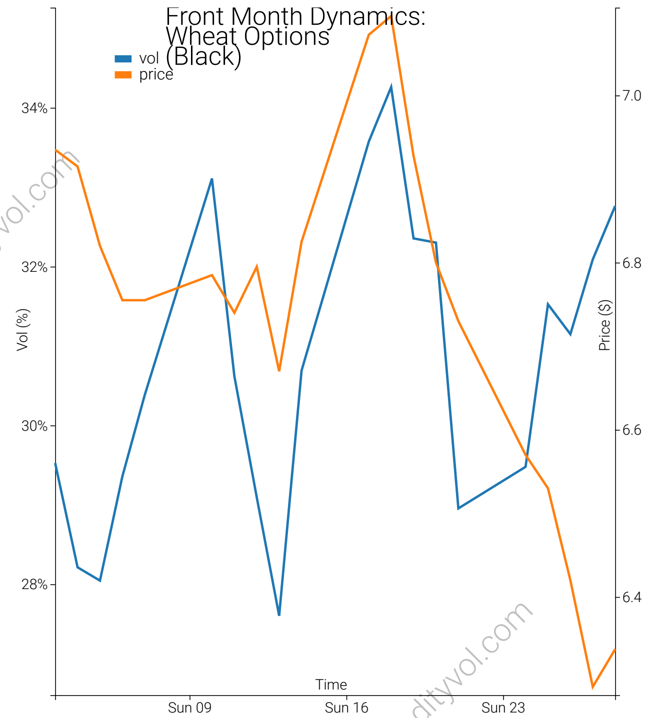

Termstructure Evolution:
Soybean Meal Options
(Black)
30%
25%
20%
15%
10%
5%
0%
Vol (%)
20230526
20231124
20240621
Start 2023-04-03
Today 2023-04-28
0.0
0.2
0.4
0.6
0.8
1.0
1.2
Time to Expiry (Yrs)

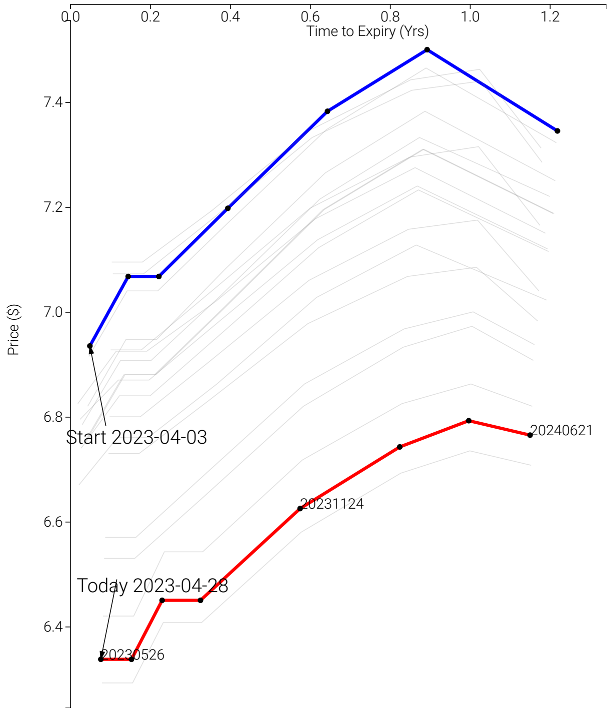

Front Month Dynamics:
Soybean Meal Options
(Black)
vol
price
24%
22%
20%
Vol (%)
460
450
440
430
Price ($)
Sun 09
Sun 16
Sun 23
Time

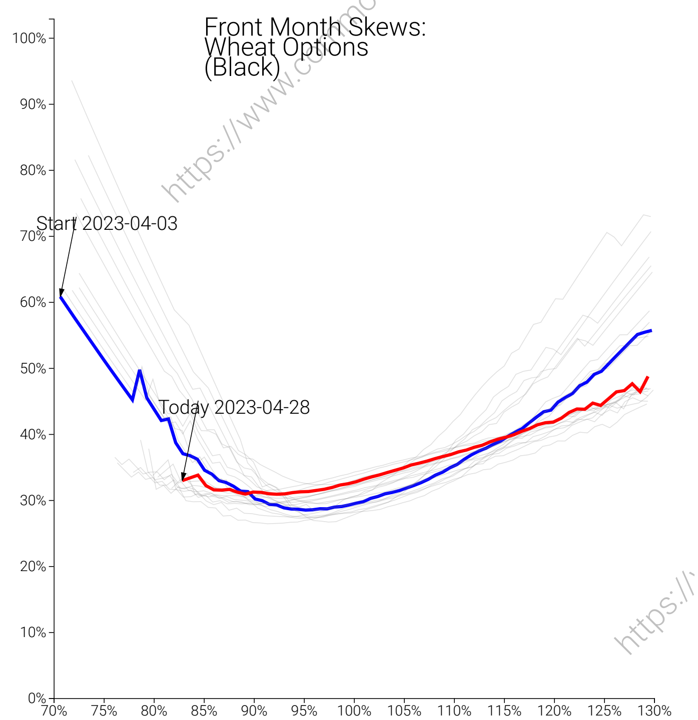

Start 2023-04-03
460
440
420
400
Price ($)
20230526
20231124
20240621
Today 2023-04-28

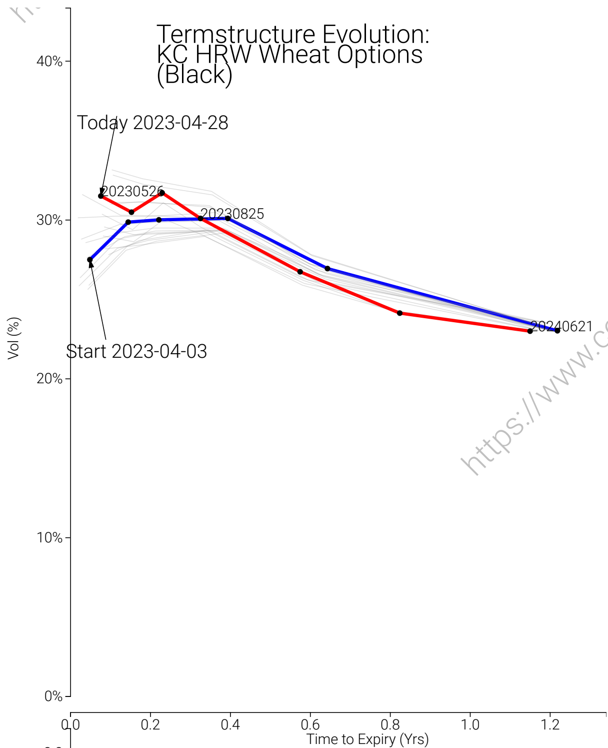

Front Month Skews:
Soybean Meal Options
(Black)
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Start 2023-04-03
Today 2023-04-28
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

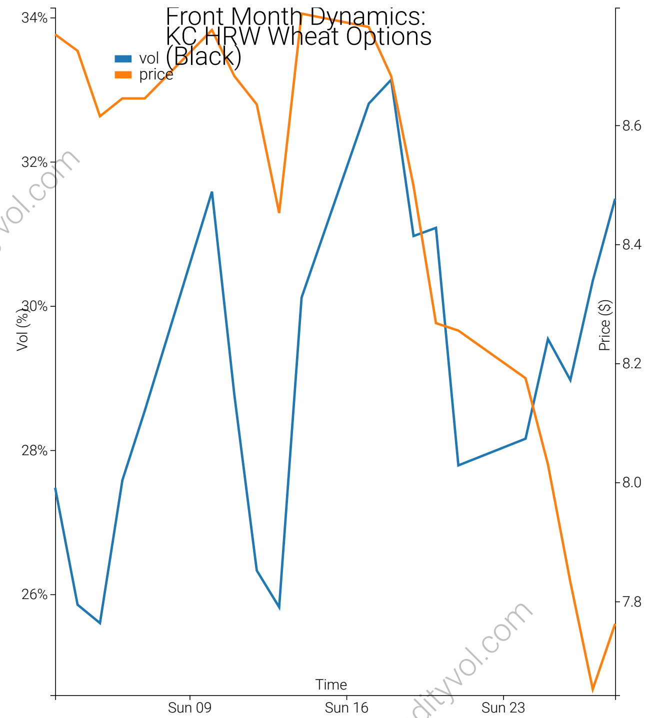

Termstructure Evolution:
Wheat Options
(Black)
Today 2023-04-28
20230526
20231124
20240621
Start 2023-04-03
Vol (%)
Time to Expiry (Yrs)
https://www.commodityvol.com

