Contents

Overview of the categories of risk inherent in financial instruments and products  5
The different categories of risks 6
Investing in deposits and money market instruments 10
Investing in bonds 13
Investing in equities 20
Investing in collective investment schemes (mutual funds, UCITS...) 25
Investing in funds using alternative strategies 31
Investing in structured products 39
Investing in private equity 44
Investing in derivative products 51
Investing in warrants 56
Investing in an unlisted real estate fund 60
Investing in commodities 65
Investing in exchange traded products (ETPs) 70
Overview of the categories of risk inherent in financial instruments and products

Pursuant to EC directive 2004/39/EC (MiFID), which entered into force on 1 November 2007 and was repealed and replaced by directive 2014/65/EU on markets in financial instruments (so-called MiFID II), which entered into force on 3 January 2018, BGL BNP Paribas has created a description of financial instruments and products which enables you to assess the main characteristics and risks inherent in investing in certain categories of financial products and instruments.

First, the recommended investment universe and the investment services:

BGL BNP Paribas offers investment advisory and asset management services at its own discretion (on a non-independent basis) as well as order reception and transmission, the conditions of which are outlined in the current prospectus available on request from your private banker.

We offer our recommended investment universe as part of our investment advisory services. The following principles are used to select and monitor the financial instruments within our recommended investment universe: appropriate and documented selection and monitoring of financial instruments and issuers; analysis of the risks, complexity and cost of the financial instruments, as well as the profits they generate. This is implemented as part of the personal recommendation process (excluding order reception and transmission).

The recommended universe may include financial instruments issued, placed or distributed by the bank or other entities with close ties (legal and economic) to the bank or the BNP Paribas Group, as well as the financial instruments of third parties.

The financial instruments:

This description gives a general overview of the main types of risk you may encounter while investing in the different families of products or financial instruments (excluding FX Spot, physical precious metals and physical real property). It supplements various specific documents that are tailored to each product or family of financial instruments: “Invest in ...” comprises three parts: Understand, Evaluate, and Select. These documents are available from your private banker depending on your potential needs regarding financial knowledge.

Of course, all the risk elements mentioned should not obscure the numerous opportunities offered by the variety of available investment instruments and products to increase the value of your assets. Generally speaking, the relationship between risk (of loss or lack of profits) and expected return is an important concept to guide your choices and build a portfolio corresponding to your needs and investment objective.

We recommend that you carefully read the various documents on each family of investment products that is of relevance to you, so that you have the required information on each of them. In this way, we will be better able to support you in your investment decisions and advise you, while informing you as efficiently as possible.

The purpose of these documents is not to exhaustively cover all the categories of financial instruments or all the risks inherent in investing in said financial instruments.

It should be emphasised that a minimum investment duration which fits your personal investment horizon is assigned to most of the individually considered investment products. This is particularly true for products that have a maturity guarantee, even if they offer interim liquidity by allowing you to request a redemption with profit before maturity.

Furthermore, we would like to draw your attention to the fact that you must carry out your own analysis of the financial, legal, bookkeeping, fiscal, and regulatory aspects of each transaction in financial instruments to be able to determine its advantages and disadvantages, and to assess related risks over the entire investment period.

Finally, we would like to remind you that it is indispensable that you avoid concentrating your investments, and are committed to building a portfolio comprising a sufficiently large number of items and products. Portfolio diversification presents a good opportunity for risk mitigation in many market scenarios.
THE DIFFERENT CATEGORIES OF RISKS
In order to familiarise yourself with a number of risks, you will find below the main risks inherent in investment instruments and products.

1. **Exchange risk**

   Where an investor buys or sells a currency, or instruments denominated in a currency other than his reference currency, in addition to the risks inherent in the transaction itself, an additional risk of gain or loss arises from movements in the exchange rate used in relation to the reference currency.

2. **Risk of changes in net asset values or prices**

   The risk of changes in net asset values or prices exists in all financial markets. The price of a financial instrument is the result of the balance between supply and demand on the market. The price might be subject to unforeseen fluctuations involving risk of loss. Furthermore, the volatility historically displayed by a particular instrument may change over time, even without extreme conditions intervening.

   Irrational factors, either market factors or factors specific to a particular security, taken individually, can affect overall movements in prices, for example trends, announcements, opinions or rumours that may lead to unforeseen but sudden and large reductions in price, even though the financial situation and prospects of the businesses that underlie the investment involved may not have changed unfavourably.

3. **Interest rate risk**

   Movements in interest rates expose the fixed interest rate investor to the risk of loss of capital. Even if the issuer scrupulously respects the issue terms, just a rise in market interest rates can lead the investor to suffer a loss or absence of gain. As a general rule, increases in interest rates tend to lower the price of those financial instruments that are sensitive to rates to a greater or lesser extent, such as fixed interest bonds and certain structured products, while a reduction in rates has the opposite effect.

4. **Inflation risk**

   Inflation can lead to a loss in value of your investments and a reduction of purchasing power of the capital invested if the inflation rate exceeds the return yielded by the financial instruments.

5. **Market liquidity risk**

   For the investor, liquidity means the opportunity to sell the financial instruments that they hold, at any time and at a satisfactory price. In the event of low or insufficient liquidity, the investor may have to sell at a much reduced price or even, in extreme cases, be unable to sell part or all of his financial assets at any given moment. Lack of liquidity may arise from the interplay of supply and demand, or from characteristics inherent in the financial instrument, or from market practices. A contract for purchase or sale may not be executed immediately and/or may be executed only partially (partial execution) and/or may be executed in unfavourable conditions. What is more, higher transaction costs are likely to apply.

6. **“Country” risk and transfer risk**

   The political and economic climate in certain countries can produce instability and lead to large and rapid changes in prices, such as the default of a foreign debtor, difficulty or impossibility of converting a currency, the freezing of assets or restriction of rights. In principle, there is no way to protect against such risks, although ratings published in the financial press may be of use to investors in this respect.

7. **Counterparty risk or risk related to the solvency of the issuer**

   Default by the counterparty or the issuer of financial instruments for a financial transaction, (or of the settlement/clearing system on which the instruments are traded) can lead to the investor losing all or part of the funds invested. The investor must therefore take into consideration the quality of the issuer of the product in which he invests. The concept of rating (or credit scoring) should in this case very much be borne in mind in evaluating this risk, which is liable to change throughout duration to maturity, in particular for products with a long maturity.

8. **Economic climate risk**

   Changes in the activity of a market economy always have repercussions on movements in prices of financial instruments and interest rates. Prices fluctuate according to the cycle of phases of economic slowdown and recovery. The length and extent of the cycles of economic slowdown and recovery vary, as do their repercussions on the various sectors of the economy. Moreover, the economic cycle can vary from country to country.

9. **Risk linked to the use of leverage**

   Leverage that may be attached to a product can have a significant amplifying effect both on the return and on the risk associated with the product.

10. **Risk of finance through borrowing**

    The purchase of financial instruments by means of borrowing brings with it additional risk. On one hand, additional guarantees (additional assets as collateral) may be required. On the other hand, the loss incurred when prices move adversely is liable to be higher than the initial investment. Fluctuations in prices of pledged financial instruments can therefore have a negative influence on the ability to repay the loans. It is clearly important to understand that the leveraging effect produced by buying financial instruments through the means of borrowing results in proportionately greater sensitivity to fluctuations in price, and therefore
offers the prospect of higher gains, but also at the same time the risk of higher losses. The risk attaching to such purchases increases with the rate of leveraging.

**Additional risks affecting emerging markets**

Emerging markets are defined as the markets of countries with a low income per person as defined by the World Bank. These markets are in countries which may have a certain degree of political instability, and whose financial markets and economy are still in the process of growing. These markets may experience high volatility. In general, the risks listed above may be amplified in these markets.

**Information risk**

Information risk means the risk of making unfortunate investment choices through lack of information, or through incomplete or inaccurate information. This may arise from the investor depending on unreliable sources, having a poor understanding of available information, or perhaps from failures in communication.

**Operational risks**

When placing an order, the investor must provide certain details needed for its execution to the Bank, such as the type of instrument, the type of order, the volume, the date of execution, etc. The more accurately the order is given, the lesser the risk of any transmission error.

**Risk connected with transaction costs**

BNP Paribas or other financial intermediaries, national or foreign, will be involved in the execution of an order, for example as brokers, in which case the fees and commissions of these entities will be charged to the investor. An investment becomes viable only after these costs have been covered.

**Risk specific to certain products**

Forward transactions or options can bring special risks and should be entered into with care by knowledgeable investors with a high risk tolerance. Furthermore, the investor must have sufficient liquid assets available to meet any margin call that may be made during the life of the product. Some products - Private Equity for example - involve a commitment from the outset for the investor to be able to produce funds at short notice throughout the term of the investment (several years) at preset times for capital calls, as the initial investment represents only a limited part of his total commitment. It is therefore very important in this case that the investor makes such an investment only if he has available funds sufficient to meet all capital calls in full.
Risk of complexity of the product or the model

It should be emphasised that a small number of products or instruments within certain of the broad families under consideration may have special complex characteristics as a counterpart to the expectation of a corresponding return. This complexity may arise either from a combination of multiple risk factors inherent in certain sophisticated products, or from their very structure which may yield notably different returns according to market conditions and movements in their underlyings throughout the life of the product, or from the complexity of their legal structure.

It is therefore advisable with such products that the investor should carefully analyse their characteristics to make sure that they are really appropriate to his needs. Investment decisions and the management strategy for certain managed financial products are based on quantitative models which may have given good results in the context of past market conditions, but which may not give the same results throughout the lifetime of the product.

Risk connected with the quality of product management

For investment products that are managed throughout their lifetime, particularly for products with a long maturity, the quality and consistency of the staff in charge of management must be considered as one of the major criteria in the selection of an investment product, particularly to avoid the risk of any deterioration in management when a key person leaves.
INVESTING IN DEPOSITS AND MONEY MARKET INSTRUMENTS
1 | What is the definition of a deposit and a money market instrument and what are their main characteristics?

1.1 Term deposits
These are deposits made in a given currency and blocked for a fixed length of time defined in the deposit contract. Except in specific circumstances, the larger the sum invested and the longer the duration of the deposit, the more attractive the interest rate will be. The latter will vary according to the specific rates applicable to the currency deposited. You may request early withdrawal of the capital invested, but will generally be charged interest penalties.

1.2 Certificates of deposit
These are negotiable debt instruments issued by financial institutions corresponding to a deposit made in a given currency, with a bank or credit company (for the purposes of comparison, commercial paper is a similar type of instrument, issued by companies looking for liquidity to finance their activity). Certificates of Deposit can be issued for predefined minimum unit amounts, for a duration varying from one day to one year, the most common maturities being 1 to 6 months or a year.

1.3 Other money market instruments
The short-term capital market (less than a year) offers other categories of financial instruments negotiable in the short/medium term. These vary by country, but are most often issued by category, particularly by financial institutions and businesses and are usually accessible to institutional investors. These instruments are issued specifically for durations of a year or less, allowing investors to make short-term investments. These are known as Negotiable Debt Securities, which generally include Certificates of Deposit, Commercial Paper, Treasury Notes and Medium-Term Negotiable Bonds. In practice, their names vary according to the issuing economic entity: Treasury Bills for State issues, Negotiable Certificates of Deposit for financial institutions, Commercial Paper for businesses (Corporate). Negotiable Debt Securities are also negotiable before their maturity date and issued as discount instruments quoted on a discount basis.

1.4 Money market funds
Money market mutual funds are mainly invested in money market instruments and can vary in their management objectives. Some money market funds, offering what are known as regular returns, give priority to the regular changing of their liquidation value. Other more sensitive ones aim for an ideally higher, but consequently less regular, return and are subject to variations in interest rates, since a part of their assets may be invested in bonds, for example.

Holding UCITS units or shares in mutual funds, Unit Trusts or Open Ended Investment Companies in the UK, or SICAV (investment company with variable capital) or FIAMM in Spain, or any other type of fund invested in money market instruments, confers on the bearer a portion of the securities held in the SICAV’s or FCP’s portfolio. Investors acquiring money market funds therefore have to rely on the quality of the financial management applied to the fund portfolio by the portfolio management company and on defined investment guidelines.

2 | What is the advantage of investing in deposits and money market instruments?

The main advantage of these investments lies in their availability, the security conferred by their short-term investment horizon and their flexibility as a means of maintaining capital awaiting other investments, fulfilling short-term investment requirements or contributing to balancing a diversified portfolio.

3 | What are the principal elements of risk to be taken into account when investing in the money markets?

3.1 Interest rate risk
This translates as a re-investment risk in that, if interest rates go down in the short term, investors will see a decrease in the return on their deposit and money market investments. When a negotiable debt security is unwound before maturity, there is a risk of negative capital (e.g. if interest rates vary unfavourably), which can result in a reduction in the final return for the investor.

3.2 Issuer and counterparty risk
These investments involve a risk in that their reliability is dependent on the continuing solvency of the depository institution (for deposits) or the issuer (for certificates of deposit or other negotiable financial instruments). By choosing money market funds, this risk can be diversified. In this case, however, investors must analyse the fund’s management objectives and portfolio components very carefully, as certain dynamic money market fund may contain higher risk investments.
3.3 Liquidity risk
Excluding exceptional circumstances, this type of investment generally offers good liquidity (deposits can be withdrawn early, negotiable debts can be sold). Money market fund products generally allow day-to-day purchase or sale, offering good liquidity, excluding exceptional circumstances.

3.4 Exchange risk
By investing in deposits or money market funds in a currency other than your reference currency, you may benefit from a higher rate of return or a relative increase in the value of the currency in question, but in return you run the risk of a capital loss if the currency depreciates (relative to your reference currency).

3.5 Country and transfer risk
In certain countries, the political and economic situation may become unstable, causing significant or rapid fluctuations in their currencies (making it impossible to exchange the currency in question) or restricting transfer rights for non-residents (exchange control policies, inconvertibility, etc.).

4 What kind of investors should consider deposits and money market instruments?

This type of investment is aimed at:
- Either investors who prefer to protect their capital and/or the liquidity of their investments, rather than take advantage of the generally higher returns offered by medium or long-term investments
- Or investors wishing to maintain liquidity, whilst awaiting other forms of investment, or with specific requirements (relatively short-term capital withdrawal).

Concerning money market mutual funds, you have to be aware, in your choice, of their specificities. “Dynamic” money market mutual funds are more risky than “classic” ones because they aim for an accrued return and involve a longer-term investment horizon.

Taxation

It is important that you seek independent advice about the taxation applicable to deposits and money market instruments.

Your private banker is available to provide any further information you may require. They will be fully acquainted with all the deposit and MMI investment opportunities recommended by BNP Paribas and will assist you in your choices, according to your personal needs and investment profile, before any investment decisions are made.
INVESTING IN BONDS
1 How is a bond and what are its main characteristics?

1.1 The main characteristics

Public sector (States or supranational organisations) and private sector (companies, banks, specialised financial institutions) economic players have, in the main, access to various sources of finance: shareholders funds, bank borrowing and investments offered to the public such as stock market listings, and bond market borrowings.

In the specific case of bonds, private and institutional investors provide capital to the borrower in exchange for securities which are called bonds. In actual fact, the investor buys the bond straight off the market. A bond is therefore a security representing a debt receivable from a private or public body. It can be traded either on an organised market or over-the-counter (both bought and sold) and remunerates its holder with interest.

This interest is paid in the form of coupons, the dates of payment of which depend on local practice (yearly usually for bonds denominated in euros, half yearly or quarterly for those denominated in US dollars). This interest may be fixed or variable - for instance indexed to interest rates, to inflation, to 10 year rates, etc. The advantage of fixed-rate bonds is that investors will know exactly, from the day of purchase, what the yield on their investment will be. However, this yield will only be realised subject to the condition that the bond is held to maturity.

A bond bears a defined nominal amount (e.g.: 1, 1,000, 50,000, 100,000 euros) and duration. At maturity, the holder recovers the nominal amount of the bond and the final coupon (except if the issuer defaults in part or in whole).

By way of an example, let us take a bond with a face value of 1000 euros, and a duration of seven years, with a coupon of 4% paid annually. On the same date each year over seven years, this will pay a 40 euros coupon. At maturity, the investor will get back 1,040 euros, which is the nominal value with the final coupon added to it.

Bonds with an initial or residual duration of over one year are traded on the bond market. Transactions can take place from the issue of the bond (primary market) or during the life of the bond (secondary market). On the secondary market, unlike stock markets, there is no systematic quotation of prices: transactions often take place by over-the-counter trades. Many factors then enter into the equation, which may influence not only the price but also the liquidity of bonds.

1.2 Bases on which the prices of traditional issues are quoted

Conventionally, the price of a bond is defined as the percentage of its face value, which provides a standard method of quotation whatever the various nominal amounts may be (and as a result it is possible to compare the price of a 50,000 euros nominal value bond with one of a 5,000 euros nominal value).

So, a 50,000 euros nominal value bond quoted at 95% represents the amount of 47,500 euros (50,000 × 97/100).

At maturity, however, the amount redeemed is equal to 100% of the nominal amount if there has been no default on the part of the issuer.

The price quoted on the secondary market - for purchase or sale - may be more or less than 100% during the life of the bond, depending on rises or falls in market rates; it is
also necessary to take into account the accrued interest in arriving at the value of a particular transaction. This means that the buyer routinely pays the seller of the bond the proportion of the coupon that has already been earned (the proportion of accrued interest). So, in the particular case of buying a bond whose annual coupon is about to be paid, the purchaser will have to pay the seller a very high amount of accrued interest, even if they are going to get back that amount very soon. They must therefore ensure that they have the necessary funds to pay the whole amount (price and accrued interest) of the transaction. Any transaction on the secondary market takes effect on a predetermined date (in general execution date + 3 business days).

