



ČSOB – Dealing on financial markets

Product portfolio available either for hedging or investment purposes,
risk types related to dealing investment instruments

Ladies and gentlemen,

It is our pleasure to introduce you the fundamentals of the financial markets and investment instruments we as Československá obchodní banka, a.s. (ČSOB) are trading and can be your counterparty. The purpose of this document is to explain you basic terms, desired investment instruments and related risks you may encounter while dealing on financial markets.

In general we recognize financial markets as a place where trading with a vast number of financial instruments is carried out by various counterparties (e.g. commercial and central banks, investment funds, institutional investors or private individuals) from all around the world and around the clock. There are different incentives leading investors to trade – either free cash allocation, arbitrage or hedging various risk exposure.

There are many ways how to define and describe financial markets – let's have a look at the following structure:

- a) money markets (short term) and capital markets (medium- and long-term time horizon)
- b) primary and secondary market (according to investment instruments allocation and trading)
- c) debt and equity-based investment instruments (types of investment instruments allocation)
- d) exchange traded or over-the-counter based (institutional organization and regulation)

Once said “*Greed is good*” is going for everyone as well as various risks related to trading activity and may be derived from e.g. the market, investment instrument or a counterparty. The most relevant **risks** follow:

- a) market risk – embraces entire market and lies in a risk of unanticipated performance in broad market prices or interest rates and comprises foreign exchange (FX), interest rate (IR) or commodity prices risk; all the trading counterparties are involved no matter what they are dealing with (export – import oriented companies, investors and so on); may be caused by development aside of fin. markets (e.g. presidential elections)
- b) credit risk – represents the risk of loss suffered either as a result of counterparty's inability to settle concluded transactions or issuer's inability to fulfill its obligations related to the securities issued
- c) liquidity risk – relates to a situation on a market when trading conditions do not allow to buy or sell a particular investment instrument or to conclude or early terminate desired transaction

From ČSOB perspective and available products our attention is pointed out on following categories:

- a) investment instruments for investing purposes:
 - 1. Shares
 - 2. Bonds
 - 3. Standard investment funds
 - 4. Structured products with at least 90% protection
 - 5. Structured products with conditional protection/without protection

- b) investment instruments for risk hedging purposes:
 - 1. (FX) Foreign-exchange derivatives
 - 2. (IR) Interest rate derivatives
 - 3. (COM) Commodity derivatives

Investment instruments for investing purposes

In general, every investment instrument is encompassed with the risk of its value fluctuations over the time. Price movements in both ways influence the value of investment instrument – if it rises (we achieve gain) if it declines (we incur loss). For the investor on one hand the risk means either the fact that the real yield will be lower than expected or the opportunity to perform better than in case of yield achieved on savings account.

Investment risk and expected return/yield

There is an inverse relation between yield and risk in general. The higher yield expected the higher risk is to be undergone and vice versa. High yield investment is associated with high uncertainty related to future yield.

1. Stocks (Shares)

Stocks are equity-based securities representing owner's (shareholder's) rights on a joint-stock company. The stock is a security bearing following fundamental shareholder's rights:

- to participate on company's management
- to participate on company's yield (dividend payout)
- to participate on company's liquidation settlement.

The stock as a security in general represents in comparison with a corporate bond an investment instrument with a higher risk. Value of stocks fluctuates substantially over the time. As a result, the holder may experience short term decline with a high impact on a price which may incur a big loss. Thus it is suggested to choose at least 5 – 7 year investment horizon once investing on stock market.

2. Bonds

Bonds are debt-based securities which oblige the issuer to repay the bond face amount (notional) to the bond owner on a maturity day. The issuer's obligation turns into the holder's right for the repayment – face amount and coupons – the issuer may either be corporate or governmental origin.

Bond holders bear an interest rate risk which in general means that if the interest rates rise – the bond values decline. In terms of credit risk, the most secure ones are the government bonds.

It is important to distinguish between the bond (market) price and the bond notional (face value). The higher demand for bonds the higher price may be achieved and may exceed the face value. On the

other side if the bond price is higher than its notional then the yield to maturity for the investor declines. The explanation is that the buyer purchases the bond more expensive than the face value which is to be redeemed on a maturity day (the bond coupons have to be taken into account). On the other side if the investor purchases the bond below par then achieves a higher yield when holding the bond until maturity because receives in notional more than initially invested. There are further attributes impacting the bond price e.g. % coupon and its settlement day(s) or the bond maturity date.

