Systematic investment/exchange plan application



Return by mail:

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

Putnam Investments 801 Pennsylvania Ave Suite 219697 Kansas City, MO 64105-1307

For more information:

Putnam Investments 1-800-225-1581 www.putnam.com



Use this form to establish a systematic investment or systematic exchange program. Investments are processed through the Automated Clearing House (ACH). Systematic exchanges are only allowed within the same registration. You may wish to consult your tax advisor prior to establishing a systematic exchange, as this may be a taxable event. Providing bank information in Section 3 will also allow you to make ACH on-demand investments by phone or web (all Putnam account owners and all bank account owners must provide authorization in Section 6).

Please return all pages. All references herein to the singular (i.e., "I" or "my") include the plural as applicable.

As an alternative to completing this form, bank account information and systematic options can be added or updated online at Putnam.com (some restrictions apply).

Important:

- All Putnam account owners must sign in Section 6.
- All bank account owners must sign in Section 6 to authorize the use of the bank account for any purchase options. If a bank account owner has already signed as a Putnam account owner, they do not need to sign a second time.
- You must include a preprinted or web-generated voided check/deposit slip or a signed letter from the bank on bank letterhead to verify the bank information. The document must include **current bank information**; if an owner has recently been added to, or removed from, the bank account, or has undergone a name change, you must obtain an updated document from the bank.
- Use the Add or change bank account information form to update the bank information for any existing Putnam account options. Changes to a program's investment/exchange date, frequency or amount can be made online or by phone.

Please note that additional restrictions will apply in some scenarios:

- This form cannot be used by a power of attorney.
- IRA Rollover and Roth Conversion accounts are not eligible for direct contributions. If you do not have a Putnam retirement account which is eligible for direct contributions and wish to establish one, please submit the appropriate *Traditional or Roth IRA adoption agreement*.

Section 1 Account owner information

Name of current owner/custodian/trustee/entity

Tax identification number

Name of current joint owner/minor/co-trustee/authorized party

Tax identification number

Contact phone number

Note: Providing a phone number above will replace the current contact information on file with Putnam (if applicable).

Section 2 Investment options

Please use the Putnam Fund Guide (https://www.franklintempleton.com/forms-literature/download/PFGUD-FORM) to select your investment allocations for Sections 4 and/or 5 of this form. You must enter the fund name and number for the corresponding share class you wish to establish.

Section 3 Bank account information

Please provide your bank information to purchase shares by phone, web, or systematic investment plan. All individuals named on the bank account registration must authorize the use of the bank account to purchase shares by signing in Section 6. If you wish to add telephone redemption options via Federal bank wire and/or ACH to a bank within the United States, please complete Putnam's Add or change bank account information form with the applicable signature authentication stamp.

Attach a preprinted or web-generated voided check/deposit slip or a signed letter from the bank on bank letterhead below. Each of these documents must include: bank name, name(s) as registered on the bank account, routing number, and account number. Starter checks, counter checks, brokerage checks and checkwriting checks will not be accepted.

Savings account

Indicate the type of bank account you would like to use: Checking account Tape voided check/deposit slip here

Bank ABA routing number

Bank account number

Section 4 Systematic investment plan

Complete this section to establish a systematic investment program from the bank account provided in Section 3. Please indicate the investment allocation(s), share class, investment date, and frequency below. If no class of shares is indicated, class A shares will be utilized as the default option. Putnam requests the draft from your bank account on the business day prior to the investment date.

Step 1: Investment frequency

Please indicate a start month, start year, frequency, and investment date for your systematic investment plan. If the investment date falls on a date which does not occur within a particular month (29th-31st), the investment will be made on the prior day, unless the day falls on a weekend or a holiday, then the investment will be made on the next business day.

- If no start month is indicated, investments will begin in the next available month.
- If no start year is indicated, investments will begin in the current year. If there are no investment dates remaining for the current year, then the program will begin the following year.
- If no frequency is selected investments will take place monthly.
- If no investment date is selected, investments will take place on the 15th.
- Any investments designated for a date which has already occurred will not be processed until the next investment date indicated.

Start month	Start year	Frequency (check one)		Investment date		
		Monthly	Semiannually	1st	10th	20th
		Quarterly	Annually	5th	15th	25th
Step 2: Investment all	ocation(s)					

Please indicate the fund name, fund number, account number, and dollar amount for each investment.

