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UNDER THE SPOTLIGHT

The power of swap-based ETFs

Does swap-based replication offer
an advantage?

Invesco

The power of synthetic ETFs for China
A-Shares exposure

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Does swap-based replication offer an advantage?

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Any debate over whether physical or swap-based replication is the best way to track an index has been all but laid to rest, with both methods now appreciated for their potential benefits.

We have long argued that each should be judged on a case-by-case basis or, to be more precise, each index should be considered individually to see whether there is an advantage to be exploited. Here, we highlight five instances in which a swap-based replication method offers a distinct structural advantage:

- US equity indices
- UK equity indices
- European equity indices
- Global equity indices
- China A-shares indices

The two replication methods

Physical replication is the most straightforward method and involves buying in proportion all constituents in the index and rebalancing those holdings whenever the index does. Other than the costs involved, including those related to trading and rebalancing of the securities, the ETF's performance may deviate from that of the index depending on, for instance, how the ETF handles dividends and any revenue received from securities lending.

For indices with some less-liquid securities, an ETF may hold only a representative portion of the index. Using sampling techniques generally has lower costs than full physical replication but at the expense of higher

tracking error versus the index.

In contrast, an ETF may be able to deliver the index performance more uniformly by using swaps. This type of replication method, sometimes



referred to as 'synthetic' replication, involves the use of these derivative contracts, which are agreements between the ETF and a counterparty, or multiple counterparties, for the exchange (swapping) of cashflows. A swap-based ETF would typically receive the precise index performance, minus a fee for the swap contract.

Swap-based replication for US equity indices

Among the largest and longest-running swap-based ETFs are those tracking major US equity benchmarks such as the

S&P 500 and MSCI USA indices. While a physically replicated ETF, domiciled in one of the European jurisdictions that has a tax treaty with the US, is subject to reduced withholding taxes on the dividends it receives, an ETF using swaps can receive the gross return of the index, i.e., with 0% dividend withholding tax.

As a result, a swap-based ETF domiciled in Ireland can benefit from an additional 15% of dividend values, compared to a physically replicated ETF also domiciled in Ireland.

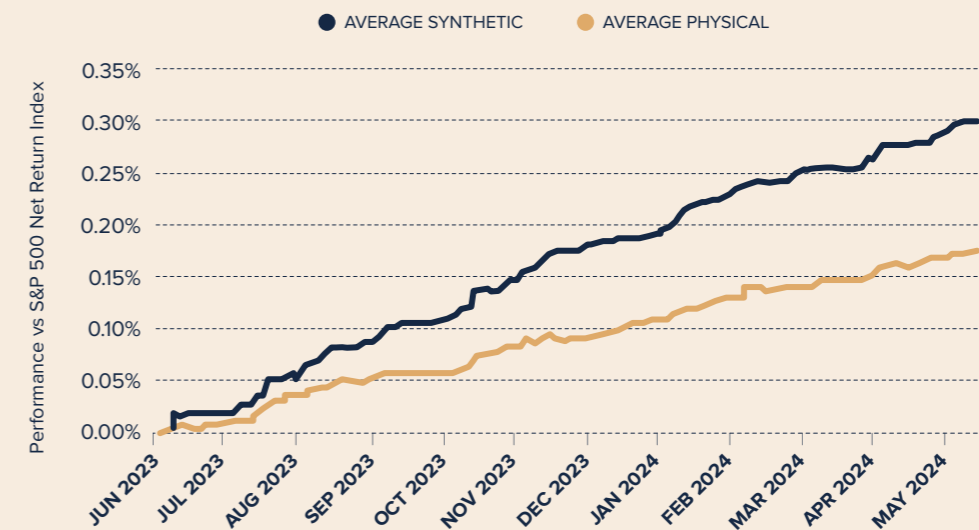
The basis for this structural advantage is embedded within US legislation.

Section 871(m) of the US HIRE Act explicitly excludes swaps written on indices with deep and liquid futures markets from the requirement to pay dividend withholding taxes. This enables a US bank writing the swap to return the equivalent of the gross return of the index to an ETF domiciled outside the US.

ETFs tracking UK and European equity indices

A swap-based replication method also has an advantage in the UK and some European equity markets. An ETF that physically purchases UK-listed securities,

Chart 1: Relative performance differential of swap-based and physical S&P 500 ETFs



Source: Bloomberg, 12 months to end-June 2024, in USD, average of largest swap-based and physical S&P 500 ETFs in Europe. For illustrative purposes only.

for example, is required to pay Stamp Duty and, similarly, an ETF pays Financial Transaction Tax (FTT) when purchasing shares of companies listed in Italy and France. Those additional costs are reflected in the price of creating shares in the ETF.