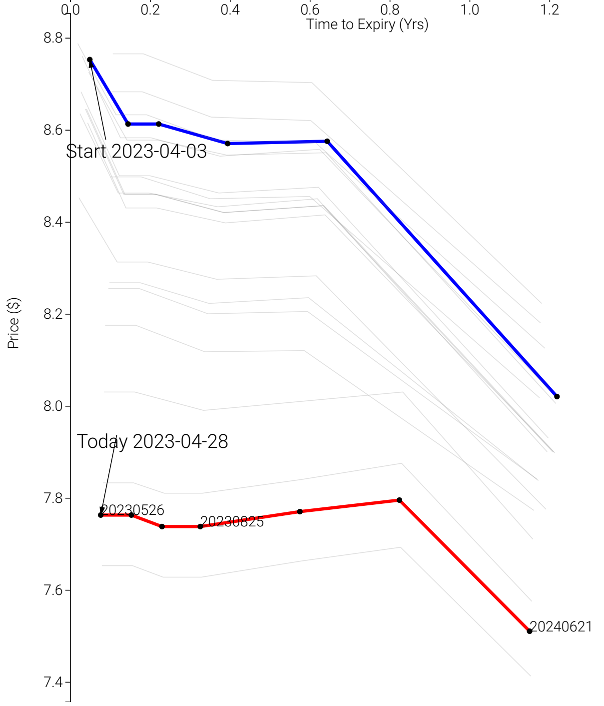

Front Month Dynamics:
Wheat Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23
https://www.commodityvol.com

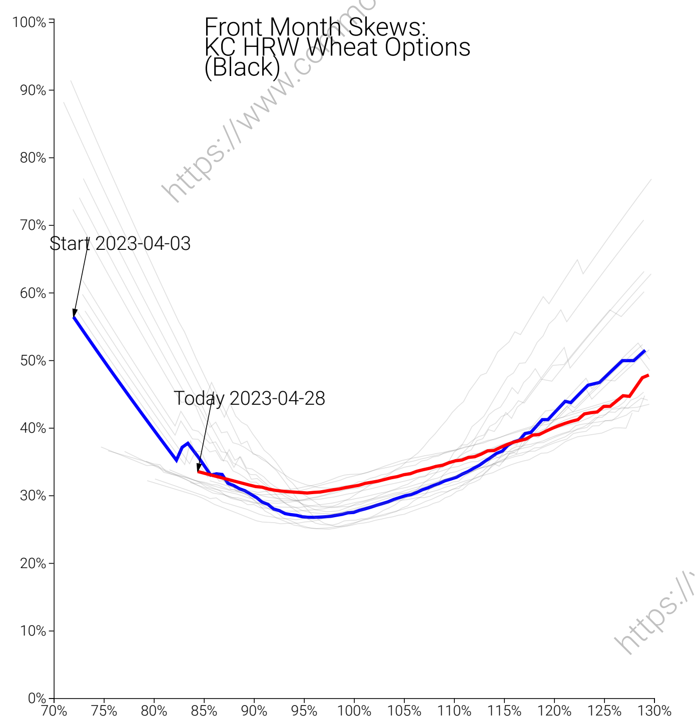

Price ($)
Start 2023-04-03
Today 2023-04-28
20230526
20231124
20240621

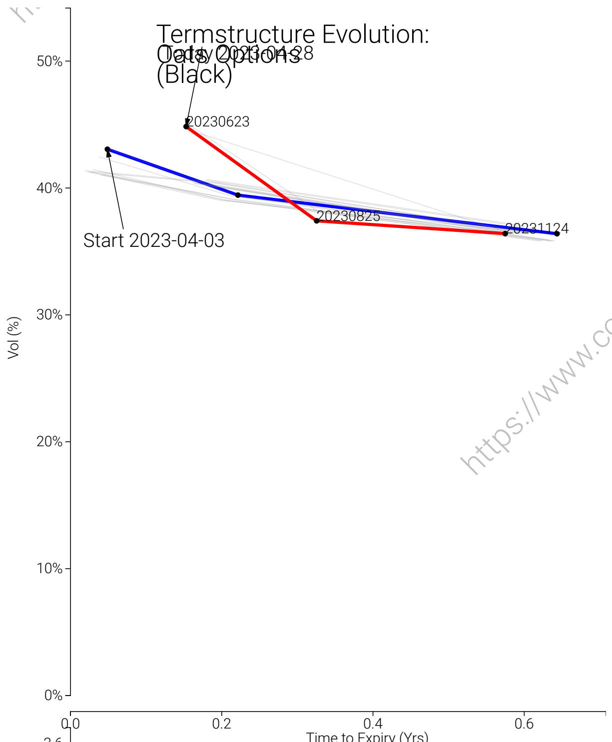

Front Month Skews:
Wheat Options
(Black)
Start 2023-04-03
Today 2023-04-28
https://www.commodityvol.com

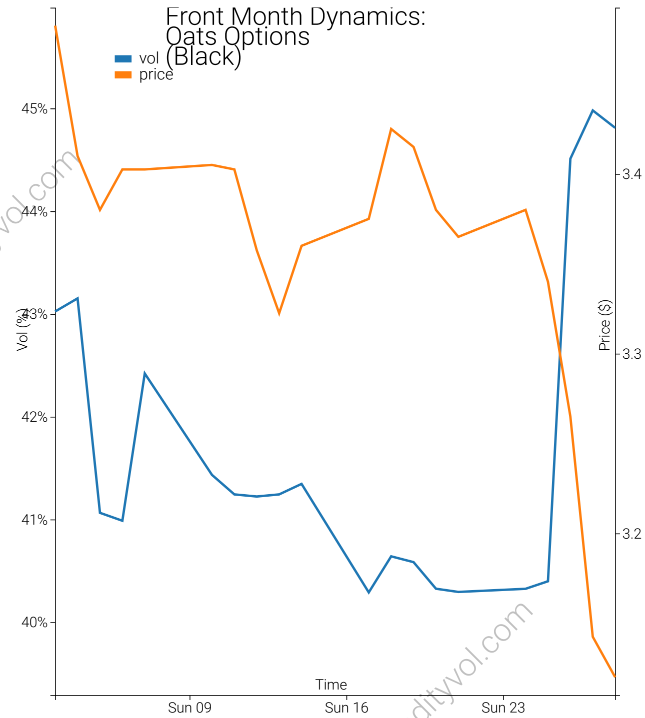

Termstructure Evolution:
KC HRW Wheat Options
(Black)
Today 2023-04-28
Start 2023-04-03
20230526
20230825
20240621
Vol (%)
Time to Expiry (Yrs)

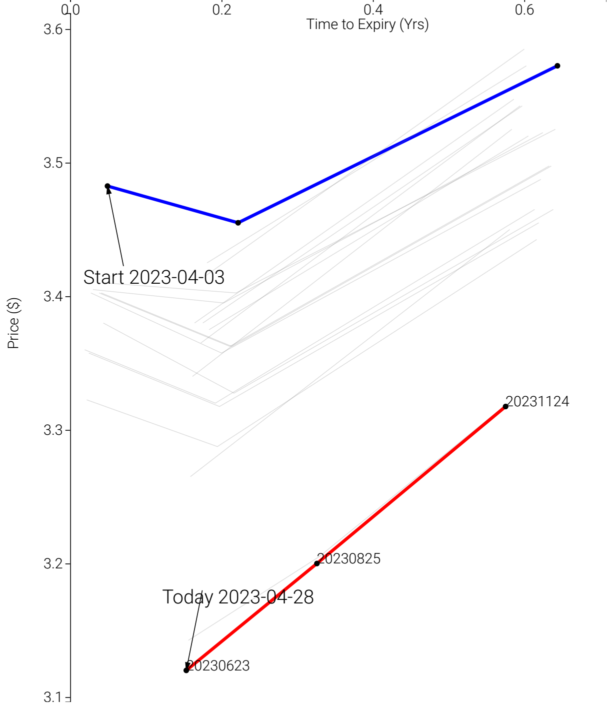

Front Month Dynamics:
KC HRW Wheat Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

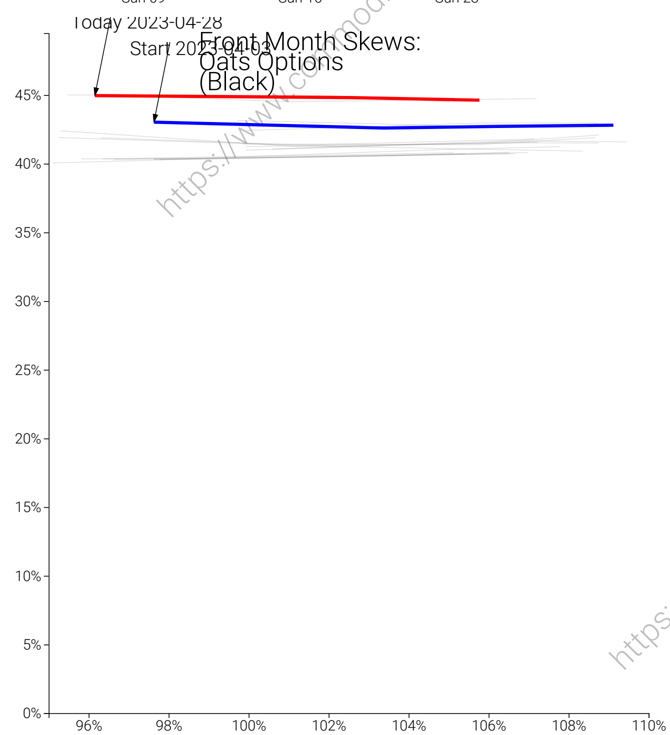

Start 2023-04-03
Today 2023-04-28
20230526
20230825
20240621
Price ($)

