

# US rates & inflation sensitive bonds

## Performance report – Q1 2020



### Key highlights

US inflation expectations slumped in March to their lowest level since the financial crisis in 2008. This was not only a reflection of the collapse in oil prices – the biggest price rout that oil has suffered in almost 30 years – but also of the ongoing demand shock from the Covid-19 crisis. Extraordinary policy intervention by the Fed to support short-term funding markets and government bonds improved liquidity conditions, and this eventually supported some recovery in US TIPS performance on the very last days of the quarter.

Overall, challenging market conditions affected the performance of indices sensitive to US inflation. Our smart beta strategy on US yield curve flattening posted positive performance over Q1 2020. The performance of our US floating rate note strategy was also affected by wider spreads in the financial sector.

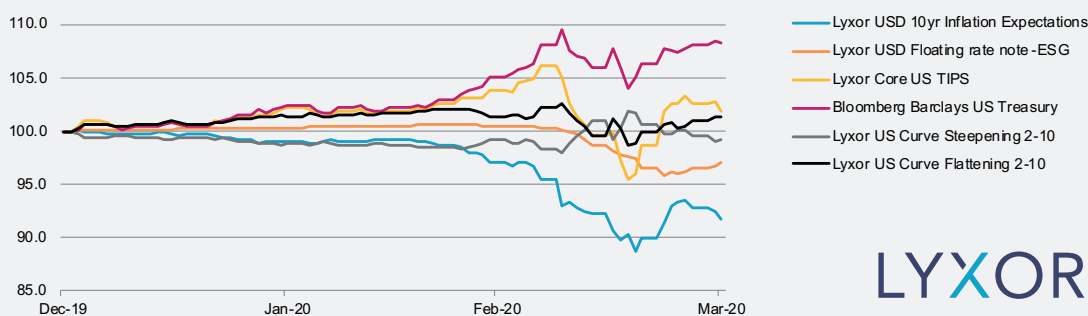
**Philippe Baché**  
Head of Fixed Income ETFs

### Fund details

UCITS ETF	Lyxor Core US TIPS (DR)	Lyxor USD 10Y Inflation Expectations	Lyxor USD Floating Rate Note	Lyxor US Curve Steepening 2-10	Lyxor US Curve Flattening 2-10
Index tracked	BCIT1T	IBXXUBF1	I34979US	SOU07STT	SOU07FTT
Bloomberg ticker	TIPU	INFU	BUOY	STPU	FLTU
Duration	8.30	-0.16	0.13	–	–
Assets under Management	\$1,903m	\$116.2m	\$145.3m	\$116.1m	\$1.7m
Replication Type	Physical	Swap Based	Swap Based	Swap Based	Swap Based
Total expense ratio	0.09%	0.25%	0.10%	0.30%	0.30%
Q1-20 performance	1.90%	-8.30%	-2.94%	-0.95%	1.14%
2019 performance	8.65%	1.79%	4.94%	–	–

TER and AuMs correct as at 31/03/2020. Past performance is not a reliable indicator of future results.

### Year-to-date performance of US inflation and rates-sensitive bond funds



Source: Lyxor International Asset Management, Bloomberg. Data as at 31/03/2020. Past performance is not a reliable indicator of future results. All performances in the chart are based on the ETFs' underlying indices.

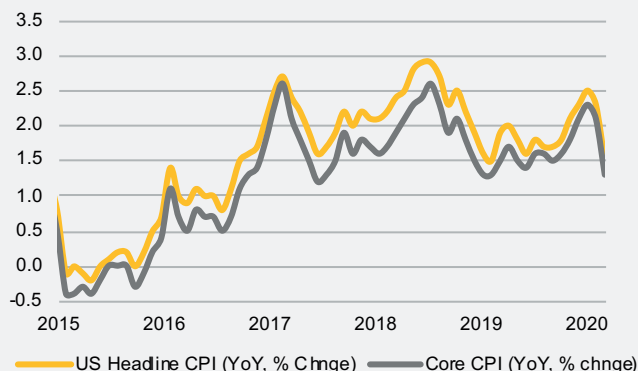
**LYXOR** etf  
SOCIETE GENERALE GROUP

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# Market parameters

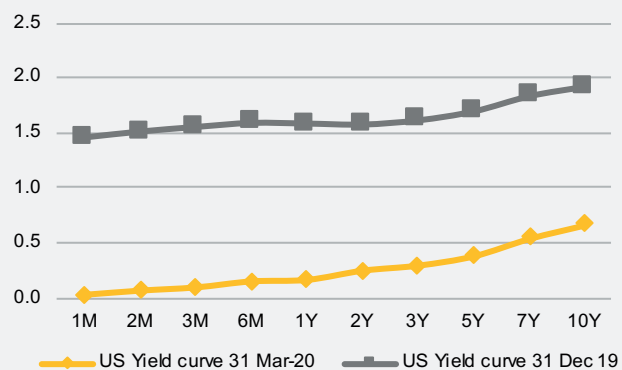
US CPI YoY (Headline & Core)



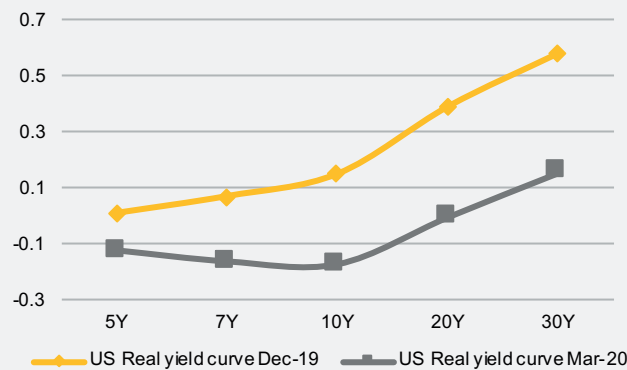
Oil prices YoY (WTI spot price, \$/bbl)



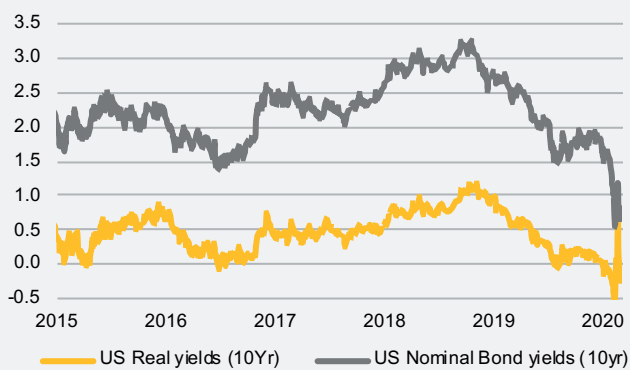
US Treasuries yield curve (nominal, in %)



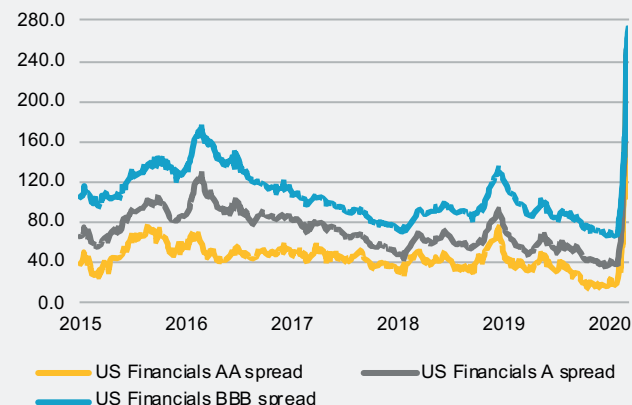
US Treasuries yield curve (real, in %)



US real vs nominal bond yields (%)



US Financials corporate bond spreads (3yrs, bps)



Sources: Lyxor International Asset Management, Bloomberg, Data as at 31/03/2020. Past performance is not a reliable indicator of future results.

