

HOW TO MANAGE THE UNEXPECTED? DEALING WITH TAIL EVENTS IN SHORT AND LEVERAGED EXCHANGE TRADED ETPs

February 2021

WisdomTree is one of the European leaders in Short and Leveraged Exchange Traded Products ("S&L ETPs"), offering a global product range, covering most asset classes (Equity, Fixed Income, Commodities, FX) and leveraged formats (-5x to 5x). S&L ETPs are like the investor's Swiss Army Knife, giving everyone access to tools that are usually reserved to large institutional clients. Those products can be used in various market scenarios and can help investors achieve a wide range of investment goals. However, while S&L ETPs are very powerful and versatile tools they are also complex instruments that bear higher risk than traditional unleveraged, long only, Exchanged Traded Products ("ETP").

If you want to learn more about the way those products work and the important things to keep an eye on in normal market conditions, please read our "7 things to remember about S&L ETPs" webpage, [here](#). Please read on below to learn more about the way these products function in periods of heightened volatility.

LEVERAGE CREATES MORE EXTREME GAINS AND MORE EXTREME LOSSES

Leverage, by definition, magnifies returns, creating more extreme gains and more extreme losses. Every day, investors are exposed not only to the moves of the underlying asset but to a multiple of those moves. If the market is down -3% on a day, then a 3x ETP is down -9% on that day. If the market is down -10% on a day, then a 3x ETP is down -30% on that day.

But what happens if the market is down -40% on a day? Can the 3x ETP be down -120%? Similarly, if the market is up 40%, can the 3x short ETP be down 120%? Would an investor end up owing money back to WisdomTree? Of course not!

The value of S&L ETPs is floored at zero meaning that it cannot go below zero. So, there is no scenario where an investor would owe money above what was invested in the product in the first place.

However, would 100% of the investment be lost in such a scenario? Even though the leverage factor indicates that 100% of the investment should be lost, in many cases the S&L ETP will retain some value. The main reason for some value being retained is because, to protect the S&L ETP's value from going to zero in a single day,

WisdomTree's S&L ETPs have up to five protection mechanisms embedded in the product's structure which can come into play. The goal of those five mechanisms is to help reduce the impact of very sudden and very large adverse moves in the underlying assets on investments in S&L ETPs. Those five mechanisms are:

- + Intraday Restrike
- + Overnight Restrike
- + Severe Overnight Gap
- + Near – Zero Event
- + Discretionary Index Change

Depending on which specific S&L ETPs you are invested in, up to five of these mechanisms will apply to your investment. Investors should read the relevant parts of the relevant prospectus or supplement as well as the relevant Final Terms, which set out the details of this mechanism's operation and their associated benefits and risk and whether they are applicable to the relevant product.

If you want to learn more about how increased volatility can increase the risk further for S&L investors, please read our guide "6 ways volatility increase risks for Short and Leveraged ETP Investors", [here](#).

GLOSSARY

These mechanisms are technical, so before we go through them in detail, let's define a few terms:

Leverage factor is the number as defined in the name of the S&L ETP that clarifies the leverage of the S&L ETP.

Underlying index is the financial index that the S&L ETP has been structured to track. The index is usually unleveraged and the S&L ETP will deliver the performance of that index every day, multiplied by the leverage factor, minus fees, and cost. In some cases, this index is already leveraged, meaning that the S&L ETP will deliver every day the performance of that index net of fees and cost.

Underlying asset is the financial asset that the underlying index (and therefore the S&L ETP) is designed to reflect. The underlying index (and therefore the S&L ETP) may not always track what you think they track. It could track a future contract instead of the spot for commodities, or a total return index instead of a price index for equities.

ETP Fair Value is the per unit price of the ETP as estimated at any point in time.

Net Asset Value (NAV) per Share or Price per ETP Security is the per unit price of the ETP calculated at a specific given point in time every business day, the NAV Calculation Time. The per unit price of the ETP or NAV is calculated in accordance with the formula which is set out in the relevant prospectus for the S&L ETP.

NAV Calculation Time is the time of day each day at which the NAV is calculated. At the NAV Calculation Time, the ETP's NAV and the ETP's Fair Value are equal.

WHY DO THE PROTECTION MECHANISMS FOCUS ON CRASHES INTRADAY, NOT LONGER ONES?

It is worth noting here that the recommended holding periods for WisdomTree's S&L ETPs are one day only. This is because as explained in our "7 things to remember when investing in S&L ETPs" guide (see [here](#) for more explanations), the performance of a S&L ETPs is always calculated by measuring the daily performance of the S&L ETP from one NAV Calculation Time to the next. When calculating the performance over multiple days, this is also the case. The S&L ETP performance is calculated by chaining together the consecutive daily performances

of the S&L ETP. This leads to a difference between the real S&L ETP Performance and the easier to calculate but erroneous formula that would consist of multiplying the performance of the underlying index over the full period by the leverage factor. This difference is called the compounding effect. As markets go up or down, compounding can be beneficial or detrimental to the investor, depending on the performance of the underlying index between NAV Calculation Times (see [here](#) for more explanations on the compounding effect).

