

Agent Authorization

To grant one or more agents (person, organization, or trust) full or limited authority to act on your accounts

Review the following tables carefully to determine whether limited or full agent access is more appropriate for your situation.

- Caution: Granting full agent authority (Option B) empowers the agent(s) to act with almost the same authority you have on your accounts, including the ability to withdraw your money and change your beneficiaries.
- See Section 4 for the list of capabilities for each agent type.

Option A nited agent	Option B Full agent
	Χ
	Χ
Χ	Χ
Χ	Χ
Χ	Х
	Х
	Χ
	Х
Х	Х
	Χ
	Х
nt. X	Х
	X X X

Types of accounts that allow agent access	Option A Limited agent	Option B Full agent
Individually owned nonretirement accounts.	X	Χ
IRAs (traditional, Roth, SEP, SIMPLE, rollover, and inherited).	Х	X
Non-ERISA 403(b)(7) accounts.	X	Х
Individual 401(k) and Individual Roth 401(k) accounts.**	X	
Joint accounts.	Х	X
ERISA 403(b)(7) accounts.**	X	
UGMA/UTMA accounts, custodial accounts, and education savings accounts.	X	
Trust registrations.	Х	
Organization and corporate accounts.	X	
Vanguard Brokerage Option for employer-sponsored retirement plans.	Х	

^{*}Online access is only available to those who can register online at vanguard.com.

^{**}The plan administrator must sign in Section 7.



Agent Authorization

Use this document to grant one or more agents (person, organization, or trust) full or limited authority to act on your accounts. Keep in mind that:

- Any agent(s) you previously authorized will remain on your accounts unless you specifically revoke those agents in Section 3.
- If you have a joint account and the joint owner also wants the agent to act on his or her behalf, the joint owner must complete and submit a separate Agent Authorization.
- Once this authorization is returned with all pages together with the agent's signature in Section 5 and the account owner's notarized signature in Section 6, this Agent Authorization will be a Durable Power of Attorney under Pennsylvania law, except for its conflicts of laws provisions.
- If you're naming multiple agents and those agents have different levels of authority, complete a separate copy of this form for each agent.

Print in capital letters and use black ink. **Note:** You can also complete this form online at **vanguard.com/serviceforms**.

Questions?Call 800-662-2739.

To complete this form online, go to vanguard.com/serviceforms.

1. Notice

THE PURPOSE OF THIS POWER OF ATTORNEY IS TO GIVE THE PERSONS YOU DESIGNATE (YOUR "AGENTS") BROAD POWERS TO HANDLE YOUR PROPERTY, WHICH MAY INCLUDE POWERS TO SELL OR OTHERWISE DISPOSE OF ANY REAL OR PERSONAL PROPERTY WITHOUT ADVANCE NOTICE TO YOU OR APPROVAL BY YOU. THIS POWER OF ATTORNEY DOES NOT IMPOSE A DUTY ON YOUR AGENTS TO EXERCISE GRANTED POWERS, BUT WHEN POWERS ARE EXERCISED, YOUR AGENTS MUST USE DUE CARE TO ACT FOR YOUR BENEFIT AND IN ACCORDANCE WITH THIS POWER OF ATTORNEY. YOUR AGENTS MAY EXERCISE THE POWERS GIVEN HERE THROUGHOUT YOUR LIFETIME, EVEN IF YOU BECOME INCAPACITATED, UNLESS YOU EXPRESSLY LIMIT THE DURATION OF THESE POWERS, YOU REVOKE THESE POWERS, OR A COURT ACTING ON YOUR BEHALF TERMINATES YOUR AGENTS' AUTHORITY.

YOUR AGENTS MUST KEEP YOUR FUNDS SEPARATE FROM THEIR FUNDS.

A COURT CAN TAKE AWAY THE POWERS OF YOUR AGENTS IF IT FINDS YOUR AGENTS ARE NOT ACTING PROPERLY.

THE POWERS AND DUTIES OF AN AGENT UNDER A POWER OF ATTORNEY ARE EXPLAINED MORE FULLY IN 20 PA.C.S. Ch. 56.

