Schwab One[®] Account Application for Personal Accounts

Page 1 of 9

Investment Advisor ("IA") Informatio	n (This portion to be completed by IA.)	
IA Firm Name (please print):		
IA Master Account Number:		Service Team:
Advisor Contact Information (if follow-ur) is required):	
	. ,	guardian, conservator or custodian of this account?
○ Yes ○ No If "ves " is it intended that this account	will hold assets belonging to persons or entities	other than your firm, your firm employees or yourself, or
relatives of you or your firm members?		other than your infit, your infit employees or yoursell, or
*A "related person" is defined as any adv	isory affiliate or any person that is under common c	control with your firm. See Form ADV for additional information.
To use this form, all account holders must b	e U.S. citizens or U.S. resident aliens, reside in the	U.S. or one of its territories, and provide a U.S. mailing address.
Please print in CAPITAL LETTERS if you an	e filling out this form or providing an attached inst	ruction by hand.
		-
Note: To add checks or debit cards to you	r Personal account, please submit the Update You	Ir Schwab One Account form.
1. Type of Account (Select only one.)		
\bigcirc Schwab One \bigcirc Schwab One with N	largin	
2. Registration (Select only one.)		
\bigcirc Individual	\bigcirc Joint Tenants with Rights of Survivors	hip 🔿 Tenants in Common
\bigcirc Tenants by the Entirety [†]	\bigcirc Community Property [†]	\bigcirc Community Property with Rights of Survivorship^{+}
○ Conservatorship [*]	⊖ Guardianship ⁺	
Custodial (Section 12, optional) Unde	er Laws of (State) [§] Age of Termination	on [§]
○ Estate ⁺		
Decedent's First Name	Decedent's	Middle Name
Decedent's Last Name	Decedent's	Social Security Number
Tax ID Number of the Estate		
⁺ This type of registration may not be ava	ilable in your state.	
		order (Letters Testamentary, Letters of Administration, court clerk within the last 60 days and bearing the clerk's
		nors Act or by the Uniform Gifts to Minors Act. The age of

custodianship termination varies by state, although many states set the maximum age for termination at 21. If you do not indicate an age or governing state law here, the account will be set up using the custodian's state of residence and that state's default age of custodianship termination (either 18 or 21). If neither the minor nor the custodian is a U.S. resident, the custodian must indicate the governing state law in the Governing State Law field above.

I understand that electing to extend custodianship to age 25, if applicable, may cause me to lose my annual exclusion from federal gift tax and that I should consult with an attorney or tax advisor before making this election. (Note: Only certain states allow the custodianship to be extended to the minor's 25th birthday. This election may be exercised only in those states that specifically provide for it.)

Brokerage Products: Not FDIC-Insured • No Bank Guarantee • May Lose Value			
FOR CHARLES SCHWAB USE ONLY:			
Account Number			



charl

3. Account Holder Information (For information about Schwab's privacy policy, see the attached Schwab One® Account Application Agreement.) As required by federal law, Schwab will use the information provided below to verify your identity.

rimary Account Holder/ Minor/ Executor						
Name (First)		(Middle)			(Last)	
Are you known by another name? Specify:						
Home/Legal Street Address (no P.O. boxes, please)	Line 1		Line 2			
City			State			Zip Code
Mailing Address (if different from above; P.O. boxes i	may be used) I	Line 1	Line 2			
City			State			Zip Code
Social Security/Tax ID Number		Date of Birth (mm/dd/yyyy)	<u> </u>		Email Address*	I
Home Telephone Number		Business Telephone Number			Cellular Telephon	ne Number
Country(ies) of Citizenship (Must list all; if not a U.S.	. citizen, pleas	l se complete identification information	on below	·.)	Country of Legal	Residence
○ USA ○ Other:		○ Other:			USA () Other:	
Identification Type (Complete only if not a U.S. citize	.n.)		Identific	cation Number		
O Passport O U.S. Driver's License O U.S. G	ov't-Issued ID)				
State or Country of Issuance			Issue D	ate		Expiration Date
Employment Status (Select only one.)			Employ	er Name/Business Nam		
○ Employed ○ Self-Employed ○ Retired ○	Homemaker	◯ Student ◯ Not Employed				
Occupation (If you selected "Employed" or "Self-Emp	ployed," please	e select one option that best descri	ibes your	r occupation.)		
O Business Owner/Self-Employed	Business Owner/Self-Employed O Financial Services/Banking Professional			○ Military	\bigcirc c	Consultant
C Executive/Senior Management	Executive/Senior Management O Information Technology Professional			○ Educator	\bigcirc o	Other (please specify):
O Medical Professional	O Other Pro	ofessional	Clerical/Administrative Services			
C Legal Professional	🔘 U.S. Gov	vernment Employee (Federal/State/I	/Local)	(Local) O Trade/Service (Labor/Manufacturing/Production)		/Production)
○ Accounting Professional	O Foreign (Government Employee (Non-U.S.)		Sales/Marketing		
Business Street Address (no P.O. boxes may be used	d) Line 1		Line 2			
City		State			Zip Code	
The Next Two Questions Are Required b	by Industry	Regulations:				
Are you affiliated with or employed by a stock excha		-	a municir	pal securities broker-dea	aler?	
○ No ○ Yes (If "yes," you must attach a lette	r from your en	nployer or affiliated broker-dealer ap	pproving	the establishment of yo	ur account when s	submitting this application.

List the company name ______.)
Are you a director, 10% shareholder or policy-making officer of a publicly held company?
O No O Yes (If "yes," enter company name ________and trading symbol _____.)

*For Custodial Accounts, list Custodian's email address. By providing your email address, you are consenting to receive email from Schwab. Information about opting out of certain email communications is provided at www.schwab.com/privacy.

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3. Account Holder Information (Continued)

Trusted Contact Designation

A Trusted Contact Person ("Trusted Contact")* is a resource Schwab, and your advisor (if you have one), may contact on your behalf, if necessary, to attempt to address concerns regarding potential financial exploitation, or in communicating with you regarding issues related to your account(s). A Trusted Contact will not be able to view your account information, execute transactions in your account(s), or inquire about account activity, unless that person has that authority through another role on the account(s), such as a trustee or power of attorney. Providing Schwab with Trusted Contact information is voluntary. We encourage you to provide two Trusted Contacts in the event that one is not reachable in the future.

- · Schwab suggests that your Trusted Contact(s) be someone other than your financial consultant or investment advisor.
- You may name up to two Trusted Contacts.
- The person(s) you name as Trusted Contact(s) will be the Trusted Contact(s) on all of your Schwab accounts, as provided for in your account agreement.
- \cdot For multiple-party accounts, each party can name separate Trusted Contacts.
- The Trusted Contact(s) must be at least 18 years old.

Trusted Contact Information

Trusted Contact information provided on this form will replace all Trusted Contact information currently on file.

Person 1

If you have no changes to your existing Trusted Contact, please skip this section.

Name (Title, First)	(Middle Name)	(Last Name, Suffix)		
Relationship (Please select only one.)				
Spouse O Partner O Child O Parent O Sibling O Friend O Other				
Please provide at least one method of contact for each Trusted Contact listed.				

Mailing Address (No P.O. Boxes)		City	
State or Province	Country F		Postal or Zip Code
Home Phone	Mobile Phone		Email Address

Person 2

If you have no changes to your existing Trusted Contact, please skip this section.

Name (Title, First)	(Middle Name)	(Last Name, Suffix)
Relationship (Please select only one.)		
◯ Spouse ◯ Partner ◯ Child ◯ Parent ◯ Sibling ◯	Friend Other	

Please provide at least one method of contact for each Trusted Contact listed.

Mailing Address (No P.O. Boxes)		City	
State or Province	Country	l	Postal or Zip Code
Home Phone	Mobile Phone		Email Address

*If you provide a Trusted Contact Person(s) to Schwab, you understand that you have authorized Schwab and your advisor (if you have one) to contact the Trusted Contact Person(s) at their discretion and to disclose information about your account to address possible activities that might indicate financial exploitation of you; to confirm the specifics of your current contact information, health status (including physical or mental capacity), or the identity of any legal guardian, executor, trustee, or holder of a power of attorney on your account(s); or as otherwise permitted by FINRA rules or state law. For more information, please see your Schwab Account Agreement, which is available at schwab.com/accountagreement.



