

**CERTIFICATE OF
JPMORGAN CHASE BANK, NATIONAL ASSOCIATION**

I, Carin S. Reddish, DO HEREBY CERTIFY that I am a duly elected and qualified Assistant Corporate Secretary of JPMorgan Chase Bank, National Association, a national banking association duly organized and existing under the laws of the United States of America (the "Bank") and that set forth below is a true and correct copy of a resolution adopted at a meeting of the Board of Directors of the Bank on January 16, 2018, which meeting was properly called and held and at which a quorum was present and voted in favor of said resolution. I further certify that said resolution, at the date hereof, is still in full force and effect.

RESOLVED, that the By-laws of JPMorgan Chase Bank, N.A. are hereby amended to read substantially in the form presented to this meeting.

I DO HEREBY FURTHER CERTIFY, that attached hereto is a true and correct copy of the By-Laws of the Bank dated January 16, 2018.

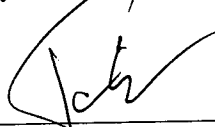
IN WITNESS WHEREOF, I have subscribed my name and affixed the seal of JPMorgan Chase Bank, National Association this 13th day of February, 2018.



Carin S. Reddish
Assistant Corporate Secretary

(CORPORATE SEAL)

The undersigned member of the Board of Directors hereby verifies, on this 14 day of February 2018, that the resolution set forth above was duly adopted, and the By-Laws dated January 16, 2018 which are attached to this Certificate were approved, by the Board of Directors of JPMorgan Chase Bank, National Association on January 16, 2018,



James Dimon

Member of the Board of Directors of JPMorgan Chase Bank, National Association



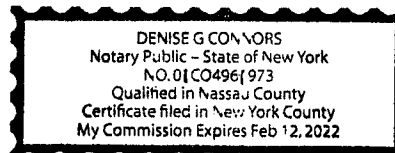
STATE OF NEW YORK)
) ss.:
 COUNTY OF NEW YORK)

On the 13th day of February 2018, before me, the undersigned, personally appeared Carin S. Reddish, an Assistant Corporate Secretary of JPMorgan Chase Bank, National Association, personally known to me to be the individual whose name is subscribed to the within instrument, and in her capacity acknowledged this instrument to be the act and deed of JPMorgan Chase Bank, National Association and the seal affixed to it to be its seal.

WITNESS my official seal and signature this day and year aforesaid.

Denise G Connors

Notary Public



BY-LAWS

JPMorgan Chase Bank, National Association

January 16, 2018

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BY-LAWS
OF
JPMORGAN CHASE BANK, NATIONAL ASSOCIATION

ARTICLE I

Meetings of Shareholders

Section 1.01. Shareholders' Meetings. The regular annual meeting of the shareholders of JPMorgan Chase Bank, National Association (the "Bank") for the election of directors and the transaction of whatever other business may properly come before the meeting shall be held at the main banking office of the Bank or any other convenient place the Board of Directors may designate, on such date as may be designated by the Board of Directors. Special meetings of the shareholders may be called by the Chairman of the Board, the Chief Executive Officer, the President, or the Secretary. The time and place of each special meeting shall be designated by the Board and shall be included in a notice of meeting.

Section 1.02. Consent in Lieu of Meeting of Shareholders. Except as otherwise required by applicable laws and regulations, any action that may be taken at the annual meeting or any special meeting of the shareholders may also be taken without a meeting if a written consent to the action is signed by all of the persons who would be entitled to vote thereon and is filed with the Secretary of the Bank as part of the corporate records.

ARTICLE II

Board of Directors

Section 2.01. Number. The business and affairs of the Bank shall be managed by or under the direction of a Board of Directors, of such number as may be fixed from time to time by resolution adopted by the Board, but in no event less than 5 or more than 25. Each director hereafter elected shall hold office until the next annual meeting of the shareholders and until his successor is elected and has qualified, or until his death or until he shall resign or shall have been removed.

Section 2.02. Qualifications. During his entire term of service, each director of the Bank, unless otherwise permitted under the laws of the United States, must be a citizen of the United States and must own, in his own right, capital stock in the Bank or in a company that controls the Bank, in such amounts as required by applicable statute or regulation.