IF THERE IS ANYTHING ABOUT THIS DOCUMENT THAT YOU DO NOT UNDERSTAND, YOU SHOULD ASK A LAWYER OF YOUR OWN CHOOSING TO EXPLAIN IT TO YOU.

2. Account owner information

- If you're adding a limited agent to multiple minors' accounts for which you're the sole custodian, you may photocopy this page to provide each minor's information.
- If you're appointing an agent for a trust, provide the trust's name below—not the grantor's or trustee's name.

Provide the full, legal name.	Name of owner or minor first, middle initial, last	OR trust or orga	anization
	Last four digits of Social Security number or emp	oloyer ID number	Zip code
If owner is a minor, trust, or organization, provide the name	Daytime phone area code, number, extension	Evening phone are	a code, number, extension
	No. of the state o		
of the person who will sign this > authorization.	Name of custodian, trustee, authorized person, or authorized representative		
Additional	Note: To list additional trustees, authorized persons, or	authorized representa	tives, photocopy this page or

provide the information on a separate sheet.

3. Adding or revoking agents

documentation

may be required.

Check all that apply. If you don't check a box, we'll assume that you're adding one or more agents.
☐ I'm adding one or more agents on my accounts.
☐ I want to revoke all previous agents.
☐ I want to revoke the following agent(s) only.
Name of agent first, middle initial, last
Name of agent first, middle initial, last

4. Agent authority level

Descriptions of authority levels

Important: Review each option thoroughly before choosing which level of account access you want to grant to the agent on page 4. Then check the appropriate boxes on the next page.

- Neither a limited nor a full agent may appoint another agent to act on your behalf, nor register on your behalf or change your online access through vanguard.com.
- Full agent authority is only available for certain account types. If you select full agent authority for an account type ineligible for full authority, your agent will be granted limited authority.
- Online access is only available to those who can register online at vanguard.com. If the agent isn't a Vanguard client, he or she should call us at 800-662-2739 to review our options for online access.

Subject to Vanguard policies and procedures, by my selection on the following page, I grant my agent the selected authority to perform the following transactions by mail, by phone, and online on my Vanguard accounts:

Option A. Limited agent authority available on nearly all account types

Ability to (1) purchase, sell (including short sales), and trade in stocks, bonds, and other securities and contracts relating to the same; (2) engage in margin and/or option trading if established by the account owner(s); (3) request that distributions from my accounts be payable to me and sent to my address or bank account of record; and (4) obtain information on my Vanguard mutual fund and Vanguard Brokerage Services® account(s), including historical account information.

I understand that the agent won't have authority to conduct transactions that could change the ownership of my accounts or assets, including:

- 1. Change the address of record or bank information on my accounts.
- 2. Transfer or invest assets into a different registration.
- 3. Redeem assets by phone, online, or by wire transfer to anyone other than me or my address of record.
- 4. Use checkwriting privileges on my accounts.
- 5. Add, change, or delete beneficiary designations.
- 6. Sign a new account application or otherwise open a new registration on my behalf.
- 7. Sign any tax information or reporting form required by federal or state taxing authorities, including IRS Form W-9 and any substitute IRS Form W-9.
- 8. Request a distribution from a Vanguard Brokerage Option plan account.

Caution: This option empowers the agent to act with almost the same authority you have on your accounts.

Caution: This option > Option B. Full agent authority available only on certain account types

- 1. All of the transactions listed for limited agent authority, as well as those listed below.
- 2. Change the address of record or the bank account information on my accounts.
- 3. Add, change, or delete any beneficiary designation I have on file with Vanguard, *including the authority to name the agent as my beneficiary*.
- 4. Request distributions from my accounts payable to anyone, including the agent, and sent to any address or any bank account the agent designates.
- 5. Transfer securities from my accounts to the agent's name or direct that sales or redemption proceeds be made payable to anyone, including the agent, and sent to any address or any bank account the agent designates.
- 6. Make, draw, sign, endorse, initiate, cash, deliver, and stop payment on any checks drawn on an account with checkwriting or check card privileges.
- 7. Sign a new account application or otherwise open a new brokerage account.
- 8. Sign any tax information or reporting form required by federal or state taxing authorities, including IRS Form W-9 and any substitute IRS Form W-9.
- 9. Enter into all other lawful transactions on any account to which this authorization applies.
- 10. Request a Vanguard Financial Plan (VFP), engage in consultations over the phone, and take advice from a Certified Financial Planner™ professional.

