

BG & PARTNER AG

General Information and Risk Disclosure for Futures Transactions („General Information and Risk Disclosure“)

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I. General Information regarding Futures

1. Definition and basic principles

Financial futures are a type of derivatives. Derivatives are essentially financial instruments which are derived from other financial assets or instruments, known as the “underlying”.

Financial futures are standardized forward contracts which are traded on futures and options exchanges. A wide range of financial instruments may be used as the underlying asset. There are, for example, financial futures contracts on interest rates (interest-rate futures), on equity indices (equity index futures), on foreign currencies (currency futures), and on commodities (commodity future).

Futures have a symmetrical risk profile as it represents an unconditional contractual obligation for both parties, i.e. for the buyer as well as the seller. Both parties agree to the delivery of an underlying asset at an exact fixed price on a predetermined future date. The profit potential and risks of loss for each of the contracting parties created by the transaction are a mirror image of each other. (Asymmetric risk profiles are characteristic for options and option-like instruments as they are conditional forward transactions. The buyer’s risk of loss is limited to the amount of the option premium. The seller or “writer” of the option, on the other hand, assumes a theoretically unlimited risk of loss, while at the same time having only a limited profit potential.)

Purchase of a futures contract (future long position)

By purchasing a futures contract, the buyer obligates himself to take delivery of a certain quantity of a certain underlying asset at a pre-agreed price on a certain date in the future (alternately referred to as the “delivery date”, “settlement date”, or “maturity date”). A future long position is established by purchasing a futures contract. The buyer anticipates that the price of the underlying asset or instrument will rise during the term of the contract.

Sale of a futures contract (future short position)

If selling a futures contract, the seller obligates himself to deliver a certain quantity of an underlying asset at a pre-agreed price on a certain date in the future (the delivery, settlement, or maturity date). A future short position is established by selling a futures contract. The seller anticipates that the price of the underlying asset or instrument will fall during the term of the contract.

Closing out of a futures position

Futures transactions are usually not entered into with the aim of contract fulfilment. Their purpose is generally not to make or receive physical delivery of the underlying asset on the future date as per the terms specified in the contract. Rather, far more often, the market participants intend to reverse their obligations prior to maturity of the contract by concluding an offsetting counter-trade with some other market participant; this is called “closing out” of the position. Because the contract is centrally traded on a futures and options exchange, there is assurance that the position may be closed out on an exchange trading day until the end of the contract. Once the position has been closed out, the market participant no longer has any obligations under the contract.

The buyer of a futures contract closes out a long position by entering the opposite short position in that he sells a future contract with the exact same contract specifications. The seller of a futures contract closes out a short position by buying a futures contract with the exact same contract specifications. The closing out of a futures position should be marked as a “closing” transaction when the order is placed.

Profits and losses from futures transactions

The closing out of positions generally results in a net profit or net loss because the market price of the futures contract changes over the course of its term. The difference between the purchase and sale price of the futures contract determines the profit or loss realized on the position. Other costs (such as transaction costs) must also be considered.

The amount of profit resulting from a future long position depends on how far the price quoted for the futures contract has risen above the originally agreed price (purchase price) on the maturity date or the date the position is closed out. The theoretically unlimited profit potential that a future long position offers is, however, offset by a high risk of loss. The farther the price of the future falls below the originally agreed price, the greater is the loss. In extreme cases, the futures contract can become worthless, while the buyer must nevertheless pay the full agreed price.

The amount of profit resulting from a future short position depends on how far the price quoted for the futures contract has fallen below the purchase price on the maturity date or the date the position is closed out. In the case of a short futures position, the high profit potential is likewise offset by an unlimited risk of loss. The amount of loss on a short position depends on how far the price quoted for the futures contract has risen above the purchase price on the maturity date or the date the position is closed out. The higher the price rises above the purchase price, the greater is the loss.

Future contracts are exchange-traded instruments

Future contracts are exchange-traded instruments and are traded on futures and options exchanges.

Exchange Trading, in contrast to Over-the-counter (OTC) trading, is characterized by the following:

- trading takes place on special futures and options exchanges
- the contracts are standardized
- the futures and options exchanges or their clearing organizations require security deposits ("margin") to ensure smooth trading.

A defining characteristic of all exchange-traded derivatives is that they are strictly standardized. This standardisation includes the following contractual elements:

- the underlying asset or instrument
- the notional amount of the contract, i.e. the amount of the underlying asset per contract and thus the discrete amounts which can be traded
- the date on which the contract is to be fulfilled or settled in the future
- the location, meaning both the venue where the contract is traded (whether floor trading or computerised exchange trading) as well as the place where the contract is to be fulfilled or settled
- the counterparty (which is invariably the clearinghouse affiliated with the exchange)

The only variable elements of an exchange-traded derivative instrument are the price of the futures or options contract on the exchange and the number of contracts which the investor wishes to buy or sell.

Trading of these standardised contracts on futures and options exchanges occurs in two different ways: Through "open outcry" on trading floors - for example, on the Chicago Board of Trade (CBoT) and the Chicago Mercantile Exchange (CME) - or as purely electronic trading - for example, on Eurex Deutschland. The central functional feature of organised futures and options exchanges is that transactions are settled in their entirety through a clearinghouse. The clearinghouse may be a part of the exchange or an entirely independent organisation. The functions of the clearinghouse include the settlement of trades, the collection and administration of collateral or "margin" deposits, as well as the fulfilment of the maturing contracts, whether in cash or in kind.

The clearinghouse acts as the contractual counterparty toward all market participants, i.e. it acts as the seller toward all buyers and as the buyer toward all sellers, thus guaranteeing that all contracts are fulfilled. To ensure, in turn, that the contracts they enter into are properly fulfilled, all buyers and sellers must participate in the margin system of the relevant futures and options exchange. The amount of margin to be deposited is determined by the rules of the respective exchange, and these are binding for both buyers and sellers.

The margin system of a futures and options exchange is usually arranged as follows: Before trading in any futures contract as buyer or seller, or selling any options contract, the market participant must first deposit an amount of collateral in the form of cash or securities (the "initial margin") for credit to a margin account. This margin account is then debited or credited on each exchange trading day with the profits and losses accrued or incurred on all open positions, which is called "marking to market". If the amount of margin on deposit by a market participant falls below a certain required amount (the "maintenance margin"), the market participant must generally, to comply with the margin requirements, deposit additional margin in the amount of the difference (the "variation margin").

Margin System for futures transactions

To cover the price risk associated with futures contracts, the clearinghouse requires the posting of collateral, called "margin". The individual exchange participants (generally banks) are, in turn, obliged to demand that their customers provide margin of at least the same amount. Therefore, the investor, who must immediately meet demands for margin (margin calls), must have sufficient liquid assets available to be able to cover these. To avoid the costs of having to arrange additional margin every day, banks usually require a higher level of collateral from their customers than the exchange requires from them. This practice, which is standard international procedure, is important for the security and reliability of exchange trading. Some futures and options exchanges distinguish between daily settlement of each day's profits and losses on accounts (variation margin) and risk-based margin.

The purpose of variation margin is to balance out profits and losses on open futures and options contracts by settling the profits and losses on accounts each trading day. To do this, the individual positions are revalued or "marked to market" each day at their daily settlement price (mark-to-market method). The difference between the new value of the position and its value on the previous trading day is debited or credited to the participant.

The risk-based margin system involves the calculation of collateral required to cover the price risk on all futures and options positions held by an exchange participant. Because the risk-based margin system takes the aggregate position of a participant into account, it can compare the risks of the individual positions and offset these as appropriate.

Risk-based margin is calculated by aggregating all options and futures positions relating to an underlying asset instrument or a group of comparable (correlated) underlying assets into a margin class. The risk-based margin calculated daily for each margin class is the sum of the following components:

- Futures spread margin

This margin considers the fact that spreads created through similar futures positions - i.e. long and short positions in the same underlying asset but with different maturities - require less collateral than individual positions. Those net positions which can be offset against opposite net positions with a different contract maturity are instead subject to futures spread margin. The required margin is calculated by multiplying the resulting spreads by a factor which is specifically determined for this purpose. Net positions which cannot be offset against opposite net positions are subject to the same margin requirements as non-spread positions.

- **Additional margin**

This corresponds to the additional margin amount that would be payable, assuming the worst-case possible price change on the following day, for closing out all non-spread futures and option positions held by a participant. First, the highest and lowest price which could foreseeable be attained by the underlying asset on a given exchange day is calculated based on historical volatility. The theoretical option prices are then calculated for all options with strike prices lying between these two extremes. The theoretical costs of closing these out, minus the current value of the position (premium margin), determines the additional margin which is then required. The maximum daily fluctuations in the price of a future are calculated in "ticks", and the resulting worst-case costs of closing out the position determine the amount of the additional margin.

Possible applications

Several differing objectives may be pursued using futures.

