Scalable Capital

Risks of Investing

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Scalable Capital

I. Introduction

An investment is generally the use of funds in investments, tangible assets or the like for the purpose of making a profit. In the present case, the investment in question is an investment in financial instruments. Risks are part of every investment. Every investor should therefore develop a basic understanding of the characteristics, functioning and risks of an investment. The aim of this document is to provide investors with such an understanding.

1. Objective of the investment

The aim of investment in financial instruments is to preserve or increase assets. The main difference between investing in securities and forms of savings such as savings accounts, call deposit or fixed-term deposit accounts is the deliberate assumption of risks in order to take advantage of opportunities for returns. In the case of savings products, on the other hand, the amount paid in (nominal) is guaranteed, but the return is limited to the agreed interest rate.

Traditional savings products usually increase in value over time, i.e. through recurring payments and interest income. The amount saved is not subject to fluctuations. However, this supposed security may only exist in the short or medium term. The assets can be gradually devalued by inflation. If the applicable interest rate is lower than inflation, the investor has to accept a loss of purchasing power and thus a financial loss. The longer the investment period, the greater the negative impact of inflation on the assets.

Investment in securities is intended to protect against this gradual loss of wealth by generating a return above the level of inflation. However, the investor must be prepared to bear the various risks of the investment.

2. Interplay of return, security and liquidity

In order to select an investment strategy and the corresponding investment instruments, it is important to be aware of the importance of the three basic pillars of investment, namely return, security and liquidity:

- **Return** is the measure of the economic success of an investment, measured in terms of profits or losses. This includes, among other things, positive price developments and distributions such as dividends or interest payments.
- **Security** is geared to the preservation of the invested assets. The security of an investment depends on the risks to which it is exposed.
- **Liquidity** describes the availability of the invested assets, i.e. in what period and at what cost the invested assets can be sold.

The objectives of return, security and liquidity are interrelated. An investment with high liquidity and high security does not usually offer high return. An investment with high return and relatively high security may be characterized by lower liquidity. An investment with high return and high liquidity usually has low security.

Investors must weigh these objectives against each other according to their individual preferences and financial and personal circumstances. Investors should be aware that an investment that promises to achieve all three objectives is usually "too good to be true".

3. Risk diversification

For investment purposes, it is particularly important not only to know and take into account the risks of individual securities or asset classes, but also to understand the interaction of the various individual risks in the portfolio context.

Taking into account the targeted return, the portfolio risk should be optimally reduced by a suitable combination of investment instruments. This principle, i.e. the reduction of the risk of an investment through an appropriate portfolio composition, is referred to

as spreading risk or diversification. The principle of diversification follows the principle of not "putting all your eggs in one basket". Investors spreading their investment over just a few assets, may be exposed to unnecessarily high risk. Appropriate diversification can reduce the risk of a portfolio not just to the average of the individual risks of the portfolio components, but usually below that level. The degree of risk reduction depends on how the prices of the portfolio components are correlated.

The correlation expresses the degree of dependence of the price development of the individual portfolio components to each other. In order to reduce the overall risk of the portfolio, investors should allocate their funds to investments that have as low or negative a correlation to each other as possible. This can be done by spreading investments across regions, sectors and asset classes, among other things. In this way, losses on individual investments can be partially offset by gains on other investments.

II. General risks of investing

There are general risks associated with investing that are significant regardless of the particular asset class, the particular way in which securities are traded or the particular investment service provided. Some of these risks are described below.

1. Economic risk

The overall economic development of a national economy typically takes place in cycles, the phases of which can be divided into the sub-sections upswing, peak phase, downswing and trough phase. These economic cycles and the interventions by governments and central banks that are often associated with them can last for several years or decades and have a significant impact on the performance of various asset classes. Unfavourable economic phases can thus affect an investment over the long term.

2. Inflation risk

The inflation risk describes the danger of suffering a financial loss due to the devaluation of money. If inflation - i.e. the positive change in the prices of goods and services - is higher than the nominal return on an investment, this results in a loss of purchasing power equal to the difference. In this case, one speaks of negative real interest rates.

The real rate of return can serve as a benchmark for a possible loss of purchasing power. If the nominal interest rate of an investment is 4% over a certain period of time and inflation is 2% over this period, this results in a real interest rate of +2% per year. In the case of inflation of 5%, the real return would only be -1%, which would correspond to a loss of purchasing power of 1% per year.

3. Country risk

A state can influence the movement of capital and the transferability of its currency. If, for this reason, a debtor domiciled in such a state is unable to meet an obligation (on time) despite its own solvency, this is referred to as a country or transfer risk. An investor may suffer a financial loss as a result.

Reasons for such an influence on capital movements and the transferability of the currency can be, for example, a lack of foreign exchange, political and social events such as changes of government, strikes or foreign policy conflicts.

4. Currency risk

In the case of investments in a currency other than the investor's home currency, the return achieved does not depend exclusively on the nominal return on the investment in the foreign currency. It is also influenced by the development of the exchange rate of the foreign currency to the home currency. A financial loss may arise if the foreign currency in which the investment was made depreciates against the domestic currency. Conversely, the investor may benefit if the home currency depreciates. A

currency risk exists not only in the case of cash investments in foreign currencies, but also in the case of investments in shares, bonds and other financial products which are quoted in a foreign currency or make distributions in a foreign currency.

5. Liquidity risk

Investments that can usually be bought and sold at short notice and whose buying and selling prices are close together are called liquid. For these investments, there are usually a sufficient number of buyers and sellers to ensure continuous and smooth trading. In the case of illiquid investments, on the other hand, or even during market phases in which there is insufficient liquidity, there is no guarantee that it will be possible to sell an investment at short notice and without a significant price discount. This can lead to asset losses if, for example, an investment can only be sold at a lower price.

6. Volatility

The value of an investment may fluctuate over time. This applies in particular to the prices of securities. The so-called volatility is a measure of these fluctuations within a certain period of time. The higher the volatility of an investment, the greater the fluctuations in value (both upwards and downwards). A longer-term investment in the capital market counteracts short-term fluctuations insofar as short-term fluctuations in value become less relevant over a longer period of time.

7. Cost risk

Costs are often neglected as a risk factor of investments. However, overt and hidden costs are of crucial importance for investment success. For long-term investment success, it is essential to pay close attention to the costs of an investment.

Credit institutions and other financial- or securities services providers generally pass on transaction costs for the purchase and sale of securities to their clients and may also charge a commission for the execution of orders. In addition, banks, fund providers or other financial service providers or intermediaries usually charge so-called follow-up costs, such as costs for custody account management, management fees, initial charges or pay commissions, which are not readily apparent to the client. These costs should be included in the overall economic analysis: The higher the costs, the lower the effectively achievable return for the investor.

8. Tax risks

Income generated from investments is generally subject to tax and/or duties for the investor. Changes in the tax framework for capital gains may lead to a change in the tax and duty burden. In the case of investments abroad, double taxation may also occur. Taxes and duties therefore reduce the effectively achievable return for the investor. In addition, tax policy decisions can have a positive or negative impact on the performance of the capital markets as a whole. If necessary, the investor should contact their tax authority or their tax advisor in order to clarify tax issues and reduce the associated risks.

9. Risk of credit-financed investments

Investors may be able to obtain additional funds for investment by taking out credits or lending their securities with the aim of increasing the investment amount. This approach results in leverage of the capital invested and may lead to a significant increase in risk. The interest incurred reduces the income from the capital investment and may even exceed it. If the capital investment results in price declines, the total loss is further increased by the interest incurred. In the event of a falling portfolio value, the borrower may no longer be able to fulfil supplementary contribution obligations (margin calls), or interest and repayment obligations of the credit, which may result in the investor being forced to (partially) sell the portfolio.

Investors should therefore be particularly careful with credit-financed capital investments and, in particular, comprehensively assess the risks of a credit-financed capital investment (e.g. a margin call) and their own financial circumstances before making an investment decision. As a rule, investors should only invest freely available capital that is not required for current living expenses or to cover current liabilities. Otherwise, Scalable Capital expressly advises against credit-financed investments.

10. Risk of incorrect information

Accurate information forms the basis for successful investment decisions. Wrong decisions can be made due to missing, incomplete or incorrect information as well as incorrect or delayed information transmission. For this reason, it may be appropriate under certain circumstances not to rely on a single source of information, but to obtain further information. An example here may be the basic information sheets, key investor information and other sales documents made available by the provider of the financial instrument.

11. Risk from trading interruptions and disruptions

Trading in financial instruments may be interrupted temporarily, for example due to technical malfunctions or by the execution venue, or may be temporarily unavailable for other reasons. In the case of volatile investments in particular, investors may not be able to sell the investment as a result. In the meantime, losses may occur.

12. Risk of self-custody

The proprietary custody of securities opens up the risk of loss of the certificates. The replacement of the securities documents embodying the investor's rights can be time-consuming and costly. Self-custodians also risk missing important deadlines and dates, so that certain rights can only be asserted with delay or not at all.