An ETF that uses swaps to replicate a UK or European index, however, does not pay Stamp Duty or FTT because it is not purchasing the underlying shares of the index. If the swap counterparty (usually a bank) buys the constituents of the index to hedge the derivative contract it writes with the ETF, the bank would generally be exempt from those same taxes. This results in an up-front cost savings to the

end-investor, compared to an investor in a similarly priced physical ETF on the same index.

Swap-based replication for world equities

An ETF that uses a swap-based replication method to track a global benchmark might be able to benefit from a combination of each of these tax treatments. A swaps-based ETF on the MSCI World index, for instance, should not be liable for dividend withholding tax on the US components, nor should it pay Stamp Duty or FTT on its UK and Italian and French constituents.

Using swap contracts may also be a

more cost-effective way to track such a large index compared to having to buy and sell all the constituents through a physical replication method. Also, as illustrated in Chart 2, a swap-based ETF may generally be expected to deliver smoother performance relative to the index being tracked, compared to physical variations.

China: One more beneficial use case for swap-based ETFs

The China A-Shares market is another case where swap-based replication can provide an advantage but, rather than coming from any tax treatment, it is due to the unusual dynamics of the market itself. The China A-Shares market tends to be a profitable environment for market-neutral strategies.

However, securities lending and other hedging mechanisms traditionally used by these hedge funds are not available to them in China, so they often turn to banks to offset the risk. Banks provide these facilities (for a generous fee) and are willing to pay an ETF to take the market exposure through a swap agreement.

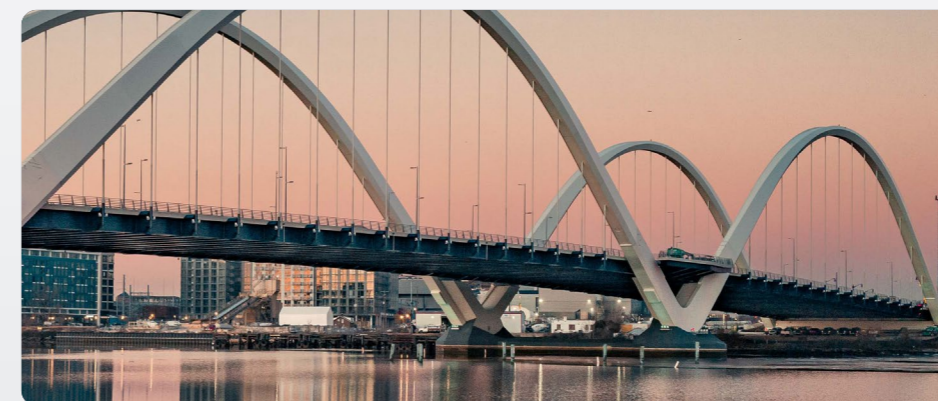
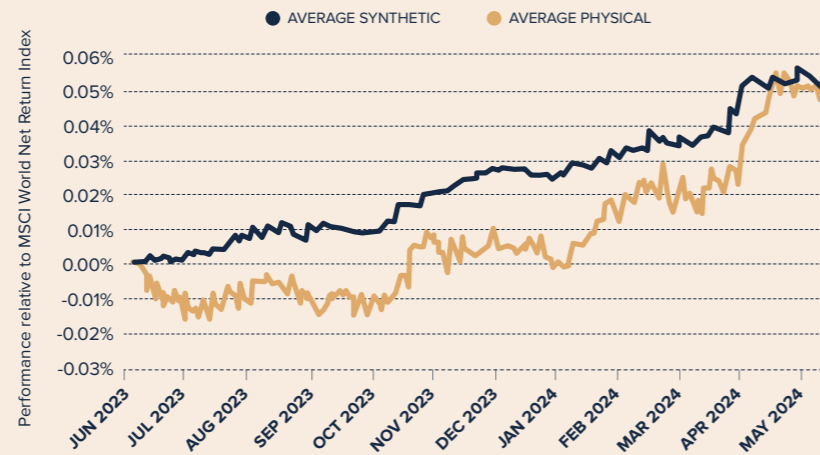


Chart 2: Relative performance differential of swap-based and physical MSCI World ETFs

Source: Bloomberg, 12 months to end-June 2024, in USD, average of largest swap-based and physical MSCI World ETFs in Europe. For illustrative purposes only. Data: Invesco and Bloomberg, showing the averages of the largest swap-based and largest physical MSCI World ETFs in Europe based on AUM, to 31 October 2022. For illustrative purposes only. Past performance is not an indication of future returns.



