Putnam Investments Proxy Voting Guidelines

The proxy voting guidelines below summarize Putnam's positions on various issues of concern to investors and indicate how client portfolio securities will be voted on proposals dealing with a particular issue. The proxy voting service is instructed to vote all proxies relating to client portfolio securities in accordance with these guidelines, except as otherwise instructed by the Proxy Voting Team.

Putnam's voting policies are rooted in our views that (1) strong, independent corporate governance is important to long-term company financial performance, and (2) long-term investors' active engagement with company management, including through the proxy voting process, strengthens issuer accountability and overall market discipline, potentially reducing risk and improving returns over time. Our voting program is offered as a part of our investment management services, at no incremental fee to Putnam, and, while there can be no guarantees, it is intended to offer potential investment benefits over a long-term horizon. Our voting policies are designed with investment considerations in mind, not as a means to pursue particular political, social, or other goals. As a result, we may not support certain proposals whose costs to the issuer (including implementation costs, practicability, and other factors), in Putnam's view, outweigh their investment merits.

These proxy voting policies are intended to be decision-making guidelines. The guidelines are not exhaustive and do not include all potential voting issues. In addition, as contemplated by and subject to Putnam's Proxy Voting Procedures, because proxy issues and the circumstances of individual companies are so varied, portfolio teams may recommend votes that may vary from the general policy choices set forth in the guidelines.

The following guidelines are grouped according to the types of proposals generally presented to shareholders. Part I deals with proposals which have been approved and recommended by a company's board of directors. Part II deals with proposals submitted by shareholders for inclusion in proxy statements. Part III addresses unique considerations pertaining to non-US issuers.

I. Board-Approved Proposals

Proxies will be voted **for** board-approved proposals, except as follows:

A. Matters Relating to the Board of Directors

Uncontested Election of Directors

The board of directors has the important role of overseeing management and its performance on behalf of shareholders. Proxies will be voted **for** the election of the company's nominees for directors (and/or subsidiary directors) and **for** board-approved proposals on other matters relating to the board of directors (provided that such nominees and other matters have been approved by an independent nominating committee), except as follows:

- Putnam will **withhold votes** from the entire board of directors if:

- The board does not have a majority of independent directors,

- The board does not have nominating, audit and compensation committees composed solely of independent directors, or

- The board has more than 15 members or fewer than five members, absent special circumstances.

- Putnam may refrain from withholding votes from the board if insufficient key committee independence is due to director resignation, change in board structure, or other specific circumstances, provided that the company has stated (for example in an 8-K), or it can otherwise be determined that, the board will address committee composition to ensure compliance with the applicable corporate governance code in a timely manner after the shareholder meeting and the company has a history of appropriate board independence.

Unless otherwise indicated, for the purposes of determining whether a board has a majority of independent directors and independent nominating, audit, and compensation committees, an independent director is a director who (1) meets all requirements to serve as an independent director of a company under the final NYSE Corporate Governance Rules (e.g., no material business relationships with the company and no present or recent employment relationship with the company (including employment of an immediate family member as an executive officer)), and (2) has not accepted directly or indirectly any consulting, advisory, or other compensatory fee (excluding immaterial fees for transactional services as defined by the NYSE Corporate Governance rules) from the company other than in his or her capacity as a member of the board of directors or any board committee. Putnam believes that the receipt of such compensation for services other than service as a director raises significant independence issues.

- Putnam will **withhold votes** from any nominee for director who is considered an independent director by the company and who has received compensation within the last three years from the company for the provision of professional services (e.g., investment banking, consulting, legal or financial advisory fees).

- Putnam will **withhold votes** from any nominee for director who attends fewer than 75% of board and committee meetings. Putnam may refrain from

withholding votes on a **case-by-case** basis if a valid reason for the absence exists, such as illness, personal emergency, potential conflict of interest, etc.

- Putnam will **withhold votes** from any incumbent nominee for director who served on a board that has not acted to implement a policy requested in a shareholder proposal that received the support of a majority of the votes actually cast on the matter at its previous two annual meetings, or

- Putnam will **withhold votes** from any incumbent nominee for director who served on a board that adopted, renewed, or made a material adverse modification to a shareholder rights plan (commonly referred to as a "poison pill") without shareholder approval during the current or prior calendar year. (This is applicable to any type of poison pill, for example, advance-warning type pill, EGM pill, and Trust Defense Plans in Japan.)

  Putnam will refrain from opposing the board members who served at the time of the adoption of the poison pill if the duration is one year or less, if the plan contains other suitable restrictions, or if the company publicly discloses convincing rationale for its adoption and seeks shareholder approval of future renewals of the poison pill. (Suitable restrictions could include but are not limited to, a higher threshold for passive investors. Convincing rationale could include circumstances such as, but not limited to, extreme market disruption or conditions, stock volatility, substantial merger, active investor interest, or takeover attempts.)

- Numerous studies of gender diversity on boards have shown that diverse boards are associated, over the long term, with, among other things, higher financial returns and lower volatility. Putnam will **withhold votes** from the chair of the Nominating Committee if:

  - there are no women on the board, or
  - in the case of a board of seven members or more, there are fewer than two women on the board, or
  - there is no apparent racial or ethnic diversity on the board, and the board has not provided sufficient disclosure regarding its plans to achieve racial or ethnic diversity.

- Putnam will **withhold votes** from the Nominating Committee Chair for companies that have not provided any disclosure of both the board's diversity (e.g., race or ethnicity) at the aggregate board or individual director level and the company's policies, or plans to establish such policies, regarding the consideration of diversity in identifying director nominees. Putnam expects companies to provide both disclosure of diversity within their current board composition as well as its policies regarding its approach to board diversity. (Note: Gender diversity is addressed under a separate guideline.)

Putnam is concerned about over-committed directors. In some cases, directors may serve on too many boards to make a meaningful contribution. This may be particularly true for senior executives of public companies (or other directors with substantially full-time employment) who serve on more than a few outside boards.

- Putnam will vote **against** any non-executive nominee for director who serves on more than four (4) public company boards, except where Putnam would otherwise be withholding votes for the entire board of directors. For the purpose of this guideline, boards of affiliated registered investment companies and other similar entities such as UCITS will count as one board. Generally, Putnam will withhold support from directors serving on more than four unaffiliated public company boards, although an exception may be made in the case of a director who represents an investing firm with the sole purpose of managing a portfolio of investments that includes the company.

- Putnam will **withhold** votes from any nominee for director who serves as an executive officer of any public company ("home company") while serving on more than two (2) public company board**s** other than the home company board. (Putnam will withhold votes from the nominee at each company where Putnam client portfolios own shares.) In addition, if Putnam client portfolios are shareholders of the executive's home company, Putnam will withhold votes from members of the company's governance committee. For the purpose of this guideline, boards of affiliated registered investment companies and other similar entities such as UCITS will count as one board.

- Putnam will **withhold votes** from any nominee for director of a public company (Company A) who is employed as a senior executive of another public company (Company B) if a director of Company B serves as a senior executive of Company A (commonly referred to as an "interlocking directorate").

Board independence depends not only on its members' individual relationships, but also the board's overall attitude toward management. Independent boards are committed to good corporate governance practices and, by providing objective independent judgment, enhancing shareholder value. Putnam may withhold votes on a case-by-case basis from some or all directors that, through their lack of independence, have failed to observe good corporate governance practices or, through specific corporate action, have demonstrated a disregard for the interest of shareholders.

Note: Designation of executive director is based on company disclosure.

- Putnam will vote **against** proposals that provide that a director may be removed only for cause. Putnam will generally vote **for** proposals that permit the removal of directors with or without cause.

- Putnam will vote **against** proposals authorizing a board to fill a director vacancy without shareholder approval.

- Putnam will vote on a **case-by-case** basis on subsidiary director nominees if Putnam will be voting against the nominees of the parent company's board.

- Putnam will vote on a **case-by-case** basis for director nominees, including nominees for positions on Supervisory Boards or Supervisory Committees, or similar board entities (depending on board structure), for (re)election when cumulative voting applies.

- Putnam will vote **for** proposals to approve annual directors' fees, except that Putnam will vote on a **case-by-case** basis if Putnam's independent proxy voting service has recommended a vote against such proposal. Additionally, Putnam will vote **for** proposals to approve the grant of equity awards to directors, except that Putnam will consider these proposals on a **case-by-case** basis if Putnam's proxy service provider is recommending a vote against the proposal.

Classified Boards

- Putnam will vote **against** proposals to classify a board, absent special circumstances indicating that shareholder interests would be better served by this structure.