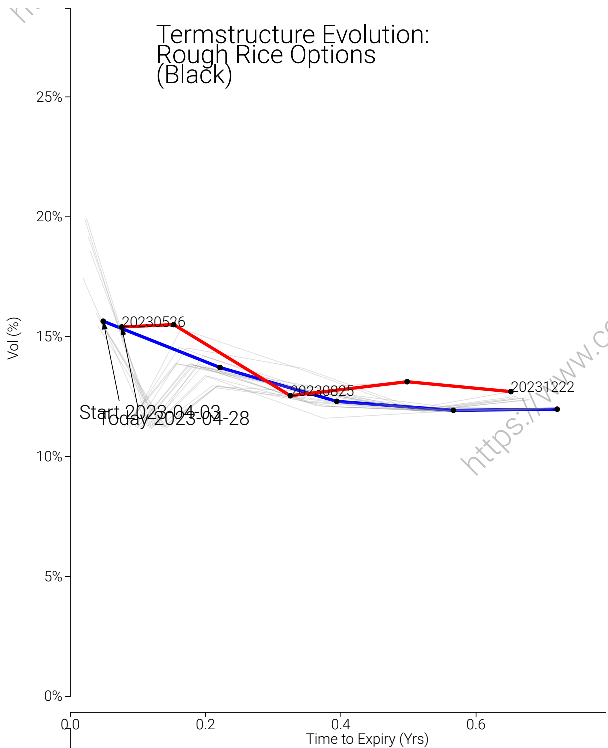

Front Month Skews:
KC HRW Wheat Options
(Black)
Start 2023-04-03
Today 2023-04-28

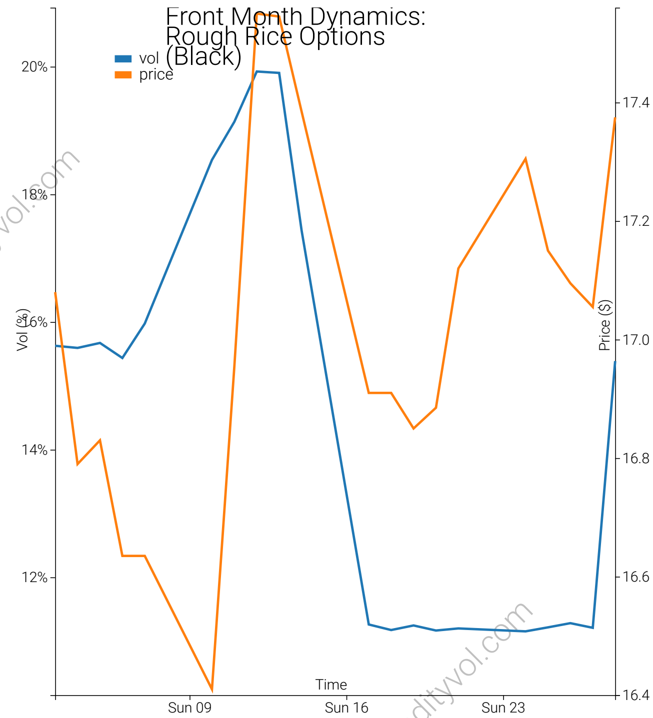

Termstructure Evolution:
Oats Options
(Black)
Today 2023-04-28
Start 2023-04-03
20230623
20230825
20231124
Vol (%)
Time to Expiry (Yrs)

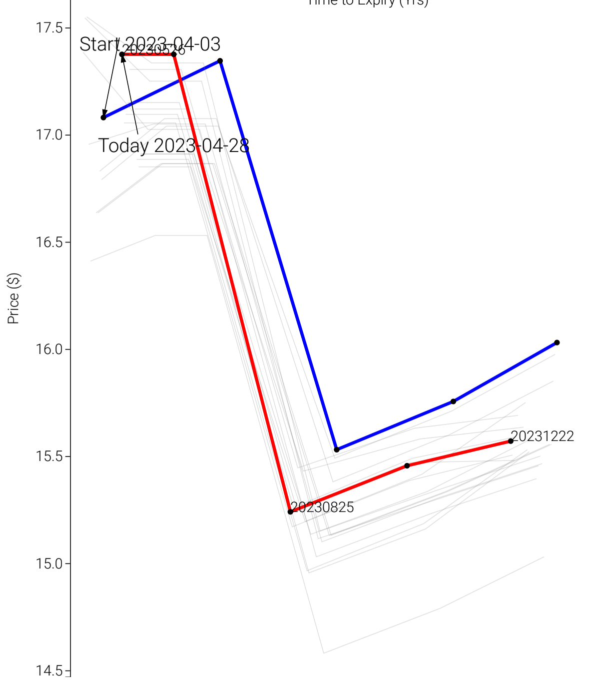

Front Month Dynamics:
Oats Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

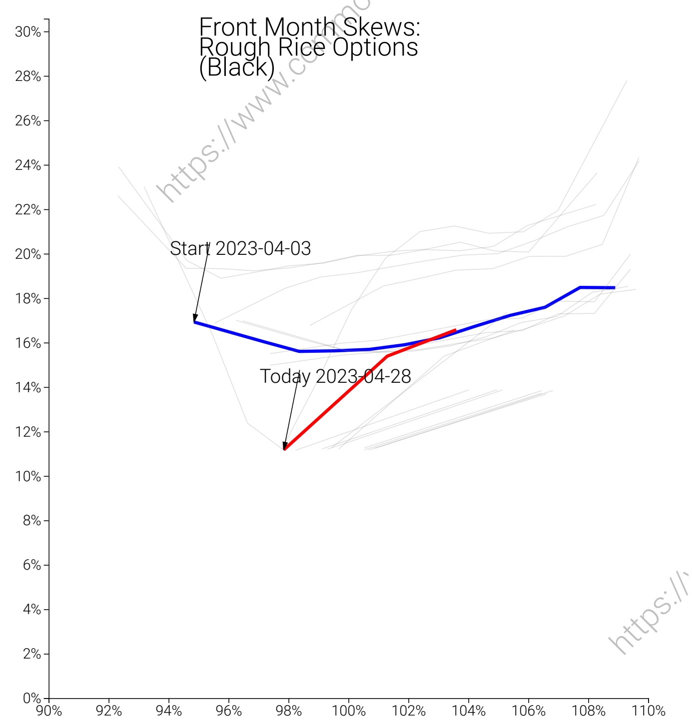

Start 2023-04-03
Today 2023-04-28
20230623
20230825
20231124
Price ($)

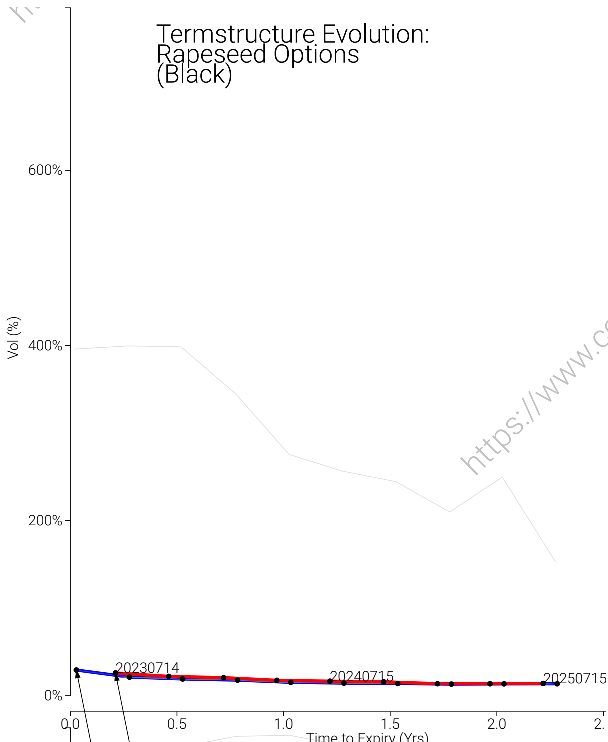

Front Month Skews:
Oats Options
(Black)
Today 2023-04-28
Start 2023-04-03

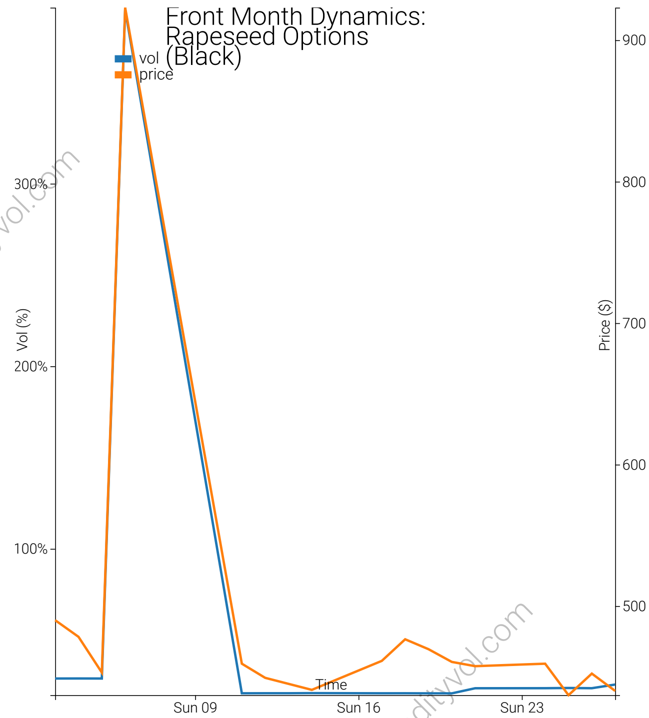

Termstructure Evolution:
Rough Rice Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20230526
20230825
20231222
Start 2023-04-03
Today 2023-04-28

