GLOBAL MARKETS PRODUCT RISK BOOK

Marketing Communication

GLOBAL MARKETS

BNP PARIBAS FORTIS

The bank for a changing world

Introduction

This Product Risk Book is addressed to the Corporate & Institutional Banking and Retail & Private Banking clients (at the exception of physical persons) of BNP Paribas Fortis or any of its subsidiaries, affiliates or branches which are "Professional Clients" or "Retail Clients" in the sense of Directive 2014/65/EC on markets in Financial instruments ("MiFID) ("our clients").

The purpose of this Product Risk Book is to provide our clients with a general description of the nature of the financial products offered by Global Markets at BNP Paribas Fortis ("Global Markets Products"), their functioning and performance in different market conditions as well as the risks particular to each product to enable the client to take investment decisions on an informed basis.

Prior to executing a transaction, we recommend you to read marketing information or/and any more specific information that may be provided to you by BNP Paribas Fortis and in particular, if relevant, the KID (key information document), as foreseen by the Regulation (EU) 1286/2014 of 26 November 2014 (PRIIPS) (either on the link https://kidpriips.bnpparibasfortis.be/en/ or on the link received per mail ahead of the trade, as the case may be) and to consult information on Costs and Charges of the product and related services by clicking on the link https://kidpriips.bnpparibasfortis.be/ before the conclusion of any transaction.

Part A of this Product Risk Book contains the basic principles related to the Global Markets Products (cash and derivative instruments, description of risks, difference between investment and risk management). Part B describes the characteristics related to Global Markets Products.

This Product Risk Book does not constitute investment advice (nor any other advice of whatever nature) and is not intended as a personal recommendation to invest in the Global Markets Products. Before making an investment decision, any client should seek appropriate professional advice.

For further general information, please contact your relationship manager or any relevant BNP Paribas Fortis product specialist.

Contents

A. Basic principles

A.1. Cash vs. Derivatives

A.1.1. Cash Instruments

Cash instruments are financial instruments that imply a cash (or cash alike) transfer of a notional amount. Typical examples are spot transactions in currencies, loans, deposits, stocks and bonds.

A.1.2. Derivative Instruments

Description
A derivative is a financial instrument whose price is dependent upon or derived from one (or more) underlying assets. The derivative itself is merely a contract between two or more parties. Its value is determined by fluctuations in the underlying asset. The most common underlying assets include stocks, bonds, commodities, currencies, interest rates and market indices.

There are many different types of derivatives that can be used for risk management.

Derivatives can either be traded over-the-counter (OTC) or on an exchange.

OTC derivatives constitute the greater proportion of derivatives and can be tailored to the client needs. Meanwhile, derivatives traded on exchanges are standardized and more heavily regulated.

OTC derivatives generally have greater counterparty risk than standardized derivatives. In the case of Over-The-Counter (OTC) derivatives, your counterparty will be the bank, whereas listed derivatives are traded on an exchange with the latter as your counterparty (and the bank as your broker).

Some derivatives are optional instruments (call, put, cap and floor) and in this case, it is worth mentioning that the seller of options is exposed to unlimited losses as he/she has an obligation towards the buyer. The seller receives a premium for that from the buyer. The buyer of options pays a premium to obtain a right and his/her loss is limited to the premium.

Basic components
Some of the most common basic components are:

a. Call
An option contract giving the owner the right (but not the obligation) to buy a specified amount of an underlying at a specified price during/at a predetermined period or moment. To obtain this right, the buyer needs to pay a premium to the seller.

b. Put
An option contract giving the owner the right (but not the obligation) to sell a specified amount of an underlying at a specified price during/at a predetermined period or moment. To obtain this right, the buyer needs to pay a premium to the seller.

c. Swap
A swap is a contract between two parties to exchange cash flows related to the underlying financial assets during a predetermined period.

d. Cap
An option contract giving the owner the right (but not the obligation) to benefit from a maximum interest rate or price level against payment of a premium. To obtain this right, the buyer needs to pay a premium to the seller.

e. Floor

An option contract giving the owner the right (but not the obligation) to benefit from a minimum interest rate or price level against payment of a premium. To obtain this right, the buyer needs to pay a premium to the seller.

f. Forward / Outright

A contract between two parties to buy or sell a financial instrument e.g. a stock, commodity, currency ... at a specific future date and at a specific price or level.

A non-deliverable forward (NDF) is a special type of forward where there is only cash settlement of the difference between the NDF forward price and the fixing of the reference price. NDF is intended to risk manage exposure to foreign currencies that are not internationally traded or whose trade is limited or legally restricted in the domestic market.

g. Future

A standardized, transferable, exchange-traded contract that requires delivery of a commodity, bond, currency, stock index ... at a specified price, on a specified future date. Futures convey an obligation to buy or sell. Futures contracts are forward contracts, meaning they represent a pledge to make a certain transaction at a future date. The exchange of assets occurs on the date specified in the contract. Futures are distinguished from generic forward contracts in that they contain standardized terms, are guaranteed by clearinghouses, are regulated by overseeing agencies and are traded on an exchange.

h. Warrant

A warrant is an option (call or put) that is usually issued by a company or a financial institution and in some case traded on an exchange. The underlying is usually a company's stock, an index or a commodity.

Features and triggers

Options with features or triggers are often referred to as exotic options. Some of the most common features and triggers are:

a. Knock-out / Reverse Knock-out

A knock-out option contract ceases (temporarily or definitively) to function as a normal option ("knocks out") once a certain price level is reached during a certain period or on a given date.

Reverse Knock Out: Option is in the money when the event occurs.

b. Knock-In / Reverse Knock-In

A latent option contract that begins (temporarily or definitively) to function as a normal option ("knocks in") only once a certain price level is reached during a certain period or on a given date.

Reverse Knock In: Option is in the money when the event occurs.

c. Azian Option

An Asian option is an option whose payoff is based on the average value of an underlying during a specific period.

d. Switch

A Switch feature gives to the holder of an option the right to switch one contract for another having identical details, but with longer expiry.

e. Options exercise style

Options are exercised on banking days, never on holidays or weekends. There are 3 ways or 'styles' to exercise an option:

- European style: the holder/buyer of the option can exercise the option on one specific date in the future (= the exercise date).
- American style: the holder/buyer of the option can exercise the option on any date during the life time of the option (= until expiry date).
- Bermudan style: the holder/buyer of the option can exercise the option on a number of specific dates in the future.

Specific characteristics of derivatives

Derivatives have characteristics, which can be different from the underlying instruments. Dealing in derivatives therefore needs special attention.

- Derivatives have a maturity date and especially the optional instruments could become worthless.
- The value of a derivative can move exponentially vis-à-vis the value of the underlying. This is called the leverage effect. A price movement of 3% of the underlying could mean for example a 30% value increase/ decrease of the derivative instrument.
- A derivative construction is a combination of basic components, features and triggers in order to create a certain pay-off pattern. The value of this construction could therefore move a) with a higher exponential leverage and b) in the opposite direction vis-à-vis the underlying.

A.2. Definition of different types of risks

Below you can find a list of the most common risks related to financial transactions.

With respect to products and clients falling under the scope of Regulation (EU) No 1286/2014 (PRIIPS), the risk shall be summarised by the SRI (Summary Risk Indicator) expressed on a 1 to 7 scale.

A.2.1. Main risks

a. Market Risks

The risk that a change in the market price of a financial instrument will negatively affect the client's financial performance.

- **Foreign Exchange Risk:** the risk that the change of the value of one currency versus (an)other currenc(y)ies will negatively affect the client's financial performance.
- **Interest Rate Risk:** the risk that interest rate movements will negatively affect the client's financial performance.
- **Commodity & Energy Price Risk:** the risk that the change of the value of the commodity or energy related financial instrument will negatively affect the client's financial performance.
- **Equity Price Risk:** the risk that the change of the value of (a) stock(s) will negatively affect the client's financial performance.

Each financial instrument has its own price sensitivity and this is often expressed in terms of volatility. Volatility is the relative rate at which the price of a financial instrument moves up and down and it is found by calculating the annualized standard deviation of daily changes in price. Higher volatility means substantial changes and/or in shorter time interval changes in the market price, whereas lower volatility would mean that the market price does not change dramatically and the changes happen in a stable pace over a period.

b. Liquidity Risks

The risk from the lack of marketability of a financial instrument that cannot be bought or sold in due time.

c. Counterparty Risks

Het risico dat de tegenpartij of de emittent haar/zijn verplichtingen niet kan of wil nakomen. Bijvoorbeeld:

- **Settlement Default risk:** the risk that one party fails to deliver the terms of a contract with another party at the time of settlement. Settlement risk can be the risk associated with default at settlement and any timing differences in settlement between the two parties.
- **Credit Default risk:** the risk that an issuer of debt cannot meet its future debt obligations.

  In case the issuer or the counterparty to the client's contract (hereunder the "Entity") would be failing or likely to fail, it can occur that you (as investor or counterparty to the "Entity") will not be able to recuperate partially or completely the amount that the "Entity" owes you in respect of the financial instrument. It is clear that in this hypothesis it could be possible that the amount that you would receive could be significantly lower than the amount due for the financial instrument and could even be equal to zero.

  Bail-in: In case the issuer or the contract counterparty to the client is a bank, the credit risk is as follows:

  In case the Entity would be failing or likely to fail, the legal provisions on the recovery and resolution of credit institutions would apply and the "Entity" could even be declared bankrupt. Consequently, the client runs the risk for the "Entity" not to fulfil its contractual obligations and thus you may not receive the amount(s) owed by the "Entity" under the financial instrument considered. Most financial instruments are not protected by the Financial Services Compensation Scheme or any other investor compensation or guarantee scheme.

  It should be pointed out that if the "Entity" is approved as credit institution in Belgium, it is subject to the banking resolution regime introduced by the European Directive 2014/59/UE of 15 March 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms. This Directive grants, among others, the resolution authorities the

power to change the main conditions of the financial instrument, to reduce the amounts that a bank may owe in respect of the down payment or the amounts that may be owed by such bank in respect of the deposit of capital securities, including up to zero.

It can occur that you will not be able to recuperate partially or completely the amount that the "Entity" owes you in respect of the financial instrument, or it can occur that, if the "Entity" is approved as credit institution in Belgium, you will receive any other financial instrument that has been issued by the "Entity" (or another entity) instead of the amount due of the financial instrument. It is clear that in this hypothesis it could be possible that the amount that you would receive could be significantly lower than the amount due for the financial instrument.

A.2.2. Other types of risks to be considered

a. Political Risk:
The risk of a negative financial impact related to changes in a country's political structure or policies, such as tax laws (e.g. gross up), tariffs, expropriation of assets or restriction in repatriation of profits.

b. Force Majeure:
These are risks or circumstances beyond one's control, such as, but not limited to earthquakes, floods, Acts of God, terrorism, riots, war, but also a change in national or international financial, political, or economic conditions or currency exchange rates or exchange controls likely to prejudice materially the success of a transaction and/or that renders impossible to maintain the financial instrument and may force the Issuer to early redeem the investment instrument at market price.

c. Operational Risk:
The risk associated with the potential for systems, human or procedure failure.

d. Reinvestment Risk:
The risk that the rate of return of a reinvestment in a financial asset at current market conditions is lower than the one of the preceding investment (also applicable for risk management).

e. Inflation Risk:
The risk that inflation has a negative financial impact on the client's financial performance.

f. Regulatory / Legal Risk:
The risk the changes in laws and regulations have a negative financial impact on the client's financial performance.

g. Fraud:
The risk that misrepresentation or concealment of information with the intention to mislead or deceive leads to a negative financial impact on the transaction's expected financial performance.

h. Reference rate:
Reference rates and indices (Benchmarks), such as the London Interbank Offered Rate (LIBOR), are commonly used to determine amounts payable under various financial contracts and financial instruments (including derivatives, loans and notes) as well as their value.

Clients and counterparties that have entered into financial contracts or purchased financial instruments that reference a Benchmark (or may in the future enter into or purchase such financial contracts or instruments) should therefore:

a) be aware of possible changes in, or disruption to, such Benchmarks or the disappearance of such Benchmarks and
b) understand the potential legal, regulatory and financial impact on those financial contracts or financial instruments.

A.3. Investments vs. Risk management

Although the financial products used for investments or risk management might be the same, it is essential to understand the difference between their uses as it is directly linked to your risk as a client.

A.3.1. Investments

Description
An investment in a financial product is the purchase of a financial instrument with different possible objectives that differ depending on the investment: capital growth, return greater than what it could be with a deposit account, green & social investment... This usually implies a transfer of capital (money or cash alike) in order to obtain the financial instrument.