Ratification of Auditors

- Putnam will vote on a **case-by-case** basis on proposals to ratify the selection of independent auditors if there is evidence that the audit firm's independence or the integrity of an audit is compromised. (Otherwise, Putnam will vote **for**.)

Contested Elections of Directors

- Putnam will vote on a **case-by-case** basis in contested elections of directors.

B. Executive Compensation

Putnam will vote on a **case-by-case** basis on board-approved proposals relating to executive compensation, except as follows:

- Putnam will vote **for** stock option and restricted stock plans that will result in an average annual dilution of 1.67% or less (based on the disclosed term of the plan and including all equity-based plans), except where Putnam would otherwise be withholding votes for the entire board of directors in which case Putnam will evaluate the plans on a **case-by-case** basis.

- Putnam will vote **against** stock option and restricted stock plans that will result in an average annual dilution of greater than 1.67% (based on the disclosed term of the plan and including all equity plans).

- Putnam will vote **against** any stock option or restricted stock plan where the company's actual grants of stock options and restricted stock under all equity-based compensation plans during the prior three (3) fiscal years have resulted in an average annual dilution of greater than 1.67%.

    - Additionally, if the annualized dilution cannot be calculated, Putnam will vote **for** plans where the Total Potential Dilution is 5% or less If the annualized dilution cannot be calculated and the Total Potential Dilution exceeds 5%, then Putnam will vote **against**. Note: Such plans must first pass all of Putnam's other screens.

- Putnam will vote proposals to issue equity grants to executives on a **case-by-case** basis.

- Putnam will vote **against** stock option plans that permit replacing or repricing of underwater options (and **against** any proposal to authorize such replacement or repricing of underwater options).

- Putnam will vote **against** stock option plans that permit issuance of options with an exercise price below the stock's current market price.

- Putnam will vote **against** stock option plans/restricted stock plans with evergreen features providing for automatic share replenishment.

- Putnam will vote **for** bonus plans under which payments are treated as performance-based compensation that is deductible under Section 162(m) of the Internal Revenue Code of 1986, as amended, except as follows:

  Vote on a **case-by-case** basis on such proposals if any of the following circumstances exist:

    - the amount per employee under the plan is unlimited, or
    - the maximum award pool is undisclosed, or
    - the incentive bonus plan's performance criteria are undisclosed, or
    - the independent proxy voting service recommends a vote against.

- Putnam will vote in favor of the annual presentation of advisory votes on executive compensation (Say-on-Pay).

- Putnam will generally vote **for** advisory votes on executive compensation (Say-on-Pay). However, Putnam will vote **against** an advisory vote if the company fails (receives an F grade) to effectively link executive compensation to company

performance according to benchmarking performed by the independent proxy voting service.

- Putnam will vote on a **case-by-case** basis if the company receives an F grade by the independent proxy voting service and the recommendation by that service is favorable.

- Additionally, if there is no grade attributed to the company's executive pay, Putnam will generally vote **for**, unless the recommendation of the independent proxy voting service is against, in which case Putnam will review the proposal on a **case-by-case** basis.

- Putnam will vote on a **case-by-case** basis on severance agreements (e.g. golden and tin parachutes).

- Putnam will **withhold** votes from members of a Board of Directors which has approved compensation arrangements Putnam's investment personnel have determined are grossly unreasonable at the next election at which such director is up for re-election.

- Putnam will vote **for** employee stock purchase plans that have the following features: (1) the shares purchased under the plan are acquired for no less than 85% of their market value, (2) the offering period under the plan is 27 months or less, and (3) dilution is 10% or less.

- Putnam will vote **for** Non-qualified Employee Stock Purchase Plans with all the following features:

  1) Broad-based participation (i.e., all employees of the company with the exclusion of individuals with 5 percent or more of beneficial ownership of the company).

  2) Limits on employee contribution, which may be a fixed dollar amount or expressed as a percent of base salary.

  3) Company matching contribution up to 25 percent of employee's contribution, which is effectively a discount of 20 percent from market value.

  4) No discount on the stock price on the date of purchase since there is a company matching contribution.

Putnam will vote **against** Non-qualified Employee Stock Purchase Plans when any of the plan features do not meet the above criteria.

Putnam may vote against executive compensation proposals on a **case-by-case** basis where compensation is excessive by reasonable corporate standards, or where a company

fails to provide transparent disclosure of executive compensation. In voting on proposals relating to executive compensation, Putnam will consider whether the proposal has been approved by an independent compensation committee of the board.

C. Capitalization

Putnam will vote on a **case-by-case** basis on board-approved proposals involving changes to a company's capitalization, except as follows:

- Putnam will vote **for** proposals relating to the authorization of additional common stock, except that Putnam will evaluate such proposals on a **case-by-case** basis if (i) they relate to a specific transaction or to common stock with special voting rights, (ii) the company has a non-shareholder approved poison pill in place, or (iii) the company has had sizeable stock placements to insiders within the past three years at prices substantially below market value without shareholder approval.

- Putnam will vote **for** proposals to effect stock splits (excluding reverse stock splits.)

- Putnam will vote **for** proposals authorizing share repurchase programs, except that Putnam will vote on a **case-by-case basis** if there are concerns that there may be abusive practices related to the share repurchase programs.

D. Acquisitions, Mergers, Reorganizations and Other Transactions

Putnam will vote on a **case-by-case** basis on business transactions such as acquisitions, mergers, reorganizations involving business combinations, liquidations and sale of all or substantially all of a company's assets.

E. Anti-Takeover Measures

Putnam will vote **against** board-approved proposals to adopt anti-takeover measures such as supermajority voting provisions, issuance of blank check preferred stock, the creation of a separate class of stock with disparate voting rights, control share acquisition provisions, targeted share placements, and ability to make greenmail payments, except as follows:

- Putnam will vote on a **case-by-case** basis on proposals to ratify or approve shareholder rights plans.

- Putnam will vote on a **case-by-case** basis on proposals to adopt fair price provisions.

- Putnam will vote on a **case-by-case** basis on proposals to issue blank check preferred stock in the case of REITs (only).

- Putnam will generally vote **for** proposals that enable or expand shareholders' ability to take action by written consent.

- Putnam will vote on a **case-by-case** basis on proposals to increase shares of an existing class of stock with disparate voting rights from another share class.

- Putnam will vote on a **case-by-case** basis on **shareholder or board-approved** proposals to eliminate supermajority voting provisions at controlled companies (companies in which an individual or a group voting collectively holds a majority of the voting interest).

- Putnam will vote on a **case-by-case basis** on **board-approved** proposals to adopt supermajority voting provisions at controlled companies (companies in which an individual or a group voting collectively holds a majority of the voting interest).

- Putnam will vote on a **case-by-case** basis on proposals to issue blank check preferred stock if appropriate "*de-clawed"* language is present. Specifically, appropriate *de-clawed* language will include cases where the Company states (i.e., through 8-K, proxy statement or other public disclosure) it will not use the preferred stock for anti-takeover purposes, or in order to implement a shareholder rights plan, or discloses a commitment to submit any future issuances of preferred stock to be used in a shareholder rights plan/anti-takeover purpose to a shareholder vote prior to its adoption.

F. Other Business Matters

Putnam will vote **for** board-approved proposals approving routine business matters such as changing the company's name and procedural matters relating to the shareholder meeting, except as follows:

- Putnam will vote on a **case-by-case** basis on proposals to amend a company's charter or bylaws (except for charter amendments necessary or to effect stock splits, to change a company's name, to authorize additional shares of common stock or other matters which are considered routine (for example, director age or term limits), technical in nature, fall within Putnam's guidelines (for example, regarding board size or virtual meetings), are required pursuant to regulatory and/or listing rules, have little or no economic impact or will not negatively impact shareholder rights).

- Additionally, Putnam believes the bundling of items, whether the items are related or unrelated, is generally not in shareholders' best interest. We may vote **against** the entire bundled proposal if we would normally vote against

any of the items if presented individually. In these cases, we will review the bundled proposal on a **case-by-case** basis.

- Putnam generally supports quorum requirements if the level is set high enough to ensure a broad range of shareholders is represented in person or by proxy but low enough so that the Company can transact necessary business. Putnam will vote on a **case-by-case** basis on proposals seeking to change quorum requirements; however, Putnam will normally support proposals that seek to comply with market or exchange requirements.

- Putnam will vote on a **case-by-case** basis on proposals seeking to change a company's state of incorporation. However, Putnam will vote **for** mergers and reorganizations involving business combinations designed solely to reincorporate a company in Delaware.