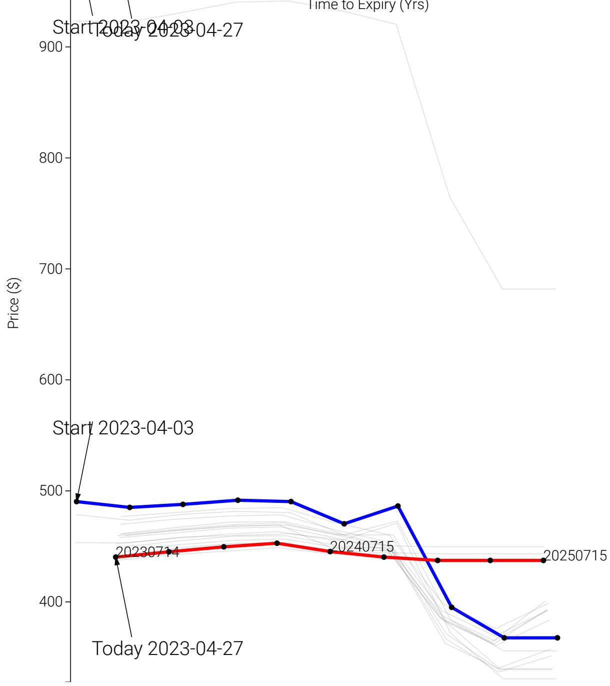

Front Month Dynamics:
Rough Rice Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

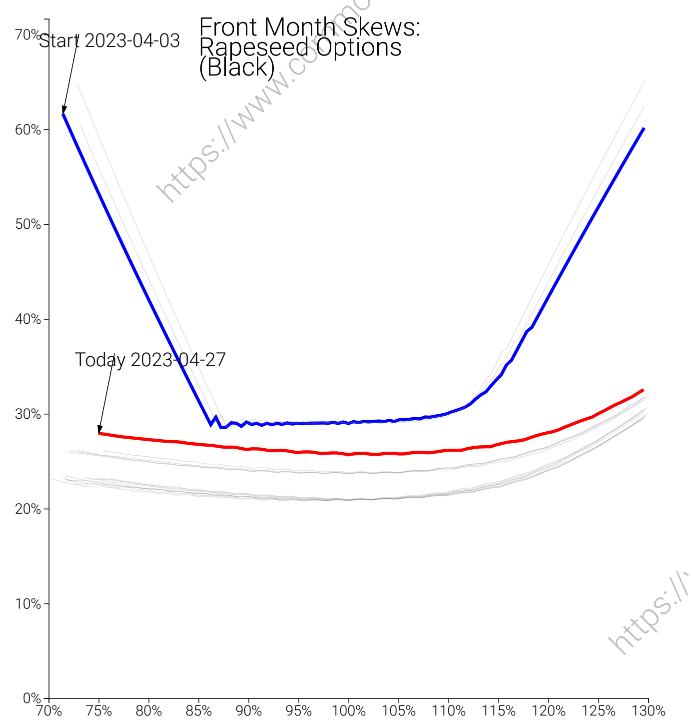

Price ($)
20230526
20230825
20231222
Start 2023-04-03
Today 2023-04-28


Front Month Skews:
Rough Rice Options
(Black)
Start 2023-04-03
Today 2023-04-28

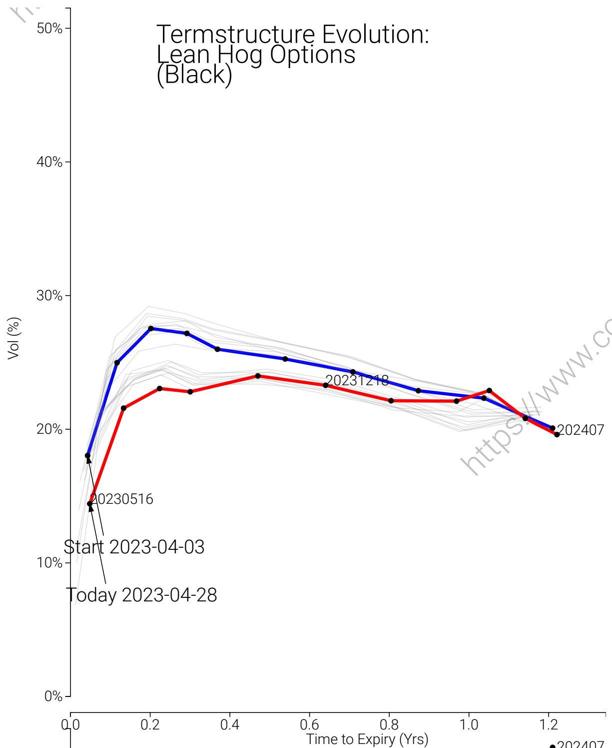

Termstructure Evolution:
Rapeseed Options
(Black)
Vol (%)
600%
400%
200%
0%
20230714
20240715
20250715
0.0
0.5
1.0
1.5
2.0
Time to Expiry (Yrs)
Start 2023-04-03
Today 2023-04-27

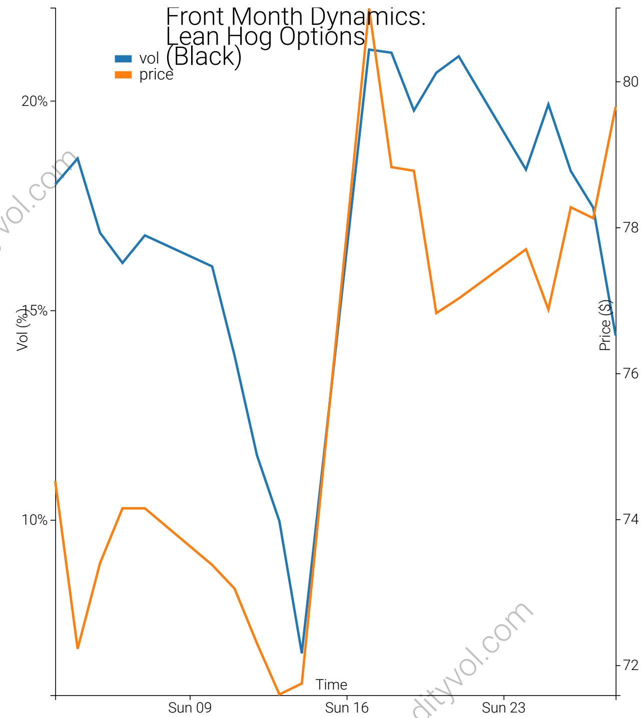

Front Month Dynamics:
Rapeseed Options
(Black)
vol
price
Vol (%)
300%
200%
100%
Price ($)
900
800
700
600
500
Sun 09
Sun 16
Sun 23
Time

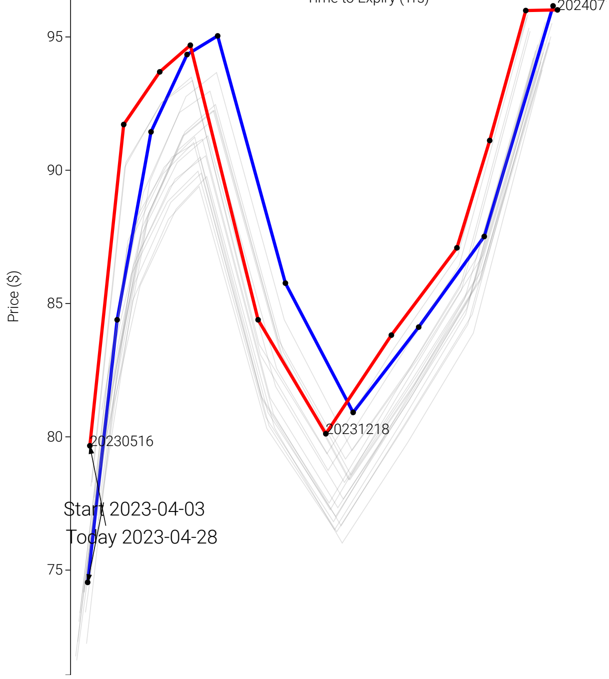

Price ($)
900
800
700
600
500
400
Start 2023-04-03
20230714
20240715
20250715
Today 2023-04-27

