

J.P. MORGAN SELF-DIRECTED INVESTING MARGIN AGREEMENT

This *J.P. Morgan Self-Directed Investing Margin Agreement* (**Margin Agreement**), together with the *J.P. Morgan Self-Directed Investing Disclosures and Brokerage Account Agreement* (**J.P. Morgan Self-Directed Investing Agreement**), sets forth the terms and conditions under which J.P. Morgan Securities LLC (**JPMS**) will open and maintain margin account(s) (**Account(s)**) in your name.

The parties to this *Margin Agreement* shall consist of you and JPMS, its affiliates, successors and assigns (collectively referred to as **JPMS**).

The meanings given to all terms defined herein shall be equally applicable to both the singular and plural forms of such terms. This *Margin Agreement* applies to your J.P. Morgan Self-Directed Investing Account(s) and does not apply to any full service brokerage account that is assigned to a Registered Representative.

1. Satisfaction of Your Liabilities; Security Interest and Lien

- (a) You agree to satisfy each and every obligation or liability you owe to JPMS (such obligations or liabilities, whether fixed, matured, unmatured, liquidated, unliquidated or contingent, **Obligations**) when due, including without limitation, to pay any debit balance in any account and the Costs described in the *J.P. Morgan Self-Directed Investing Agreement* and in the event of a sell or redemption order by you, to deliver the applicable security in good deliverable form no later than the deadline set by JPMS, if the applicable security is not credited to an account at the time such order is placed or settled.
- (b) To secure the payment and performance of your Obligations to JPMS, you hereby grant JPMS a lien on and a valid and first priority, perfected, continuing security interest in the following: (i) all property, including all investment property, held, carried or controlled by or through JPMS in which you presently have or in which you acquire an interest in the future, including all property in each account in your name; (ii) any and all rights, claims or causes of action you may now or hereafter have against JPMS; and (iii) all proceeds of or distributions on the foregoing (collectively (i) through (iii) are referred to in this *Margin Agreement* as **Collateral**). Each item of property, including investment property, a security, a general intangible, contract rights, an instrument and cash, held in or credited to any securities account at a securities intermediary shall be treated as a Financial Asset. All undefined terms in the preceding sentence shall have the meanings ascribed to them in the New York Uniform Commercial Code (**NYUCC**), as in effect from time to time.
- (c) Any Collateral held by JPMS is held by JPMS acting as an agent and bailee for itself. Additionally, JPMS has the right, in its sole discretion, not to comply with any entitlement order or instruction from you or a third party with respect to the Collateral. Further, JPMS is authorized, at any time and without notice to you, to transfer Collateral from your Account(s) to any account of an obligor for which you have provided a guarantee to collateralize or satisfy any Obligations of such obligor. You agree that the actions of JPMS in not complying with orders or instructions as allowed in this Section 1(c) satisfy any duties JPMS may have under the NYUCC.
- (d) The reasonable costs and expenses of collection of any such indebtedness or debit balance, including but not limited to attorney fees and expenses, shall be payable by you to JPMS.

- (e) In order to secure the payment and performance of any of your outstanding Obligations to JPMS, JPMS may, to the fullest extent permitted by law, without prior notice to you, use, apply or transfer Collateral as it determines. Unless otherwise agreed in writing, JPMS may register and hold Collateral in its name or the name of its designee.
- (f) You appoint JPMS with full power as your true and lawful attorney-in-fact, to the fullest extent permitted by law, for the purpose of perfecting the security interest granted in this *Margin Agreement* and taking any action and executing any instrument that JPMS deems necessary or advisable to accomplish the purposes of this *Margin Agreement*.