As the value of a financial instrument varies over time, the risk of a partial or complete loss of the initial capital or not obtaining a positive return is possible, especially in case of sale before maturity or if the financial instrument has no capital or return protection feature. To make a proper assessment of this risk it is essential to understand its components and other types of risk.

Types of risks related to Investments
Most common types of risk related to investment instruments are:

a. Market Risk:
The Market Risks are as described under section A2 and as further detailed, as the case may be, in the relevant product section.

b. Liquidity Risk:
The Liquidity Risks are as described under section A2 and as further detailed, as the case may be, in the relevant product section.

c. Counterparty Risk:
The Counterparty Risks are as described under section A2 and as further detailed, as the case may be, in the relevant product section.

d. Other types of risks:
The other type of risks are as described under section A2 and as further detailed, as the case may be, in the relevant product section.

A.3.2. Risk management

Description
Risk management is a technique used to mitigate or offset financial risks that might arise from the financial or commercial activities of clients. These financial risks may be present both on the liability as on the asset side and can affect the financial performance of clients. This technique makes use of a broad range of financial products, especially derivative financial instruments. The so-called risk managed item can be an asset, liability, a firm commitment, a highly probable forecast transaction, a net investment in a (foreign) operation ...

The most common types of risk that are managed are foreign exchange risk, interest rate risk, commodity and energy price risk, equity price risk and credit risk, and the other types of risks described under A.2.2 are also to be considered.

The client has the possibility to manage (fully or partially / macro risk management, non-perfect micro risk management or perfect risk management) the identified financial risks; or not to manage those risks at all and be fully exposed. The decision whether or not to manage financial risks is up to the client (although sometimes the bank requires that a certain portion of the position is risk managed in order to obtain the underlying) and related to the client's risk profile.

Only the client is fully aware of his/her financial situation and risks, therefore the bank will rely upon the instructions of the client regarding the purpose of the financial transaction (risk management or investment). In order to advise the client correctly, the client is kindly requested to notify the bank explicitly if a transaction is meant for investment purposes; in all other cases the bank will, given the nature of the relationship, assume the transaction will be done for risk management purposes.

Accounting
Without wanting to explain how or when to use hedge accounting, reference is made to "IFRS 9 Financial Instruments" that is the International Financial Reporting Standards that replaces IAS 39 as from January 1st, 2018. IFRS 9 relaxes the conditions for obtaining hedge accounting by suppressing the narrow 80% - 125% effectiveness test requirement. IFRS 9 introduces also a more favorable treatment for the use of options as risk management instruments.

The application of hedge accounting allows to reflect the economic objective of the hedge into P&L. Without hedge accounting, derivative hedges are considered as speculative under IFRS and accounted for at fair value through P&L.

The main criteria for obtention of hedge accounting under IFRS 9 are as follows.

- The risk management relationship must be formally designated and documented at the inception of the hedge. The documentation should specify:
  - the risk management objective and strategy;
  - the hedged item;
  - the risk management instrument;
  - the nature of risk being hedged; and
  - how management will assess hedge effectiveness, including giving a description of sources of expected ineffectiveness and how the hedge ratio was determined.
- In addition, IFRS 9 introduces three hedge effectiveness requirements:
  - an economic relationship exists between the hedged item and risk management instrument;
  - the effect of credit risk does not dominate the value changes that result from the economic relationship; and
  - the hedge ratio is the same as that resulting from the quantity of the hedged item that the entity actually hedges and the quantity of the risk management instrument that the entity actually uses to hedge that quantity of hedged item.

The effectiveness of the hedge must be tested regularly throughout its life. In the case of a hedge of a forecast transaction, the forecast transaction must be 'highly probable'.

The amount of ineffectiveness recorded in P&L is determined based on a comparison of the cumulative changes in fair value of the risk management instrument with those of the hedged item.

We recommend checking the detailed IFRS or local GAAP requirements with your advisors or accountants prior to entering into derivative risk management transactions.

Possibilities of risk management

a. Via underlying

Risk management uses mainly derivative financial instruments.

Examples of risk management via cash underlying are the spot purchase of foreign currency to manage the foreign exchange risk of a scheduled purchase of imported goods or the management of the interest and foreign exchange risk of a foreign investment through a borrowing in this foreign currency.

b. Via derivatives on the underlying

Most important derivative products constructions used in risk management are:

- With the client's payment of a net premium;
- With the client's payment of a reduced net premium; or
- No net premium paid by the client (so-called "Zero-net premium construction")

Types of Risks related to Risk management

Risk management is used to mitigate or offset financial risks and the risk management degree will relate to the clients risk profile.

In risk management with financial derivatives, these are the main risks to be considered:

a. Market Risks:

The Market Risks are as described under section A2 and as further detailed, as the case may be in the relevant product section.

It is to be noted that, although derivatives in risk management are used to offset or reduce the Market Risks, note that cancelling or unwinding a risk management derivative before the expiry is done at market conditions. This means that there might be a risk that the marked-to market of the value of the derivative(s) has moved unfavorably for the client.

b. Liquidity Risks:

The Liquidity Risks are as described under section A2 and as further detailed, as the case may be, in the relevant product section.

c. Counterparty Risks:

The Counterparty Risks are as described under section A2 and as further detailed, as the case may be, in the relevant product section.

d. Other types of risks:

The other type of risks are as described under section A2 and as further detailed, as the case may be, in the relevant product section.

Other risk related issues

An over-the-counter (OTC) contract (as defined under A.1.2 above) is considered to have a higher degree of risk than those traded on an exchange.

A financial derivatives construction could minimize as well as add risks; the latter case will be an important factor to determine the risk profile of the product concerned vis-à-vis the risk management perspective. Elements that could add risks are e.g.

- A combination of financial derivatives resulting in a net sold option or right. A net sold option leads to unlimited price or market risk.
- Barrier options with the possibility of reducing the effectiveness of the initial risk management technique (e.g. to construct "zero-net premium constructions").
- When a construction results in the fact that the client does not know in advance the maximum or minimum price, interest rate and other variables.

A.4. Types of Asset Classes

Products and/or financial assets can be categorized into the following asset classes. Part B mentions the asset class for each product if applicable.

- Money Market Instruments
- Bonds
- Securitized Debt
- Equities
- UCITS (Undertakings for Collective Investment in Transferable Securities)
- Complex Products
  - Interest rate Derivatives
  - Foreign Exchange Derivatives (also called currency derivatives)]
  - Inflation Linked Derivative
  - Equity Derivatives
  - Other Derivatives
  - Derivative Products for the transfer of credit risk
  - Structured Products (Combination of 2 or more different asset classes)

Each Asset class hereabove can be categorized as green, ESG, CSR or any other sustainable related categorization Any such categorization does not warranty the specific return or efficiency of the products and/or financial assets.

B. Products (description, advantages, disadvantages and risks)

B.1. Foreign Exchange Market Instruments

B.1.1. Foreign Exchange Spot

Asset Class: Foreign Exchange Product

Description
A foreign exchange spot transaction is a contract between two parties that agree to exchange an amount in one currency against another currency at a certain exchange rate. The settlement takes place two working days after the trade date.

Advantages, disadvantages and risks

Advantages

- The foreign exchange market is a very liquid and transparent market.
- Many currencies are possible.
- It is appropriate to manage the exchange rate risk from the moment it occurs.
- The foreign exchange spot transaction is frequently used in different trading activities.

Disadvantages

- The foreign exchange spot transaction is less appropriate to manage the risk of future cash flows, taking into account that the settlement takes place just two working days after the transaction and therefore prompt cash funding would be needed. For that reason forwards are more appropriate.

Risks

- **Market risk:** The foreign exchange risk is mainly dependent on the volatility of the currency pair.
- **Liquidity risk:** The liquidity risk is limited for the most important currencies (the "majors") such as EUR, USD, JPY, GBP … but can be higher for currencies of emerging markets.
- **Counterparty risk:** For foreign exchange spot transactions, there is mainly a settlement default risk.
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.1.2. Foreign Exchange Forward / Outright

Asset Class: Foreign Exchange Derivative

Description

A foreign exchange forward/outright is a binding contract between two parties which agree to exchange an amount in one currency for an amount in another currency at a predetermined exchange rate. The settlement takes place on a later date (more than two working days after the trade date).

Most common periods are: 1, 2, 3, 6 and 12 months, but periods exceeding one year or broken dates are also possible. Foreign Exchange forwards are tailor-made agreements between the bank and another party.

They are not traded on an exchange and therefore are considered as Over-The-Counter (OTC) products.

Advantages, disadvantages and risks

Advantages

- The foreign exchange market is a very liquid and transparent market.
- Many currencies are possible.
- Foreign exchange forwards fix an exchange rate on a later, but known date.
- It is a simple and commonly used product.
- It is a tailor-made product.

Disadvantages

- The most important disadvantage can be the fact that the exchange rate is fixed and that one can therefore not step back and benefit from positive exchange rate movements.
- The due date and the amount are fixed which makes the transaction less flexible.
- It is an Over-The-Counter (OTC) product that cannot be traded on an exchange.

Risks (to read in conjunction with section A2 above)

- **Market risks:** The foreign exchange risk is mainly dependent on the volatility of the currency pair.
- **Liquidity risk:** The liquidity risk is limited for the most important currencies (the "majors") such as EUR, USD, JPY, GBP … but can be higher for currencies of emerging markets.
- **Counterparty risk:** For the foreign exchange forward, the risk is that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.1.3. Foreign Exchange Flexi Forward / Outright

Asset Class: Foreign Exchange Derivative

Description
A foreign exchange Flexi forward/outright is a binding contract between two parties which agree to exchange an amount in one currency for an amount in another currency at a predetermined exchange rate. The settlement date is flexible and takes place at the latest on a given later date (more than two working days after the trade date).

Most common periods are: 1, 2, 3, 6 and 12 months, but periods exceeding one year or broken dates are also possible. Foreign Exchange flexi forwards are tailor-made agreements between the bank and another party.

They are not traded on an exchange and therefore are considered as Over-The-Counter (OTC) products.

Advantages, disadvantages and risks

Advantages

- The foreign exchange market is a very liquid and transparent market.
- Many currencies are possible.
- Foreign exchange flexi forwards fix an exchange rate and gives the flexibility of the exercise date(s) on the latest on a later, but known date.
- It is a simple and commonly used product.
- It is a tailor-made product.

Disadvantages

- The most important disadvantage can be the fact that the exchange rate is fixed and that one can therefore not step back and benefit from positive exchange rate movements.
- The exchange rate is less favorable than that of the foreign exchange forward
- The amount is fixed which makes the transaction less flexible.
- It is an Over-The-Counter (OTC) product that cannot be traded on an exchange.

Risks (to read in conjunction with section A2 above)

- **Market risks:** The foreign exchange risk is mainly dependent on the volatility of the currency pair.
- **Liquidity risk:** The liquidity risk is limited for the most important currencies (the "majors") such as EUR, USD, JPY, GBP … but can be higher for currencies of emerging markets.
- **Counterparty risk:** For the flexi forward, the risk is that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.1.4. Foreign Exchange Options (Call and Put)

Asset Class: Foreign Exchange Derivative

Description
A foreign exchange call option gives the holder or the buyer the right (and not the obligation) during a certain period or on an expiry date to buy a certain amount in one currency against another currency at a predetermined exchange rate (strike price). The counterparty, the seller of the call, is obliged to deliver the agreed amount against the strike price if the holder wants to exercise his/her right. The buyer of the call pays to the seller a premium for the acquired right.

A foreign exchange put option gives the holder or the buyer the right (and not the obligation) during a certain period or on an expiry date to sell a certain amount in one currency against another at a predetermined exchange rate (strike price). The counterparty, the seller of the put, is obliged to buy the agreed amount against the strike price if the holder of the put option wants to exercise his/her right. The buyer of the put pays a premium to the seller for acquiring this right.

The buyer/holder of the option can exercise this right for a certain period (American Option) or on the date of expiry (European Option). The price of an option is a premium and depends on volatility, strike price versus market price, interest rates, time periods, currency...

European options can be exercised (redeemed) only on the expiry date. American options can be exercised (redeemed) at any time before the expiry.

Depending on the strike price in comparison to the price of the underlying asset an option can be:

- At the money: if the strike price is equal to the price of the underlying asset or very close to it.
- Out of the money: if the strike price is less advantageous than the price of the underlying asset.
- In the money: if the strike price is more advantageous than the price of the underlying asset.

Leverage effect
By buying an option e.g. a call option, one can gain the same profit as by buying the underlying itself, but by investing much less money since the value of the derivative is only a fraction of the value of the underlying.