Also, this same compounding effect, explains our focus on daily or intraday crashes when building protection mechanisms. With an investment in a long only S&P 500 ETF for example, an investor gains access to the performance of the S&P 500 Index. The only way that the investment can go to zero is if the index itself goes to zero i.e. in the case of the S&P 500 that means every single one of the 500 companies in the index is worthless and priced at zero. In other words, it is pretty unlikely. With an investment in 2 times leveraged S&P 500 ETP, the value of the investment would go to zero if:

- + the index itself goes to zero like for an unleveraged ETF
- + but also, if the index loses more than 50% in a single business day (i.e. between two ends of days NAVs)

If the index loses more than 50%, over multiple days, the S&L ETP value would not go to zero because of the compounding effect. Let us assume that the index loses 30% two days in a row, the overall index would be down by 51% after those two days. A typical 2 times leveraged ETP would be down 60% the first day and down 60% the second day so a total performance of -84% and not -102% (2 times -51%). In this case the compounding effect helps the investor. This means that even if the index lost more than 50%, as long as this loss is over multiple days, thanks to the compounding effect, the leveraged ETP's value is not driven to zero.

For a short ETPs, the same logic applies. If the S&P 500 more than doubles in a single day, the value of the short ETP will be wiped out fully in the absence of any protection mechanism. However over multiple days, because of the compounding effect, the S&P 500 can more than double without bringing the value of the short S&L ETP to zero. Taking a simple example over two days, where the index is up 60% twice in a row, the underlying asset over the 2 days is up 156% (from 100 to 256). But a short ETP would have lost 60% the first day and then lost 60% again on the second day driving the performance to -84%. Here again, the compounding effect helps the ETP by not driving the price to zero despite large moves over multiple day periods.

The conclusion is that for S&L ETPs the risk of the full investment being driven to zero, comes not from large moves over a long period of time but from large moves (how large depends on the leverage) in a single day. This is why all of the mechanisms considered below focuses mostly on that risk.

1. THE INTRADAY RESTRIKE

The first mechanism designed to minimize the chance of an S&L ETP going to zero and losing all of its value i.e. aimed at helping the strategy continue to trade as long as is practical under the more extreme conditions is the Intraday Restrike.

The Intraday Restrike is an event where the S&P ETP will reset its leverage, between one NAV Calculation Time and the next, if the level of the underlying index moves by a certain percentage threshold (the "Restrike Threshold") intraday i.e. during the standard trading hours of the underlying asset.

For long leveraged ETPs, the threshold is a negative move of the underlying index (-15% for example), for short ETPs, it is a positive move of the underlying index (+15% for example). The objective is to stop the S&L ETP from reaching the level where the value of the S&L ETP is effectively zero. For example, a daily 2x (double leveraged) ETP would lose all of its value if the underlying (non-leveraged) index reaches -50% or less. Such an ETP might have a restrike threshold at -25% for example (i.e. where a decline of -50% in the theoretical ETP fair value would have occurred). See below for a clear example of how this works.

WHEN IS THE INTRADAY RESTRIKE MECHANISM INVOKED?

First of all, as its name indicates, the Intraday Restrike takes place intraday. The exact definition of intraday varies from one S&L ETP to another and depends mostly on the underlying asset but in principle, it means while the underlying asset is trading in a very liquid manner. Hence, the Intraday Restrike in an S&P 500 leverage ETP can happen as long as the stocks in the S&P 500 are trading i.e. during the regular trading hours of the New York Stock Exchange (9 am to 4 pm Eastern time) which is the most liquid part of the day for US Equities. The Intraday Restrike in a WTI Crude Oil leverage ETP can happen for example between 5 am to 2.30 pm Eastern Time, when WTI Crude Oil futures are trading actively in New York Mercantile Exchange (NYMEX). The S&L ETPs themselves trade solely on European exchanges and therefore can be traded only during those periods where European exchanges are open. This means that an Intraday Restrike can happen regardless of if the related S&L ETP is trading or not. In other words, Intraday does not meanwhile the S&L ETP is trading on a European exchange.

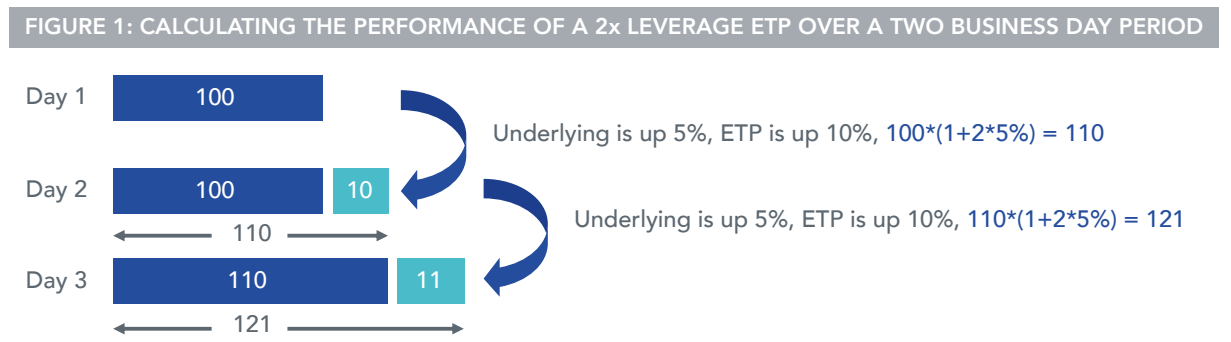
It is enough for the relevant underlying index (non-leveraged) to ‘touch’ the Restrike Threshold for the Intraday Restrike to be invoked. The Index does not need to cross the Restrike Threshold. These thresholds are different for each product depending on the underlying and leverage factor and are specified in the final terms or the prospectus of the relevant S&L ETPs.

