Structured Notes Building Blocks

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## Fundamental components of a principal protected structure

Example: $\$ 100$ initial investment, 1 year maturity, with $100 \%$ principal protection


Note: This is a hypothetical example only and does not represent an investment in any particular portfolio.
Not all investments are suitable for all investors. Investors should analyze products based on their individual arcumstances and taking into account such factors as their investment objectives, tolerance for risk and liquidity needs.
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S\&P 500 100\% Principal Protected Note
Combines principal protection with potential upside participation

## Selected Purchase Considerations

- Appreciation potential subject to a cap: the notes provide the opportunity for expos ure to the underlying index, up to a cap, in sddition to principal protection at maturity
- Principal protection at maturity

Taxed as debt instruments*

- Return on the notes is limited to the maximum return
- The notes might not pay more than the principal amount
- No interest or dividend payments or voting rights
- Certain built-in costs are likely to adversely affect the value of the notes prior to maturity
- Any liquidity provided at the sole discretion of issuer

| Terms |  |
| :--- | :--- |
| Underlying index | S\&P 500 |
| Currency | USD |
| Principal protection | $100 \%$ |
| Cap on index | $7.10 \%$ |
| Participation rate | $100 \%$ |
| Maximum retum | $7.10 \%$ |
| Maturity | 12 months |

This material is distributed with the understanding that the issuer is not rendering
accounting, legal or tax advice. You should consult your own tax adviser before investing in the notes.
Products maynot be sutable for all individual investors and are subject to investment risks.

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| Ending Index Level* | Index Return | Total Return on Notes |
| :---: | :---: | :---: |
| $\begin{aligned} & 2,400.00 \\ & 2,250.00 \\ & 2,100.00 \end{aligned}$ | $\begin{aligned} & 60.00 \% \\ & 50.00 \% \\ & 40.00 \% \end{aligned}$ | $\begin{aligned} & 7.10 \% \\ & 7.10 \% \\ & 7.10 \% \end{aligned}$ |
| 1,950.00 | 30.00\% | 7.10\% |
| $\begin{aligned} & 1,650.00 \\ & 1,606.50 \end{aligned}$ | $\begin{array}{r} 10.00 \% \\ 7.10 \% \end{array}$ | 7.10\% $7.10 \%$ Max.axa |
| 1,575.00 | 5.00\% | 5.00\% |
| 1,500.00 | 0.00\% | 0.00\% |
| 1,350.00 | -10.00\% | 0.00\% |
| 1,200.00 | -20.00\% | 0.00\% |
| 900.00 | -40.00\% | 0.00\% |
| 600.00 | -80.00\% | 0.00\% |
| 0.00 | -100.00\% | 0.00\% Max, las |
| *The table above ass umes an init be set on the Pricirg Date. <br> - At maturity, vouvill receive a $\$ 1,000$ plus the Adátional Amour <br> The Additional Amount per $\$$ the Index Return $x$ the Paricipatio than zero or greater than the Mex | evel of 1500 . <br> nent for each y be zero but cipal amount vided trat the m. | Initial Index Level will <br> irc ipal amount note, of than the Maximum Return. t maturityvill equal $\$ 1,000 x$ I Amount will not be less |

## Payout table on a S\&P 500 Principal Protected Note

Client buys a 100\% Principal Protected Note with 100\% participation, capped at 7.10\%, 12 months
\(\left.$$
\begin{array}{|ccccc|}\hline \text { Underlying } & \begin{array}{c}\text { Buy 1 Zero Coupon Bond } \\
-\$ 95.00\end{array} & \begin{array}{c}\text { Buy } 1100 \% \\
\text { Strike Call } \\
-\$ 7.00\end{array} & \begin{array}{c}\text { Sell } 1107.1 \% \\
\text { Strike Call }\end{array} & \begin{array}{c}\text { PPN } \\
\\
\end{array}
$$ <br>

\& +\$ 3.25\end{array}\right]\)|  |
| :--- |
|  |
| 130.00 |

Important the examples above are provided for illustrative purposes only. Not all
JPMOrgan investments are suitable for all investors. Investors should analyze produds based on their
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objectives, tolerance for risk and liquidity needs.
$=$ Maximum gain: $\$ 7.10$