13. Risk of custody abroad

Securities acquired abroad are usually held in custody by a third party domiciled abroad selected by the custodian bank. This can lead to increased costs, longer delivery times and uncertainties with regard to foreign legal systems. In particular, in the event of insolvency proceedings or other enforcement measures against the foreign custodian, access to the securities may be restricted or even excluded.

III. Functioning and risks of different asset classes

1. Safekeeping of credit balances with Scalable Capital

Scalable Capital may, in accordance with the Special Terms and Conditions: Cash Management (Client Documentation Section B., Chapter I.) hold a client's credit balances in open omnibus trust accounts and/or in qualifying money market funds.

1.1. Safekeeping in open omnibus trust accounts

Trust accounts are accounts with other banks (trustee banks) in which Scalable Capital, as the account holder, holds the client's credit balances. Omnibus trust account means that the credit balances of several clients are held in one account so that the credit balances are not separated from each other. The omnibus trust account is an open omnibus trust account, as Scalable Capital discloses to the trustee banks for the purpose of deposit guarantee that the credit balances are due to the clients and the credited balances are therefore deposited on a trust basis. Scalable Capital may hold a client's credit balance in several omnibus trust accounts.

- **Deposit guarantee:** Deposits are protected up to a certain amount per bank and per client. In the event of compensation, all deposits held at the same bank are added up. If Scalable Capital holds credit balances at several trustee banks, the respective credit balance is protected within the framework of the statutory deposit guarantee up to an amount of EUR 100,000 per trustee bank. Depending

on the bank, there may also be additional deposit guarantees. Credit balances deposited by the client can therefore regularly be protected by several deposit guarantees.

- **Deposit guarantee limit for other credit balances:** In the event that the client has other credit balances at a trustee bank, the deposit guarantee limits applicable at the trustee bank may be exceeded under certain circumstances if Scalable Capital holds the credit balance in the omnibus trust account at this trustee bank. This means that the amount of the credit balance that exceeds the applicable deposit guarantee limit is not protected by the relevant statutory, institutional and/or voluntary deposit guarantee scheme. In principle, the credit balances can be held in full in an omnibus trust account at a single trustee bank. Scalable Capital has no knowledge of whether a client holds other credit balances with a trustee bank.
- **Separation of assets of Scalable Capital:** Scalable Capital holds credit balances in omnibus trust accounts separately from its own funds. This serves to protect the client's rights to their credit balance against the insolvency of Scalable Capital and against improper use.
- **No separation from other clients' credit balances:** The separation of credit balances of individual clients from one another addresses the risk that the client could be affected by offsetting the loss of one client against positions of other clients, by creditors of other clients claiming funds for themselves or by otherwise impacting the credit balances in a way that does not fulfil the investor objectives. The separation therefore also serves to protect the rights of the client. Scalable Capital does not separate the credit balances of individual clients when holding credit balances in omnibus trust accounts. Scalable Capital takes appropriate precautions to protect the client's rights to their credit balances, in particular through internal organisational arrangements, records and correct accounting as well as agreements with trustee banks.

1.2. Safekeeping in qualifying money market funds

Please refer to Clauses 8.6 and 8.7 for information on the functioning and risks associated with the safekeeping of credit balances in qualifying money market funds.

2. Call and fixed-term deposits

2.1. General

The acceptance of third-party funds as deposits or other unconditionally repayable funds from the public is referred to as deposit business. Legally, this is usually a loan. In addition to current and savings accounts, banks also regularly offer call deposit and fixed-term deposits on corresponding call deposit and fixed-term deposit accounts as part of their deposit business. Deposits in a call deposit account are subject to a fixed interest rate without a fixed term. The deposit is available daily. A fixed-term deposit account, on the other hand, has a fixed term during which the investor cannot access the deposit (or can only access it at the loss of the agreed interest).

2.2. Specific risks

- **Inflation risk:** Inflation risk is the change in the purchasing power of the final repayment and/or the interest income from an investment. If, during the term of a deposit, inflation changes in such a way that it exceeds the interest rate on the deposit, the investor's effective purchasing power falls (negative real interest).
- **Default risk:** There is a risk that the deposit-taking credit institution may default (e.g. in the event of insolvency), i.e. it may no longer be able to repay the savings deposits. This risk can be mitigated by so-called deposit guarantee schemes, in which the repayment of the savings deposit is guaranteed in part or in full by the deposit guarantee scheme. In Europe, all EU member states have agreed to create national deposit guarantee schemes in accordance with harmonised European requirements. The EEA countries that are not members of the EU (e.g. Norway)

have also set up deposit guarantee schemes. These deposit guarantee schemes cover up to a certain amount (in the EU generally up to EUR 100,000) if a bank is unable to repay its clients' deposits.

- **Interest rate risk:** Call deposits are subject to the risk of a change in the applicable interest rate by the deposit-taking credit institution.
- **Foreign currency risks:** If call deposits or fixed-term deposits are concluded in a currency other than the investor's home currency, the development of the exchange rate of the foreign currency to the home currency also influences the success of the investment. In addition, there are country risks in the form of influence on capital movements and the transferability of currencies.

3. Shares

3.1. General

Shares are securities issued by companies to raise equity capital and certify an ownership right in the company. A shareholder is therefore not a creditor as with a bond, but a co-owner of the company. The shareholder participates in the economic success and failure of the company through profit distributions, so-called dividends, and the performance of the share price.

The extent of the participation in the company evidenced by the share is determined, in the case of par value shares, by the fixed nominal amount stated. A no-par share is denominated in a specific number of shares. The participation quota of the individual shareholder and thus the scope of their rights is derived from the ratio of the number of shares held by them to the total number of shares issued.

There are different types of shares that carry different rights. The most important types are ordinary shares, preferred shares, bearer shares and registered shares. While ordinary shares do carry voting rights, preferred shares do not. To compensate for this, preferred shareholders receive preferential treatment, e.g. in the distribution of dividends. A bearer share does not require the shareholder to be entered in a share register. Shareholders can exercise their rights even without registration. Bearer shares are therefore more easily transferable, which typically improves their tradability. In the case of a registered share, the name of the holder is entered into the company’s share register. Without registration, the rights arising from ownership of the share cannot be exercised. Registered shares with restricted transferability are shares whose transfer to a new shareholder is also subject to the company's approval. Registered shares with restricted transferability are advantageous for the issuing company in that it retains an overview of the group of shareholders. However, registered shares with restricted transferability do not occur frequently.

Participation in a stock corporation confers various rights on shareholders. Share holder rights are defined by the local stock corporation acts and the articles of association of the company concerned. These are essentially property and management rights.

With regard to property rights, the most important are the claims on dividends, subscription rights and entitlement to additional or adjustment shares:

- A dividend is the annual distribution of profits by the issuer to its shareholders. It depends on the economic development of the company, in particular on the net profit. A decision on the amount of the dividend is made by the shareholders at the Annual General Meeting as part of the appropriation of profits.
- A subscription right is the right of a shareholder to participate in a capital increase in order to preserve existing voting rights and to compensate for a possible asset disadvantage. An appropriate period of time must be observed for the exercise of the subscription right (which is independently tradable for this time).

- Additional or bonus shares may be issued as part of a capital increase from company funds. In such a case, the company increases the share capital from its own reserves, without making external contributions. The value of the company does not increase as a result (in contrast to the number of shares).

With regard to administrative rights, the rights to participate in the Annual General Meeting, the right to information and the right to vote are particularly worthy of mention. These administrative rights are prescribed by law and enable shareholders to safeguard their interests. As a rule, the Annual General Meeting is held annually. At this meeting, the shareholders pass resolutions on items on the agenda. Items for resolution are those provided for by law or the articles of association (e.g. the appropriation of the balance sheet profit, amendments to the articles of association or the discharge of the management board and supervisory board). At the Annual General Meeting, shareholders have a right to information on legal and business matters. Only in exceptional cases does the management board have the right to refuse to provide information. The shareholder's right to vote is the most important administrative right. As a rule, each share is allocated one vote. Preferred shares are an exception. Holders of these have no voting rights, but are given preference in the distribution of the unappropriated profit. Voting rights can either be exercised personally by attending the Annual General Meeting or transferred to a third party by power of attorney.

REITs are a special type of real estate investment. These are regularly listed stock corporations whose business consists of the acquisition, construction, rental, leasing and sale of real estate. In addition to the risks inherent in an investment in shares, there are also special risks associated with real estate as an asset class. While REITs in Germany have the legal form of a stock corporation, foreign REITs can take other forms. In the case of REITs, the assets must consist mainly of real estate and, in addition, the majority of the distributable profit must be distributed to the shareholders. If certain conditions are met, REITs are tax-efficient, as income is not taxed at the level of the company but only at the level of the shareholders. If REITs are listed on the stock exchange, as is the case in Germany, the value is determined by the available supply and the demand.

