



Welcome to our December 2023 Recap and Year End Wrap Up:

We are pleased to welcome you to our December 2023 month-end and year-end report. We wish you all a wonderful, prosperous and healthy 2024

Add 2023 to the list of confusing and inscrutable years. Age seems to cause this list to grow. Looking very superficially at the vol picture, it was a clear picture. Vol came off in droves. It came off across the board. The empty-headed market commentators frequently talk about the market 'climbing a wall of worry'. Markets experienced a panic, decided it wasn't important and then ignored any signs of problems. It all seems surreal.

We summarize the year using the important points from our past year's missives. The year started out with the reopening of China and the Fed overhang. Both have turned out to be cryptic. The Fed hiked much harder than anticipated, but then turned tail as the public outcry increased and the election loomed large. The US Dollar started out with a rally. Early March showed a small nick in the armor. The collapse of Silicon Valley Bank was greeted with a little pause and trepidation. Overnight, the 200Bln+ (in assets) bank disappeared. There were various malefactors, but one major systemic risk that peeked out was the duration mismatch between liabilities and assets. During the halcyon days of low and falling interest rates, borrowing short and lending long has some advantages. When the Fed reversed the interest rate picture (or merely brought some level of reality back), SVB stuttered. Many banks and financial intermediaries are in this position. The worry was that the SVB failure would lead to contagion. Signature Bank's failure occurred almost concurrently with SVB. Again, the magic of the printing press saved the day. The Fed and bank regulators defused a time bomb in a true 80's action TV manner. They clipped the appropriate wire before the bomb went boom!

The tightening squeeze of credit conditions began to be visible in the economy. While in a larger sense the interest rates simply moved closer to their long run averages, the financial press and business people were crying like a drunk college student ejected from the campus bar. In real terms, rates were most likely quite negative. Our press never allows reality to intrude on another story of inequity and woe. The grand theater that we call the 'Debt Ceiling' negotiation poked its head into the picture. This drama did seem to create a lot of angst during the summer. It led to the rending of hands at the prospect that kicking the can down the road was reaching the end of the road. Even the normally comatose media noticed that the debt and debt service were exploding. This, unfortunately, served as another reason to argue rates were too high.

As the mortgage rates rose, one heard the familiar refrain of 'this time it is different'.

Even now, the common refrain is that there isn't any supply of housing. Nobody seems to question where the (incremental) demand is coming from. If we are all trading the existing stock (more or less) then how can the average price zooming benefit us (on average). It would seem the government is the prime beneficiary through transfer and capital gains taxes. Don't expect the comatose press to take this up.

Halcyon ruled in the early summer. Nothing could upset the party. The first signs of the failure of the vaunted 'Ukraine offensive' began to manifest themselves in pictures of burnt Western armor. The cancellation of the Black Sea grain deal roiled some of the ags markets. There was unrest in France. Markets trucked on. There was this quaint concept of the discounted cash flow model that fundamental analysts would dust off from time to time. In the face of rising nominal rates and more uncertain cash flows, equity markets were the picture of calm.

Early fall seemed like the season for the fall. Analysts dimly recalled that equity prices and nominal rates were typically negatively correlated. The movement in US Treasury futures was not good. There were drumbeats of a weak China and more calls for confrontation with them. Obviously, October was bad. The conflagration in the Middle East was in effect. In other times, even an unexpected campfire in the desert would ignite crude prices and vols. This time there was a half hearted bid in vol coupled with prices receding. The more erudite debated where this disconnection stemmed from. Some viewed it as illustrating the importance of the electric car revolution. Others used it to suggest that global energy demand was weak-so weak that repeated OPEC+ jawboning and a war could not change its course. Still others used this to argue that US shale was the new swing producer. Whatever the true reasons for the anemic response, we cannot recall a period of greater disconnection. Energy vol acts like equity index vol, which is to say lackluster and uninspiring. We wonder if the brokers still have that edge in their voice when they shop the June/July spread around or whether they are like postal workers offering you seasonal stamps.

The end of the year was met with a massive rally in equities. The talking heads breathed a sigh of relief as Uncle Jerry decided 'no mas' and signaled a hasty retreat from the tightening regime. As we have hinted in our monthly missives, this is not surprising. In times of trouble, central banks always choose more money supply over less. The Wiemar experience doesn't matter (in their minds). The policy makers abroad are weak and they coordinate with the Fed. There is no real feedback loop. The rally has continued undeterred by a worsening Middle East, replete with the Red Sea becoming a no-go zone. People still believe in miracles.

We'd be remiss without a brief discussion of those flash in the pan endeavors that occupied our attention this year. First is the growth of the ODTE option world. We've witnessed first hand the mess that is expiration day. Does having a picture of OI, volume and weighted Gamma help? Yes, but it is rarely comforting. Until the print, the desk is moving deltas to avoid pins and generally trying to make money. We've had spec trades in ODTEv1 (weeklies) where the market ran into our strike and died. Analytics aren't enough. You need to know who is dealing the cards and who has the

big positions. These games will turn out badly for the retail investor. They always do. The next flash in the pan is boosted stochastic gradient descent models known as 'AI' by the breathless and fawning press. We've been around long enough to see Support Vector Machines and Neural Nets in the limelight. This too will fade. Are there applications where AI makes sense? Probably. They will probably work as knowledge augmentation for doctors and researchers-suggesting probabilistic diagnoses or summations of other people's work. It isn't sexy, but add that to the list of things misrepresented by our betters. Finally, the ongoing miscarriage called politics in the US should, by itself, be a cause for concern in all markets. Whether they are called migrants or invaders matters less than deciding what to do with them and whether it is in the public interest to let them in. The debacle of a fight between a senile President and his cartoonish foe, should also strike fear into anyone who has long term stakes in the country. Markets trundle higher!

We now proceed to our dive into the different market segments and our observations.

Wow... Crypto was the place to be. The Bitcoin future was up 157%. Vol hurtled higher by 1300bps. Ethereum futures lagged a bit, only up 96% with vol up 1100bps. In the conventional currencies, JPY was weak-cementing its role as the funding currency. The Franc, Euro and Pound were up. It is as if the gang that couldn't shoot straight got their act together. Front month, at the money vol was cut in half over the year. The coming expropriation of Russian assets in Europe will probably lead to more linkages within the US/EU block. It would not surprise us to see lower vol and generally more integration with the dollar.

[Foreign Exchange ATM](#)

[Bitcoin Detail](#)

[Ethereum Detail](#)

[Yen Detail](#)

[Pound Detail](#)

As is often the case in life, if you slept through most major events, you'd be hardpressed to dream them up. Looking at the changes in Treasury and SOFR futures, all except the Ultras and the 30 Year contract are up. The angst and woe that everyone expected and was visible for a time, dissipated. To quote a disaster recovery company, it is if it never happened. In almost every case, the ATM vol is lower and the puts are (relatively) crushed. This has to be one of the quickest stop and reverse in history, perhaps congruent with Wagner's march on Moscow.

[Interest Rates ATM](#)

[30 Year Detail](#)

[Ultrabond Detail](#)

If ever you stop believing in miracles, just look at equity indexes this year. Neither the Fed, a war in Europe, a war in the Middle East, high rates, bank failures and so on, could keep them down. Futures were led by Nasdaq which was up an unbelievable 54%-to be sure the index moved a little less than that, but why quibble? The SP500 index futures were up about 24% and the tail was taken by the Russell and Dow futures. As one might

expect, VIX was destroyed. The index was down 10.5 index points. Vol was off by 1300bps. ATM SP500 vol was offered by as much. There is not much to say except that the power of hope and a printing press should never be underestimated.

[EquityIndex ATM](#)

[SP500 Detail](#)

[Russell Detail](#)

[VIX Detail](#)

Gold and copper futures were up on the year, with Gold up 13% on the year. Palladium futures were down 38%. Vol, on the other hand, was down across the board. Everything seems like a scene from a zombie movie. Prices move up or they move down, with very little volatility or second thoughts.

[Metals ATM](#)

[Gold Detail](#)

[Palladium Detail](#)

[Copper Detail](#)

Looking at the list of rallying commodities, we see Feeder Cattle, Live Cattle, Oats and Rapeseed. They are important commodities, but the missing commodities; corn, wheat or soybeans, are much more important. They were down year on year. Yes, we understand that the prices are more conjecture than driven by plantings, yield or harvest, but they do reflect best estimates. Vol was down aggressively in everything except lean and live cattle.

[Ags ATM](#)

[Feeder Cattle Detail](#)

[Live Cattle Detail](#)

[Corn Detail](#)

[Wheat Detail](#)

[Ags Details](#)

There was not one front month future that closed up on the year. More concerning is the vol has receded from all markets. Not to rehash our homily, but a war in the Middle East and potential restrictions in energy flows should generate a little bit of concern. What the plots in this document do not show is the general reduction in open interest and volume. There seems to be a whole lot less price and price distribution discovery. Perhaps the trade is moving back to the OTC world which is more opaque.

[Energy ATM](#)

[US Natty Gas Detail](#)

[WTI Crude Detail](#)

[Details Energy](#)

As always, we welcome you to visit our website and hope to help you manage risk!

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info@commodityvol.com

At The Money Roundup of Products

EquityIndex

exch/prod	desc	futures chng [%]	vol chng [%]
CBT/YM	E-Mini Dow	+4727.000 [+14.2%]	-0.061 [-30.8%]
CME/NQ	E-Mini Nasdaq	+6001.250 [+54.4%]	-0.121 [-42.6%]
CME/RTO	E-Mini Russell 2000	+276.800 [+15.6%]	-0.068 [-25.9%]
CME/RTM	E-Mini Russell EOM	+276.800 [+15.6%]	-0.051 [-20.8%]
CME/ES	E-Mini S&P 500	+959.000 [+24.8%]	-0.106 [-47.3%]
CBOE/VIX	VIX Volatility Index	-10.450 [-45.6%]	-0.134 [-18.2%]

exch/prod	desc	futures chng [%]	vol chng [%]
CME/DK	Class IV Milk	-3.080 [-13.9%]	-0.023 [-55.8%]
CBT/C	Corn	-2.072 [-30.5%]	-0.030 [-15.9%]
CME/62	Feeder Cattle	+38.600 [+21.0%]	+0.049 [+52.0%]
CBT/KW	KC HRW Wheat	-2.460 [-27.7%]	-0.052 [-17.3%]
CME/LN	Lean Hog	-19.725 [-22.5%]	+0.002 [+0.9%]
CME/48	Live Cattle	+10.600 [+6.7%]	+0.023 [+19.8%]
CME/NF	Nonfat Dry Milk	-24.575 [-17.0%]	-0.007 [-16.9%]
CBT/O	Oats	+0.185 [+5.0%]	-0.026 [-5.6%]
ENXT_COM/OCO	Rapeseed	+14.500 [+3.4%]	-0.001 [-0.3%]
CBT/14	Rough Rice	-0.870 [-4.7%]	-0.020 [-12.2%]
CBT/S	Soybean	-2.260 [-14.8%]	-0.056 [-28.3%]
CBT/06	Soybean Meal	-85.000 [-18.0%]	-0.049 [-16.8%]
CBT/07	Soybean Oil	-15.890 [-24.8%]	-0.047 [-15.1%]
CBT/W	Wheat	-1.640 [-20.7%]	-0.073 [-22.4%]

Metals

exch/prod	desc	futures chng [%]	vol chng [%]
COMEX/HX	Copper	+0.080 [+2.1%]	-0.114 [-38.2%]
COMEX/OG	Gold	+245.600 [+13.4%]	-0.019 [-12.5%]
NYMEX/PAO	Palladium	-688.700 [-38.3%]	-0.182 [-31.9%]
NYMEX/PO	Platinum	-73.700 [-6.8%]	-0.140 [-41.1%]
COMEX/SO	Silver	+0.046 [+0.2%]	-0.080 [-25.4%]

Forex

exch/prod	desc	futures chng [%]	vol chng [%]
CME/ADU	AUDUSD 2pmfix	+0.000 [+0.0%]	-0.072 [-44.0%]
CME/BTC	Bitcoin	+25950.000 [+156.9%]	+0.132 [+27.6%]
CME/CAU	CADUSD 2pmfix	+0.017 [+2.3%]	-0.038 [-39.2%]
CME/CHU	CHFUSD 2pmfix	+0.108 [+9.9%]	-0.011 [-10.5%]
CME/ETH	Ethereum	+1148.500 [+96.6%]	+0.110 [+19.6%]
CME/EUU	EURUSD 2pmfix	+0.032 [+3.0%]	-0.045 [-39.3%]
CME/GBU	GBPUSD 2pmfix	+0.067 [+5.5%]	-0.066 [-49.5%]
CME/JPU	JPYUSD 2pmfix	-0.001 [-6.9%]	-0.101 [-53.7%]
CME/MP	Mexican Peso	+0.008 [+15.1%]	-0.022 [-18.6%]
CME/NE	New Zealand	-0.002 [-0.3%]	-0.091 [-51.5%]

InterestRates

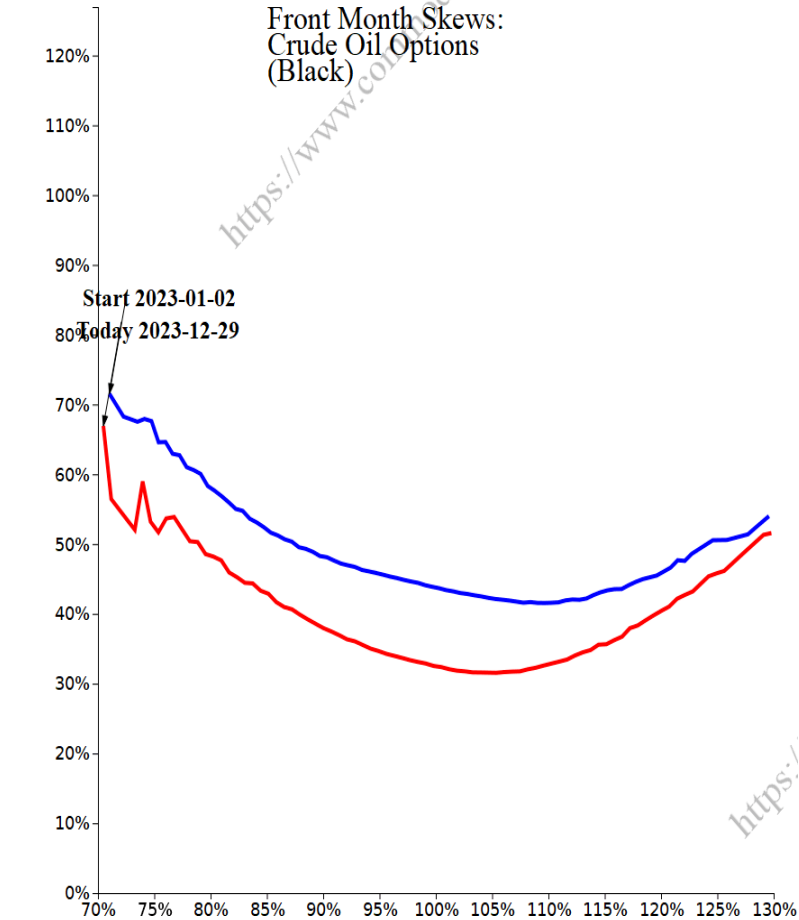
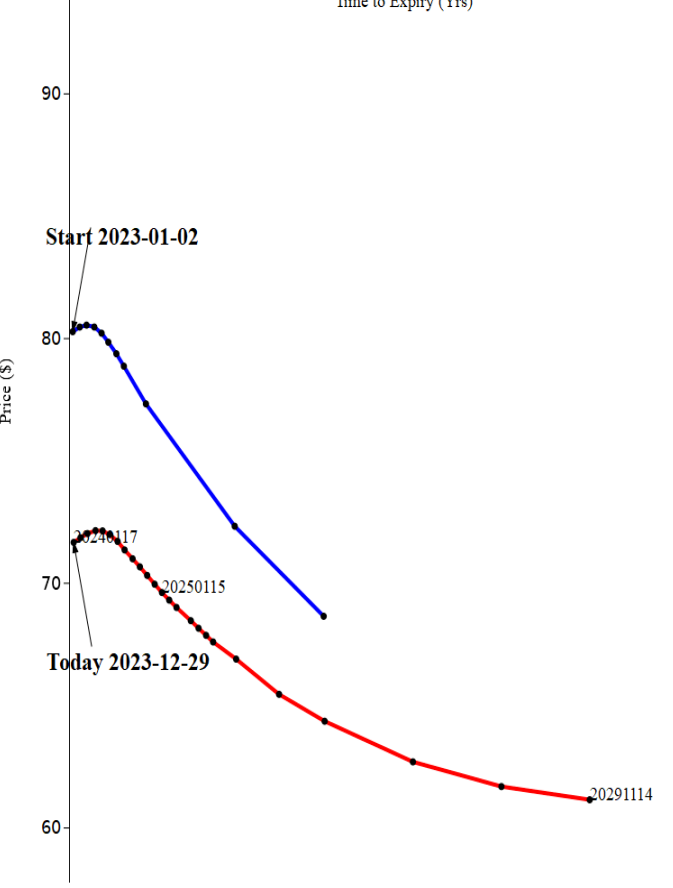
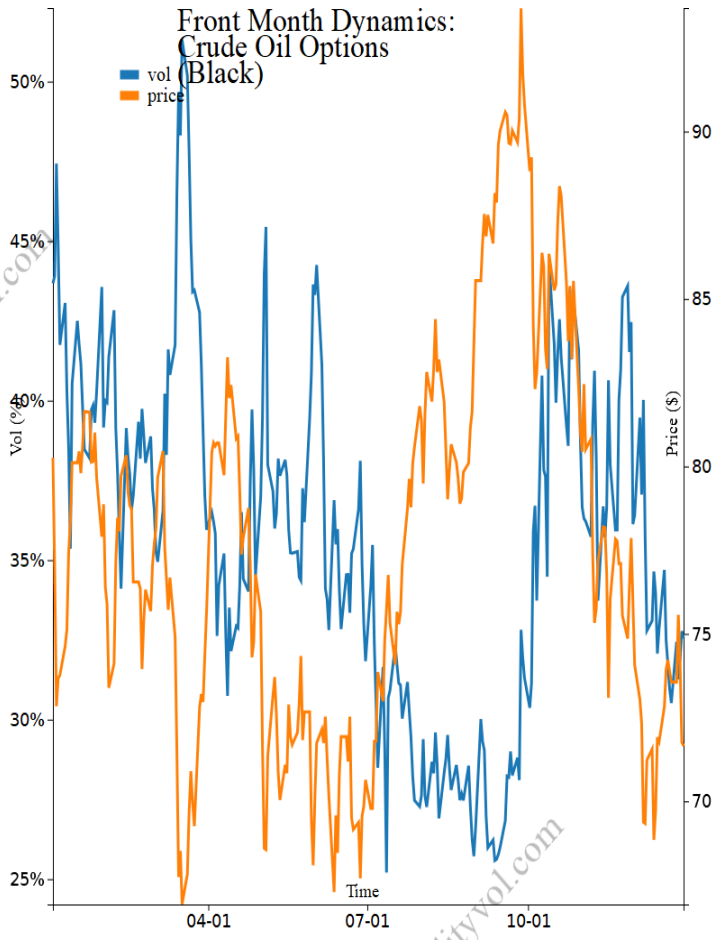
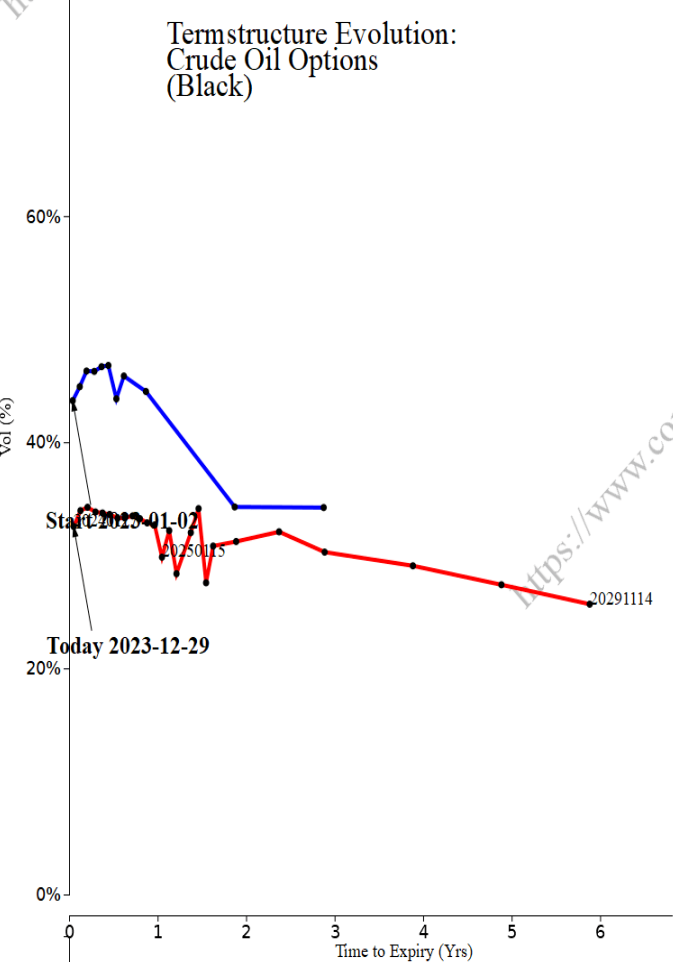
exch/prod	desc	futures chng [%]	vol chng [%]
CBT/26	2 YR US Treasury Note	+0.418 [+0.4%]	+0.001 [+3.8%]
CBT/25	5 YR US Treasury Note	+0.844 [+0.8%]	-0.003 [-4.9%]
CBT/21	10 YR US Treasury Note	+0.594 [+0.5%]	-0.007 [-9.2%]
CBT/17	30 YR US Treasury Bond	-0.406 [-0.3%]	-0.015 [-10.5%]
CBT/UBE	Long Term US Treasury Bond	-0.719 [-0.5%]	-0.059 [-26.9%]
CME/S0	One-year Mid-curve Three-month SOFR	+0.720 [+0.8%]	-0.003 [-12.8%]
CME/SR3	Three-month SOFR	-0.070 [-0.1%]	-0.002 [-22.2%]
CME/S3	Three-year Mid-curve Three-month SOFR	+0.035 [+0.0%]	-0.005 [-24.1%]
CME/S2	Two-year Mid-curve Three-month SOFR	+0.185 [+0.2%]	-0.005 [-22.8%]

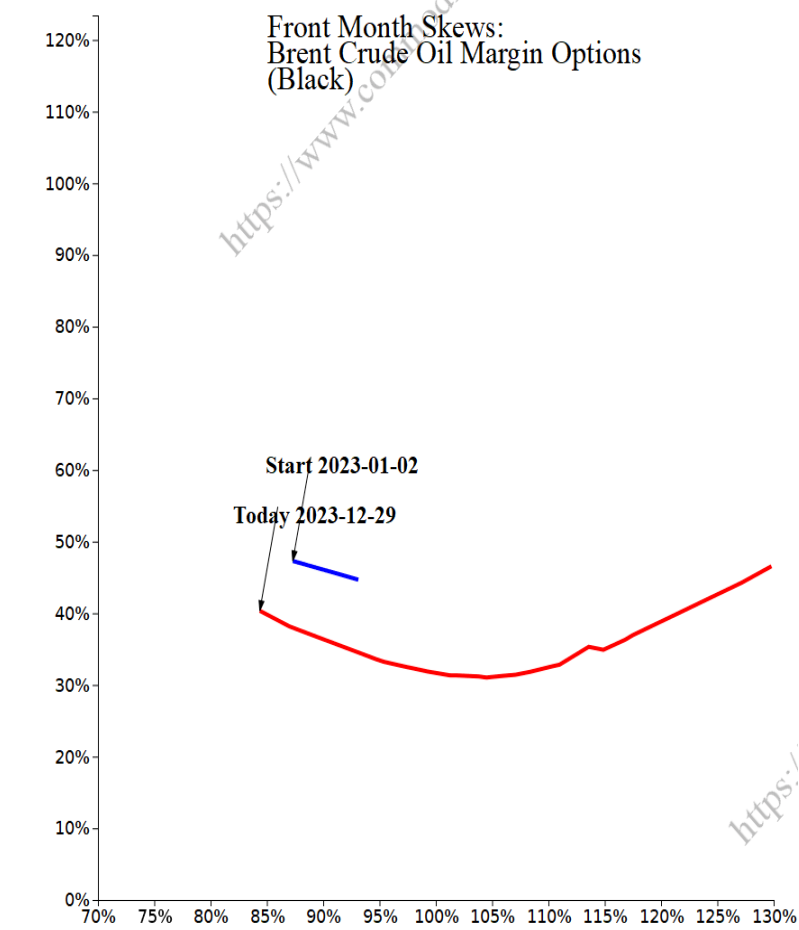
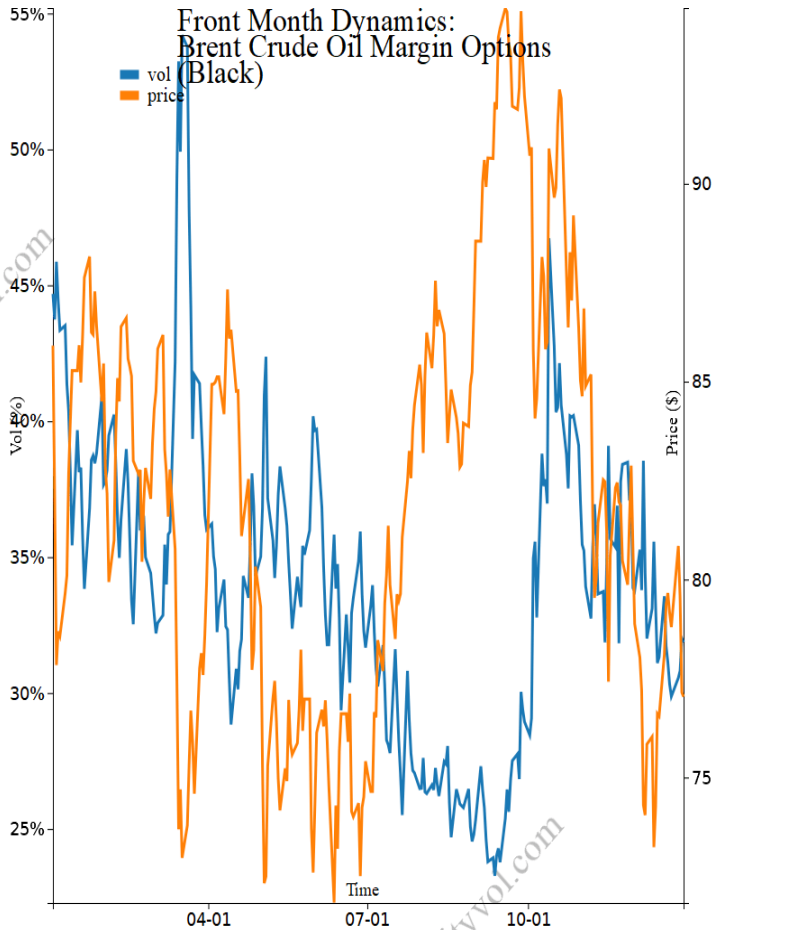
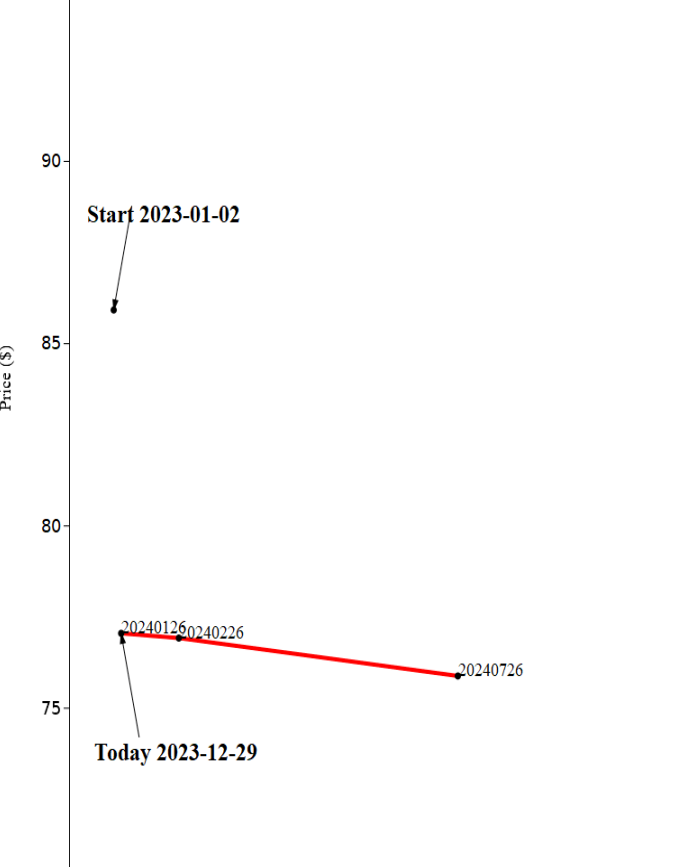
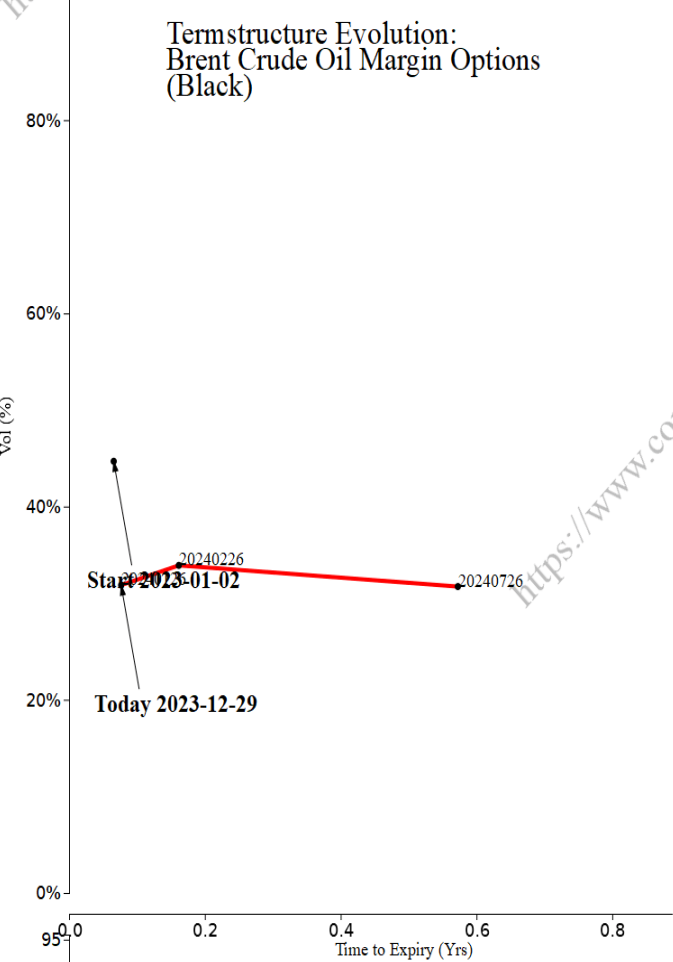
Energy

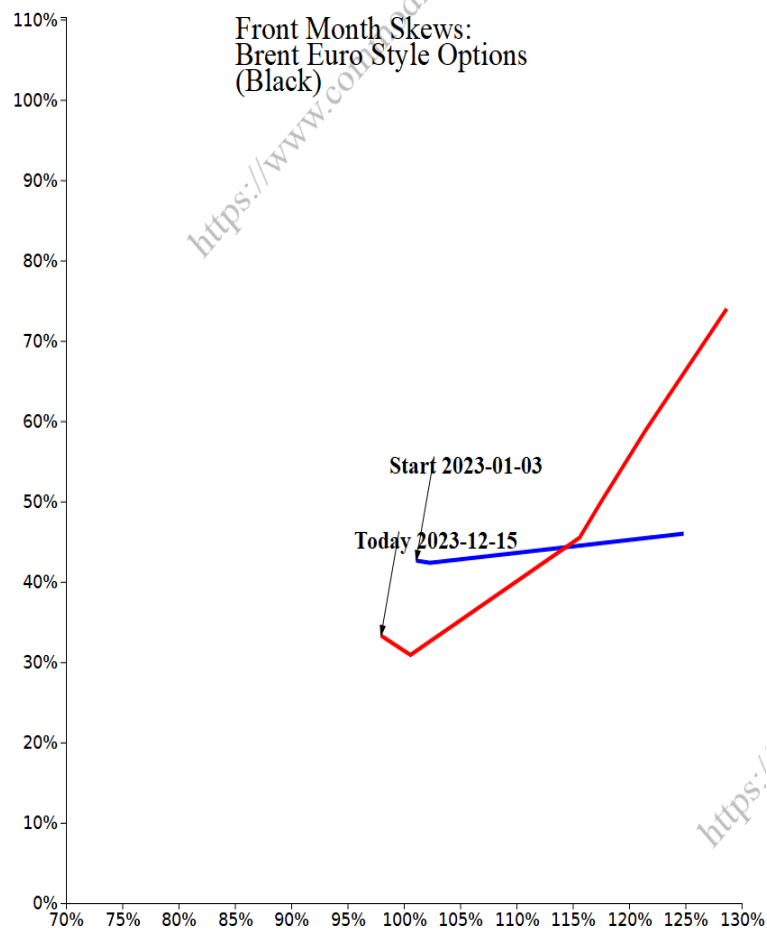
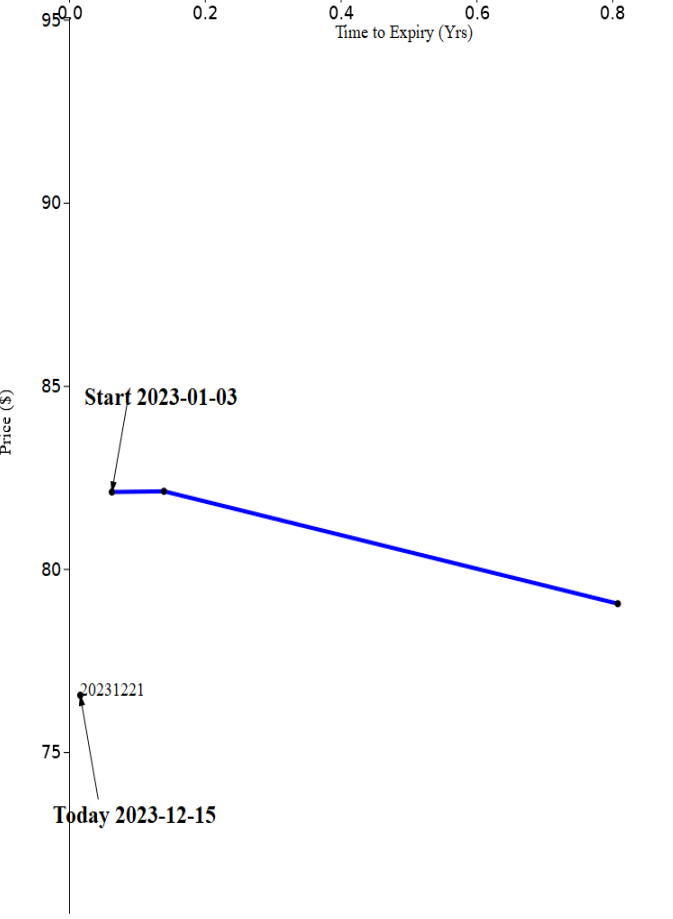
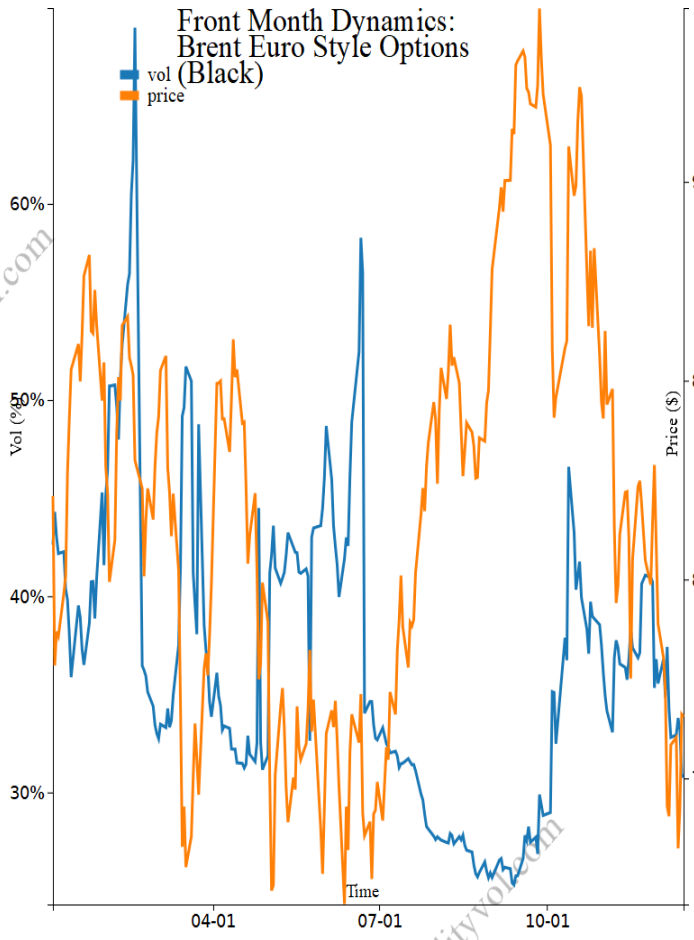
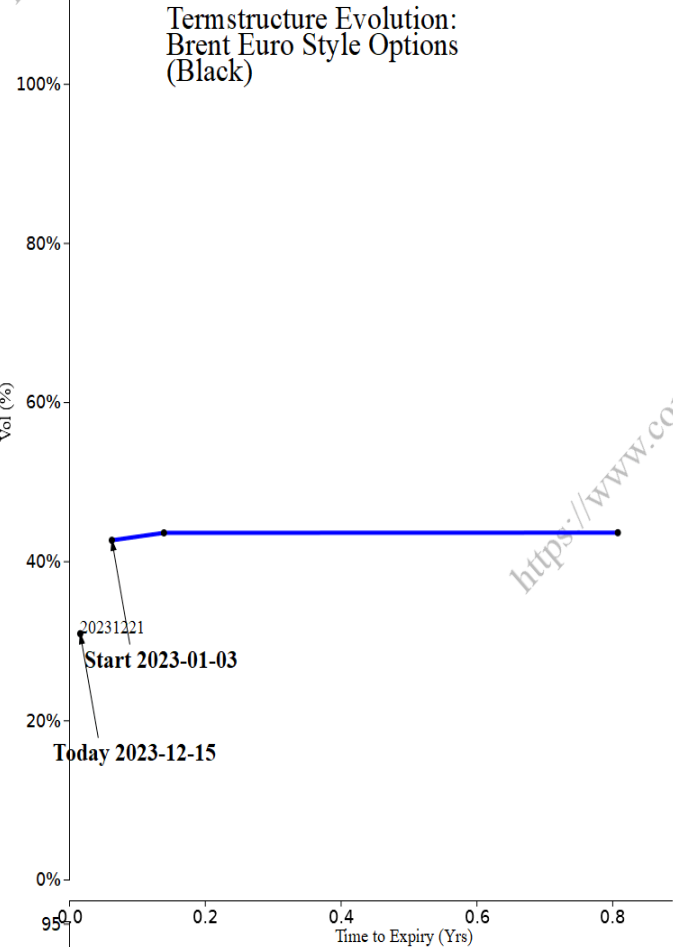
exch/prod	desc	futures chng [%]	vol chng [%]
NYMEX/BZO	Brent Crude Oil Margin	-8.870 [-10.3%]	-0.128 [-28.7%]
NYMEX/BE	Brent Euro Style	-4.150 [-5.1%]	-0.003 [-0.8%]
NYMEX/CVR	Chicago Ethanol(platts) Average Price	-0.661 [-28.4%]	-0.139 [-73.1%]
NYMEX/LO	Crude Oil	-8.610 [-10.7%]	-0.111 [-25.5%]
NYMEX/LN	European Natural Gas	-1.961 [-43.8%]	-0.208 [-22.4%]
NYMEX/E7	Henry Hub Financial Last Day	-1.474 [-37.0%]	-0.196 [-21.3%]
NYMEX/ON	Natural Gas	-1.961 [-43.8%]	-0.208 [-22.3%]
NYMEX/OH	NY Harbor ULSD	-0.766 [-23.3%]	-0.208 [-37.2%]
NYMEX/OB	RBOB	-0.372 [-15.0%]	-0.095 [-20.3%]

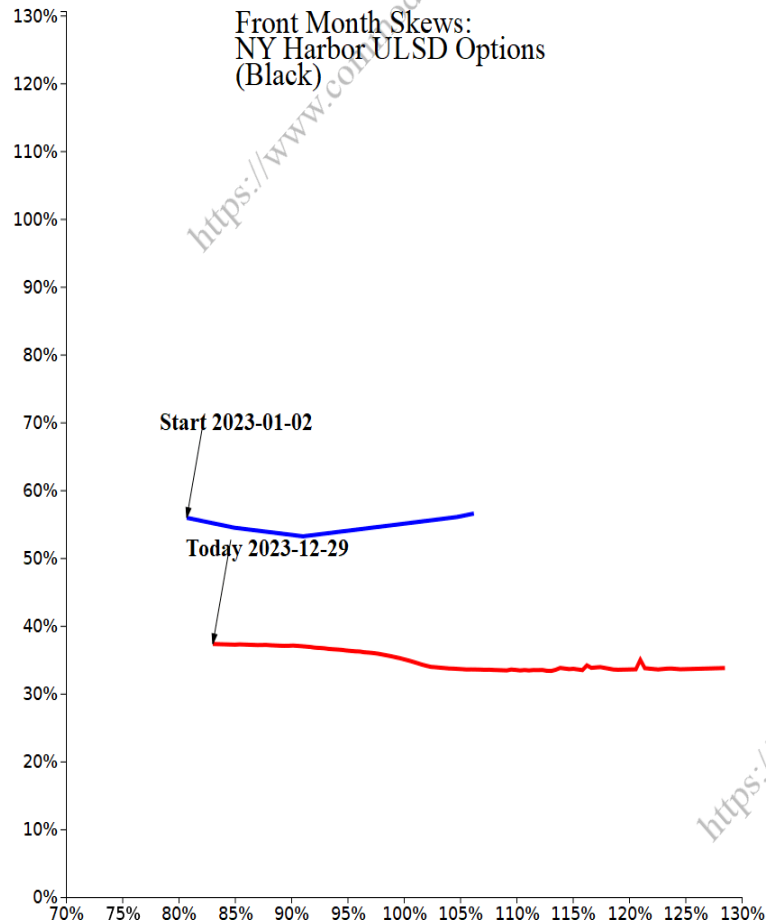
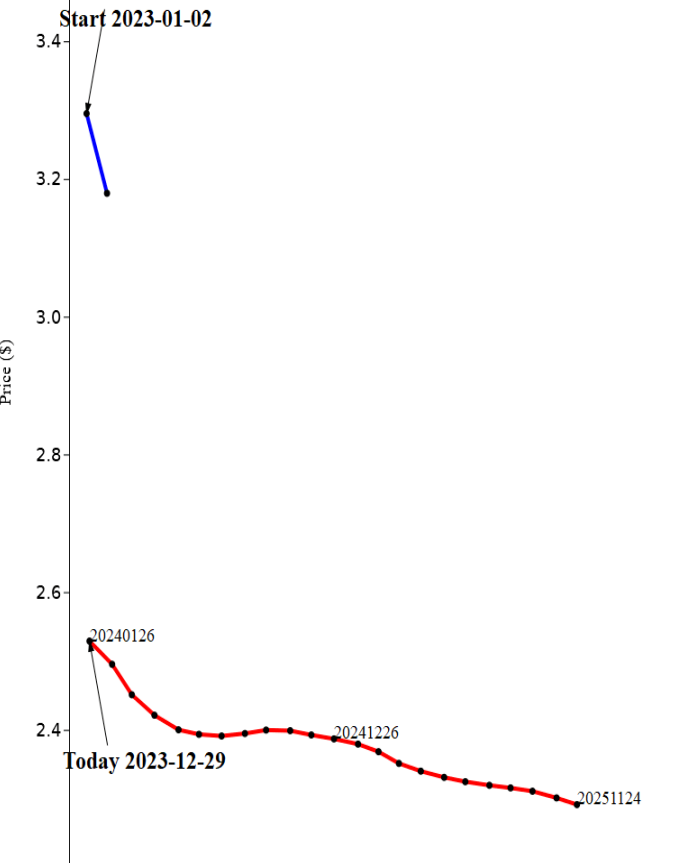
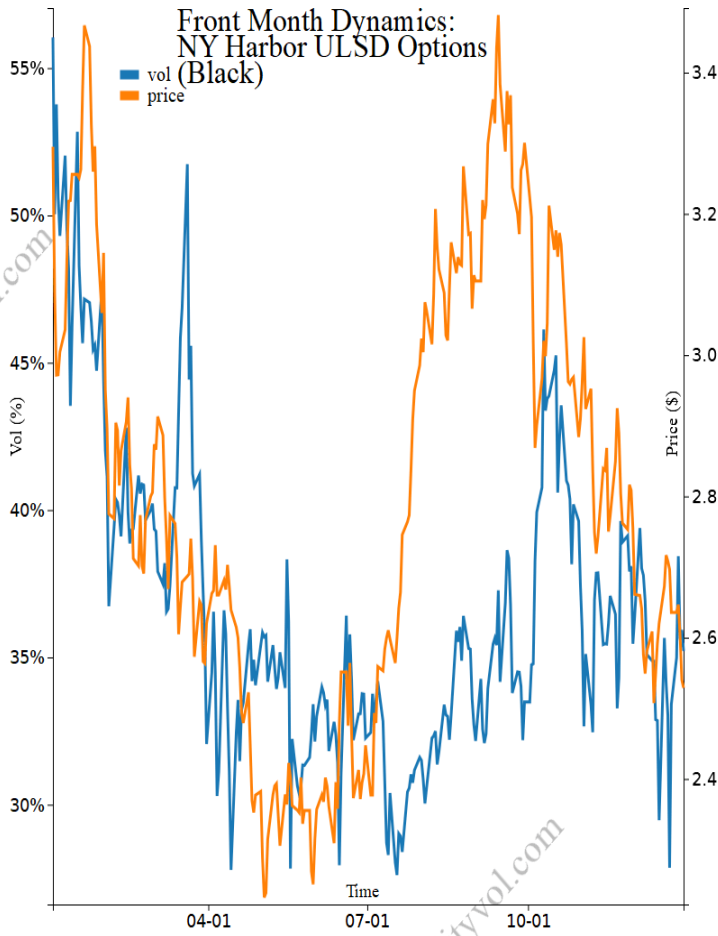
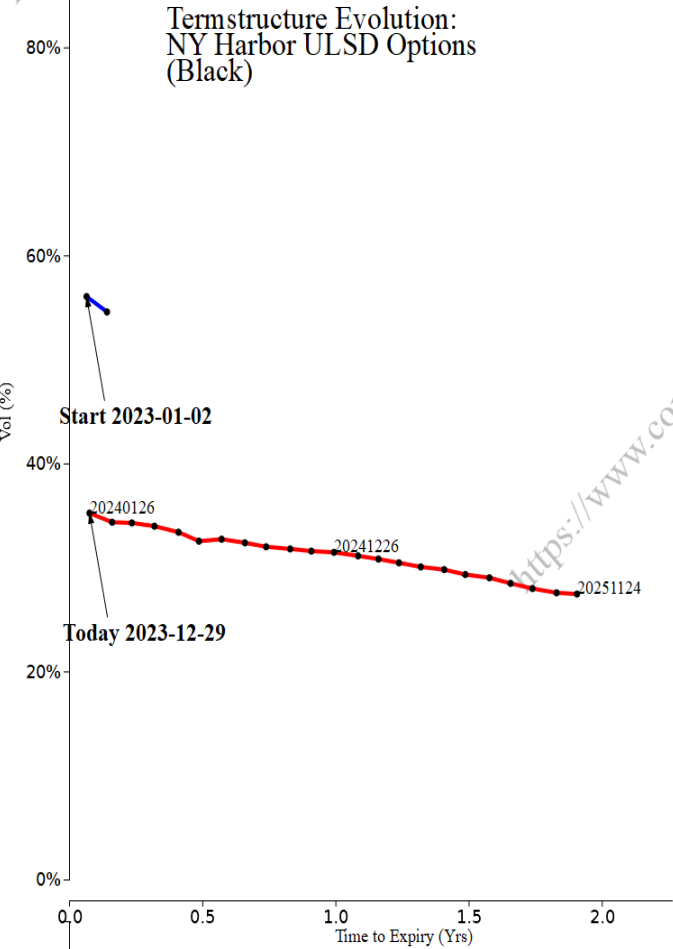
Skews, Termstructures and more

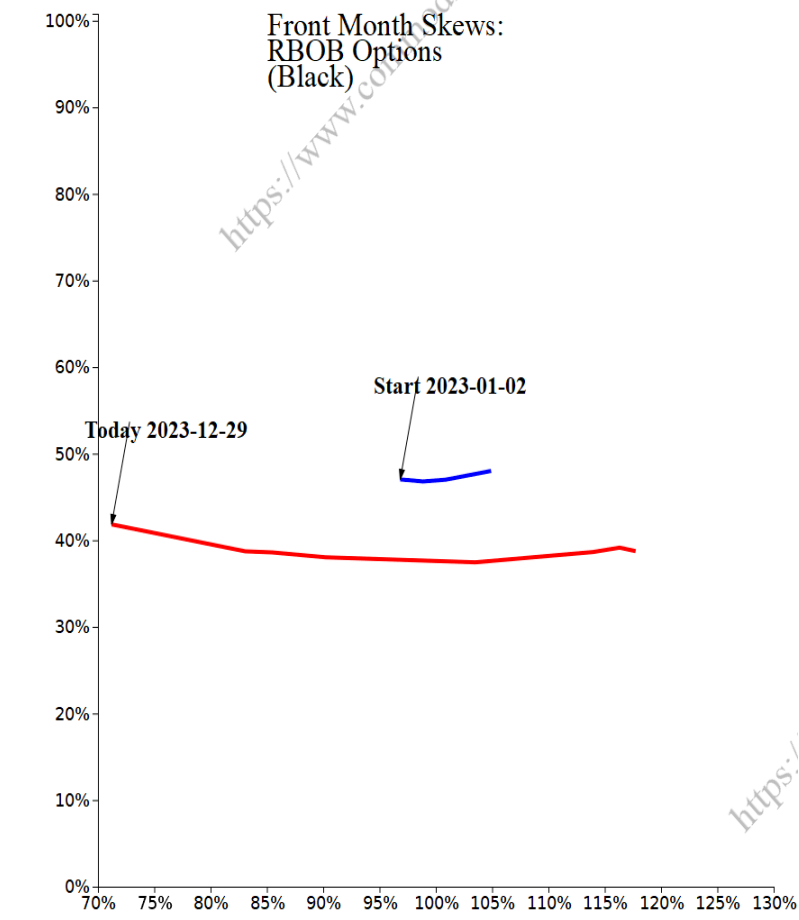
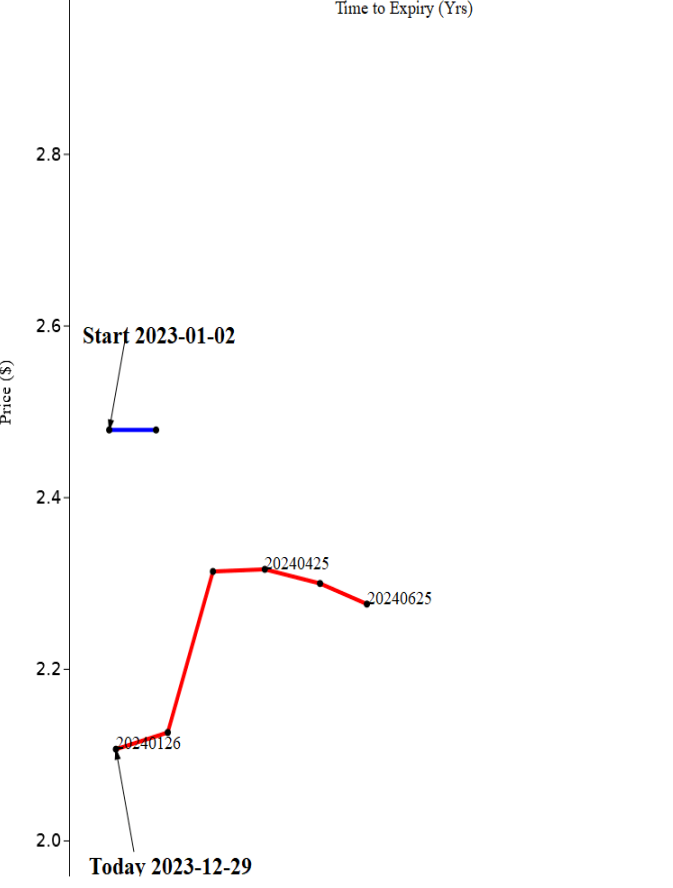
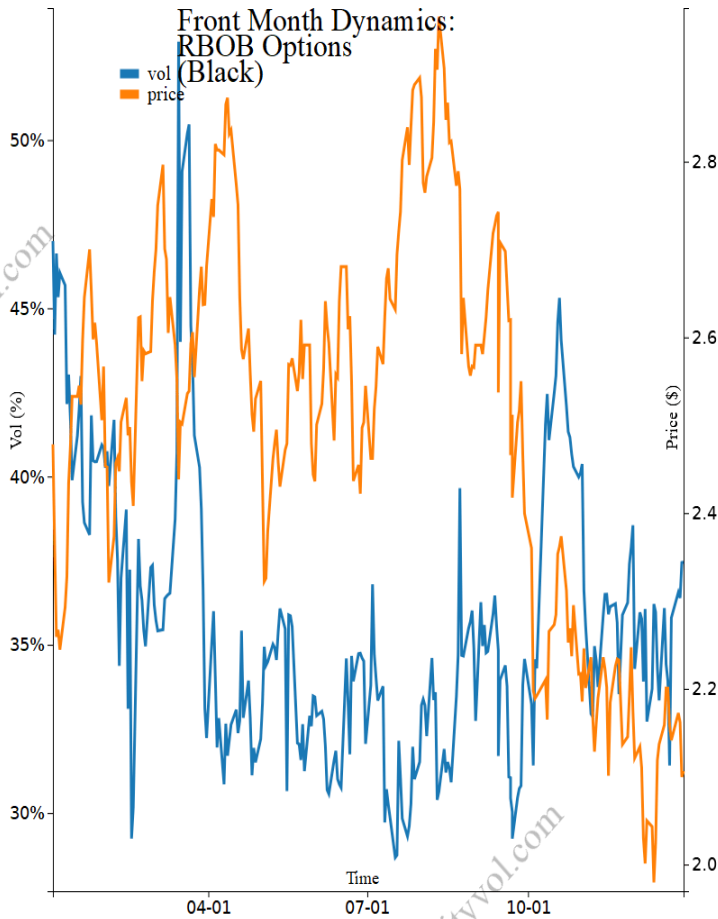
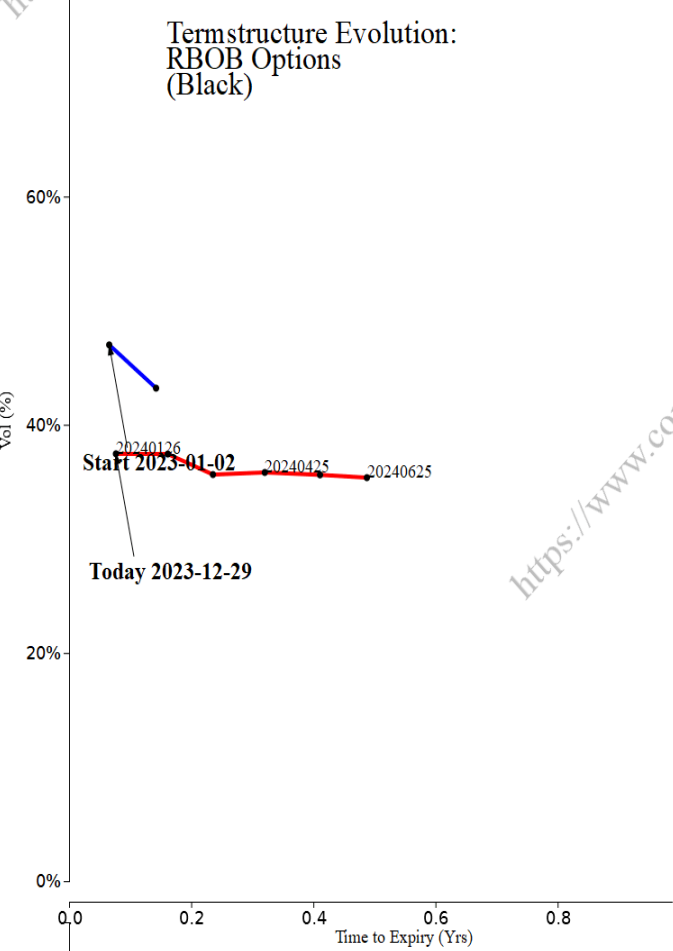
Energy: Crude and Derivatives