* Maximum loss: $\$ 0.00$ CVA $=1.25 \%$

Call option - gives the owner the right, but not the obligation, to buy stock at a specific price (strike price) on or before the expiry date

## Main characteristics

- A Call option gives the owner the right, but not the obligation, to buy stock at a specific price (Strike Price) on or before the expiry date
- Call buyer pays an upfront Premium. The buyer may choose the expiry date and the Strike Price
- The buyer's downside is limited to the non-refundable premium
- The seller's maximum upside is the premium


## Who uses Call options? <br> Long strategy

- Call options are bought by a client who is bullish on a stock

A call option gives leveraged exposure to the stock. Since the outlay of the premium is a fraction of the stock price, the investor enjoys all the upside that an outright buyer has, but none of rights attached to owning the stock (dividend, voting rights...)

- The investors downside is limited to the premium paid for the option-unlike the downside for a stock owner


## Short strategy

- Clients may sell Call options on stocks owned (writing a 'covered call') to enhance the yield
- Selling a call allows the holder to generate an upfront premium that will benefit from a high volatility environment,
enhance the yield return of the stock, and provide some guaranteed return (e.g. the premium) at the expense of a limited upside in the stock


The payout at maturity of a Call Option depends on the strike, the level of the underlying, and the upfront premium

Client BUY S a Call struck at-the-money ( $\$ 100$ ) and pays a premium of $\$ 5$

| Underlying | Premium | Long Call | Total Payout |
| :---: | :---: | :---: | :---: |
| 120 | $-\$ 5$ | $+\$ 20$ | $+\$ 15$ |
| 115 | $-\$ 5$ | $+\$ 15$ | $+\$ 10$ |
| 110 | $-\$ 5$ | $+\$ 10$ | $+\$ 5$ |
| 108 | $-\$ 5$ | $+\$ 8$ | $+\$ 3$ |
| 105 | $-\$ 5$ | $+\$ 5$ | $\$ 0=$ |
| 104 | $-\$ 5$ | $+\$ 4$ | $-\$ 1$ |
| 103 | $-\$ 5$ | $+\$ 3$ | $-\$ 2$ |
| 102 | $-\$ 5$ | $+\$ 2$ | $-\$ 3$ |
| 101 | $-\$ 5$ | $+\$ 1$ | $-\$ 4$ |
| 100 | $-\$ 5$ | $\$ 0$ | $-\$ 5=$ |
| 98 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 96 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 95 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 92 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 90 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 80 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 60 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 40 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 20 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 0 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |

* Maximum loss: \$5

Breakeven at $\$ 105$
Maximum gain: unlimited

Client SELLS a Call struck at-the-money (\$100) and receives a premium of $\$ 5$

| Underlying | Premium | Short Call | Total Payout |
| :---: | :---: | :---: | :---: |
| 120 | $+\$ 5$ | $-\$ 20$ | $-\$ 15$ |
| 115 | $+\$ 5$ | $-\$ 15$ | $-\$ 10$ |
| 110 | $+\$ 5$ | $-\$ 10$ | $-\$ 5$ |
| 108 | $+\$ 5$ | $-\$ 8$ | $-\$ 3$ |
| 105 | $+\$ 5$ | $-\$ 5$ | $+\$ 0^{* *}$ |
| 104 | $+\$ 5$ | $-\$ 4$ | $+\$ 1$ |
| 103 | $+\$ 5$ | $-\$ 3$ | $+\$ 2$ |
| 102 | $+\$ 5$ | $-\$ 2$ | $+\$ 3$ |
| 101 | $+\$ 5$ | $-\$ 1$ | $+\$ 4$ |
| 100 | $+\$ 5$ | $\$ 0$ | $+\$ 5^{*}$ |
| 98 | $+\$ 5$ | $\$ 0$ | $+\$ 5$ |
| 96 | $+\$ 5$ | $\$ 0$ | $+\$ 5$ |
| 95 | $+\$ 5$ | $\$ 0$ | $+\$ 5$ |
| 92 | $+\$ 5$ | $\$ 0$ | $+\$ 5$ |
| 90 | $+\$ 5$ | $\$ 0$ | $+\$ 5$ |
| 80 | $+\$ 5$ | $\$ 0$ | $+\$ 5$ |
| 60 | $+\$ 5$ | $\$ 0$ | $+\$ 5$ |
| 40 | $+\$ 5$ | $\$ 0$ | $+\$ 5$ |
| 20 | $+\$ 5$ | $\$ 0$ | $+\$ 5$ |
| 0 | $+\$ 5$ | $\$ 0$ | $+\$ 5$ |

** Maximum gain: $\$ 5$
Maximum loss: unlimited

JPMOrgan These payout tables assume values remain constant between option purchase and expiration.