Futures may be used for hedging purposes, which means protecting against risks. Price risks related to existing or planned positions in the underlying asset (spot positions) can be largely neutralized by entering offsetting positions in the relevant futures contract. If a loss incurred on the spot position, a previously sold futures contract (i.e. future short position) may produce a profit of approximately the same magnitude. On the other hand, if the price moves upward, the spot position makes a profit, while the related futures position makes an offsetting loss.

Besides hedging strategies, arbitrage strategies and speculative strategies are also possible. In this case, uncovered futures positions (i.e. futures positions that are not covered by a corresponding position in the underlying asset) are deliberately entered into based on subjective expectations and assessments of market or price trends for the underlying asset.

Settlement of futures contracts

In the relatively rare cases where a futures position is not closed out by means of an offsetting countertrade prior to maturity, the transaction is settled either by physical delivery of the underlying asset by the seller against payment by the buyer, or by settling the net difference between the official settlement price on the final day of trading and the purchase price as a single cash payment (cash settlement).

2. Types of Futures

Following there is a description of futures contracts on the most common underlying assets. These are intended only as examples. The futures and options exchanges are constantly developing new products, and thus there is an extremely wide range of possibilities for trading and hedging.

Futures on interest rates

Interest-rate futures contracts are available on a broad range of financial instruments. The underlying asset is always an instrument which is based on the payment of interest. Contracts on money market instruments and time deposits as well as contracts on short- and long-term government securities are traded on futures and options exchanges across the globe. Examples of interest-rate futures contracts which are traded on Eurex Deutschland are those on German long-term treasury bonds (*Bundesanleihe* or "Bund"), medium-term treasury notes (*Bundessobligation* or "Bobl"), and short-term treasury notes (*Finanzierungsschatz* or "Schatz"). There are likewise standardized interest-rate futures contracts on US treasury securities, British long gilts, and French OATs (Obligation Assimilable du Trésor), among many others.

Equity futures

The underlying assets of an equity futures contract are the shares of some specific company. On the Eurex, for example, futures contracts are traded on the shares of several different companies. These are generally the most important German, European, and American corporations which belong to the key equity indices.

Index futures

Index futures contracts are for the most part based on equity indices. However, exchange traded index funds, volatility indices, inflation indices or credit indices may also serve as underlying instruments for index futures. Indices are generally fictive, non-deliverable assets which are computed according to precisely defined rules. Some well-known examples of equity indices are the German DAX, the US S&P 500, the Japanese Nikkei 225, the British FTSE 100 and the French CAC 40. An equity index is based on a defined basket of shares in different companies (hypothetical portfolio) and expresses the weighted market value of many different shares in a single composite figure – for example, in the case of the CAX, the composite value of 30 shares. Futures contracts on such equity- market indices are traded on international futures and options exchanges. Futures on equity indices are generally settled in cash.

Currency futures

The subject of a currency futures contract is the receipt of delivery of a defined amount of foreign currency on a fixed date at a pre-agreed rate of exchange. Currency futures contracts are tradable in the major currencies, with the largest market being the US dollar. While exchange-traded currency futures are relative unimportant in the European market, they enjoy a very active and liquid market elsewhere, particularly in the US.

Commodity futures

The underlying asset for a commodity futures contract is some commodity, such as an agricultural commodity, a precious metal, an industrial metal or an energy commodity.

3. Price determination

The question of valuation is crucial for the efficient use of futures. Futures prices are continuously determined during exchange trading hours. The price of a futures contract depends upon:

- the price of the underlying asset (spot price)
- the cost of carry
- other influencing factors (e.g. market liquidity)

Influence of the spot price

Upon maturity of a futures contract, either the underlying asset is physically delivered against payment, or a net cash settlement is made. The futures price, therefore, depends largely on the price of the underlying asset or instrument. This means that the futures price generally increases if the spot price rises and falls if the spot price falls.

The futures price and the spot price are identical on the date of maturity. Before maturity, on the other hand, the two prices will normally differ, but basically fluctuate in the same direction. Differences between futures prices and the spot prices may be attributed to cost of carry as well as other influencing factors.

Cost of carry

A key reason for differences between the price of the futures contract and the underlying asset is the cost related to outright ownership of the underlying asset, called “cost of carry”.

Apart from margin deposits, the buyer of a futures contract is not required to provide any funds until the final settlement date. If, on the other hand, he had purchased the underlying asset and held it for the relevant period, he would have had to pay and finance the full amount of the position up front. As a result, he would either incur financing costs by borrowing funds or opportunity costs by losing the income, which would have otherwise been earned through alternative investments of his funds. However, if his position involves shares, he might also earn offsetting income from the underlying asset in the form of dividends and rights issues, and likewise if his position involves bonds, he may receive offsetting interest payments. The net financing costs (the cost of financing the underlying asset less any income received from it) of an equivalent spot position is referred to as the cost of carry. A change in cost of carry, for example resulting from a change in market interest rates or in the income from the asset, will result in a change in the futures price, assuming all other things being equal (*ceteris paribus*).

Other influencing factors

Cost of carry generally does not fully explain differences between the spot prices and the futures prices. In addition to cost of carry, other influencing factors which in many cases cannot be directly measured play an important role. Some examples of these are market liquidity and subjective expectations. Assessments of market participants may likewise lead to movement in the futures market which anticipate the spot market or conversely the futures market may have a delayed reaction to a change in the spot market. Differences in financing costs among market participants also lead to differing individual calculations of cost of carry and thus of fair futures prices.

4. Quotation of Futures

Futures on indices and other instruments quoted in points

Futures contracts based on equity indices and other index-based instruments are quoted in index points. The value of a futures contract is obtained by multiplying the index level by the value of an index point.

The DAX futures contract on Eurex Deutschland is quoted in tenths of an index point, i.e. with one added decimal place (e.g. 7,800.5). Each index point is equivalent to EUR 25.00. If the DAX rises in value to 7.900.5, the buyer of a DAX futures contract earns a profit of EUR 2,500.00 (EUR 25.00 x 100 points).

Futures on long-term interest-rate instruments (bonds)

Futures contracts on long-term interest rates generally follow the quotation method of the underlying bond. The price of a bond is normally quoted either by means of the decimal method (e.g. market value of EUR 82.60 per EUR 100.00 nominal value of the bond) or – common in international markets – in full percentage points and 1/32 thereof. A quotation of 82 - 19 for a US treasury bond approximately equals a decimal quotation of 82.60 ($82 + 19 / 32 = 82.59375$).

As an exception to the above, futures contracts may alternatively be quoted according to the index method, whereby the prices of the underlying bonds are converted into an index. For certain bond contracts, a third method may be used in which the interest rate is quoted using the method for short-term interest-rate instruments.

Futures on short-term interest-rate instruments

With short-term interest instruments, such as treasury bills, the interest is usually paid in the form of a discount at issuance instead of an interest coupon. A 12-month German treasury note may, for example, be sold at 92.5 % of its nominal value and repaid one year later at 100 %. In this case, the yield resulting from this price difference is approximately 8.1 % ($100 \% / 92.5 \%$).

5. Costs of Futures

The costs that an investor pays a broker for a futures transaction is normally quoted as a fixed amount per contract. The types and rates of the charges are defined on www.optimtrader.com or in the documents provided by the Institute Servicing the Account. The total costs payable by an investor varies depending on different factors such as market, contract size, broker, and exchange. The charges are due for any opening and closing of a position.

It is important to note that the charge rates and types in the following calculations are only exemplary and for descriptive purposes. The actual charge rates and types are defined on www.optimtrader.com. Personal taxes, such as income tax and flat rate withholding tax, are also not included in the calculations. Potential securities transaction taxes are also omitted. For completeness, the spread of the Institute Servicing the Account is displayed, even though it is not charged separately. Transaction fees are computed based on the billing rate and not on the mean rate.

Futures on the DAX

A trade signal to buy a futures contract on the DAX (long position) is assumed. The available speculation capital is EUR 50,000. The execution price is 9,600 points (mean rate). 1 contract (value of one FDAX futures contract is EUR 25 per index point) is bought and the stop level is fixed at 20 points below the execution price. Once the stop level is reached, the sell order is triggered, and the position is closed. Assuming that the execution price is at 9,580 points. The following costs accrue:

1. Total costs:

The total cost for one future contract is 4 EUR.

2. Margin and total loss:

An initial margin (also referred as additional margin on the Eurex) must be provided. Currently, a future on the DAX requires an initial margin of EUR 10,000 for each futures contract. As such, the total initial margin amounts to EUR 10,000 (EUR 10,000 x 1 contract). To keep a position overnight, overnight margin rates may apply. It is important to note that margin rates may vary due to market conditions.

If the position is not closed, the position balance must be at least as high as the maintenance margin. Currently, the future on the DAX requires a maintenance margin of EUR 5,000 for each contract. If the position balance falls below the maintenance margin, the investor must deposit the difference to keep his position. Assuming the position balance is EUR 4,700, the investor must deposit an additional EUR 300 to increase the position balance to the maintenance margin level.

