Product Insight

The new FTSE US Municipal Tax-Exempt Investment-Grade Bond 0+ Years Index

FTSE Russell

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AUTHOR

Michael Hampden-Turner
Director, Fixed Income and Multi-Asset (FIMA) Applied Research
+0 789 442 0210
michael.hampden-turner@lseg.com

Introduction

For US dollar investors, including some municipal bond ('muni') exposure should be core to their strategic asset allocation, adding diversity and quality to their investment portfolios. Historically, the market has been dominated by retail investors allocating into single assets without much focus on risk characteristics. This is changing, and FTSE Russell has adapted its muni indices to facilitate this process.

Over time, the broader exposure offered by mutual funds has grown in popularity. However, the newest and most significant growth sector has been in passive ETF funds. The downside of muni mutual funds is that they do not allow investors to maximize the tax-exempt potential of their muni allocation. However, by taking exposure to the whole market, rather than a handful of bonds, ETFs extend diversity, offer liquidity, lower costs and avoid the need for the idiosyncratic risks inherent with security selection. We expect demand for muni index products to grow.

The appeal of munis is that they are a large liquid asset class with attractive risk characteristics as well as a special tax status. The 'municipal' status has a variety of credit implications that position the bonds between Treasuries and corporate credit in risk and return terms. An additional attraction for investors is the combination of a good return and a defensive quality relative to Treasuries. Munis offer returns that are similar to corporates but less volatile and with low correlation to other asset classes. Our new index enhances some of these characteristics.

The new FTSE US Municipal Tax-Exempt Investment-Grade Bond 0+ Years Index (0+ Munis index)

The new FTSE US Municipal Tax-Exempt Investment-Grade Bond 0+ Years Index (0+ Munis index) has some important differences with the broader universe of munis and other indices. It is different to the old Muni 1+ index in that bonds with maturities between 0-1 year do not drop out of the index. This enables investors to benefit from that final pull to par and avoid the capital gains tax liability.

Also, it is an investment grade index that excludes riskier high yield muni issuers. Therefore, without the high yield component, the index benefits from a more defensive ‘flight-to-quality’ characteristic. This means the index often outperforms during a correction unlike corporate credit and other risk assets, offering diversification benefits.

While there are taxable munis, the index filters these out. It also has a minimum issue size of $75 million which removes many of the smaller less liquid bonds from the index.

Additionally, the creation of new 0+ Muni sub-indices such as 0-3yr and 0-5yr allow the potential for a more precise duration exposure to the asset class that can accommodate elements of *tactical* asset allocations and hold-to maturity. Thinking ‘tactically’ is topical in fixed income. For example, with the Fed guiding investors to policy rates of 2.5% and announcements on QE bond sales due imminently, bond yields seem likely to continue to rise in the short term. These new maturity-based sub-indices enable investors to shorten their duration and reduce mark-to-market exposure to rates and opt for a hold-to-maturity portfolio. Once the cycle has turned, they can then lengthen their duration and benefit from higher yields: enabling active management with passive investments.

Let us step through some of these index risk characteristics in turn.

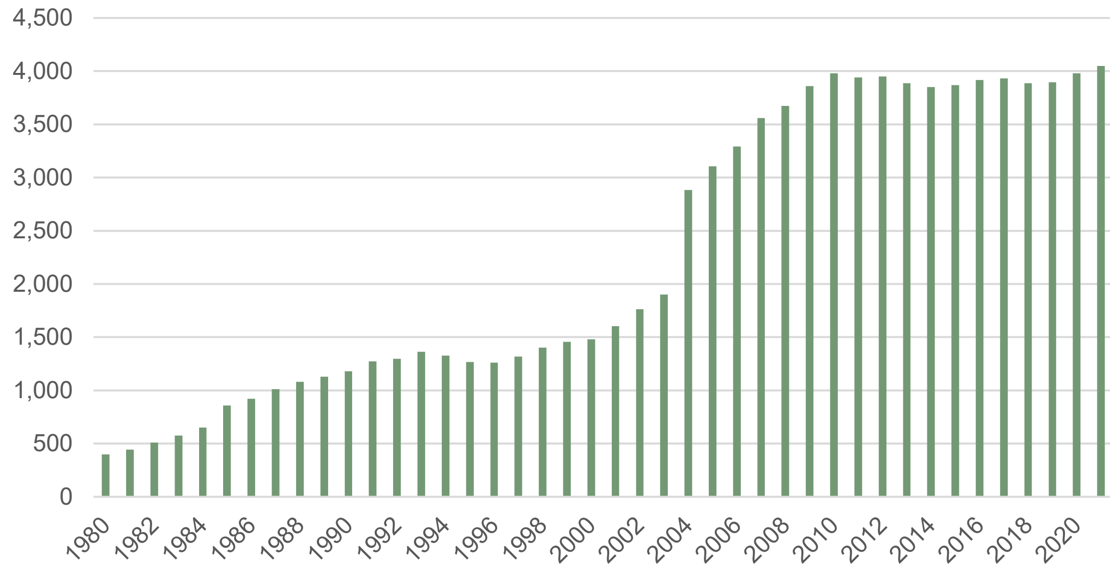
Liquid and diverse universe: market size and major issuers

