



**STRUCTURED PRODUCTS AND  
OTC DERIVATIVES**  
BOOKLET 2023

Tailor-made Solutions

*Architects of Wealth*

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- Introduction

## WHY INVEST IN STRUCTURED PRODUCTS?

Structured products comprise a wide range of investment solutions. They are a combination of a traditional fixed income instrument and one or several option strategies that are structured into one securitised instrument. Structured products can be linked to various underlying assets such as equities, commodities, interest rates, credit, currencies... They constitute an efficient alternative to traditional investments and provide sophisticated solutions tailored to meet the specific needs and constraints of every investor.

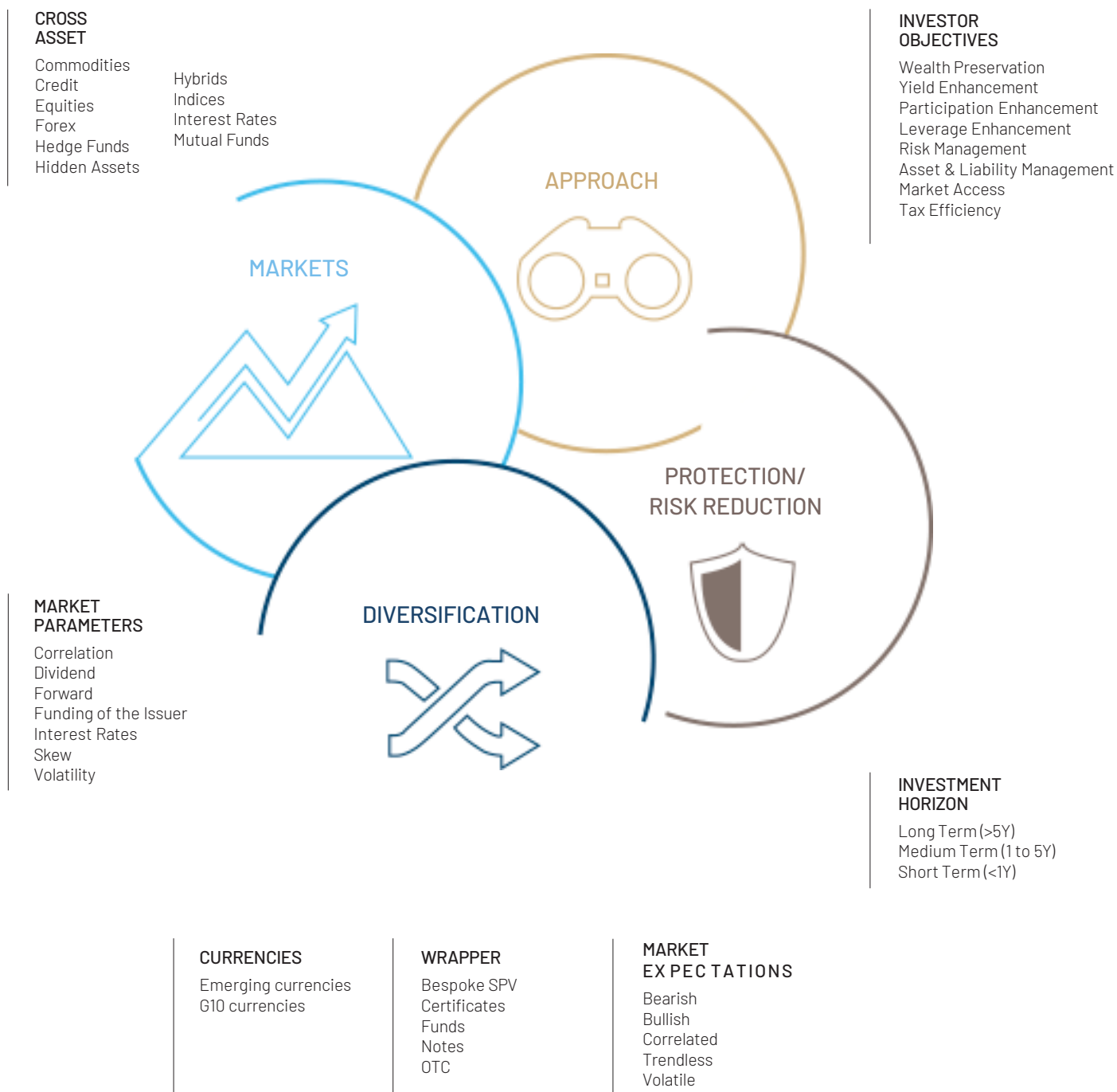
### THERE ARE 7 MAIN REASONS TO INVEST IN STRUCTURED PRODUCTS

- 1 • First of all, structured products allow to **transform the pay-off of classical assets** as well as transform any series of cash flows into new categories of instruments. As an example, when buying a participation product linked to the upside performance of an equity underlying, the dividend of the stock or the index is transformed into capital appreciation.
- 2 • Structured products, such as reverse convertibles and all their variations, allow **monetise non tangible assets** (volatility, correlation...). They are particularly attractive in today's market conditions characterised by high level of volatilities. They allow to capture volatility (investor is seller of volatility) and monetise it by extracting attractive yield in a low or even negative interest rate environment.
- 3 • Derivatives allow to take advantage of imbalances in the market (e.g. divergence between forward prices and forecasts). Therefore, structured products create potential **alpha-generating opportunities** and eradicate beta to deliver absolute returns with minimal volatility.
- 4 • Structured products are **a way to access to specific markets or underlyings** that could not be invested through classical instruments, e.g. commodities. The investor can participate to any trend or market development of a wide range of markets, topics and investment strategies.
- 5 • **Minimum redemption of principal at maturity**, combined with participation or yield is another attractive feature of structured products. It allows investors to benefit from a defined market scenario (bullish, bearish or stable) whereas products with coupons allow investors to receive periodic payments. **Minimum redemption of principal at maturity** products are suitable for conservative investors.
- 6 • Structured products allow **a very precise portfolio diversification** thanks to their link to **various underlyings** and the different **risk/return profiles available**. Investors take a customised exposure to the underlying assets of their choice and optimise the upside and/or the downside of the specific structure. The asymmetric profile of structured products add flexibility and value for investors.
- 7 • Finally, structured products follow a **determinist approach**. Once launched, structured products do not allow any "human" exogenous intervention. Their redemption value follows the development of one or more underlying assets which drive the performance of the product.

*For all these reasons, structured products are attractive solutions to traditional investments. They allow to boost performance and maximise portfolio's return while keeping risks under control.*



• Introduction  
A WIDE RANGE OF SOLUTIONS



- **Introduction**

## KEY STRENGTHS OF INDOSUEZ WEALTH MANAGEMENT AND BENEFITS FOR OUR CLIENTS

### TAILOR MADE SOLUTIONS

Our offering and investment proposals are based on investor needs and constraints.

We design customized solutions in line with investment requirements for our UHNWI and HNWI clients (client profile, time horizon, risk aversion, anticipation on the underlying...).

We propose optimized risk / return solutions to reach investment objectives.

### OPEN ARCHITECTURE APPROACH

Our contacts with the best derivatives houses allow us to propose a wide range of structures and underlyings as well as the most competitive prices.

We apply a best execution process.

We ensure credit risk diversification.

### OFFERING IN LINE WITH THE BANK CONVICTIONS

Our product offering reflects our house view and investment strategy.

We select added-value investment ideas to benefit from market opportunities.

We propose enhanced financing of investment solutions.

### POST-TRADE SERVICE

Regular product valuations and secondary liquidity is provided for all existing products.

We monitor the performances and provide product reports.

We provide customized follow-up of your products and propose switch ideas.

- Introduction

## RISK PROFILE AND MARKET ANTICIPATION

		MARKET ANTICIPATION				
		LOWER	SLIGHTLY LOWER	STABLE	SLIGHTLY HIGHER	HIGHER
DESIRED RISK	LOW (100% Minimum Redemption)	Bear Note	Callable Note			Bull Note
			Put Spread Note	Range Note	Spread Note	
			Bear Autocall		Autocall	
	AVERAGE	95% Minimum Redemption Bear Note	Certificate "Twin Win" on index			95% Minimum Redemption Bull Note
		Reverse Certificate on index	Autocallable on indice(s)			"Bull" certificate on index with protection barrier
			Certificate "Plus" on indice(s)			
	HIGH	Reverse Certificate on one share		Reverse convertibles "lock-up" or with strike < 100%		"Bull" certificate on one share
			Reverse convertibles "knock-in"		Turbo with cap	
		Reverse Turbo	Reverse convertibles "worst-of " on shares			Turbo without cap

# MAIN INVESTMENT SOLUTIONS



## *Minimum Redemption of Principal at Maturity*

Minimum redemption of principal at maturity products are suitable for security oriented investors.

At maturity the investor receives a minimum redemption in the amount of the capital investment level.

Furthermore, for growth products, the investor can participate in the performance of the underlying or, for yield enhancement products, the investor can receive coupons over the lifetime of the product.

The investor bears the default risk of the issuer.



# 01 • Minimum Redemption of Principal at Maturity Bull Note MINIMUM REDEMPTION AT MATURITY: 100% (HIGHER OR LOWER)

## RATIONALE

A simple and effective way to participate in the performance of an underlying asset with minimum redemption of principal at maturity.

## INVESTOR'S MARKET VIEW

- Rising underlying.
- Rising volatility.

## PRODUCT FEATURES

- Minimum redemption (totally or partially) of the invested amount at maturity.
- Participate to the upside performance of the underlying.

## FAVORABLE MARKET CONDITIONS

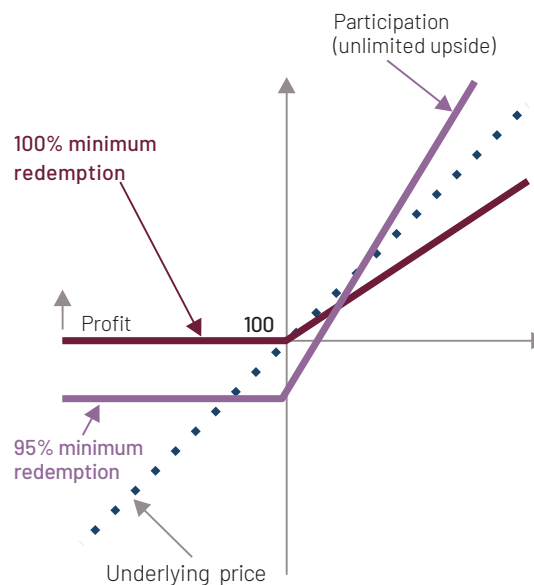
The participation rate will be higher in a context of:

- Low volatility of the underlying.
- High dividend yield of the underlying.
- Low correlation between the different basket's components (if applicable).
- High interest rate of the note's currency.
- High funding level of the Issuer of the note.

## VARIATIONS

- **Underlying:** equity, index, commodity, fund, currency, or a basket of several underlyings.
- **Duration:** usually 1 to 5 years.
- **Currency** of the product can be different from the underlying's one (quanto product).
- **Partial protection:** a minimum redemption at maturity below 100% allows a higher participation rate.
- **Participation rate:** the participation can be higher than, or lower than 100%, depending on the market conditions.
- **Averaging:** the performance can be calculated between the initial level and the average of multiple closing prices at predefined observation dates, instead of the final level (in order to reduce volatility and obtain a higher participation rate).
- **Cap:** a cap can be added to increase the participation rate.
- **Exotic features:** "callable", "switchable", "lookback", "re-strikable", "ladder", "cliquet", "hybrids".

CHART 1: PRODUCT PAYOFF AT MATURITY



## 5-YEAR VANILLA BULL NOTE



CURRENCY	USD The product is immunised against EUR/USD currency fluctuations.	UNDERLYING	EURO STOXX 50 Index
			PARTICIPATION
	TENOR	5 years	
MINIMUM REDEMPTION	100%		

REDEMPTION AT MATURITY	<p>On maturity date, the investor shall receive:</p> <p><b>100% of principal plus:</b></p> <p><b>1) 100% of principal x 75% x [(underlying_final - underlying_initial) / underlying_initial]</b> if underlying_final is at or above underlying_initial.</p> <p><b>Otherwise 2) zero</b> if underlying_final is strictly below underlying_initial.</p>
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### PROS

- 100% minimum redemption at maturity.
- The investor will profit from 75% of any upward performance of the underlying at maturity without cap.



### CONS

- In case of a decline in the underlying, the investor will not obtain any return.
- The price of the product will be reacting, during the life of the product, to any rise in the underlying but with a factor lower than 75%.

TABLE 1: SIMULATION OF RETURNS AT MATURITY

Change in the underlying price	-60%	-40%	-20%	0%	10%	20%	40%	60%
Value of redemption	100%	100%	100%	100%	107.5%	115%	130%	145%
Annual return (% per annum)	-	-	-	-	1.50%	3.00%	6.00%	9.00%

## 5-YEAR "SWITCHABLE" NOTE

<b>CURRENCY</b>	USD The product is immunised against EUR/USD currency fluctuations	<b>UNDERLYING</b>	EURO STOXX 50 Index		
	<b>TENOR</b>		5 years	<b>SWITCH</b>	The issuer has the right to switch the product to a fixed coupon note, from the first to the fourth year. Once activated, the switch is definitive
	<b>MINIMUM REDEMPTION</b>		100%		

<b>COUPON</b>	A coupon is payable only if the switch has been activated as follows: <b>1) A cumulative coupon equal to 4.00% x (1+n) of principal</b> payable 2 weeks after the date of switch. <b>2) 4.00% p.a.</b> payable annually on a 30/360 basis at each anniversary date of the settlement date for the remaining year(s) until maturity.  <b>Where:</b> n corresponds to the number of dates of switch before the activation of the switch.
	On maturity date, the investor shall receive: <b>100% of principal plus:</b> <b>1) 100% of principal x 175% x [(underlying_final - underlying_initial) / underlying_initial]</b> if the switch has NOT been activated by the issuer. <b>Otherwise 2) the last coupon payment (4.00% of principal)</b> if the switch has been activated by the issuer.
<b>REDEMPTION AT MATURITY</b>	



### PROS

- 100% minimum redemption at maturity.
- If switched, the investor will receive high annual coupons (20% in total).
- If not switched, the product will allow to profit from 175% of any upside performance of the underlying at maturity.



### CONS

- If the product has never been switched and if the performance of the underlying at maturity is negative, the investor will not obtain any return.

TABLE 2: SIMULATION OF RETURNS AT MATURITY IN CASE THE PRODUCT HAS NOT BEEN SWITCHED

Change in the underlying price	-60%	-40%	-20%	0%	10%	20%	40%	60%
Value of redemption	100%	100%	100%	100%	117.50%	135%	170%	205%
Annual return (% per annum)	0.0%	0.0%	0.0%	0.0%	3.50%	7%	14%	21%

TABLE 3: SIMULATION OF RETURNS AT MATURITY IN CASE THE PRODUCT HAS BEEN SWITCHED

Change in the underlying price	-60%	-40%	-20%	0%	10%	20%	40%	60%
Value of redemption	100%	100%	100%	100%	100%	100%	100%	100%
Annual return (% per annum)	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%

## 02 • Minimum Redemption of Principal at Maturity Twin Win Note MINIMUM REDEMPTION AT MATURITY: 100% (HIGHER OR LOWER)

### RATIONALE

An effective way to generate return from an underlying's both positive and negative performances / in both bullish and bearish markets with minimum redemption of principal at maturity.

### INVESTOR'S MARKET VIEW

- No certainty of market's direction.
- Rising volatility.

### PRODUCT FEATURES

- Minimum redemption (totally or partially) of the invested amount at maturity.
- Participate to both upside and downside performance of the underlying.

### FAVORABLE MARKET CONDITIONS

The participation rate will be higher in a context of:

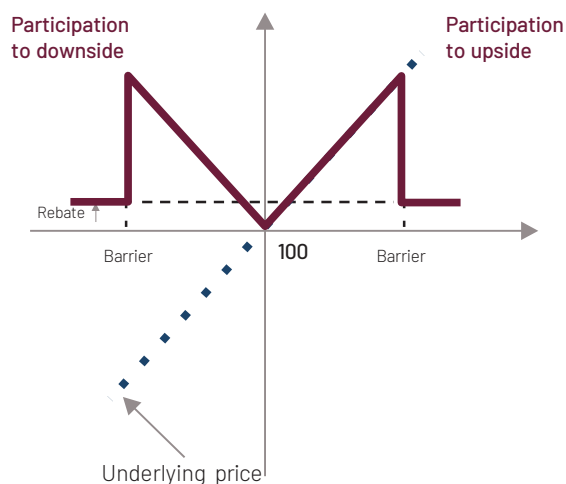
- Low volatility of the underlying.
- High dividend yield of the underlying.
- High interest rate of the note's currency.
- High funding level of the Issuer of the note.

