

Please complete the attached Putnam mutual fund account application to establish one of the registration types below. All references herein to the singular (i.e., “I” or “my”) include the plural as applicable. To establish an account registered to a legal entity such as a corporation, partnership, limited liability company, or non-profit foundation, please contact Putnam Investor Services for the correct form(s).

All references to a “certified copy” of a court document indicate the requirement of an original stamp or seal by the clerk of the issuing court dated within the last 120 days.

Available registration types and considerations

Individual/Joint Registrations

Individual: An account registered in the legal name of one owner

Joint tenants with rights of survivorship: An account with two or more parties (not an entity) with equal interest in the account

- Upon the death of a tenant, the account goes to the surviving tenants. Upon the death of all tenants, the account goes to the estate of the last surviving tenant.
- This type of registration is **not** available for residents of **Louisiana**.

Tenants in common: An account registered to two or more parties (individuals or entities); all entity types are eligible

- Equal divisible interest in the account is determined by the number of tenants. Upon death, the deceased tenant’s interest is distributed per the terms of their estate; the surviving tenants must transfer their remaining interest to a new registration.

Community property: An account registered between spouses where each spouse has one-half interest

- Upon death, the deceased spouse’s half is distributed per the terms of their estate and is taxable; the surviving spouse must transfer their remaining interest to a new registration.
- Joint community property registrations are **only** available in the following states: Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, Washington, and Wisconsin.

Custodial/Fiduciary Registrations

Uniform Gifts to Minors Act (UGMA) / Uniform Transfers to Minors Act (UTMA): An account that represents an irrevocable gift that belongs solely to a minor

- Complete Section 1B to provide a donor state (**required**) and to designate a successor custodian in the event of the custodian’s resignation, disability or death.

Conservator/Guardian: An account for a court-appointed individual who is responsible for, or administers the property of, a minor or incapacitated adult

- You must provide a certified copy of the Letter of Appointment of conservator or guardian which lists the powers of the appointed party as well as any and all restrictions.

Trust/Estate Registrations

Trust: An account established pursuant to a declaration of trust executed by one or more individuals as trustors (also known as the grantor(s) or settlor(s) of the trust) naming one or more trustees to hold assets for the benefit of a beneficiary

- You must provide a copy of an excerpt of the trust, including the first page, all signature pages, and the pages designating of the initial or successor trustees, as applicable. Please provide a copy of IRS Employee Identification Number (EIN) assignment letter for the trust, if applicable. The copy of the trust excerpt must be certified by one of the following options:
 - Original medallion guarantee on the title page of the trust document
 - Self-certification by trustee(s) (rules and restrictions vary by state, contact Putnam for state specific guidelines)
 - Attorney certification written on the attorney’s or law firm’s letterhead. The certification must (1) be signature guaranteed, medallion guaranteed, notarized, or include the attorney’s state bar number, (2) state that the copy of the document is a true and correct copy of the original (including any amendments), and (3) that the document has not been revoked and is still in full force and effect. This may be qualified by the statement “to the best of my knowledge, information, or belief,” but may not be limited in any other way. The certification must be dated within the last 120 days and be included with the copy of the trust excerpt that is being certified.

Estate: An account set up by the court appointed fiduciary that consists of the testamentary assets attributable to a deceased individual

- You must provide a certified copy of the appointment of the executor, administrator, or personal representative. Please provide a copy of the IRS Employee Identification Number (EIN) assignment letter for the Estate, if applicable.

Additional notes

- If you wish to make beneficiary designations on an individual or joint with rights of survivorship registration then Putnam’s Transfer on death designation form is also required.
- For joint registrations, the first owner listed will be deemed the tax reportable party.
- Additional joint registration options may be available depending on your state of residence. Speak to your financial representative to determine eligibility rules and requirements.

Putnam mutual fund account application

**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 checks
payable to The Putnam
Funds



Section 1 Select your registration type

Please complete only one registration type subsection below (1A, 1B or 1C). All information within that subsection is required. If you need space for additional owners/trustees/authorized signers, please use Section 3. Please complete a separate Putnam mutual fund account application to establish additional registration types.