By closing the position at the stop level, a loss of EUR 550 (EUR 230,025 - EUR 229,475) is realized. The total loss of this transaction for the client is EUR 601.80 comprising a EUR 550 loss and total costs of EUR 51.80. Given the original speculation capital of EUR 50,000, the total loss is approximately 1.20 %.

Note: The lower the original speculation capital, the higher the loss percentage.

Futures on the S&P 500

A trade signal to buy a futures contract on the S&P 500 (long position) is assumed. The available speculation capital is EUR 50,000. The execution price is 1,751.75 points (mean rate). 1 contract (value of one S&P 500 contract is USD 50 per index point) is bought and the stop level is fixed at 5 points below the execution price. The following costs accrue:

1. Total costs:

The total cost for one future contract is 4 USD.

2. Margin and total loss:

An initial margin to the amount of USD 2,703 (USD 2,703 x 1 contract) must be provided. If the position is not closed, the position balance must be at least as high as the maintenance margin. Currently, the future on the S&P 500 requires a maintenance margin of USD 24,750 for each contract. If the position balance falls below the maintenance margin, the investor must deposit the difference to keep his position. Assuming the position balance if USD 21,750, the investor must deposit an additional USD 3,000 (EUR 2,199 = 3,000 / 1.3639; assuming the closing interest rate is 1.3639 USD/EUR) to increase the position balance to the maintenance margin level.

By closing the position at 1,746.25 points, a loss of USD 250 (USD 87,562.50 - USD 87,312.50) is realized.

The total loss of this transaction for the investor is USD 306 comprising a USD 250 loss and total costs of USD 56. Given the original speculation capital of EUR 50,000, the loss percentage depends on the exchange rate. Assuming an exchange rate of 1.3639 USD/EUR, the total loss is EUR 224.36 equal to approximately 0.45 %.

Note: The lower the original speculation capital, the higher the loss percentage.

Should there be any questions, or should anything be unclear in these documents, please contact the Company.

II. Risk Disclosure for Futures

Futures trading is not suitable to all investors. Because futures trading is highly leveraged, the maximum risk from this kind of trading is potentially unlimited and can be substantial. This amount can certainly exceed the investor's initial deposit with a broker. Therefore, futures trading is not recommended for very risk-averse investors. The investor should carefully deliberate the account agreement with the broker before entering any contracts. Following are the inherent risks associated with futures trading which Clients should consider with care.

1. Market price risk

Market price risk is the risk associated with the price performance of futures contracts. The consequential risk is a loss incurred by either the buyer or seller of futures contracts. It may result from a range of factors including the change in the price of the underlying assets.

Futures contracts fundamentally entail similar price risks as their respective underlying assets which, in turn, depend on various factors including, but not limited to, the following ones:

- *Interest risks:* adverse interest movements resulting from changes in the yield curve, changes in interest rate volatility, government intervention, and the passage of time.
- *Currency risks:* adverse currency movements resulting from changes in foreign exchange rates and influenced by the interest rates and yield curves of the respective currencies; and
- *Psychological factors:* changes in sentiments and behaviors of market participants under the influence of news and events.
- *Illiquid market:* especially when the primary market for the underlying asset is closed or the reporting of transactions in the underlying asset is delayed.
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The risks of potential underlying assets (e.g. stocks, bonds) are explained in detail in section "Risks specific to particular underlyings" in this document.

The inherent relationship between price movements of the underlying assets and the price performance of futures contracts are highly complex. The impact of underlying assets' prices onto futures contracts' price performance may be in different directions and at various levels. The resultant loss is hence impossible to be estimated precisely. The maximum amount may exceed the full amount of the investment.

2. Risks of leverage

The risks of leverage in futures trading are related to the leverage effect as one enters futures transactions. At the inception of a futures transaction, the initial margin, a minimal level of fund (equity), is required. This is a good-faith deposit which enables investors to borrow additional funds and trade on margin. The position therefore may encompass an asset of much greater value than the initial deposit. Depending on the leverage ratio, the leverage effects can result in changes in value of a futures position which are a multiple of the initial margin. This means any small movement in the price the underlying asset is magnified by the leverage effect. Therefore, such event may result in substantial gains or losses for the trading account.

The magnifying impact of leverage

To open a position at a futures exchange and start trading futures contracts, an investor is not required to pay the entire contract value upfront. Instead, he must pay an initial margin which is a fraction of the actual contract price. The following example quotes show hypothetical initial margins and maintenance margins for DAX futures contract traded on the Eurex and SPX futures contract traded on the Chicago Mercantile Exchange. The DAX stands for Dax 30 Index and SPX for S&P 500 Stock Index.

Exchange	Underlying	Intraday Initial	Intraday Maintenance	Overnight Initial	Overnight maintenance	Currency
Eurex (DTB)	DAX	10,000	5,000	20,000	12,500	EUR
Chicago Mercantile Exchange (CME)	SPX	12,500	10,000	25,000	20,000	USD

For example, the value of a futures contract on the S&P 500 is USD 250 times the level of the S&P 500 Stock Index. If the S&P 500 level is currently of 1,000, the value of the futures contract is USD 250,000 (USD 250 X 1,000.) An investor is not required to pay USD 250,000 upfront to initiate a trade but must post an initial margin of only USD 12,500 to enter the trade and 25,000 to hold the trade overnight. The leverage effect for the intraday trading is 20 times and overnight holding is 10 times. This high level of leverage magnifies both profits and loss on the account.

If the S&P 500 Stock Index increases to 1,100, which is an augment of 10 %, the contract would be worth USD 275,000 (250 x 1,100). The profit from the position is USD 25,000. In the case the investor posts an initial margin for intraday trading of USD 12,500, the investor enjoys a profit of 200 % with a 10 % movement of the underlying index. This is thanks to the leverage in futures trading – 200 % equals 10 % increase in underlying index value multiplied with 20 times leverage effect for intraday trading.

Vice versa, if the S&P 500 falls to 900 equaling a decrease of 10 %, the contract would be worth USD 225,000 (250 x 900). The loss from the position is USD 25,000. In the case the investor posts an initial margin for intraday trading of USD 12,500, the investor bears a loss of 200 % with a 10 % movement of the underlying index. This is also because of the leverage in futures trading that the investor loses more than the initial investment he made. To continue intraday trading, the investor must pay for the loss in excess of the initial margin, which is USD 12,500, and receive a margin call for an

additional fund of USD 10,000 to reach the intraday maintenance requirement. As a result, the investor must deposit another USD 22,500 to maintain his position.

This is just an example illustrating the magnifying impact of leverage in futures trading on profit and loss of the investor. Such large movement of the underlying index is uncommon for intraday trading.

3. Risk of margin calls

Positions in exchange-traded futures are subject to daily margin calls for additional liquidity. When the margin account balance goes below a certain level namely the “maintenance margin”, a margin call is triggered. Such additional liquidity (variation margin) aims to ensure sufficient premium margin on a deposit. The amount of margin calls is determined by changes in the prices of the futures contracts and cannot be precisely determined in advance.

Profits and losses on futures positions are marked to market and settled out daily (variation margin). Thus, even when the investor intends to hedge an underlying spot position or transaction with this position, there can be a deviation in cash flows between the hedged position and the futures position. This means even when the futures-based transaction has a maturity date that coincides the spot transaction which is being hedged, and the respective profits or losses at maturity offset each other closely, there may still be considerable fluctuations in liquidity requirements during the term. This effect magnifies as the term and the amount of the futures position increase.

If the futures position is not intended to hedge any underlying spot position, the possible divergence between the price in the futures contract and the spot price of the underlying asset still implies the risk of margin calls.

If margin requirements or payment obligations are not fulfilled in a timely manner, the position may be prematurely closed out (liquidated) and, thus, that the investor will be forced to realize a loss.

4. Liquidity risk

Liquidity risk is the risk where the investor may not be able to liquidate or close out positions or may not be able to do so at a fair market price. This risk therefore encompasses both the price risk and the order transmission risk. Any delay in order processing or an illiquid market may result in difficulties for the investor to manage his positions against changes in market properly. The investor may, therefore, not be able to exit a position by entering an offsetting one at the interim “fair price”.

Although this risk is not prominent for exchange-traded instruments like futures contracts, there is still the probability that it happens. A possible scenario for this risk to arise is when there are extraordinarily high transaction volumes which have a significant impact on the market for either exchange-traded futures or the underlying security, for example on contract fulfillment dates. There exists the possibility that delays in execution happen during very heavy trading. The relevant exchange price may change considerably during the time order is placed and settled.

Furthermore, the limited official trading hours on futures exchanges expose investors to restrictions in terms of time. During closing time of the exchange, it is impossible to alternate one’s existing positions. The investor therefore faces the risk that he may not be able to react to changes in the market environment in a timely manner and may, thus, must accept losses.

Finally, technical problems with order forwarding or order execution may also lead to a delay in reacting to changes in the market and expose investor to the liquidity risk.

5. Correlation risk

Correlation risk is the risk where a perfect 100 % hedge against market price risks (pure hedge) may not be possible if there's a mismatch between the position to be hedged and the available derivatives, or if for reason, the suitable derivative cannot be chosen.