## S\&P 500 Return Enhanced Note

Provides leveraged upside up to a cap

| Selected Purchase Considerations |  |
| :---: | :---: |
| - Appreciation potential - The notes provide the opportunity to enhanoe equity returns by multiplying a positive return on the underlying index by the lever sge factor, up to the maximum total return. <br> - Limited protection against loss-Payment at maturity of the principal amount of the notes is protected against a decline in the underlying index during the relevant meas urement period of up to $10 \%$. <br> - Potential capital gains tax treatment* |  |
| Selected Risk Considerations |  |
| - Your investment in the notes may res ult in a loss <br> - Your maximum gain on the notes is limited to the maximum total return. <br> - Certain built-in costs are likely to advers ely affect the value of the notes prior to maturity <br> - No interest or dividend payments or voting rights <br> - Any liquidity provided at sole discretion of issuer |  |
| Terms |  |
| Underlying Index <br> Currency <br> Upside leverage factor <br> Cap on Index <br> Buffer amount <br> Downside leverage factor <br> Maximum potential gain <br> Maximum potential loss <br> Maturity date | S\&P 500 USD 2x up to Cap $8.00 \%$ $10.00 \%$ 1.1111 $16.00 \%$ $100 \%$ 12 Months |
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You may lose some or all of your investment, to rexampe, a 100\% noex de preciation wil resul in a 1055 of $100 \%$ of hnilal investmert.


## Payout table on a S\&P 500 Return Enhanced Note

Client buys a Return Enhanced Note with 7.25\% cap, 2x leverage, 14.5\% max return, and 12 month tenor

| Underlying | Buy 1 Zero Bond \$95.00 | $\begin{gathered} \text { Sell } 1100 \% \\ \text { Strike Put } \\ 1 \times \$ 3.9 \end{gathered}$ | Buy 2 100\% Strike Calls $2 \times-\$ 7.00$ | $\begin{gathered} \text { Sell } 2107.25 \% \\ \text { Strike Calls } \\ 2 \times \$ 3.17 \end{gathered}$ | $\begin{aligned} & \text { REN } \\ & \$ 100.00 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 120 | +\$100 | \$0 | $2 \mathrm{x}+\$ 20$ | 2x-\$12.75 | \$114.5 |
| 115 | +\$100 | \$0 | $2 \mathrm{x}+$ \$15 | 2 x -\$7.75 | \$114.5 |
| 112 | +\$100 | \$0 | $2 \mathrm{x}+\mathrm{\$ 12}$ | $2 \mathrm{x}-\$ 4.75$ | \$114.5 |
| 110 | +\$100 | \$0 | $2 \mathrm{x}+\mathrm{\$ 10}$ | 2 x -\$2.75 | \$114.5 |
| 107.25 | +\$100 | \$0 | $2 \mathrm{x}+\$ 7.25$ | \$0 | \$114.5* |
| 105 | +\$100 | \$0 | $2 \mathrm{x}+$ \$5 | \$0 | \$110 |
| 104 | +\$100 | \$0 | $2 \mathrm{x}+$ \$4 | \$0 | \$108 |
| 103 | +\$100 | \$0 | $2 \mathrm{x}+$ \$3 | \$0 | \$106 |
| 102 | +\$100 | \$0 | $2 \mathrm{x}+$ \$2 | \$0 | \$104 |
| 101 | +\$100 | \$0 | $2 \mathrm{x}+$ \$1 | \$0 | \$102 |
| 100 | +\$100 | \$0 | \$0 | \$0 | \$100 |
| 98 | +\$100 | -\$2 | \$0 | \$0 | \$98 |
| 95 | +\$100 | -\$5 | \$0 | \$0 | \$95 |
| 90 | +\$100 | -\$10 | \$0 | \$0 | \$90 |
| 80 | +\$100 | -\$20 | \$0 | \$0 | \$80 |
| 70 | +\$100 | -\$30 | \$0 | \$0 | \$70 |
| 60 | +\$100 | -\$40 | \$0 | \$0 | \$60 |
| 50 | +\$100 | -\$50 | \$0 | \$0 | \$50 |
| 40 | +\$100 | -\$60 | \$0 | \$0 | \$40 |
| 20 | +\$100 | -\$80 | \$0 | \$0 | \$20 |
| 0 | +\$100 | -\$100 | \$0 | \$0 | \$0 ${ }^{* *}$ |