3. Standard investment funds, Mutual funds

Collective investment (funds) is the way of investing money into the various investment instruments (e.g. stocks, bonds) across industries and counterparties – the initial funds are collected from the pool of investors. However, the investment decisions and trades are carried out by fund managers.

Under the mutual funds meaning we recognize e.g. investment funds shares or mutual funds units. Mutual funds are usually highly liquid and investors may have the funds available within a few business days.

4. Structured products with at least 90% protection

Structured products allow to invest money with defined level of protection against potential loss under clearly specified conditions and payout with a fixed maturity. The protection varies between 90 – 100 % of the face value which brings the investor a high certainty level of a redeemed amount on a maturity day (at least 90 % of the amount invested).

However, a product manager / issuer invests into fixed income portfolio (e.g. bonds or term deposits) even in that no guarantee of a full redeem can be granted. These products are designed for more conservative investors especially who do not intend to withdraw money before maturity. Cashing out the investment is possible before maturity date however it is not for free but for fee. The time horizon spans between 3 – 6 years.

5. Structured products with conditional protection/without protection

Conditional or non-protected structured products are designed to meet investor's investment goals in terms of risk and reward in an easy way. These products are either non-protected at all or a protection against a loss is limited unless further conditions are met in a future. Investment certificates or warrants are products belonging into this group.

Common attribute of these products lies in a value which is conditionally derived from an economic performance of either single underlying asset or a group of (various) assets or asset classes. Underlying assets may embrace single or multiple (baskets) of assets or even complex stock-exchange indexes. Embedded conditional protection is effective only in some cases when predefined scenario of underlying asset(s) movement occurs.

Investment instruments for risk hedging purposes

1. FX – Currencies and Foreign-exchange derivatives (FX)

Currency trading on financial markets (FOREX) represents substantial part of world financial markets turnover. Standard settlement related to any standard currency trade (FX Spot) occurs within two business days. Foreign exchange rate and its movement reflects actual bid and offer for traded currency pair in a real time environment – which may bring undesired risk of loss to exposed participants as a result of unexpected price (FX rate) movement (we call it currency or FX risk). In order

to avoid this situation, we deal in hedging FX derivatives allowing to offset or eliminate FX risk (FX forward, options and option structures). The most traded currency pairs (among ČSOB clients) are EURCZK, USDCZK and PLNCZK. From the worldwide perspective we talk about USD, EUR or JPY as the most traded currencies so far. Unlike FX Spot currency derivatives maturities last from number of days up to number of years.

(FX) Currency derivatives – general overview:

- a) FX Forward
 - a. represents a firm agreement between entities (Buyer and Seller) about a currency exchange at fixed terms (forward rate, fixed amount and delivery date) in the future; FX forward is binding for both parties
 - b. the purpose of FX Forward transaction is currency risk hedging, when between engaged entities – Buyer and Seller – is agreed mutual currency exchange – for binding terms (forward exchange rate, notional amount, settlement day) in a future
 - c. the forward rate is agreed upfront and thus independent from actual exchange rate on a settlement day
- b) FX Option or Option structure
 - a. Gives the Option buyer (owner) the right (not the obligation) to buy or sell agreed notional amount of base currency (from the Option seller) in exchange for the reference currency at a strike price in future;
 - b. the Option buyer pays the premium to Option seller as a purchase price
 - c. FX risk hedging performed via options and option structures offers more possibilities in currency hedging environment than basic FX forward
 - d. Call option is giving the option buyer the right (not the obligation) to buy a base currency (against reference currency) while put option in contrast stands for the right to sell a base currency at a strike price on certain day (period) in a future
 - e. European option may be exercised only on a specified expiry date unlike American one which may be exercised any time until its expiry date
 - f. In general, the settlement of FX Option exercise (currency exchange) takes two business days; if the option owner does not exercise the right then the option ceases to exist on expiry date
 - g. FX option structures represent transactions built on a combination of options bought and sold simultaneously which allows the hedging party to eliminate or offset the FX risk without premium settlement
- c) Barrier FX Option
 - a. Represents an exotic FX option category enhanced by specific barrier (exchange rate) defining further option behavior
 - b. Reaching Knock-In (KI) barrier activates such an option (entering possibility to option exercise) while reaching Knock-Out (KO) causes its expiry
 - c. Barrier in FX option or option structure represents in common a way how to reach more favorable levels of FX hedging