3. Account Holder Information (Continued)

Additional Account Holder/Custodian/Co-Executor

Name (First)		(Middle)		(1.0.01)	
Name (First) (Middle) (Last)					
Are you known by another name? Specify:					
Home/Legal Street Address (no P.O. boxes, please) Line 1		Line 2		
City			State		Zip Code
Mailing Address (if different from above; P.O. boxes	s may be used) l	ine 1	Line 2		
City			State		Zip Code
Social Security/Tax ID Number			Date of Birth (mm/dd/yyyy)		
Home Telephone Number		Business Telephone Number	4	Cellular Telephone Numbe	r
Country(ies) of Citizenship (Must list all; if not a U.S	S. citizen, pleas	e complete identification informat	ion below.)	Country of Legal Residence	e
○ USA ○ Other:	C				
USA Other: Identification Type (Complete only if not a U.S. citiz) Other:	Identification Numbe	USA Other:	
Passport U.S. Driver's License U.S. State or Country of Issuance	Gov't-Issued ID		Issue Date		Expiration Date
Employment Status (Select only one.)			Employer Name/Busi	ness Name	
C Employed C Self-Employed C Retired	Homemaker	Student Not Employed			
Occupation (If you selected "Employed" or "Self-En			l ribes your occupation.)		
Business Owner/Self-Employed Financial Services/Banking Professional		O Military	\bigcirc (Consultant	
		\bigcirc			
C Executive/Senior Management Information Technology Professional Educator Other (please specify):			other (please specify):		
O Medical Professional	O Other Pro	fessional	O Clerical/	Administrative Services	
C Legal Professional	🔿 U.S. Gove	ernment Employee (Federal/State	/Local) O Trade/Se	ervice (Labor/Manufacturing	/Production)
		overnment Employee (Non-U.S.)	◯ Sales/M	a di cabina d	
 Accounting Professional Business Street Address (no P.O. boxes may be us) 			Line 2		
			Line 2		
City			State		Zip Code
UILY				2.0 0000	
The Next Two Questions Are Required Are you affiliated with or employed by a stock exch		-		hadron do alero	
○ No ○ Yes (If "yes," you must attach a let	ter from your em	ployer or affiliated broker-dealer a	approving the establish	ment of your account when	submitting this application.
List the company name)					
Are you a director, 10% shareholder or policy-maki	ng officer of a n				
	9 p	2			
○ No ○ Yes (If "yes," enter company name _				and trading	symbol)
I vive tes (in yes, enter company name				and trading s	.)

3. Account Holder Information (Continued)

Trusted Contact Designation

A Trusted Contact Person ("Trusted Contact")* is a resource Schwab, and your advisor (if you have one), may contact on your behalf, if necessary, to attempt to address concerns regarding potential financial exploitation, or in communicating with you regarding issues related to your account(s). A Trusted Contact will not be able to view your account information, execute transactions in your account(s), or inquire about account activity, unless that person has that authority through another role on the account(s), such as a trustee or power of attorney. Providing Schwab with Trusted Contact information is voluntary. We encourage you to provide two Trusted Contacts in the event that one is not reachable in the future.

- · Schwab suggests that your Trusted Contact(s) be someone other than your financial consultant or investment advisor.
- You may name up to two Trusted Contacts.
- The person(s) you name as Trusted Contact(s) will be the Trusted Contact(s) on all of your Schwab accounts, as provided for in your account agreement.
- · For multiple-party accounts, each party can name separate Trusted Contacts.
- The Trusted Contact(s) must be at least 18 years old.

Trusted Contact Information

Trusted Contact information provided on this form will replace all Trusted Contact information currently on file.

Person 1

If you have no changes to your existing Trusted Contact, please skip this section.

Name (Title, First)	(Middle Name)	(Last Name, Suffix)		
Relationship (Please select only one.)				
Spouse OPartner OChild OParent OSibling OFriend Other				
Please provide at least one method of contact for each Trusted Contact listed				

Mailing Address (No P.O. Boxes)		City	
State or Province	Country	I	Postal or Zip Code
Home Phone	Mobile Phone		Email Address

Person 2

If you have no changes to your existing Trusted Contact, please skip this section.

Name (Title, First)	(Middle Name)	(Last Name, Suffix)
Relationship (Please select only one.)		
Spouse Partner Child Parent Sibling) Friend Other	

Please provide at least one method of contact for each Trusted Contact listed.

Mailing Address (No P.O. Boxes)		City	
State or Province	Country		Postal or Zip Code
Home Phone	Mobile Phone		Email Address

*If you provide a Trusted Contact Person(s) to Schwab, you understand that you have authorized Schwab and your advisor (if you have one) to contact the Trusted Contact Person(s) at their discretion and to disclose information about your account to address possible activities that might indicate financial exploitation of you; to confirm the specifics of your current contact information, health status (including physical or mental capacity), or the identity of any legal guardian, executor, trustee, or holder of a power of attorney on your account(s); or as otherwise permitted by FINRA rules or state law. For more information, please see your Schwab Account Agreement, which is available at schwab.com/accountagreement.

4. Your Consent to Enroll in Schwab's Cash Features Program

The Cash Features Program is a service that offers the Bank Sweep feature (a "Cash Feature") to permit your uninvested cash (the "Free Credit Balance") to earn income while you decide how those funds should be invested longer term.

You understand that additional information about the Cash Features Program and each Cash Feature is available in the Cash Features Disclosure Statement.

By signing this Application, you consent to having the Free Credit Balance in your brokerage account included in the Cash Features Program, as described in the Cash Features Disclosure Statement.



4. Your Consent to Enroll in Schwab's Cash Features Program (Continued)

The Bank Sweep feature is designated as the Cash Feature for brokerage accounts of account holders residing in the U.S. Through the Bank Sweep feature, Schwab automatically makes deposits to and withdrawals from deposit accounts at one or more banks affiliated with Schwab ("Sweep Banks"). Your deposits at each Sweep Bank are insured by the Federal Deposit Insurance Corporation (FDIC) up to \$250,000 (including principal and accrued interest) when aggregated with all other deposits held by you in the same insurable capacity at that bank. Your funds may be placed in a Sweep Bank in excess of the FDIC insurance limit. In certain limited circumstances, Schwab may place your funds in a sweep money market fund. Please see the Cash Features Disclosure Statement for additional information.

You understand and agree that Schwab may (1) make changes to the terms and conditions of the Cash Features Program; (2) make changes to the terms and conditions of any Cash Feature; (3) change, add, or discontinue any Cash Feature; (4) change your investment from one Cash Feature to another if you become ineligible for your current Cash Feature or your current Cash Feature is discontinued; and (5) make any other changes to the Cash Features Program or Cash Feature as allowed by law. Schwab will notify you in writing of changes to the terms of the Cash Features, changes to the Cash Features we make available, or changes to the Cash Features Program prior to the effective date of the proposed change.

5. Paperless Document Enrollment

You will receive account statements, trade confirmations, shareholder materials, account agreements and related disclosures, and other regulatory documents, if available in paperless form, by email. For certain documents, including account statements, you will receive an email notification with a link to log on to our secure website to access your documents. For complete information, please see Important Information About Your Informed Consent to Receive Paperless Documents in the Appendix to this application. Enrollment may also qualify you for lower online equity trades—consult your IA or the applicable Charles Schwab Pricing Guide for additional details.

To opt for Paperless Documents, simply provide your email address in Section 3. The completion of your enrollment will depend on one of the following scenarios.

Scenario 1:

If you already have an account enrolled in Paperless Documents using the email address provided in Section 3, have logged on to schwaballiance.com in the past six months, and agree to the following, your paperless enrollment will be complete once your account is opened.

- · I have read and understood the Important Information About Your Informed Consent to Receive Paperless Documents in the Appendix to this application and consent to enrolling this account in Paperless Documents.
- · I understand that I will receive an email with my new account agreement and related disclosures.

Or

Scenario 2:

If you do not have an existing account enrolled in Paperless Documents, are using a different email address, or have not logged on to schwaballiance .com in the past six months, we will send you an email after the account is opened. To complete enrollment, you will need to click the "I Consent" button in that email and/or follow the instructions to access schwaballiance.com. If you do not click the "I Consent" button, this account will not be enrolled in Paperless Documents and we will send your account agreement and related disclosures, as well as future regulatory documents, by postal mail.