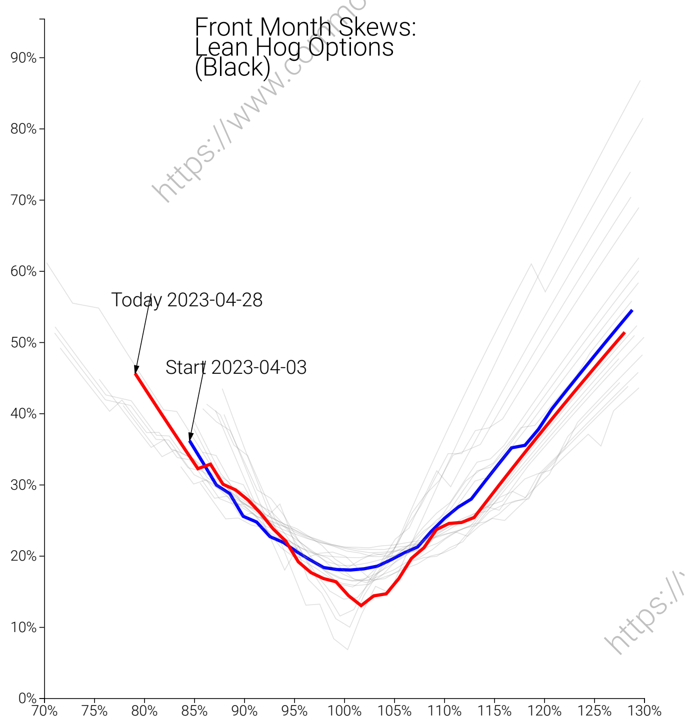

Front Month Skews:
Rapeseed Options
(Black)
70%
60%
50%
40%
30%
20%
10%
0%
Start 2023-04-03
Today 2023-04-27
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%

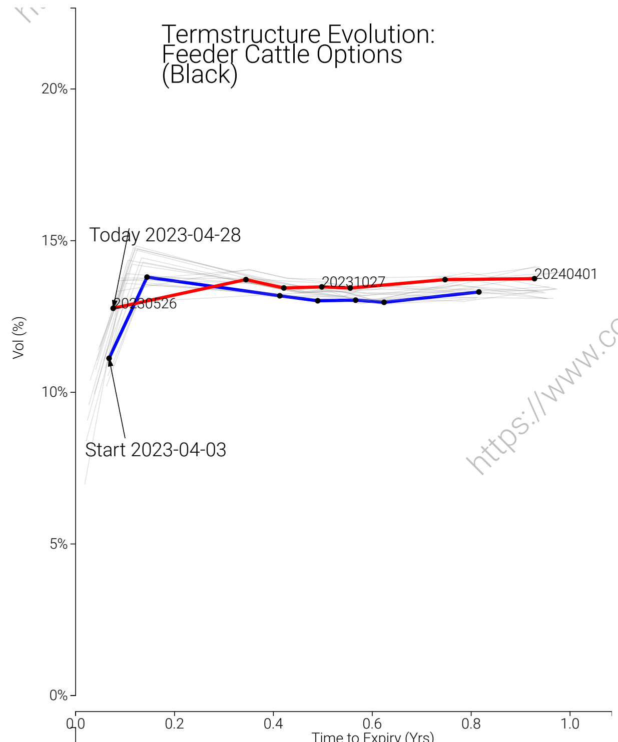
Ags: Proteins, Meats and so forth

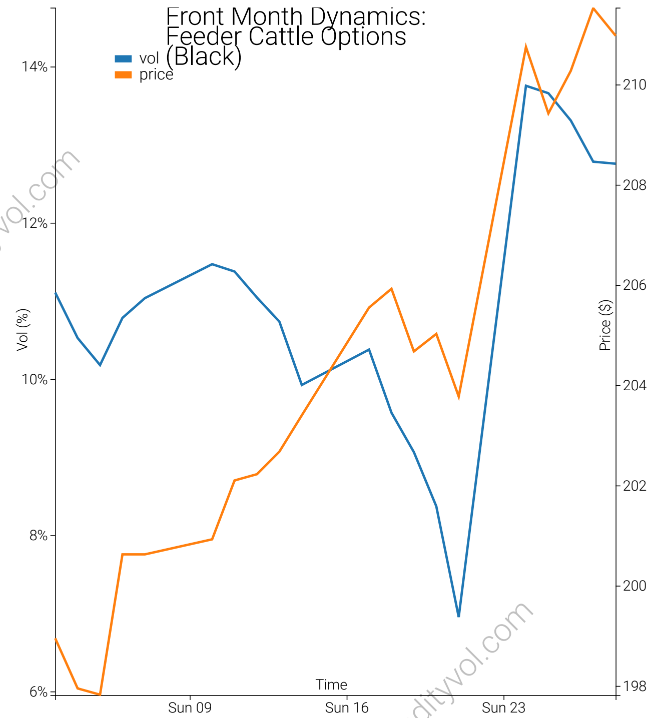

Termstructure Evolution:
Lean Hog Options
(Black)
Vol (%)
50%
40%
30%
20%
10%
0%
20231218
202407
20230516
Start 2023-04-03
Today 2023-04-28
0.0
0.2
0.4
0.6
0.8
1.0
1.2
Time to Expiry (Yrs)
https://www.commodityvol.com

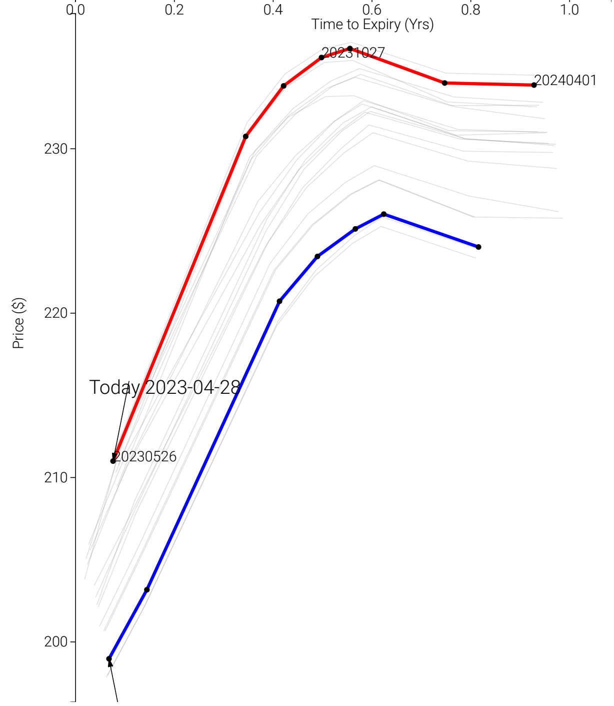

Front Month Dynamics:
Lean Hog Options
(Black)
vol
price
Vol (%)
Price ($)
20%
15%
10%
80
78
76
74
72
Time
Sun 09
Sun 16
Sun 23
https://www.commodityvol.com

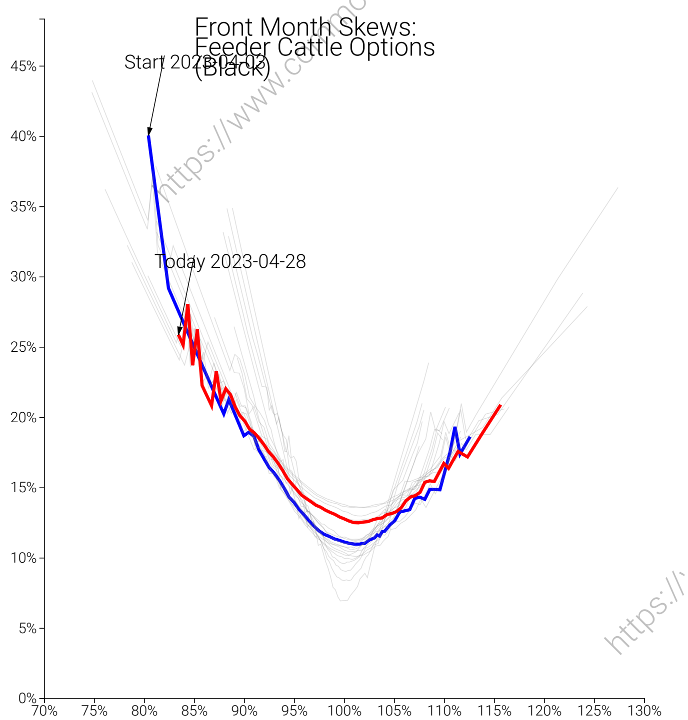

Price ($)
95
90
85
80
75
202407
20230516
20231218
Start 2023-04-03
Today 2023-04-28