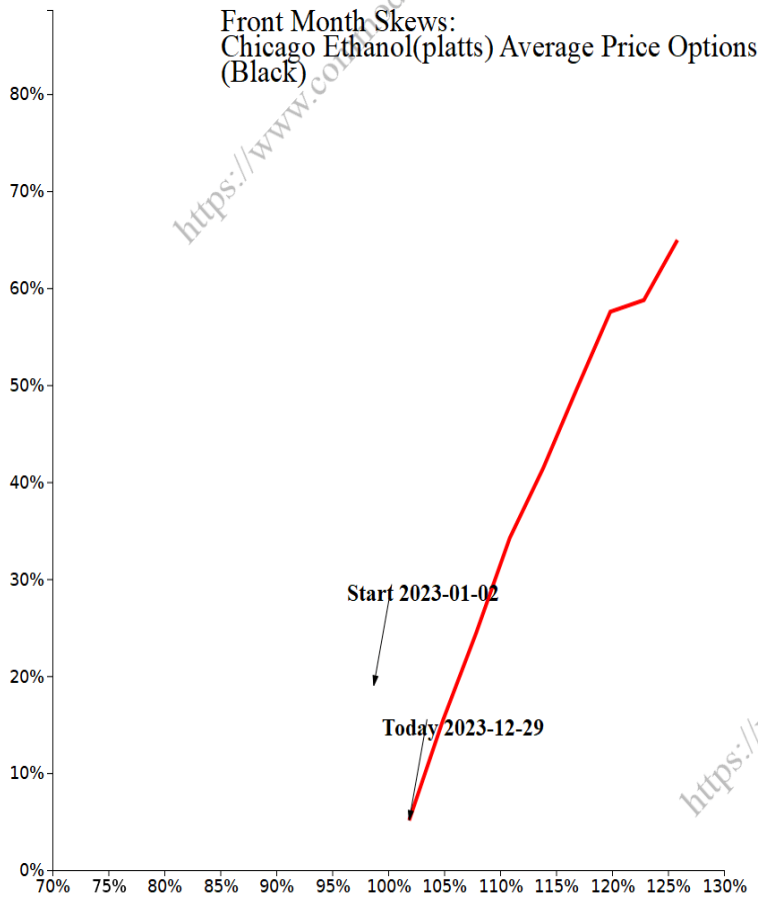
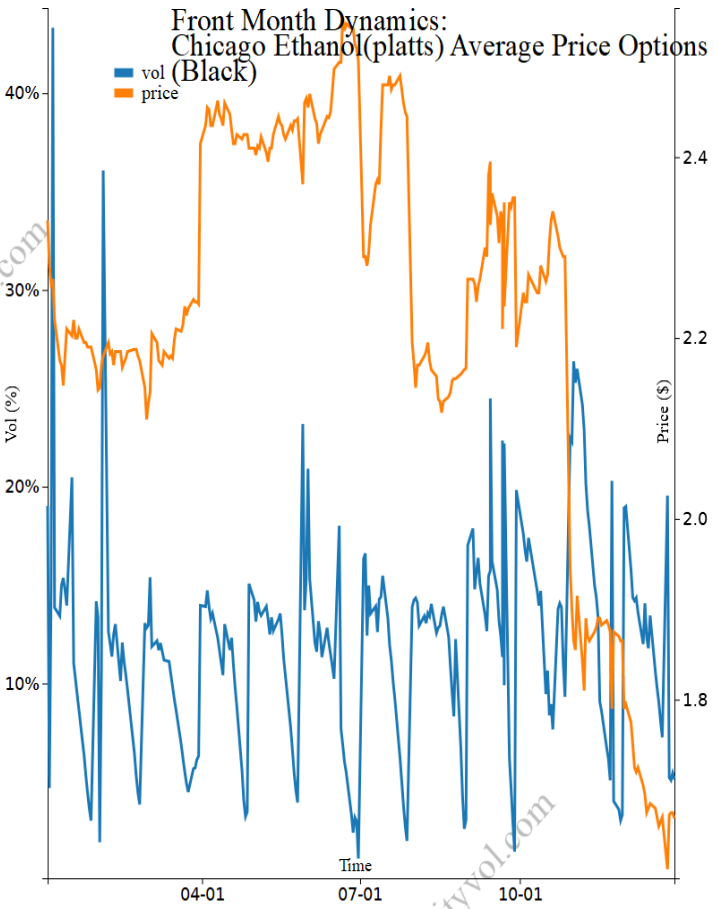
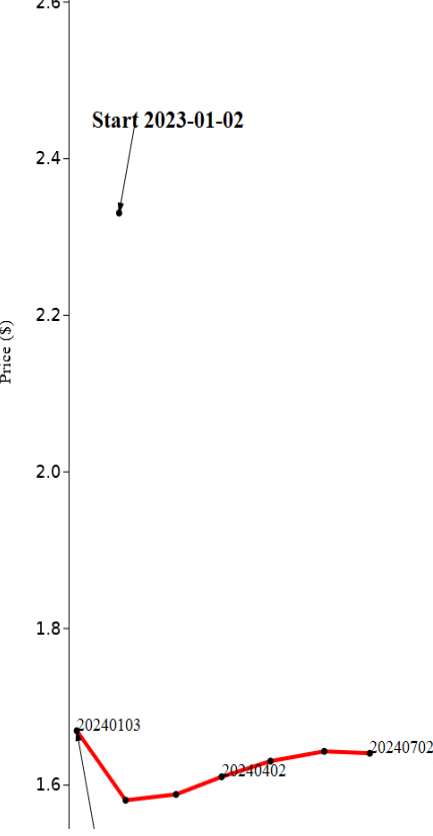
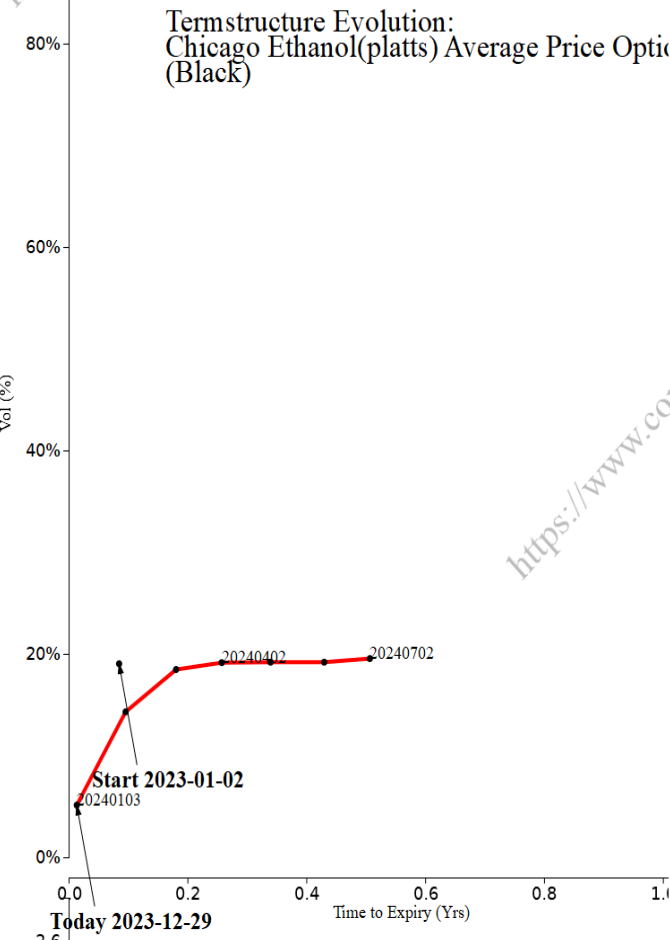




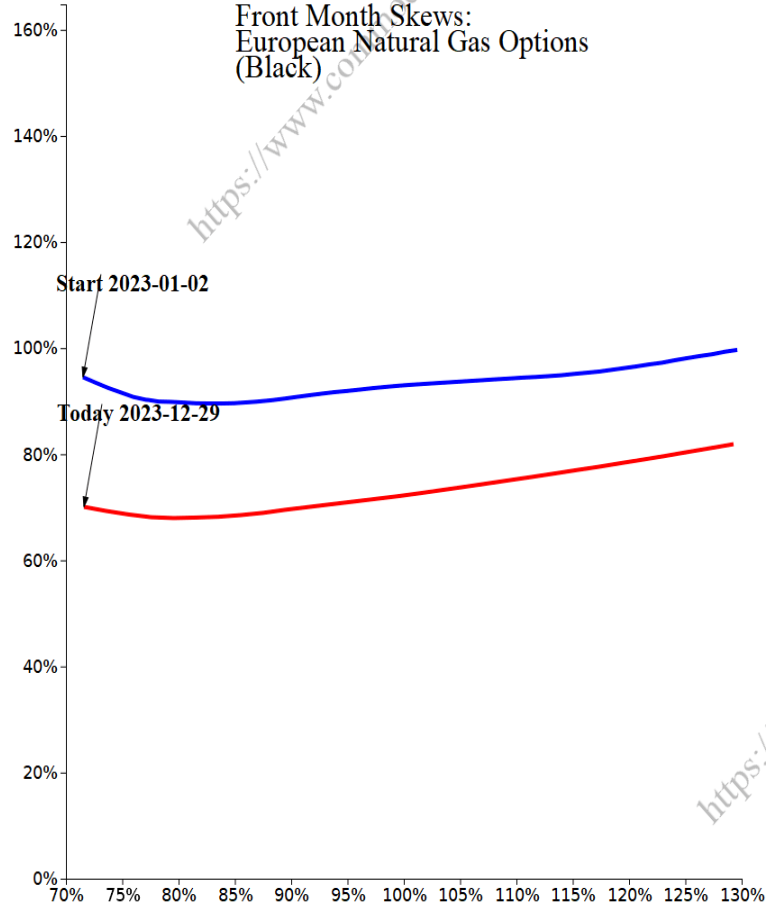
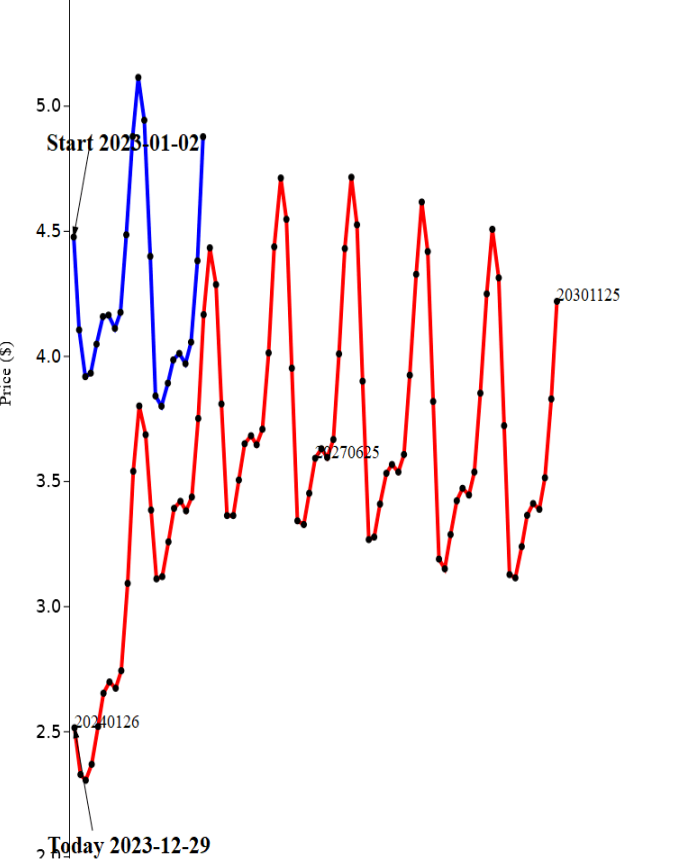
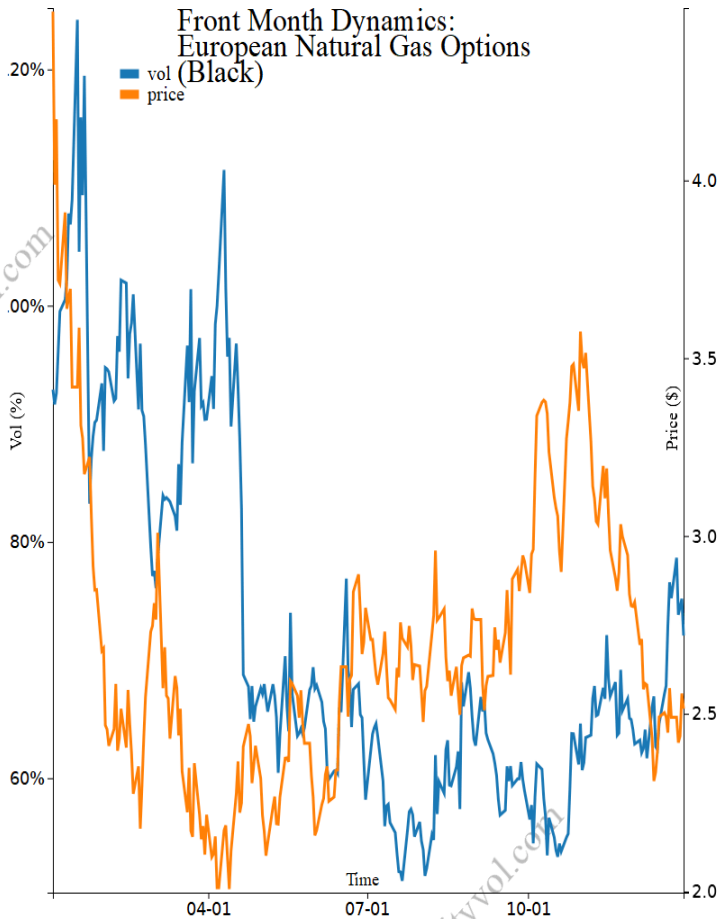
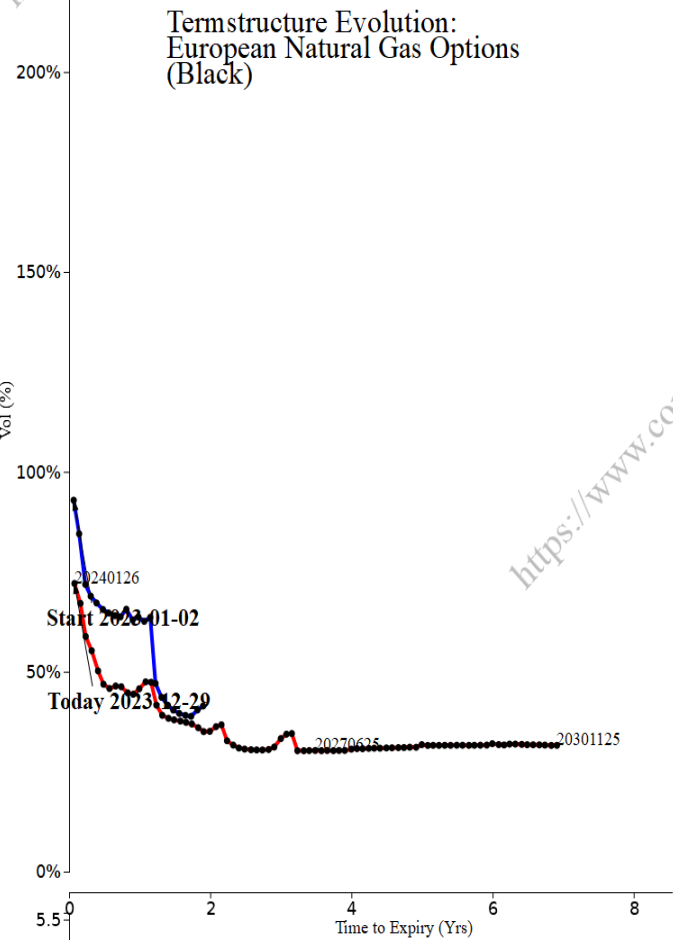


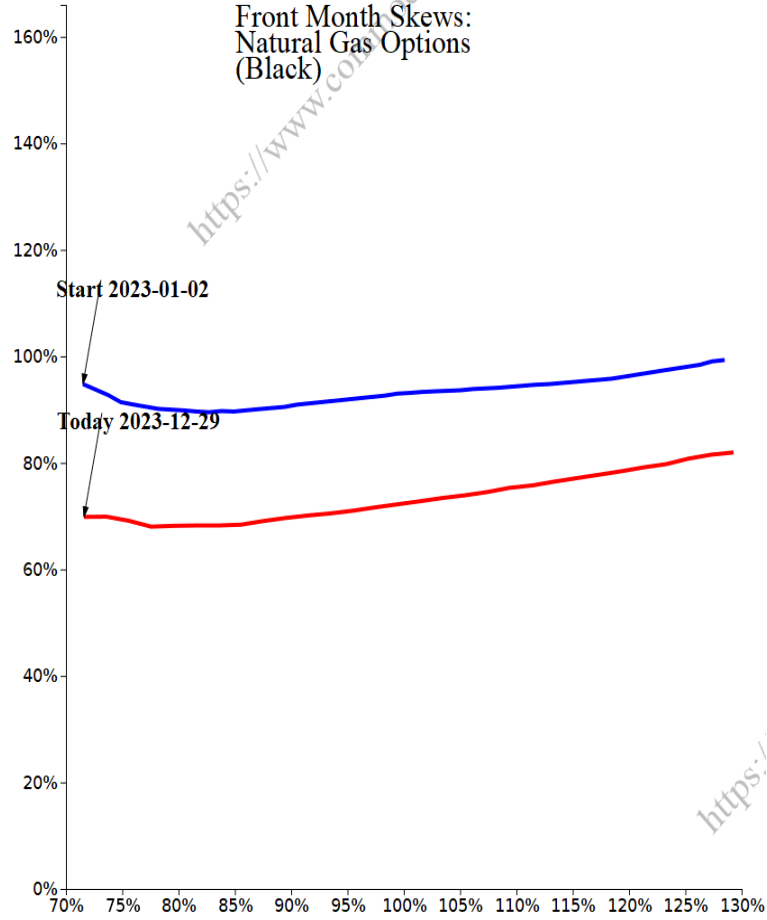
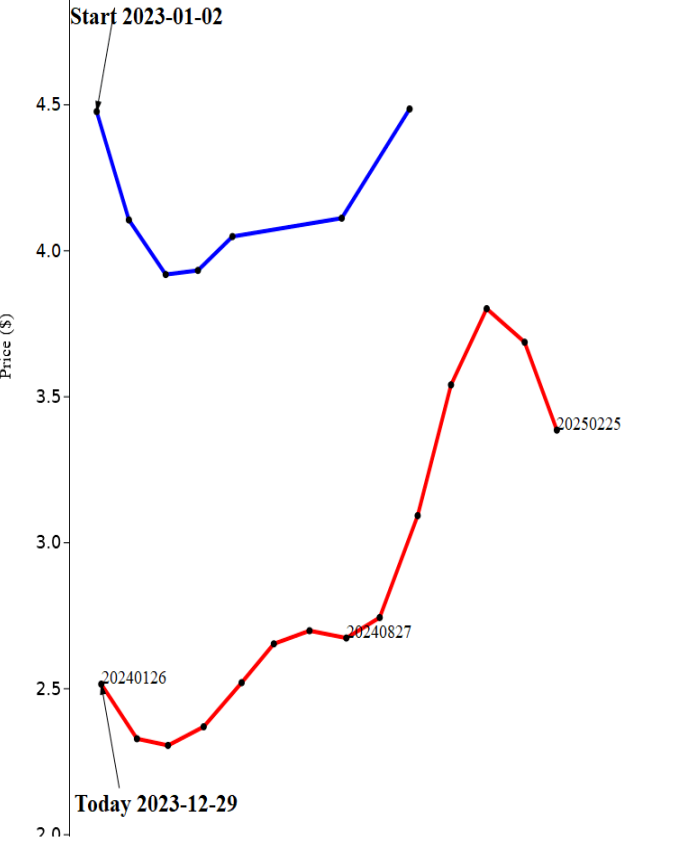
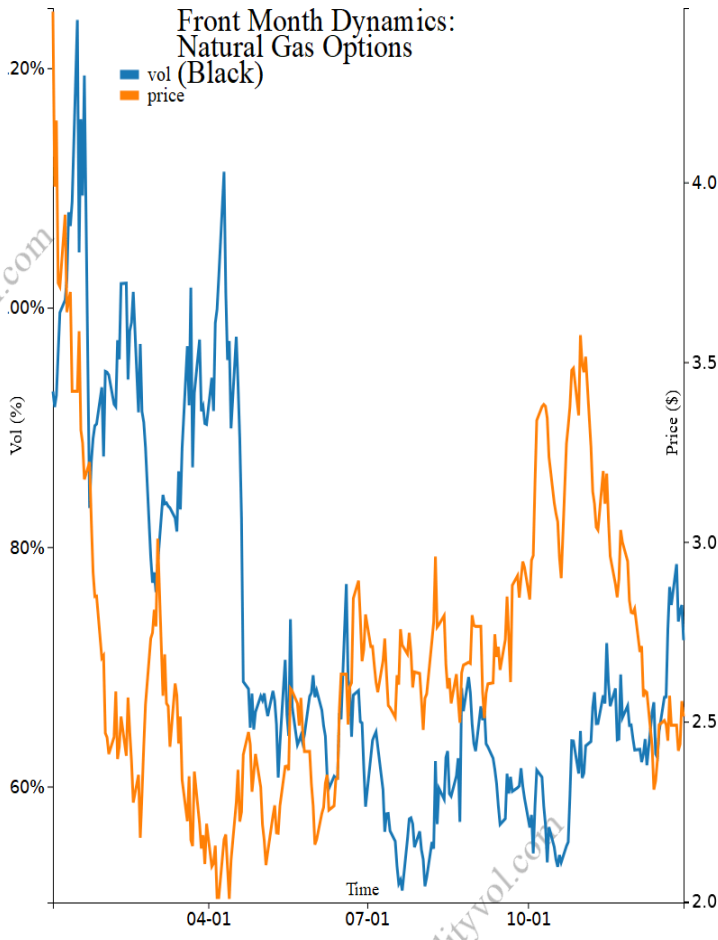
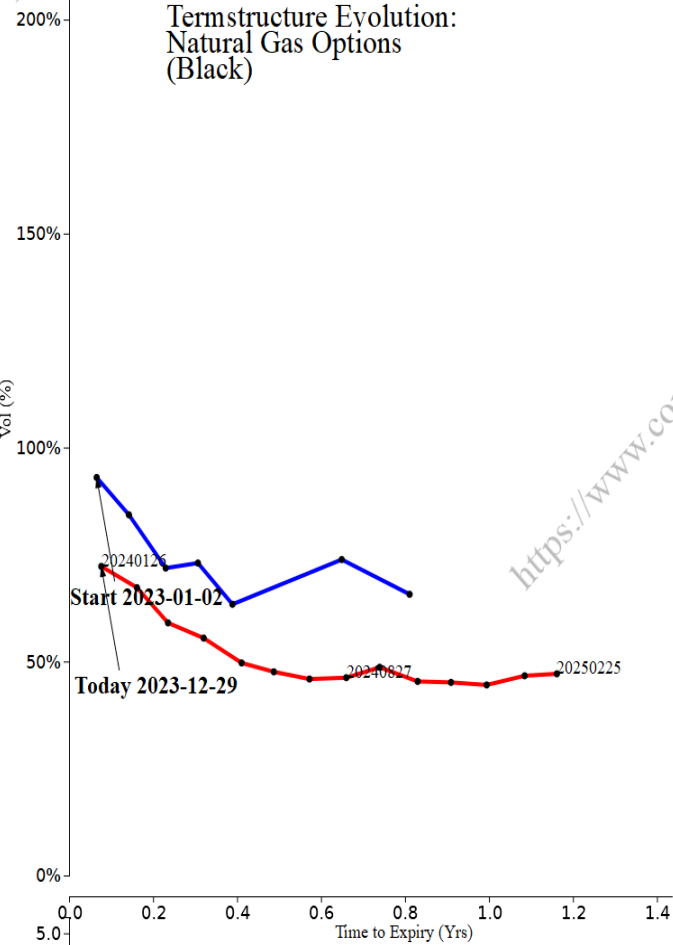


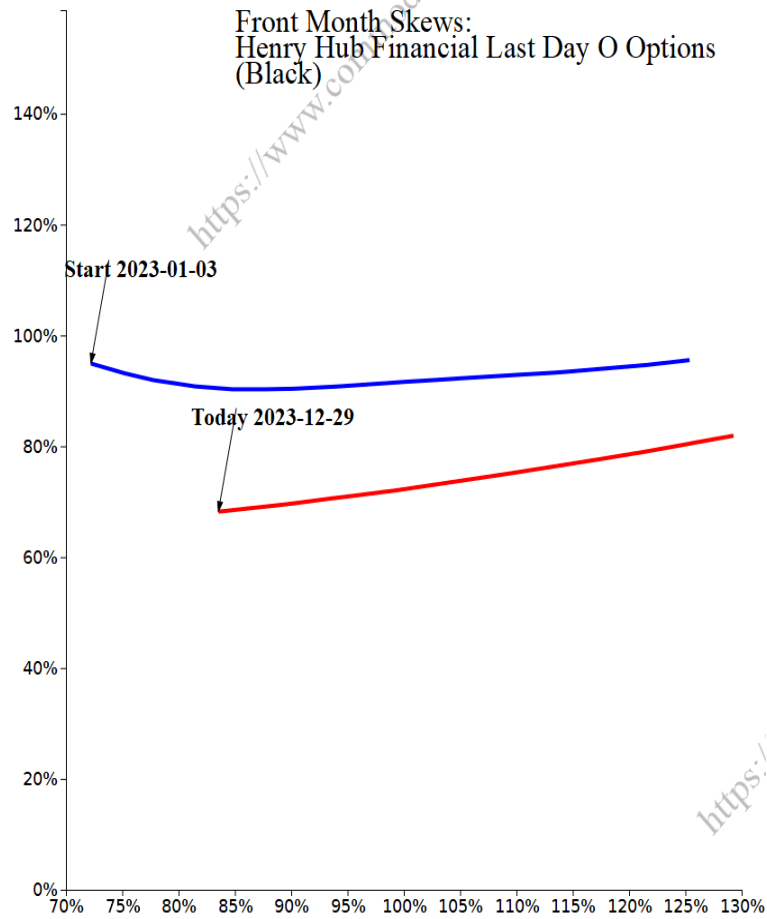
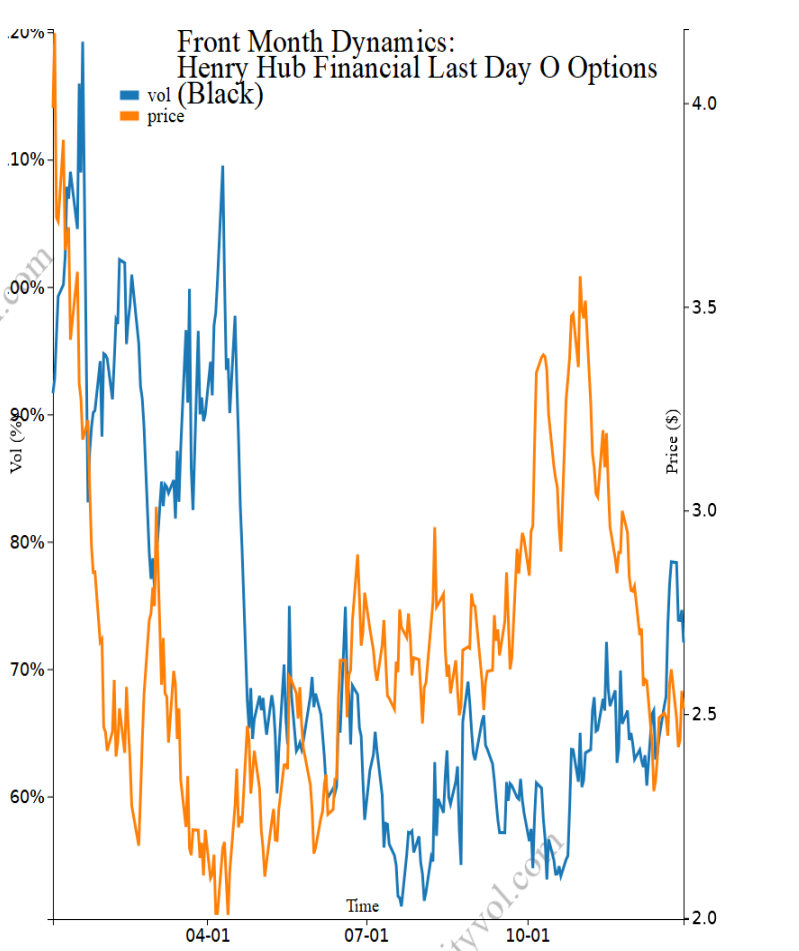
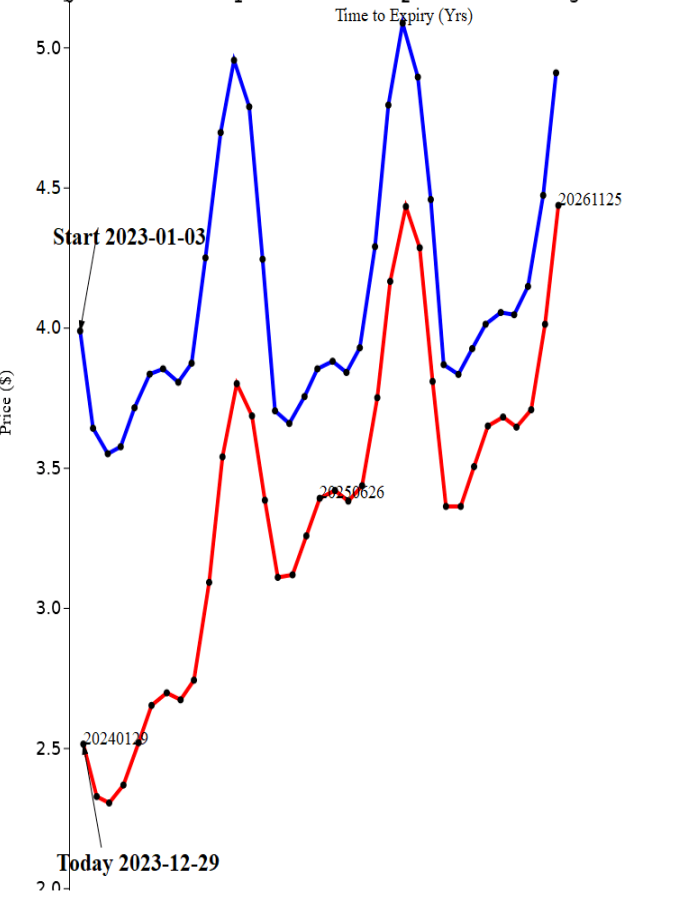
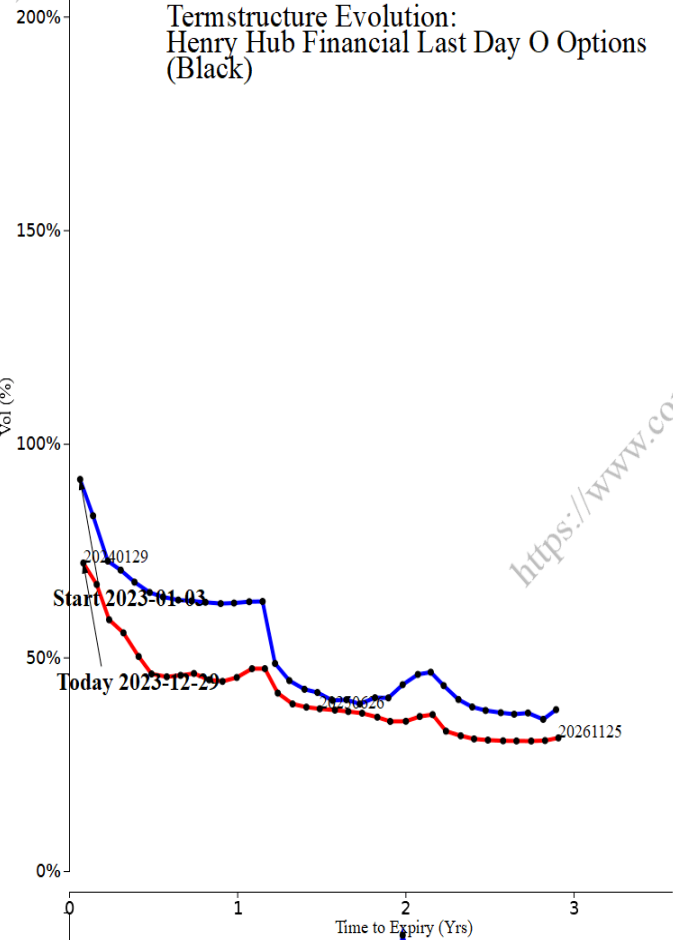




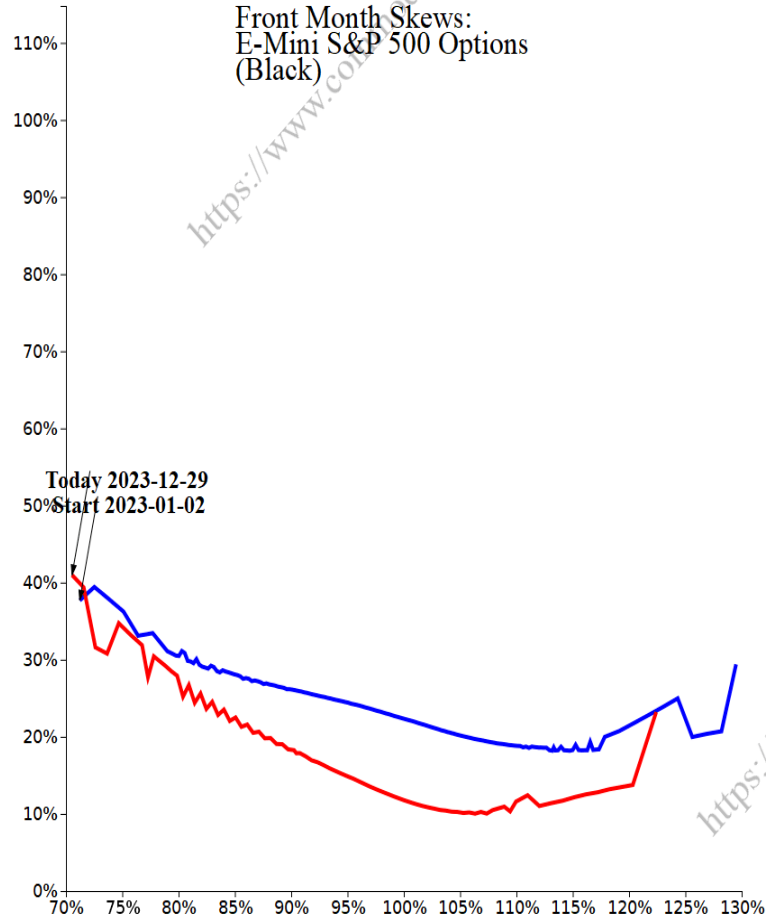
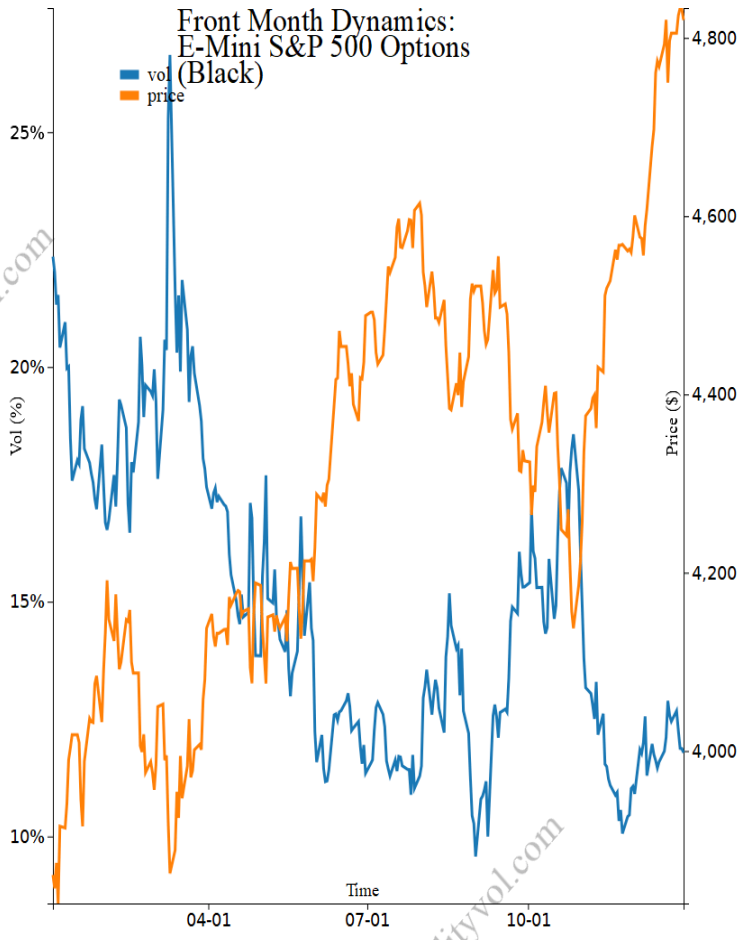
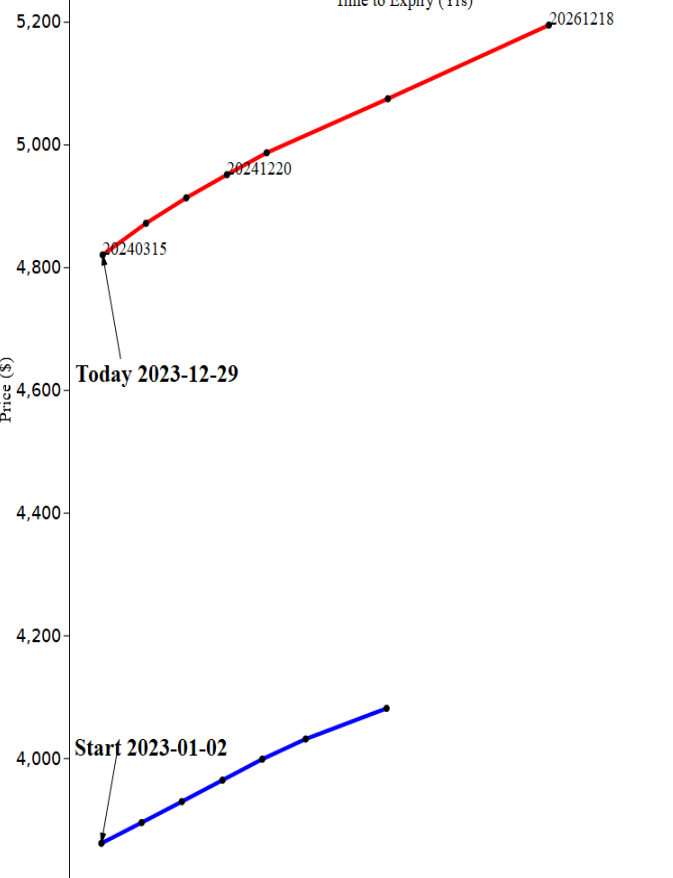
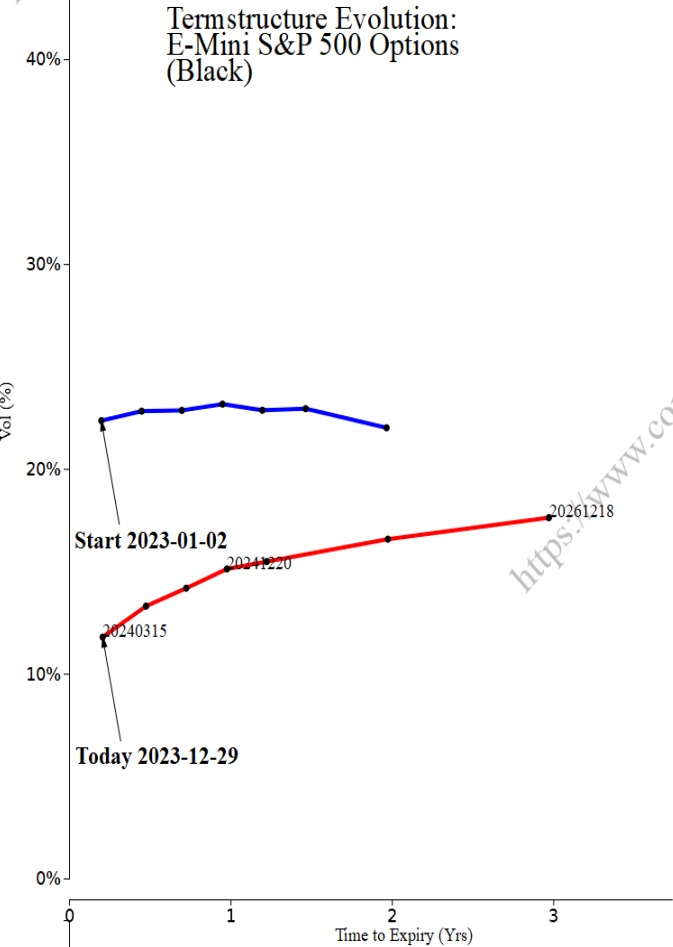
Energy: Natural Gas

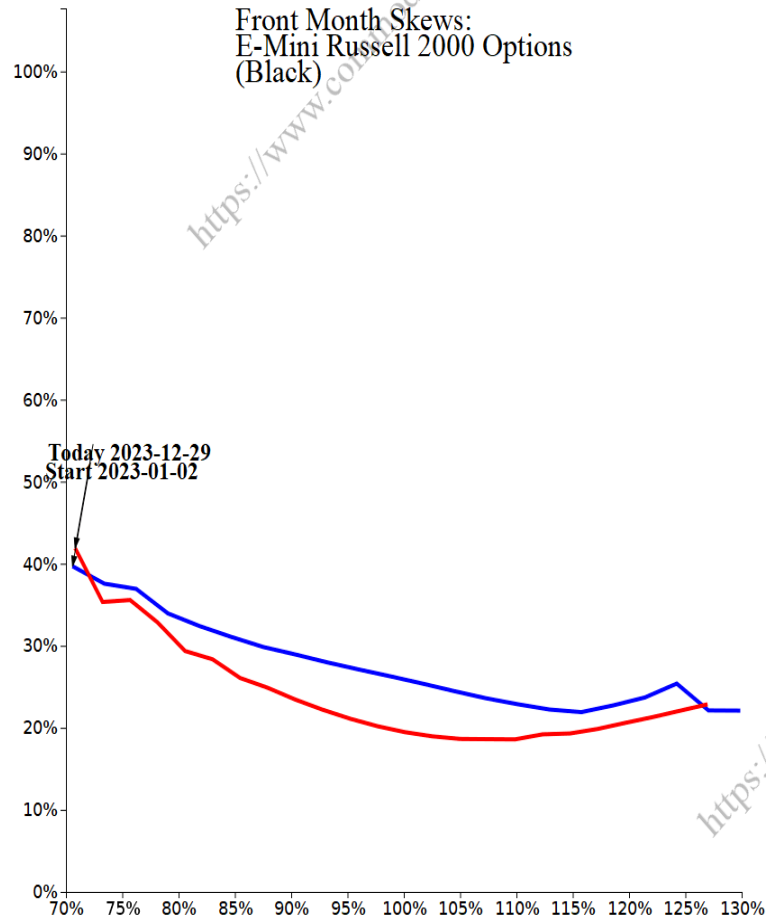
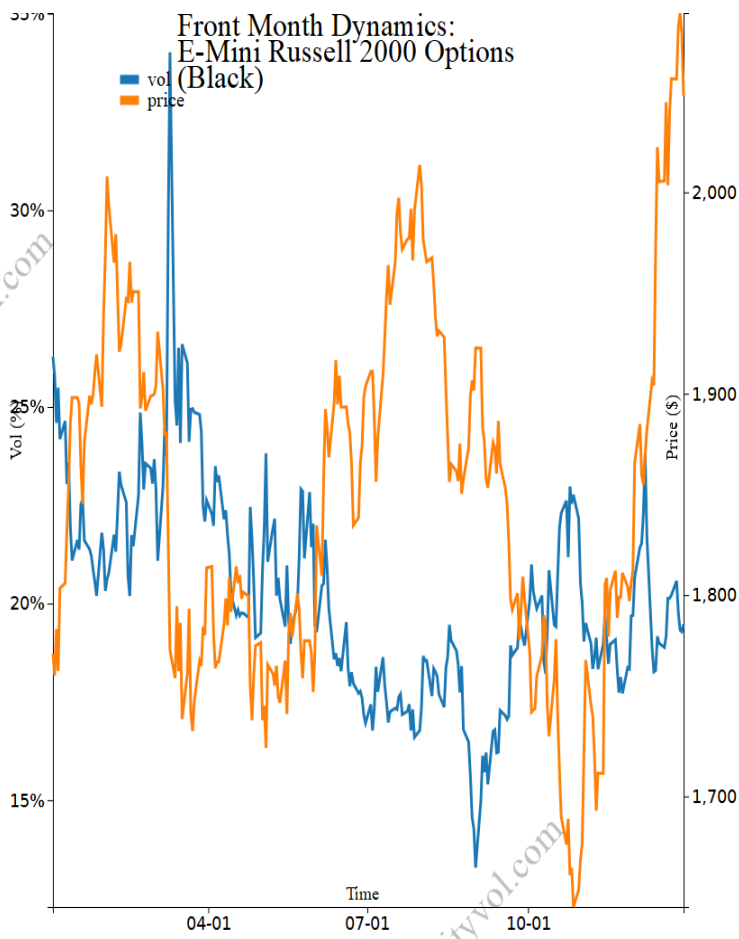
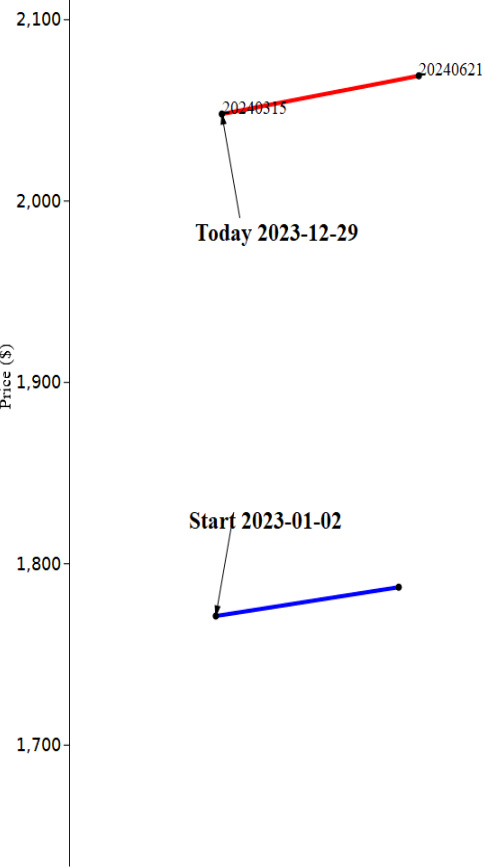
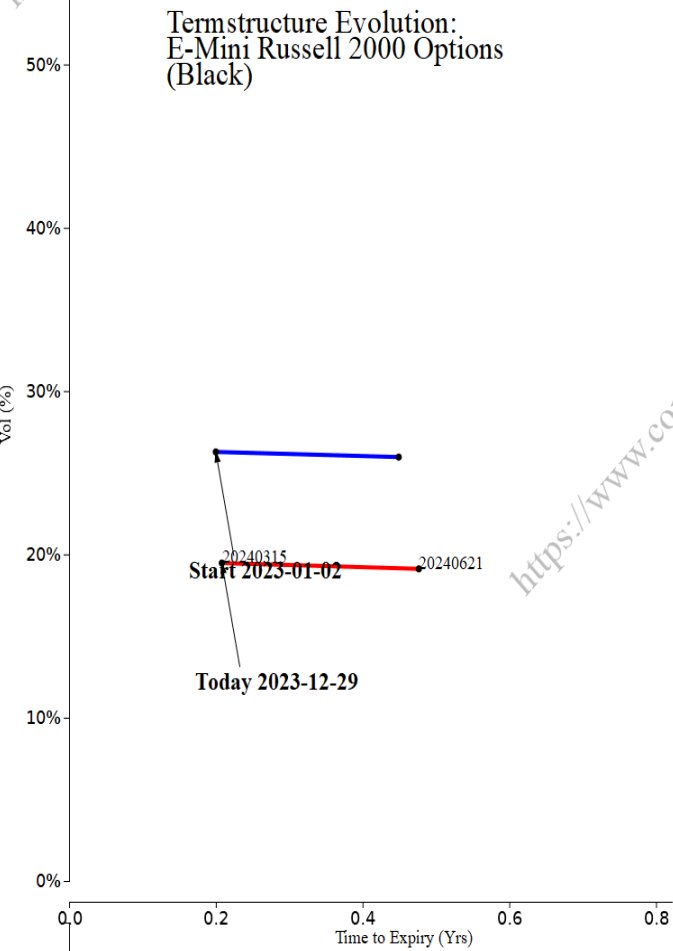


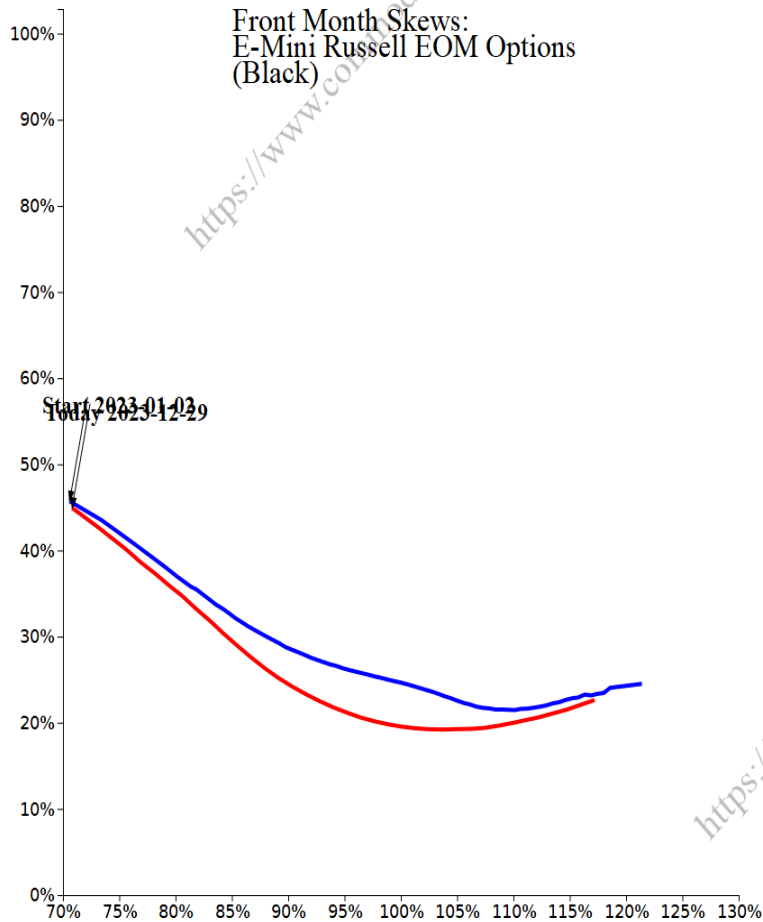
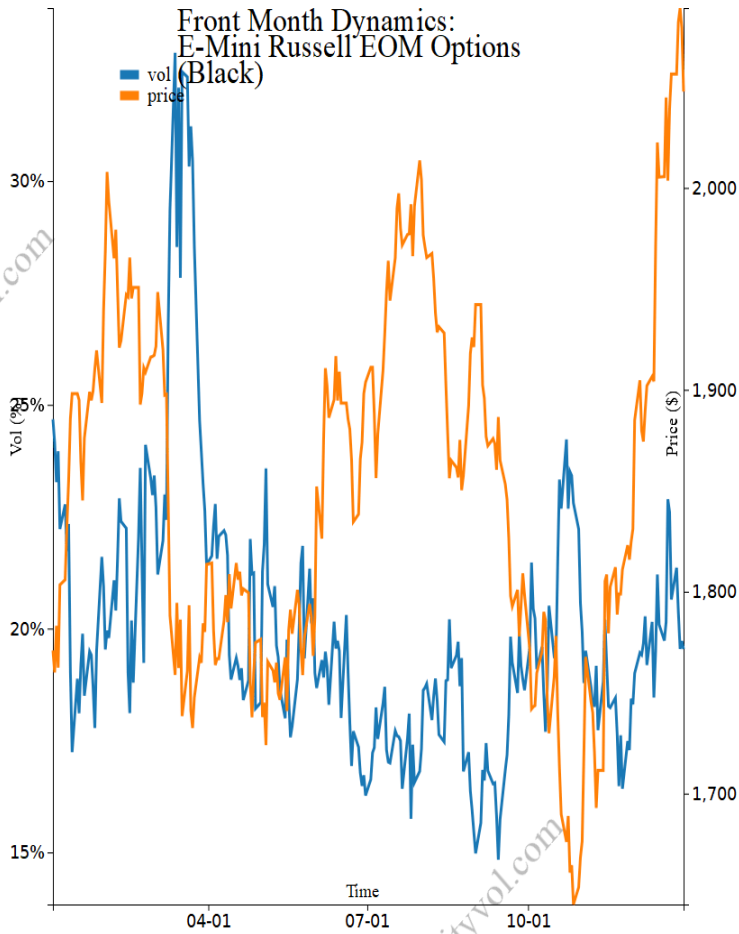
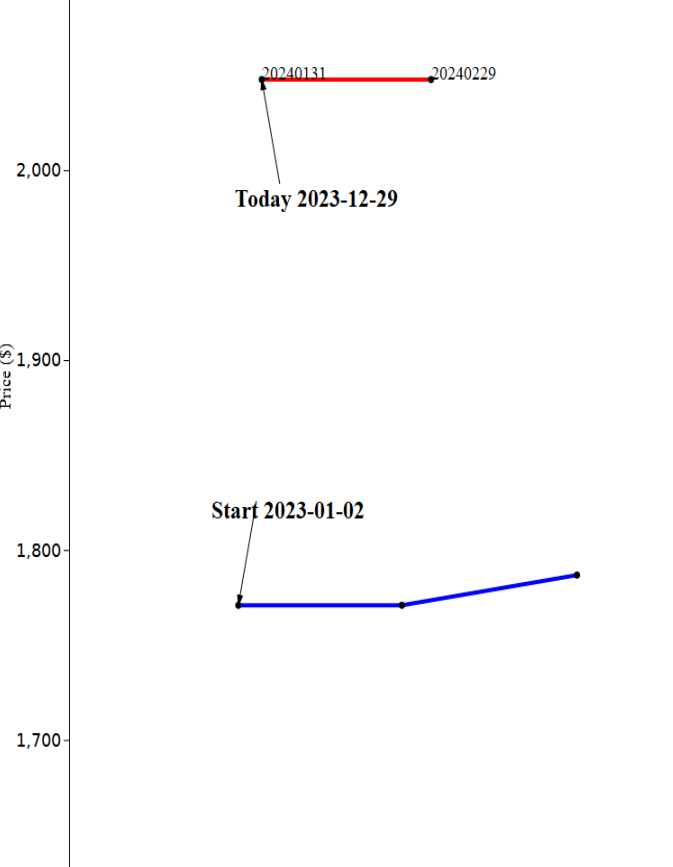
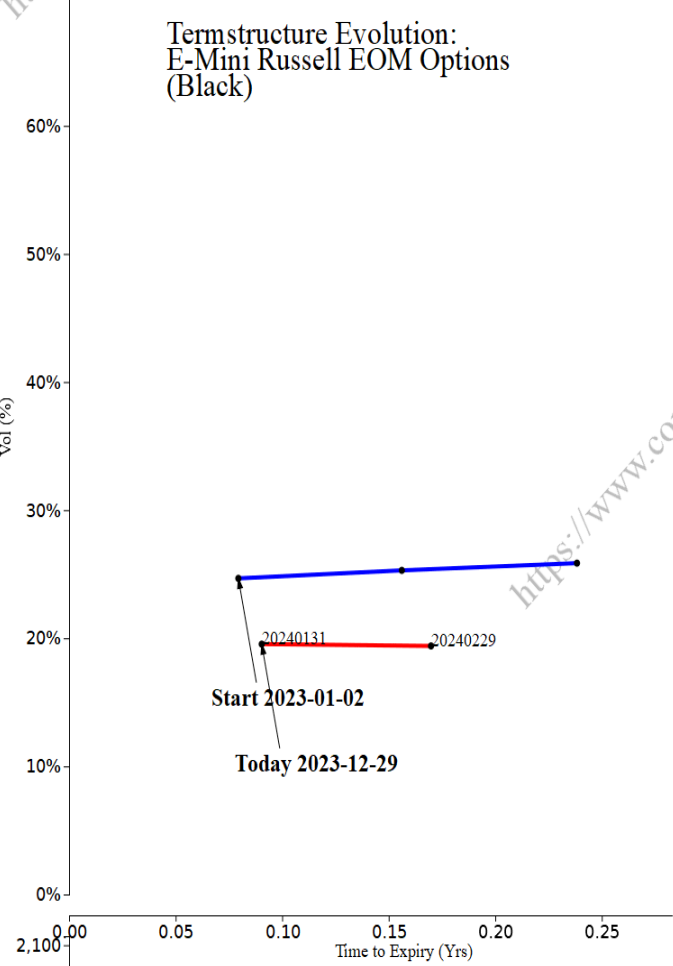