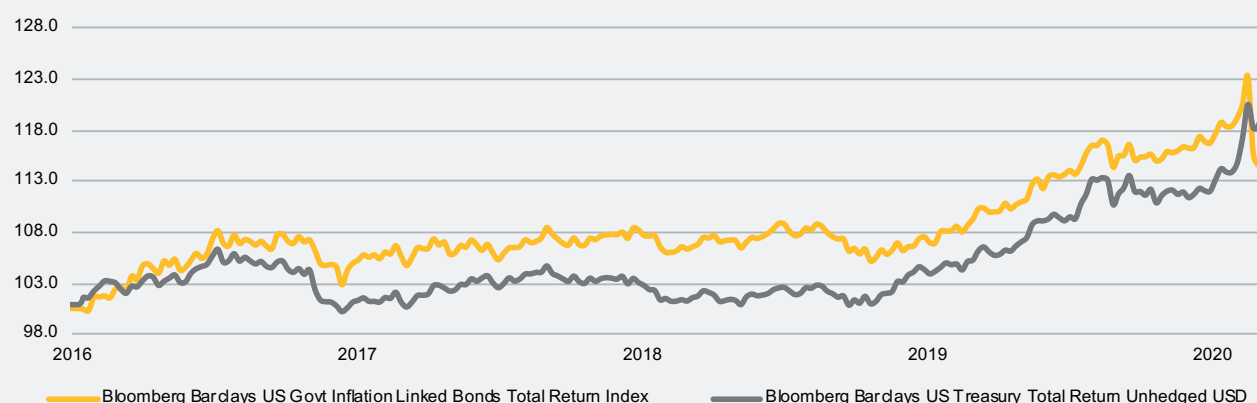
# Lyxor Core US TIPS (DR)

## Performance commentary

The period of heightened uncertainty related to the Covid-19 outbreak, led to a collapse in inflation expectations. During this time of intense volatility, the mismatch in supply versus demand led to a surge in bid-ask spreads on off-the-run bonds. This was a side effect of the sharp unbundling of TIPS holdings by market participants and reflected by the rise in primary dealer holdings of TIPS. The Fed's extraordinary intervention to support short-term funding markets and government bonds allowed for better liquidity conditions and eventually supported the recovery in US TIPS performance (a much smaller market than the regular Treasury bonds) at the end of March.

The US real yield curve steepened sharply at the end of Q1 2020 on growing concerns over the inevitable surge in fiscal deficit. This led investors to shun long-duration bonds despite the fall in inflation expectations.

## How has the benchmark index performed relative to US Treasuries?



Base 100 = 01/01/2016.

Sources: Lyxor International Asset Management, Bloomberg Barclays. Data as at 31/03/2020. Past performance is not a reliable indicator of future returns.

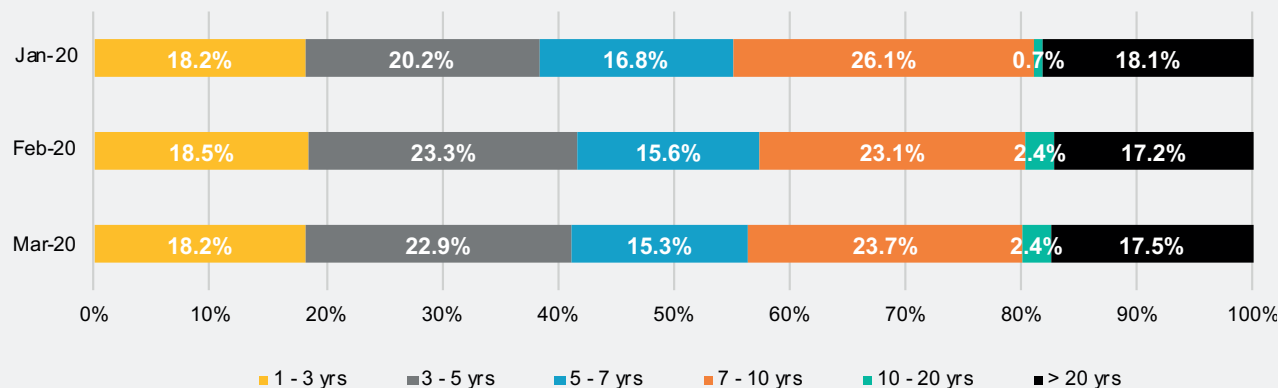
## Returns

	Currency	Since Inception	Total return (%)						
			Q4-20	Q3-20	Q2-20	Q1-20	YTD	2019	1Y
Bloomberg Barclays US Government Inflation-Linked Bond Index	USD	9.90%	-	-	-	1.93%	1.93%	8.75%	7.27%
Bloomberg Barclays US Treasury Total Return Index	USD	13.94%	-	-	-	8.20%	8.20%	6.86%	13.23%

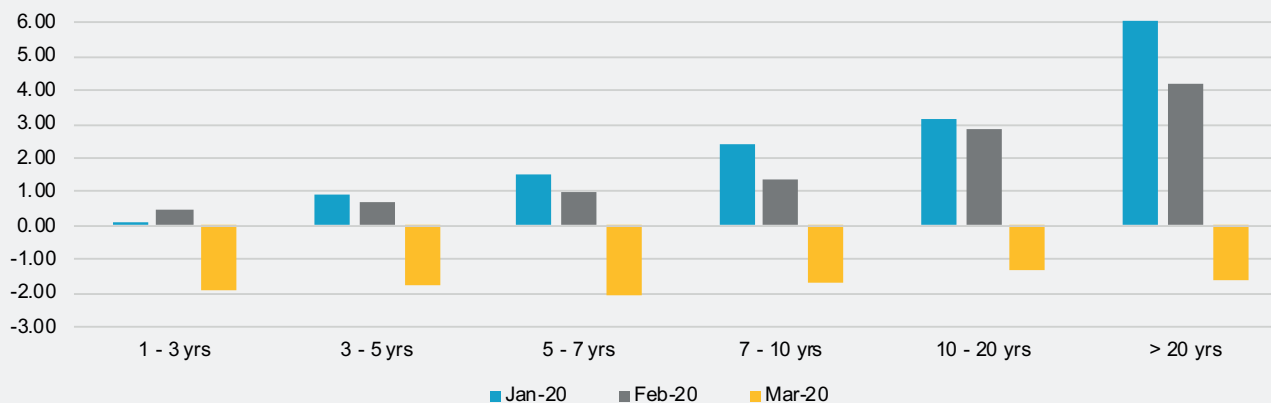
Sources: Bloomberg Barclays, Data as at 31/03/2020. Past performances are not reliable indicators of future performance.