2. Representations by You

You represent and covenant that:

- (a) You have read, understand and agree to the terms set forth below. Upon acceptance of your application(s) for margin services, you understand that JPMS will maintain an account for you and may buy or sell securities or other products according to your instructions. All decisions relating to your investment or trading activity shall be made by you, JPMS or your duly authorized representative.
- (b) You have received the *Margin Disclosure Statement* pursuant to FINRA Rule 2264, which is part of this document, and you understand and agree that margin transactions are riskier and can involve greater loss than cash transactions. You have carefully examined your financial resources, investment objectives, tolerance for risk along with the terms of the *Margin Agreement* and have determined that margin financing is appropriate for you. You understand that investing on margin involves the extension of credit to you and that your financial exposure could exceed the value of securities in your account. You understand and agree that margin transactions in your J.P. Morgan Self-Directed Investing Account(s) are solely your decision and that JPMS will not provide any advice or recommendations with respect to this activity nor will it monitor your J.P. Morgan Self-Directed Investing Account(s) for excessive margin activity. You agree to notify JPMS in writing of any material changes in your financial circumstances or investment objectives.
- (c) In placing any sell order for a short Account, you will designate the order as such and hereby authorize JPMS to mark the order as being "short" or "short exempt."
- (d) You have the right to pledge and assign Collateral to JPMS.

3. Breach, Bankruptcy or Default; Remedies

- (a) JPMS may elect to consider you in default of any or all agreements you may then have with it if: (i) you do not pay any liability or perform any Obligation to JPMS by the time you are obligated to do so; (ii) you otherwise breach, repudiate or default under this *Margin Agreement* or any other agreement you may have with JPMS; (iii) you commence a proceeding in bankruptcy or insolvency or one is commenced against you; (iv) any guarantor, co-signer or other party (a **Responsible Party**) liable for or providing security or your Obligations to JPMS defaults in its obligation to JPMS or commences a proceeding in bankruptcy or insolvency or one is commenced against it; (v) an attachment is made against your or a Responsible Party's Account(s) with JPMS; (vi) a receiver is appointed with respect to you, any of

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your assets or the assets of a Responsible Party; (vii) if you are a natural person, you die or become incompetent, and if you are an entity, you merge, liquidate or dissolve; or (viii) an event, circumstance or condition occurs that, in JPMS' judgment, materially impairs your creditworthiness, your ability to timely perform your Obligations to JPMS or otherwise causes it to view itself as insecure. The occurrence of any of the foregoing is referred to as an "Event of Default."

- (b) Upon the election by JPMS to consider you in default, it shall have all of the rights and remedies of a secured party upon default under the NYUCC and other Applicable Laws and may, without notice to you, among other things: (i) in whole or in part, accelerate, cancel, terminate, liquidate or otherwise close out this *Margin Agreement* in accordance with its terms; (ii) foreclose, collect, sell or otherwise liquidate any Collateral JPMS selects in its sole discretion, in any order and at any time, and apply, in a manner determined by JPMS in its sole discretion, the proceeds to satisfy any of your Obligations to JPMS; (iii) buy any property that may have been sold short; (iv) retain any Collateral; (v) set-off, net, and/or recoup JPMS' obligation to you against any of your Obligations to it, and your Obligations shall be deemed performed and discharged to the extent JPMS has effected a valid and unavoidable set-off, netting or recoupment; (vi) calculate any obligation due to you by first deducting any Obligation that you owe to JPMS before determining the final amount of any such obligation; (vii) in JPMS' discretion, convert at your expense any Obligation from one currency into another currency at such rates as JPMS shall determine; and (viii) take any other action permitted by law or in equity to protect, preserve or enforce JPMS' rights or to reduce any risk to JPMS of loss or delay, including entering into hedging transactions for you Account(s) and risk.
- (c) At any sale of Collateral or other sale or purchase permitted hereunder or otherwise, JPMS may sell or purchase to or from itself or third parties, and you hereby acknowledge and agree that the securities subject to such sale or purchase are instruments traded in a recognized market. You will pay JPMS for any losses and costs incurred by it as a result of any default by you. You waive marshalling of assets and any similar doctrine dealing with the application of Collateral. JPMS' rights and remedies hereunder are cumulative and are in addition to any other rights and remedies available at law or in equity.

4. Margin and Other Collateral Requirements

You understand and agree that margin transactions are riskier and can involve greater loss than cash transactions. If the value of your assets declines in value, you may be required to add more assets to your Account(s) and/or your assets could be sold without notice and at a loss to repay your loan. Therefore, you hereby agree (i) to deposit and maintain such margin in your margin Account(s), if any, as JPMS may in its sole discretion require; (ii) to pay on demand any debit balance owing with respect to any of your margin Account(s); (iii) that margin calls may be communicated orally, without subsequent written confirmation; (iv) to deposit promptly and maintain such other Collateral with JPMS as is required by Applicable Laws or this or any other JPMS agreement; and (v) that no demands, calls, tenders or notices that JPMS may have made or given in the past shall obligate it to make or give the same in the future.