The coupon rate of a bond is defined when it is issued. It corresponds to the prevailing market risk-free (for the desired issuance duration) plus a yield pick-up depending on the degree of risk of the issuer at the time of issue. In addition to the coupon rate, it is possible at any time to calculate the yield to maturity of the bond, which allows different bonds to be compared, since market rates change as does the financial standing of the issuer. The actual yield on a bond at a given time can therefore be very different from its coupon rate.

The world of bonds is very broad and diversified, and so is the method of calculating their coupon, the currencies in which they are denominated, their geographical origin and the quality of their issuers. As a result, at any one time large differences in yields can be observed for bonds of equivalent duration. It must be borne in mind that high yield (compared to that of an issuer of the very highest quality for an equivalent duration) corresponds to increased risk.

In fact, the lower the issuer risk, the lower the yield.

### 1.3 Different types of bond

The bonds universe is also broad and diversified in respect of the types of bonds issued. We can single out, among others the following type of bonds:

- **Fixed rate**: the coupon payable at each coupon date is fixed and known from the time of issue.
- **Floating rate**: the coupon is based on short-term rates (three-month rate) or on long-term rates (10-year maturity rate); the latter are very sensitive to the spreads that exist between short-term and long-term rates at any given moment.
- **Inflation-linked**: these bonds are increasingly being issued by States in the Eurozone. Both the capital and the interest are indexed on inflation rates. Against this, the coupons are often rather low. The price of bonds is sensitive to movements in real interest rates, that is to say the market rates corresponding to the bond duration less a deduction for expected inflation. This makes them a very technical medium for investment, and makes them suitable only for knowledgeable investors.
- **Convertible bonds**: these bonds integrate an option for the investors to convert them, as and when they wish, into the issuer’s shares according to a defined procedure (conversion price, quotas, etc.). The closer the price of the underlying asset to its exercise price, the more the price of the bond will change in line with that of the underlying asset. This is why, at a given time t, bonds with an equity profile, others with a fixed income profile and finally a third category of bonds with a mixed profile are defined on this market. It is a market with low levels of liquidity (very few new issues each year). It is better to approach this professionals’ market via a collective investment vehicle (UCITS).
“Hybrid” bonds: some bonds have characteristics that are common to both bonds and to shares. They may not have a maturity date, and these are called perpetual bonds. Nevertheless, some of them may be redeemable at the issuer’s discretion as from some future date (for example: from the 10th year). This option is within the issuer’s control and may never be used. Such securities are therefore suitable only for knowledgeable investors. This means that, at a time of crisis in the markets, the liquidity of these bonds can become very restricted.

Why invest in bonds?

In a context where the markets are dominated by uncertainty, bonds are a form of investment that offer the specific advantage of providing both regular interest payments and the repayment of principal at maturity if the issuer does not default. However, certain precautions nevertheless need to be taken to ensure peace of mind with an investment of this kind: choosing issuers of the very highest quality, favouring bonds of not too long a duration (3 to 7 years) so as not to have to sell them before maturity, considering only fixed rate bonds and ensuring real diversification within the portfolio so as to spread receipt of coupons throughout the year. With this conservative approach, bonds can usually be considered as a «blue-chip» investment.

It is also essential to consider liquidity, even if there is no intention of selling the bonds before maturity: should the need arise, bonds with more than €500 million or equivalent in issue are usually easier to sell. It should be pointed out that if they are sold before maturity, a capital loss may occur.

There are other approaches which consist of buying bonds which return higher yields, or even investing with a view to making capital gains (the price of a fixed rate bond rises when interest rates fall). This is going entering the domain of speculators, and should be left to knowledgeable investors. Taking issuer risk into account is as necessary as taking interest-rate risk into account. The default rate (issuer’s insolvency) is related to overall economic conditions and should be watched throughout the duration in parallel with movement in long-term rates connected with the global economic climate.

These two facets of the bond world, both secure and speculative at the same time, will be more or less represented in portfolios according to the way in which the investor approached this market and according to the general economic and financial climate. Between these two extremes, various intermediate combinations are possible. Your private banker will be able to help you in your choice according to your objectives, and to define your risk profile.

What are the main risk components that should be considered when investing in bonds?

Interest-rate risk

The price of a bond can move significantly from the time of its issue to maturity. This price variation is connected with movements in market interest rates. For an identical shift in rates, the movement in price will generally increase in proportion to the length of time left to run to the bond’s maturity. This is an important constraint for anyone who wants to sell bonds before maturity, as they may make a capital loss if rates rise. Conversely, a knowledgeable investor who expects a drop in rates can make substantial gains, if they are right. This risk is obviated if the investor keeps the bond to maturity, with the intention of receiving regular interest income. Nevertheless, it will show up in the valuation of the bonds in their portfolio in line with the rate of interest at any one time.

Credit risk

A bond may not necessarily be redeemed at maturity. In the event of insolvency, bondholders rank after priority debtors (the State and employees). Some bonds of the «subordinated» type rank the investor after holders of traditional bonds: these are called Tier 1 or LT2, and are most often issued by banks. Against that, they yield a higher coupon than those of traditional (senior) bonds.

Insolvency (or default) of the issuer is something that happens rather rarely on the bond market, but it should not be overlooked, as the rate of default moves in line with the macro economic climate and can be more significant under economic or specific circumstances. Consequently, the investor should find out about of the quality of the issuer in which they are investing. There is an indicator that exists for this purpose: the rating (or credit score). This gives an idea of the level of risk involved in respect of most bond issuers.

The main rating agencies are Standard & Poor’s (S&P) and Moody’s.

The list below ranks ratings in order of risk and also shows the equivalences between the different rating systems used by S&P and Moody’s. Credit rating agencies may amend an issuer’s rating during the life of the bond, in response to changes in its financial situation. As a general rule, a downgrading of the rating will cause a reduction in the price of the bond concerned, especially if it is a steep downgrading and the market is not expecting it.
For long-term borrowing, here is the risk table used by the rating agencies.

<table>
<thead>
<tr>
<th>Moody’s Rating</th>
<th>Standard &amp; Poor’s Rating</th>
<th>Means</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaa</td>
<td>AAA</td>
<td>Highest quality, lowest risk</td>
<td></td>
</tr>
<tr>
<td>Aa</td>
<td>AA</td>
<td>High quality. Very high capacity to honour financial commitments.</td>
<td>Investment Grade</td>
</tr>
<tr>
<td>A</td>
<td>A</td>
<td>Category above medium quality bonds. Good capacity of the borrower to honour its commitments.</td>
<td></td>
</tr>
<tr>
<td>Baa</td>
<td>BBB</td>
<td>Medium quality. Satisfactory capacity of the borrower to honour its commitments.</td>
<td></td>
</tr>
<tr>
<td>Ba</td>
<td>BB</td>
<td>Of speculative nature. Uncertain capacity of the borrower to honour its commitments</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>B</td>
<td>Low capacity of the borrower.</td>
<td>High Yield</td>
</tr>
<tr>
<td>Caa</td>
<td>CCC</td>
<td>Poor quality. Danger as to payment of interest and redemption of the capital.</td>
<td></td>
</tr>
<tr>
<td>Ca</td>
<td>CC</td>
<td>Highly speculative. Close to insolvency.</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td>Default.</td>
<td></td>
</tr>
</tbody>
</table>

WARNING: The meaning of the ratings is given for information purposes only. Situations may vary, particularly between securities within the same category.

A bond with a rating of less than BBB- is known as a High Yield bond. The risk associated with these issuers is high, as are their coupon rates. Upward and downward variations in the price of these bonds can be sharp and fast. These speculative instruments are therefore reserved for informed investors who accept significant levels of risk. In that event, investment in a high yield bond fund, managed by professionals who know how to measure and assess risk as well as how to choose issuers whose financial situation is likely to improve, is more suitable than an investment in direct lines.

3.3 Country risk
Since 2011, on top of credit and interest rate risks, there has also been Country risk, especially with the crisis in the euro zone peripheries. In the past, Country risk remained confined to certain emerging countries (political risks, terrorist risks, etc.). Since 2011, the sharp deterioration in the public finances of some countries in the euro zone has led to a significant drop in their rating (for some into the High Yield category), which has spread by contagion to the financial and non-financial corporate issuers in these same countries. This situation has taken the form of a sharp rise in yields and therefore a sharp decline in the bond prices of these issuers.

3.4 Other risks
We have already gone through the idea of liquidity in bonds. If these are resold on the secondary market, liquidity may be low or non-existent in certain cases (market conditions, type of securities). To avoid upsets, it is essential to choose a quality issuer as well as to pay attention to the overall amount in issue, which should be equal to or more than €500 million or the equivalent.

Finally, investors may be very disappointed with transactions handled on the primary bond market. For a start, the time between announcement of the issue and its close may be too short for private clients to obtain information and place an order to purchase. The issue is therefore settled between institutional investors, who are instantly able to mobilise huge amounts of capital (UCITS, mutual funds or pension fund managers, etc). And again, if the private client places an order, it may be cut back, sometimes drastically, if the issue has been a success with investors. One alternative is to buy the bond on the secondary market.

3.5 Additional Risk of Investing in High-Yield Bonds
In addition to the generic risks listed above, investments in high-yield bonds are subject to risks such as:

Higher credit risk - Since they are typically rated below investment grade or are unrated and as such are often subject to a higher risk of issuer default.

Vulnerability to economic cycles - During economic downturns such bonds typically fall more in value than investment grade bonds as (i) investors become more risk averse and (ii) default risk rises.
### 3.6 Foreign Exchange Risk

This is the risk of making a loss due to the fluctuation of the currency in which the bond is denominated in comparison with the client’s reference currency.

### 3.7 Additional risks on emerging markets (EM)

EM are the markets of countries with an average or low per capita income in accordance with the World Bank’s definition. They are markets established in countries that could present a certain degree of political instability, and whose financial market and economy are still developing. These markets may experience high volatility. Generally speaking, the risks described above are accentuated on such markets.

### 3.8 Special Features and Risks

Furthermore, some bonds may contain special features and risks that warrant special attention. These include bonds:

- **Perpetual** - When investing in perpetual bonds with no maturity, investors should understand that the holdings can only be disposed of by sale. Holders who wish to sell their holdings may be unable to do so at a price at or above their purchasing price, or at all, if insufficient liquidity exists in the market. Meanwhile, the coupon payments may be deferred or even suspended subject to the terms and conditions of the issue. Furthermore, as perpetual debentures are often callable, investors should be aware of the reinvestment risk.

- **Subordinated** - That have a lower priority of claims in the event of liquidation of the issuer, and in case of such liquidation, investors can only get back the principal after other senior creditors are paid.

- **Callable** - That are callable and investors face reinvestment risk when the issuer exercises its right to redeem the bond before it matures.

- **Deferrable Coupon** - That have variable and/or deferral of interest payment terms and investors would face uncertainty over the amount and time of the interest payments to be received.

- **Extendible** - That have extendable maturity dates and investors would not have a definite schedule of principal repayment.

- **Convertible Bond** - That are convertible or exchangeable in nature and investors are subject to both equity and bond investment risk.

Contingent Convertible Bond (COCO) - That have contingent write down or loss absorption feature and the bond may be written-off fully or partially or converted to common stock on the occurrence of a trigger event or on a decision of the relevant authority.

Loss absorption features - Some financial bonds, though not classified by market as Contingent Convertible (Coco) with explicit capital trigger for loss absorption, may also have loss absorption features. If, in the context of the recovery and resolution of credit and investment firms’ provisions, the resolution authority established the known or foreseeable failure of the issuer, it might decide to take measures impacting the value of its bonds (bail-in); in this context, the investor supports the risk of losing all or part of the amount invested and interest, or may be required to convert into capital instruments (shares) by decision of the regulator.

Market disruption risk - Markets may become disrupted. Local market disruptions can have a global effect. Market disruption can adversely affect the performance of the investment.
What type of investor should invest in bonds?

The world of bonds is very broad and their behaviour is sensitive to many factors that can be very varied. Contrary to widespread beliefs, bond management has a very technical aspect that requires a good knowledge of the characteristics of each issue and the market environment. Investments in bonds may therefore be of interest to investors with very different profiles, ranging from a very security conscious profile to high risk profiles.

Whatever the profile may be, it is very important:

- To make sure of the exact characteristics of the issue in which you want to invest
- To diversify your portfolio by having a number of different types of bond: in terms of the proportion of each type, of bond in the portfolio, in terms of issuers, in terms of time to maturity
- To take into account your personal investment horizon and the issue currency
- To take advice from your adviser if you decide to sell bonds before their maturity, to analyse the movements in interest rates on the market since purchase, (price movements), to check whether you are in a gain or loss situation to take into account the fees on bonds Prior to investing in convertible bonds, the investor should carefully read the legal reference documents, comprising the prospectus and the Key Investor Information Document (KIID). The latter provides you with standardised information on the main characteristics of the financial product. If a Key Investor Information Document has been published for your bond, your private banker will give you this document before every investment.

Generally, any stock market transaction involves:

- Dealing fees for each bond sale or purchase order, with a minimum dealing charge. The amount can vary according to how you place your order, the type of securities, the origin and the amount of your order,
- Depository fees for holding and managing your securities.

Tax situation

It is important that you seek independent advice about the taxation applicable to bonds.

Your private banker is at your disposal to provide any further information, to consider proposed investments suggested by BNP Paribas for investing in bonds, and to help you in your choice according to your personal needs and investment profile, before you make your decision on your investment.
INVESTING IN EQUITIES
A share is a deed of ownership corresponding to a portion of a company’s capital. By purchasing a share, you become a shareholder and therefore the owner of a portion of the business in which you have invested.

As a shareholder, you have a certain number of rights:

- The right to receive dividends: each shareholder has the right to a portion of the company’s profits. Every year, at the company’s Annual General Meeting, a decision may be made to distribute a part of the profits to the shareholders in the form of dividends. These dividends are generally paid annually, but may also be paid quarterly or half-yearly as interim dividends. The AGM may also vote to reinvest the profits in order to finance the company’s development. In this case, no dividend will be paid to the shareholders.
- The right to vote at ordinary and extraordinary general meetings.
- The right to be kept informed: this gives you access to certain information about the company. As a shareholder, the company is obliged to inform you about events which affect the business’s economic activity, in particular any changes in ownership (acquisitions, sales) and any significant events affecting its development prospects. The annual accounts for the last three financial years, as well as the latest annual report, must also be made available to you.

You can hold shares in several different ways. The main types of shares are:

- “Bearer” shares: the majority of shares are held in this way. The company does not know the identity of its shareholders. Only your financial intermediary knows that you are the bearer; you have to keep yourself informed by reading the press and consulting the company’s web site.
- Nominative shares: the company knows your identity, which will be registered in its list of shareholders. You will be informed directly and automatically by the company.

Shares represent a company’s own equity capital (as opposed to borrowed capital), which the company does not reimburse (unlike bonds, for example) but may buy back.

If the company is liquidated, the shareholder has the right to a division of the company’s assets, after the company’s bond and bank creditors have been paid.

You should also know that shares can be traded, either on regulated markets that organise trades (for which specific financial guarantees exist) or on OTC (or over the counter) markets.

Stock exchanges on regulated markets are governed by local market authorities. These regulations will among other things govern:

- Transaction rules (for instance methods for matching buy and sell orders).
- Measures to protect the various participants (for example protection of private investors interests through the MiFID within the European Economic Area or EEA).

Each local authority can also recognise or not a foreign stock exchange. This implies for example that the level of protection may not be guaranteed to the same extent from one financial centre to another. An investor could, for instance, be less protected on a specific emerging market compared with mature countries’ stock exchanges.

Regulators will additionally regulate marketing to the general public and admission to trading ensuring, for example, that a specific framework is set up for the organisation of trades (minimum number of shares to be issued in case of flotation, methods for recording and publishing transactions, etc.) and regarding the various levels of information requirement imposed on listed companies (company reports, specific events or deals regarding securities, etc).

It should be remembered, however, that each country’s legislation, as applied to financial markets, has its own definition of the concept of a regulated market. A regulated market according to a given country’s legislation is not necessarily recognised as regulated by a foreign legislation.

For example, in terms of European legislation, only markets within the European Economic Area (EEA) can claim the status of a regulated market. Foreign markets outside the EEA can take steps to obtain regulated market status to enable European investors to access their operations more easily. In order to do this, they are subject to certain obligations and procedures.

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OTC markets are any markets which have not been granted the status of regulated market as such. Within this category, markets may nevertheless be more or less organised or regulated. Finally, from an international point of view we can mention, regarding the issuing of stocks on foreign markets, that specific types of stocks exist such as:
- American Depositary Receipt (or ADR): a negotiable certificate issued by a US bank against shares held in custody and representing shares issued by non-US companies.
- Global Depositary Receipt (or GDR): global certificates representing foreign shares in the same way as ADR, denominated in an international currency (often USD) and issued by a custodian bank (often a British or Luxembourg bank) against foreign shares that are deposited with a local bank in the country as the share issuer.

2 | What are the benefits of investing in shares?

As an investor in equities, stock markets give you scope for a wide range of investment opportunities. As a general rule, through investing in shares, you should be in a position to take advantage of opportunities arising from various industries and sectors in the world and to benefit in turn from the potential of related capital gains and additionally from revenues represented by dividends.

When you become a shareholder, you benefit from the company’s profits, both:
- Directly, in the case of the profits earned by the company during its last financial year. You receive a dividend periodically, if the AGM votes to pay one.
- Indirectly, in the form of capital gains resulting from the market’s perception of the potential development of the company’s profits over the following financial years (the anticipated growth in future profits affects the share price).

In certain circumstances, the potential for capital gain can be accentuated: in the case of a take over bid on the stock, for example. In return for these opportunities, before investing in any shares, you should be aware that several elements influence changes in their price and that specific risk factors apply to this type of security.