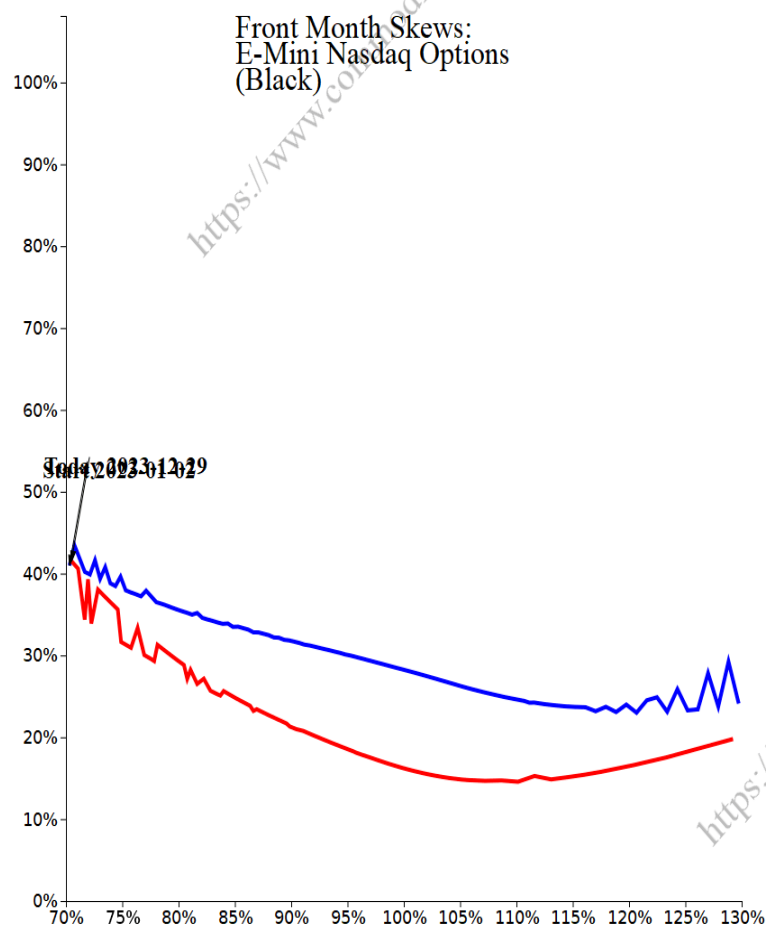
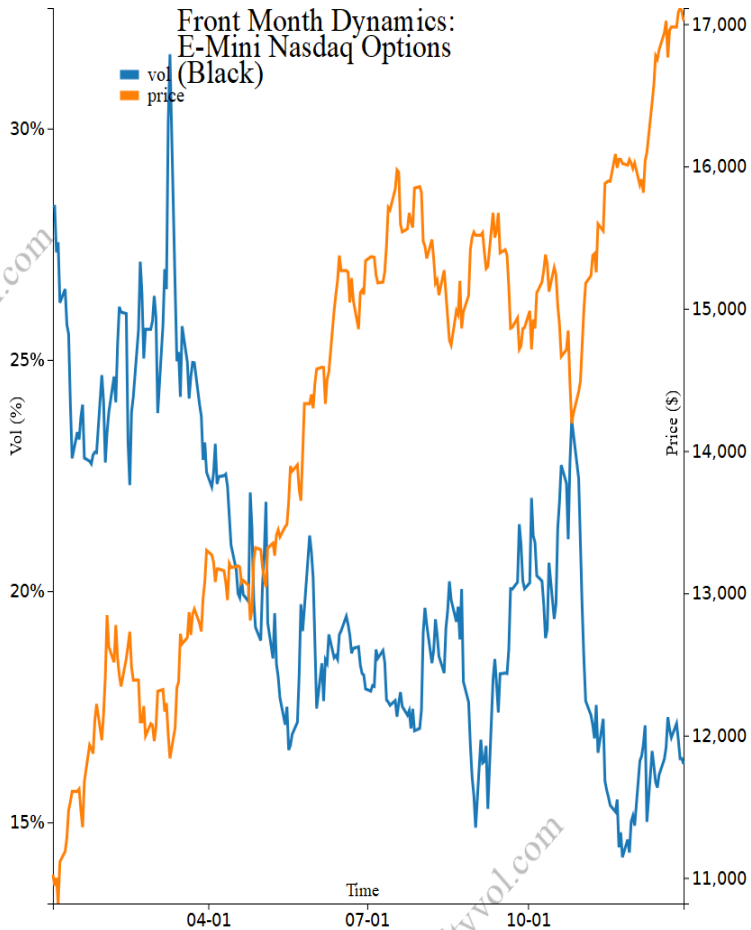
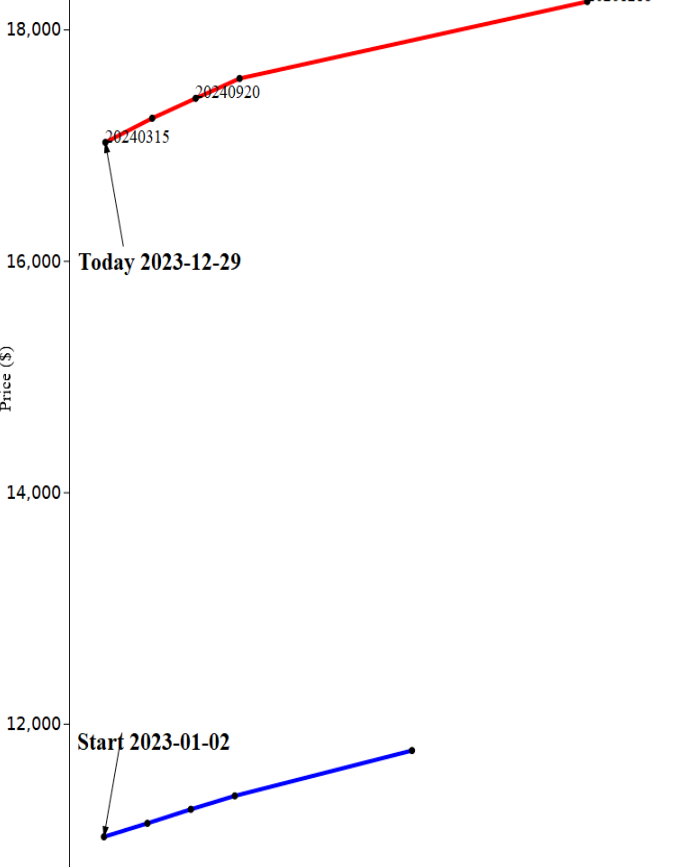
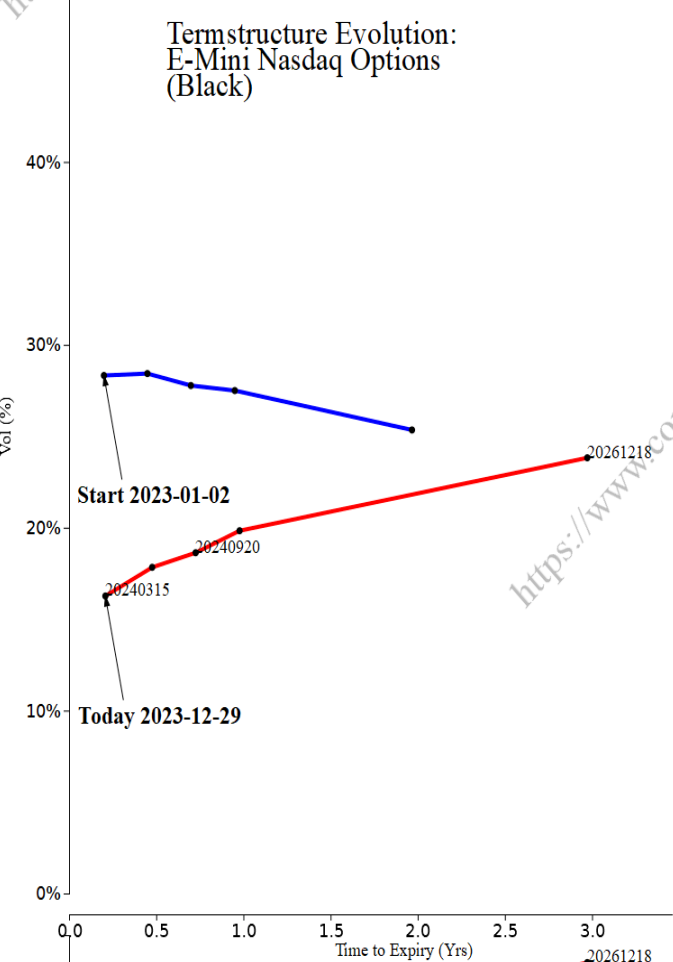


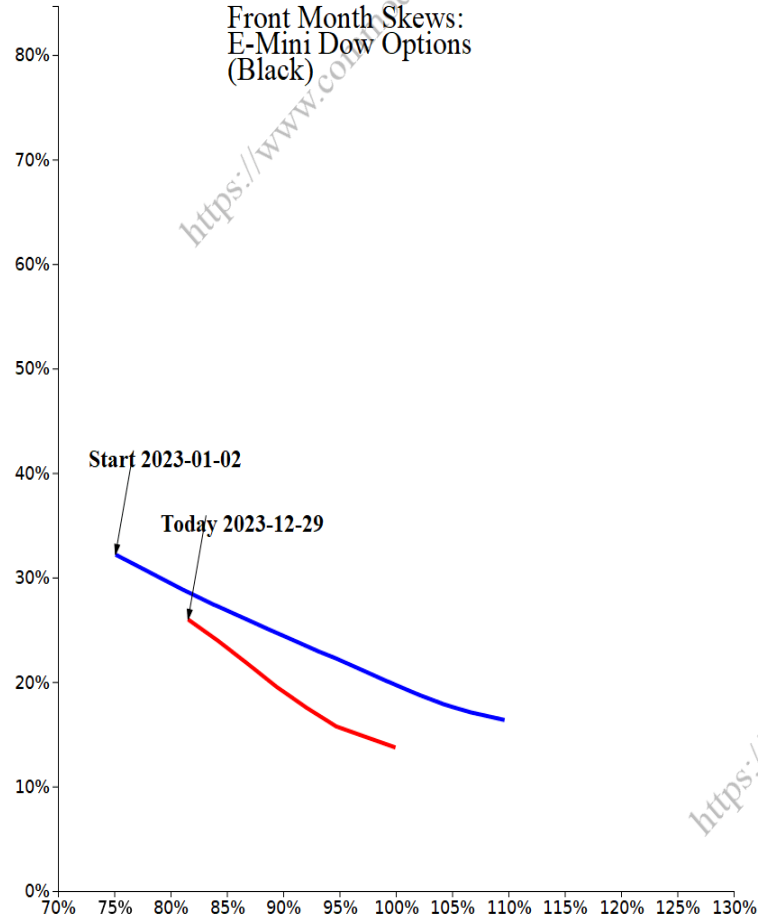
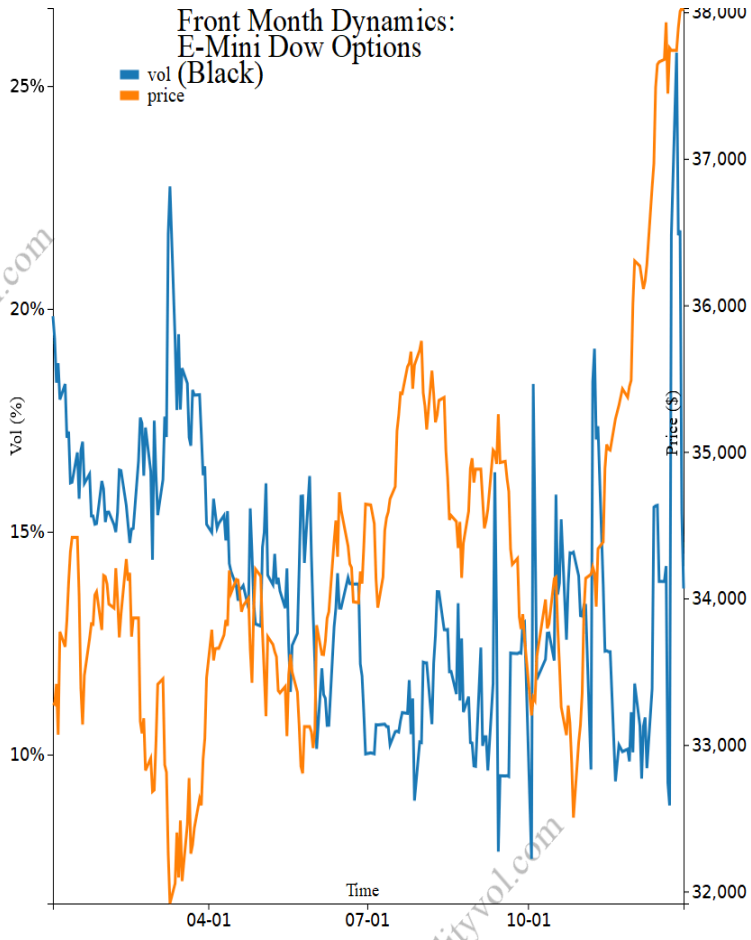
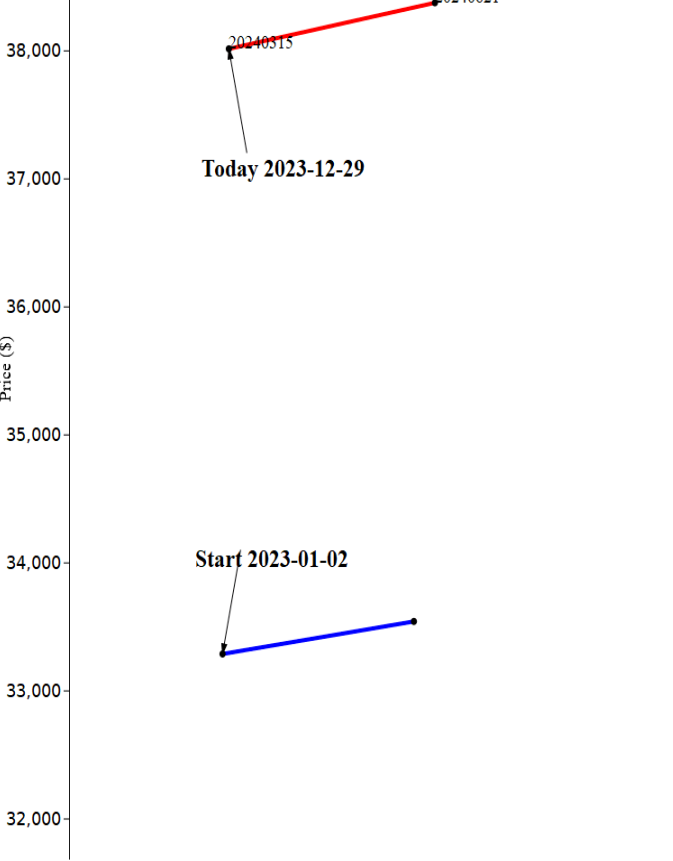
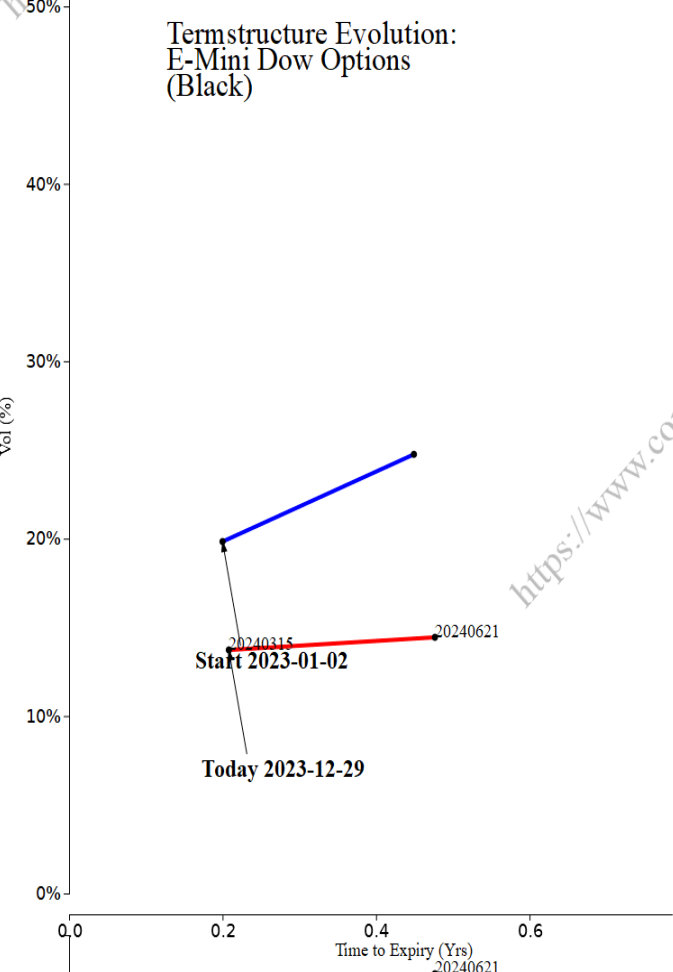
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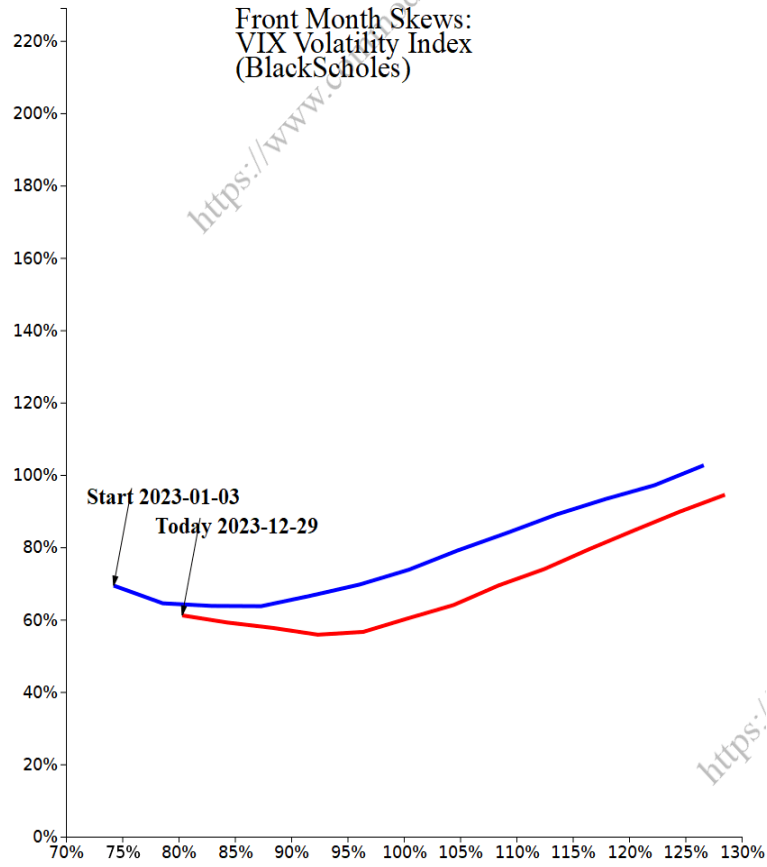
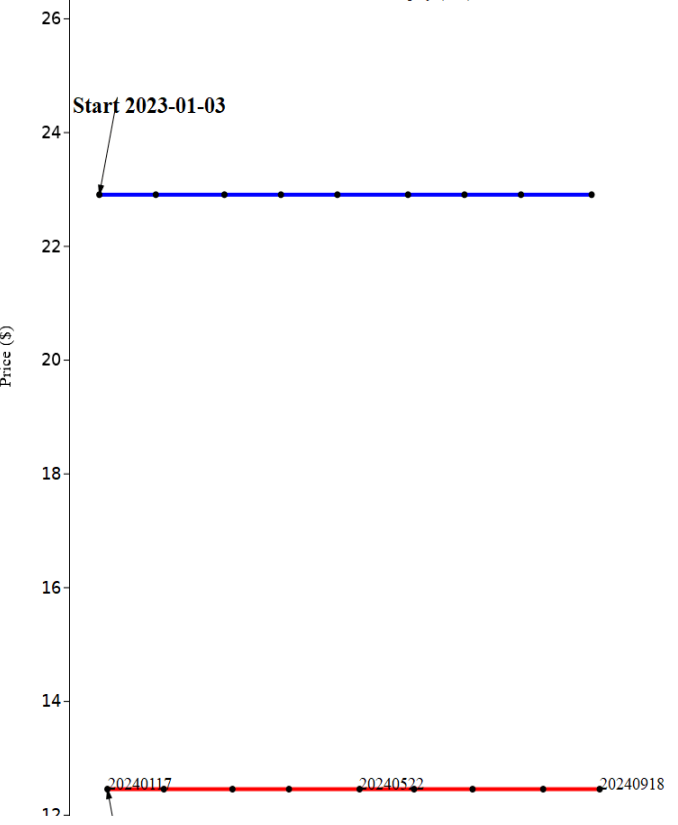
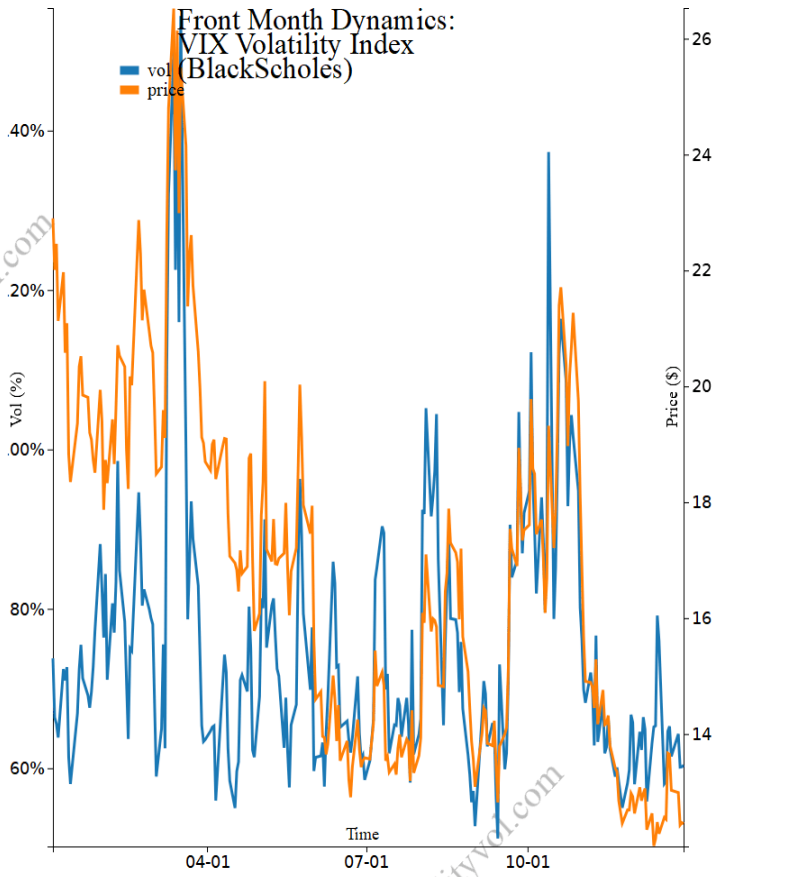
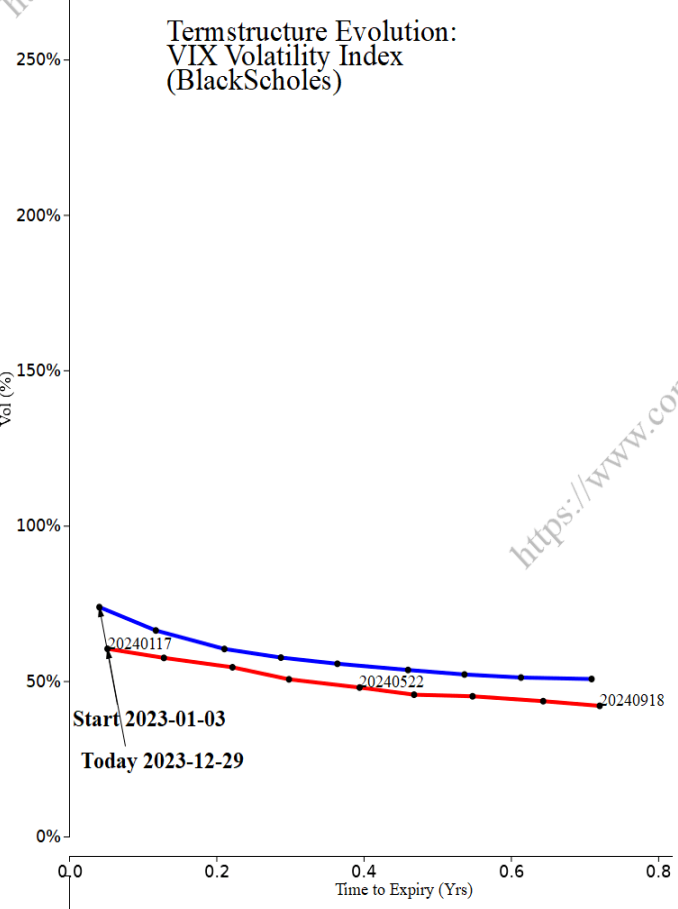




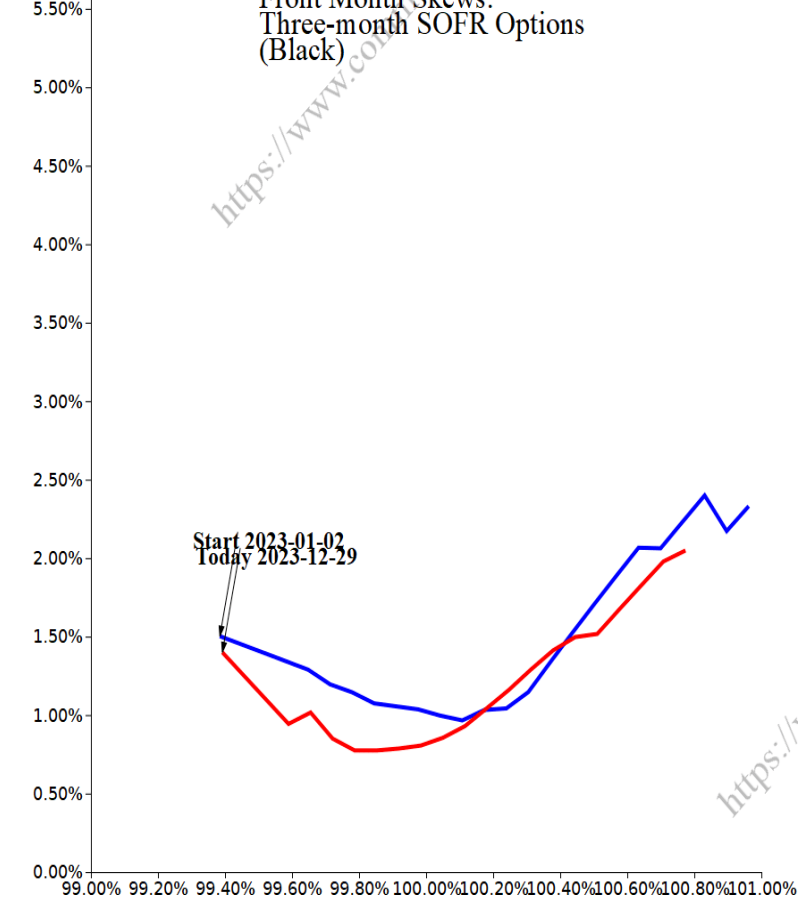
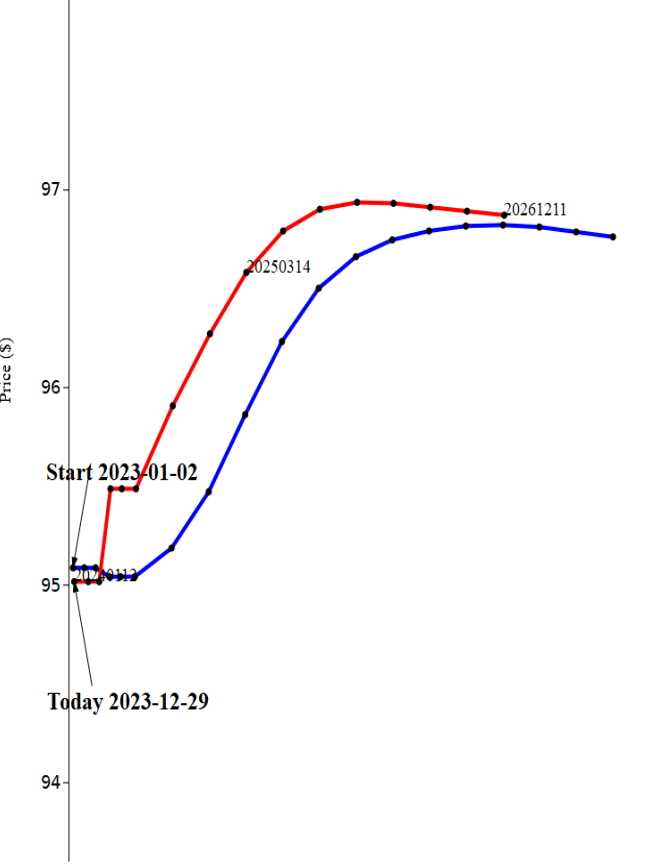
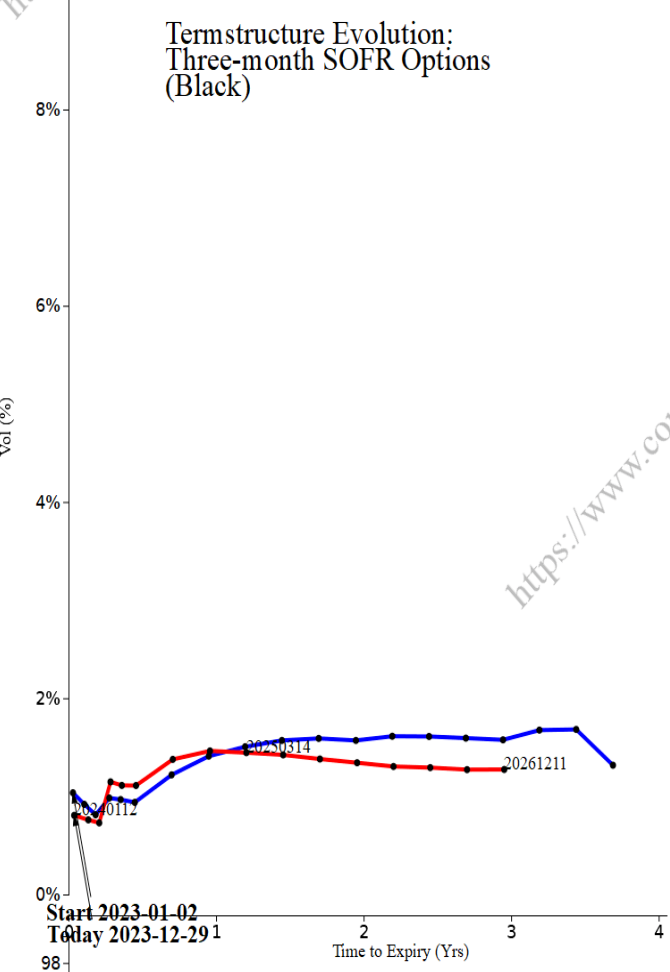


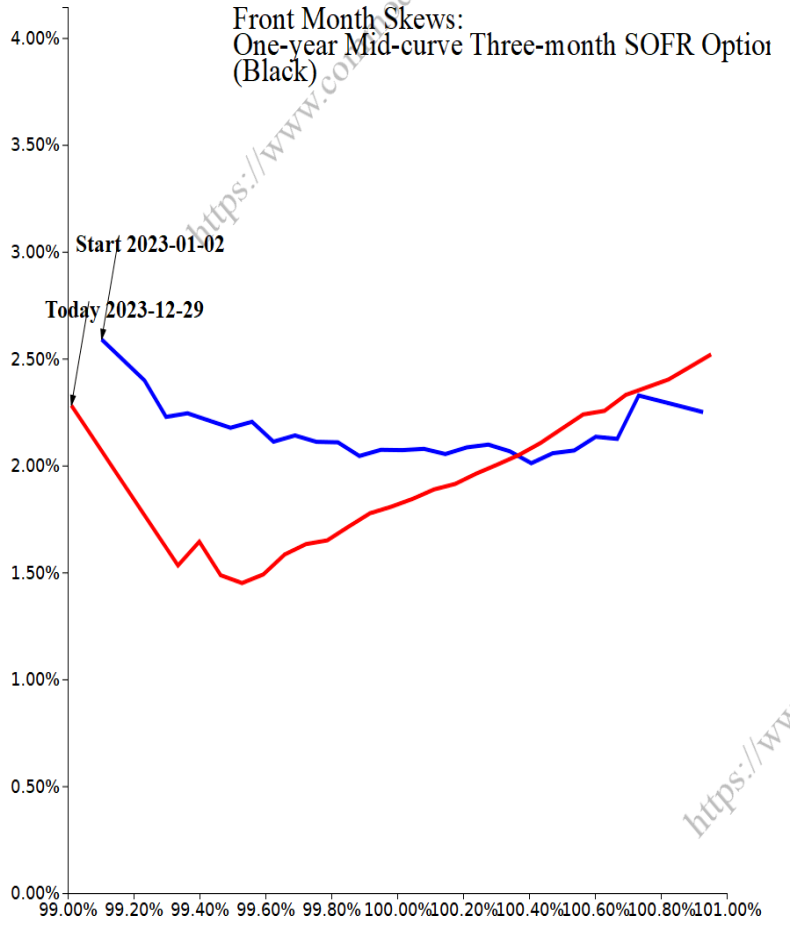
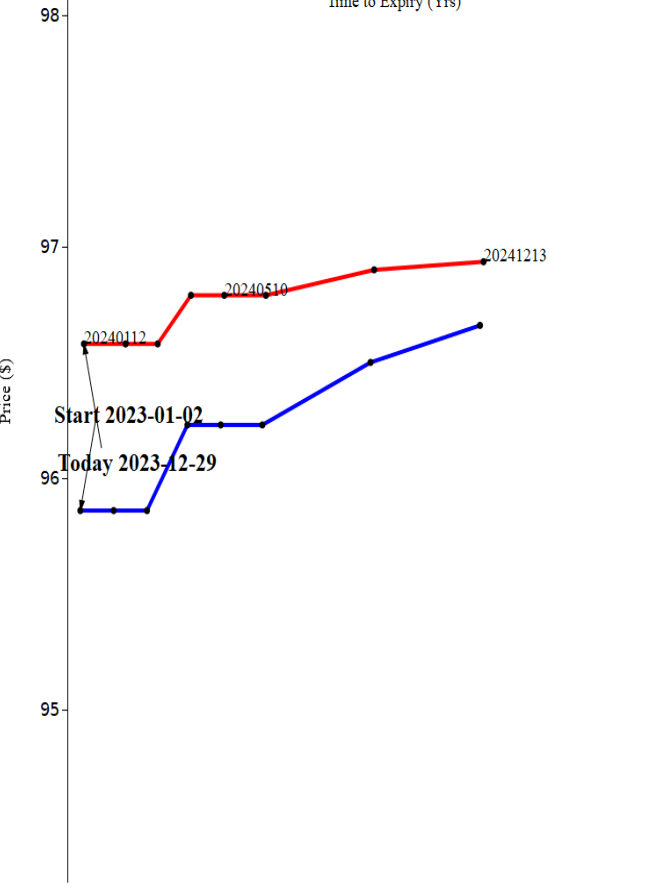
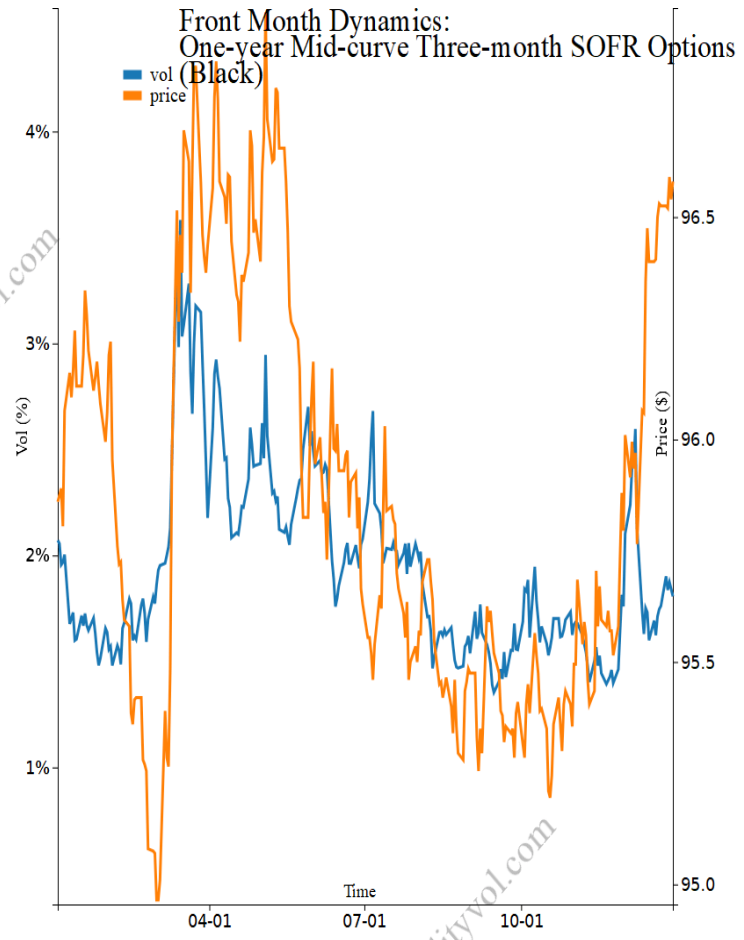
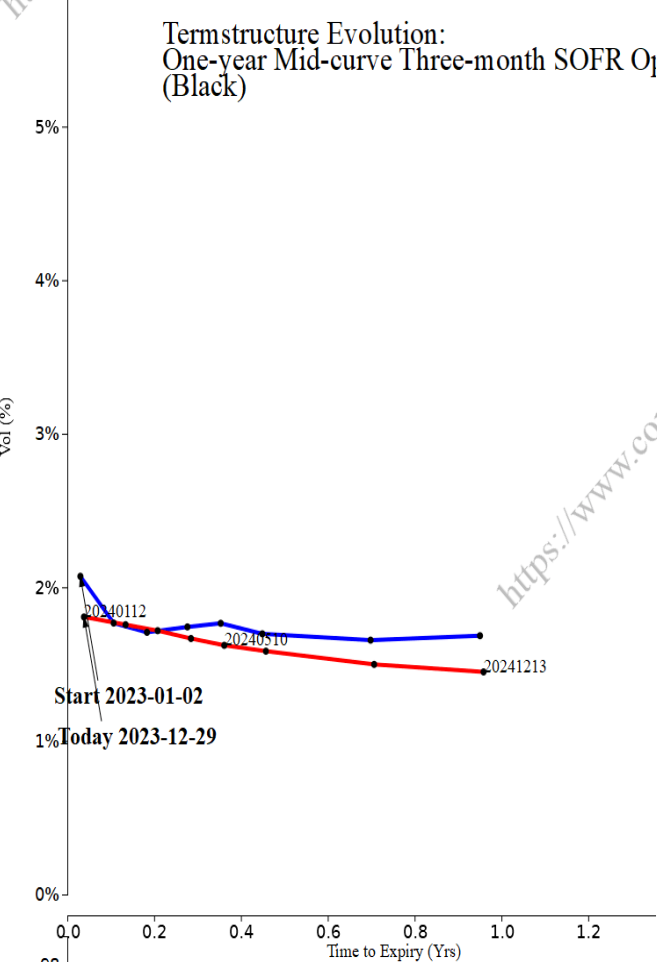


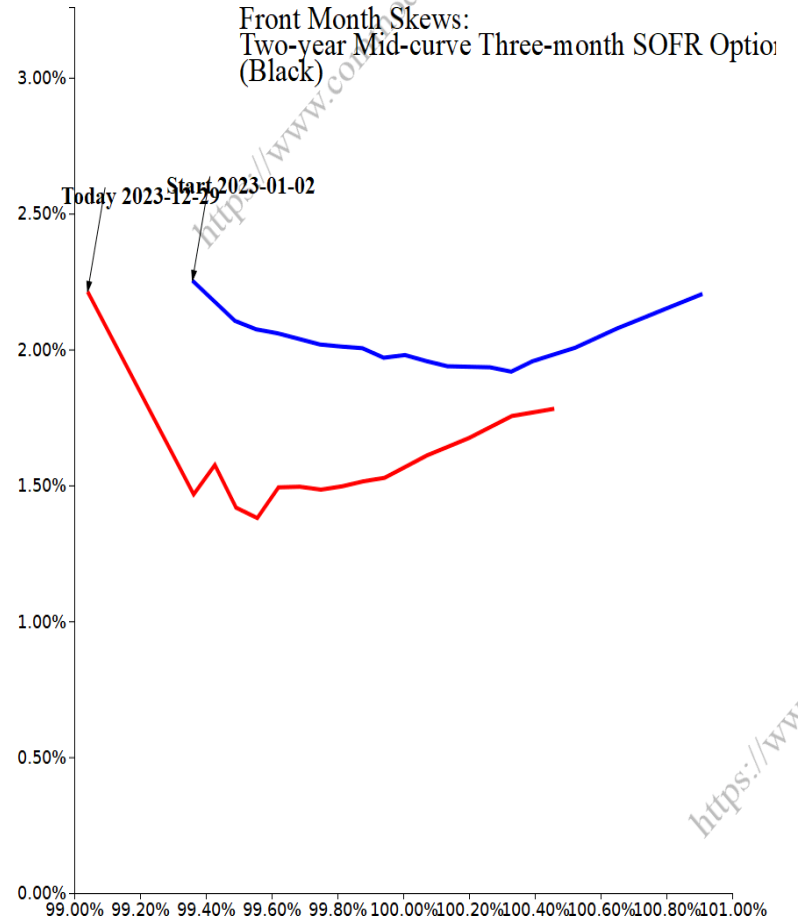
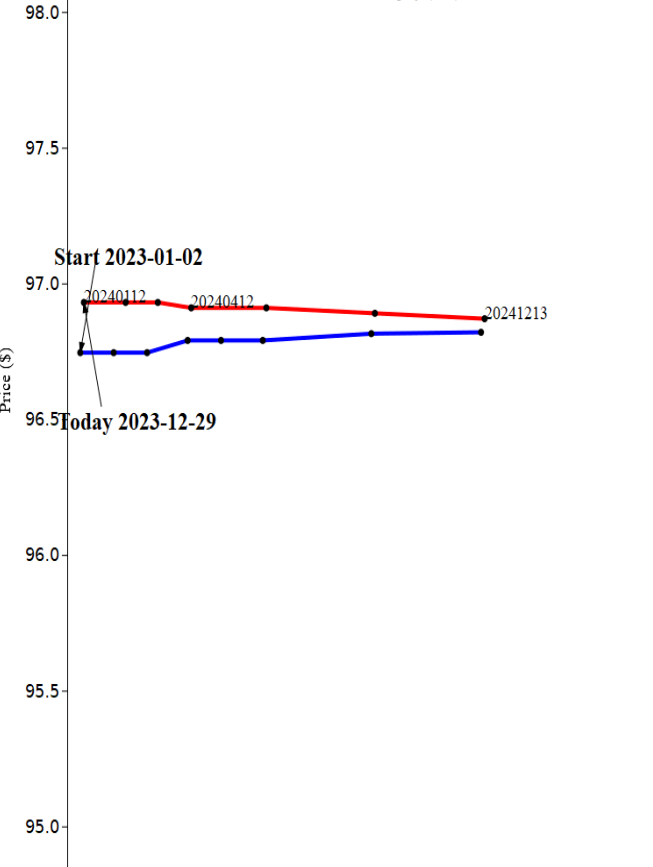
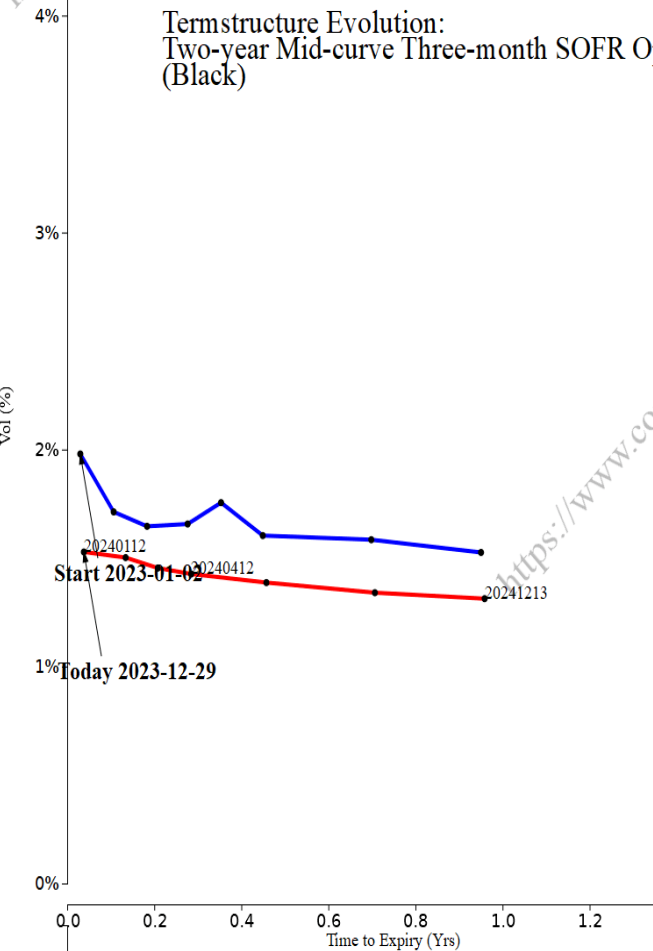


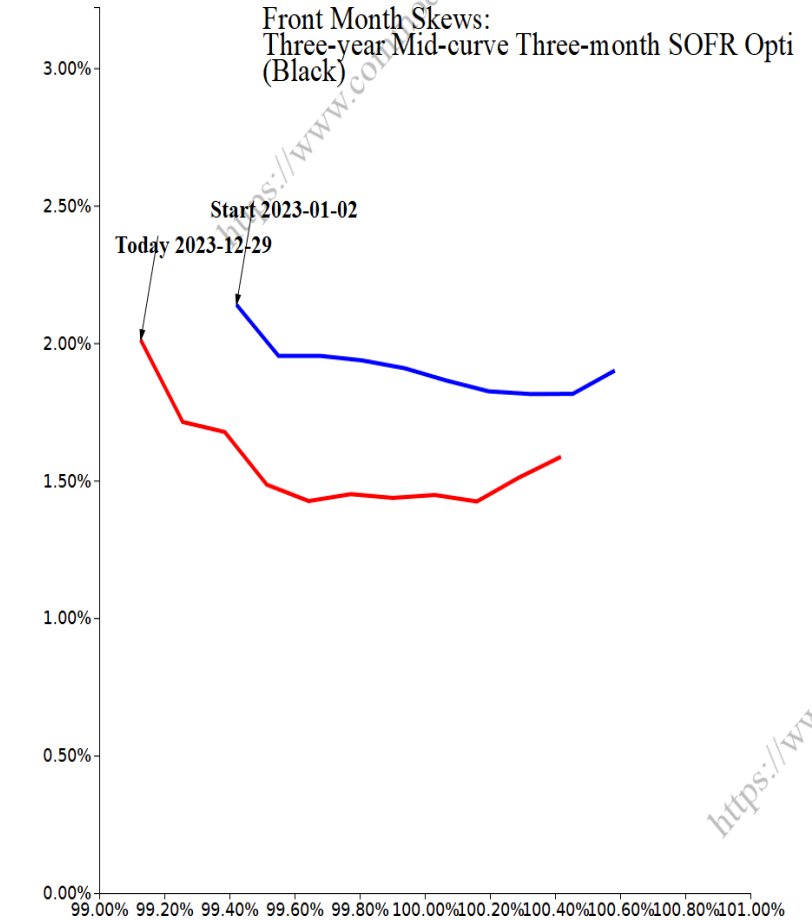
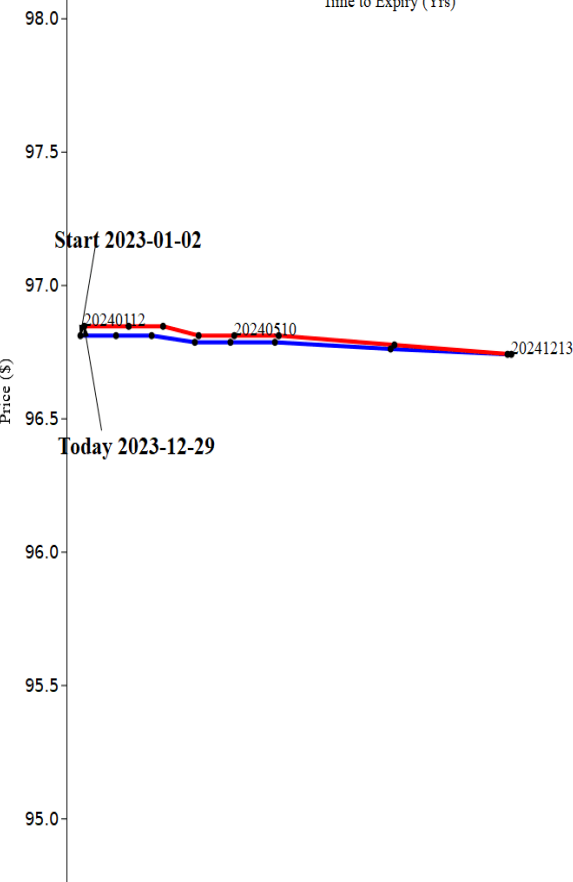
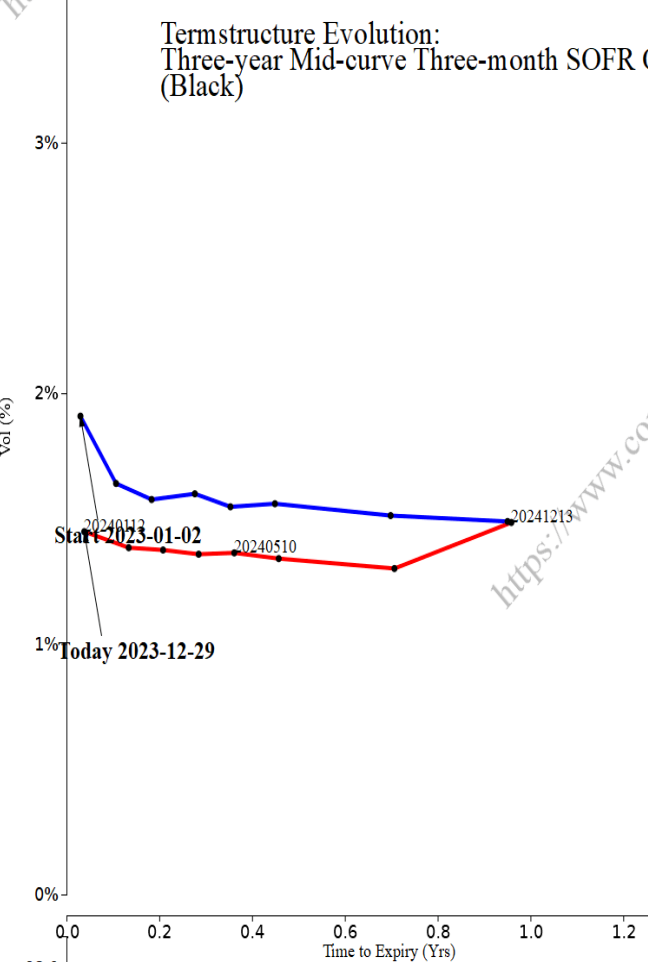


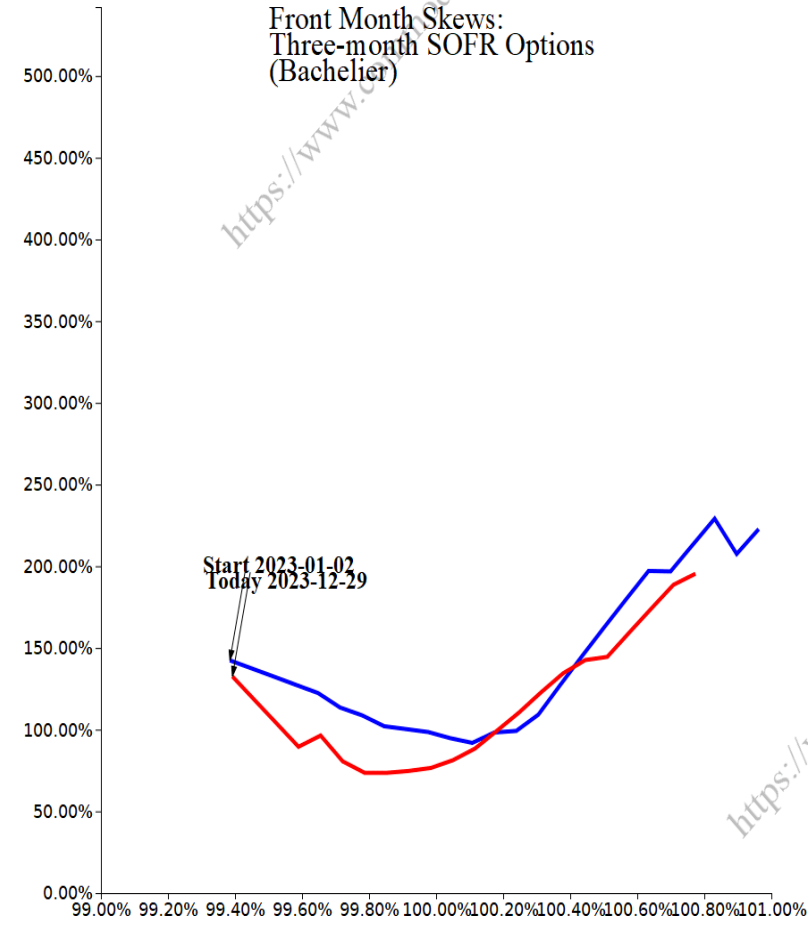
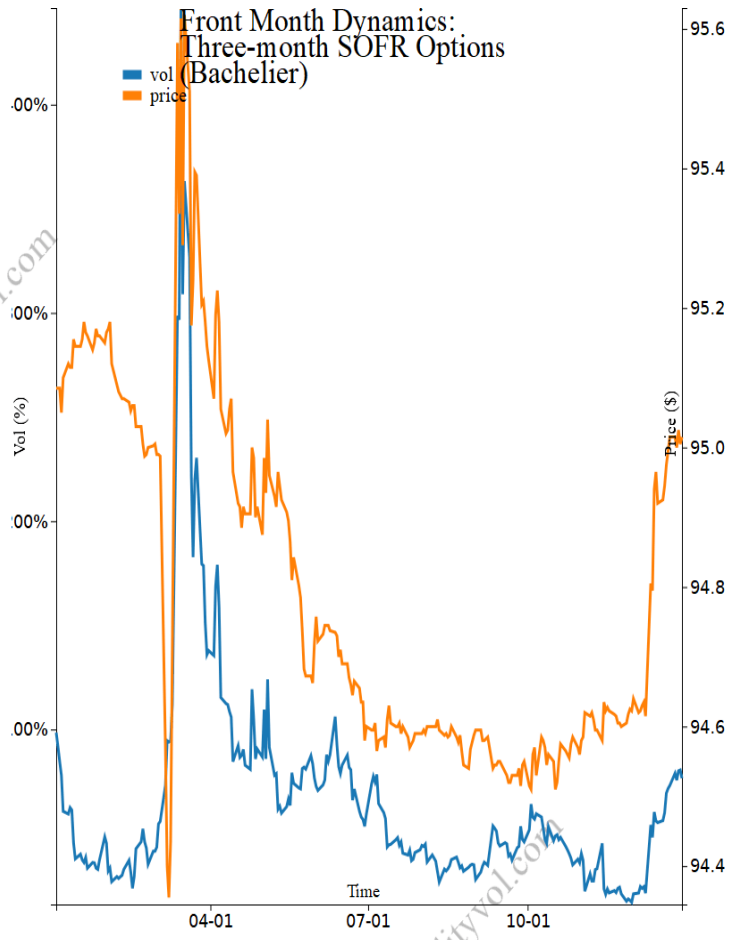
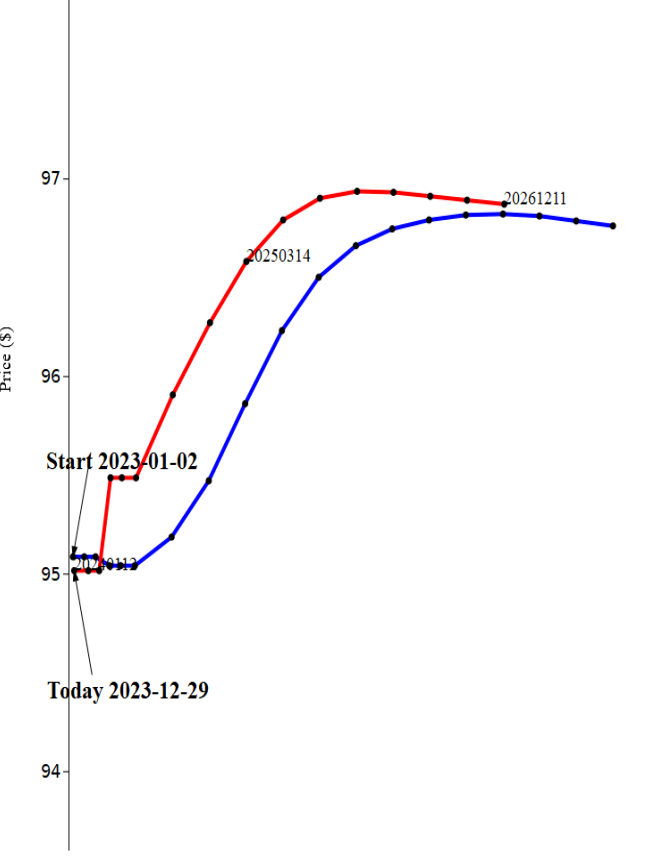
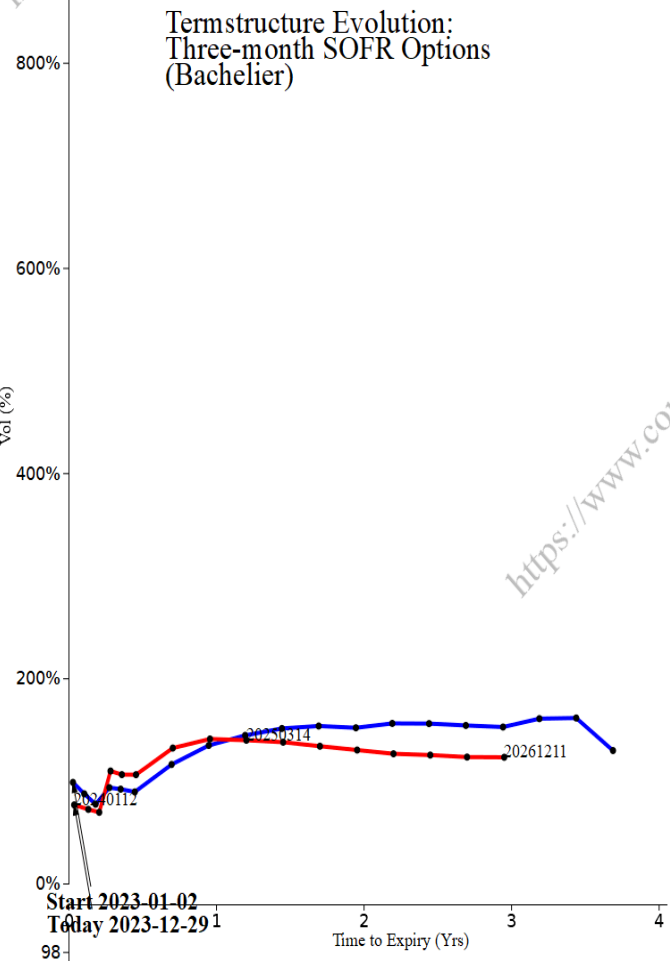
InterestRates: Fixed Income and STIRS