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JPMOrgan investments are suitable for all investors. Investors should anslyze produds based on
Maximum gain: $\$ 14$
Privat their individual dircumstances and taking into account such factors as their investment
Maximum loss: $\$ 100$ CVA $=1.25 \%$
objectives, tolerance for risk and liquidity needs.

Put option - gives the owner the right, but not the obligation, to sell stock at a specific price (strike price) on or before the expiry date

Main characteristics

- A Put option gives the owner the right, but not the obligation to sell stock at a specific price (Strike Price) on or before the expiry date
- Put buyer pays an upfront premium. The put provides downside price protection
- At expiration, the holder of a put will be guaranteed that the value of his investment will be at least equal to the strike price of the put
- The value of the put at expiration compensates the holder for the decline in the value of the stock relative to the strike price


## Who uses Put options?

Long strategy

- Put options are purchased by clients who want protection
- Purchasers believe the option premium is worth the 'unlimited' protection that is available if the stock price declines below the strike price

Short strategy

- Put options are so/d by clients who would like to buy more stock at a particular price
- Sellers use the option premium received to subsidize the purchase price of the stock if the option were exercised
- Sale of put options may be credit intensive

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In/Out of/At-the Money Put options
Stock Price $>$ Strike Price $\longrightarrow$ Strike Price $\longrightarrow$ Out the Money
Stock Price $\longrightarrow$ In the M oney
Stock Price $=$ Strike Price $\longrightarrow$ At the $M$ oney

The payout at maturity of Put options depends on the strike, the level of the underlying and the upfront premium

Client BUYS a put struck at-the-money ( $\$ 100$ ) and pays a premium of $\$ 5$

| Underlying | Premium | Long Put | Total Payout |
| :---: | :---: | :---: | :---: |
| 120 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 115 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 110 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 108 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 105 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 104 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 103 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 102 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 101 | $-\$ 5$ | $\$ 0$ | $-\$ 5$ |
| 100 | $-\$ 5$ | $\$ 0$ | $-\$ 5 *$ |
| 98 | $-\$ 5$ | $+\$ 2$ | $-\$ 3$ |
| 96 | $-\$ 5$ | $+\$ 4$ | $-\$ 1$ |
| 95 | $-\$ 5$ | $+\$ 5$ | $\$ 0=$ |
| 92 | $-\$ 5$ | $+\$ 8$ | $+\$ 3$ |
| 90 | $-\$ 5$ | $+\$ 10$ | $+\$ 5$ |
| 80 | $-\$ 5$ | $+\$ 20$ | $+\$ 15$ |
| 60 | $-\$ 5$ | $+\$ 40$ | $+\$ 35$ |
| 40 | $-\$ 5$ | $+\$ 60$ | $+\$ 55$ |
| 20 | $-\$ 5$ | $+\$ 80$ | $+\$ 75$ |
| 0 | $-\$ 5$ | $+\$ 100$ | $+\$ 95=\%$ |

