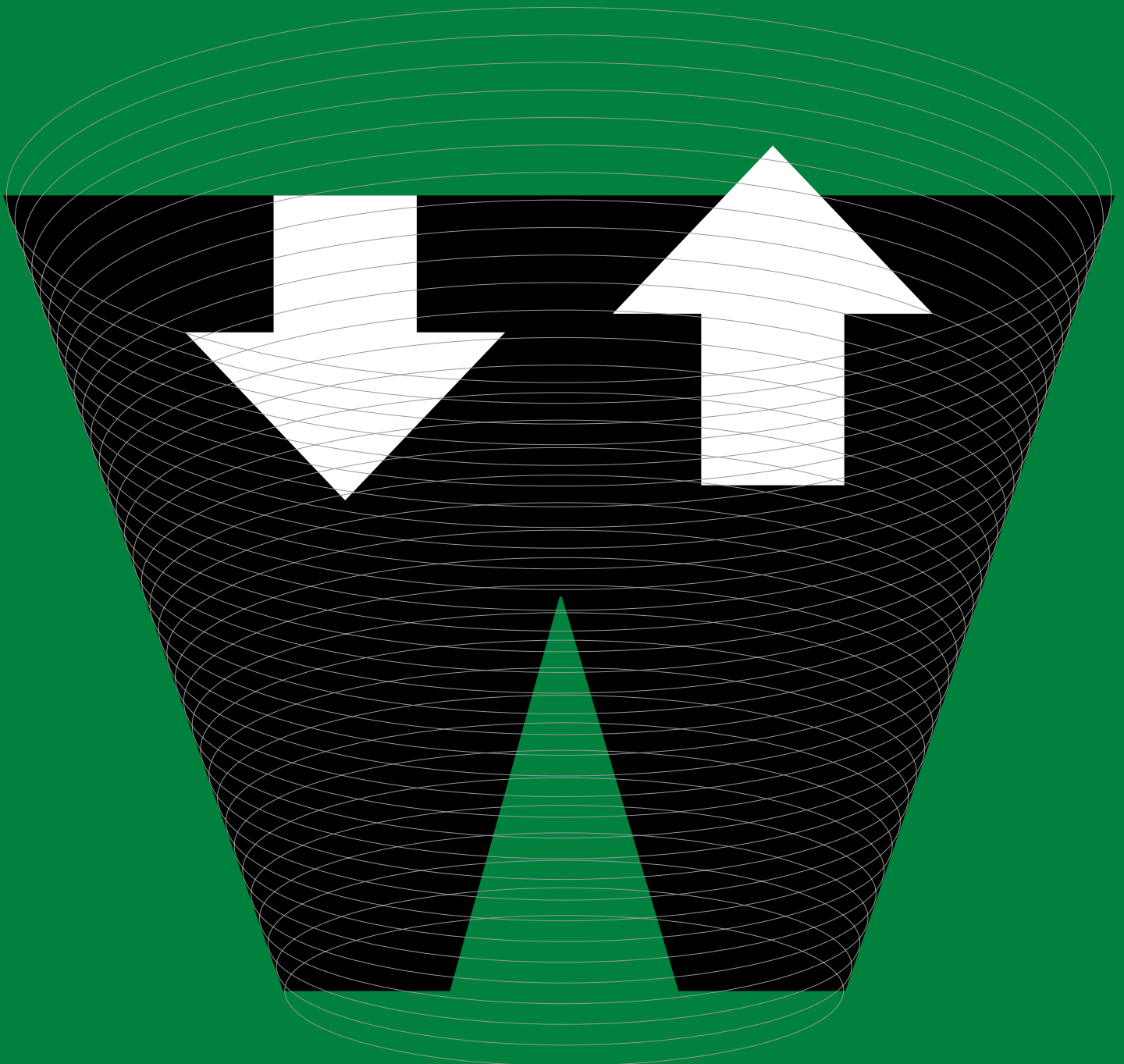


## Go for warrants





Euronext, the new pan-European exchange, was created by the merger of the exchanges in Amsterdam, Brussels and Paris to enable you to trade faster and more cost effectively in Europe. Soon you will be able to trade using just one order book, one clearing system and a single list featuring major European blue chips. Euronext also compiles leading European indices such as the Euronext 100 and Next 150.