The muni market is huge and liquid, with over $4 trillion of outstanding bonds. It has doubled since 2003[1] and has over $9 billion of daily trades. Approximately 50,000 authorities have been issuing an average of $435 billion of securities a year since 2015. [2]

[1] SIFMA website, available at http://www.sifma.org/legal, as of April 2022

[2] MSRB.org

Graph 1. Municipal bond market exceeds $4 trillion



Source: SIFMA

Some of the biggest issuers fall broadly into these following sectors:

General Obligation (GO) are what the majority of investors think of as muni bonds. Debt issued by states or local municipalities whose credit risk profile is enhanced by their ability to level local taxes to meet their liabilities. These bonds make up 30% of the market.

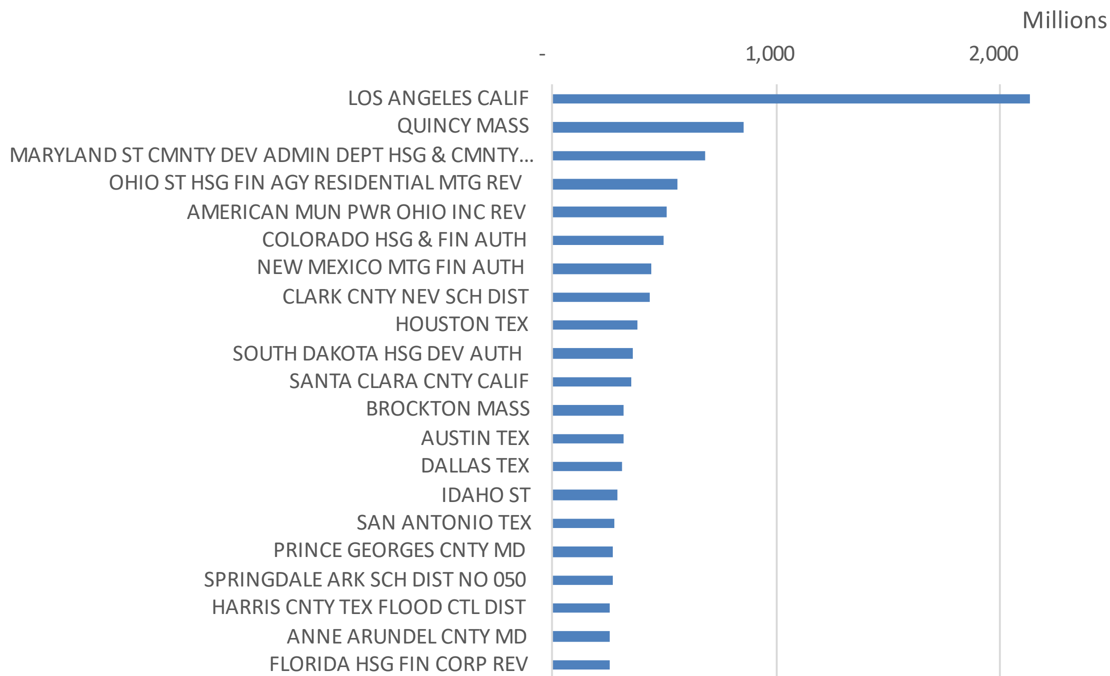
Advanced Refunded are bonds where the issuer wants to repay a debt but must wait until the call date or maturity. To improve their credit profile, issuers buy treasuries to repay the bond and place them in an escrow account until the call/maturity date. This changes the credit profile of the bond.