[^0]Client SELLS a put struck at-the-money ( $\$ 100$ ) and receives a premium of $\$ 5$

| Underlying | Premium | Short Put | Total Payout |
| :---: | :---: | :---: | :---: |
| 120 | +\$5 | \$0 | +\$5 |
| 115 | +\$5 | \$0 | +\$5 |
| 110 | +\$5 | \$0 | +\$5 |
| 108 | +\$5 | \$0 | +\$5 |
| 105 | +\$5 | \$0 | +\$5 |
| 104 | +\$5 | \$0 | +\$5 |
| 103 | +\$5 | \$0 | +\$5 |
| 102 | +\$5 | \$0 | +\$5 |
| 101 | +\$5 | \$0 | +\$5 |
| 100 | +\$5 | \$0 | +\$5 * |
| 98 | +\$5 | -s2 | +\$3 |
| 96 | +\$5 | -\$4 | +\$1 |
| 95 | +\$5 | -S5 | S0* |
| 92 | +\$5 | -s8 | -\$3 |
| 90 | +\$5 | -\$10 | -\$5 |
| 80 | +\$5 | -\$20 | -\$15 |
| 60 | +\$5 | - $\$ 40$ | -\$35 |
| 40 | +\$5 | - 560 | -\$55 |
| 20 | +\$5 | -\$80 | -\$75 |
| 0 | +\$5 | -\$100 | - $\$ 95 \%$ |
| $\begin{array}{llr} & & \text { Maximum gain: } \\ \text { * } & \$ 5 \\ \text { ** } & \text { Breakeven at } & \$ 95 \\ \text { *** } & \text { Maximum loss: } & -\$ 95\end{array}$ |  |  |  |

JPMOrgan These payout tables assume values remain constant between option purchase and expiration.

## S\&P 500 Buffered Return Enhanced Note

## Defined amount of downside protection with leveraged upside up to a cap

## Selected Purchase Considerations

- Appreciation potential - The notes provide the opportunity to enhance equity returns by multiplying a positive return on the underlying index by the leverage factor, up to the maximum total return.
- Limited protection against loss- Payment at maturity of the principal amount of the notes is protected against a dedine in the underlying index during the relevant measurement period of up to $10 \%$
- Potential capital gains tax treatment*


## Selected Risk Considerations

- Your investment in the notes may result in a loss
- Your maximum gain on the notes is limited to the maximum total return. - Certain built-in costs are likely to sdiversely affect the value of the notes prior to maturity
- No interest or dividend payments or voting rights - Any liquidity provided at sole discretion of issuer


## Terms

Underlying Index
Currency
Ups ide leverage factor
Cap on Index
Buffer amount
Dowrs ide leverage factor
Maximum potential gain
Maximum potential loss
Maturity date los acosurting legaloritax aow whice the understanding that JPMorgan is not rendering The notes are complex instrum applicable to them is unclear, you should consul your own tax aoviser before investing In the notas
Products may not de sutable for all individal investors and are subject to investment rikks.

Buffered return enhanced note versus cash investment in portfolio payoff at maturity (assuming \$100 initial investment)

rou may bse some oral of your inves ment, for example, a $100 \%$ invex deprecation wil resur in a - bou may ose some or al ofyour

| Enahg Index Lever | index Return | Total Rewm on Notes |  |
| :---: | :---: | :---: | :---: |
| 2,175.00 | 50.00\% | 16.10\% |  |
| 2,030.00 | 40.00\% | 16.10\% |  |
| 1,885.00 | 30.00\% | 16.10\% |  |
| 1,740.00 | 20.00\% | 16.10\% |  |
| 1.595.00 | 10.00\% | 16.10\% |  |
| 1,566.73 | 8.05\% | 16.10\% | Mac. $\mathbf{p a n}$ |
| 1.522 .50 | 5.00\% | 10.00\% |  |
| 1.450 .00 | 0.00\% | 0.00\% | Batsome |
| 1,305.00 | -10.00\% | 0.00\% | Butserses |
| 1,160.00 | -20.00\% | -11.11\% |  |
| 870.00 | -40.00\% | -33.33\% |  |
| 580.00 | -60.00\% | -55.56\% |  |
| 0.00 | -100.00\% | -100.00\% | Max. loss |

The table above assumes an |nitial |ndex Level of 10.50 . The actual Intal| Index Level waill Max. lo
set on the Pricing Date
Ifthe average of the undetying clas ing index levels on the relavant dates is greater than
the cla ing index level on the pricing data for the notss, you will receive a cash paymant per
1,000 pricc pal a mourt nets that provides you with a retum on your investmert of
whice the index return, s ubjecto a Maximum Tetal return on the nete of $16.1 \%$

- Your principal is proctad up to $10 \%$ dac ine in the underlying index. amourt for every $1 \%$ that the index declines.