3.2. Specific risks

- **Price risk:** Shares can be traded on the stock exchange as well as over the counter. The price of a share is determined by supply and demand. There is no formula for calculating the "correct" or "fair" price of a share. Models for calculating share prices are always subject to subjective assumptions. The price formation depends to a large extent on the different interpretations of the accessible information of the market participants. Numerous empirical studies show that stock prices cannot be predicted systematically. Share prices are influenced by many factors. The associated risk of a negative share price development can be roughly divided into company-specific risk and general market risk. The company-specific risk depends on the economic development of the company. If the company's economic development is worse than expected, this can lead to negative share price developments. In the worst case, namely in the event of insolvency and subsequent bankruptcy of the company, the investor may suffer a total loss of their invested capital. However, it is also possible for the price of a share to move as a result of changes in the market as a whole, without this price change being based on company-specific circumstances. Price changes that are more likely to occur due to general trends in the stock market and are independent of the economic situation of the individual company are referred to as general market risk.
- **Insolvency risk:** As shareholders are only serviced in the event of insolvency after all other creditor claims have been serviced, equities are considered to be a relatively high-risk asset class.

- **Dividend risk:** Shareholders' participation in the company's profits through monetary distributions are called dividends. Just like a company's future profits, future dividends cannot be predicted. If a company earns a lower-than-planned profit or no profit at all and has not set aside any reserves, the dividend may be reduced or suspended altogether. However, an equity investor is not entitled to a distribution even if a profit is made. If the company deems provisions necessary, e.g. due to expected future costs (lawsuits, restructuring, etc.), it may suspend the dividend despite a profit.
- **Interest rate risk:** As interest rates rise, share prices may decline because, for example, the company's borrowing costs may increase or future profits may be discounted at a higher interest rate and thus be valued lower at the present time.
- **Liquidity risk:** Usually, buying and selling prices are quoted on an ongoing basis for shares traded on the stock exchange, especially for companies with a high enterprise value that are part of a major share index, such as the MSCI World Index. If, for various reasons, no tradable prices are available on the market, the shareholder temporarily has no possibility to sell their position, which can have a negative impact on their investment. An example of illiquid shares are the so-called penny stocks. These are characterised by a very low stock market price (usually below the equivalent of one US dollar) and are often not traded on a market regulated and supervised by state-approved bodies. There is a risk that the security can only be resold under difficult conditions and at a considerable price disadvantage (due to a very wide spread between supply and demand prices). In addition, penny stocks are also subject to an increased risk of price manipulation by market participants.
- **Psychology of market participants:** In addition to objective factors (economic data, data on the company, etc.), psychological factors also play a role when a security is traded on an organised market, e.g. a stock exchange. Expectations of market participants, who may hold irrational opinions under certain circumstances, can contribute to rising or falling prices or decisively reinforce them. In this respect, share prices also reflect investors' assumptions, moods, hopes and fears. The stock market is also a market of expectations, whereby behavioural patterns do not always have to be comprehensible.
- **Risk of loss and modification of shareholder rights:** The shareholder rights already described (in particular the property and management rights) can be changed or replaced by measures under company law. Examples include mergers, demergers and changes of legal form. In addition, major shareholders (i.e. shareholders with a corresponding majority) can also force minority shareholders to leave the company by means of a so-called "squeeze-out". Although they receive a legally prescribed compensation, they lose all shareholder rights in return and are forced to give up their investment.
- **Risk of delisting:** The listing of a share on a stock exchange increases its tradability considerably. Stock corporations can have the listing of their shares revoked by the stock exchange (taking into account legal regulations as well as the stock exchange legal provisions). The shareholders' rights (in particular the asset and management rights) are not affected by this in principle, but the liquidity of the investment suffers significantly from such a so-called "delisting".

4. Bonds

4.1. General

Bonds refer to a wide range of interest-bearing securities (also known as fixed-income securities). In addition to "classic" bonds, these also include index-linked bonds, German mortgage bond (*Pfandbrief*) and structured bonds. The basic mode of operation is common to all bond types. In contrast to shares, bonds are issued by companies as well as by public institutions and governments (so-called issuers). They

do not grant the holder any share rights. By issuing bonds, an issuer raises debt capital. The purchaser of the bond becomes the creditor of a monetary claim against the issuer (debtor). Bonds are usually tradable securities with a nominal amount (amount of debt), an interest rate (coupon) and a fixed term.

As with a loan, the issuer undertakes to pay the investor a corresponding interest rate. Interest payments can be made either at regular intervals during the term or cumulatively at the end of the term. At the end of the term, the investor also receives the nominal amount. The amount of the interest rate to be paid depends on various factors. The most important parameters for the level of the interest rate are usually the creditworthiness of the issuer, the term of the bond, the underlying currency and the general market interest rate level.

Depending on the method of interest payment, bonds can be divided into different groups. If the interest rate is fixed from the issuance over the entire term, we speak of "fixed rate bonds", for example. Bonds for which the interest rate is linked to a variable reference interest rate and whose interest rate can change during the term of the bond are called "floating rate bonds". A possible company-specific premium or discount on the respective reference interest rate is usually based on the issuer's credit risk. A higher interest rate generally means a higher credit risk. Just like shares, bonds can be traded on stock exchanges or over the counter.

The returns that investors can achieve by investing in bonds result from the interest on the nominal amount of the bond and from any difference between the buying and selling price. Empirical studies show that the average return on bonds over a longer time horizon has historically been higher than that on fixed-term deposits, but lower than that on stocks (source: Siegel, J. (1992). The Equity Premium: Stock and Bond Returns Since 1802. Financial Analysts Journal, 48(1), 28-38+46).

4.2. Specific risks

- **Issuer/creditworthiness risk:** An obvious risk when investing in bonds is the issuer's default risk. If the issuer cannot meet their obligation to the investor, the investor faces a total loss. In contrast to equity investors, however, bond investors are in a better position in the event of insolvency, as they provide the issuer with debt capital and their claim can be serviced (in part, if necessary) from any insolvency assets that may arise. The creditworthiness of many issuers is assessed at regular intervals by rating agencies and divided into risk classes (so-called ratings). However, ratings are not to be understood as a recommendation for an investment decision. Rather, they can be included as information when the investor is considering an investment decision. An issuer with a low credit rating usually has to pay a higher interest rate to the buyers of the bonds as compensation for the credit risk than an issuer with an excellent credit rating. In the case of secured bonds ("covered bonds"), the credit rating depends primarily on the extent and quality of the collateralisation (cover pool) and not exclusively on the creditworthiness of the issuer. In addition, the risk of a loss also depends on the so-called rank of the bond. Subordinated bonds are subject to greater risk in this respect, as their creditors are only serviced on a subordinated basis in the event of insolvency.
- **Inflation risk:** Inflation risk is the change in the purchasing power of the final repayment and/or the interest income from an investment. If, during the life of a bond, inflation changes in such a way that it exceeds the interest rate on the bond, the investor's effective purchasing power falls (negative real interest).
- **Price risk:** The price of a bond is influenced by various factors. The price of a bond is also subject to the interplay of demand and supply. In particular, the level of key interest rates set by the central bank has a significant influence on the value of a bond. When interest rates rise, for example, the yield on a fixed-rate bond becomes relatively less attractive and the price of the bond falls. Thus, a rise in market interest rates is usually accompanied by falling bond prices. The magnitude

of the response to changes in the market interest rate is not always the same. Rather, a bond's "sensitivity to interest rate changes" depends on its remaining maturity and the size of its coupon. Thus, even if an issuer pays all interest and the principal amount at maturity, a bond investor may incur a loss if, for example, it sells before maturity at a price lower than the issue or purchase price of the bond. In addition, the aforementioned credit and inflation risks may also have an adverse effect on the price of the bond.

5. Commodities

5.1. General

Investments in commodity products are counted among the alternative asset classes. Unlike shares and bonds, commodities, if traded for the purpose of investment, are usually not physically delivered but traded via derivatives (mostly futures, forwards or swaps). Derivatives are contracts in which the parties to the contract agree to buy or sell a particular commodity (underlying asset) at a specified price in the future. Depending on whether the market price of the commodity is above or below the agreed price, the value of the derivative is positive or negative. In most cases, there is no actual delivery of the commodity, but a settlement payment for the difference between the market price and the agreed price. This approach facilitates trading as challenges such as storage, transportation and insurance of the commodities can be ignored. However, this synthetic way of investing in commodities comes with some peculiarities that need to be taken into account. Commodities only provide an investor with the prospect of income through price gains and do not offer any distributions.

If the investor wishes to invest in commodities, in addition to a direct investment in the commodity, which is generally not suitable for private investors, they can, for example, also buy shares in a commodity fund or a security that tracks the performance of commodities.

Open-ended commodity funds share the characteristics, functioning and risks of the open-ended investment funds described elsewhere. In addition to these risks, there are also risks specific to the investment of commodities. Open-ended commodity funds invest primarily in commodity equities (i.e. companies associated with the mining, processing and sale of commodities) or derivatives of the relevant commodity. Open-ended commodity funds usually have an active fund management that is responsible for the purchases and sales within the fund. Ongoing fees are charged for this, which can be comparatively high. Passive investment instruments, such as ETFs, are usually cheaper as they only track a commodity index (consisting of several different commodities).

If the investor wishes to invest in only one commodity, they must buy a corresponding security that tracks the performance of that commodity (exchange-traded commodities, ETCs). Like ETFs, ETCs are traded on the stock exchange. However, there is an important difference to note: The capital invested in an ETC is not a special asset that is protected in the event of the issuer's insolvency. An ETC is in fact a debt security of the ETC issuer. Compared to an ETF, investors in an ETC are therefore exposed to counterparty risk. To minimise this risk, issuers use different methods of collateralisation. The criteria relevant for the selection of an ETF are correspondingly applicable to ETCs (cf. Section 7.5).