Tobacco bond securitizations are about $100 billion outstanding of bonds issued against future revenue streams of liability payments from tobacco companies.

Education for school districts or universities, **Health** for hospitals and assisted living, **Housing**, such as for low-income groups. Both housing and **Industrial** can also be state or for-profit enterprises.

Utilities such as **Water** and **Sewer** repaid by property taxes, usage fees etc

Graph 2. Top 20 issuers in last year by notional, GO sector dominating larger issuers



Source: Refinitiv Eikon, 22 April 2022.

The investor base

Retail investors directly hold 45% of muni outstanding. The next biggest category of holder is mutual funds, which account for 25% of bonds outstanding. However, an increasing number are opting to take exposure through ETFs. This currently only makes up 7% of mutual funds but the numbers are rising. While muni mutual funds overall are seeing outflows against the current negative backdrop for fixed income, muni ETFs are bucking the net outflow trend.

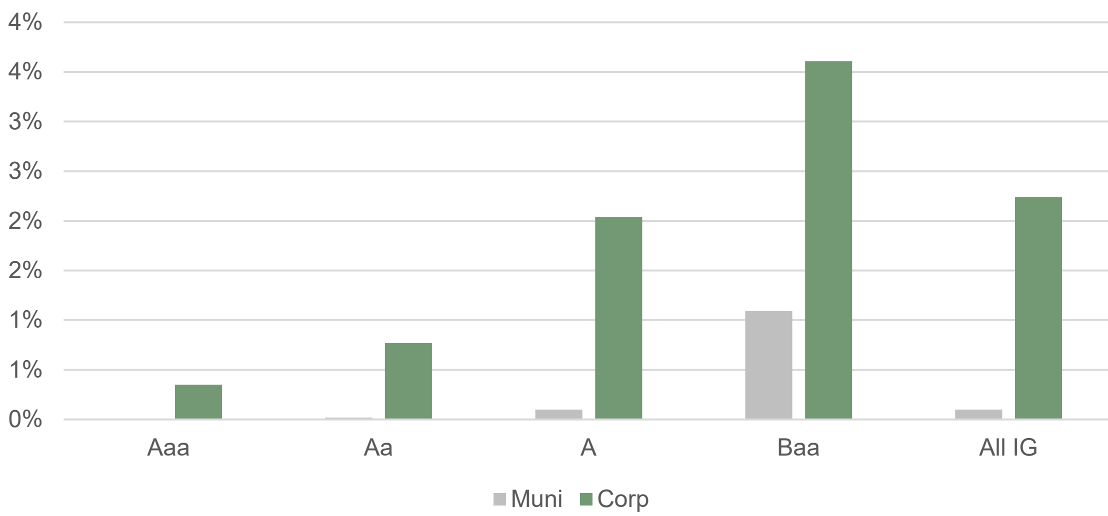
Low credit risk relative to broad corporate bond indices

There is a popular perception that the low risk of default for munis is due to the issuers ability to level taxes to support their debts and, as a result, credit events within this asset class tend to make headlines. However, the quality and quantity of muni issuers has changed over time. While the default rate is historically low, only 30% of the total pool of munis are now classified as “General Obligation” (GO) bonds. The broadening of the muni universe over time has resulted in an increasing number of non-GO utility and other projects that have run into problems. For instance, the privately owned Vegas monorail was unable to keep up with its debt repayments in 2010 and defaulted, taking its guarantor Ambac down with it; it filed for Chapter 11 again in 2020 and was finally taken public. Even GOs run into problems, Puerto Rico enticed US retail investors with a triple tax exemption; it was downgraded to junk by rating agencies in 2014 and declared bankruptcy in 2017.

The advantage of investing in an index such as the FTSE Russell 0+ Muni index, however, is that many of these idiosyncratic episodes are much less relevant. Diversity allows investors to benefit from the extra yield, low default rate relative to rating, flight-to-quality characteristic, and low volatility without the need for careful credit analysis. An investment grade index filters out problem credits early on, offering further protection. Historically, these infrequent default events have only resulted in a small drag on portfolio returns. Idiosyncratic risk can however result in a significant loss for a private investor, who selects a small number of individual securities for a less diverse portfolio.