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## Payout table on a S\&P 500 Buffered Return Enhanced Note

Client buys a Buffered Return Enhanced Note, with an 8.05\% cap, 2x leverage, 16.1\% max, 10\% Buffer, and 12 month tenor

| Underlying | Buy 1 Zero Coupon Bond $-\$ 92.50$ | $\begin{gathered} \text { Sell } 1.1190 \% \\ \text { Strike Puts } \\ 1.11 \times+\$ 2.5 \end{gathered}$ | Buy 2 100\% Strike Calls $2 \times-\$ 9.10$ | $\begin{gathered} \text { Sell } 2108.05 \% \\ \text { Strike Calls } \\ 2 \times+\$ 4.9 \end{gathered}$ | $\begin{aligned} & \text { BREN } \\ & \$ 100 \text { (1) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 120.0 | +\$100 | \$0 | $2 \mathrm{x}+\$ 20$ | 2x-\$11.95 | \$116.1 |
| 115.0 | +\$100 | \$0 | $2 \mathrm{x}+$ \$15 | 2x-\$6.95 | \$116.1 |
| 112.0 | +\$100 | \$0 | $2 \mathrm{x}+\mathrm{\$ 12}$ | 2x-\$3.95 | \$116.1 |
| 110.0 | +\$100 | \$0 | $2 \mathrm{x}+\mathrm{\$} 10$ | 2x-\$1.95 | \$116.1 |
| 109.0 | +\$100 | \$0 | $2 \mathrm{x}+\$ 9$ | 2x-\$0.95 | \$116.1 |
| 108.05 | +\$100 | \$0 | $2 \mathrm{x}+58.05$ | \$0 | \$116.1 ${ }^{\text {* }}$ |
| 104.0 | +\$100 | \$0 | $2 \mathrm{x}+$ \$4 | \$0 | \$108.0 |
| 103.0 | +\$100 | \$0 | $2 \mathrm{x}+$ \$3 | \$0 | \$106.0 |
| 102.0 | +\$100 | \$0 | $2 \mathrm{x}+$ \$2 | \$0 | \$104.0 |
| 101.0 | +\$100 | \$0 | $2 \mathrm{x}+$ \$1 | \$0 | \$102.0 |
| 100.0 | +\$100 | \$0 | \$0.0 | \$0 | \$100.0 |
| 98.0 | +\$100 | \$0 | \$0.0 | \$0 | \$100.0 |
| 95.0 | +\$100 | \$0 | \$0.0 | \$0 | \$100.0 |
| 90.0 | +\$100 | \$0 | \$0.0 | \$0 | \$100.0 $=$ |
| 80.0 | +\$100 | 1.11x-\$10 | \$0.0 | \$0 | \$88.9 |
| 70.0 | +\$100 | 1.11x-\$20 | \$0.0 | \$0 | \$77.8 |
| 60.0 | +\$100 | 1.11x-\$30 | \$0.0 | \$0 | \$66.7 |
| 50.0 | +\$100 | 1.11x-\$40 | \$0.0 | \$0 | \$55.6 |
| 40.0 | +\$100 | 1.11x-\$50 | \$0.0 | \$0 | \$44.4 |
| 20.0 | +\$100 | 1.11x-\$70 | \$0.0 | \$0 | \$22.2 |
| 0.0 | +\$100 | 1.11x-\$90 | \$0.0 | \$0 | \$0.00 ${ }^{* * *}$ |

 Private Bank account such fadors as their investment objectives, toleranos for risk and liquidity needs. $\quad$ CVA $=1.75 \%$

## Many factors affect the price of an option

An option＇s price represents the present value of its expected payoff at expiration