If you do not want to participate in Paperless Documents, please check the circle below.

○ Gambling/Lottery

6. Required Information About the Account

Source of Funds (Please select all that apply.)

In this section, we're collecting information about the categories ("sources") of assets that will be held in your account. Please select all of the sources of the assets that will be deposited or held in your account, including the original sources of any assets that will be transferred into the account from another firm.

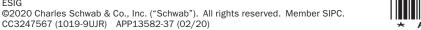
- Salary/Wages/Savings Investment Capital Gains
- Social Security Benefits Gifts
- Sale of Property or Business
- Family/Relatives/Inheritance

Other (please specify): _

Purpose of Account (Please select all that apply.)

- General Investing
- Investing for Estate Planning
- Investing for Tax Planning
- Investing for College
- Investing for Retirement
- Investment of Pooled Assets
- Other (please specify): _

FSIG





7. Checking Preferences

If you want checks, make one selection in A or B. If you do not want checks, skip this section and go to Section 8.

A. \bigcirc Schwab One[®] brokerage checks and Visa[®] Platinum debit cards.

Select only one:

- Checks only
- O Checks and one Visa debit card
- O Checks and two Visa debit cards (second debit card may be issued only in the name of the additional account holder on joint accounts)

Anticipated Activity

On average, how many times per month do you anticipate writing checks and/or making ATM withdrawals? (Select only one.)

- Less than 5 times per month
- \bigcirc 5 to 10 times per month
- \bigcirc 11 to 20 times per month
- O More than 20 times per month
- B. O Schwab Bank High Yield Investor Checking[®] account.* Complete and attach the Add Schwab Bank High Yield Investor Checking to Your Schwab One Brokerage Account Application.

*You must be a U.S. citizen or U.S. resident alien, reside in the U.S. or one of its territories, and have a U.S. mailing address to open a High Yield Investor Checking account.

8. Instructions about IA Authorizations (Optional-please select all that apply.)

You may change or revoke these instructions at any time by contacting Schwab.

Trading and Disbursement Authorization for Checks and Journals. Selecting this option indicates that I have authorized my IA to take the following actions, and I instruct Schwab to permit my IA: (1) to place trades in my account as provided under the Trading Authorization heading in the attached Account Application Agreement; (2) to remit checks to me at my address of record; and (3) to journal cash and/or securities to a Schwab brokerage account on which I am named account holder (known as a first-party transfer).

This disbursement authorization does not apply to wire disbursements; Schwab MoneyLink® distributions; or direct, ongoing electronic payments of dividends, interest, and money market income, which use separate forms. (Note: Trading and Disbursement Authorization for Checks and Journals is not available for Estate, Guardianship, or Conservatorship accounts.)

- Trading Authorization. Selecting this option indicates that I have authorized my IA, and I instruct Schwab to permit my IA, to place trades in my account as provided under the Trading Authorization heading in the attached Account Application Agreement.
- Fee Payment Authorization. Selecting this option indicates that I have authorized my IA, and I instruct Schwab to permit my IA, to pay investment advisory and related fees to IA from my account or another account registered to my name, over which I have granted IA fee payment authorization in the amount of IA's instructions.

9. Issuer Communications and Related Actions

If you have granted your IA trading authority over your account, and your IA exercises investment discretion for you pursuant to an advisory contract, you can appoint your IA to be sent certain issuer and issuer-related communications (proxies, tender offers, proposed mergers, rights offerings, exchange offers and warrants, among other things) that may require a voting decision or other action regarding investments held in your account.

If you appoint your IA below, your IA will, regarding only those voting decisions or other action communications sent to your IA: (i) be requested to vote proxy ballots; (ii) be requested to provide instructions regarding corporate reorganizations and other corporate actions; and (iii) be sent certain prospectuses and annual reports and other communications. In these cases, you will be authorizing your IA to make all voting decisions and take all actions on your behalf. You will not be sent informational copies of these communications.

Even if you appoint your IA below, you may still be sent certain other issuer and issuer-related communications regarding investments held in your account. You agree that you will be responsible for providing Schwab any applicable instructions or directions on those items.

Please select only one:

- Yes. I appoint my IA, and I will fulfill my responsibilities, as described above. I instruct Schwab not to disclose my name, address and securities positions to any issuer of securities held in my account.
- No. I do not appoint my IA as described above. I wish to be sent all issuer and issuer-related communications, make all voting decisions and take all actions described above. I understand that any issuer of securities held in my account may request that Schwab disclose to it my name, address and securities positions in that issuer.

If you selected "No" above, please select one:

My IA \bigcirc should $/ \bigcirc$ should not be sent informational copies of any issuer or issuer-related communications.

If you do not select either "Yes" or "No" above, Schwab will deem you to have indicated "No," but informational copies of issuer and issuer-related communications may be sent to your IA.



10. Certification and Indemnification—Estate, Guardianship, or Conservatorship Accounts Only

Any and all debts of the deceased, claims against the estate, administration expenses, inheritance and estate taxes, and legacies having priority will be provided for or paid. This certification is made for the purpose of securing the transfer or delivery of property owned at the time of the decedent's death to a purchaser or the person(s) legally entitled thereto under the laws of the state of the decedent's domicile. Any apparent inequity in distribution is appropriate, whether it is due to the manner of distribution of other estate assets, the provisions of the estate plan, or other factors.

By signing this Application, each Executor, Guardian, or Conservator certifies that the representations and warranties in the attached Certification and Indemnification are true and complete.

11. Authorization to Open Account

By signing this Application, you acknowledge that you have received and read a copy of the attached Application Agreement, which contains a predispute arbitration provision. You acknowledge that your signature signifies and constitutes your agreement that this account and your relationship with Schwab will be governed by the Application Agreement and all incorporated agreements and disclosures, including, but not limited to, the Schwab One® Account Agreement and the applicable *Charles Schwab Pricing Guide*, each as amended from time to time (the "Agreement and Disclosures"). You understand there are fees associated with establishing, maintaining and engaging in transactions.

If you have selected the margin feature, you acknowledge that securities securing loans from Schwab may be lent to Schwab and lent by Schwab to others. You also acknowledge that if you trade "on margin," you are borrowing money from Schwab and that you understand the requirements and risks associated with margin borrowing as summarized in the Margin Disclosure Statement included with this Application. For purposes of this Account Application and the attached Application Agreement, the terms "you," "your" and "Account Holder" refer to each person who signs this Account Application. The terms "we," "us," "our" and "Schwab" refer to Charles Schwab & Co., Inc.

All Account Holders must sign and date. All Executors, Guardians, or Conservators must sign this application even if you will not conduct business on the account. Your signature(s) below will also serve as a signature card for checks and Visa® debit card(s).

I certify, under penalty of perjury, that (1) the number shown on this Application is the correct Taxpayer Identification Number; (2) I am not subject to backup withholding due to a failure to report interest and dividend income; (3) I am a U.S. person (a U.S. citizen or U.S. resident alien); and (4) I am exempt from Foreign Account Tax Compliance Act (FATCA) reporting. I understand that if I have been notified by the IRS that I am subject to backup withholding as a result of dividend or interest underreporting and I have not received a notice from the IRS advising me that backup withholding is terminated, I must cross out item 2 above.

The Internal Revenue Service does not require your consent to any provision of this document other than the certification required to avoid backup withholding.		The Agreement with Schwab includes a predispute arbitration clause. I acknowledge receipt of the predispute arbitration clause contained in the Required Arbitration Disclosures and Arbitration Agreement sections on page 1 of the Schwab One Account Application Agreement.	
Signature: Primary Account Holder/Custodian/Executor	Print Name	Date (mm/dd/yyyy)	
Signature: Additional Account Holder/Custodian/Executor	Print Name	Date	



12. Nominate a Successor Custodian—Custodial Accounts Only

Use this section to designate a successor custodian to act on this account in the event of your incapacity, death, resignation or removal as custodian. This is a nomination only. To activate the role of a successor custodian, the account registration must be changed.