## NextWarrants

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## **Euronext**

Euronext, the first pan-European exchange, operates the cash and derivatives markets of Amsterdam, Brussels, London, Lisbon and Paris. It supervises all proceedings to ensure fair-trading and pricing, and one of its most important goals is to provide clear, objective product information so that investors are aware of the opportunities and risks attached to investing.

## **Information contained in this brochure**

This brochure was produced for the NextWarrants segment to help you invest wisely and safely in warrants. It outlines various investment strategies, explains the role that warrants can play in your portfolio, looks at the factors that affect pricing, contains tips on how to select the warrant that best suits your investment needs from the wide range available, and pays attention to the practical aspects of investing in warrants.

Please note that warrants can fluctuate in value. The value of your warrants can go down as well as up.

## NextWarrants

As well as listing shares, bonds, trackers, derivatives and investment funds, Euronext has NextWarrants<sup>®</sup>, a special product segment for buying and selling warrants. NextWarrants offers the following services:

- **Dedicated segment**

Euronext launched NextWarrants so that investors can trade warrants in a convenient way. NextWarrants can be accessed by issuers and investors, and is governed by rules specifically designed for warrant trading.

- **Choice**

NextWarrants offers a wide range of warrants based on a varied selection of national and international assets.

- **Trading**

- Automatic order execution
- Liquidity providers that continuously issue quotes for orders of a minimum size
- Wide range of order types

- **Data dissemination**

Complete information on each warrant is available via the Internet.

This information includes product characteristics, historical data and a direct link to the issuer's website.

- **Marketing and education**

Euronext supports the NextWarrants product segment and the warrants listed on it by means of marketing efforts and educational activities.

## 1 Go for warrants!

Small investments, maximum losses fixed in advance and potentially high returns – these are the key advantages of warrants. Warrants offer an easy and exciting way of turning your market predictions into investments or hedging your portfolio.

## 2 What is a warrant?

A warrant is a financial product which conveys to its holder the right, but not the obligation, to buy (in the case of a call warrant) or sell (in the case of a put warrant) of the underlying at a specified price (the strike price) on or before a given date (expiration day). After this date, the right ceases to exist.

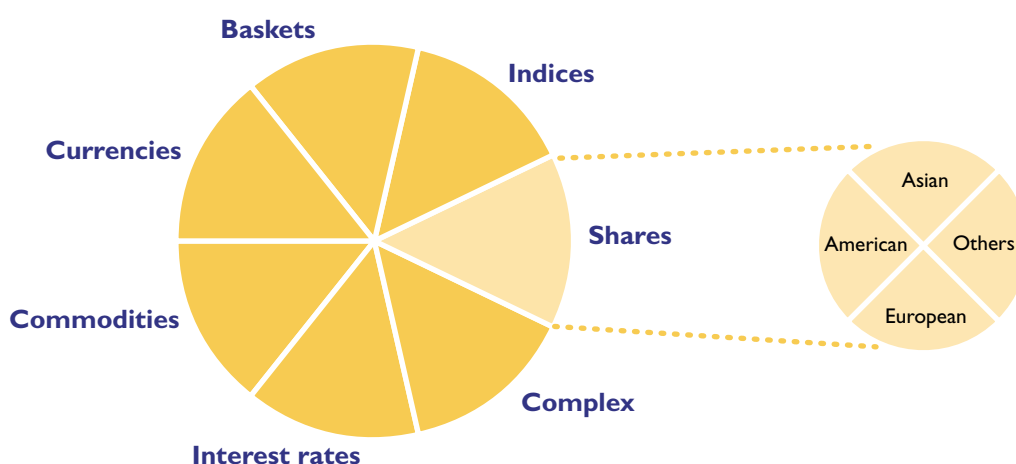
### ● Call warrants and put warrants

There are two types of warrants – call warrants and put warrants. Call warrants give holders the right to buy the underlying at the strike price, while put warrants give them the right to sell the underlying at the strike price. The decision to opt for call or put warrants is based on the investor's view of the market.