## Analysis of the effects of the market factors that affect the price of an option

| Price of a call option |  |  |
| :---: | :---: | :---: |
| Direction of change | Market Factor | Impact on value |
| $\Uparrow$ | Stock price | $\pi \uparrow \Uparrow$ |
| $\Uparrow$ | Strike price | แ以 |
| $\Uparrow$ | Time to expiration | $\pi \uparrow \Uparrow$ |
| $\Uparrow$ | Dividend yield | 山以 |
| $\Uparrow$ | Interest rates | $\pi \uparrow \Uparrow$ |
| $\Uparrow$ | Volatility | $\pi \Uparrow \Uparrow$ |


| Price of a put option |  |  |
| :---: | :---: | :---: |
| Direction of change | Market Factor | Impact on value |
| $\Uparrow$ | Stock price | ル上， |
| $\Uparrow$ | Strike price | $\pi \pi \Uparrow$ |
| $\Uparrow$ | Time to expiration | $\pi \uparrow \Uparrow$ |
| $\Uparrow$ | Dividend yield | $\pi \uparrow \Uparrow$ |
| $\Uparrow$ | Interest rates | แน้ |
| $\Uparrow$ | Volatility | $\pi \uparrow \Uparrow$ |

## Private Bank

## Certain Risk Considerations

NO INTEREST OR DIVIDEND PAYMENTS OR VOTING RIGHTS - As a holder of any notes that may be issued by us, you will not reosive any interest payments, and you will not have voting rights or rights to receive cash dividends or other distributions or other rights that holders of securities comprising the underlying index or basket may have.

CERTAIN BUILT-IN COSTS ARE UKELY TO ADVERSELY AFFECT THE VALUE OF THE NOTES DESCRIBED ABOVE PRIOR TO MATURITY - While the payment at maturity described above would be based on the full principal amount of any notes sold by JPMorgan Chase \& Co., the original issue price of any notes we issue includes an agent's
commission and the cost of hedging our obligations under such notes through one or more of our affliates. As a result, the price, if any, at which JPMSI will be willing to purchase such notes from you in secondary market transactions, if at all, will likely be lower than the original issue prioe and any sale prior to the maturity date could result in a substantial
locss to you. The notes described will not be designed to be short-term trading instruments. YOU SHOULD BE WILING TO HOLD ANY NOTES THAT WE ULTIMATELY ISSUE
TO MATURITY. TOMATURITY.

POTENTIAL CONFLICTS - We and our affilistes play a variety of roles in connection with any potential issuance of the notes described above, induding acting as calculation agent and hedging our obligations under such notes. In performing these duties, the economic interests of the calculation agent and other affiliates of ours would be potentially adverse and hedging our obligations under such notes.
to your interests as an investor in such notes.

LACK OF LIQUIDITY - The notes described above will not be listed on any securities exchange. There may be no secondary market for such notes, and JPMSI will not be required to purchase notes in the secondary market. Even if there is a secondary market, it may not provide enough liquidity to allow you to trade or sell any notes issued by JPMorgan
Chase \& Co. essily. Because other dealers are not likely to make a secondary market for such notes, prices for the notes described above in any secondary market are likely to
depend on the price, if any, at which JPMSI is willing to buy such notes. depend on the price, if any, at which JPMSI is willing to buy such notes.

JPMORGAN CREDIT RISK - Because any notes that may be issued by us would be our senior unsecured obligations, payment of any amount at maturity is subject to our ability to pay our obligations as they become due.

MANY ECONOMIC AND MARKET FACTORS WILL IMPACT THE VALUE OF THE NOTES DESCRIBED ABOVE - In sddition to the level of the underlying index or basket on any day, the value of any notes that may be issued by us described above will be affected by a number of economicand market factors that may either offset or magnify each other. induding

- the expected volatility of the underying index or basket;
- the time to maturity of the notes described above;
- if the underlying index or indices are linked to equity securities, the dividend rate on the common stodks underlying the index or indices;
if the underlying index or indices or basket are linked to commodities, the market price of the physical commodifes upon which the futures contrads that compose the underiying index or indioes or basket of commodities are based or the exchange-traded futures contracts on such commodities;
- interest and yield rates in the market generally:
- a variety of economic, finandial, political, regulatory, geographical, agrialtural, meteorological or judidisl events; and
- our creditworthiness.


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[^0]:    $\begin{array}{llr}\text { * } & \text { Maximum loss: } & \$ 5 \\ \text { ** } & \text { Breakeven at: } & \$ 95\end{array}$
    Breakeven at: $\$ 9$

