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Investment Instruments and Related Risks

SECURITIES

Documents:

The Bank concludes standard contracts with clients depending on the type of transaction concerned (Commission Agent's Contract, Repo Contract, Mandate Contract).

SHARE

is a security which confirms that its owner is a shareholder, i.e. that s/he invested certain ownership interest (capital) into a joint-stock company. A shareholder has all kinds of rights. S/he is, for example, entitled to a share in profit of the company in the form of a dividend and to participate in the company's management by, besides the others, voting in the general meeting, or participate in a liquidation share of the company in case of liquidation. The shareholders are not liable for the company's debts.

Types of shares according to the shareholder's rights:

Ordinary shares entitle the holder of such shares to a company's profit, to participate in the company's general meeting, to present proposals or counterproposals, and participate in the liquidation remainder.

Priority shares are bound with a priority right to payment of a dividend or a privileged share in the liquidation remainder (or both), normally with limited right of vote.

Advantages:

- higher yield (dividend and capital yield) compared to other more conservative assets,
- zero taxation of a capital yield applicable to securities held longer than 6 months (in case of residents of the Czech Republic),
- certain types of shares entitled the holder to participate in the company's undertaking.

Disadvantages:

- higher yield is compensated by higher risk,
- high volatility – price of a share can fluctuate significantly, even in a short-term horizon,
- no guarantee of return on investment, high loss may occur.

Risks and securitization options:

Market risk:

- **change of share prices** which depends on various factors – overall economical development, economic cycle, development in specific industry or company,
- **development of interest rates,**
- in case of shares of foreign companies also **development of currency exchange rates**.

Liquidity risk:

- it concerns mainly the shares that are not traded on regulated market, but also the shares of companies which may, on various grounds, get into problems.

Market risk may be to a certain degree moderate by diversification of investments and selection of an appropriate portfolio. An investor may avoid the currency risk by investing only (in case of Czech investors) in shares denominated in CZK, or applying a currency hedge. An investor may influence liquidity of his portfolio by investing rather to publicly traded shares on regulated markets, although listed shares as well are threatened by various market factors that may decrease liquidity of shares.

BONDS

(also obligations or bonds) are debt securities which express an obligation of an issuer to a creditor. They are fungible securities connected with the right to payment of a due amount, payment of fixed revenues and with the issuer's obligation to fulfill all obligations.

Types of bonds according to issuers:

Government bonds – they are issued by the government or, possibly, by a government agency, in case of the Czech Republic by the Ministry of Finances of the Czech Republic. Generally, government bonds are low-risk instruments.

Municipal bonds – they are issued by regional self-regulatory bodies.

Corporate bonds – they are issued by corporations with the objective to gain capital. Corporate bonds involve various risks which fact is reflected by the level of interest.

Bank bonds – they are issued by financial institutions; this type of bonds is sometimes regarded as a part of corporate bonds associated with specific legal and financial options (e.g. a bank may be a distributor).

Treasury bills – short-term bonds issued by government or public administration bodies or institutions, or bank houses. This type of bonds is used as an instrument for short-term optimization of cash flows. Treasury bills are bonds associated with the least risk which fact is reflected by a low interest rate.

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Types of bonds according to interest:

Fixed rate bonds (with a fixed coupon) – a coupon negotiated during the issue remains unchanged during the entire bond's lifespan. An advantage is easily calculable profit; a disadvantage low profitability during economic fluctuations.

Floating rate bonds (with a variable coupon) – their coupon depends on the reference rate which is often an inter-bank rate, such as PRIBOR, LIBOR, EURIBOR. As a rule, a mark-up is added to the reference rate to compensate higher risk compared to the inter-bank market.

Zero coupon bonds – no coupon payments are paid during the lifespan of these bonds. Creditors achieve a profit by buying these securities with a discount, i.e. under their nominal value and then debtors will pay the nominal value of the bond at maturity.