For better understanding let's simplify: suppose that a buyer has a right to buy an underlying for a price of 100. In case the underlying quotes at 120 then the obtained right is worth minimum 20 and if the underlying quotes 130 the right is worth at least 30. When the underlying rises from 120 to 130 that is a growth of 8.3%. But, if the price of the option rises from 20 to 30 that is a growth of 50%. This is a leverage effect. Naturally this mechanism functions in both directions.

Fixed duration
Another essential characteristic of derivatives is that they have an expiry date. That means that when the expected evolution of the underlying asset does not take place before the expiry the derivative loses its full value.

Foreign Exchange options may or may not embed triggers and features, such as Knock Out/Reverse Knock Out or Knock In/Reverse Knock In.

Advantages, disadvantages and risks

Advantages

- It is used to manage an exchange rate risk.
- It is more flexible than a forward because since one buys a right, he/she can decide to exercise the right or not. In case of a positive rate evolution one can have unlimited benefit.
- It allows very dynamic management.
- Due to the leverage effect the buyer can with a reasonably small amount benefit in abundance from:
  - Rising price of the underlying asset (when buying a call); or
  - Dropping price of the underlying (when buying a put).
- The potential profit is in principle unlimited for the buyer of a call as well as for the buyer of a put.
- The potential loss is limited to the fully paid premium for the buyer of a call as well as for the buyer of a put.

Disadvantages

- A premium has to be paid by the buyer of an option, but can prove to be a burden for clients wanting to manage their risk.
- The seller of a foreign exchange option (call or put) receives a premium and becomes obliged to sell if the call is to be exercised and to buy if the put is to be exercised.
- This is an Over-The-Counter product that cannot be traded on an exchange.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The foreign exchange risk mainly is dependent on the volatility of the currency pair.
  The buyer of an option (call or put) can maximum lose the paid premium.
  The seller of an option has to fulfil his/her obligations if the holder of the option wants to exercise his/her right.
  The seller's loss is in principle unlimited.
- **Liquidity risk:** The liquidity risk is limited for the most important currencies ('the majors') like EUR, USD, JPY, GBP … but can be higher for currencies of emerging markets.
- **Counterparty risk:** The risk that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risks).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.1.5. Foreign exchange swap

Asset Class: Foreign Exchange Derivative

Description
The English term swap means to exchange. A foreign exchange swap is a combination of a foreign exchange spot and a forward in the opposite direction. These two transactions are simultaneously concluded with the same counterparty. It is an agreement between the bank and the client whereby the interest and the notional amount in different currencies are exchanged. This is typically an Over-The-Counter product.

Advantages, disadvantages and risks

Advantages

- The exchange market is very liquid and transparent.
- Many currencies are possible. Swaps are possible among any exchangeable currencies.
- No premium has to be paid.
- Foreign exchange swaps are used to manage treasuries in different currencies. A temporarily treasury surplus in one currency can be exchanged for a currency for which there is a shortage. In this way one avoids concluding a loan in a currency for which there is a temporarily shortage.
- Foreign exchange swaps can be used to prolong or advance an earlier concluded forward. One has to take into account the modified interest and exchange rate circumstances and its influence on the cash flows.

Disadvantages

- It is a fixed and definitive obligation concluded between two parties and does not have an optional character.
- It is an Over-The-Counter product that cannot be traded on an exchange.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The foreign exchange risk is mainly dependent on the interest rate risks in both currencies and spot rate of the currency pair.
- **Liquidity risk** is limited for the most important currencies ('the majors') like EUR, USD, JPY, GBP … but can be higher for currencies of emerging markets.
- **Counterparty risk:** In the case of a currency swap it is the risk is that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.1.6. Futures

Asset Class: Foreign Exchange Derivative

Description
Futures are standardized contracts that are traded on an exchange. It is an obligatory contract for buying/delivering a precisely defined amount in foreign currency against a fixed exchange rate on a predetermined future date (or in another underlying against a fixed price on a predetermined future date). The payment occurs only at the delivery of the underlying asset. The futures can be considered as standardized forwards.

As opposed to options that give the right to buy or sell, futures are obligatory (to buy or to sell at a certain point in time). A future contract is not about the right to buy or sell a given quantity of an asset, but about buying or selling the asset itself. When the contract expires an actual delivery must take place. In practice, however, it seldom takes place (cash settlement).

Originally this contract was only associated to goods (commodity futures) like wheat, coffee, cotton, crude oil… It was used by traders to protect themselves against possible unfavorable price swings.

The liquidity of a future is steered by strict rules (the scope of the contract, duration, settlement procedures). A margin system on contracts is imposed to the buyers and the sellers serving as a protection against potential loss.

For every transaction (buying or selling) each party has to pay an amount as a protection, in cash or in securities, expressed as a percentage of the value of the bought or sold contracts. At the end of every transaction day contracts are re-evaluated and the account of the investor becomes debited or credited.

Positions could be closed in three manners:

- By taking an opposite position, but with same size before the due date (buying if you have sold and selling if you have bought). Most of the futures are closed like this.
- By a cash settlement on the due date, or
- By rolling the position before the due date: this means e.g. that the buyer of a certain index future sells it before the due date and at the same time against a predetermined price buys a new position with an upcoming due date (calendar spread).

Advantages, disadvantages and risks

Advantages

- The fact that futures are traded on an organized market means that there is greater liquidity than in the case of forwards.
- Futures can be simple instruments to protect the value of an underlying asset.

Disadvantages

- The underlying asset does not always entirely correspond to the amount, dates, … that one wants to risk manage. Therefore it is a less flexible and less tailor-made contract.
- The daily adjusted margin scheme causes a heavy administrative burden.

Risks (to read in conjunction with section A2 above)

- **Market risk:** the foreign exchange risks are mainly dependent on the interest rate risks in both currencies and spot rate of the currency pair. In principle, the loss can be unlimited for an investor mistaken in his/her expectations.
- **The liquidity risk** is very limited. Futures are traded on an organized market.
- **The counterparty risk** is low since the counterparty is an exchange. The insolvency risk is limited due to the margin scheme.
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, reference rate.

  All types of risks are as defined under chapter A2 “Definition of different types of risks”.

B.1.7. Currency option structures

Asset Class: Foreign Exchange Derivative

Description
A currency option structure is a combination of currency options, which may or may not embed "triggers" and "features" that aim to generate a particular return pattern or to create a tailor-made risk management structure.

Triggers and features imply certain (non-exhaustive) characteristics of options, such as Knock Out/Reverse Knock Out or Knock In/ Reverse Knock In.

Advantages, disadvantages and risks

Advantages

- Can create a tailor-made solution for a specific problem or goal.
- Provides the possibility of protection against a foreign exchange risk.
- Greater flexibility than a forward contract and allows very dynamic managing.
- These structures in certain cases generate better pay-off than a forward contract.
- The exchange market is very liquid and transparent.
- Many currencies are possible.
- For some structures, the client does not pay a net premium (zero-premium construction).

Disadvantages

- Due, a.o. to the specific structure, the value of the option structure does not necessary follow the same evolution as the one of the underlying currency pair.
- In certain market circumstances a lack of liquidity can occur.
- These are Over-The-Counter products that cannot be traded on an exchange.
- Very often these structures can be very complex.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The foreign exchange risk is mainly dependent on the volatility of the currency pair. The value of a currency option structure can move in another direction than the one of the underlying currency pair. That means that the value can sometimes exponentially decrease or increase in respect to the evolution of the underlying currency pair or it can even move in the opposite direction of the value of the underlying.
  - The risk of a lack of return which depends on the characteristics of each construction. If there is a return or a pay-off foreseen the effective payment is depending on the evolution of the currency pair.
  - Structures that result in a situation where the client has sold (a) net option(s) can lead to indefinite loss.
  - Features that occur in a currency option structures should be very carefully assessed not to create, under certain circumstances, additional risks.
  - The maximum loss of a buyer of an option (call or put) is limited to the paid premium.
  - The seller of an option has to meet his/her obligations if the buyer/holder of an option wants to exercise his/her right. The loss is in principle unlimited.
  - The risks related to these currency structures enclose the risks of each separate component.
- **Liquidity risk:** There is no organized secondary market to trade these products. They are Over-The-Counter products. The liquidity risk is limited for the most important currencies (the 'majors') like EUR, USD, JPY, GBP … , but can be higher for currencies of emerging markets.
- **Counterparty risk:** The risk that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

Most common currency option structures

- Vanilla FX forward
- Flexi term
- Non deliverable forward
- FX swap
- Call
- Put
- Cylinder
- Participating forward
- KI forward
- KI Cylinder
- (EKI) improved forward
- (AKI) improved forward
- Bonus Forward
- Asymmetric forward
- Asymmetric cylinder
- Asymmetric KI forward
- Asymmetric KI cylinder
- Asymmetric (EKI) improved forward
- Asymmetric (AKI) improved forward

B.2. Money Market products or similar

B.2.1. Term Deposit

Asset Class: Money Market product

Description
A term deposit is a short-term investment where the client lends funds (a cash amount) to the bank for a predetermined period in exchange for a certain remuneration (interest). All modalities are agreed on the moment the deal is closed. Term deposits are possible in Euro or in other currencies.

Periods generally range from 1 day to 12 months, but longer periods are also possible. The interest rate is based on actual market conditions and varies according to the currency, period and base. The agreed interest rate remains applicable until expiry, also in case of interest rate changes during the life span of the investment.

Upon earlier agreement, term deposits can be automatically rolled over on the expiry date. The same modalities (period, currency, (capitalized) amount, base) will then apply, except for the interest rate.

Advantages, disadvantages and risks

Advantages

- The return of a term deposit is certain and known in advance (expressed in the original currency).
- There is a high flexibility in possible periods; the client can invest his/her money for exactly the desired period.

Disadvantages

- In principle, it is not allowed to withdraw a term deposit before its maturity date.
- The investor does not benefit from a rise in interest rates during the life span of his/her term deposit.

Risks (to read in conjunction with section A2 above)

- **Market risk:** the market risk is mainly a short-term interest rate risk. If the client wants to withdraw his/her capital before the maturity date, he/she is exposed to the risk of receiving a lower return. The foreign exchange risk depends on the currency of the investment.
- **Liquidity risk:** The liquidity is very low: Cancellation before expiry is possible but might lead to a reduced return.
- **Counterparty/credit risk:** For the term deposit, it is the credit default risk. The insolvency risk of the debtor is partially reduced since the term deposit is opened with a credit institution and rigorously supervised by national supervisory authorities. In case of a bankruptcy, most of the countries have an established deposit protection system. Under EU rules, the deposit guarantee schemes only protect depositors' savings by guaranteeing deposits of up to €100,000.
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.2.2. Treasury Bills

Asset Class: Money market instrument

Description
A Treasury bill is a short-term debt instrument issued by a government with a maturity of less than 1 year. Treasury bills are usually issued for 3, 6 and 12 months intended for professional investors.

The placement of Treasury Bills is usually done via an auction process reserved to Primary Dealers and Recognized Dealers who will then ensure the distribution, liquidity and market making of this financial product.

Advantages, disadvantages and risks

Advantages

- Treasury bills are liquid instruments. Primary dealers are providing the market making.
- The quality of the issuers of Treasury Bills is usually high, though it happened in the past that some issuers defaulted on their payment.

Disadvantages

- Treasury bills have relatively low returns compared to other money market instruments since there is a low credit risk involved.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The market risk is mainly a short-term interest rate risk. The foreign exchange risk depends on the currency of the investment.
- **Liquidity risk:** The liquidity risk for treasury bills is very low. However, certain issuances can be very illiquid
- **Counterparty risk:** The risk that the issuer and the counterparty cannot/will not meet their obligations (settlement default risk and credit default risk). The bank plays only the role of an intermediary.
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 “Definition of different types of risks”.

B.2.3. Repurchase Agreement (Repo)

Asset Class: Other Derivatives

Description
A repurchase agreement is a cash sale of a security (mostly government bonds, but also ordinary shares or bonds of certain quality) with the agreement to buy it back on a future date. Economically it can be considered as secured loan or cash placement, with the buyer of the security (i.e. lender of cash or investor) receiving securities as a collateral to protect against default. The reverse transaction is called a reverse repo. The investor receives an interest: the repo rate.

The cash and the security do not necessarily have to be expressed in the same currency but could also be cross-currency. Repo transactions are usually bilateral but could also be concluded between three parties. The third party takes care of the settlement and can be a custodian bank as well as an international clearing-house. Repo's are often used by central banks to steer monetary policy.

Advantages, disadvantages and risks

Advantages

- For the cash borrower (security seller) it means:
  - Often lower funding costs since the loan has a collateral (unless for instance if the lender of the cash is ready to pay an interest to get the securities because he needs those securities)
  - Can be used to temporary "create" cash while not having to sell the security
- For the lender of cash (security buyer) there is less risk due to the collateral.