US Inflation-linked bonds use linear interpolation (translating CPI monthly data into daily fixings) with a 3 months lag on payment date. As an example – in April the USD inflation curve will quote the combination of January & February CPI data.

### Benchmark index breakdown by maturity buckets



### Index return by maturity buckets



Date	Total Return (%)						
	Total	1 - 3 yrs	3 - 5 yrs	5 - 7 yrs	7 - 10 yrs	10 - 20 yrs	> 20 yrs
31/01/2020	2.25	0.09	0.91	1.55	2.41	3.16	6.57
29/02/2020	1.49	0.46	0.71	1.00	1.38	2.83	4.17
31/03/2020	-1.79	-1.89	-1.79	-2.07	-1.71	-1.32	-1.60

Sources: Bloomberg Barclays, Data as at 31/03/2020. Past performances are not reliable indicators of future performance.

### Index composition analysis

There have been two bond additions and one bond removal over the period.

Rebalancing	Bond (in)	Bond (out)
Jan-20	TII 0 1/8 01/15/30	TII 1 1/8 01/15/21
Feb-20	TII 0 1/4 02/15/50	–
Mar-20	–	–

Sources: Lyxor International Asset Management, Bloomberg Barclays, Data as at 31/03/2020.

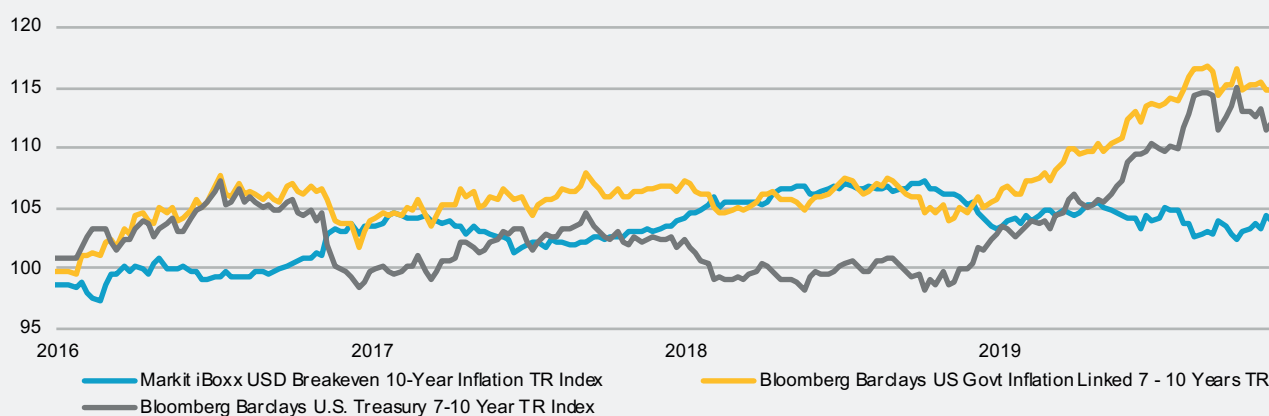
# Lyxor USD 10Y Inflation Expectations

## Performance commentary

US inflation breakeven rates declined to the lowest level since the financial crisis of 2008 in March. This fall was not only a reflection of the collapse in oil prices – the biggest price rout in almost 30 years – but also of the ongoing demand shock.

Our inflation expectations strategy fell over the period, as the negative performance of selling the US Treasury basket was not compensated for by the positive performance of the TIPS basket. The average repo rate also declined over the period on the back of very aggressive easing from the Fed. The US central bank slashed Fed Funds rates by 150bps in March.

## How has the index performed?



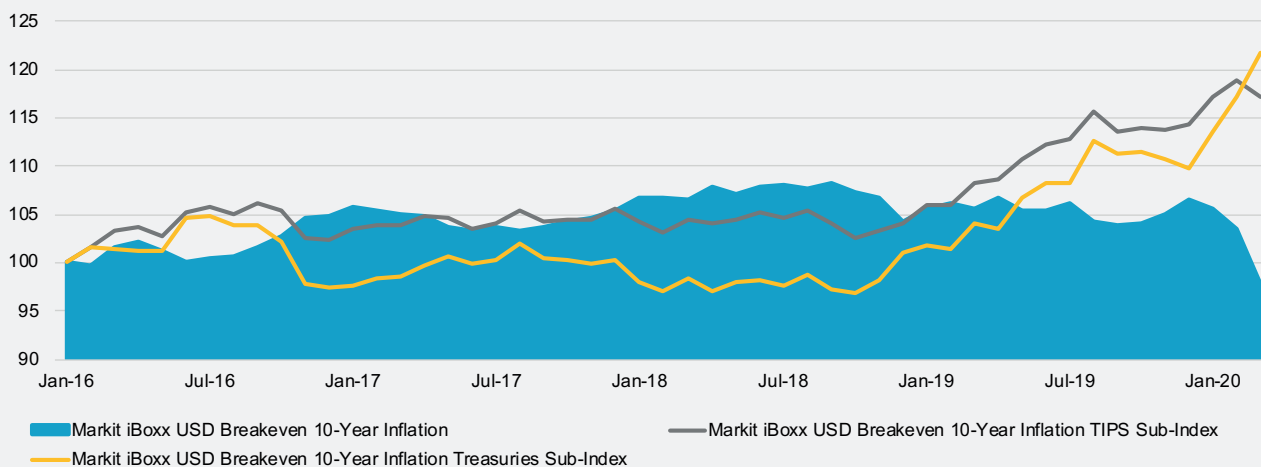
## Returns

	Total return (%)							
	Since Inception (*)	YTD	Q4-20	Q3-20	Q2-20	Q1-20	2019	1Y
Markit iBoxx USD Breakeven 10-Year Inflation Index	-2.91%	-8.22%	-	-	-	-8.22%	2.15%	-7.38%
Bloomberg Barclays US Government Inflation-Linked 7 to 10 Y Bond Index	13.75%	2.04%	-	-	-	2.04%	9.43%	7.54%
Bloomberg Barclays US Treasury 7-10 Year Total Return Index	19.04%	10.15%	-	-	-	10.15%	8.49%	16.17%

(\*) 13/04/2016

Sources: Lyxor International Asset Management, Markit, Bloomberg. Data as at 29/09/2019. Past performances are not reliable indicator of future performance.