- Putnam will vote **against** authorization to transact other unidentified, substantive business at the meeting.

- Putnam will vote **against** proposals where there is a lack of information to make an informed voting decision.

- Putnam will vote as follows on proposals to adjourn shareholder meetings:

  If Putnam is withholding support for the board of the company at the meeting, any proposal to adjourn should be referred for **case-by-case** analysis.

  If Putnam is not withholding support for the board, Putnam will vote in favor of adjourning, unless the vote concerns an issue that is being referred back to Putnam for case-by-case review. Under such circumstances, the proposal to adjourn should also be referred to Putnam for **case-by-case** analysis.

- Putnam will vote **against** management proposals to adopt a specific state's courts or a specific U.S. district court as the exclusive forum for certain disputes, except that Putnam will vote **for** proposals adopting the State of Delaware, or the Delaware Chancery Court, as the exclusive forum, for corporate law matters for issuers incorporated in Delaware. Requiring shareholders to bring actions solely in one state may discourage the pursuit of derivative claims by increasing their difficulty and cost. However, Putnam's guideline recognizes the expertise of the Delaware state court system in handling disputes involving Delaware corporations. In addition, Putnam will **withhold votes** from the chair of the Nominating/Governance committee if a company amends its Bylaws or takes other actions to adopt a specific state's courts (other than Delaware courts, for issuers incorporated in Delaware) or a specific U.S. district court as the exclusive forum for certain disputes without shareholder approval.

- Putnam will vote on a **case-by-case** basis on management proposals seeking to adopt a bylaw amendment allowing the company to shift legal fees and costs to unsuccessful plaintiffs in intra-corporate litigation (fee-shifting bylaw). Additionally, Putnam will **withhold votes** from the Chair of the Nominating/Governance committee if a company adopts a fee-shifting bylaw amendment without shareholder approval.

- Putnam will support management/shareholder proxy access proposals as long as the proposals align with the following principles for a shareholder (or up to 20 shareholders together as a group) to receive proxy access:

  1) The required minimum aggregate ownership of the Company's outstanding common stock is no greater than 3%;
  2) The required minimum holding period for the shareholder proponent(s) is no greater than two years; and
  3) The shareholder(s) are permitted to nominate at least 20% of director candidates for election to the board.

  Proposals requesting shares be held for 3 years will be reviewed on a **case-by-case** basis. Putnam will vote **against** proposals requesting shares be held for more than three years. Proposals that meet Putnam's stated criteria and include other requirements relating to issues such as, but not limited to, shares on loan or compensation agreements with nominees, will be reviewed on a **case-by-case** basis.

  Additionally, shareholder proposals seeking an amendment to a company's proxy access policy which include any one of the supported criteria under Putnam's guidelines, for example, a 2-year holding period for shareholders, will be reviewed on a **case-by-case** basis.

- Putnam supports management / shareholder proposals giving shareholders the right to call a special meeting as long as the ownership requirement in such proposals is at least **15%** of the company's outstanding common stock and not more than **25%**.

  In general, Putnam will vote **for** management or shareholder proposals to reduce the ownership requirement below a company's existing threshold, as long as the new threshold is at least **15%** and not greater than **25%** of the company's outstanding common stock.

  Putnam will vote **against** any proposal with an ownership requirement exceeding **25%** of the company's common stock or an ownership requirement that is less than **15%** of the company's outstanding common stock.

  In cases where there are competing management and shareholder proposals giving shareholders the right to call a special meeting, Putnam will generally vote **for** the proposal which has the lower minimum shareholder ownership threshold, as long

as that threshold is within Putnam's recommended minimum/maximum thresholds. If only one of the competing proposals has a threshold that falls within Putnam's threshold range, Putnam will normally support that proposal as long as it represents an improvement (reduction) from the previous requisite ownership level. Putnam will normally vote **against** both proposals if neither proposal has a requisite ownership level between **15%** and **25%** of the company's outstanding common stock**.**

- Putnam will generally vote **for** management or shareholder proposals to allow a company to hold virtual-only or hybrid shareholder meetings or to amend its articles/charter/by-laws to allow for virtual-only or hybrid shareholder meetings, provided the proposal does not preclude in-person meetings (at any given time), and does not otherwise limit or impair shareholder participation; and if the company has provided clear disclosure to ensure that shareholders can effectively participate in virtual-only shareholder meetings and meaningfully communicate with company management and directors. Additionally, Putnam may consider the rationale of the proposal and whether there have been concerns about the company's previous meeting practices.

  Disclosure should address the following:
  - the ability of shareholders to ask questions during the meeting
    - including time guidelines for shareholder questions
    - rules around what types of questions are allowed
    - and rules for how questions and comments will be recognized and disclosed to meeting participants
    - the manner in which appropriate questions received during the meeting will be addressed by the board
  - procedures, if any, for posting appropriate questions received during the meeting and the company's answers on the investor page of their website as soon as is practical after the meeting
  - technical and logistical issues related to accessing the virtual meeting platform; and
  - procedures for accessing technical support to assist in the event of any difficulties accessing the virtual meeting

  Putnam may vote against proposals that do not meet these criteria.

  Additionally, Putnam may **withhold votes** from the Chair of the Governance Committee when the board is planning to hold a virtual-only shareholder meeting and the company has not provided sufficient disclosure (as noted above) or shareholder access to the meeting.

- Putnam will vote **for** proposals to approve a company's board-approved climate transition action plan ("say on climate" proposals in which the company's board proposes that shareholders indicate their support for the company's plan), unless

the proxy voting service has recommended a vote against the proposal, in which case Putnam will vote on a **case-by-case** basis on the proposal.

- Putnam will vote on a **case-by-case** basis on board-approved proposals that conflict with shareholder proposals.

II. Shareholder Proposals

Shareholder proposals are non-binding votes that are often opposed by management. Some proposals relate to matters that are financially immaterial to the company's business, while others may be impracticable or costly for a company to implement. At the same time, well-crafted shareholder proposals may serve the purpose of raising issues that are material to a company's business for management's consideration and response. Putnam seeks to weigh the costs of different types of proposals against their expected financial benefits. More specifically:

Putnam will vote **in accordance with the recommendation of the company's board of directors** on all shareholder proposals, except as follows:

- Putnam will vote **for** shareholder proposals that are consistent with Putnam's proxy voting guidelines for board-approved proposals.

- Putnam will vote **for** shareholder proposals to declassify a board, absent special circumstances which would indicate that shareholder interests are better served by a classified board structure.

- Putnam will vote **for** shareholder proposals to require shareholder approval of shareholder rights plans.

- Putnam will vote **for** shareholder proposals asking that director nominees receive support from holders of a majority of votes cast or a majority of shares outstanding of the company in order to be (re)elected.

- Putnam will review on a **case-by-case** basis, shareholder proposals requesting that the board adopt a policy whereby, in the event of a significant restatement of financial results or significant extraordinary write-off, the board will recoup, to the fullest extent practicable, for the benefit of the company, all performance-based bonuses or awards that were made to senior executives based on having met or exceeded specific performance targets to the extent that the specified performance targets were not met.

- Putnam will vote **for** shareholder proposals urging the board to seek shareholder approval of any future supplemental executive retirement plan ("SERP"), or individual retirement arrangement, for senior executives that provides credit for

additional years of service not actually worked, preferential benefit formulas not provided under the company's tax-qualified retirement plans, accelerated vesting of retirement benefits or retirement perquisites and fringe benefits that are not generally offered to other company employees. (Implementation of this policy shall not breach any existing employment agreement or vested benefit.)

- Putnam will vote **for** shareholder proposals requiring companies to report on their executive retirement benefits. (Deferred compensation, split-dollar life insurance, SERPs and pension benefits)

- Putnam will vote **for** shareholder proposals requesting that a company establish a pay-for-superior-performance standard whereby the company discloses defined financial and/or stock price performance criteria (along with the detailed list of comparative peer group) to allow shareholders to sufficiently determine the pay and performance correlation established in the company's performance-based equity program. In addition, no multi-year award should be paid out unless the company's performance exceeds, during the current CEO's tenure (three or more years), its peer median or mean performance on selected financial and stock price performance criteria.

- Putnam will vote **for** shareholder proposals urging the board to disclose in a separate report to shareholders, the Company's relationships with its executive compensation consultants or firms. Specifically, the report should identify the entity that retained each consultant (the company, the board or the compensation committee) and the types of services provided by the consultant in the past five years (non-compensation-related services to the company or to senior management) and a list of all public company clients where the Company's executives serve as a director.