5. Truth-In-Lending Disclosures; Debit Balances

You hereby acknowledge receipt of the Truth-In-Lending disclosure statement, which is contained in the "Important Margin Information" section of this form. Interest will be charged on any debit balances in your Account(s) in accordance with the methods described in such statement or in any amendment or revision thereto that may be provided to you. Any debit balance, which is not paid at the close of an interest period, will be added to the opening balance for the next interest period. The amount lent to you by JPMS upon which you are charged interest may include purchases of securities for which payment is made by check for which JPMS has not yet received credit.

The Federal Equal Credit Opportunity Act prohibits creditors from discriminating against credit applicants on the basis of race, color, religion, national origin, sex, marital status, age (provided the applicant has the capacity to enter into a binding contract); because all or part of the applicant's income derives from a public assistance program; or because the applicant has, in good faith, exercised any right under the Consumer Credit Protection Act. The Federal agency that administers compliance with this law concerning this creditor is: Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549.

6. Consent to Loan, Pledge or Use Securities in Margin Accounts

- (a) To the greatest extent permitted under Applicable Laws, you hereby authorize JPMS to lend either to itself or to others and to otherwise use, sell or pledge any securities held by it in any of your margin Account(s), to convey therewith all attendant rights of ownership (including voting rights) and to use all such property as Collateral for JPMS' general loans and/or other obligations or with respect to repurchase transactions. Any such property, together with all attendant rights of ownership, may be pledged, repledged, sold, hypothecated, rehypothecated, become subject to a repurchase transaction either separately or in common with other property for any amounts due to JPMS thereon, and for a greater sum than, and for periods longer than, any Obligation that you owe to JPMS, and JPMS shall have no obligation to retain a like amount of similar property in its possession and control. You hereby acknowledge that, as a result of such activities, (i) JPMS may receive and retain certain benefits to which you will not be entitled and (ii) the securities in your margin Account(s) may be used as Collateral by JPMS for loans made to it in excess of your indebtedness to it.
- (b) In certain circumstances, such loans or other use may limit, in whole or in part, your ability to receive dividends directly from the issuing company and/or your right to exercise voting and other attendant rights of ownership with respect to the loaned or pledged securities. Such circumstances include, but are not limited to, loans of securities that you own in your margin Account(s) that continue over record dates for voting purposes and ex-dividend dates for dividend distributions. Record dates and ex-dividend dates are declared by the issuing company. If you do not receive dividends directly from the company, you may receive payments-in-lieu of dividends, which may cause me to lose the benefit of the preferential tax treatment accorded to dividends.

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7. Short Sales and Special Charges for Short Sales in Hard-to-Borrow Securities

- (a) In placing any sell order for a short Account, you will designate the order as such and hereby authorize JPMS to mark the order as being "short" or "short exempt." Short sales are margin transactions and must be conducted in a Margin Account. Short sale transactions are subject to certain regulatory rules and cannot be executed under certain market conditions. JPMS does not guarantee that it will be able to locate securities to facilitate a short sale. JPMS may, in its discretion and without notice to you, "buy in" securities to cover any short security position in your Account(s). If you are unable to cover a short security position (either through delivery of the security or JPMS "buying in" the security) in enough time for it to deliver the security to its lender (to whom JPMS is obligated), you agree to reimburse JPMS for the losses it sustains as a result of your failure to cover.
- (b) With respect to any short sale transactions in securities that are or become hard-to-borrow, your Account(s) also may be charged an amount equal to the sum of (i) the costs and expenses incurred by JPMS and (ii) a Service Fee in connection with the establishment and/or maintenance of your short positions in that security (together, **Short Sale Charges**). A security is or becomes hard-to-borrow when increased short selling in that security in the market causes an increase in demand to borrow the security, which in turn causes an increase in the cost and expense to JPMS in establishing and/or maintaining a short position in such security for your Account(s). Short Sale Charges may be disclosed to you at the time a short position is established or may be imposed or increased from time to time in light of changing market conditions, and you agree to pay such Short Sale Charges at JPMS' then-prevailing rates.