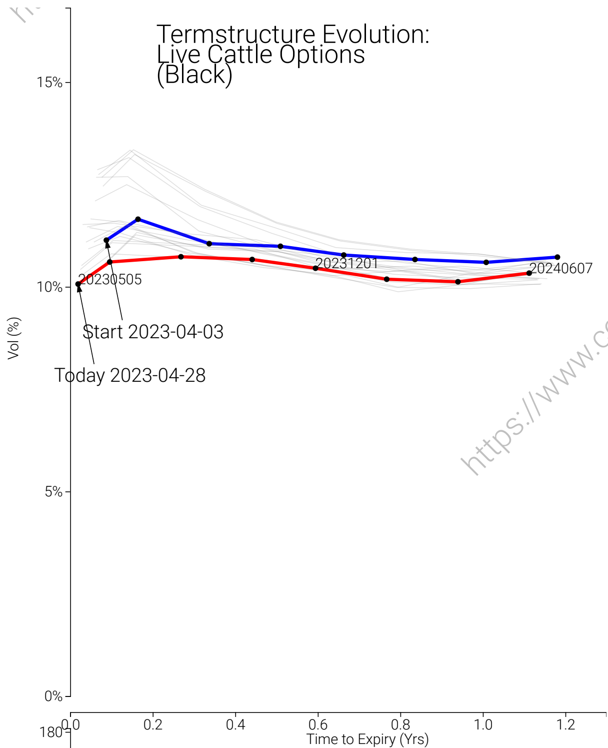

Front Month Skews:
Lean Hog Options
(Black)
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Today 2023-04-28
Start 2023-04-03
70%
75%
80%
85%
90%
95%
100%
105%
110%
115%
120%
125%
130%
https://www.commodityvol.com


Termstructure Evolution:
Feeder Cattle Options
(Black)
Today 2023-04-28
Start 2023-04-03
20230526
20231027
20240401
Vol (%)
Time to Expiry (Yrs)
https://www.commodityvol.com

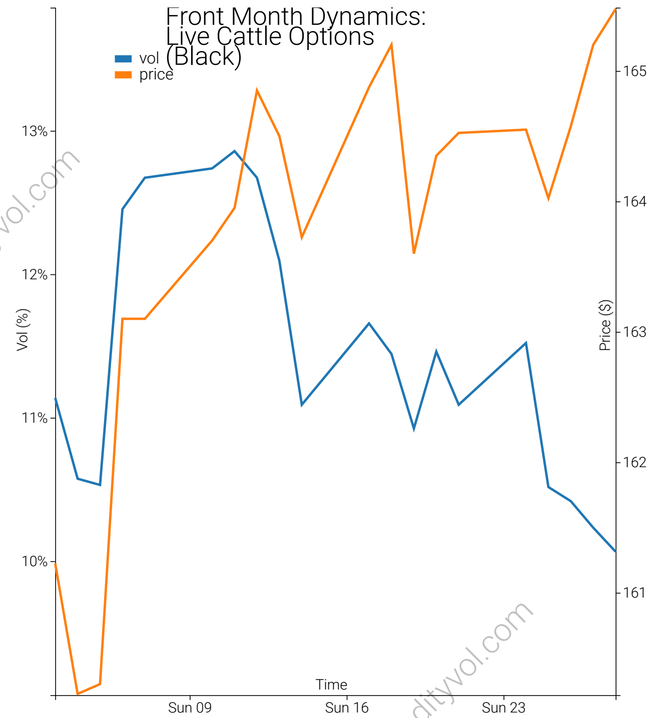

Front Month Dynamics:
Feeder Cattle Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23


Today 2023-04-28
20230526
20231027
20240401
Price ($)

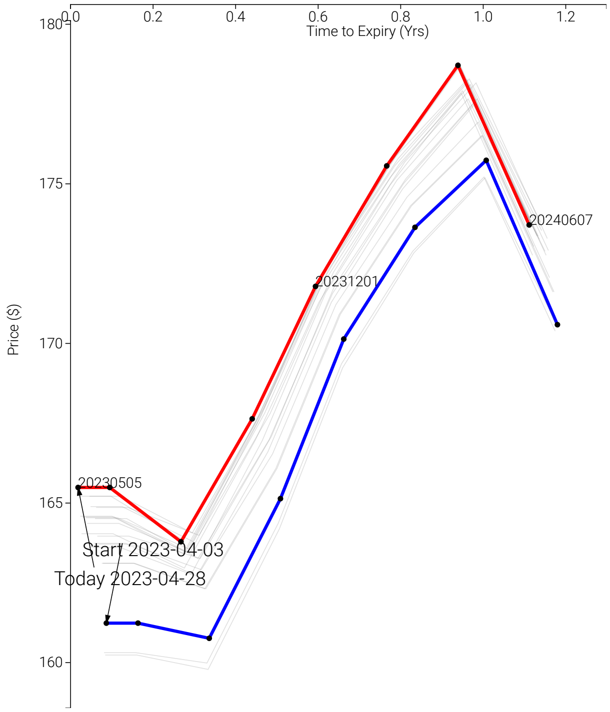

Front Month Skews:
Feeder Cattle Options
(Black)
Start 2023-04-03
Today 2023-04-28
https://www.commodityvol.com



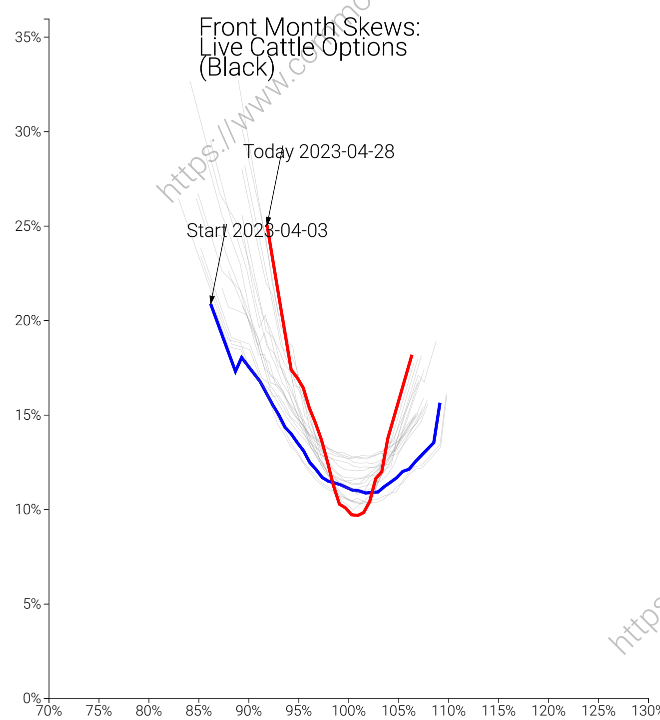
Termstructure Evolution:
Live Cattle Options
(Black)
Vol (%)
Time to Expiry (Yrs)
20230505
20231201
20240607
Start 2023-04-03
Today 2023-04-28



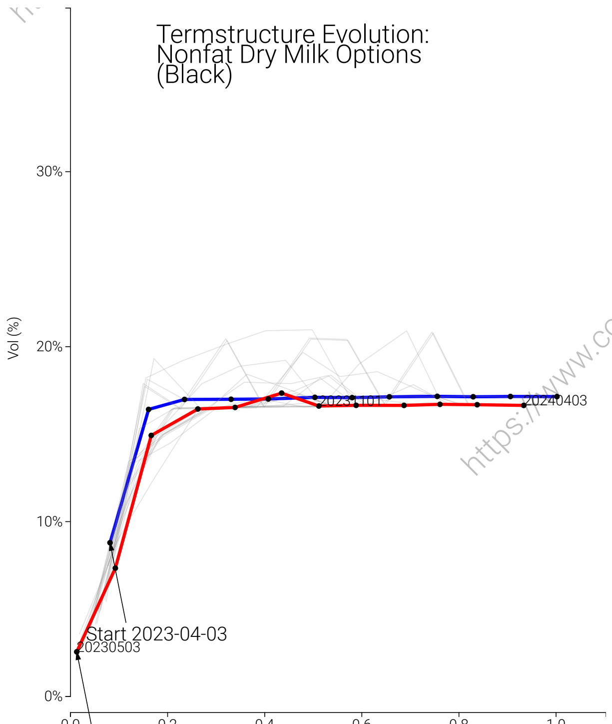
Front Month Dynamics:
Live Cattle Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23