### VARIATIONS

- **Underlying:** equity, index, commodity, fund, currency.
- **Duration:** usually 1 to 3 years.
- **Currency** of the product can be different from the underlying's one (quanto product).
- **Partial protection:** a minimum redemption at maturity below 100% allows a higher participation rate to the performance.
- **Participation rate:** the participation can be higher than, or smaller than 100%, depending on the market conditions.
- **Averaging:** the performance can be calculated between the initial level and the average of multiple closing prices at predefined observation dates, instead of the final level (in order to reduce volatility and obtain a higher participation rate).
- **Cap:** a cap can be added to increase the participation rate.
- **Exotic features:** "knock-out barrier", "rebate coupon", "autocallable", "lookback" etc.

CHART 2: PRODUCT PAYOFF AT MATURITY

If no barrier has ever breached, the product participates to the absolute performance of the underlying (negative or positive)



## 2-YEAR "TWIN WIN" NOTE



<b>CURRENCY</b>	USD	<b>UNDERLYING</b>	S&P 500 Index
<b>TENOR</b>	2 years	<b>PARTICIPATION</b>	100% of underlying's absolute performance
<b>MINIMUM REDEMPTION</b>	100% at maturity		

<b>KNOCK-OUT BARRIERS</b>	<b>115% and 75% of initial level</b> , observed continuously during the life of the product.
<b>REDEMPTION AT MATURITY</b>	On maturity date, the investor shall receive: <b>1) 100% of principal + 100% x absolute value of underlying's performance</b> if barriers have NEVER been breached. <b>Otherwise 2) 100% of principal.</b>



### PROS

- 100% minimum redemption at maturity.
- The product allows to profit at maturity from 100% of the absolute performance of the underlying up to the barrier levels.



### CONS

- If the underlying trades at least once above 115% or below 75% of its initial level during the life of the product, the investor will not obtain any return.

TABLE 4: SIMULATION OF RETURNS AT MATURITY IN CASE BARRIERS HAVE **NEVER** BEEN BREACHED

Change in the underlying price	-25%	-20%	-10%	-1%	0%	1%	10%	15%
Value of redemption	125%	120%	110%	101%	100%	101%	110%	115%
Annual return (% per annum)	12.50%	10.00%	5.00%	0.50%	0.00%	0.50%	5.00%	7.50%

TABLE 5: SIMULATION OF RETURNS AT MATURITY IN CASE ANY BARRIER HAS BEEN BREACHED

Change in the underlying price	-25%	-20%	-10%	-1%	0%	1%	10%	15%
Value of redemption	100%	100%	100%	100%	100%	100%	100%	100%
Annual return (% per annum)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

## 03 • Minimum Redemption of Principal at Maturity “Up & Out” Note MINIMUM REDEMPTION AT MATURITY: 100%

### RATIONALE

A simple and effective way to participate in the performance of an underlying asset up to a knock-out level with minimum redemption of principal at maturity.

### INVESTOR'S MARKET VIEW

- Rising underlying.
- Rising volatility.

### PRODUCT FEATURES

- Minimum redemption of totally the invested amount at maturity.
- Participate to the upside performance of the underlying up to the knock-out level.

### FAVORABLE MARKET CONDITIONS

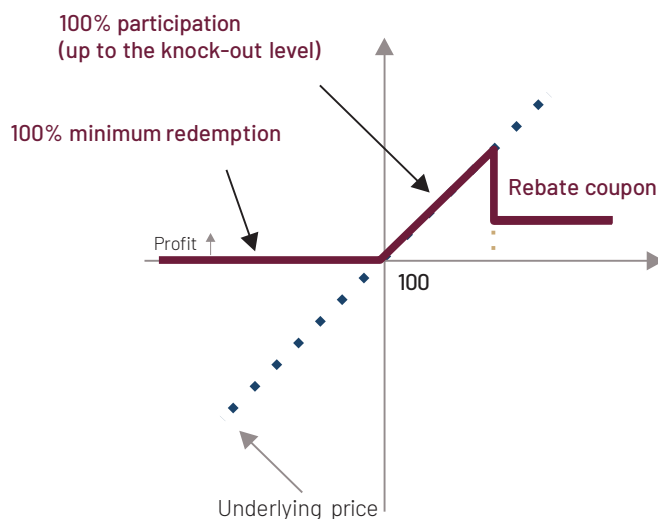
The participation rate will be higher in a context of:

- Low volatility of the underlying.
- High dividend yield of the underlying.
- Low correlation between the different basket's components (if applicable).
- High interest rate of the note's currency.
- High funding level of the Issuer of the note.

### VARIATIONS

- **Underlying:** equity, index, commodity, fund, currency, or a basket of several underlyings.
- **Duration:** usually 1 to 5 years.
- **Currency** of the product can be different from the underlying's one (quanto product).
- **Partial protection:** a minimum redemption at maturity below 100% allows a higher rebate or a higher knock-out level.
- **Participation rate:** the participation can be higher than, or smaller than 100%, depending on the market conditions.
- **Averaging:** the performance can be calculated between the initial level and the average of multiple closing prices at predefined observation dates, instead of the final level (in order to reduce volatility and obtain a higher participation rate).

CHART 3: PRODUCT PAYOFF AT MATURITY



### 3-YEAR “UP & OUT” NOTE



<b>CURRENCY</b>	USD The product is immunised against EUR/USD currency fluctuations	<b>UNDERLYING</b>	EURO STOXX 50 Index
		<b>PARTICIPATION</b>	100% of the upward performance of the EURO STOXX 50 Index
<b>TENOR</b>	3 years		
<b>MINIMUM REDEMPTION</b>	100% at maturity		

<b>KNOCK-OUT LEVEL</b>	<b>140%</b> of the closing price on trade date ( <b>observed daily on close</b> ).
<b>REBATE COUPON</b>	<b>6%</b> of principal at maturity.
<b>REDEMPTION AT MATURITY</b>	<p>On maturity date, the investor shall receive:</p> <p><b>1) 100% of principal plus:</b>  <math>100\% \text{ of principal} \times 100\% \times \frac{\text{underlying\_final} - \text{underlying\_initial}}{\text{underlying\_initial}}</math>                      if the underlying never closed strictly above its knock-out level between trade date and reference date and underlying_final is at or above its initial level.</p> <p><b>Or 2) 6.00% (2.00% p.a.) of principal</b>                      if the underlying closed at least once strictly above its knock-out level between trade date and reference date.</p> <p><b>Otherwise 3) zero.</b></p>

#### PROS

- 100% minimum redemption at maturity.
- 100% participation to the upside performance of the underlying up to +40%.

#### CONS

- Maximum profit capped at 13.33% p.a.
- Should the underlying close above the knock-out level the investor will not participate to any upside.

TABLE 6: SIMULATION OF RETURNS AT MATURITY  
 (IN CASE THE UNDERLYING NEVER CLOSED ABOVE THE KNOCK-OUT LEVEL)

Change in the underlying price	-60%	-40%	-20%	<b>0%</b>	10%	15%	20%	40%
Value of redemption	100%	100%	100%	<b>100%</b>	110%	115%	120%	140%
Annual return (% per annum)	-	-	-	-	3.33%	5.00%	6.66%	13.33%

TABLE 7: SIMULATION OF RETURNS AT MATURITY  
 (IN CASE THE UNDERLYING CLOSED AT LEAST ONCE ABOVE THE KNOCK-OUT LEVEL)

Change in the underlying price	-60%	-40%	-20%	<b>0%</b>	10%	20%	40%	60%
Value of redemption	106%	106%	106%	<b>106%</b>	106%	106%	106%	106%
Annual return (% per annum)	2%	2%	2%	<b>2%</b>	2%	2%	2%	2%

## 04 • Note with Guaranteed Coupons

### MINIMUM REDEPTION AT MATURITY: 100%

#### RATIONALE

Ensure a regular guaranteed return over the tenor while minimum redemption of principal at maturity.

#### INVESTOR'S MARKET VIEW

- Stable or bearish view on short term and medium term interest rates.

#### PRODUCT FEATURES

- Minimum redemption of the invested amount at maturity.
- Receive guaranteed coupons over the lifetime of the product.

#### FAVORABLE MARKET CONDITIONS

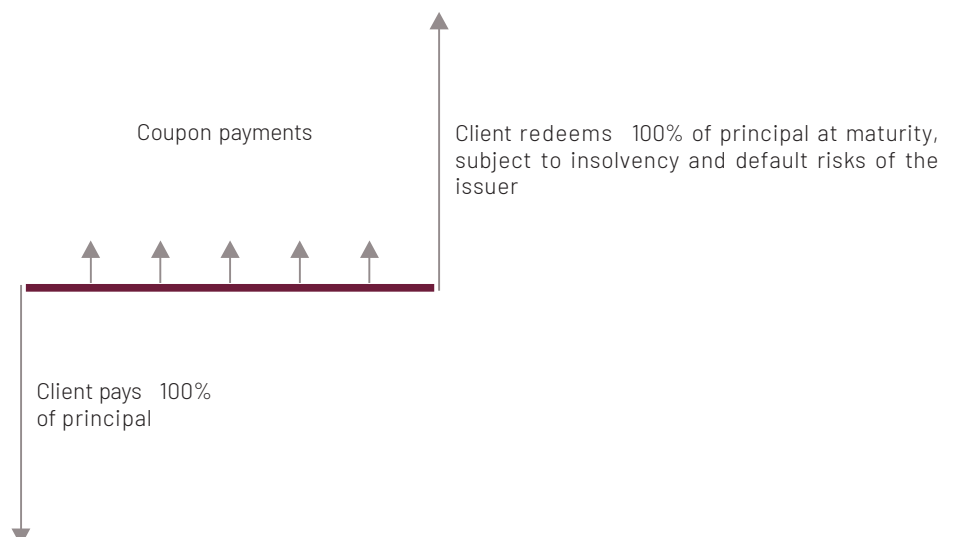
The coupon level will be higher in a context of:

- High interest rate of the note's currency.
- High volatility of interest rates (in case of callable or switchable notes).
- High funding level of the Issuer of the Note.

#### VARIATIONS

- **Duration:** usually 1 to 10 years.
- **Coupon frequency:** the coupon can be paid annually, semi-annually, quarterly or monthly...
- **Floating coupons:** the coupons paid can be floating (e.g.: 3-month compounded SOFR + spread).
- **Floored coupons:** the floating coupons may be floored, in order to pay a minimum coupon to the investor.
- **Capped coupons:** the floating coupons may be capped in order to improve other features of the structure.
- **Step up coupon:** the coupon levels can scale up at regular payment dates.
- **Callable:** the issuer has the right to redeem the note by anticipation at predefined dates at 100% of principal.
- **Switchable by the investor:** the investor has the right to switch the fixed coupons of the note into floating coupons after a certain period and regularly thereafter. Once activated, the switch applies until maturity.
- **Puttable:** the note holder can require from the issuer the redemption of the note at 100% after a certain period and regularly thereafter.

CHART 4: PRODUCT CASH FLOW





### 3-YEAR FLOATING COUPON NOTE WITH A MINIMUM COUPON



CURRENCY	USD
TENOR	3 years
MINIMUM REDEMPTION	100%

COUPON	<b>SOFR compound to 3-month tenor</b> , payable quarterly on a 30/360 basis, subject to a minimum level.
MINIMUM LEVEL	<b>5.70% p.a.</b>
REDEMPTION AT MATURITY	<b>100% of principal</b> on maturity date.



#### PROS

- 100% minimum redemption of principal at maturity.
- Benefit from a minimum coupon of 5.70% p.a.



#### CONS

- Higher USD medium term interest rates can reduce the market value to below par (100%) during the life of the product.

TABLE 8: SIMULATION OF RETURNS

Level of SOFR compound to 3-month tenor	0%	1.00%	3.00%	5.00%	6.00%	7.00%	8.00%
Coupon (p.a.)	5.70%	5.70%	5.70%	5.70%	6.00%	7.00%	8.00%

## MINIMUM REDEMPTION AT MATURITY: 100% (OR LOWER)

## RATIONALE

By taking a specific view on the underlying movement, obtain a conditional coupon higher than the risk free rate with minimum redemption of principal at maturity.

## INVESTOR'S MARKET VIEW

- Directional view on the evolution of the underlying (bullish or bearish).

## PRODUCT FEATURES

- Minimum redemption (totally or partially) of the invested amount at maturity.
- Coupon payment at maturity if the underlying reaches a pre-determined condition.

## FAVORABLE MARKET CONDITIONS

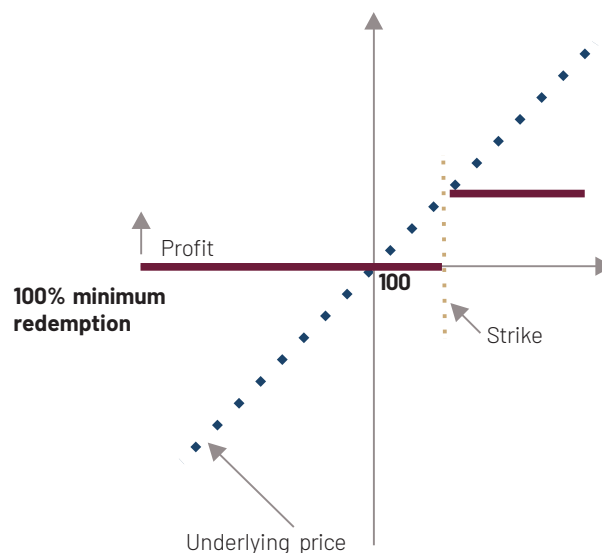
The coupon level will be higher in a context of:

- Low volatility of the underlying.
- A far forward price of the underlying compared of the pre-determined condition.
- High interest rate of the note's currency.
- High funding level of the Issuer of the note.

## VARIATIONS

- **Underlying:** interest rate, equity, index, commodity, currency, or a basket of several underlyings.
- **Duration:** usually 6 months to 5 years.
- **Currency** of the product can be different from the underlying's one (quanto product).
- **Strike:** there could be one or several regular observation dates with strikes with different levels.
- **Range double digital:** the coupon will be paid if the underlying is above a lower barrier and below an upper barrier at maturity. This would allow to improve the coupon level.
- **Option scenario:** the coupon will be paid if the underlying never reaches the strike level.
- **Hybrid:** several underlyings belonging to different asset classes (e.g. Currency and Equity).

CHART 5: PAYOFF AT MATURITY



## 3-YEAR DIGITAL COUPON NOTE



CURRENCY	USD
TENOR	3 years
MINIMUM REDEMPTION	100%

COUPON	<p>The coupon is payable annually on a 30/360 basis.</p> <p><b>1) 5.85% p.a.</b> if the 2-year USD CMS is fixed at or above 2.00%.</p> <p><b>Otherwise 2) 0%</b></p>
REDEMPTION AT MATURITY	<b>100% of principal</b> on maturity date.



### PROS

- 100% minimum redemption at maturity.
- The product allows the investor to receive a quarterly fixed coupon of 5.85% p.a. if the 2-year USD CMS fixes at or above 2.00%.



### CONS

- In case the 2-year USD CMS fixes below 2.00%, no coupon will be paid.

TABLE 9: SIMULATION OF RETURNS

Level of 2-year USD CMS	0%	1.00%	2.00%	4.00%	5.00%	6.00%	7.00%
Coupon (p.a.)	0%	0%	5.85%	5.85%	5.85%	5.85%	5.85%



## *Yield Enhancement*

Yield enhancement products are suitable for investors with a moderate to high risk appetite who expect the underlying to move sideways.

Those products provide the investor coupons (conditional or guaranteed) over the lifetime of the product.

The risk is lower or equivalent than with a direct investment in the underlying.

The investor bears the default risk of the issuer.