	Holder (Buyer)
<b>Call warrant</b>	Right to buy
<b>Put warrant</b>	Right to sell

- **Underlying**

The underlying is the investment product that can be bought or sold at the strike price. It may be a share, a basket of shares, an index, an interest rate, a currency or a commodity. At the end of 2001, NextWarrants listed warrants on over 500 different underlyings in the following categories:



- **Strike price**

The strike price (also known as the exercise price) is the fixed price at which the underlying can be bought or sold if the warrant is exercised, regardless of the underlying's market price at that time. NextWarrants lists many warrants on the same underlying with different strike prices. It is important to choose the strike price that is most in line with your market expectations and strategy.

- **Lifetime**

The time during which the warrant is valid is known as the lifetime. The lifetime ends on the expiry date. As warrants cannot be exercised after the expiry date, they are worthless after the end of their lifetime. If the underlying and the volatility stay the same, your warrant loses value every day.

- **Exercising**

When investors exercise their warrants, they make use of their right to buy or sell the underlying. If a warrant is exercised, the holder's gross profit consists purely of the difference between the strike price and the underlying's current market price. Warrants can also be sold on Euronext, which can result in higher profits.

**Example of a call warrant:**

If investors buy call warrants on XYZ shares that have a strike price of € 50 and expire on 27 December 2004, they obtain the right to buy XYZ shares on or before that date for € 50. Towards the end of December 2004, if XYZ trades at more than € 50, investors can exercise their right and buy XYZ shares for € 50. If the price of XYZ is lower, they will simply waive their right.

**Example of a put warrant:**

If investors buy put warrants on XYZ shares that have a strike price of € 30 and expire on 30 June 2002, they obtain the right to sell XYZ shares on or before that date for € 30. At the end of June 2002, if XYZ trades at less than € 30, the investors can exercise their right and sell their XYZ for € 30. If the price of XYZ is higher, they will simply waive their right.

- **Parity**

Parity indicates the number of warrants needed to buy or sell one unit of the underlying. Most of the time, 10 or 100 warrants are needed for each unit.

## ● ● 3 Why invest in warrants?

- **Small investment, potentially high profit (leverage)**

Warrants provide leverage. This means a warrant buyer pays a relatively small premium for market exposure in relation to the contract value.

To buy a warrant, investors only have to pay the premium – i.e. the price of the warrant – which is a small percentage of the price of the underlying. As a result, the potential profit on warrants is far greater in percentage terms than the potential profit on the underlying. This difference is known as the warrant's leverage. Leverage indicates the extent to which a warrant enhances returns on the underlying, and is calculated by dividing the underlying's price by the warrant's premium (after being adjusted for parity).

- **Maximum loss fixed in advance**

Warrants represent a right, not an obligation, so the maximum loss that can be incurred on a warrant is never more than the amount originally invested. The right does not have to be exercised, and holders make the ultimate decision on whether or not to exercise a warrant. In a worst case scenario, the holder of a warrant can lose the entire premium (100% of the investment), which is a relatively small amount compared to the losses that could have been made on the underlying.

### ● **Easy and cheap way to invest in worldwide assets**

Warrants allow you to invest in the world's largest multinationals, leading indices, currencies, thematic baskets and even in oil. It is much more difficult and expensive to obtain direct access to these investments than it is to submit a simple order to buy a warrant based on them. You can buy warrants on these assets on Euronext via your bank or broker. All warrants are traded in euros, including those based on Japanese or US shares, for example. However, you do run currency risks with such warrants.

### ● **Diversifying your portfolio<sup>1</sup>**

Warrants are a cheap and easy way of diversifying your investments, thus increasing or reducing the overall risk attached to your total investment. You can use warrants that bear little resemblance to the composition of your portfolio to add risk, in order to improve the overall performance of your portfolio. The risk attached to this strategy is limited if the portfolio is secure and stable in the first place. You can also use put warrants that closely resemble the composition of your portfolio to protect your entire investment portfolio against price falls.