On a portfolio basis Moody's[3] point out that the default rate for investment-grade municipal bonds was 0.1% relative to 2.24% for investment grade corporate bonds over the period 1970-2020. This low default rate is a considerable advantage and helps explain Munis' reputation as a safe-haven asset. This growth in the number of muni issuers beyond the core of GO may mean that the default rate over the next 50 years will be larger than the previous 50.

Graph 3. Moody's 10-year average cumulative default rates for corporates and munis



Source: Moody's, 9 July 2021, "US Municipal Bond Defaults and Recoveries, 1970-2020"

Rating and diversity

The muni market provides considerable diversity within the index itself. The Municipal Securities Rulemaking Board estimates there is a total of 50,000 authorities issuing an average of $435 billion in new securities every year since 2015. This offers considerable diversity to help minimize idiosyncratic risk. The large number of issuers and frequently non-vanilla nature of the bond is itself a creator of additional premia for investors.

Additionally, munis' correlation with equity indices is low and tends to be low with other fixed income indices, too, as can be seen in table 1. Their position within the risk spectrum tends to be between Treasuries and corporates, as they share attributes of both asset classes, therefore reducing their correlation to each of these fixed income categories.

[3] Moodys "US Public Finance: US municipal bond defaults and recoveries 1970-2021", April 2022

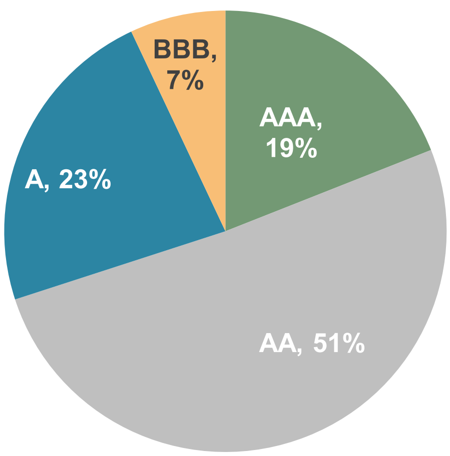
Table 1. Correlation of asset classes

	Munis 0+	US Tsy 0+	USBIG Corp 1y +	EMUSDBBI	Russell 1000	Oil
Munis 0+	100%	-9%	65%	55%	17%	4%
US Tsy 0+	-9%	100%	10%	14%	-25%	-37%
USBIG Corp 1y +	65%	10%	100%	80%	-6%	22%
EMUSDBBI	55%	14%	80%	100%	11%	3%
Russell 1000	17%	-25%	-6%	11%	100%	54%
WTI Oil	4%	-37%	22%	3%	54%	100%

Source: FTSE Russell, 22 April 2022. Past performance is not an indication of future performance.

The rating breakdown of the FTSE 0+ Munis index is attractive, offering a weighted average AA- rating overall. Graph 4 illustrates that more than two third of the index is rated AAA or AA. To put this in context, only 25% of global corporate issuers are rated A, or higher, according to Moody's.

Graph 4. Rating breakdown – FTSE 0+ Munis index is predominantly AAA and AA, as of April 2022