# 01 • Put option: barrier or strike

## ADVANTAGE OF A PUT WITH AN "OUT-OF-THE-MONEY" STRIKE

Change in underlying price	-50%	-36%	-35%	-20%	0%	+20%	+40%	+50%
Value of redemption with a down and in put strike 100% and 65% barrier	50%	64%	100%	100%	100%	100%	100%	100%
Value of redemption with a put strike 65%	76.92%	98.46%	100%	100%	100%	100%	100%	100%

CHART 6: PRODUCT WITH A BARRIER (DOWN AND IN PUT)

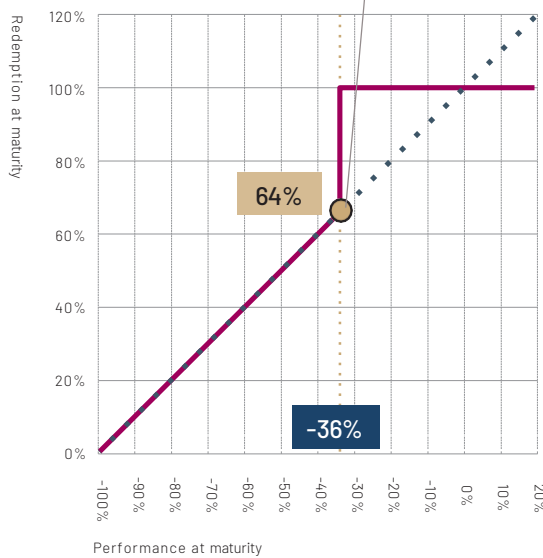
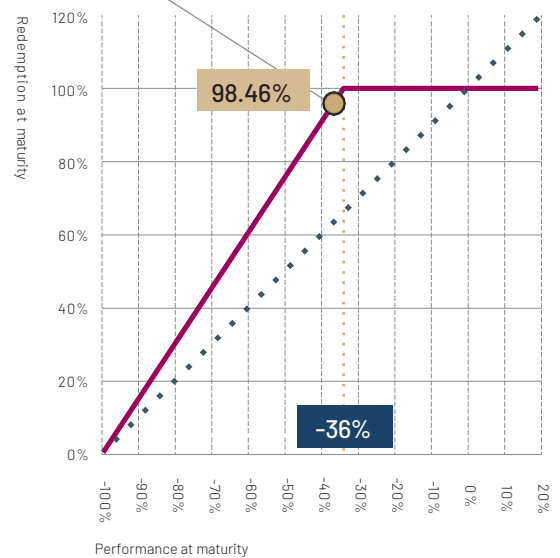


CHART 7: PRODUCT WITH A LOW STRIKE (PUT WITH OUT OF THE MONEY STRIKE)



- No discontinuity at maturity (no "gap risk").
- In case of a negative market scenario at maturity, a reverse convertible with a low strike would minimise the capital loss compared to a similar structure with a barrier at the same level.
- The valuation of a low strike reverse convertible is less volatile on the secondary market (implying a higher collateral value).

## 02 • Plan Vanilla Reverse Convertible/Unit PUT WITH “OUT-OF-THE-MONEY” STRIKE

### RATIONALE

- Receive a coupon higher than the risk free rate, assuming the underlying price will not be lower than the strike price at maturity.
- Accept principal at risk to improve potential yield.

### INVESTOR'S MARKET VIEW

- Underlying moving sideways or slightly rising.
- The underlying has just dropped and seems to bottom.
- Falling volatility.

### PRODUCT FEATURES

- Unconditional coupon paid at maturity or at regular payment dates.
- At maturity, either redemption of 100% of principal if the price of the underlying at maturity is above the strike level; or, physical delivery of the underlying (or cash settlement) at the strike price.

### FAVORABLE MARKET CONDITIONS

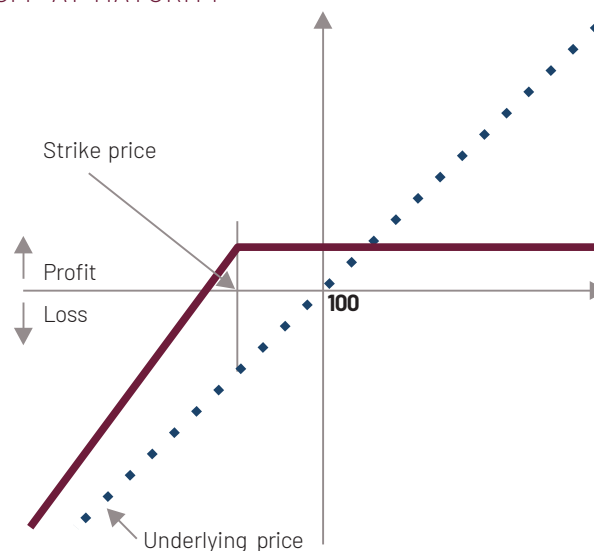
The coupon will be higher and/or the strike level will be lower in a context of:

- High volatility of the underlying.
- High dividend yield of the underlying.
- High interest rate of the product's currency.

### VARIATIONS

- **Underlying:** equity, index, commodity, fund, currency, or a basket of them.
- **Duration:** usually 1 month to 3 years.
- **Currency** of the product can be different from the underlying's one (quanto product).
- **Settlement:** cash or physical delivery.
- **Worst-of put:** the product is linked to the lowest performing underlying.
- **Basket of reverses:** the product is composed of a basket of reverse convertibles, each linked to one asset, and pays an average coupon. At maturity, there can be partial cash redemption and partial physical delivery.

CHART 8: PAYOFF AT MATURITY



## 1-YEAR INTEREST RATE LINKED UNIT



<b>CURRENCY</b>	USD	<b>UNDERLYING</b>	10-year USD CMS(Constant Maturity Swap)rate
<b>TENOR</b>	1 year		
<b>MINIMUM REDEMPTION</b>	None		

<b>STRIKE LEVEL</b>	<b>60%</b> of initial level.
<b>COUPON</b>	<b>6.25%</b> of principal, payable at maturity.
<b>REDEMPTION AT MATURITY</b>	On maturity date, the investor shall receive: <b>1) 100% of principal x [underlying_final / underlying_strike level]</b> if underlying_final is strictly below its strike level. <b>Otherwise 2) 100% of principal.</b>



### PROS

- High unconditional coupon.
- Out-of-the-money strike (low strike): in case the underlying closes below the strike level, the negative performance will be computed from the strike level.



### CONS

- No minimum redemption.
- No participation to any upside movement.

TABLE 10 : SIMULATION OF RETURNS AT MATURITY

Change in underlying price	-50%	-41%	-40%	-15%	0%	10%	20%	50%
Value of redemption	83.33%	<b>98.33%</b>	<b>100%</b>	100%	<b>100%</b>	100%	100%	100%
Coupon at maturity	6.25%	<b>6.25%</b>	<b>6.25%</b>	6.25%	<b>6.25%</b>	6.25%	6.25%	6.25%

## 6-MONTH AUTO-CALLABLE "WORST-OF" REVERSE CONVERTIBLE



<b>CURRENCY</b>	CNY	<b>UNDERLYING</b>	Lowest performing underlying amongst China Life Insurance Co Ltd and China Overseas Land and Investment Ltd
<b>TENOR</b>	6 months		
<b>MINIMUM REDEMPTION</b>	None		

<b>AUTO-CALL</b>	Auto-callable monthly if the lowest performing underlying is at or above its initial level on observation date.
<b>STRIKE LEVEL</b>	<b>84%</b> of relevant initial level of each underlying.
<b>COUPON</b>	<b>0.6675%</b> of principal, payable monthly in arrears ( <b>8.01% p.a.</b> ).
<b>REDEMPTION AT MATURITY</b>	On maturity date, the investor shall receive: <b>1) 100% of principal</b> if lowest performing underlying <sub>final</sub> is at or above its strike level. <b>Otherwise 2) Physical delivery of the lowest performing underlying at its strike level</b> if lowest performing underlying <sub>final</sub> is strictly below its strike level.



### PROS

- High unconditional coupon.
- Out-of-the-money strike (low strike): in case the lowest performing underlying closes below its strike level, the negative performance will be computed from the strike level.



### CONS

- No minimum redemption.
- No participation to any upside movement.
- Reinvestment risk in case of auto-call.
- The underlying is the lowest performing underlying.

TABLE 11: SIMULATION OF RETURNS AT MATURITY

Change in underlying price of LPU <sup>1</sup>	-30%	-17%	-16%	-5%	0%	10%	20%	50%
Value of redemption	83.33%	<b>98.80%</b>	<b>100%</b>	100%	<b>100%</b>	100%	100%	100%
Last period coupon	0.6675%	<b>0.6675%</b>	<b>0.6675%</b>	0.6675%	<b>0.6675%</b>	0.6675%	0.6675%	0.6675%

1) LPU: lowest performing underlying



## 2-MONTH AUTO-CALLABLE "WORST-OF" DAILY KNOCK-OUT REVERSE CONVERTIBLE

CURRENCY	HKD	UNDERLYING	Lowest performing underlying amongst Ping An Insurance Group Co of China Ltd and China Telecom Corp Ltd
TENOR	2 months		
MINIMUM REDEMPTION	None		

AUTO-CALL	Auto-callable daily, starting from the second month, if the lowest performing underlying is at or above <b>98%</b> of its initial level on observation date.
STRIKE LEVEL	<b>90%</b> of relevant initial level of each underlying.
COUPON	<p>First month: <b>1.00%</b> of principal (<b>12% p.a.</b>). Following months:</p> $\left[ \frac{n}{N} \times 12\% \text{ p.a.} \right]$ <p>Payable on the earlier of either the immediate following coupon payment date or the call redemption date (if any).</p> <p><b>Where N</b> is the number of exchange business days in the coupon period. <b>n</b> is the number of exchange business days, within <b>N</b>, from the respective period start date up to and including the earlier of either the immediate following period end date or the date of call (if any).</p>
REDEMPTION AT MATURITY	<p>On maturity date, the investor shall receive:</p> <p><b>1) 100% of principal</b> if lowest performing underlying<sub>final</sub> is at or above its strike level.</p> <p><b>Otherwise 2) Physical delivery of the lowest performing underlying at its strike level</b> if lowest performing underlying<sub>final</sub> is strictly below its strike level.</p>



### PROS

- High potential coupon.
- Out-of-the-money strike (low strike): in case the lowest performing underlying closes below its strike level, the negative performance will be computed from the strike level.



### CONS

- No minimum redemption.
- No participation to any upside movement.
- Reinvestment risk in case of auto-call.
- The underlying is the lowest performing underlying.

TABLE 12: SIMULATION OF RETURNS AT MATURITY IN CASE THE PRODUCT HAS NOT BEEN EARLY REDEEMED

Change in underlying price of LPU <sup>1</sup>	-40%	-20%	-11%	-10%	-5%	0%	10%	20%
Value of redemption	66.66%	88.88%	<b>98.88%</b>	<b>100%</b>	100%	<b>100%</b>	100%	100%

1) LPU: lowest performing underlying

## PUT WITH “AT-THE-MONEY” STRIKE AND DOWN-AND-IN BARRIER

### RATIONALE

- Receive a coupon higher than the risk free rate, assuming the underlying price will not be lower than the strike price at maturity.
- Accept principal at risk to improve potential yield.

### INVESTOR’S MARKET VIEW

- Underlying moving sideways or slightly rising.
- The underlying has just dropped and seems to bottom.
- It will not reach a predefined barrier during the product lifetime.
- Falling volatility.

### PRODUCT FEATURES

- Unconditional coupon paid at maturity or at regular payment dates.
- At maturity, redemption of 100% of principal either if the knock-in barrier is not touched or if the price of underlying at maturity is above the strike; otherwise, physical delivery of the underlying (or cash settlement) at the strike price.

### FAVORABLE MARKET CONDITIONS

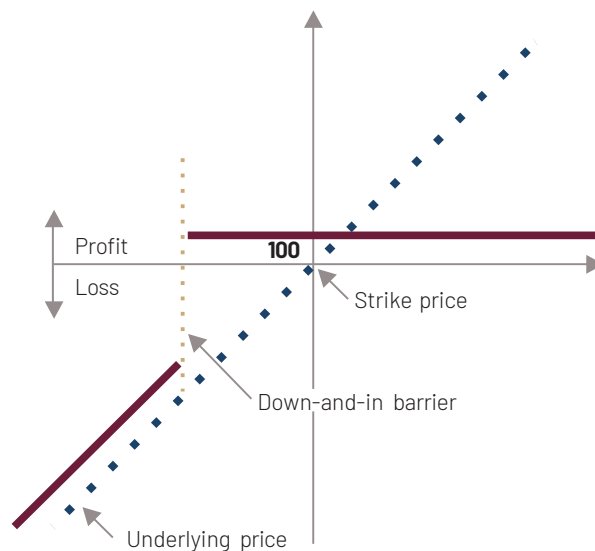
The coupon will be higher and/or the strike level will be lower in a context of:

- High volatility of the underlying.
- High dividend yield of the underlying.
- High interest rate of the product’s currency.

### VARIATIONS

- **Underlying:** equity, index, commodity, fund, currency, or a basket of several underlyings.
- **Duration:** usually 3 months to 3 years.
- **Currency** of the product can be different from the underlying’s one (quanto product).
- **Settlement:** cash or physical delivery.
- **Worst-of:** the product is linked to the lowest performing underlying.
- **Discount reverse convertible:** instead of paying a coupon at maturity, the product is bought at a discounted price and redeemed at par or by physical delivery at maturity.
- **Knock-in barrier:** the knock-in barrier can be observed at any time, on daily close, or at maturity (recommended) of the product.

CHART 9: PRODUCT PAYOFF AT MATURITY



## 1-YEAR COMMODITY LINKED UNIT



CURRENCY	USD	UNDERLYING	Gold price PM fixing
TENOR	1 year		
MINIMUM REDEMPTION	None		

BARRIER LEVEL	<b>82%</b> of initial level, observed at maturity.
COUPON	<b>3.15%</b> of principal, payable at maturity.
REDEMPTION AT MATURITY	<p>On maturity date, in addition to the coupon, the investor shall receive:</p> <p><b>1) 100% of principal</b> if underlying_final is at or above its barrier level.</p> <p><b>Otherwise 2) 100% of principal x [underlying_final / underlying_initial]</b> if underlying_final is strictly below its barrier level.</p>



### PROS

- Guaranteed coupon paid at maturity.
- Barrier level observed at maturity only.



### CONS

- No minimum redemption.
- No participation to any upside movement.

TABLE 13: SIMULATION OF RETURNS AT MATURITY

Change in underlying price	-39%	<b>-19%</b>	<b>-18%</b>	-17%	-10%	<b>0%</b>	10%	20%
Value of redemption	61.00%	<b>81.00%</b>	<b>100%</b>	100%	100%	<b>100%</b>	100%	100%
Coupon	3.15%	<b>3.15%</b>	<b>3.15%</b>	3.15%	3.15%	<b>3.15%</b>	3.15%	3.15%

## 04 • Auto-Callable Reverse Convertible/Unit with Conditional Coupon “PHOENIX” STRUCTURE

### RATIONALE

- Receive a coupon higher than the risk free rate, assuming the underlying price will not be lower than the barrier on coupon observation date and at maturity.
- The underlying only needs to trade at or above its auto-call level to get early redeemed at a high redemption level.
- Accept principal at risk to improve potential yield.

### INVESTOR'S MARKET VIEW

- Stable or slightly bullish view on the underlying.
- The downside is limited and the underlying is unlikely to fall below the knock-in barrier.

### PRODUCT FEATURES

- Conditional coupon payment at regular intervals and at maturity if the underlying is above the coupon barrier level.
- Auto-callable at 100% of principal if the underlying is at or above its auto-call level on each observation date.
- Redemption of 100% of principal if the price of the underlying at maturity is above the barrier or strike; otherwise, physical delivery of the underlying (or cash settlement) at the strike price.

### FAVORABLE MARKET CONDITIONS

The coupon will be higher and/or the barrier will be lower in a context of:

- High volatility of the underlying.
- High dividend yield of the underlying.
- High interest rate of the product's currency.

### VARIATIONS

- **Underlying:** equity, index, commodity, fund, currency, or a basket of several underlyings.
- **Duration:** usually 6 months to 5 years.
- **Currency** of the product can be different from the underlying's one (quanto product).
- **Settlement:** cash or physical delivery.
- **Worst-of:** the product is linked to the lowest performing underlying.
- **Frequency of auto-call** can be monthly, quarterly, semi-annually or annually.
- **Accrual coupon:** the coupon amount is accrued for the days the underlying closes above a barrier.
- **“Memory” coupon:** In case of a missed coupon, should the underlying close subsequently at or above the coupon barrier on any observation date, the missed coupon shall be added to that due for the next coupon period.
- **Lock-in:** the product becomes 100% minimum redemption of principal at maturity if the underlying closes at or above a lock-in barrier at predefined observation dates.

## 1-YEAR "MEMORY" AUTO-CALLABLE COMMODITY LINKED UNIT



CURRENCY	USD	UNDERLYING	WTI light sweet crude oil price (first nearby deliverable future contract)
TENOR	1 year		
MINIMUM REDEMPTION	None		

AUTO-CALL	Auto-callable quarterly if the underlying is at or above 95% of its initial level on observation date.
BARRIER LEVEL	<b>65%</b> of initial level, observed at maturity.
COUPON BARRIER LEVEL	<b>75%</b> of initial level.
COUPON	<b>1.50%</b> payable quarterly in arrears ( <b>6.00% p.a.</b> ), if the underlying is at or above its coupon barrier level. No coupon paid for that quarter otherwise.
MEMORY	Any missed coupon will be added to the next coupon payment date if the underlying closes at or above its coupon barrier level on any following observation date.
REDEMPTION AT MATURITY	On maturity date, the investor shall receive: <b>1) 100% of principal</b> if underlying <sub>final</sub> is at or above its barrier level. <b>Otherwise 2) 100% of principal x [underlying<sub>final</sub> / underlying<sub>initial</sub>]</b> if underlying <sub>final</sub> is strictly below its barrier level.