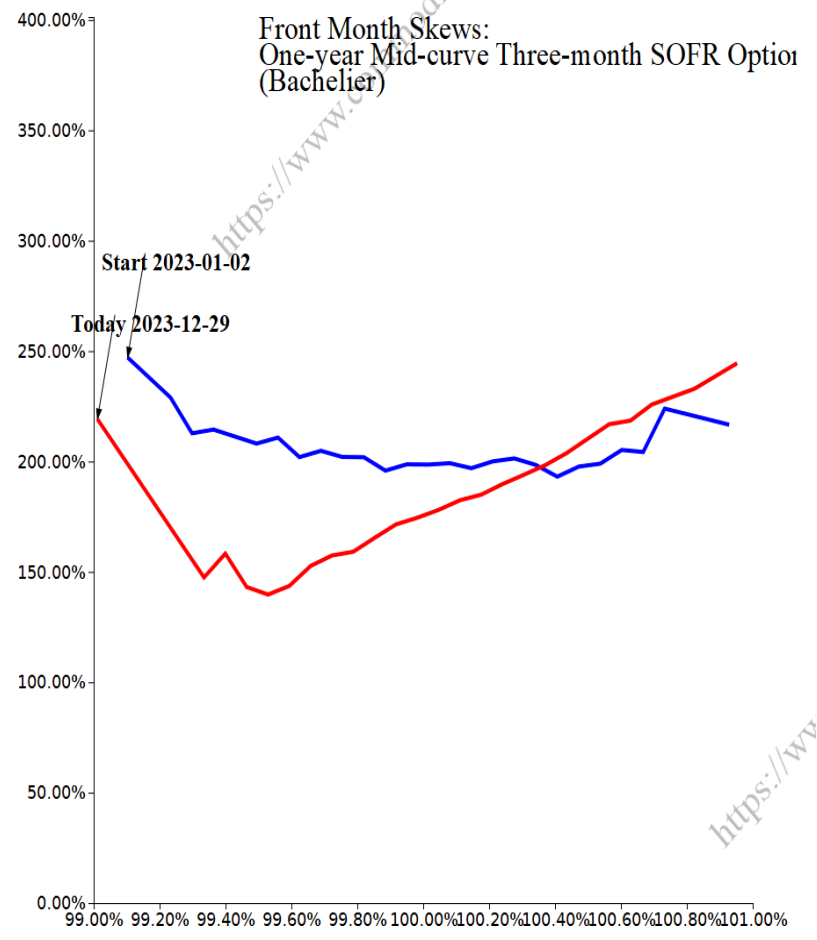
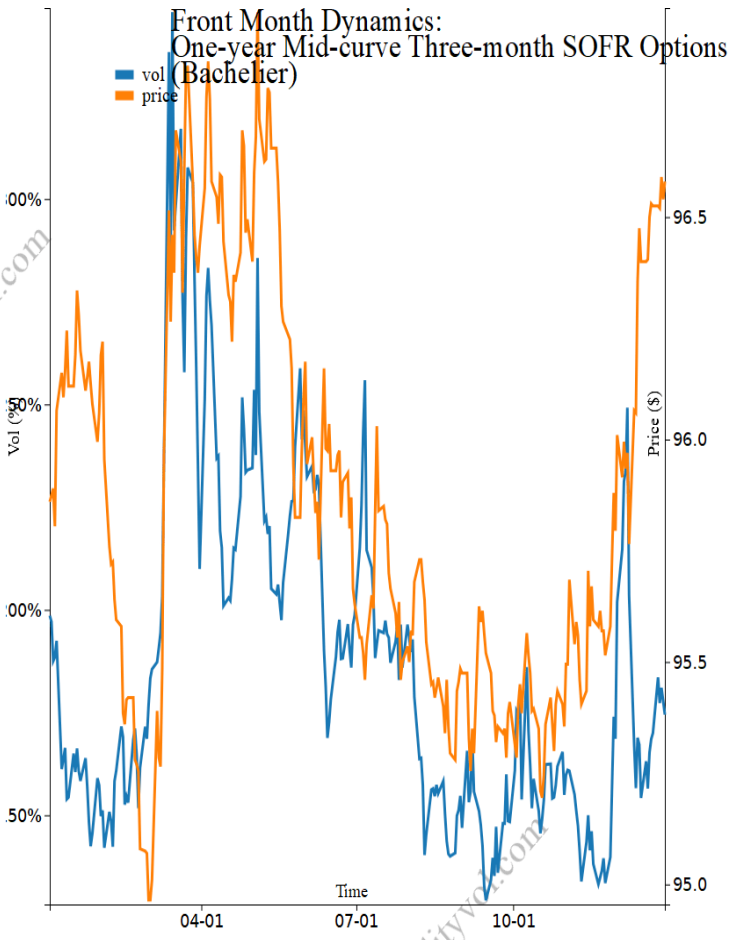
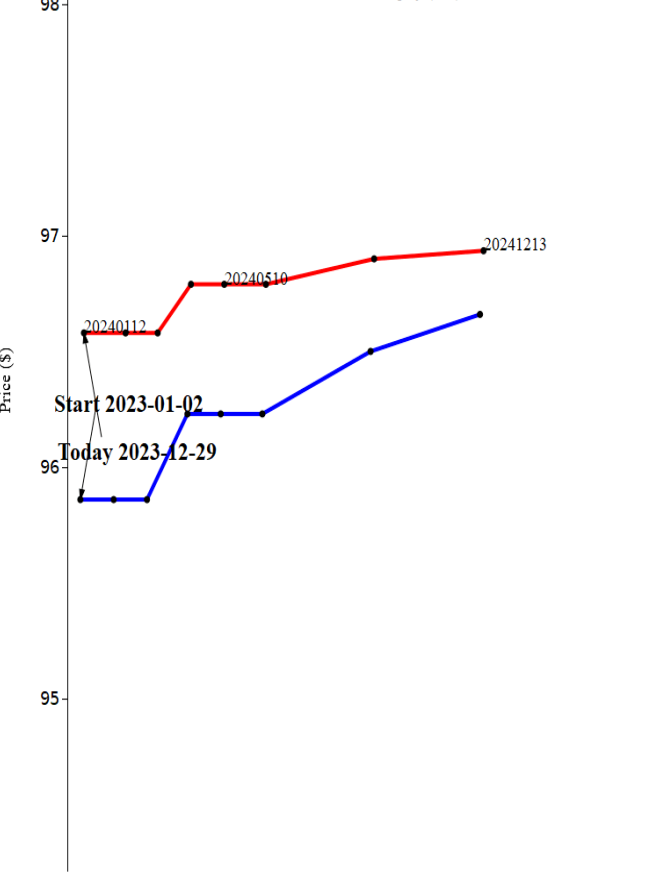
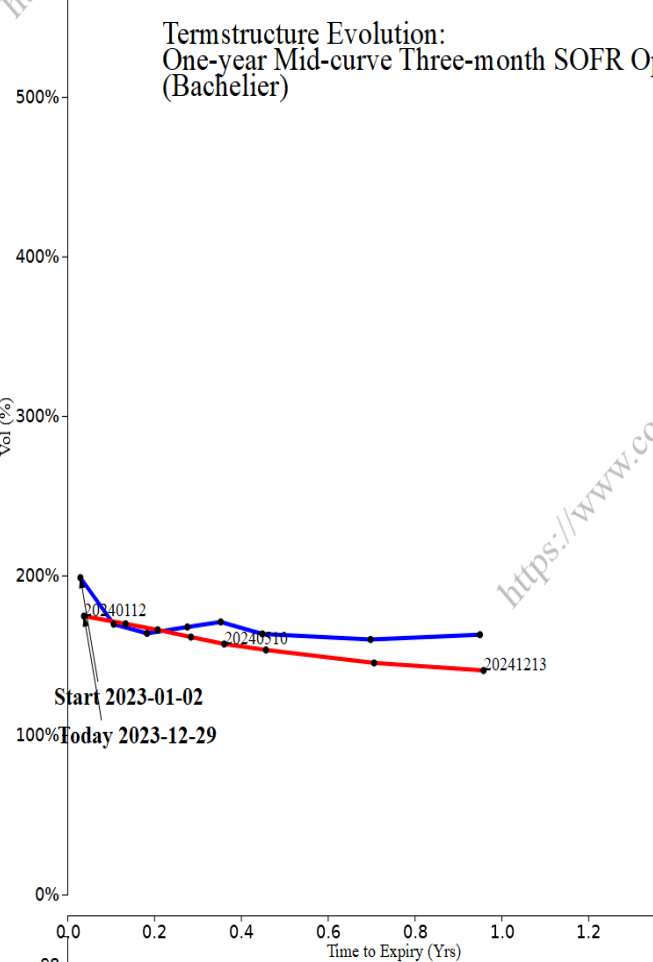


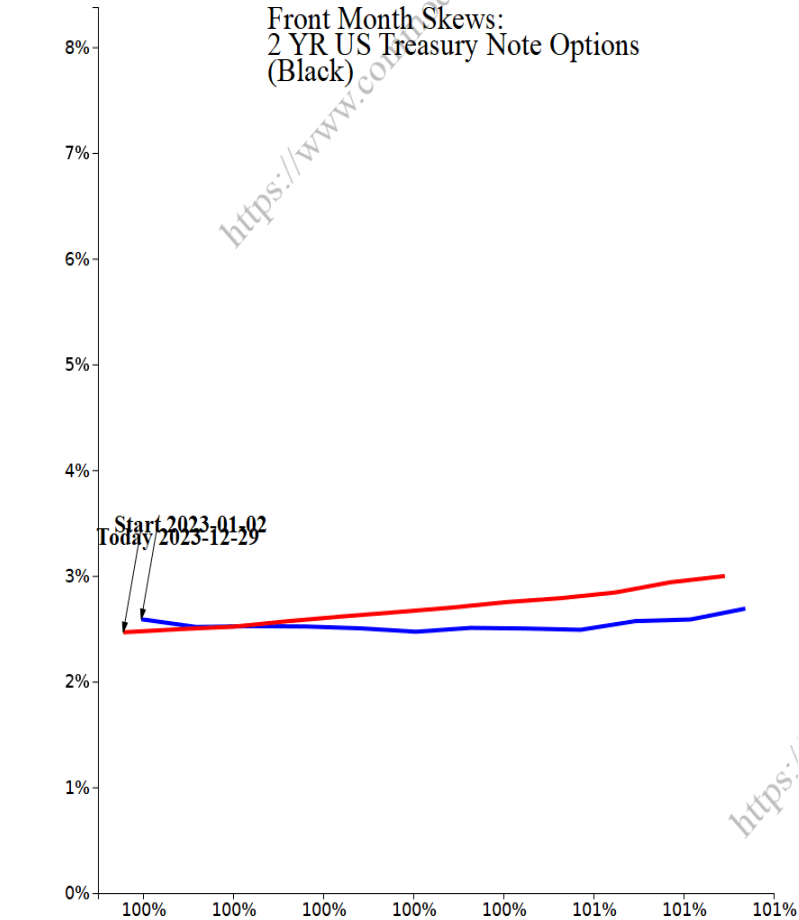
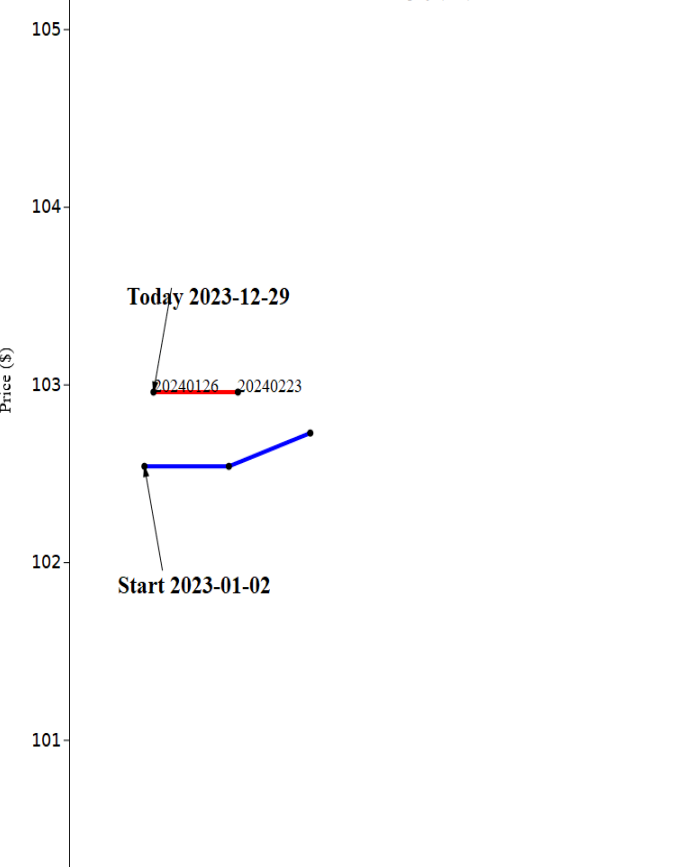
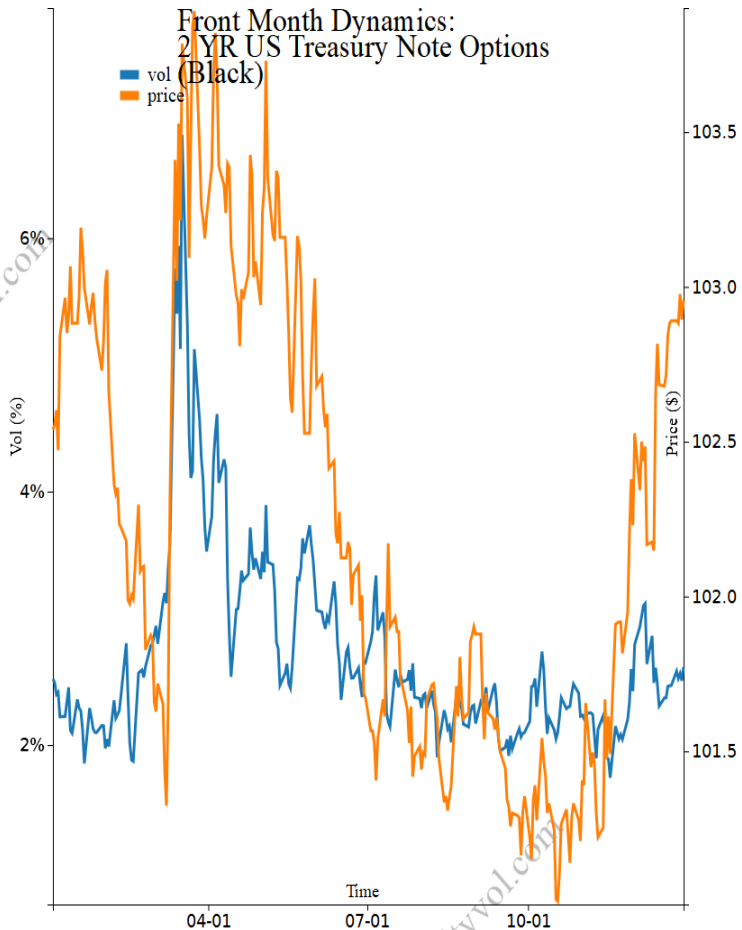
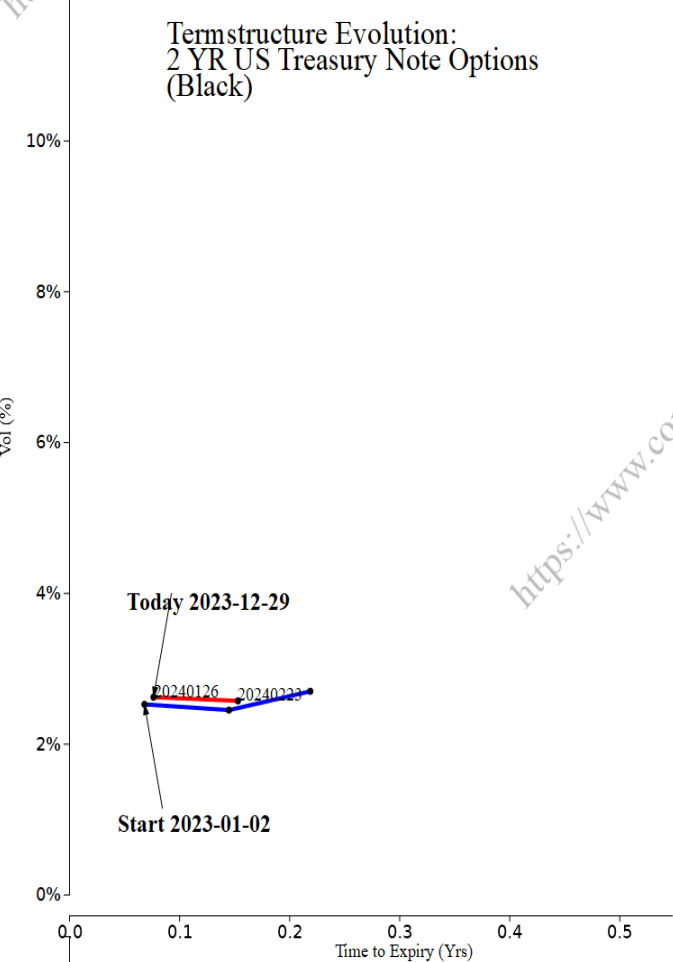


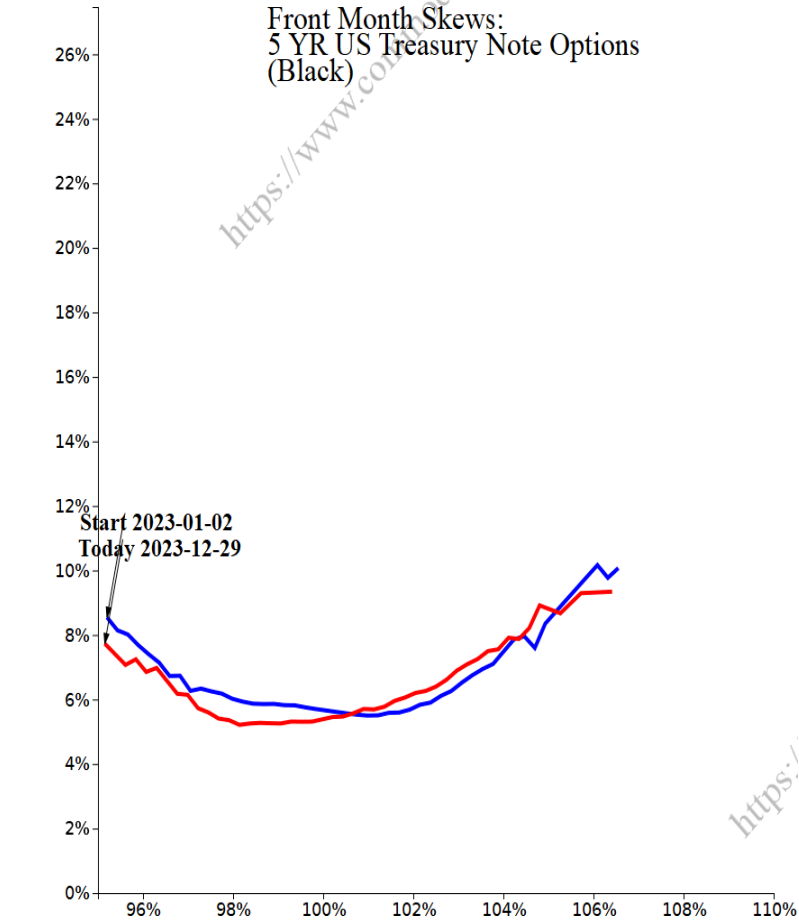
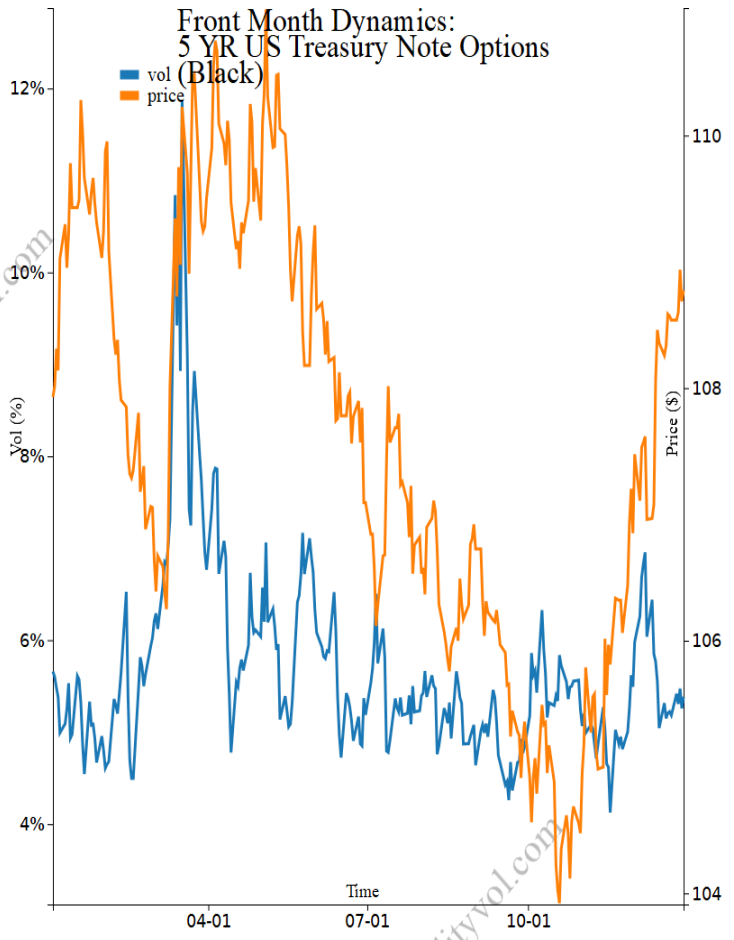
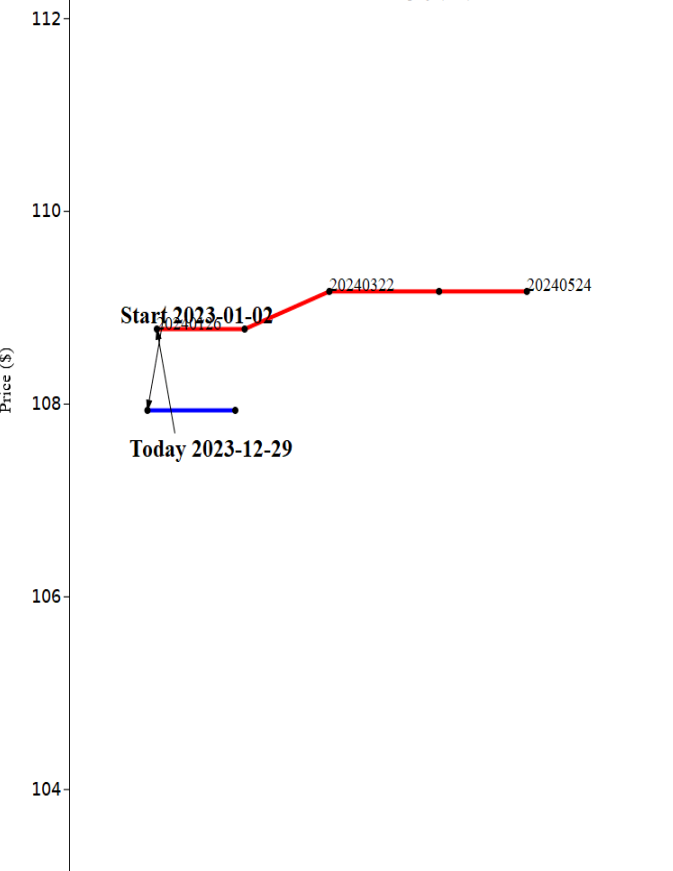
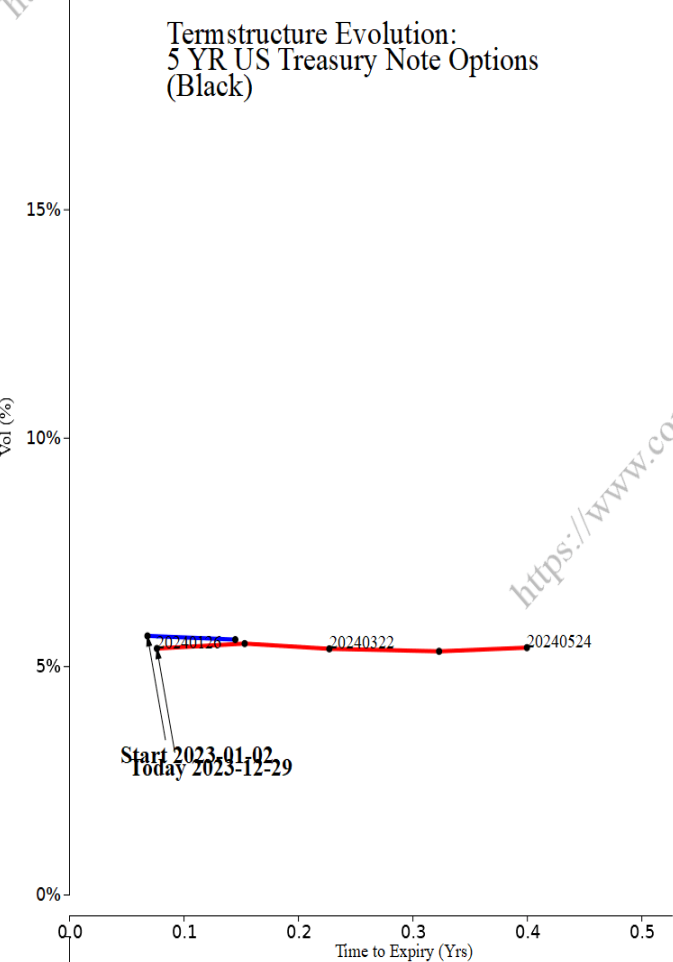


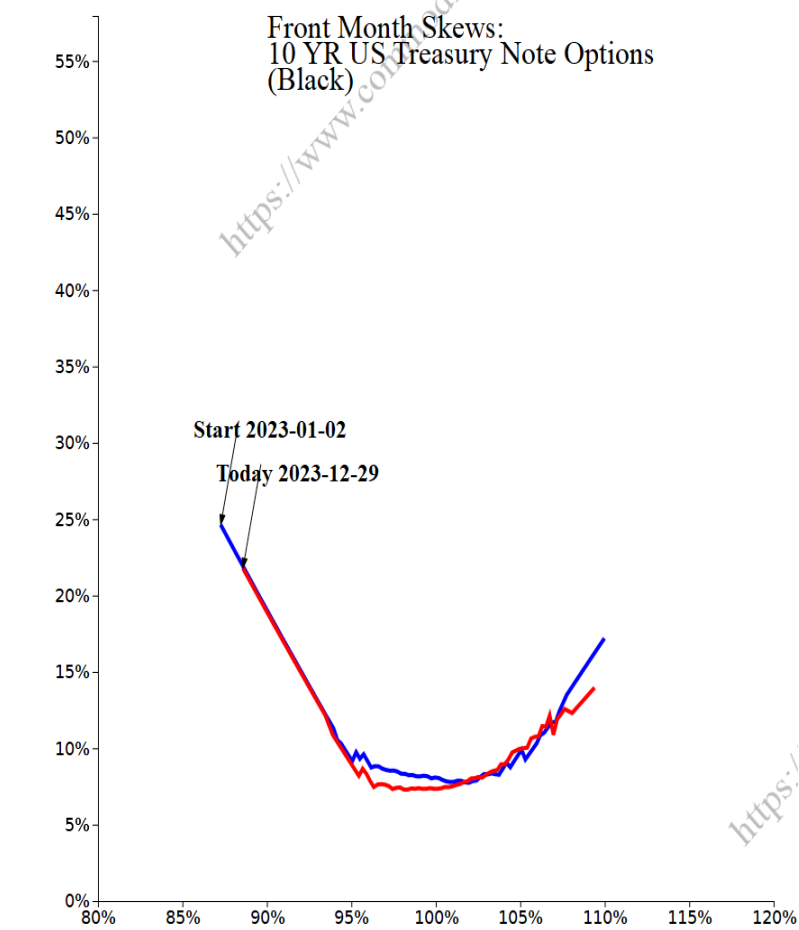
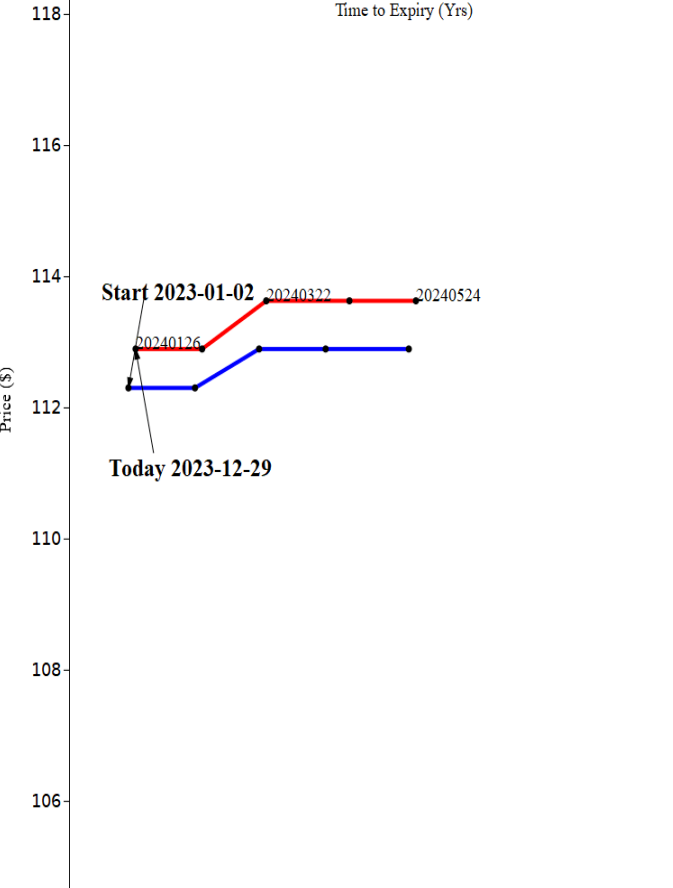
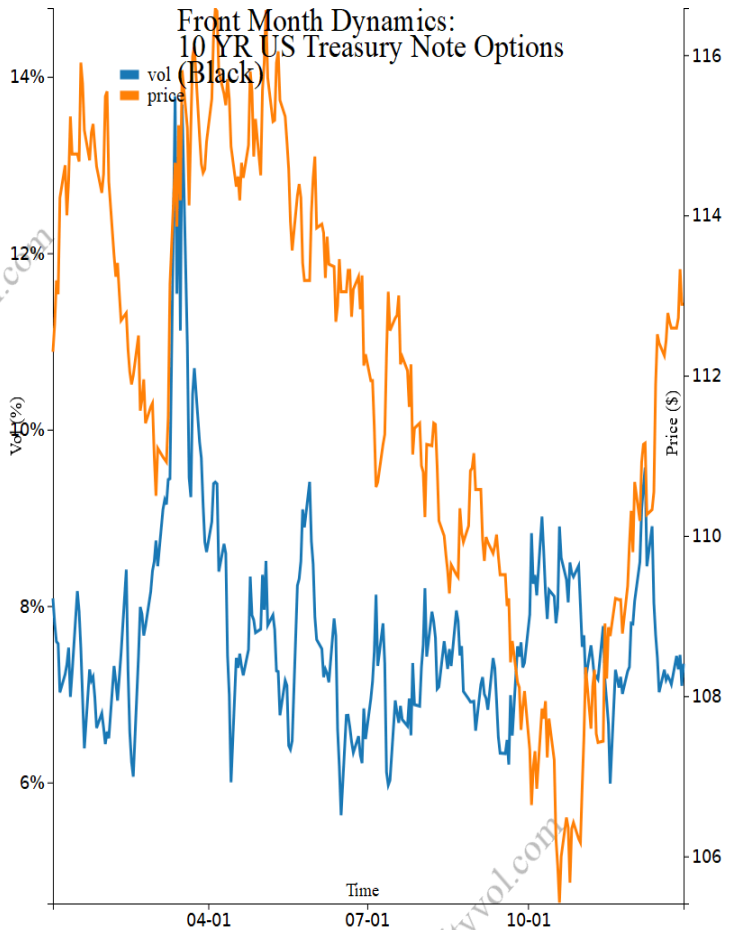
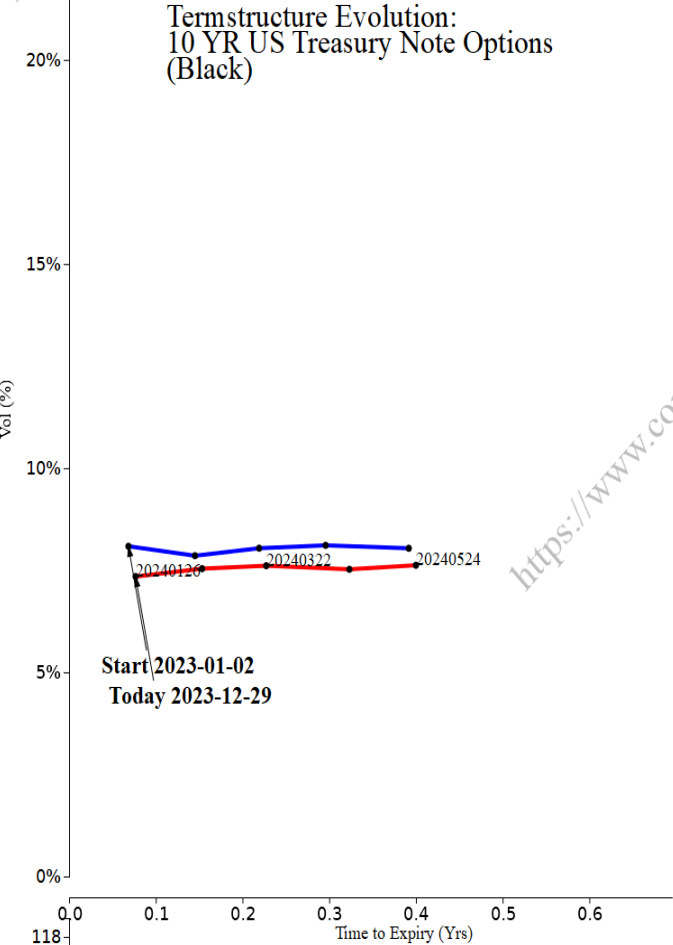


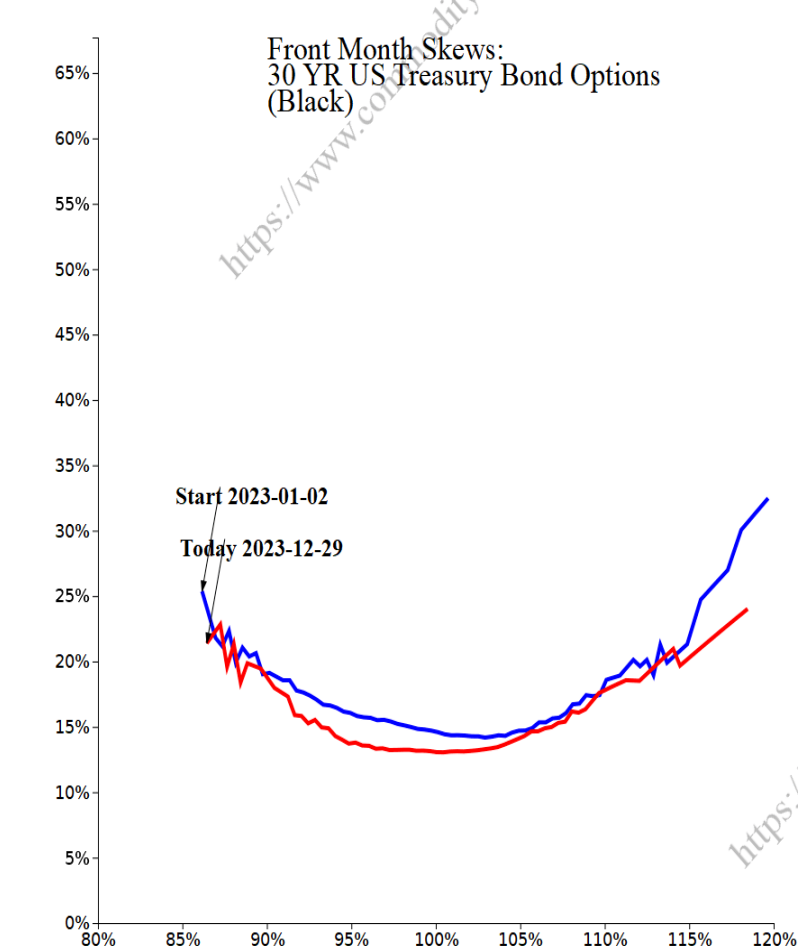
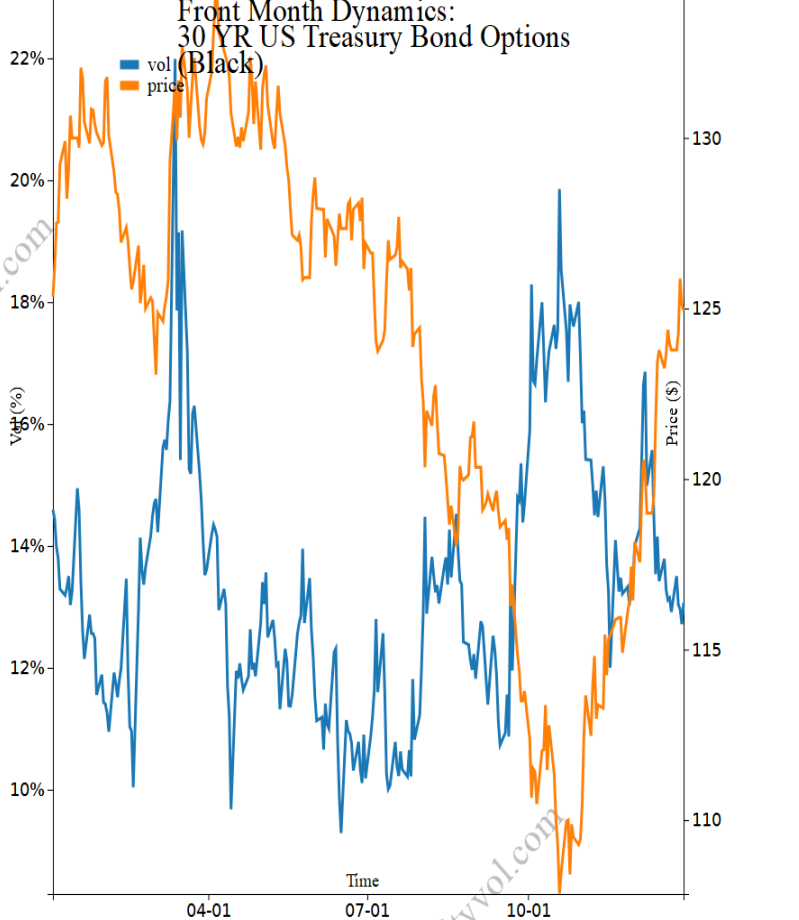
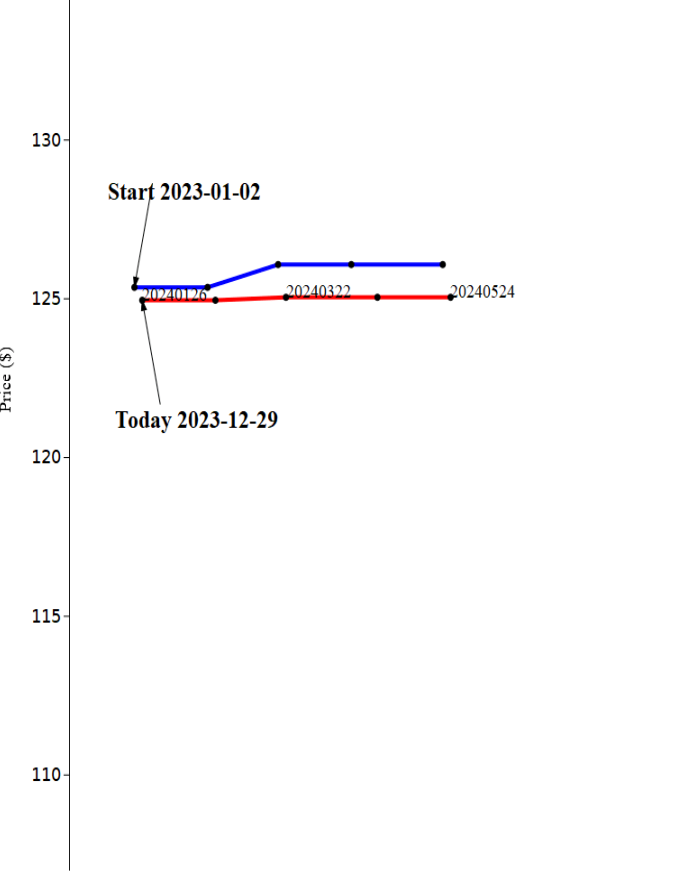
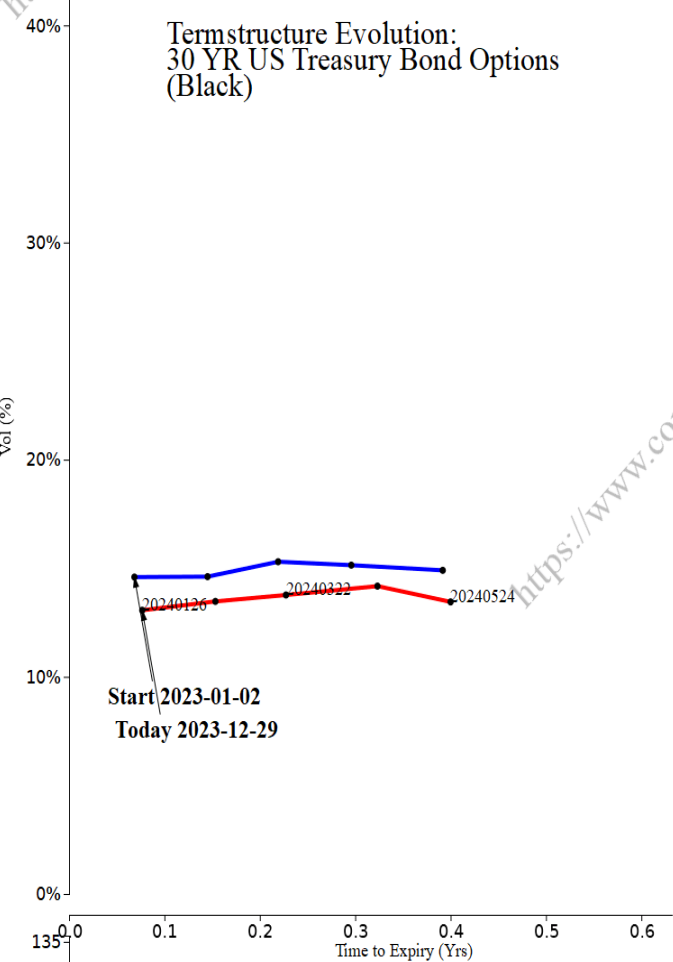


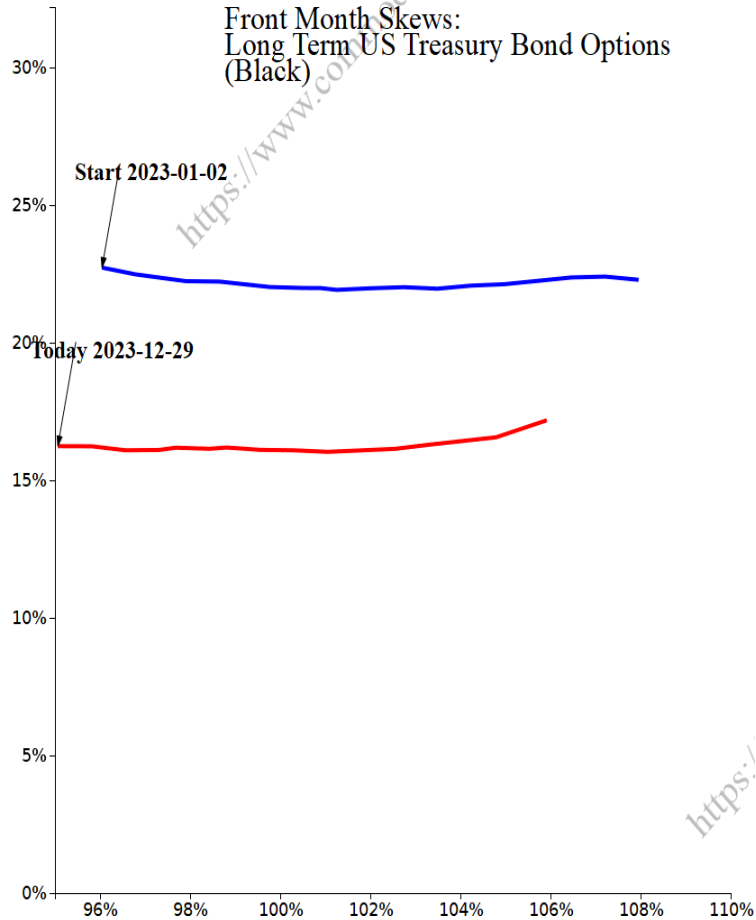
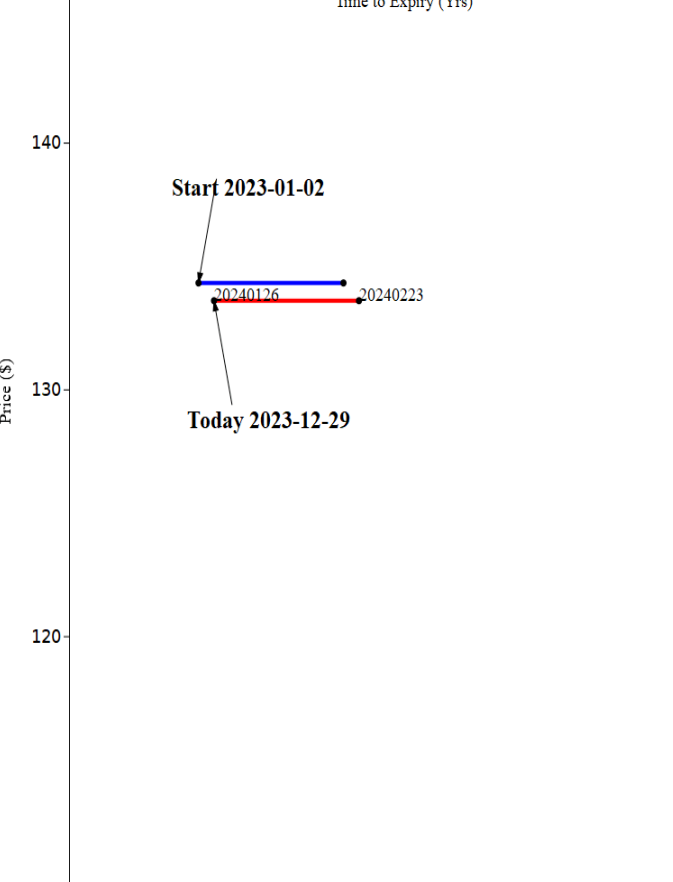
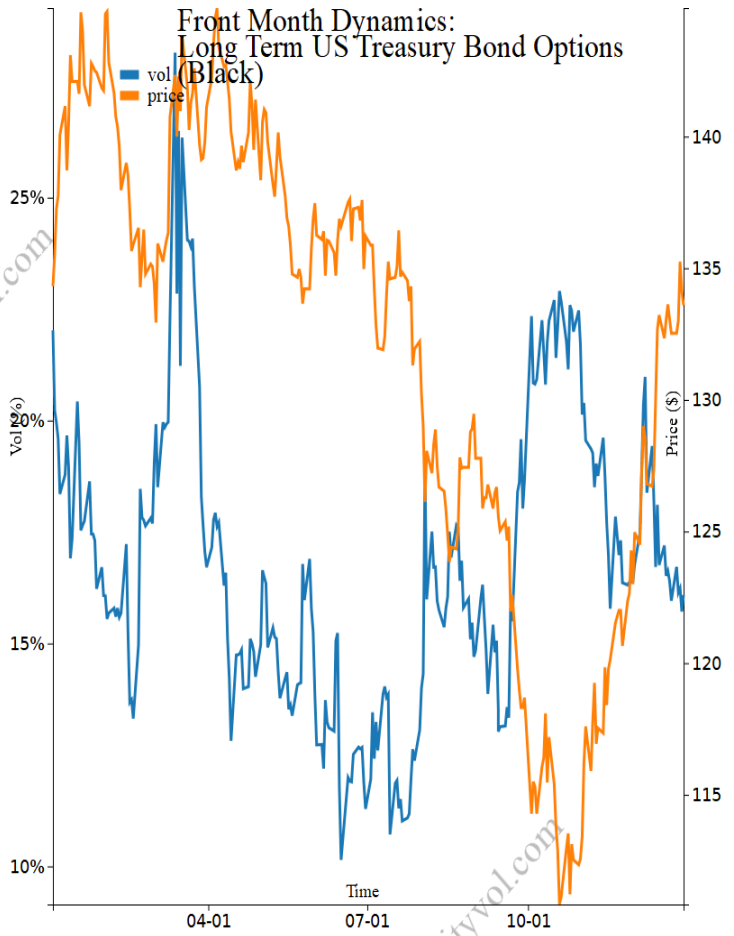
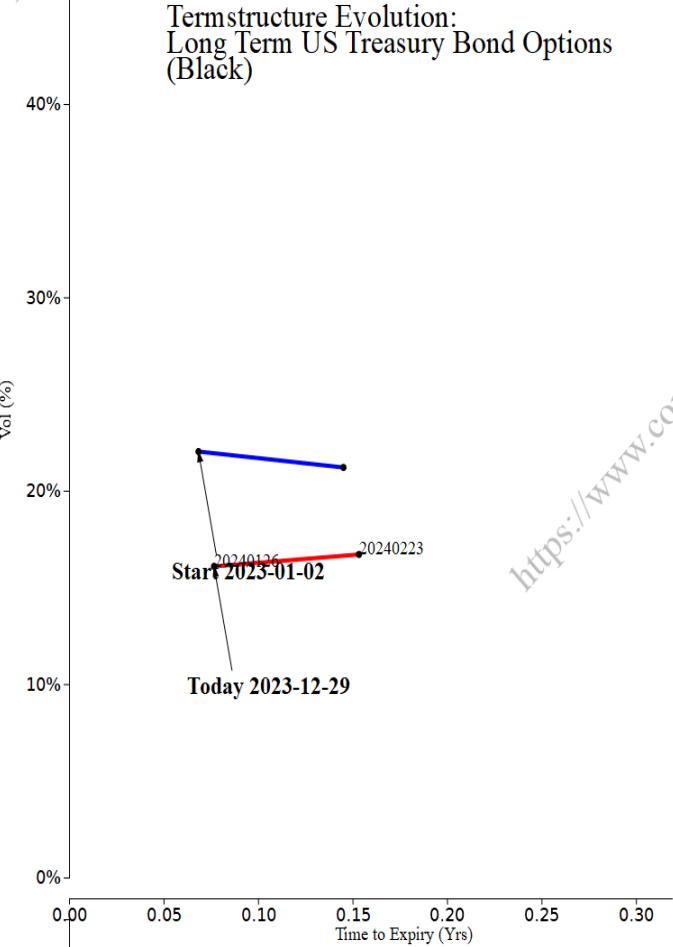




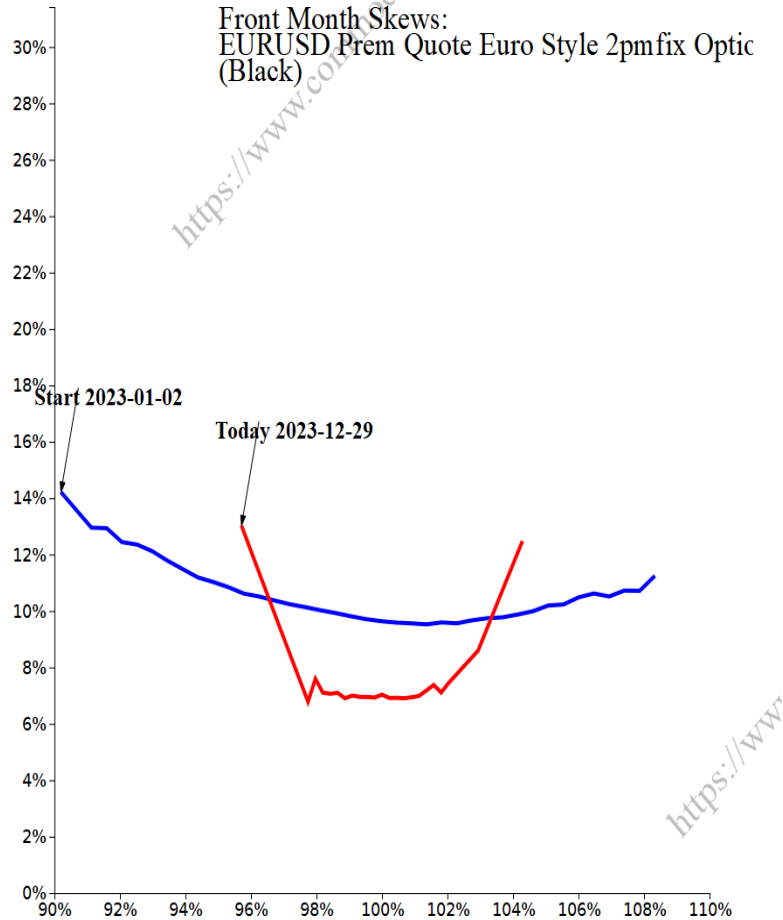
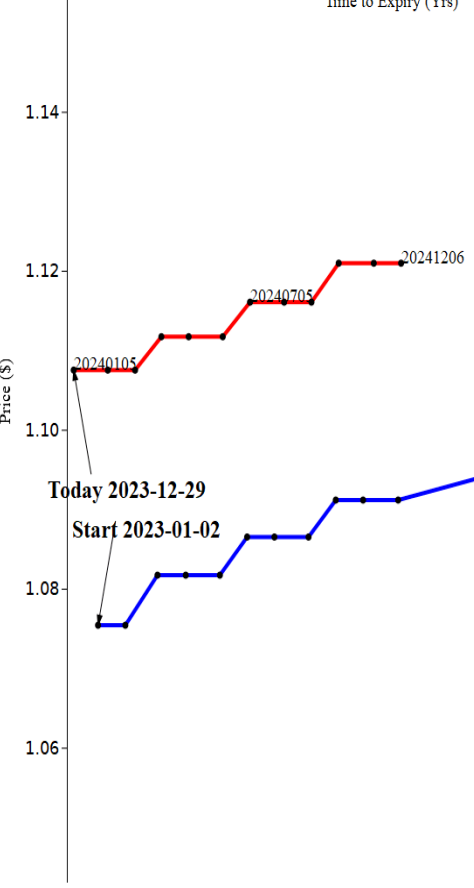
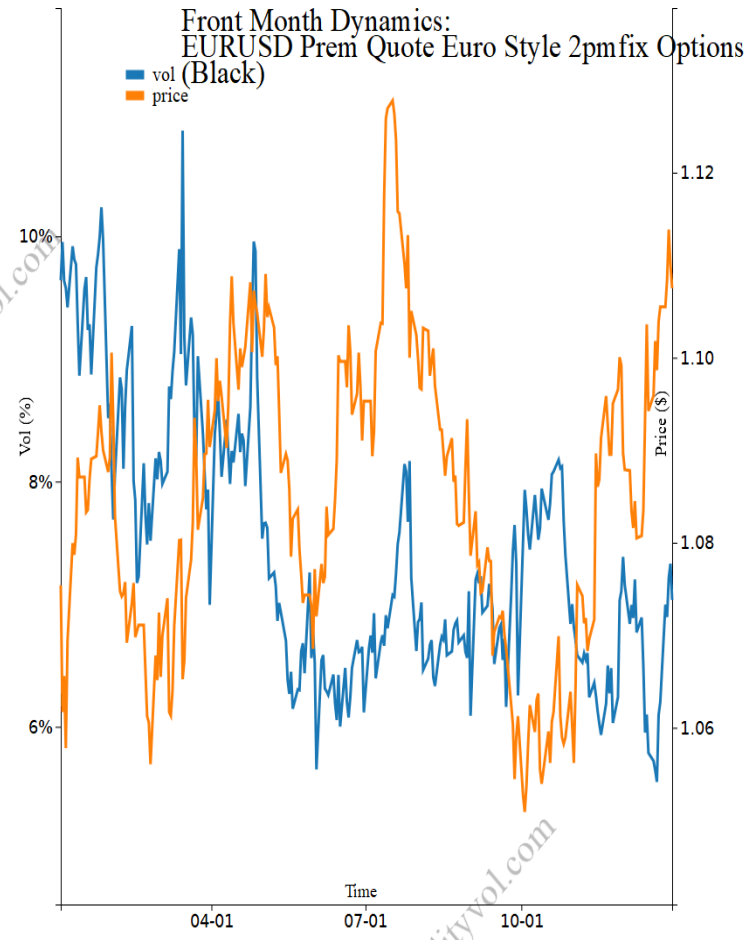
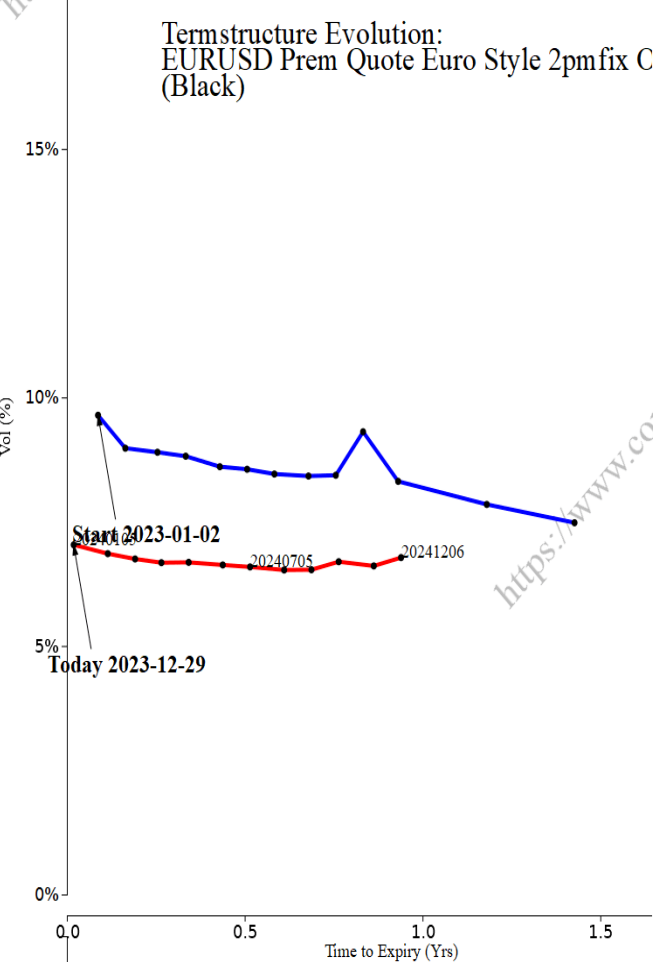