While in a typical market, an ETF would be expected to pay a swap fee to the counterparty, these unusual market dynamics in China may result in a negative fee, i.e., the ETF receiving the swap fee from the counterparty. When the swap fee is negative, the ETF can deliver outperformance of the index return. The amount of the swap fee – and the potential outperformance – varies over time.

What about the risks?

Using swaps to replicate an index is not without risk, but measures can be put in place to reduce it. Aside from the common risks associated with any investment, the use of swaps introduces counterparty risk, i.e., that the swap counterparty is unable to fulfil its side of the contract. At Invesco, we seek to reduce this risk through:

Holding a basket of quality equities:

Invesco's swap-based ETFs hold a basket of equities that are different from those in the index being tracked. The basket is owned by the ETF (not used as collateral) and is expected to provide a return for the ETF. One objective of using swaps is to deliver a lower tracking error than would be possible with the basket alone.

The use of multiple counterparties:

Our swap-based ETFs can have up to six counterparties, which reduces the potential financial impact on the ETF if any one counterparty defaults. We only select counterparties with high credit ratings, regularly monitor these and stress-test potential risk scenarios.

Resetting the swaps: The value of the swap, known as the mark-to-market, is reset to zero whenever certain conditions are met, such as when there is a creation/redemption in the fund, or the mark-to-market value exceeds a strictly defined level. These frequent resets are intended to limit the amount of counterparty risk.

Visit our website for more information on our range of ETFs:

<https://www.invesco.com/uk/en/capabilities/etfs.html>

Investment risks

For complete information on risks, refer to the legal documents.

The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested. For complete information on risks, refer to the legal

documents.

A synthetic ETF's ability to track a benchmark's performance is reliant on the counterparties to continuously deliver the performance of the benchmark in line with the swap agreements and would also be affected by any spread between the pricing of the swaps and the pricing of the benchmark. The insolvency of any institutions providing services such as safekeeping of assets or acting as counterparty to derivatives or other instruments, may expose a synthetic ETF to financial loss.

Important information

Data as at 30 July 2024 unless otherwise stated.

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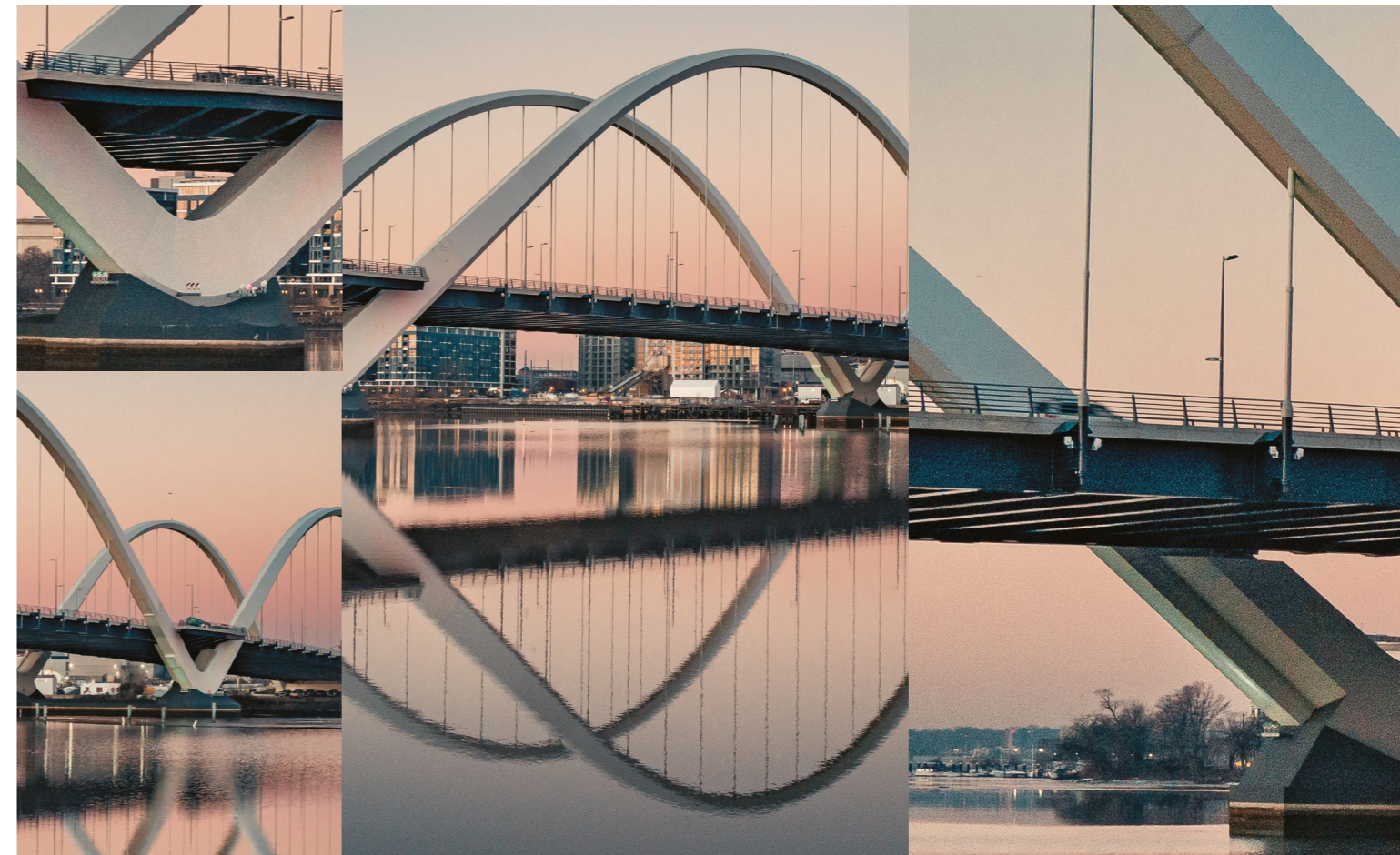
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Views and opinions are based on current market conditions and are subject to change.