The mismatch between the hedged and hedging positions may arise from, but is not limited to, the following problems:

- Whole contract problem: The amount of the underlying position cannot be matched with the standard futures contract size or a multiple thereof.
- Maturity mismatch: The expiry dates of the futures position and the underlying position do not match.
- Availability problem: None of the available futures contract exactly matches the underlying asset and/or currency to be hedged.

6. Risks associated with trading on foreign markets

There is a range of additional risks that are associated with transactions executed on foreign exchanges and in foreign currencies. The most common ones are currency risk, country risk, and transferability risk. Other various individual risks are also difficult to evaluate because of limitation of information. Such risks are generally more alarm in emerging economies.

Currency risk involves the risk that movements of exchange rates may have adverse impacts on the domestic-currency-nominated profit of the portfolio. As the income from investment is to be translated back to the domestic currency of the investor, a depreciation of the foreign currency lowers the post-translation profit. While currency risk may be hedged through different financial instruments, additional costs burden may incur.

Country risk and transferability risk incorporate the risks of both economic instability and political instability. Turmoil in the foreign economy may result in unfavorable economic conditions which deflate the value of the portfolio. The transferability of proceeds may be halted by foreign country government when there's a shortage of foreign currency and/ or massive capital flight. Country risk and transferability risk are very difficult to hedge. The maximum loss may, in the worst case, be the total amount of both the investment and its profit.

7. Effect of ancillary costs on expected profit

Ancillary costs are those that are incurred in addition to the current price of the derivative, such as transaction costs, commissions. Such costs arise from futures contract transactions.

Many ancillary costs are charged by intermediaries such as banks and brokers. Banks usually charge their customers a commission which is either an absolute amount of money or a percentage of the value of the order. If a domestic or foreign third party is involved in executing an order, such as a broker on a foreign market, further ancillary costs are charged on the investor. These are inclusive of, but not limited to, brokerage fees, commissions, and costs (third-party costs).

The investor is highly recommended to understand the cost structure of futures transaction before placing any order. If the price does not perform as favorably as expected, the burden of ancillary costs may add-up to a loss.

8. Tax risks

Tax risks can also influence futures transactions. The legislature as well as the tax courts and tax authorities have developed principles for the taxation of futures transactions. Accordingly, the tax

consequences of a futures transaction depend on many factors such as the status of the taxpayer and the type of position.

Risk of double taxation on foreign investments

This is the risk where the income from a futures transaction in a foreign country is taxed twice. The investor is exposed to this risk particularly when he is subject to tax in Germany while the income is taxable abroad. It is also possible when under a double taxation agreement, tax withheld at source cannot be offset in Germany, or just partly offset, or only under special conditions. Tax withheld at source is normally the tax charge on interest and dividends which is directly collected by the country of source based on the limited tax liability of the investor and without the necessity for a tax assessment.

Uncertainty about tax treatments

In the case of a new form of futures investment, the currently imposed tax treatment may not be adequate to cover the innovative aspect of the transaction. An unfavorable change in tax treatment determined by the legislature, the courts, or the tax authorities may hinder the investor from achieving the anticipated yields.

Other adverse changes in law and tax treatments also increase the tax burden for the investor and undermine the profitability of the investment.

9. Delivery risk

Delivery risks, also known as settlement risk, is the risk that a counterparty in a transaction may be unable to fulfill its side of the agreement by failing to transfer the agreed purchase price or deliver the underlying asset of the contract. In the context of futures transaction, this risk arises when the investor does not close his position prior to final settlement and a cash settlement is not in place.

On settlement date the investor – as a contract buyer - would have to transfer the agreed purchase price and receive the underlying asset stated in the contract. The underlying contract value is normally much greater than the margin provided by the investor. Therefore, he may fail to transfer the fund in a timely manner.

A similar situation happens to the sell-side of the futures contract if he does not close his position prior settlement of contract. On settlement date, the underlying asset is to be delivered to the buy-side. If the sell-side investor does not possess the underlying asset, he is exposed to another risk that he must acquire the underlying asset on the market at an unfavorable price. The value of the underlying asset is as well a multiple of the investor's margin. Therefore, the investor may fail to deliver the asset in a timely manner.

10. Suspension of quotation and similar measures

In some cases, a quotation for a security may be suspended by the stock exchange. A possible reason may be an upcoming announcement by the company which may influence the quotation. Regarding electronic exchange, high volatility may trigger trading breaks. In this case, the quotation is suspended to prevent excessive price fluctuation when prices fall below a defined threshold. When a quotation is suspended on a German stock exchange, all orders on the respective security are not executed and become void.

In some extreme cases, the exchange may discontinue the quotation for a particular security perpetually. This decision may be triggered by, for example, liquidation proceedings instituted against the issuer's assets. This imposition restricts and, to some extent, removes the tradability of the respective securities. Therefore, orders on such securities cannot be executed via the stock exchange anymore.

11. Risks associated with same-day transactions (“day trading”)

Day trading involves short-term market participation which takes place in the form of day trades. The opened position is closed on the same day. It may be the case, if triggered by trading signals, that the exact same position is opened and closed multiple times in a single day (intraday trading).

During day trading, unexpectedly small, short-term price changes may cause a total loss. In addition to market risks, transaction costs must be considered for risk calculation. These transaction costs are mainly remunerations for the Broker, commissions of other financial services companies, including the Company’s commissions, and execution costs.

Immediate loss, competition with professionals, and requisite knowledge

Day trading may lead to immediate losses if unexpected price developments cause the value of the invested futures to drop on the same day. In this case, to avoid further risks overnight, the investor is compelled to sell the futures contract on the same day before the closing of the exchange. The higher the volatility of the futures price, the greater this risk is. In the worst case, the investor may lose the total amount of the investment.

Another source of intraday trading is from the fierce competition from professional and financially strong market participants. To stack up against these players, the investor needs to have an in-depth knowledge of the instruments, the markets, the trading techniques, and derivative trading strategies.

Greater loss potential from trading on margin

Trading on margin brings about the leverage effect which magnifies profits and losses on investor’s position. Together, the higher frequency in day trading and leverage increases the risk of substantial loss on investor’s trading account.

Costs

The short-term nature of this business may result in a total portfolio turnover within a day leading to a high number of trades in the investor’s account. The total costs incurred may be extraordinarily high. As a result, this cost burden may entail the consumption of the investor’s capital on the costs incurred, especially ancillary costs. This is especially the case if the market has a low volatility, so that the gains cannot compensate the losses when offsetting the positions.

12. Other risks

Apart from the main risks above, there are also a number of further risks that the investors should take into account when deliberating an investment in futures. Besides the financial loss, there are also different disadvantages to investors inherent in such risks, for instance loss of time and efforts.

Information risk

Missing, incomplete, or incorrect information may lead the investor to make bad decisions. Incorrect information may arise from the quality of the original sources of information. However, even when the information provided is correct, fallacy in information transmission and interpretation may also result in misleading investment decision. Lack of enough material information, distraction by too much nonmaterial information, or focusing on irrelevant and obsolete information may also impair the investment decision.

Order transmission risk

The order transmission risk incurs where the investor gives an unclear, ambiguous or misunderstanding order to the bank. The consequence may be erroneous and unintended transactions or delays in execution. It is important for investors to make sure of the accuracy and completeness of the order instruction he places with the bank or broker. Key sections of the instruction include the type of order (e.g. purchase, sale or closing transaction), the volume of the transaction in unit or monetary amount, and the precise name of the futures instrument.

Risk of moratorium of investor's bank

In the case a moratorium is imposed on investor's bank, the bank becomes technically insolvent. Consequentially, all of the bank's open contracts on behalf of the investors may be liquidated prematurely. This involves the probability that the investor is forced to realize a loss too early.

III. Risks specific to particular underlyings

1. Risks specific to interest-bearing securities

Interest-bearing securities, also involve several risks which are particular to them. These include credit risk, the risk of changes in interest rates, the risk of early redemption, the risk of the bond being drawn for redemption and other specific risks associated with individual types of bonds. Even though interest-bearing securities are regarded as being a relatively safe form of capital investment in comparison with other forms of investment in securities, you should familiarize yourself with the different sources and kinds of risk to be able to reliably assess your chances of making a profit and to judge as accurately as possible the alternative possibilities of investing in interest-bearing securities.

1.1. Credit risk

Credit risk refers to the risk of insolvency or illiquidity on the part of the debtor, i.e. a possible - temporary or permanent - inability to fulfill its interest and/ or redemption obligations on time. Alternative names for credit risk are the debtor or issuer risk.

Causes of changes in credit quality

The credit quality of an issuer may change during the life of a bond because of developments in the overall economic environment or the specific environment of the company in question. This can be caused by three factors:

- Changes in the economic climate which can seriously impair the profit situation and solvency of issuers. The pressure increases the longer economic recovery is delayed.
- Changes the causes of which are to be found in individual companies, sectors, or countries. Examples of these include high national deficits and economic crises.
- Political developments with serious economic consequences which affect a country's ability to pay.