- Putnam will vote **for** shareholder proposals requiring companies to accelerate vesting of equity awards under management severance agreements only if both of the following conditions are met:

  - the company undergoes a change in control, and

  - the change in control results in the termination of employment for the person receiving the severance payment.

- Putnam will vote **for** shareholder proposals requiring that the chair's position be filled by an independent director (separate chair/CEO). However, Putnam will vote on a **case-by-case** basis on such proposals when the company's board has a lead-independent director (or already has an independent or separate chair) and Putnam is supporting the nominees for the board of directors.

- Putnam will vote **for** shareholder proposals seeking the submission of golden coffins to a shareholder vote or the elimination of the practice altogether.

- Putnam will vote **for** shareholder proposals seeking a policy that forbids any director who receives more than 25% withhold votes cast (based on for and withhold votes) from serving on any key board committee for two years and asking the board to find replacement directors for the committees if need be.

- Putnam will vote **for** shareholder proposals urging the board to seek shareholder approval of severance agreements (e.g., golden and tin parachutes)

  Putnam will vote on a **case-by-case** basis on approving such compensation arrangements.

- Putnam will vote **for** shareholder proposals requiring companies to make cash payments under management severance agreements only if both of the following conditions are met: the company undergoes a change in control, and the change in control results in the termination of employment for the person receiving the severance payment.

- Putnam will vote on a **case-by-case** basis on shareholder proposals to limit a company's ability to make excise tax gross-up payments under management severance agreements as well as proposals to limit income or other tax gross-up payments.

- Putnam will vote **in accordance with the recommendation of the company's board of directors** on shareholder proposals regarding corporate political spending, unless Putnam is voting against the directors, in which case the proposal would be reviewed on a **case-by-case** basis.

- Putnam will vote on a **case-by-case** basis on shareholder proposals that conflict with board-approved proposals.

Environmental and Social

- Putnam believes that sustainable environmental practices and sustainable social policies are important components of long-term value creation. Companies should evaluate the potential risks to their business operations that are directly related to environmental and social factors (among others). In evaluating shareholder proposals relating to environmental and social initiatives, Putnam takes into account (1) the relevance and materiality of the proposal to the company's business, (2) whether the proposal is well crafted (e.g., whether it references science-based targets, or standard global protocols), and (3) the practicality or reasonableness of implementing the proposal.

  Putnam may support well-crafted and well-targeted proposals that request additional reporting or disclosure on a company's plans to mitigate risk to the company related to the following issues and/or their strategies related to these issues: Environmental issues, including but not limited to, climate change,

greenhouse gas emissions, renewable energy, and broader sustainability issues; and Social issues, including but not limited to, fair pay, employee diversity and development, safety, labor rights, supply chain management, privacy and data security.

Putnam will consider factors such as (i) the industry in which the company operates, (ii) the company's current level of disclosure, (iii) the company's level of oversight, (iv) the company's management of risk arising out of these matters, (v) whether the company has suffered a material financial impact. Other factors may also be considered.

Putnam will consider the recommendation of its third-party proxy service provider and may consider other factors such as third-party evaluations of ESG performance.

Additionally, Putnam may vote on a **case-by-case** basis on proposals which ask a company to take action beyond reporting where our third-party proxy service provider has identified one or more reasons to warrant a vote FOR.

III. Voting Shares of Non-US Issuers

Many non-US jurisdictions impose material burdens on voting proxies. There are three primary types of limits as follows:

(1) Share blocking. Shares must be frozen for certain periods of time to vote via proxy.

(2) Share re-registration. Shares must be re-registered out of the name of the local custodian or nominee into the name of the client for the meeting and, in many cases, then re-registered back. Shares are normally blocked in this period.

(3) Powers of Attorney. Detailed documentation from a client must be given to the local sub-custodian. In many cases Putnam is not authorized to deliver this information or sign the relevant documents.

Putnam's policy is to weigh the benefits to clients from voting in these jurisdictions against the detriments of not doing so. For example, in a share blocking jurisdiction, it will normally not be in a client's interest to freeze shares simply to participate in a non-contested routine meeting. More specifically, Putnam will normally not vote shares in non-US jurisdictions imposing burdensome proxy voting requirements except in significant votes (such as contested elections and major corporate transactions) where directed by portfolio managers.

Putnam recognizes that the laws governing non-US issuers will vary significantly from US law and from jurisdiction to jurisdiction. Accordingly, it may not be possible or even advisable to apply these guidelines mechanically to non-US issuers. However, Putnam

believes that shareholders of all companies are protected by the existence of a sound corporate governance and disclosure framework. Accordingly, Putnam will vote proxies of non-US issuers **in accordance with the foregoing guidelines where applicable**, except as follows:

- Putnam will vote **for** shareholder proposals calling for a majority of the directors to be independent of management.

- Putnam will vote **for** shareholder proposals that implement corporate governance standards similar to those established under U.S. federal law and the listing requirements of U.S. stock exchanges, and that do not otherwise violate the laws of the jurisdiction under which the company is incorporated.

- Putnam will vote on a **case-by-case** basis on proposals relating to (1) the issuance of common stock in excess of 20% of a company's outstanding common stock where shareholders do not have preemptive rights, or (2) the issuance of common stock in excess of 100% of a company's outstanding common stock where shareholders have preemptive rights.

- Putnam will vote **for** proposals to authorize share repurchase programs that are recommended for approval by Putnam's proxy voting service provider; otherwise, Putnam will vote **against** such proposals, except that Putnam will vote on a **case-by-case basis** if there are concerns that there may be abusive practices related to the share repurchase programs.

- Putnam will vote **against** authorization to repurchase shares or issue shares or convertible debt instruments with or without preemptive rights when such authorization can be used as a takeover defense without shareholder approval. Putnam will not apply this policy to a company with a shareholder who controls more than 50% of its voting rights.

- Putnam will generally vote **for** proposals that include debt issuances, however substantive/non-routine proposals, and proposals that fall outside of normal market practice or reasonable standards, will be reviewed on a **case-by-case** basis.

- Putnam will vote **for** board-approved routine, market-practice proposals. These proposals are limited to (1) those issues that will have little or no economic impact, such as technical, editorial, or mandatory regulatory compliance items, (2) those issues that will not adversely affect and/or which clearly improve shareholder rights/values, and which do not violate Putnam's proxy voting guidelines, or (3) those issues that do not seek to deviate from existing laws or regulations. Examples include but are not limited to, related party transactions (non-strategic), profit-and-loss transfer agreements (Germany), authority to increase paid-in capital (Taiwan). Should any unusual circumstances be identified concerning a normally routine issue, such proposals will be referred back to Putnam for internal review.

- Putnam will generally vote **for** proposals regarding amendments seeking to expand business lines or to amend the corporate purpose, provided the proposal would not include a significant or material departure from the company's current business, and/or will provide the company with greater flexibility in the performance of its activities.

- Putnam will normally vote **for** management proposals concerning allocation of income and the distribution of dividends. However, Putnam portfolio teams will override this guideline when they conclude that the proposals are outside the market norms (i.e., those seen as consistently and unusually small or large compared to market practices).

- Putnam will generally vote **for** proposals seeking to adjust the par value of common stock. However, non-routine, substantive proposals will be reviewed on a **case-by-case** basis.

- Putnam will vote **against** proposals that would authorize the company to reduce the notice period for calling special or extraordinary general meetings to less than 21-Days.

- Putnam will generally vote **for** proposals relating to transfer of reserves/increase of reserves (i.e., France, Japan). However, Putnam will vote on a **case-by-case** basis if the proposal falls outside of normal market practice.

- Putnam will generally vote **for** proposals to increase the maximum variable pay ratio. However, Putnam will vote on a **case-by-case** basis if we are voting against a company's remuneration report or if the proposal seeks an increase in excess of 200%.

- Putnam will review stock option plans on a **case-by-case** basis which allow for the options exercise price to be reduced by dividend payments (if the plan would normally pass Putnam's Guidelines).

- Putnam will generally vote **for** requests to provide loan guarantees; however, Putnam will vote on a **case-by-case** basis if the total amount of guarantees is in excess of 100% of the company's audited net assets.

- Putnam will generally support remuneration report/policy proposals (i.e., advisory/binding) where a company's executive compensation is linked directly with the performance of the business and executive. Putnam will generally support compensation proposals which incorporate a mix of reasonable salary and performance based short- and long-term incentives. Companies should demonstrate that their remuneration policies are designed and managed to incentivize and retain executives while growing the company's long-term shareholder value.