Disadvantages

- The return is usually lower than in the case of a term deposit or commercial paper because of the lower risk (unless for instance if the lender of the cash is ready to pay an interest to get the bonds because he needs those bonds).

Risks (to read in conjunction with section A2 above)

- **Market risk:** The market risk is mainly a short-term interest rate risk. The foreign exchange risk depends on the currency of the investment.
- **Liquidity risk:** The liquidity risk will depend on the type of underlying security and the currency.
- **Counterparty risk:** The risk is very low because of the collateral. There is a settlement default risk as well as a credit default risk.
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.2.4. Money Market Derivatives

Derivatives are financial instruments whose characteristics and value are derived from another financial product on the market (the "underlying value"). That underlying value can be a stock, commodity, or in this context a reference interest rate. Derivatives can be traded on an exchange or between two parties, in latter case it is an 'Over-The-Counter' transaction.

Interest rate options provide the possibility to manage the risk of unfavorable movements of interest rates and the possibility to benefit from favorable movements. A Cap is the right on a maximum interest rate during a certain period. On the other hand, a Floor is the right on a minimum interest rate during a certain period. These options have a price: the premium. Such premium depends on volatility, strike price versus market price, interest rates, time periods, currency ...

Interest rate options are financial instruments that can be used for different purposes e.g. to manage the interest rate risk, for yield enhancement. An option is a contract between a buyer (the holder) and a seller (the writer).

Leverage effect
See part A.1.2. Derivatives Instruments - Specific characteristics of derivatives.

Fixed duration
See part B.1.4. Foreign exchange derivatives – Fixed duration.

B.2.4.1. Forward Rate Agreement (FRA)

Asset Class: Interest Rate Derivative

Description
A Forward Rate Agreement is a contract between two parties to fix an interest rate for a certain period in the future on a predetermined notional amount. There is no exchange of the notional amount. Only the discounted interest rate differential between the fixed rate of the FRA and the reference interest rate (mostly IBOR) is paid or received on the settlement date. The underlying periods of a FRA are standard to 1, 3, 6 or 12 months and the latest start date can be maximum one year in the future.

FRA's are used to manage the interest rate risk of financial assets and liabilities with a floating interest rate. It is typical Over- The-Counter (OTC) product.

Advantages, disadvantages and risks

Advantages

- Fixing the base interest rate today for a period in the future.
- No premium is to be paid to engage in an FRA.
- Management of a floating interest rate risk.
- There is no exchange of the notional amount.

Disadvantages

- The interest rate is irrevocably fixed, you cannot profit from a favorable interest rate movement.
- It is less appropriate to manage the floating interest rate risk for a longer period.
- Interest difference is paid/received at period start, whereas the interest difference is paid/received at period end in the underlying to risk manage.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The market risk is mainly a short term interest rate risk. If an FRA is expressed in a foreign currency, there is also a foreign exchange risk. Cancelling the contract is possible at the market conditions at that moment and with a possible negative financial impact.
- **Liquidity risk:** The liquidity risk is higher for OTC products than for short-term interest futures traded on an exchange.
- **Counterparty risk:** The risk that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.2.4.2. Cap and floor

Asset Class: Interest Rate Derivative

Description

Caps and floors are interest rate options, which give the buyer the right to a maximum interest rate (Cap) or to a minimum interest rate (Floor) during a certain predetermined period. The underlying amount can be fixed over the period or change according to a predetermined repayment schedule. The buyer pays a premium to the seller for this right. The risk for the buyer is limited to the premium, but unlimited for the seller. Caps and floors are used mainly as risk management instruments against floating interest rates.

Advantages, disadvantages and risks

Advantages

- Flexibility. The buyer decides whether to exercise the right or not. If the interest rate evolves positively then one can benefit from this evolution.
- Allowing a dynamic interest rate management.
- If the option is purchased for investment purposes: due to the leverage effect (see part A.), the buyer can benefit from:
  - Rising interest rates (when buying a Cap)
  - Dropping interest rates (when buying a Floor)
- If the option is purchased for risk management purposes: the buyer has managed the risk of:
  - Rising interest rates (when buying a Cap)
  - Dropping interest rates (when buying a Floor)
- The potential profit is theoretically unlimited for the buyer of a Cap as well as for the buyer of a Floor.
- The potential loss is limited to the premium for the buyer of Cap as well as for the buyer of a Floor.

Disadvantages

- A premium has to be paid by the buyer of an option (Cap or Floor), but can prove to be a burden for clients wanting to manage a risk.
- The seller of an option (Cap or Floor) receives a premium and becomes obliged to fulfil its obligations should the buyer wants to exercise his/her right.
- Over-The-Counter products that cannot be traded on an exchange.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The interest rate risk is dependent on the volatility of the short-term interest rates during the lifetime of the option. If the option is expressed in a foreign currency, there is also a foreign exchange risk. Cancelling the contract is possible at the market conditions at that moment and with a possible negative financial impact.
  - The buyer of the option (Cap and Floor) can at the most lose the paid premium.
  - The seller of the option must meet his/her obligations if the holder of the option wants to exercise his/her rights, his/her loss is in principle unlimited
- **Liquidity risk:** The liquidity risk is higher for Over-The-Counter (OTC) products than for short term interest futures traded on an exchange.
- **Counterparty risk:** The risk that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 “Definition of different types of risks”.

B.2.4.3. Interest Rate Swap (IRS)

Asset Class: Interest Rate Derivative

Description
An Interest Rate Swap is an agreement between two parties to exchange interest rate payments over an agreed period of time, based on a notional amount. Standard periods are from 1 to 10 years (longer terms are also possible). Possibilities to swap are floating/floating, floating/fixed and fixed/fixed interest payments. Only the interest rate payments are swapped, the notional amount does not change hands. The floating periods range from one day to one year and have EURIBOR, LIBOR or another IBOR (Interbank Offered Rate) as a reference interest rate. The IRS is a typical Over-The-Counter (OTC) product.

A cross currency swap is similar to an IRS, provided that the cash flows are expressed in different currencies and an exchange of the nominal amounts take place on the maturity date and/or on the value date.

Advantages, disadvantages and risks

Advantages

- Possibility to swap from one type of interest rate to another type of interest rate (from fixed to floating, from one floating to another floating ...), according to the needs.
- Possibility to adjust the interest payment modalities of a loan to changed market circumstances.
- Possibility to adjust the duration of assets and liabilities in the balance sheet.
- No premium needs to be paid to engage in an IRS.
- Flexible start dates and duration.
- Available in the most important currencies.

Disadvantages

- In case of swapping a floating interest rate for a fixed interest rate one cannot benefit from a potential fall of interest rates, and vice versa.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The interest rate risk is dependent on the short and long-term interest rates during the lifetime of the IRS. If the IRS is expressed in a foreign currency, there is also a foreign exchange risk. Cancelling the contract is possible at market conditions at that moment and with a possible negative financial impact.
- **Liquidity risk:** The liquidity risk is higher for Over-The-Counter (OTC) products than for short-term interest futures traded on an exchange.
- **Counterparty risk:** The risk that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 “Definition of different types of risks”.

B.2.4.4. Swaption

Asset Class: Interest Rate Derivative

Description
Coinciding with the development of the swap market, derivative instruments that combined the features of swaps and options emerged. One such instrument is the "swaption" (contraction of the words "swap" and "option").

Swaptions are flexible instruments used to manage interest rate risk. They grant their owner the right but not the obligation to enter into an Interest Rate Swap (IRS) in the future. Features of the swap are predetermined in the contract. The buyer of a swaption pays a premium.

There are two types of swaptions contracts:

- A payer swaption gives the owner of the swaption the right to enter into a swap where he pays the fixed leg and receives the floating leg.
- A receiver swaption gives the owner of the swaption the right to enter into a swap where he receives the fixed leg and pays the floating leg.

To some extent, swaptions are similar to forward swaps except that the swaption buyer has the option to enter into the swap on the effective date and not the obligation.

Advantages, disadvantages and risks

Advantages

- The buyer decides whether to exercise the right or not. If the interest rate evolves positively then he/she can benefit from this evolution.
- The potential profit is theoretically unlimited for the buyer of a swaption.
- The potential loss is limited to the premium for the buyer of a swaption.
- Management of an interest rate risk in a dynamic way.
- Available in the most important currencies.

Disadvantages

- A premium has to be paid by the buyer of a swaption, but can prove to be a burden for clients wanting to manage a risk. Like any other option, if the swaption is not exercised by maturity it expires worthless.
- The seller of a swaption receives a premium and becomes obliged to fulfill its obligations should the buyer want to exercise his right. The loss of the seller is in principle unlimited.
- Over-The-Counter (OTC) product that cannot be traded on an exchange.

Risks (to read in conjunction with section A2 above)

- **Market risk**: The interest rate risk is dependant on the short and long term interest rates and their volatility during the lifetime of the swaption. If the swaption is expressed in a foreign currency, there is also a foreign exchange risk. Cancelling the contract is possible at the market conditions at that moment and with a possible negative financial impact.
- **Liquidity risk:** The liquidity risk is higher for Over-The-Counter (OTC) products than for short term interest futures traded on an exchange.
- **Counterparty risk:** The risk that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.2.4.5. Inflation Swap

Asset Class: Inflation Linked Derivative

Description
An inflation swap is an over-the-counter contract between two counterparties, who agree to exchange inflation related cash flows over a certain period of time and based on a nominal amount.

In the majority of the cases, the cash flows of one party ("the fixed rate payer") are known in advance and the cash flows of the second party ("the floating rate payer") are unknown in the beginning of the contract. These unknown cash flows are function of the evolution of a specific reference inflation index or consumer price index (e.g. HICP, CPI, Health Index ...). The reference inflation rate represents the real observed variable inflation rate.

Inflation is the quantification of the general rise in the price of goods and services acquired by households. The inflation swap can either be used as a management of the risk of the fluctuation of inflation-linked liabilities or to fix today future inflation-linked revenues.

Advantages, disadvantages and risks

Advantages

- Possibility to swap from floating inflation rate to a fixed inflation rate or vice versa, according to the needs.
- No premium needs to be paid to engage in an inflation swap.
- Flexible start dates and duration.

Disadvantages

- In case of swapping a floating inflation rate to a fixed inflation rate, one cannot benefit from a potential fall of inflation rates, and vice versa.
- Inflation swaps refer to reference inflation rates or consumer price indices that can be revised afterwards. These revisions are not taken into account, which makes the reference inflation rates or consumer prices indices more like a good proxy of the real observed variable inflation rate.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The inflation rate risk is dependent on the economic conditions in a country, supply and demand, monetary policy, foreign exchange rate evolutions... If the inflation swap is expressed in a foreign currency, there is also a foreign exchange risk. Cancelling the contract is possible at market conditions at that moment and with a possible negative financial impact.
- **Counterparty risk:** The risk is that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risk).
- **Liquidity risk:** The liquidity risk is higher for Over-The-Counter (OTC) products than for futures traded on an exchange
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.2.4.6. Money Market Futures

Asset Class: Interest Rate Derivative

Description
Money market futures are standardized forward contracts traded on an exchange where an interest rate is fixed for a certain period in the future and on a fixed amount per contract. The settlement occurs at the start of this period but in practice, there is usually a cash settlement against an IBOR.

The liquidity of futures dealing is enhanced by strict rules (the scope of the contract, duration, settlement procedures). A margin system is imposed by the exchange to the buyers and the sellers serving as a guarantee against potential loss.

For every transaction (buying or selling) each party has to pay an amount as a guarantee (initial margin), in cash or in securities, expressed as a percentage of the value of the bought or sold contracts. At the end of every transaction day, contracts are revaluated and the account of the investor becomes debited or credited (variation margin).

Positions can be closed in three manners:

- By taking the opposite position before the due date (buying what you have sold and selling what you have bought). Most of the futures are closed in this way.
- By a cash settlement on the due date.
- By rolling the position: this means e.g. that the buyer of a future sells it before the due date and at the same time buys a new position with an upcoming due date (calendar spread).

Advantages, disadvantages and risks

Advantages

- The fact that futures are traded on an exchange means that there is a greater liquidity than in the case of a forward rate agreement.
- Futures can be simple instruments to manage the value fluctuation risk of an underlying asset.