3 | What are the risks you should take into account when investing in shares?

The risks attached to shares are twofold in that they are linked either to the issuing company itself, or to the behaviour of the markets as a whole. A certain number of elements will therefore influence a share price:
- The outcome of matching the offer with the demand for the shares on the market. This match will give rise to greater or lesser volatility (i.e. the potential for upward or downward movement) for the share price, as a function of market factors, whether objective or not.
- The valuation of the company and anticipated future profits: a share’s value changes according to the company’s present and future economic activity. The share value will also depend on the quality of the company’s management and its financial communication.
- External factors: the local and international economic climate, geopolitical changes, interest rate fluctuations, exchange rate variations, change in commodities or commodities...

In addition to the general risks inherent to all investment products, the following risks apply to shares:

3.1 Risk relative to issuer solvency

By purchasing shares, the investor becomes a joint owner of the issuing company, participating in its development as well as the opportunities and risks arising from that development. A company may suffer financial losses, the worst case scenario being an issuing company going bankrupt, which could result in the loss of the entire sum invested.

3.2 Information related risk

The information available on the company or the quality of the information provided by the company itself might not be of a standard that would provide you with appropriate decision-making data in order to properly assess the stock’s financial prospects.

3.3 Risks of changing share price

Share prices can be subject to unexpected and sometimes abrupt fluctuations, resulting in capital losses on your investment. Price increases and decreases alternate over the short, medium or long term and it is impossible to define the duration of these cycles. Price changes result both from factors specific to the market as a whole and from factors specific to the security itself.

The greater the volatility, the higher the risk (on the other hand, the potential for financial gain can be much larger).

3.4 Market liquidity risk

The size of the issuing company can influence the volatility of its share price. A small or medium-sized company (with small or mid-sized market capitalisation) is likely to offer less share liquidity and greater price volatility. Furthermore, it is generally advisable to be careful about any interventions on narrow or low liquidity markets (markets trading small stocks with large potential for growth, narrow exchanges...).

3.5 No dividend risk

A share’s dividend is determined according to the profits earned by the issuing company. Thus, if profits are low or losses are incurred, it is possible that the dividend will be reduced or that no dividend will be distributed at all.
3.6 Forex risks

For securities which are not traded in your reference currency, the exchange risk must be taken into account. This would be the case for a euro investor investing in American shares (traded in US dollars) for example.

3.7 Additional risks on emerging markets

Anyone investing in shares on emerging markets must be aware of the specific rules which apply to them, particularly when access to information is more difficult, making it harder to understand the complexities of these markets and keep track of securities.

You need to know whether you are operating on a regulated market, for which specific guarantees exist, or on an OTC market. An independent investor must take great care when operating on an unregulated market. The securities on these markets are aimed at investors who have, trading an extensive understanding of this type of security and the ability to follow its development on a day-to-day basis. Such investors must accept the risk of strong price fluctuations and an absence of liquidity.

In view of their high risk level, emerging market shares are reserved for experienced investors, who should invest only a portion of their assets in these markets.

4 What do I need to know before investing in shares?

Before deciding to buy or sell shares, you should have at your disposal all the elements required to analyse and assess the issuing company, in particular:

- The company’s financial situation: its earnings, prospects, sector of activity, the changes in its share price and volumes within its market sector, its competitors, its market share at home and abroad, its solvency (credit rating), its sensitivity to changes in interest rates, exchange rates and commodity prices (hedging tools), its geopolitical exposure and more generally the economic environment.

- The company’s capital: the main shareholders (or the absence of reference shareholders), the portion of its capital available on the market (float), its market capitalisation, its inclusion or not in a reference index (geographical or by market sector) etc.

- The share itself: the price change over different periods (absolute change and change relative to its sector or geographical zone), the highest and lowest prices reached, the price volatility, the level of certain market ratios (Price Earning Ratio or PER, dividend yield, etc), the market opinion of the share (consensus), the share’s liquidity (volumes traded) …
Some of this information will be available in the company’s annual report, on its website or in the specialised press. It will allow you to select the share which best corresponds to the investment you wish to make.

Remember to diversify your portfolio in order to limit the risks. You should balance your investment capital between several stocks. It is not advisable to concentrate too great a part of your portfolio on one single position. It is, however, wise to diversify positions over different market sectors (cyclical stocks and defensive securities) and different countries and zones (the geopolitical and exchange risks must then be taken into consideration).

- Monitor the changes to your portfolio regularly and pay careful attention to any documents published by the companies whose shares you hold (turnover, earnings, capital operations, acquisitions, etc.)
- Buying shares is reserved for investors with a long-term investment horizon (in general, at least 5 years).
- Beyond stock picking and monitoring, you might, from a more global stock allocation and portfolio construction perspective, take different approaches, according to your personal needs or interest in one specific market or another, for example:
  - Move on to different economic zones and markets worldwide aiming at international diversification
  - Conversely, stick mainly to your home market
  - Participate in the buoyancy of certain economies or markets either developing or emerging
  - Approaches that are thematic (commodities...), industry-based, investment-style based (growth or value stocks, high dividend yield shares, mid or small cap stocks...)
  - etc.

Although we do not intend to deal here with portfolio management principles, we must stress the fact that, whatever your personal approach to equity markets, you can participate in certain markets in a secure way indirectly by investing through vehicles that offer, in particular, diversification, monitoring or specific access. Such vehicles could be mutual funds or UCITS, or Exchange Traded Funds (ETF), structured products (index-linked, indexed to a basket of stocks or indices,...)

Making the best of these vehicles could be a useful alternative in some cases, for instance, to investing in emerging or commodities markets.

What kind of investors should consider shares?

Before investing in any shares, you should have at your disposal all the decision-making elements provided by an economic, financial and market analysis of the issuing company, and the situation of various world stock markets and economies.

All these factors make shares a difficult product to evaluate and therefore a high risk investment. Financial gains are not guaranteed and it is possible to lose a significant part of the capital invested, even in the very short term.

However, in general, shares traditionally constitute one of the most efficient long-term investments.

In conclusion, investing in shares is for experienced investors with a long term investment horizon.

Taxation

It is important that you seek independent advice about the taxation applicable to shares.

Your private banker is available to provide any further information you may require. They will be fully acquainted with all the share investment opportunities recommended by BNP Paribas and will assist you in your choices, according to your personal needs and investment profile, before you make any investment decisions.
INVESTING IN COLLECTIVE INVESTMENT SCHEMES (MUTUAL FUNDS, UCITS... )
What are collective investment schemes and what are their main characteristics?

A collective investment scheme or mutual fund is a legal vehicle that holds and manages a portfolio of financial or non-financial assets on the common behalf of several investors, in accordance with a predefined policy and set of goals, and managed by a professional of the financial sector approved by the local financial regulator, called the portfolio management company.

When you buy a CIS, you indirectly a fraction of this portfolio, in the form either of units (for Unit Trusts, ...) or shares (for Investment Companies or SICAVs, ...). There are two main categories of CIS, which operate identically from a financial point of view, but have different legal structures and methods of functioning:

- A SICAV (Société d’Investissement à Capital Variable or Investment Company with Variable Capital) is an investment company with variable capital, benefiting from a legal regime very similar to that of a limited liability company. It issues shares as and when subscribers apply to invest. When you buy shares in a Sicav, you become a shareholder and therefore enjoy the rights conferred on all shareholders (e.g. the right to vote at General Meetings).

- An FCP (Fonds Commun de Placement or Mutual Fund), is a jointly-owned portfolio of securities which issues units. The unit bearer does not benefit from any of the rights conferred on a shareholder.

More generally, different investment vehicles co-exist worldwide which can be classified according to criteria pertaining to legal structure and arrangements: Fonds Commun de Placement (France, Luxembourg), Investmentfonds (Germany), Units Trusts (the UK), SICAV (Luxembourg, Belgium, France, Italy), SIMCAV, FIAMM and FIM (Spain), etc.

Lastly, an investor can be led to subscribe to so-called “feeder funds”. This is done within the context of the specific structure of master/feeder funds which are two distinct legal entities (with their own decision-making bodies). A master fund is a fund where the underlying assets, whatever their nature, are grouped together and managed as a whole. The object of the related feeder fund or funds is to subscribe exclusively to the shares of the master fund, thus offering to the investor in the feeder fund a specific access to the master fund.

Collective investment schemes (CIS), whatever their nature, are managed by specialists and offer an opportunity to invest without being an expert in the financial markets and to benefit from the expertise of professionals who will do everything in their power to respect the CIS management objective. The latter is specified in the informational documentation, generally known as the prospectus, which comprises the simplified prospectus, the securities note and the rules/statutes ((DICI or KIID to use the English terms).

The CIS legal documents, as well as national regulations, define specific investment ratios imposed on the asset manager handling its financial management, according to the categories of financial securities held in the CIS.

In general, most CIS are subject to the approval of a regulator based in the legal domicile of the CIS. They can then be authorised for marketing in different countries after approval by the local financial regulatory authority.

Within the European Union, a growing number of European CIS and asset management companies comply with the regulatory European UCITS format which aims to improve investor protection, through rules of diversification, concentration and liquidity, and which give access almost automatically to the European passport. For example, a CIS authorised in its country of origin (e.g. Luxembourg) can offer its units in other Member States of the European Union by asking its own regulatory authority to be entitled to the European passport for other Member States.

A few definitions

The net asset value of a CIS corresponds to the price of a unit share, excluding entry and exit fees,

Distribution share class: income will be paid out in the form of dividends.

Accumulation share class: the income will be reinvested in the portfolio and will increase in value the net asset value of the Fund.

Capital gains/losses: These correspond to the difference between the redemption price per unit of the UCI and its price of subscription.

Benchmark: a manager will generally seek to produce a performance over time higher than a market index or a composite of several clues.

Absolute performance: unlike comparison with respect to an index, the manager will seek to preserve the capital and to generate a positive return regardless of the market configuration. The net asset value of a mutual fund is the price of the unit the mutual fund or the Sicav’s share, excluding entry or redemption fees.

Net Asset Value (also referred to as Net Asset Value in some jurisdictions).

Categories

There is no official international system of categories for collective investment schemes (CIS). However, depending upon its management objective, a CIS may be specialised in:

- An asset class (equities, bonds, cash, etc.)
- A business sector
- A region
- A management style
- A market capitalisation size

Conversely, some funds diversify into a variety of assets in pursuit of a specific theme.
Management type
In addition, the CIS may: Offer guarantee or a promise of minimum return, notably through the use of a formula, or be actively or passively managed:

If it is **actively managed**, the fund manager can make investment decisions with the aim of:
- Protecting capital first and foremost. This category notably includes money market CIS.
- Outperforming a benchmark index or a composite of multiple indices by deviating from the composition of the benchmark or indices. This is a conventional, or “long-only” CIS. The management consists in buying an asset – for example a stock or a bond – in such a way that the investment performance depends entirely on the change in asset value over the holding period. The manager’s goal is to outperform the benchmark while staying more or less correlated with it.
- Generating absolute returns. This kind of CIS, known as an absolute return fund, tries to generate consistently positive performance. This category notably includes flexible allocation funds and the “Newcits” family of funds regulated by the European UCITS directive, whose managers use alternative strategies.

Furthermore, hedge funds fall into this last category, but they are not subject to the same strict regulations. Descriptions of the CIS that use alternative strategies, i.e. Newcits, and hedge funds, are presented in the section entitled “Investing in funds using alternative strategies”.

If the fund is **passively managed**, the manager aims to replicate a market index. These CIS are generally called index funds.

If the management company so desires, index funds can be traded on an exchange in the same way as a stock. Funds in this distinct category of funds are called trackers or Exchange Traded Funds (ETF). While passively replicating the performance of an index, the tracker is continuously quoted on the stock and can be bought and sold like a stock. As a result, liquidity and size are key criteria.

CIS type
A CIS can be open-end (generally the case) or closed-end:
- Open-end CIS: there is neither pre-determined number of shares/units nor for that reason, investors. The CIS may issue new shares/units or redeem those it has already issued. With respect to investors, the CIS is required to redeem, at its own expense, the shares/units at the agreed redemption price and in accordance with the prospectus and/or subscription form.
Closed-end CIS: issuance is limited to a set number of shares/units, or subscription may be limited to a set period. This category includes CIS that offer a specific strategy for a certain period (underlying assets are dated bonds). Unlike an open-end CIS, the closed-end CIS is not required to redeem shares/units. Thus, shares/units may only be sold to third parties or, if applicable, on an exchange. The selling price depends on supply and demand.

2 | What are the advantages of investing in a collective investment scheme?

Diversification though the underlying investments by the CIS can limit the risk of loss and may increase the likelihood of making gains.

CIS are also used to spread the risk by using a diversified portfolio less exposed to a drop in one of the securities held in portfolio.

For all its investments, the CIS generally benefits from more favourable conditions (notably in terms of costs) than those available to individuals investing directly in the same assets.

Since investments are mutualised with a single asset manager, an expert in its field, the latter has access to a range of human and technical resources (research teams, computer simulations, sophisticated analysis, etc.) which help it improve the quality of its decision-making and thus allow all the unit bearers or shareholders to benefit from improved performance.

CIS most of the time offer a controlled level of risk and national and international regulations provide a strong framework for the functioning of this type of financial instrument. Furthermore, they are subject to primary controls carried out by the portfolio management companies themselves, but also by the establishment designated as the fund depository, the designated Auditor and the national regulatory authority which, in most case, has expressly approved the CIS.

In general, there is a wide choice of specialised or diversified CIS making it easy to take advantage of a wide range of investment opportunities having sufficient liquidity to allow for easy trade-offs between funds or even within a fund, for those which comprise sub-funds. A CIS may allow a client to be present in a given geographic area (an emerging market, in particular) or sector which would be more difficult to access thought individual securities and without special expertise.
What are the principal elements of risk to be taken into consideration when investing in CIS?

The degree of risk varies according to the CIS management objective. In all cases, the unit or share holder is exposed through a CIS mainly to the:

3.1 Risk of price changes

These are market risks related to changes in the index underlying each CIS. The net asset value of the CIS will follow, fairly closely, rises and falls in the markets of the financial instruments and currencies held in the portfolio. For formula-based (guaranteed or protected) CIS, you are invited to carefully analyse the various possible market scenarios.

Units/shares in CIS are subject to the risk of a fall in their price; all other things being equal such decreases reflect a fall in the corresponding value of the securities or currencies that make up the assets in the CIS. Theoretically, the greater the diversity of investments, the lower the risk of capital loss. Inversely, the risk is higher when the CIS holds more specialised and less diverse investments. Investors should therefore be aware of the general and specific risks related to their investment strategy and to the financial instruments and currencies held in the UCITS.

3.2 Risk related to the quality of the product management

The management objective may be only partially achieved if the CIS is not an index-tracking CIS. The capital losses or gains made by a manager will depend partly on the quality of their decisions, and therefore on whether their investment strategies pay off over time, and partly on their level of experience.

3.3 Liquidity risk

Investors should be aware of the liquidity offered by the CIS in terms of the frequency of its net asset value calculations and any redemption conditions. In addition, in certain but generally exceptional circumstances, the net asset value calculation may be temporarily suspended, and so likewise any subscriptions/redemptions.

The size of the assets held in the fund is also a factor to be taken into account.

3.4 Operational risks

The investor should look at check the operational risks involved in the management process and the controls implemented by the management company to mitigate these risks, particularly regarding subscriptions/redemptions.

3.5 Les risques liés à la qualité de gestion du produit

Il convient d’être vigilant à la qualité du gérant, notamment sur la qualité de gestion, de son degré d’expérience, de sa réputation.

La performance d’un OPC peut ne pas être conforme à ses objectifs et le capital initialement investi par l’investisseur (déduction faite des commissions de souscription) peut ne pas lui être totalement restitué. Les OPC à recherche de performance absolue ne contiennent pas, sauf mention contraire, de garantie de préservation du capital.

Enfin, la taille des actifs du fonds est notamment un critère d’appréciation à prendre en compte.

What you should know before investing in a UCITS

1 Be sure to read attentively the CIS reference document (ie the full prospectus and the KIID). The KIID will provide you with consistent information about the CIS and the prospectus with exhaustive information. In these documents, you will find amongst other things the method of functioning of the CIS, its financial characteristics, the cost levels applied, the list of people involved in the CIS’s activity and the risks inherent to the Sicav or FCP. The totality of these documents can be obtained on request and will also be available on the portfolio manager’s web site.

2 Unless stated otherwise, and except for guaranteed capital CISs, there is no guarantee for capital invested. Some CISs, particularly those composed essentially of shares, are aimed at investors looking for a high level of performance, linked to the changes in predetermined financial indicators, in return for a high level of risk.

3 Amongst the risk criteria, it is important to study the investment fund volatility. This risk indicator measures the size of its price variations. High volatility levels mean that the UCITS could see significant upward or downward fluctuations.

4 Awards and ratings attributed by various organisations will allow you to evaluate the quality of the CIS management. Even if past performance does not allow you to anticipate future results, and comparisons between CIS are not always consistent, they will help you in your choice.

5 When deciding to invest, you must take into account the duration of the investment recommended or indicated in the CIS documentation. It is generally 5 years for a equity fund, 3 years for a CIS composed mainly of bonds and between one day and a year for a money market fund.

For «formula» (or «structured») CIS (which may be secured or protected) or those which have a fixed maturity date, the shareholder or unitholder must not need to recover the investment before the maturity.
Investors should therefore ensure that they have sufficient financial assets to enable them to not be forced to request a redemption before the maturity date. The capital guarantee or protection is only valid at maturity.

6 | Conditions of investment in a CIS: frequent of net asset of liquidation values, fund reference or named currency, total size of the fund, exit conditions ...