Section 1A - Individual/Joint registrations (if more than one account owner is indicated and no boxes have been checked off below, your account will default to joint tenants with rights of survivorship for all states except for Louisiana which will default to tenants in common)

- Individual
- Joint tenants with rights of survivorship
- Tenants in common
- Community property

Name of account owner

First	MI	Last	Suffix	Social Security number	Date of birth (mm/dd/yyyy)

Name of joint account owner

First	MI	Last	Suffix	Social Security number	Date of birth (mm/dd/yyyy)

Section 1B - Custodial/Fiduciary registrations (review the Putnam mutual fund account application guide for additional requirements)

- UGMA/UTMA account from the donor state of _____ (required)
- Conservator
- Guardian

Name of custodian or fiduciary

Name of custodian or fiduciary	Social Security/Tax ID number	Date of birth (mm/dd/yyyy)

Name of minor or beneficial owner

First	MI	Last	Suffix	Social Security number	Date of birth (mm/dd/yyyy)

Successor UGMA/UTMA custodian designation

Successor UGMA/UTMA custodian designation	Social Security/Tax ID number	Date of birth (mm/dd/yyyy)

Section 1C- Trust/Estate registrations (review the Putnam mutual fund account application guide for additional requirements)

- Trust
- Estate

Name of trust or estate

Name of trust or estate	Tax identification number	Date of trust (mm/dd/yyyy)

Name of trustee or authorized signer

Name of trustee or authorized signer	Social Security/TaxID number	Date of birth (mm/dd/yyyy)

Name of co-trustee or co-authorized signer

Name of co-trustee or co-authorized signer	Social Security/Tax ID number	Date of birth (mm/dd/yyyy)

For the benefit of (if applicable)

First	MI	Last	Suffix

Section 2 Provide your address and contact information

Provide the address and contact information for the individuals/entities listed in Section 1. Providing an e-mail address and/or phone number below will replace the current contact information on file with Putnam (if applicable). No changes will be made for fields that are left blank. If you are enrolled in electronic delivery, all notifications will be sent to the e-mail address listed below.

Primary mailing address (street, city, state, ZIP code; **required**)

Primary residential address (street, city, state, ZIP code; **required if the mailing address is a P.O. Box or c/o address**)

Joint/minor/co-trustee/co-authorized signer residential address (street, city, state, ZIP code; **required if different from the primary address**)

Primary contact phone number

E-mail address

Electronic delivery of account documents

I want to “Go Green” and reduce paper, printing and mailing by receiving documents electronically.

By checking the “Go Green” box above, an e-mail will be sent to the e-mail address provided above with a link to Putnam’s secure Investor Website, which will allow you to choose your eDelivery options. Documents available for eDelivery include transaction confirmations, quarterly statements, prospectuses, annual/semiannual fund reports, proxy statements, and tax forms. When a new document is available, instead of sending the document to you by U.S. mail, Putnam Investor Services will send you an e-mail notification that the document is available through Putnam’s website. Terms and Conditions related to eDelivery will be provided to you prior to confirmation of your elections.

Section 3 Additional account owners/trustees

All information is **required** for each additional joint account owner, co-trustee, or co-authorized signer.

Name of joint owner/co-trustee/co-authorized signer

First	MI	Last	Suffix	Social Security number (required)	Date of birth (mm/dd/yyyy)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Joint owner/co-trustee/co-authorized signer residential address (street, city, state, ZIP code; **required if different from the primary address**)

Name of joint owner/co-trustee/co-authorized signer

First	MI	Last	Suffix	Social Security number (required)	Date of birth (mm/dd/yyyy)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Joint owner/co-trustee/co-authorized signer residential address (street, city, state, ZIP code; **required if different from the primary address**)

Section 4 Financial intermediary information

Please use this section to designate financial intermediary and financial representative information on your Putnam account. A financial intermediary is the broker-dealer, bank, or other financial institution through which you purchase shares of the Putnam Funds. The financial representative is the person associated with the financial intermediary who is assisting you with your investments. You may designate a financial intermediary at any time by returning a signed Financial intermediary change request to Putnam Investor Services. Putnam Retail Management Limited Partnership (PRM) will be designated as the default broker-dealer of record on your account(s) and will retain all applicable sales charges if any of the following apply:

- You do not designate a financial intermediary below.
- The financial intermediary you designate does not have a selling agreement with PRM.