Source: FTSE Russell, 22 April 2022

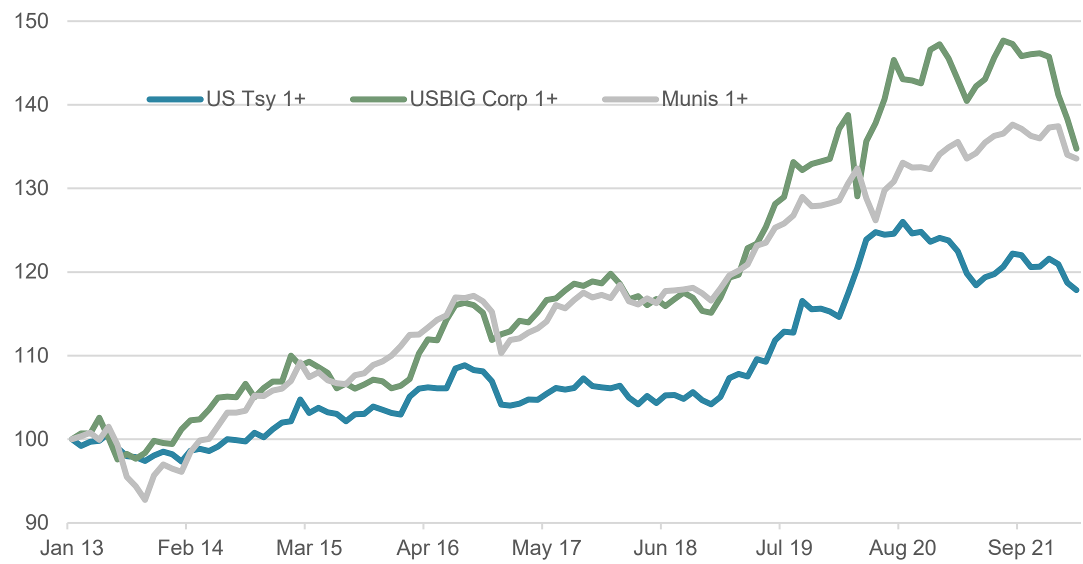
'Flight-to-quality' characteristics

Munis have a 'defensive' or 'quality' characteristic. Consider Graph 5 below which illustrates the performance of munis relative to Treasuries and credit. Notice how the different asset classes performed in periods of significant credit widening such as in 2018, during the Covid crisis and the start of 2022. During these periods, the US Broad Investment Grade Corporate Index (USBIG) saw losses, while the more defensive Treasuries and munis performed better. Longer term, munis offer a similar performance to corporate bonds but also some of the 'quality' characteristics of Treasuries. Conversely, credit outperformed during risk asset rallies such as during 2019.

Attractive returns relative to corporate bonds

Despite having a defensive characteristic, munis have provided attractive returns that are more similar to corporate bonds. Munis tend to be riskier and have offered higher returns than Treasuries but are better rated on average than investment grade corporate bonds. Interestingly, Graph 5 and Table 2 illustrate how, despite this, munis have offered a similar return to corporates over the last nine years.

Graph 5. Treasury, US corporate and muni gross total returns compared.



Source: FTSE Russell, 22 April 2022. Past performance is not an indication of future performance.

Corporate bonds typically have a shorter legal maturity than munis but their average duration is more comparable. This is driven by bond characteristics that make them harder to compare. For instance, 85% of munis have a call option, some call at par, while others call at a premium. Equally, many munis amortize over long periods. These factors help explain this duration/maturity characteristic. It is worth noting that in an interest rate bull market, cheaper funding opportunities will tend to make durations shorter on average, and in a bear market (as now), bonds are less likely to get called and durations extend.

The very large number of issuers, hard-to-judge credit quality, small issue sizes, idiosyncratic bond structures and complexity of tax status means that munis carry a premium relative to non-muni bonds that are easier to benchmark. Unknown factors tend to carry a premium in fixed income and the bewilderingly large number of securities requires a lot of attention to detail for a retail audience.

The alternative is to forgo some of the tax optimization available to the single investor and take an allocation through mutual funds. As this market grows in popularity, the economies of scale will likely mean that some of this complexity premium is compressed. For now, the comparative metrics relative to Treasuries and corporates are compelling as illustrated in Table 2.

Table 2. Volatility and returns of munis relative to Treasuries and corporates

	US Tsy 1+	Munis 1+	USBIG Corp 1y +
Total return	17.83%	33.59%	34.77%
Annualized return	1.82%	3.24%	3.34%
Annualized volatility	16.70%	19.21%	24.42%
Sharpe ratio	0.109	0.169	0.137
Max drawdown	-6.02%	-8.63%	-7.00%

Source: FTSE Russell, 22 April 2022. Returns measured: February 2012-March 2022. Past performance is not an indication for future performance.

Table 2 illustrates that munis have offered higher returns and lower volatility and therefore more attractive Sharpe ratios. Against this, the lower volatility is likely a product of the muni universe being made up of many more issuers and securities. Also, this table illustrates how they have suffered from bigger drawdowns.