Section 2.03. Oath. Each person appointed or elected a director of the Bank must, prior to exercising the functions of such office, take the oath of such office in the form prescribed by the Comptroller of the Currency.

Section 2.04. Vacancies. In case of any increase in the number of directors, the additional director or directors, and in case of any vacancy in the board due to death, resignation, removal, disqualification or any other cause, the successors to fill the vacancies shall be elected by action of the shareholders or, subject to the limits specified in 12 CFR Part 7, a majority of the directors then in office.

Section 2.05. Annual Meeting. An annual meeting of the directors shall be held each year at such time and place as shall be designated by the Board. At such meeting, the directors may elect from their own number a Chairman of the Board, a Chief Executive Officer, and a President, and shall elect or appoint such other officers authorized by these By-laws, and appoint such Committees consistent with Article III hereof, as they may deem desirable.

Section 2.06. Regular Meetings. The Board may hold regular meetings, without notice, at such times and places as the Board may from time to time determine.

Section 2.07. Special Meetings. Special meetings of the Board of Directors may be called by the Chairman of the Board, the Chief Executive Officer, the President, or a majority of the directors then in office. Unless waived, each member of the Board of Directors shall be given notice by telephone, in person, or in writing by facsimile transmission, hand delivery, courier service, first-class mail, certified mail, express mail, email or other electronic means, stating the time and place of each special meeting.

Section 2.08. Quorum; Majority Vote. Except as otherwise provided herein or as required by applicable law, a majority of the members of the entire Board (or the next highest integer in the event of a fraction) shall constitute a quorum, and a majority of those present and voting at any meeting of the Board of Directors shall decide each matter considered. If less than a quorum be present, a majority of those present may adjourn any meeting from time to time and the meeting may be held as adjourned without further notice.

ARTICLE III

Committees of the Board

Section 3.01. Committees. Except for those duties that by law or regulation must be performed by at least a majority of the full Board of Directors, the performance of such duties as the Board deems appropriate may be assigned to one or more committees of one or more persons. Membership in each such committee shall be as established from time to time by the Board. All acts done and powers conferred by any Committee from time to time shall be deemed to be, and may be certified as being done or conferred under authority of the Board. A Committee may delegate its duties to one or more subcommittees composed of one or more members of the Committee. Each Committee may fix its own rules and procedures, in the absence of which the provisions of the Articles of Association and these By-laws with respect to meetings of the Board shall apply to Committees and their members. The minutes of the meetings of each Committee shall be submitted at the next regular meeting of the Board at which a quorum is present, or, if impracticable, at the next such subsequent meeting.

Section 3.02. Committees of the Board of Directors of the Bank's Parent Holding Company. The Audit Committee, Compensation & Management Development Committee, Corporate Governance & Nominating Committee, Public Responsibility Committee, and Risk Policy Committee of the Board of Directors of JPMorgan Chase & Co. (the "Corporation"), the Bank's parent holding company, shall have full and complete authority to act for and on behalf of this Bank in the exercise of the authority granted to the committees by the Board of Directors of the Corporation.

ARTICLE IV

Officers and Agents

Section 4.01. Officers. The officers of the Bank may include a Chairman of the Board, a Chief Executive Officer, and a President, each of whom must be a director and shall be elected by the Board; and such other officers as may from time to time be elected by the Board or under its authority, or appointed by or under the authority of the Chairman, the Chief Executive Officer, or the President. The Board may determine that the Chairman of the Board is a non-executive position, in which case the second sentence of Section 4.04 of this Article IV shall not apply.

Section 4.02. Other Employees. The Board of Directors may delegate others to appoint agents and employees, define their duties, fix their compensation and dismiss them.

Section 4.03. Term of Office. All officers, agents, and employees appointed by the Board of Directors, or under its authority, shall hold office at the pleasure of the Board.

Section 4.04. Chairman of the Board. The Chairman shall preside at all meetings of the shareholders and at all meetings of the Board. The Chairman of the Board shall have the same power to perform any act on behalf of the Bank and to sign for the Bank as is prescribed in these By-laws for the Chief Executive Officer. He shall perform such other duties as from time to time may be prescribed by the Board.