It is worth mentioning that there may be multiple Intraday Restrike events on a single day if the relevant index continues to move in an adverse direction for the ETP.

WHAT HAPPENS WHEN THE INTRADAY RESTRIKE MECHANISM IS INVOKED?

As explained above and in our “7 things to remember when investing in S&L ETPs” guide (see [here](#) for more explanations), the performance of an S&L ETPs is calculated by measuring the daily performance of the ETP from one NAV Calculation Time to the next and then to aggregate those performances in a multiple day performance (see below).

In the example below, the underlying index is up 5% two days in a row (i.e. 10.25% over the two days). On each of those days a 2x leveraged ETP would be up 10% (before costs and fees). So, the overall performance over the 2 business days is 21% (i.e. not 10.25%*2). The calculation of the performance over the period is path dependent, it depends on each NAV along the way.



In effect, what it means is that the leverage of the ETP is reset every day at the NAV Calculation Time.

The Intraday Restrike effectively forces a reset of the leverage intraday; if the threshold is touched it forces the S&L ETP to behave as though the business day has finished, reset its NAV and then resume tracking the underlying index. Looking at the example above it is like having a Day 1A and a Day 1B.

However, there are a few differences between the Intraday Restrike and the normal NAV Calculation at the end of a business day. Firstly, instead of resetting instantly like S&L ETPs do at the end of the day, at the NAV Calculation Time, the Intraday Restrike takes place over a given time period (the “Restrike Period”), usually around 15 minutes. The price at which the S&L ETP is re-struck called the “Restrike Price” will generally be the lowest price

for the S&L ETP during these 15 minutes. The Restrike Price acts like an extra intraday NAV. If the underlying asset continues to fall during the Restrike Period, the restrike may conclude at a Restrike Price significantly lower than the Restrike Threshold itself. For some of the S&L ETPs and depending on the market conditions, and liquidity, the S&L ETP Restrike Price may be further adjusted according to the actual rebalancing cost incurred by the swap provider. Such an adjustment is defined as a Hedging Adjustment or Hedging Cost in the prospectus of the S&L ETP. The restrike price is communicated to the investment community as soon as it is determined and verified. It usually can be found on the product page of the S&L ETP and in the Important Notice section of our [website](#).

Secondly, in some cases, the Intraday Restrike may not have time to conclude before the underlying index falls (or rises) so far that the full value of the S&L ETP is zeroed out and the S&L ETP, therefore, terminates with zero residual value for investors and the investors stop being exposed to the underlying asset at that moment. This is an inherent risk for the product: if the underlying asset continues to fall during the Restrike Period (i.e. during the 15 minutes following the touching of the threshold) and the product goes to zero, then the product terminates and the investors stop being exposed to the underlying asset at that moment.

Note that, in most cases, the S&L ETP tracks an unleveraged index and the Intraday Restrike is built into the structure of the product. However, some S&L ETPs track already leveraged indices and in those cases the Intraday Restrike is usually built into the underlying index itself.

As usual, to know if this mechanism applies to your investment, which thresholds are used, how intraday is defined and much more, please refer to the relevant prospectus and the relevant Final Terms of each individual products, or each product page on our [website](#).

TWO CASE STUDIES OF THE INTRADAY RESTRIKE MECHANISM

Let us consider an investment in a 3x S&P 500 ETP.

Scenario 1

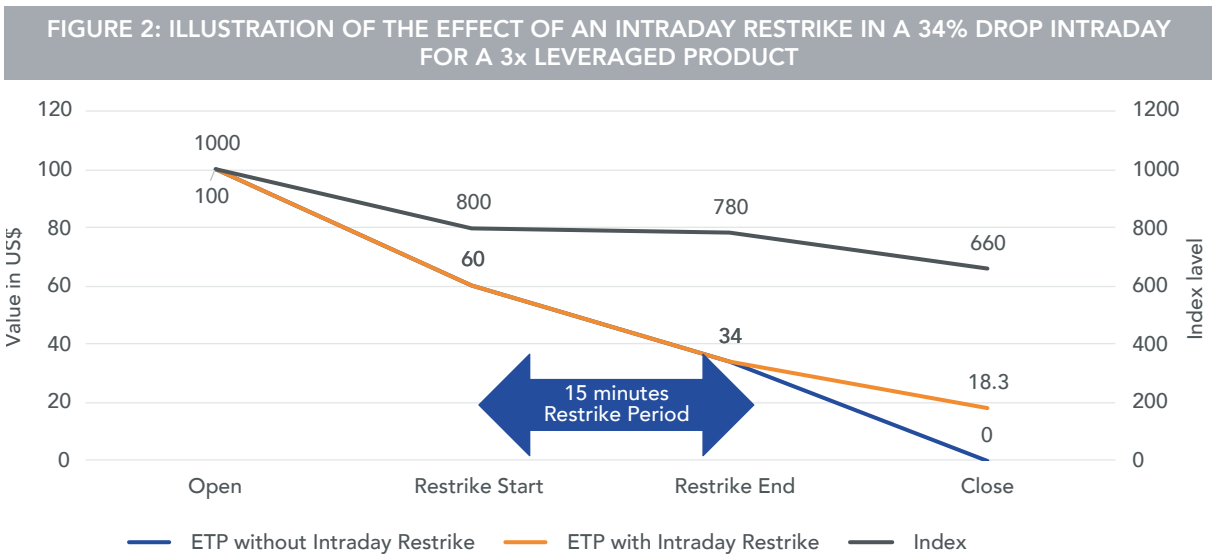
Day 1: ETP Net Asset Value is worth 100\$, the underlying index loses 34% over the course of the day.