Indexed bonds – the instruments the coupon payments of which are associated with development of wage, price, gold, crude oil or other commodity indexes. A coupon of such bonds is fixed, yet modified depending on actual changes of the respective index.

Advantages:

- higher appreciation in current bank accounts and term deposits,
- sufficiently secured risk,
- if held until due date, the yield of such bond is known before the investment is made.

Disadvantages:

- thanks to its high nominal value (CZK 100 000 and higher) it is unavailable to smaller clients,
- lower liquidity of certain bonds,
- a holder is exposed to a risk of changes of conditions from the issue of the bond until its redemption through changes of interest rates,
- if the bond is held less than 6 months, a profit from fluctuations in exchange rate is subject to an income tax,
- coupon payments are subject to interest taxation.

Risks and securitization options:

Credit risk:

- depends on the ability of the issuer to redeem the interest and nominal value of the bond. In case of business corporations the risk may be quite significant; on contrary for bonds issued by the EU Member States, or the international organizations the risk is substantially lower.

Interest risk:

- consists in a change in interest rates depending on maturity of the bond,
- investors should allow for this risk in case of small issue bonds, or bonds not traded in the secondary market.

Currency risk:

- relates to bonds denominated in the currency other than the investor's domestic currency.

Generally, the market risk of bonds is lower than the market risk of shares. Investors may influence the credit risk by selecting the bonds of the issuer with high rating. The liquidity risk may be reduced by investing in the bonds traded in the secondary market, while the currency risk (which applies also to shares) may be completely avoided by buying only the bonds denominated in the investor's domestic currency. In order to secure the interest risk, it is possible to use an interest swap.

BILL OF EXCHANGE

is a loan security drawn up with a precise information which implies an debtor's obligation giving the bearer of the bill of exchange an indisputable right to request the fixed amount by the fixed date. No specific form is prescribed.

Types of bills of exchange according to a debtor's obligation:

Promissory note represents a debtor's obligation to pay and it includes the expression "I will pay".

Draft orders a third party to pay the draft. It includes the expression "Pay".

Types of bills of exchange according to maturity:

At sight (against presentation) - bill payable at sight

After sight – after-sight bill

At a fixed period after date - bill payable at a fixed period after date

Payable at specific date – a fixed bill

Advantages:

A bill represents an indisputable obligation which means that a person who holds an original bill and proves himself as its legitimate holder has sufficiently proved his right to payment of such bill. A debtor who wants to deny his obligation to pay the bill is required not only to present the grounds of such denial but also to prove them.

Disadvantages:

A bill of exchange must be drawn with the contents stipulated by law and if any of the essential elements is missing, the bill is null and void.

Risk of bills of exchange:

Credit risk:

- it is associated with the debtor's risk to fulfill his obligations.

REPO TRANSACTIONS

are loans secured by transfer of securities. The level of a loan facility is set according to the financial standing of the client and credibility of securities.

Interest:
is expressed by a repo rate.

Repo transaction risk:
it is associated with a drop in value of underlying instruments (securities) and the subsequent need for securitization.

SELL/BUY AND BUY/SELL TRANSACTIONS

are buy/sell and repurchase of securities. Both transactions are negotiated concurrently. They are used an instrument for depositing or borrowing money. The interest is expressed as a difference between the price of the security at the beginning and at the end of the Sell/Buy and Buy/Sell transaction.

Yield:
(or in case of a loan – **the cost**) is known beforehand – the interest is based on a difference between the initial and final price.

Liquidity risk:

- relates to the securities used for securitization. The liquidity risk is low in case of government bonds traded in the stock exchange or the inter-bank market, on the contrary in case of shares and bonds with low rating the liquidity risk is higher.

Credit risk:

- relates to a counterparty and it is managed by pledge of securities. Therefore, the risk may be a drop in price of pledged securities. In case of credible government bonds the risk is very low, in case of shares with higher price fluctuations - better coverage is generally required depending on the amount of the loan provided.

Derivates

Documents:

The bank concludes standard contracts with clients depending on the type of transaction (Framework Treasury Contract, ISDA).