2. Interest rates and derivatives (IR)

Interest rates (like FX rates) and their dynamic movement may imply risk of loss originating either from their rise (credit facility floating rates) or decline (depo floating rates) for engaged entities. There is a lot of interest rate derivatives used for IR risk elimination and clients can enter into various transactions to protect themselves against IR risk. The tenor of such transactions can vary from couple of days up

to the number of years (e.g. 25-30 years). Thus, a maturity of hedging transactions is a substantial price determinant. On top of that, some interest rates are quoted in a negative price range on the market in recent years.

IR derivatives – general overview:

- a) Interest rate swap (IRS)
 - a. means a contract between buyer and seller about future exchange of payments derived from various interest rates (e.g. fixed and float) referred to a certain cash flow
 - b. the buyer (e.g. fixed rate payer) in general hedges its exposure against unexpected rise of reference floating rate (e.g. PRIBOR 3M) whereas the seller (e.g. floating rate payer) against its decline
 - c. the fixed rate may be more convenient than actual floating rate
- b) IR options and option structures (Cap / Floor / Collar)
 - a. Interest rate cap allows its buyer/holder to hedge its IR exposure against rise in reference interest rate above agreed strike price (level) – which is not for free – but the buyer pays a premium to the option/cap seller; in case of Interest rate floor the purpose is (opposite) to avoid reference interest rate decline under agreed strike price (level)
 - b. Interest rate collar allows engaged entities to hedge interest rate risk within agreed spread between cap and floor (strike prices); if both strike prices are chosen appropriately then premium for both options may be offset
- c) Other IR derivatives
 - a. There is a whole range of more advanced IR hedging strategies like IR swaption where IRS and option is combined in order to allow the option buyer whether to enter into a swap transaction on certain day (if the option is exercised) or not in case the option is to expire;
 - b. knock-in swap combines IRS and a barrier option
 - c. should a barrier option be embedded in a derivative the more favorable hedging levels can be achieved with a risk of additional obligation or a loss of hedging itself once the barrier is reached; one of the assumptions for the more complex transactions is a previous experience with basic IR products (e.g. IRS)

3. Commodities and commodity derivatives (COM)

Commodities trading is believed to be a historical forerunner of exchange trading at all. It's not only about physical delivery how commodities trades are settled but also the whole scope of derivative trades shapes the market itself. Commodity derivatives are not settled physically (with a delivery of desired commodity) but financially – the subject to settlement is a difference between fixed and floating commodity price in a future. Such a scheme – with a financial difference settlement (without physical delivery) allows engaged entities hedging against unanticipated fluctuation. The rise in prices may hurt manufacturers (hedging against price rise) while producers face and opposite situation and can hedge against price decline.

Commodity derivatives – general overview

- a. Commodity forward / swap
 - i. represents an agreement between engaged parties (commodity derivative buyer and seller) about payment exchange where the seller pays the amount derived from the actual / reference (contract) price in a future while the buyer

pays an amount based on a fixed price; the purpose is for sure unexpected price fluctuation elimination

- ii. the buyer – paying a fixed (forward/swap) price hedges its position against price rise while the seller – paying a price derived from a floating commodity contract hedges its position against price decline of desired commodity
- b. settlement of commodity derivative deals is carried out on a financial ground without physical delivery of traded – hedged commodity;
- c. in order to perform commodities trades efficiently the amount of each commodity is normalized into measure of quantity we call lots; commodity lots are unique and bear units of measurement and “minimum” sizes for each commodity separately
- d. the hedging horizon of every commodity is dependent on a liquidity / existence of reference underlying contract (in a corporate hedging it usually does not exceed 2Y tenor)
- e. the final commodity hedging settlement is also influenced by exchange rate movement in case the currency of hedged position differs from the base currency of underlying commodity (e.g. commodity hedging in USD vs. exposure in CZK)