UCITS ETF's units / shares purchased on the secondary market cannot usually be sold directly back to UCITS ETF. Investors must buy and sell units / shares on a secondary market with the assistance of an intermediary (e.g. a stockbroker) and may incur fees for doing so. In addition, investors may pay more than the current net asset value when buying units / shares and may receive less than the current net asset value when selling them.

Current tax levels and reliefs may change. Depending on individual circumstances, this may affect investment returns.

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When synthetic benefits become real



Discover Invesco's range of swap-based ETFs

Discover more

Let's rethink possibility.



Capital at risk.

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The power of synthetic ETFs for China A-Shares exposure

Market dynamics offers potential outperformance of the index

AUTHOR: THEO ANDREW | SPONSORED BY: INVESCO

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Investors are increasingly becoming aware of the advantages of the role synthetic ETFs can play in portfolios, but there is one market where a “structural anomaly” allows investors to benefit.

China A-Shares have had a love-hate relationship with investors over the past few years, but accessing the market via a synthetic ETF has proved a more fruitful exercise.

Rather than the benefit coming from any form of tax treatment, China’s high retail participation makes it an attractive environment for hedge funds to capture alpha.

However, hedge funds suffer from access issues – due to there being no physical securities lending market for offshore investors – so they often use

index derivatives written by banks to get the exposure.

Banks then hedge their own exposure to these contracts using ETFs that offer synthetic replication of an A-Shares index, providing an attractive level of swap pricing that results in outperformance for an onshore China ETF.

“While in a typical market, an ETF would be expected to pay a swap fee to the counterparty, these unusual market dynamics in China may result in a negative fee, meaning the ETF receiving the swap fee from the counterparty,” Christopher Mellor, head of EMEA ETF equity product management at Invesco, said.

“When the swap fee is negative, the ETF can deliver outperformance of the index return. The amount of the swap fee – and

the potential outperformance – varies over time.”

Highlighting this, Invesco S&P China A MidCap 500 Swap UCITS ETF (C500) and the Invesco S&P China 300 Swap UCITS ETF (C300) currently carry swap fees of -7.12% and -2.81%, respectively, as at 30 September.

“While in a typical market, an ETF would be expected to pay a swap fee to the counterparty, these unusual market dynamics in China may result in a negative fee, meaning the ETF receiving the swap fee from the counterparty.”



Christopher Mellor
Head of EMEA ETF Equity Product Management
Invesco

In practice, this means investors are earning additional performance of 6.77% for C500 and 2.46% once the 0.35% total expense ratio (TER) has been taken into account.

Investment risks: For more information, please see next page. For complete information on risks, refer to the legal documents. An investment in these funds is an acquisition of units in a passively managed, index tracking fund rather than in the underlying assets owned by the fund. Applies to all: Value fluctuation, emerging markets, use of derivatives for index tracking, concentration risk, equity risk, synthetic ETF risk, currency risk.

It is important to note that the swap fees can vary significantly, based on hedge fund demand, market conditions and the status of China A-Shares lending by offshore investors.

The synthetic structure advantage differs somewhat from US exposures where the advantages are tax related.