Derivates are investment instruments derived from underlying assets. Underlying assets may include securities, commodities, real estate property, indexes etc. The derivates are typical for:

their ***term character*** and the related ***leverage effect***. Term character means that the transaction is being settled in the future. These transactions are associated with relatively low or even zero initial investments and, thanks to the leverage effect ensuing from this feature, derivates offer, by the contrast to common spot investment instruments, an opportunity to achieve a much greater appreciation, but on the other hand, the greater loss as well.

Application of derivates:

Securitization (hedging)

- consists in the fact that by derivates we can fix the price of particular financial instrument as of the fixed date in the future. In other words, for particular position we negotiate such transaction on the term market the profit or loss of which will develop as a mirror reflection of the respective position.

Speculations

- a speculator concludes a term transaction with the objective to profit from price development. Simply speaking, he speculates that the price agreed in the term transaction will be lower, or higher, than the prompt price of the underlying financial instrument on the due date for which this instrument can be sold, or bought on the prompt market.

Arbitration:

- it is an application of price differences which may arise from the territorial and/or time point of view.

Risks arisen from transactions:

<u>General risks</u>

Market risk

- The risk of decrease in the real value of a derivate transaction due to
  - fluctuation of interest rates of currencies contained in underlying instruments,
  - changes in value of securities,
  - exchange rate,
  - change in the exchange rate corresponding to the currency couple contained in the underlying instrument,

- commodity price changes,
- other derivates, financial indexes or financial or other underlying instruments which form a part of agreed upon conditions of underlying instruments and may influence a real value of the transaction.

The risk is especially significant in case of speculative transactions, but it may influence hedging transactions as well, particularly when the original assumption on account of which hedging was provided shows to be incorrect. In extreme cases the potential loss arisen from such risk may even exceed the nominal value of the contract.

The risk of liquidity of underlying asset

- Since the contracts between the client and the bank are in the majority of cases concluded as OTC transactions (transactions concluded outside regulated markets), it is not possible to assume automatically that the client has under all circumstances an opportunity to close his position or prematurely terminate the contract for the price which could be expected by the client with respect to the last known market quotation. In extreme cases during the limited period of time no price can be available on OTC market. In such time period it will not be possible for the client to conclude the required transaction at all. The potential loss arisen from such risk may reach (especially in case of non-standard combinations of certain derivates) even several tens of percent of a difference between the expected price based on the last known quotation of the relevant underlying instruments and the price for which the bank or other entity is willing to offer these instruments on the market when the client require them.

Credit risk

- Credit risk results from the fact that in the absolute majority of cases the bank is the client's counterparty in the transaction. Although probability that the bank fails to fulfill its obligations from the contract is very low, but not actually zero. Final value of a potential loss arisen from such risk is affected significantly especially by development of market quotations related to the underlying instrument, development of liquidity of the underlying instrument and ability of the bank to additionally settle its obligations in accordance with the contract.

<u>Specific risks for option contracts</u>

Loss of exercise/non exercise of an option

- In case of purchased option the risk of drop in real value of the underlying asset is reflected in the same manner as in case of the sold option. In case of purchased options, the client's maximum loss is limited by the level of paid premium and transaction costs; however, in case of sold options the loss can be unlimited.

Volatility of a price of underlying asset

- The risk of drop in real value of an option is also significantly affected by volatility of a price of the underlying asset (in this case the forward), i.e. by frequency and size of changes in its market value.

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FORWARD RATE AGREEMENT – FRA

A fixed agreement between two entities under which they may fix the interest rate of the loan or the deposit in the future, or to "change" a floating rate of the claim (receivable) or the obligation to a fixed rate or vice versa.
It is a derivate interest rate contract which is concluded as individual, non-standardized contract in the *over-the-counter market* (OTC).

Entities that conclude FRA:

FRA Buyer
- fixes a fixed interest rate for its future obligations bearing a floating interest rate, or **secures himself against rising interest rates** in the future (or speculates on increase in market interest rates).