Name of Successor Custodian	Social Security Number of Successor Custodian	
Home/Legal Street Address (no P.O. boxes, please) Line 1	Line 2	
City	State	Zip Code

This designation shall take effect for this account in the event of my incapacity, death, resignation or removal as custodian. IN WITNESS THEREOF, I have executed this Designation of Successor Custodian Form.

Signature: Current Custodian		Date (mm/dd/yyyy)
Print Name	Title	
ness (The witness may NOT be the individua	al designated as the successor custodian.)	
		Date
Signature: Witness		Date (mm/dd/yyyy)
Signature: Witness Print Name	Title	



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Schwab One[®] Account Application Agreement for Personal Accounts

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These terms relate to your account and are part of the Account Agreement between each Account Holder and Schwab. Please retain for your files.

I hereby request that Charles Schwab & Co., Inc. ("Schwab") open a brokerage account (the "Account") in the names listed as Account Holders on this Schwab One Account Application ("AA"). I agree to read and be bound by the terms of the Account Agreement (which includes information on the Cash Account and, if applicable, the Schwab Sweep Funds, the Margin and Short Account, Disclosure of Credit Terms and Policies, the Schwab StockBuilder Plan® and other written agreements between me and Schwab that apply to my brokerage account) as currently in effect and as amended from time to time. If, in the future, I add features to this Account governed by the foregoing agreements (e.g., a money fund or margin trading), I agree to be bound by their terms and conditions. If I do not receive or understand the Account Agreement, I will notify Schwab.

In accordance with Section 8 of Brokerage Services in the *Schwab One Account Agreement*, I agree that all debts and other obligations owed to Schwab by any party to the Account Agreement will be secured by a lien on all Securities and Other Property now or hereafter held, carried or maintained in any of my present or future brokerage accounts with Schwab, whether individually or jointly held with others, or in any brokerage account at Schwab in which I have an interest.

Required Arbitration Disclosures. Regulatory authorities require that any brokerage agreement containing a predispute arbitration agreement must disclose that this agreement contains a predispute arbitration clause. This Agreement contains a predispute arbitration clause. By signing an arbitration agreement, the parties agree as follows:

- All parties to this Agreement are giving up the right to sue each other in court, including the right to a trial by jury, except as provided by the rules of the arbitration forum in which a claim is filed.
- Arbitration awards are generally final and binding; a party's ability to have a court reverse or modify an arbitration award is very limited.
- The ability of the parties to obtain documents, witness statements and other discovery is generally more limited in arbitration than in court proceedings.
- The arbitrators do not have to explain the reason(s) for their award unless, in an eligible case, a joint request for an explained decision has been submitted by all parties to the panel at least 20 days prior to the first scheduled hearing date.
- The panel of arbitrators will typically include a minority of arbitrators who were or are affiliated with the securities industry.
- The rules of some arbitration forums may impose time limits for bringing a claim in arbitration. In some cases, a claim that is ineligible for arbitration may be brought in court.

• The rules of the arbitration forum in which the claim is filed, and any amendments thereto, shall be incorporated into this Agreement.

No person shall bring a putative or certified class action to arbitration, nor seek to enforce any predispute arbitration agreement against any person who has initiated in court a putative class action; or who is a member of a putative class who has not opted out of the class with respect to any claims encompassed by the putative class action until:

- 1. the class certification is denied;
- 2. the class is decertified; or
- 3. the customer is excluded from the class by the court.

Such forbearance to enforce an agreement to arbitrate shall not constitute a waiver of any rights under this Agreement except to the extent stated herein.

Arbitration Agreement. Any controversy or claim arising out of or relating to (i) this Agreement, any other agreement with Schwab, an instruction or authorization provided to Schwab or the breach of any such agreements, instructions, or authorizations; (ii) the Account, any other Schwab account or Services; (iii) transactions in the Account or any other Schwab account; (iv) or in any way arising from the relationship with Schwab, its parent, subsidiaries, affiliates, officers, directors, employees, agents or service providers ("Related Third Parties"), including any controversy over the arbitrability of a dispute, will be settled by arbitration.

This arbitration agreement will be binding upon and inure to the benefit of the parties hereto and their respective representatives, attorneys-in-fact, heirs, successors, assigns and any other persons having or claiming to have a legal or beneficial interest in the Account, including court-appointed trustees and receivers. This arbitration agreement will also inure to the benefit of third-party service providers that assist Schwab in providing Services ("Third-Party Service Providers") and such Third-Party Service Providers are deemed to be third-party beneficiaries of this arbitration agreement.

The parties agree that this arbitration agreement will apply even if the application to open the Account is denied and will survive the closure of your Account and/or the termination of services rendered under this Agreement.

Such arbitration will be conducted by, and according to the securities arbitration rules and regulations then in effect of, the Financial Industry Regulatory Authority (FINRA) or any national securities exchange that provides a forum for the arbitration of disputes, provided that Schwab is a member of such national securities exchange at the time the arbitration is initiated. Any party may initiate arbitration by filing a written claim with FINRA or such eligible national securities exchange. If arbitration before FINRA or an eligible national securities exchange is unavailable or impossible for any reason, then such arbitration will be conducted by, and according to the rules and regulations then in effect of, the American Arbitration Association (AAA). If arbitration before the AAA is unavailable or impossible for any reason, the parties agree to have a court of competent jurisdiction appoint three (3) arbitrators to resolve any and all disputes or controversies between or among the parties. Each party shall bear its own initial arbitration costs, which are determined by the rules and regulations of the arbitration forum. In the event of financial hardship, the arbitration forum may waive certain costs in accordance with such rules. At the conclusion of the hearing, the arbitrators will decide how to assess the costs of the arbitration among the parties.

Any award the arbitrator makes shall be final and binding, and judgment on it may be entered in any court having jurisdiction. This arbitration agreement shall be enforced and interpreted exclusively in accordance with applicable federal laws of the United States, including the Federal Arbitration Act. Any costs, fees or taxes involved in enforcing the award shall be fully assessed against and paid by the party resisting enforcement of said award.

For FINRA arbitrations, FINRA will appoint a single public arbitrator in customer cases decided by one arbitrator. In customer cases decided by three arbitrators, investors have the option of choosing an arbitration panel with two public arbitrators and one non-public arbitrator (Majority-Public Panel Rule) or a panel of all public arbitrators (Optional All-Public Panel Rule). If the customer declines to elect a panel selection method in writing by the applicable deadline, the Majority-Public Panel Rule for selecting arbitrators will apply.

All notices from one party to the other involving arbitration shall be considered to have been fully given when so served, mailed by first-class, certified or registered mail, or otherwise given by other commercially accepted medium of written notification.

In addition to the above provisions, if a party to this Agreement is or becomes a non-U.S. resident at the time of any controversy subject to this arbitration agreement, such party acknowledges and agrees to the following additional provisions:

- (1) The rules of the organization administering the arbitration specifically provide for the formal designation of the place at which the arbitration is to be held.
- (2) Entering into this Agreement constitutes consent to submit to the personal jurisdiction of the courts of the state of California, U.S.A., to interpret or enforce any or all of these arbitration provisions. Judgment on any arbitration award may be entered in any court having jurisdiction, or application may be made to such court for judicial acceptance of the award and an order of enforcement, as the case may be.
- (3) The exclusive language to be used by the parties and the arbitrators in the arbitration proceedings shall be English. Any party

wishing an interpreter shall make all arrangements directly with the interpreter and shall assume all costs of the service.

(4) If a party is a foreign government or state, state-owned or state-operated enterprise or other instrumentality of a foreign government or state, such party waives all rights of sovereign immunity and neither the Federal Act of State doctrine nor the doctrine of sovereign immunity shall apply insofar as any enforcement in courts located in the U.S.A. is concerned.

Schwab One® Accounts. I further request Bank of New York Mellon Investment Servicing Trust Company (BNY IST) to issue checks and Visa® Platinum debit card(s) as indicated on this AA. I authorize Schwab to make inquiries for the purpose of verifying my creditworthiness and the creditworthiness of my spouse if I am married and live in a community property state. Such inquiries may include verifying information I have given in my AA, contacting my employer and obtaining credit reports. I further authorize Schwab to disclose information to others about me and my Accounts when it is necessary for completing transactions; to comply with a government agency request or court order, such as the IRS or the SEC; to verify the existence and condition of my Account for a third party, such as a credit bureau or merchant; and as otherwise authorized by the Schwab One Account Agreement.