5.2. Specific risks

- **Price risk:** In general, investments in commodities products are exposed to the same price risks as direct investments in commodities. Special events such as, for example, natural disasters, political conflicts, government regulation or weather fluctuations can affect the availability of commodities and thereby lead to a drastic change in the price of the underlying and, under certain circumstances, also of the derivative. This can also lead to a restriction of liquidity and result in falling prices. As a production factor for industry, the demand for certain commodities such as

metals and energy sources significantly depends on the general economic development.

- **Roll loss risk:** The derivative mapping of a commodity (for example via futures) within the framework of an ETF or ETC requires (depending on the methodology) the so-called rolling of futures contracts into the next time period. This is necessary because futures contracts only have a limited term and must therefore be switched to the next due contract before expiry (the contract is "rolled"). In this case, a peculiarity may arise in connection with the so-called contango. "Contango" means that futures contracts with shorter maturities trade at a discount to futures contracts with longer maturities. This can occur, for example, when there is an oversupply and a lack of demand for the commodity. Rolling the futures contract into the next time period now results in the shorter maturity futures contract having to be sold at a lower price and the longer maturity futures contract having to be bought at a higher price. Each roll can lead to a loss in this context, regardless of the general price development of the commodity on the so-called spot market.
- **Counterparty risk:** Trading in derivatives involves a risk with regard to the structure of the derivative contract. If the counterparty is unable or unwilling to meet its obligation under the derivative contract, the derivative contract may not be performed in whole or in part.

6. Foreign exchange

6.1. General

Investments in foreign currencies offer investors an opportunity to diversify their portfolios. Furthermore, investments in the aforementioned asset classes, among others, are often associated with the assumption of foreign currency risks. If, for example, a German investor invests directly or indirectly (e.g. via a fund or ETF) in American equities, their investment is subject not only to equity risks but also to the exchange rate risk between the Euro and the US dollar, which can have a positive or negative impact on the value of their investment.

6.2. Specific risks

- **Exchange rate risk:** Exchange rates of different currencies may change over time and there may be significant price fluctuations. For example, if a German investor invests in US dollars or in a share quoted in US dollars, a depreciation of the US dollar against the Euro (i.e. appreciation of the Euro) will have an adverse effect on their investment. Under certain circumstances, even a positive share price performance may be overcompensated by the weakening of the US dollar. Country-specific risks can also have an impact on the exchange rate of a currency. For example, the currencies of oil-exporting countries can depreciate sharply in the event of strong oil price distortions.
- **Interest rate risk:** If interest rates change in the home market or in the market of the foreign currency, this can have a significant impact on the exchange rate, as changes in interest rate levels can sometimes trigger large cross-country capital movements.
- **Regulatory risks:** Central banks play a critical role in the pricing of exchange rates. In addition to money supply and interest rates, some central banks also control exchange rates. They intervene in the markets as soon as certain thresholds are reached by selling or buying their own currency, or they peg the exchange rate in whole or in part to a foreign currency. If these strategies are changed or cancelled, this can lead to considerable distortions on the corresponding currency markets. This was seen, for example, when the Swiss National Bank abandoned the setting of the minimum exchange rate of the Swiss franc (CHF) against the Euro (EUR) of EUR/CHF 1.20 in January 2015 and the exchange rate fell from EUR/CHF 1.20 to EUR/CHF 0.97 on the same day.

7. Real Estate

7.1. General

This asset class includes residential real estate (e.g. apartments and houses), commercial real estate (e.g. office buildings or retail space) and companies that invest in or manage real estate. The investment can be made either directly through the purchase of the properties or indirectly through the purchase of shares in real estate funds, real estate investment trusts (REITs) and other real estate companies.

Open-ended real estate funds share the characteristics, functioning and risks of the open-ended investment funds described elsewhere. The main characteristic is that the fund's assets are predominantly invested in real estate (e.g. commercially used land, buildings, own construction projects). Special legal provisions apply to the redemption of unit certificates. Investors must hold open-ended real estate funds for at least 24 months and give 12 months' notice of redemption. Furthermore, the investment conditions of open-ended real estate funds may stipulate that the fund units can only be returned to the capital management company on certain dates (at least once a year). The Terms of Investment may also stipulate that the redemption of units may be suspended for a period of up to three years. In addition to the risks inherent in an investment in real estate, there are therefore special risks associated with restricted redemption or liquidity.

7.2. Specific risks

- **Earnings risk:** The acquisition of real estate requires a high investment at the outset, which is only amortised over time through cash flows from letting and leasing. However, the earnings potential can be relatively easily disrupted by restrictions on usability in terms of time and the physical object, so that the amortisation of the initial investment takes a longer period of time.
- **Valuation risk:** A large number of criteria play a role in the valuation of a property (location, size, environment, area used, interest rate level, etc.). In addition, the real estate market consists of geographically separate submarkets. For these reasons, property valuation is subject to numerous uncertainties that are difficult to forecast in detail.
- **Liquidity risk:** Real estate is a relatively illiquid asset class because the process of valuation, sale and transfer of ownership can take a long time due to the highly individual nature of real estate and the existence of submarkets. It is therefore usually not possible to realise the value of a property quickly. The indirect acquisition of real estate through shares in real estate companies reduces this risk.
- **Transaction costs:** The process of valuation, sale and transfer of direct real estate investments incurs relatively high costs compared to other financial investments.

7.3.

Price risk: When investing indirectly in real estate through the purchase of shares in real estate funds or REITs, the investor is exposed to a price risk. The price may change in the course of general market fluctuations without the situation of the fund having changed.

8. Open-ended investment funds

8.1. General

Investment funds are vehicles for collective investment. In the EU they are subject to the Undertakings for Collective Investment in Transferable Securities (UCITS) Directive and the applicable national laws. Foreign investment funds may be organised in the same or similar way to UCITS funds. However, there may also be significant legal or other differences. If foreign investment funds are distributed in the EU, certain legal requirements must be met, compliance with which is checked by the national regulators.

Open-ended investment funds (unlike closed-ended investment funds) are open to an unlimited number of investors. In an open-ended investment fund, a capital management company usually pools the money of many investors in a special fund. However, special forms of investment funds are also possible (such as investment stock corporations or investment limited partnerships). The capital management company invests these funds in various assets (securities, money market instruments, bank deposits, derivative instruments, real estate) in accordance with a defined investment strategy and the principle of risk diversification and manages them professionally. As separate assets, the fund assets must be kept strictly separate from the asset manager's balance sheet for reasons of investor protection. For this reason, the assets belonging to the investment fund are held in custody by the so-called custodian.

Investors may acquire a co-entitlement to the fund assets at any time by purchasing investment unit certificates via a credit institution or the capital management company. The value of an individual investment unit certificate is calculated by dividing the value of the fund assets by the number of investment unit certificates issued. The value of the fund's assets is usually determined using a predefined valuation procedure. For exchange-traded investment funds, continuous exchange trading is also available for pricing and acquisition.

The investment units can be liquidated in two ways. Firstly, it is generally possible to return the investment unit certificates to the Investment Management Company at the official redemption price. Secondly, the investment unit certificates may be traded on a stock exchange. Third-party costs (e.g. issue premium, redemption discount, commission) may be incurred in the case of both the purchase and the liquidation of investment unit certificates.

The key investor information, the sales prospectus and the investment conditions provide information on the investment strategy, the ongoing costs (management fee, operating costs, costs of the custodian, etc.) and other key information relating to the open-ended investment fund. In addition, the semi-annual and annual reports to be published are an important source of information.

The different types of open-ended investment funds can be differentiated in particular according to the following criteria:

- **Type of management:** A distinction is made between active and passive management. The aim of active management is to ensure positive performance by continually adjusting the portfolio. In contrast, the performance of passive management is closely linked to the performance of a tracked index.
- **Composition:** Fund assets may be composed of various asset classes (e.g. equities, interest-bearing securities, commodities).
- **Geographical focus:** Open-ended investment funds can either focus on specific countries or regions or invest globally.
- **Investment horizon:** Open-ended investment funds may have a fixed or an unlimited duration.
- **Use of income:** Open-ended investment funds can distribute income regularly or use it to increase the fund's assets (reinvest).
- **Currency:** The prices of the investment unit certificates of open-ended investment funds may be offered in Euro or a foreign currency.
- **Hedging:** The capital management company or a third party can guarantee a certain performance, certain distributions or a certain preservation of value.