Section 4.05. Chief Executive Officer. The Chief Executive Officer shall be the chief executive officer of the Bank and shall have, subject to the control of the Board and the Chairman, general supervision and direction of the policies and operations of the Bank and of its several officers other than the Chairman. In the absence of the Chairman, he shall preside at all meetings of the shareholders and at all meetings of the Board. He shall have the power to execute any document or perform any act on behalf of the Bank, including without limitation the power to sign checks, orders, contracts, leases, notes, drafts and other documents and instruments in connection with the business of the Bank, and together with the Secretary or an Assistant Corporate Secretary execute conveyances of real estate and other documents and instruments to which the seal of the Bank may be affixed. He shall perform such other duties as from time to time may be prescribed by the Board.

Section 4.06. President. The President shall, subject to the direction and control of the Board, the Chairman and the Chief Executive Officer, participate in the supervision of the policies and operations of the Bank. In general, the President shall perform all duties incident to the office of President, and such other duties as from time to time may be prescribed by the Board, the Chairman, or the Chief Executive Officer. In the absence of the Chairman or the Chief Executive Officer, the President shall preside at meetings of shareholders and of the Board. The President shall have the same power to sign for the Bank as is prescribed in these By-laws for the Chief Executive Officer.

Section 4.07. Powers and Duties of Other Officers. The powers and duties of all other officers of the Bank shall be those usually pertaining to their respective offices, subject to the direction and control of the Board and as otherwise provided in these By-laws.

Section 4.08. Fidelity Bonds. The Board, in its discretion, may require any or all officers, agents, and employees of the Bank to give bonds covering the faithful performance of their duties or may obtain insurance covering the same, in either case in form and amount approved by the Board, the premiums thereon to be paid by the Bank.

ARTICLE V

Indemnification

Section 5.01. Right to Indemnification and Advancement of Expenses. The Bank shall to the fullest extent permitted by applicable law as then in effect indemnify any person (the "Indemnitee") who was or is involved in any manner (including, without limitation, as a party or a witness), or is threatened to be made so involved, in any threatened, pending or completed investigation, claim, action, suit or proceeding, whether civil, administrative or investigative (including, without limitation, any action, suit or proceeding by or in the right of the Bank to procure a judgment in its favor, but excluding any action, suit, or proceeding, or part thereof brought by such person against the Bank or any affiliate of the Bank) (a "Proceeding") by reason of the fact that he is or was a director, officer, or employee of the Bank, or is or was serving at the request of the Bank as a director, officer, or employee of another corporation, partnership, joint venture, trust or other enterprise against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such Indemnitee in connection with such Proceeding (or part thereof). Such indemnification shall be a contract right. Each Indemnitee shall also have the right to receive payment in advance of any expenses incurred by the Indemnitee in connection with such Proceeding, consistent with the provisions of applicable law as then in effect.

Section 5.02. Contracts and Funding. The Bank may enter into contracts with any director, officer, or employee of the Bank in furtherance of the provisions of this Article V and may create a trust fund, grant a security interest or use other means (including, without limitation, a letter of credit) to ensure the payment of such amounts as may be necessary to effect indemnification and/or advancement of expenses as provided in this Article V.

Section 5.03. Definitions. For purposes of this Article V, references to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on a person with respect to any employee benefit plan; and references to "serving at the request of the Bank" shall include any service as a director, officer, or employee of the Bank which imposes duties on, or involves services by, such director, officer, or employee with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner he reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner not opposed to the best interest of the corporation.

Section 5.04. Indemnification and Advancement of Expenses Not Exclusive Right. The right of indemnification and advancement of expenses provided in this Article V shall not be exclusive of any other rights to which a person seeking indemnification and/or advancement of expenses may otherwise be entitled, under any statute, by-law, agreement, vote of shareholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another

capacity while holding such office. The provisions of this Article V shall inure to the benefit of the heirs and legal representatives of any person entitled to indemnity and/or advancement of expenses under this Article V and shall be applicable to Proceedings commenced or continuing after the adoption of this Article V whether arising from acts or omissions occurring before or after such adoption.

Section 5.05. Claims for Indemnification or Advancement of Expenses; Procedures.