### PROS

- High potential coupons with memory feature.
- The duration of the product can be significantly reduced, even potentially to 3 months (auto-call feature).
- Barrier level observed at maturity only.



### CONS

- No minimum redemption.
- No participation to any upside movement.
- Reinvestment risk in case of auto-call.

TABLE 14: SIMULATION OF RETURNS AT MATURITY IN CASE THE PRODUCT HAS NOT BEEN EARLY REDEEMED

Change in underlying price	-55%	-36%	-35%	-30%	-25%	-12%	0%	10%
Value of redemption	45%	<b>64%</b>	<b>100%</b>	100%	<b>100%</b>	100%	<b>100%</b>	100%
Coupon (with n=0) <sup>1)</sup>	-	-	-	-	<b>1.50%</b>	1.50%	<b>1.50%</b>	1.50%

1) n corresponds to the number of unpaid coupon(s).

### 3-YEAR "MEMORY" AUTO-CALLABLE "WORST-OF" REVERSE CONVERTIBLE



<b>CURRENCY</b>	USD	<b>UNDERLYING</b>	Lowest performing underlying amongst Apple Inc, Alphabet Inc. and Facebook Inc
<b>TENOR</b>	3 years		
<b>MINIMUM REDEMPTION</b>	None		

<b>AUTO-CALL</b>	Auto-callable semi-annually if the lowest performing underlying is at or above <b>90%</b> of its initial level on observation date.
<b>STRIKE LEVEL</b>	<b>50%</b> of relevant initial level of each underlying.
<b>COUPON BARRIER LEVEL</b>	<b>50%</b> of relevant initial level of each underlying.
<b>COUPON</b>	<b>3.85%</b> payable semi-annually in arrears ( <b>7.70% p.a.</b> ), if the lowest performing underlying is at or above its coupon barrier level; no coupon paid for that semester otherwise.
<b>MEMORY</b>	Any missed coupon will be added to the next coupon payment date if the lowest performing underlying closes at or above its coupon barrier level on any following observation date.
<b>REDEMPTION AT MATURITY</b>	On maturity date, the investor shall receive: <b>1) 100% of principal</b> if lowest performing underlying _final is at or above its strike level. <b>Otherwise 2) Physical delivery of the lowest performing underlying at its strike level</b> if lowest performing underlying _final is strictly below its strike level.



#### PROS

- High potential coupon with memory feature.
- Out-of-the-money strike (low strike): in case the lowest performing underlying closes below its strike level, the negative performance will be computed from the strike level.
- The duration of the product can be significantly reduced, even potentially to 6 months (auto-call feature).



#### CONS

- No minimum redemption.
- No participation to any upside movement.
- The underlying is the lowest performing underlying.
- Reinvestment risk in case of auto-call.

TABLE 15: SIMULATION OF RETURNS AT MATURITY IN CASE THE PRODUCT HAS NOT BEEN EARLY REDEEMED

Change in closing price of LPU <sup>1</sup>	-70%	-51%	-50%	-47%	-40%	-20%	0%	10%
Value of redemption	60%	<b>98%</b>	<b>100%</b>	100%	100%	100%	<b>100%</b>	100%
Coupon (with n=0) <sup>2</sup>	-	-	<b>3.85%</b>	3.85%	3.85%	3.85%	<b>3.85%</b>	3.85%

1) LPU: lowest performing underlying

2) n corresponds to the number of unpaid coupon(s).

### 3-YEAR AUTO-CALLABLE DAILY ACCRUAL "WORST-OF" UNIT

<b>CURRENCY</b>	USD The product is immunised against EUR/USD currency fluctuations	<b>UNDERLYING</b>	Lowest performing underlying amongst EURO STOXX 50 Index and EURO STOXX Banks Index
<b>TENOR</b>	3 years		
<b>MINIMUM REDEMPTION</b>	None		

<b>AUTO-CALL</b>	Auto-callable quarterly if the lowest performing underlying is at or above its initial level on observation date.
<b>BARRIER LEVEL</b>	80% of relevant initial level of each underlying, observed at maturity.
<b>COUPON BARRIER LEVEL</b>	80% of relevant initial level of each underlying.
<b>COUPON</b>	$\left[ \frac{n}{N} \times 13.20\% p.a. \right]$ , payable quarterly in arrears. <p>Where <b>N</b> is the total number of business days in the coupon period.  <b>n</b> is the number of business days, within <b>N</b>, that the closing price of the lowest performing underlying is at or above 80% of its initial level.</p>
<b>REDEMPTION AT MATURITY</b>	<p>On maturity date, the investor shall receive:</p> <p><b>1) 100% of principal</b> if lowest performing underlying _final is at or above its barrier level.</p> <p><b>Otherwise 2) 100% of principal x [lowest performing underlying _final / lowest performing underlying _initial]</b> if lowest performing underlying _final is strictly below its barrier level.</p>

#### PROS

- High potential coupon.
- Barrier observed at maturity only.
- The duration of the product can be significantly reduced, even potentially to 3 months (auto-call feature).

#### CONS

- No minimum redemption.
- No participation to any upside movement.
- The underlying is the lowest performing underlying.
- Reinvestment risk in case of auto-call.

TABLE 16: SIMULATION OF RETURNS AT MATURITY IN CASE THE PRODUCT HAS NOT BEEN EARLY REDEEMED AND THE LOWEST PERFORMING INDEX HAS CLOSED HALF OF THE DAYS STRICTLY BELOW THE COUPON BARRIER LEVEL

Change in closing price of LPU <sup>1)</sup>	-50%	-21%	-20%	-10%	0%	10%	20%	30%
Value of redemption	50%	79%	100%	100%	100%	100%	100%	100%
Coupon	1.65%	1.65%	1.65%	1.65%	1.65%	1.65%	1.65%	1.65%

1) LPU: lowest performing underlying

## 05 • Auto-Callable Certificate WITH CUMULATIVE COUPON

### RATIONALE

- Auto-callable at a high redemption level while the underlying does not need to have strong movement.
- Accept principal at risk to improve potential yield.

### INVESTOR'S MARKET VIEW

- Underlying moving sideways or slightly rising. The underlying has just dropped and seems to bottom. It will not reach a predefined barrier during the product lifetime.
- Falling volatility.

### PRODUCT FEATURES

- Automatically redeemed by anticipation if the underlying price is above a specific level at predefined dates of call.
- Increasing redemption levels at each date of call (100% nominal + cumulated interests).
- At maturity, redemption of 100% of principal either if the knock-in barrier is not touched or if the price of underlying at maturity is at or above the strike; otherwise, physical delivery of the underlying (or cash settlement) at the strike price.

### FAVORABLE MARKET CONDITIONS

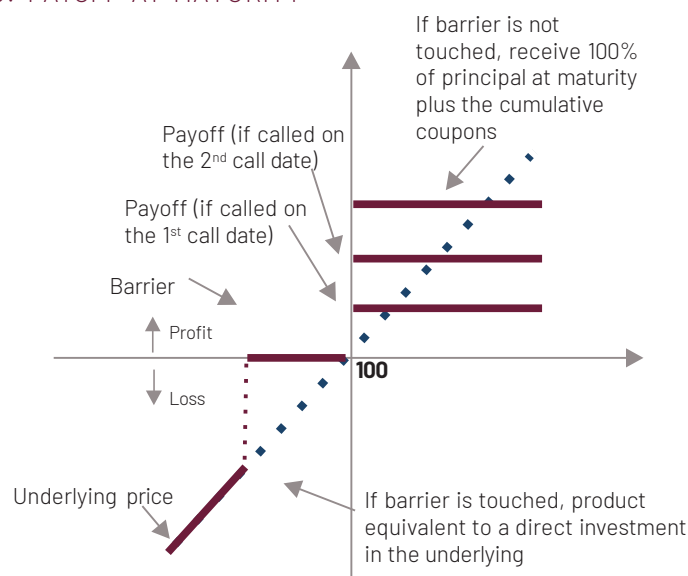
The redemption levels will be higher and/or the strike level will be lower in a context of:

- High volatility of the underlying.
- High dividend yield of the underlying.
- High interest rate of the product's currency.

### VARIATIONS

- **Underlying:** equity, index, commodity, fund, currency, or a basket of several underlyings.
- **Duration:** usually 1 to 5 years.
- **Currency** of the product can be different from the underlying's one (quanto product).
- **Settlement:** cash or physical delivery.
- **Worst-of:** the product is linked to the lowest performing underlying.
- **Airbag effect:** at maturity, redemption of 100% + cumulated interests if the knock-in barrier is not touched or if the price of underlying at maturity is above the strike.
- **Participation:** the potential yield can be the max between cumulated interests and performance of the underlying.

CHART 10: PAYOFF AT MATURITY





## 3-YEAR AUTO-CALLABLE UNIT



CURRENCY	EUR	UNDERLYING	EURO STOXX Banks Index
TENOR	3 years		
MINIMUM REDEMPTION	None		

STRIKE LEVEL	70% of initial level.				
DATE OF CALL	End of semester 1	End of semester 2	End of semester 3	End of semester 4	End of semester 5
AUTO-CALL LEVEL	95%	90%	85%	80%	75%
AUTO-CALL REDEMPTION CONDITIONS	105%	110%	115%	120%	125%
REDEMPTION AT MATURITY	<p>On maturity date, the investor shall receive:</p> <p><b>1) 130% of principal</b> if underlying_final is at or above its strike level.</p> <p><b>Otherwise 2) 100% of principal x [underlying_final / underlying_strike level]</b> if underlying_final is strictly below its strike level.</p>				



### PROS

- High potential coupon in case of auto-call.
- Out-of-the-money strike (low strike): in case the lowest performing underlying closes below its strike level, the negative performance will be computed from the strike level.
- The duration of the product can be significantly reduced, even potentially to 6 months (auto-call feature).



### CONS

- No minimum redemption.
- No participation to any upside movement.
- Reinvestment risk in case of auto-call.

TABLE 17: SIMULATION OF RETURNS AT MATURITY IN CASE THE PRODUCT HAS NOT BEEN EARLY REDEEMED

Change in underlying price	-50%	-31%	-30%	-10%	0%	10%	30%	50%
Value of redemption	71.43%	<b>98.57%</b>	<b>130%</b>	130%	<b>130%</b>	130%	130%	130%

## RATIONALE

- Receive a coupon higher than the risk free rate, assuming no credit event occurs over the product tenor.
- Accept principal at risk to improve potential yield.

## INVESTOR'S MARKET VIEW

- No credit event on any of the reference entities will occur over the investment period.
- Expect a tightening of the CDS spread.

## PRODUCT FEATURES

- Receive a coupon at predefined regular dates if no credit event occurs (bankruptcy, failure to pay, obligation acceleration, repudiation / moratorium, restructuring, governmental intervention).
- Redemption of 100% of principal at maturity if no credit event occurs, otherwise by a cash amount according to the recovery price of the Reference Entity (nominal multiplied by the recovery value).

## FAVORABLE MARKET CONDITIONS

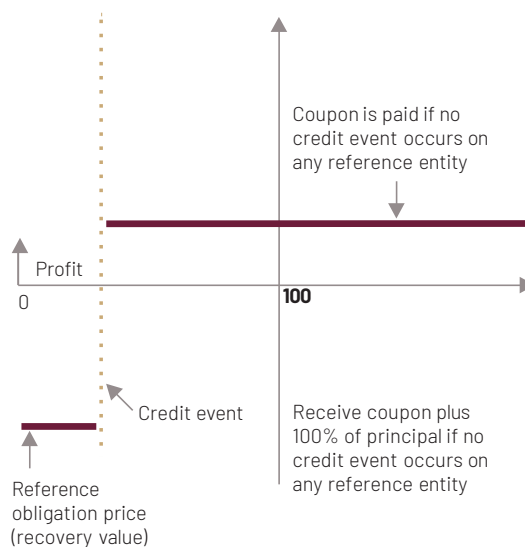
The coupon will be higher and/or the barrier will be lower in a context of:

- High credit spread of the reference entity/entities.
- Low correlation between the different reference entities (if applicable).
- High interest rate of the note's currency.

## VARIATIONS

- **Underlying:** reference obligation of one single reference entity (corporates, sovereigns), or a basket / portfolio of them.
- **Duration:** usually 1 year to 5 years.
- **Currency** of the product can be different from the currency of the reference entities country (quanto product).
- **Coupon payment:** in case of a credit event, either the accrued coupon will be paid (recommended) or no coupon will be paid for this observation period.
- **First-to-default / Second-to-default:** the coupon will cease to accrue and the product will be early redeemed as soon as one / two reference entity(s) defaults.
- **Tranching mechanism:** tranches enable to be protected against a limited number of credit events.
- **Minimum Redemption :** the product can be structured as minimum redemption of principal at maturity, with the coupon(s) only subject to the credit events.

CHART 11: PAYOFF AT MATURITY



## 5-YEAR CREDIT LINKED NOTE ON A SINGLE REFERENCE ENTITY



CURRENCY	USD - The product is immune to the exchange rate risk between the currency of the underlying and the USD	MINIMUM REDEMPTION	None
	TENOR	5 years	REFERENCE ENTITY
		ELIGIBLE CREDIT EVENT	Bankruptcy, Failure to Pay, Restructuring

COUPON	<b>5.90% p.a.</b> payable quarterly on a 30/360 basis. In case of credit event, neither the accrued coupon, nor any further coupon will be paid out.
REDEMPTION	<p><b>1)</b> In case no credit event occurs over the life of the product: <b>100% of principal</b> on maturity date.</p> <p><b>Otherwise 2)</b> In case a credit event occurs over the life of the product: <b>The CLN will terminate</b> (early redemption). The issuer will redeem the note by way of a cash amount payment according to the <b>recovery value</b> of the reference entity (loss for the investor), in accordance with the terms of the issuer's documentation.</p>
RECOVERY VALUE	In most cases, the recovery value corresponds to the auction final price determined by the ISDA Committee.
ISDA	ISDA (international swaps and derivatives association) has binding decisions as to whether a credit event occurred or not. Recovery values are determined by an auction organized by ISDA (standardized process).

**PROS**

- Attractive coupon in USD, should no credit event occurs prior to maturity.
- Tailored: CLN can be structured to match the risk, currency, cash flow, and maturity requirements of an investor.

**CONS**

- No minimum redemption.
- More volatile than a bond issued by the reference entity, bid-ask spread could be wider than a comparable cash bond; the CLN should be considered as a buy & hold investment.

## 5-YEAR CREDIT LINKED NOTE WITH LINEAR REDEMPTION PRICE



CURRENCY	GBP The product is immunised against EUR/GBP currency fluctuations.	UNDERLYING	Itraxx Crossover S33 Index Equally weighted basket of the CDS of 75 European high yield companies
	TENOR		5 years
MINIMUM REDEMPTION	None		

COUPON	7.50% p.a. x outstanding nominal, payable quarterly.
OUTSTANDING NOMINAL	<b>100% - 1.33% x n of principal</b> Where <b>n</b> is the number of credit events that have occurred within the underlying since trade date.
RECOVERY VALUE	In case of credit event, the recovery value for that reference entity is fixed at 0. Thus, the loss in capital is <b>1.33%</b> for each reference entity that is affected by a credit event.
REDEMPTION AT MATURITY	Outstanding nominal as of maturity date.
ISDA	ISDA (International Swaps and Derivatives Association) has binding decisions as to whether a credit event occurred or not. Recovery values are determined by an auction organized by ISDA (standardized process).



## PROS

- Exposure to a diversified basket of European sub-investment grade companies.
- The outstanding nominal and the coupon will be reduced only by 1.33% for each credit event that occurred.



## CONS

- No minimum redemption.
- More volatile than a bond issued by the reference entity, bid-ask spread could be wider than a comparable cash bond; the CLN should be considered as a buy & hold investment.