### Index performance analysis



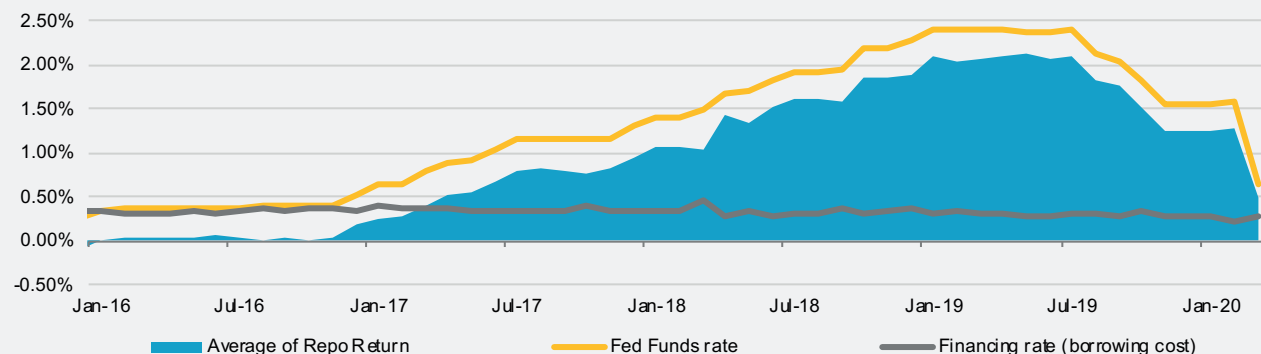
	2020 Q1	2019 Q4	2019 Q3	2019 Q2	2019	2018
Index return over the period	-8.22%	2.65%	-1.43%	-0.28%	2.15%	-1.09%
TIPS basket performance (Long)	2.48%	0.74%	1.162%	3.59%	9.85%	-1.46%
US Treasuries basket performance (Short)	10.98%	-1.41%	2.79%	4.08%	8.65%	0.77%
Average Scaling Factor (SF)	107.19%	108.79%	109.37%	109.91%	109.96%	108.49%
Average Repo return (*) (R)	0.25%	0.34%	0.48%	0.53%	1.86%	1.49%
Total Rebalancing costs (RC)	-0.04%	0.00%	-0.04%	-0.00%	-0.09%	-0.18%
Net performance estimation Long US TIPS - SF * (Short US Treasuries - R) - (RC)	-9.06%	2.64%	-1.41%	-0.33%	2.29%	-0.86%

(\*) the average return over the period for the net repo (Fed Funds minus Financing Rate as defined by Markit). This may lead to estimations deviations when the average repo is not constant over the period.

The index performance is the result of:

- ▶ The difference between the realised daily returns of the Inflation-Linked Bonds (ILB) basket and the US Treasuries (UST) bond basket
- ▶ This performance is adjusted for the cost of repo and rebalancing, when applicable

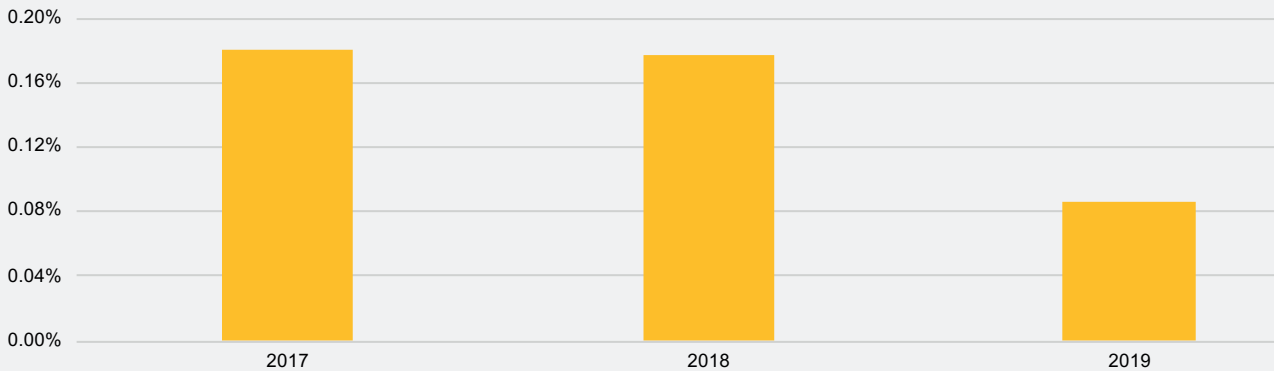
### Historical average repo return



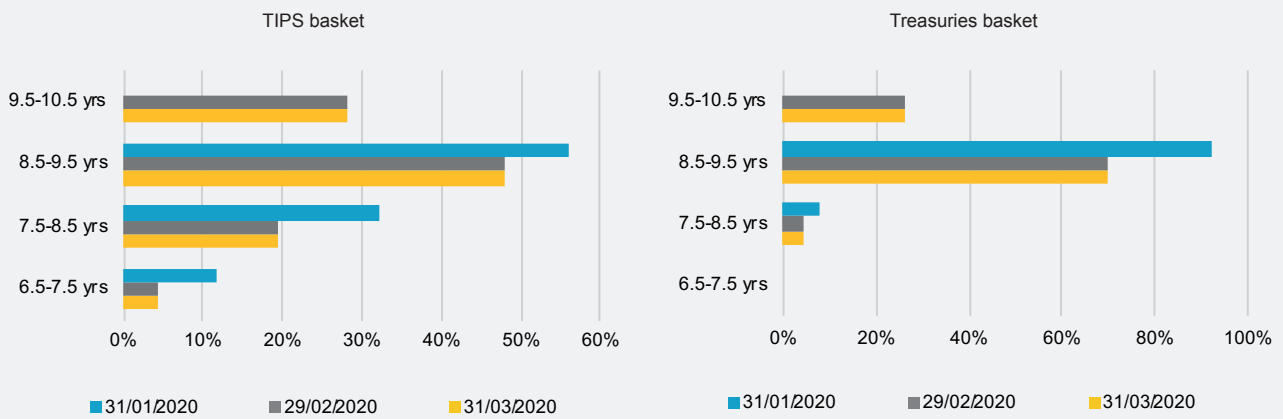
Average of repo: the average return over the period for the net repo (Fed Funds minus Financing Rate as defined by Markit). This may lead to estimations deviations when the average repo is not constant over the period.

Sources: Lyxor International Asset Management, Markit, Data as at 31/03/2020. Past performances are not reliable indicators of future performances.