Assuming, the ETP has no protection mechanism and no Intraday Restrike, the ETP will be worth 0\$ because the theoretical performance over the full day should have been -102%; thanks to the zero floor the ETP stopped at -100%. It is interesting to note here that the way the day unfolded is irrelevant to the end result. The index could have dropped on the open, or continuously during the day, none of which would have changed the performance of the ETP at the end of the day.

Now with an Intraday Restrike and a Restrike Threshold of -20% for example, the day would unfold as followed:

- + The underlying index opens at 1000 points and the ETP Net Asset Value is worth 100\$
- + As soon as the underlying index touches -20% (800 points), the Restrike Period starts.
- + At the end of the 15 minutes Restrike Period, a Restrike Price is announced. If the index has continued to drop during the Restrike Period, it could at that point be worth 780 points and the Restrike Price would be $100\$ * (1 + 3 * (780 - 1000) / 1000) = 34\$$ because the index has dropped 22% between the open and the Restrike Price.
- + Then the day concludes with the index closing at 660 points => What is the Net Asset Value of the ETP at the end of the day? NAV calculated for the rest of the day: $34\$ * (1 + 3 * (660 - 780) / 780) = 18.3\$$

So overall in this case the Intraday Restrike has helped stop the product's entire value being wiped out and save 18.3\$ of value allowing the ETP to continue trading the next day.



Scenario 2

Day 1: the ETP Net Asset Value is worth 100\$, the underlying index loses 10% over the course of a day but had a drop to during the day the underlying index falls to -30% and then before rebounded rebounding before market close.

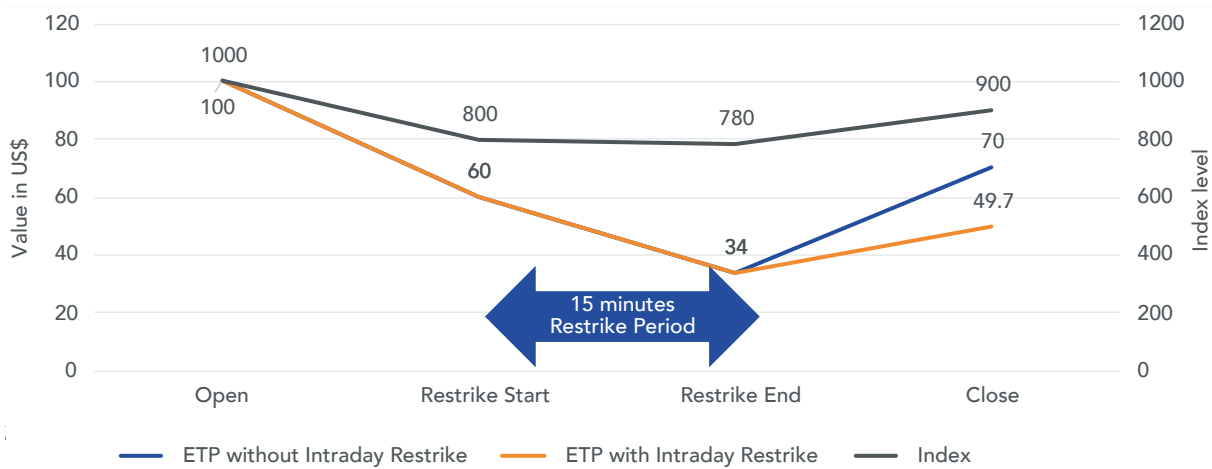
Assuming the ETP has no protection mechanism and no Intraday Restrike, at the end of the day the ETP will be worth 70\$ because the theoretical performance of the ETP over the full day should have been -30%. Note that without protection mechanism the way the day unfolded is irrelevant to the end result.

