Nuveen Proxy Voting Guidelines

I. Introduction

Applicability

These Guidelines apply to Nuveen associates acting on behalf of Nuveen Asset Management, LLC ("NAM"), Teachers Advisors, LLC ("TAL") and TIAA-CREF Investment Management, LLC ("TCIM") (each an "Adviser" and collectively referred to as the "Advisers")

Our voting practices are guided by our fiduciary obligations to our clients. These Guidelines set forth the manner in which the Advisers intend to vote on proxy matters involving publicly traded portfolio companies held in client portfolios, and serve to assist clients, portfolio companies and other interested parties in understanding how the Advisers intend to vote on proxy-related issues.

We vote proxies in accordance with what we believe is in the best interest of our clients. In making those decisions, we are principally guided by enhancing long-term shareholder value, and may take into account many factors, including input from our investment teams and third-party research.

As indicated in these Guidelines, we monitor Portfolio Companies' environmental, social and governance (ESG) practices in an effort to ensure that boards consider these factors in the context of their strategic deliberations consistent with the aim of preserving and enhancing long-term shareholder value. It is our belief that a one-size-fits-all approach to proxy voting is not appropriate and we may vote differently on the same proposal given the Portfolio Company's individual circumstances. The Guidelines are not exhaustive and do not necessarily dictate how the Advisers will ultimately vote with respect to any proxy proposal.

The Guidelines are implemented by Nuveen's Stewardship Group and applied in consideration of the facts and circumstances of the particular proxy proposal. The Stewardship Group relies on its professional judgment informed by proprietary research and reports provided by various third-party research providers. The portfolio managers of the Advisers maintain the ultimate decision-making authority with respect to how proxies will be voted and may determine to vote contrary to the Guidelines if such portfolio manager determines it is in the best interest of the respective Adviser's clients to do so. The rationale for votes submitted contrary to the Guidelines will be documented and maintained.

The Guidelines are applicable to any publicly traded operating company held in an account that is managed by an Adviser or a Nuveen Affiliated Entity. For the avoidance of doubt, Portfolio Company excludes investment companies.

II. Accountability and Transparency

Board of Directors

ELECT DIRECTORS

General Policy: We generally vote in favor of the board's nominees but will consider withholding or voting against some or all directors in the following circumstances:

- When we conclude that the actions of directors are unlawful, unethical, negligent, or do not meet fiduciary standards of care and loyalty or are otherwise not in the best interest of shareholders. Such actions would include:
  - Egregious compensation practices,
  - Lack of responsiveness to a failed vote,
  - Unequal treatment of shareholders,
  - Adoption of inappropriate antitakeover devices, or
  - When a director has consistently failed to attend board and committee meetings without an appropriate rationale being provided.

- Independence
  - When board independence is not in line with local market regulations or best practices,
  - When a member of executive management sits on a key board committee that should be composed of only independent directors, or
  - When directors have failed to disclose, resolve or eliminate conflicts of interest that affect their decisions.

- Board Refreshment
  - When there is insufficient representation of difference backgrounds, experiences, and perspectives on the board, and the company has not demonstrated its commitment to making the board more inclusive and reflective of a broad range of characteristics, or
  - When we determine that director tenure is excessive and there has been no recent board refreshment.

CONTESTED ELECTIONS

General Policy: We will support the candidates we believe will represent the best interests of shareholders.

MAJORITY VOTE FOR THE ELECTION OF DIRECTORS

General Policy: We generally support shareholder resolutions asking that companies amend their governance documents to provide for director election by majority vote.

ESTABLISH SPECIFIC BOARD COMMITTEES

General Policy: We generally vote against shareholder resolutions asking the company to establish specific board committees unless we believe specific circumstances dictate otherwise.

ANNUAL ELECTION OF DIRECTORS

General Policy: We generally support shareholder resolutions asking that each member of the board of a publicly traded operating company stand for re-election annually.

CUMULATIVE VOTING

General Policy: We generally do not support proposals asking that shareholders be allowed to cumulate votes in director elections, as this practice may encourage the election of special interest directors.

SEPARATION OF CHAIRMAN AND CHIEF EXECUTIVE OFFICER

General Policy: We will consider supporting shareholder resolutions asking that the roles of chairman and CEO be separated when we believe the company's board structure and operation has insufficient features of independent board leadership, such as the lack of a lead independent director. In addition, we

may also support resolutions on a case-by- case basis where we believe, in practice, that there is not a bona-fide lead independent director acting with robust responsibilities or the company's ESG practices or business performance suggest a material deficiency in independent influence into the company's strategy and oversight.

Shareholder Rights

PROXY ACCESS

General Policy: We will consider on a case-by-case basis shareholder proposals asking that the company implement a form of proxy access. In making our voting decision, we will consider several factors, including, but not limited to: current performance of the company, minimum filing thresholds, holding periods, number of director nominees that can be elected, existing governance issues and board/management responsiveness to material shareholder concerns.