### Historical rebalancing costs



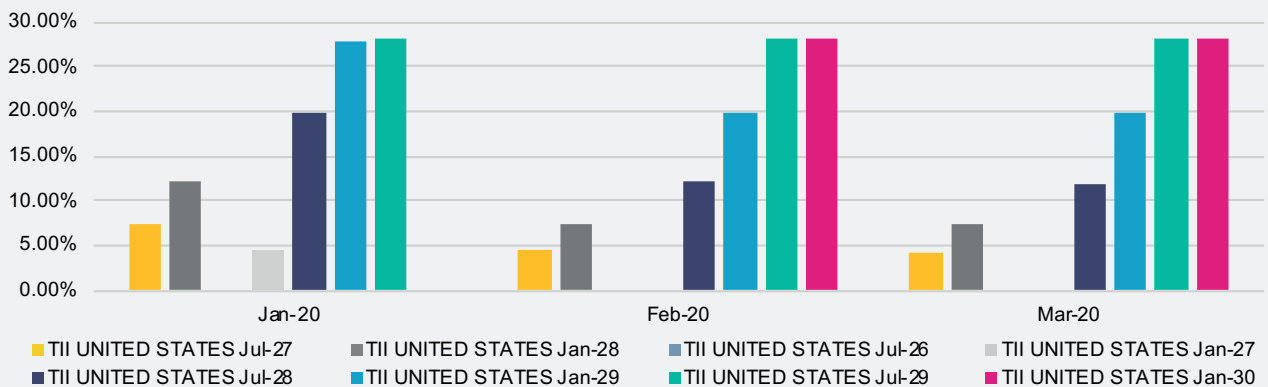
### Historical maturity breakdown



### Index composition analysis

There was a new 10-year TIPS issue in January 2020 which led to a rebalancing of the TIPS basket. The Jan-30 TIPS entered the inflation-linked basket and Jan-27 TIPS was removed. These moves induced a 56% turnover in the basket. The total turnover of the Treasuries basket was also significant in order to match durations of both baskets.

### Index rebalancing history

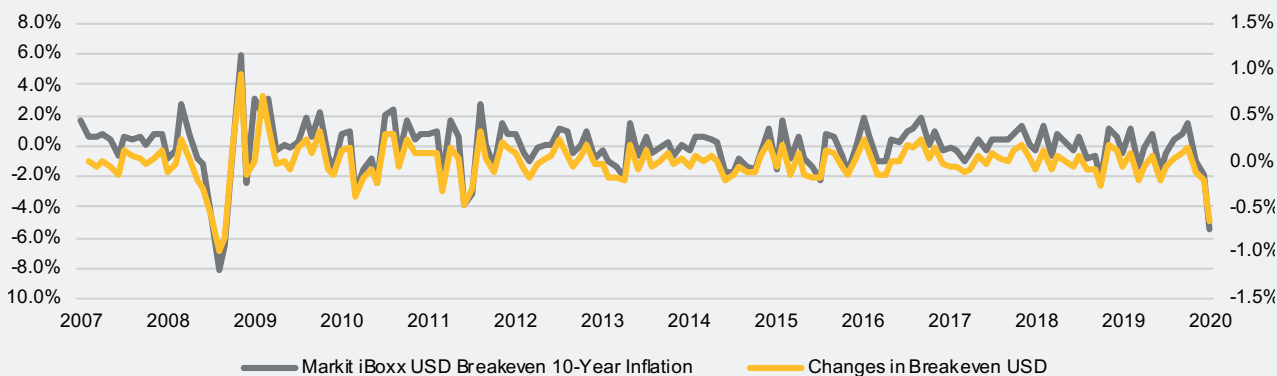


Sources: Lyxor International Asset Management, Markit, Data as at 31/03/2020. Past performances are not reliable indicators of future performances.

## How does the index behave vs theoretical US breakeven inflation rate?

The index is designed to capture changes in the 10-year breakeven inflation rate. Due to the non-linear relationship between changes in yield and return and fluctuations in market supply and demand, the magnitude of index movements compared to changes in breakeven inflation varies from time to time. Thus, the comparison between the index level and the breakeven rate can be only directional. The relationship between the changes in the two series is, however, clearly visible (chart below). Historically, across the entire sample period, a 1% absolute change in the breakeven inflation rate corresponded to an approximately 8% change in the index level. The correlation coefficient between the two series exceeds 0.9. The correlation level can vary over time and should not be used as a systematic rule.

### Markit iBoxx USD breakeven 10-year inflation vs changes in average breakeven\*



\*based on monthly observations.

Sources: Lyxor International Asset Management, Markit, Bloomberg, Data as at 31/03/2020. Past performances are not reliable indicators of future performances.

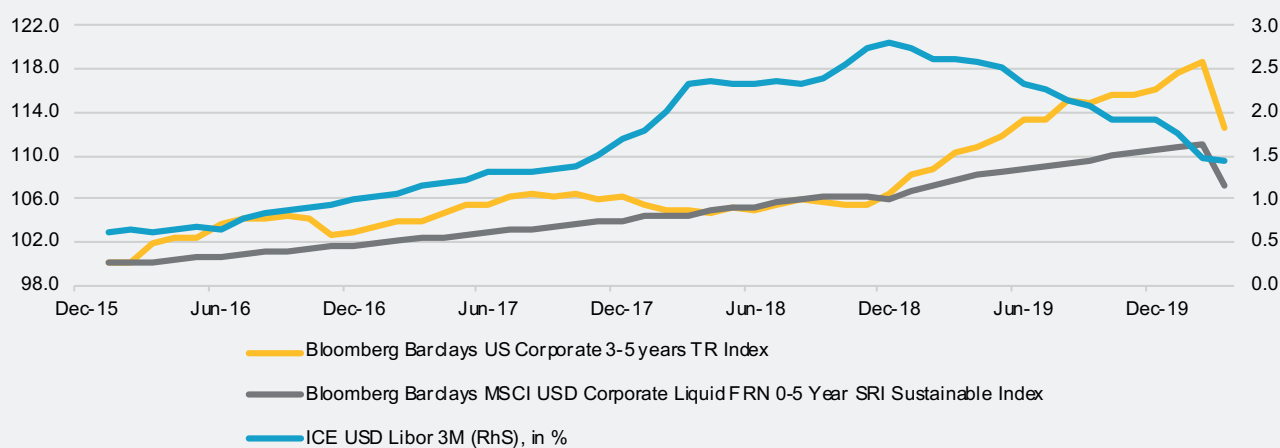


# Lyxor USD Floating Rate Note

## Performance commentary

The corporate credit market has been severely hit in the market downturn, leading to a surge in corporate credit spreads. This was reflected in index performance which was affected mostly in March. Nonetheless, the index's limited exposure to the energy sector allowed for greater resilience in the downturn.

## How has the index performed?



Base 100 = 01/01/2016.

Sources: Lyxor International Asset Management, Markit, Bloomberg. Data as at 31/03/2020. Past performances are not indicative of future returns.