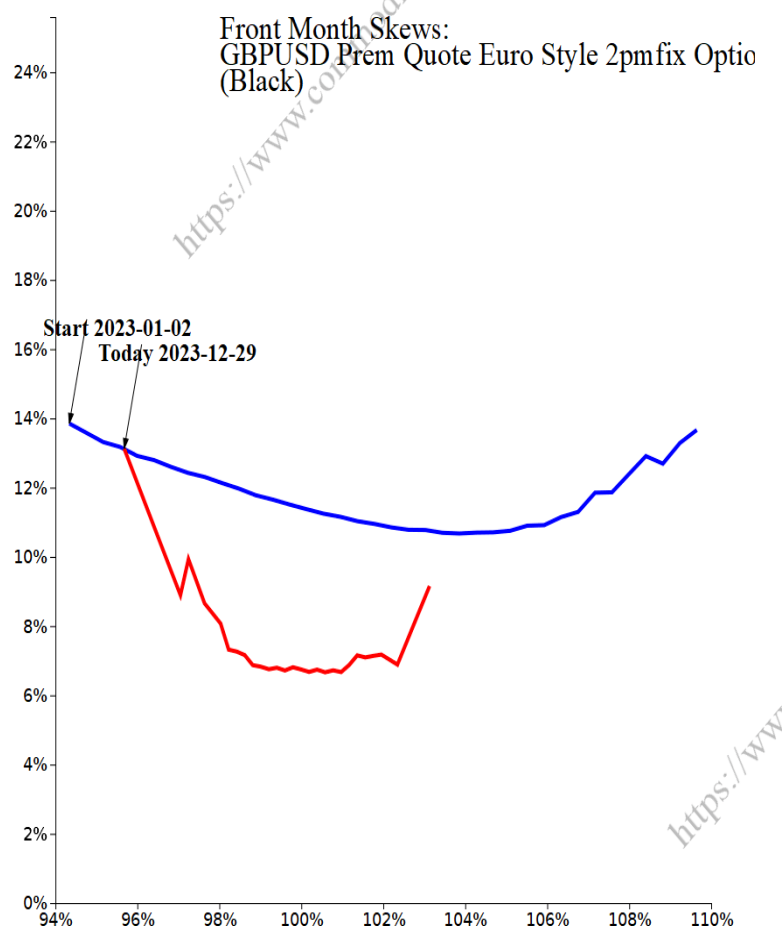
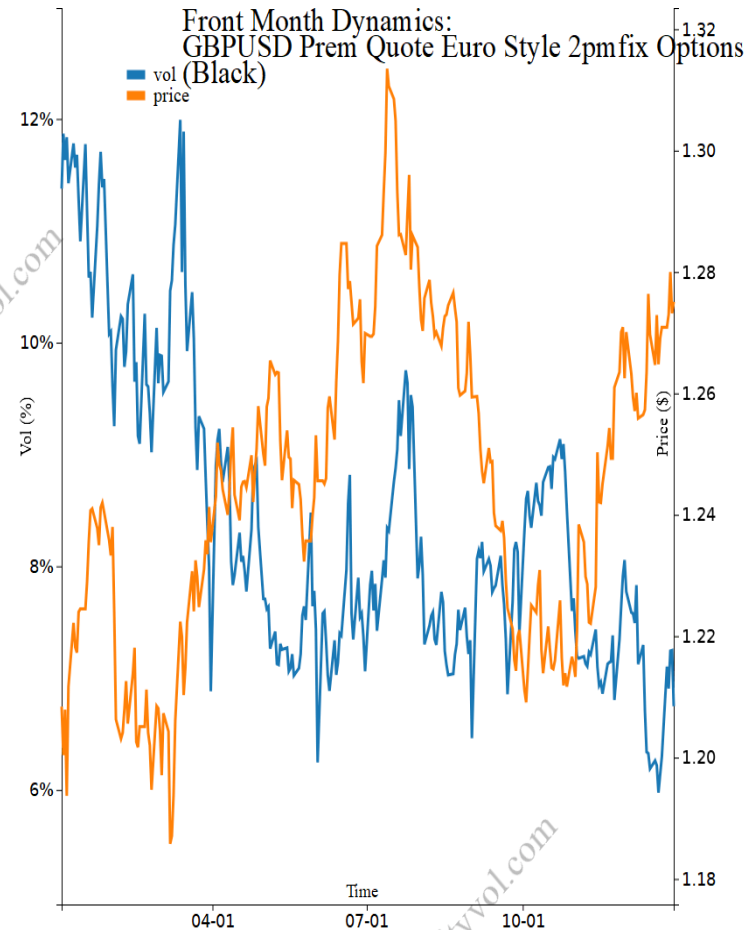
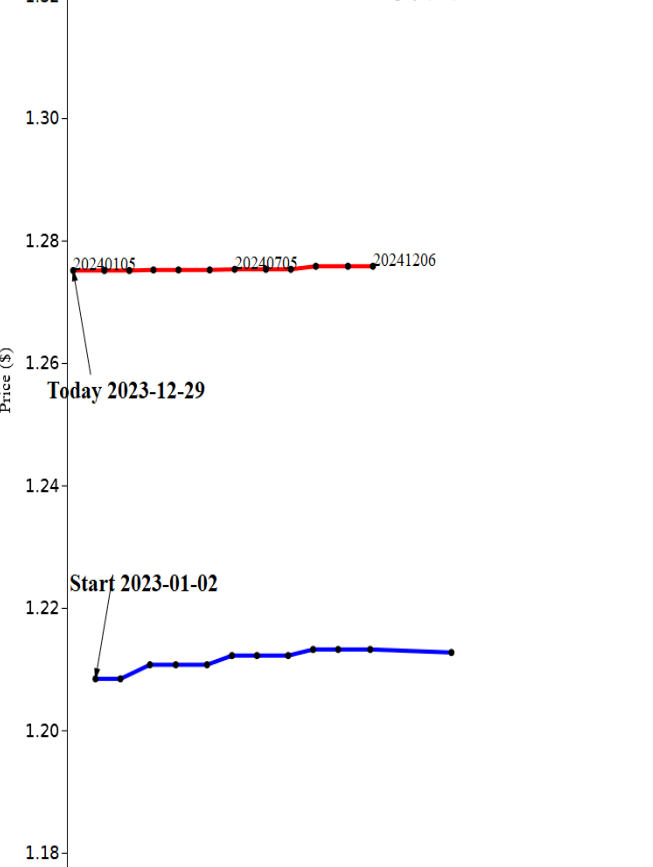
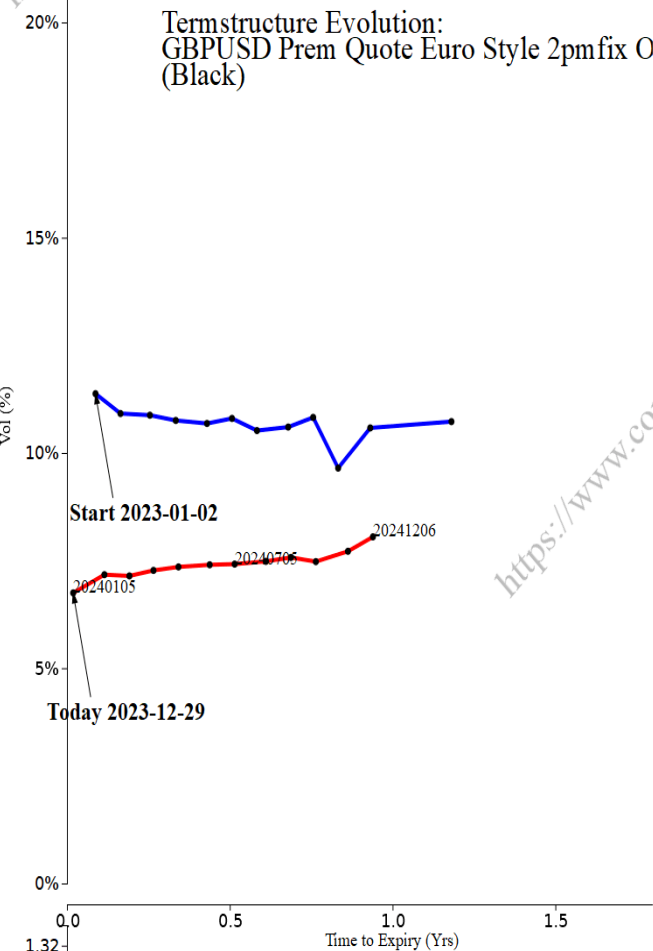


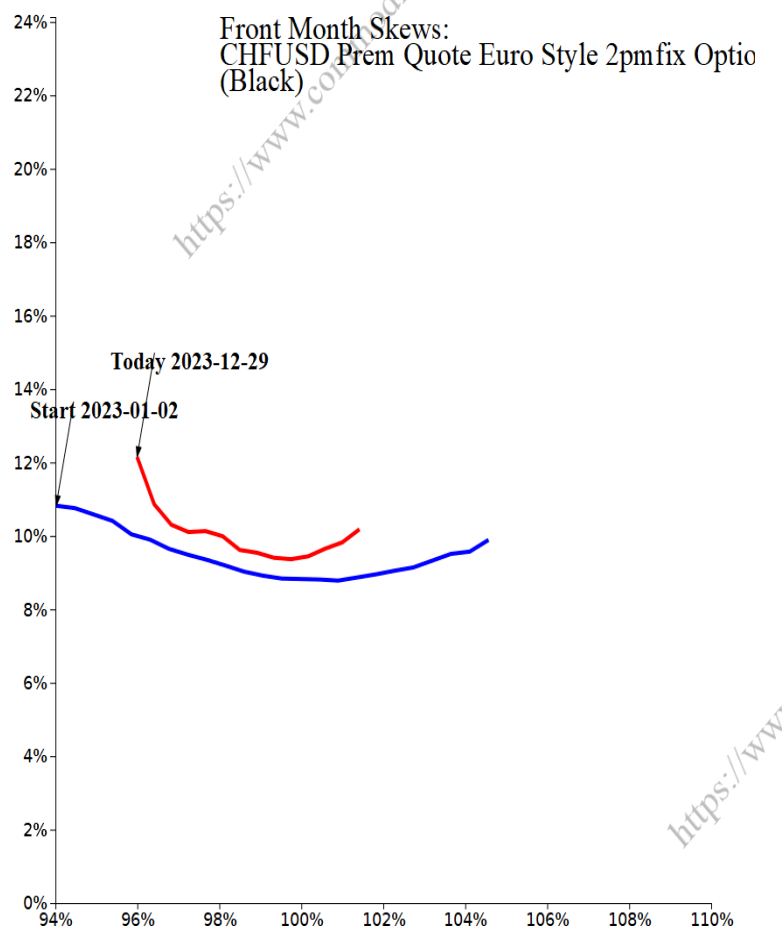
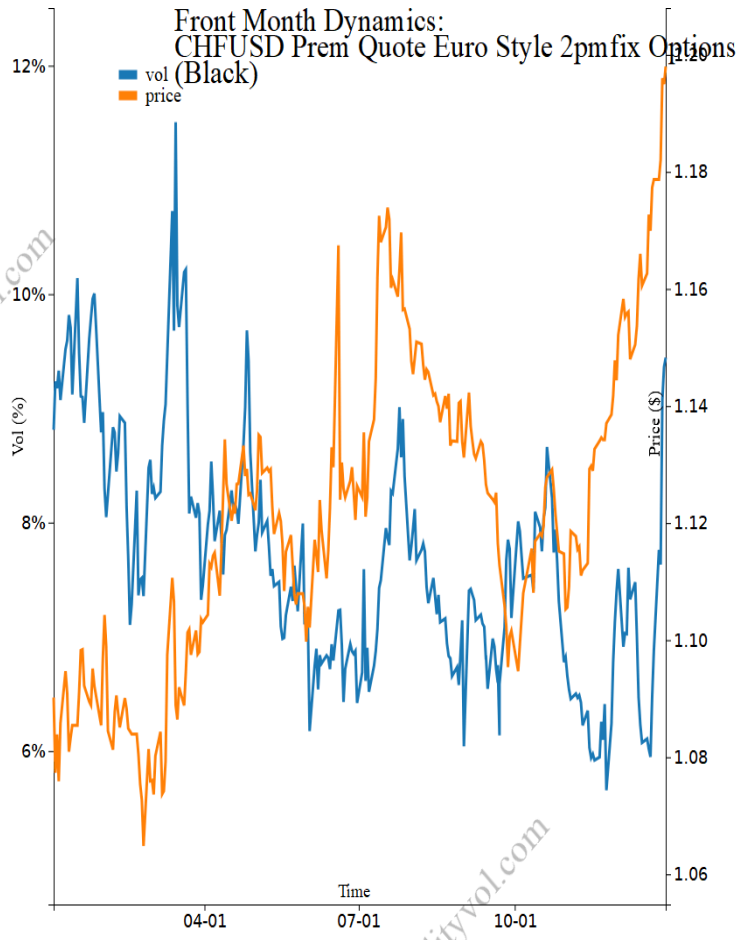
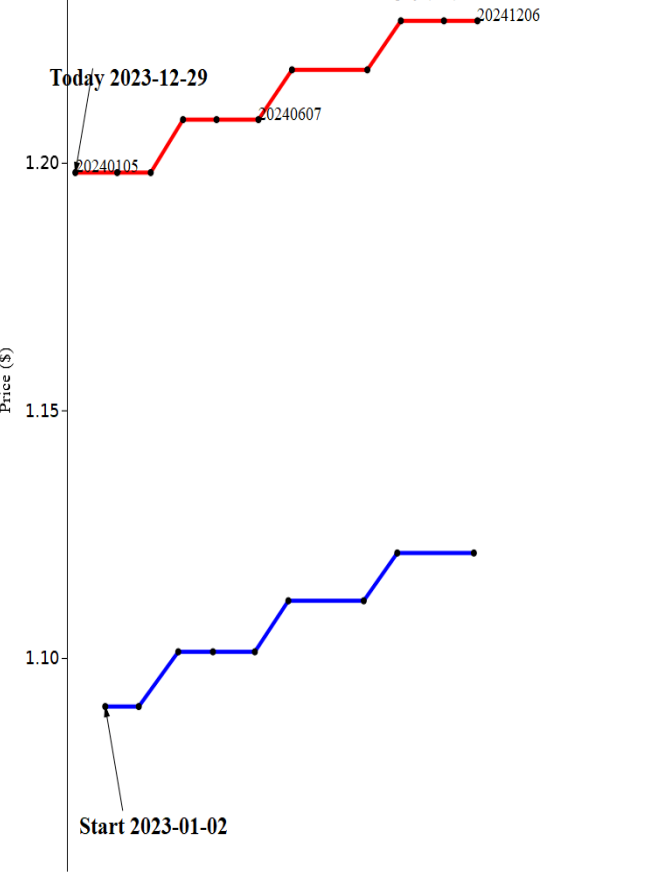
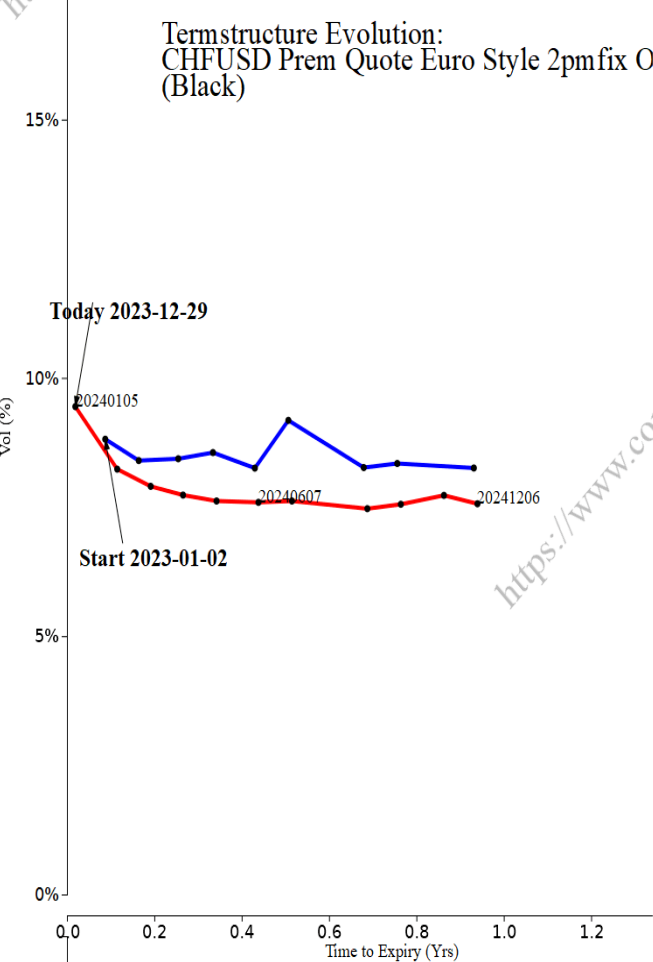


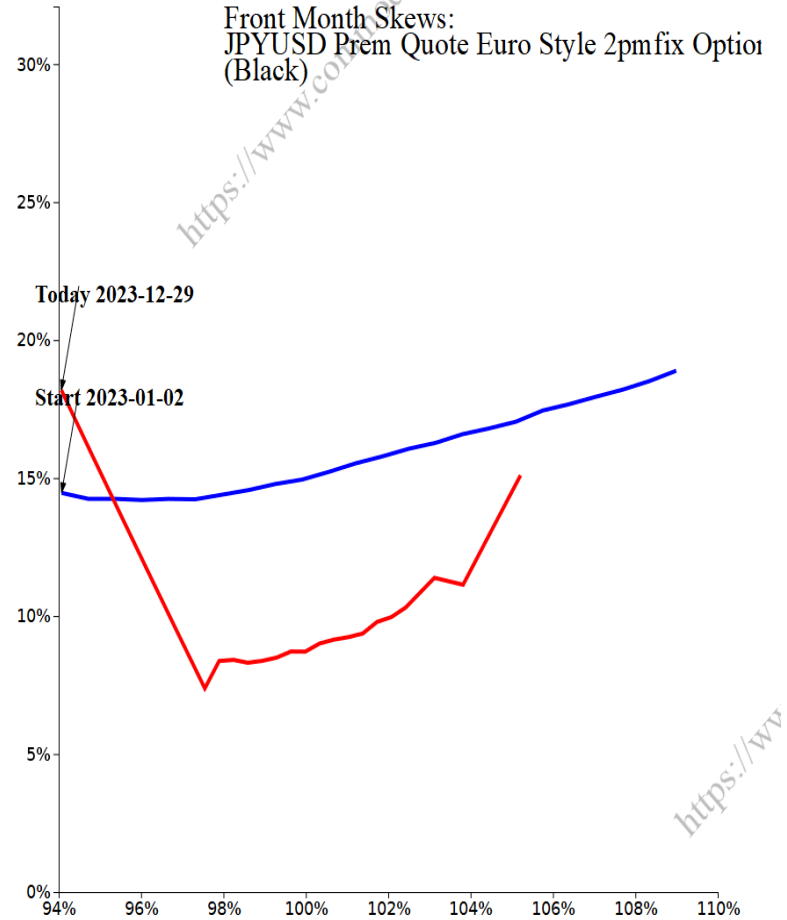
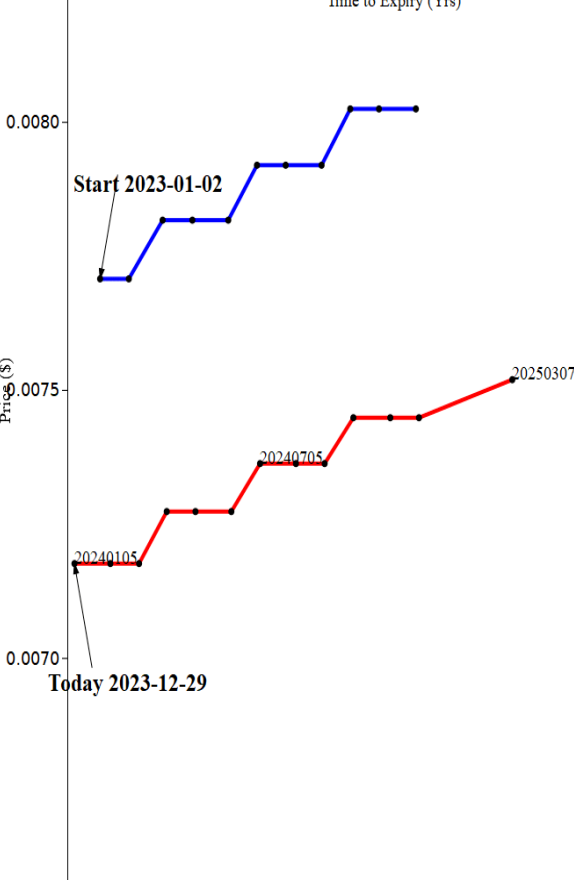
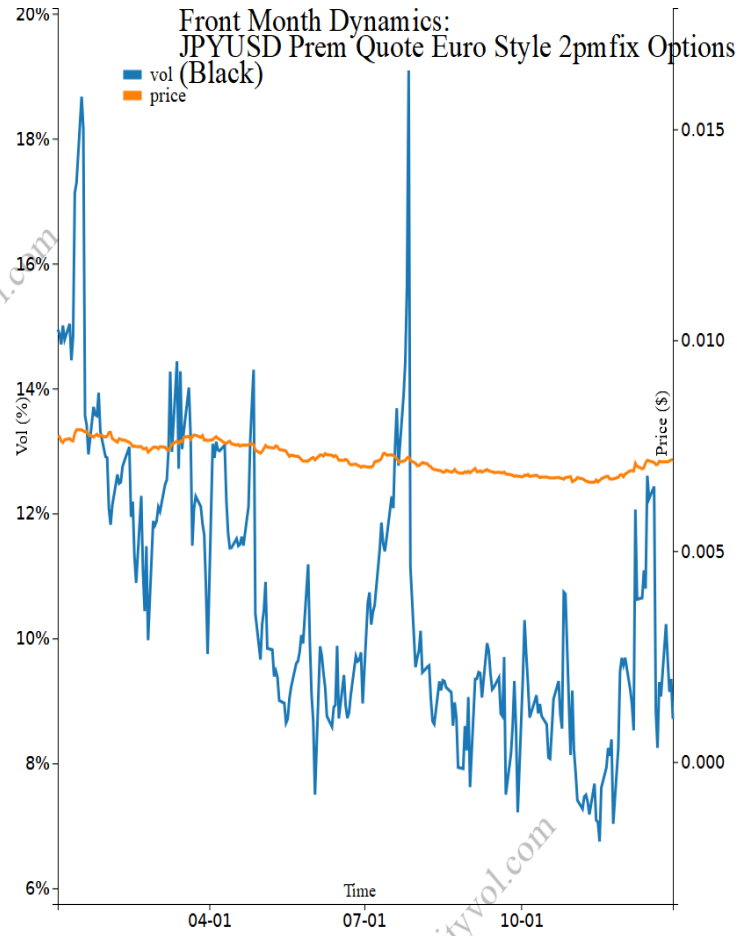
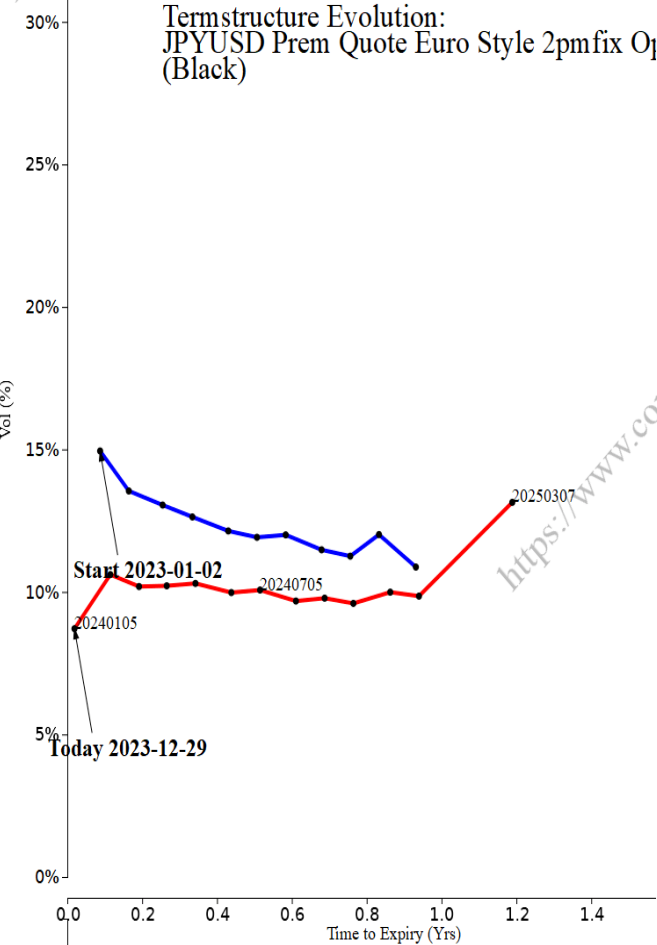


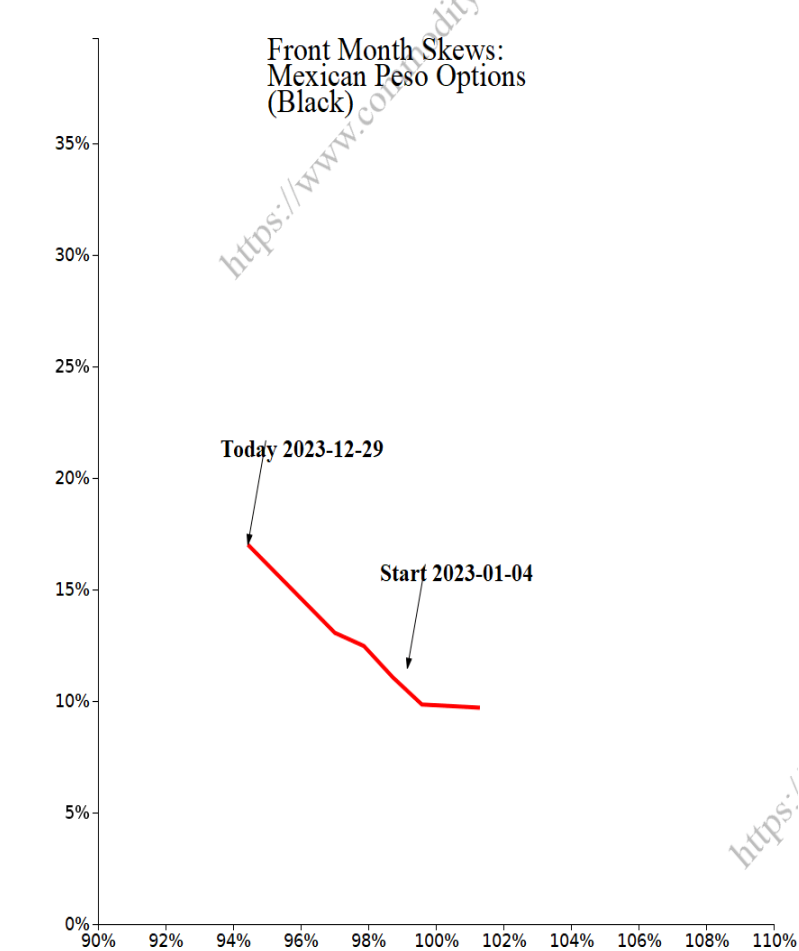
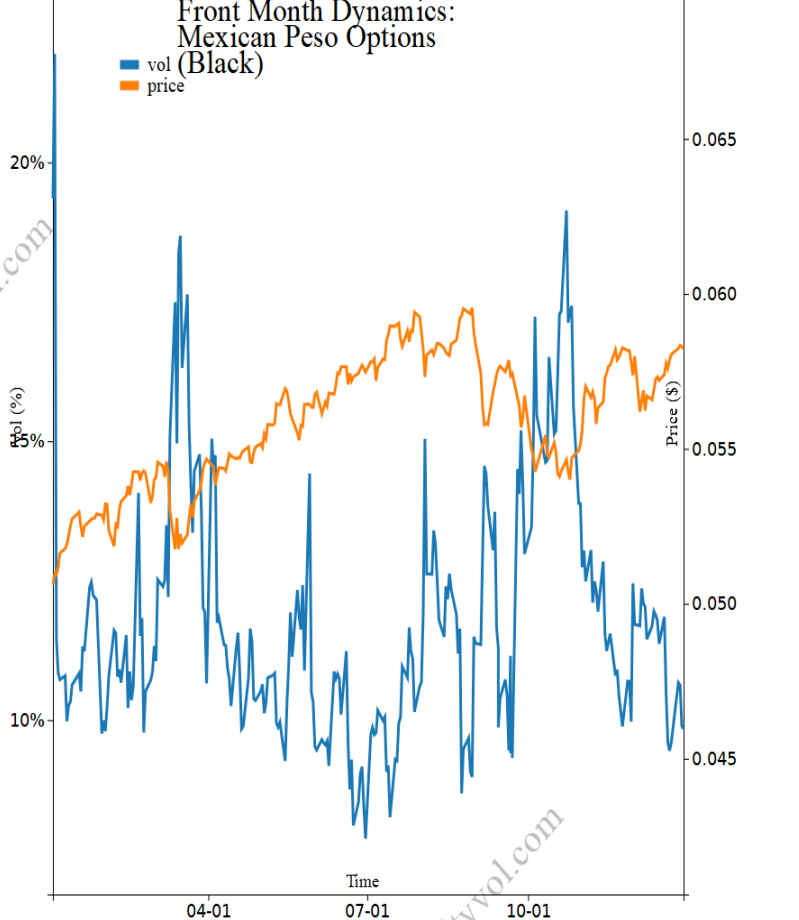
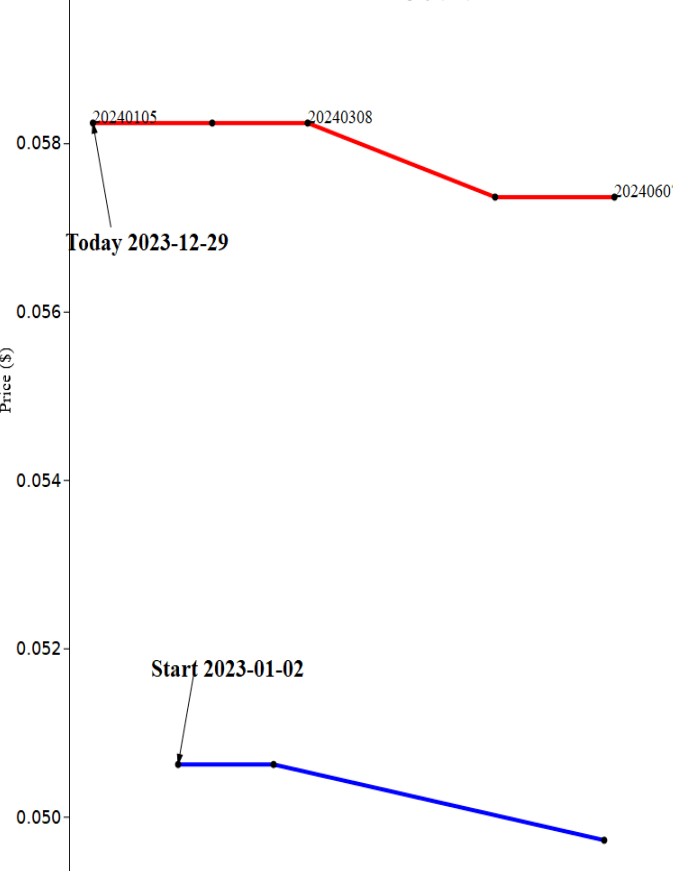
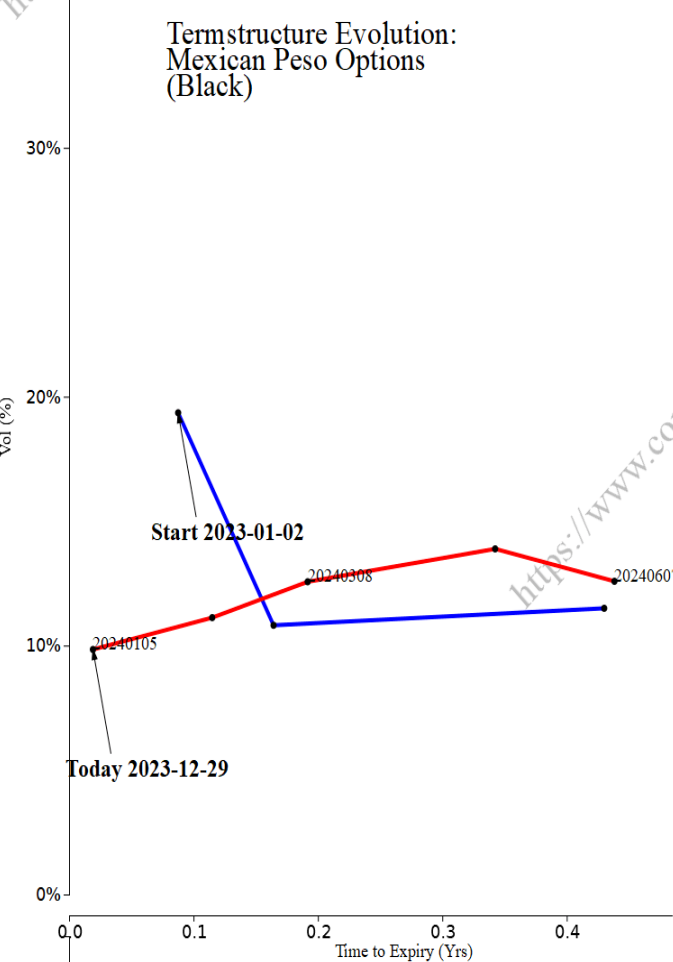
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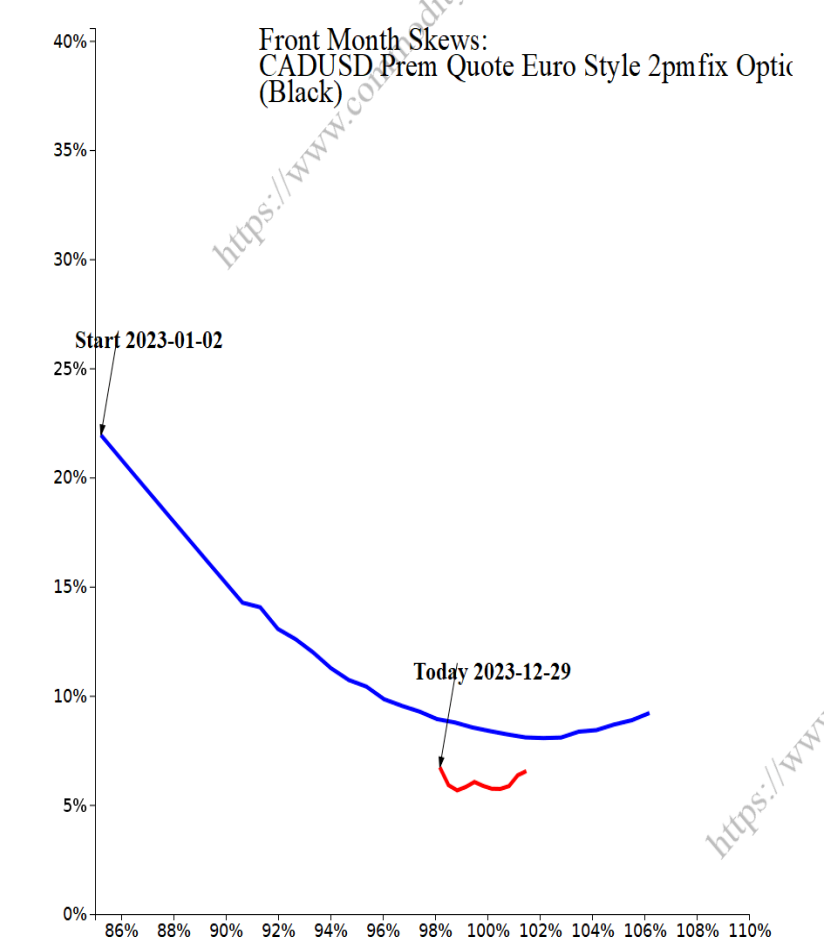
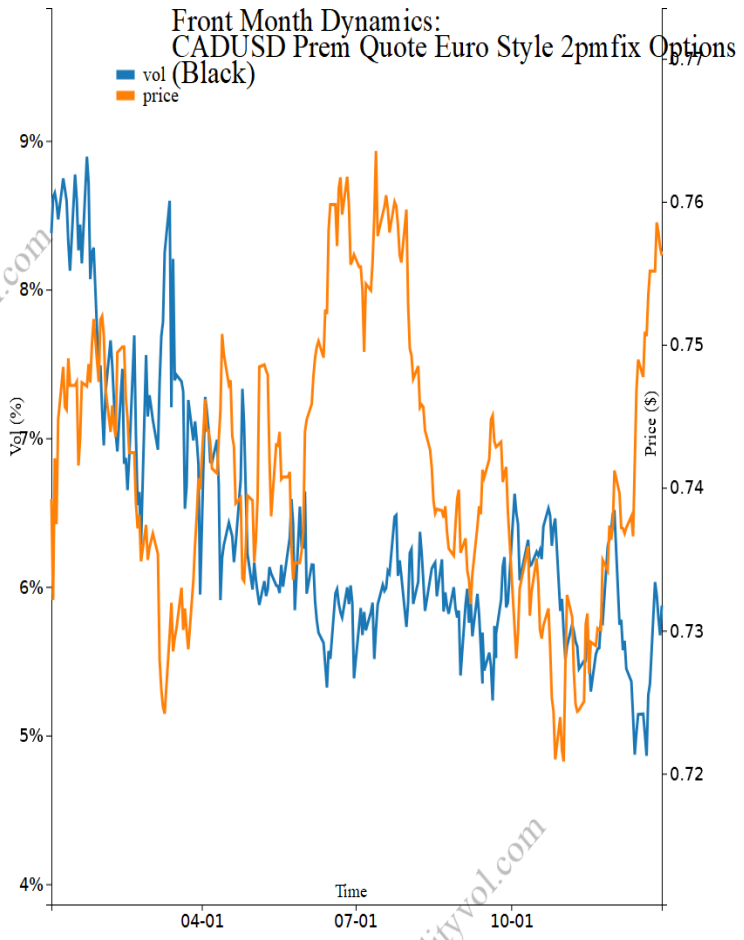
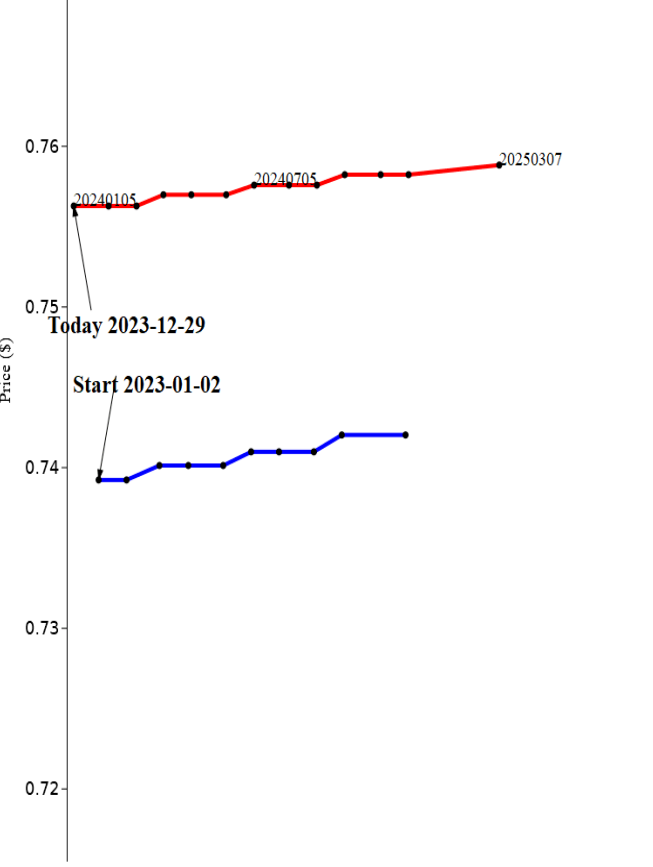
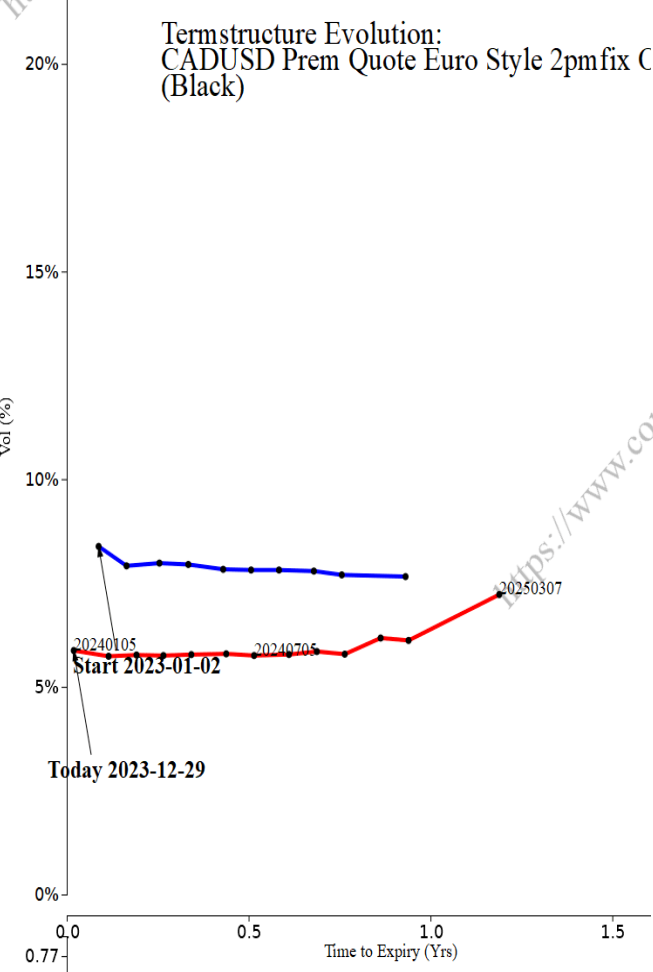


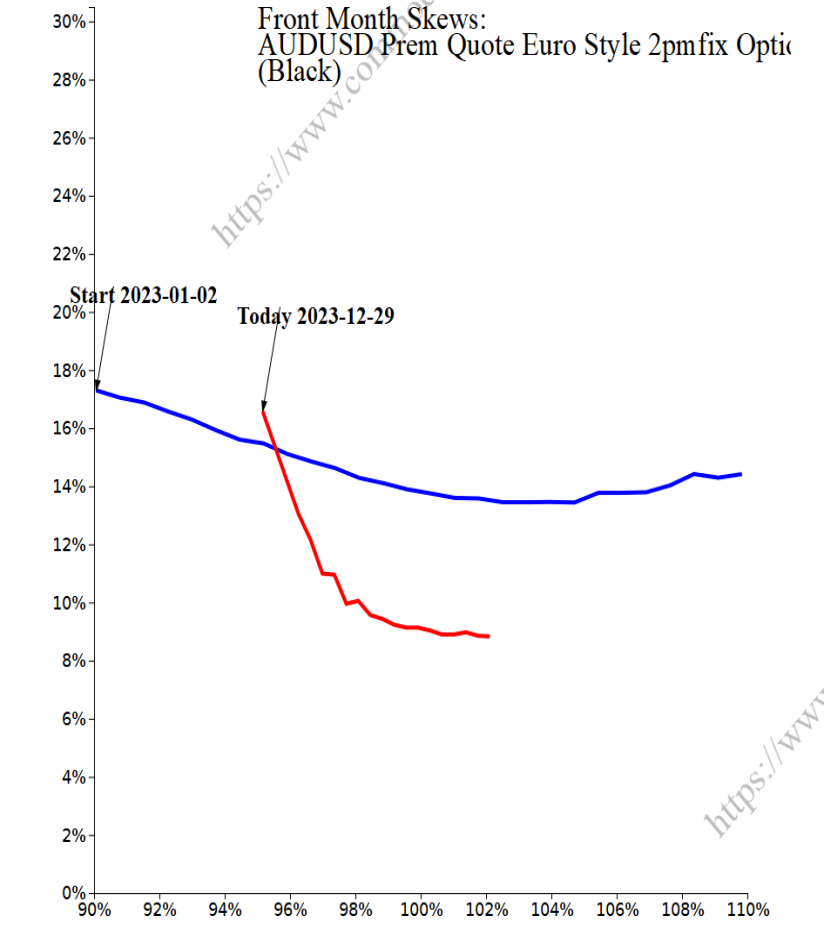
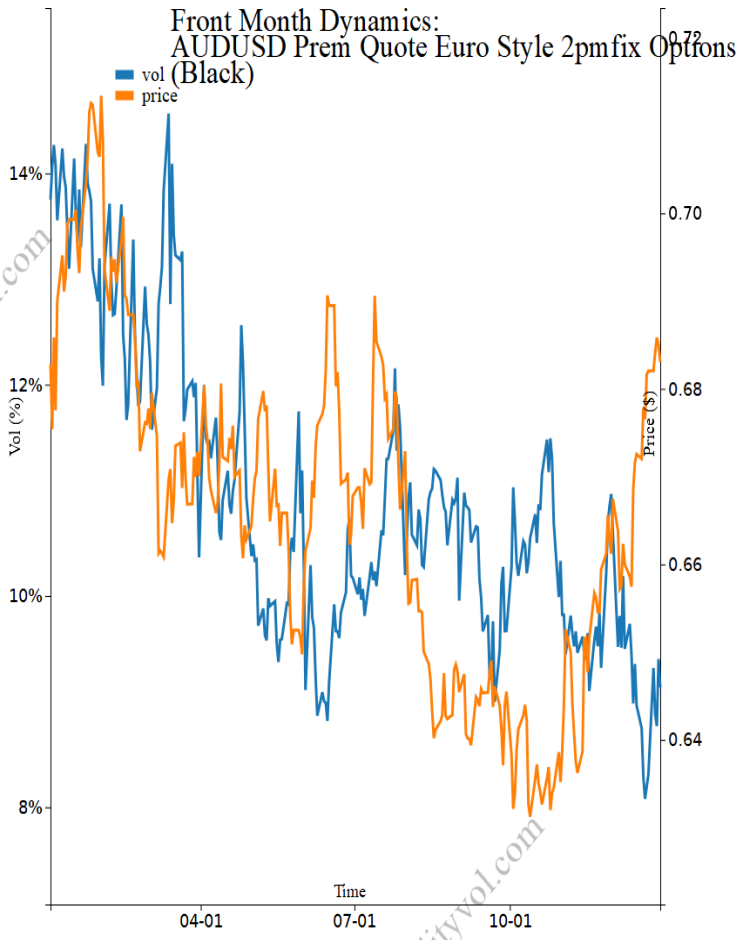
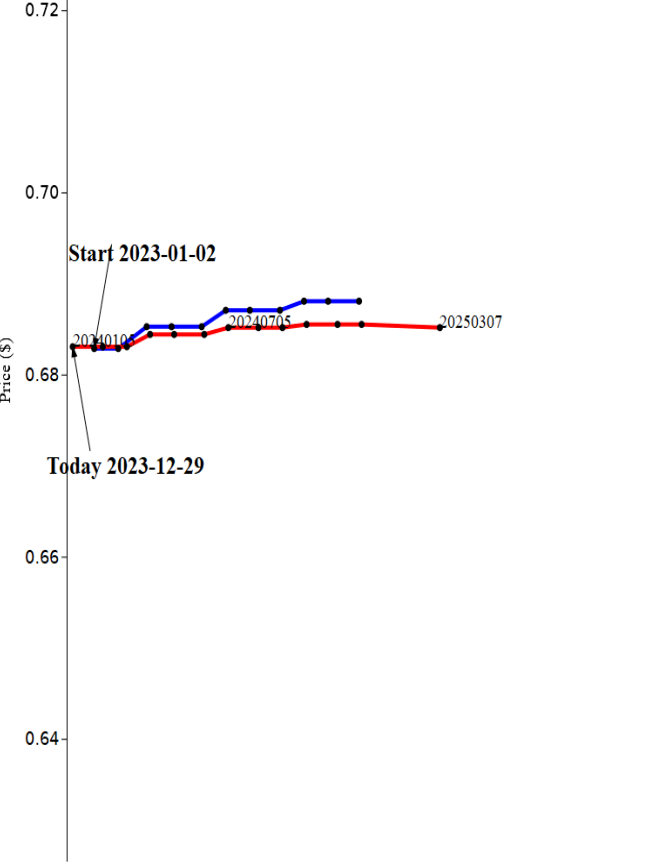
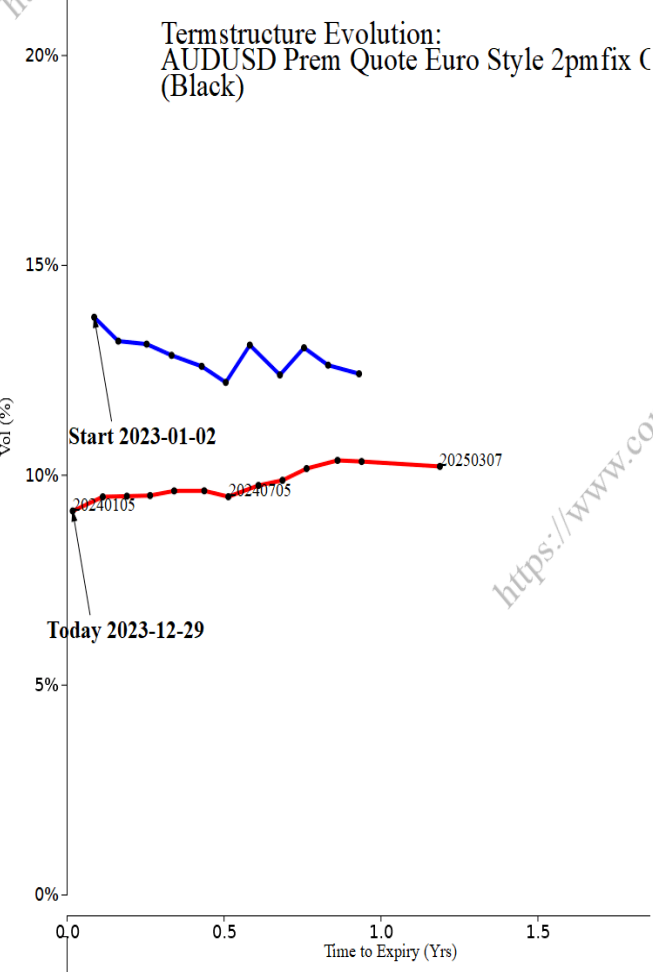


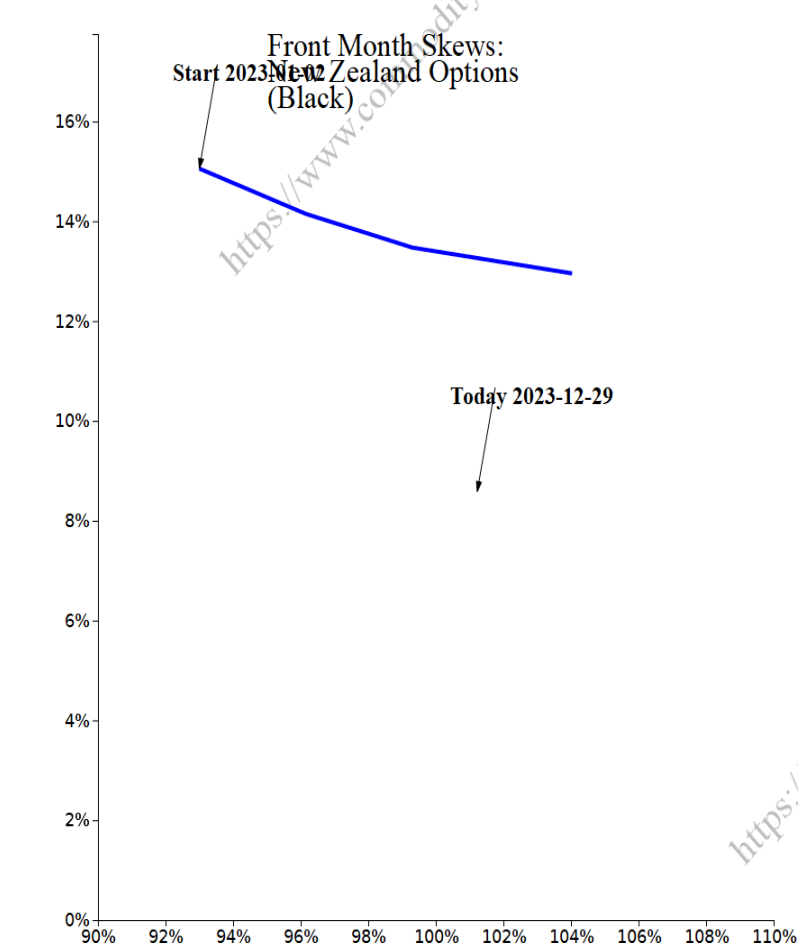
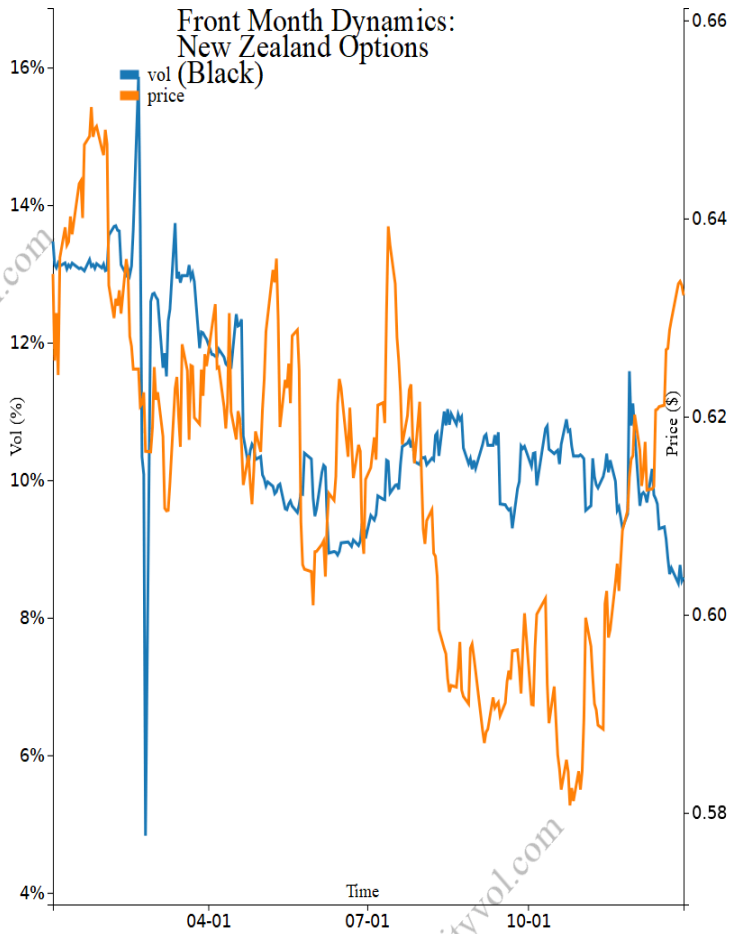
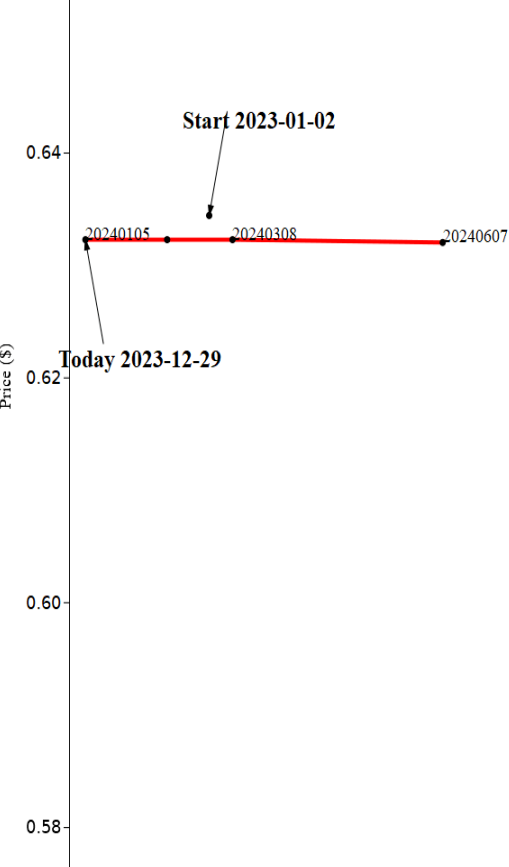
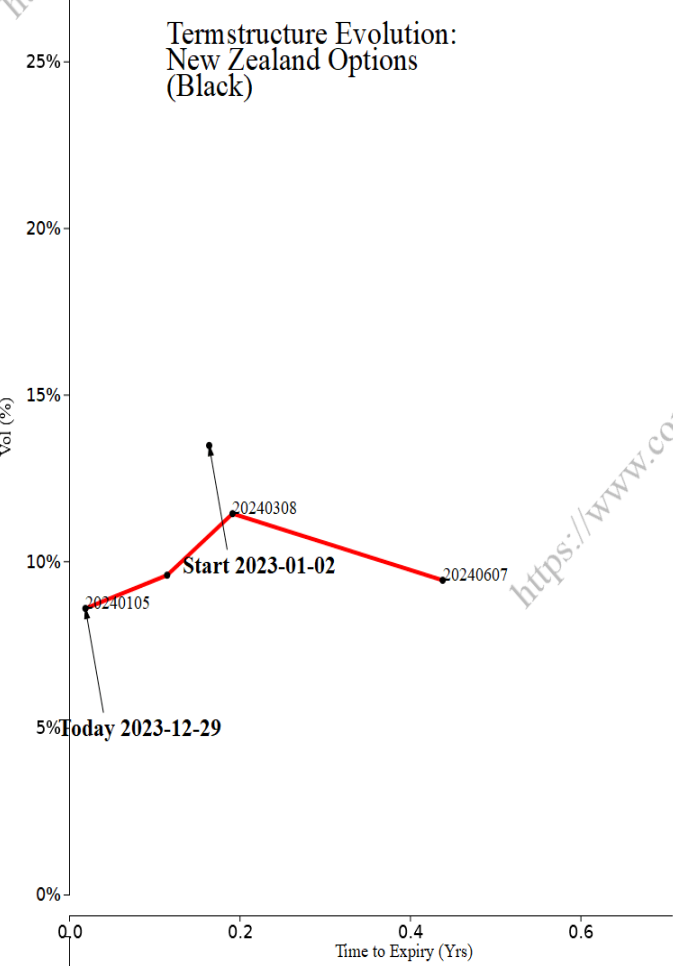


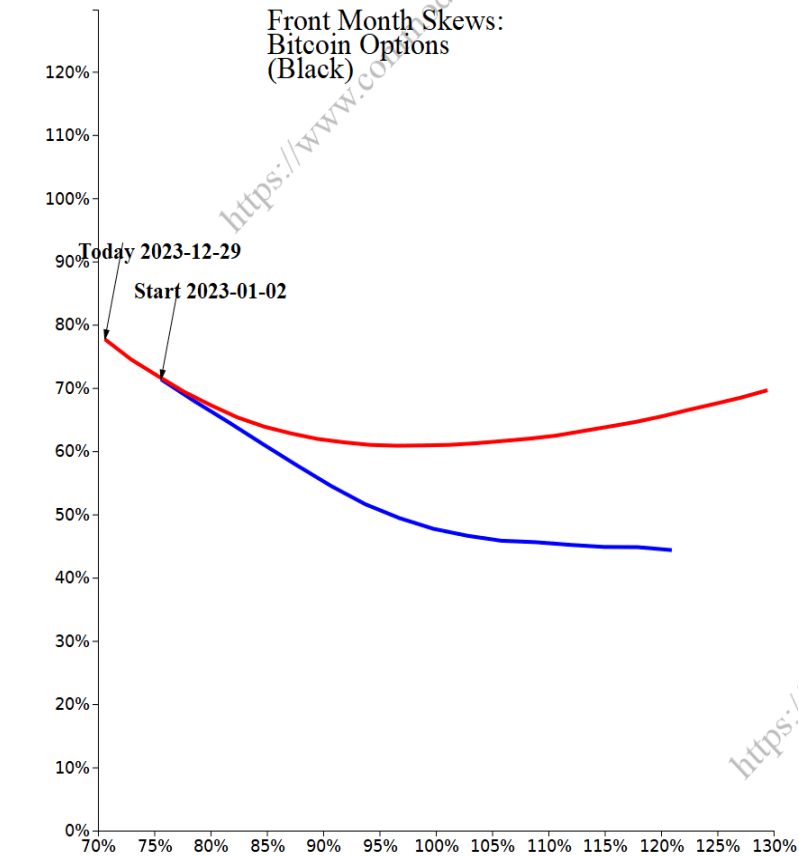
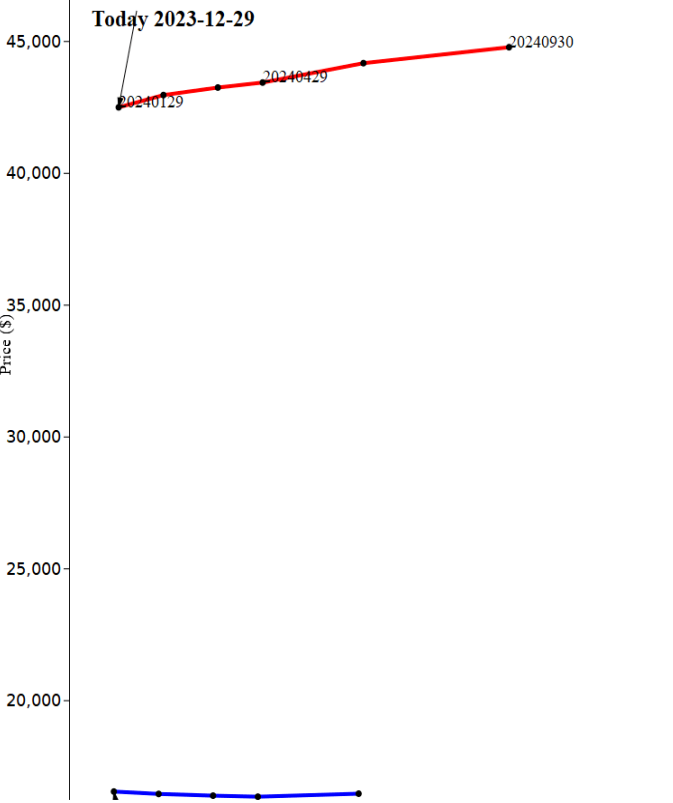
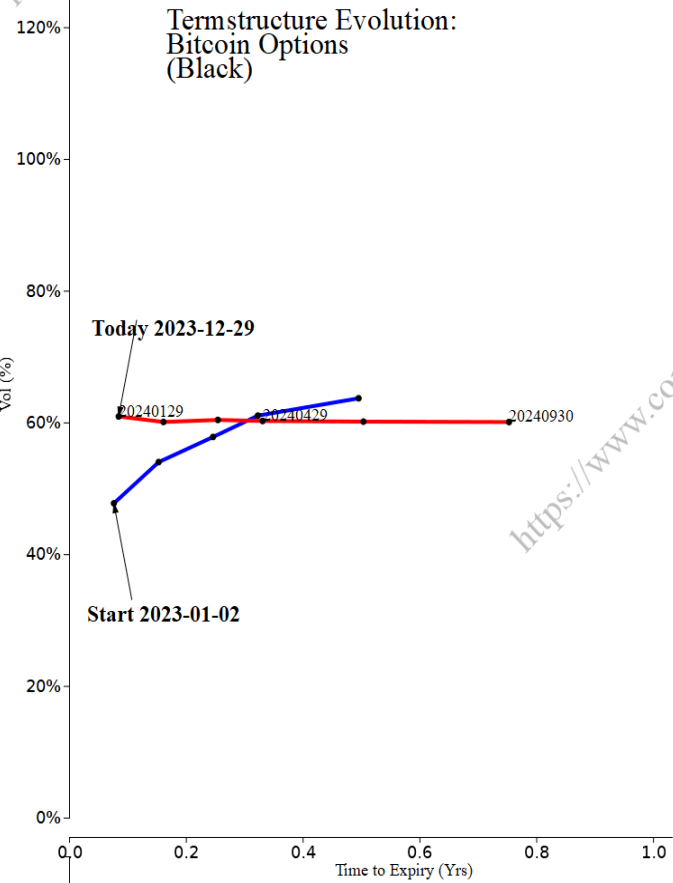