Disadvantages

- The underlying asset does usually not correspond exactly to the amount, dates … that one wants to risk manage. Therefore it is a less flexible and less tailor-made contract.
- The margin scheme that is daily adjusted causes heavy administrative burden.
- It is not an instrument with the characteristics of an option. The interest rate is irrevocably fixed.
- It is less appropriate to manage a floating interest rate risk for a longer period.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The interest rate risk is mainly a short-term interest rate risk. The further you go in the future the higher the risk is. If the future is expressed in a foreign currency, there is also a foreign exchange risk. The loss in principle can be unlimited for investors in Futures, mistaken in their expectations.
- **Liquidity risk:** The liquidity risk is very limited since futures are traded on an organized market. This risk is higher for products traded Over-The-Counter (OTC).
- **Counterparty risk:** The risk is low because the counterparty is an exchange. The insolvency risk is limited due to the margin scheme.
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 “Definition of different types of risks”.

B.2.4.7. Interest rate structures

Asset Class: Interest Rate Derivative

Description
An interest rate structure is a combination of interest rate options, swaps, "triggers" and "features" that have the purpose to generate a particular return pattern or to create a tailor-made risk management structure.

Triggers and features imply certain (non-exhaustive) characteristics of options.

Knock Out/Reverse Knock Out: A knock out option contract ceases to function as a normal option ("knocks out") once a certain price level is reached during a certain period or on expiry. The underlying periods mentioned are interest rate periods.

Reverse KO: Option is in the money when the event occurs.

Knock In/Reverse Knock In: A latent option contract that begins to function as a normal option ("knocks in") only once a certain price level is reached during a certain period or on expiry. The underlying periods mentioned are interest rate periods.

Reverse KI: Option is in the money when the event occurs.

Callable/putable: An interest rate structure or a part of it that is callable/putable. That means that the counterparty can revoke/enforce the interest rate structure during a certain period or at a certain moment during the lifetime of the entire structure.

Advantages, disadvantages and risks

Advantages

- Can create a tailor-made solution for a specific problem or goal.
- Provides the possibility of protection against interest rate risk.
- Great flexibility and very dynamic management.
- These structures in certain cases generate better pay-off.
- Many currencies are possible.
- There are structures where the client does not pay a net premium.

Disadvantages

- The value of the option structure does not necessary follow the same evolution as the one of the underlying.
- In certain market circumstances a lack of liquidity can occur.
- These are Over-The-Counter products that cannot be traded on an exchange.
- Very often these structures can be very complex.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The market risk is mainly the interest rate risk: The value of an interest rate structure can move in another direction than the one of the underlying (the interest rate). That means that the value can sometimes exponentially decrease or increase in respect to the evolution of the underlying or it can even move in the opposite direction of the value of the underlying. If the structure is expressed in a foreign currency there is also a foreign exchange risk.
  - The risk of a lack of return depends on the characteristics of each construction. If there is a return or a pay-off foreseen the effective payment is depending on the evolution of the interest rate.
  - Structures that result in a situation where the client has sold (a) net option(s) can lead to indefinite loss.
  - Features that occur in interest rate option structures should be very carefully assessed not to create, under certain circumstances, additional risks.
  - The buyer of an option can maximum lose the paid premium.
  - The seller of an option has to meet his/her obligations if the holder of an option wants to exercise his/her right. The seller's loss is in principle unlimited.
  - The risks related to these structures enclose the risks of each separate component.
- **Liquidity risk:** The liquidity risk is higher for Over-The-Counter (OTC) products than for futures traded on an exchange.
- **Counterparty risk:** The risk that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

Most common interest rate structures

- Forward Rate Agreement
- IRS (2)
- Basis swap
- Cross currency swap
- Cap/floor (2)
- Collar (2)
- Participating Cap/Floor
- Swaption cash settlement
- Swaption swap settlement
- Lock-in swap
- Collar with floor KI (fixed KI, dynamic KI, zero-premium)
- Collar with digital floor
- Cap/floor + swaption (matching maturities)

B.3. Capital Market Instruments

B.3.1. Equities

Asset Class: Equities

Description
When a corporation wishes to raise capital, it might issue shares in exchange for cash. Shares are securities representing each a unit of ownership interest in the corporation. Shares can either be referred to as "shares", "equities" or "stocks".
Shares may be listed or not.
A person who legally owns one or more shares is a shareholder (or stockholder). It does not entitle the owner to have direct control over the business's day-to-day operations but may have a voting rights at the shareholders meetings and is usually entitled to receive an equal distribution of any profits (if any), in the form of a dividend.

The two main types of shares are common shares (ordinary shares) and preferred shares. Shareholders are granted privileges depending on the class of shares. Rights include:

- Right to get a portion of the company's income in the form of a dividend.
- Right to purchase new shares of the company in case of rights issue (preferential rights).
- Right to vote in corporate decision matters.
- Right to a portion of the company's assets in case of liquidation.

The aggregate value of a corporation's issued shares is its market capitalisation.

Advantages, disadvantages and risks

Advantages

- Shareholders are usually entitled to collect dividends.
- Buying shares is suitable for long-term investors, since shares have no maturity date.
- Shares do not mature at a pre-determined date unlike single stock futures (Unlike options they do not experience time decay).

Disadvantages

- Shareholders are the last in order of priority in case of liquidation of the company.
- Future income cash flows (dividends) are uncertain.
- Shares are usually not suitable products for short term investments.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Mainly equity price risk. The price of a share may be very volatile: it fluctuates according to the law of supply and demand. However, there are many factors on the basis of which the demand for a particular share may increase or decrease. These factors are studied using various methods of fundamental analysis or technical analysis to predict the changes in the share price. Share price is particularly sensible to forecasts regarding the company (whether profits are expected to increase or decrease). If denominated in foreign currency, a foreign exchange risk needs to be considered as well. The future dividends may be lower than the historical ones
- **Liquidity risk:** Liquidity depends on the interest the company generates on market participants, market capitalisation and free float.
- **Counterparty risk:** The risk that the counterparty cannot/will not meet its obligations (settlement default risk)
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.2. Financial instruments related to equities

B.3.2.1. Stock option

Asset Class: Equity Derivatives

Description
An equity or stock option gives the buyer the right to buy (call) or to sell (put) a certain quantity (usually 100) of underlying stocks at the exercise price of the option until maturity date (American style) or at maturity date (European style).

At maturity, if the option is not exercised or has become worthless, it ceases to exist. Can be an OTC product as well as traded on an exchange.

Advantages, disadvantages and risks

Advantages

- Individual equity options can be used to fine-tune an investor's market exposure by creating the exact portfolio desired.
- Higher leverage compared to direct investment in stocks.
- They are considered as cost efficient method to invest in stocks compared to purchasing stocks on margin: purchasing stocks on margin triggers the payment of interest on the sum borrowed to the broker to purchase the stocks.

Disadvantages

- Like all options, individual equity options suffer from time decay: if the price of the underlying stock does not reach the level expected by the investor before expiry (or reached it but without the knowledge of the investor), the option will expire worthless.
- Holders of individual equity options are not entitled to collect dividends.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Mainly an equity price risk. If denominated in foreign currency, a foreign exchange risk needs to be considered as well.
  - **Double witching:** Exceptional calendar situation that creates high volatility every time when two classes of option contracts and futures contracts all expire on the same day.
  - **Triple witching:** Exceptional calendar situation that creates high volatility every time when three classes of stock index options, stock index futures and stock options all expire on the same day.
  - **Quadruple witching:** Exceptional calendar situation that creates high volatility every time when four classes of stock index options, stock index futures, stock options and stock futures all expire on the same day.
  - The buyer of an option (call or put) can maximum lose the paid premium.
  - The seller of an option has to fulfil his/her obligations if the holder of the option wants to exercise his/her right. The seller's loss is in principle unlimited[1].
- **Liquidity risk:** Liquidity is generally good but also depends on the liquidity of the underlying stock. Moreover, unusual market circumstances, such as when trading on cash market of underlying stock stops, might disturb the option market, too.
- **Counterparty risk:** The risk that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

[1] Note that if the client sells a put, he shall, in case of exercise, be forced to buy the stock at the exercise price (or strike price). His loss shall be limited to that exercise price as a stock price cannot be lower than zero.

B.3.2.2. Stock index option / Equity index option

Asset Class: Equity Derivates

Description
Stock index options (Equity index options) are option contracts used to replicate the performance of an underlying stock index.

A stock index option gives the buyer the right to buy (call) or to sell (put) the portfolio of stocks included in the underlying index at the exercise price of the option until maturity date (American style) or at maturity date (European style).

The cash value of the underlying index equivalent to one contract equals the option price times a certain multiplier in the currency of the contract.

At maturity, unlike equity options, they trigger a cash settlement which calculation is based on a multiple of the underlying index on which they are based.

Advantages, disadvantages and risks

Advantages

- They can be used for (proxy) risk management against an existing equity position or an equity index future position.
- They provide a convenient tool for gaining rapid exposure to a market, a sector or a country without having to actually purchase a representative basket of shares.
- Underlying stock indices for options include well-established benchmarks offering broad or sectorial exposure.
- Like all options, stock index options have a leverage effect compared to direct investment in stocks.

Disadvantages

- It is unlikely that one of the equity indices available will exactly reflect the portfolio to risk manage: equity index options cannot be used to fine-tune an investor's market exposure by creating the exact portfolio desired.
- Unlike equity index futures, investors in equity index options pay a volatility premium for the right to buy or sell the option.
- Unlike equity index futures, equity index options experience time decay: options can expire worthless.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Mainly an equity price risk. If denominated in foreign currency, a foreign exchange risk needs to be considered as well.
  - **Double witching:** Exceptional calendar situation that creates high volatility every time when two classes of option contracts and futures contracts all expire on the same day.
  - **Triple witching:** Exceptional calendar situation that creates high volatility every time when three classes of stock index options, stock index futures and stock options all expire on the same day.
  - **Quadruple witching:** Exceptional calendar situation that creates high volatility every time when four classes of stock index options, stock index futures, stock options and stock futures all expire on the same day.
  - The buyer of an option (call or put) can maximum lose the paid premium.
  - The seller of an option has to fulfil his/her obligations if the holder of the option wants to exercise his/her right. The seller's loss is in principle unlimited.
- **Liquidity risk:** Liquidity is generally very high, in particular for short maturities and on condition that the underlying index is liquid. Exceptions are when unusual market circumstances happen on the underlying market (e.g. when trading on cash market of underlying stocks composing the stock index stops).
- **Counterparty risk:** The risk that the counterparty cannot/will not meet its obligations (settlement default risk and credit default risk)
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.2.3. Single stock future / Single equity future

Asset Class: Equity Derivatives

Description
Single stock future is a derivative contract to deliver/accept a certain number of shares (usually 100) of a specific stock at a designated date in the future.

Except delivery, which is physical, single stock futures have similar characteristics than those of other futures contracts.

Advantages, disadvantages and risks

Advantages

- Single stock futures are considered a cost efficient method to invest in stocks because they have the cost of carry built into their price. This interest rate is locked when the trade is made and is determined by multiple market participants in a competitive open market.
- Single stock futures are also a more efficient way of short selling a specific stock.
- Higher leverage compared to direct investment in the underlying stock.
- Unlike single equity options, investors in single equity futures do not pay a volatility premium for the right to buy or sell the future and contracts do not experience time decay: contracts settle to physical delivery and never expire worthless.
- Single stock futures can be used to fine-tune an investor's market exposure by creating the exact portfolio desired.

Disadvantages

- Since holders of single stock futures are not entitled to collect dividends (and sellers are not required to pay a dividend), the contract must be adjusted downward by the amount of the expected dividends before expiration.
- Like with all futures contracts, daily margining has the disadvantage of potentially requiring a margin call in order for the investor not to see his position liquidated.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Mainly an equity price risk. If denominated in foreign currency, a foreign exchange risk needs to be considered as well.
  - **Double witching:** Exceptional calendar situation that creates high volatility every time when two classes of option contracts and futures contracts all expire on the same day.
  - **Triple witching:** Exceptional calendar situation that creates high volatility every time when three classes of stock index options, stock index futures and stock options all expire on the same day.
  - **Quadruple witching:** Exceptional calendar situation that creates high volatility every time when four classes of stock index options, stock index futures, stock options and stock futures all expire on the same day.
- **Liquidity risk:** Liquidity is generally good but very much depends on the liquidity of the underlying stock. Moreover, unusual market circumstances, such as when trading on cash market of underlying stock stops, might disturb the futures market too.
- **Counterparty risk:** Virtually inexistent since at the end of the day the Clearing House becomes the counterpart of each buyer and each seller (novation principle). There is nevertheless a counterparty risk on the Clearing House.
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.2.4. Stock index future

Asset Class: Equity Derivatives

Description
Stock index futures (Equity index futures) are future contracts used to replicate the performance of an underlying stock index. A stock index future contract represents the obligation to buy or to sell the portfolio of stocks included in the underlying index.

The cash value of the underlying index equivalent to one contract equals the futures price time a certain multiplier in the currency of the contract.