For account holders with more than one account at Schwab: This authorization further authorizes Schwab to direct transfers between your accounts at Schwab when no written authorization is requested.

Linking Your Account to a Schwab Bank High Yield Investor Checking® Account. If you link your Account to a High Yield Investor Checking account held at Schwab Bank, you authorize Schwab to accept and follow instructions received from Schwab Bank to transfer funds from your Account to your High Yield Investor Checking account as set forth in your Schwab Bank High Yield Investor Checking Account Application and Schwab Bank Deposit Account Agreement. The provisions of the Agreement and Disclosures relating to checks and debit cards will not apply to the services received from Schwab Bank.

You authorize Schwab to act as your agent in processing those instructions from Schwab Bank. You understand and agree that Schwab has sole discretion to accept or deny, in whole or in part, any such instruction. You also agree that Schwab is not responsible for any errors in calculation or damages resulting from errors in calculation or delays in transfers. In no event will Schwab be liable for any special, indirect or consequential damages, even if we have been informed of the possibility of such damages.

You authorize Schwab to act upon your requests for Real-Time Funds Transfers (as defined in the Schwab Bank Deposit Account Agreement) from Schwab Bank. The maximum amount you may transfer will be calculated in the same way that Schwab calculates the Authorization Limit for brokerage checkwriting privileges as set forth in the Schwab One Account Agreement. By requesting a Real-Time Funds Transfer, you understand that you may create a margin loan in your brokerage account that may be subject to daily interest charges. In order for transfers to occur, both your High Yield Investor Checking account and your Account must be open and active and linked with each other. Target Balance Transfers will be limited to your Authorization Limit (as described in the Schwab One Account Agreement), excluding your Available Margin Loan Value (as defined in the Schwab One Account Agreement). Overdraft Transfers will be limited to your Authorization Limit.

If you have a debit balance in your Account, Target Balance Transfers will not be made to your High Yield Investor Checking account. Pending securities trades (including the Automatic Investment Plan [AIP]), pending debits to your Account, and pending transfers of funds from your Account may not be considered in determining whether funds are available for transfer from your Account to your High Yield Investor Checking account at Schwab Bank.

Further, transfers of funds from your Account are subject to Schwab's minimum deposit requirements. You and your Account may not have any restrictions preventing Schwab from using funds in your Account to satisfy a transfer instruction from Schwab Bank. If your Account becomes subject to a restriction, your eligibility for this feature may be revoked and you understand that Schwab Bank may close your High Yield Investor Checking account.

Transfers to Schwab Bank may result in debits in your Account. You acknowledge that you are responsible for all debits (and interest on debits) in your Account, as described in further detail in the Agreement and Disclosures. Your Account remains an obligation solely of Schwab. Likewise, your High Yield Investor Checking account remains an obligation solely of Schwab Bank.

Trading Authorization. If I have indicated on this AA that the Investment Advisor ("IA") named above, which I understand may be referred to as "Investment Manager" or "IM" in other documentation relating to my Account, will have the authority to direct Schwab to execute trades in my Account, I authorize Schwab to accept instructions from IA regarding my Account, and to take all other actions necessary or incidental to the execution of such instructions, as IA shall direct. If my Account has a margin feature, Schwab is authorized to accept instructions from IA to trade on margin, to sell short, to borrow securities, to otherwise cause credit to be extended through the Account, and to secure the performance of obligations in the Account with any assets held in the Account (the "Account Assets"). If my Account is authorized for option trading, Schwab is authorized to accept instructions from IA to purchase and sell (write) index participation contracts and covered and uncovered option contracts on securities and securities-related indexes, up to my approved level of options trading strategy. Schwab, and other people to whom Schwab has given instructions in order to implement the IA's instructions, may rely on IA's instructions without obtaining my approval, counter-signature or co-signature. IA's authority will include, without limitation: the authority to

give instructions for transactions in securities and financial instruments, including the buying and selling of stocks, bonds, debentures, notes, subscription warrants, stock purchase warrants, covered and uncovered options (if I have authorized trading covered and uncovered options, and only up to my approved level of option trading strategy), mutual fund shares, evidences of indebtedness and any other securities, instruments or contracts relating to securities.

I authorize Schwab to take such actions as Schwab deems reasonably necessary to carry out instructions Schwab receives from me and/or IA. I further authorize Schwab, acting upon IA's instructions, to aggregate transaction orders for my Account with orders for one or more other accounts over which IA has trading authorization or to accept or deliver assets in transactions executed by other broker-dealers where IA has so aggregated orders. I agree that if any such aggregated order is executed in more than one transaction, my portion of such order may be deemed to have been executed at the weighted average of the prices at which all of such transactions were executed.

Fee Payment Authorization. If I have indicated on this Application that my IA will have fee payment authority over my Account, I authorize Schwab to pay investment advisory and related fees from my Account to my IA in the amount of my IA's instructions. I have authorized my IA in writing to receive fee payments directly from my Account. Schwab may rely on the instructions submitted by my IA, and will have no responsibility to confirm those instructions with me or verify the fees. Schwab may redeem money market fund shares in my Account to the extent necessary to pay these fees. My IA's fees debited from my Account will appear on Schwab's statements of my Account.

Disbursement Authorization. If I have indicated on this AA that my IA will have trading and disbursement authority over my Account, I have authorized my IA to take the following actions, and I instruct Schwab to permit my IA to (1) place trades in my account as provided under the Trading Authorization heading in this Account Application Agreement; (2) remit checks to me at my address of record; and (3) journal cash and/or securities to a Schwab brokerage account on which I am named account holder (known as a first-party transfer). This disbursement authorization does not apply to wire disbursements: Schwab MoneyLink® distributions; or direct, ongoing electronic payments of dividends, interest, and money market income, which use separate forms.

Role of Charles Schwab & Co., Inc. I acknowledge and agree that: Schwab will merely carry out transactions as directed by me and/or IA as the case may be; I (and not Schwab) am responsible for investigating and selecting IA; except in the case of Schwab's affiliated IA, Charles Schwab Investment Advisory, Inc. ("CSIA"), IAs are not affiliated with, or controlled or employed by, Schwab; and Schwab has no duty to supervise or monitor trading by me or by IA, including CSIA, in my Account. Schwab will send me written confirmations of my trades executed through

Schwab and statements of all activity in my Account. If my IA and/or I direct Schwab to act as custodian of non-publicly traded assets, I acknowledge and agree: (1) that non-publicly traded assets generally lack a liquid market and that the value of such assets may be difficult to ascertain; (2) that any estimated value reflected on my account statement or other communication from Schwab is for informational purposes only and may be significantly different from the actual market value or the liquidation value of such assets; (3) that Schwab has no responsibility for, nor does Schwab guarantee the accuracy of, any such valuation of assets, even if the assets have been valued by a pricing service selected by Schwab; and (4) that Schwab may require that I sign an addendum to my Account Agreement if Schwab agrees, in the exercise of its discretion, to accept custody of any non-publicly traded assets in my Account. I authorize Schwab to obtain from IA, and IA to provide to Schwab, information regarding my Account as Schwab may reasonably request. If any of IA's employees is associated with a member of FINRA or affiliate. Schwab is authorized to deliver information concerning my Account to such member upon request. I acknowledge, understand and agree that (1) Schwab Advisor Network[®] member advisors ("Network member advisors") pay Schwab fees to be members; (2) Network member advisors, including IA, are independent and not employees or agents of Schwab; (3) Schwab prescreens Network member advisors and checks their experience and credentials against criteria Schwab sets; (4) neither an IA's membership in Schwab Advisor Network nor CSIA's affiliation with Schwab changes that (A) I am solely responsible for (i) the decision to hire IA, (ii) what authority to give IA and (iii) evaluating IA's services and performance; and (B) Schwab (i) does not supervise IA and (ii) takes no responsibility to monitor IA's performance or transactions in the Account; and (5) if I was referred to IA through the Schwab Advisor Network® or referred to Windhaven® Strategies or ThomasPartners® Strategies that are managed by CSIA. I have received, read and understood the Schwab Advisor Network Disclosure Documents and the Disclosure Brochures for Windhaven Investment Management® and ThomasPartners Investment Management® each a division of CSIA.