7 | Net asset value: How it is used

Net asset value is calculated each day, each week or sometimes less frequently, depending on the underlying assets. An individual sub-fund within a CIS may be subject to valuation in several distinct denomination currencies. The net asset value used as a benchmark for determining the purchase or redemption price will be:

■ Either the last known net asset value; this is called a «known price»
■ Or the next net asset value to be calculated; this is called an «unknown price».

To find out the net asset value at which the subscription or redemption will be executed, you must consult the CIS prospectus.

It is recommended that when placing any order (subscription or redemption), you check the time by which the order should be placed in order for it to be executed at the benchmark net asset value as indicated in the prospectus.

Taxation

It is important that you seek independent advice about the taxation applicable to Collective Investment schemes.

Your private banker is available to provide any further information you may require. They will be fully acquainted with all the Collective Investment Scheme investment opportunities recommended by BNP Paribas and will assist you in your choices, according to your personal needs and investment profile, before any investment decisions are made.
INVESTING IN FUNDS USING ALTERNATIVE STRATEGIES
How is an alternative strategy defined and what are its main characteristics?

“Alternative” management is defined in opposition to traditional management (long only share, long only bond…) by seeking for a so-called “absolute” return over a defined investment horizon, i.e. a performance which is not strongly correlated with the financial markets and that covers the main risks of traditional asset classes (in particular market and interest rate risks).

1.1 The main families of alternative strategies

There are a number of alternative strategies that can be grouped into four main categories presented below.

1.1.1 DIRECTIONAL STRATEGIES

Investment managers who follow directional strategies aim at maintaining buy and/or sell positions, according to their forecasts regarding the evolution of global financial markets (stocks, bonds, currencies, commodities and derivatives).

Global Macro

Global Macro managers establish their investment strategy on the basis of an analysis of global macroeconomic trends, which are then translated into directional investments through a wide range of instruments: equities, bonds, currencies, commodities, indices and/or derivatives. The investments can be enhanced by use of leverage.

Event Driven

Event Driven strategies make the most of the special events that occur in the lives of businesses: restructuring, mergers/acquisitions, spin-offs, etc. These strategies are typically less affected by market trends.

In this category, there are sub-strategies:
- Activists: these managers buy a share of the floating capital of a company and become involved in the governance and business strategy of the firm by imposing their vision and experience. In so doing, they hope that the value of the firm will increase.
- Distressed Securities: a «distressed» manager invests in securities, mainly bonds or bank loans, which are highly undervalued due to bankruptcies or during bailouts. This strategy is most prevalent in the United States, where the legislation is favourable.
- Merger Arbitrage: this strategy aims to take advantage of differences in valuation caused by a current takeover bid or merger. To do this, the manager usually takes a long position on the target and a short position on the future purchaser, either before the transaction is announced, or after the announcement.

1.1.2 NEUTRAL STRATEGIES

These strategies aim at making profit from valuation discrepancies between multiple securities. This, arbitrage strategies take place independently of market conditions.

Long/short equity

Long/short strategies combine long positions on undervalued stocks and short positions on overvalued securities. They give the manager much considerable flexibility, allowing him to adjust net exposure to the market depending on his more or less optimistic vision of the future. The manager usually specialises by sector, by region or by market capitalization. The use of leverage is common and allows the manager to strengthen his positions.

In this category, there are sub-strategies:
- Macro/Discretionary: unlike the systematic approach, the discretionary approach is based on the investment decisions taken by the manager, reflecting their beliefs about certain markets and/or sectors.
- CTA (Commodity Trading Advisors)/Systematic Trading: systematic managers invest in the futures markets in many underlying assets (equities, interest rates, currencies, etc.). Investment decisions are taken using quantitative models developed by the fund’s management team.

Long/short strategies

These strategies combine long positions on undervalued stocks and short positions on overvalued securities. They give the manager must considerable flexibility, allowing him to adjust net exposure to the market depending on his more or less optimistic vision of the future. The manager usually specialises by sector, by region or by market capitalization. The use of leverage is common and allows the manager to strengthen his positions.

In this category, there are sub-strategies:
- The following sub-strategies can be distinguished: Sector long/short: manager with expertise in a particular industry (e.g.: the financial sector, technology, etc.).
- GEOGRAPHICAL Long/Short: the manager is specialised in a particular geographical area, thus benefiting from in-depth knowledge of local markets and their characteristics, in particular in regulatory terms.
- Short Sellers: These funds only use short positions. They look for securities they consider to be overvalued and which they anticipate will drop in price. Their main selection criterion is the deteriorating fundamentals of the issuer.

Event Driven strategies

Event Driven strategies make the most of the special events that occur in the lives of businesses: restructuring, mergers/acquisitions, spin-offs, etc. These strategies are typically less affected by market trends.

In this category, there are the following sub-strategies:
- Activists: these managers buy a share of the floating capital of a company and become involved in the governance and business strategy of the firm by imposing their vision and experience. In so doing, they hope that the value of the new manager would increase.
- Distressed Securities: a “distressed” manager invests in securities, mainly bonds or bank loans, which are highly undervalued due to bankruptcies or during bailouts. This strategy is most prevalent in the United States, where the legislation is favourable.
- Merger Arbitrage: this strategy aims to take advantage of differences in valuation caused by a current takeover bid or merger. To do this, the manager usually takes a long position on the target and a short position on the future purchaser, either before the transaction is announced, or after the announcement.
Relative Value strategies

Relative Value managers use market imperfections to generate performance. They try to identify price or performance differentials that are not justified by the economic situation of an issuer or of a market in order to try to take advantage of these discrepancies.

In this category, we can cite the following sub-strategies:

- **Fixed Income Arbitrage**: these funds use price discrepancies in the bond markets. The use of derivatives is an integral part of this strategy and often makes it a little more complex to undertake the risk analysis and adjust the extent of leverage used.

- **Equity Market Neutral**: market neutral managers seek to minimise market risk by balancing long and short positions in common sectors to maintain near zero net exposure to the market.

- **Convertible arbitrage**: the fund makes a trade-off between a convertible bond, with a generally long position, and the corresponding share, with a generally short position. Depending on how they anticipate things, managers may cover or maintain certain risks (equity, interest rate, volatility and credit) related to their position.

These four families of strategies can be implemented regardless of the type of vehicle (see section B below).

However, usually because of the need for a high level of liquidity, some sub-strategies (Activist, Distressed) of certain strategy families (Event Driven, Relative Value, for example) cannot be transferred to UCITS format funds.

1.2 Categories of alternative strategy vehicles

The world of international funds using alternative strategies is wide and varied. It includes many types of vehicles that have a variety of risk profiles, liquidity and expected returns. However, it is possible to group these structures together into four major categories listed below:

**Newcits**

These funds implement alternative management strategies in accordance with the traditional European regulatory framework for UCITS investment funds. This category of funds, for which the legislative framework is stricter, provides more adequate protection for the investor in a number of areas, particularly in terms of diversification, leverage, valuation, control of counterparty risk and liquidity rules. These funds almost automatically have the European passport.

These features, as well as improved transparency and reporting requirements, have led to rapid growth in the assets held by this kind of fund. However, these funds remain complex, in some cases, because of their alternative management strategies.

Some strategies, such as distressed securities or activism, cannot be used, or only with great difficulty, in this UCITS framework.

**Managed accounts**

For over twenty years now, investors have been able to subscribe through managed accounts. These accounts (often sub-funds of a mutual fund or a comparable structure) are held by specialised platforms. They appoint a hedge fund manager to implement their usual management strategy, with predefined constraints and risk limitations: liquidity, market risk, diversification, management of counterparty risk, valuation, asset segregation, etc.

The assets are controlled by the managed accounts platform (full transparency), which is also free to impose the counterparties with which the manager will work. Operational risk is almost completely transferred from the manager to the managed account platform.

The managed accounts universe is very large. Investors must, therefore, prior to any subscription, read the documentation for each managed account very carefully and understand how it works.

Compared to other alternative investment vehicles, there are additional costs associated with a managed account.

**Hedge fund funds**

A fund of funds is comprised of a portfolio of pure hedge funds (usually around twenty) which enables investors to diversify their risk across a whole range of strategies and/or managers.

The risks (in particular arising from volatility) of direct investment in a single Hedge Fund (see section iv below) can therefore be greatly reduced since the investment is made through a fund of hedge funds, allowing for broad diversification in terms of both strategies (multi-strategy approach) and of hedge fund managers (multi-manager approach).

Their level of risk is generally much lower than that of an equity fund, for example, while offering more regular profitability which is less dependent on the financial markets which is relatively uncorrelated with that of financial markets.

This hedge fund approach is, therefore, a good diversification opportunity for most private investors. Given how funds of hedge funds are structured, however, management fees are higher than for single hedge funds.
Single Hedge Funds

The management policies of single hedge funds are very varied and are sometimes based on an active search for returns which means that risks can be high. However, this universe has become highly institutionalised and due to the significant volumes subscribed by institutional investors, a search for more reasonable and consistent return has become very common.

In general, multiple-strategy single Hedge Funds are less risky than their single strategy cousins.

The acquisition of this type of product should be subject to special scrutiny because it is so specific, and must be on an appropriate portion of investor’s wealth or correspond to an investor’s particular asset allocation needs.

At the end of June 2013 (source HFR report), 67% of alternative strategy management companies have more than $5 billion in assets and 90% more than $1 billion. As regards the funds, 80% have more than $1 billion in assets (90% have at least $500 million).
What are the advantages of investing in a product that uses alternative strategies?

The objective of an alternative management approach is to achieve absolute returns which have low correlation with market indices. The strategies implemented by the fund to achieve these absolute returns have very different characteristics in terms of profitability and risk, which potentially make it possible to take advantage of all market phases (bull, bear or flat).

Investing in such funds may allow for risk-return optimisation and provides an attractive outlook for substantial gains given the level of risk (volatility). For instance, the Newcits, the multi-strategy funds of hedge funds or the single Hedge Fund portfolios/mandates offered by BNP Paribas seek to preserve capital, to break the correlation with the markets and to achieve limited volatility while providing superior returns compared to bonds over a medium-term/long-term investment period. The single strategy funds of hedge funds and the single Hedge Fund portfolios/mandates, depending on the approach adopted and/or strategies implemented, offer superior performance goals with a little more volatility.

The chart below shows the impact of adding funds of hedge funds to a portfolio of stocks and bonds (between January 2000 and March 2013).

**Composition of a balanced portfolio without HF:**
50% World Share Index + 50% of the World Bond Index

**Composition of a balanced portfolio with HF:**
40% World Share Index + 40% of the World Bond Index + 20% of the Fund of Hedge Funds Index

**World Share Index:** MSCI World (USD)
**World Bond Index:** JP Morgan Aggr. Bond Index (USD)
**Composite Index of Hedge Funds:** HFRI Funds of Funds Index (USD)

Sources: MSCI, JP Morgan Aggr. Bond Index, HFRI
What are the main risk factors to consider when investing using alternative strategies?

3.1 Risk associated with leverage

The level of risk may be increased if the manager uses leverage, that is to say, takes positions (by borrowing) which are greater than the total amount paid in by the investor, with the aim of higher gains than would have been achieved with the nominal capital.

In this case, a small movement in the market can lead to significant gains but also to substantial losses. In extreme cases, as for any type of investment, a total loss of the capital invested may occur.

The use of leverage is strictly regulated in Newcits and it is contractual and controlled in managed accounts.

3.2 Information risk

Vehicles using alternative management strategies have a variety of constraints in terms of valuation and reporting depending on the fund’s regulations or mode of operation.

For instance, investors in funds using alternative strategies are sometimes provided with very little information. The sometimes, complex strategies in investment funds applying an alternative management methodology may seem rather opaque to investors. This phenomenon may be exacerbated when the fund is not subject to strict regulations (such as those which apply to Newcits for example).

In this case, access to information is limited and is only possible through direct or indirect contact already established with the fund and/or the management company. That is why strategy changes, which can lead to a significant increase in risk, are often misunderstood or completely underestimated by investors, because they operate in an environment with low levels of transparency and reporting. This is not the case for Newcits and managed accounts, which offer high levels of transparency and, for Newcits, a statutory obligation to provide regular reports.

The redemption value (or net asset value) of a given investment fund is generally not known (it is usually the value of the previous month which is known) when the investor decides to purchase or redeem this type of financial instrument. This is explained by the fact that notice usually has to be given before any operation of this kind. As a result, the net asset value can only be calculated once the purchase or redemption has taken place.

3.3 Liquidity risk

Funds using alternative strategies have very different degrees of liquidity, which can sometimes be extremely limited.

Overall, for single Hedge Funds and funds of hedge funds, the breakdown of liquidity is as follows: daily for 22%, weekly for 8%, monthly for 41%, quarterly for 24% and longer intervals for 6% (source: HFR report - 30 June 2013).

These investments may sometimes be subject to minimum lockup periods or to penalties if the investor wants out of the fund before the end of a given period (less true for funds of hedge funds). This is explained by the sometimes relatively low levels of liquidity for investments contained in hedge fund portfolios, which are designed with the long term in mind.

Moreover, among the techniques used in alternative investments, some involve financial instruments which are illiquid or subject to legal restrictions on transfers or other operations. It is therefore possible that the sale of an alternative investment is permitted only periodically or on certain dates, after a notice period of several weeks, for example, four times a year on specific dates.

For hedge funds, in most cases, redemptions are possible only monthly, quarterly or annually.

Furthermore, due to the complexity of the underlying investments made by these funds, it may be necessary to adjust the net asset value after receipt of the audited financial statements. Therefore, some «alternative» funds may retain a portion of the investor’s shares if the investor decides to redeem 100% of his shares, pending receipt of the audited accounts.

In most case, managed accounts offer much more flexible liquidity (monthly, weekly or even daily) and at short notice.

As for Newcits, they offer high levels of liquidity: in most cases daily (83% of the market at the end of September 2012) or weekly (16% of the market at the end of September 2012). In any event, the regulation provide that redemption must be possible at least twice a month.

3.4 Risks related to regulatory provisions

We can make a distinction between funds that comply with the standards of the European UCITS directives (funds called Newcits) and the others. These UCITS standards have been refined over time and are intended to provide a satisfactory level of protection for investors, particularly in terms of the management rules applied to the funds and the way they are marketed.

The UCITS directives establish specific rules on permitted investments (prohibition on directly holding short positions, prohibition on investing directly in commodities), management techniques, rules for diversification, risk management, publication of net asset value at a minimum frequency, minimum segregation of assets and functions.
Despite the constraints imposed by the UCITS directives, related in particular to the management of the fund, the assets of Newcits have increased in recent years.

“Non-UCITS” funds may be subject to minimal regulations and a relatively flexible monitoring system, and may therefore offer varying levels of protection to investors.

Problems or delays may occur in the execution of orders for unit subscriptions or redemptions for certain single Hedge Funds, for which the bank can take no liability. There is not always a guarantee that investor rights are enforceable.

Investors interested in investing in so-called «alternative» methods must be aware of these risks. Cautious consideration should be given to the investment products, their solidity the asset management rigour the quality of the risk-monitoring system, before making any investment.

However, for the hedge funds universe, a new European directive (AIFM directive) came into force in July 2013 in all countries of the European Union, with the aim of establishing increased common requirements for accreditation, transparency, risk control and monitoring of asset managers based in the European Union and those established in other countries but wishing to manage or sell CIS within the European Union. This will have the effect of increasing investor protection and of limiting access to only well-informed, if not professional, clients.

3.5 Risk related to management techniques

The funds in which the client has invested may make short sales of securities (that is to say, sell securities that they do not own or, in most cases, that have been borrowed, in order to seek a return from an overvalued asset that is expected to drop in value). This technique is likely to expose the portion of the fund’s assets involved in such activities to an unlimited risk, because there is no upper limit to the price these securities can reach. However, losses will be limited to the amount invested in the fund in question.

3.6 Risk related to the change in valuation

In most cases, Newcits, managed accounts and funds of hedge funds have net asset values established by an independent external auditor. This is also the case for single hedge funds.

However, some funds do not have the NAV validated by auditors (except the NAV calculated at year-end). In these cases, to value the funds, the bank uses uncommitted financial information provided by administrative staff and/or market makers. When the financial information used by the funds to determine their own NAV prove to be incomplete or incorrect or when the NAV does not reflect the value of the investments made by the funds, the valuation of these assets becomes inaccurate.

A certain number, if not most, of the funds provide for performance fees.
3.7 Custodians

Newcits and managed accounts are subject to strict constraints on custodians; this provides a satisfactory level of security.

For some hedge funds, the function of custodian is performed by a broker instead of a bank. These brokers may not have the same credit rating as a bank. In addition, unlike custodian banks which operate in a regulated environment, these brokers only assume the task of keeping custody of the assets, but none of the regulatory monitoring obligations.

4 What kind of investors are funds using alternative strategies intended for?

4.1 Those with some knowledge of the investment techniques and their underlying risks

In general, and depending on the type of fund or strategy, this investment is for clients with good or very good financial knowledge. The hugely diverse world of funds (from Newcits to single hedge funds through to managed accounts and funds of hedge funds) includes funds whose approaches or strategies are accessible to investors with good financial knowledge, while other funds/strategies require really very good financial knowledge.

In particular, before entering into a fund using alternative strategies, investors should consider in detail the specific risks associated with the investment. They must also ensure that they are legally entitled to purchase the product (depending on local regulations) and that it is not restricted to a certain category of investors (e.g. market professionals).

4.2 Those who want to introduce meaningful diversification into their asset holdings

Moreover, as with any asset class, investment funds using alternative strategies must be used in a way that reflects the investor profile (risk appetite, technical knowledge and investment horizon in particular).

To this end, BNP Paribas has a wide range of specialised products and partners.

Thanks to the selections it makes, BNP Paribas provides funds which meet strict criteria in terms of transparency, the use of leverage and the use of independent directors, reference audit firm or professional custodian, etc.