RATIFICATION OF AUDITOR

General Policy: We will generally support the board's choice of auditor and believe that the auditor should be elected annually. However, we will consider voting against the ratification of an audit firm where non-audit fees are excessive, where the firm has been involved in conflict of interest or fraudulent activities in connection with the company's audit, where there has been a material restatement of financials or where the auditor's independence is questionable.

SUPERMAJORITY VOTE REQUIREMENTS

General Policy: We will generally support shareholder resolutions asking for the elimination of supermajority vote requirements.

DUAL-CLASS COMMON STOCK AND UNEQUAL VOTING RIGHTS

General Policy: We will generally support shareholder resolutions asking for the elimination of dual classes of common stock or other forms of equity with unequal voting rights or special privileges.

RIGHT TO CALL A SPECIAL MEETING

General Policy: We will generally support shareholder resolutions asking for the right to call a special meeting. However, we believe a 25% ownership level is reasonable and generally would not be supportive of proposals to lower the threshold if it is already at that level.

RIGHT TO ACT BY WRITTEN CONSENT

General Policy: We will consider on a case-by-case basis shareholder resolutions requesting the right to act by written consent.

ANTITAKEOVER DEVICES (POISON PILLS)

General Policy: We will consider on a case-by-case basis proposals relating to the adoption or rescission of antitakeover devices with attention to the following criteria:

- Whether the company has demonstrated a need for antitakeover protection,
- Whether the provisions of the device are in line with generally accepted governance principles,
- Whether the company has submitted the device for shareholder approval, or
- Whether the proposal arises in the context of a takeover bid or contest for control.

We will generally support shareholder resolutions asking to rescind or put to a shareholder vote antitakeover devices that were adopted without shareholder approval.

REINCORPORATION

General Policy: We will evaluate on a case-by-case basis proposals for reincorporation taking into account the intention of the proposal and the established laws of the new domicile and jurisprudence of the target domicile. We will not support the proposal if we believe the intention is to take advantage of laws or judicial interpretations that provide antitakeover protection or otherwise reduce shareholder rights.

CORPORATE POLITICAL INFLUENCE

General Policies:

- We will generally support reasonable shareholder resolutions seeking disclosure or reports relating to a company's direct political contributions, including board oversight procedures.
- We will generally support reasonable shareholder resolutions seeking disclosure or reports relating to a company's charitable contributions and other philanthropic activities.
- We may consider not supporting shareholder resolutions that appear to promote a political agenda that is contrary to the long-term health of the corporation.
- We will evaluate on a case-by-case basis shareholder resolutions seeking disclosure of a company's lobbying expenditures.

CLOSED-END FUNDS

We recognize that many exchange-listed closed-end funds ("CEFs") have adopted particular corporate governance practices that deviate from certain policies set forth in the Guidelines. We believe that the distinctive structure of CEFs can provide important benefits to investors but leaves CEFs uniquely vulnerable to opportunistic traders seeking short-term gains at the expense of long-term shareholders. Thus, to protect the interests of their long-term shareholders, many CEFs have adopted measures to defend against attacks from short-term oriented activist investors. As such, in light of the unique nature of CEFs and their differences in corporate governance practices from operating companies, we will consider on a case-by-case basis proposals involving the adoption of defensive measures by CEFs. This is consistent with our approach to proxy voting that recognizes the importance of case-by-case analysis to ensure alignment with investment team views and voting in accordance with the best interest of our shareholders.

Compensation Issues

ADVISORY VOTES ON EXECUTIVE COMPENSATION (SAY ON PAY)

General Policy: We will consider on a case-by-case basis the advisory vote on executive compensation (say on pay). We expect well-designed plans that clearly demonstrate the alignment between pay and performance, and we encourage companies to be responsive to low levels of support by engaging with shareholders. We also prefer that companies offer an annual non-binding vote on executive compensation. In absence of an annual vote, companies should clearly articulate the rationale behind offering the vote less frequently.

We generally note the following red flags when evaluating executive compensation plans:

- ***Undisclosed or Inadequate Performance Metrics:*** We believe that performance goals for compensation plans should be disclosed meaningfully. Performance hurdles should not be too easily attainable. Disclosure of these metrics should enable shareholders to assess whether the plan will drive long-term value creation.

- ***Excessive Equity Grants:*** We will examine a company's past grants to determine the rate at which shares are being issued. We will also seek to ensure that equity is being offered to more than just the top executives at the company. A pattern of excessive grants can indicate failure by the board to properly monitor executive compensation and its costs.

- ***Lack of Minimum Vesting Requirements:*** We believe that companies should establish minimum vesting guidelines for senior executives who receive stock grants. Vesting requirements help influence executives to focus on maximizing the company's long-term performance rather than managing for short-term gain.

- ***Misalignment of Interests:*** We support equity ownership requirements for senior executives and directors to align their interests with those of shareholders.

- ***Special Award Grants:*** We will generally not support mega-grants. A company's history of such excessive grant practices may prompt us to vote against the stock plans and the directors who approve them. Mega-grants include equity grants that are excessive in relation to other forms of compensation or to the compensation of other employees and grants that transfer disproportionate value to senior executives without relation to their performance. We also expect companies to provide a rationale for any other one-time awards such as a guaranteed bonus or a retention award.

