

Net asset value (NAV) certification statement



Return by mail:
Putnam Investments
PO Box 219697
Kansas City, MO 64121-9697

Return by express delivery:
Putnam Investments
430 W 7th Street Suite
219697
Kansas City, MO 64105-1407

For more information:
Putnam Investments
1-800-225-1581
www.putnam.com

Please make check
payable to:
The Putnam Funds



The net asset value (NAV) purchase privilege is a discount option that allows certain customers to invest in Putnam class A share funds without paying a sales charge. Complete this form to authorize future Putnam mutual fund purchases at NAV.

Section 1 Individual receiving NAV

Name of owner/trust/entity

Tax identification number (required)

Date of birth/trust (mm/dd/yyyy)

Relationship to eligible individual below

Section 2 Individual eligible for NAV

Please complete only one section (A or B) below.

A. Financial Institution/Dealer Firm information

Dealer number

Branch office number

Financial advisor's number

BIN number

Name of financial advisor

First

MI

Last

Suffix

Financial advisor's firm

Financial advisor's phone number

Branch office street address

City

State

Zip code

Or

B. Putnam employee / Putnam trustee

Name

First

MI

Last

Suffix

Employee I.D.

Section 3 Certification and authorization by financial advisor or Putnam employee/trustee

I certify that I am (i) a registered representative or other employee of a broker-dealer that has a sales agreement with Putnam Retail Management, (ii) an employee of a financial institution that has a sales agreement with Putnam Retail Management or that otherwise has an arrangement with a broker-dealer or other financial institution with respect to the sale of shares of the Putnam funds, or (iii) a current or former Putnam employee, trustee of the Putnam funds, or employee of certain former corporate affiliates of Putnam.

I am, therefore, eligible to receive or extend this privilege to purchase class A shares of the Putnam funds at net asset value to the person named above and agree that any order to purchase any other share class may be converted to an order to purchase class A shares after Putnam receives this Certificate in good order. I understand that I may only extend this privilege as set forth in the Putnam funds' Statements of Additional Information.

I understand that Putnam has the right to revoke this privilege at any time, and that the intentional abuse of this privilege may result in the application of retroactive sales charges or other penalties at the discretion of the Fund or Putnam. I understand that a new certification statement will be required when I make a firm or institution change.

Signature of financial advisor/Putnam employee/Putnam trustee

Date (mm/dd/yyyy)

Print name of signature above