Before investing in a fund, the investor should be aware of the possible existence of performance fees. Some funds, perhaps even the majority, provide for a performance fee. This is a variable fee, often charged annually, which is paid to the management company if, and only if, performance reaches a level defined in advance in the rules and regulations of the fund (or a trigger threshold). This fee is in addition to the annual management fees.

Taxation

It is important that you seek independent advice about the taxation applicable to vehicles using alternative strategies.

Your BNP Paribas Private Banker is available to provide any further information, to talk to you about the investment proposals put forward by BNP Paribas for investing in vehicles using alternative investment strategies, and to assist you in your choice according to your personal needs and your investment profile before you make your investment decisions.
INVESTING IN STRUCTURED PRODUCTS
1 | How is a structured product defined?

Structured products are financial products that can meet all investment objectives, including hedging and limited, average or aggressive speculation, and involve all types of asset, particularly equity, fixed interest securities, credit risk, foreign currencies, commodities and funds.

Their maturity may be from one week to 30 years and is fixed at the inception.

Structured products are financial products which combine money market or bond-based investment (basis of the structured product) with a static or managed financial instrument.

Financial instruments used as a basis for structured products are issued by financial institutions and can take the form of Negotiable Debt Instruments: for example CDs (certificates of deposit) with a maturity running from one week to two years or Euro Medium Term Notes (EMTN), locally approved structured funds, or Special Purpose Vehicle (SPV) (certificates or specific warrant issues, generally with longer maturity).

Static financial instruments are derivatives traded on regulated or over-the-counter markets the value of which varies in response to the movements in a financial asset called the underlying security. They can be grouped into three broad families:

- **Both forward and futures type contracts**
- **Swaps**
- **Options whose prices** are determined utilising mathematical algorithms which model the behaviour of the product over time and according to various market scenarios.

These managed financial instruments are based on a number of types of model, particularly Constant Proportion Portfolio Insurance (CPPI), or specific structuration pattern such as Collateralised Debt Obligation (CDO), as well as the quantitative management methods used by certain hedge funds.

2 | What are the main characteristics of a structured product?

2.1 Characteristics

At maturity, a structured product can be thought of as a cross between:

- Risk/return trade-off
- A strategy on one or more underlyings

In a risk/return trade-off, there are three major categories of structured product going from the most risky investment profile to the most conservative:

- **Products with capital fully guaranteed at maturity**
  - With minimum coupon guaranteed at maturity
  - With coupon at risk
- **Products with capital partially guaranteed at maturity**
  - With minimum coupon guaranteed at maturity
  - With coupon at risk
- **Products with capital not guaranteed at maturity**
  - With coupon guaranteed at maturity
  - With minimum coupon guaranteed at maturity
  - With coupon at risk

As concerns strategies on one or more underlyings, there are four basic strategies:

- **Directional**: betting on a rise or fall in the underlying
- **Opportunistic**: betting on upside or downside potential in underlyings which could happen at any time during the life of the product.
- **Stability**: betting on the stability of the underlying asset throughout the life of the product
- **Volatility**: betting on significant fluctuations in the underlying assets during the life of the product.

During their life, structured products are traded on a secondary market which generally enables the investor to sell or buy a product at periods defined by the issuer, at market rates prevailing at the time.

2.2 Mechanism

Depending on their sophistication, structured products involve methods of remuneration for the investor which are determined according to more or less complicated payoff formulae.

Depending on which payoff formula is chosen, investment in structured products gives the opportunity to:

- Significantly increase return in the case of risky products.
- Ensure repayment of guaranteed capital at maturity while potentially offering a return higher than the deposit over the investment period.

What is more, two major categories of payoff formulae can be distinguished:

- Payoff formulae which depend on particular events happening during the life of the product.
- Payoff formulae linked to participating in the actual performance of the underlying securities.

For the product groups certificates/EMTN, Athena, cap & floor, credit linked note and reverse convertible bond, the "Structured Products" brochure, which is available on request from your private banker, describes the operating and repayment mechanism of each product based on the three market scenarios: Positive, Negative, and Neutral.
The “Structured Products” brochure, available from your private banker on request, describes for the Athena, Cap&Floor, Credit Linked Note and Reverse Convertible families of certificates/EMTNs, the operating and redemption mechanism of each product according to the 3 favourable, unfavourable and neutral market scenarios.

3 What are the advantages of investing in a structured product?

3.1 Engineered investment products
By combining a forward/future type investment with one or more derivative financial investments on different underlyings, structured products constitute an integrated investment product offering a both a synthetic return (midway between that of a bond and a share) and one that is very varied, since there can be many different underlying assets and payoff formulae.

3.2 Customised products
There are many types of structured products offering almost limitless combinations to best meet the investor’s needs in terms of underlying securities, amount, maturity, strategy, risk/return trade-off and payoff profile. These structured products are denominated in various currencies at the investor’s choice.

3.3 Intermediate risk products
These often feature the opportunity to invest indirectly into markets that are not easily accessible to the private investor, or into volatile markets, without requiring a direct holding in the corresponding underlyings, and without feeling the immediate impact of fluctuations through the smoothing of risk.

3.4 Products for diversification
These provide overall portfolio diversification both on the level of investment profile (with intermediate risk by comparison to other investment products), of investment horizon (from very short to very long term), and of underlying asset (all types of assets).
What are the main elements of risk to be considered when investing in a structured product?

4.1 Market risk

Like all financial products, structured products can be subject to high risk because the underlying securities and their volatility are constantly fluctuating along with the market. Similarly, the market value of a structured product can vary significantly under the influence of other factors such as changes in interest rates or exchange rates (especially if the product is denominated in a currency other than the investor’s currency) and the time left on the product until maturity.

Structured products should be offered to investors who have the necessary knowledge and experience to allow them to evaluate all the characteristics and risks inherent in such a product.

4.2 Risk of not understanding the product

As structured products are based on a number of complex parameters (risk/return trade-off, strategy on the underlying asset and the sometimes complex payoff formula), the investor must fully understand the mechanisms of the structured product offered and the results arising from the payoff formula chosen, according to various market expectations and the nature of the underlying security(ies).

4.3 Capital guarantee risks

Products with capital that is fully or partially guaranteed are aimed at investors who want to limit or eliminate the risk of loss of capital while seeking to profit from a strategy on the underlyings that they have chosen. However, there is no guarantee of capital until the product reaches maturity. Should the investor require early withdrawal (initially unforeseen), they run the risk of losing their guaranteed capital through exit penalties or adverse market conditions amongst other things.

In addition, the capital guarantee may not be invoked if the issuer or guarantor were to default.

Products with unsecured capital are designed for investors with a high risk investment profile.

The investor must be willing to accept losing a greater or lesser portion of the original capital on the redemption date, in the event that the trend of the underlying it has chosen is unfavourable or if the issuer defaults.

4.4 Constraints related to valuation

Depending on the specific composition of structured products (packaging a forward/future type investment with one or more derivatives based on various underlyings), valuation of such products may be influenced by a number of parameters. To understand these valuations, the investor must understand that an overall valuation is not enough, but that the various product components and parameters must be analyzed to judge its performance.

4.5 Constraints connected with the liquidity of the secondary market

The liquidity of structured product markets is entirely under the control of the issuer who commits as part of normal market operating terms to buy or sell the product from/to the investor according to various criteria defined at the outset (price, frequency and minimum amount). For example, if they wanted to get out before maturity, the investor may well not be able to sell part or all of the financial assets or be required to sell them at a significantly lower price.

Various performance scenarios are detailed in the Key Investor Information Document pertaining to the structured product, together with an estimation of the future performance of past fluctuations in the value of the investment.

4.6 Risk arising from early repayment by the issuer

Some structured products give the issuer the option to repay the product early (issuer call). In these circumstances reinvestment conditions may be unfavorable to the investor.
4.7 Issuer risk
To limit this risk, the thing to do in choosing issuers is look at their credit rating which, according to the maturity of the investment, should be equal or be very close to that of the BNP Paribas Group (AA+), which itself often issues structured products.

However, the investor assumes the credit risk of the issuer and the guarantor, if any, defined in the product’s legal documentation. The ratings of the issuer and the guarantor reflect the opinion of the independent rating agencies concerned and should not be considered as a guarantee of the quality of credit. In the event of default by the issuer or even its guarantor, the investor may suffer partial or total loss of the capital invested.

4.8 Leverage risk (leveraging effect)
Applying leveraging effect to structured products can greatly increase both the products’ return and risk.

Risk connected with the management model
For managed products, this risk is connected with the appropriateness of the model implemented over the prospective period of management.

5 For what type of investor are structured products suitable?
In general, structured products are most often intended for experienced investors.

5.1 Products subject to various regulations
Structured products may be marketed either:
- Within the regulatory framework of a public offering (APE), as established, approved and signed by the local regulator, thus providing adequate security to investors,
- Through private investments outside the scope of the public offering and which therefore provide a lower level of protection for investors.

These products are outside the scope of the public savings offer in most cases
The circle of investors is therefore limited, because the products are not marketed to the general public.

Regulations differ from country to country
Structured products have their own special tax and/or regulatory arrangements according to the country or the geographic zone in which they are sold. Under these conditions, purchase or subscription of these products can be offered only to investors meeting regulatory constraints.

5.2 Complex products
Structured products come in an almost unlimited variety of combinations of structure, some of which may be particularly complex. For this reason, they are usually reserved for knowledgeable investors who know the financial markets and have sufficiently broad and stable financial holdings to react and meet any losses. It is therefore very important that investors should fully inform themselves of all product risks, by consulting the detailed product description (the term sheet specific to each product).

5.3 Before investing in a structured product, be sure to:
- Have a depository nominee account open with BNP Paribas
- Carefully read the information packs which gave the main characteristics specific to each product
- Have the minimum investment amount confirmed, both on the primary and secondary markets
- Obtain information on the detailed workings of the product and the investment context

Taxation
It is important that you seek independent advice about the taxation applicable to structured products.
INVESTING IN PRIVATE EQUITY
How do we define Private Equity and what are its main features?

Private Equity consists of investing mainly in unlisted companies at various stages of maturity in order to assist them in their development and then selling them a few years later with the goal of generating significant added value.

In this document, the term «Private Equity» refers to various components such as Venture Capital, Expansion Capital, Buyout Capital/LBO (or «Leveraged Buyout»1) and Turnaround Capital. These investments can be made using funds, funds of funds or through secondary investments.

1.1 Principal investment strategies

Venture Capital
Venture Capital means investing in start-up companies specialising in high growth areas and/or developing innovative products. This type of investment has a particular emphasis on entrepreneurial undertakings and start-ups and less mature companies.

<table>
<thead>
<tr>
<th>SEED STAGE</th>
<th>Financing of the research and development stage of an initial concept before a business has reached the start-up phase.</th>
</tr>
</thead>
<tbody>
<tr>
<td>START-UP STAGE</td>
<td>Financing product development and initial marketing. Companies may be in the process of being set up or right at the start of trading but they have not yet sold their products or are not yet generating profits.</td>
</tr>
<tr>
<td>LATE STAGE</td>
<td>Financing a company whose sales are growing strongly and starting to generate profits, but whose cash flow is not yet sufficient.</td>
</tr>
</tbody>
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Capital Development
Investment intended to finance the growth and/or expansion of a company that has reached break even point or is generating profit. Expansion Capital finances increases in production capacity and/or marketing and/or product development and/or working capital requirements. The capital investment is most often carried out as a minority shareholder.

Buyout Capital /LBO1)
An LBO fund typically aims to acquire a significant or majority stake in an unlisted company generally involving the creation of a new governance and a new strategic plan. Typically, these funds invest in mature businesses, with established growth plans, with the intention of financing expansion or consolidation, sales growth, reorganisation, or the transfer of less strategic assets. For example, funding a company’s growth through a policy of multiple acquisitions is often defined as a «buy and build» strategy.

1) Refer to the insert on the following page: “Summary of the leveraged buyout (LBO) technique”
SUMMARY OF THE LEVERAGED BUYOUT (LBO) TECHNIQUE

A leveraged buyout provides finance for the acquisition of a company based on a contribution of a Private Equity fund taking an equity stake through a holding company, with the balance being financed by bank borrowings. This technique can maximise return on investment for shareholders who provided equity funds, by taking advantage of the leveraging effect achieved through these borrowings. The debt incurred to finance the acquisition is repaid from dividends received from the target company. Usually the directors of the target company invest in it alongside the fund, giving them a common interest in the success of the operation.

The leveraged acquisition technique is based on the premise that the target company can produce sufficient profit («Cash Flow») to cover the repayment of the debt. In this case, the internal rate of return (IRR) for the transaction can be very high. However, should the company not produce sufficient cash to repay the debt or the interest on it, the shareholders’ equity could be partially or completely lost.

Turnaround Capital
Turnaround capital concerns the purchase of firms in difficulty, which require an operational and/or financial restructuring. The objective is to implement a recovery plan.
Main characteristics of a Private Equity fund

Structures of Private Equity funds
Example of the simplified structure of a Private Equity Fund

| Company “A” | 10 millions euros |
| Company “B” | 8 millions euros |
| Company “C” | 3 millions euros |
| Etc.        |                  |

Engaged amount 100 millions euros

Fund Manager 1 million euros
Investors 99 millions euros

Legal and tax aspects
The multiple legal jurisdictions make it difficult to create a common framework for funds suitable for investors from different legal and tax backgrounds. It is often necessary to create two or more vehicles, with different legal structures and domiciles, to allow investors from different countries to co-invest in a shared asset portfolio.

From a tax perspective, the structures of these funds are generally based on the principle known as «transparency.» In other words, investors are treated as investing directly in the portfolios of underlying assets.

The funds may have different structures, such as Limited Partnerships in England or the United States, FIS (Specialised Investment Funds) in Luxembourg or FCPR (venture capital funds) in France.

These structures provide their investors with a regulatory framework that can vary according to their country of registration. Within the EU, private equity funds are not covered by the framework set by the standards of the European UCITS directives, which do not recognise private equity assets as being eligible for UCITS standards.

However, a new AIFM European Directive applicable to all non-UCITS funds, and in particular to private equity funds, comes into effect in July 2013 across the whole European Union in order to establish more rigorous common requirements for authorisation, transparency, risk control and the supervision of managers headquartered in the EU and those established in a third country but who want to manage or market «alternative» funds in the EU. This will result in the strengthening of investor protection.

Definitions
Minimum commitment:
Often between €5 and €10 million in the case of a direct subscription to the fund (it is possible to lower the minimum commitment by setting up funds called «feeder» funds which themselves invest in the master Private Equity fund).

Managers’ commitment to the Fund:
Usually, managers and/or directors of the funds invest their own capital alongside the investors (usually between 0.5% and 1% of the total fund).

Duration of the investment vehicle (Limited Partnership, FCPR, etc.):
The usual duration for a Private Equity fund investment is around 10 years, with possible extensions. Throughout this period, the investment is generally not liquid. However, distributions may be carried out during the life of the fund if one of the companies in the portfolio is sold off.

Investment period:
The investment period is the investment phase of the fund. It starts at the end of the subscription period and when the fund first invests in a target and usually lasts an average of 4 to 6 years.

Management fees:
The management fees charged by the fund traditionally include annual management fees (between 1.5% and 2.5% of the total commitments of the fund).
Performance-based fees:
These represent the share of total profits allocated to fund managers (usually 20%). These fees are commonly referred to as «carried interest» and are subject to a minimum preferred return for investors.

Preferred return:
Payment to the management team of its share of the fund’s profits is normally subject to an annual preferred return on all the amounts invested (typically around 8% per year).

Early exit:
The investment term of the fund is contractually binding with no possibility of an early exit from the fund.
What are the benefits of investing in Private Equity?

2.1 Portfolio diversification and an attractive risk/return ratio

Private Equity generally has a low correlation with other classes of assets. If a certain amount of the total portfolio of assets is allocated to private equity, an investor reduces the correlation of the portfolio to the volatility of the equity markets. Moreover, Private Equity has a more attractive risk/return profile (see the chart below):

![Portfolio with & without Private Equity](chart)

**REFERENCE NOTES**

**Bonds**: Treasury Bonds 10 years (January 1971 – December 2012).

**Stocks**: DJ EuroStoxx 600 (December 1987 – December 2012).

**Private Equity**: EVCA (December 1987 – December 2012).

2.2 Seeking an absolute return

Historically, the Private Equity sector has outperformed other classes of traditional assets such as shares and bonds, as a result of a number of factors:

- An active role in the reorganisation of businesses to achieve better performance (breaking up of failing groups and selling off of non-core businesses)

- Ongoing monitoring and advice provided to companies’ managements (regular reporting by companies to the shareholder funds and involvement of the Private Equity fund in strategic decisions)

- More effective corporate governance required by Private Equity funds

- A “cash flow optimisation culture”, due to the need to repay the acquisition debt, and greater performance from the company management

2.3 Privileged access to unlisted companies and creation of long-term value

Individual investors, generally through feeder vehicles, can now have access to Private Equity funds previously reserved for institutional investors.

The cash flow structure of a Private Equity fund concentrates on creating long-term value, thereby generating absolute returns which can offset limited liquidity.
What are the main risk components that should be taken into account when investing in Private Equity?

3.1 Success of the fund and investment returns

The success of an investment in a Private Equity fund depends on the ability of the investment team to identify and complete adequate investments in companies or the underlying funds. The gains or losses realised depend on the quality of the decisions taken by the manager of the Private Equity fund and whether or not their management decisions are put into practice over time. Consequently, the quality, expertise and continuity of the teams in charge (departure of potential key men) are important risk factors. There is no guarantee that the investments will or can be made, nor yet that the investments will prove profitable.

3.2 Investment in an unlisted company

An investment, even indirectly, in an unlisted company involves a high degree of risk, as these unlisted companies may be small, vulnerable to changes in the markets and dependent on the skills and the commitment of a management team that may be small, and therefore may encounter difficulties likely to cause a significant loss of value.