Generally, Putnam will vote **against** remuneration report/policy proposals (i.e., advisory/binding) in the following cases:

- Disconnect between pay and performance
- No performance metrics disclosed;
- No relative performance metrics utilized;
- Single performance metric was used and it was an absolute measure;
- Performance goals were lowered when management failed or was unlikely to meet original goals;
- Long Term Incentive Plan is subject to retesting (e.g., Australia);
- Service contracts longer than 12 months (e.g., United Kingdom);
- Allows vesting below median for relative performance metrics;
- Ex-gratia / non-contractual payments have been made (e.g., United Kingdom and Australia);
- Contains provisions to automatically vest upon change-of-control; or
- Other poor compensation practices or structures.
- Pension provisions for new executives is not at the same level as the majority of the wider workforce; pension provisions for incumbent executives are not set to decrease over time (United Kingdom)
- Proposed CEO salary increases are not justifiably appropriate in comparison to wider workforce or rationale for exception increases is not fully disclosed (United Kingdom)

- Putnam will vote on a **case-by-case basis** on bonus payments to executive directors or senior management; however, Putnam will vote **against** payments that include outsiders or independent statutory auditors.

Matters Relating to Board of Directors

Uncontested Board Elections

Asia: China, Hong Kong, India, Indonesia, Philippines, Taiwan and Thailand

- Putnam will **vote against** the entire board of directors if

  - fewer than one-third of the directors are independent directors, or

  - the board has not established audit, compensation and nominating committees each composed of a majority of independent directors, or

  - the chair of the audit, compensation or nominating committee is not an independent director.

Commentary: Companies listed in China (or dual-listed in China and Hong Kong) often have a separate supervisory committee in addition to a standard board of directors containing audit, compensation, and nominating committees. The supervisory committee

provides oversight of the financial affairs of the company and supervises members of the board and management, while the board of directors makes decisions related to the company's business and investment strategies. The supervisory committee normally comprises employee representatives and shareholder representatives. Shareholder representatives are elected by shareholders of the company while employee representatives are elected by the company's staff. Shareholder representatives may be independent or may be affiliated with the company or its substantial shareholders. Current laws and regulations neither provide a basis for evaluation of supervisor independence nor do they require a supervisor to be independent.

- Putnam will generally vote in favor of nominees to the Supervisory Committee.

Australia

- Putnam will vote **against** the entire board of directors if

  - fewer than a majority of the directors are independent, or

  - the board has not established an audit committee composed solely of non-executive directors, a majority of whom, including the chair of the committee (who should not be the board chair), should be independent directors, or

  - the board has not established nominating and compensation committees each composed of a majority of independent, non-executive directors, with an independent chair.

Brazil

- Putnam will vote **against** proposals requesting cumulative voting unless there are more candidates than number of seats available, in which case vote for.

- Putnam will vote **for** proposals for the proportional allocation of cumulative votes if Putnam is supporting the entire slate of nominees. Putnam will vote **against** such proposals if Putnam is not supporting the entire slate.

- Putnam will **abstain** on individual director allocation proposals if Putnam is voting for the proportional allocation of cumulative votes. Putnam will vote on a **case-by-case** basis on individual director allocation proposals if Putnam is voting against the proportional allocation of votes.

- Putnam will vote **for** proposals to cumulate votes of common and preferred shareholders if the nominees are known and Putnam is supporting the applicable nominees; Putnam will vote **against** such proposals if Putnam is not supporting the known nominees, or if the nominees are unknown.

- Putnam will generally vote **against** proposals seeking the recasting of votes for amended slate (as new candidates could be included in the amended slate without prior disclosure to shareholders).

- Putnam will vote **against** proposals regarding instructions if meeting is held on second call if election of directors is part of the recasting as the slate can be amended without (prior) disclosure to shareholders.

- Putnam will vote **against** proposals regarding the casting of minority votes to the candidate with largest number of votes.

Canada

Canadian corporate governance requirements mirror corporate governance reforms that have been adopted by the NYSE and other U.S. national securities exchanges and stock markets. As a result, Putnam will vote on matters relating to the board of directors of Canadian issuers **in accordance with the guidelines applicable to U.S. issuers.**

Commentary: Like the UK's Combined Code on Corporate Governance, the policies on corporate governance issued by Canadian securities regulators embody the "comply and explain" approach to corporate governance. Because Putnam believes that the board independence standards contained in the proxy voting guidelines are integral to the protection of investors in Canadian companies, these standards will be applied in a prescriptive manner.

Continental Europe (ex-Germany)

- Putnam will vote **against** the entire board of directors if

  - fewer than a majority of the directors are independent directors, or

  - the board has not established audit, nominating and compensation committees each composed of a majority of independent directors.

Commentary: An "independent director" under the European Commission's guidelines is one who is free of any business, family or other relationship, with the company, its controlling shareholder or the management of either, that creates a conflict of interest such as to impair his judgment. A "non-executive director" is one who is not engaged in the daily management of the company.

In France, Employee Representatives are employed by the company and represent rank and file employees. These representatives are elected by company employees. The law also provides for the appointment of employee shareholder representatives, if the

employee shareholdings exceed 3% of the share capital. Employee shareholder representatives are elected by the company's shareholders (via general meeting).

Germany

- For companies subject to "co-determination," Putnam will vote **for** the election of nominees to the supervisory board, except:
  - Putnam will vote **against** the Supervisory Board if
    - the board has not established an audit committee comprising an Independent chair.
    - the audit committee chair serves as board chair.
    - the board contains more than two former management board members**.**
  - Putnam will vote **against** the election of a former member of the company's managerial board to chair of the supervisory board.

Commentary: German corporate governance is characterized by a two-tier board system - a managerial board composed of the company's executive officers, and a supervisory board. The supervisory board appoints the members of the managerial board. Shareholders elect members of the supervisory board, except that in the case of companies with a large number of employees, company employees are allowed to elect some of the supervisory board members (one-half of supervisory board members are elected by company employees at companies with more than 2,000 employees; one-third of the supervisory board members are elected by company employees at companies with more than 500 employees but fewer than 2,000). This practice is known as co-determination.

Israel

Non-Controlled Banks: Director elections at Non-Controlled banks are overseen by the Supervisor of the Banks and nominees for election as "other" (non-external) directors and external directors (under Companies Law and Directive 301) are put forward by an external and independent committee. As such,

- Putnam's guidelines regarding board Nominating Committees will not apply
- Putnam will vote on a **case-by-case** on nominees when there are more nominees than seats available.

Italy

Election of directors and statutory auditors:

- Putnam will apply the director guidelines to the majority shareholder supported list and vote accordingly (**for** or **against**) if multiple lists of director candidates are presented. If there is no majority shareholder supported slate of nominees, Putnam will support the shareholder slate of nominees that is recommended for approval by Putnam's service provider.

- Putnam will vote **against** the entire list of director nominees if the list is bundled as one proposal and if Putnam would otherwise be voting against any one director nominee.

- Putnam will generally vote **for** the majority shareholder supported list of statutory auditor nominees.

Note: Pursuant to Italian law, directors and statutory auditors are elected through a slate voting system whereby candidates are presented in lists submitted by shareholders representing a minimum percentage of share capital.

- Putnam will withhold votes from any director not identified in the proxy materials. (Example: Co-opted director nominees.)

Japan

- For companies that have established a U.S.-style corporate governance structure, Putnam will **withhold votes** from the entire board of directors if:

  - the board does not have a majority of outside directors,

  - the board has not established nominating and compensation committees composed of a majority of outside directors,

  - the board has not established an audit committee composed of a majority of independent directors or,

  - the board does not have at least two independent directors for companies with a controlling shareholder.

- For companies that have established a statutory auditor board structure:

  - Putnam will **withhold votes** from the appointment of members of a company's board of statutory auditors if a majority of the members of the board of statutory auditors is not independent.

- For companies that have established a statutory auditor board structure, Putnam will **withhold votes** from the entire board of directors if:

  - the board does not have at least two outside directors or,

  - the board does not have at least two independent directors for companies with a controlling shareholder.

  - Putnam will vote **against** any statutory auditor nominee who attends fewer than 75% of board and committee meeting without valid reasons for the absences (i.e., illness, personal emergency, etc.) (Note that Corporate Law requires disclosure of outsiders' attendance but not that of insiders, who are presumed to have no more important time commitments.)

- For companies that have established an audit committee board structure (one-tier / one committee), Putnam will **withhold votes** from the entire board of directors if:

  - the board does not have at least two outside directors,

  - the board does not have at least two independent directors for companies with a controlling shareholder or,

  - the board has not established an audit committee composed of a majority of independent directors.