A deterioration in the credit quality of an issuer has a corresponding negative effect on the price of the securities in question (risk markdown). Credit risk tends to be higher, the longer the remaining life of the bond. In the case of zero bonds, particular attention should be paid to the credit quality of the issuer of the bond, to increase the certainty of redemption, since with this type of bond the interest payments are deferred and are only paid out together with the capital upon final maturity (for other specific risks associated with this form of investment see Section II 1.5).

With bonds, the credit quality of the issuer is - along with the stability in value of any security which may have been provided for the bond - one of the most important factors influencing the decision-making process of an investor. Ongoing high credit quality ensures the fulfillment of the debtor's contractual obligations - i.e. the payment of interest and the repayment of capital upon redemption. However, the credit quality of an issuer can deteriorate to such a degree during the life of the bond that the interest and redemption payments are not merely endangered, but rather are defaulted on completely.

Yield as measure of credit quality

First-rate credit quality on the part of the debtor is generally associated with a lower yield, since a bond of this sort will from the outset carry a lower nominal rate of interest than a bond issued at the same time by a debtor with a lower credit rating. Thus, government bonds, for example, usually produce a lower yield than bonds from corporate issuers.

As an investor, you must consider whether you are prepared to accept a lower yield in return for a higher degree of security or whether you wish to achieve a higher yield, albeit at a higher risk. As a rule of thumb: The higher the yield of a particular security in comparison with usual market yields, the greater the risk for the investor.

Issuers with low credit ratings and thus comparatively high yields are only suitable for investors who are aware of the risk. In the case of high-yield bonds or so-called "junk bonds", the credit quality of the issuer is usually very low and there is a risk of a total loss, particularly in times of economic recession.

Rating as an aid to decision-making

Ratings are used to assess the probability that the interest and redemption amounts payable in connection with the bonds issued by a debtor will be paid on time and in full.

Independent rating agencies publish their ratings in the form of a credit rating or classification of the debtor or its issues. Each rating agency uses its own rating symbols.

The rating systems take account of both quantitative and qualitative criteria. The analysis includes the overall economic situation in the country in which the issuer is domiciled and involves not only an analysis of the tendencies in the relevant sector and of the individual situation of the issuer, but also an economic and legal assessment of the terms of the issue.

The rating which is given to an issuer, or its bonds has an effect on the formulation of the terms of bonds which have yet to be issued, in particular the amount of the yield. A bond with a first-class rating therefore generally offers you as an investor a lower yield than bonds with a lower rating.

Please note: Changes in the rating during the term of a bond may result in changes in the price of the bond.

Important note on the use of ratings: The rating is not a substitute for your judgement as an investor and should not be understood as a recommendation to buy or sell securities. The rating is simply intended to assist you in making an investment decision and is only one factor which must be considered and weighed along with others in the valuation process. Since the rating is often not altered until after an issuer's credit quality has changed, you must form your own judgement despite the availability of existing ratings. You should also note that not all issuers are given a rating and that the quality of a bond issue without a rating may well be better than that of an issue with a rating.

1.2. Risk of changes in interest rates during the term (price risk)

The risk of changes in interest rates is one of the central risks associated with interest-bearing securities. Fluctuations in interest-rate levels are always to be expected on the money market (short to medium term) and capital markets (long term), and these can change the price of your securities daily.

The risk of changes in interest rates results from the uncertainty concerning future changes in the market interest rate. The buyer of a fixed-interest security is exposed to the risk of a change in interest rates in the form of a price loss if the market interest rate rises. Fundamentally, the effects of this risk become more pronounced as the market interest rate rises, the remaining term of the bond is longer, and the nominal interest paid on the bond is lower.

Relationship between changes in interest rates and prices

The price of interest-bearing securities depends on supply and demand. These two factors are based first and foremost on the relationship between the nominal interest rate of the bond and the current level of interest rates on the money market and capital markets (= market interest rate).

- The nominal interest rate of a fixed-interest bond is generally fixed for the life of the bond

based on the market interest rate effective at the time of issue. During the life of the bond, however, the price may deviate considerably from the initial price. The extent of this deviation depends on changes in the level of the market interest rate.

- The market interest rate is largely influenced by government budgetary policy, the policy of the central bank, the development of the economy, the inflation rate, foreign interest rates and anticipated exchange rate levels. However, the importance of individual factors is not directly quantifiable and varies over the course of time.

A change in the market interest rate following the issue of a fixed-interest security has an inverse effect on the price of the security: In the event of an increase in the market interest rate, the price of the bond generally falls until its yield is approximately equal to the market interest rate. Conversely, in the event of a fall in the market interest rate, the price of the bond rises until its yield is approximately equal to the market interest rate.

The reason for this is that fixed-interest bonds are provided with interest “coupons” corresponding to a fixed percentage of the original nominal value. When interest rates rise, this fixed rate of interest for an existing bond becomes comparatively less attractive, which leads to selling in the market. For this reason, the market price of an existing bond may fall below its nominal value. Falling rates generally lead to the opposite effect, i.e. that the fixed interest being paid on the bond becomes more attractive, leading to an increase in the market price of the bond.

The yield of a fixed-interest security is its effective interest return, which depends on the nominal interest rate (the “coupon”), the issue or purchase price, the redemption price and the (remaining) life of the fixed-interest security.

Sensitivity to changes in interest rates depends on the remaining life and coupon

The extent to which a bond reacts to changes in the market interest rate depends substantially on two factors: the (remaining) life of the bond and the level of the nominal interest rate (coupon) of the bond.

The degree to which the price of a bond reacts to changes in interest rates is measurable. A frequently used measure to characterize the sensitivity of a particular bond to changes in rates is the modified duration. The modified duration is the percentage amount by which the price of the bond will change when the market interest rate changes by one per cent. This means that the higher the duration, the more strongly the price of the bond reacts to changes in interest rates.

Different bonds display different sensitivities to interest rates. Bonds with long lives (terms) have a higher duration than similar bonds with short lives because the relative advantage or disadvantage of a higher or lower coupon is more pronounced for long-term bonds than for short-term securities. Furthermore, the same is true if we are talking about just one bond: In the course of time, a bond with a long term becomes a bond with a short (remaining) term. This means that the interest-rate sensitivity of the bond gradually diminishes.

An additional factor which has effects on the duration of a bond is the amount of the coupon of the bond compared to the prevailing relevant market interest rate for the relevant currency. A bond which from the start has a relatively high coupon is less sensitive to changes in interest rates than a bond with a relatively low coupon. The reason for this is that, in the case of the bond with the comparatively high coupon, investors receive an amount corresponding to the nominal value of the bond more quickly which they can then reinvest.

Fixed-interest securities are subject to considerable risks associated with changes in interest rates in times of steeply rising capital market interest rates. Of course, the price changes which occur are only relevant to you if you do not hold the bond until the end of its term. Otherwise, at the end of the bond's term, at the latest, the bond will be redeemed at its nominal value – assuming that the issuer is solvent.

1.3. Risk of early redemption

In the terms and conditions of the issue, which are contained in the issuer prospectus, the debtor under a bond may reserve a right of early redemption. Bonds are often issued with such a one-sided right of early redemption during periods of high interest rates. If the market interest rate falls, the risk for you, as an investor, that the issuer will exercise its right of early redemption increases. In this way, the issuer can reduce its liabilities or refinance itself more cheaply through the issuer of a new bond, thus reducing its interest burden.

Longer-term fixed-income securities on the Eurobond market are frequently issued with this one-sided right of early redemption on the part of the issuer, also known as a “call right”. For you as an investor, early redemption may lead to deviation from the anticipated yield. This is compensated for by the fact that such bonds generally feature a higher yield from the outset compared to similar bonds without a right of early redemption. On the other hand, the risk exists that, in case of an early redemption due to exercise of the issuer’s call right because of changed market conditions, a new investment may be less favorable than the previous investment (reinvestment risk).

1.4. Drawing risk

Redeemable bonds which are repaid according to a drawing of lots entail risks for you, because the fact that the life of such bonds cannot be calculated with arithmetic certainty can lead to changes in yields. If you purchase a bond at a price of over 100 % and the bond is then repaid at par at an unexpectedly early date, because of a drawing of lots, this shortening of the life of the bond leads to a deterioration in the yield to you.

1.5. Risks associated with individual types of bonds

Certain individual types of bonds entail different and, in some cases, additional risks:

Floating-rate notes

The difference between these and fixed-interest bonds is in the uncertain interest income: Because of the fluctuating levels of interest income, you cannot determine the final yield of floating-rate notes at the time of purchase. This also makes it impossible to compare the profitability of such notes with that of investments featuring longer-term fixed-interest periods. If the terms and conditions of the bond provide for frequent interest payment dates at short intervals, you bear a corresponding reinvestment risk if the market interest rates fall. This means you can only reinvest the interest payments which you receive at the lower interest rate prevailing at that time. During their term, floaters may be subject to price fluctuations, the size of which depends particularly on the credit rating of the issuer.