In furtherance, but not in limitation, of the foregoing provisions, the following procedures and remedies shall apply with respect to advancement of expenses and the right to indemnification under this Article V:

(a) Advancement of Expenses. All reasonable expenses incurred by or on behalf of the Indemnitee in connection with any Proceeding shall be advanced to the Indemnitee by the Bank within 30 days after the receipt by the Bank of a statement or statements from the Indemnitee requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the expenses incurred by the Indemnitee. In addition, such statement or statements shall, to the extent required by law at the time of such advance, and otherwise except as may be determined by or under the authority of the General Counsel, include or be accompanied by a written undertaking by or on behalf of the Indemnitee to repay the amounts advanced if it should ultimately be determined that the Indemnitee is not entitled to be indemnified against such expenses. Notwithstanding the absence of such a written undertaking, acceptance of any such advancement of expenses shall constitute such an undertaking by the Indemnitee.

(b) Written Request for Indemnification. To obtain indemnification under this Article VII, an Indemnitee shall submit to the Secretary of the Bank a written request, including such documentation and information as is reasonably available to the Indemnitee and reasonably necessary to determine whether and to what extent the Indemnitee is entitled to indemnification (the "Supporting Documentation"). The determination of the Indemnitee's entitlement to indemnification shall be made within a reasonable time after receipt by the Bank of the written request for indemnification together with the Supporting Documentation.

(c) Procedure for Determination. Where the Indemnitee is a current or former director or a current officer of the Bank, the Indemnitee's entitlement to indemnification under this Article V shall be determined (i) by the Board by a majority vote of a quorum (as defined in Article II of these By-laws) consisting of directors who were not parties to such action, suit or proceeding, or (ii) if such quorum is not obtainable, or, even if obtainable, a quorum of disinterested directors so directs, by independent legal counsel in a written opinion, or (iii) by the shareholders, but only if a majority of the disinterested directors, if they constitute a quorum of the Board, presents the issue of entitlement to indemnification to the shareholders for their determination. Where the Indemnitee is not a current or former director or a current officer of the Bank, the Indemnitee's entitlement to indemnification under this Article V may be determined by the General Counsel. For purposes of this Article V, the term "officer," when used with respect to the Bank, shall mean those officers of the Bank who are determined by the Board to be "executive officers" of the Bank.

Section 5.06 Amendment or Repeal. Any repeal or modification of the foregoing provisions of this Article V shall not adversely affect any right or protection hereunder of any Indemnitee in respect of any act or omission occurring prior to the time of such repeal or modification.

ARTICLE VI

By-laws

Section 6.01. Inspection. A copy of the By-laws shall at all times be kept in a convenient place at the principal office of the Bank, and shall be open for inspection by shareholders during banking hours.

Section 6.02. Amendments. These By-laws may be added to, amended, altered or repealed by action of the shareholders, or by vote of a majority of the entire Board at any meeting of the Board. No amendment may be made unless the By-laws, as amended, are consistent with the requirements of the laws of the United States and of the Articles of Association of the Bank.

Section 6.03. Construction. The masculine gender, where appearing in these By-laws, shall be deemed to include the feminine gender.

ARTICLE VII

Miscellaneous

Section 7.01. Seal. The corporate seal of the Bank shall be in the form of a circle and shall bear the full name of the Bank and the words "Corporate Seal" together with the logo of JPMorgan Chase & Co.

Section 7.02. Fiscal Year. The fiscal year of the Bank shall be the calendar year.

Section 7.03. Waiver of Notice. Unless otherwise provided by the laws of the United States, notice of any Board or Board committee meeting, need not be given to any person who (a) submits a signed waiver of notice, whether before or after the meeting, or (b) is present at such meeting; and any meeting shall be a legal meeting without any notice thereof having been given, if all the members are present.

Section 7.04. Electronic Meetings. Subject to the provisions required or permitted by these or the Articles of Association of the Bank for notice of meetings, members of the Board of Directors, or members of any committee of the Board, may participate in and hold a meeting of the Board of Directors or such committee by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other. Participation in such a meeting shall constitute presence in person at such meeting, except where a person participates in the meeting for the express purpose of objecting to the transaction of any business on the ground that the meeting is not lawfully called or convened.