Return ALL pages of this form, even if some sections are left blank.

Accounts the agent is allowed access to

You may give your agent authority to conduct transactions on any existing and future accounts of the same registration type established under the Social Security or employer ID number referenced in Section 2.

For future accounts: If you open a new registration type and want to provide an agent access to this account (for example, an individual nonretirement account when you own only an IRA at the time you're filing this document), then a new Agent Authorization including that new registration type must be submitted.

If you add a Vanguard Brokerage account to an existing registration in the future, we may contact your agent directly to collect associated and control status prior to opening the account.

You must check a box for each account type you own—or act as a fiduciary for—today. (If you're both an owner *and* a fiduciary, you'll need to submit a separate Agent Authorization for each capacity.) If you don't check a box in either column—or if you check boxes in both columns—your agent will be granted limited authority to act on your accounts.

Option A: Option B: Limited Full authority authority Account type When you're the owner All individually owned nonretirement accounts. П П This does not include a trust account. All accounts owned jointly by me and the following individual(s). Important: This form grants the agent authority to act only for you. If the joint owner also wants the agent to act on his or her behalf, the joint owner must complete and submit a separate Agent Authorization. Name(s) of joint owner(s) first, middle initial, last П All my IRAs (traditional, Roth, SEP, SIMPLE, rollover, and inherited). All my non-ERISA 403(b)(7) accounts. All my Individual 401(k) and Individual Roth 401(k) accounts. The plan NA administrator must sign in Section 7. All my ERISA 403(b)(7) accounts. The plan administrator must sign in NA Section 7. My Vanguard Brokerage Option employer-sponsored retirement plan NA account. Name and account number of plan

Important:

If you selected any account types above as an owner and you're also a fiduciary, you'll need to submit a separate Agent Authorization for the accounts listed here.

If you check any of these boxes, the account owner must be listed in Section 2.

Where you act in a fiduciary capacity

NA	As trustee of the trust named and held under the Social Security or employer ID number referenced in Section 2. By signing in Section 6, the trustee confirms that he or she and all other trustees, if any, have the authority to appoint agents and to delegate authority under the trust document and/or applicable law.
NA	As custodian or authorized person, all UGMA/UTMA accounts, custodial accounts, including minors' IRAs, and education savings accounts held for the minor named in Section 2.
NA	As authorized representative, all accounts of the corporation or organization registered under the employer ID number referenced in Section 2. You may be required to provide additional documentation. Call us at 800-662-2739 for more information.

5. Agent information The agent must complete, sign, and return this section with the rest of the document.

- If you're naming multiple agents, copy this page for the additional agent(s) to complete and mail with this authorization. Once this authorization is processed by Vanguard, we'll require the signature of only one of the agents on written transaction requests unless you notify us otherwise in writing. Telephone and online requests can be made by any one of the agents.
- Each agent must sign below. We must have the signatures of all agents on file.
- If you're naming an organization as agent, the organization must also complete and submit our Organization Resolution form.
- If you're naming a trust as agent, the trustee(s) must also complete and submit our Trustee Certification form.

Provide the full, legal name.	Name of individual first, middle initial, last or trust or organization				
	Social Security number (SSN) or employer ID nu	ımber (EIN)	Birth date n	mm/dd/yyyy	
	Daytime phone area code, number, extension	Evening phone area code, number, extension			
	Street P.O. box or rural route is NOT acceptable				
	City, state, zip			Country if not U.S.	
	E-mail address optional				

☐ Check this box if the agent listed above would like to receive copies of account statements.

Association If the agent is authorized to transact on a Vanguard Brokerage Services account, check all affiliations that apply, regardless of employment or retirement status. If any of this information changes after this form is submitted, you must notify Vanguard promptly.