Products and Services Provided to IA. Schwab may provide IA, at no fee or at a discounted fee, with research, software and other technology, information and consulting services, and other products and services that benefit IA. Schwab's provision of these products and services to IA may be based upon clients of IA placing a certain amount of assets in their brokerage accounts at Schwab (i.e., custodying assets at Schwab) within a certain period of time. IA may be influenced by this commitment in recommending or requiring that its clients establish brokerage accounts at Schwab. These products and services may not necessarily benefit my Account. Pricing. Schwab and IA may agree to pricing (including commissions and transaction account and service fees) for my Account and IA's other clients' accounts at Schwab based upon the nature and scope of business that IA transacts with Schwab, including the current and future expected amount of IA's clients' assets custodied at Schwab, the types of securities managed by IA and/or expected frequency of IA's trading. Schwab may change this pricing if the nature and scope of business that IA transacts with Schwab changes or does not reach agreed-upon levels, in which case pricing for IA's clients' accounts, including my Account, may increase to an amount determined by Schwab not to exceed Schwab's standard pricing as published in the then-current applicable Charles Schwab Pricing Guide.

Accounts with Margin Features. I understand that when I buy securities on margin or enter into short sales or short options, or when my IA. if I have granted this authority to my IA. does so for my Account, I am borrowing money from Schwab for part of that transaction(s). All securities and other assets in my Schwab Account(s) are pledged as collateral to secure this loan. I acknowledge that margin transactions are riskier and involve the possibility of greater loss than transactions where I am not borrowing money. If the value of my securities and other assets falls, I acknowledge that I may be required to deposit more assets (a margin call) to secure this loan or that securities and other assets held in my Account may be sold to pay down or pay off my loan without prior notice and at a loss or at lower prices than under other circumstances. I agree to carefully consider my own financial condition, tolerance for risk and investment objectives, as well as market conditions, before I decide to use margin credit or grant this authority to my IA. By placing an order on margin, or by granting this authority to my IA, I acknowledge that I have considered all of these factors and have decided that margin financing is appropriate for me.

All securities and other assets now or hereafter held in this Account may be pledged, repledged or otherwise used as collateral, separately or together with securities of other customers, for the amount I owe Charles Schwab & Co., Inc., or for a larger amount.

Interest on debit balances will be charged and compounded in accordance with the Account Agreement and as permitted under the laws of the state of California.

Termination of Authorizations. The authorizations I have granted in this AA will remain effective until I or IA have revoked or terminated any of them by giving notice to Schwab, either by mail, telephone, facsimile, telegraph, messenger, electronic mail, voice mail or otherwise, provided, however, that Schwab reserves the right to require written notice or confirmation that such authorization has been terminated or revoked. I understand that I may revoke or terminate all authorizations or designations conferred herein at any time. Unless revoked or terminated by me, all authorizations and designations conferred herein to IA shall continue to apply to IA's successors or assigns. Such revocation will not affect my obligation resulting from transactions

initiated prior to Schwab's receipt of such notice. I understand that if Schwab terminates its Investment Manager Service Agreement with IA, Schwab will not be obligated to honor any further instructions from IA; I will have exclusive control over, and responsibility for, my Account; and unless Schwab notifies me otherwise, my Account will become a Schwab retail brokerage account subject to all terms and conditions applicable thereto, including fees and commissions, investment products and other services available to Schwab retail customers. Schwab will notify me as soon as reasonably possible after any such termination.

Indemnification. I agree to indemnify and hold harmless Schwab, its affiliates and their directors, officers, employees and agents from and against all claims, actions, costs and liabilities, including attorneys' fees, arising out of or relating to: (1) their reliance on this AA, and (2) Schwab's execution of IA's instructions.

Verification. I authorize Schwab to inquire from any source, including a consumer reporting agency, as to my identity (as required by federal law), creditworthiness and ongoing eligibility for the Account (and that of my spouse, if I live in a community property state) at account opening, at any time throughout the life of the Account, and thereafter for debt collection or investigative purposes.

Suitability. From time to time, Schwab may make available investment research and information ("Schwab Research"). I agree and acknowledge that my IA and I are responsible for the transactions in my Account, including assessing the suitability of transactions for my Account, even if Schwab Research was used in making the investment decisions for my Account.

Account Ownership. For Accounts held as Joint Tenants with Rights of Survivorship, on the death of either party, the entire Account shall vest in and belong to the surviving joint tenant(s). For Accounts held as Tenants in Common, each party shall be deemed to own an equal interest in the Account unless otherwise specified, and on the death of either party, the decedent's interest shall vest in and be distributed to that party's estate. For Accounts held as Community Property, all rights shall be governed by applicable state law. For Custodial accounts governed by the Uniform Transfers to Minors Act (UTMA) or the Uniform Gifts to Minors Act (UGMA), I agree that the Account is irrevocably vested in and belongs to the minor, to be used for the sole benefit of the minor, and delivered to the minor promptly upon attaining the age of majority (or other age specified for termination under applicable state law).

Unclaimed Property. If no activity occurs in the Account within the time period specified by applicable state law, the Account may be transferred to the appropriate state.

Account Handling Instructions. Schwab will automatically hold all securities purchased, as well as all sale proceeds, dividends and interest, unless you specify otherwise.

Schwab's Privacy Policy and Disclosure of Information. Schwab respects your privacy. Schwab will use the information you provide to open and service your Account, to communicate with you when necessary, to provide you with additional information about products and services, and to provide to your IA, and certain third parties as your IA directs Schwab, information as provided in this AA. Pursuant to your Account Agreement, Schwab may disclose information about you and your Account to certain other third parties. Please call Schwab at 1-800-515-2157 for a copy of Schwab's privacy policy.

I consent to Schwab: (i) sending, by mail, electronic delivery and/or other means, duplicate copies of account trade confirmations, account statements and any other information relating to me and my Accounts to my IA and MM, if and in such manner as requested by my IA and MM; (ii) sending such information about me and my Accounts to third parties as my IA or MM shall direct Schwab; and (iii) disclosing information about me and my Accounts to other third parties as provided in Schwab's privacy policy, this Account Application and the Account Agreement.

Information About SIPC. To obtain information about the Securities Investor Protection Corporation (SIPC), including an explanatory SIPC brochure, please contact SIPC at www.sipc.org or 1-202-371-8300.

Impartial Lottery for Securities Subject to Partial Call or Partial Redemption. If Schwab holds securities for you in street name, in Schwab's name, or in bearer form that are subject to partial call or partial redemption, then in the case of a partial call or partial redemption Schwab will use an impartial lottery system to select the securities to be called or redeemed from among accounts holding those securities. For a description of Schwab's lottery system, please visit www.schwab.com/PartialCalls. If you would like a printed description of Schwab's lottery system mailed to you, please contact Schwab Alliance at 1-800-515-2157.

Certification and Indemnification—Estate, Guardianship, or Conservatorship Accounts Only

Certification and Indemnification sets forth Executors', Guardians', or Conservators representations and warranties regarding their authority under the estate, guardianship or conservatorship. In consideration for Schwab opening and/or maintaining a brokerage account for the estate, guardianship, or conservatorship named in this application, the Executor(s), Guardian(s), or Conservator(s) represent, warrant and certify that they are all of the duly appointed Executors of the estate, Guardians of the guardianship, or Conservators of the conservatorship and any one of them who is authorized in Section 3 to conduct business in the account shall obtain the prior consent and approval of all other Executors, Guardians, or Conservators to the extent required by law before taking any action. The Executors, Guardians, or Conservators hereby jointly and severally agree to indemnify Schwab and each of its officers, directors, employees and agents from, and hold such persons harmless against,

any claims, judgments, surcharges, settlement amounts or other liabilities or costs of defense or settlement (including attorneys' fees) arising out of or related to any actual or alleged improper or unsuitable actions taken at any Executor's, Guardian's, or Conservator's instructions in connection with the brokerage account established at Schwab for the estate. guardianship, or conservatorship. This indemnification is made by the Executors. Guardians, or Conservators, both in their capacities as Executors, Guardians, or Conservators and in their individual capacities, and shall not be limited by the Executors', Guardians', or Conservators' provision to Schwab of independent documentation concerning the representations made herein. The representations and obligations stated herein shall survive termination of the estate, guardianship, or conservatorship and the Account Agreement relating to the estate's, guardianship's, or conservatorship's brokerage account.