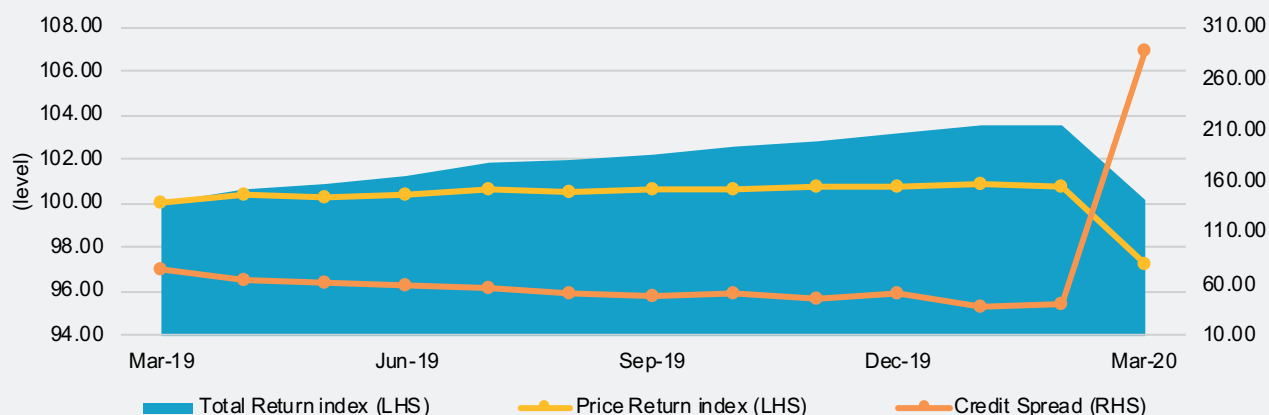
## Returns

	Returns %							
	Since Inception (*)	YTD	Q4-20	Q3-20	Q2-20	Q1-20	2019	1Y
Bloomberg Barclays MSCI USD Corporate Liquid FRN 0-5 Year SRI Sustainable	4.87%	-2.87%	-	-	-	-2.87%	4.33%	-0.30%
Bloomberg Barclays US Corporate FRN 2-7 Year Total Return Index Unhedged USD	1.85%	-6.83%	-	-	-	-6.83%	5.74%	-3.62%
Bloomberg Barclays US Treasury 3-5 Year Total Return Index	12.78%	5.38%	-	-	-	5.38%	5.26%	9.19%

(\*) 06/04/2017

Source: Lyxor International Asset Management, Bloomberg. Data as at 31/03/2020. Past performances are not reliable indicators of future performances.

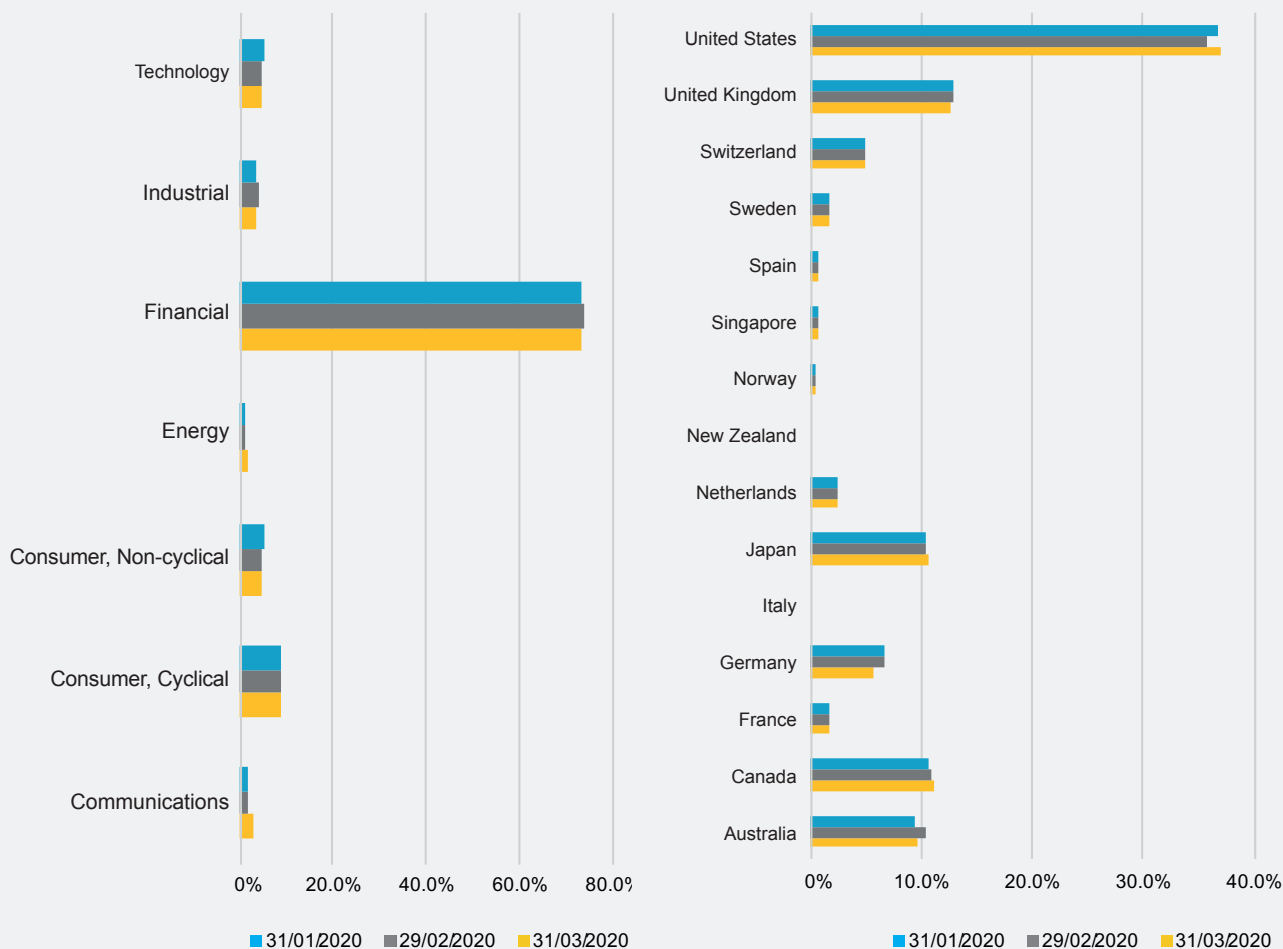
### Benchmark index's returns breakdown



Base 100 = 30/09/2018

Index performance takes into account change of underlying index from Bloomberg Barclays US Corporate FRN 2-7 Yr TR (previous benchmark) to Bloomberg Barclays MSCI USD Corporate Liquid FRN 0-5 Year SRI Sustainable (current benchmark). The performance of the two indices was linked on 31/07/2019.