If this box is checked,
the agent must
include with this
form a letter of
account approval
from the affiliated
organization's
compliance officer.

iai	iges after this form is submitted, you must notify variguard promptly.			
Ch	Check all that apply.			
	Check this box if you are associated with a member of a stock exchange, a FINRA member firm, or a municipal securities dealer.			
	Check this box if you are, or a household member, is, a control person or an affiliate of a public company, as defined in SEC Rule 144 (this would include, but is not limited to, 10% shareholders, policymaking executives, and members of the board of directors). If this box is checked, you must provide the names and trading symbols of the companies for which such person serves as a control person or an affiliate.			
Var	ne of company	Trading symbol		

The following statement applies to agents who may engage in option trading on behalf of the owner(s):

I understand the investment objectives and trading plan of the registered account owner(s) and will only use trading strategies that are consistent with these objectives and plans. I acknowledge that I have received from the registered account owner(s) (or I already possess) copies of the Vanguard Brokerage Option Application and Vanguard Brokerage Option Account Agreement (Option Agreement), and I have read and understand them. I also acknowledge that if the registered account owner(s) are approved for options trading, they will be sent the booklet, *Characteristics and Risks of Standardized Options*. I agree to read the booklet prior to conducting any trades in the registered account owner's(s') account. I also accept all the terms and conditions of the Option Agreement.

I acknowledge receiving a copy of the Option Agreement, which contains a predispute arbitration clause highlighted in paragraphs 14 and 15 on page 3. By signing this authorization, I agree to be bound by the terms of the Option Agreement.

Agent acknowledgement The agent must sign below.

Important: If you're naming more than one agent, copy this page for the other agent(s) to complete, sign, and mail with this document.

I, the agent identified in Section 5 of this Agent Authorization, have read the attached power of attorney and am the person identified as the agent for the principal. I hereby acknowledge that, in the absence of a specific provision to the contrary in the power of attorney or in 20 PA.C.S. Ch. 56, when I act as agent:

- I shall exercise the powers for the benefit of the principal.
- I shall keep the assets of the principal separate from my assets.
- I shall exercise reasonable caution and prudence.
- I shall keep a full and accurate record of all actions, receipts, and disbursements on behalf of the principal.

I understand that I may resign my position as agent at any time by notifying the principal and Vanguard in writing.

	Signature of agent, trustee, or authorized representative		Date mm/dd/yyyy
The agent must sign here.	×		
If the agent is a trust or organization, the > trustee/authorized	Print name if applicable	Name of trust/organizat	ion if applicable
representative should also complete these boxes.			

6. Authorization of owner/custodian/trustee/authorized representative

I agree that none of The Vanguard Group, Inc., Vanguard Fiduciary Trust Company, Vanguard Marketing Corporation, or any of their respective affiliates will be held responsible for my decisions or for the investment recommendations or decisions of my agent(s), and is under no duty whatsoever to question any instructions received from the agent(s) or the suitability of any transactions requested by him/her/them.

I agree to indemnify and hold The Vanguard Group, Inc., Vanguard Fiduciary Trust Company, Vanguard Marketing Corporation, their affiliates, and each of the investment company members of The Vanguard Group and their respective officers, employees, and agents (collectively, Vanguard) harmless from acting on instructions, whether oral, written, or online, reasonably believed by Vanguard to have originated from my agent(s), and from all acts of my agent(s) involving the Vanguard mutual fund accounts or Vanguard Brokerage Services accounts covered by this authorization.

In the event of my disability or incapacity, this authorization will remain in full force and effect. This authorization will terminate only when one of the following occurs:

- Vanguard receives notice of my revocation. I understand that I have the right to revoke this authorization at any time and, if I have named multiple agents, I understand that I must specifically identify the agent(s) whose authority I am revoking. I further understand that each authorization covering the same accounts and the same level of authority (limited or full agents) submitted to Vanguard will revoke any prior authorization only to the extent indicated in such subsequent authorization. Any revocation will not affect any liability resulting from transactions initiated before Vanguard has had a reasonable amount of time to act upon such notice.
- Vanguard receives notice of my death. I understand that the authority granted under this authorization terminates at my death. My death will not affect any liability resulting from transactions initiated before Vanguard has had a reasonable amount of time to act upon such notice.

I understand that Vanguard reserves the right to reject, at any time, instructions that Vanguard believes to be suspicious, fraudulent or otherwise unauthorized, or illegal.

I have read this authorization and the notice in Section 1 in their entirety or had them explained to me, and I understand their contents.