More pronounced price fluctuations with reverse floaters: In the case of reverse floaters, the interest income changes in the opposite direction to the reference interest rate: If the reference interest rate rises, your interest income as an investor falls, whereas it rises if the reference interest rate falls.

Unlike ordinary floaters, the price of a reverse floater is heavily dependent on the level of yields from fixed-interest bonds with a comparable life. The price fluctuations of reverse floaters move in the same direction but are much more pronounced than in the case of fixed-interest bonds with a comparable life. The risk for the investor is high if there are prospects of a rise in long-term market interest rates, even if the short-term interest rates are falling. In this case, the rising interest income does not adequately compensate for the price losses of the reverse floater, as these are over proportionally high.

Zero bonds

In the case of zero-coupon bonds (“zero bonds”), because the issuer prices are well below par because of discounting, changes in the market interest rate have a much greater effect on the price than is the

case with ordinary bonds. If market interest rates rise, zero bonds suffer greater price losses than other bonds with the same life and credit quality. Therefore, it should be noted that zero bonds involve a particularly high risk of price fluctuation because of the leverage effect on the price. In the case of zero bonds in a foreign currency, there is also an increased currency risk because the interest payments are not distributed throughout the life of the bond, but rather are made on a single date, namely together with the repayment of the capital on final maturity.

Foreign-currency bonds and dual-currency bonds

As a buyer of foreign-currency bonds, you are exposed to the risk of fluctuating exchange rates. In the case of a dual-currency bond, the fluctuations in the exchange rate can also affect the price of the bond unless the terms and conditions of the bond include a currency-adjustment clause for the investor. In the latter case, which is called a "quanto structure", currency risk does not apply because the amount of the coupon in the nominal currency of the bond is independent of changes in the currency of the reference interest rate. Without such a clause, changes in the exchange rate have a greater effect on the price of the bond, the greater the foreign currency component of the bond.

Convertible bonds

The price of a convertible bond is largely determined by the price of the underlying share. If the share price rises, the price of the bond rises, too. If the share price falls, the price of the convertible bond will also fall.

Intermediate position between bond and share: Due to the linking to a particular share, the price risk of convertible bonds is generally higher than in the case of bonds without a right of conversion, but lower than in the case of a direct investment in the share concerned. This is because, due to the fixed interest rate of the bond, the price risk of the convertible bond has a bottom limit: The price will fall no further than the point at which the yield from the convertible bond corresponds to the market interest rate for issuers of comparable credit quality. The position is different with bonds providing for mandatory conversion: In their case, the price of the share is what matters most, so that the price risk is much higher.

The nominal interest rate of a convertible bond is usually lower than that of a bond without a right of conversion, so that the periodic interest payments are relatively low.

Please note: If, as an investor, you exercise your right of conversion and acquire the relevant share, you become subject to the usual risks of a shareholder. This applies also if the terms and conditions of the convertible bond provide for mandatory conversion (see part II. 2).

Bonds with warrants attached

As with convertible bonds, capital investment in bonds issued with warrants is generally associated with lower periodic interest payments (coupons). The interest rate is usually below the rates for bonds without such an option right.

The price of a bond with warrants attached (a "cum-warrant bond") will follow rises in the price of the share (or underlying asset). Because of the bond's fixed interest rate, there is a bottom limit to the price risk of the warrant-linked bond: The price of a warrant-linked bond will fall no further than the point at which its yield corresponds to the market interest rate for issuers of comparable credit quality.

The bond without warrants attached ("bond ex warrant") is a straight interest-bearing security; its price is based primarily on the capital market interest rate. The risks associated with the warrant on its own - i.e. without the bond - are described in part II. 6 "risks specific to warrants (option certificates)".

Structured bonds

A comparison of index-linked bonds and plain-vanilla bonds makes the following clear: While, as an investor holding plain-vanilla bonds, you generally receive - depending on the credit quality of the

issuer - a fixed rate of interest based on the capital market interest rate, the yield on index-linked bonds moves within a specific range. The floor generally lies between zero per cent and a minimum rate of interest that is lower than the market rate. Depending on the repayment rate, the yield may also be negative. There is generally an upper limit to the yield, but it is possible that this may be higher than the market yield on plain-vanilla bonds.

While index-linked bonds offer the chance of a yield that is higher than the market yield, equity bonds specify this from the outset. However, because principal is not guaranteed, equity bonds may also produce losses if share prices drop. This is true even if you purchased the bond at its nominal value and you have received interest payments. Let us take a closer look at the risks associated with equity bonds and index-linked bonds in the following:

- Equity bonds: As the buyer of an equity bond, you receive high regular interest payments. The interest rate is normally much higher than the rates for plain-vanilla bonds. You should, however, have a positive opinion regarding the share that is to be delivered, as you may have to take delivery of it on the due date on the pre-arranged terms and conditions. On the due date, the price of the share is compared with the delivery threshold of the equity bond:
 - If on the due date the price of the share is higher than the delivery threshold or if both prices are identical, the nominal value of the bond will be repaid to you. You will incur a loss if you purchased the equity bond during its term at a higher price than the repayment price and you are also unable to cover the difference by means of the interest obtained during the term of the bond.
 - If on the due date the price of the share is lower than the delivery threshold, the bond issuer will deliver the shares. In this case, the current market value of the shares delivered will generally be less than the capital originally invested. If the stock corporation fails, you could in an extreme case even receive worthless shares. The size of a potential loss is the difference between the price originally paid for the bond and the lower price of the shares delivered, minus the interest payments obtained. If you hold the shares delivered, you carry the risks of an equity investment from the delivery date onwards.

During the term of the equity bond, its price is influenced by the following factors:

- Changes in the capital market interest rate for similar terms,
- Performance of the underlying share,
- Volatility (intensity of fluctuation) of the underlying share.

The price may therefore fluctuate more sharply than is the case with a plain-vanilla bond. Falling share prices lead to falling equity bond prices. The risk of a drop in price during the term of the bond increases the more the share price falls below the delivery threshold and the shorter the remaining term of the bond is. The more the share price falls below the delivery threshold, the more the tradability of the bond may be restricted because of the lack of market demand.

In the case of so-called "two-asset equity bonds", the share prices and the equity bond delivery thresholds are also compared on the fixed date. If either of the two share prices is lower than the corresponding delivery threshold, the issuer will deliver the shares. As there are several underlying shares, the probability of a delivery of shares increases. It increases even further if a two-asset reverse convertible is based on shares that display a negative correlation, i.e. their prices move in opposite directions.

- Index-linked and equity-basket bonds: Where these types of bonds are concerned, the total payout amount at maturity of the bond is made up of the following components:
 - a guaranteed repayment amount (percentage of the nominal amount),
 - a fixed minimum rate of interest (if provided for),

- participation in the rise in the index or basket of equities, possibly limited to a certain percentage and/or capped.

The amount cannot be determined in advance. It ultimately depends on whether and to what extent the expected performance of the underlying index or basket of equities materializes; sometimes it may not exceed a certain maximum amount.

During their term, the movement in the price of these bonds depends on different parameters that may change over the course of time. Essentially, the following factors influence the price:

- the performance of the index or equity basket,
- the volatility (intensity of fluctuation) of the index or equity basket,
- changes in the market interest rate for a comparable term.

Please note: It may well happen that the price falls below the promised repayment amount during the term of the bond.

Index-linked bonds which, thanks to a positive index performance during their term, promise a relatively high repayment amount, will react more strongly to index movements. On the other hand, bonds which, because of the index performance so far, offer no yield or only a very small yield, generally react more strongly to interest rate changes.

The shorter the remaining term of the bond is, the closer the price of the bond will move towards the nominal amount or the fixed repayment rate.

- Other structured bonds: The biggest risk attaching to synthetic bonds lies in the lack of transparency of the structure behind the bond. This directly affects the issuer's repayment and/or interest payment commitment and may ultimately lead to the total loss of the capital you invest. Synthetic bonds are often highly complex in structure. Specific advice on product features and the way these instruments work is only possible in each case on the strength of a detailed description of the transaction. Before buying such a synthetic bond, you should thus not fail to closely study the relevant securities prospectus and the terms and conditions of the issue, as the probability of loss may be very high.

2. Risks specific to shares (equities)

It is characteristic of the risks specifically associated with shares that their pricing depends to a large extent on factors which cannot be calculated rationally. In addition to the risk factors described in Section 2.1 to 2.3, the "psychology of market participants", which is dealt with in Section 2.4, also plays an important role. The methods which have been developed for dealing with the flood of information to be considered in making an objective investment decision (Section 2.5) also involve interpretation risks. Do make sure you are aware of the various risk factors, some of which are interrelated, before you invest in shares.

2.1. Business risk (insolvency risk)

As a buyer of a share, you are not a creditor, but a contributor of equity capital and thus a co-owner of the stock corporation. With the acquisition of the share, you participate in the economic development of the company; you become, in effect, an entrepreneur and thus stand to benefit from the associated opportunities, while at the same time bearing the risks.