Any and all debts of the deceased, claims against the estate, administration expenses, inheritance and estate taxes, and legacies having priority will be provided for or paid. This certification is made for the purpose of securing the transfer or delivery of property owned at the time of the decedent's death to a purchaser or the person(s) legally entitled thereto under the laws of the state of the decedent's domicile. Any apparent inequity in distribution is appropriate, whether it is due to the manner of distribution of other estate assets, the provisions of the estate plan, or other factors.



Cash Features Program General Terms and Conditions

The automatic investment of your free credit balance, including the frequency and the amount of each sweep, is governed by the terms and conditions set forth in the Cash Features Disclosure Statement and in the Account Agreement applicable to your account. The material in this document is intended for informational purposes only. If there is any conflict between the descriptions in this document and the terms of the Cash Features Disclosure Statement, the Cash Features Disclosure Statement will control.

How the Cash Features Program Works	Schwab's Cash Features Program is the service (described in the Cash Features Disclosure Statement) that we provide to automatically invest, or "sweep," the free credit balance in your account into a liquid investment to earn interest. The program permits you to earn income while you decide how those funds should be invested longer term.
Available Cash Feature	The available cash features currently consist of:
	• The free credit balance in your eligible account (the "Schwab One® Interest feature"), on which Schwab pays interest;
	• Interest-bearing deposit accounts at one or more of our affiliated banks (the "Bank Sweep feature" for most accounts and the "Bank Sweep for Benefit Plans feature" for retirement plan accounts); and
	• For some accounts, one or more affiliated money market mutual funds (the "Money Fund Sweep feature").
Eligibility	Eligibility for each cash feature is based on the registered ownership and the type of account. Not all account registrations and account types will be eligible for all cash features. Some account registrations and account types will be eligible for only one cash feature. Please see your Account Application and the Cash Features Disclosure Statement for more complete eligibility details.
Duty to Monitor Eligibility for Cash Features	It is your responsibility to monitor your eligibility for the cash features and determine the best cash feature available to you. Schwab is not responsible for contacting you if you are, or later become, eligible for other higher-yielding cash features.
Interest Rates and Yields	The interest rates and yields for the different cash features vary over time. There is no guarantee that the interest rate and yield on any particular cash feature will be or will remain higher than the interest rate and yield on any other cash features over any period. Current interest rates and yields can be obtained by contacting your independent investment advisor or your Financial Consultant, or by calling us at 1-800-435-4000. If you already have an account, you can visit our website at www.schwab.com/sweep. If your account is an Advisor Services account, please contact your advisor, visit www.schwab.com/SA_sweep, or call Schwab Alliance at 1-800-515-2157.
	• The interest rate on the Schwab One Interest feature is set by Schwab. We may seek to pay as low a rate as possible consistent with our views of competitive necessities. With certain exceptions, the rate will be tiered based upon the overall free credit balance within your account.
	• The interest rate on the Bank Sweep feature is set by our affiliated bank(s), which may seek to pay as low a rate as possible consistent with their views of competitive necessities. Retirement accounts will be paid a reasonable rate consistent with applicable legal and regulatory requirements. With certain exceptions, the rate will be tiered based upon your account type and the combined amount of your account's Bank Sweep deposits at our affiliated bank(s).

Interest Rates and Yields (Continued)	 The interest rate on the Bank Sweep for Benefit Plans feature is set by our affiliated bank(s), which intend to pay interest consistent with reasonable rate provisions of applicable legal and regulatory requirements. This may be lower than some competitors' rates. Interest rates do not vary by tiers and do not vary based on your cash balances. Money market mutual funds offered through the Money Fund Sweep feature seek to achieve the highest yield (less fees and expenses) consistent with prudence and their investment
	objectives. Cash features are not intended to be long-term investments, and yields on any of our cash features may be lower than those of similar investments or deposit accounts offered outside the Cash Features Program. If you desire to maintain cash balances for other than a short-term period and/or are seeking the highest yields currently available in the market, please contact your Schwab representative or visit www.schwab.com/cash for investment options that may be available outside of the Cash Features Program to help maximize your return potential consistent with your investment objectives and risk tolerance. If your account is an Advisor Services account, please contact your advisor, visit www.schwab.com/SA_cash, or call Schwab Alliance at 1-800-515-2157.
Benefits to Schwab	We may charge fees and receive certain benefits under the different cash features. A portion of these fees and benefits may be shared with your investment professional. Because of these fees and benefits, we have a financial incentive to select the particular cash features included in the Cash Features Program.
Differing Risks and Account Protection	 The different cash features are subject to different risks and account protection: The Schwab One[®] Interest feature is not subject to market risk and value loss but is subject to the risk of Schwab's failure. In the unlikely event that Schwab fails, cash is eligible for SIPC coverage up to a limit of \$250,000 (including principal and interest) per client in each insurable capacity (e.g., individual or joint). Free credit balances held at Schwab are not insured or guaranteed by the FDIC.
	• The Bank Sweep and Bank Sweep for Benefit Plans features are not subject to market risk and value loss but are subject to the risk of the failure of one or more of our affiliated banks. In the unlikely event that one or more of our affiliated banks fails, deposits at each bank are eligible for FDIC insurance protection up to a limit of \$250,000 (including principal and interest) per depositor in each insurable capacity (e.g., individual, joint, and plan participant). This limit includes any other deposits you may have at that bank outside of the Bank Sweep and Bank Sweep for Benefit Plans features. You are responsible for monitoring your bank balances in the Bank Sweep and Bank Sweep for Benefit Plans features and the balances in any of your other bank accounts at each affiliated bank to determine if these, in total, exceed FDIC insurance limits. Monies held in both features are not covered by SIPC.
	• Money market mutual funds in the Money Fund Sweep feature invest in high-quality, short- term securities and seek to maintain a stable value, but are subject to market risks and potential value loss. They are not bank accounts and are not subject to FDIC insurance protection. They are instead covered by SIPC, which protects against the custodial risk (and not a decline in market value) when a brokerage firm fails by replacing missing securities and cash up to a limit of \$500,000, of which \$250,000 may be cash. Shares held through the Money Fund Sweep feature are not considered cash, but are treated as securities for SIPC coverage.



Margin Disclosure Statement

www.schwab.com | 1-800-435-4000 (inside the U.S.) international.schwab.com | +1-415-667-8400 (outside the U.S.)

- This is important information regarding margin borrowing, if you have requested the margin feature on your brokerage account.
- Please retain this document for your files.
- When using margin, please keep these important rules and conditions in mind.
- A complete list of terms and conditions pertaining to margin trading and short selling, including credit terms and policies, can be found in the Account Agreement. The Account Agreement will be provided to you after account opening or you can access it at any time on our website or by calling us. Please read this important document before opening a margin account.
- For questions regarding margin borrowing, please contact us at the numbers listed above. For clients of independent investment
 advisors, please call your advisor directly or call Schwab Alliance at 1-800-515-2157.

When considering a margin loan, you should determine how the use of margin fits your own investment philosophy. It is important that you fully understand the risks, rules, and requirements involved in trading securities on margin.

The following paragraphs highlight some of the critical aspects of margin trading:

Margin trading increases your level of market risk. Margin trading increases your buying power, allowing you to purchase a greater amount of securities with your investing dollar. Therefore, your exposure to market volatility increases—a declining market could result in even greater losses. A decline in the value of your securities that you purchase on margin may require you to provide additional funds to Schwab in order to avoid the forced sale of those securities or other securities in your account.

Your downside is not limited to the collateral value in your margin account. When you buy securities on margin, you are borrowing money from Schwab for part of your transactions. Securities and other assets in your Schwab account(s) are pledged as collateral to secure this loan. These margin transactions are riskier and involve the possibility of greater loss than transactions where you are not borrowing money. If the securities in your account decline in value, so does the value of the collateral supporting your loan. When the value of the collateral falls below the maintenance margin requirements, or Schwab's higher "house" requirements, Schwab can move to protect its position. In order to cover margin deficiencies, Schwab may issue you a margin call—a request for additional cash—or sell securities from your account. If a sale does not cover the deficiency, you will be responsible for any shortfall.