TABLE18: SIMULATION OF REDEMPTION AT MATURITY

Number of reference entities affected by credit events (n)	0	1	2	3	-	74	75
Redemption at Maturity	100%	98.67%	97.33%	96.00%	-	1.33%	0%

## 5-YEAR CREDIT LINKED NOTE WITH TRANCHING MECHANISM

CURRENCY	EUR	UNDERLYING	Itraxx Europe Main S33 Index Equally weighted basket of the CDS of 125 investment grade European corporate entities
TENOR	5 years	ELIGIBLE CREDIT EVENT	Bankruptcy, Failure to Pay, Restructuring, Governmental Intervention
MINIMUM REDEMPTION	None		

COUPON	5.00% p.a. x Outstanding Nominal, payable annually.
TRANCHING MECANISM	The notional amount is protected against the 3 first credit events.  The notional amount will be adjusted for each credit event that is notified during the reference period with respect to any reference entity listed in the Markit itraxx Europe Main Series 33 index as follows:
OUTSTANDING NOMINAL	1) if the cumulative weight of the reference entities in the index affected by the notified credit event(s) is below or equal to 2.40% of the index, the notional amount is not adjusted and remains equal to 100% of principal on trade date. 2) if the cumulative weight of the reference entities in the index affected by the notified credit events is strictly above 2.40% and strictly below 6.40% of the index, the notional amount is reduced by 100% of principal multiplied by 25 times the weight of any additional reference entity affected by a credit event. 3) once the cumulative weight of the reference entities in the index affected by the notified credit events is equal to 6.40% of the index, then the notional amount becomes zero.
RECOVERY VALUE	In case of Credit event, the recovery value for that reference entity is fixed at 0.
REDEMPTION AT MATURITY	Outstanding Nominal as of maturity date.



## PROS

- Exposure to a diversified basket of 125 investment grade European corporate entities.
- Principal is not impacted up to 3 credit events.



## CONS

- Partial or total loss of capital starting from the 4<sup>th</sup> to the 8<sup>th</sup> credit event.
- More volatile than a bond issued by the reference entity, bid-ask spread could be wider than a comparable cash bond; the CLN should be considered as a buy and hold investment.

TABLE19: SIMULATION OF REDEMPTION AT MATURITY

Number of reference entities affected by credit events	0	1	2	3	4	5	6	7	8
Sum of the weight of reference entities affected by credit events	0.00%	0.80%	1.60%	2.40%	3.20%	4.00%	4.80%	5.60%	6.40%
Redemption at Maturity	100%	100%	100%	100%	80%	60%	40%	20%	0%

SSPA Product type code: 1410

Internal classification: D6



## *Participation*

Participation products are suitable for investors with a moderate to HIGH risk appetite who normally wish to have unrestricted participation in the underlying performance. The risk is equivalent or lower than with a direct investment in the underlying.

The investor bears the default risk of the issuer.

## CONDITIONAL MINIMUM REDEMPTION OF PRINCIPAL AT MATURITY

### RATIONALE

- Participate in the positive performance of the underlying with conditional downside protection assuming the underlying will not reach the barrier.
- Accept capital at risk to achieve higher participation in underlying performance.

### INVESTOR'S MARKET VIEW

- Bullish outlook on the underlying with unlimited potential profit.
- The underlying is unlikely to close below the barrier.

### PRODUCT FEATURES

- Participate in the upside performance of the underlying with principal at risk if the underlying reaches the barrier.
- Equivalent to a direct investment in the underlying ("Delta One") if the underlying has reached the barrier.

### FAVORABLE MARKET CONDITIONS

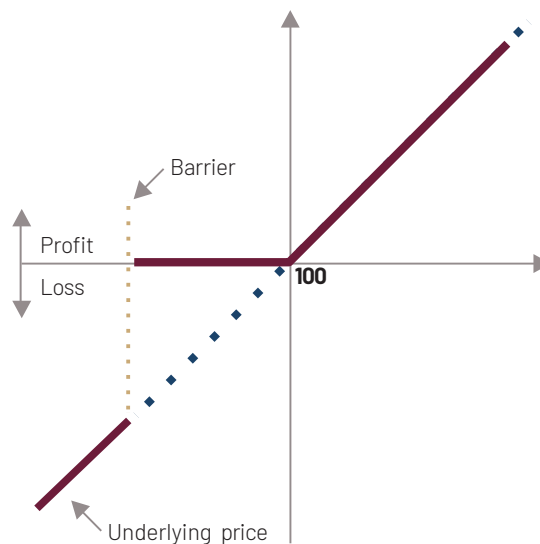
The barrier level will be lower in a context of:

- High volatility for the underlying.
- High dividend yield for the underlying.
- High interest rate of the product's currency.

### VARIATIONS

- **Underlying:** equity, index, commodity, funds, currency, or a basket of several underlyings.
- **Duration:** usually 6 months to 5 years.
- **Currency** of the product can be different from the underlying's one (quanto product).
- **Barrier:** the barrier can be observed anytime, or on any daily close, or at the maturity of the product (recommended).
- **Lookback:** the performance of the underlying is measured between its lowest level observed during the life of the product (or a predefined period) and its final level.
- **Callable / auto-call:** product can be (automatically) redeemed during its life.

CHART 12: PRODUCT PAYOFF AT MATURITY



## 5-YEAR "LOOKBACK" AUTO-CALLABLE UNIT



<b>CURRENCY</b>	EUR	<b>UNDERLYING</b>	EURO STOXX 50 Index
<b>TENOR</b>	5 years		
<b>MINIMUM REDEMPTION</b>	None		

<b>BARRIER LEVEL</b>	65% of initial level, observed at maturity.			
<b>AUTOMATIC CALL</b>	The issuer will reimburse the unit semi-annually, at the level indicated below, if 2 weeks before the end of any of the first four semi-annual period (Date of Call), the closing price of the underlying is at or above <b>95%</b> of its initial level.			
<b>DATES OF CALL</b>	End of semester 1	End of semester 2	End of semester 3	End of semester 4
<b>REDEMPTION CONDITIONS</b>	105% of principal	110% of principal	115% of principal	120% of principal
<b>REDEMPTION AT MATURITY</b>	<p>On maturity date, if the unit has not been called, the investor shall receive:</p> <p><b>1) 100% of principal + 100% x [(underlying_highest - underlying_initial) / underlying_initial]</b>                      if underlying_final is at or above 65% of underlying_initial.</p> <p><b>Otherwise 2) 100% of principal x [underlying_final / underlying_initial]</b>                      if underlying_final is strictly below 65% of underlying_initial.</p> <p><b>Where Highest</b> is the highest daily closing price of the underlying during the life of the product.</p>			





PROS

- The “lookback” mechanism allows to capture the highest level (on daily close) recorded over the investment period.
- Barrier level observed at maturity only.
- The duration of the product can be significantly reduced, even potentially to 6 months (auto-call feature).



CONS

- No minimum redemption.
- Reinvestment risk in case of auto-call.

TABLE 20: SIMULATION OF RETURNS AT MATURITY IN CASE THE PRODUCT HAS NOT BEEN AUTOMATICALLY REDEEMED IF THE HIGHEST UPWARD PERFORMANCE OF THE EURO STOXX 50 INDEX IS +15%

Change in the underlying price	-60%	-50%	-36%	-35%	-20%	0%	10%	15%
Value of redemption	40%	50%	64%	115%	115%	115%	115%	115%
Annual return (% per annum)	-12%	-10%	-7.20%	3%	3%	3%	3%	3%

## 5-YEAR "LOCK-IN" UNIT



CURRENCY	USD The product is immunised against EUR/USD currency fluctuations.	UNDERLYING	EURO STOXX 50 Index	
	TENOR			5 years
	MINIMUM REDEMPTION			None

BARRIER LEVEL	<b>60%</b> of initial level, observed at maturity.
AUTOMATIC "LOCK-IN"	At maturity, the issuer will reimburse the unit at least at the highest automatic "lock-in" level, if on any monthly "lock-in" observation date, the closing price of the underlying is at or above <b>110%</b> of the closing price of the underlying on trade date.
AUTOMATIC "LOCK-IN" LEVELS	<b>110%, 120%, and 130%</b> of closing price of the underlying on trade date.
MAXIMUM REDEMPTION	<b>140%</b> of principal.
REDEMPTION AT MATURITY	<p>On maturity date, the investor shall receive:</p> <p><b>1) 100% of the principal x [underlying_final / underlying_initial]</b> if underlying_final is strictly below 60% of underlying_initial and the underlying closed strictly below 110% on all observation dates.</p> <p><b>2) 100% of the principal</b> if underlying_final is at or above 60% and strictly below 100% of underlying_initial and the underlying closed strictly below 110% on all observation dates.</p> <p><b>3) 100% of the principal x [underlying_final / underlying_initial]</b> if underlying_final is at or above 100% and strictly below 110% of underlying_initial and the underlying closed strictly below 110% on all observation dates.</p> <p><b>Otherwise 4) The greater of:</b>  <b>A) the highest automatic "lock-in" level ; or</b>  <b>B) 100% of principal + 100% of the upward performance of the underlying between trade date and reference date (up to a maximum of 40%)</b>                      if the underlying closed at or above 110% on an observation date.</p>



PROS

- The “lock-in” mechanism captures the highest level recorded on any observation date.
- Minimum redemption of principal at maturity if on any observation date the underlying closes above 110% of its initial level.
- Barrier observed at maturity only.



CONS

- No minimum redemption.
- Potential upside is limited to +40% over the 5 years horizon (8% p.a.)

TABLE 21: SIMULATION OF RETURNS AT MATURITY IN CASE THE UNDERLYING CLOSED STRICTLY BELOW THE FIRST AUTOMATIC “LOCK-IN” LEVEL ON ALL OBSERVATION DATES

Change in the underlying price	-41%	-40%	-20%	0%	9%	-	-	-	-
Value of redemption	59%	100%	100%	100%	109%	-	-	-	-
Annual return (% per annum)	-8.20%	0%	0%	0%	1.80%	-	-	-	-

TABLE 22: SIMULATION OF RETURNS AT MATURITY IN CASE THE UNDERLYING CLOSED AT OR ABOVE THE FIRST AUTOMATIC “LOCK-IN” LEVEL ON ONE OBSERVATION DATE AND HIGHEST “LOCK-IN” LEVEL IS 110%

Change in the underlying price	-41%	-40%	-20%	0%	5%	10%	18%	-	-
Value of redemption	110%	110%	110%	110%	110%	110%	118%	-	-
Annual return (% per annum)	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	3.60%	-	-

TABLE 23: SIMULATION OF RETURNS AT MATURITY IN CASE THE UNDERLYING CLOSED AT OR ABOVE AN AUTOMATIC “LOCK-IN” LEVEL ON ONE OBSERVATION DATE AND HIGHEST “LOCK-IN” LEVEL IS 130%

Change in the underlying price	-41%	-40%	-20%	0%	5%	10%	18%	35%	50%
Value of redemption	130%	130%	130%	130%	130%	130%	130%	135%	140%
Annual return (% per annum)	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	7.00%	8.00%

### RATIONALE

- Participate in the positive performance of the underlying with conditional downside protection assuming the underlying will not reach the barrier.
- Accept capital at risk to achieve higher participation in underlying performance.

### INVESTOR'S MARKET VIEW

- Bullish outlook on the underlying with unlimited potential profit.
- The underlying is unlikely to close below the barrier.

### PRODUCT FEATURES

- Leveraged participation rate to the upside performance.
- Physical delivery or cash settlement if the underlying is below the barrier at maturity.

### FAVORABLE MARKET CONDITIONS

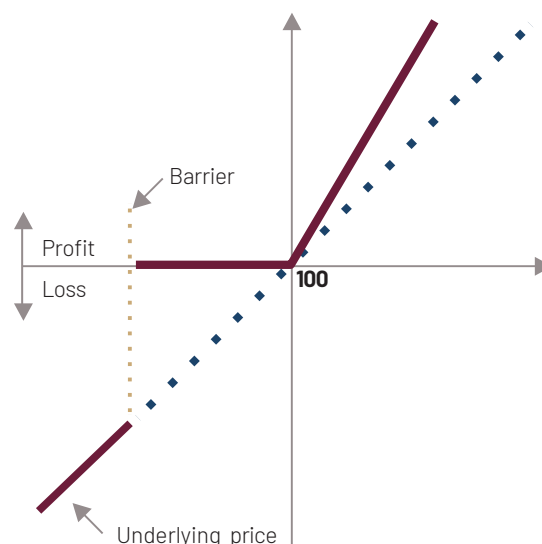
The participation rate will be higher in a context of:

- Low volatility of the underlying.
- High dividend yield of the underlying.
- High interest rate of the product's currency.

### VARIATIONS

- **Underlying:** equity, index, commodity, fund, currency, or a basket of several underlyings.
- **Duration:** usually 6 months to 5 years.
- **Currency** of the product can be different from the underlying's one (quanto product).
- **Worst-of:** the lowest performing asset will be delivered at maturity if applicable.
- **Barrier:** a barrier can be added to the product in order to offer a conditional minimum redemption of principal at maturity.
- **Cap:** a cap can be added to increase the participation rate.
- **Callable/ auto-call:** Product can be (automatically) redeemed during its lifetime.

CHART 13: PRODUCT PAYOFF AT MATURITY



## 15-MONTH TURBO "WORST-OF" UNIT



CURRENCY	USD - The product is immune to the exchange rate risk between the currency of the underlying and the USD	MINIMUM REDEMPTION	None
	TENOR	15 months	UNDERLYING

PARTICIPATION RATE	188% of the positive performance of the underlying.
BARRIER LEVEL	55% of relevant initial level of each underlying, observed at maturity.
REDEMPTION AT MATURITY	<p>On maturity date, the investor shall receive:</p> <p><b>1) 100% of principal x [1 + 188% x (lowest performing underlying_final - lowest performing underlying_initial) / lowest performing underlying_initial]</b> if lowest performing underlying_final is strictly above 100% of lowest performing underlying_initial.</p> <p><b>2) 100% of principal</b> if lowest performing underlying_final is at or above 55% and at or below 100% of lowest performing underlying_initial.</p> <p><b>Otherwise 3) 100% of principal x [lowest performing underlying_final / lowest performing underlying_initial]</b> if lowest performing underlying_final is strictly below 55% of lowest performing underlying_initial.</p>



### PROS

- Benefit from 188% of the upside performance.
- Low barrier level observed at maturity only.



### CONS

- No minimum redemption.
- The underlying is the lowest performing underlying.

TABLE24: SIMULATION OF RETURNS AT MATURITY

Change in the LPU <sup>1</sup> price	-50%	-46%	-45%	-10%	0%	10%	20%	30%
Value of redemption	50%	54%	100%	100%	100%	118.80%	137.60%	156.40%
Annual return (% per annum)	-40.00%	-36.80%	0%	0%	0%	15.04%	30.08%	45.12%

1) LPU: lowest performing underlying

## 2.5-YEAR AUTO-CALLABLE CERTIFICATE



<b>CURRENCY</b>	USD The product is immunised against USD/HKD currency fluctuations	<b>UNDERLYING</b>	HSCEI (Hang Seng China Enterprises Index)
<b>TENOR</b>	2.5 years		
<b>MINIMUM REDEMPTION</b>	None		
<b>BARRIER LEVEL</b>	70% of initial level, observed at maturity.		
<b>AUTO-CALL</b>	Auto-callable semi-annually if the underlying on observation date is at or above <b>100%</b> its initial level.		
<b>EARLY REDEMPTION LEVELS</b>	<b>107% / 114% / 121% / 128%</b> at the end of each semester.		
<b>REDEMPTION AT MATURITY</b>	<p>On maturity date, the investor shall receive:</p> <p><b>1) 100% of principal + 200% x [(underlying_final - underlying_initial) / underlying_initial]</b> if underlying_final is at or above 100% of underlying_initial.</p> <p><b>2) 100% of principal</b> if underlying_final is at or above 70% and at or below 100% of underlying_final.</p> <p><b>Otherwise 3) 100% of principal x [underlying_final / underlying_initial]</b> if underlying_final is strictly below <b>70%</b> of underlying_initial.</p>		



### PROS

- If not auto-called, the client benefits from 200% of the upward performance at maturity.
- The product can be automatically called semi-annually at predefined attractive levels.
- Barrier level observed at maturity only.



### CONS

- No minimum redemption.
- Reinvestment risk in case of auto-call.

