COMMERZBANK

Product Group

Reverse ETFs

In this information sheet, Commerzbank provides information on the underlying characteristics, opportunities and risks of the reverse ETFs product group.

General characteristics and investment opportunities
Exchange traded funds, or ETFs, traded on a securities exchange are a special type of investment fund. They aim to track the performance of a particular index as closely as possible. In this product group, the ETFs refer to indices that generally track a reverse change in the index level of the previous day (short). This is designed to result in a daily reverse proportional participation in the respective performance on a daily basis. Typically, the underlying index of the ETF is already designed accordingly, such that the short position is tracked in the index calculation on a daily basis.

The fund uses swaps to replicate the index performance. Swaps are over-the-counter derivatives. A swap-based replication adds the particular risk that the swap partner may no longer be able to meet its payment obligations under the swap transaction (counterparty risk). To minimise the default risk of the swap counterparty, it provides e.g., cash, securities or precious metals in sufficient amounts as collateral. The fund investor is exposed to the risk that, in the event of insolvency, this collateral may not be sufficient to fully satisfy the claims.

Typical product characteristics
In a reverse ETF, a capital management company typically first invests money from many investors in securities. Through swap transactions, the securities performance is exchanged for the reverse index performance in accordance with the fund's investment policy.

The following example illustrates the general functioning of a reverse ETF (also called short ETF or inverse ETF) compared to the underlying index performance. For this purpose, we considered a reverse index for an assumed holding period of three days and disregarded other index components such as interest rates, possible index - and product costs.
At the end of the third day, the underlying index remains unchanged compared to the starting level. By contrast, the reverse index declined compared to its starting level. This example illustrates the possible disadvantage of a daily recalculation of the reverse index ("base effect", "path dependency" or "chaining").

Day	**Underlying Index**	% change Underlying Index	Reverse % change	**Reverse Index**
0	**5,000**			**5,000**
1	**4,900**	-2.00%	+2.00%	**5,100**
2	**5,100**	+4.08%	-4.08%	**4,892**
3	**5,000**	-1.96%	+1.96%	**4,988**

The percentage change of the index compared to the closing price of the previous day provides the new basis for calculating the reverse index every day. Because of this type of daily recalculation, it is possible that the reverse index price declined after several days despite the "underlying index" having remained unchanged. These deviations become greater the longer the term and the greater the index volatility.

Investors need to be aware of the increased risk of this investment. The above-described path dependency may turn out to be unfavourable for the investor. Especially for medium to long-term exposures in reverse ETFs, path dependency may lead to significant disadvantages.

Material risks of the product group
By investing in reverse ETFs, investors benefit from return opportunities, but are also exposed to additional material risks. These include the following material risks:
Risk of loss - The price of a fund unit depends on the price performance and the income generated by financial instruments held by the fund, such as securities and derivatives, and may therefore be subject to considerable fluctuations.
Foreign currency risk - the ETF as well as the underlying index may be denominated in either euro or a foreign currency. If denominated in a foreign currency, investors are exposed to adverse changes in the exchange rate of the foreign currency.
Issuer risk, i.e. investors are exposed to a default risk on the part of the issuer of the securities held in the fund if there is no

collateral or insufficient collateral in the event of realisation. Sustainability-related decisions relating to the environment, social aspects and corporate governance also impact the credit quality of the issuer.
Liquidity risk - during the term of the securities held in the fund, the fund may not be able to sell a security or may only be able to sell it at a possibly much lower price.

Holders of investment fund units are subject to special risks, for example that unit redemption may be temporarily suspended due to insufficient fund liquidity, for example in the event that many investors wish to redeem their units at the same time, or that a fund may be liquidated in an orderly manner.

When funds experience liquidity shortages, fund management companies have certain options to address them. They may, for example, introduce redemption notice periods. This means investors would have to notify the fund company of their intention to redeem their fund units some time in advance.

The fund company may also impose redemption restrictions. For example, fund companies may choose not to meet redemption requests for a certain period of time, or only partially, if the number of redemption requests exceeds a certain threshold.

Furthermore, a fund company may allocate transaction costs arising from unit redemptions or unit issues based on the cost originators. These transaction costs may be included in the calculation of the net asset value of a fund, up to a predefined rate.

These options are intended to prevent fund companies from having to completely suspend unit redemptions, which would be even more detrimental to investors.

Further information and costs
For further details on these aspects and the product, please refer to the relevant sales prospectus and basic information sheet. In principle, inflation trends impact your investment performance. A resulting loss of purchasing power affects both the income generated and your capital invested. When acquiring, holding and eventually selling securities and derivatives, costs will impact returns. For further details, please refer to the respective cost information before entering into a securities transaction.

For further details on the characteristics and risks of the products, please refer to the brochure “Basic Information on Securities and Other Investments”.