8. Account Termination and Restriction

- (a) The provisions of this *Margin Agreement* and the other Account Documents shall be continuous, shall cover individually and collectively all Accounts that you may open with JPMS, and shall inure to the benefit of JPMS and any successors or assigns.
- (b) You understand that you may terminate or close your Account(s) at any time by giving instructions to JPMS, provided that JPMS receives all securities and/or other property for which your Account(s) are short and you have satisfied all of your outstanding Obligations that you owe to it for any reason whatsoever. You agree that you will remain fully responsible for any outstanding obligations and/or any charges to your Account(s) for any reason whatsoever, whether arising before or after termination.
- (c) JPMS may restrict or terminate your margin privileges or terminate this *Margin Agreement* for any reason upon notice to you.

9. Communications

JPMS shall send all communications (including, without limitation, margin calls) to you by first-class mail, postage paid, fax, electronic mail or express delivery service at the address reflected on JPMS' books and records or to another address that you specify in writing and will be deemed to have been personally delivered to you whether actually received or not. Notices and other communications may also be provided to you verbally or in any

other manner allowed by the *J.P. Morgan Self-Directed Investing Agreement*. You shall send all communications to JPMS by secure electronic communication, first-class mail, postage paid to the respective current mailing address as communicated to you from time to time for your J.P. Morgan Self-Directed Investing Account. Any communication sent by JPMS by such means shall be considered delivered whether or not it is actually received, on the earlier of the actual delivery date or 3 days after it is sent. You hereby authorize JPMS to accept facsimile copies of this or any other document or instruction as if it were the original and to accept signatures on facsimiles as if they were originals.

10. General Terms, Definitions

This *Margin Agreement* is subject to the terms and conditions, including, without limitation, those pertaining to arbitration, contained in the Account Documents as defined in the *J.P. Morgan Self-Directed Investing Agreement*. Capitalized terms not defined in this *Margin Agreement* have the meanings given to them in the Account Documents. To the extent there are any conflicts between the Account Documents and this *Margin Agreement*, this *Margin Agreement* will prevail.

Important Margin Information

Please Read Carefully and Retain for Future Reference

This *Margin Agreement*, together with the *J.P. Morgan Self-Directed Investing Agreement*, sets forth the terms and conditions under which JPMS, its successor firms, present and future direct or indirect subsidiaries, affiliates and assigns will open and maintain margin account(s) (**Account(s)**) in your name.

Statement of Interest Charges Pursuant to the "Truth-in-Lending" Rule 10 (b) -16

This statement, pursuant to the "Truth-In-Lending" rule, is provided to explain the terms and conditions under which interest charges are computed in your account if you effect securities transactions on credit.

JPMS is responsible for extending credit in margin accounts in compliance with Regulation T of the Board of Governors of the Federal Reserve System (**Regulation T**) determining all maintenance margin requirements crediting and charging interest, hypothecating, rehypothecating or lending securities if your account is maintained on margin. (Refer to the below for an explanation of how interest is calculated by JPMS.)

Interest will be charged as provided in the table below on any credit extended to you by JPMS for the purpose of purchasing, carrying or trading in any security.

The annual rate of interest that you will be charged on any U.S. dollar denominated credit is based on either the Prime interest rate (**Prime**) or the Secured Overnight Financing Rate (**SOFR**). The Prime interest rate is an important index used by banks to set rates on many consumer loan products, such as credit cards or auto loans. The Prime interest rate will move up or down in lockstep with changes made by the Federal Reserve Board. SOFR is a benchmark for dollar-denominated derivatives and loans. SOFR is based on transactions in the Treasury repurchase market.