Fund name Fund number Account number Dollar amount

Section 5 Systematic exchange plan

Complete this section to establish a systematic exchange program from one fund to another fund within the same registration.

Step 1: Exchange frequency

Please indicate a start month, start year, frequency, and exchange date for your systematic exchange plan. If the exchange date falls on a weekend or a holiday, then the exchange will be made in the next business day.

- If no start month is indicated, exchanges will begin in the next available month.
- If no start year is indicated, exchanges will begin in the current year. If there are no exchange dates remaining for the current year, then the program will begin the following year.
- If no frequency is selected, exchanges will take place monthly.
- If no exchange date is selected, investments will take place on the 15th.
- Any exchanges designated for a date which has already occurred will not be processed until the next exchange date indicated.

Start month	Start year		Frequency (check one)		Exchange date (check one)		
		Monthly Quarterly	Semiannually Annually	1st 5th	10th 15th	20th 25th	
Step 2: Exchange allocation(s) Please indicate the fund number	er, fund name, and dollar am	ount for each investment.					
Exchange funds from: Fund name		Fund number —	Account number			Dollar amount	
Exchange funds to: Fund name		Fund number —	Account number			Ť	
Exchange funds from: Fund name		Fund number	Account number			Dollar amount	
Exchange funds to: Fund name		Fund number —	Account number				
Exchange funds from: Fund name		Fund number	Account number			Dollar amount	
Exchange funds to: Fund name		Fund number —	Account number				
Exchange funds from: Fund name		Fund number	Account number			Dollar amount	
Exchange funds to: Fund name		Fund number —	Account number				

Section 6 Authorization

If I have completed the bank account information section, I authorize my bank/credit union to accept credit entries initiated by Putnam Investor Services, Inc., to my account and to credit, as requested, the same to my account, without responsibility for correctness thereof or for the existence of any further authorization relating thereto. I also authorize my bank/credit union to accept debit entries initiated by Putnam Investor Services, Inc., to reverse or otherwise correct any erroneous credit to my bank/credit union account. I agree to indemnify and hold harmless my bank/credit union, the Putnam funds, and Putnam Investor Services, Inc. for any loss, liability, or expense incurred from acting on these instructions. I also agree to waive any right under the NACHA Rules to rescind any instruction for ACH transactions that have already occurred at the time of the attempt to rescind. This waiver of the rescission right applies to both ACH investments in and ACH redemptions from the Putnam funds. This authorization may be terminated by me at any time by written notification to Putnam Investor Services, Inc., with reasonable time given to implement my request. Putnam Investor Services, Inc. may amend or terminate this agreement at any time. You will be notified before any such changes go into effect. For bank account information, Putnam does not assess a fee for federal bank wire and/or ACH transactions on your account(s). Some banks/credit unions may not offer ACH transactions or may charge a fee to conduct such transactions. Please check with your financial institution for information regarding eligibility, fees and applicable routing number(s) for federal bank wire and/or ACH transactions.

With this application, I authorize Putnam Investor Services, Inc. to exchange, as requested, on my account, without responsibility for correctness thereof or for the existence of any further authorization relating thereto. I agree to indemnify and hold harmless the Putnam funds, and Putnam Investor Services, Inc. for any loss, liability, or expense incurred from acting on these instructions. This authorization may be terminated by me at any time by written notification to Putnam Investor Services, Inc., with reasonable time given to implement my request.

I understand that, if I am not the account owner, I will not retain any control over, or rights to, any contribution made pursuant to this form (or any other portion of the account) after the contribution is made. I further understand that I will not receive any statements or other information with respect to the contribution or the account.

My signature below indicates:

Print name of signer

- (1) I have read the fund prospectus(es) and agree to the terms therein and herein;
- (2) I authorize automatic debits and/or direct phone/web debits from my bank account to my Putnam account(s).

The registered owner(s) name in Section 1 must sign this application.			
Signature of owner/custodian/trustee/authorized signer	Current date (mm/dd/yyyy)		
Print name of signer			
Signature of joint owner/co-trustee/co-authorized signer	Current date (mm/dd/yyyy)		
Print name of signer			
All individuals named on the bank account registration in Section 3 who did not already sign above as a Putnam accuse of the bank account to purchase shares. By signing below, each bank account owner authorizes purchases to be			
Signature of bank account owner(s) (required if different from the Putnam account owner)			
Signature of bank account owner	Current date (mm/dd/yyyy)		
Print name of signer			
Signature of bank account owner	Current date (mm/dd/yyyy)		