### ● **Time element**

Since a warrant's expiry date may be several years away, warrants allow you to wait for the optimum moment to buy or sell the underlying. You can benefit from rises in share prices now, instead of having to wait until you have the necessary capital at your disposal. You can also wait to see how a share performs before buying it. If its performance is disappointing, your loss is limited to the premium you paid for the warrant. You can use put warrants to postpone the moment when you sell your shares, and to protect you against the risk of a sharp drop in the price of your shares if you plan to sell them in the future to finance an expensive purchase.

<sup>1</sup> Diversification means investing in a broad range of investment products in order to make your portfolio less vulnerable to price falls in a specific sector or region.

## 4 What are the risks?

There are three main risks attached to warrants.

- **Time always works against warrant holders.** This means that if the underlying does not perform in the way you predict before the expiry date, your warrant will be worthless. This risk affects the warrant's premium. As the expiry date approaches, it becomes less likely that the underlying will fluctuate sharply before it expires, which reduces the warrant's value. Moreover, if the underlying stays at the same price for a long period of time, the warrant's premium will gradually decline.
- **Leverage can work against investors.** With warrants, price movements in all directions are magnified, and so a small adverse movement in the underlying can have a major impact on the value of a warrant. Leverage explains why warrant premiums frequently rise or fall by more than 50% a day.
- **Volatility can work against investors.** Volatility is the tendency of the underlying's market price to fluctuate up and down. It reflects the magnitude of a price change and does not indicate a trend towards price movements in one direction or the other. It is a major factor in determining a warrant's premium. The higher the volatility of the underlying, the higher the premium because there is a greater possibility that the warrant will become profitable.

## 5 How do warrants work?

Warrants give you choices by letting you tailor your position to your own situation.

- You can protect your holdings from a decline in market price by buying a put warrant.
- You can prepare to buy the underlying at a lower price at a later moment in time by buying a call warrant.
- You can position yourself for a big market move – even when you don't know which way prices will move by buying a call and a put warrant.
- You can benefit from rises or falls in the price of the underlying without incurring the cost of buying the underlying outright by buying call or put warrants.

### ● The price of a warrant

In order to obtain the right to buy or sell the underlying, investors have to pay a price, called *premium*, which is less than the underlying's price.

Warrants can rise and fall in value, as reflected in their premiums. There are various factors that affect a warrant's premium, as shown in the following table.

Increase in:	Effect on premium	
	Call warrant (in the money)	Put warrant (in the money)
<b>Price of underlying</b>	Rise	Fall
<b>Interest rates</b>	Rise	Fall
<b>Volatility</b>	Rise	Rise
<b>Dividend</b>	Fall	Rise

Holders of call warrants benefit if the underlying's market price rises while all other parameters remain unchanged (particularly the volatility of the underlying). As holders have the right to buy the underlying at a specific price while its market price increases, they can potentially earn more. This higher potential profit leads to an increase in the call warrant's price.

The premium payable for a warrant is also affected by supply and demand on Euronext's stock market, as is every financial instrument listed on Euronext. The premium can change constantly during the trading day.

### ● Warrant price consists of intrinsic value and time value

The premium of a warrant consists of two parts.

- Intrinsic value** This is the positive difference between the strike price and the underlying's market price, adjusted to take account of parity.
- Time value** The difference between the warrant premium and the intrinsic value. The time value is affected by factors such as the remaining lifetime of the warrant and the volatility of the underlying.

### ● In the money, at the money and out of the money

If a warrant's strike price is close to the price of the underlying, the warrant is said to be at the money. It can also be in the money or out of the money, depending on the underlying's market price.

	Call warrant	Put warrant
<b>Strike price higher than underlying</b>	Out of the money	In the money
<b>Strike price close to underlying</b>	At the money	At the money
<b>Strike price less than underlying</b>	In the money	Out of the money

Warrants that are in the money have intrinsic value and therefore higher premiums. If they go further in the money, the intrinsic value increases. Warrants that are out of the money have no intrinsic value, only time value. If they go further out of the money, the time value decreases, as they are less likely to be in the money on the expiry date.

#### **Example of an out-of-the-money warrant**

A call warrant that expires in January has a strike price of € 100, a parity of 10 and a trade size of 1,000. The underlying's market price is € 97.30, and the premium quoted for the warrant is € 0.47. (This warrant is therefore out of the money.)