Now with an Intraday Restrike with a Restrike Threshold of -20% for example, the day would unfold as followed:

- + The underlying index opens at 1000 points and the ETP is worth 100\$
- + As soon as the underlying index touches 800 points, the Intraday Restrike period starts.
- + At the end of the 15 minutes Restrike Period, a Restrike Price is announced. If the underlying index has continued to drop during the Restrike Period, the lowest level of the underlying index could be at 780 and the Restrike Price would then be $100\$ * (1 + 3 * (780 - 1000) / 1000) = 34\$$ like in Scenario 1.
- + Then the day concludes with the underlying index closing at 900. What is the Net Asset Value of the ETP at the end of the day? NAV calculated at the end of the day: $34\$ * (1 + 3 * (900 - 780) / 780) = 49.7\$$

In this case the Intraday Restrike has in fact been detrimental to the value of the ETP, closing at 49.7\$ instead of 70\$ (the closing level of the ETP without an intraday restrike in this scenario). The reason for this result is that the Intraday Restrike introduced a path dependency in the performance calculation i.e. the way the index behaved during the day is relevant to the end result (which is not the case without the restrike) and in this case, the restrike stopped the ETP from rebounding fully with the index after the initial deep loss.

FIGURE 3: ILLUSTRATION OF THE EFFECT OF AN INTRADAY RESTRIKE IN A 10% DROP INTRADAY FOR A 3x LEVERAGED PRODUCT



The second protection mechanism is the Overnight Restrike. It is also designed to minimise the chance of an S&L ETP going to zero and losing all of its value over night. In this case, it supports trading in the strategy as long as is practical under the more extreme conditions. Whether the Overnight Restrike mechanism applies to the product is specified in the prospectus and in the Final Terms for the product.

WisdomTree S&L ETPs invest in underlying assets all over the world, some of which may not be trading on European exchanges or during European exchange trading hours. For example, assets like the Oil future contracts or Copper futures contracts are traded on multiple exchanges around the clock and around the globe, going from Europe to America to Asia and back again. This means that the price of those underlying assets may evolve and move at any time during the day and the night.

However, there are periods where the markets for those assets are more liquid. Oil Future contracts are more liquid between 5 am and 2.30 pm Eastern Time for example. WisdomTree and the relevant counterparties define intraday and overnight periods based on when the underlying asset is the most liquid.

So, should the underlying asset of an S&L ETP moves significantly overnight i.e. during the less liquid periods of the day, the Overnight Restrike would occur rather than an intraday Restrike(if the mechanism is specified to be applicable).

As mentioned before, the S&L ETPs themselves trade solely on European exchanges and therefore can be traded only during those periods where European exchanges are open. European exchanges may be open while the markets in the underlying assets are illiquid. This means that an Overnight Restrike can happen while the S&L ETP is trading on the exchange.

The Intraday and Overnight Restrikes are similar, with the key difference being that the overnight Restrike happens at times where the underlying markets are usually less liquid and therefore the length of the Restrike Period is longer and therefore both the likelihood of the Restrike failing and the product terminating with no value is greater.

WHEN IS THE OVERNIGHT RESTRIKE MECHANISM INVOKED?

In principle, Overnight means not Intraday so when applicable, the Overnight Restrike mechanism is applied at a time where the Intraday Restrike is not applicable. As discussed earlier, the exact definition of intraday varies from one S&L ETP to another therefore the definition of overnight also varies but in principle it means while the underlying asset is not very liquid. For example, an overnight restrike in a WT Crude Oil leveraged ETP would happen when the American exchanges are closed.

To invoke an Overnight Restrike, the relevant underlying asset (non-leveraged) needs to touch the threshold ("Restrike Threshold"). This threshold is different for each product depending on the underlying and leverage factor.

It is worth mentioning that there may be multiple Overnight Restrikes in a single night and that an Intraday Restrike might also occur during the following day if the relevant index continues to move in an adverse direction for the S&L ETP.

WHAT HAPPENS WHEN THE OVERNIGHT RESTRIKE MECHANISM IS INVOKED?

The Overnight Restrike works very similarly to the Intraday Restrike. It forces a reset of the leverage. If the Restrike Threshold is touched, the mechanic forces the S&L ETP to behave as though the business day has ended, reset its NAV, and then resume tracking the underlying index.

The main difference from an Intraday Restrike is the length of the Restrike Period. The Restrike Period for an Overnight Restrike is longer than the Restrike Period for an Intraday Restrike to accommodate for the lower levels of liquidity in the underlying asset. When an Overnight Restrike is invoked, the liquidity of that underlying asset is severely limited. The restrike period will start from the moment the underlying index touches the threshold. The Restrike Period will then last either 3 hours for some products or up to 15 minutes after the market for the underlying asset enters intraday hours for others depending on their prospectus. The length and conditions of the Overnight Restrike are specified in the final terms or the prospectus of the relevant S&L ETPs.

The Restrike Price at which the S&L ETP is re-struck will be the lowest price for the S&L ETP during the Restrike Period. If the underlying asset continues to fall during the period, the restrike may conclude with a new Restrike Price significantly lower than the Restrike Threshold itself. For some of the S&L ETPs and depending on the market conditions, and liquidity, the S&L ETP Restrike Price may be further adjusted according to the actual rebalancing cost incurred by the swap provider. Such an adjustment is defined as the "Hedging Adjustment" or "Hedging Costs" in the prospectus and the Final Terms of the S&L ETP. The Restrike Price is communicated to the investment community as soon as it is determined and verified. It usually can be found on the product page of the S&L ETP and in the Important Notice section of our [website](#).