Please note that PRM is not a full service broker-dealer and does not provide investment advice. As default broker-dealer, PRM cannot assist you with financial planning or provide recommendations, services that are provided by a financial intermediary. If you wish to receive such services, you must designate a financial intermediary.

Note: Please refer to <https://www.finra.org> for assistance in locating the Central Registration Depository (CRD) number for the financial intermediary.

Financial institution ID	Branch office ID	Financial representative ID	CRD number
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Financial intermediary

Financial representative's name exactly as it appears on the financial intermediary's registration	Financial representative's contact phone number
<input type="text"/>	<input type="text"/>

Branch office street address

City	State	ZIP code
<input type="text"/>	<input type="text"/>	<input type="text"/>

Section 5 Investment instructions

Please indicate how you wish to fund your account. Select all that apply.

- A check is enclosed / A check is en route (make checks payable to The Putnam Funds)
- Draft a one-time debit from my checking or savings account for (limit of \$200,000 per fund-account):

\$ (indicate investment elections in Section 6 and bank account information in Section 7)

Note: The one-time debit will be initiated on the date the account is established.

- Draft systematic investments from my checking or savings account (complete Section 7)
- Transfer assets from an existing Putnam account (additional documentation must be included)

Section 6 Select your funds

Use the Putnam Fund Guide (<https://www.putnam.com/literature/pdf/FM103.pdf>) to select your investment. You must enter the fund name and number for the corresponding share class you wish to establish. If no class of shares is indicated, class A shares will be purchased. Indicate the amount of your initial investment in each fund. For additional fund selections, please attach a separate sheet of paper with fund number, fund name, and dollar amount or percentage. Please make checks payable to The Putnam Funds. If you are moving assets held in Putnam funds to a new registration with Putnam, fund allocations will remain consistent with the originating Putnam account(s) unless otherwise indicated. In addition, the share class must remain consistent with the originating Putnam account(s).

Fund number	Fund name	Dollar amount	Percentage
<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	or <input type="text"/> %
<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	or <input type="text"/> %
<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	or <input type="text"/> %
<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	or <input type="text"/> %
<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	or <input type="text"/> %
			<u>100%</u>

Section 7 Select your account features (if applicable)

Section 7A - Bank account information (You must provide a voided check or deposit slip; please do not staple)

Note: Starter checks, brokerage checks and checkwriting checks will not be accepted.

Please provide your bank information below 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 8. 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.

Indicate the type of bank account you would like to use: Checking account Savings account

Please use my enclosed investment check to establish bank account options on my account in lieu of other acceptable documents named above.

tape your document here

Name _____ DATE _____
 Address _____
 City, State, ZIP _____

PAY TO THE ORDER OF _____ \$
 _____ DOLLARS

memo: _____

|: 123456789 |: 000123456789 |: 101

Bank ABA routing number

Bank account number

Name(s) of all bank account owner(s)

Section 7B - Systematic investment plan

Complete this section to establish a new systematic investment plan using the bank account information provided in Section 7A. Please indicate the fund number, fund name, dollar amount, frequency and date for your investments below. Investments will be made into the same share class selected in Section 6 unless otherwise indicated. Putnam requests the draft from your bank account on the business day prior to the investment date. If no date is selected, Putnam will default to the 15th. If the investment date falls on a weekend or a holiday, the investment will be made the next business day. If the investment date falls on a date that does not occur within a particular month (29th-31st), the investment will be made the prior day, unless this day falls on a weekend or holiday then the investment will be made the next business day.