To calculate the intrinsic value, the strike price is subtracted from the underlying's price and adjusted to take account of parity.

$$(\text{€ } 97.30 - \text{€ } 100) \div 10 = \text{€ } 0$$

The time value is the difference between the intrinsic value and the premium and calculated as follows:

$$\text{€ } 0.47 - \text{€ } 0 = \text{€ } 0.47$$

#### **Example of an in-the-money warrant**

A call warrant that expires in January has a strike price of € 50, a parity of 10 and a trade size of 1,000. The underlying's market price is € 52.60, and the premium quoted for the warrant is € 0.53. (This warrant is therefore in the money.)

Again, the strike price is subtracted from the underlying's price and adjusted to take account of parity, giving us the warrant's intrinsic value.

$$(\text{€ } 52.60 - \text{€ } 50) \div 10 = \text{€ } 0.26$$

Time value, i.e. the difference between the intrinsic value and the premium, is calculated as follows:

$$\text{€ } 0.53 - \text{€ } 0.26 = \text{€ } 0.27$$

The time value depends on how investors believe the underlying's price will develop, the volatility of this price and the time remaining before expiration. It is not an exact measure. Investors can have different views or strategies, which generate different prices for the same warrant and lead to a need for a regulated market such as Euronext.

### ● Sell or exercise?

There are two ways to cash in a profit on warrants – by exercising them or selling them.

If a warrant is exercised, the holder's gross profit consists purely of the intrinsic value, i.e. the difference between the strike price and the underlying's current market price. Any time value is lost. However, if a warrant is sold before expiration, the time value is not lost. In this case, the holder's gross profit is the difference between the price for which the warrant was sold and the premium paid for it.

#### **Example**

A call warrant that expires in January has an exercise price of € 40, a parity of 10 and a trade size of 100. The underlying's current market price is € 45. The warrant's bid price (i.e. the price at which the warrant can be sold) is € 0.55, while its offer price (i.e. the price at which it can be bought) is € 0.56.

- If the warrant is exercised, the investor's gross profit will be € 5 per share, i.e. the difference between the price at which the underlying shares are sold (€ 45) and the strike price (€ 40).
- If the warrant is sold, the investor's gross profit will be € 5.50 per share, i.e. the premium multiplied by the trade size and divided by the warrant's parity ( $€ 0.55 \times 100 \div 10$ ).

To calculate the net profit in both cases, the investor must subtract the premium originally paid for the warrants and all transaction fees from the gross profit.

It is not always possible to exercise a warrant during its lifetime. There are two types of warrants: American and European. *American-style* warrants can be exercised at any time from the day of purchase until the expiry date. By contrast, *European-style* warrants can only be exercised on the expiry date.

### ● Settlement: physical or in cash

Some warrants, when exercised, result in physical settlement (i.e. the holder of the warrant receives the underlying), which is usually the case for shares. Many other warrants, such as index warrants, result in cash settlement. With cash settlement, holders of call warrants receive the difference between the underlying's market price and the strike price if the price of the underlying is higher, while holders of put warrants receive the difference if the strike price is higher. The form of settlement, i.e. physical or cash settlement, is decided in advance by the issuer.

### ● Warrants do not provide shareholders' rights

Warrant holders do not have the same rights as shareholders, such as voting rights and entitlement regular cash or special dividends, etc. A call warrant holder must exercise the warrant and become the owner of the underlying shares to obtain these rights.

## 6 How to buy a warrant

You can buy and sell warrants via your usual intermediary in the same way as you do shares or trackers. They will put your order through to Euronext's electronic order book.

Before investing, it is a good idea to:

- read the issuing note;
- check the warrants details on [www.euronext.com](http://www.euronext.com);
- watch the market and the underlying, which may be modified due to corporate events, etc.

Euronext lists a few thousand warrants, and it is important to select the right warrant on the underlying you have chosen. Warrants not only have different prices, their potential price development is also different as they all have different expiry dates and strike prices.

You should never select a warrant purely on the basis of its absolute price. Although the absolute price of a warrant may be low, its relative price may be very high. You should therefore take into account the intrinsic value in the warrant premium.