In some cases, the restrike may not have time to conclude before the underlying asset falls so far that the value of the S&L ETP goes to zero and the S&L ETP, therefore, terminates with zero value for investors and the investors stop being exposed to the underlying asset at that moment, this is an inherent risk of the ETP.

As usual, to know if this mechanism applies to your investment, which thresholds are used, how intraday is defined and much more, please refer to the relevant prospectus and the relevant Final Terms of each individual products, or on each product page on our [website](#).

3. THE SEVERE OVERNIGHT GAP EVENT

While only a few S&L ETPs have an Overnight Restrike, most S&L ETPs have another mechanism called the Severe Overnight Gap Event. It is another mechanism designed to minimize the chance of an S&L ETP going to zero and losing all of its value. A Severe Overnight Gap Event happens when the underlying asset sees a very large, extreme movement and the ETP either does not have a restrike feature available at that point in time (for example, it is outside of the applicable hours for the **Intraday Restrike** and the S&P ETP does not have an **Overnight Restrike**) or if the market moves so quickly that the Restrike cannot work fast enough.

WHEN IS THE SEVERE OVERNIGHT GAP EVENT MECHANISM INVOKED?

In principle, overnight means not intraday so the exact definition of intraday varies from one S&L ETP to another, therefore, the definition of overnight also varies accordingly, but in principle, it means while the underlying asset is not liquid.

Like restrike events, the Severe Overnight Gap Event has a percentage threshold level which if reached, leads to the event being triggered. Such thresholds vary from product to product but are generally more extreme than the thresholds for restrikes i.e. where the Overnight Restrike is applicable for a product, the Overnight Restrike could be triggered and start before the Severe Overnight Gap Event is triggered.

WHAT HAPPENS WHEN THE SEVERE OVERNIGHT GAP EVENT MECHANISM IS INVOKED?

If that threshold is crossed at any time overnight the Swap Provider has the discretion to terminate the underlying swaps and terminate the S&L ETPs at the current ETP fair value. In some cases, this could lead to the swap provider terminating the product at zero or with little value remaining.

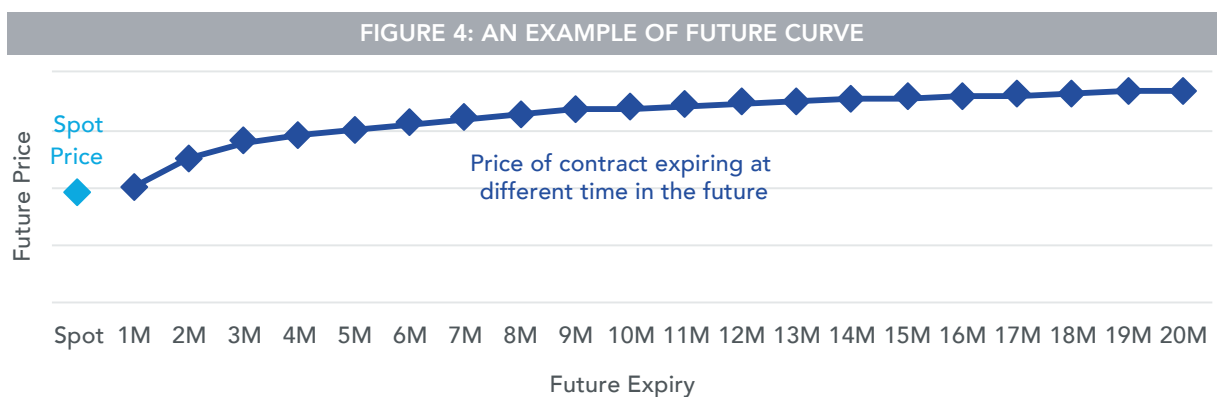
As usual, to know if this mechanism applies to your investment, which thresholds are used, how intraday is defined and much more, please refer to the relevant prospectus and the relevant Final Terms of each individual products, or on each product page on our [website](#).

4. THE NEAR ZERO PRICE DISRUPTION EVENT

The Near Zero Price Mechanism is another protection mechanism designed to minimize the chance of an S&L ETP going to zero and losing all its value. The above three mechanisms are built to reduce the risk of the value of the S&L ETP going to zero from large intraday, or overnight, adverse moves in the underlying index. While the value of the underlying asset is close to zero there is a greater chance of large intraday moves. This is a risk that can be managed for certain commodity S&L ETPs in part via the Near Zero Price Disruption Event.

This mechanism allows for the product to keep up to date with the ever-changing market dynamics, further ensuring its investibility especially when there are acute structural issues affecting the normal functioning of the relevant markets.

This mechanism relies on the fact that in commodities, the underlying asset is NOT the commodity itself (known as the Spot Price), but it is a commodity future contracts i.e. the obligation to buy or sell the commodity at some point in the more or less distant future. There are multiple future contracts trading at the same time on a given commodity. Those future contracts vary depending on the maturity of their underlying obligation (i.e. is the obligation to buy or sell next month, next year or 3 years from now). All those future contracts move in a similar fashion to the Spot Price but with some variations. The future contract with shorter maturity tends to be more volatile than the longer maturity ones.