TABLE 25: SIMULATION OF EARLY REDEMPTION

Change in the underlying (%)	-30%	-20%	0%	5%	10%	20%	30%
End of semester 1	No Call	No Call	Call at 107%	Call at 107%	Call at 107%	Call at 107%	Call at 107%
End of semester 2	No Call	No Call	Call at 114%	Call at 114%	Call at 114%	Call at 114%	Call at 114%
End of semester 3	No Call	No Call	Call at 121%	Call at 121%	Call at 121%	Call at 121%	Call at 121%
End of semester 4	No Call	No Call	Call at 128%	Call at 128%	Call at 128%	Call at 128%	Call at 128%

TABLE 26: SIMULATION OF RETURNS AT MATURITY IN CASE THE PRODUCT HAS NOT BEEN EARLY REDEEMED

Change in the underlying price (%)	-40%	-31%	-30%	-10%	0%	10%	20%
Value of redemption	60%	69%	100%	100%	100%	120%	140%
Annual return (% per annum)	-16%	-12.4%	0%	0%	0%	8%	16%

SSPA Product type code: 1330  
Internal classification: C4

## 18-MONTH TURBO UNIT WITH CAP

<b>CURRENCY</b>	USD- The product is immune to the exchange rate risk between the currency of the underlying and the USD	<b>TENOR</b>	18 months
		<b>MINIMUM REDEMPTION</b>	None
		<b>UNDERLYING</b>	EURO STOXX 50 Index

<b>CAP LEVEL</b>	<b>140%</b> of initial level, observed at maturity.
<b>PARTICIPATION RATE</b>	<b>250%</b> of the positive performance of the underlying.
<b>MAXIMUM REDEMPTION</b>	<b>200%</b> of principal.
<b>REDEMPTION AT MATURITY</b>	<p>On maturity date, the investor shall receive:</p> <p><b>1) 200% of principal</b> if underlying_final is at or above <b>140%</b> of underlying_initial.</p> <p><b>2) 100% of principal x [1 + 250% x (underlying_final - underlying_initial) / underlying_initial]</b> if underlying_final is strictly above underlying_initial and strictly below <b>140%</b> of underlying_initial.</p> <p><b>Otherwise 3) 100% of principal x [underlying_final / underlying_initial]</b> if underlying_final is strictly below <b>100%</b> of underlying_initial.</p>



PROS

- Benefit from 250% of the upside performance.
- Cap level observed at maturity only.

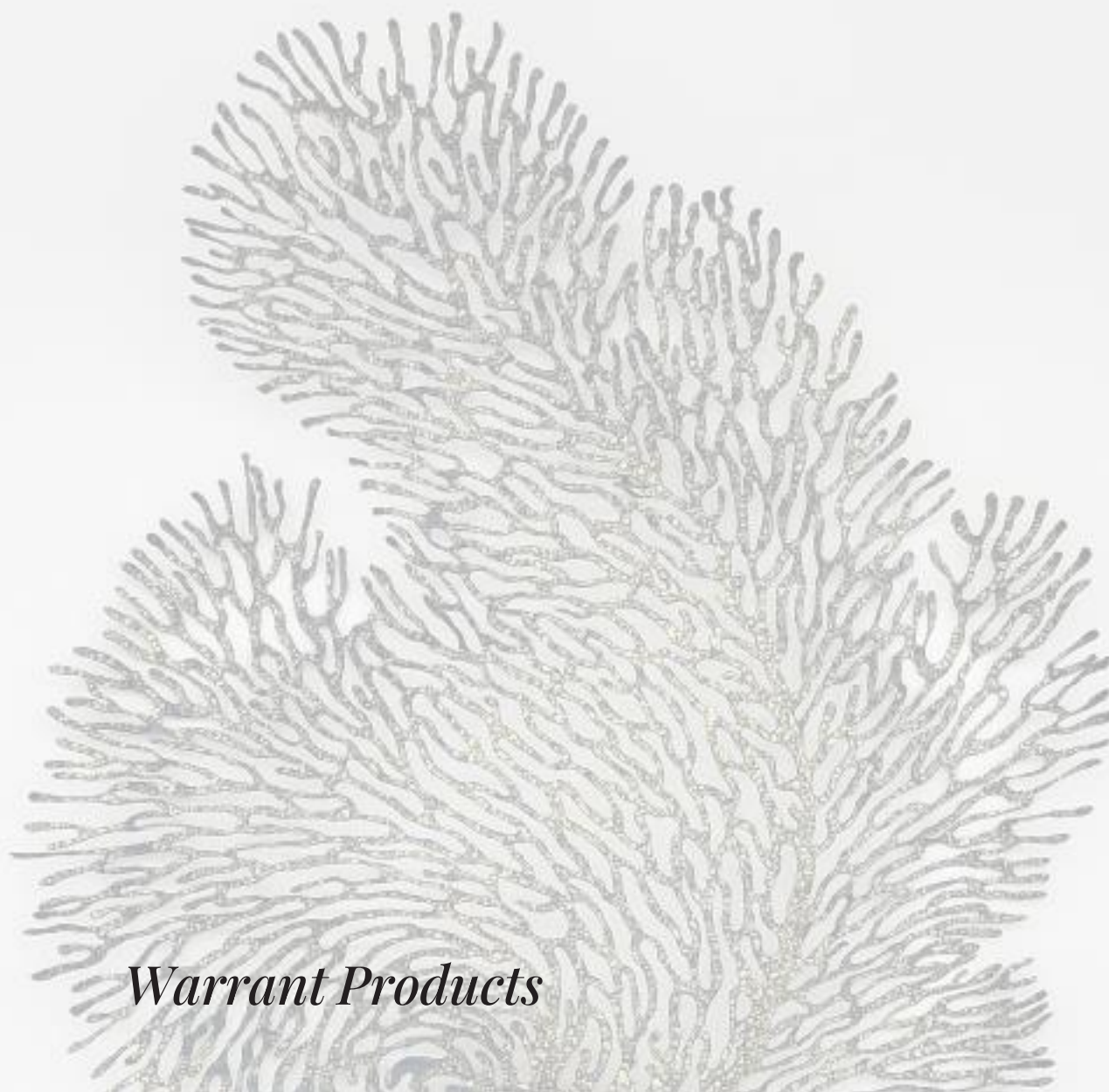


CONS

- No minimum redemption.
- The maximum redemption is capped at 200%.

TABLE 27: SIMULATION OF REDEMPTION AT MATURITY

Change in the underlying price	-50%	-40%	-10%	0%	10%	30%	40%	50%
Value of redemption	50%	60%	90%	100%	125%	175%	200%	200%
Annual return (% per annum)	-33.33%	-26.67%	-6.67%	0%	16.67%	50%	66.67%	66.67%



## *Warrant Products*

Leverage products are suitable for volatility tolerant investors who want to speculate or hedge positions.

A warrant is a securitized option strategy. Its price movements tend to exaggerate the underlying price variations (leverage effect).

The investor bears the default risk of the issuer.



## CONDITIONAL MINIMUM REDEMPTION OF PRINCIPAL AT MATURITY

### RATIONALE

- Small investment generating a leveraged performance relative to the underlying.
- High risk of total loss (limited to initial investment).
- Suitable for speculation or hedging.
- Daily loss of time value.

### INVESTOR'S MARKET VIEW

- Warrant call: bullish outlook on the underlying with unlimited potential profit.
- Warrant put: bearish outlook on the underlying with unlimited potential profit.

### PRODUCT FEATURES

- Warrant call: entitles the holder to buy the underlying at a fixed price until the expiry date.
- Warrant put: entitles the holder to sell the underlying at a fixed price until the expiry date.

### FAVORABLE MARKET CONDITIONS

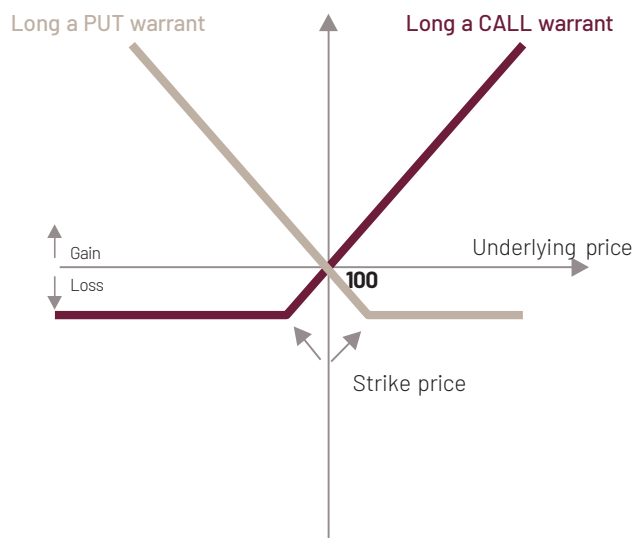
The premium will be lower in a context of:

- Low volatility of the underlying.
- High dividend yield (call) / low dividend yield (put) of the underlying.

### VARIATIONS

- Underlying: equity, index, commodity, funds, currency, or a basket of several underlyings.
- Duration: usually 1 month to 5 years.
- Exotic features: "up and out", "down and in", "best of", "worst-of", "lookback", "restrickable".

CHART 14: PRODUCT PAYOFF AT MATURITY



## 6-MONTH CALL WARRANT



<b>CURRENCY</b>	EUR	<b>UNDERLYING</b>	CAC 40 Index
<b>TENOR</b>	6 months		

<b>PREMIUM</b>	1.42%
<b>INITIAL LEVEL</b>	5'643.07
<b>STRIKE LEVEL</b>	6'000 (106.32% of the initial level).
<b>STRATEGY</b>	Against the payment of a premium, this product allows the investor to profit at maturity from 100% of the upward performance of the CAC 40 Index, IF the underlying index fixes strictly above 106.32% (strike level) of its initial level at maturity. Should the underlying index close at or below its strike level, the investor will receive zero at maturity.
<b>REDEMPTION AT MATURITY</b>	On maturity date, the investor shall receive: Nominal amount* max [0; (underlying_final - underlying_strike level) / underlying_initial]).

### PROS

- This product allows the investor to receive a positive return, if on reference date the underlying index fixes strictly above the strike level.
- The cost of the strategy is the premium.

### CONS

- With this product, the investor will lose the whole premium paid in case the underlying index fixes on reference date at or below the strike level.

TABLE 28: SIMULATION OF RETURNS AT MATURITY

Change in the underlying price	-20%	-10%	0%	6.32%	7.74%	10%	20%	30%
Payment at maturity (flat in % of principal)	0%	0%	0%	0%	1.42%	3.68%	13.68%	23.68%
Net return at maturity (flat in % of principal)	-1.42%	-1.42%	-1.42%	-1.42%	0%	2.26%	12.26%	22.26%

## 6-MONTH PUT SPREAD WARRANT

CURRENCY	USD	UNDERLYING	S&P 500 Index
TENOR	6 months		

PREMIUM	2%
INITIAL LEVEL	3'287
HIGHER STRIKE LEVEL	3'122.65 (95% of the initial level)
LOWER STRIKE LEVEL	2'793.95 (85% of the initial level).
MAXIMUM RETURN	10% (higher strike level – lower strike level).
STRATEGY	Against the payment of a premium, this product allows the investor to profit at maturity from 100% of the downward performance of the S&P 500 Index, up to a maximum downward performance of -15% (lower strike level) (maximum return of 10%), IF the underlying index fixes strictly below 95% (higher strike level) of its initial level at maturity. Should the underlying index close at or above its higher strike level, the investor will receive zero at maturity.
REDEMPTION AT MATURITY	On maturity date, the investor shall receive: Nominal amount min (10%; max [0; (underlying_higher strike level- underlying_final)/ underlying_initial]).

### PROS

- This product allows the investor to receive a positive return, if on reference date the underlying index fixes strictly below the higher strike level.
- The cost of the strategy is the premium.

### CONS

- With this product, the investor will lose the whole premium paid in case the underlying index fixes on reference date at or above the higher strike level.

TABLE 29: SIMULATION OF RETURNS AT MATURITY

Change in the underlying price	-20%	-15%	-10%	-7%	-5%	0%	10%	20%
Payment at maturity (flat in % of principal)	10%	10%	5%	2%	0%	0%	0%	0%
Net return at maturity (flat in % of principal)	8%	8%	3%	0%	-2%	-2%	-2%	-2%



# SPECIFIC OTC OPTION STRATEGIES



## *Accumulators & Reverse Accumulators*

Accumulator or reverse accumulator strategies are complex derivatives and are suitable for investors with a high risk appetite.

Accumulator or reverse accumulator allow the investor to purchase or to sell a fixed number of shares at a pre-determined price subject to a knockout event that terminates the contract immediately.

Accumulator or reverse accumulator are mostly leveraged strategies, this enables investors to enjoy a more attractive strike price, but the downside risk is higher.

### RATIONALE

The strategy allows the client to buy shares progressively at a discounted price, i.e. over performing a direct equity investment in moderately bearish to bullish markets.

### OBJECTIVE

To allow the client to buy shares at a discount to the current market price at inception over a period through a zero-cost strategy (and so to allow to gradually build a long position in a specific underlying).

### INVESTOR'S MARKET VIEW

Expect moderately bearish to bullish underlying.

### OPTION STRUCTURE

- At inception, the client does not pay any premium.
- Every day, the client buys a fixed number of shares at discount from the initial price.
- The accumulated shares are delivered at the end of a period (e.g. a month).

- If on one day the share price close above the knock-out level:

- The buying program stops,
- The shares accumulated until then are delivered at the end of the defined period.

### MAIN CHARACTERISTICS

- **Strike level:** it is the predefined price level at which the underlying shares will be bought.
- **Leverage:** if the underlying share close below the strike level, the investor accumulates a multiple of the daily amount (usually x2).
- **Knock-out level:** if the underlying share closes above this level, the accumulation stops.
- **Guaranteed accumulation period:** (optional) protects investors from an early knock-out if the underlying share appreciates too quickly.

## 12-MONTH ACCUMULATOR



<b>BUYER</b>	Client	<b>UNDERLYING</b>	Citigroup Inc
<b>SELLER</b>	CA Indosuez (Switzerland) SA's entity holding the buyer's account relationship.		
<b>CURRENCY</b>	USD		
<b>TENOR</b>	1 year (257 business days)		
<b>KNOCK-OUT LEVEL</b>	105% of initial spot level.		
<b>STRIKE LEVEL</b>	87.65% of initial spot level.		
<b>NOMINAL SIZE</b>	Client buys 75 shares per day (19'275 shares in total).		
<b>SIZE WITH LEVERAGE OF 2X</b>	Client buys 150 shares per day (38'550 shares maximum in total).		
<b>PURCHASE MECHANISM</b>	<p>1) for every day that <b>closing is at or above the strike level and strictly below the knock-out level</b>, client will buy <b>75 shares</b> at the <b>strike level</b>.</p> <p>2) for every day that <b>closing is strictly below the strike level</b>, client will buy <b>150 shares</b> at the <b>strike level</b>.</p> <p>3) if at one day <b>closing is at or above the knock-out level</b>, client will stop buying shares and the accumulator strategy ends.</p>		
<b>SETTLEMENT</b>	Monthly (client receives shares and pays cash).		



### PROS

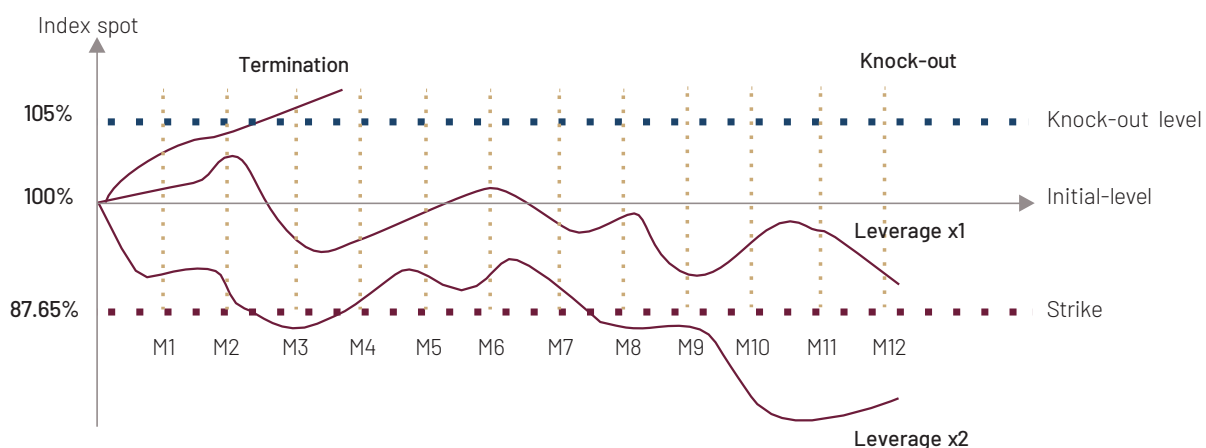
- Buy shares with a discount from the initial spot price.
- Less cash consuming than delta-one strategy.



### CONS

- The strategy can stop early.
- For each day the spot closes below the strike level, the client will have to buy twice the daily nominal size at the strike level (ie at a less favorable level than the existing market conditions).

CHART 15



### RATIONALE

- The client is selling the shares at a premium price compared to current market price. Attractive for clients who hold a large position on a stock, and are ready to sell those shares at a pre-determined level.

### OBJECTIVE

- To allow the client to sell shares at a premium to the current market price at inception over a period through a zero-cost strategy (and so to allow to gradually sell a long position hold on a specific underlying).

### INVESTOR'S MARKET VIEW

- Expect a moderately bullish or bearish underlying.

### OPTION STRUCTURE

- At inception, the client does not pay any premium.
- Every day, the client sells a fixed number of shares at a premium compared to the initial price.
- The decumulated shares are sold at the end of a period (e.g. a month).

- If on one day the underlying share price close below the knock-out level:

- The selling program stops,
- The shares decumulated until then are delivered at the end of the defined period.