3.3 Unsecured invested capital

A Private Equity investment may involve a risk of capital losses. As such, the investor can have no guarantee as to the capital invested and must, therefore, allocate a limited amount of their assets to Private Equity.

3.4 Leveraged transactions

The manager of a Private Equity fund can use leveraged transactions, which by their very nature involve a high degree of financial risk and thus increase the exposure of companies to adverse economic factors such as the deterioration of sources and credit conditions, increases in interest rates, economic recession or deteriorating market conditions in the sectors where these companies operate.

3.5 Illiquidity and investment over the long term

Private Equity is a long-term investment and investors may not sell, transfer or freely exchange their interest in a fund and may not be able to withdraw the funds before maturity. There is no public market which sells interests in Private Equity funds, and no secondary market is likely to develop in the future. It may therefore be difficult for the investor to sell their interest, or to obtain reliable information as to the value of their investments and the extent of the risk to which they are exposed. As a result, investors in Private Equity must be prepared to bear the risks inherent in holding an interest in a Private Equity fund over an extended period of time.

3.6 Difficulty of valuation

The valuation of an investment by any Private Equity fund aims to give a true and transparent reflection of the intrinsic value of the said investment. Nevertheless, the real market value of an unquoted investment cannot be determined until that investment is sold.

4 What type of investor is Private Equity aimed at?

Investment in Private Equity is aimed at investors who are:

■ Sophisticated and familiar with the business world
■ Legally entitled to invest in a Private Equity fund (depending on local regulations)
■ Aware of the illiquid nature of investments in unquoted companies (no secondary market)
■ Able to hold the investment in the medium or long term
■ Seeking high rates of return and relative out-performance by comparison to traditional asset classes
■ And wanting to include real diversification into their holdings by means of exposure to Private Equity type assets which have historically shown low correlation with the equity markets

Taxation

It is important that you obtain precise information from a third party on the taxation of private equity.

Your private banker is at your disposal for any further information, to talk to you about the investment proposals put forward by BNP Paribas for private equity investment and to assist you in your choice to suit your needs and your personal investment profile before making your investment decisions.
INVESTING IN DERIVATIVES PRODUCTS
What is the definition of a derivative product and what are its main characteristics?

A derivative is a financial instrument whose value depends on one or more underlying assets traded on markets: equities, interest rates, exchange rates, raw materials, as well as climatic conditions, etc.

There are two types of market: derivatives can be traded on organised exchanges, known as «listed», and on «OTC (Over The Counter)» markets:

Listed contracts are standardised. They are processed and administered through a clearing house

Over-the-counter contracts are confidential, non-standardised and traded between two parties. The main advantage of the OTC market is the ability to handle products on a case by case basis; the major risk is that one party may default.

The potential gains and losses from derivatives can be quite significant (even unlimited in extreme cases). These gains and losses are realised at the maturity of the derivative, for products traded on the OTC market. In the case of products traded on organised markets (which provide greater transaction security), the investor must be able, every evening, to handle any potential losses estimated by the Clearing House.

It is also necessary to sign contract and specific documentation with BNP Paribas Wealth Management, with whom the derivative is concluded, containing all the product features.

Classification of derivatives

There are two main types of derivative:

- Unconditional contracts which are firm commitments (Futures, Forwards, Swaps)
- Conditional contracts (Vanilla and exotic options) in which the buyer of the option has the choice to abide with the contract or not, and the seller is obliged to keep to the terms of the contract.

1.1 The unconditional contracts

Futures contracts

A Futures contract is a firm commitment to buy or sell a quantity of an asset at an agreed price at a future date. A Futures contract requires the buyer to buy and the seller to sell the underlying product at maturity. Futures contracts are traded on organised markets and their characteristics are standardised.

When a Futures contract is signed, the contract amount is not paid (or received) in full. An initial payment is deposited with a clearing house. During the life of the contract, the investor’s account is adjusted to reflect the gains or losses (margin calls).

A Futures contract has the following characteristics:

- The underlying asset (bought and sold): Currencies, commodities, stocks, indices, etc.
- The contract size (amount of underlying assets exchanged at maturity)
- The maturity of the contract: the delivery frequencies vary from contract to contract
- The delivery method: in some cases, the place of delivery
- The amount initially deposited and the margin calls

When the operation is set up, there is no exchange of cash flows. The underlying asset is exchanged at the maturity of the contract.

Forwards contracts

A Forward contract is a firm commitment to buy or sell a quantity of an asset at an agreed price at a future date. As opposed to a Futures contract, Forwards are traded on the OTC market.

A Forward contract includes the following features:

- The underlying (bought and sold): currencies, commodities, stocks, indices, etc.
- The contract size (amount of underlying assets exchanged at maturity)
- The maturity date of the contract: a delivery date
- The method of delivery: the standard is delivery in cash
- A single flow at the end of the contract

Les swaps

A swap is an exchange of cash flows between two parties at an agreed frequency and over a given period, determined over a notional amount (no exchange of the cash flows at inception).

Swaps are OTC instruments (not administered via a clearing house) which are made to measure and which involve a counterparty risk on the flows. They may focus on different asset classes (interest rate, credit, foreign exchange, equities, etc.)

1.2 The conditional contracts

The vanilla options

On distingue deux catégories d’options vanilles : les Calls et les Puts

- The call option: gives the buyer the opportunity to buy and the seller the obligation to sell the underlying futures at a specified price (called the Strike Price)
- The put option: gives the buyer the opportunity to sell and the seller the obligation to buy the underlying futures at a specified price (called the Strike Price)
There are two types of exercise:

- **American option**: option exercisable at any time until maturity
- **European option**: option which can be exercised only at maturity

The price of an option is called the “premium”

- The option buyer pays the premium for the right to exercise their option. Any potential loss is limited to the premium paid when setting up the operation
- The seller of the option receives a premium in exchange for the obligation to buy or sell the asset. The potential losses are unlimited. The option seller is asked to establish a line of credit.

**Exotic options**

Exotic options are options whose repayment profiles depend on a number of criteria:

- **Binary option**
  This is an option with an «all or nothing» pay-off, which pays a predetermined amount when exercised. This type of option is frequently used when setting up structured products over different asset classes.

- **Asian option**
  This is an option with a pay-off that depends on the average levels of the underlying observed over a given maturity and frequency.

- **Barrier option**
  This is an option that introduces a requirement for its exercise, either its activation (“Knock-in”) or deactivation (“Knock-out”). This kind of option is used in structured products called “barrier” products

- **Worst Of/Best Of Option**
  This is an option whose pay-off depends on the performance of the underlyning with the lowest or best performance from a basket of securities

- **Callable/Autocallable**
  This is an option that features early redemption at the option of the issuer or subject to the way the underlying moves

Whether vanilla or exotic, all options features the following:

- **The underlying (bought and sold)**: currencies, commodities, stocks, indices, etc.
- **The nominal (amount of underlying assets exchanged at maturity)**
- **Maturity**: the maturity date of an option, the delivery date
- **The exercise price of the option (strike)**
- **The price of the underlying asset**
- **The option premium**
- **The pay-off formula or result at maturity**
- **Plus some unique characteristics specific to exotic options**
It should be noted that the volatility which helps determine the price of the option serves as a parameter for quantifying the risk taken on the underlying asset, since it measures the magnitude of changes in the underlying asset price.

2 What is the advantage of investing in derivative products?

The main advantages of investing in derivative products are:
- The potential for significant financial gain with a small initial investment (leverage effect)
- The use of suitable hedges

For sophisticated investors, the use of derivative products makes it possible to elaborate more complex and/or more targeted speculative strategies than direct intervention on the market for the underlying asset.

3 What are the main elements of risk to be taken into account when investing in derivatives?

3.1 Market risk

The market value of a derivative may vary significantly under the influence of various factors such as the performance of the underlying assets and their volatility, changes in interest rates or exchange rates (especially if the product is denominated in a currency other than the currency of the investor), the economic and financial situation of the country/countries concerned and the life of the product remaining until maturity.

For derivatives related to credit markets, the default risk of the various issuers of the underlying bonds depends on their quality (reflected by their ratings when this data is available) and the macroeconomic environment. The investor should know the details of the issuers of the bonds associated with the options in question. On the other hand, bond prices can vary greatly between the issue date and the maturity date. This price variation is partly related to the interest rate on the market.

3.2 Option pricing risk

As options are developed using complex parameters, the investor must fully understand how the proposed derivative works and the results obtained from the pay-off formula or the chosen value, according to the different market forecasts and the nature of the underlying asset(s).

3.3 Liquidity risks

In the case of derivatives, liquidity is entirely under the control of the counterparty who can choose whether or not, under normal market conditions, to buy or sell the derivative product from/to the investor according to various criteria defined at the outset (price, frequency and minimum amount). If they wanted to get out before maturity, the investor may well not be able to unwind part or all of their derivative or be required to unwind it at a significantly lower price. Finally, some products may become relatively illiquid, encounter high levels of volatility or a decrease (or increase) in value, reducing the relevance of their value in the portfolios or even making such valuation impossible.

3.4 Counterparty risk

With derivatives, each investor bears the credit risk of the counterparty to the transaction. The ratings of the counterparty reflect the opinion of the independent rating agencies concerned and should not be considered as a guarantee of the quality of credit. In the event of counterparty default, the investor may suffer partial or total loss of the nominal involved.
3.5 Credit risk
For the seller of a derivative (e.g. Option), credit risk also needs to be taken into account. This risk is related to the possibility of an unfavourable trend in the underlying asset which can cause irregularities that then have to be corrected by reducing exposure or strengthening collateral. The level of collateral required from the investor as well as the method used to estimate it depends entirely on the Bank.

3.6 Risk of unlimited loss for the sale of an option
It is important to understand that in the sale of an option, the risk of loss can be unlimited if the price of the underlying asset moves unfavourably.

3.7 Conflict of interest
A number of conflicts of interest (actual or potential) may arise from the general investment activities of the parties involved in the transaction, of their investment professionals or their affiliates. More specifically, the counterparty or its affiliates may offer/deal in other investment vehicles whose interests may differ from those of the holders of derivatives in question.

3.8 Risk linked to hybrid products and exotic options
The risk associated with hybrid products and exotic options is of the same kind as for OTC options, but there are other factors that must be taken into account (possible correlations, particularities of exotic options, etc.)

4 | What kind of investors are derivatives aimed at?

Derivative products are generally aimed at experienced investors who can understand the often complex changes in these products. We recommend that you perform market simulations on derivative product positions in order to gauge the outcome of their possible development and thus make fully-informed decisions. Furthermore, derivative product positions should be followed up frequently (ideally, daily), as these positions change very quickly in accordance with their underlying asset; its volatility (leverage effect) and the time remaining to maturity (time value decay).

Prior to investing in a derivative, the investor should carefully read the Key Investor Information Document (KIID), which provides a standardised summary of the specific and most important characteristics of each product.

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Taxation
It is important that you seek independent advice about the taxation applicable to derivative products.

Your BNP Paribas Advisor is at your disposal for any further information, to talk to you know about the investment proposals put forward by BNP Paribas using derivative products and to assist you in your choice to suit your needs and your personal investment profile before making your investment decisions.
INVESTING IN WARRANTS
What is the definition of a warrant and what are its main characteristics?

A warrant is a security, which confers the right (and not the obligation) to buy or sell:
- A given quantity of a specific asset, (underlying asset)
- At a given price (strike price)
- At any time within a given time limit or at a given maturity date

The premium is the transaction price of the warrant. These parameters are defined in advance and fixed on the day the operation is concluded. The underlying asset may be an equity share, an index, an equity basket, a commodity, a currency pair...

As for option contracts, there are two types of warrants:
- **Call warrant**: option to buy the underlying assets at the strike price
- **Sell warrant**: option to sell the underlying assets at the strike price.

For the European-type warrants, the investor is granted the right to buy or sell the underlying asset at expiry date (maturity). For the American-type warrants, this right is available throughout the lifetime of the product.

**Parity** is the number of warrants required to exercise one's right on an underlying. Each warrant has its own parity. For instance, a parity of 10 on a call warrant means that you must buy 10 warrants to be able to buy a share at the strike price, on expiration time.

The warrants are financial instruments belonging to the category of securities (bonds, stocks, etc...). They are not derivative products, although they function in a similar way.

They differ from options as follows:
- A warrant can be bought, but it can only be sold if the investor actually owns it as a part of their portfolio: no short sales can be made on this type of financial instrument, unlike with options.
- Warrants can generally be issued by financial establishments or limited companies, which are by definition legally authorized to issue securities.

The issuer communicates on the market in order to solicit investors' interest, stimulate demand and thus ensure a certain level of liquidity.

Warrants can be listed. In such case, they are listed on a stock market as a security. Since listing is optional, a certain number of warrants are traded over the counter (OTC).

Usually, the liquidity of the warrant markets is high enough for the issuer to be able to sell his warrant at any time until a few days before the maturity date, defined on each stock exchange.

For most warrants, a cash settlement at maturity is chosen by the issuer. It is always the case for put warrants.

**Price factors for a warrant:**

As for an option premium, the price of a warrant depends on several market parameters:
- **The value of the underlying asset** (equity, index, basket, commodity, etc...)
- **The prospective movements** in the underlying asset price in respect of the chosen strike price and underlying volatility
- **The warrant lifetime**

When the market expects high price movements on the underlying asset, its volatility is high, which passes through to the warrant. The value of the warrant will rise, reflecting the greater opportunity to realize capital gains.

Similarly, the longer the warrant lifetime, the higher the probability of significant change in value of the underlying asset.
So, a warrant with a longer maturity is more risky than a warrant with a shorter maturity; however at the same time, the opportunities for making capital gains are increased.

Finally, the choice of the strike price, compared to the underlying price at the time of the warrant purchase, is paramount because the gain at maturity time will depend not only on the trend observed over the warrant lifetime, but also on its scale.

The opportunities and risks of such speculative investment will depend on the combination of these three main factors. So, it is essential that the investor masters the warrant’s sensitivity to the value changes in these parameters to make a profitable purchase.

Why is it interesting to purchase a warrant?

- The warrant is a speculative financial instrument: it offers a high expectation of gain as well as a high level of risk. This product specificity is to offer leverage, i.e. it accentuates the price moves of the underlying asset in question upwards as well as downwards. Thanks to leverage, a low investment amount equal to the premium paid can yield very high returns.

- Warrants also allow a speculative position to be taken on a specific underlying asset, without buying it directly. If the investor expects movements in an underlying asset, but however wishes to limit his loss in case of an unfavorable trend, purchasing a warrant judiciously chosen as regards its parameters (strike price and maturity), allows him to bet on the price move while limiting his loss to the purchasing price of the warrant, instead of the price difference which he would have to bear if he had directly bought the underlying asset. Here again, leverage, using a low invested amount, enables the investor to back an idea for a much higher nominal amount than that for which he may have the liquid funds available.

What are the main elements of risk to be taken into consideration when investing in warrants?

Market risk
The main risk for a warrant is that market conditions on maturity mean that there is no point in buying the underlying asset at the warrant strike price. For example: with a call warrant on a share at a strike price of 100, if, on maturity date of the warrant, the share price is 80, there would be no point in the investor exercising his warrant and it would make more sense to buy the share at 80 directly on the stock market. In such a case, the investor would lose his seed money (the premium).

Risk of change in net asset value
The warrant value decreases over time. But this time decay is not linear with time: the closer the warrant is to the maturity date, the faster the time value decreases (and thus the warrant value). An approximate estimate is that a warrant loses about 2/3 of its value over one-third of its lifetime. It is sometimes better to sell the warrant early enough to realise a profit and offset the potential loss due to time value.
Counterparty risk
There is also a counterparty risk on the warrant issuer: it is important to buy the issue from a highly rated financial institution of the market.

4 | What kind of investors should consider warrants?

Warrants are financial instruments suitable only for experienced investors who are able to understand the complexity of such products that are often highly sensitive to movements in their quotation parameters.

The choice of the different warrant parameters is paramount in achieving high gains. It should optimize the strike price and maturity in order to match market expectations, while minimizing the negative effect due to the time value decrease at the end of the warrant life. So, in order to optimize his choices, the investor should have an excellent knowledge of complex products of an optional nature, as well as a thorough knowledge of the underlying asset markets.

Price movements in the warrant bought should be monitored to detect any opportunities related to a dynamic management of such highly volatile instruments.

Taxation
It is important that you seek independent advice regarding the taxation applicable to warrants.

Your private banker is available to provide any further information you may require. They will be fully acquainted with all the warrant investment opportunities recommended by the BNP Paribas and will assist you in your choices, according to your personal needs and investment profile, before any investment decisions are made.
INVESTING IN AN UNLISTED REAL ESTATE FUND
What is the definition of an unlisted real estate fund and what are its main characteristics?

1.1 Generalities

Traditionally, investing in real estate used to be synonymous with direct, physical investments.

Now, there are a number of investment vehicles and legal structures available which make it possible to invest in real estate indirectly. Investing in a real estate fund therefore represents an alternative to direct investment and the transaction can be entrusted to real estate market professionals.

An indirect investment can be made:

- Through listed vehicles (real estate investment companies, exchange traded funds). Their shares are subject to daily liquidity. Listed real estate is more liquid and diverse than unlisted real estate. However, it is more sensitive to stock market fluctuations.

- Through an unlisted private structure, managed by a management company. This company is responsible for investing, managing and arbitraging property, depending on market opportunities. It aims to optimise the profitability of the fund over a period of often predetermined time.

There are numerous legal structures, often specific to each country. The securities are traded OTC.

The most frequently used benchmark for measuring performance is the IPD (Investment Property Databank). It provides the real estate investment market with comparable information with that of regulated markets (Europe, USA, Asia).
1.2 What are the main characteristics of an unlisted real estate fund?