Election of Executive Director and Election of Supervisory Director - REIT

REITs have a unique two-tier board structure with generally one or more executive directors and two or more supervisory directors. The number of supervisory directors must be greater than, not equal to, the number of executive directors. Shareholders are asked to vote on both types of directors. Putnam will vote as follows, provided each board of executive / supervisory directors meets legal requirements.

- Putnam will generally vote **for** the election of Executive Director
- Putnam will generally vote **for** the election of Supervisory Directors

Commentary:

Definition of outside director and independent director:
The Japanese Companies Act focuses on two director classifications: Insider or Outsider. An outside director is a director who is not a director, executive, executive director, or employee of the company or its parent company, subsidiaries or affiliates. Further, a director, executive, executive director or employee, who have executive responsibilities, of the company or subsidiaries can regain eligibility ten years after his or her resignation,

provided certain other requirements are met. An outside director is designated as an "independent" director based on the Tokyo Stock Exchange listing rules. An outside director is "independent" if that person can make decisions completely independent from the managers of the company, its parent, subsidiaries, or affiliates and does not have a material relationship with the company (i.e., major client, trading partner, or other business relationship; familial relationship with current director or executive; etc.).

The guidelines have incorporated these definitions in applying the board independence standards above.

Korea

Putnam will **withhold votes** from the entire board of directors if:

- For large companies (i.e., those with assets of at least KRW 2 trillion), the board does not have at least three independent directors or less than a majority of directors are independent directors,

- For small companies (i.e., those with assets of less than KRW 2 trillion), fewer than one-fourth of the directors are independent directors,

- The board has not established a nominating committee with at least half of the members being outside directors, or

- the board has not established an audit committee composed of at least three members and in which at least two-thirds of its members are independent directors.

Commentary: For purposes of these guidelines, an "outside director" is a director who is independent from the management or controlling shareholders of the company and holds no interests that might impair performing his or her duties impartially from the company, management or controlling shareholder. In determining whether a director is an outside director, Putnam will also apply the standards included in Article 382 of the Korean Commercial Act, i.e., no employment relationship with the company for a period of two years before serving on the committee, no director or employment relationship with the company's largest shareholder, etc.) and may consider other business relationships that would affect the independence of an outside director.

- Putnam will generally vote **for** proposals to amend the Executive Officer Retirement Allowance Policy unless the recipients of the grants include non-executives; the proposal would have a negative impact on shareholders, or the proposal appear to be outside of normal market practice, in which case Putnam will vote **against**.

Malaysia

- Putnam will vote **against** the entire board of directors if:

    - less than 50% of the directors are independent directors, or less than a majority of the directors are independent directors for large companies,

    - the board has not established an audit committee with all members being independent directors, including the committee chair,

    - the board has not established a nominating committee with all members being non-executive directors, a majority of whom are independent, including the committee chair; the board chair should not serve as a member of the nomination committee, or

    - the board has not established a compensation committee with all members being non-executive directors, a majority of whom are independent; the board chair should not serve as a member of the remuneration committee.

Nordic Markets – Finland, Norway, Sweden

- Putnam will vote **against** the entire board of directors if:

Board Independence:

- The board does not have a majority of directors independent from the company and management. (Sweden, Finland, Norway)
- The board does not have at least two directors independent from the company and its major shareholders holding > 10% of the Company's share capital. (Sweden, Finland, Norway)
- An executive director is a member of the board. (Norway)

Audit Committee:

- The audit committee does not consist of a majority of directors independent from the company and management. (Sweden, Finland)
- The audit committee does not have at least one director independent from the company and its major shareholders holding > 10% of the Company's share capital. (Sweden, Finland)
- The audit committee is not majority independent. (Norway)

Remuneration Committee:

- The remuneration committee is not fully independent of the company, excluding the chair. (Sweden)
- The remuneration committee is not majority independent of the company. (Finland)

- The remuneration committee does not consist fully of non-executive directors. (Finland)
- The remuneration committee is not fully independent of management (Norway)
- The remuneration committee is not majority independent from the company and its major shareholders holding > 50% of the Company's share capital. (Sweden, Finland, Norway)

Board Nomination Committee:

- The nomination committee does not consist of a majority of directors independent from the company. (Finland)
- An executive is a member of the nomination committee. (Finland)

External Nomination Committee: Vote against the establishment of the nomination committee and its guidelines when:

- The external committee is not majority independent of the company and management. (Sweden)
- The external committee does not have at least one director not affiliated to largest shareholder on the committee. (Sweden)
- The external committee does not meet best practice based on Glass Lewis analysis. (Finland)
- The external committee is not majority independent of the board and management. (Norway)
- The external committee has more than one member of the board of the directors sitting on the committee. (Norway)
- There is insufficient disclosure provided for new nominees (Norway)
- An executive is a member of the committee. (Norway)

Russia

➢ Putnam will vote on a **case-by-case basis** for the election of nominees to the board of directors.

Commentary: In Russia, director elections are handled through a cumulative voting process. Cumulative voting allows shareholders to cast all of their votes for a single nominee for the board of directors, or to allocate their votes among nominees in any other way. In contrast, in "regular" voting, shareholders may not give more than one vote per share to any single nominee. Cumulative voting can help to strengthen the ability of minority shareholders to elect a director.

Singapore

- Putnam will vote **against** from the entire board of directors if

  - in the case of a board with an independent director serving as chair, fewer than one-third of the directors are independent directors; or, in the case of a board not chaired by an independent director, fewer than half of the directors are independent directors,

  - the board has not established audit and compensation committees, each with an independent director serving as chair, with at least a majority of the members being independent directors, and with all of the directors being non-executive directors, or

  - the board has not established a nominating committee, with an independent director serving as chair, and with at least a majority of the members being independent directors.

United Kingdom, Ireland

Commentary:

Application of guidelines: Although the Combined Code has adopted the "comply and explain" approach to corporate governance, Putnam believes that the guidelines discussed above with respect to board independence standards are integral to the protection of investors in UK companies. As a result, these guidelines will be applied in a prescriptive manner.

Definition of independence: For the purposes of these guidelines, a non-executive director shall be considered independent if the director meets the independence standards in section A.3.1 of the Combined Code (i.e., no material business or employment relationships with the company, no remuneration from the company for non-board services, no close family ties with senior employees or directors of the company, etc.), except that Putnam does not view service on the board for more than nine years as affecting a director's independence.

Smaller companies: A smaller company is one that is below the FTSE 350 throughout the year immediately prior to the reporting year.

- Putnam will **withhold votes** from the entire board of directors if:

  - the board, excluding the Non-Executive Chair, is not comprised of at least half independent non-executive directors

- the board has not established a Nomination committee composed of a majority of independent non-executive directors, excluding the Non-Executive Chair, or

- the board has not established a Compensation committee composed of (1) at least three directors (in the case of smaller companies, as defined by the Combined Code, two directors) and (2) solely of independent non-executive directors. The company chair may be a member of, but not chair, the Committee provided he or she was considered independent on appointment as chair.

- The board has not established an Audit Committee composed of, (1) at least three directors (in the case of smaller companies as defined by the Combined Code, two directors) and (2) solely of independent non-executive directors. The board chair may not serve on the audit committee of large or small companies.

All other jurisdictions

- In the absence of jurisdiction specific guidelines, Putnam will vote as follows for boards/supervisory boards:
  - Putnam will vote **against** the entire board of directors if
    - fewer than a majority of the directors are independent directors, or
    - the board has not established audit, nominating and compensation committees each composed of a majority of independent directors.

Additional Commentary regarding all Non-US jurisdictions:

Whether a director is considered "independent" or not will be determined by reference to local corporate law or listing standards.

Some jurisdictions may legally require or allow companies to have a certain number of employee representatives, employee shareholder representatives (e.g., France) and/or shareholder representatives on their board. Putnam generally does not consider these representatives independent. The presence of employee representatives or employee shareholder representatives on the board and key committees is generally legally mandated. In most markets, shareholders do not have the ability to vote on the election of employee representatives or employee shareholder representatives. In some markets, significant shareholders have a legal right to nominate shareholder representatives. Shareholders are required to approve the election of shareholder representatives to the

board. Unlike employee representatives, there are no legal requirements regarding the presence of shareholder representatives on the board or its committees.

- Putnam will **not include** employee or employee shareholder representatives in the independence calculation of the board or key committees, nor in the calculation of the size of the board.

- Putnam will **include** shareholder representatives in the independence calculation of the board and key committees, and in the calculation of the size of the board.