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\$0-\$25,000	Prime + 4.75%
\$25,001-\$50,000	Prime + 4.50%
\$50,001-\$100,000	Prime + 4.00%
\$100,001-\$500,000	Prime + 3.75%
\$500,001-\$1,000,000	Prime + 3.00%
\$1,000,001-\$3,000,000	Prime + 2.50%
\$3,000,001-\$10,000,000	SOFR + 2.35%
\$10,000,001 and above	SOFR + 1.85%
Listed Option Margin Requirement Minimum account equity for clients writing options	Account equity of \$50,000

Debit balances in your account represent money lent to you by JPMS, and it is the amount lent to you by JPMS upon which JPMS charges you interest. Each additional purchase of securities on credit increases your debit balance as do interest expenses and any other charges assessed against your account. The amount lent to you by JPMS upon which you are charged interest may include purchases of securities for which payment is made by check for which JPMS has not yet received credit. Interest may be charged to your account at varying rates during the month to reflect any changes in such interest rates that have occurred during that month. Any interest charged on your debit balance that is unpaid at the close of an interest period will be added to the opening balance for the next interest period.

If you have a debit in your cash account and you also have a margin account, interest calculated on the debit balance in the cash account (calculated on a settlement date basis) will be charged to your margin account. Free and available credit balances in cash accounts (i.e., credit balances from which proceeds of securities sold but not available for delivery, whether because not long or not in good deliverable form, are deducted) are netted against settlement date debit balances in the calculation of your net balance.

In addition to interest on debit balances, interest will be charged on proceeds of sales paid to you prior to settlement date and on late payments, including those in cash accounts.

The method of computing interest is as follows: interest is computed on a daily basis on the net debit balance during the interest period. JPMS basic interest period runs on a calendar month cycle from the 1st day through the last day of the month. You commence your interest calculation by ascertaining the net debit balance on the 1st day of the month (or the first day thereafter on which there is a net debit balance) and on each day thereafter. You then multiply each day's net debit balance by the interest rate and then by the fraction 1/360. The interest charged during the interest period is the total of the daily charges so computed. Accrued interest for the period will be charged on the 1st business day of the following month. Your monthly statements show the opening and closing balances for the period.

With respect to short sales and "marking-to-the-market," the credit that appears on your statement due to short sales (including short sales against the box) is offset by a debit of like amount because JPMS has to borrow the same security in order to deliver it to the buying broker and has to provide its lender collateral of up to 105% of the settled short market value of the borrowed securities to secure such loan. This means that the debit balance on which interest is computed will be the difference between (i) up

to 105% of the settled short market value of such short sales (across all currencies), which shall be calculated daily; and (ii) the proceeds of such short sales.

Any short positions in your account will be kept "marked-to-the-market." This means that periodically the balance maintained in the short account will be adjusted to equal the market value of the short securities. Securities that are priced below five dollars per share may be valued at five dollars per share for short marking-to-the-market purposes. If a security has been sold short (or sold short against the box) and has appreciated in market price over the selling price, interest will be charged on the amount of appreciation plus the value of any additional collateral as described in the preceding paragraph; if it depreciates in market price, interest will be correspondingly reduced by the drop in value. The appreciation or depreciation of securities sold short will be determined by JPMS based upon daily closing prices or quotations provided by pricing services, as applicable, or upon such factors as JPMS in its sole judgment deems pertinent, including, without limitation, the amount of any interest accrued with respect to such securities. Therefore, in order to compute the amount on which interest is charged to you in connection with your short sales, you will need to contact the J.P. Morgan Self-Directed Investing Service Center to determine the amount of collateral in excess of 100% provided by JPMS to its lender, as described in the preceding paragraph, and the amount of any interest accrued with respect to such securities.

If you maintain a short position in a security over a dividend record date, a charge may be assessed upon you and all other short sellers in that security, on a pro-rata basis, to the extent JPMS incurs any cost or expense in maintaining such short position. In addition, with respect to any short sale transactions in securities that are or become hard-to-borrow, your account also may be charged an amount equal to the sum of (i) the costs and expenses incurred by JPMS and (ii) a service fee in connection with the establishment and/or maintenance of your short positions in that security (together, **Short Sale Charges**). A security is or becomes hard-to-borrow when increased short selling in that security in the market causes an increase in demand to borrow the security, which in turn causes an increase in the cost and expense to JPMS in establishing and/or maintaining a short position in such security for your account. Short Sale Charges may be disclosed to you at the time a short position is established or may be imposed or increased from time to time in light of changing market conditions at JPMS' then-prevailing rates.