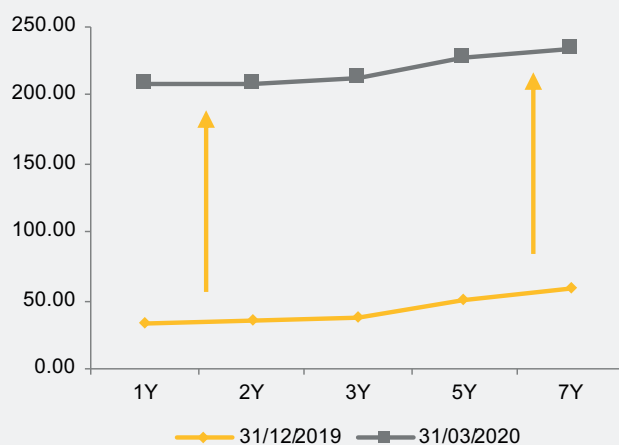
### Sector & country breakdown (%)



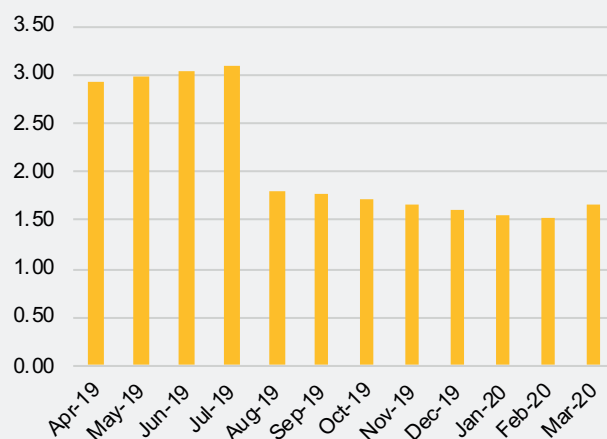
Sources: Lyxor International Asset Management, Bloomberg, Data as at 31/03/2020. Past performance is not a reliable of future results.

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## Credit spread analysis (in bps)



## Average credit spread sensitivity (in years)



US Financials A rated spread to US Treasuries.

Sources: Lyxor International Asset Management, Bloomberg. Data as at 31/03/2020. Past performance is not a reliable indicator of future results.

## Index composition analysis

There was a net total reduction of 9 index constituents. The biggest turnover was among financial bonds. Overall 14 entered the index and 23 exited, of which 10 were financial bonds.

Jan-20	In	Out	Net Total Jan-20
Consumer, Non-cyclical		2	-2
Financial	3	5	-2
Industrial		2	-2
Technology		1	-1
<b>Total Jan-20</b>	<b>3</b>	<b>10</b>	<b>(7)</b>

Feb-20	In	Out	Net Total Feb-20
Consumer, Cyclical		1	-1
Financial	3	1	2
Industrial	1		1
Technology		2	-2
<b>Total Feb-20</b>	<b>4</b>	<b>4</b>	<b>0</b>

Mar-20	In	Out	Net Total Mar-20
Communications	2		2
Consumer, Cyclical	1	1	0
Consumer, Non-cyclical		2	-2
Energy	2		2
Financial	2	4	-2
Industrial		2	-2
<b>Total Mar-20</b>	<b>7</b>	<b>9</b>	<b>(2)</b>

Data represents the number of bonds that have been added/ removed in the index in the stated period.

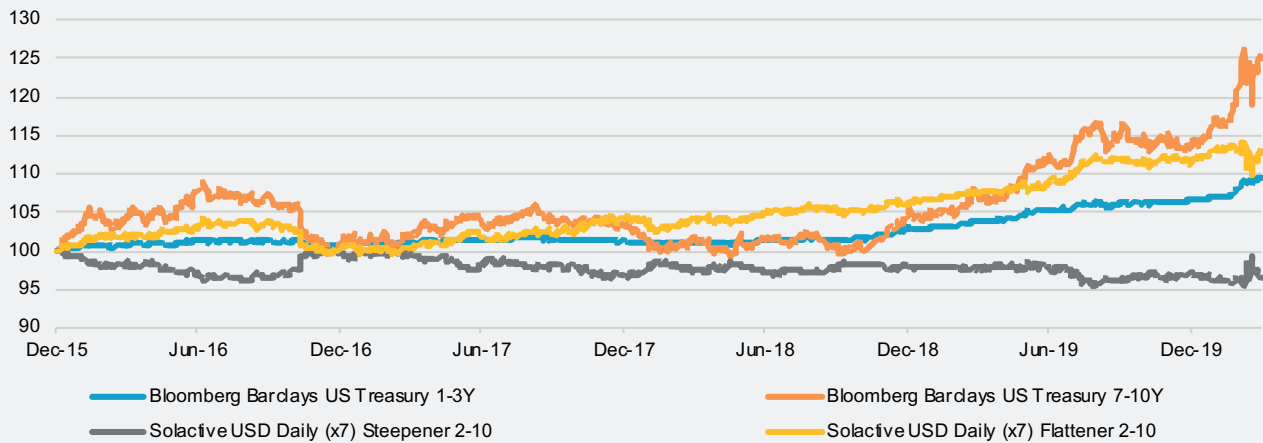
Sources: Lyxor International Asset Management, Bloomberg, Data as at 31/03/2020.

# US Curve

## Performance commentary

Unprecedented and aggressive support from the US Federal Reserve triggered a strong rally at the long end of the US yield curve. The 2-10yr US yield curve flattened aggressively on Fed support leading to positive returns for the 2-10yr flattening strategy over Q1 2020 (+1.27%).

## How have the benchmark indices performed?



Base 100 = 31/12/2015

Sources: Lyxor International Asset Management, Solactive, Bloomberg. Data as at 31/03/2020. Past performances are not reliable indicator of future performance.

## Returns

	Returns %							
	Since Inception	Q4-20	Q3-20	Q2-20	Q1-20	YTD	2019	1Y
Solactive USD Daily (x7) Flattener 2-10 Index	3.57%	-	-	-	1.27%	1.27%	5.00%	4.65%
Solactive USD Daily (x7) Steepener 2-10 Index	3.57%	-	-	-	-0.81%	-0.81%	-0.72%	-1.05%

Sources: Lyxor International Asset Management, Solactive. Data as at 31/03/2020. Past performance is not a reliable indicator of future performance.