8.2. Specific risks

- **Fund management:** The specific investment decisions are made by the management of the capital management company. Investors cannot influence the composition of the fund assets.
- **Costs:** The professional management of the fund incurs additional costs that would not be incurred if the securities tied up in the fund assets were purchased by the investor themselves. In addition, there are often one-off issue surcharges which, together with the ongoing management costs, make up the total costs of this form of investment and, depending on the holding period, can have an unfavourable impact on the return on the investment. Investors should therefore always take the total costs into account when purchasing an investment fund (in particular management costs, transaction costs, issue surcharges and redemption fees).
- **General market risk:** A broad diversification of the fund's assets according to various aspects cannot prevent a downward overall trend on one or more stock exchanges from being reflected in significant declines in unit prices.
- **Misinterpretation of performance statistics:** To the extent that so-called performance statistics are used to assess the Fund's investment performance to date, there is a special risk of misinterpretation. In particular, it should be noted that past performance cannot guarantee future performance.
- **Risk concentration:** Risk concentration increases as a fund becomes more specialised, for example in a particular region, sector or currency. However, this increased risk can also bring increased opportunities for returns.
- **Risk of suspension and liquidation:** Under certain circumstances, the capital management company may temporarily restrict, suspend or permanently discontinue the issue of fund units.
- **Risk of transfer or termination of the investment fund:** Under certain conditions, both the transfer of the investment fund to another investment fund and the termination of management by the capital management company are possible. In the event of a transfer, continued management may take place on less favourable terms. In the case of termination, there is a risk of (future) lost profits.
- **Risk arising from the use of derivatives:** Investment funds may invest in derivatives (in particular options, financial futures and swaps). These may not only be used to hedge the investment fund, but may also form part of the investment strategy. The leverage effect of derivative transactions also results in greater participation in the price movements of the underlying asset. This may result in an indeterminable risk of loss when the transaction is entered into.
- **Use of securities lending transactions:** An investment fund may enter into securities lending transactions in order to optimise returns. If a borrower cannot meet its obligation to return the securities and the collateral provided has lost value, the investment fund is at risk of losses.

8.3. Exchange Traded Funds in particular

Exchange Traded Funds ("ETFs") are exchange-traded open-ended investment funds that track the performance of an index - such as the global stock index MSCI World. They are also referred to as passive index funds. In contrast to active investment strategies, which aim to outperform a benchmark by selecting individual securities ("stock picking") and determining favourable times for entry and exit ("market timing"), a passive investment strategy does not aim to outperform a benchmark, but to replicate it at the lowest possible cost.

Like other open-ended investment funds, ETFs give investors access to a broad portfolio of stocks, bonds or other asset classes such as commodities or real estate. Unlike other open-ended mutual funds, ETFs are usually not bought or sold directly from a capital management company; instead, trading takes place on an exchange or

other trading venue. Thus, an ETF can be traded on securities exchanges just like a stock. To improve liquidity, market makers are usually appointed for ETFs to ensure sufficient liquidity by regularly providing bid and ask prices. However, there is no obligation to provide liquidity.

ETFs can replicate their underlying indices in two different ways. In the case of physical replication, the index is replicated by purchasing all index constituents (e.g. all the shares of the MSCI World Index) or, if applicable, a relevant subset. In the case of synthetic replication, the ETF provider concludes an agreement in the form of a swap with a bank (or several banks) in which the exact performance of the desired index is guaranteed and collateralised. Thus, a synthetic ETF generally does not hold the underlying securities.

8.4. Specific risks with ETFs

ETFs are a special type of open-ended investment fund. They are therefore subject to the same risks as other types of open-ended investment funds (see above). In addition, there are ETF-specific risks:

- **Price risk:** Since ETFs passively track an underlying index and are not actively managed, they generally bear the basis risks of the underlying indices. ETFs therefore fluctuate directly in proportion to their underlying. The risk-return profile of ETFs and their underlying indices are therefore very similar. If the DAX falls by 10%, for example, the price of an ETF tracking the DAX will also fall by around 10%.
- **Exchange rate risk:** ETFs contain exchange rate risks if their underlying index is not quoted in the ETF's currency. If the index currency weakens against the ETF's currency, the ETF's performance will be negatively affected.
- **Liquidity risk:** Particularly in illiquid market phases, there is a risk that the ETF price may deviate from the intrinsic value of the fund. This can arise, for example, due to a lack of liquidity in the asset class represented by the ETF (so-called underlying) and associated inefficiencies in the so-called creation/redemption process (i.e. the issue and redemption of ETF units).
- **Replication risk:** ETFs are also subject to replication risk, i.e. there may be differences between the value of the index and the ETF ("tracking error"). This tracking error may go beyond the difference in performance caused by the ETF fees. Such a deviation may be caused, for example, by cash holdings, rebalancing, corporate actions, dividend payments or the tax treatment of dividends.
- **Counterparty risk:** In addition, synthetically replicating ETFs are subject to counterparty risk. Should a swap counterparty fail to meet its payment obligations, the investor may incur losses.
- **Off-exchange trading:** If ETFs and their underlying components are traded on different exchanges with different trading hours, there is a risk that trades in these ETFs will be executed outside the trading hours of the respective components. This may result in a discrepancy in performance relative to the underlying index.

8.5. Criteria for selection

When selecting ETFs, the following criteria in particular should be taken into account:

- **Low costs:** Avoiding costs is one of the most important criteria for long-term investment success. When selecting ETFs, particular attention should be paid to the total costs of index tracking ("total expense ratio", TER) as well as the even broader total costs of an investment ("total cost of ownership", TCO), which additionally take into account external trading costs such as bid-ask spreads, taxes and brokerage commissions.
- **High liquidity:** ETFs with low trading liquidity usually have wider bid-ask spreads, which increases trading costs. Preference should be given in the selection process

to ETFs with large investment volumes and multiple market makers to ensure the best possible tradability and to keep trading costs low.

- **Low tracking error:** The tracking error indicates the accuracy of the index tracking. It is advisable to look for a small deviation of the ETF's performance from the underlying index in order to achieve the most accurate reflection of the intended investment market.
- **Appropriate diversification:** ETFs usually track broad indices with a large number of individual stocks. Depending on the ETF, these may be spread across countries, currencies and sectors. This broad diversification of risk provides access to the fundamental return drivers of the asset class in question without accepting high individual risks. However, very broad-based indices may also contain a number of small companies with low liquidity and therefore higher trading costs. When selecting, attention should be paid to a balanced and favourable ratio of risk diversification and implicit trading costs of the ETFs.
- **Robust replication method:** ETFs are offered in two basic designs: with physical and synthetic replication of the underlying index. Synthetic replicating ETFs have a higher risk profile compared to physical replicating ones, as synthetic ETFs are dependent on their swap counterparties and thus face some risk of default. As a result, physical replicating ETFs are often preferred due to their somewhat more robust and reliable investment form. However, for investing in certain markets, such as commodity markets or individual emerging markets, physical replication may not be possible or economical. In these cases, synthetic ETFs offer a viable alternative way to access these markets.

In addition, so-called "ESG criteria" can also be taken into account when selecting ETFs. These are factors that characterise particular environmental, social and governance (ESG) risks. ESG criteria are used to assess the extent to which companies align their organisation and business activities with these factors. Certain indices and corresponding ETFs only track companies that operate in accordance with ESG criteria. Thus, the consideration of these criteria when selecting ETFs can also be suitable in order to mitigate certain risks and, where applicable, to lend weight to idealistic objectives in the investment of capital. However, the criteria explained above should always be taken into account when selecting an ESG-compliant ETF.

8.6. Money market funds and qualifying money market funds in particular

Money market funds are investment funds that invest in short-term, high-quality debt instruments and cash equivalents. These funds generally invest in financial instruments issued or guaranteed by public authorities, deposits with credit institutions, financial derivatives and certain eligible securitisations and asset-backed commercial papers (ABCP). The primary objective of money market funds is to provide investors with a secure place to invest easily accessible, short-term funds while aiming to offer returns in the form of income.

Qualifying money market funds are a specific type of money market fund that meet strict regulatory requirements to ensure a high level of liquidity and stability. These funds typically adhere to strict credit quality, diversification and maturity criteria. In addition, settlement must occur no later than the next banking day following the redemption order from the investor.

In the European Union, money market funds are subject to the provisions of the Money Market Fund Regulation (Regulation (EU) 2017/1131), which sets strict standards for these funds to protect investors and maintain market confidence. In Germany, qualifying money market funds are additionally regulated by the German Investment Services Rules of Conduct Regulation (WpDVerOV), the German Securities Trading Act (WpHG) and the German Investment Code (KAGB), which stipulate specific requirements and auditing standards for these funds.

Retail investors can use money market funds to achieve several financial goals:

- **Liquidity management:** Money market funds are generally highly liquid, making them suitable for short-term investments of funds that may be required at short notice.
- **Capital preservation:** Money market funds aim to preserve capital and provide a stable net asset value (NAV), although this is not guaranteed.
- **Diversification:** Investments in money market funds can offer the possibility of diversification within a larger portfolio, especially for investors seeking low-risk options.

8.7. Specific risks with money market funds

Money market funds are a special type of investment fund. They are therefore subject to the same risks as other types of investment funds (see above). Additionally, the following specific risks must also be taken into account:

- **Credit risk:** An investment in money market funds differs from a bank deposit. There is no protection through the statutory deposit guarantee scheme. The credit balances and financial instruments held by the fund are protected in accordance with the protection standards stipulated for investment funds (UCITS). However, there is a risk that issuers or debtors of the financial instruments and/or receivables held by the fund may not fulfil their obligations in part or in full. Investors in money market funds may incur corresponding losses up to a total loss.
- **Interest rate risk:** Changes in (reference) interest rates may affect the value of the securities held by the fund, possibly leading to a loss of capital.
- **Liquidity risk:** Despite regulatory safeguards, there may be times when it is difficult for the fund to meet redemption demands from investors immediately.
- **Regulatory risk:** Changes in applicable laws or regulations could impact the functioning, security, liquidity, etc. of money market funds.