There are three main strategy types: "Core/Value Added/Opportunistic". They offer varying risk/return ratios and more or less added value, depending on the degree of recourse to financial leverage and active asset management.

<table>
<thead>
<tr>
<th>Strategy Type</th>
<th>Return</th>
<th>Risk / Recourse to Financial Leverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Value Added</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Opportunistic</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>

The investment zone can be single or multi-country and single or multi-sector (housing, offices, shops, hotels, etc.) making for more or less diversification.

The expected duration of an unlisted investment fund varies from 6 to 10 years, including a property acquisition period of 2 to 4 years.

The return objectives are expressed as a net, pre-tax Internal Return Rate (calculated as a percentage, the IRR measures the profitability of an investment based on cash-flows). The profitability can be raised, for distribution to investors, during the fund's lifetime or at the time of exit from the investment (liquidation, cease of trading, flotation).

1.3 Investment scheme

An investment in an unlisted product may be made via a feeder fund or directly in the Master Fund.

Depending on the structure in question, a direct investment in a master fund is associated with a level of investment of more than 1 million euros, while the average unit of an investment through a feeder fund is usually goes for around 150,000 euros to 250,000 euros.

It is therefore generally recommended to investors to invest through the feeder fund.

Investments in real estate will be made by the master fund through an appropriate legal structure. Each investment in a property may be accompanied by leverage of various dimensions (debt).
The real estate strategy is implemented at the discretion of a management company to whom the investor fully delegates the management of the fund and who is paid a management fee.

2. What are the advantages of investing in real estate?

In the last twenty years or so, real estate has established itself as an asset class in its own right, with the following merits:

- A sizeable market - real estate investment representing around 15% of global GDP
- It provides a useful means of diversifying portfolios with real assets, since real estate cycles vary in sensitivity by geographical location and by the broad range of underlying assets (residential, offices, shops,...)
- It offers an intermediary risk/return ratio in relation to equities and bonds
- It shows a capacity for resistance because of its low correlation with traditional financial investments (blue chip securities)
- It helps protect against inflation due to regular, stable revenues.

3. What are the elements of risk to be taken into consideration when investing in an unlisted real estate fund?

This type of investment combines the risks associated with investing in the real estate market and those of investing in an unlisted fund:

3.1. Market liquidity risk

Unlisted companies' shares cannot generally be sold freely; there is no “secondary market” for these shares and it is not foreseen that such a market will develop. It is therefore difficult, if not impossible, for an investor to sell their shares.

3.2. Risks linked to changes in interest rates and in the economic situation

Variations in interest rates and financial market volatility may also restrict the financing solutions available to potential real estate buyers or for mounting operations and therefore push selling prices for these assets down, reducing the effective return on the investment.

A general economic slowdown or a significant variation in real estate market cycles may affect the local real estate market.
3.3 Risks linked to the investment strategy specific to each fund

The choice of a real estate strategy must meet the investor’s expectations in terms of performance and risks. The financing risks must also be included – these increase in proportion to the returns – as well as those linked to the maturity of the real estate markets, the construction sector and the management team’s ability to implement the desired strategy.

3.4 Risks linked to the product management quality

Making a success of a unlisted company requires a very specific type of expertise and depends above all on the skill and commitment of the asset manager. Of particular importance is their ability to identify, choose and acquire appropriate real estate assets and implement the investment strategy. It is essential to choose a first class asset manager with an excellent track record over several years (previously existing funds or successfully completed real estate operations).

3.5 Market and underlying asset risks

An investment in an unlisted company is more risky than an investment in a listed company, as unlisted companies are often smaller and more vulnerable to changes in the markets. Past performance of similar investments cannot serve as a reference or a guide to the returns likely to be produced by another real estate investment fund. When investments are pooled via a single manager, who is an expert in their field, the manager is able to call on human and technical resources (research team, computer modeling, sophistication, etc.) to improve the quality of their decisions and thus provide all unit-holders or shareholders with better performance.

3.6 Regulatory risk

The regulations and taxation applicable to property investors may be subject to modification, with possible consequences for the operational management of the assets, which may have detrimental effects on the performance of the investments.

3.7 Additional risks associated with investing in emerging markets

Investing in a fund which invests significantly in the “emerging” property market, must be approached carefully. The asset manager must carefully analyse the characteristics of each local market (transparency, property and leasing rights, etc.), and pay particular attention to the quality and reputation of the local partners selected.

3.8 Counterparty risk

The counterparty with whom a contract is concluded may fail to meet its commitments (delivery of goods, payment of rent, etc.). The level of risk involved depends on the choice of counterparty (property developers, tenants, etc.). In the case of a fund, this choice is the responsibility of the asset manager.

4 What kind of investor should consider investing in real estate?

Investing in an unlisted real estate fund provides access to investments managed by real estate market professionals, able to respond to the investor’s specific requirements through a combination of the following factors:

- Risk/return profile (Core to Opportunistic strategies)
- Investment horizon (medium/long-term)
- Diversification in terms of geographical zones / real estate sectors

However, investing in an unlisted real estate fund involves a significant degree of risk in that it implies a long-term investment horizon and carries no guarantee that the investment will achieve its return objectives nor that the investor’s capital will be recovered.

This type of investment is suitable for investors who have the ability, the means and the financial circumstances required to evaluate and accept the risks involved in investing in an unlisted company (in particular, the lack of liquidity inherent to this type of investment, as well as the risks associated with investing in the real estate market).

Given the risks inherent to both unlisted investments and the real estate market, investors should make sure they have access to clear, timely information. It is particularly important that they receive regular, detailed reports, validated by an independent expert, so they can fully assess the quality of the assets acquired, verify the accurate implementation of the fund strategy and therefore ensure the smooth running of their investment for its entire duration.

Taxation

It is important that you seek independent advice about the taxation applicable to unlisted real estate investments.

Your BNP Paribas Relationship Manager is available to provide any further information you may require. They will be fully acquainted with all the unlisted real estate securities investment opportunities offered by the BNP Paribas and will assist you in your choices, according to your personal needs and investment profile, before you make your investment decisions.
INVESTING IN COMMODITIES
What is the definition of the Commodities market and what are its main characteristics?

The term Commodities covers a vast field, from markets in raw materials to agricultural and farming products, oil and energy sources, precious/rare/industrial metals, minerals, etc.

For generic, fungible products for which a standardisation has been defined, these markets feature various types of players carrying out transactions providing an instant reflection of supply and demand based on prices. By their very nature, the prices of materials traded on these markets have an intrinsic level of volatility.

Their various characteristics (quality standards, delivery conditions, etc.) also result in a proliferation in the number and terms of contracts which can be traded, producing an extremely sophisticated range of financial instruments. These markets are therefore among the most complex for an investor.

Players on these markets

These markets, which are generally still very much the preserve of professionals, essentially developed in the form of organised markets, with a clearing house, futures contracts with pre-defined delivery periods and options contracts. These contracts allow one party (mainly producers) to cover itself against an unfavourable change in prices, and another party (speculators) to profit from fluctuations and underlying volatility. The involvement of speculators makes it possible to considerably increase these markets' liquidity and volumes.

Settlement on maturity can be carried out via physical delivery of the materials in question, mainly when players are professionals. In this case the date and place of delivery must be stipulated, as well as the product's characteristics. Quality standards generally make this approach complex.

Most trades by investors are settled prior to maturity with a cash payment of the difference between the initial purchase/sale price and the final resale/redemption price of the forward or futures contracts. The transparency offered by these markets also means they can be used as a benchmark for physical transactions on the spot market.

For private investors, only the markets in gold and precious metals can be physically delivered or recorded in book-entry form with their bank.

Main underlying products

- **Agriculture:** These commodities are often classified in three categories:
  - “Grains”: corn, soya, wheat, oats, rice, barley, etc.
  - “Exotics”: cocoa, coffee, sugar, rubber, orange juice, etc.
  - “Fibres”: cotton, wool, silk, lumber, etc.
- **Cattle farming:** meet, live animals, etc.
- **Energy:** oil, petroleum products, gas, coal, power
- **Precious metals:** gold, platinum, palladium, silver
- **Minerals and industrial metals:** iron, copper, aluminium, zinc, lead, nickel, diamonds, etc.

As part of its commitment to Corporate Social Responsibility (CSR), BNP Paribas has developed a policy designed as a framework for its activities in certain underlying products linked to commodities, with particular vigilance in relation to key agricultural commodities (e.g. grains) according to the definition given by the FAO. The group undertakes not to sell derivatives (futures) on exclusively financial grounds. When an investor wants to invest in this type of underlying product, BNP Paribas checks that it is purely for hedging purposes.

Indexes

The main composite indexes acting as market benchmarks particularly include:

- Rogers International Commodity Index® (RICI)
- Reuters/Jefferies CRB® Index (RI/CRB)
- Dow Jones-UBS Commodity Index (DJ-UBSCI)
- Standards & Poor’s Goldman Sachs Commodity Index (S&P GSCI™ Commodity Index)
- DCI® BNP Paribas Enhanced (DCI®-B)

These indexes are constructed to include baskets of futures on the various underlying markets.

They have variable characteristics depending on the weighting of the various categories of raw materials – either balanced and diversified, or concentrated on one of them (e.g. energy, metals, or agriculture) – and depending on their geographical scope.

Some are listed directly on organised markets via futures on these indexes (the GSCI index futures contract is listed on the Chicago Mercantile Exchange, RI/CRB index futures on the New York Board of Trade) or via index funds or trackers making these composite markets accessible to general investors in the commodities asset class.

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1) *future:* firm undertaking to buy or sell a determined quantity of an asset at an agreed price and date.

2) BNP Paribas has also established a sector-based policy concerning companies working in the field of palm oil, nuclear and coal.
1.4 Instruments

Futures and options contracts (see document on derivatives)

Futures (and options) contracts for commodities generally function in the same way as for other markets. The prices of futures represent the prices that traders are prepared to pay/receive at a future date for a fixed quantity of a commodity. These futures contracts have the advantage of being standardised, listed on an organised, transparent and liquid market, and avoid physical delivery of raw materials.

The main organised commodities markets are:

■ For all underlying commodities, the Chicago Mercantile Exchange Group (CME Group) and the Intercontinental Exchange (ICE) which recently merged with the NYSE Liffe,

■ For agricultural products, the New York Board of Trade (NYBOT),

■ For industrial metals, the London Metal Exchange (LME).

Markets specialising in a specific commodity are mainly reserved for professionals and private investors experienced in the underlying commodity concerned, with the multitude of contracts available making trading even more complex.

For a more general, but still sector-based approach, futures based on composite indexes are available with contracts requiring cash settlement on maturity.

Finally, assorted “baskets” have been prepared for institutional investors on the theme of “global commodities” to be found in the main indexes.

Long only funds specialising in commodities

For several years management companies have developed a specialised range of funds adopting an index-based approach, either general or focused on a specific theme.

Many indexes created by large financial institutions are listed on the market. Many of them require very high initial investments which are not accessible to all private investors. Management companies specialising in commodities offer an increasingly accessible range of general and diversified index funds and index funds concentrated on a theme (biofuels, non-GMO, etc.), some aimed at private investors.

Furthermore, some «enhanced» indexes and index funds exist (e.g. DCI® BNP Paribas Enhanced (DCI®-B). These funds use complex mathematical models to take advantage of differences between spot and futures prices.

Some managers have also developed strategies using a range of instruments (indexes, equity-commodities, etc.) allowing active management in this asset class.

Commodities structured products

It is possible to create structured products based on commodities in the same way as on other underlying assets such as shares. Most standard structured products can be adapted to underlying commodities or commodities indexes. These products provide private investors with easy access to these underlying commodities which are sometimes difficult to access otherwise.

It is possible to develop a wide range of products (yield, performance, etc.), offering total or partial protection of the principal amount (see document on structured products).
Commodities funds use alternative strategies (particularly long/short funds)
The range of funds using alternative strategies and investing in commodities is many and varied. It offers funds with a wide choice of risk/return profiles. These funds offer varying exposure to commodities, which will be managed actively to capture short-term returns and long-term structural bull trends.

This type of fund, like all products with underlying commodities, is reserved for experienced investors.

What is the advantage of investing in commodities markets?

In recent years, commodities have offered a very important means of diversification due to their low correlation with traditional asset classes (shares and bonds). Their significant volatility gives these products a speculative appeal.

Management funds and institutional investors have therefore gradually added commodities to their range of instruments for diversifying financial investments.

They have also become accessible to private investors via funds, and index products mirroring the behaviour of these markets in a more or less diversified way depending on the number of underlying products (funds or tracker funds based on these indexes or futures based on composite indexes).

Investors still need to be very experienced, since trading derivatives on an organised market can generate significant gains from a low initial investment but also has a high risk of loss if the market turns. A few valuable materials such as gold and silver are easier to trade. The relative transparency of the market make them a good portfolio diversification asset.

Providing you fully understand the rules, investing in commodities has three major advantages:
- Portfolio diversification
- Performances with a low correlation to shares and bonds
- Protection against inflation

What are the main risk factors to take into account on commodities markets?

3.1 Market risks
Commodities markets, particularly in their commonest form of derivatives (futures and options traded on organised markets) are products reserved for very experienced investors due to their high level of volatility, and due to the extremely specialist nature of their underlying assets (seasonality, market announcements and anticipation of production levels, stocks, geostrategic issues for some markets such as oil, copper and other raw materials, climatic variations for agricultural products, etc.)

3.2 Risk associated with leverage
It is possible to obtain leverage on organised markets (initial margin allowing investment in a nominal multiple of the initial capital), amplifying the risk of loss.

3.3 Counterparty and delivery risks
For materials subject to physical delivery, such as gold, the nature of the transaction (physical or via book entry) determines the nature of the counterparty risk taken by the investor. A book entry to some extent reflects the investor’s confidence in the financial future of the bank. Physical ownership, in a safe for example, does not incur the bank’s liability in the same way... It is therefore necessary to ask about the type of contract before carrying out transactions, as well as issues of storage and insurance for the assets in the event of physical delivery.

3.4 Country risk and transfer risk
The political and economic climate of some countries producing raw materials may be unstable and lead to significant and rapid fluctuation in prices. Country rating published in the financial press can provide useful indications for investors in this respect.

3.5 Cyclical risk
Changes in a company’s activity or a market’s economy constantly affect changes in the prices of financial instruments and exchange rates. Since raw materials are closely linked to the economic climate as a physical or consumable asset, they fluctuate based on economic peaks and troughs.
What you need to know before investing in a commodities product

These markets are generally suitable for experienced investors able to understand often complex macro-economic, political and strategic changes affecting these products. Like any derivatives, futures and options contracts must be approached with caution, particularly due to the amplification of gains and losses made possible by leverage.

For investments in funds, index and structured products providing a level of portfolio diversification compared with more traditional markets, special attention must be paid to the product documentation and the composition of underlying indexes. It is important for investors to understand and comply with the implicit management strategies, as well as the intrinsic characteristics of the structured product (capital guarantee or highly speculative product).

Finally, although the volatility of each commodity is fairly high, combining several raw materials in one basket allows greater control over this volatility to some extent, since raw materials in different categories have a low correlation to each other. For investors with less experienced risk profiles, preference should therefore be given to investments in diversified baskets of commodities, to ensure portfolio diversification.

To allow more secure and/or more diversified access to these markets, banks have adapted their products and now offer collective investment schemes allowing diversification of underlying products via composite indexes, or certificates or structured funds index-linked to these markets. Some even offer products guaranteeing the principal amount, protecting investors from market falls or volatility.

Taxation

It is important that you obtain precise information from a third party regarding taxation applicable to commodities.

Your BNP Paribas advisor is available for any further information, to tell you about investment proposals recommended by BNP Paribas in relation to "commodities" and to support you in your choices according to your needs and your personal investment profile before you make your decisions.
INVESTING IN EXCHANGE TRADED PRODUCTS (ETPS)
What is the definition of an Exchange Traded Product (ETP) and what are its main characteristics?

Exchange Traded Products (ETPs) are a broad category of listed securities tracking the performance of underlying asset(s). They encompass Exchange Traded Funds (ETFs), Exchange Traded Commodities (ETCs) and Exchange Traded Notes (ETNs).

**ETP**  
**ETF**  
**ETC**  
**ETN**

<table>
<thead>
<tr>
<th>Provides access to, among others:</th>
<th></th>
<th></th>
<th>Provides access to an asset or benchmark using an uncollateralised debt security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity indices</td>
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<tr>
<td>Commodity indices</td>
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<tr>
<td>Fixed income</td>
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<tr>
<td>Money markets</td>
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<td>Private equity indices</td>
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<tr>
<td>Fund of hedge funds indices</td>
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</table>

Only ETFs, being funds, can be UCITS-compliant funds whereas ETCs and ETNs are not issued as fund units but as debt securities. As such, ETCs and ETNs can never be collective investment schemes under the UCITS directive, and therefore, can never be governed by UCITS regulations.

ETFs can be UCITS compliant funds if they are created and managed in the European Union under the UCITS directive by a UCITS compliant asset manager.

As a consequence many ETFs, even if traded, are not UCITS compliant because they are not European or because their asset manager has not chosen to fulfil UCITS requirements. For example, none of US ETFs can be UCITS compliant.

**ETPs Overview:**

<table>
<thead>
<tr>
<th>Security type</th>
<th>ETF</th>
<th>ETC</th>
<th>ETN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governed by UCITS</td>
<td>Collective investment vehicle</td>
<td>Debt security</td>
<td>Debt security</td>
</tr>
<tr>
<td>Commodity access</td>
<td>Possible</td>
<td>Never</td>
<td>Never</td>
</tr>
<tr>
<td>Issuer credit risk</td>
<td>Limited</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Eligible by UCITS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Sources: ETF Securities
1.1 Replication method

ETPs can be structured in two ways: physically or synthetically.