Section 7.05. Action Without Meeting. Any action required or permitted to be taken at any meeting of the Board or of any committee thereof may be taken without a meeting if all members of the Board or of such committee, as the case may be, consent thereto in writing or by electronic transmission, and such consent or consents are filed with the minutes of the Board or of such committee.

Section 7.06. Governing Law. To the extent not inconsistent with applicable Federal banking statutes and regulations, or safety and sound banking practice, the Bank shall follow the

corporate governance procedures, including indemnification standards, of the General Corporation Law of the State of Delaware, as amended (the "General Corporation Law").

Section 7.07. Safety and Soundness of the Bank. Directors and management have a duty to preserve the safety and soundness of the Bank. Directors and management should not let the Bank's interests be subordinated to the interests of the parent holding company in matters that impact the Bank's risk profile in such a way as to jeopardize the safety and soundness of the Bank.

ARTICLE VIII

Emergency By-laws

Section 8.01. Emergency By-Laws. This Article VIII shall be operative during any emergency resulting from an attack on the United States or on a locality in which the Bank conducts its business or customarily holds meetings of its Board or its shareholders, or during any nuclear or atomic disaster, or during the existence of any catastrophe or other similar emergency condition (including without limitation apparent terrorist activity or the imminent threat of such activity, chemical and biological attacks, natural disasters, or other hazards or causes commonly known as acts of God), as a result of which a quorum of the Board or the Executive Committee thereof cannot readily be convened for action (an "Emergency"), notwithstanding any different or conflicting provisions in the preceding Articles of these By-Laws, the Articles of Association or the General Corporation Law. To the extent not inconsistent with the provisions of this Article VIII, the By-Laws provided in the other Articles of these By-Laws and the provisions of the Articles of Association shall remain in effect during such Emergency and upon termination of such Emergency, the provisions of this Article VIII shall cease to be operative.

Section 8.02. Meetings. During any Emergency, a meeting of the Board, or any committee thereof, may be called by the Chairman or any other member of the Board or the Chief Executive Officer, or any member of the Corporation's Operating Committee (each, a "Designated Officer" and collectively, the "Designated Officers", and as a committee, the "Operating Committee"), or the Secretary. Notice of the time and place of any meeting of the Board or any committee thereof during an Emergency shall be given by any available means of communication by the individual calling the meeting to such of the directors and/or Designated Officers who shall be deemed to be directors of the Bank for purposes of obtaining a quorum during an Emergency if a quorum of directors cannot otherwise be obtained during such Emergency, in each case, as it may be feasible to reach. Such notice shall be given at such time in advance of the meeting as, in the judgment of the individual calling the meeting, circumstances permit.

Section 8.03. Quorum. At any meeting of the Board, or any committee thereof, called in accordance with Section 8.02 above, the presence of one director shall constitute a quorum for the transaction of business. Vacancies on the Board, or any committee thereof, may be filled by a majority vote of the directors in attendance at the meeting. In the event that no directors are able to attend the meeting of the Board, then the Designated Officers in attendance shall serve as directors for the meeting, without any additional quorum requirement and will have full powers to act as directors of the Bank for such meeting.

Section 8.04. Amendments. At any meeting called in accordance with Section 8.02 above, the Board or a committee of the Board, as the case may be, may modify, amend or add to the provisions of this Article VIII so as to make any provision that may be practical or necessary for the circumstances of the Emergency.

Section 8.05. Management Contingency Plan. During an Emergency, the Bank shall be managed by the Operating Committee under the direction of the Corporation's Chief Executive Officer. In the absence of the Corporation's Chief Executive Officer or his or her successor, the Operating Committee shall act under the direction of the Operating Committee member with the longest tenure with the Corporation.

Section 8.06. Liability. No officer, director or employee of the Bank acting in accordance with the provisions of this Article VIII shall be liable except for willful misconduct.

Section 8.07. Repeal or Change. The provisions of this Article VIII shall be subject to repeal or change by further action of the Board or by action of the shareholders, but no such repeal or change shall modify the provisions of Section 8.06 of this Article VIII with regard to action taken prior to the time of such repeal or change.

Section 8.08. Termination of Emergency. The provisions of this Article VIII shall cease to be operative upon the termination of the Emergency as determined by a quorum of the Board or the Executive Committee thereof in accordance with Sections 2.08 and 3.01, respectively, of these By-Laws.