### MAIN CHARACTERISTICS

- **Strike level:** it is the predefined level at which the underlying shares will be sold.
- **Leverage:** if the underlying share closes above the strike level, the investor decumulates a multiple of the daily amount (usually x2).
- **Knock-out level:** if the underlying share closes below this level the decumulation stops.
- **Guaranteed decumulation period:** (optional) protects investors from an early knock-out if the underlying depreciates too quickly.



## 12-MONTH REVERSE ACCUMULATOR



SELLER	Client	UNDERLYING	Carrefour SA
BUYER	CA Indosuez (Switzerland) SA's entity holding the Buyer's account relationship.		
CURRENCY	EUR		
TENOR	1 year (257 business days)		
KNOCK-OUT LEVEL	95% of initial spot level.		
STRIKE LEVEL	112.40% of initial spot level.		
NOMINAL SIZE	Client sells 874 shares per day (224'618 shares in total).		
SIZE WITH LEVERAGE OF 2X	Client sells 1'748 shares per day (449'236 shares maximum in total).		
SALE MECHANISM	<p>1) For every day that <b>closing is at or lower than the strike level and strictly above the knock-out level</b>, client will sell <b>874 shares</b> at the <b>strike level</b>.</p> <p>2) For every day that <b>closing is strictly above the strike level</b>, client will sell <b>1'748 shares</b> at the <b>strike level</b>.</p> <p>3) If at one day <b>closing is at or below the knock-out level</b>, client will stop selling shares and the reverse accumulator strategy ends.</p>		
SETTLEMENT	Monthly (client sells shares and receives cash).		



## PROS

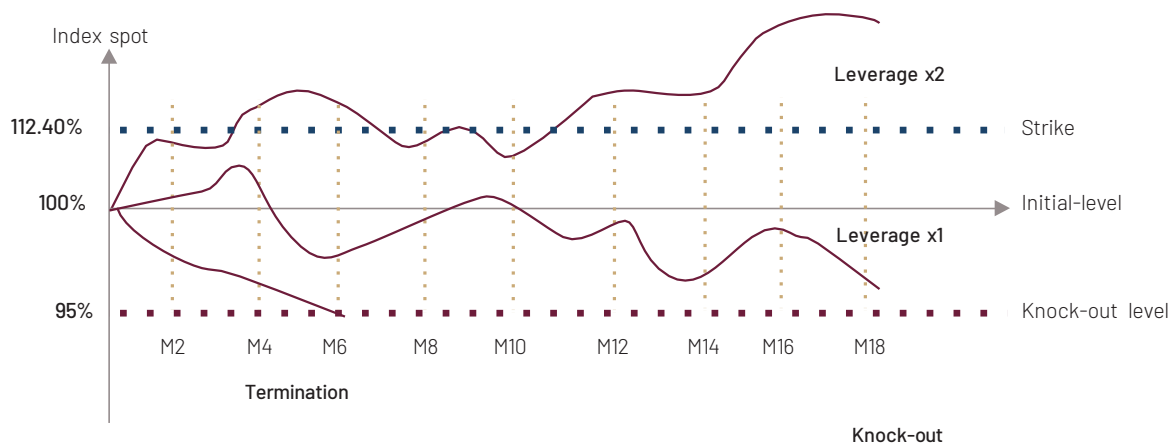
- Sell shares at a premium from the initial spot level.



## CONS

- The strategy can stop early.
- For each day the spot closes above the strike level, the client will have to sell twice the daily nominal size at the strike level (ie at a less favorable level than the existing market conditions).

CHART 16



## • Glossary

### **American Depository Receipt (ADR)**

A negotiable certificate issued by a U.S. bank representing a specific number of shares of a foreign stock traded on a U.S. stock exchange. ADRs make it easier for Americans to invest in foreign companies, due to the widespread availability of dollar-denominated price information, lower transaction costs, and timely dividend distributions.

### **American style option**

An option contract that can be exercised at any time between the date of purchase and the expiration date. Most exchange-traded options are American style.

### **Autocallable**

Automatically redeemed prior to maturity by the issuer if a certain condition is verified for the underlying on any observation date.

### **At-The-Money (ATM)**

An option is at-the-money if the strike price of the option is equal to the market price of the underlying asset.

### **Average option or asian option**

A path dependent option which calculates the average of the path traversed by the asset, arithmetic or weighted. The payoff therefore is the difference between the average price of the underlying asset, over the life of the option, and the exercise price of the option. The premium of such option is much cheaper than those of a vanilla one, and the return to expect from that type of option is therefore lower. The premium of such option is much cheaper than those of a vanilla one, and the return to expect from that type of option is therefore lower.

### **Ask price**

The price at which a seller is offering to sell an underlying asset.

### **Back-testing**

The testing of a strategy based on historical data to see if the results are consistent.

### **Backwardation**

The situation when the cash or spot price of a commodity is greater than its forward price. A backwardation occurs when there exists insufficient supply to satisfy nearby demand in a commodity market. The size of the backwardation is determined by differences between supply/demand factors in the nearby positions compared with the same factors on the forward position.

### **Basket options**

This type of option allows the buyer to combine two or more underlying assets and to assign a weight to each asset.

### **Barrier options**

These are options that have an embedded price level (barrier) which, if reached, will either transform the option into a vanilla option or eliminate the existence of a vanilla option. These are referred to as Knock-In options and knock-out options which are further explained below. The price of a barrier option is lower than a vanilla option with the same strike.

### **Bear**

An investor who acts on the belief that market prices are falling or are expected to fall.

### **Bermuda options**

This is a type of option that is exercisable only on predetermined dates, such as every month, or every quarter. They are neither american style nor european style, hence the term, "bermuda".

### **Best of option**

A best of option pays out on the best performing of a number of underlying assets over an agreed period of time. For instance, if a basket contains asset A, asset B and asset C and asset B gains in value by the larger amount during the products term, then the payout would be based on the increase in value of asset B.

### **Bid price**

The price at which a buyer is willing to buy an underlying asset.

**Binary option**

Please see Digital Option.

**Black-scholes pricing model**

The original closed-form solution to option pricing developed by Fischer Black and Myron Scholes in 1973. In its simplest form it offers a solution to pricing European-style options on assets with interim cash pay-outs over the life of the option. The model calculates the theoretical, or fair value for the option by constructing an instantaneously riskless hedge: that is, one whose performance is the mirror image of the option pay-out. The portfolio of option and hedge can then be assumed to earn the risk-free rate of return. Central to the model is the assumption that market returns are normally distributed (i.e.: have lognormal prices), that there are no transaction costs, that volatility and interest rates remain constant throughout the life of the option, and that the market follows a diffusion process. The model has five major inputs: the risk-free interest rate, the option's strike price, the price of the underlying, the option's maturity, and the volatility implied. Since the first four are usually determined by the market, options traders tend to trade the implied volatility of the option.

**Bull**

An investor who believes that market prices are rising or are expected to rise.

**Callable**

Able to be redeemed prior to maturity. The term usually applies to bonds and convertible securities. The issuer of a callable security has to state at his discretion the conditions under which the security may be called at the time of issue. For most securities, there is a certain initial time period in which the security cannot be called. A bond will usually be called when market interest rates fall below the yield being paid on the bond (bonds are usually called when the price rises to a certain point).

**Call option**

An option contract which gives the holder the right, but not the obligation, to buy a specified amount of an underlying asset at a specified price (strike price) within a specified time in exchange of paying a premium.

**Cap**

The highest level of return that can be paid on a specific security, or the highest interest rate that can be paid on a floating-rate bond in a specified period of time.

**Capital gain**

The profit realized when a capital asset is sold for a higher price than the purchase price.

**Capital loss**

The loss incurred when a capital asset is sold for a lower price than the purchase price.

**Chooser options**

Allows the buyer to determine the characteristics of an option during a predetermined period of time. As an example, during a 30-day period, the buyer can determine if the option will be a put or call, what the strike price will be, and at times even set the expiry date. After the 30-day period has elapsed, the seller must enter into an option agreement with the buyer according to the terms chosen by him. This type of option is generally quite expensive because of the flexibility afforded to the buyer.

**Cliquet option**

A type of option in which the strike price periodically resets before the final expiration date is reached. When the resetting date is reached, the option will expire worthless if the current price of the underlying is below the strike price, and the strike price will reset to this lower underlying price. If the resetting date is reached and the underlying is trading higher than the strike price, the investor will earn the difference and the strike price will reset to the higher underlying price.

**Closing price**

The price of the last transaction for a given security at the end of a given trading session.

**Commodity**

Any bulk good traded on an authorized exchange. The types of commodities include energy, metals, agricultural commodities.

**Compound options**

This is simply an option on an existing option.

**Constant Maturity Swap (CMS)**

Constant Maturity Swap rates, as SOFR rates, are fixed on a daily basis and represent the cost of funding for a maturity from 1 year onwards. A swap is an exchange of a fixed interest rate for a floating interest rate between two counterparts over a fixed time period. Interest rate swaps are the market reference for mid to long term interest rates (1 to 30 years). A 10-year Constant Maturity Swap (CMS) is a contract that allows to reset, semi-annually in this case, the fixed interest rate based on the relevant 10 years interest swap rate, thus providing a floating rate linked to 10 years yield.

**Constant Proportion Portfolio Insurance (CPPI)**

A fund management technique that aims to provide maximum exposure to risky assets while still protecting investors' capital. The technique requires the manager to dynamically rebalance the portfolio between risky assets (such as equities or funds) and safe assets (such as bonds) according to a quantitative model. The level of risky assets is managed such that at all times, in the event of a market crash, the remaining NAV of the fund is still sufficient to meet the stated protection level at maturity. Generally, the proportion of risky assets in the fund is increased when these perform well and decreased when these perform poorly. The minimum redemption level may be fixed, or ratchet up (reset) according to a certain percentage of the fund NAV achieved during the fund term.

**Contango**

The situation when a commodity's future price is higher than its spot price. Whereas financial futures and forwards are invariably priced off the cost of carry of the underlying, the forward or spot prices of commodities are heavily influenced by supply and demand. Contango arises where there is sufficient supply in the spot market or where future supply is thought to be tight.

**Correlation** is a measure of the degree to which changes in two variables are related. It is normally expressed as a coefficient between plus one (+1), which means variables are perfectly correlated (in that they move in the same direction to the same degree) and minus one (-1), which means they are perfectly negatively correlated (in that they move in opposite directions to the same degree).

**Covered call**

A short call option position against a long position in an underlying asset.

**Credit Default Swap (CDS)**

A credit derivative contract between two counterparties, whereby the "buyer" or "fixed rate payer" pays periodic payments to the "seller" or "floating rate payer" in exchange for the right to a payoff if there is a default or "credit event" in respect of a third party or "reference entity". If a credit event occurs, the typical contract either settles by delivery by the buyer to the seller of a (usually defaulted) debt obligation of the reference entity against a payment by the seller of the par value ("physical settlement") or the seller pays the buyer the difference between the par value and the market price of a specified debt obligation, typically determined in an auction ("cash settlement").

**Credit risk**

Also known as default risk. In broad terms, the risk that a loss will be incurred if a counterparty to a (derivatives) transaction does not fulfill its financial obligations in a timely manner. The term is sometimes loosely used as shorthand for the likelihood or probability of default, irrespective of the value of any position exposed to this risk. More precisely, credit risk is the risk of financial loss arising out of holding a particular contract or portfolio. In this sense, it is a function of three variables:

- the value of the position exposed to default (the credit or credit risk exposure);
- the proportion of the value that would be recovered in the event of a default;
- the likelihood of a default occurring.

**Credit spread**

A credit spread is the difference in yield between two debt issues of similar maturity and duration. The credit spread is often quoted as a spread to a benchmark such as SOFR, or alternatively as a spread to a highly rated reference security such as a government security. The credit spread is often used as a measure of relative creditworthiness, with reduction in the credit spread reflecting an improvement in the borrower's perceived creditworthiness.

**Deep-in-the-money**

A deep-in-the-money call option has a strike price well below the current price of the underlying asset. A deep-in-the-money put option has a strike price well above the current price of the underlying asset. Such options have intrinsic value.

**Delta**

The variation of the option price for every move in the underlying asset. Delta is often interpreted as the probability that the option will be in-the-money by expiration.

**Delta neutral**

A position arranged by selecting a calculated ratio of short and long positions that balance out to an overall position delta of zero.

**Derivative**

Financial instruments based on the market value of an underlying asset.

**Digital option or binary option**

These are options that can be structured as a "one touch" barrier, "double no touch" barrier and "all or nothing" call/puts. The "one touch" digital provides an immediate payoff if the currency hits your selected price barrier chosen at outset. The "double no touch" provides a payoff upon expiration if the currency does not touch both the upper and lower price barriers selected at the outset. The call/put "all or nothing" digital option provides a payoff upon expiration if your option finishes in the money. It is referred to as "all or nothing" because even if your option finishes in the money by 1 pip, you receive the full payoff. Digital options are usually settled in cash.

**Discount factor**

Coefficient used to compute the present value of future cash flows.

**Dividend**

A sum of money paid out to a shareholder from the stock's profits.

**Downside risk**

The potential risk one takes if prices decrease in directional trading.

**Duration**

Duration is the average life of the present values of all future cash flows from a bond. For a given maturity, the higher the coupon, the more it (rather than the redemption payment) contributes to yield. So the higher the coupon, the shorter the duration. Although the duration of a bond increases monotonically as the maturity increases, it is non-linear (except for zero-coupon bonds), because the coupon payments are increasingly important to the yield. Duration usually refers to what technically should be described as modified duration. This measures the effect on a bond's price of a unit change in yield. So if a bond has a duration of two, a yield change of 1% will produce a price change of 2% in the other direction. The higher the modified duration, the more sensitive the bond is to interest rate changes.

**Euro Medium Term Note (EMTN)**

A Medium Term Note (MTN) is a debt instrument that usually matures (is paid back) in 5-10 years, but the term may be as short as one year or as long as 50 years. They are normally issued on a floating basis such as Euribor +/- basis points. When they are issued in a Euro-currency (say, Eurodollars or Euroyens), they are called "Euro Medium Term Notes".

**European style option**

An option contract that can only be exercised on the expiration date.

**Exchange**

An area where an asset, option, future, stock or derivative is bought and sold.

**Exercise**

the action taken by the holder of an option to buy or sell the underlying asset or more generally to exercise some rights within an option. Also referred to the Strike price.

**Exercise price**

Please see Strike Price.

**Exotic option**

A category of options which includes complicated components and complex payoffs. Its payoff or other key values often depend on outside factors

which vary over time, such as exchange rate. Because of their complexity, exotic options are often traded over the counter (OTC) rather than through an exchange. Asian-style options are one type of exotic options. Exotic option is the opposite of plain vanilla option.

**Expiration (date)**

The date and time after which an option may no longer be exercised.

**Extrinsic value (see Time value)**

The price of an option less its intrinsic value. An out-of-the money option is worth nothing but extrinsic or time value.

**Floor**

A contract whereby the seller agrees to pay to the purchaser, in return for an upfront premium, the difference between a reference rate and an agreed strike rate should the strike rate exceed the reference rate. Interest rate floors are effectively a string of interest rate guarantees. In a more common language, a floor is the lowest level that can be paid on a specific security.

**Fair value**

The theoretical value of what an option should be worth usually generated by an option pricing model such as the Black-Scholes option pricing model.

**Front month**

The first expiration month in a series of months (for instance for future contracts).

**Forward (currency)**

An agreement to exchange a specified amount of one currency for another at a future date at a certain rate. The exchange of currencies is priced so as to allow no risk-free arbitrage. In other words, pricing is not a market estimate of the spot rate at that date, but is made according to the two currencies' respective interest rates.

**Forward price**

As with a futures contract, the first step in pricing a forward is to add the spot price to the cost of carry (interest forgone, convenience yield, storage costs and interest/dividend received on the underlying). However, unlike a futures contract, the price may

also include a premium for counterparty credit risk, and there is not daily marking-to-market to minimize default risk. If there is no allowance for these credit risks, then the forward price will equal the futures price.

**Forward rate curve**

The yield curve, as of a future (or forward) date, constructed using currently prevailing rates on instruments settling in the future; commonly used to price many interest rate derivative instruments.

**Future or forward contract**

A future is a contract to buy or sell a standard quantity of a given instrument, at an agreed price, on a given date. A future is similar to a forward contract and differs from an option in that both parties are obliged to abide by the transaction. Futures are traded on a range of underlying instruments including commodities, bonds, currencies and stock indexes. The most important difference between futures and forwards is that futures are almost always traded on an exchange and cleared by a clearing house, whereas forwards are over-the-counter instruments. Furthermore, futures, unlike forwards, have standard delivery dates and trading units. Most futures contracts expire on a quarterly basis. Contracts specify either physical delivery of the underlying instrument or cash settlement at expiry. Cash settlement involves the counterparty paying or being paid the difference between the price struck at the outset and the expiry price of the contract.