Two other useful indicators for selecting warrants are the delta and elasticity. These are values that reflect the situation at a particular moment in time and therefore allow you to compare warrants objectively. These values can be calculated for all warrants, and information about them can be found on the websites of most issuers. More information on these indicators can be found at the end of this brochure.

## 7 Trading warrants

Warrants are traded on Euronext's cash market in the same way as shares. They can be bought and sold throughout the day from 9.05 a.m. to 5.25 p.m. Warrants can be traded through your bank or broker, which will pass on your buy or sell order to the exchange. It is advisable to state a limit price for your order, so that you do not have to pay more or receive less than you intended.

### Transaction fees

Transaction fees differ depending on the intermediary involved. Your bank or broker will tell you which fees apply to you.

### Minimum trade size

There is often a minimum trade size for warrants. If this is 1,000 investors can buy the warrants in batches of 1,000.

### Price fluctuations and trading freezes

Euronext has specific trading rules for warrants, which are intended to protect investors from sharp price movements. Trading in a warrant is frozen when a new order is entered in the order book and its execution results in a price movement that exceeds the relevant threshold. The thresholds are maximum acceptable price movements and are stated in percentages.

Trading freeze thresholds for warrants:

- if the warrant's price is less than € 0.05, the threshold is 95%;
- if the warrant's price is between € 0.05 and € 0.10, the threshold is 50%;
- if the warrant's price is more than € 0.10, the threshold is 25% or 35% (determined by the issuer).

Following a trading freeze, Euronext uses an automatic procedure to resume trading in warrants.

### Liquidity provider system

To ensure that investors are always able to buy and sell warrants at good prices, Euronext has concluded liquidity agreements<sup>2</sup> with the major issuers of warrants. Under these agreements, liquidity providers have to place orders that comply with strict criteria regarding maximum spreads and minimum quantities throughout the trading day.

Under some circumstances, such as system breakdowns or unusual market conditions, Euronext can release liquidity providers from their obligations. At such times it may be difficult to trade in the affected warrants.

### Last day of trading

The last day of trading in a warrant is not always the same as the warrant's expiry date. In the case of warrants listed in Paris and Brussels, the last day of trading may be six days before the expiry date, while it is three days for Portugal and warrants listed in Amsterdam are usually traded until the expiry date. We recommend that you carefully check the contract specifications of your warrants.

<sup>2</sup> The contractual obligations are the same for all liquidity providers supplying services for warrants.

## 8 Do's and don'ts

1. Do have a clear view of how you expect the underlying to develop.
2. Do choose a warrant whose strike price and expiry date correspond closely to your expectations for the underlying's development.
3. Do buy a warrant whose delta<sup>3</sup> is between 0.4 and 0.6. The warrant's leverage is optimum when the underlying's price is higher than the strike price and the expiry date is still some time away.
4. Do submit limit orders for warrants, even though this entails a risk that your order will not be executed.
5. Do keep a close eye on your warrant's expiry dates. As expiry draws closer, warrants lose more time value. Time works against warrant holders!
6. Do cash in your profit. You should cash in your profit if your expectations prove correct and your warrant has performed well.
7. Do use a pricer (a calculator provided by some issuers) to check the price of the warrant before sending an order. Many pricers exist on the market, and the price can differ from one pricer to another, depending on how it takes account of dividends or American-style warrants.
8. Do not hesitate to ask issuers for their brochures. Investors in warrants must learn about how premiums fluctuate. This small personal investment can prevent you from incurring an 'incomprehensible' loss, which can be the volatility effect or time effect.
9. Do check how your warrants will be taxed before investing.