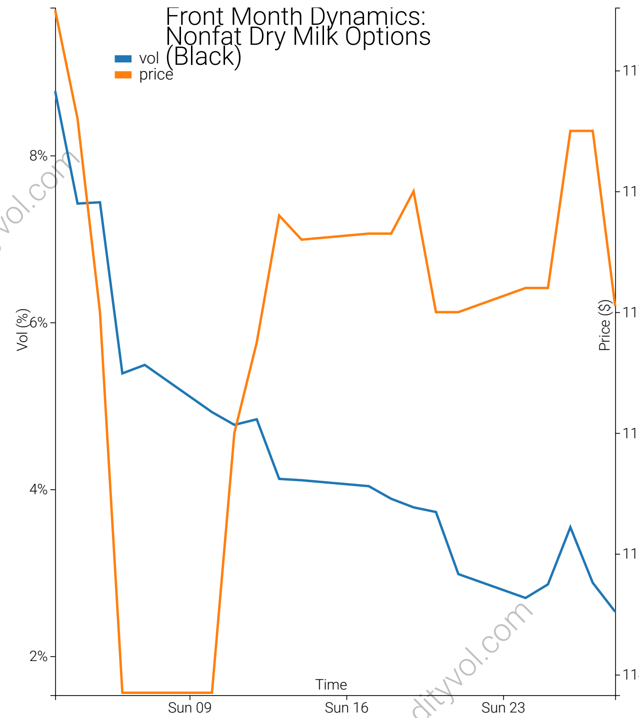
Price ($)
20230505
20231201
20240607
Start 2023-04-03
Today 2023-04-28



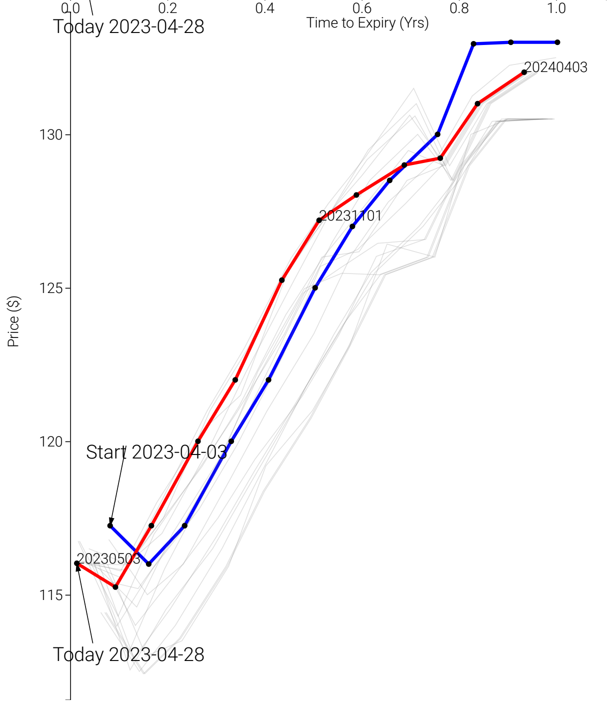
Front Month Skews:
Live Cattle Options
(Black)
Today 2023-04-28
Start 2023-04-03



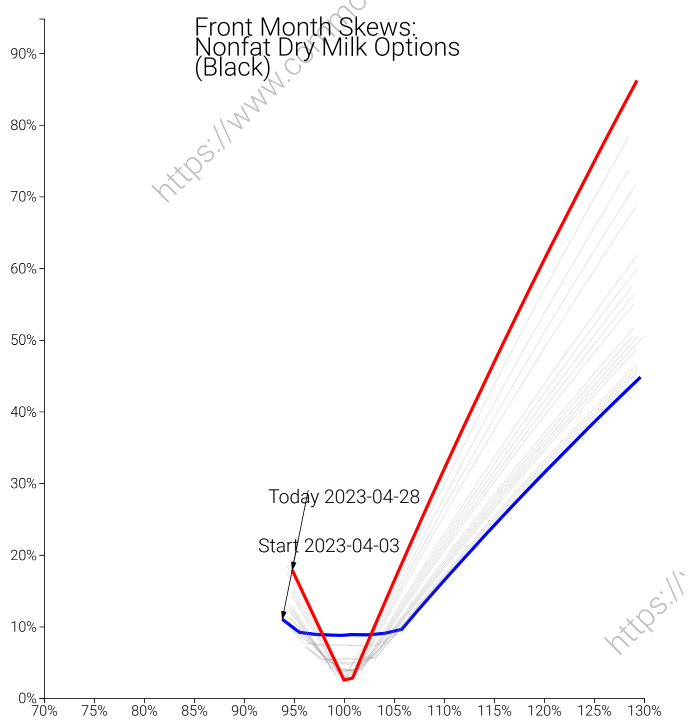
Termstructure Evolution:
Nonfat Dry Milk Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2023-04-03
Today 2023-04-28
20230503
20231101
20240403



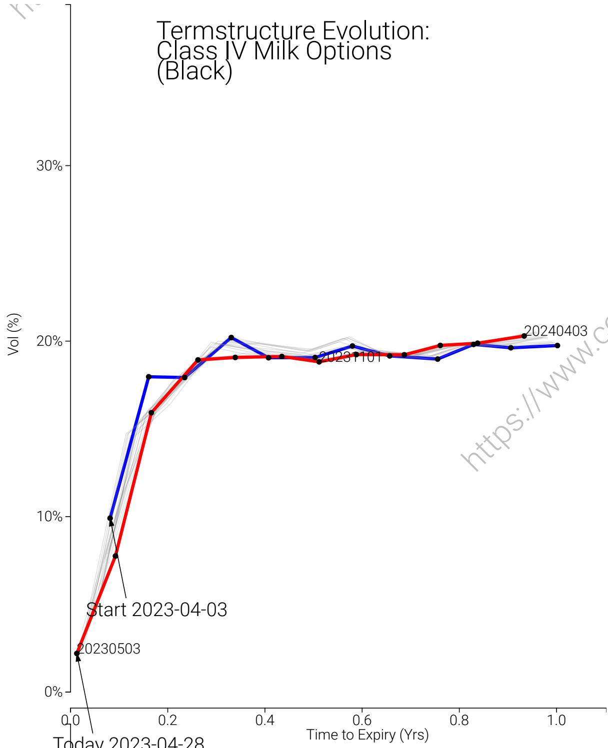
Front Month Dynamics:
Nonfat Dry Milk Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23

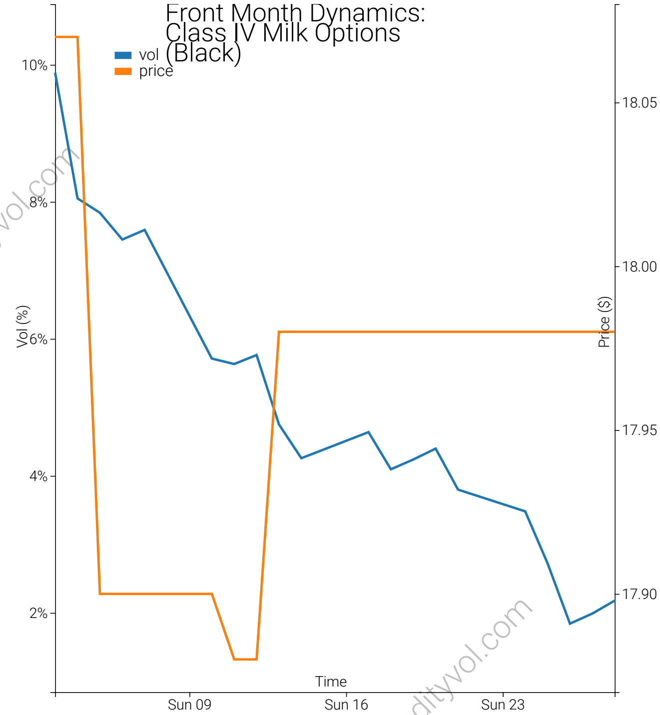


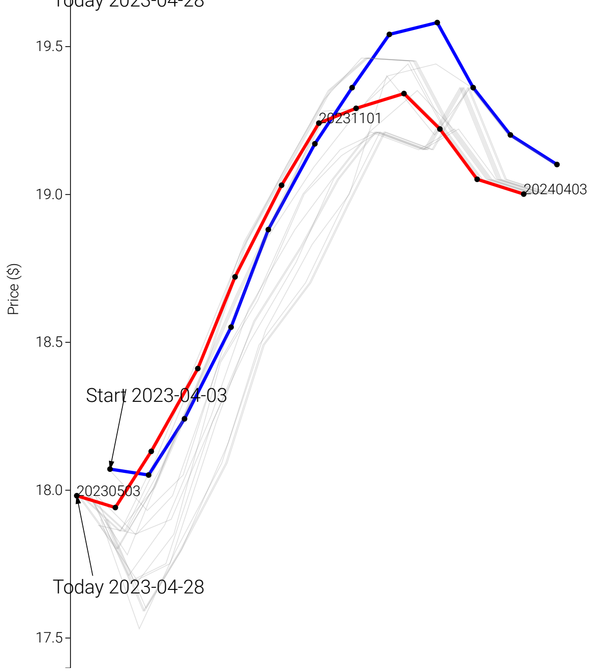
Price ($)
Start 2023-04-03
Today 2023-04-28
20230503
20231101
20240403