- Putnam will generally support shareholder or employee representatives if included in the agenda Putnam will vote on a **case-by-case** basis when there are more candidates than seats. Additionally, Putnam will vote **against** such nominees when there is insufficient information disclosed.

- Putnam Investments' policies regarding the provision of professional services and transactional relationship with regard to directors will apply.

- Putnam will vote **for** independent nominees for alternate director, unless such nominees do not meet Putnam's individual director standards.

Shareholder nominated directors/self-nominated directors

- Putnam will vote **against** shareholder nominees if Putnam supports the board of directors.

- Putnam will vote on a **case-by case** basis if Putnam will be voting against the current board.

- Putnam will vote on a case-by-case basis if the proposal regarding a self-nominated/shareholder nominated director nominee would add an additional seat to the board if the nominee is approved.

Other Business Matters

Japan

A. Article Amendments

- The Japanese Companies Act gives companies the option to adopt a U.S.-Style corporate structure (i.e., a board of directors and audit, nominating, and compensation committees). Putnam will vote **for** proposals to amend a company's articles of incorporation to adopt the U.S.-Style "Board with Committees" structure. However, the independence of the outside directors is critical to effective corporate governance under this new system. Putnam will, therefore, scrutinize the backgrounds of the outside director nominees at such

companies, and will vote **against** the amendment where Putnam believes the board lacks the necessary level of independence from the company or a substantial shareholder.

- Putnam will vote on a **case-by-case** basis on granting the board the authority to repurchase shares at its discretion.

- Putnam will vote **against** amendments to delete a requirement directing the company to reduce authorized capital by the number of treasury shares cancelled. If issued share capital decreases while authorized capital remains unchanged, then the company will have greater leeway to issue new shares (for example as a private placement or a takeover defense).

- Putnam will vote **against** proposals to authorize appointment of special directors. Under the new Corporate Law, companies are allowed to appoint, from among their directors, "special directors" who will be authorized to make decisions regarding the purchase or sale of important assets and major borrowing or lending, on condition that the board has at least six directors, including at least one non-executive director. At least three special directors must participate in the decision-making process and decisions shall be made by a majority vote of the special directors. However, the law does not require any of the special directors to be non-executives, so in effect companies may use this mechanism to bypass outsiders.

- Putnam will generally vote **for** proposals to create new class of shares or to conduct a share consolidation of outstanding shares to squeeze out minority shareholders.

- Putnam will vote **against** proposals seeking to enable companies to establish specific rules governing the exercise of shareholder rights. (Note: Such as, shareholders' right to submit shareholder proposals or call special meetings.)

B. Compensation Related Matters

- Putnam will vote **against** option plans which allow the grant of options to suppliers, customers, and other outsiders.

- Putnam will vote **against** stock option grants to independent internal statutory auditors. The granting of stock options to internal auditors, at the discretion of the directors, can compromise the independence of the auditors and provide incentives to ignore accounting problems, which could affect the stock price over the long term.

- Putnam will vote **against** the payment of retirement bonuses to directors and statutory auditors when one or more of the individuals to whom the grants are being proposed has not served in an executive capacity for the company. Putnam

will also vote **against** payment of retirement bonuses to any directors or statutory auditors who have been designated by the company as independent. Retirement bonus proposals are all-or-nothing, meaning that split votes against individual payments cannot be made. If any one individual does not meet Putnam's criteria, Putnam will vote **against** the entire bundled item.

C. Other Business Matters

- Putnam votes **for** mergers by absorptions of wholly-owned subsidiaries by their parent companies. These deals do not require the issuance of shares, and do not result in any dilution or new obligations for shareholders of the parent company. These transactions are routine.

- Putnam will vote **for** the acquisition if it is between parent and wholly-owned subsidiary.

- Putnam will vote **for** the formation of a holding company, if routine. Holding companies are once again legal in Japan and a number of companies, large and small, have sought approval to adopt a holding company structure. Most of the proposals are intended to help clarify operational authority for the different business areas in which the company is engaged and promote effective allocation of corporate resources. As most of the reorganization proposals do not entail any share issuances or any change in shareholders' ultimate ownership interest in the operating units, Putnam will treat most such proposals as routine.

- Putnam will vote **against** proposals that authorize the board to vary the AGM record date.

- Putnam will vote **for** proposals to abolish the retirement bonus system.

- Putnam will vote **for** board-approved director/officer indemnification proposals.

- Putnam will vote on a **case-by-case** basis on private placements (Third-party share issuances). Where Putnam views the share issuance necessary to avoid bankruptcy or to put the company back on solid financial footing, Putnam will generally vote **for**. When a private placement allows a particular shareholder to obtain a controlling stake in the company at a discount to market prices, or where the private placement otherwise disadvantages ordinary shareholders, Putnam will vote **against**.

- Putnam will generally vote **against** shareholder rights plans (poison pills). However, if all of the following criteria are met, Putnam will evaluate such poison pills on a **case-by-case** basis:
  1) The poison pill must have a duration of no more than three years.
  2) The trigger threshold must be no less than 20 percent of issued capital.
  3) The company must have no other types of takeover defenses in place.

4) The company must establish a committee to evaluate any takeover offers, and the members of that committee must all meet Putnam's' definition of independence.
5) At least 20 percent, and no fewer than two, of the directors must meet Putnam's definition of independence. These independent directors must also meet Putnam's guidelines on board meeting attendance.
6) The directors must stand for reelection on an annual basis.
7) The company must release its proxy materials no less than three weeks before the meeting date.

- Putnam will vote **against** proposals to allow the board to decide on income allocation without shareholder vote.

- Putnam will vote **against** proposals to limit the liability of External Audit Firms ("Accounting Auditors").

- Putnam will vote **against** proposals seeking a reduction in board size that eliminates all vacant seats.

- Putnam may generally vote **against** proposals seeking an increase in authorized capital that leaves the company with as little as 25 percent of the authorized capital outstanding (general request). However, such proposals will be evaluated on a company specific basis, taking into consideration such factors as current authorization outstanding, existence (or lack thereof) of preemptive rights and rationale for the increase.

- Putnam will vote **for** corporate split agreement and transfer of sales operations to newly created wholly-owned subsidiaries where the transaction is a purely internal one which does not affect shareholders' ownership interests in the various operations. All other proposals will be referred back to Putnam for **case-by-case** review. These reorganizations usually accompany the switch to a holding company structure, but may be used in other contexts.

United Kingdom

- Putnam will not apply the U.S. standard 15% discount cap for employee share purchase schemes at U.K. companies. As such, Putnam will generally vote **for** 'Save-As-You-Earn' schemes in the U.K which allow for no more than a 20% purchase discount, and which otherwise comply with U.K. law and Putnam standards.

France

- Putnam will not apply the U.S. standard 15% discount cap for employee share purchase schemes at French companies. As such, Putnam will generally vote **for**

employee share purchase schemes in France that allow for no greater than a 30% purchase discount, or 40% purchase discount if the vesting period is equal to or greater than ten years, and which otherwise comply with French law and Putnam standards.

- Putnam will generally vote **for** the Remuneration Report (established based on SRD II), however Putnam will vote on a **case-by-case** basis when Putnam is voting against both the ex-Post Remuneration Report (CEO) and ex-Ante Remuneration Policy (CEO, or proposal including CEO remuneration package) in the current year, and Putnam's third party service provider(s) is recommending a vote against.

Canada

- Putnam will generally vote **for** Advance Notice provisions for submitting director nominations not less than 30 days prior to the date of the annual meeting. For Advance Notice provisions where the minimum number of days to submit a shareholder nominee is less than 30 days prior to the meeting date, Putnam will vote on a **case-by-case** basis. Putnam will also vote on a **case-by-case** basis if the company's policy expressly prohibits the commencement of a new notice period in the event the originally scheduled meeting is adjourned or postponed**.**

Hong Kong

- Putnam will vote **for** proposals to approve a general mandate permitting the company to engage in non-pro rata share issuances of up to 20% of total equity in a year if the company's board meets Putnam's independence standards; if the company's board does not meet Putnam's independence standards, then Putnam will vote against these proposals.

  Additionally, Putnam will vote **for** proposals to approve the reissuance of shares acquired by the company under a share repurchase program, provided that: (1) Putnam supported (or would have supported, in accordance with these guidelines) the share repurchase program, (2) the reissued shares represent no more than 10% of the company's outstanding shares (measured immediately before the reissuance), and (3) the reissued shares are sold for no less than 85% of current market value.

This policy supplements policies regarding share issuances as stated above under section III. Voting Shares of Non-US Issuers.