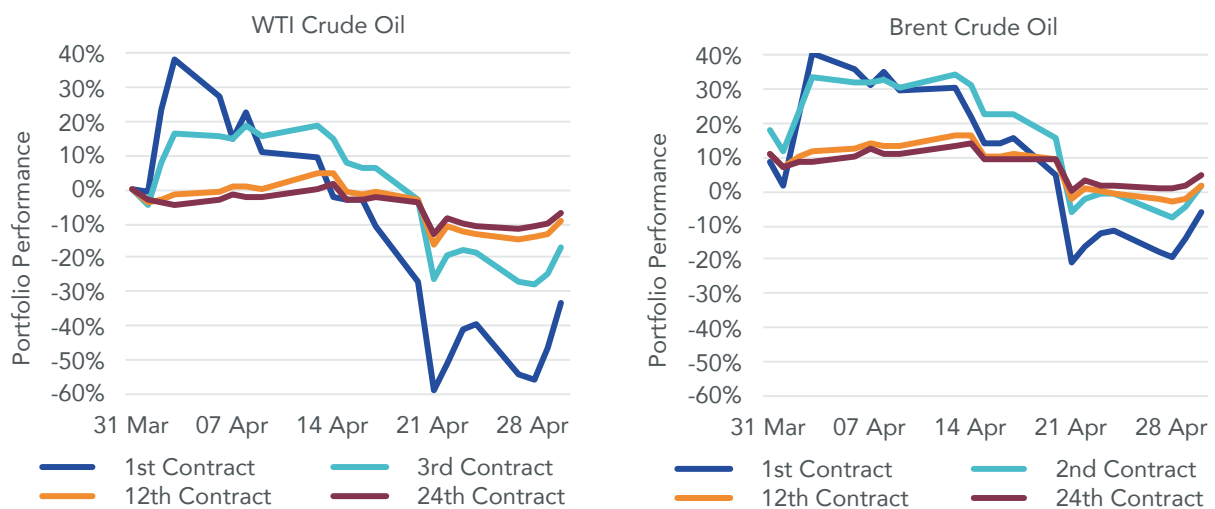
Hence, the Near Zero Price Disruption Event introduces the ability to change the underlying index of the product in the event that the price of the underlying asset gets too close to zero for some commodity linked S&L ETPs and therefore to reduce the volatility in the product (the “Near Zero Price Disruption Event”).

In this case, the underlying asset is a commodity future contract, usually the front-month contract i.e. the future contract with the shorter maturity. This mechanism in effect allows the S&L ETP to switch its exposure from that shorter future contract to another future contract, which might lie slightly further on the commodity curve, like the second month contract i.e. with longer maturity and that is expected to show less volatility.

A good example of a time when this mechanism could have been useful, happened earlier in 2020 in WTI Crude Oil. Between the 13th and the 20th April 2020, the price of the WTI Crude Oil May future contract dropped from 22.4\$ to -39.6\$. At the same time, the next WTI Crude Oil future contract, i.e. the June contract, only moved from 29.26\$ to 20.43\$. Under such circumstances, switching the underlying assets of the ETP from the May Contract to the June Contract would have had very useful ramifications.

There is, of course, a flip side, as that in other market scenarios it may be more favourable for the investor to keep holding the shorter maturity future contract if the longer dated future contract potentially moves less.

FIGURE 4: APRIL PERFORMANCE 2020 OF INVESTMENTS IN DIFFERENT FUTURE CONTRACTS FOR WTI AND BRENT CRUDE OIL



Source: WisdomTree, Bloomberg. Period 31st March 2020 to 30th April 2020. Calculations on daily return in USD. Contracts are rolled systematically on close over 1 day, 3 days before expiry. **Historical performance is not an indication of future performance and any investments may go down in value.**

WHEN IS THE NEAR ZERO PRICE DISRUPTION EVENT MECHANISM INVOKED?

This mechanism is triggered when the relevant future contract, i.e. the future contract that is currently being tracked by the underlying index of the ETP, falls below a given Threshold (the "Near Zero Price Roll Threshold").

WHAT HAPPENS WHEN THE NEAR ZERO PRICE DISRUPTION EVENT IS INVOKED?

It means that as long as the relevant futures contract is below the Near Zero Price Roll Threshold and for 24 hours afterwards, the S&L ETP can switch its exposure to another underlying index and therefore another future contract at the next NAV Calculation Time. The new underlying index (the "Roll Index") remains similar to the original index and provides exposure to the same commodity but using a different contract. The Roll Index is also announced in advance as you can see below.

In other words, if the relevant future breaches the Near Zero Price Roll Threshold on a given day, then at the end of that day, the index can be changed to the Roll Index. If the Index is not changed, it can still be changed in any of the subsequent business days as long as the price of the relevant contract remains under the Near Zero Price Roll Threshold (and for 24 hours afterwards).

Please find below the Near Zero Price Roll Threshold and Roll Index for the products where this mechanism applies.