If JPMS makes changes in any of the credit terms and conditions described herein or if a change is required by law, we will notify you of such change within a reasonable period of time, unless such change results in a higher rate to you, in which case we will provide you at least 30 days' prior written notice. The annual rate of interest you are charged may fluctuate with changes in the stated base rates. The changes in rates resulting from this fluctuation will be made without prior notice to you (as contrasted with changes in the credit terms and conditions, notice of which will be provided as described above).

General Margin Policies

The amount of initial credit and the terms under which JPMS may extend credit to you are governed by Regulation T and the maintenance requirements are governed by the self-regulatory agencies that have jurisdiction over JPMS. JPMS has established certain "house" margin policies within the scope of these requirements that generally contemplate the maintenance of

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equity in the account above that required by applicable rules. It is JPMS' policy to review periodically any account in which the equity of any securities, calculated without giving value to certain low priced securities, falls below 35% of the market value of the account, or where concentration or other factors are deemed by JPMS to warrant review. The margin account equity of an account is the current market value of the securities, as determined by JPMS, and any cash deposited as security, less the value of any short positions and amounts owed to JPMS. Each account is reviewed on an individual basis with consideration given to factors such as current market conditions, marketability of the securities in the account, frequency of the activity in the account, duration of the account and concentration of particular securities in the account. Different weight may be given to these factors by JPMS and, on the basis of the review, JPMS in its sole discretion may, but has no obligation to, require additional collateral above the amount required by the rules of the self-regulatory agencies as security for your obligations to JPMS and its affiliates. If you have questions about JPMS' margin practices, contact the J.P. Morgan Self-Directed Investing Service Center.

MARGIN DISCLOSURE STATEMENT

Special Notices for Margin Customers

The following disclosure is required by FINRA Rule 2264:

JPMS is furnishing this document to you to provide some basic facts about purchasing securities on margin and to alert you to the risks involved with trading securities in a margin account. Before trading stocks in a margin account, you should carefully review the *Margin Agreement* provided by JPMS, which covers the parties rights including, but not limited to, the right to sell your securities or other assets as outlined below, shall be applicable to it. Consult JPMS regarding any questions or concerns you may have regarding your margin accounts.

When you purchase securities, you may pay for the securities in full or you may borrow part of the purchase price from JPMS. If you choose to borrow funds from JPMS, you will open a margin account with JPMS. The securities purchased are collateral for the firm that has made the loan to you. If the securities in your account decline in value, so does the value of the collateral supporting your loan and, as a result, the lender can take action, such as issue a margin call and/or sell securities or other assets in any of your accounts held with the clearing broker, in order to maintain the required equity in the account. It is important that you fully understand the risks involved in trading securities on margin. These risks include the following:

You can lose more funds than you deposit in the margin account.

A decline in the value of securities that are purchased on margin may require you to provide additional funds to the firm that has made the loan to avoid the forced sale of those securities or other securities or assets in your account(s).

The firm can force the sale of securities or other assets in your account(s). If the equity in your account falls below the maintenance requirements or the firm's higher "house" requirements, the firm can sell the securities or other assets in any of your accounts held at the firm to cover the margin deficiency. You also will be responsible for any shortfall in the account after such a sale.

The firm can sell your securities or other assets without contacting you. Some investors mistakenly believe that a firm must contact them for a margin call to be valid, and that the firm cannot liquidate securities or other assets in their accounts to meet the call unless the firm has contacted them first. This is not the case. Most firms will attempt to notify their customers of margin calls, but they are not required to do so. However, even if a firm has contacted a customer and provided a specific date by which the customer may meet a margin call, the firm can still take necessary steps to protect its financial interests, including immediately selling the securities without notice to the customer.

You are not entitled to choose which securities or other assets in your account(s) are liquidated or sold to meet a margin call. Because the securities are collateral for the margin loan, the firm has the right to decide which security to sell in order to protect its financial interests.

The firm can increase its "house" maintenance margin requirements at any time and is not required to provide advance written notice. These changes in firm policy often take effect immediately and may result in the issuance of a maintenance margin call. Your failure to satisfy the call may cause the member to liquidate or sell securities in your account(s).

You are not entitled to an extension of time on a margin call. While an extension of time to meet margin requirements may be

available to customers under certain conditions, a customer does not have a right to the extension.