9. Cryptocurrencies

9.1. General

Cryptocurrencies, also known as virtual currencies, are defined as a digital representation of value that is not created or guaranteed by a central bank or government agency and does not need to be linked to legal tender. Similar to central bank currencies, cryptocurrencies are used as a medium of exchange and can be transferred, held or traded electronically. Examples of well-known cryptocurrencies are Bitcoin (BTC), Ether (ETH), Ripple (XRP) and Litecoin (LTC).

As exchangeable (fungible) units of value, so-called tokens, cryptocurrencies or other assets are digitally generated in a publicly visible database ("distributed ledger") distributed over a large number of network participants. The creation of new tokens is usually done through a computationally intensive, cryptographically sophisticated process ("proof of work") known as "mining". New information, such as transaction data, is communicated by so-called "nodes" within the peer-to-peer network, validated, and added to the database in blocks by "miners" in a nearly irreversible manner. Because this process resembles a chain, this decentralized database is also known as a "blockchain". The blockchain records the entire history of the database. A copy of the transaction history is stored with all network participants. Consensus between network participants about the state of the blockchain is established through adherence to rules defined in the decentralized network's protocol.

9.2. 8.2. Exposure via Exchange-Traded Products (ETP)

In addition to direct investment in cryptocurrencies via the corresponding crypto platforms or exchanges, it is also possible to invest via exchange-traded products (ETPs), which track the value of an underlying, e.g. cryptocurrencies. The buyer of an

ETP is (usually) entitled to payment of a certain amount of money or to delivery of the underlying against the issuer of the ETP. The terms and conditions of such a claim are usually explained in the issuer's product documentation. If the issuer becomes insolvent and/or any possible collateralisation of the product is not of value or the delivery of the underlying is partially or completely impossible, the investor may thus suffer a substantial or even total loss.

9.3. Specific risks

- **Price risk:** Cryptocurrencies are regularly subject to particularly high price fluctuations. Investors can therefore suffer significant losses within a very short period of time. The prices of cryptocurrencies are determined solely by supply and demand and are historically significantly more volatile than traditional currencies and many other asset classes. Cryptocurrencies have no objectively quantifiable intrinsic value. Valuation models, e.g. of network effects and utility values of different cryptocurrencies, are subject to subjective assumptions. The price formation depends to a large extent on the different interpretations of the accessible information of the market participants. The value of cryptocurrencies can fluctuate significantly within a short period of time. A potential, permanent and complete loss of value of a cryptocurrency occurs when the acceptance and thus the market for a respective cryptocurrency dwindles. Cryptocurrencies are not a legally recognized means of payment. The use and acceptance of cryptocurrencies, e.g. for the purchase of goods and services or for the storage of value, is therefore not guaranteed.
- **Liquidity risk:** Prompt tradability may not always be guaranteed. Investors may not be able to sell their positions immediately or only by realising a significant price loss. Furthermore, trading in individual cryptocurrencies may be suspended temporarily or completely without notice. When mapping via ETP, there is an additional risk due to shorter trading hours of the ETP compared to the trading hours of the respective cryptocurrencies. As a result, the investor may not be able to react immediately to market movements in the underlying.
- **Custody risk:** Cryptocurrencies are held on publicly visible blockchain addresses within a self-managed or, in the case of mapping via ETP, externally managed "wallet" by securing the associated private cryptographic keys ("private keys"). Loss or mishandling of these keys may result in the complete loss of access to the Tokens. Lost, unsecured keys cannot be recovered. Furthermore, unauthorized persons can gain access, e.g. through improper protection against spyware, and irrevocably transfer the tokens.
- **Issuer risk:** When mapping via ETP, the investor acquires shares in financial instruments that track the value of certain cryptocurrencies. These products are bearer bonds of the issuer. If the issuer becomes insolvent and/or any possible collateralisation of the product is not of value or the delivery of the underlying is partially or completely impossible, the investor may thus suffer a substantial or even total loss.
- **Legal and political risks:** The ownership and trading of cryptocurrencies may be restricted or banned outright by state authorities and governments. This may lead to a significant decrease in the general market acceptance of individual or all cryptocurrencies, even if regulation only affects individual countries outside Germany or Europe.
- **Cryptography and technology risk:** Cryptocurrencies are mostly based on open source software and on cryptographic algorithms. Even if the software is constantly being further developed by a diverse community, there is a risk of serious, systematic programming errors. Also, the technology of another, new cryptocurrency may be superior to the previous one. This may lead to a rapid decline in the usability, acceptance and thus the value of the cryptocurrency in question.

- **Transaction risk:** Transactions on the blockchain are irreversible. An incorrect specification of the public wallet address ("public key") during the transfer leads to the permanent loss of the transferred tokens.
- **Risk from trading interruptions and disruptions:** The trading of cryptocurrencies may be interrupted, for example due to technical malfunctions or by the execution venue, or may be temporarily unavailable for other reasons. As a result, the investor may not be able to sell cryptocurrencies. In the meantime, losses, up to and including a total loss, may occur.
- **Network risk (51% attack):** If more than half of the computing power of a proof-of-work blockchain is controlled by one or a group of miners, the integrity and immutability of the blockchain is no longer guaranteed. As a direct result, new blocks with valid transactions may be withheld or double spending may occur. An immediate drop in the price of the cryptocurrency is to be expected if the decentralization of the network is no longer given.
- **Hard fork risk:** Further developments of the software of cryptocurrencies due to a protocol change of the blockchain are usually carried out seamlessly on a continuous basis by a "soft fork". An update of the individually used wallet or node software is not necessary for network participants to continue using the cryptocurrency. In a "hard fork", on the other hand, a protocol change is no longer compatible with the previous protocol. If all network participants fail to reach consensus on the new protocol, a second, alternative blockchain forks. The market decides which of the two parallel and competing blockchains is the "legitimate" cryptocurrency. The best-known "hard fork" was the Bitcoin Cash (BCH) cryptocurrency blockchain and community splitting off from Bitcoin (BTC) in 2017.
- **Market manipulation risk:** Cryptocurrencies are partly traded on unregulated markets and without state supervision. Market and price manipulation by individual market participants cannot be ruled out.

10. Certificates, leveraged products, warrants and other complex financial instruments ("derivatives")

10.1. General

Certificates, leveraged products, warrants and other complex financial instruments ("derivatives") legally are debt securities. They can securitise the investor's claim against the issuer for the repayment of a cash amount or for the delivery of financial instruments or other assets and, if applicable, also for payments during the term. The performance of a derivative depends on the performance of one or more underlyings. Underlyings can be, for example, individual shares, baskets of shares, currencies, commodities or indices.

Derivatives may have fixed **terms**, e.g. over several years, or may be issued without a fixed term, also known as "open ended". Depending on the structure, both the issuer may have a termination right that leads to early redemption and the investor may have a so-called exercise or redemption rights during the term or at defined times. Details of this are explained in more detail in the product terms and conditions of the respective derivative.

The **performance of a derivative** depends on the performance of the respective underlying and the structure of the respective product. Depending on the structure, factors such as dividend payments, interest rates, exchange rates or volatility may affect the value of the derivative.

To **calculate the unit price** of a derivative, the issuer uses the theoretical fair value based on financial mathematical models. Any difference between the calculated theoretical value and the actual unit price may result, for example, from the Issuer's margin, any distribution fees and the costs of structuring, pricing, settling and hedging

the product. Accordingly, the buying and selling prices (bid and ask prices) set by the Issuer during the term are not directly based on supply and demand for the respective product, but rather on the Issuer's pricing models.

When issuers set prices, **costs** do not have to be spread evenly over the term, but can be deducted at the beginning of the term. The types of costs include, for example, management fees charged or margins included in the products.