The business risk involves the danger that the investment will perform differently from what was originally expected. Nor can you be certain that you will recover the invested capital. In extreme cases, i.e. if the company becomes insolvent, an investment in shares can mean the complete loss of the amount invested, since shareholders only receive a share of the proceeds of liquidation after all creditors' claims have been satisfied.

2.2. Price risk

Share prices are subject to unpredictable fluctuations. Short-, medium- and long-term upward and downward movements succeed one another without any discernible fixed relationship for the lengths of the different phases being identifiable.

In the long term, price movements are determined by the company's profits, which in turn are influenced by developments in the economy as a whole and the general political situation. The influences of economic, currency and monetary policy overlap in the medium term. In the short term, current events of limited duration, such as industrial disputes or international crises, may influence the mood of the market and thus the price of the shares.

Distinction between two sources of risk

From the point of view of a purchaser of shares, a basic distinction can be made between the general market risk and the risk specific to a particular company (and thus to the shares in question). Both affect share prices, either on their own or cumulatively.

General market risk

The general market risk of a share (also known as the systematic risk) is the risk of a change in price which is attributable to the general trend on the stock market and is not directly related to the economic situation of the individual company. In theory, therefore, all shares are subject to the same market risk. Accordingly, the share price of a company can fall on the stock exchange in line with the overall market trend, even though nothing has, in fact, changed in the company's current economic situation. Thus, a change in market interest rate levels may have an indirect effect on the stock market. As a rule, the stock market reacts - usually with a certain time lag - to rising interest rates with falling share prices and, conversely, to falling interest rates with rising share prices. However, a direct and automatic correlation - as in the case of bonds - does not exist here.

The factors which can trigger this sort of general fall in prices are extremely varied and can scarcely be calculated since they may overlap with one another. Even first-class shares may suffer severe price losses because of a negative basic trend on the stock market. As an investor, you cannot expect that an unfavorable price change will necessarily, or immediately, be reversed: It is quite possible that a slump will last for months or even years.

Nor can you reduce the general market risk by a wide distribution of shares among different companies and sectors within a market. The wider the shares are distributed; the more precisely will the portfolio reflect the development of the market.

Risk specific to a particular company

The risk specific to a particular company (also known as the unsystematic risk of a share) means the risk of a downturn in the price of a share because of factors directly or indirectly affecting the issuing company. The causes of such a change in the price of a specific share may lie in the company's operational situation - e.g. in incorrect management decisions, or failure to comply with legal or regulatory obligations. They may also result from general external economic factors.

As a result of risks specific to the company in question, share prices may follow a quite individual trend which is contrary to the general trend. It should be noted that even the fact that the shares have gone up in price for many years is no guarantee that they will be equally successful in the future. The extent of price changes cannot be estimated accurately in advance and may vary from company to company, from sector to sector and from country to country. However, it is this very fact that allows you to reduce the specific company risk by diversifying your share investments.

Penny stocks

Exchange-listed shares are often termed "penny stocks" when their price over a long period remains below a level such as EUR 1. These shares cannot be identified with any branch of industry. ~~Penny stocks are often extremely volatile because of their speculative character, so that very sharp price~~

fluctuations are also possible over a day.

"Penny stocks", however, may also refer to stocks which are not traded on a stock exchange and whose price is usually less than an amount such as USD 1. These types of penny stocks are often offered for sale or purchase by just a single brokerage house. This is the case, for example, for certain exotic shares or participation certificates for which a market regulated and supervised by officially recognized bodies (an organized market) along the lines of a stock exchange does not exist. You should exercise particular care before effecting trades in such non-exchange listed and frequently illiquid securities. Because there is no organized market, the danger exists that securities purchased may not be sold, or may only be sold under unfavorable conditions or at a depressed price. It should also be noted that there is generally a lack of a transparent price determination mechanism, such that it cannot always be determined whether the prevailing bid or offer price corresponds to market supply and demand. There may be a wide gap (spread) between the bid and offer prices, particularly when the security is only offered for sale or purchase by a single entity.

Moreover, because of the narrow market, penny stocks are subject to a great risk of market manipulation by market participants.

2.3. Dividend risk

The dividend on a share is principally based on the profits achieved by the stock corporation. In profitable years, the dividend can rise. However, if the company shows low profits or suffers a loss, the dividend may be reduced or even may not be paid at all. Please note: Years of uninterrupted dividend payments are no guarantee of future dividend payments, and these cannot simply be taken for granted.

2.4. Psychology of market participants

Rising or falling prices on the stock market, or of a single share, depend on the judgements of market participants and thus on their investment behavior. Not only objective factors and rational considerations, but also irrational opinions and mass-psychological behavior influence the decision to buy or sell securities. Share prices thus reflect the hopes, fears, suspicions and moods of buyers and sellers. In this respect, the stock market is a market of expectations where the boundary between objectively based, and more emotional behavior cannot be drawn clearly.

Examples of psychological factors influencing share prices

In the following paragraphs, several typical phenomena and factors are described which can trigger share price movements which often cannot be justified on economic grounds.

Mood of the market

In a rising market, the investing public tends to gain in confidence, to accept new risks and, for emotional reasons, no longer to stand by their original, rational decisions. Negative price-relevant events which go against the general trend are simply ignored or are deemed to have already been considered in the current prices. In such phases, price levels on the share market rise continuously, at times resulting in a boom or "bull market".

This same emotional way of looking at matters can also be seen - but in reverse - if share prices fall persistently. Positive price-relevant events which go against the general trend are simply ignored or are deemed to have already been considered in the prices. Sometimes this results in a slump (or "bear market").

Depending on the mood of the market, a circumstance which would be regarded positively in a friendly market environment may be regarded as negative on another occasion. In such cases, the market trend diverges from reality because of the mood of the market.

Opinion leader

Usually, each investor endeavors to base his investment decisions on as many sources of information as possible to reduce uncertainty regarding future developments affecting the capital market. Analysts' recommendations, press publications and stock exchange circulars are of particular significance in this context. These "opinion leaders" provide guidance for a wide range of investors and can reinforce the current market trend (multiplier effect and bandwagon effect). This can trigger price changes which are often not justifiable on economic grounds, and which can lead the individual investor to come to erroneous valuations.

Speculation-reinforcing trends

Because of the uncertainty concerning future developments, any investment decision involves speculative elements. As soon as wide circles of investors are led to speculate in a particular direction because of having been psychologically "infected", there is a risk that the development of the market will tend to detach itself from economic reality. During such phases of exaggeration, even comparatively insignificant economic or political events which either fail to confirm (or indeed which call into question) the previous market trend can lead to a sudden turnaround in prices and trends.

Market technology

Drastic price movements can also be triggered within seconds by computer-assisted trading activities. This leads to the risk of self-accelerating processes, whereby falls in prices because of sales automatically cause a flood of further selling.

Globalization of markets

Price trends on important foreign stock exchanges often point the way for the domestic stock exchange. Because of this interlinking of market psychologies, developments on foreign stock exchanges can - with varying time lags and to varying degrees - be reflected on the domestic exchange.

Company-related measures

The market may respond differently to official announcements, or even widespread rumors, of impending company-related measures, such as increases in share capital, inter-company agreements, offers to purchase securities, take-over bids or delisting.

In a favorable market climate, a capital increase, for instance, will tend to push up the share price, assuming that the market believes that the "ex-rights reduction" (*Bezugsrechtsabschlag*) will be rapidly recovered and that the dividends will remain constant despite the wider capital base. In contrast, in a less favorable market climate the company's need for capital may be interpreted as a sign of weakness and thus may lead to a fall in share prices.

2.5. Risk involved in price forecasting

When trading in shares, buying and selling at the right time ("timing") is the most decisive factor for the success of the investment. Numerous methods of analysis, such as fundamental analysis and chart analysis, attempt to collect and interpret the wide variety of market-relevant, price-relevant, and technical factors so as to provide a basis for making a promising investment decision. Fundamental analysis focuses on making the right selection from the shares on offer, whereas chart analysis is used principally to assist in the decision on the timing of the transaction.

Fundamental analysis: Fundamental share analysis is a method of evaluating companies based on company-specific data and the economic environment. The aim of fundamental analysis is to determine the "fair" or "appropriate" price of a share. The process is based on the classic method of analyzing balance sheets and profit and loss accounts, as well as a series of share-price-related factors such as the dividend yield or the price-earnings ratio. Fundamental analysis provides

indications of undervalued or overvalued shares or companies and thus a basis for developing a corresponding trading strategy on the stock market.

Chart analysis: Chart analysis (also known as "technical analysis") is a technique for interpreting charts (generally, charts of past price performance). The aim is to derive share price forecasts and identify share price potential to identify appropriate times for buying and selling. The chart is a graphic representation of price developments and turnover trends, usually for a share or an equity index, but also for sectors and currencies, over a selected period.

A chart analyst works on the hypothesis that share prices follow certain patterns which are repeated in a similar way over the course of time and which therefore - once recognized - can be used to predict price developments. Many market participants take chart factors into account in making their investment decisions, and this in turn affects prices in the form of a "self-fulfilling prophecy", meaning that the more often the price development predicted by a particular technical configuration takes place, the more investors act on this to take account of the anticipated price effect in their strategies.