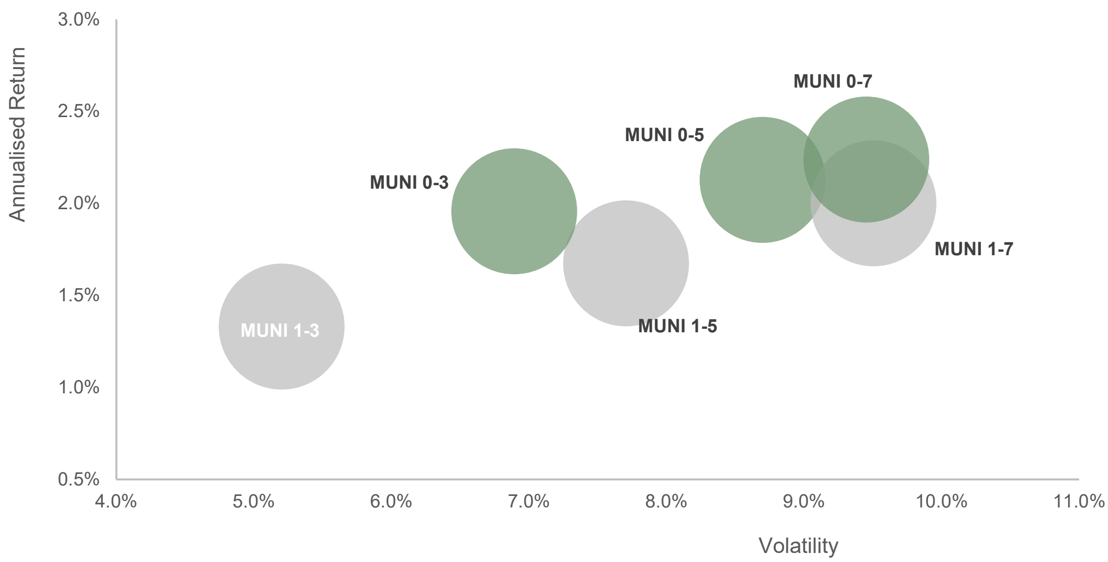
It is worth noting that there is a linear relationship between returns and volatility in sub-indices of munis, too, as illustrated in Table 3 and Graph 6. This means that Sharpe Ratios are broadly consistent across sub-indices.

Table 3. Comparative metrics for different muni sub-indices

Summary metric	Performance summary			
	MUNI 1-5	MUNI 0-5	MUNI 1-7	MUNI 0-7
Total return	8.66%	9.16%	10.42%	9.66%
Annualized return	1.67%	2.13%	2.00%	2.24%
Annualized volatility	7.71%	8.70%	9.50%	9.45%
Sharpe ratio	0.22	0.24	0.21	0.24
Max drawdown	-2.14%	-1.67%	-2.47%	-2.04%

Source: FTSE Russell, 22 April 2022

Graph 6. Return and Volatility Comparison across sub-indices



Source: FTSE Russell

Tax exempt status of Munis

The majority of munis are attractive for US domestic investors because they offer Federal and some state tax breaks on the bond interest (i.e. the coupons) in something like a standard brokerage account. This advantage goes away somewhat for individual retirement accounts (IRA) or 401(k)s, which are taxed at a later stage. This is further complicated because this tax exemption varies by bond, investor domicile and an investors' marginal tax rate. For instance, in California state tax is 13.3%, while in Texas it is 0%. Also, a wealthier investor paying the top rate of income tax saves more than a lower rate taxpayer. Investors still pay capital gains tax on gains on bonds that are sold, for example, before maturity at a premium to par; for most Americans, capital gains tax is 15%.

Historically, munis have offered lower coupons than equivalent corporate bonds of a similar rating and maturity. Issuers have adjusted for the tax advantage and are able to offer reduced coupons in the knowledge that investors will still buy the bonds. Munis additional returns during the fixed income rally of the last ten years has increased tax liabilities to capital gains too. Also, munis typically have a different risk profile relative to corporate bonds, making the distinction between them less black and white. In other words, a choice between corporates and munis should not solely driven by tax advantages.

Mutual funds and ETFs offer highly valuable diversity, lower correlation to other asset classes, lower volatility and access to a bigger pool of investment. The downside is that this is at the expense of optimal tax efficiency for individual investors. Typically, mutual funds end up with a larger capital gains tax liability. Individual investors and privately managed funds can offset some capital gains and losses in different parts of their investment portfolio for optimal tax efficiency. This advantage is unavailable to mutual fund holders. Higher rate tax payers with large portfolios might benefit from specialized advice to optimize their portfolios, and will not mind the fees required for this, but many are likely to be more attracted by the lower costs and comparative ease of ETFs.

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EMEA
+44 (0) 20 7866 1810

North America
+1 877 503 6437

Asia-Pacific
Hong Kong +852 2164 3333
Tokyo +81 3 4563 6346
Sydney +61 (0) 2 8823 3521