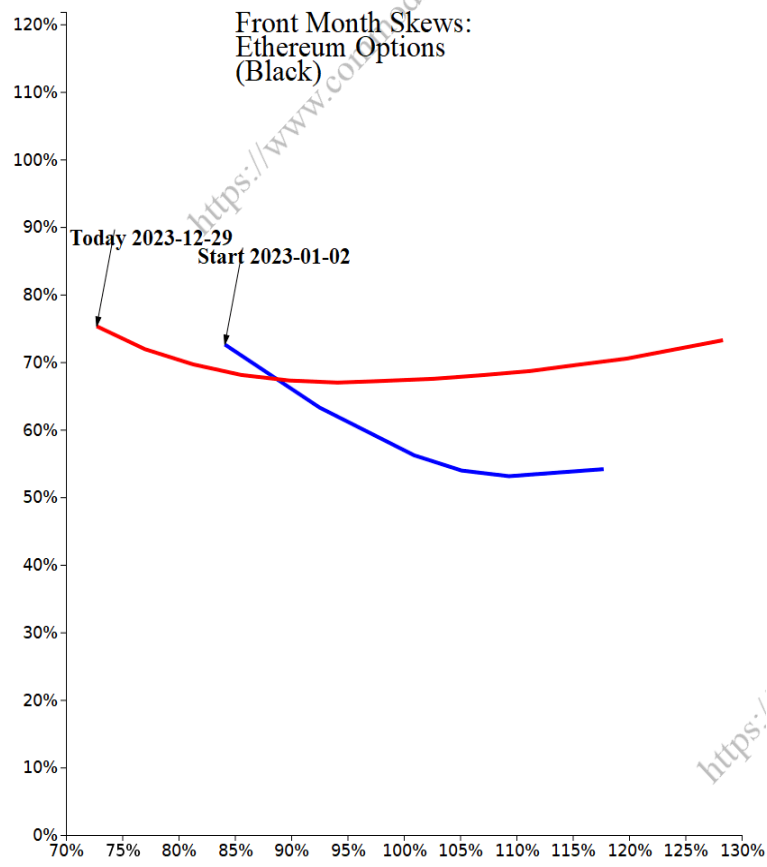
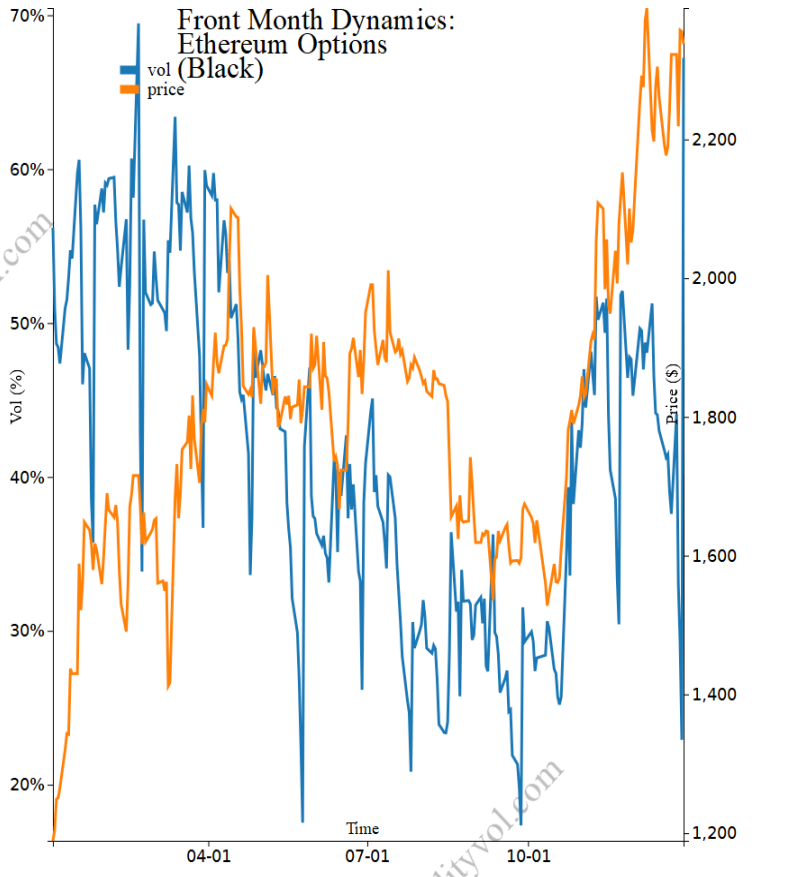
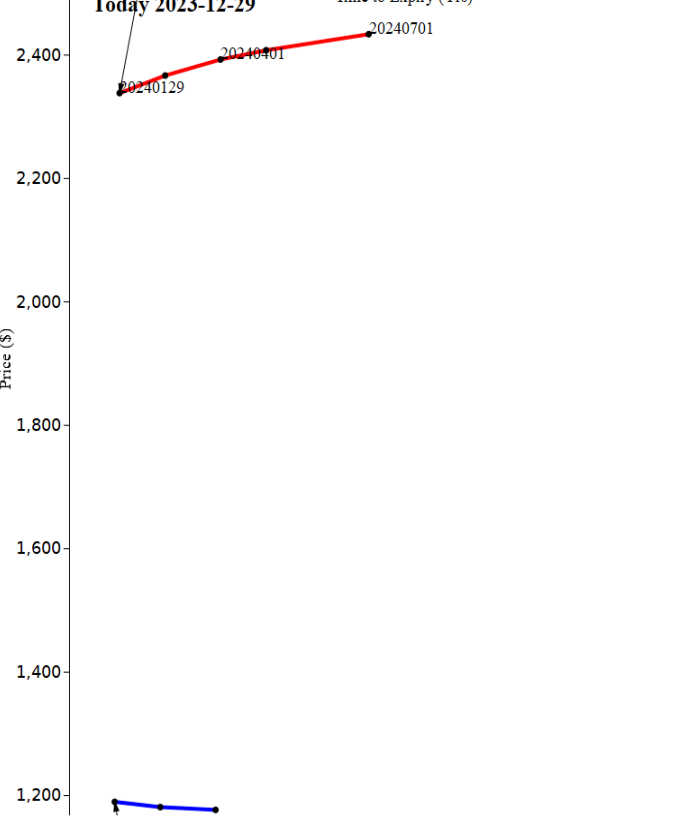
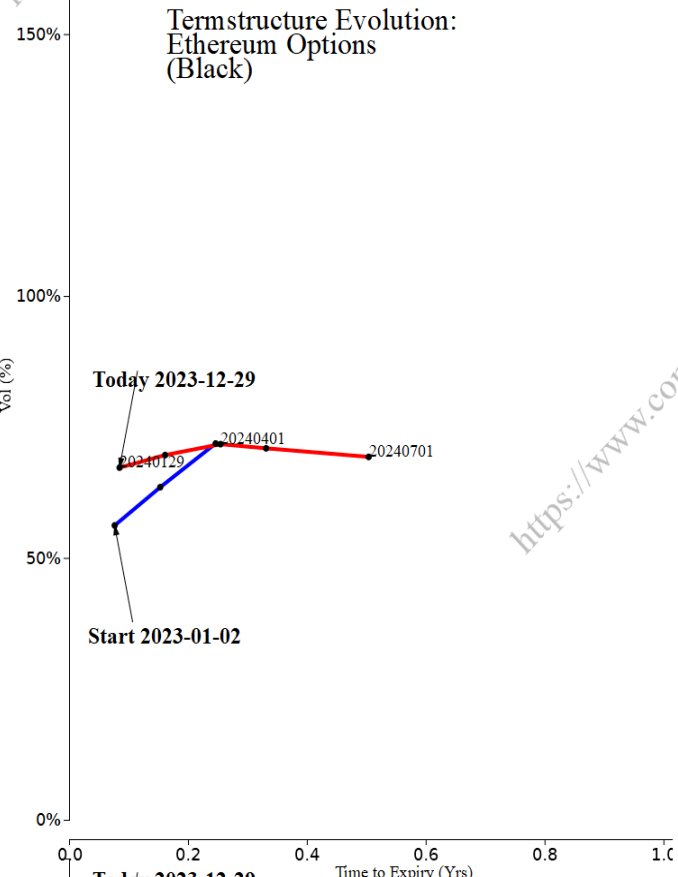




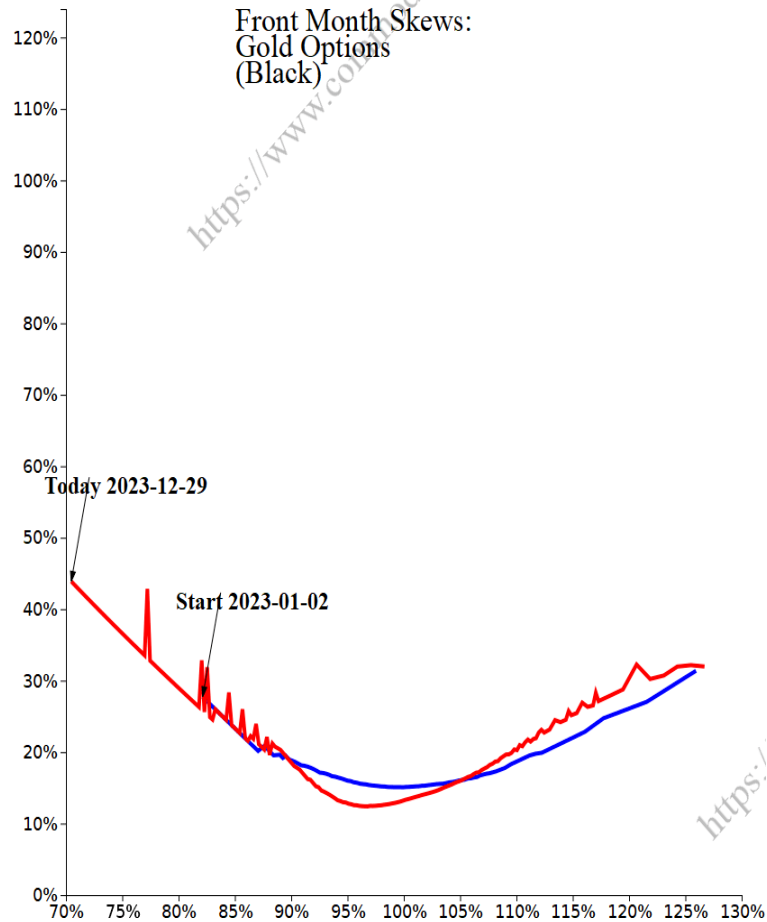
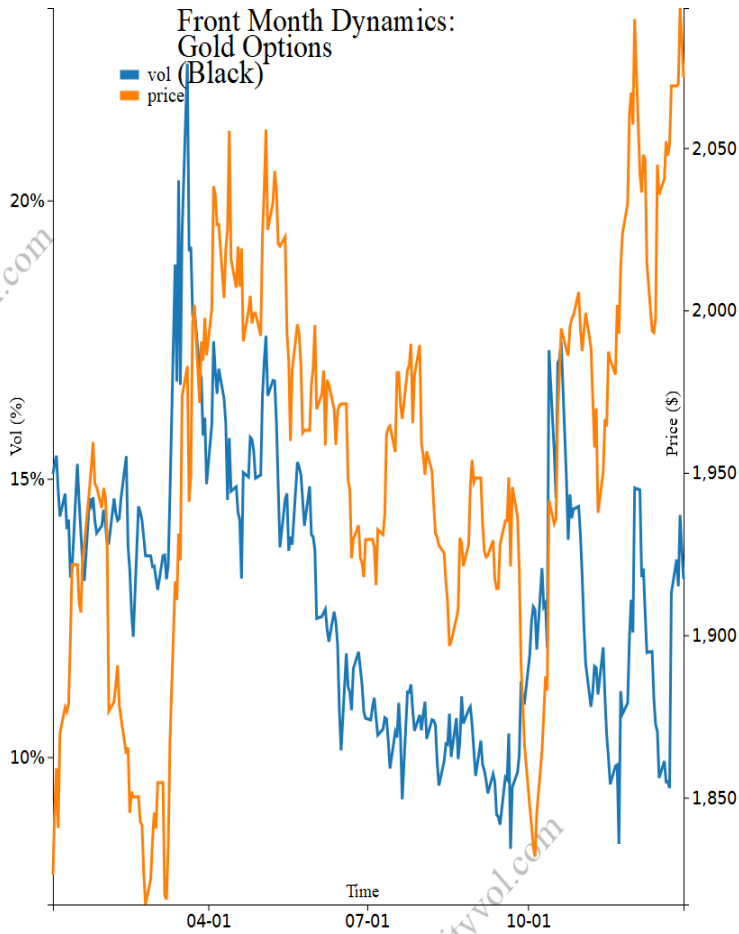
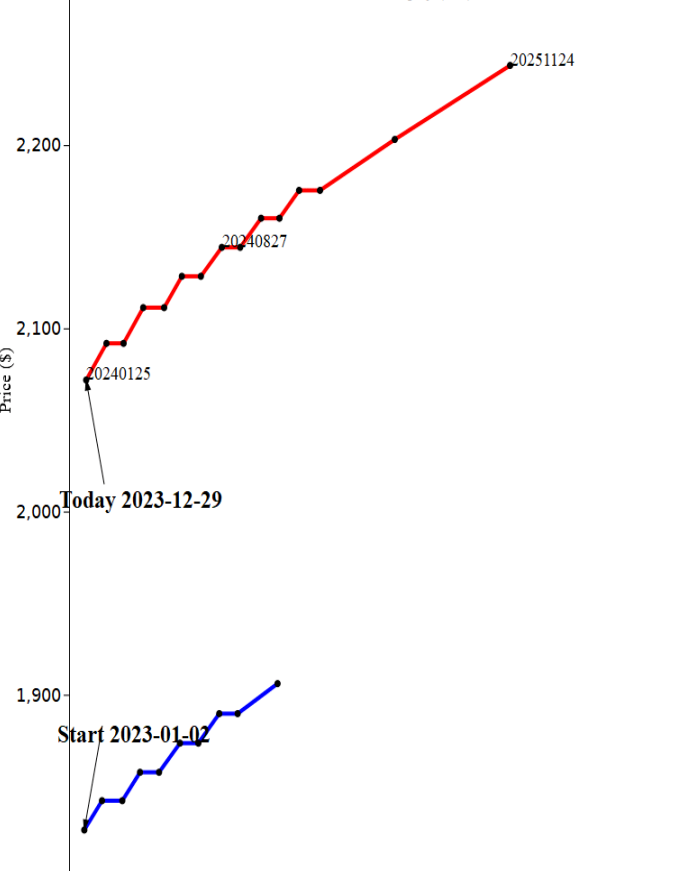
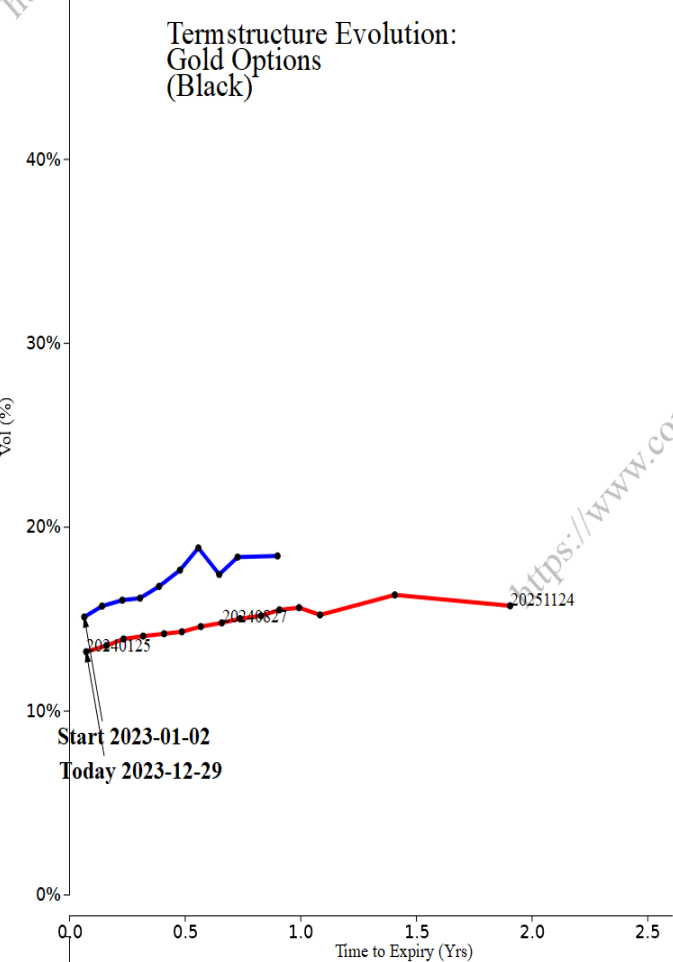


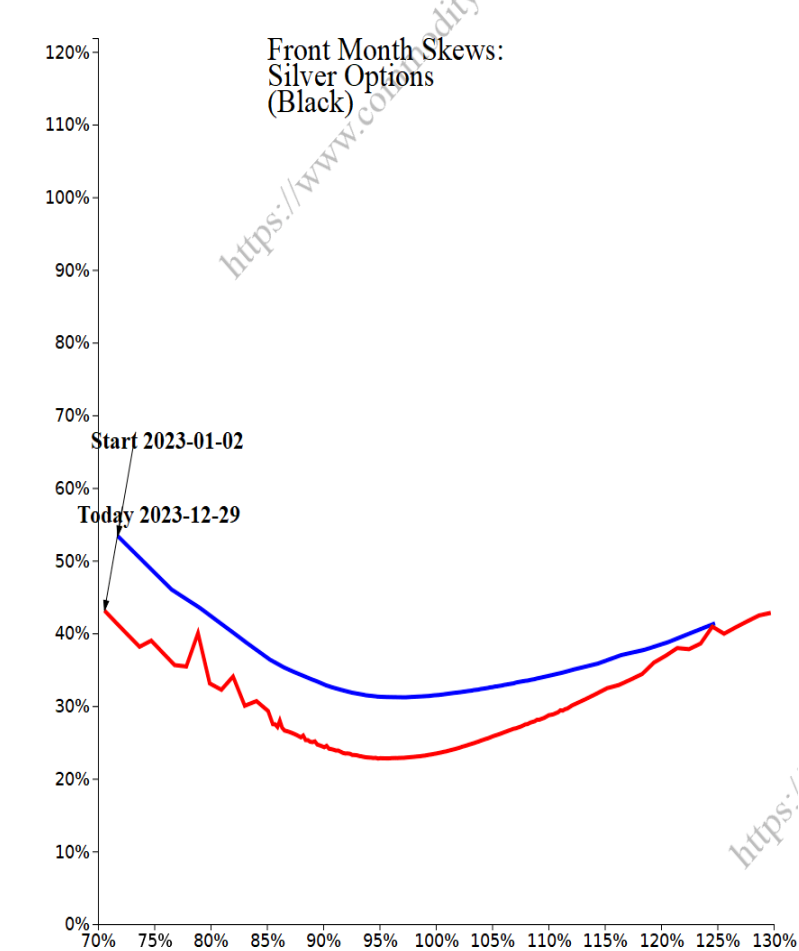
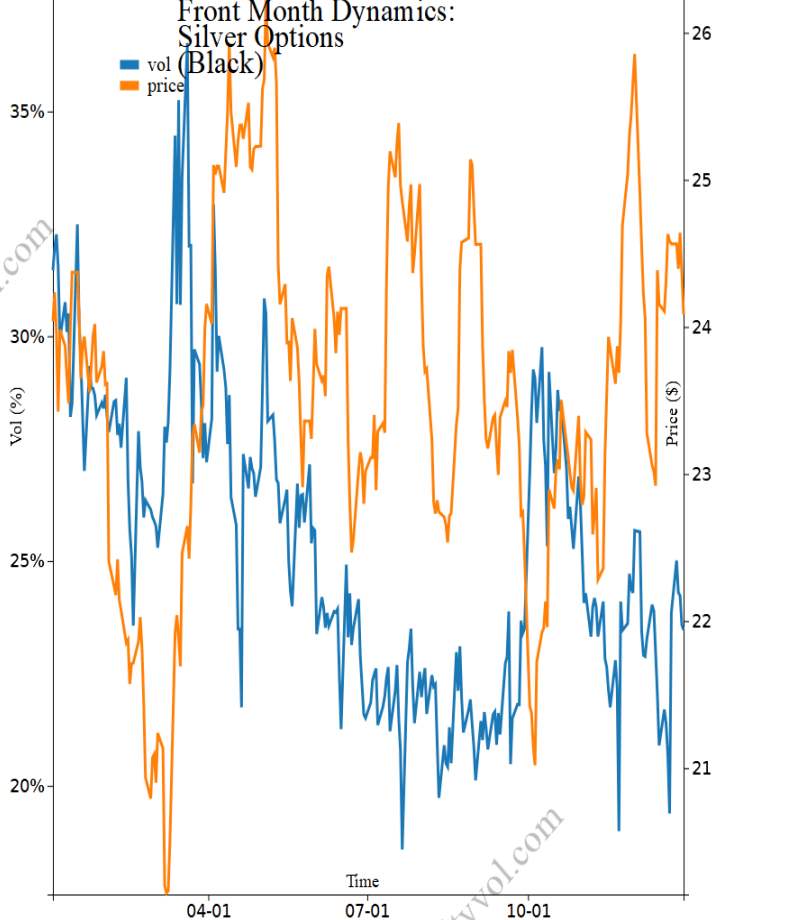
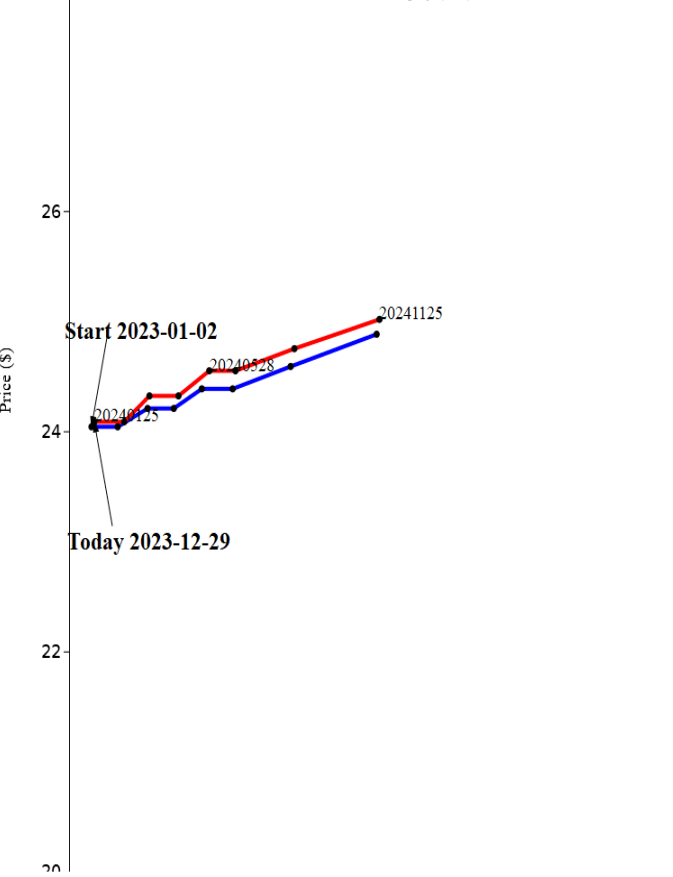
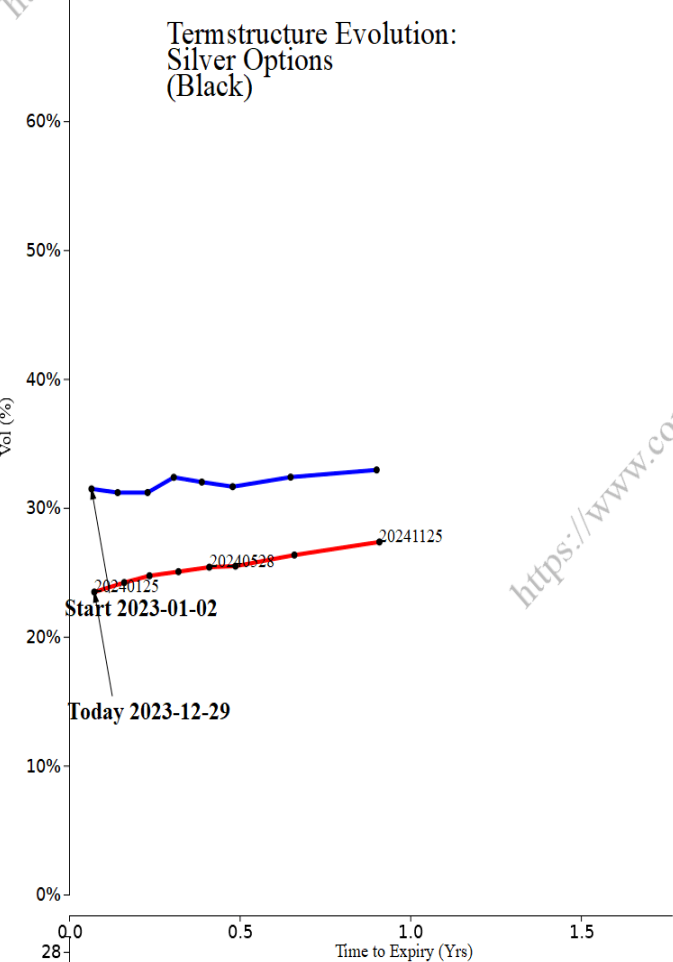


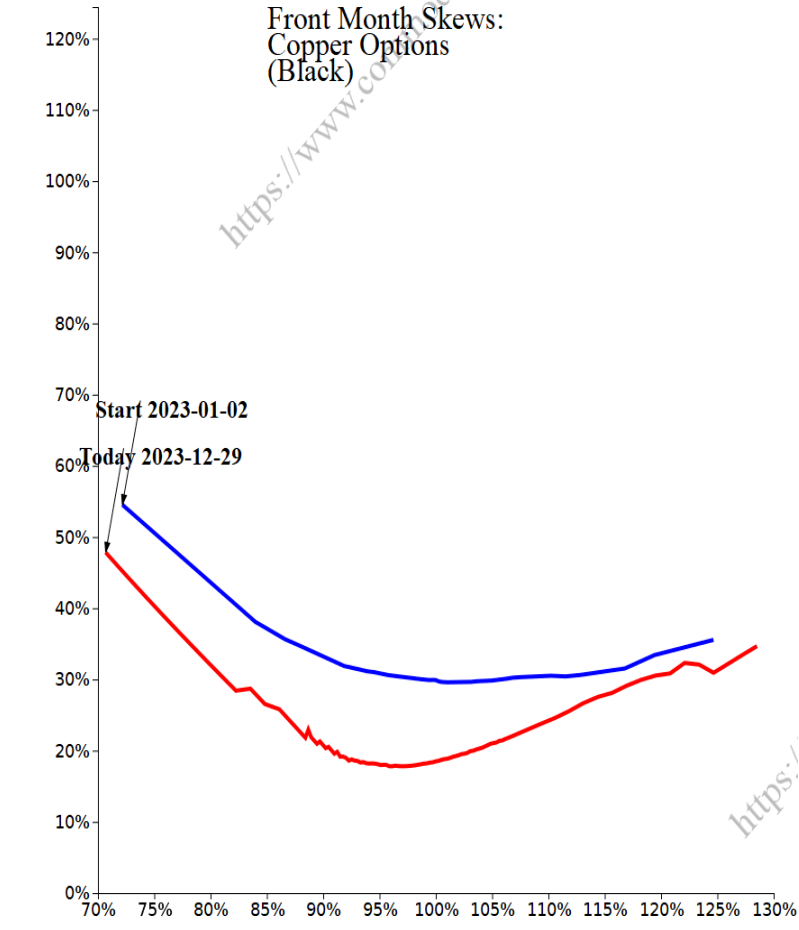
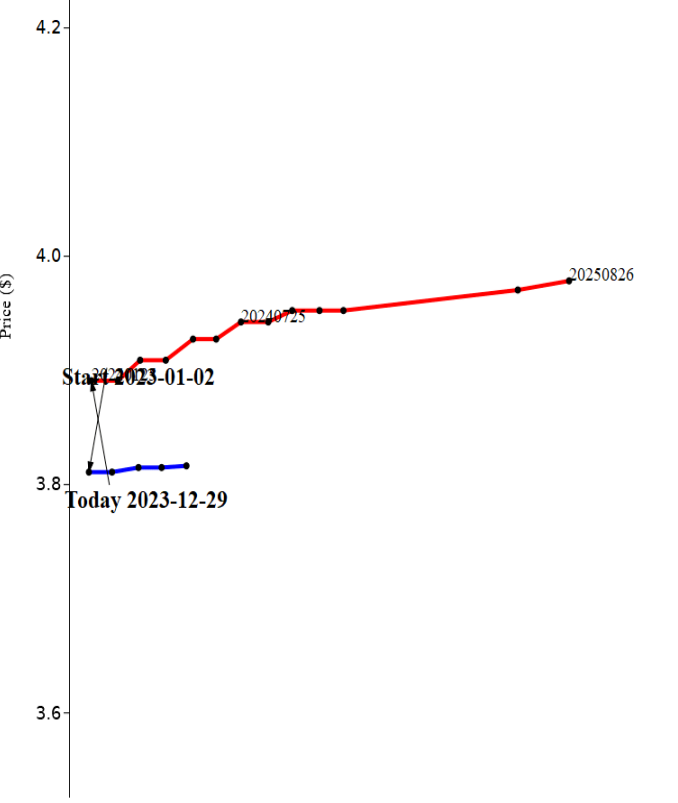
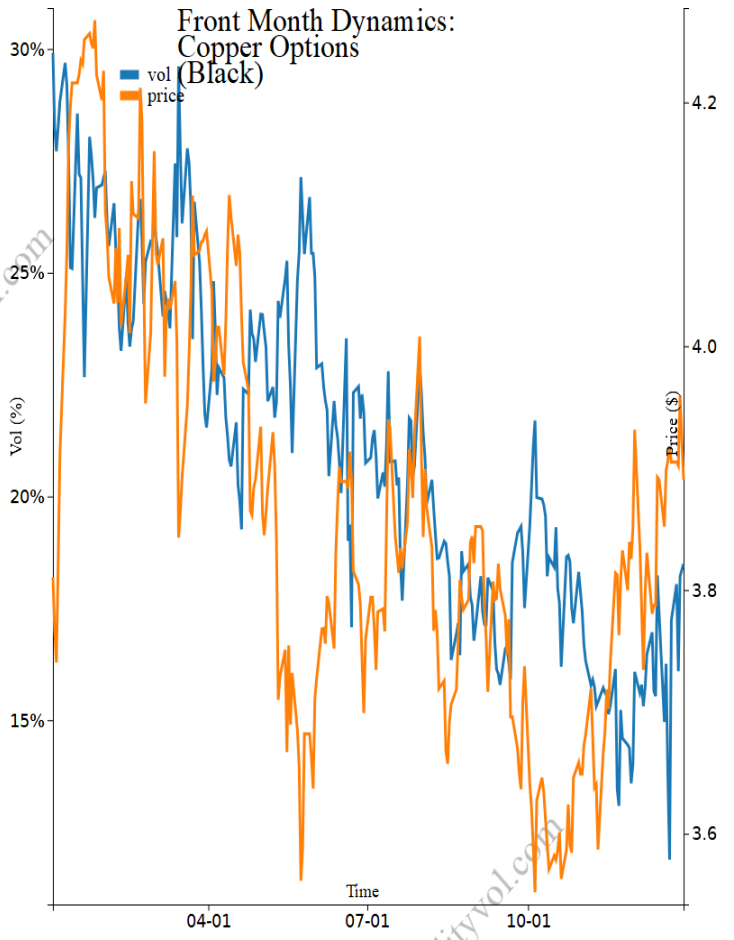
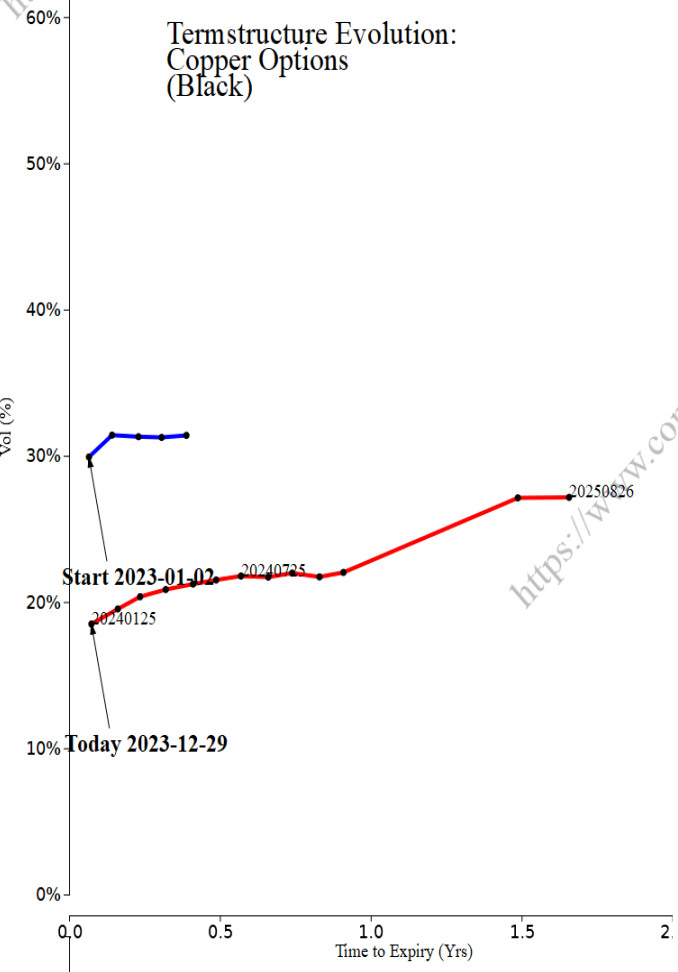


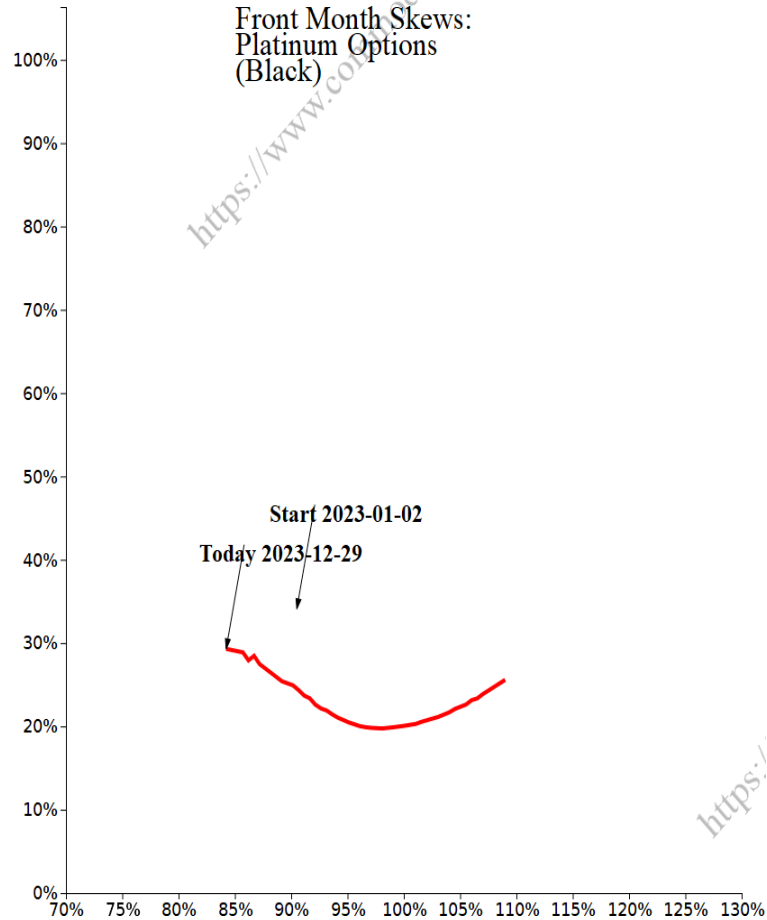
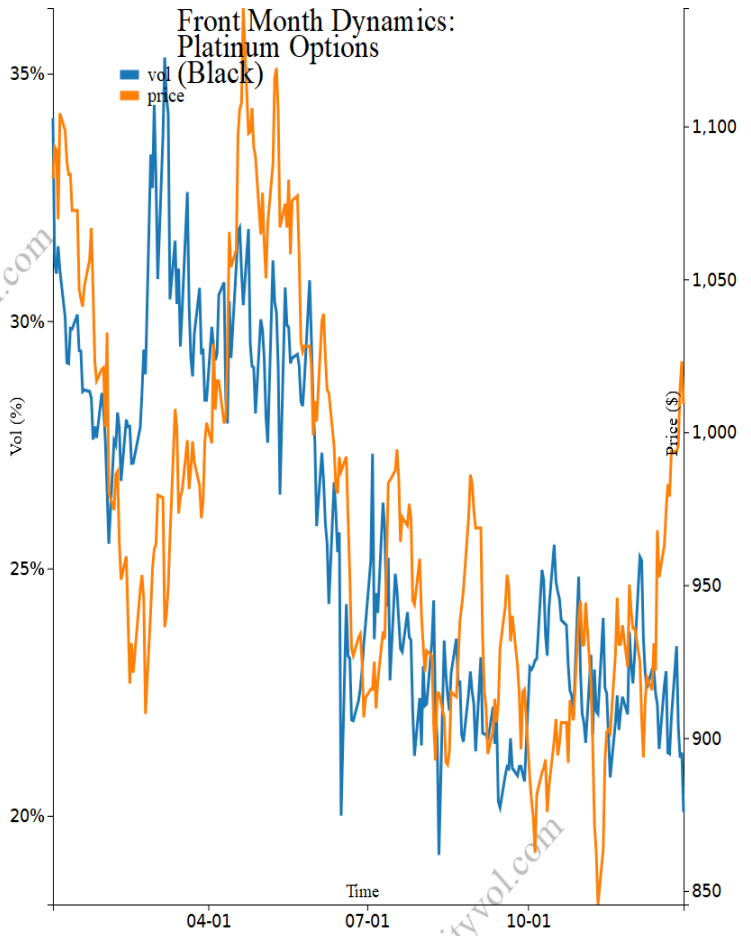
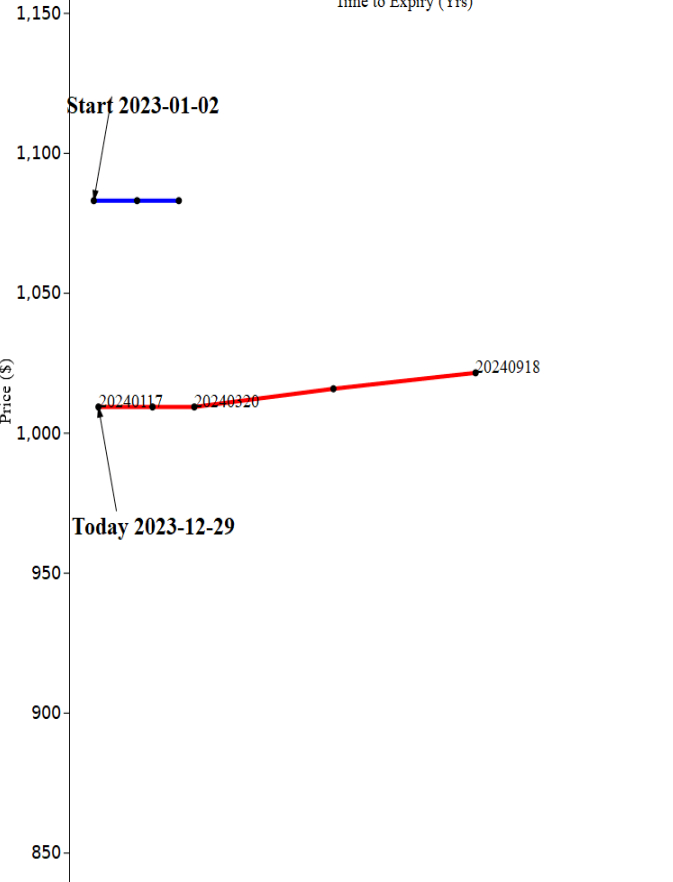
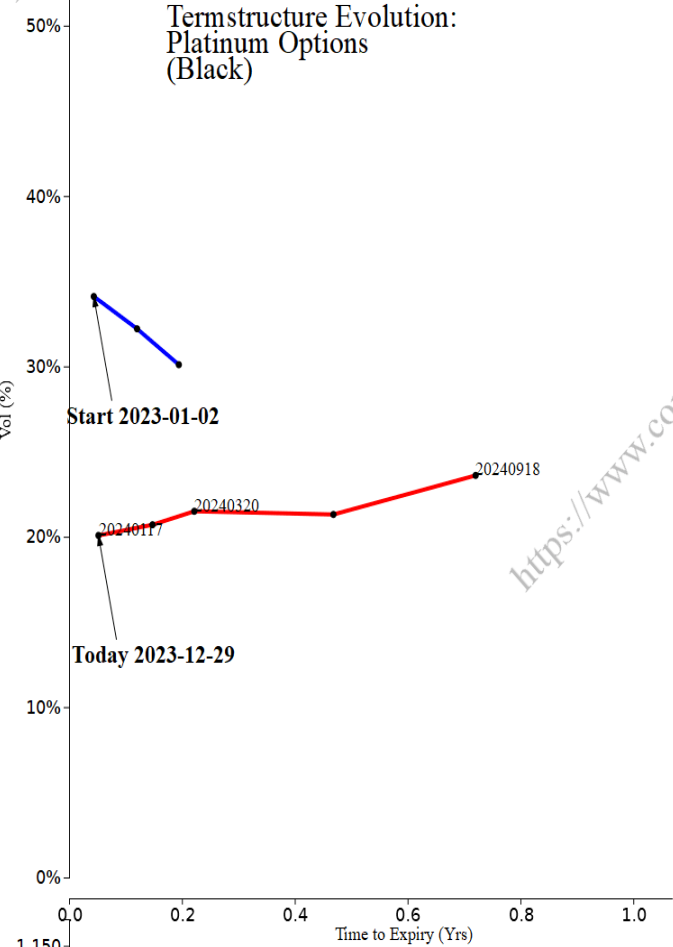


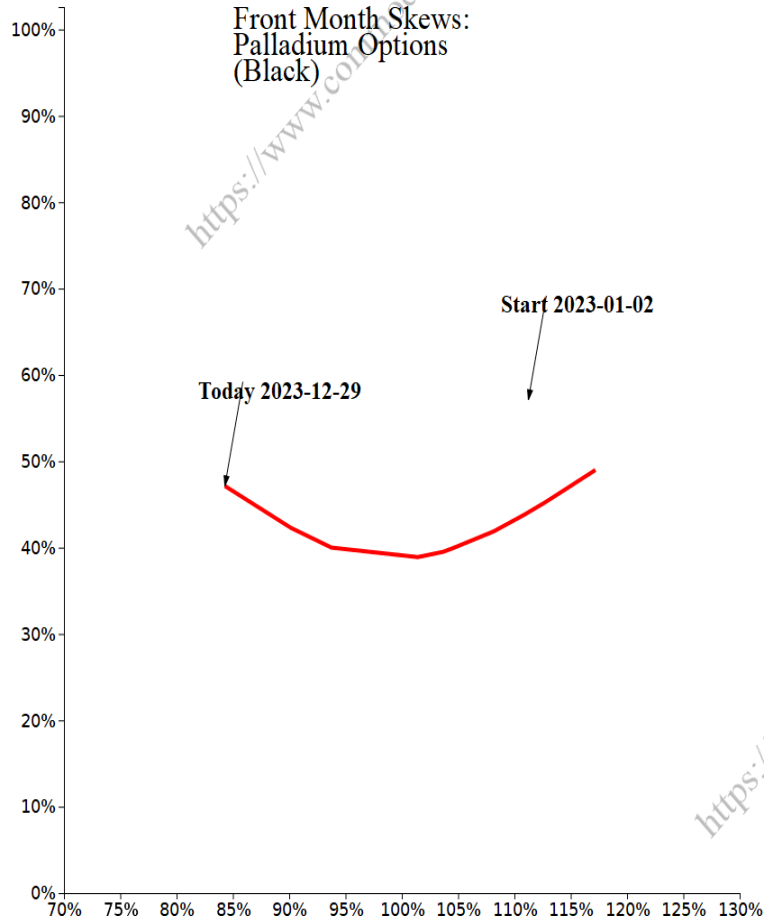
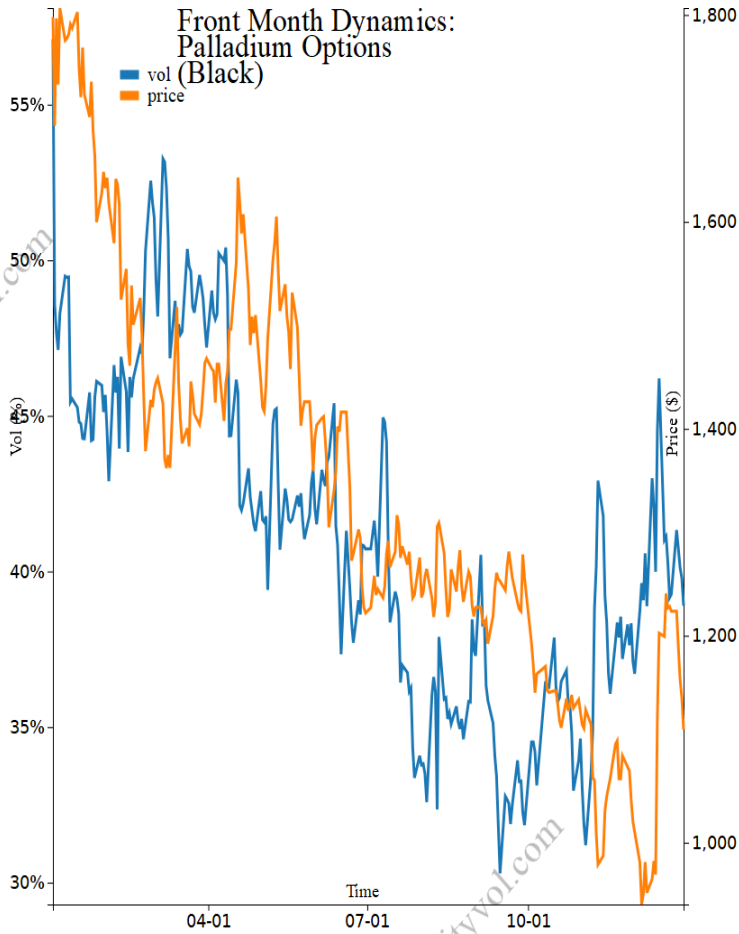
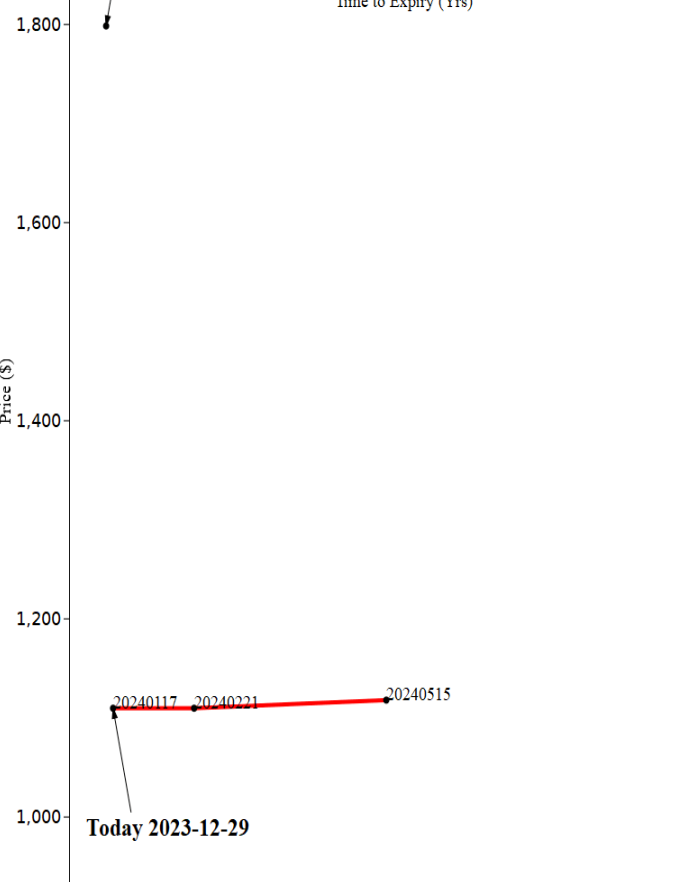
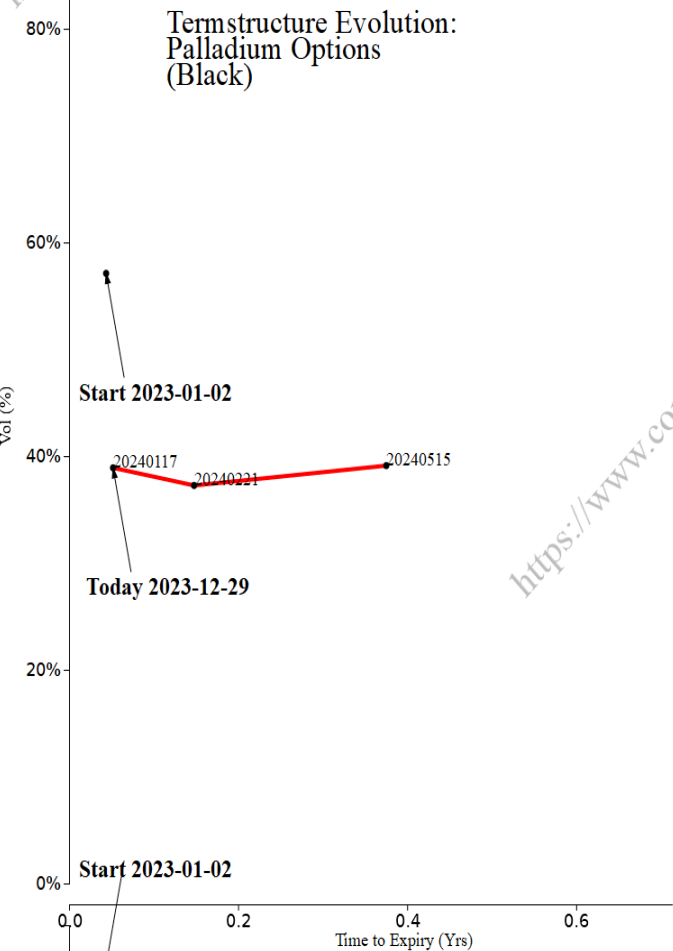
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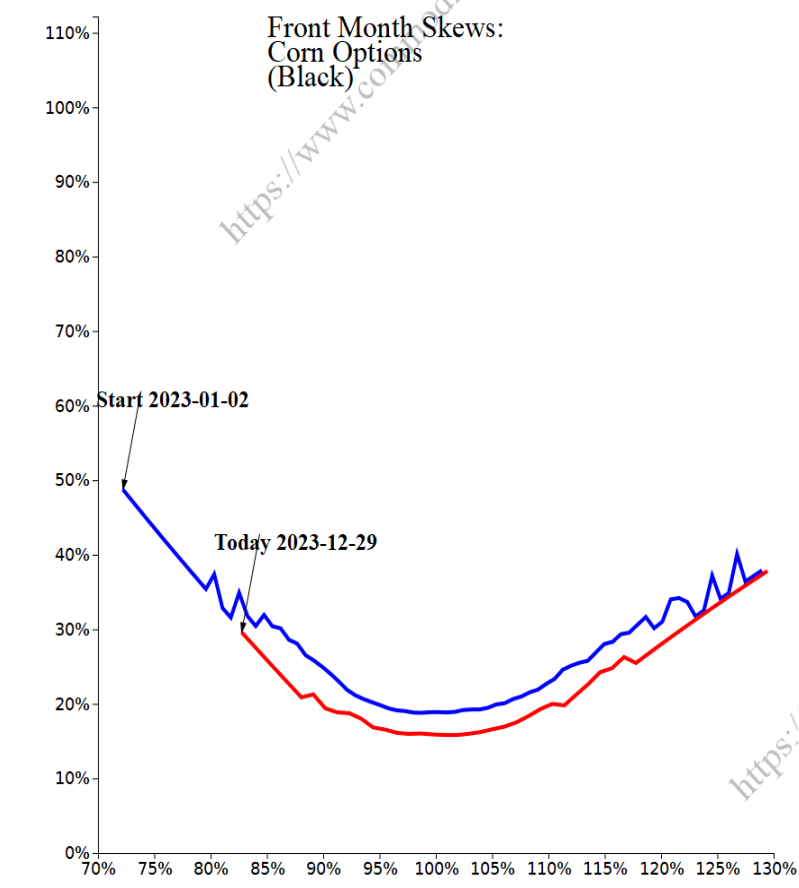
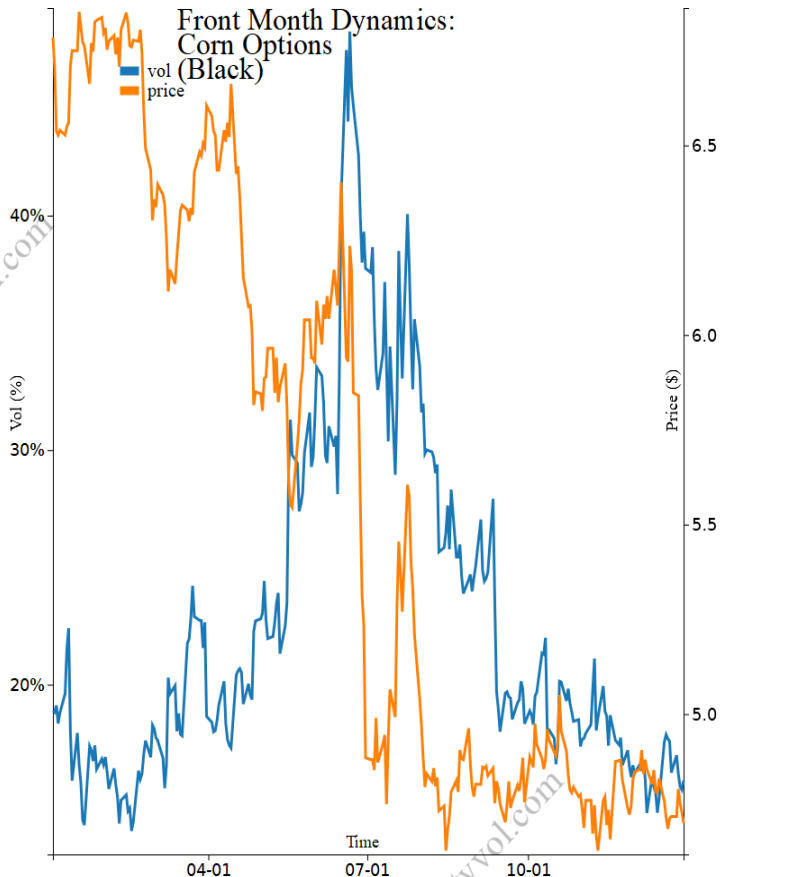
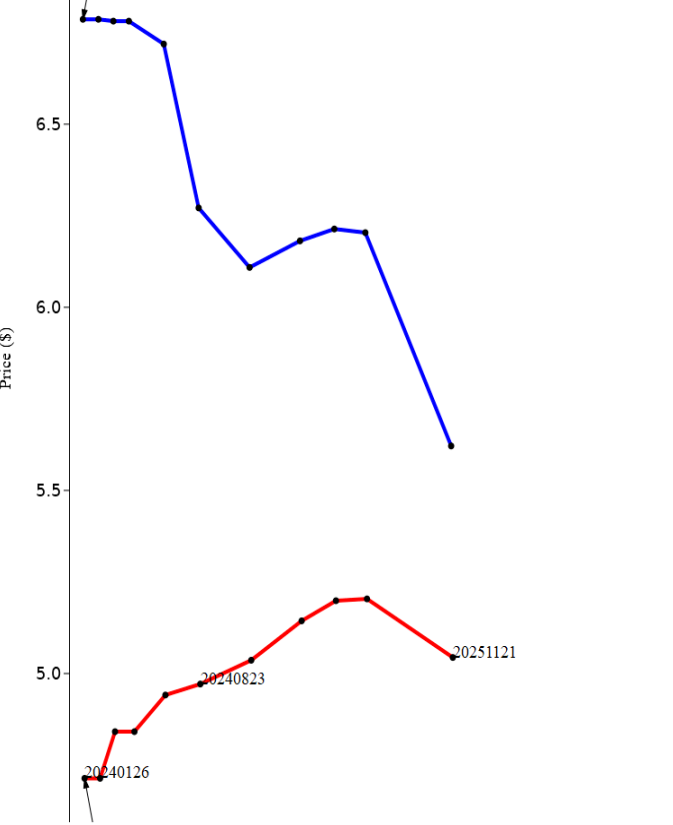
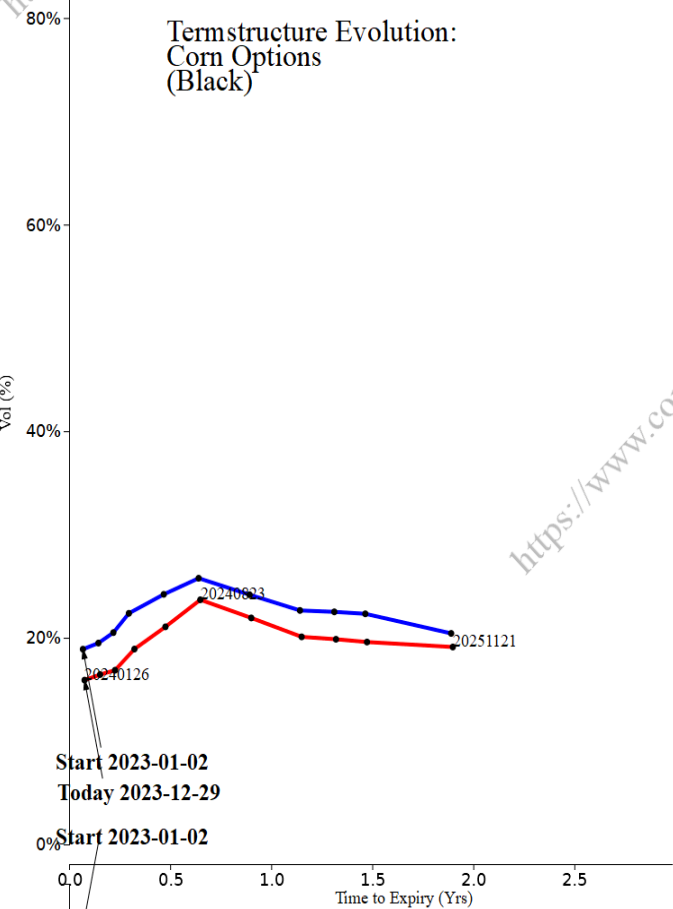