European ETFs see benefits in certain



Chart 1: Standardised rolling 12-month performance comparison of Invesco China ETFs

Discrete performance	September 2023 - 2024	September 2022 - 2023	September 2021 - 2022	September 2020 - 2021	September 2019 - 2020	September 2018 - 2019	September 2017 - 2018	September 2016 - 2017	September 2015 - 2016	September 2014 - 2015
S&P China A 300 Index	16.3%	-4.20%	-26.45%	18.57%	27.69%	7.76%	-10.17%	22.16%	-1.12%	26.60%
Invesco S&P China A 300 Swap UCITS ETF	18.55%	-2.79%	-	-	-	-	-	-	-	-
S&P China A MidCap 500 Index	7.44%	-7.34%	-27.81%	17.28%	35.47%	5.18%	-31.73%	-2.33%	-3.36%	20.51%
Invesco S&P China A MidCap 500 Swap UCITS ETF	14.39%	-1.86%	-	-	-	-	-	-	-	-

Past performance (actual or simulated) does not predict future returns. Source: Bloomberg, 30 September 2024. The table shows performance over the past 10 years to the most recent month end. All securities are in USD. Invesco ETF performance is based on Net Asset Value after management fees and other ETF costs but does not consider any commissions or custody fees payable when buying, holding or selling the ETF. The ETF does not charge entry or exit fees. Each period starts at the end of the indicated month. The first indicated month may not represent a full month and may start only on the launch/restructuring date indicated above. Returns may increase or decrease as a result of currency fluctuations. An investment in this fund is an acquisition of units in a passively managed, index tracking fund rather than in the underlying assets owned by the fund.

markets such as the US where they are not required to pay withholding tax on dividends.

This is because the substitute baskets of the ETFs are restricted to non-dividend paying stocks while physical ETFs domiciled in Luxembourg pay 30% withholding tax on US equity dividends and Irish-domiciled ETFs pay 15%.

Outlook for China

Investors are often split on their outlook for China given its potential for oversized growth versus developed markets. The past 18 months have seen the market plagued with geopolitical uncertainty, deflation and property market woes. However, the announcement last week of significant policy easing has put the market squarely in the spotlight.

While its breakneck growth predictions of the past 18 months had already been tempered somewhat, Goldman Sachs and Citigroup analysts recently lowered their full-year projections to 4.7%, below the government’s 5% target but ahead of the US 2.5%.

Valuations of Chinese stocks have recently reached their lowest levels in a decade, with the price-to-earnings ratio of the CSI 300 index at its lowest since 2014, meaning it could be an attractive entry point for investors.

However, ETF Stream’s recent Buyer’s Club sentiment survey found just 12% of

investors surveyed were bullish on China, with a 42% taking a bearish stance and 46% neutral.

Whichever way investors view the market, getting exposure via a synthetic ETF such as the Invesco S&P China A MidCap 500 Swap UCITS ETF (C500) and the Invesco S&P China 300 Swap UCITS ETF (C300) can potentially boost returns significantly.

Investment risks

For complete information on risks, refer to the legal documents.

Both **Invesco S&P China A MidCap 500 Swap UCITS ETF** and **Invesco S&P China 300 Swap UCITS ETF**:

Value fluctuation: The value of investments, and any income from them, will fluctuate. This may partly be the result of changes in exchange rates. Investors may not get back the full amount invested.

Emerging markets: As a large portion of this Fund is invested in less developed countries, investors should be prepared to accept a higher degree of risk than for an ETF that invests only in developed markets.

Use of derivatives for index tracking: The Fund’s ability to track the benchmark’s performance is reliant on the counterparties to continuously deliver the performance of the benchmark in line with the swap agreements and would also be affected by any spread between the pricing of the swaps and the pricing of the benchmark. The insolvency of any institutions providing services such

as safekeeping of assets or acting as counterparty to derivatives or other instruments, may expose the Fund to financial loss.

Concentration: The Fund might be concentrated in a specific region or sector or be exposed to a limited number of positions, which might result in greater fluctuations in the value of the Fund than for a fund that is more diversified.

Equity: The value of equities and equity-related securities can be affected by a number of factors including the activities and results of the issuer and general and regional economic and market conditions. This may result in fluctuations in the value of the Fund.

Synthetic ETF Risk: The Fund might purchase securities that are not contained in the reference index and will enter into swap agreements to exchange the performance of those securities for the performance of the reference index.

Currency: The Fund’s performance may be adversely affected by variations in the exchange rates between the base currency of the Fund and the currencies to which the Fund is exposed.

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