At maturity, like equity options, they trigger a cash settlement which calculation is based on a multiple of the underlying index on which they are based.

Advantages, disadvantages and risks

Advantages

- They can be used for risk management against an existing equity position or an equity index option position.
- They provide a convenient tool for gaining rapid exposure to a market, a sector or a country without having to actually purchase a representative basket of shares.
- Underlying stock indices for futures include well-established benchmarks offering broad or sector exposure. These underlying stock indices are in liquid markets and are mainly used for short terms (close to delivery maturities).
- Like all futures, stock index futures are purchased using margin, providing leverage compared to direct investment in stocks. Moreover, it is more cost effective to buy an index futures contract than purchasing individually all stocks forming the underlying equity index.
- Unlike equity index options, investors in equity index futures do not pay a volatility premium for the right to buy or sell the future and contracts do not experience time decay: contracts very rarely expire worthless.

Disadvantages

- It is unlikely that one of the equity indices available will exactly reflect the portfolio to risk manage: equity index futures cannot be used to fine-tune an investor's market exposure by creating the exact portfolio desired.
- Far maturities (longer terms) are usually less liquid and are the territory of OTC products, which offer more flexibility.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Mainly an equity price risk. If denominated in foreign currency, a foreign exchange risk needs to be considered as well.
  - **Double witching:** Exceptional calendar situation that creates high volatility every time when two classes of option contracts and futures contracts all expire on the same day.
  - **Triple witching:** Exceptional calendar situation that creates high volatility every time when three classes of stock index options, stock index futures and stock options all expire on the same day.
  - **Quadruple witching:** Exceptional calendar situation that creates high volatility every time when four classes of stock index options, stock index futures, stock options and stock futures all expire on the same day.
- **Liquidity risk:** Liquidity is generally very high, in particular for short maturities and if underlying index is liquid. Exceptions are when unusual market circumstances happen on the underlying market (e.g. when trading on cash market of underlying stocks composing the stock index stops).
- **Counterparty risk:** Virtually inexistent since at the end of the day the Clearing House becomes the counterpart of each buyer and each seller (novation principle). There is nevertheless a counterparty risk on the Clearing House.
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.2.5. Option on stock index future

Asset Class: Equity Derivatives

Description
Options on stock index futures (Options on equity index futures/Stock index futures options/Equity index futures options) are options the underlying of which is another derivative.

Unlike stock index futures or stock index options, these futures are not settled in cash but by delivering the underlying stock index futures contracts.

Advantages, disadvantages and risks

Advantages

- Before exercise or maturity, options on stock index futures bring investors the same advantages as options on stock index, in particular:
  - Convenient, fast and cost efficient tool for gaining global exposure to an equity market.
  - Leverage effect of derivatives with limited risk for bought options.
- After exercise, options on stock index futures bring investors the same advantages as futures on stock index.
- In futures trading, the risks can be higher that some investors can bear and losses can be important. With options on futures, investors can limit risks substantially. Investors who do not want to commit themselves to buying or selling futures contracts but wish nevertheless to be positioned on the market have the opportunity to buy options on futures contracts.

Disadvantages

- Before exercise or maturity, options on stock index futures bring investors the same disadvantages as options on stock index, in particular:
  - Time decay (options can become worthless if market expectations do not realise before or at maturity).
  - Imperfect specific portfolio coverage.
  - Constant position monitoring is required to avoid losing timely exercise opportunity or letting the option expire worthless.
- After exercise, options on stock index futures bring investors the same disadvantages as futures on stock index, in particular:
  - Imperfect specific portfolio coverage.
  - Constant position monitoring is required.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Mainly an equity price risk. The value of an option on stock index futures can even drop to zero. If denominated in foreign currency; a foreign exchange risk needs to be considered as well.
  - **Double witching:** Exceptional calendar situation that creates high volatility every time when two classes of option contracts and futures contracts all expire on the same day.
  - **Triple witching:** Exceptional calendar situation that creates high volatility every time when three classes of stock index options, stock index futures and stock options all expire on the same day.
  - **Quadruple witching:** Exceptional calendar situation that creates high volatility every time when four classes of stock index options, stock index futures, stock options and stock futures all expire on the same day.
- **Liquidity risk:** Liquidity is generally very high, in particular for near terms and if underlying future market and cash market are liquid. Exceptions are when unusual market circumstances happen on the underlying market (e.g. when trading on cash market of underlying stocks composing the stock index stops).
- **Counterparty risk:** Virtually inexistent since at the end of the day the Clearing House becomes the counterpart of each buyer and each seller (novation principle). There is nevertheless a counterparty risk on the Clearing House.
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 “Definition of different types of risks”.

B.3.2.6. Equity Warrant

Asset Class: Equity Derivatives

Description
An equity warrant (stock warrant/warrant on stock/warrant on equity) is a security that entitles the holder to buy stock of the company that issued it at a specific price, generally much higher than at the time of issue.

Equity warrants are very similar to equity options (stock options).

Advantages, disadvantages and risks

Advantages

- Warrants are transferable, listed , and they tend to be more attractive for medium-term to long-term investment schemes.
- Market is transparent.
- Due to their gearing effect, warrants need a small initial investment in comparison to the larger amount of underlying equity.

Disadvantages

- A holder of a warrant does not have any voting, shareholding or dividend rights, although he is directly affected by any decision made.
- An important difference between options and warrants is that when a warrant issued by a company is exercised, the company actually issues new shares, thus increasing the number of outstanding shares (dilution). When a call option is exercised, the owner of the call option receives existing shares from an assigned call writer.
- As opposed to listed options, warrants cannot be short sold.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Mainly an equity price risk. The value of a warrant could even drop to zero. If denominated in foreign currency, a foreign exchange risk needs to be considered as well.
- **Liquidity risk:** Liquidity is generally good, in particular when the issuer tries to establish a market for the warrant and registers it with a listed exchange. It is, however, not comparable to that of listed options. Since liquidity of the derivative also depends on the liquidity of the underlying asset, equity index warrants tend to enjoy more liquidity than equity warrants.
- **Counterparty risk:** Counterparty risk is directly related to the issuer's quality, even when traded on an exchange, the performance of issuer is never guaranteed by the exchange (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.2.7. Warrant on indices

Asset Class: Equity Derivatives

Description
A warrant on index (or a stock index warrant) is a (derivative) security linked to the performance of an equity index.

An important difference between equity warrants and warrants on indices is that there is no physical delivery if exercised. Stock index warrants trigger a cash payment on exercise or at expiry, depending on the level of the underlying index at that time. The index multiplier determines the cash value per index point

Equity index warrants are very similar to equity index options (stock index options).

Advantages, disadvantages and risks

Advantages

- Index warrants enable investors to benefit from moves in the overall market or a market sector, rather than from the price movement of an individual share.
- They allow investors to achieve many objectives at limited cost: obtain leveraged return, diversify into a market or sector, protect the value of an underlying equity portfolio or earn extra income.
- Warrants are transferable, quoted certificates, and they tend to be more attractive for medium-term to long-term investment schemes.

Disadvantages

- As opposed to listed options, warrants cannot be short sold.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Mainly an equity price risk. The value of a warrant can even drop to zero. If denominated in foreign currency, a foreign exchange risk needs to be considered as well.
- **Liquidity risk:** Liquidity is generally good, in particular when the issuer tries to establish a market for the warrant and registers it with a listed exchange. It is, however, not comparable to that of listed options. Since liquidity of the derivative also depends on the liquidity of the underlying asset, equity index warrants tend to enjoy more liquidity than equity warrants.
- **Counterparty risk:** Counterparty risk is directly related to the issuer's payment incapacity / issuer's risk of default, for even when traded on an exchange, performance of issuer is never guaranteed by the exchange (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.3. Bonds and similar debt instruments

B.3.3.1. Bonds (Fixed income)

Asset Class: Bonds & Notes

Description
A bond is a transferable security issued by an issuer which can be a public entity (such as national and regional governments, municipalities, public entities, central banks, international and supranational institutions…) or a private entity (such as financial institutions, corporations, associations…). The bondholder that purchases bonds gets, in counterparty of its payment to the Issuer, the right to get back its invested capital at a specific maturity date together with a possible interest.

The interest to be paid generally depends on the quality of the borrower the maturity of the bonds, the currency, the liquidity, the debt seniority and the market conditions.

Advantages, disadvantages and risks

Advantages

- Bonds are considered safer than stocks due to the right to be reimbursed at maturity. Bond investments are historically more stable than their stock counterparts.
- Bondholders also enjoy higher legal protection than stockholders if the company issuing the bonds goes bankrupt.
- Investing in bonds allows investors to:
  - Diversify their investment portfolio.
  - Plan cash flows or interest streams in a more predictable way.
- If an investor has a preference in receiving income as opposed to capital appreciation, then investing in bond is a good choice.

Disadvantages

- Bond coupon payments of fixed income bonds are fixed by nature which means that one could miss out the opportunity to invest at more favorable rates.
- If an investor is more interested in capital appreciation than receiving a steady income, then investing in bond is not the optimal investment vehicle.
- Capital is protected only at maturity when the principal amount is repaid at par.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Mainly an interest rate risk combined with the credit risk on the issuer. Foreign exchange risk is to be considered if the bond is denominated in a foreign currency.
  - **Sensitivity:** The longer the maturity of a bond, the higher the risk. This relationship can be measured by the duration, the weighted average maturity of a bond's cash-flows. It measures the sensitivity of a bond's price to interest rate movements.
  - **Reinvestment risk:** The risk resulting from the fact that interest earned from investment in a bond (coupon payments) are reinvested at lower yield to maturity than at the time of purchase of the bond.
  - **Inflation risk:** The risk that a bond's total return will not outpace inflation. In cases where the coupon is fixed until maturity, an inflationary environment will cause these payments to lose value relative to other investments
- **Liquidity risk:** Liquidity very much depends on market participants, issue size and for which purpose they use bonds:
- **Counterparty risk:** Counterparty risk is directly related to the issuer's payment incapacity / issuer's risk of default (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment (see above), Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.3.2. Other types of bonds or debt instruments

B.3.3.2.1. Zero-coupon bonds

Asset Class: Bonds & Notes

Description
Zero-coupon bonds are bonds that pay no interest during their life time. They are issued at discount and are redeemed at par (face value of the bond) at maturity. The difference between the two amounts is the investor's return over the life time of the bond.

Advantages, disadvantages and risks

Advantages

- Elimination of Reinvestment risk for the coupons: Investors who take the view that interest rates will fall have an excellent opportunity to lock in a yield rather than rely on reinvestment opportunities for later cash flows (such as interest payments).
- If interest rates drop, it will generate a more positive effect on the price of the zero-coupon bond because the duration is longer than that of a similar classical bond.

Disadvantages

- There is no income generated during the life time of the zero-coupon bond.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Zero-coupon bonds are more sensitive to interest rate changes than conventional bonds. Market value of zero-coupon bonds can be highly volatile. When the market's interest rates rise, zero-coupon bond prices drop, resulting in a loss of capital when the investor sells bonds before maturity. Zero-coupon bondholders cannot benefit from a raise in interest rates to reinvest received coupons. Foreign exchange risk is to be considered if the bond is denominated in a foreign currency.
- **Liquidity risk:** Liquidity very much depends on market participants, issue size and for which purpose they use zero-coupon bonds:
- **Counterparty risk:** Counterparty risk is higher than with conventional bonds. If an issuer of zero-coupon defaults, investors suffer consequences that would not have happened if they had bought conventional bonds because conventional bonds would have paid to investors some interest that could have been reinvested before default. Conversely, since the interest payments and principal repayment of zero-coupon bonds happens once (at maturity) through a single payment and if the issuer is not able to make this single payment, bondholders might receive nothing (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.3.2.2. Stripped bonds

Asset Class: Bonds & Notes

Description
A stripped bond is a bond that has its main components broken up into a zero-coupon bond and a series of coupons.

Stripped bonds are not issued directly like linear bonds. They are created on the basis of existing debts (underlying bonds) chosen among well-traded benchmark issues with a large outstanding amount. For example, a bank strips the coupon payments of a conventional bond from its principal capital sum and repackages both the coupon payments and the principal as a series of zero-coupon bonds.

Strips stands for Separate Trading of Registered Interest and Principal Securities. It means that trading and ownership of each coupon and of the principal of the underlying bond are autonomous dematerialised zero-coupon bonds.