If I am signing as trustee, I confirm that I have the authority to appoint one or more agents and to delegate authority under the trust document and/or applicable law.

The following statement applies to Vanguard Brokerage option employer-sponsored retirement plan accounts only:

I am currently a participant or the beneficiary of a participant in the defined contribution plan maintained by the participant's employer identified in the plan document. The limited agent's authority on my Vanguard Brokerage Option account is subject to the terms and conditions of this Agent Authorization, as well as to any and all limitations on investment, maintenance, or distribution of my employer plan account. I understand it is my sole responsibility to monitor the actions of my agent as to the Vanguard Brokerage Option account to ensure that the terms of the plan are complied with.

DO NOT SIGN BELOW UNTIL YOU'RE IN THE PRESENCE OF A NOTARY PUBLIC.

An agent under a power of attorney document CANNOT sign for the shareholder. This document won't be honored if the notary signature is the agent identified in Section 5.

The individual listed
in Section 2 (except
minors) must '
sign here.

Signature of owner, custodian, trustee, or authorized representative Date mn	m/dd/yyyy
X	

Notarization/affidavit of owner, custodian, trustee, or authorized representative

	On	Date mm/dd/yyyy	Name of owner or authorized person
	0	County or state	,
The notary seal must be dated within 30 days of receipt of this document by	of has appeared before me, has proven to be individual named in Section 2, and has acknowledged that this authorization is his/her wisl		has appeared before me, has proven to be the vledged that this authorization is his/her wish.
Vanguard.	Sig	nature of notary public	Notary seal
	Cor	mmission expiration date mm/dd/yyyy	_

7. Approval of administrator applies to ERISA 403(b)(7), Individual 401(k), and Individual Roth 401(k) plans

Special note about ERISA 403(b)(7)

- If Vanguard is the custodian, the appropriate fiduciary is the plan administrator designated on the plan's Vanguard 403(b)(7) Plan Authorization Form.
- If Vanguard isn't the custodian, the appropriate fiduciary is the plan's designated custodian or trustee.

I authorize The Vanguard Group, Inc., Vanguard Marketing Corporation, and Vanguard Fiduciary Trust Company to accept instructions from the agent above in accordance with the terms and conditions of this Agent Authorization.

If the account owner has an ERISA 403(b)(7), Individual 401(k), or Individual Roth 401(k) retirement account at Vanguard, the plan administrator must sign here.

Signature of plan fiduciary	Date mm/dd/yyyy
X	

Mailing information

Make a copy of your completed form for your records.

Return ALL pages of this document together. Mail your completed form and any attached information in the enclosed postage-paid envelope.

If you don't have a postage-paid > P.O. Box 1110 envelope, mail to:

Vanguard

Valley Forge, PA 19482-1110

For overnight delivery, mail to: Vanguard

> 455 Devon Park Drive Wavne, PA 19087-1815

Reminders

You MUST include or attach the following items. If any are missing upon receipt of this form at Vanguard, your request won't be processed.

- Last four digits of the account owner's taxpayer ID number.
- The level of authority, either limited or full, in Section 4.
- The accounts on which the agent is authorized in Section 4.
- The full taxpayer ID number, birth date (if applicable), and street address of the agent in Section 5.
- · Letter of account approval (if applicable). If you checked the first box under Association on page 5, you must attach a letter of account approval from the associated organization's compliance officer. Upon written request of the member firm, we'll automatically send them duplicate copies of confirmations, statements, and other information. Failure to include an approval letter may delay the processing of your form. An account approval letter isn't needed for FINRA, New York Stock Exchange, or Vanguard employees.
- · Agent's signature in Section 5. The agent must sign. If you're naming an organization as agent, please attach a completed Organization Resolution form. If you're naming a trust as agent, please attach a completed Trustee Certification form.
- · Account owner's signature with notarization in Section 6. The account owner, custodian, trustee, or authorized representative must sign. An agent under a power of attorney can't sign for the account owner.
- Plan administrator's signature in Section 7, if applicable. If you choose to grant your agent access to your ERISA 403(b)(7) or Individual 401(k)/Individual Roth 401(k), the plan administrator must sign.

requirements before returning > this authorization to Vanguard.

Review all of these

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