<sup>3</sup> See appendix I

10. Don't assume that warrants in which higher volumes are traded are more liquid. It is not important whether other investors are interested in a particular warrant. All that matters is your prediction of the way the underlying will develop. Issuers of warrants continuously quote bid and offer prices with small spreads to ensure that all their warrants are liquid, and all warrants that are continuously traded are covered by a liquidity provision contract concluded with Euronext. Strong trading volumes do not necessarily indicate a good buy.
11. Don't assume that historical performance is a good indicator. The fact that a warrant has already risen by, say, 200% does not provide any indication of future trends. You should choose warrants whose strike price and expiry date correspond closely to your market expectations.
12. Don't buy a warrant that is deep in the money. This offers no benefits over buying the underlying value, and deep-in-the-money warrants offer no leverage.
13. Don't exercise warrants before they expire, unless you want to get or sell the underlying. In most cases, you will make a higher profit by selling your warrants, since their premium consists of intrinsic value and time value. If you exercise your warrants, you will only receive their intrinsic value.

## 9 Comparing warrants and options

### Similarities

Warrants and options are both classified as derivatives because they are derived from shares, bonds, indices or other investment products. Like warrants, options also have a lifetime, an expiry date and a strike price, and their prices depend on the same factors and develop in the same way as warrant prices.

### Differences

#### Options are contracts, warrants are financial products

Options are contracts created and concluded on the options market. When you buy an option, you are buying a contract that entitles you to buy the underlying value. If you want to trade in options, you must conclude a special agreement with your bank or broker.

Warrants are traded on the stock market, and you do not have to conclude an agreement to trade them. They are not created by the exchange like options, but by banks aiming to meet the demands of the market.

#### Standardised and non-standardised contracts

Option contracts are standardised, which means that nearly all options have to comply with specific rules regarding their lifetime, contract size, strike price and trading unit.

Warrants do not have to comply with any standards for their lifetime, strike price or parity. Banks can issue warrants with any specifications they wish. This means there are many different types of warrants in circulation, with a wide variety of lifetimes, strike prices, contract sizes and parities.

#### Underlying

Warrants are issued on many different types of underlyings, whereas the options market focuses on domestic shares, indices and bonds.

#### Options are always available

An unlimited number of contracts can be created in every option series, and the number of options in circulation does not affect the price. The number of warrants issued in each series is limited, however, and this can affect the warrant premium.

#### Options can be created by investors

Warrants are only issued by major issuers that sell them to investors. However, options are created and traded by investors.

## Appendix I: Two important indicators

### Delta

The delta indicates the movement in a warrant's premium when the price of the underlying rises or falls by one unit. A call warrant's delta is always a positive figure between 0 and 1, whereas a put warrant's delta is always a negative figure between 0 and -1.

The delta provides an indication of the risk connected to the warrant, its relative price and its sensitivity to time, while taking parity into account. The following table shows the attributes of warrants with different deltas.

High delta (e.g. 0.8 or -0.8)	Medium delta (e.g. 0.5 or -0.5)	Low delta (e.g. 0.2 or -0.2)
Deep in the money	At the money	Out of the money
Relatively expensive	Medium priced	Relatively cheap
Responds sharply to changes in underlying	Responds noticeably to changes in underlying	Only responds to major changes in underlying
Premium is mostly intrinsic value	Premium is only or mostly time value	Premium is only time value
Low risk	Medium risk	High risk
Good chance of small profit	Good chance of profit	Low chance of big profit

### Elasticity

Elasticity reflects the potential price movement of your warrant, and indicates the percentage rise or fall in the warrant's premium when a comparable investment in the underlying fluctuates by 1%. Elasticity is calculated by multiplying the warrant's delta by its leverage. The leverage is the price of the underlying divided by the warrant's price and the parity.

#### Example:

A warrant on XYZ has a premium of € 0.25, a parity of 10 and a delta of 0.2. The price of the underlying shares is currently € 45.

To calculate the warrant's elasticity, we first need to calculate its leverage:

$$€ 45 \div (\€ 0.25 \times 10) = 18$$

We then need to multiply the warrant's leverage by its delta. The result is the warrant's elasticity:

$$18 \times 0.2 = 3.6$$

As the warrant's elasticity is 3.6, a comparable investment in warrants will rise by 3.6% if the price of XYZ shares rises 1%.

## Appendix 2: Glossary

**American-style warrant:** A warrant that can be exercised at any time prior to or at its expiry date. (See also European-style warrant.)

**Ask price:** The price at which a seller is prepared to sell a warrant.

**At-the-money:** A term that describes a warrant with a strike price that is equal to the current market price of the underlying.