Advantages, disadvantages and risks

Advantages

- Stripped bonds are zero-coupon bonds and, therefore, offer the same advantages as those offered by zero-coupon bonds.
- Strips are ideal instrument for Asset & Liability Management (ALM) because all types of maturities are available: for instance money managers buy short-term strips while the longest maturities are held by pension funds and insurance companies attracted by the long duration of these instruments.
- High flexibility to fine tune cash flow and duration.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Market risk is equivalent to that of zero-coupon bonds. Foreign exchange risk is to be considered if the bond is denominated in a foreign currency.
- **Liquidity risk:** Liquidity is ensured by market-makers. It very much depends on market participants, issue size and for which purpose they use stripped bonds.
- **Counterparty risk:** Counterparty risk is directly related to the issuer's payment incapacity / issuer's risk of default. If an issuer defaults, investors suffer consequences that would not have happened if they had bought conventional bonds. Conventional bonds would have paid some interest to investors that could have been reinvested before default. Since the repayment of stripped bonds and strips happens only through a single payment at maturity and if the issuer is not able to make this single payment, bondholders might receive nothing (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.3.2.3. Inflation-linked bonds

Asset Class: Bonds & notes

Description
Inflation-linked bonds are bonds of which the principal amount is indexed to inflation.

They are designed to protect the principal amount against erosion from inflation by an indexation to an inflation reference based on a consumer price index (e.g. US-CPI, French CPA…).

There are three main types of inflation-linked bonds:

- Capital indexed bonds: They pay a fixed coupon on a principal that is linked to inflation and therefore, simply offer a final principal payment that is indexed to inflation.
- **Interest indexed bonds:** At each coupon payment, these bonds pay a fixed coupon + inflation rate calculated for the period. At maturity, bonds are redeemed at face value.
- **Indexed annuity bonds:** Annuity payment is indexed to inflation.

Advantages, disadvantages and risks

Advantages

- Inflation-linked bonds enjoy, by nature, a protection against inflation risk: their principal/interest amount grows with inflation, therefore generating an increase in coupon payments.
- In most inflation-linked bonds there is a floor designed to prevent negative effect of deflation.

Disadvantages

- As with inflation itself, the exact income cash flow cannot exactly be predicted.
- In times of deflation or low inflation they might have a lower return than classical bonds.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Inflation-linked bonds are less exposed to interest rate changes than conventional bonds. Foreign exchange risk is to be considered if the bond is denominated in a foreign currency.
- **Indexation lag:** Income streams are generally indexed to a consumer price calculated 2 or 3 months before. Indexation lag is therefore not a relevant risk for long-term bondholders but should be considered as an actual risk for short term holding periods.
- **Liquidity risk:** Inflation-linked bonds might be less liquid than conventional bonds. Liquidity very much depends on market participants, issue size and for which purpose they use Inflation-linked bonds:
- **Counterparty risk:** Counterparty risk is directly related to the issuer's payment incapacity / issuer's risk of default (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment (see above), Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.3.2.4. Floating Rate Note (FRN)

Asset Class: Bonds & notes

Description
Floating rate notes are Notes of which the coupon is linked to a reference rate, such as the LIBOR or the Euribor, plus a spread.

At the time of issuance, there is no fixed coupon for the entire term of the Note. The coupon is paid and reset periodically, for example every 3 months.

Some FRNs have special features, such as maximum coupon (capped FRNs), minimum coupon (floored FRNs) or both (collared FRNs).

FRNs can be obtained synthetically through the combination of a fixed rate bond and an IRS. This combination is known as an Asset Swap.

Advantages, disadvantages and risks

Advantages

- FRNs have only short-term interest rate risk. They display very low sensitivity to changes in market rates compared to fixed-rate, conventional bonds, therefore protecting investors against a rise in interest rates which have an inverse relationship with bond prices.
- FRNs have a duration shorter than 1 year.
- As a result of its floating structure, the market value of a FRN will not diverge greatly (compared to a fixed rate bond) from its par value because of interest rate movements only.

Disadvantages

- FRNs carry usually lower yields than fixed notes of the same maturity (in case of positive interest rate slope).

Risks (to read in conjunction with section A2 above)

- **Market risk:** Very low compared to fixed-rate bonds. Foreign exchange risk is to be considered if the note is denominated in a foreign currency.
- **Liquidity risk:** Liquidity very much depends on market participants, issue size and for which purpose they use FRNs:
- **Counterparty risk:** Counterparty risk is directly related to the issuer's payment incapacity / issuer's risk of default (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment (see above), Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.3.2.5. Perpetual bonds

Asset Class: Bonds & notes

Description
Perpetual bonds are bonds with no set maturity date. However there are many perpetual bonds that are callable by the issuer after 5 years.

Unless called, they are not redeemable but pay a steady stream of interest for ever.

Perpetual bonds are priced similarly to stocks as the sum of discounted future cashflows.

Advantages, disadvantages and risks

Advantages

- The historic rate of return is usually more attractive than the one of traditional bonds.

Disadvantages

- Perpetual bonds are unsecured and rank subordinate to the company's senior and secured debt, thus bearing a greater risk than secured debt. Consequently, holders of perpetual bonds are almost the last, before shareholders, in order of priority in case of liquidation of the company.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Market risk is equivalent to the one of conventional bonds, although there might be a higher price sensitivity and volatility due to longer duration. Foreign exchange risk is to be considered if the bond is denominated in a foreign currency.
- **Liquidity risk:** Liquidity very much depends on market participants, issue size and for which purpose they use Perpetual Bonds.
- **Counterparty risk:** Counterparty risk is directly related to the issuer's payment incapacity / issuer's risk of default (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment (see above), Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.3.2.6. Convertible bonds

Asset Class: Structured Product

Description
Convertible bonds are bonds that can be converted into a pre-determined amount of the issuing company's equity (in general common shares) at a stated price, within a specified timeframe, usually at the discretion of the bondholder.

It is a hybrid security with both debt- and equity-like features. From a valuation's perspective a convertible bond is a combination of a bond and an option on equity.

If the bondholder makes use of his conversion right, he will relinquish his bonds, thus becoming a shareholder instead of remaining a creditor of the issuing company.

Advantages, disadvantages and risks

Advantages

- Convertible bonds have a value-added component: a bond with an embedded stock option.
- The conversion of the bond into common stocks is usually at a premium to the stock's market value, thus offering a higher yield than that obtainable directly on the shares into which the bond converts.
- Unless converted, convertible bonds are safer than preferred or common shares. They provide asset protection because their value will only fall to the value of the bond floor, while still being able to provide the possibility of high equity-like returns: if the underlying equity does not perform up to expectations, the investor can simply keep the bonds.
- Unless converted, since they are debt securities, convertible bonds rank senior to all of the issuer's preferred and common equity.
- Convertible bonds benefit from the price increase of the underlying equity without having to actually purchase the inherently riskier share.
- An anti-dilution provision is generally included. It provides protection against dilution in the form of a reduction in the conversion price in case the company issuing the convertible bonds increases its equity capital at some point during the life time of the bond.

Disadvantages

- Convertible bonds tend to offer a lower rate of return than conventional bonds in exchange for the value of the option to exchange the bond into stocks.
- Convertible bonds typically convert to fewer shares of common stock than could be purchased with the bond value.
- In order to convert, the price of the underlying stock should achieve a particular level, which is often high.
- Most convertible bonds include a callable feature that involves an additional risk to investors. This affects the return expected by the investor.
- Investors must constantly follow the price of the underlying equity in order not to miss the most favorable point for conversion.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Convertible bond price is tied to the underlying' stock price. They tend to be less volatile than regular shares. As stock price goes up, so does the value of the convertible bond. As a bond, they react also to interest rate changes. Rising interest rates typically lead to falling value of stocks. Since convertible bonds are hybrid securities with characteristics of both stocks and bonds, net result is uncertain. Foreign exchange risk is to be considered if the bond is denominated in a foreign currency.
- **Liquidity risk:** Liquidity very much depends on market participants, issue size and for which purpose they use Convertible Bonds.
- **Counterparty risk:** Counterparty risk is directly related to the issuer's payment incapacity / issuer's risk of default. Generally, the convertible bond will be unsecured and rank subordinate to the company's senior and secured debt, thus bearing a greater risk than secured debt (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment (see above), Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.3.2.7. Commercial paper (of "CP")

Asset Class: Money market instrument

Description
Commercial paper is a short-term debt instrument issued by private companies or public institutions for periods ranging usually from one week to one year (but possibly for longer period in Belgium for instance).

Commercial paper is issued in the framework of a program. A financial institution ('the arranger') arranges it and it is offered to investors via financial intermediaries ("the dealers"). An issuer can also be a dealer for its own program.

When the issuer is a financial institution, the instrument is often referred to as a certificate of deposit. Interest rate calculations are on a discounting base.

Advantages, disadvantages and risks

Advantages

Advantages for the issuer

- Lower funding costs because the issuer can borrow at very competitive conditions.
- High degree of flexibility since the issuer is free to specify the amount, the duration... according to its specific needs.
- Diversification of his/her funding sources.
- Improved market recognition.

Advantages for the investor

- The return is generally higher compared to other short term investments, such as deposits, treasury bills, repurchase agreements... depending on the issuer.
- Flexibility, because the issuer can take into account the needs of the investor with regard to the required duration and amount.
- Diversification of his/her investments.

Disadvantages

- It is possible that interests of all parties are not met at the same time, leading to the impossibility to issue.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The market risk is mainly a short-term interest rate risk. The foreign exchange risk depends on the currency of the investment.
- **Liquidity risk:** The liquidity of commercial paper is lower in comparison to other instruments. To secure a certain degree of liquidity, dealers organize a secondary market, "on a best effort basis".
- **Counterparty risk:** The risk that the issuer and the counterparty cannot/will not meet their obligations (settlement default risk and credit default risk). The bank plays only the role of an intermediary unless the bank is the CP issuer.
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.3.2.8. Bonds cum warrant

Asset Class: Bond & Notes

Descripton

Bonds cum warrant (bonds with warrants) are bonds that have a warrant attached as a bonus, allowing the issuer to pay lower interest rates. The warrants attached usually entitle bond holders to acquire shares or other securities during a certain period of time at a pre-determined price. They are generally used to enhance the yield of a bond.

Frequently, warrants are detachable and can be sold independently of the bond.

Advantages, disadvantages and risks

Advantages

- The warrants allow investors to benefit from future price appreciation in the underlying equity securities. The conversion of the bond into common stocks is usually at a premium to the stock's market value, thus offering a higher yield than that obtainable directly on the shares into which the bond converts.
- Bonds cum warrant benefit from the price increase of the underlying equity without having to actually purchase the inherently riskier share.
- Unless converted, convertible, bonds cum warrant are safer than preferred or common shares. They provide asset protection because their value will only fall to the value of the bond floor, while still being able to provide the possibility of high equity-like returns: if the underlying equity does not perform up to expectations, the investor can simply keep the bonds.
- A big advantage compared to convertible bonds is that only the warrants attached to the bond must be relinquished, not the bond itself if the underlying securities are acquired.
- An anti-dilution provision is generally included to protect the investor from being disadvantaged if the company were to increase its equity capital or split its stock during the life of the warrant.
- Bonds cum warrant usually trade separately on an exchange, thus providing investors with the opportunity to buy or sell warrants that are no longer attached to the bond.

Disadvantages

- The price bondholders of bonds cum warrants have to pay for this growth potential is the lower coupon rate that they will receive on the bond itself.
- They convert to fewer shares of common stock than could be purchased with the bond value.
- Investors must constantly follow the price of the underlying equity in order not to miss the most favourable point for conversion.
- In order to convert, the price of the underlying stock should achieve a particular level, which is often high.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The price of bonds cum warrant is tied to the underlying' stock price. Bonds cum warrant tend to be less volatile than shares but more than regular bonds. However, as every bond, bonds cum warrant also react to interest rate changes. The net result is therefore difficult to predict. Foreign exchange risk is to be considered if the bond is denominated in a foreign currency.
- **Inflation risk:** As the coupon of bonds cum warrants tend to be lower than regular bonds there is a higher chance of money erosion.
- **Liquidity risk:** Liquidity of bonds cum warrant tends to be lower than regular bonds. Liquidity very much depends on market participants, issue size and for which purpose they use bonds cum warrant.
- **Counterparty risk:** Counterparty risk is directly related to the issuer's payment incapacity / issuer's risk of default (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment (see above), Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.3.3.2.9. Asset-Backed Security (ABS) & Mortgage-Backed Security (MBS)

Asset Class: Securitized Debt

Description
An Asset-Backed Security (ABS) is a security (debt security) backed by different assets such as loans, lease, royalties, receivables… Asset-Backed Securities bring together a pool of financial assets that in their original form are quite illiquid.

Please note that these products are mainly intended for institutional investors.

Mortgage-backed Security (MBS) Description
A Mortgage-Backed Security (MBS) is a form of ABS where the underlying assets are mortgages.