FRA Seller
- fixes a fixed interest rate for its future claims bearing a floating interest rate, or **secures himself against drop in interest rates** in the future (or speculates on drop in market interest rates).

Subject of performance of FRA

- Performance of FRA means only settlement of a balance from the difference between both interest rates.

Possible use of FRA:

FRA Seller
- to secure the capital invested in interest instruments sensible to development of market interest rate against **drop in interest rates.**

FRA Buyer
- to secure his expected future needs for capital **against rising market interest rates**.

Advantages of FRA:

- a possibility to conclude individual contracts exactly corresponding to the needs of both parties,
- a loan risk relates only to fulfillment in the form of a interest rate difference,
- the nominal value of FRA is not posted in the balance sheets of contracting entities, i.e. FRA is neutral with respect to the balance sheet,
- FRA is not associated with other costs or commissions,
- for the period up to one year a relatively liquid market exists for FRA.

Disadvantages of FRA:

- for smaller entities the minimum nominal transacted values are too high,
- it is a fixed (definitive) contract, i.e. both parties are obliged to fulfill the contract and hence nobody profits from a positive development of interest rates during the contract term till maturity of FRA,
- both parties bear loan risk of the other partner.

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INTEREST RATE SWAP – IRS

An agreement between two contracting parties on an exchange of cash flows in the specific time period based on floating and fixed interest rate.

Nominal value of a swap:

- it is fixed in the swap contract and is used **only to derive the level** of interest payments, it is not shifted between swap parties,
- in case of non-standard contracts, it may change in the course of the contract.

Interest Rate:

- **Fixed interest rate** - Index used for derivation of a fixed interest rate
- **Floating interest rate** - Index used for derivation of a floating interest rate mostly expressed in the form of the reference rate PRIBOR, LIBOR etc.

Application of IRS:

- **Securing** interest cash-flow from obligations/claims of swap partners against changes in market interest rates (IR)
- **Speculation** on changes of market interest payments

Expectations of *growing* market interest rate

- **An investor** wants to **profit** from the expected growth in rates (he wants to get a floating rate and to pay a fixed rate).
- **A debtor** wants to secure his interest costs against the expected growth in rates (he wants to get a floating rate but pay a fixed rate).

Expectations of *decreasing* market interest rate

- **An investor** wants to **profit** from the expected growth in rates (he wants to get a floating rate and to pay a fixed rate).
- **A debtor** wants to use the expected drop in rates and thus reduce the **financing costs** (he wants to get a fixed rate but to pay a floating rate).

Advantages of IRS:

- an interest swap is an instrument that is used to manage the interest costs, or yield, depending on the expectations of development of interest rates, or a yield curve,
- a possibility to change the existing structure of assets and liabilities without affecting the original sources and capital investments.

Disadvantages of IRS:

- credit risk of both contracting parties,
- in case of non-standard contracts the conditions of premature settlement of the contract can be less advantageous compared to the standard transactions,
- impossibility to participate in changes of interest rates.

FOREIGN EXCHANGE FORWARD – FX FORWARD

A concurrent obligation to buy or sell pre-defined number of foreign currencies as of the fixed date and for the fixed exchange rate.

Contracting parties:

FX Forward Buyer

- is entitled but concurrently obliged to **buy** within the fixed term in the future the stipulated number of a commodity currency for the fixed exchange rate (price),

FRA Buyer

- is entitled but concurrently obliged to **sell** within the fixed term in the future the stipulated number of a commodity currency for the fixed exchange rate (price).

An example of use of FX Forward:

- **An importer** wants to secure his obligation against strengthening EUR against the domestic currency CZK in the future.
  Therefore today he concludes **FX Forward as of the day of maturity of his future obligations.**
  On the due day of the obligation the contract is settled at the agreed upon FWD exchange rate:

- **An importer** expects payment from his foreign customer in EUR. He is concerned about strengthening CZK and therefore **today he concludes FX Forward as of the due date of his claim.**
  On the due day of the claim the contract is settled at the agreed upon FWD exchange rate:

Advantages of FX Forward:

- a possibility to agree upon individual terms and conditions of the contract,
- securing future cash-flow.