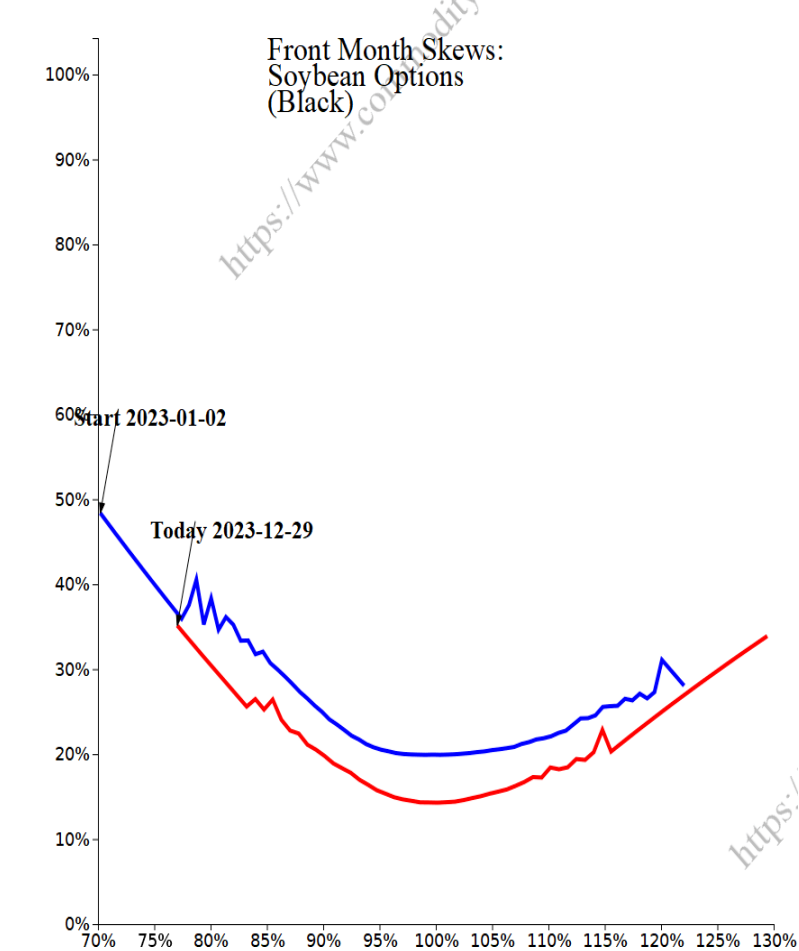
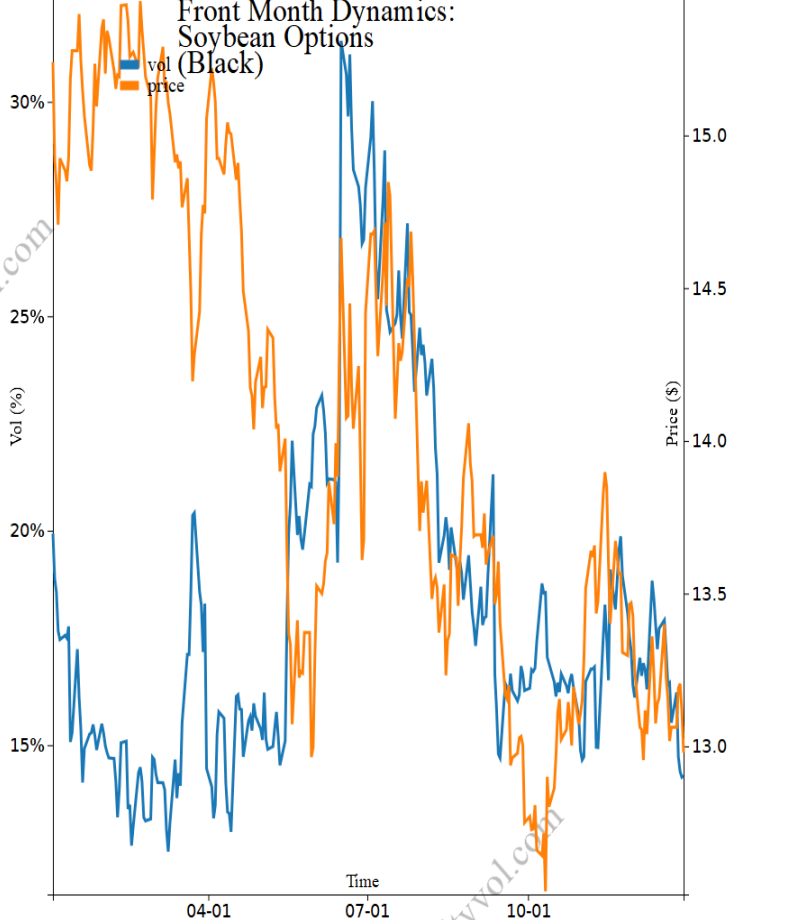
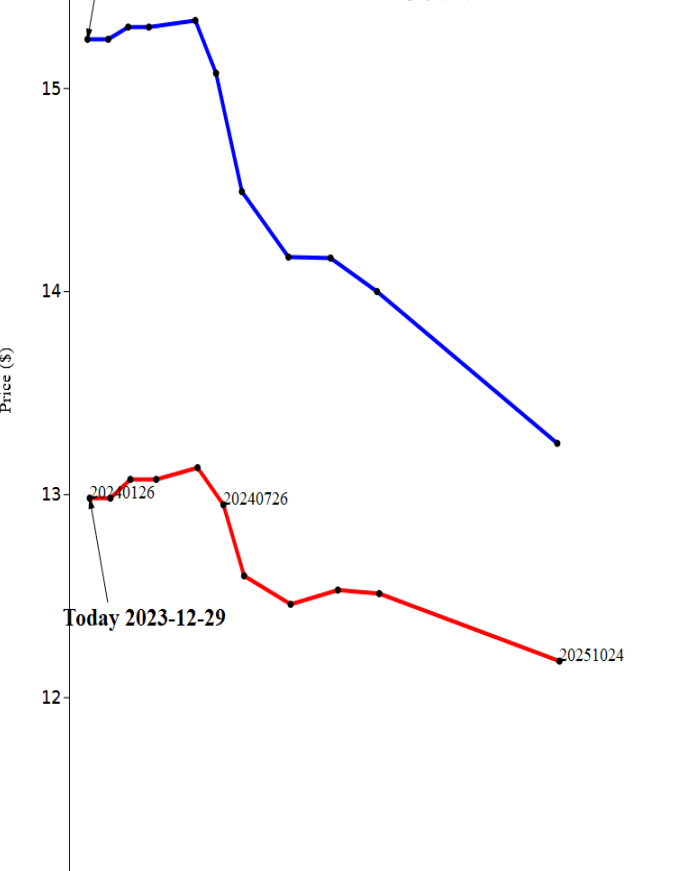
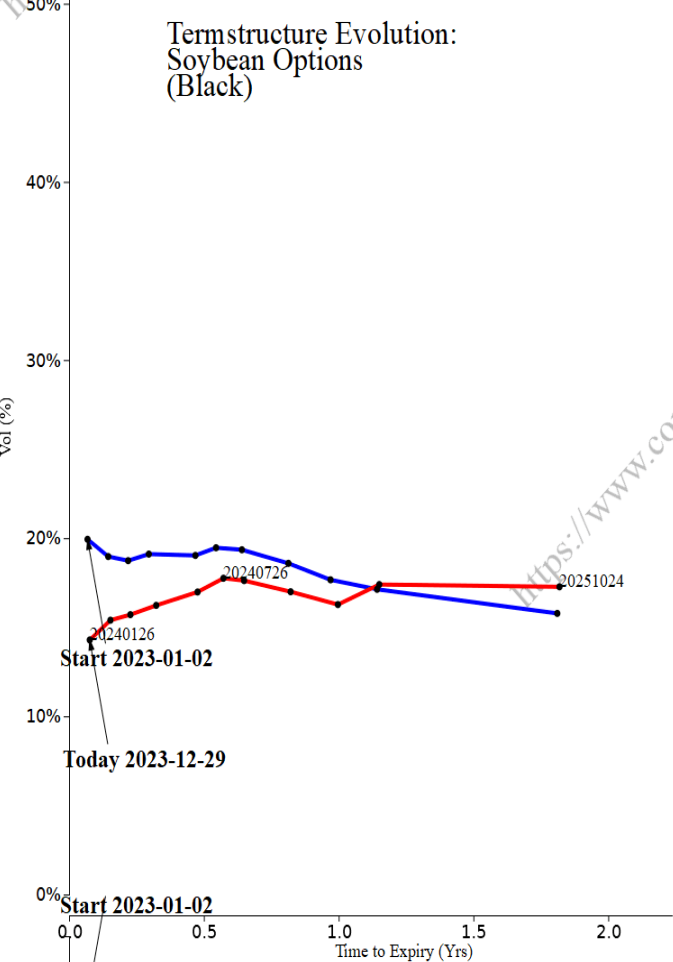


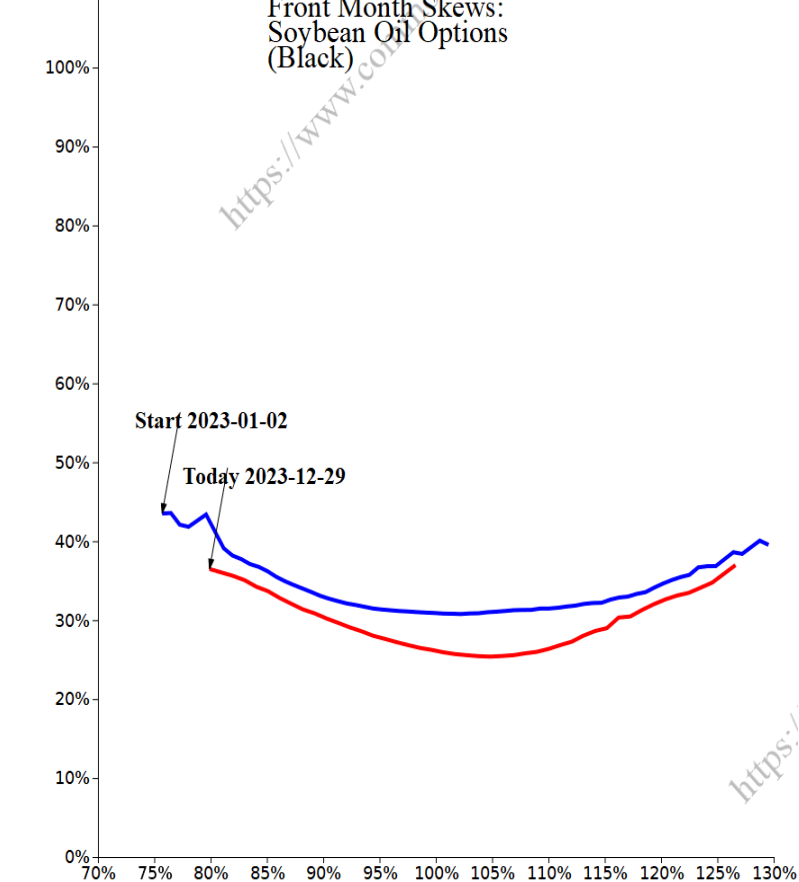
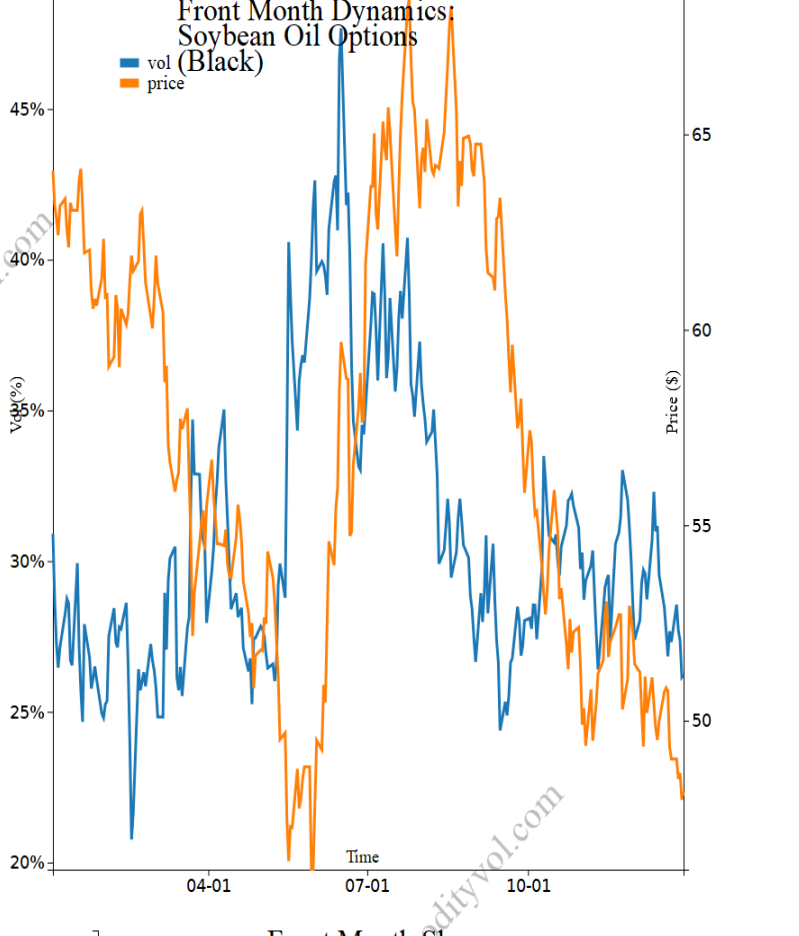
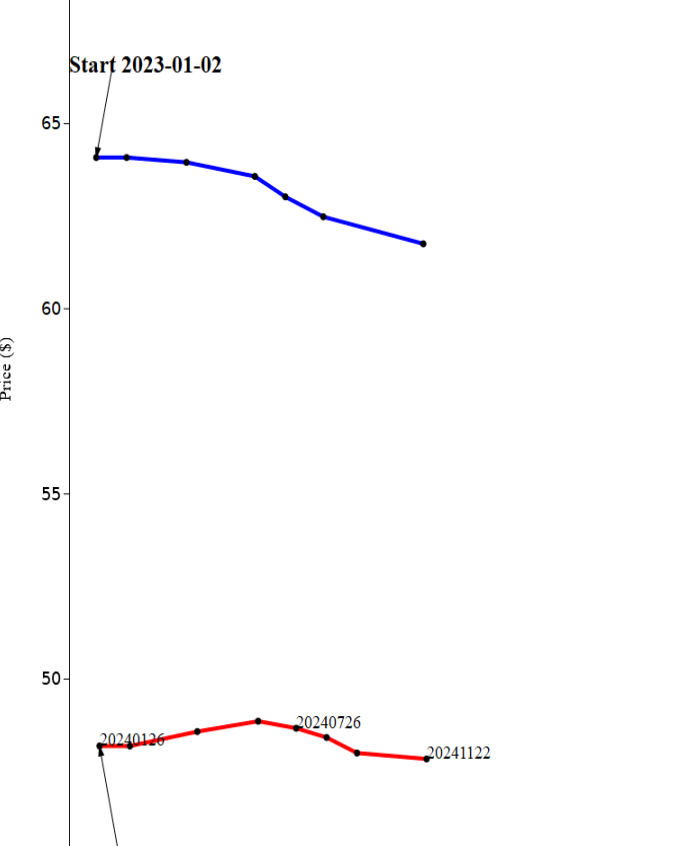
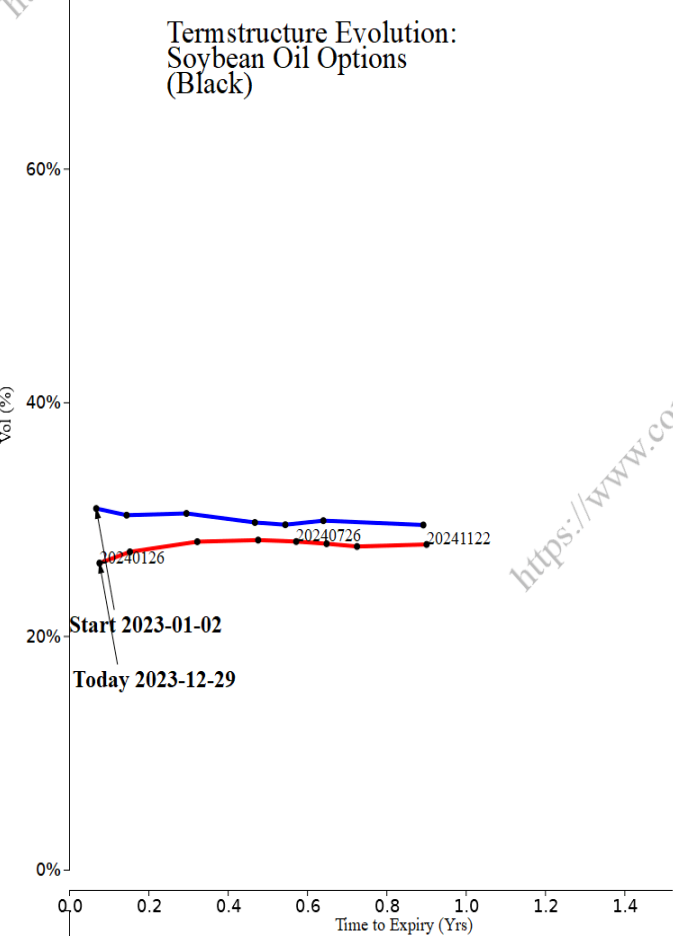


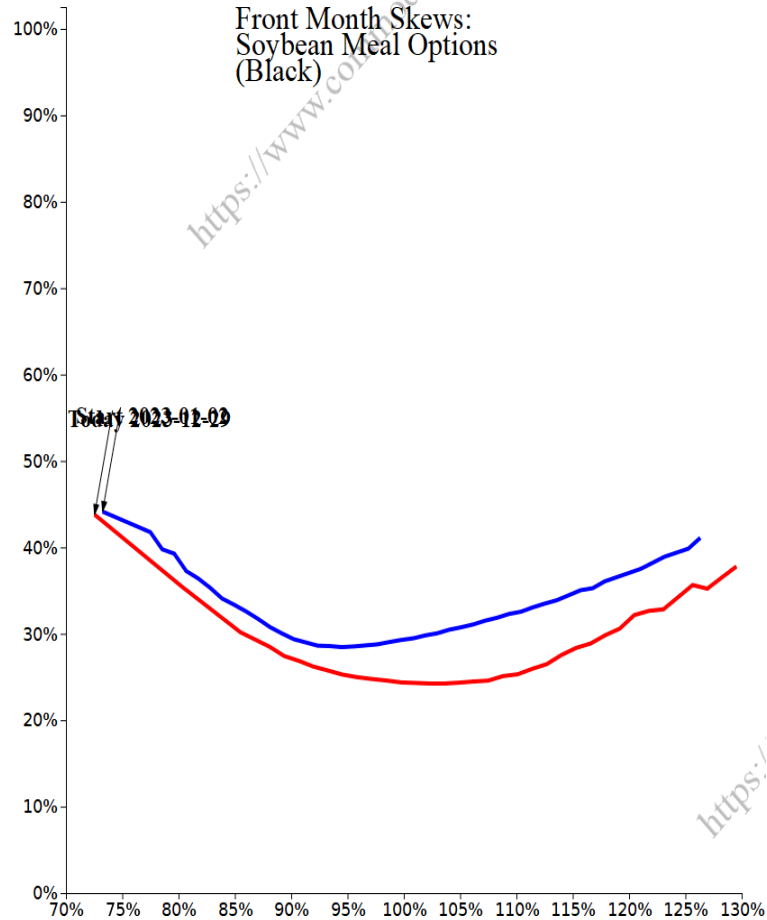
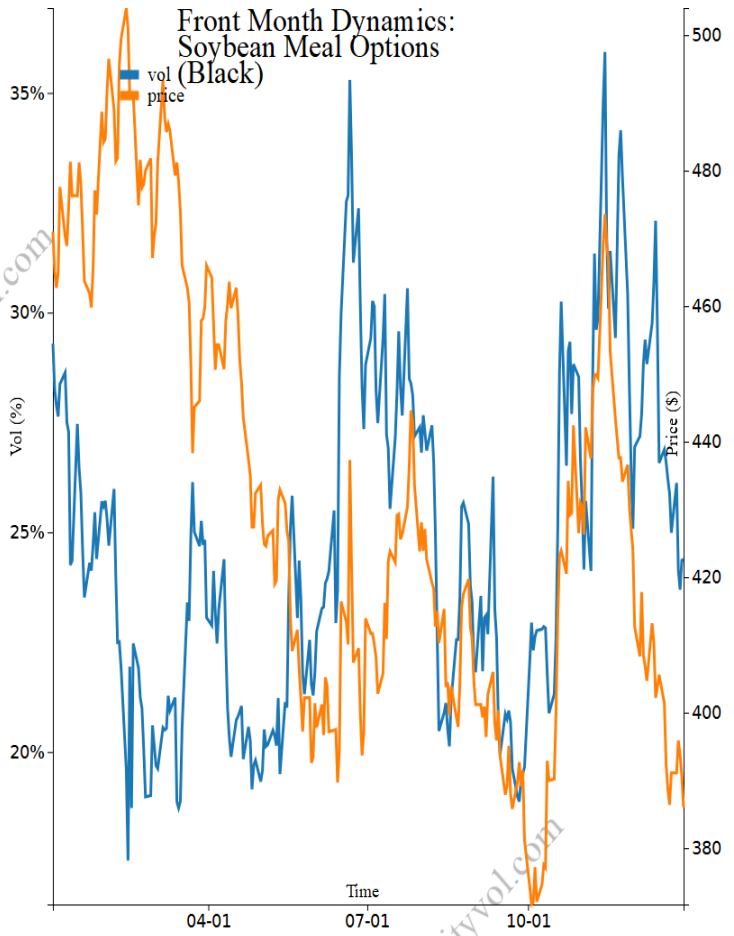
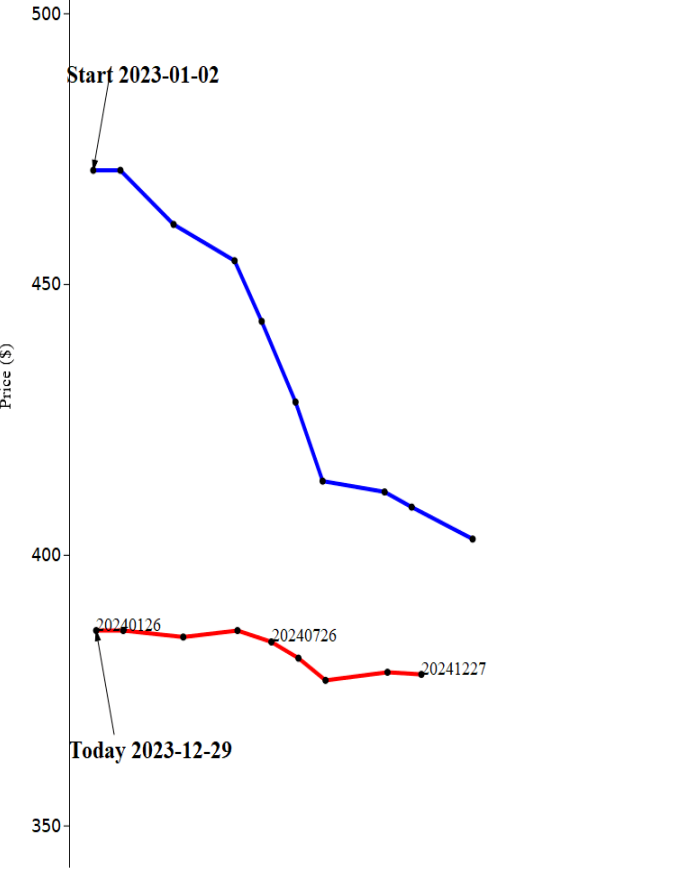
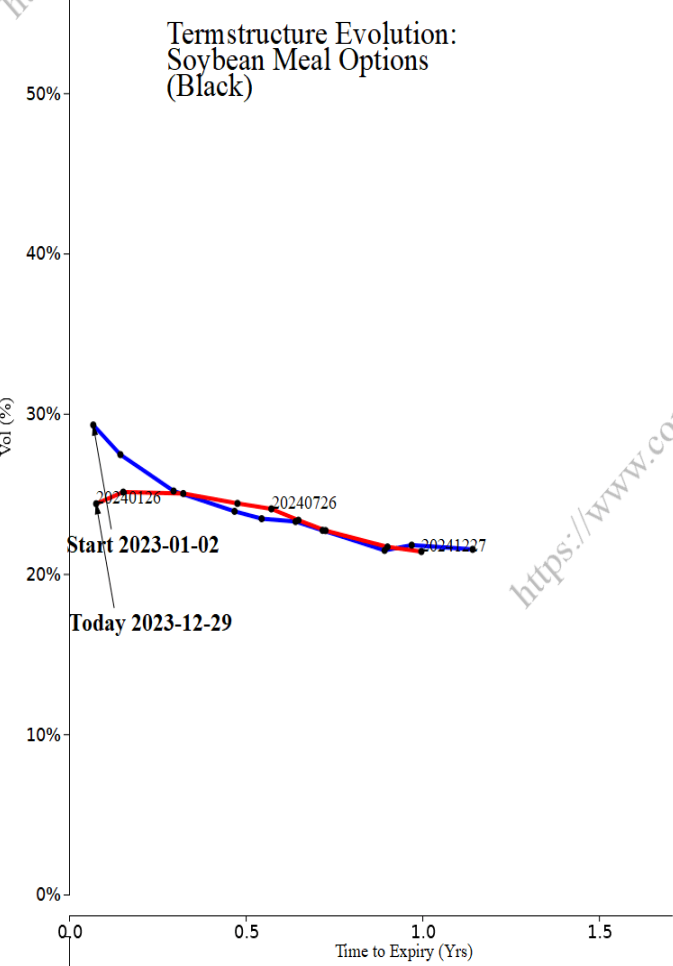


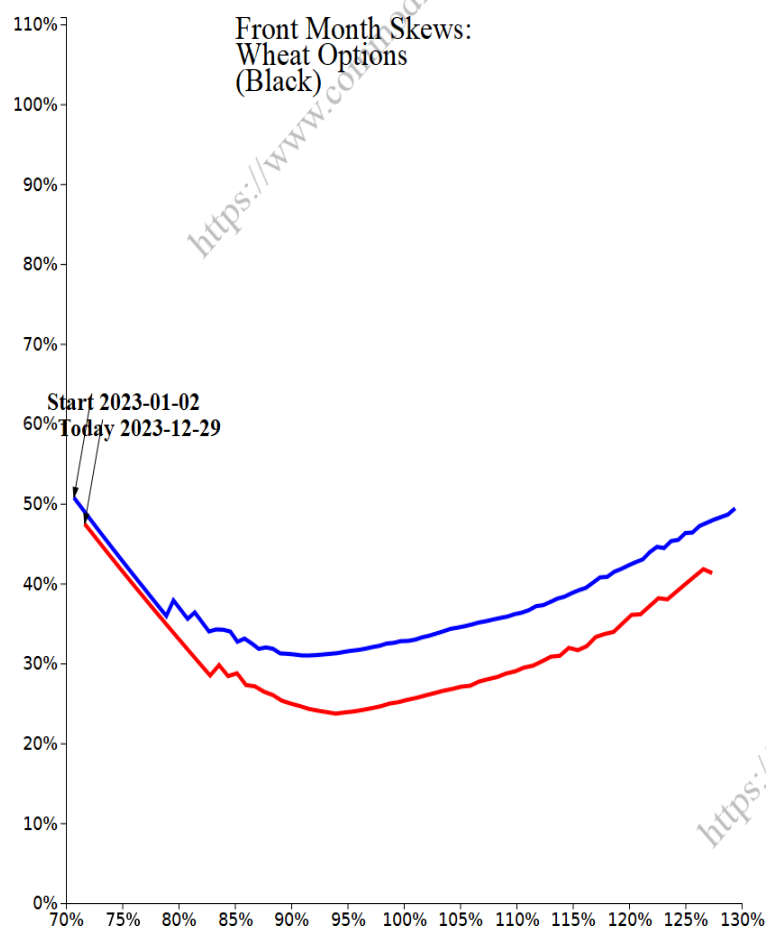
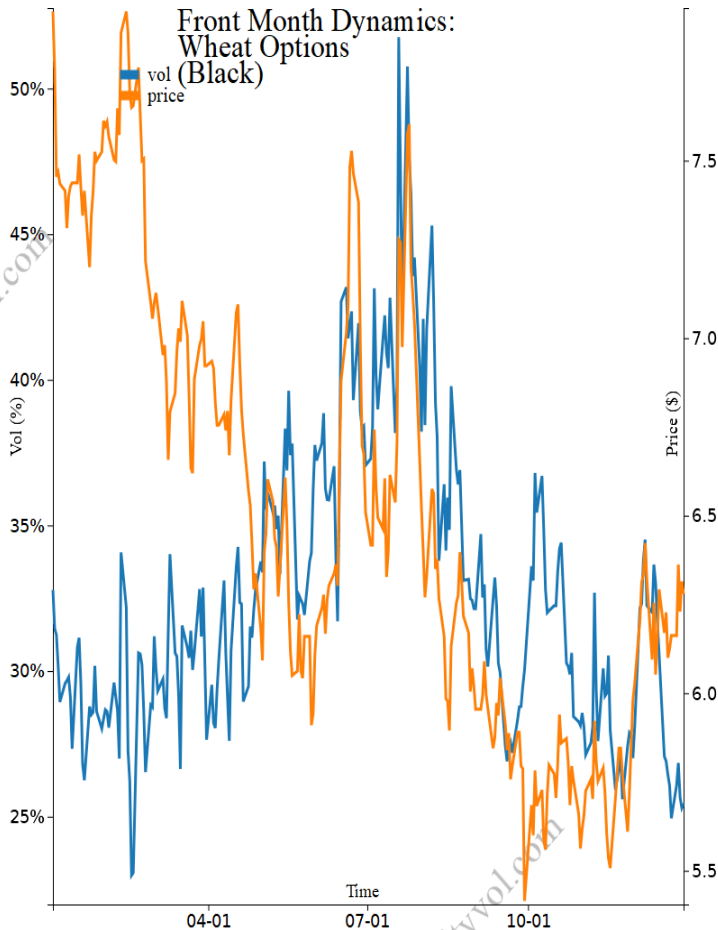
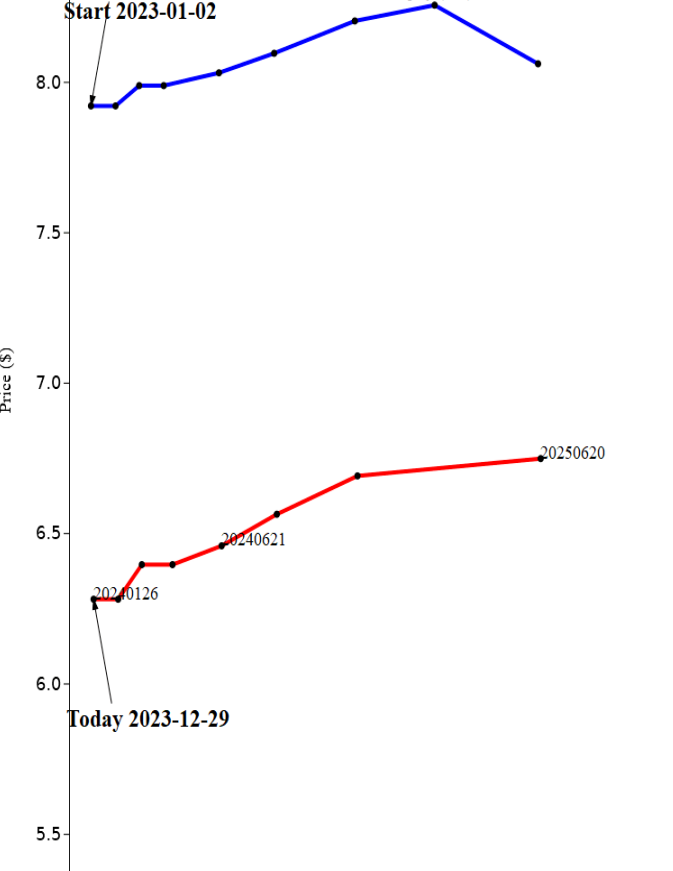
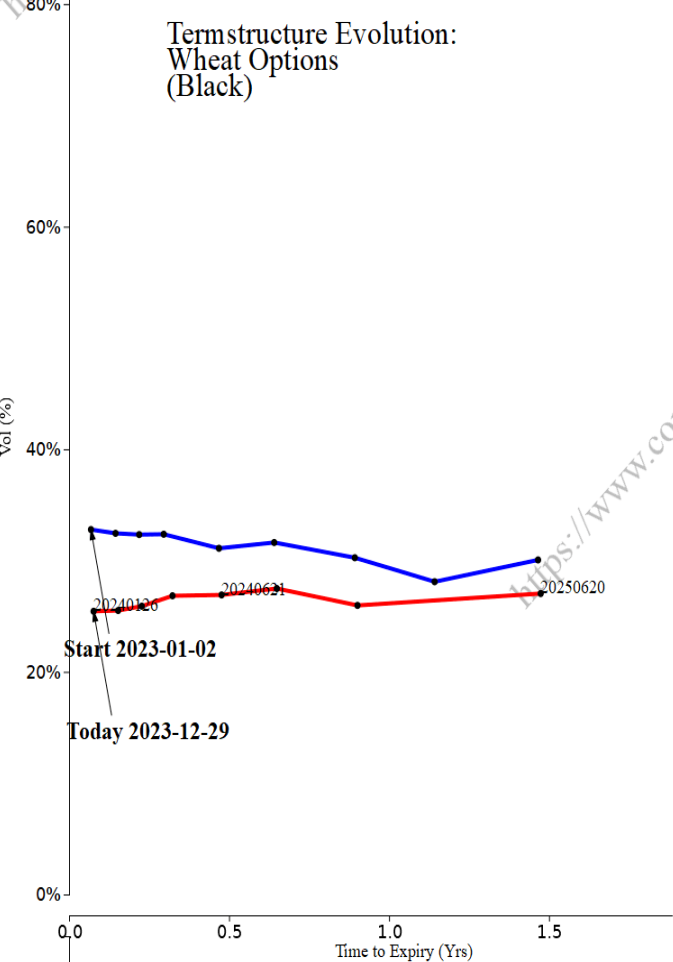
Ags: Grains, Oilseeds, and so forth

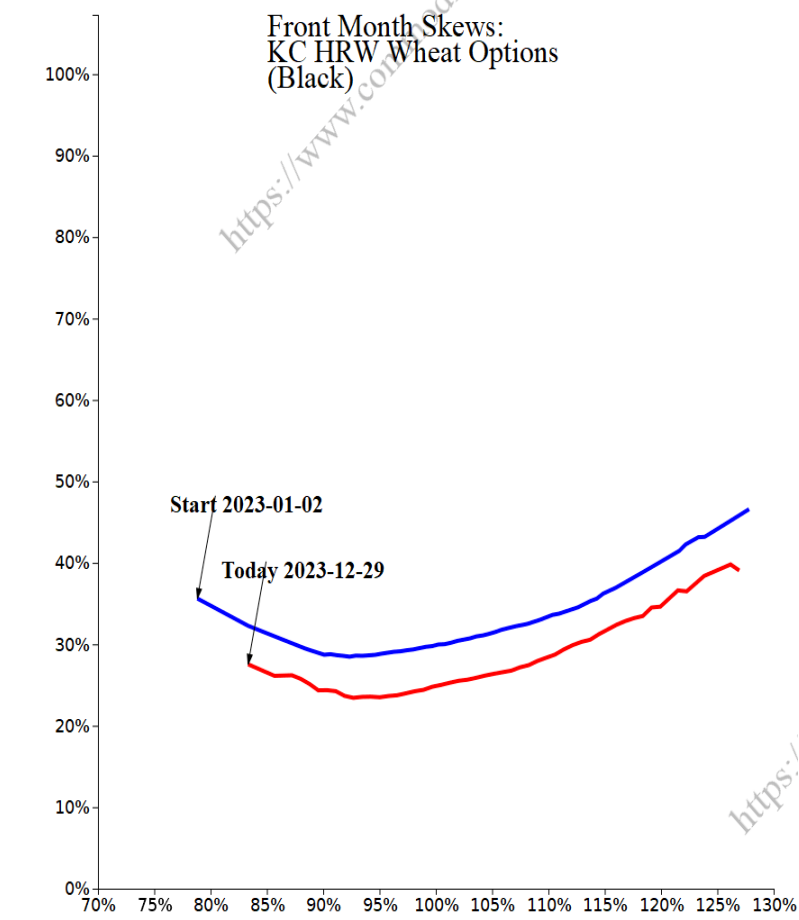
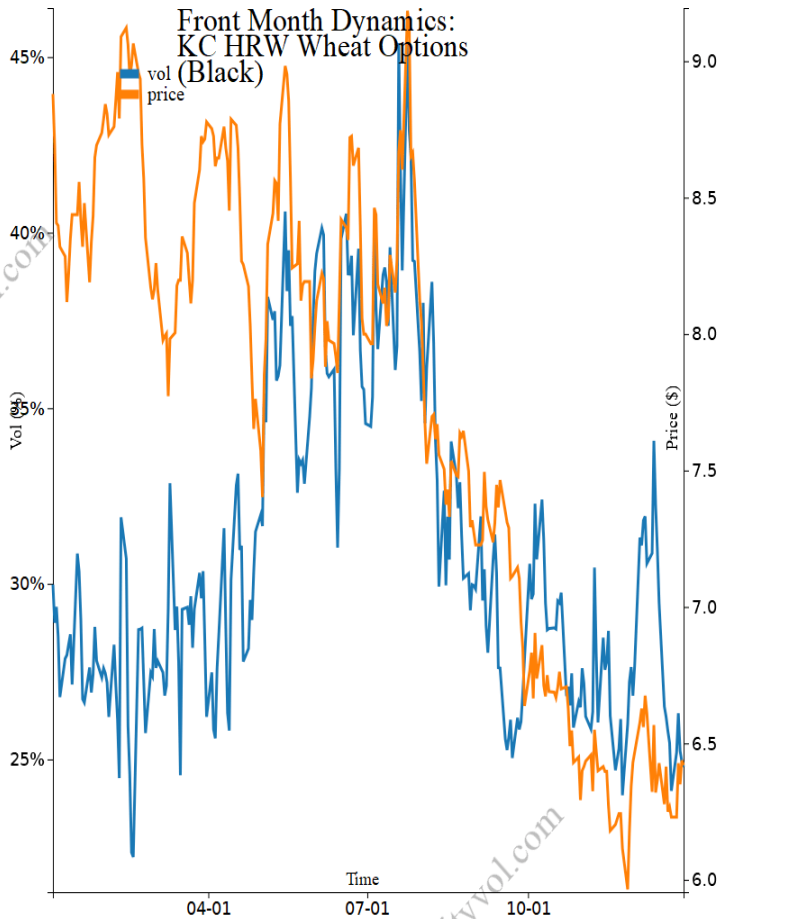
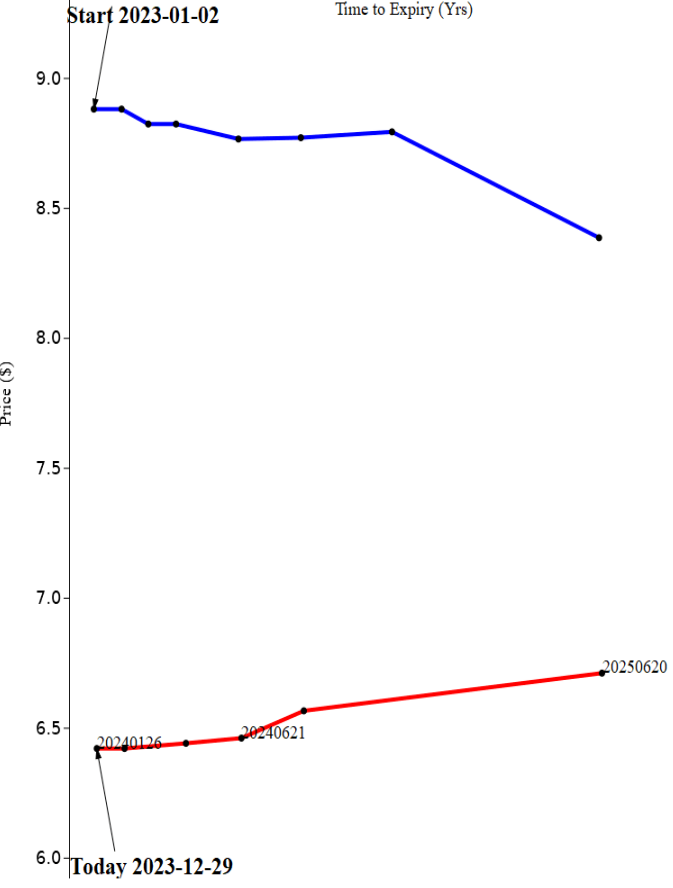
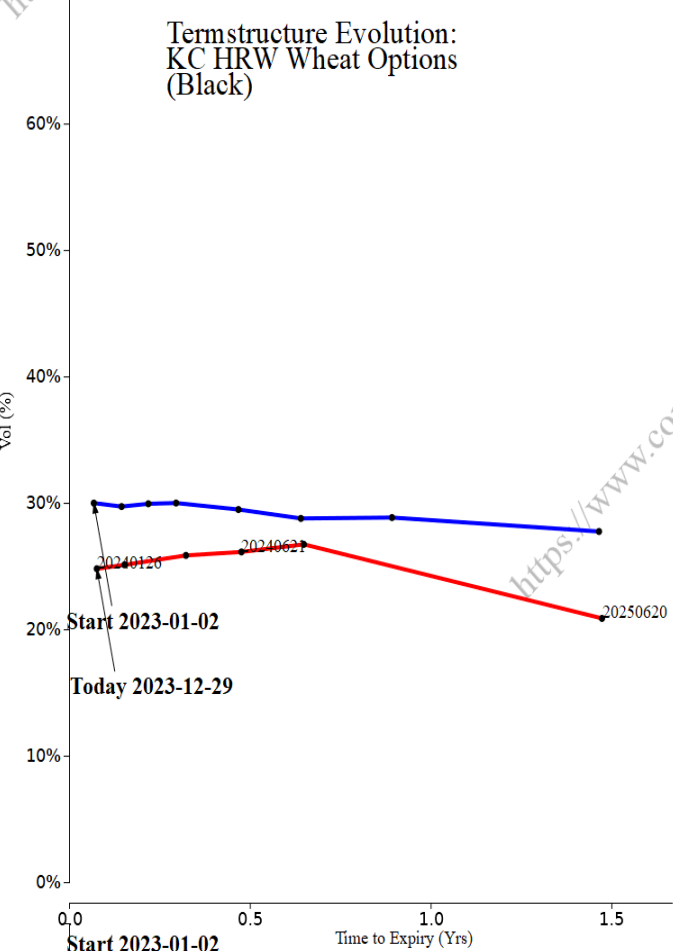


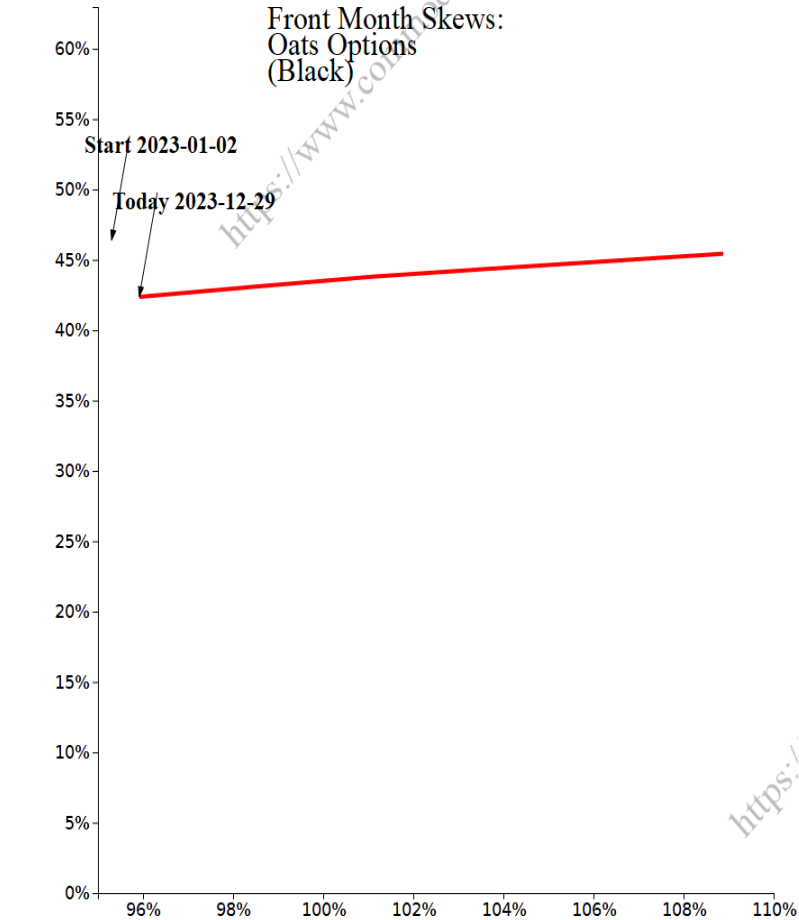
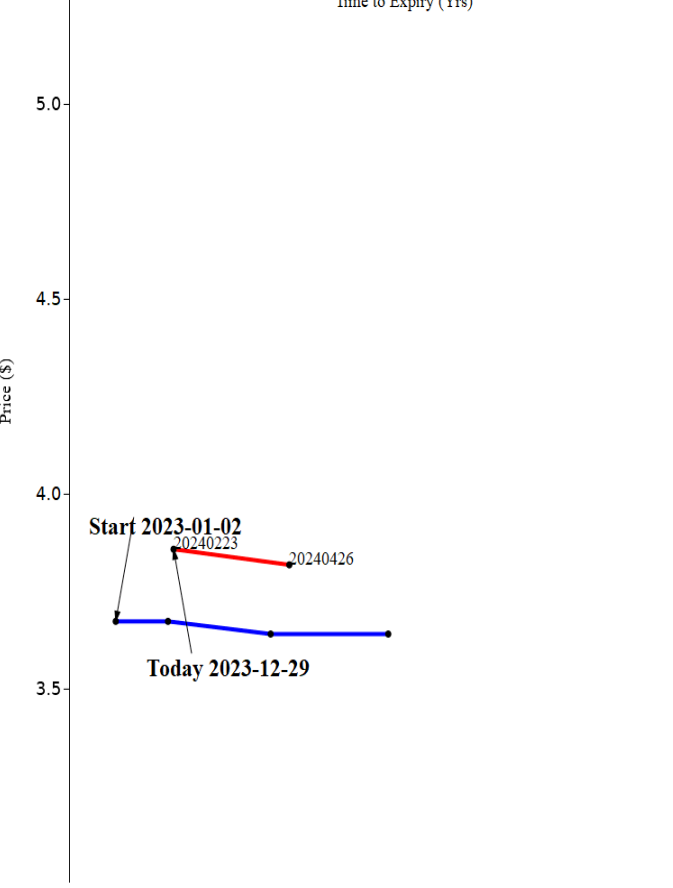
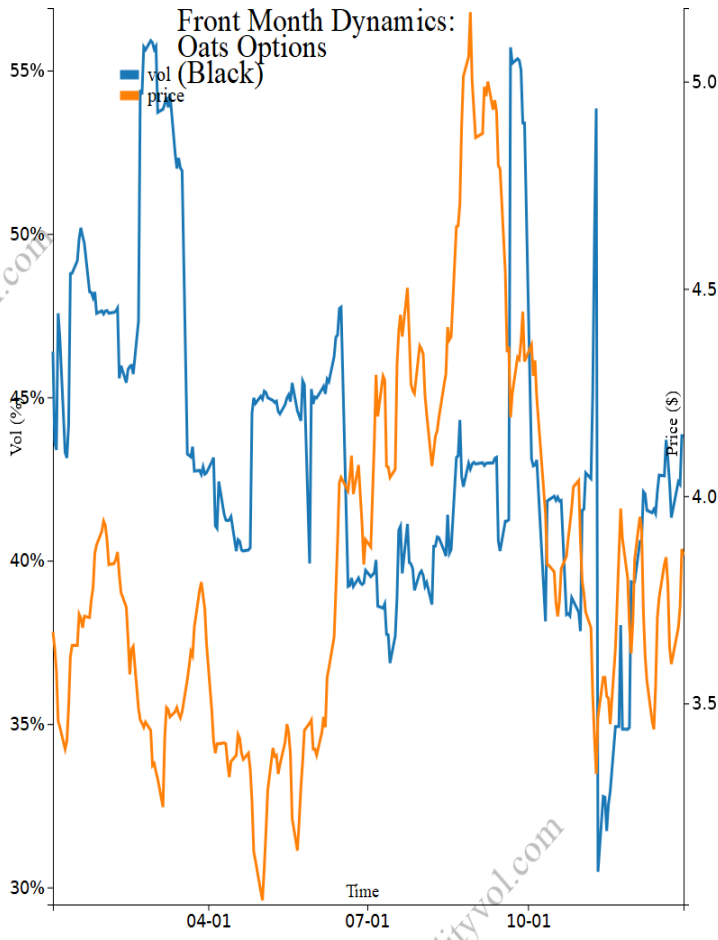
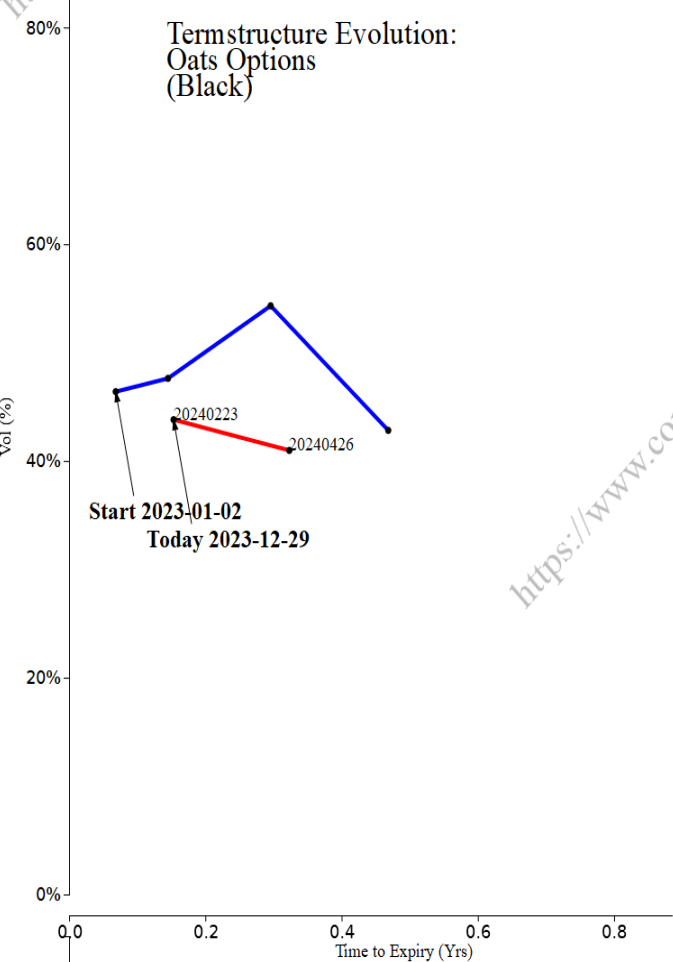


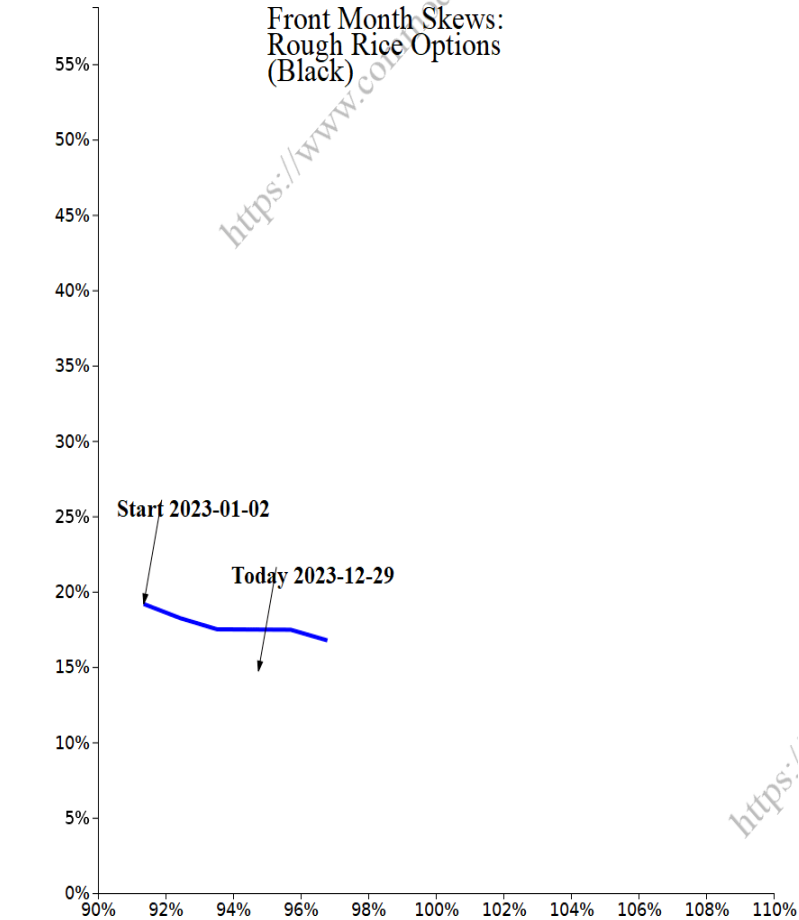
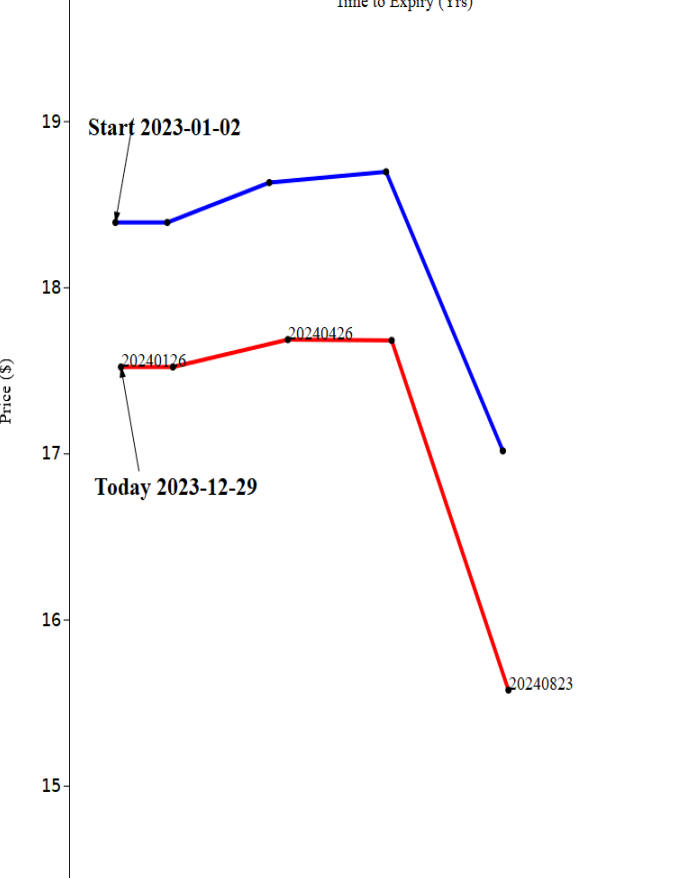
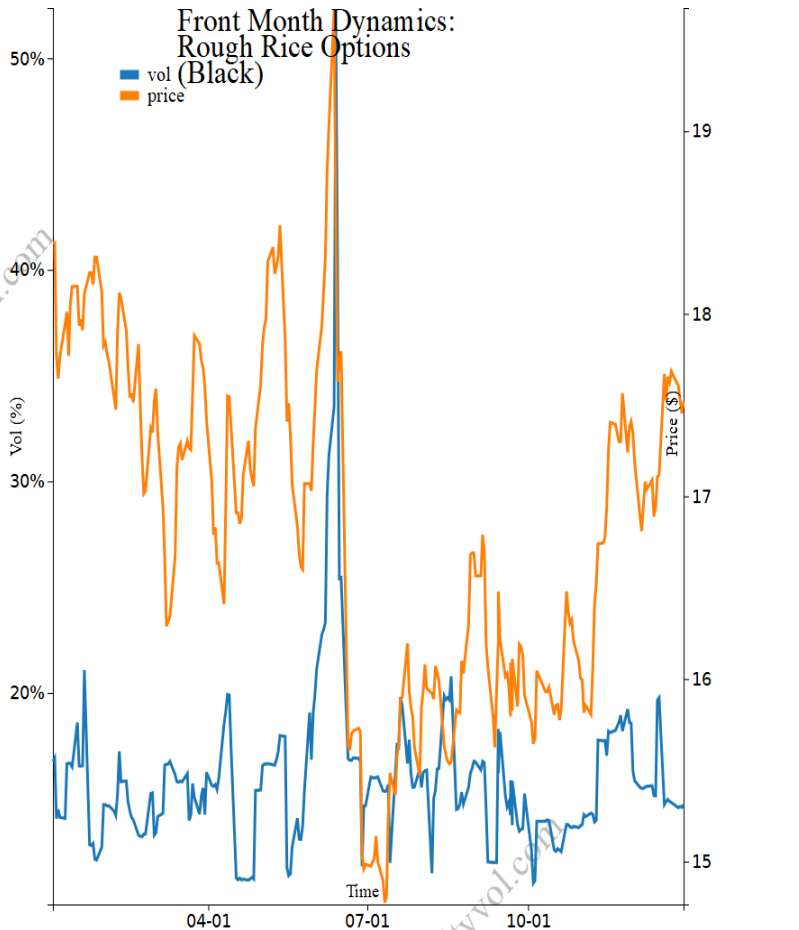
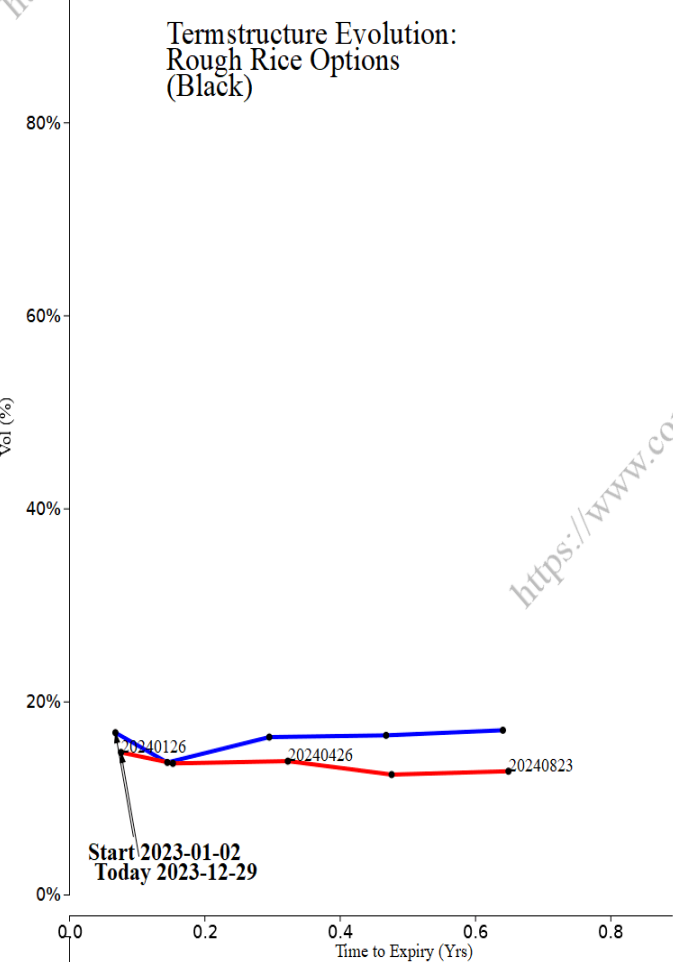