10.2. Specific risks

- **Issuer/creditworthiness risk:** Analogous to the investment in bonds, the investment in derivatives involves the default risk of the issuer. If the issuer cannot fulfil its obligation to the investor, the investor faces a total loss. In contrast to equity investors, however, bond investors are in a better position in the event of insolvency, as they provide the issuer with debt capital and their claim can be serviced (in part, if necessary) from any insolvency assets that may arise. The creditworthiness of many issuers is assessed at regular intervals by rating agencies and divided into risk classes (so-called ratings). Ratings are not to be understood as a recommendation for an investment decision. Rather, they can be included as information when the investor is considering an investment decision.
- **Price risk:** All factors that affect the price of the underlying asset also affect the price of the derivative. In principle, the more volatile the price of the underlying, the more the derivative is subject to price fluctuations. Other aspects, too, can have an influence on the price development of a derivative. Depending on the structure of the product, these may include interest rate levels, dividend payments or exchange rates to foreign currencies.
- **Risks due to leverage and knockout:** In the case of leveraged products, the price risk can be significantly increased by the leverage effect. In the case of knockout products, there is also the risk of a total loss in the event of interim price fluctuations that lead to the knock-out threshold being reached.
- **Currency risk:** Derivatives on underlyings that are not quoted in the investor’s home currency are subject to exchange rate risk. If the foreign currency loses value against the home currency, the investor may incur losses even if the price of the underlying asset develops positively. The currency risk can be eliminated, for example, by using derivatives with a so-called quanto structure (currency-hedged).
- **Liquidity risk:** The investment in a derivative is generally for a certain duration. There is no guarantee that the derivative can be traded regularly during its term. If the investor is dependent on the capital invested, they may not be able to sell the derivative or may only be able to sell it at a high discount. The difference between the buying and selling price (spread) may be high, particularly in the case of strongly fluctuating markets. Possible illiquidity can lead to prices that are not in line with the market. In the event of an early sale, the investor may also forego payments that are not due until a later date or at the end of the term.
- **Risk of delivery of the underlying:** In the case of products that have been issued on a single underlying, for example a share, delivery of the underlying may be provided for. Depending on the design, the investor may, in certain scenarios, receive the underlying instead of a payout. The current market value of the underlying may be considerably lower than the purchase price paid for the derivative.
- **Termination and reinvestment risk:** The issuer may terminate the term of the derivative with immediate effect upon the occurrence of certain events listed in the relevant product terms and conditions or in the event of manifestly incorrect product terms and conditions, or adjust the terms and conditions. In the event of termination, investors receive a payout equal to the market price determined by the issuer or the amount specified in the product terms. The payout may be

considerably lower than the purchase price paid for the derivative. In addition, the investor bears the risk that the timing of the termination is unfavourable for them and that they can only reinvest the payout amount on less favourable terms.

- **Costs:** Depending on their structure, derivatives may be subject to costs that have a negative impact on performance. Details of the costs are explained in more detail in the product terms and conditions of the respective derivative.
- **Risk from trading interruptions and disruptions:** Trading in derivatives may be interrupted from time to time, for example due to technical malfunctions, by the issuer or by the execution venue, or may be temporarily unavailable for other reasons. As a result, the investor may not be able to sell the derivative. In the meantime, losses may be incurred, up to and including a total loss (e.g. in the case of knockout products).
- **Risk due to complex structure:** Due to the extensive structuring possibilities of derivatives, the specific structures and the associated risks can be difficult for investors to understand. Before making a purchase, investors should therefore familiarise themselves with the key investor information and other product information provided by the manufacturer for the respective derivative.

10.3. Important types of derivatives

In principle, derivatives can be divided into the categories of leveraged products and investment products.

Leveraged products can participate more strongly in the performance of the underlying via so-called leverage - this also means that the associated risks (in particular price risk and risks due to leverage and knock-out) increase. Some types of leveraged products have a so-called knock-out threshold, which means that the product in question expires worthless if the threshold is touched. This means that the investor can no longer participate in the subsequent performance of the underlying.

- Warrants represent the right to purchase (call option, also known as a "call") or sell (put option, also known as a "put") the underlying at a predetermined strike price within a subscription period (American option) or at the end of a subscription period (European option) in accordance with a specified subscription ratio.

  Instead of the actual purchase or sale, resulting in the delivery of the underlying, the product terms and conditions of warrants generally provide for the payment of a settlement amount. In the event of a payment, no purchase (and conversely no sale) of the underlying takes place upon exercise of the option; rather, the difference between the agreed strike price and the current market value of the underlying is calculated and paid out to the investor.

  The unit price of a warrant is influenced by the performance of the underlying, the (remaining) term and volatility, among other factors. Thus, although the price is directly related to the underlying, it is usually well below it. This means that the buyer of the warrant can participate in price changes of the underlying to a greater extent in percentage terms than in the case of a direct investment in the underlying. This effect is also known as "leverage". Accordingly, price risks are greater and can lead to a total loss of the investment.

- With knock-out products, the investor also participates disproportionately in price movements of the underlying. This means that price losses of the underlying security have a correspondingly greater impact on the investor's investment than would be the case with a direct investment in the underlying security. The product therefore carries a greater risk, up to and including total loss. Similar to warrants, knock-out products also offer the opportunity to profit from rising prices of the underlying (long or bull products) or falling prices (short or bear products).

A relevant difference to warrants is the so-called knock-out threshold. If this threshold is touched, the instrument becomes worthless and the investor suffers a total loss.

- Factor certificates offer another opportunity to participate disproportionately in the performance of the underlying. The performance of a factor certificate is determined by the intraday change in the value of the underlying multiplied by the respective factor. The fact that the performance of the certificate is always calculated against the respective closing price of the underlying on the previous day results in a path dependency. This entails considerable risks and losses may also be incurred on the factor certificate during sideways phases of the underlying.

Investment products can be divided into products that participate directly in the performance of the underlying and those with a predefined redemption profile.

- Discount certificates, for example, belong to the latter category. These can be purchased at a price below the current price of the underlying asset. This price reduction - also known as a "discount" - acts as a risk buffer and may still allow positive returns even if the price of the underlying asset moves sideways. In return, the investor forgoes participation in a strong price increase, as the potential return is limited by an upper threshold, the so-called "cap".
- Express certificates also follow a predefined payout profile. The performance of the underlying is monitored at certain points in time. If the underlying is quoted above the starting price, the investor receives a payout equal to the nominal value of the certificate plus a defined express amount. If the underlying is below the starting price, this analysis is repeated at the next observation date. In the event of price losses, a safety buffer may be provided to protect the investor against price setbacks up to a predetermined level. However, if the prices of the underlying fall beyond this, the investor is exposed to the same risk as with a direct investment in the underlying.
- As a classic participation certificate, index certificates are based on a stock, security, commodity or other type of index. They track the performance of the underlying index on a one-to-one basis. They are therefore particularly suitable for investors who wish to implement the investment strategy of a specific index. An alternative to index certificates are index funds, which also track an index. Index certificates usually incur lower costs than index funds, but are associated with additional risks.

  If the certificate is based on a stock index, it is important to determine whether the certificate relates to a performance index or a price index. In the case of a performance index, dividend payments are included, whereas in the case of a price index they are not. In the case of indices that are not quoted in the investor’s home currency, there is also a currency risk. However, this can be excluded with so-called quanto index certificates.
- Basket certificates represent a basket of shares or other investment products and are a variation of index certificates. The certificates differ in terms of the distribution of dividends, the mechanism for maintaining the basket composition and the management fee charged for this.
- Guarantee certificates, also known as capital protection certificates, track the positive price development of an underlying, such as an index. At the same time, investors should be protected from a negative performance of the underlying asset. If the capital protection level, for example, is set at 100%, investors will receive at least the nominal value back at the end of the term. In return, investors usually forego participation in strongly rising prices, as potential gains are limited by an upper threshold, known as the cap. If the underlying performs positively during the term, a positive return can be achieved up to this threshold. However, if

the price of the underlying falls, no loss occurs beyond the capital protection level. Additionally, some guarantee certificates offer an interest rate (coupon) during the term.

Another form of complex financial instruments are so-called complex ETFs. In analogy to the derivatives described above, complex ETFs may, depending on their structure, also achieve a leverage effect (e.g. leveraged ETFs) and/or an opposite participation in the performance of the underlying (e.g. short ETFs). In addition to the risks of all other complex financial instruments, as well as the special risks of synthetically replicating ETFs already mentioned, complex ETFs may also entail the special risk arising from the daily resetting of the leverage or short factor. The fact that the performance is calculated daily against the respective underlying closing price of the respective previous day results in a path dependency. Even if the underlying moved sideways over several days, the ETF may suffer losses.

IV. Functioning and risks of trading securities

1. General information

Buy and sell orders shall be executed by the custodian bank in accordance with its special conditions for securities transactions and its execution policy. If the orders are placed by an asset manager, its selection or execution principles must also be observed. In addition, the respective Conflict of Interest Policies may contain relevant provisions. If necessary, the client's orders can be combined with orders from other clients when they are executed by a third party. Such so-called aggregated orders enable cost-effective trading in securities and are therefore in principle also advantageous for the client, since without them it would be impossible to provide a cost-effective service for a large number of clients. However, in individual cases, aggregated orders can also be disadvantageous for the individual client. They may, for example, have a negative impact on market pricing or lead to a reduced allocation for the individual client due to an excessively large order volume.

2. Commission and fixed price

Dispositions of securities made for the investor by a third party can, amongst others, be carried out by means of fixed-price or commission transactions. In a fixed-price transaction, the third party (e.g. the bank) sells or buys the relevant securities directly to or from the client at an agreed price. In a commission transaction, the third party buys or sells the relevant securities for the account of the client, so that the conditions agreed with the counterparty (i.e. the buyer or seller) are economically attributed to the client.