- ***Excess Discretion:*** We will generally not support plans where significant terms of awards — such as coverage, option price, or type of awards — are unspecified, or where the board has too much discretion to override minimum vesting or performance requirements.

- ***Lack of Clawback Policy:*** We believe companies should establish clawback policies that permit recoupment from any senior executive who received compensation as a result of defective financial reporting, or whose behavior caused financial harm to shareholders or reputational risk to the company.

EQUITY-BASED COMPENSATION PLANS

General Policy: We will review equity-based compensation plans on a case-by-case basis, giving closer scrutiny to companies where plans include features that are not performance-based or where potential dilution or burn rate total is excessive. As a practical matter, we recognize that more dilutive broad-based plans may be appropriate for human-capital intensive industries and for small- or mid- capitalization firms and start-up companies.

We generally note the following red flags when evaluating equity incentive plans:

- ***Evergreen Features:*** We will generally not support option plans that contain evergreen features, which reserve a specified percentage of outstanding shares for award each year and lack a termination date.

- ***Reload Options:*** We will generally not support reload options that are automatically replaced at market price following exercise of initial grants.

- ***Repricing Options:*** We will generally not support plans that authorize repricing. However, we will consider on a case-by-case basis management proposals seeking shareholder approval to reprice options. We are likely to vote in favor of repricing in cases where the company excludes named executive officers and board members and ties the repricing to a significant reduction in the number of options.

- ***Undisclosed or Inappropriate Option Pricing:*** We will generally not support plans that fail to specify exercise prices or that establish exercise prices below fair market value on the date of grant.

GOLDEN PARACHUTES

General Policy: We will vote on a case-by-case basis on golden parachute proposals, taking into account the structure of the agreement and the circumstances of the situation. However, we would prefer to see a double trigger on all change-of-control agreements and no excise tax gross-up.

SHAREHOLDER RESOLUTIONS ON EXECUTIVE COMPENSATION

General Policy: We will consider on a case-by-case basis shareholder resolutions related to specific compensation practices. Generally, we believe specific practices are the purview of the board.

III. Guidelines for ESG Shareholder Resolutions

We generally support shareholder resolutions seeking reasonable disclosure of the environmental or social impact of a company's policies, operations or products. We believe that a company's management and directors should determine the strategic impact of environmental and social issues and disclose how they are dealing with these issues to mitigate risk and advance long-term shareholder value.

Environmental Issues

CLIMATE CHANGE
General Policy: We will generally support reasonable shareholder resolutions seeking disclosure of greenhouse gas emissions, the impact of climate change on a company's business activities and products and strategies designed to reduce the company's long-term impact on the global climate.

USE OF NATURAL RESOURCES
General Policy: We will generally support reasonable shareholder resolutions seeking disclosure or reports relating to a company's use of natural resources, the impact on its business of declining resources and its plans to improve the efficiency of its use of natural resources.

IMPACT ON ECOSYSTEMS
General Policy: We will generally support reasonable shareholder resolutions seeking disclosure or reports relating to a company's initiatives to reduce any harmful impacts or other hazards to local, regional or global ecosystems that result from its operations or activities.

ANIMAL WELFARE
General Policy: We will generally support reasonable shareholder resolutions asking for reports on the company's impact on animal welfare.

Issues Related to Customers

PRODUCT RESPONSIBILITY
General Policy: We will generally support reasonable shareholder resolutions seeking disclosure relating to the quality, safety and impact of a company's goods and services on the customers and communities it serves.

Issues Related to Employees and Suppliers

HUMAN CAPITAL
General Policies:

- We will generally support reasonable shareholder resolutions seeking disclosure or reports relating to a company's nondiscrimination policies and practices, or seeking to implement such policies, including equal employment opportunity standards.

- We will generally support reasonable shareholder resolutions seeking disclosure or reports relating to a company's workforce, board composition in terms of varied backgrounds and perspectives, and gender pay equity policies and practices.

GLOBAL LABOR STANDARDS
General Policy: We will generally support reasonable shareholder resolutions seeking a review of a company's labor standards and enforcement practices, as well as the establishment of global labor policies based upon internationally recognized standards.

Issues Related to Communities

CORPORATE RESPONSE TO HEALTH RISKS
General Policy: We will generally support reasonable shareholder resolutions seeking disclosure or reports relating to significant public health impacts resulting from a company operations and products, as well as the risks to a company's operations and long-term growth.

GLOBAL HUMAN RIGHTS CODES OF CONDUCT

General Policy: We will generally support reasonable shareholder resolutions seeking a review of a company's human rights standards and the establishment of global human rights policies, especially regarding company operations in conflict zones or areas of weak governance.

Nuveen Asset Management, LLC, Teachers Advisors, LLC, and TIAA-CREF Investment Management, LLC are SEC registered investment advisers and subsidiaries of Nuveen, LLC

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