Taiwan

- Putnam will vote **against** proposals to release the board of directors from the non-compete restrictions specified in Taiwanese Company Law. However, Putnam will vote **for** such proposals if the directors are engaged in activities with a wholly- owned subsidiary of the company.

Australia

- Putnam will vote **for** proposals to carve out, from the general cap on non-pro rata share issues of 15% of total equity in a rolling 12-month period, a particular proposed issue of shares or a particular issue of shares made previously within the 12-month period, if the company's board meets Putnam's independence standards; if the company's board does not meet Putnam's independence standards, then Putnam will vote **against** these proposals.

- Putnam will vote **for** proposals renewing partial takeover provisions.

- Putnam will vote on a **case-by-case** basis on Board-Spill proposals.

Turkey

- Putnam will vote on a **case-by-case** basis on proposals involving related party transactions. However, Putnam will vote **against** when such proposals do not provide information on the specific transaction(s) to be entered into with the board members or executives.

Appendix

I. Fund Commentary Relating to Shareholder Proposals Regarding Environmental and Social Initiatives

The funds' Trustees recognize the importance of environmental and social responsibility. In evaluating shareholder proposals with respect to environmental and social initiatives (including initiatives related to climate change and pay equity with respect to gender, race, or ethnicity), the funds will take into account the relevance of the proposal to the company's business and the practicality of implementing the proposal, including the impact on the company's business activities, operations, and stakeholders. The funds will generally vote for proposals calling for reasonable study or reporting relating to climate change matters that are clearly relevant to the company's business activities, taking into consideration, when appropriate, the company's current publicly available disclosure and the company's level of disclosure and oversight of climate change matters relative to its industry peers.

For shareholder proposals calling for reports related to other social issues, such as workplace sexual harassment, racial equity and/or civil rights audits, or a company's use of mandatory arbitration on employment-related claims, the funds will take into account a company's current policies and practices, the company's level of disclosure of its policies and practices relative to its peers, and any controversy faced by the company regarding the issue subject to the proposal. With respect to shareholder proposals related to diversity initiatives, the funds will assess the proposals in a manner that is broadly consistent with the funds' approach to holding the chair of a board's nominating committee directly accountable for diversity on the board and will support reasonable requests for disclosure related to directors' skills and efforts to promote diversity on the board. As the Trustees also believe that a company benefits from diversity throughout the organization, the funds will support reasonable requests for disclosure regarding data on a company's workforce diversity, including a company's responses to its EEO-1 survey, which provides employment data by race and ethnicity, gender, and job category.

With respect to shareholder proposals related to age or term limits, the funds will take into account similar factors as considered by the funds when holding the chair of the nominating committee directly accountable for a lack of board refreshment. The funds recognize that age and term limits can be beneficial or counterproductive, depending on the board and on the facts and circumstances.

The funds' Trustees believe that shareholder proposals that are intended to increase transparency, particularly with respect to executive compensation, without establishing rigid restrictions upon a company's ability to attract and motivate talented executives, are generally beneficial to sound corporate governance without imposing undue burdens. The funds will generally support shareholder proposals calling for reasonable disclosure.

II. Fund Guidelines that Putnam Investments does not have

- The funds will vote on a **case-by-case basis** on other business matters where the

funds are otherwise withholding votes for the entire board of directors.

- The funds will vote on a **case-by-case basis** on shareholder proposals related to environmental and social initiatives, except that the funds will vote **for** shareholder proposals that seek reasonable disclosure related to directors' skills, reasonable disclosure regarding a company's efforts to promote diversity on the board, and reasonable disclosure regarding data on a company's workforce diversity, such as a company's responses to its Equal Employment Opportunity Commission Employer Information Report (the "EEO-1 survey"), unless the company already provides appropriate disclosure addressing the issue.

- The funds will vote on a **case-by-case basis** on shareholder proposals that conflict with board-approved proposals.

- The funds will vote on a **case-by-case basis** on other shareholder proposals where the funds are otherwise withholding votes for the entire board of directors.

- Where there is a market expectation that the company will provide disclosure regarding the meeting attendance record of its directors, the funds will **withhold votes** from directors who attend fewer than 75% of board and committee meetings without valid reasons for the absences (e.g., illness, personal emergency, etc.).

Australia, Canada, Europe, and the U.K.

- The funds will **withhold votes** from any nominee for director:

  - who serves on more than four unaffiliated public company boards (for the purpose of this guideline, boards of affiliated registered investment companies will count as one board), or
  - who serves as an executive officer of any public company ("home company") while serving on more than two public company boards other than the home company board (the funds will withhold votes from the nominee at each company where the funds are shareholders; in addition, if the funds are shareholders of the executive's home company, the funds will withhold votes from members of the home company's governance committee).

- In light of the funds' belief that companies benefit from diversity on the board, the funds will withhold votes from the chair of the nominating committee if

  - there are no women on the board, or
  - in the case of a board of seven members or more, there are fewer than two women on the board.

United Kingdom

- The funds will **withhold votes** from any nominee for director who is considered an independent director by the company and who has received compensation

within the last three years from the company other than for service as a director, such as investment banking, consulting, legal, or financial advisory fees.

- The funds will vote **for** proposals to amend a company's articles of association to authorize boards to approve situations that might be interpreted to present potential conflicts of interest affecting a director.

Corporate Governance

- The funds will vote **for** proposals to change the size of a board if the board meets the funds' independence standards, and **against** proposals to change the size of a board if the board does not meet the funds' independence standards.

- The funds will vote **for** shareholder proposals seeking to increase the independence of board nominating, audit, and compensation committees.

Europe

- The funds will vote **for** proposals to ratify board acts, except that the funds will consider these proposals on a **case-by-case basis** if the funds' proxy voting service has recommended a vote against the proposal.

Compensation

- The funds will vote **for** proposals to approve annual directors' fees, except that the funds will consider these proposals on a **case-by-case basis** in each case in which the funds' proxy voting service has recommended a vote against such a proposal.

Europe and Asia ex-Japan

- In the case of proposals that do not include sufficient information for determining average annual dilution, the funds will vote **for** stock option and restricted stock plans that will result in an average gross potential dilution of 5% or less.

Capitalization

Australia

- The funds will vote **for** proposals to approve the grant of equity awards to directors, except that the funds will consider these proposals on a **case-by-case basis** if the funds' proxy voting service has recommended a vote against the proposal.

China

- The funds will vote **for** proposals to issue and/or to trade in non-convertible, convertible and/or exchangeable debt obligations, except that the funds will

consider these proposals on a **case-by-case basis** if the funds' proxy voting service has recommended a vote against the proposal.

France

- The funds will vote **for** proposals to increase authorized shares, except that the funds will consider these proposals on a **case-by-case basis** if the funds' proxy voting service has recommended a vote against the proposal.

- The funds will vote **against** proposals to authorize the issuance of common stock or convertible debt instruments and against proposals to authorize the repurchase and/or reissuance of shares where those authorizations may be used, without further shareholder approval, as anti-takeover measures.

New Zealand

- The funds will vote **for** proposals to approve the grant of equity awards to directors, except that the funds will consider these proposals on a **case-by-case basis** if the funds' proxy voting service has recommended a vote against the proposal.

Other Business Matters

- The funds will vote **for** proposals permitting companies to deliver reports and other materials electronically (*e.g.*, via website posting).

- The funds will vote **for** proposals permitting companies to issue regulatory reports in English.

- The funds will vote **for** proposals to amend a company's charter or bylaws, except that the funds will consider these proposals on a **case-by-case basis** if the funds' proxy voting service has recommended a vote against the proposal.

France

- The funds will vote **for** proposals to approve a company's related party transactions, except that the funds will consider these proposals on a **case-by-case basis** if the funds' proxy voting service has recommended a vote against the proposal.

- If a company has not proposed an opt-out clause in its articles of association and the implementation of double-voting rights has not been approved by shareholders, the funds will vote **against** the ratification of board acts for the previous fiscal year, will **withhold votes** from the re-election of members of the board's governance committee (or in the absence of a governance committee, against the chair of the board or the next session board member up for re-election)

and, if there is no opportunity to vote against ratification of board acts or to withhold votes from directors, will vote **against** the approval of the company's accounts and reports.

Germany

- The funds will vote **in accordance with the recommendation of the company's board of directors** on shareholder countermotions added to a company's meeting agenda, unless the countermotion is directly addressed by one of the funds' other guidelines.

Taiwan

- The funds will vote **for** proposals to amend a Taiwanese company's procedural rules.