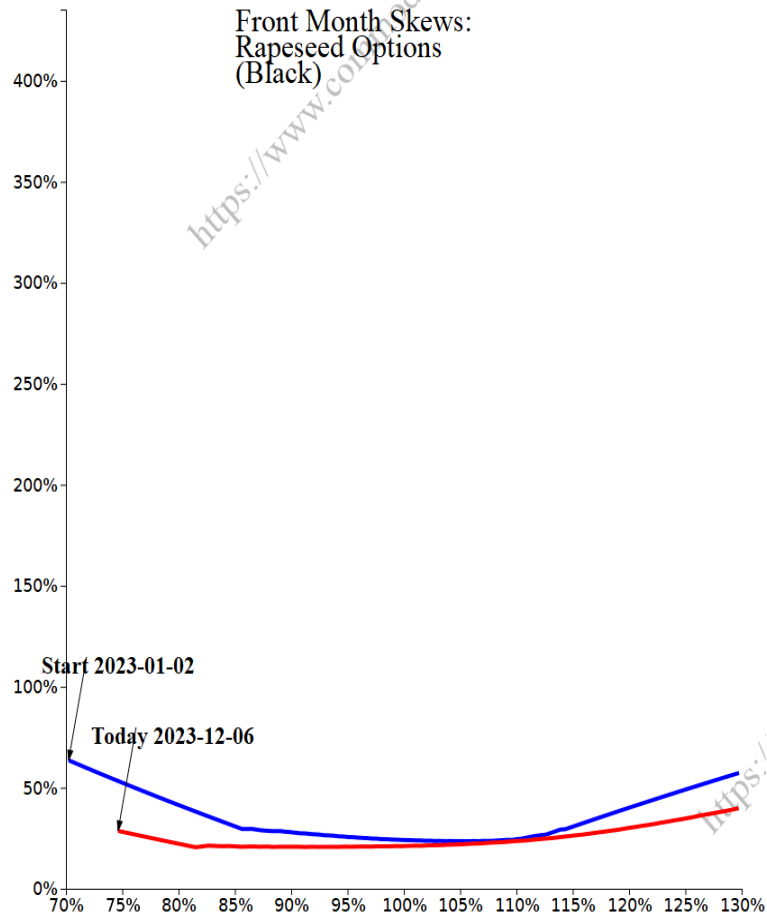
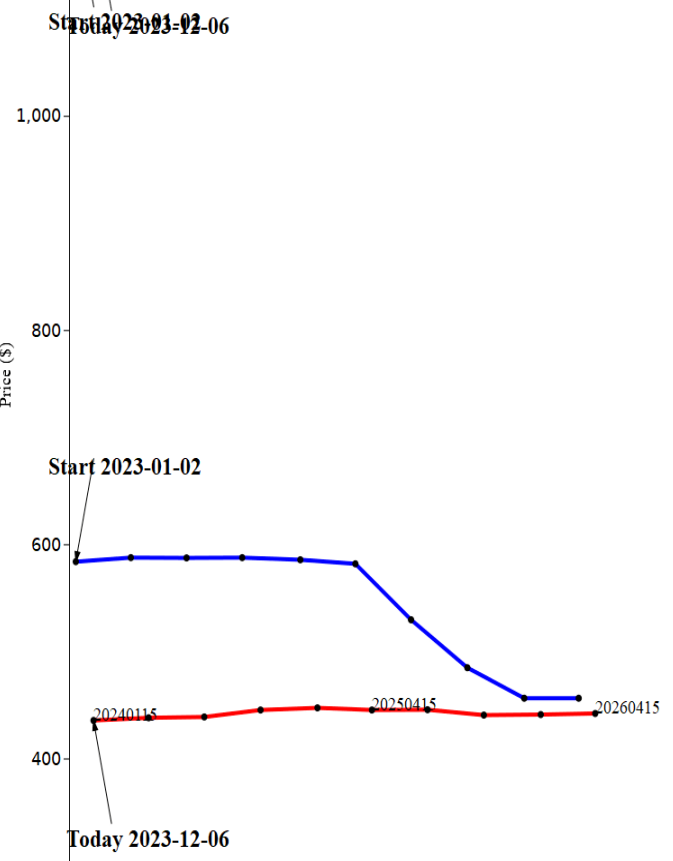
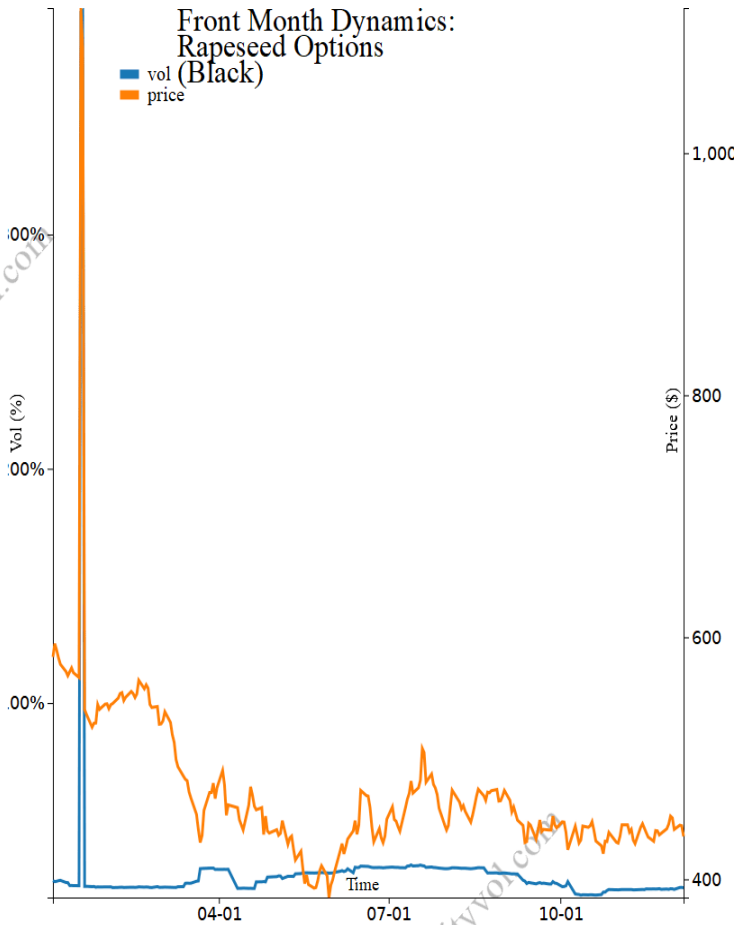
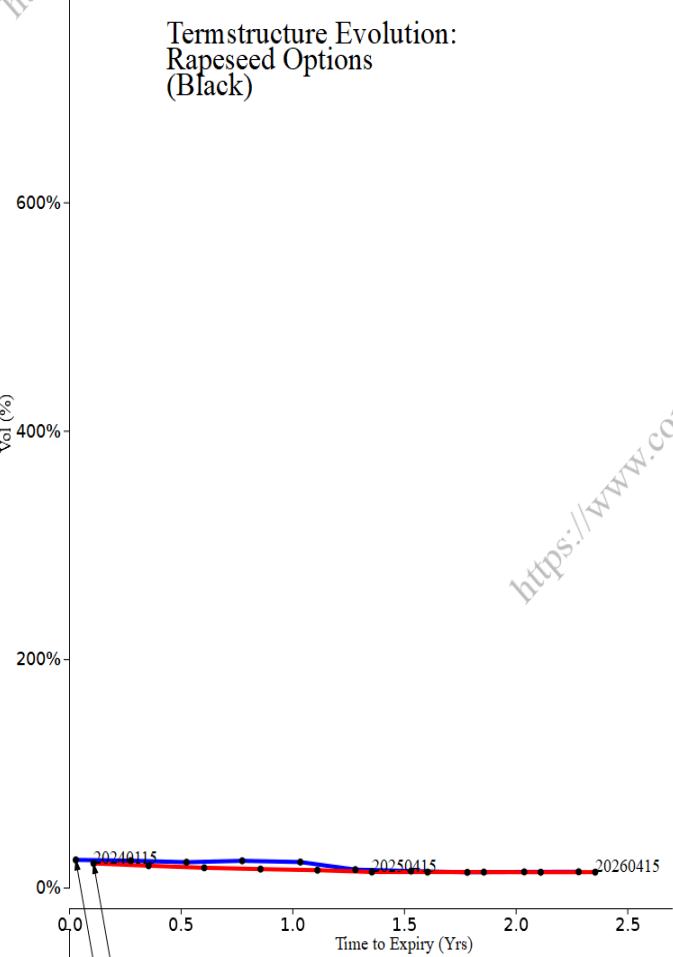




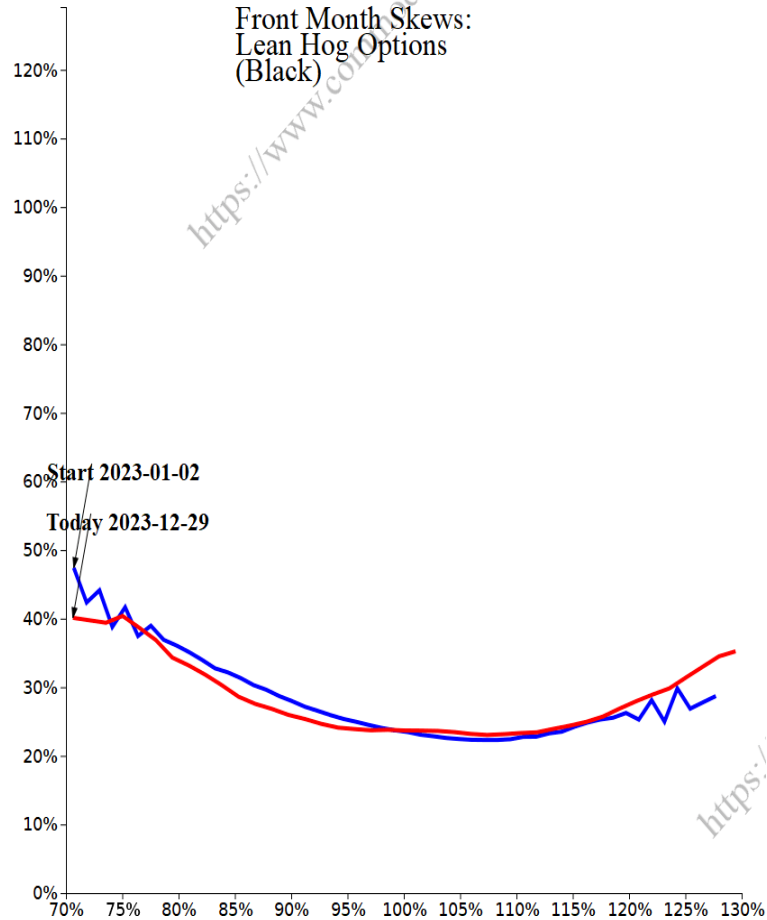
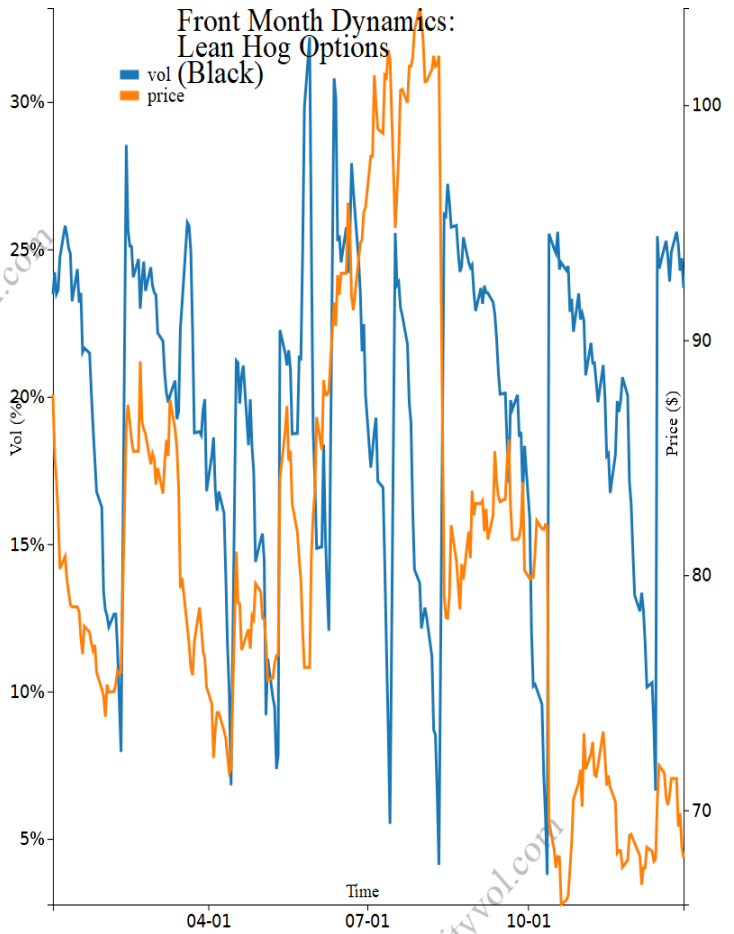
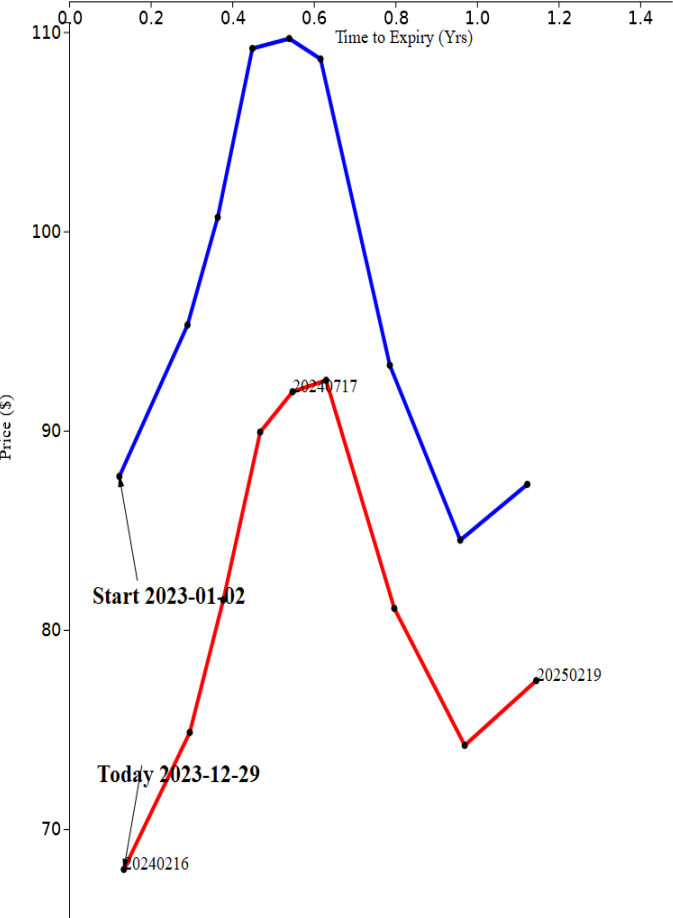
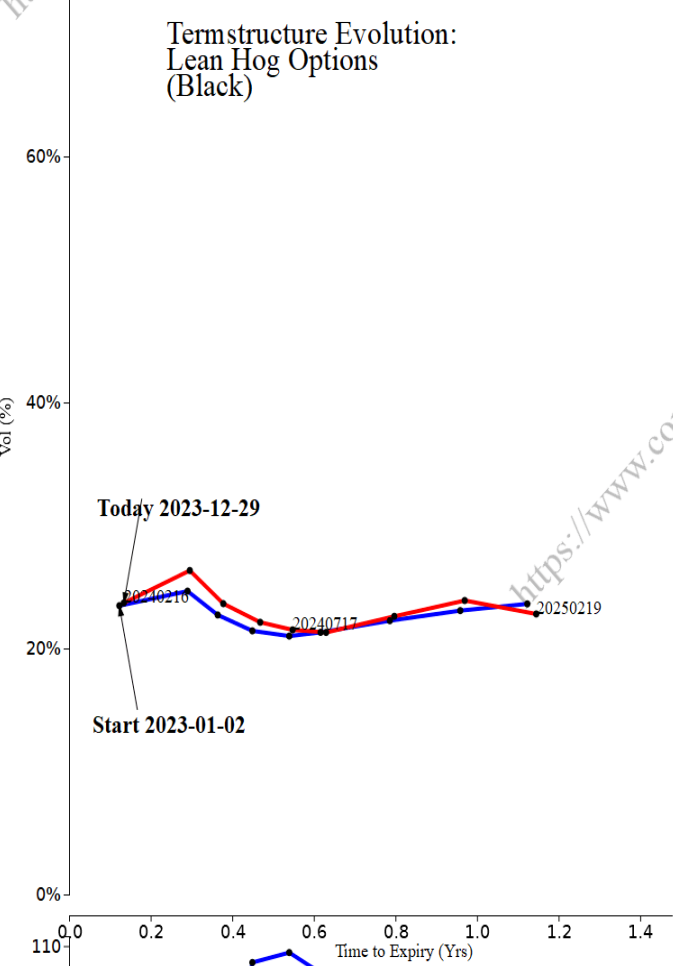


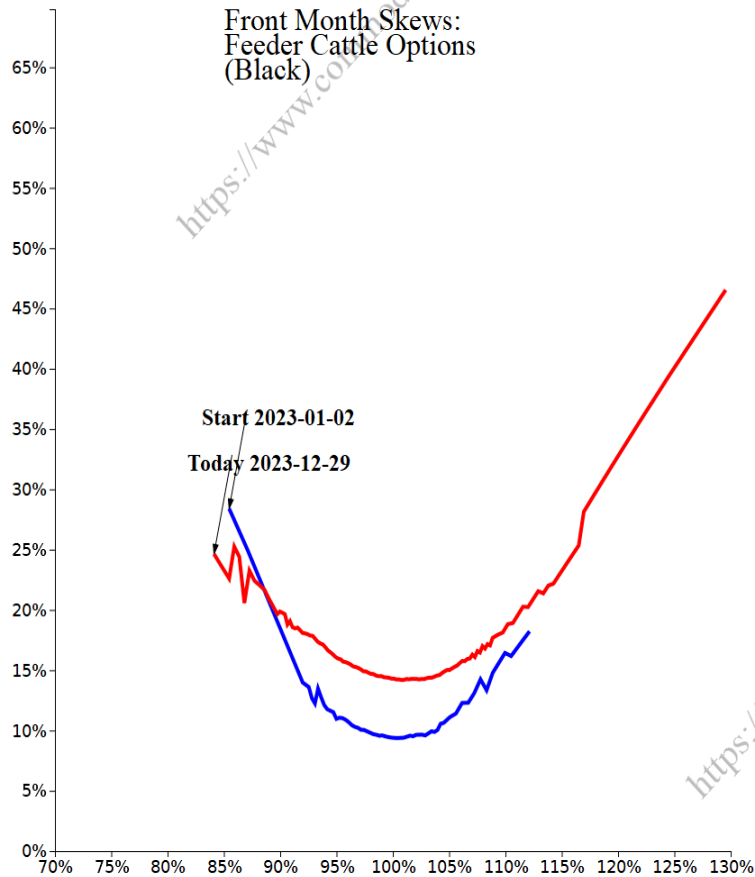
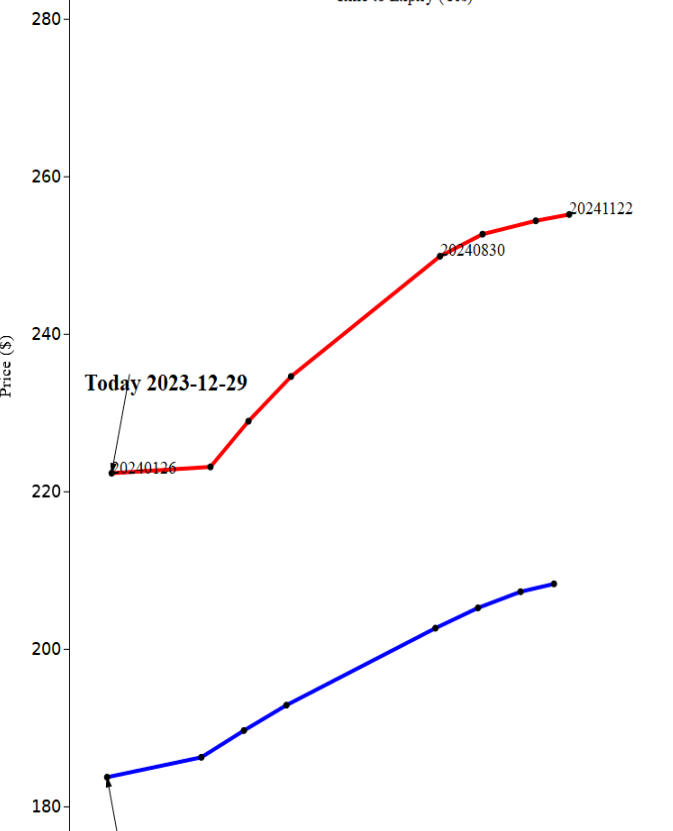
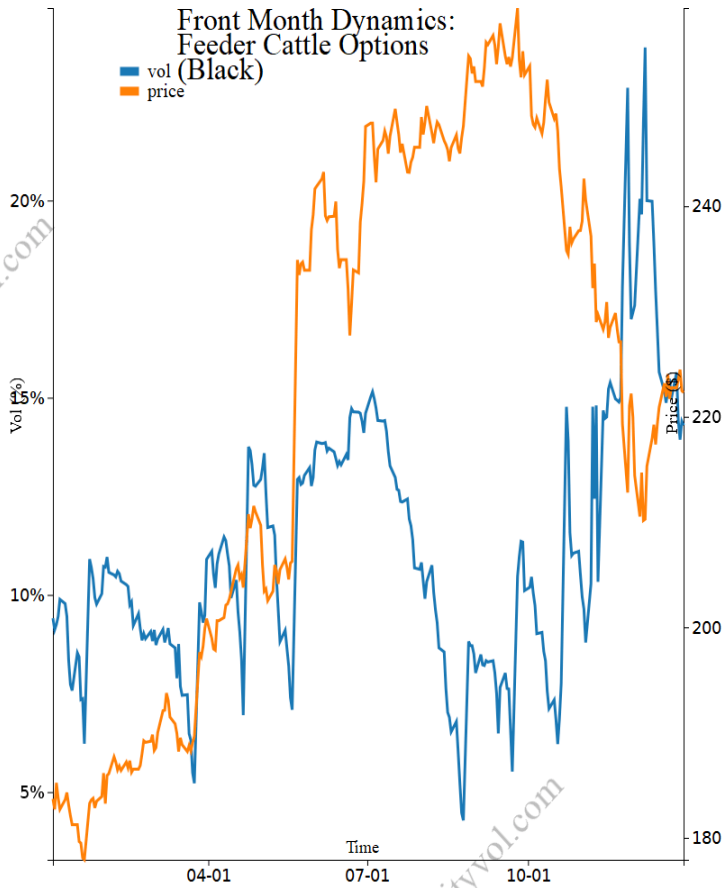
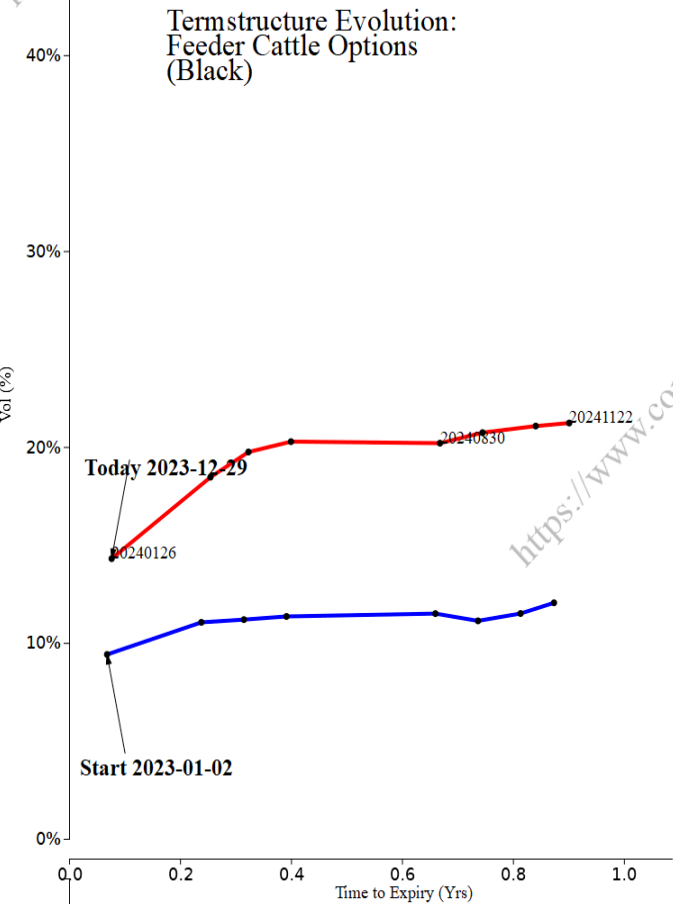


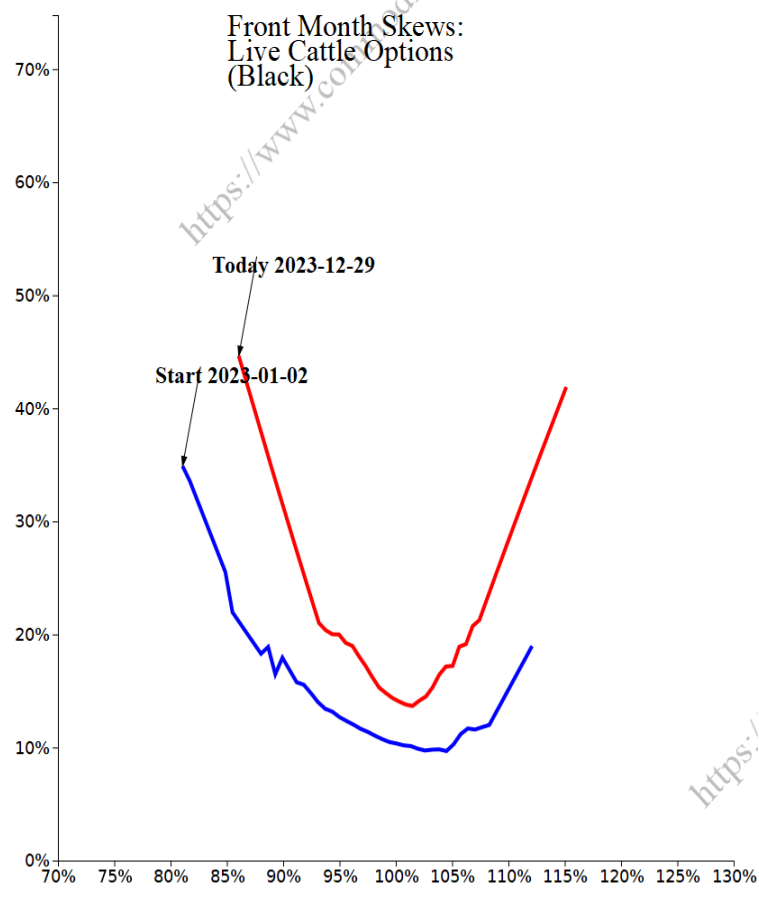
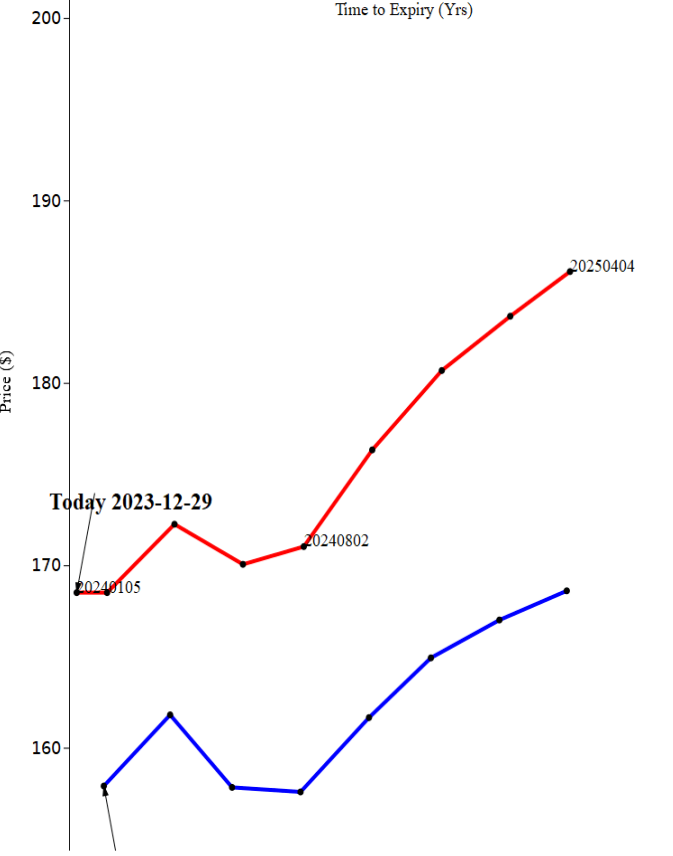
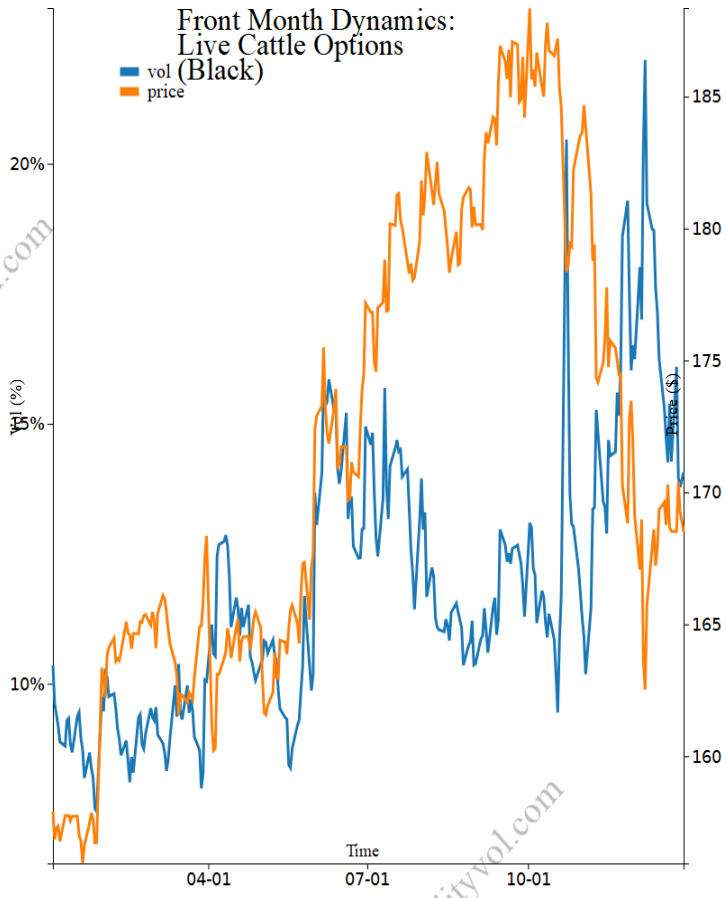
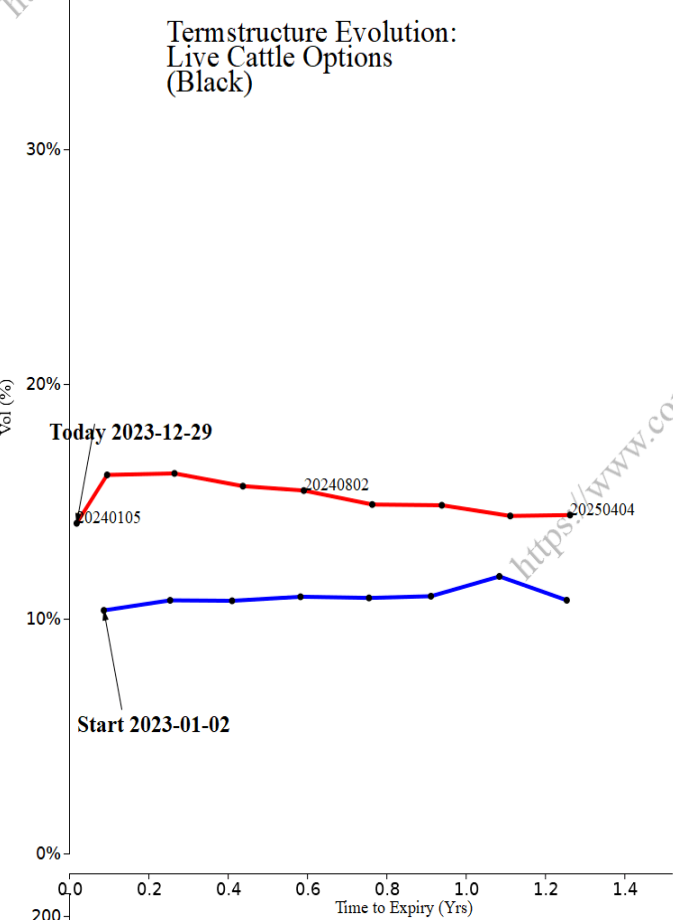


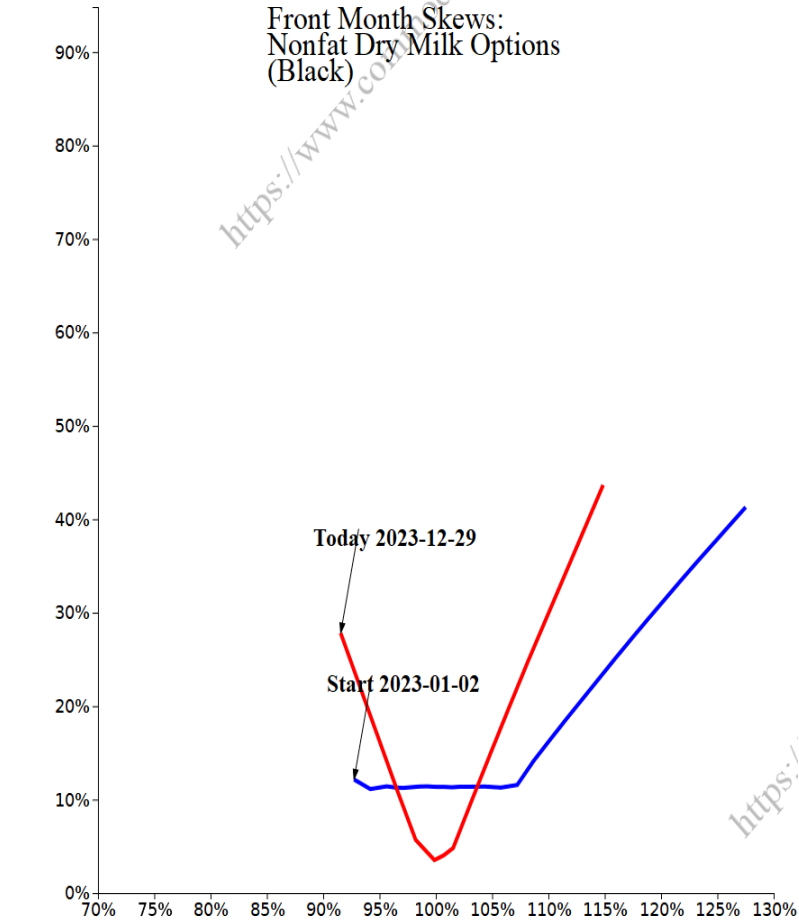
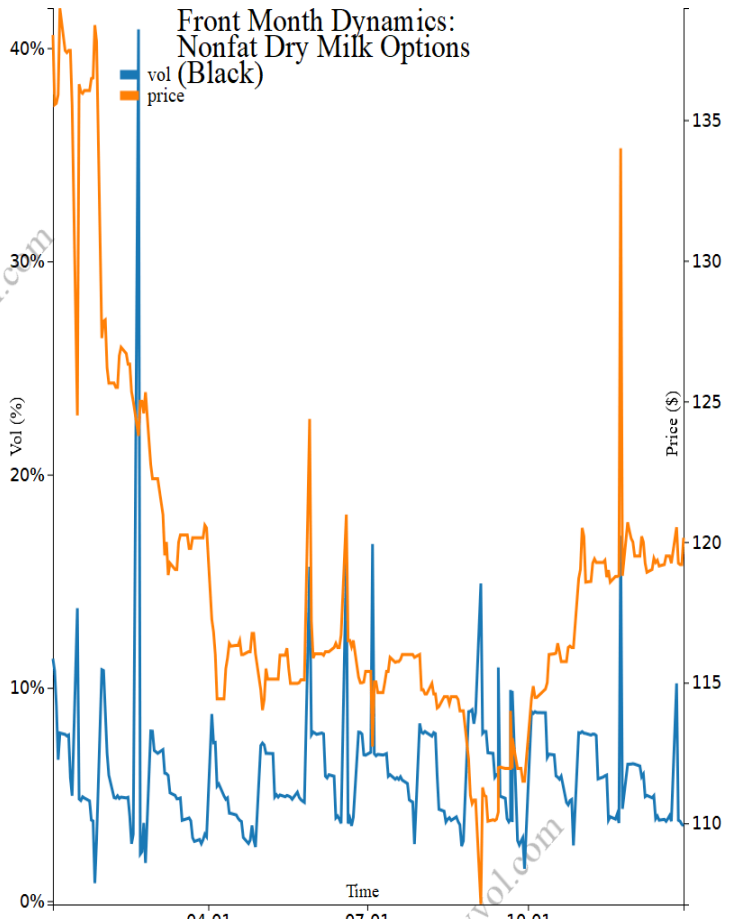
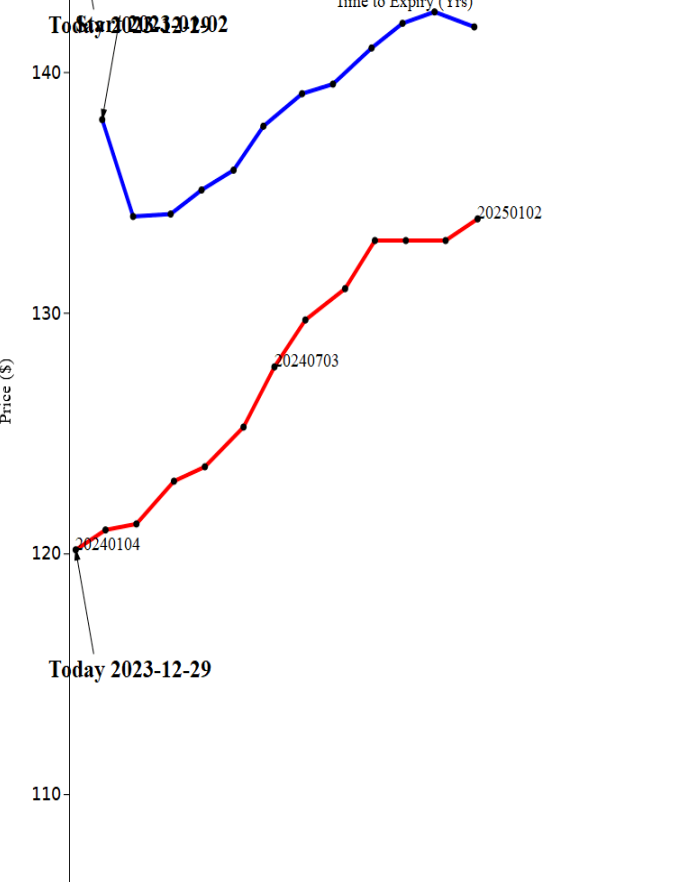
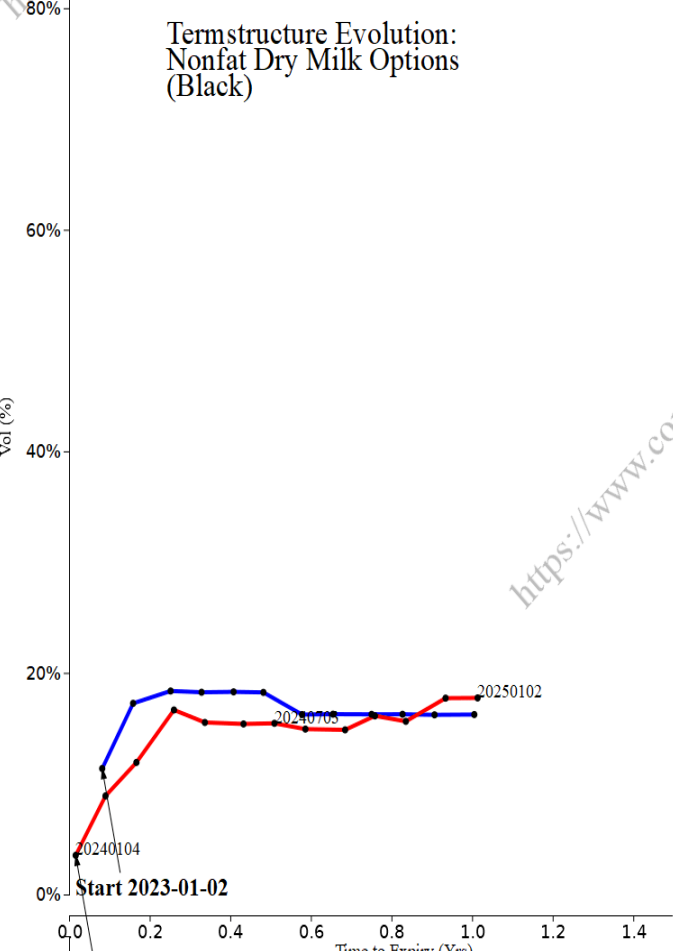


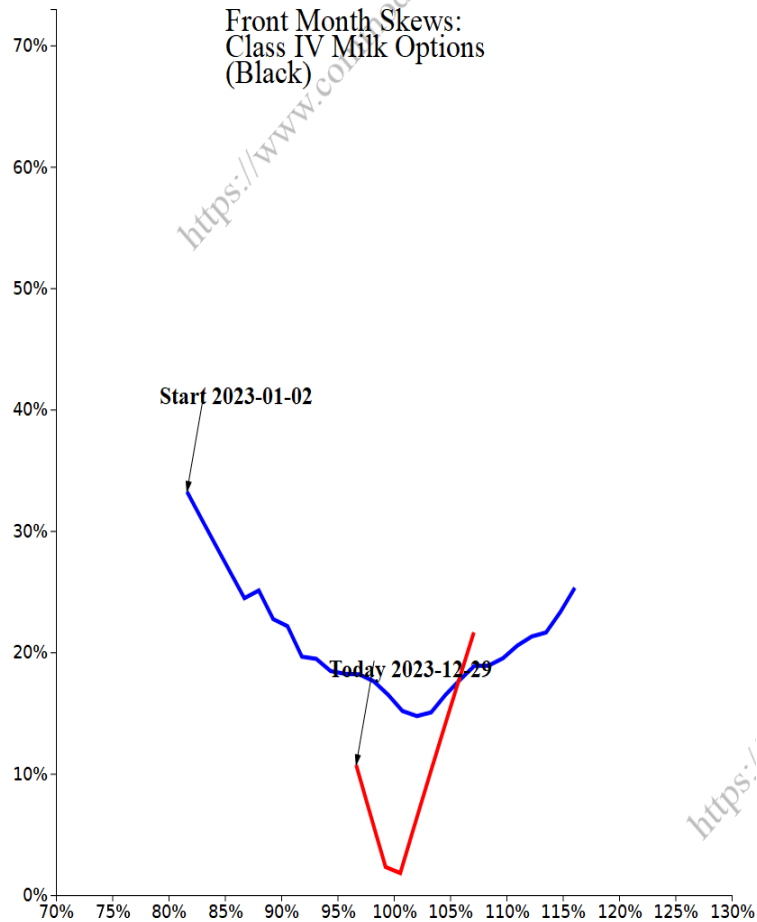
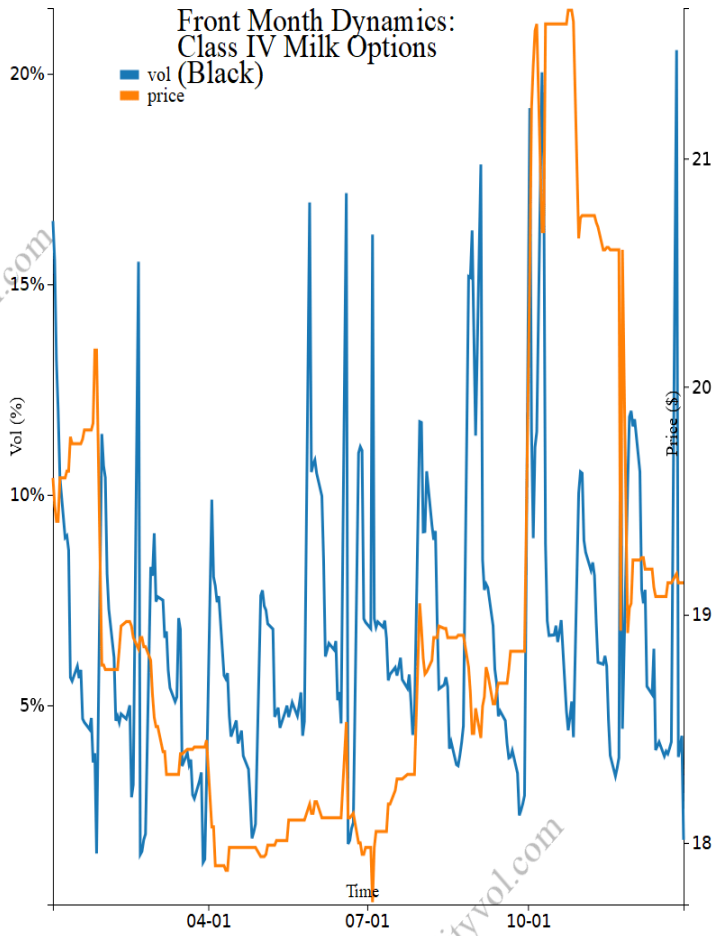
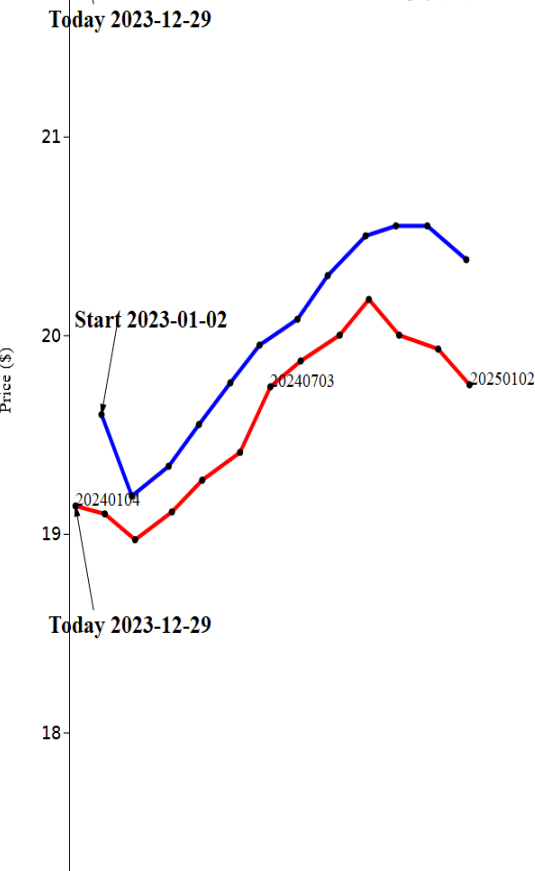
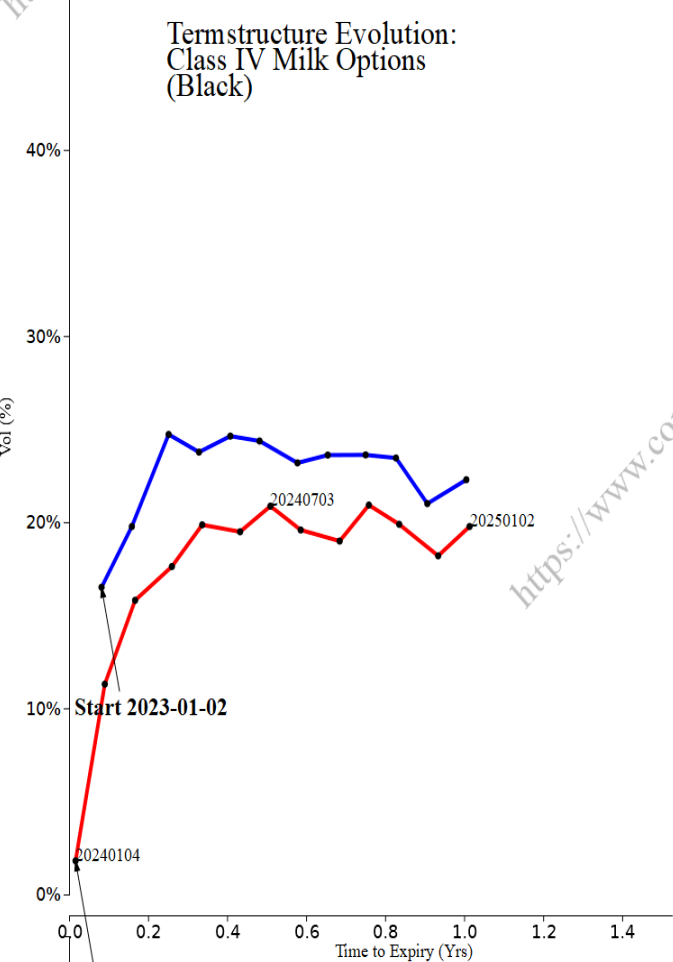
Ags: Proteins, Meats and so forth









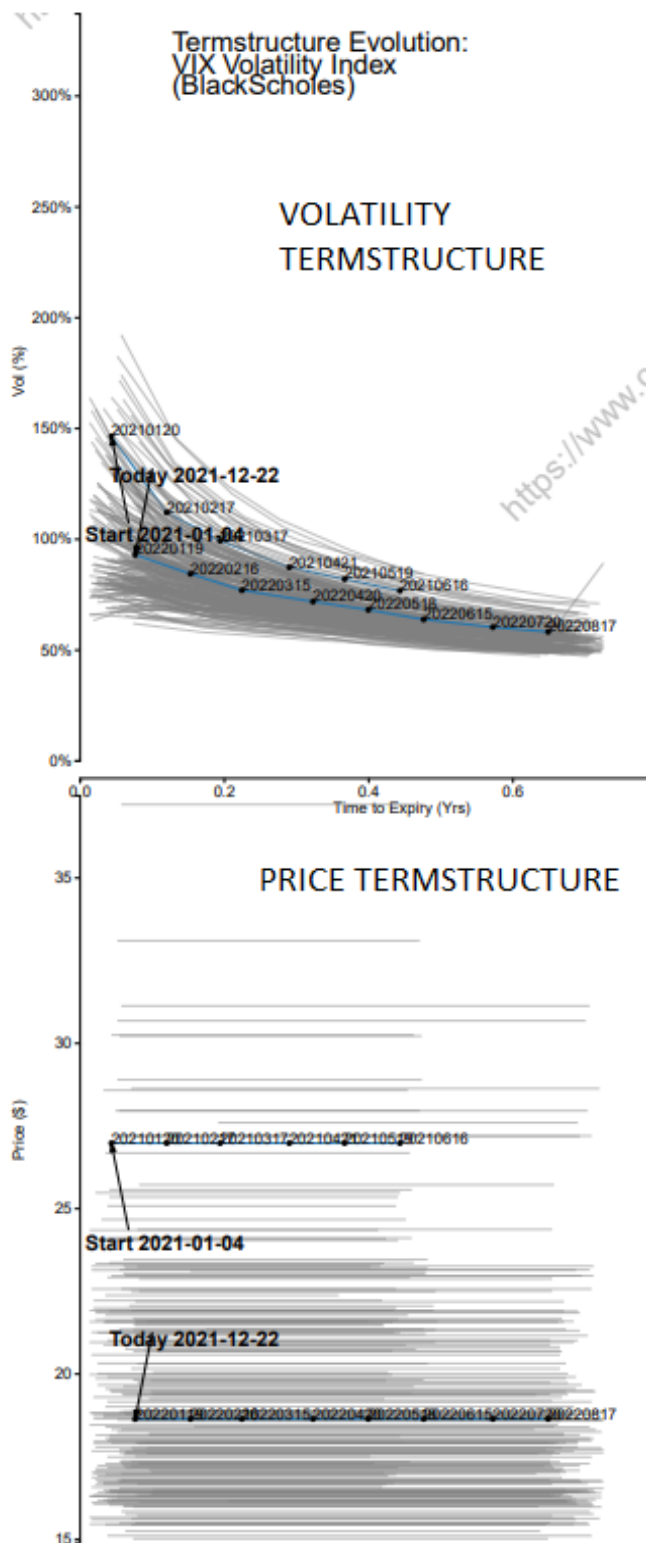


Explanation:

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 Volatility and Price Term Structures:

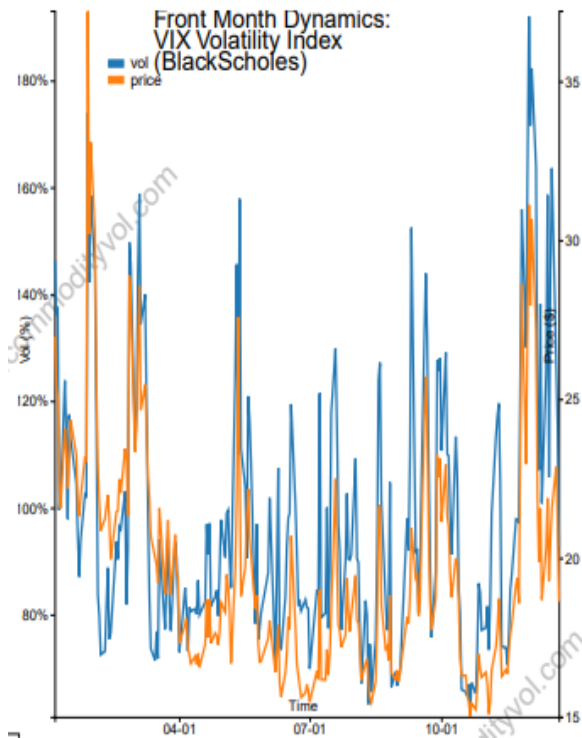
Stacked on top of the other on the left hand side, see the termstructures of vol and the (underlying) futures contract price.



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 Volatility and Front Month Price Over the Year:

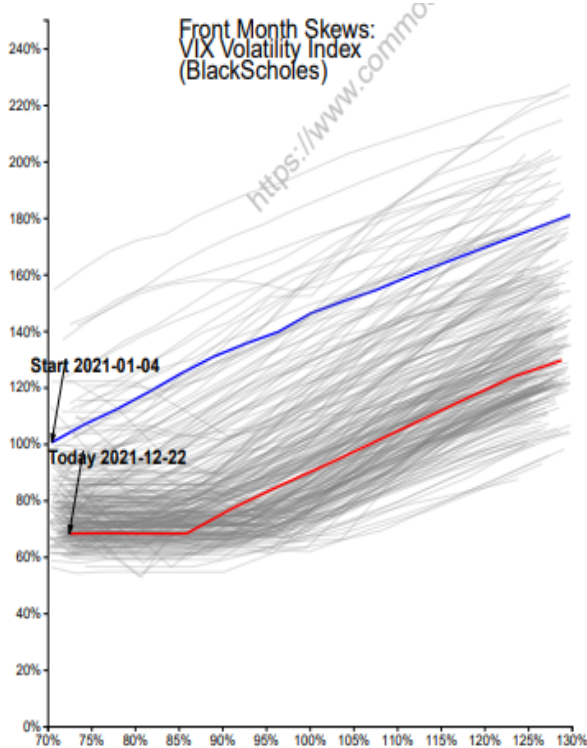
On the right hand panel we have the price and implied volatility of the front month contract.



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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