**Gamma**

A measurement of how fast delta changes, given a unit change in the underlying asset. When the option is deep in or out the money, gamma is small. When the option is near the money, the gamma is largest.

**Go long**

To buy securities, options or futures.

**Go short**

To sell securities, options or futures.

**Guarantor**

One who guarantees an obligation and has a legal duty to fulfill it.

**Hedge**

Reducing the risk of loss by taking a position through options or futures opposite to the current position they hold in the market.

**Historic volatility**

A measurement of how much a contract's price has fluctuated over a period of time in the past; usually calculated by taking a standard deviation of daily price changes over a time period.

**Hybrid securities or products**

A security or a structured product which contains multiple components, most frequently debt and equity. One common example of a hybrid security is a convertible bond, which is a hybrid security because it has features common to a bond, but also is dependent upon the performance of the stock for which it can be exchanged.

**Index options**

Call options and put options on indexes of stocks are designed to reflect and fluctuate with market conditions. Index options allow investors to trade in a specific market or industry group without having to buy all the stocks individually.

**Interest rate**

The charge for the privilege of borrowing money, usually expressed as an annual percentage rate.

**In-The-Money (ITM)**

If you were to exercise an option and it would generate a profit at the time, it is known to be in-the-money.

**In-The-Money option**

A call option is in-the-money if the strike price is less than the market price of the underlying. A put option is in-the-money if the strike price is greater than the market price of the underlying. It's an option having intrinsic value.

**Intrinsic value**

The amount by which an option is in-the-money. Out-of-the-money options have no intrinsic value. ITM Calls intrinsic value is equal to the underlying price minus the strike price. ITM Puts intrinsic value is equal to the strike price minus the underlying price.

**Implied volatility**

The value of volatility embedded in an option price. All things being equal, higher implied volatility will lead to higher vanilla option prices and vice versa. The effect of changes in volatility on an option's price is known as vega. If an option's premium is known, its implied volatility can be derived by inputting all the known factors into an option pricing model (the current price of the underlying, interest rates, the time to maturity and the strike price). The model will then calculate the volatility assumed in the option price, which will be the market's best estimate of the future volatility of the underlying.

**Knock-In options (KI)**

A type of option that has value only if a certain price level is reached. There are two kinds of knock-in options, Up-and-In options and Down-and-In options. With Knock-In options, the buyer starts out without a vanilla option:

- Up-and-In options: if the buyer has selected an upper price barrier, and the underlying hits that level, the option transforms itself into a vanilla option with a maturity date and strike price agreed upon at the outset.
- Down-and-In options are the same as Up-and-In options, except the underlying has to reach a lower barrier. Upon hitting the chosen lower price level, it creates a vanilla option.

**Knock-out options (KO)**

These options are the reverse of knock-in options. With knock-outs, the buyer begins with a vanilla option, however, if the predetermined price barrier is hit, the vanilla option is cancelled and the seller has no further obligation. As in the knock-in option, there are two kinds:

- Up-and-Out options: if the option hits the upper barrier, the option is cancelled and the buyer loses the premium paid.
- Down-and-Out options: if the option hits the lower price barrier, the option is cancelled.

**Ladder options**

This option is similar to the cliquet option, except that gains are locked in when the asset hits predefined price levels. Once hit, the gain is guaranteed even if the underlying falls back. If other levels are hit, those returns will then be guaranteed at each level.

**Leg**

One side of a spread or of a transaction.

**LIBOR / SOFR**

London Inter-Bank offered rate is the interest rate prime banks charge each other for short-term money, up to a 12-month term. The Secured Overnight Financing Rate (SOFR) is to replace LIBOR as a benchmark interest rate for dollar-denominated derivatives and loans. Short-term USD LIBOR are discontinued after June 30, 2023.

**Long**

the term used to describe the buying of an underlying (security, contract, commodity, or option).

**Lookback option**

Call or put option whose strike price is not determined until the option is exercised. At the time of exercise, the holder can exercise the option at any underlying price that has occurred during the option's life. In the case of a call, the buyer will choose the lowest price, and in the case of a put, the buyer will choose the highest price. The premium on such options tends to be high since it gives the buyer great flexibility, and the writer has to take more risk.

**Margin call**

A call from a financial institution signalling the need for a client to deposit additional money into a margin account to maintain a trade or a leveraged portfolio in position.

**Mark-to-market**

The accounting act of recording the price or value of a security, portfolio or account to reflect its current market value rather than its book value.

**Momentum**

When a market continues in the same direction for a certain time frame, the market is said to have momentum.

**Monte carlo simulation**

A method of determining the value of a derivative by simulating the evolution of the underlying variable(s) many times over. The discounted average outcome of the simulation gives an approximation of the derivative's value. This method may be used to value complex derivatives, particularly path-dependent

options, for which closed-form solutions have not been or cannot be found. Monte Carlo simulation can also be used to estimate the value-at-risk (VaR) of a portfolio. In this case, a simulation of many correlated market movements is generated for the markets to which the portfolio is exposed, and the positions in the portfolio revalued repeatedly in accordance with the simulated scenarios. The result of this calculation will be a probability distribution of portfolio gains and losses from which the VaR can be determined. The principal difficulty with Monte Carlo VaR analysis is that it can be very computationally intensive.

**Naked option**

An option written (sold) without an underlying hedge position.

**Nearby futures contract**

When several futures contracts are considered, the contract with the closest settlement date is called the nearby futures contract. The next (or the "next out") futures contract is the one that settles just after the nearby futures contract. The contract farthest away in time from settlement is called the most distant futures contract.

**Note**

A short-term debt security, usually maturing in five years or less.

**Option**

A contract that represents the right, but not the obligation, to buy or sell a specified amount of an underlying asset (stock, bond, futures contract, etc.) at a specified price within a specified time.

**Option holder**

The buyer of either a call or put option.

**Option writer**

The seller of either a call or put option.

**Out-of-The-Money (OTM)**

An option whose exercise price has no intrinsic value.

**Out-of-The-Money option (OTM)**

A call option is out-of-the-money if its exercise or strike price is above the current market price of the underlying asset. A put option is out-of-the-money



if its exercise or strike price is below the current market price of the underlying asset. It's an option without any Intrinsic value.

#### **OTC derivative**

Over-the-counter derivatives are privately negotiated contracts that are traded directly between two parties, rather than on a centralized exchange. Some of the most common derivatives to be traded in the OTC market include swaps, forward rate agreements, and exotic options. The self-regulatory trade organization that oversees the over-the-counter derivatives market is the International Swaps and Derivatives Association (ISDA). Structured products include OTC derivatives.

#### **OTC options**

The OTC market and the OTC options market in particular provide great flexibility to users. In the OTC exotic option market, the participant may choose and structure the contract as desired. For hedgers, this is particularly attractive since the standardized exchange options do not offer much flexibility resulting in imperfect costly hedges. For the speculator too, there are advantages since one may take a position that exactly reflects market opinion, resulting in reduced cost.

- Payoff or payout (chart): a chart of the profits and losses for a particular options strategy or a structured product. The diagram is plot of expected profit or loss against the price of the underlying asset.
- Par: the stated or "nominal" value of a bond (100%) that is paid to the bondholder at maturity.

#### **Path dependant option**

A path-dependent option has a pay-off directly related to movements in the price of the underlying during the option's life. By contrast, the pay-off of a standard European-style option is determined solely by the price of the underlying at expiration date.

#### **Premium**

This is the price of an option, i.e. the amount of cash that an option buyer pays to an option seller.

#### **Principal**

The amount borrowed (such as the face value of a

debt security), or the part of the amount borrowed which remains unpaid (excluding interest).

#### **Put option**

An option contract giving the owner the right, but not the obligation, to sell a specified amount of an underlying asset at a specified price (strike price) within a specified time. The put option buyer hopes the price of the shares will drop by a specific date while the put option seller (or writer) hopes that the price of the shares will rise, remain stable, or drop by an amount less than their profit on the premium by the specified date.

#### **Quanto options**

Option in one currency, but which pays the performance of an asset in another currency. Quanto options are usually used in cases when investors are confident of the underlying asset's performance, but are not confident of the performance of the currency in which the underlying is denominated. A product with a quanto-feature will eliminate the currency risk. The price of this quanto-feature depends from the interest rate differential and the covariance between the underlying asset and the currency pair. In case the currency of the underlying asset pays lower interest rates than the product's currency, the pricing of such product will be improved (e.g.: higher participation rate, higher cap level...). If the covariance is negative (meaning returns of underlying asset and currency pair move inversely), it will have also a positive influence on the product pricing.

#### **Rebate**

A barrier option that offers a predetermined rebate, should the option be "knocked out".

#### **Re-strikable option**

A restrikable option is an option whose strike is redefined at the beginning of each period (relative to the underlying level).

#### **Return**

The income profit or loss made on an investment.

#### **Reverse convertible**

These are just like convertible bonds. The main difference is that rather than buying a call option

on a stock, the investor sells a put on the stock or index. The investor receives higher than normal coupons, but may lose some principal if the put ends up in the money.

**Rho**

The rate at which the price of a derivative changes relative to a change in the risk-free rate of interest.

**Risk-reward ratio**

A ratio used by many investors to compare the expected returns of an investment to the amount of risk undertaken to capture these returns. This ratio is calculated mathematically by dividing the amount of profit the investor expects to have made when the position is closed (i.e. the reward) by the amount he or she stands to lose if price moves in the unexpected direction (i.e. the risk).

**Risk**

the potential financial loss inherent in an investment.

**Risk profile**

A graphic determination of risk on a trade. This would include the profit and loss of a trade at any given point for any given time frame.

**Senior debt**

A bond or structured product (or other form of debt) that takes priority over other debt securities sold by the issuer in case of a bankruptcy proceeding.

**Short premium**

Expectation that a move of the underlying in either direction will result in a theoretical decrease of the value of an option.

**Short selling**

The sale of shares or futures that a seller does not currently own. The seller borrows them (usually from a broker) and sells them with the intent to replace what s/he has sold through later repurchase in the market at a lower price.

**Speculator**

A trader who hopes to profit from a directional move in the underlying instrument. The speculator has in general no interest in making or taking delivery.

**Spike**

A sharp price rise in one or two days indicating the time for an immediate sale.

**Spread**

The difference between the bid and the ask prices of a security. A trading strategy in which a trader offsets the purchase of one trading instrument against another.

**Stock**

A share of a company's stock translates into ownership of part the company.

**Stock exchange or stock market**

Organized marketplace where buyers and sellers are brought together to buy and sell stocks.

**Straddle**

A position consisting of a long (short) call and a long (short) put, where both options have the same strike price and expiration date.

**Strangle**

A position consisting of a long (short) call and a long (short) put where both options have the same underlying, the same expiration date, but different strike prices. Most strangles involve OTM options.

**Strike price or exercise price**

A price at which the underlying of a call or put option can be purchased (call) or sold (put) over the specified period.

**Swap**

Agreement to exchange interest payments in a fixed rate obligation for interest payments in a floating rate obligation (an interest rate swap), or one currency for another (a currency swap), and reverse the exchange at a later date. A cross-currency swap is the exchange of a fixed rate obligation in one currency for a floating rate obligation in another. A swap agreement is based on a notional principal amount, or an equivalent amount of principal, that sets the value of the swap at maturity, but is never exchanged. The notional principal sets the value of the interest payments in a swap. Rules governing financial swaps are set by the International Swap Derivatives Association, a self-regulatory organization.

**Swaption (swap option)**

The option to enter into an interest rate swap. In exchange for an option premium, the buyer gains the right, but not the obligation, to enter into a specified swap agreement with the seller on a specified future date.

**Swap curve**

The name given to the swap's equivalent of a yield curve. The swap curve identifies the relationship between swap rates at varying maturities.

**Synthetic positions**

- Synthetic long call: a long put and a long underlying.
- Synthetic long put: a long call and a short underlying.
- Synthetic long stock: a short put and a long call.
- Synthetic short stock: a short call and a long put.
- Synthetic short call: a short put and a short underlying.
- Synthetic short put: a short call and a long underlying.

**and:** A Ki call and a Ko call equal to a vanilla call. A Ki put and a Ko put equal to a vanilla put.

**Theoretical value**

An option value generated by a mathematical option's pricing model to determine what an option is really worth.

**Theta**

The Greek measurement of the time decay of an option premium.

**Time decay**

The amount of premium movement per unit of time within a certain time frame on an option due to the passage of time in relation to the expiration of the option itself.

**Time value (extrinsic value)**

The amount by which an option's premium exceeds its intrinsic value. More specifically, an option's time value captures the possibility, however remote, that the option may increase in value due to volatility in the underlying asset. Numerically, this value depends on the time until the expiration date and the volatility of the underlying instrument's

price. The time value of an option is always positive and declines exponentially with time, reaching zero at the expiration date. At expiration, where the option value is simply its intrinsic value, time value is zero. Prior to expiration, the change in time value with time is non-linear, being a function of the option price.

**Triple witching day**

The third Friday in March, June, September and December when U.S. options, index options and futures contracts all expire simultaneously often resulting in massive trades and high volatility.

**Uncovered option**

A short option position, also called a naked option, in which the writer does not own the underlying. This is a much riskier strategy than a covered option.

**Underlying**

A trading asset subject to purchase upon exercise if this asset is physically deliverable or to cash settlement if not. Underlying of structured products may belong to all types of asset classes: equities, interest rates, currencies, commodities, funds, credit or variables that can be turned into or replicated by a financial instrument.

**Unsubordinated debt**

A loan or a security (like a structured product) that ranks above other loans or securities with regard to claims on assets or earnings of an issuer. Also known as senior security.

**Upside**

The potential for prices to move up.

**Vanilla option**

The simplest form of call and put option (opposite to exotic options).

**Value at Risk (VaR)**

A technique used to estimate the probability of portfolio losses based on the statistical analysis of historical price trends and volatilities. The VaR statistic has three components: a time period (generally a day, a month or a year), a confidence level (typically either 95% or 99%) and a loss amount (or loss percentage). The VaR question allows then

to answer the following type of question: What is the maximum percentage I can - with 95% or 99% confidence - expect to lose over the next year?

**Vega**

the amount by which the price of an option changes compared to a 1% change in volatility. Vega changes when there are large price movements in the underlying asset and vega falls as the option gets closer to maturity. Vega can change even if there is no change in the price of the underlying asset, this would happen if there is a change in expected volatility.

**Volatility**

A measure of the amount by which an underlying is expected to fluctuate in a given period of time. Volatility is a primary determinant in the valuation of options premiums and time value. There are two basic kinds of volatility, implied and historical (statistical). Implied volatility (explained above) is calculated by using an option pricing model (Black-Scholes for stocks and indices and Black for futures). Historical volatility is calculated by using the standard deviation of underlying asset price changes on a daily basis from close to close.

**Volatility skew or volatility smile**

The theory that options that are deeply out-of-the-money tend to have higher implied volatility levels than at-the-money options. Volatility skew measures and accounts for the limitation found in most options pricing models which underestimate the probability of large variation in the underlying and uses it to give the trader an edge in estimating an option's value.

**Witching day (see triple witching day)**

A day on which two or more classes of options and futures expire.

**Writer**

The seller of an option.

**Worth-of option**

Option whose payout is referenced to one or more of the worst performers in a basket of underlying assets.

**Yield**

The rate of return on an investment. The interest rate that will make the present value of the cashflows from an investment equal to the price (or cost) of the investment. Also called the internal rate of return (IRR). The current yield relates the annual coupon yield to the market price by dividing the coupon by the price divided by 100 and ignores the time value of money or potential capital gains or losses. Simple yield to maturity takes into account the effect of the capital gain or loss on maturity of a bond in addition to the current yield.

**Zero coupon bond**

A debt instrument issued at below par value. The bond pays no coupons; instead, it is redeemed at face value at maturity.

## • Risk Factors

- Mark-to-Market risk: investors should note that the protection level, if any, is only available upon the maturity of the product and that prior there to the price of the product may be lower than such protection level, if any. Indeed, the price of the product may fluctuate above or below the par over time in particular as a result of changes or expectations of changes in the value of the Underlying or in the overall level of interest rates.
- Issuer risk: investors bear the Issuer risk and, therefore, the price of the product is dependent not only on the above mentioned changes or expectations of changes, but also on the creditworthiness of the issuer, which may vary over the term of the product. Also, regardless of the protection level, if any, investors remain exposed to a default risk on the issuer's part as well as to the risk of an early redemption upon occurrence of events which are set out in the issuer's documentation. A significant loss may occur for the investors in the event of such default or early redemption. Insolvency, restructuring, liquidation or similar proceedings relating to the calculation agent may temporarily affect the secondary market.
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