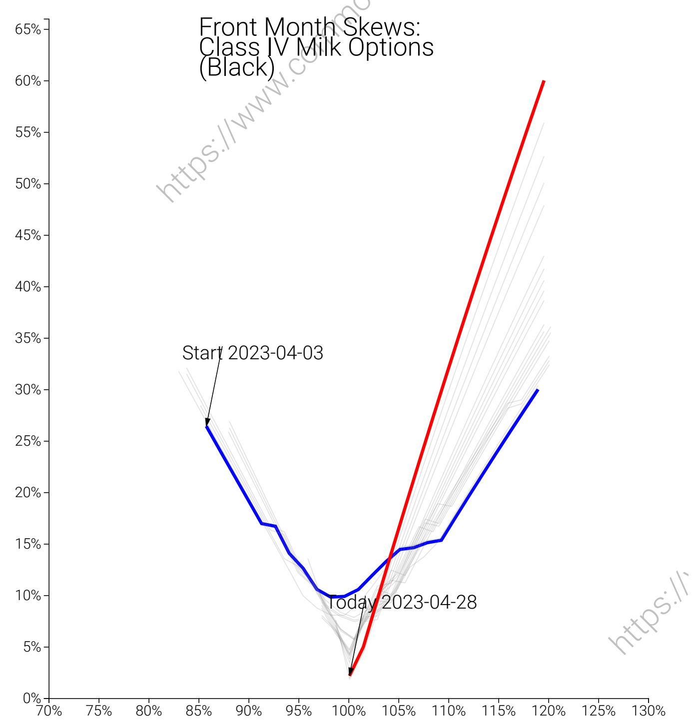


Front Month Skews:
Nonfat Dry Milk Options
(Black)
Today 2023-04-28
Start 2023-04-03


Termstructure Evolution:
Class IV Milk Options
(Black)
Vol (%)
Time to Expiry (Yrs)
Start 2023-04-03
Today 2023-04-28
20230503
20231101
20240403


Front Month Dynamics:
Class IV Milk Options
(Black)
vol
price
Vol (%)
Price ($)
Time
Sun 09
Sun 16
Sun 23


Price ($)
Start 2023-04-03
Today 2023-04-28
20230503
20231101
20240403

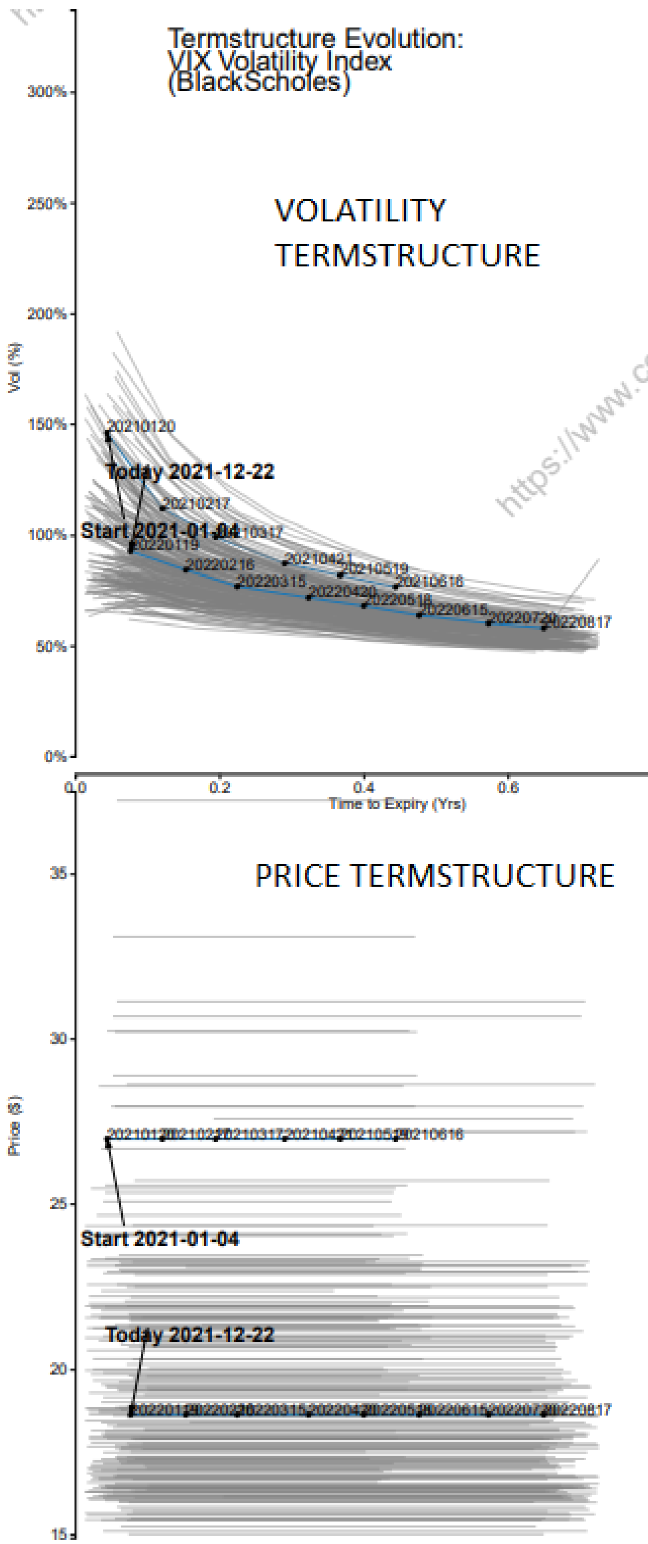

Front Month Skews:
Class IV Milk Options
(Black)
Start 2023-04-03
Today 2023-04-28

Explanation:

The document is composed of two parts. There is a tabular portion which summarizes the changes in front month futures prices and the changes in the at the money front month implied volatility. The results are presented as raw differences and percentage changes. 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.

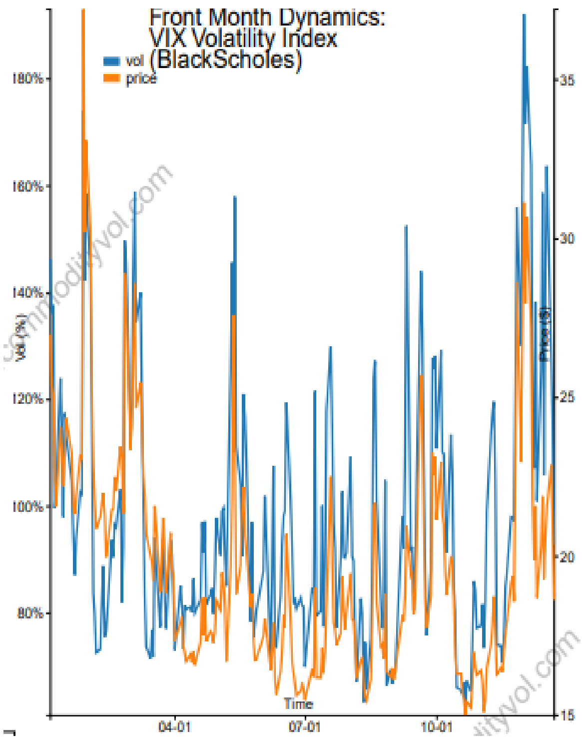
At the Money Volatilty and Price Term Structures:

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 period. 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.

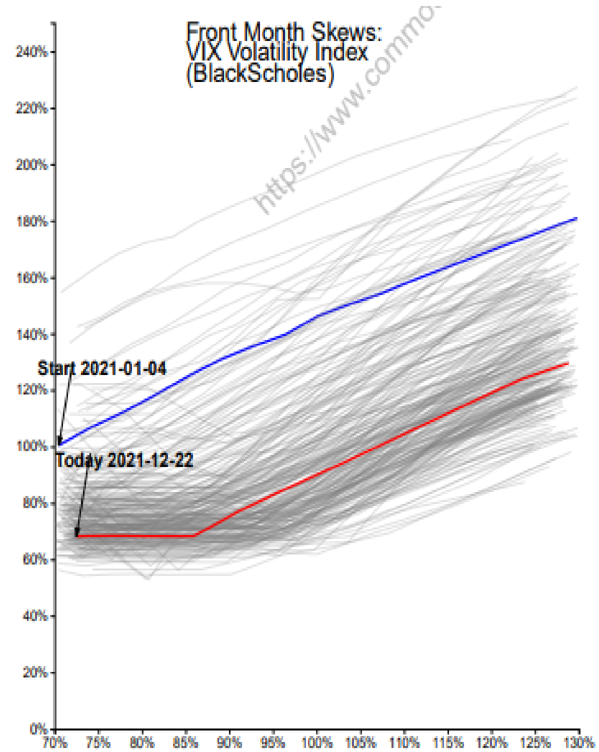
Front Month At the Money Volatilty and Front Month Price Over the Year:
On the right hand panel we have the price and implied volatility of the front month contract.



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.

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