Please note that these products are mainly intended for institutional investors.

Advantages, disadvantages and risks

Advantages
For investors:

- Portfolio diversification.
- Tend to pay higher return than securities of similar ratings.

Disadvantages

- The maturity is generally very long term and the liquidity is usually low.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The market risk is mainly an interest rate and a credit risk. If the interest rate or credit price or risk rises, the value of the ABS on the secondary market will fall down. Foreign exchange risk is to be considered if the ABS is denominated in a foreign currency.
- **Prepayment risk:** That is a risk of early redemption which usually occurs when the interest rates are falling down creating refinancing possibilities for the mortgager with lower interest rates.
- **Extension risk:** The risk of rising interest rate or slower prepayments than expected leading to extension of the ABS maturity and creating higher holding-period risk.
- **Liquidity risk:** The liquidity is generally low.
- **Counterparty risk:** This is mainly credit risk related to the on time payments by the borrowers of the underlying assets (see above under market risk) and to the issuer's payment incapacity / issuer's risk of default (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment (see above), Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.4. Credit Market Instruments

A credit derivative is a financial instrument whose price and value derives from the creditworthiness of the obligations of a third party ("the reference entity"). Credit derivatives are bilateral contracts between a buyer and a seller where the seller sells protection against certain pre-agreed events which affect the creditworthiness of that reference entity. The reference entity will not be a party to the credit derivatives contract and unaware of the contract's existence.

Credit derivatives can either be:

- Unfunded: Most commonly known unfunded credit derivatives are the Total Return Swap and Credit Default Swap and CDS Options.; or
- Funded: Most commonly known funded credit derivatives are the Credit Linked Note and the Collateralized Debt Obligation.

Please note that the main market participants to this market are banks, hedge funds, insurance companies, pension funds and corporates.

B.4.1. Credit default swap (CDS)

Asset Class: Derivative Products for the Transfer of Credit Risk

Description
A credit default swap is a bilateral contract between a protection buyer and a protection seller and will reference the creditworthiness of a third party called a reference entity (corporate or sovereign). The protection buyer will pay a periodic fee to the protection seller in return for a contingent payment by the seller upon specific credit events affecting the reference entity or some of its debts (specified in the contract).

The relevant credit events specified in a transaction will usually be selected from amongst the following: the failure to pay in relation to debt obligations of the reference entity, the bankruptcy, restructuring of debt…

If any of these events occur and the protection buyer serves a credit event notice on the protection seller detailing the credit event as well as (usually) providing some publicly available information validating this claim, then the transaction will settle (physical or cash settlement).

It is a typical Over-The-Counter product.

Advantages, disadvantages and risks

Advantages

- With a CDS an investor in a financial asset can "isolate" and transfer the credit risk.
- Can lead to an improvement of the credit quality when the correlation between the reference asset and the protection seller is low and the protection seller himself represents a low risk.
- The protection buyer does not need to own an underlying obligation of the reference entity, nor does the protection seller.
- Tailor-made.
- Investor can also gain leveraged exposure.

Disadvantages

- The protection seller has no recourse to and no right to sue the reference entity for recovery.
- The CDS may be hard to understand.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The market risk is mainly a credit risk and remotely an interest rate risk. Foreign exchange risk is to be considered if the CDS is denominated in a foreign currency.
- **Liquidity risk:** Liquidity is very low.
- **Counterparty risk:**
  - For the protection seller, the risk that the protection buyer defaults and he no longer pays the running premium.
  - For the protection buyer, the risk that the protection seller defaults and cannot pay the protection buyer in case of credit event".
    Settlement default risk and credit default risk.
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment (see above), Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.4.2. Total Return Swap (TRS)

Asset Class: Derivative Products for the Transfer of Credit Risk

Descripton
A total return swap is a contract between two counterparties whereby: one party (the protection seller) receives the total return (interest payments plus any capital gains or losses) from a specified reference asset, while the other (the protection buyer) receives a specified fixed or floating cash flow that is not related to the creditworthiness of the reference asset. The payments are based upon the same notional amount. The reference asset may be any asset, index or basket of assets.

The essential difference between a total return swap and a credit default swap is that the credit default swap provides protection against specific credit events. The total return swap protects against the loss of value irrespective of cause, whether default, widening of credit spreads or anything else i.e. it isolates both credit risk and market risk.

It is a typical Over-The-Counter product.

Advantages, disadvantages and risks

Advantages

- Protection for the protection buyer which is usually broader than in the case of a CDS, ie default, widening of credit spread or anything else.
- Can lead to an improvement of the credit quality when the correlation between the reference asset and the protection seller is low and the protection seller himself represents a low risk.
- The protection buyer does not need to own an underlying obligation of the reference entity, nor does the protection seller.
- The total return receiver (= the protection seller) does not need to buy the reference asset (he/ she is of course exposed to the underlying).
- To manage the risk of an exposure without having to sell the underlying.
- Can lead to cheaper funding cost for the total return receiver (= the protection seller).
- Tailor-made.

Disadvantages

- The protection seller has no recourse to and no right to sue the reference entity for recovery.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The market risk is a credit risk to the underlying as well as an interest rate risk. Foreign exchange risk is to be considered if the TRS is denominated in a foreign currency.
- **Liquidity risk:** Liquidity is very low.
- **Counterparty risk:** For both parties, the risk that the other party defaults on its payment obligations (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment (see above), Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 “Definition of different types of risks”.

B.4.3. Credit linked notes (CLN)

Asset Class: Structured Product

Description
A credit linked note is a note whose cash flow depends upon a credit event, which can be a default, a credit spread or a rating change on an underlying reference entity. As with the Credit Default Swap, the definition of the relevant credit events must be negotiated by the parties to the note. A CLN is a security issued with an embedded credit default swap and therefore it is an on-balance asset.

It is often an Over-The-Counter product.

Advantages, disadvantages and risks

Advantages

- An investor can buy credit exposure on a reference entity even if the reference entity does not have available debt in the market for that amount and maturity.
- Usually no ISDA documentation required, so limited burden with regard to derivatives documentation and administration.

Disadvantages

- The investor bears the credit risk of both the issuer of the CLN and the underlying reference entity.
- Credit linked notes are complex products.
- Credit linked notes may be hard to understand.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The market risk is a credit risk to the underlying reference entity as well as an interest rate risk. Foreign exchange risk is to be considered if the credit linked note is denominated in a foreign currency.
- **Liquidity risk:** Liquidity is very low.
- **Counterparty risk:** the buyer of the credit linked note bears the credit risk of the issuer and of the underlying reference entity (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment (see above), Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 “Definition of different types of risks”.

B.4.4. Collateralized Debt Obligation (CDO)

Asset Class: Structured Product

Description
Collateralized debt obligations or CDO's are a form of credit derivative offering exposure to a large number of companies in a single instrument. This exposure is sold in slices of varying risk or subordination - each slice is known as a tranche.

A cash CDO is an asset-backed security backed by a portfolio of loans or other debt obligations and with the cash CDO structure, assets are transferred to a Special Purpose Vehicle that issues the CDO.

In a synthetic CDO the Special Purpose Vehicle is acquiring primarily synthetic assets by selling protection rather than purchasing assets for cash and the reference assets are typically a portfolio of CDS's on various reference entities. A synthetic CDO can also be referred to as CSO (Collateralized Synthetic Obligation).

Advantages, disadvantages and risks

Advantages

- Yield enhancement for a given rating.

Disadvantages

- The exposure to the underlying credit portfolio is leveraged.
- CDO and CSO are complex products.
- CDO and CSO are hard to understand.

Risks (to read in conjunction with section A2 above)

- **Market Risk:** Final return on investment will be a function of the level of leverage, the number of default in the underlying portfolio and the level of recoveries in case of default. The market risk depends on the leverage, the credit risk to the underlying reference entities, as well as the interest rate risk. Foreign exchange risk is to be considered if the CSO or CDO is denominated in a foreign currency.
- **Liquidity Risk** Liquidity is very low.
- **Counterparty risk** the buyer of the CDO/CSO note bears the credit risk of the underlying portfolio of reference entities, as well as the credit risk of the issuer if the client buys it in the form of notes (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment (see above), Inflation (see above), reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.5. Structured Products

B.5.1. Structured notes

Description

These Notes may refer to various underlyings, such as but not limited to an equity, a pool of equities, an equity index (Equity-linked notes), commodities, interest rates, foreign exchange ...

These debt instruments differ from standard fixed-income products as the final payout is based on the return of an underlying.

They may be, but are not always principal protected at maturity.

If they are principal protected at maturity, it means that the investor would receive 100% of the original amount invested at maturity and a return that depends on the evolution of the underlying. The principal is only protected if the issuer does not default on its payment obligations and if the investor holds the product until maturity. Some notes, however, might promise to pay a certain level of income for the life time of the product but no principal protection in case adverse market conditions.

Since equity-linked notes, foreign exchange linked notes, commodity linked notes ... are often a combination of zero-coupon bond and a derivative financial instrument, they should be considered as structured products. These embedded options may comprise more or less complex exotic features.

B.5.1.1. Equity linked notes

MIFID Asset Class: Structured Products

Description
Indexed bonds with an equity or pool of equities as underlying value are known as Equity-linked notes.

These debt instruments differ from standard fixed-income products as the final payout is based on the return of an underlying equity, which can be a single stock, a basket of stocks or an equity index.

Advantages, disadvantages and risks

Advantages

- In case the Equity Linked Note benefits from a capital protection, depending on its features it may provide either a protection of the capital invested and/or a minimum return even if the stock market does not evolve as expected. In some situations, they .may provide a higher return than a direct investment in equity.
- Could provide a desired or tailor-made pay-out pattern.

Disadvantages

- Even if the Equity Linked Note benefits from a capital protection, in case the investor sells the note before maturity, there is a real risk of capital loss.

Risks (to read in conjunction with section A2 above)

- **Market risk:** The return of an equity-linked note depends on its specific features and on the price of the reference underlying.
- **Liquidity risk:** Most equity-linked notes trade OTC. They are not actively traded on the secondary market and are designed to be kept to maturity. However, the issuer usually offers to buy back the notes at market rate, with the risk that the price might be below the amount invested.
- **Counterparty risk:** Counterparty risk is directly related to the issuer payment incapacity / issuer's risk of default (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

B.5.2. Reverse convertible bonds

Asset Class: Structured Products

Description

A reverse convertible bond (RCB) is a bond that can be converted to equity or cash at the discretion of the issuer at a set date.

The difference between a regular convertible bond (see section B.3.3.2.6 below) and a reverse convertible bond is the option attached to the bond. The reverse convertible bond contains an embedded derivative that allows the issuer to exchange the bond at a set date prior to the bond's maturity for existing shares of an underlying company. The underlying company need not be related in any way to the issuer's business. For instance, a European bank would redeem its bond in shares of a given blue ship by the maturity date.

While a convertible bond gives the bondholder the right to convert the asset to equity, a reverse convertible bond gives the issuer the right (and if such right is exercised, it gives the bondholder the obligation) to convert the security issued to equity or cash.

Advantages, disadvantages and risks

Advantages

- If the equity markets remain stable or rise moderately, they provide regular, high interest rates: in such situations, reverse convertible bonds may provide for a higher return than a direct investment in equity.

Disadvantages

- They are neither plain debt nor plain equities.
- Return is less predictable than that of a common bond investment: investors may see their principal redeemed for shares in a company that have, or are expected to, decrease substantially in value.
- Reverse convertible do not benefit from principle amount protection.

Risks (to read in conjunction with section A2 above)

- **Market risk:** Reverse convertible bond price is tied to the underlying's stock price. As the stock price goes up, it may positively impact the value of the convertible bond. However, as a bond, they react to interest rate changes, too. Redeemed value of reverse convertible bonds fully depends on the market value of the underlying share that might be delivered. In theory, there is a risk of total loss of initial investment if the deliverable share price falls to zero.
- **Liquidity risk:** Reverse convertible bond markets are generally liquid but less than stock markets.
- **Counterparty risk:** Counterparty risk is higher because investors bear two kinds of credit risks: (i) the risk of default of the issuer and (ii) the risk of default of the company whose shares are underlying the reverse convertible bond (settlement default risk and credit default risk).
- **Other types of risks to be considered:** Political, Force Majeure, Operational, Regulatory/legal, Fraud, Reinvestment, Inflation, reference rate.

  All types of risks are as defined under chapter A2 "Definition of different types of risks".

Most common structured products

- Callable Step up Note
- CMS spread Steepener Note
- Fix to Spread Note
- Capped and Floored Floater Note
- Fix to Float Note
- Target Redemption Note

10th release, November 2019
Contact details:
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