Physical replication
A physically replicating ETF either owns all or a sample of the assets that comprise the underlying benchmark. This type of ETF is respectively known as “full replication” or “sampling replication”.

Full replication
All the underlying assets are held in the same proportion as their weighting on the replicated index. This method is used if the underlying assets are readily available, reasonably small in number, and do not significantly change (e.g. the 102 shares listed on the FTSE 100, reviewed quarterly).

The main advantage of full replication is that since the product holds the same assets as the index, it tracks the index very accurately. However, the disadvantage is potentially high transaction costs if the index frequently changes a large number of its constituents.

Sampling replication
Instead of holding all assets that make up an index, the product holds a sample of the index’s constituents.

In the case of sampling replication, transaction costs are lower than full replication. However, because the ETP’s holdings differ to those of the index, the product’s return may not be exactly the same as that of the index.

Synthetic replication
Unlike the physical replication, a synthetic ETP does not physically hold the underlying assets the product is tracking. Instead, the ETP issuer enters into a swap agreement with a counterparty that undertakes to pay the performance of the underlying assets. An ETP provider might choose to use a swap for a number of reasons:

Accuracy: Because the return on a synthetic ETP is guaranteed by a counterparty, it can accurately match the underlying asset return.

Cost-effective: A synthetic ETP has limited transaction costs relating to the buying and selling of underlying assets.

Access: Non-metal commodities can only be accessed synthetically because of the difficulties associated with storage.

Variety: Synthetic ETP structures offer exposures which cannot be physically replicated, including short and leveraged products, volatility indices and emerging market securities.

The principal risk of synthetic ETPs is counterparty default, known as counterparty risk.

If a counterparty defaults on its obligations under the swap agreement, the ETP may not be able to provide the return on the asset that it is tracking, potentially incurring losses for investors. To minimise the impact of a default, most synthetic ETFs and ETCs are backed by collateral.

1.2 Performance

The purpose of an ETF is to track the performance of the underlying index. The industry standard risk measure is the Tracking Error (TE) and the Tracking Difference (TD).

Tracking Error
The Tracking Error (TE) is a measurement that assesses how close an ETF tracks the index. This is a reasonable way of checking the stability of the ETF tracking ability. While volatility reflects the overall risk for the ETF return and is directly correlated to the index’s volatility, the TE offers an additional risk measurement that highlights the replication risk, in contrast to market risk.

The tracking error is a relevant indicator for tactical investors who trade ETFs on a regular basis or who hold an ETF for only a few days or weeks.

How Tracking Error is calculated:
Standard Deviation of the ETF excess return:

\[ TE = \sqrt{\text{Var} (r_{\text{ETF}} - r_{\text{benchmark}})} \]

Tracking Error and risks
There are three main risk factors that may affect (and lead to) a higher TE:

Fees: higher fees can logically impact the excess return and result in higher volatility.

Replication method/model: There is no empirical evidence that a specific method produces a better TE. Each method has specific features that may increase the TE.

For physical replication, the rebalancing cost has the biggest impact and can negatively affect the TE, especially for less liquid indices. Sampling may reduce the rebalancing cost for such indices or indices having a large number of underlying securities, however, this may generate a gap between the ETF’s composition and the benchmark, hence creating volatility in the TE.

Performance-enhancing practices, such as securities lending, may have a positive impact on the Tracking Difference, but this may lead to the performance diverging away from the index.

Theoretically, synthetic replication generates a lower TE due to the nature of the replication process. Nevertheless, this does not exclude additional risk factors that may have a
direct impact on the TE, such as the swap cost as well as the swap structure which are directly correlated to the index-weighting scheme and liquidity.

- **Cash Drag:**
The last component is the un-invested cash held in the portfolio due to daily operations. The challenge for a portfolio manager is to know how to reduce the impact of the residual cash balance on the fund’s global performance.

**Tracking Difference:**
The Tracking Difference is defined as the total return difference between a fund and its benchmark index over a given period of time.

For a buy-to-hold investor with a longer investment horizon, such as a long-only asset manager or a retail investor, the Tracking Difference between the fund and the index over the target investment period (e.g. a 1-year or 3-year horizon) is of greater importance.

**Causes of Tracking Error and Tracking Difference:**
Cost is one of the largest reasons for Tracking Error and Tracking Difference. Given that the total holding cost comprises both fixed (Total Expense Ratio - TER, see §1.6 below) and variable factors (bid/ask spreads), such costs may contribute to the absolute difference between a product’s return and that of its benchmark (Tracking Difference), as well as the difference in volatility (Tracking Error).

However, there are a number of causes of Tracking Error and Tracking Difference that are not covered by cost:

<table>
<thead>
<tr>
<th>Cost factors that impact tracking</th>
<th>Non-cost factors that impact tracking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Expense Ratio</td>
<td>Dividend reinvestment</td>
</tr>
<tr>
<td>Rebalancing costs</td>
<td>Withholding taxes</td>
</tr>
<tr>
<td>Swap spread</td>
<td>Sampling</td>
</tr>
<tr>
<td>Tax</td>
<td>Securities lending</td>
</tr>
</tbody>
</table>

**Source:** ETF Securities

### 1.3 Trading and valuation

ETFs trade like shares in that they are listed on equity exchanges and are thus traded via standard equity trading tools. However, the liquidity of an ETF differs from that of a share. Many investors, who are experienced in equity trading, tend to use the screen volume as a primary proxy for liquidity.

The traded volume of an ETF, however, may not reflect its accurate liquidity level as it does not include the liquidity of the underlying constituents of the ETF that can be accessed as part of the ETF trading process. This is because ETPs can be created in exchange for underlying assets or cash.

Therefore, **ETPs can source liquidity from the tracked underlying assets.** Unlike a share, pricing is not determined by the supply and demand of a fixed number of units because ETP securities can be created to meet demand. Instead, ETPs are priced on the basis of the underlying assets. Arbitrage will ensure that ETPs closely track their underlying asset.

**Creation and redemption**

Investors of Exchange Traded Products purchase and sell securities on the stock exchange. This is referred to as the secondary market.

**There is also a primary market, on which Authorised Participants (AP) can trade directly with the issuer of the ETP.**

APs are financial institutions that source the underlying assets or cash needed to create ETPs. Only APs can create or redeem ETPs. The former are typically investment banks or specialised market makers.

Market makers are financial institutions that quote prices for an asset in order to provide liquidity for such product. Market makers aim to profit from the bid/ask spread.
**Creation process**

The AP submits an application to the ETP provider to purchase (i.e. ‘create’) securities.

The AP then delivers the underlying reference asset or the cash equivalent to the ETP provider.

e.g. if the ETP tracks the FTSE 100 index, the AP will deliver the FTSE 100 shares according to their weighting in the index or the cash value of such shares.

In exchange, the ETP provider transfers the same value in ETP securities to the AP. The AP then sells the ETP securities to intermediaries and investors on the stock exchange.

**Redemption process**

The AP submits an application to the ETP provider to return (i.e. ‘redeem’) the securities. The ETP provider then delivers the underlying reference asset or the cash equivalent to the AP. In exchange, the ETP provider cancels out the same value in ETP securities.

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**LIST OF AUTHORIZED PARTICIPANTS**

<table>
<thead>
<tr>
<th>ABN AMRO</th>
<th>HYPOVEREINSBANK</th>
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<tbody>
<tr>
<td>Banca IMI</td>
<td>IMC des marchés financiers</td>
</tr>
<tr>
<td>Barclays</td>
<td>Jane Street</td>
</tr>
<tr>
<td>BNP Paribas Arbitrage</td>
<td>JP Morgan</td>
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<tr>
<td>Citadelle</td>
<td>KCGw</td>
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<tr>
<td>Citi Group</td>
<td>Kepler</td>
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<tr>
<td>Commerzbank</td>
<td>Merrill Lynch</td>
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<tr>
<td>Credit Suisse</td>
<td>Morgan Stanley</td>
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<tr>
<td>Deutsche Bank</td>
<td>Natixis</td>
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<tr>
<td>Flow Traders</td>
<td>Optiver</td>
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<td>GFI</td>
<td>Société Générale</td>
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<tr>
<td>Goldenberg</td>
<td>Susquehanna</td>
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<tr>
<td>Goldman Sachs</td>
<td>Timber Hill</td>
</tr>
<tr>
<td>HSBC</td>
<td>Virtu Finance</td>
</tr>
</tbody>
</table>

**LIST OF MARKET MAKERS**

| BNP Paribas Arbitrage        | KCG                          |
| Citigroup Global Markets     | Morgan Stanley International |
| Commerzbank AG               | Optiver V.O.F.               |
| 4700 Flow Traders            | Société Générale             |
| Hypovereinsbank              | Susquehanna Intl Sec LTD     |
| IMC                          |                              |

---

**Primary Market**

- **ETP Provider**
  - ETF Securities
  - Cash or Reference Assets
- **Authorised Participants**
  - ETF Securities
  - Cash

**Stock Exchange**

- **Market Maker**
- **Broker**
  - Buy/Sell
- **Investors**
1.4 Valuation and arbitrage process

In theory, the price of an ETP should be determined by its net asset value (NAV) divided by the number of securities. The NAV fluctuates according to the price movements of the underlying assets which, in turn, will alter the price of each ETP security.

Physical ETCs do not have an NAV. Instead, the price of a physical ETC is determined by the metal entitlement multiplied by the spot price of that metal. The spot price fluctuates according to the supply and demand for the underlying metal.

If the supply and demand for an ETP causes it to trade away from its NAV value, an arbitrage opportunity arises:

- If the ETP price is greater than the underlying assets, then the AP can buy the underlying assets and exchange them for ETP securities. These securities can then be sold to intermediaries and investors. Since the ETP securities are worth more than the underlying assets, the AP makes a profit.
- If the ETP price is less than the underlying assets, then the AP can buy ETP securities and exchange them for the underlying assets. These assets can then be sold to intermediaries and investors. Since the underlying assets are worth more than the ETP securities, the AP makes a profit.

With ETPs, the creation/redemption process allows an arbitrage operation to take place. The AP can continue the arbitrage until there is no price difference between the ETP and the underlying assets; hence the arbitrage process is no longer profitable. This ensures that ETPs can only trade away from their NAV for short periods.

1.5 Securities lending

Securities lending is used in most fund structures, including index and active mutual funds, segregated mandates, and physically and derivative replicating ETFs. If carried out under appropriate controls it is considered a low-risk activity.

However, there may be significant differences in the returns generated, the risk management standards and the level of transparency provided in different securities lending programmes.

For a fund investor, the primary benefit of securities lending is the extra revenue generated, which in some cases may significantly offset the cost of holding an ETF. Investors should consider the additional revenue generated by securities lending as an important factor when making an investment decision.
1.6 Costs and performance

Cost is one of the most important factors to consider when making an investment. While performance is difficult to predict, costs are not. Unfortunately, ETP costs are not always transparent.

The most widely reported cost figure is the ongoing charge or total expense ratio (TER), but it is often incomplete if any internal and external expenses (transactions costs, swap spreads and bid/ask spreads on exchange) are not included.

1.7 Key factors to consider when selecting an ETF

<table>
<thead>
<tr>
<th>Physical ETFs</th>
<th>Synthetic ETFs</th>
<th>Physical ETCs</th>
<th>Synthetic ETCs</th>
<th>ETNs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market risk</td>
<td>*</td>
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<tr>
<td>Tracking Difference</td>
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<td>Tax</td>
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<td>Costs</td>
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<td>Currency</td>
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<tr>
<td>Securities lending</td>
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<tr>
<td>Sampling</td>
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<td>Counterparty risk</td>
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<tr>
<td>Credit risk</td>
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</tbody>
</table>

* = if engages in securities lending  () = if engages in

Source: BlackRock

Source: ETF Securities
What are the benefits of investing in ETFs?

- Access to all asset classes.
- Listed on all major exchanges in a range of trading currencies.
- Immediate market access through a single transaction.
- Cost effective: lower TERs than traditional mutual or active funds.
- Simple: trades on exchanges and is settled like a share. Cleared and held in brokerage or bank custody accounts.
- Flexible: Choice of benchmark index, fund structure, trading venue, dividend distribution etc. Used by a range of investors.

What are the risks you should take into account when investing in ETFs?

ETFs are tracking instruments: their risk profile is similar to a direct investment in the Benchmark Index. Investors’ capital is fully at risk and investors may not recover their initial investment.

3.1 Replication risk

ETFs are designed to replicate the performance of the Benchmark Index. Unexpected events relating to the constituents of the Benchmark Index may impact the Index provider’s ability to calculate the Benchmark Index, which may affect the ETF’s ability to replicate the Benchmark Index efficiently. This may create a Tracking Error in the ETF.

The Benchmark Index of an ETF may be complex and volatile. When investing in commodities, the Benchmark Index is calculated with reference to commodity futures contracts which can expose investors to risks related to the cost of carry and transportation. ETFs exposed to Emerging Markets carry a greater risk of potential loss than investments in Developed Markets as ETFs are exposed to a wide range of unpredictable Emerging Market risks.

Holders of synthetic ETFs may be exposed to risks resulting from the use of an OTC (Over The Counter) swap. It may arise that the counterparty bank arranging the swap may not be in a position to pay the performance of the Index.

Physical ETFs may be exposed to a counterparty risk if a Securities Lending Programme is engaged.

3.2 Currency Risk

ETFs may be exposed to a currency risk if the currency of the ETF or Benchmark Index holdings differ to that of the Benchmark Index they are tracking. This means that exchange rate fluctuations could have a negative or positive effect on returns.

3.3 Liquidity Risk

On-exchange liquidity may be limited, as a result of:

- A suspension in the underlying market represented by the Benchmark Index tracked by the ETF;
- A systems failure in one of the relevant stock exchanges, or a failing in another Market Maker system; or
- An abnormal trading situation or event.

3.4 Risk link to Leveraged ETFs

These instruments carry specific risks that investors should consider before investing.

Leveraged ETFs are intended for only sophisticated investors who:

- Understand the mechanism of leveraged ETFs and accept the risk of incurring substantial losses over a short period of time;
- Understand the characteristics and specific features of leveraged ETFs;
- Monitor their portfolio on a daily basis and react to changing market conditions and the ETF’s performance.

Leveraged ETFs are not intended for risk-adverse or conservative investors who:

- Are not able to bear substantial or even total losses over a short period of time;
- Are unfamiliar with the characteristics and specific features of leveraged ETFs;
- Are unable to monitor their portfolio on a daily basis.

These types of investment are generally not designed for a buy-and-hold strategy.
Optimisation and sampling
Optimisation and sampling are often an option selected by ETF providers when a full replication is deemed less attractive if you take into consideration the full replication cost. Hence ETF providers will use “optimisers” to select a subset of the index securities to keep a similar exposure and similar risk characteristics to that of the index. While this practice reduces the cost, it can also cause a slight deviation from the index, which is often mitigated by ETF providers. It is important to keep in mind the risk that optimisation can lead to a lower performance than the index, offsetting the gains from lower transaction costs.

Securities lending
ETFs can use the assets they are holding to achieve additional sources of income. The lender is compensated with an agreed fee, and the securities must be returned at the end of the transaction. ETF providers select a maximum percentage of securities lent from the total portfolio, with specific requirements depending on the nature of the collateral and/or a list of securities eligible for lending. Then they delegate the transaction management to a lending agent. Revenue is then split between the lending agent and the ETF. It is important to assess all these elements to have a comprehensive view of the security lending process.

Yield Enhancement
To enhance yield, the fund’s objective is to obtain a favourable withholding tax rate on net dividend returns in comparison to the index. ETF providers are often concerned about the domiciliation of their funds to benefit from local tax rates. For example, most UK providers domicile their funds in Ireland. Yield enhancement can also be obtained with securities lending by way of a temporary assignment of foreign stocks to a local investor at the time of dividend payments.

Expense Ratio
The Expense Ratio includes ETF costs known ex-ante, i.e. administration and management fees (on an annual basis). However it does not include additional transaction costs or swap fees (when the ETF replication methodology is synthetic).

Index Annualized Performance
The official index (tracked by the ETF) annualized performance, compounded over the given period and annualized over 365 calendar days.

ETF Annualized Performance
The ETF annualized performance based on the official Net Asset Value (NAV), compounded over the given period and annualized over 365 calendar days.

Tracking Difference
The difference between the ETF annualized performance based on the official Net Asset Value (NAV) and the official replicated index annualized performance, over a given period.

Worst 1-Year Cumulative Return Difference
This provides a statistic for a 1-year investment. It corresponds to the lowest (i.e. worst) cumulative return difference between the ETF and its corresponding tracked index over a period of 365 consecutive calendar days, within a given period.

Best 1-Year Cumulative Return Difference
This provides a statistic for a 1-year investment. It corresponds to the highest (i.e. best) cumulative return difference between the ETF and its corresponding tracked index over a period of 365 consecutive calendar days, within a given period.

Tracking error
This indicator of relative risk corresponds to the annualized volatility of the daily return difference between the ETF and its corresponding tracked index over the given period. The volatility is annualized using a 260-day basis (daily volatility multiplied by the square root of 260).

Average Daily Return Difference
The average daily return difference between the ETF and its corresponding tracked index over a given period.

Worst Daily Return Difference
The lowest daily return difference between the ETF and its corresponding tracked index over a given period.

Market Capitalization
The Market Capitalization calculated at the end of a given period: it is equal to the total number of available ETF shares multiplied by the official ETF NAV on the last date of the given period.

One-Month ADV
The Average Daily Volume (ADV), i.e. average daily number of traded shares, over the previous month, on the market places.

Your BNP Paribas Relationship Manager is available to provide any further information you may require. They will be fully acquainted with all the ETPs recommended by BNP Paribas and will assist you in your choices, according to your personal needs and investment profile, before you make your investment decisions.
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