### Index performance analysis

Q1 2020	Performance	Average weight over the period	Q1 2020	USD Flattening (a)*F10Y - (b)*F2Y + Csh - TC	USD Steepening - (a)*F10Y + (b)*F2Y + Csh - TC
10Y Future basket	11.09% F10Y	79% (a)	Estimated performance	1.32%	-0.81%
2Y Future basket	2.08% F2Y	372% (b)	Actual index performance	1.27%	-0.81%
Cash	0.31% Csh	-			
Transaction costs	0.05% TC	-			

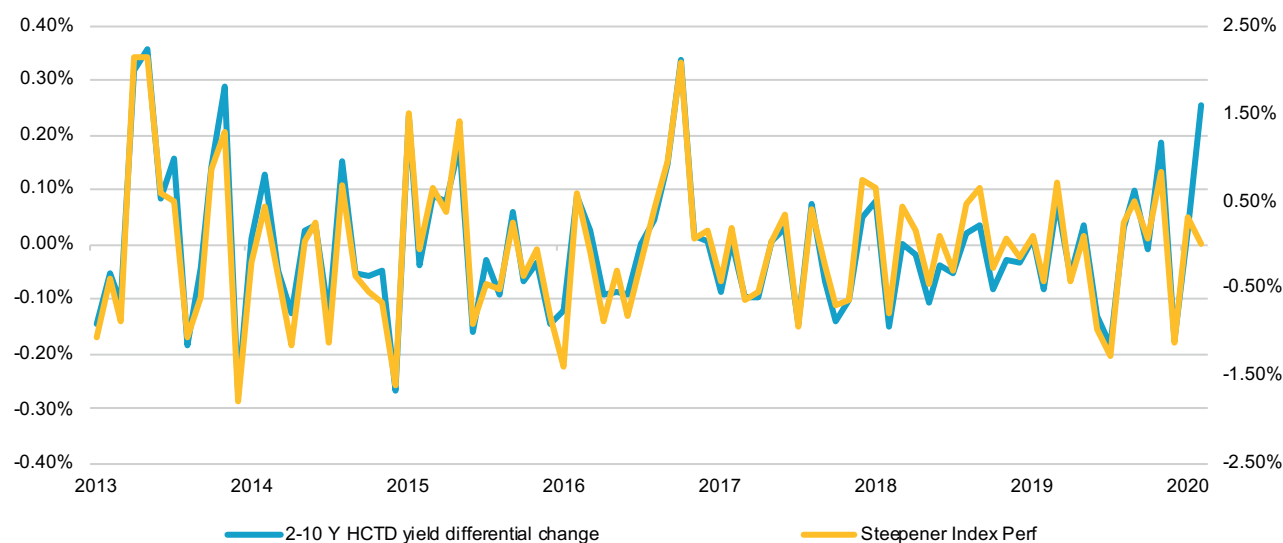
The figures relating to past performance are not a reliable indicator of future results. This also applies to historical market data. The potential return may be reduced by the effect of commissions, fees, taxes or other charges borne by the investor. Changes in currency exchange rates may have an adverse effect on the net asset value ("NAV") or income of the product.

Source: Lyxor International Asset Management, Solactive, Data as at 31/03/2020.

### How does the index behave vs the theoretical differential in 2-10yr US Treasury yields?

The index is designed to capture changes in the 2-10Y yield differential in US Treasuries. Due to the non-linear relationship between changes in yield and return and fluctuations in market supply and demand, the magnitude of index movements compared to changes in yield differentials varies from time to time. Thus, the comparison between the index level and the yield differential can be only directional. The relationship between the changes in the two series is, however, clearly visible (chart below). Historically, across the entire sample period, a 1 bp absolute change in the 2-10yr US Treasury yield differential corresponded to an approximately 7 bp change in the index level. The correlation coefficient between the two series exceeds 0.9. The correlation level can vary over time and should not be used as a systematic rule.

### Solactive USD Daily (7x) Steepener 2-10 bp vs changes in average 2-10yr yield differential\*



\*based on monthly data.

Sources: Lyxor International Asset management, Solactive, Bloomberg, Data as at 31/03/2020. Past performances are not reliable indicators of future performances.

### Knowing your risk

It is important for potential investors to evaluate the general risks described below and in the fund prospectus on our website [www.lyxoretf.com](http://www.lyxoretf.com)

#### Capital at risk

ETFs are tracking instruments: Their risk profile is similar to a direct investment in the Underlying index. Investors' capital is fully at risk and investors may not get back the amount originally invested.

#### Replication risk

The fund objectives might not be reached due to unexpected events on the underlying markets which will impact the index calculation and the efficient fund replication.

#### Counterparty risk

With synthetic ETFs, investors are exposed to risks resulting from the use of an OTC swap with Société Générale. In-line with UCITS guidelines, the exposure to Société Générale cannot exceed 10% of the total fund assets. Physically replicated ETFs may have counterparty risk if they use a securities lending programme.

#### Concentration risk

Smart Beta ETFs select stocks or bonds for their portfolio from the original benchmark index. Where selection rules are extensive it can lead to a more concentrated portfolio where risk is spread over fewer stocks than the original benchmark.

#### Underlying risk

The Underlying index of a Lyxor ETF may be complex and volatile. For example, when investing in commodities, the Underlying index is calculated with reference to commodity futures contracts exposing the investor to a

liquidity risk linked to costs such as cost of carry and transportation. ETFs exposed to Emerging Markets carry a greater risk of potential loss than investment in Developed Markets as they are exposed to a wide range of unpredictable Emerging Market risks.

#### Currency risk

ETFs may be exposed to currency risk if the ETF is denominated in a currency different to that of the Underlying index they are tracking. This means that exchange rate fluctuations could have a negative or positive effect on returns.

#### Liquidity risk

Liquidity is provided by registered market-makers on the respective stock exchange where the ETF is listed, including Société Générale. On exchange, liquidity may be limited as a result of a suspension in the underlying market represented by the Underlying index tracked by the ETF; a failure in the systems of one of the relevant stock exchanges, or other market-maker systems; or an abnormal trading situation or event.

#### Leverage risk

Leveraged products amplify both gains and losses by a given leverage factor. Losses can therefore be substantial.

#### Compounding risk

The performance of yield curve strategy ETFs is calculated on a daily basis. This means there is a compounding effect as the daily return will always be based on the previous day's closing price. This slippage can be significant over periods longer than 1 business day, meaning these ETFs are typically unsuitable for investors planning to hold them for longer than one trading session. Any positions in these ETFs should be monitored on an ongoing basis.

### Important information

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Alternatively, some of the funds described in this document are either (i) French FCPs (fonds commun de placement) or (ii) sub-funds of Multi Units France a French SICAV, both the French FCPs and sub-funds of Multi Units France are incorporated under the French Law and approved by the French Autorité des marchés financiers. Each fund complies with the UCITS Directive (2009/65/CE), and has been approved by the French Autorité des marchés financiers. Société Générale and Lyxor AM recommend that investors read carefully the "risk factors" section of the product's prospectus and Key Investor Information Document (KIID). The prospectus and the KIID are available in French on the website of the AMF ([www.amf-france.org](http://www.amf-france.org)). The prospectus in English and the KIID in the relevant local language (for all the countries referred to, in this document as a country in which a public offer of the product is authorised) are available free of charge on [lyxoretf.com](http://lyxoretf.com) or upon request to [client-services-etf@lyxor.com](mailto:client-services-etf@lyxor.com).

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