FIGURE 5: NEAR ZERO PRICE ROLL THRESHOLD AND ROLL INDICES FOR RELEVANT ETPs

ETP Name	Near Zero Price Roll Threshold	Roll Index Name
WisdomTree Natural Gas 3x Daily Short	1.25 USD/ MMBtu	Solactive Natural Gas 3M Commodity Futures Index
WisdomTree WTI Crude Oil Pre-roll	15 USD/bbl.	Solactive WTI Crude Oil 3M Commodity Futures Index
WisdomTree WTI Crude Oil 3x Daily Leveraged		
WisdomTree WTI Crude Oil 3x Daily Short		
WisdomTree Brent Crude Oil Pre-roll	15 USD/bbl.	Solactive Brent Crude Oil 3M Commodity Futures Index
WisdomTree Brent Crude Oil 3x Daily Short		
WisdomTree Brent Crude Oil 3x Daily Leveraged		

As usual, to know if this mechanism applies to your investment, which thresholds are used, how intraday is defined and much more, please refer to the relevant prospectus and the relevant Final Terms of each individual products, or on each product page on our website.

5. DISCRETIONARY INDEX CHANGE MECHANISM

The last of the five protection mechanisms is the Discretionary Index Change mechanism. This mechanism allows the Issuer, WisdomTree, to change the underlying index of the S&L ETP with 5 business days’ notice, provided that the new index remains similar to the original index and provides exposure to the same commodity but using a different contract. This mechanism allows for the product to keep up to date with the continuously changing market conditions, ensuring that it stays investable, especially at times with acute structural issues affecting the normal functioning of the relevant markets. This was especially evident during the recent oil crisis where negative oil prices in the futures market, were precipitated by a lack of storage for WTI crude.

AND YET, NO ONE CAN PREDICT THE MARKET AND THE S&L ETP MAY STILL GO TO ZERO

If the intraday moves of the underlying asset of a S&L ETP are so drastic, that the fair value of the S&L ETP is brought down to zero, despite all of the mechanism outlined above; what happens?

Some S&L ETPs will terminate as soon as the S&L ETP fair value is equal to zero, irrespective of that being in the middle of the day or in the middle of the night. Other S&L ETPs, will not terminate immediately and will continue to trade until the next NAV Calculation Time.

In the event where the underlying asset has continued to go down, the S&L ETP does terminate with a value of zero but if the underlying asset has rebounded and the S&L ETP fair value is positive again then the S&L ETP will calculate its NAV as usual, and continue to trade the next day.

This is a very important distinction in behaviour, in the first case, the S&L ETP does not rebound from an intraday fair value at zero and terminates while the other one does.

As usual, to know if this mechanism applies to your investment, which thresholds are used, how intraday is defined and much more, please refer to the relevant prospectus and the relevant Final Terms of each individual products, or on each product page on our [website](#).

IMPORTANT INFORMATION

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An investment in exchange-traded products (“ETPs”) is dependent on the performance of the underlying index, less costs, but it is not expected to match that performance precisely. ETPs involve numerous risks including among others, general market risks relating to the relevant underlying index, credit risks on the provider of index swaps utilised in the ETP, exchange rate risks, interest rate risks, inflationary risks, liquidity risks and legal and regulatory risks.

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Short and leveraged exchange-traded products are only intended for investors who understand the risks involved in investing in a product with short and/or leveraged exposure and who intend to invest on a short term basis. Any investment in short and/or leveraged products should be monitored on a daily basis

to ensure consistency with your investment strategy. You should understand that investments in short and/or leveraged exchange-traded products held for a period of longer than one day may not provide returns equivalent to the return from the relevant unleveraged investment multiplied by the relevant leverage factor. Potential losses in short and/or leveraged exchange-traded products may be magnified in comparison to investments that do not incorporate these strategies. Please refer to the section entitled "Risk Factors" in the relevant prospectus for further details of these and other risks associated with an investment in short and/or leveraged exchange-traded products. You should consult an independent investment adviser prior to making an investment in short and/or leveraged exchange-traded products in order to determine its suitability to your circumstances.

WisdomTree Multi Asset Issuer PLC (the "Issuer") issues products under a Prospectus ("WTMA Prospectus") approved by the Central Bank of Ireland, drawn up in accordance with the Directive 2003/71/EC. The WTMA Prospectus has been passported to various European jurisdictions including the UK, Italy and Germany and is available on this document.

WisdomTree Multi Asset Issuer PLC Exchange Traded Products ("ETPs") are suitable for financially sophisticated investors who wish to take a short-term view on the underlying indices and can understand the risks of investing in products offering daily leveraged or daily short exposures.

ETPs offering daily leveraged or daily short exposures ("Leveraged ETPs") are products which feature specific risks that prospective investors should understand before investing in them. Higher volatility of the underlying indices and holding periods longer than a day may have an adverse impact on the performance of Leveraged ETPs. As such, Leveraged ETPs are intended for financially sophisticated investors who wish to take a short-term view on the underlying indices and understand such risks. As a consequence, WisdomTree is not promoting or marketing WisdomTree Multi Asset Issuer PLC ETPs to retail clients. Investors should refer to the section entitled "Risk Factors" and "Economic Overview of the ETP Securities" in the WTMA Prospectus for further details of these and other risks associated with an investment in Leveraged ETPs and consult their financial advisors as needed. Neither WisdomTree, nor the Issuer has assessed the suitability of any Leveraged ETPs for investors other than the relevant Authorised Participants.

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