**Bid price:** The price at which a buyer is willing to buy a warrant.

**Call warrant:** A warrant that gives the owner the right to buy the underlying at a specified price (its strike price) for a certain, fixed period of time (until its expiration).

**Cash settlement:** The process by which the terms of a warrant contract are fulfilled through the payment or receipt in euros of the warrant's intrinsic value. The other possible settlement process is physical settlement.

**Delta:** A measure of the absolute change in a warrant's theoretical value if the price of the underlying changes by one unit.

**European-style warrant:** A warrant that can be exercised at expiration. (See also American-style warrant)

**Exercise:** To make use of the rights granted to the owner of a warrant. In the case of a call, the warrant owner buys the underlying. In the case of a put, the warrant owner sells the underlying.

**Strike price:** The price at which the owner of a warrant can purchase (call) or sell (put) the underlying. Used interchangeably with exercise price.

**Expiry date:** The date on which a warrant and the right to exercise it, cease to exist.

**Historic volatility:** A measure of actual price changes over a specific period of time.

**Holder:** Any person who has made an opening purchase transaction, call or put, and has that position in a brokerage account.

**Implied volatility:** Measure of the underlying's expected volatility during the warrant's remaining lifetime. Implied volatility is calculated on the basis of the warrant's market prices using a valuation model.

**Index:** An index measures changes in the price of certain financial instruments, expressed as a number. Indices include the AEX index, the BEL20, the CAC40 and the Euronext 100.

**Intrinsic value:** The in-the-money portion of a warrant's premium. (See in the money.)

**In the money:** An adjective used to describe a warrant with intrinsic value. A call warrant is in the money if the underlying's price is above the strike price. A put warrant is in the money if the underlying's price is below the strike price.

**Leverage:** A term describing the greater percentage of profit or loss potential when a given amount of money is invested in a warrant rather than the underlying, which has a much larger face value. For example, a call warrant enables the owner to assume the upside potential of the underlying 0.1 shares of stock by investing a much smaller amount than that required to buy underlying. If the underlying increases by 10 percent, for example, the warrant might double in value. Conversely, a 10 percent price decline might result in the total loss of the purchase price of the warrant.

**Limit order:** An order placed with a bank or broker to buy or sell warrants at a specific or a better price.

**Liquidity / liquid market:** A trading environment characterized by high trading volume, a narrow spread between the bid and ask prices, and the ability to trade larger sized orders without significant price changes.

**Liquidity provider:** An exchange member that buys and sells warrants for its own account and that has to make bids and offers and maintain a fair and orderly market.

**Offer price:** This means the same as ask / ask price, i.e. the price at which a seller is prepared to sell a warrant.

**Out of the money:** An adjective used to describe a warrant that has no intrinsic value, i.e. all of its value consists of time value. A call warrant is out of the money if the underlying's price is below its strike price. A put warrant is out of the money if the underlying price is above its strike price. (See also intrinsic value and time value.)

**Owner:** Any person who has made an opening purchase transaction (call or put) and whose position is recorded in a brokerage account, see also Holder.

**Parity:** A term used to describe how many warrants need to be exercised to buy or sell one unit of the underlying.

**Premium:** Total price of a warrant: intrinsic value plus time value.

**Put warrant:** A warrant that gives the owner the right to sell the underlying at a specified price (its strike price) for a certain, fixed period of time (until its expiration).

**Settlement:** The process by which the underlying is transferred from one brokerage account to another when warrants are exercised by their owners (and the inherent obligations assigned to warrant writers).

**Settlement price:** The official price at the end of a trading session.

**Strike price:** The price at which the owner of a warrant can purchase (call) or sell (put) the underlying. Used interchangeably with exercise price.

**Theoretical value:** The estimated value of a warrant derived from a mathematical model.

**Time value:** The part of a warrant's premium that exceeds its intrinsic value. The price of an out-of-the-money warrant consists entirely of time value.

**Underlying:** The financial investment that is traded if the warrant is exercised.

**Volatility:** A measure of price fluctuation. Mathematically, volatility is the annualised standard deviation of a security's daily price changes. (See also historic volatility and implied volatility.)

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