In principle, fundamental analysis is based on the information currently available and uses this to develop forecasts of future developments. These conclusions will not necessarily prove to be correct if, for example, current economic and political situations and their possible effects on the companies have been assessed incorrectly.

Regarding chart analysis, it should be remembered that charts can be interpreted subjectively and that conclusions derived from them only have a certain degree of probability and can never be regarded as certain. Forecasts based on technical chart patterns may therefore prove incorrect in retrospect. Decisions to buy or sell shares thus always remain decisions which must be made without any certainty about future developments.

2.6. Risk of loss and alteration of individual shareholder rights

The individual participation rights (*Mitgliedschaftsrechte*) embodied in shares may be altered by various company-related measures, culminating in the loss of shareholder status, or may be replaced by other rights. Depending on the legal system in force at the seat of the stock corporation, this may take place following a change in legal form, amalgamation, division, or absorption of the company or on conclusion of inter-company agreements. Once such measures take effect, individual rights, such as entitlement to payment of a dividend, may cease to exist. Where a change in legal form takes place, investors may become shareholders of a different company which does not necessarily grant participation rights like shareholder rights. The major shareholder is often also entitled under the respective legal system to squeeze out minority shareholders. In the event of a squeeze-out, investors no longer participate in a company at all once the relevant measure has been carried out.

Often shareholders are legally entitled to compensation (*Abfindung*) for the loss of participation rights. In the case of German stock corporations, compensation usually must be provided in cash. In addition, regular payments (e.g. in the form of so-called "guaranteed" dividends) or shares in other companies may be offered as compensation, if this is stipulated under the law for the relevant measure. The right to compensation may at the same time depend on other conditions, e.g. the shareholder's objection to the planned measure.

It is not always ensured that compensation matches the value of lost participation rights. In the case of German stock corporations, the adequacy of statutory compensation and conversion ratios can be reviewed in special court proceedings (*Spruchverfahren*). The floor for cash compensation is usually an amount calculated based on market prices, or the higher actual company valuation attributed to shares.

The measures outlined above, or related financial considerations may force you to abandon your investment in the company concerned on a date specified by third parties. Thereafter, you no longer

share in the company's profits. It may also be years in some cases before disputed compensation is paid out in full. If you refuse to accept compensation that is offered to you, you should make allowance not only for any changes in your participation rights but also for the different framework for your investment (e.g. shareholder structure, share price). Different measures may also result in different tax treatments of your investment.

2.7. Risk of delisting

The listing of shares on a stock exchange considerably increases their free tradability at any time (fungibility). However, stock corporations are usually free under the respective provisions of stock exchange law to have their shares delisting from the stock exchange. While this does not directly affect a shareholder's participation rights, it may prove extremely difficult to sell shares that are no longer listed on a stock exchange.

Under the respective provisions of stock exchange law or the company law in force at the seat of the company, offering compensation in cash is often a condition for delisting. Regarding the adequacy and enforceability of entitlement to compensation in cash, please refer to the previous Section 2.6.

3. Risks specific to commodities

Commodities refer to a range of raw materials and physical goods. Commodities are divided into four main categories:

- precious metals (e.g. gold, palladium, and platinum)
- non-precious metals (e.g. aluminum and copper)
- energy (e.g. electricity, oil, and gas)
- agricultural commodities (e.g. wheat and corn).

Commodities are traded around the world on specialized exchanges or directly between market participants in off-exchange trading. This largely occurs by way of highly standardized futures contracts. These contracts provide for a delivery at the end of a defined period for a predetermined price.

It is likewise possible to invest indirectly in commodities, for example through certificates and funds. In these cases, the commodities represent the underlying assets of the securities, with their prices being definitively determined by the prices of the respective futures contracts.

The causes of price risk associated with commodities are highly complex. The prices are often much more volatile than in the case of other investment classes. Commodity markets may also be less liquid than bond, currency, and equity markets and, as a result, changes in production and demand may have a more dramatic effect.

Commodity-based indices may not fully reflect the price movements and risks of the individual underlying commodities. The prices of the individual commodities in an index may move in extremely different directions.

Where substitutes for commodities are available, price changes in one commodity may have a direct effect on the price of another commodity.

The factors affecting commodity prices are numerous and complex, making commodity prices difficult to forecast. Following is a brief discussion of some of the factors which may particularly impact commodity prices:

Cartels and regulatory changes

Several commodity producers have formed associations or cartels to order to regulate production and

thus to influence prices. An example of this is OPEC, the Organization of the Petroleum Exporting Countries. Trading in commodities is also subject to regulatory supervision and the rules of commodities exchanges. Changes in these rules and regulations may influence prices.

Furthermore, trading in commodities may be subject to the risk of government intervention, for example through the nationalism of certain industries.

Cyclical nature of production and demand

Agricultural commodities are produced during certain times of the year, while demand spans over the entire year. Conversely, energy is produced the whole year round, while demand is the highest in very hot or cold seasons. This cyclical nature of production and demand can lead to sharp price swings.

Direct investment costs

Direct investment in physical commodities is likely to incur costs associated with holding, storage, insurance, and taxes. Furthermore, commodities do not provide any interest or dividend income. The total return from commodities is influenced by these factors.

Inflation and deflation

Changes in consumer prices (inflation or deflation) may have a significant effect on the price of commodities, in particular mineral commodities.

Liquidity

Not all commodity markets are liquid, and they may react quickly and sharply to changes in supply and demand. In the case of less liquid markets, speculative positions by individual market participants may lead to price distortions.

Political risks

Commodities are often produced in emerging-market countries and used by industrialized nations. This constellation entails political risks (e.g. economic and social unrest, embargoes, armed conflicts) which may have a (sometimes considerable) effect on the prices of commodities.

Weather and natural disasters

Adverse weather conditions may affect the supply of certain commodities over the entire year. For example, frost during the pollination season can lead to total loss of crop. Natural disasters can affect production and distribution for an extended period, an example being crude oil. Such supply shocks can lead to high and erratic price movements until the full effect is known.

4. Risks specific to currencies

There are many factors that can cause changes and fluctuations in foreign exchange rates. Following we describe some major factors.

Interest Rates

"Benchmark" interest rates from central banks influence the retail rates financial institutions charge customers to borrow money. For instance, if the economy is under-performing, central banks may lower interest rates to make it cheaper to borrow; this often boosts consumer spending, which may help expand the economy. To slow the rate of inflation in an overheated economy, central banks raise the benchmark, so borrowing is more expensive.

Interest rates are of particular concern to investors seeking a balance between yield returns and safety of funds. When interest rates go up, so do yields for assets denominated in that currency; this leads to increased demand by investors and causes an increase in the value of the currency in question. If interest rates go down, this may lead to a flight from that currency to another.

Employment Outlook

Employment levels have an immediate impact on economic growth. As unemployment increases, consumer spending falls because jobless workers have less money to spend on non-essentials. Those still employed worry for the future and tend to reduce spending and save more of their income.

An increase in unemployment signals a slowdown in the economy and possible devaluation of a country's currency because of declining confidence and lower demand. If demand continues to decline, the currency supply builds, and further exchange rate depreciation is likely. One of the most anticipated employment reports is the U.S. Non-Farm Payroll (NFP), a reliable indicator of U.S. employment issued the first Friday of every month.

Economic Growth Expectations

To meet the needs of a growing population, an economy must expand. However, if growth occurs too rapidly, price increases will outpace wage advances so that even if workers earn more on average, their actual buying power decreases. Most countries target economic growth at a rate of about 2 % per year. With higher growth comes higher inflation, and in this situation central banks typically raise interest rates to increase the cost of borrowing to slow spending within the economy. A change in interest rates may signal a change in currency rates.

Deflation is the opposite of inflation; it occurs during times of recession and is a sign of economic stagnation. Central banks often lower interest rates to boost consumer spending in hopes of reversing this trend.

Trade Balance

A country's trade balance is the total value of its exports, minus the total value of its imports. If this number is positive, the country is said to have a favorable balance of trade. If the difference is negative, the country has a trade gap, or trade deficit.

Trade balance impacts supply and demand for a currency. When a country has a trade surplus, demand for its currency increases because foreign buyers must exchange more of their home currency in order to buy its goods. A trade deficit, on the other hand, increases the supply of a country's currency and could lead to devaluation if supply greatly exceeds demand.

Central Bank Actions

With interest rates in several major economies already very low (and set to stay that way for the time being), central bank and government officials are now resorting to other, less commonly used measures to directly intervene in the market and influence economic growth.

For example, quantitative easing is being used to increase the money supply within an economy. It involves the purchase of government bonds and other assets from financial institutions to provide the banking system with additional liquidity. Quantitative easing is considered a last resort when the more typical response — lowering interest rates — fails to boost the economy. It comes with some risk: increasing the supply of a currency could result in a devaluation of the currency.