3. Securities trading

Securities trading may be carried out on securities exchanges or over-the-counter trading venues, such as interbank trading or multilateral trading facilities:

- Securities exchanges are centralised and organised markets for trading securities and other financial instruments that are regulated and supervised by state-recognised bodies. These exchanges bring together the supply and demand of a large number of market participants. Trading takes place regularly on securities exchanges; securities admitted to trading on the exchange are traded accordingly. Trading and price fixing are regulated. The various types of stock exchanges can be differentiated according to, among other things, the density of regulation (regulated market or over-the-counter market) and the type of trading (floor trading or electronic trading system). In Germany, securities trading on the stock exchange takes place at various stock exchanges. Trading is mostly carried out via electronic trading systems. Compliance with the previously defined rules is monitored by the stock exchange supervisory authority.

- Off-exchange trading, which is also referred to as direct trading or OTC trading ("over the counter"), refers to any trading that takes place outside an exchange. In this case, the investor can trade directly with the issuer or a market maker, for example.

3.1. Pricing

In floor trading, the so-called lead broker determines the corresponding price either within the framework of variable trading or according to a single price. When determining the unit price, the most-execution principle applies. This means that the price at which the largest turnover occurs with the smallest overhang is determined as the execution price. In electronic trading, the price is determined by electronic systems according to certain rules and usually also in compliance with the most-execution-principle. In order to increase the tradability of less liquid securities and thus the possibility of concluding transactions, exchanges enable issuers or third parties commissioned by them to provide additional liquidity. To this end, exchanges conclude contracts with banks, brokerage firms or securities trading houses. As so-called market makers, they undertake to submit buy and sell offers (quotes) for the securities they manage on an ongoing basis. A quote is a bid and ask price for a security. The lower bid price indicates the price at which the investor can sell the security; the higher ask price corresponds to the price at which the investor can buy the security.

3.2. Instructions

Buy and sell orders shall be executed by the custodian bank in accordance with its special conditions for securities transactions and its execution policy. However, instructions from the client take precedence. These instructions may specify price and time limits (limits, validity period or limit supplements). In this way, the client can "fine-tune" the respective order. In the following, particularly relevant examples of instructions will be explained:

- **Market order:** The market order refers to an order according to which a security is to be bought or sold at the next possible price. For buy orders, this is the lowest sell price and for sell orders, the highest buy price. If these buy or sell prices do not have a sufficient number of shares, the remaining units are bought or sold at the respective next price until the entire number of units of the order is finally processed. However, since the investor does not specify a price limit, it is also known as an unlimited order. Market orders are usually executed comparatively quickly. However, there is a risk that an order may be executed at a price worse than the desired price.
- **Limit order:** With a limit order, a price is always set that determines the (upper or lower) limit for a purchase or sale. Execution therefore takes place at the desired price or a better price. If the price set as the limit is not reached, a limit order may not be executed within the validity period of the order.
- **Stop-loss order:** The stop-loss order is a sell order instructing the bank to sell a security automatically as soon as a price level specified by the client below the current stock exchange price is reached or undershot. However, the stop-loss order does not guarantee that the security will be sold at the desired price level. The order merely triggers an order when the specified price level is reached, which is then entered into trading as a market order.

Time-based instructions are also possible; here, the investor specifies in particular how long the order should be valid. Without additional instructions, market orders are generally limited to the specific trading day, while limit orders can generally be valid for up to one year if they are not cancelled by the investor in advance.

4. Specific risks

- **Transmission risk:** If the investor does not place unambiguous orders, there is a risk of errors in the execution of the order.
- **Lack of market liquidity:** In the event of a lack of market liquidity, the investor's corresponding order cannot be executed or can only be executed with a delay. For example, it may happen that no buyer can be found for the investor's shares in the event of a sale. The risk depends in particular on the type of security. Shares of DAX companies, for example, are very liquid, while shares traded in the so-called unregulated over-the-counter market may be very illiquid.
- **Price risk:** There may be a certain period of time between placing and executing an order. This may result in the stock exchange price developing adversely in the meantime.
- **Suspension of trading and other protective measures:** Exchange trading may be suspended if orderly exchange trading is temporarily jeopardized or if this appears necessary to protect investors. In addition, trading may be interrupted due to increased volatility of stock exchange prices (so-called volatility interruptions). In the event of a price suspension on the reference exchange, the client order to buy or sell the security in question is not executed and expires. In such cases, investors may not be able to switch to other execution venues if only one execution venue is available for an affected financial instrument. This may also be the case during certain trading hours, for example in pre- or post-trading.
- **Aggregated orders:** Aggregated orders may have a negative impact on market pricing or result in a reduced allocation for the individual investor due to an excessive order volume. In the latter case, the order allocation principles of the custodian bank and, if applicable, of the asset manager apply, which govern the proper allocation of pooled orders and transactions, taking into account the influence of volume and price on the allocation and partial execution of orders.
- **Risks in the context of same-day transactions (so-called day trading):** The purchase and sale of a financial instrument within the same trading day is referred to as "day trading". The aim is to exploit small and short-term price fluctuations. In addition to the risk of short-term, sharp price fluctuations, there is in this case in particular the risk of increased costs. In addition to any fees, the difference between bid and ask spreads must also be taken into account for each buy/sell combination.

V. Functioning and risks of investment services

Various investment services are offered. Before investors decide on an offer, it is very important to understand the differences and associated typical risks and conflicts of interest.

1. Execution-only transactions and non-advisory business

In the case of execution-only transactions, the custodian bank merely acts at the instigation of the client in the execution of orders. No advice or assessment of appropriateness or suitability takes place. Due to legal regulations, execution-only transactions may solely be carried out for non-complex financial instruments (e.g. shares, money market instruments, bonds, or mutual funds). The client receives a contract note of the order execution, which contains all relevant transaction details.

A non-advisory transaction is one in which the client makes an investment decision without having previously been given an investment recommendation by a bank. The bank's duty of exploration is considerably reduced compared to investment advice or wealth management. In contrast to execution-only transactions, however, there is at

least a limited duty of exploration as well as a duty to conduct an assessment of appropriateness.

2. Investment brokerage and Contract brokerage

In the case of contract brokerage, no advice is given to the client. The client is merely provided with the possibility to buy or sell a financial instrument. An assessment of the suitability of the financial instrument for the client is not required and therefore does not take place, or only to a limited extent. Advertisement of a specific financial instrument or of a group of instruments during the brokerage process, may give the client the false impression that the service is investment advice.

Investment brokerage involves the acceptance and transmission of client orders relating to buying or selling financial instruments. Investment brokerage is usually concluded on the basis of verbal explanations of the investment concept, possibly with the handing over of prospectuses or other sales documents. The investment intermediary has no express power of attorney from the client and is only a messenger.

Contract brokerage, on the other hand, means buying or selling financial instruments in the name of a third party for the account of a third party. In this case, the client orders are processed via a third party (contract broker). Contract brokers therefore act as representatives with corresponding power of attorney for their clients. The contract is concluded directly between the client and the buyer or seller of the financial instruments.

3. Investment advice

Providing investment advice means the provision of personal recommendations to a client to buy or sell financial instruments, either upon client request or at the initiative of the investment advisor. The advisor is obliged to assess the suitability of the recommended investment for the client, taking into account the client's investment objectives, financial situation, risk appetite and knowledge and experience. However, the decision to implement the advisor's recommendation must be made by the client.

There are basically two remuneration models: fee-based and commission-based advice. The remuneration of both types of investment advice harbours a potential for conflict. In the case of fee-based advice, the client is usually invoiced directly for the advisory service on a time basis. This gives the advisor the incentive to bill for as many advisory hours as possible. In the case of commission-based advice, the service is not charged directly to the client because the advisor receives a sales commission from their employer or from the manufacturer of the financial instrument (e.g. from a fund manager or the issuer of a structured product). This entails the risk that the client is not offered the most suitable security for them, but the one that is most lucrative for the advisor.

4. Wealth management

Wealth management (also known as financial portfolio or asset management) differs from the investment services described above. While wealth management differs from intermediary services in that the interest of the investor (as opposed to the interest of the person seeking capital) is decisive, it can be distinguished from advisory services both on the basis of the disposition authority granted for the investor's assets and on the basis of the nature of the contract, which is intended to be of a (certain) duration. Wealth management has in common with investment advice that both the wealth manager as well as the investment advisor have to examine the suitability of the investment for the client, taking into account the client's investment objectives, financial situation, risk appetite and knowledge and experience.

The wealth manager receives from the client the authority to make investment decisions at their own discretion if they appear to them to be prudent for the management of the client's assets. In making investment decisions, the wealth

manager does not have to seek instructions from the client, but they are bound by the previously agreed investment guidelines which regulate their powers as well as the nature and scope of the service.

Wealth management is typically a service aimed at long-term asset accumulation or preservation. The client should therefore have a long-term investment horizon, as this increases the likelihood that the portfolio can recover in the event of negative performance. It is advisable to submit only such assets into wealth management that are not needed to cover short- and medium-term living expenses or to meet other liabilities.

Wealth management also involves a number of risks for the client's financial situation. Although the wealth manager is obliged to always act in the best interest of the client, wrong decisions and even misconduct may occur. Even in the absence of intent or negligence, general market developments can lead to deviations from the agreed investment guidelines. The general risks of the investment as well as the special risks of the related asset classes also do apply in the case of wealth management.