Step 1: Investment allocation

Fund number	Fund name	Dollar amount
<input style="width: 40px;" type="text"/>	<input style="width: 400px;" type="text"/>	\$ <input style="width: 150px;" type="text"/>
<input style="width: 40px;" type="text"/>	<input style="width: 400px;" type="text"/>	\$ <input style="width: 150px;" type="text"/>
<input style="width: 40px;" type="text"/>	<input style="width: 400px;" type="text"/>	\$ <input style="width: 150px;" type="text"/>
<input style="width: 40px;" type="text"/>	<input style="width: 400px;" type="text"/>	\$ <input style="width: 150px;" type="text"/>

Step 2: Option frequency

Choose a frequency below. Putnam will default to once per month if no option is selected:

Frequency: Invest every month (enter investment date(s) below) or Invest only in the month(s) chosen below:

Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec

Additional investment date(s) within each month (if applicable)

(MM/DD/YYYY)

(DD)

(DD)

(DD)

Begin scheduled investments on

Section 7 Select your account features (if applicable) (continued)

Section 7C - Reduced sales charge

If you already own shares of another Putnam fund, or if you agree to invest a certain amount, you may be able to reduce the sales charge you pay. Shares that have not been assessed a sales charge will not count towards your Cumulative Discount or Letter of Intent. This includes commissionable shares of the Putnam Money Market Fund, the Putnam Government Money Market Fund, and the Ultra Short Duration Income Fund, as well as closed end funds and Putnam class Y shares.

Cumulative discount

To qualify for sales charge discounts on class A and M shares, list the account number(s) of other Putnam fund(s) that you or your family (spouse and/or children under age 21) own.

Fund number	Account number
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

Letter of intent

By checking an amount below, I agree to the terms and conditions for a Letter of Intent as set forth in the Statement of Additional Information (including the escrowing of shares). Although I am not obligated to complete a Letter of Intent, I plan to invest in one or more Putnam funds over a 13-month period an aggregate amount equal to at least the amount of the box checked below. I am aware that if I do not invest at least this amount over a 13-month period any purchases made pursuant to this Letter of Intent will be adjusted to the commission rate that otherwise would apply.

- \$50,000 \$100,000 \$250,000
 \$500,000 \$1,000,000

Section 7D - Dividends and capital gains

Complete this section to select your dividend and capital gains option. If no option is selected, Putnam will default to reinvest all dividends and capital gains. Please refer to Putnam's distribution payment options authorization form to view an expanded selection of distribution options.

- Reinvest dividends and capital gains Reinvest dividends; pay capital gains by check to my mailing address Pay dividends and capital gains by check to my mailing address
 Reinvest dividends and capital gains in another Putnam Fund of the same share class (specify below) Pay dividends by check to my mailing address; reinvest capital gains

From: fund name or fund number/account number

To: fund name or fund number/account number

Section 7E - Checkwriting

Checkwriting is an option for select Putnam funds, see the fund list included with this application for availability (please note that funds may be unavailable for 7 calendar days following a purchase). Please complete Putnam's Checkwriting privilege form if you would like to utilize this option.

Section 7F - Cost basis accounting method

Please elect a cost basis accounting method for your Putnam accounts. If you do not elect a method, Putnam will default to Average Cost. For the Specific Lot ID method, you must elect a secondary accounting method to be used as an alternate in the event that Specific Lot depletion information is not provided. If no secondary accounting method is elected, Putnam will default to First-In First-Out.

- Average Cost First-In First-Out High Cost Specific Lot ID: Secondary accounting method
 Loss/Gain Utilization Last-In First-Out Low Cost

Putnam will carry forward your cost basis election to any new accounts established within your registration. If you would like to use different cost basis accounting methods for different accounts, you must complete the Cost basis accounting method election form.

Section 8 Authorize Putnam to open your account

I do not authorize telephone redemptions. Accept only written instructions signed by me.

Unless I have checked the box above, Putnam Investor Services is authorized to act upon redemption instructions up to \$100,000 received by telephone from me or any other person claiming to act as my representative who can provide Putnam with my account registration and address as it appears on Putnam's records. For eligible redemptions without a medallion guarantee, the address on record must be maintained at Putnam for a minimum of 15 days. Putnam will not be liable for unauthorized transactions if it employs reasonable procedures to confirm that instructions received by telephone are genuine. I agree to indemnify and hold harmless Putnam Investor Services and any Putnam funds that may be involved in transactions authorized by telephone against any claim or loss in connection with any telephone transaction effected on my account.

I do not authorize the mailing of only one shareholder report, one prospectus, or one set of proxy materials if there are multiple accounts in a Putnam fund at my address. Send a separate copy for every account.