Disadvantages of FX Forward:

- bilaterally binding transaction, regardless future market development
- no profit from a positive market development

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FOREIGN EXCHANGE SWAP - FX SWAP

A concurrent obligation to buy and sell the same number of one currency against the second currency for the various due dates.

Course of Transaction:

The transaction takes place in the form of two impendent conversions, i.e. the initial sale of funds by the client to the bank for the current market exchange rate and repurchase of the same funds in the future for the forward exchange rate.

Advantages of FX Swap:

- lower costs of fund-raising,
- utilization of comparative advantages of one or both swap partners in the specific segment of the financial market,
- it does not affect a loan engagement of the respective entity,
- it gives a possibility to manage cash-flow in various currencies.

Disadvantages:

- risk of default of one of the partners,
- necessary initial capital for conversion.

CURRENCY OPTIONS

A conditioned term transaction wherein a holder (buyer) of an option is ENTITLED (but not obliged) to buy or sell the currency specified within the contract for a pre-agreed price (strike price) and as of a pre-agreed date, or time interval.

Basic option position:

	BUY OPTION - CALL	SELL OPTION - PUT
Option holder LONG POSITION LONG	**The right** to buy a basic currency for a strike price **The obligation** to pay an option premium.	**The right** to sell a basic currency for a strike price **The obligation** to pay an option premium.
Option writer SHORT POSITION SHORT	**The obligation** to sell a basic currency for a strike price **The right** to collect an option premium.	**The obligation** to buy a basic currency for a strike price **The right** to collect an option premium.

Possible use of currency options:

- **securing against** the currency risk,
- **speculations** with the objective to profit from the expected future market development.

Advantages:

- a possibility to secure against the currency (FX) risk for an option buyer,
- an opportunity to gain unlimited profit in case of positive market development (see the types of positions),
- profit from the premium for an option seller.

Disadvantages:

- payment of an option premium that reduces a profit, if the option is exercised, or represents a net loss, if the option is not exercised,
- possible unlimited loss (see the types of positions),
- necessary implementation of an accounting system enabling the client to report and appraise the options in his accounts.

INVESTMENT CERTIFICATES

From the legal point of view, certificates are "debit notes". An issuer pledges to pay the value of the certificate by the fixed date. The value received by an investor at the end of the stipulated time period depends on development of the value of the underlying asset which may include shares, share indexes, bond indexes, share baskets, loan instruments, currencies or even commodities.

Risks:

- **Loan risk of the certificate issuer** – the investor is exposed to a risk that the certificate issuer (PPF Banka) will not be able to fulfill its obligations. The issuer's insolvency may be caused e.g. by an adverse market development, wrong decisions of his management, natural disaster, criminal activities and other unforeseen circumstances. The investor's loss may reach up to 100% of the invested amount.
- **The issuer's loan risk related to the underlying instrument** – the investor is exposed to a risk of insolvency of the issuers of underlying instruments. Losses are partly or fully transferred onto the investor according to the conditions of the certificate.
- **Market risk** – is a risk of loss caused by a change in market prices of the underlying instruments. Market risk means particularly the interest rate risk, share risk, currency risk and commodity risk.
- **Currency (foreign exchange) risk** – arises if the certificate is issued in a foreign currency or if it is a financial product sensible to changes in currency exchange rates.

- **Inflation risk** – consists in permanent devaluation of money. Virtually each investment is, to a certain degree, subject to such risk.

Advantages:

- **Transparency and universality** – on each IC the investor can read exactly what the underlying asset is, how and from which instruments IC is construed, in which currency it is denominated.
- **Liquidity –** i.e. an ability to exchange the certificate for money
- **Variability** – at the moment there is a countless number of certificates with difference features and characteristics, while the majority of issuers are able to customize the products.