Unless I have checked the box above, Putnam Investor Services is authorized to send only one shareholder report, one prospectus, or one set of proxy materials for all accounts in any Putnam fund at my address.

Important notice regarding Putnam's privacy policy: By signing this application, I acknowledge that Putnam's privacy policy is available for viewing and printing via Putnam's website at <https://www.putnam.com/policies/>.

Federal law requires the Putnam funds to obtain the name, residential or business address, Social Security or tax identification number, and date of birth for each registered owner, including trustees, opening a new account in order to verify their identities. For certain entities such as trusts or estates, additional documentation may be required (refer to the Putnam mutual fund account application guide). The funds are unable to accept new accounts if any required information is not provided. If the funds are unable to verify your identity, your account will be closed at the then-current NAV, which may be more or less than your original investment, and the proceeds will be sent to you, net of any applicable sales charges. The information you provide may be shared with third parties for the purpose of verification subject to the terms of Putnam's privacy policy.

If I have completed the bank account information in Section 7A, I authorize my bank/credit union to accept debit/credit entries initiated by Putnam Investor Services to my account and to debit/credit, as requested, the same to my account, without responsibility for correctness thereof or for the existence of any further authorization relating thereto. I authorize Putnam to make a follow-up attempt in retrieving any monies that are denied due to insufficient funds (i.e., systematic purchase bounce). I agree to indemnify and hold harmless my bank/credit union, the Putnam funds, and Putnam Investor Services 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, with reasonable time given to implement my request.

For bank account information (Section 7A), 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.

If I have completed a Letter of Intent (LOI) in Section 7C, I agree that the minimum initial investment, which will be held in escrow until the full LOI amount is purchased, is 5% of the amount checked. If I invest less than the LOI amount, shares may be redeemed from my account to cover the higher sales charge. If I invest more, the sales charge will only be adjusted when and if my dealer refunds Putnam its portion of the adjustment. I will not receive LOI credit for shares purchased by dividend reinvestment.

By signing below, I certify under penalties of perjury that:

1. The number shown on this form is my correct taxpayer identification number
2. I am not subject to backup withholding because:
 - a. I am exempt from backup withholding or
 - b. I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends (cross out (b) if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax returns; crossing out (b) will result in the establishment of the account with an uncertified Social Security / Tax ID number and back-up withholding will apply to dividend and capital gains distributions), or
 - c. The IRS has notified me that I am no longer subject to backup withholding
3. I am a U.S. citizen or other U.S. person. For federal tax purposes, you are considered a U.S. person if you are:
 - a. An individual who is a U.S. citizen or a U.S. resident alien
 - b. An estate (other than a foreign estate), or
 - c. A domestic trust (as defined in Treasury Regulation 301.7701-7)
4. I am exempt from FATCA reporting

The Internal Revenue Service does not require your consent to any provision of this document other than the certifications required to avoid backup withholding.

Section 8 **Authorize Putnam to open your account (continued)**

My signature(s) below indicates that I have read the fund prospectus(es) and agree to the terms therein and herein, and agree to receive a copy of Putnam's privacy notice with the confirmation of my investment.

Signature of Owner/Custodian/Trustee/Authorized Signer **(required)**

Current date (mm/dd/yyyy)

Print name of signature above

Signature of Joint Owner/Co-Trustee/Co-Authorized Signer **(required if applicable)**

Current date (mm/dd/yyyy)

Print name of signature above

Signature of Joint Owner/Co-Trustee/Co-Authorized Signer **(required if applicable)**

Current date (mm/dd/yyyy)

Print name of signature above

Signature of Joint Owner/Co-Trustee/Co-Authorized Signer **(required if applicable)**

Current date (mm/dd/yyyy)

Print name of signature above

Signature of bank account owner(s)

All individuals named on the bank account registration in Section 7 who did not already sign above as a Putnam account owner must sign below to authorize the use of the bank account to purchase shares. By signing below, each bank account owner authorizes purchases to be made from their bank account.

Signature of bank account owner **(required if different from Putnam account owner)**

Current date (mm/dd/yyyy)

Print name of signature above

Signature of bank account owner **(required if different from Putnam account owner)**

Current date (mm/dd/yyyy)

Print name of signature above