Schwab may initiate the sale of any securities in your account, without contacting you, to meet a margin call. Schwab will attempt to involve you in the case of margin deficiency; however, market conditions may require the firm to quickly sell any of your securities without your consent. Because the securities are collateral for the margin loan, Schwab has the right to decide which security to sell in order to protect its interests. Even if Schwab has contacted you and provided a specific date by which you can meet a margin call, the firm can still take necessary steps to protect its financial interests, including immediately selling the securities without prior notice to you.

Schwab's "house" initial and maintenance margin requirements may exceed those established by the Federal Reserve Board and/or the Financial Industry Regulatory Authority, Inc. Please call Schwab for current margin requirements.

Schwab may change its initial margin requirements at any time and without prior notice. We may also impose anytime and without prior notice more stringent requirements on positions that in our sole discretion involve higher levels of risk; for example, higher limits may apply for thinly traded, speculative or volatile securities, or concentrated positions of securities. Schwab may increase its "house" maintenance margin requirements at any time and is not required to provide you with advance written notice. Changes in Schwab's policy regarding "house" maintenance margin requirements often take effect immediately and may result in the issuance of a maintenance margin call. Your failure to satisfy the call may cause Schwab to liquidate or sell securities in your account.

Schwab retains absolute discretion to determine whether, when and in what amounts we will require additional collateral. For example, we may require additional collateral if an account contains only one security or a large concentration of one or more securities; or low-priced, thinly traded or volatile securities; or if some of your collateral is or becomes restricted or non-negotiable or non-marginable. We may also consider market conditions, your financial resources, or other factors deemed by us to be relevant given the circumstances at the time.

You are not entitled to an extension of time on a margin call. While an extension of time to meet margin requirements may be available to customers under certain conditions, a customer does not have a right to the extension.

Some accounts that carry a margin loan balance and hold dividendpaying securities may receive a "substitute income payment in lieu of a dividend" (PIL). This payment may be taxable as ordinary income. Taxable accounts that receive a PIL instead of a qualified dividend may also receive a supplemental credit from Schwab. This will be identified on customer statements as a "Schwab substitute income credit." However, when Schwab can identify that a dividend is nonqualified, we will not credit your account with this additional payment.

- This credit is NOT "payment in lieu," and is unrelated to any payment from either the security issuer or the borrower.
- It is a discretionary credit from Schwab which may be discontinued in the future with or without notice.*
- It may be subject to tax at your ordinary income tax rate. Please consult your tax advisor about your specific tax situation.
- Because individual tax situations differ, Schwab cannot precisely calculate the additional tax costs a client might incur. Therefore, we do not intend, nor should clients expect, for this payment to be an exact reimbursement of any excess tax cost.
- *Please refer to the "Loan Consent" section of your Account Agreement which states that no compensation is due in connection with such loans and that Schwab "is not required to compensate you for any differential tax treatment between dividends and payments in lieu of dividends."

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Important Information About Your Informed Consent to Receive Paperless Documents

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The Purpose and Effect of Your Consent

This disclosure and informed consent applies to all communications for those accounts, products and services offered in person or available via Schwab.com, Schwaballiance.com, or via a Schwab mobile website or mobile application used to access those accounts, products or services, to the extent they are not otherwise governed by the terms of a separate disclosure and informed consent.

We are required to provide to you "in writing" certain records and disclosures about our relationship and transactions in your account. You are entitled to receive those documents on paper. With your affirmative consent, we can provide the documents to you electronically instead via the Schwab Paperless Documents program ("Paperless Documents"). The information below will help you understand the conditions and requirements relating to Paperless Documents. You can always find the most up-to-date version of this important information at schwab.com/ paperless_consent.

Paperless Documents categories include: tax forms, trade confirmations, shareholder materials, statements and account documents (e.g., account statements and other account-related documents associated with the account, including account agreement amendments and program disclosures, fund prospectuses, and investment advisory service disclosures). Each of these document categories is described in detail below. If you are opening an account, the account agreements and account opening process are also included in Paperless Documents. Electronic documents specific to your transactions and account will be available online for up to 10 years from the date of initial delivery. Your consent to receive documents electronically is not limited in duration and does not expire.

Depending on where you reside, the initial scope of your Paperless Documents enrollment, and whether you have made modifications to your enrollment, not all document categories may apply to you. Certain documents that are not currently included in Paperless Documents may continue to be delivered to you via postal mail. In the future, some or all of these documents may be added to Paperless Documents and made available to you electronically in accordance with your informed consent to this disclosure. If you are uncertain which documents are covered by your Paperless Documents enrollment, please check online at schwab .com/paperless_services or call or email Schwab or Schwab Bank using the contact information below.

For additional information about Schwab Bank account statements, see the "Addendum" on the following page.

You indicate your consent to Paperless Documents by providing an email address and signing an account agreement, or by clicking or touching an "I consent" or other button indicating assent to or acceptance of the conditions and requirements relating to Paperless Documents, and we record your consent. The method of consent may depend on whether you are opening an account or separately enrolling in Paperless Documents for an existing account. If you do not provide consent, Schwab or Schwab Bank will send you paper copies. Your consent will be effective until you cancel your enrollment in Paperless Documents or Schwab or Schwab Bank notifies you that the program is discontinued. If you are a joint account holder, your consent binds the other account holder.

By providing consent, you confirm that you have the ability to access Schwab on the web, and the ability to open, view, save, retain, and print PDF documents as described below. These abilities demonstrate that you can receive the documents we will deliver to you. You also confirm that you have provided a valid email address as part of the account opening or Paperless Documents enrollment process.

We may, if necessary and at our discretion, end your participation in Paperless Documents, or change the terms and conditions relating to Paperless Documents and electronic communications. It is your responsibility to review any updates in a timely manner. We will provide you with notice of any discontinuation or update as required by law.

Our Contact Information to Request Paper or Ask Questions

To access the document and print a copy, log in to your Schwab or Schwab Bank account, select the "Accounts" tab, then select "Statements." To request paper, ask questions about, or report problems concerning Paperless Documents, you may contact us as follows:

To contact us by email, log in to Schwab.com, click "Contact Us," and then click "Send a Secure Message." Advisor Services clients, please log in to schwaballiance.com. To contact us by phone:

- Investor Services clients: 1-800-435-4000.
- Schwab Bank High Yield Investor Checking[®] (or other Schwab Bank) clients: 1-888-403-9000.
- Clients in the U.K.: 00 800 0826-5001.
- Clients in other countries: +1-415-667-8400.
- Advisor Services clients: Contact your independent advisor or call 1-800-515-2157.
- Schwab Intelligent Portfolios Solutions™ clients: 1-855-694-5208.
- Institutional Intelligent Portfolios[®] clients: 1-877-805-3399.

To Withdraw Your Consent

When you change your preference back to postal mail delivery, this cancels your enrollment in Paperless Documents and withdraws your consent for the document categories you indicate. You can do this by logging in to schwab.com/paperless_services, or by calling or emailing Schwab or Schwab Bank using the contact information above. Allow 48 hours for processing. Your consent will remain effective for other document categories for which you maintain a paperless delivery preference.

Important note for Schwab Advisor Services clients: Canceling or modifying your enrollment may make your account(s) ineligible for lower commission rates, and the commissions you pay may increase.

Important note for Schwab Intelligent Portfolios Solutions and Institutional Intelligent Portfolios clients: Intelligent Portfolios is an all-electronic service. If in the future you request paper documents, withdraw your consent, or are unable to receive Paperless Documents, Schwab may terminate your account.

Electronic Notification When a Paperless Document Is Ready

We send you an email to let you know a document is available. For some documents, the email itself will be the paperless document. For other documents, the email will contain a link that will allow you to access or download the document, and your login may be required prior to such access.

Keeping Your Email Address Current and Actions Schwab or Schwab Bank Will Take If There Is a Problem

Please note that after three consecutive months of unsuccessful electronic delivery attempts of your tax forms, trade confirmations, or statements and account documents, your account(s) will revert back to postal mail delivery. This will cancel your enrollment in Paperless Documents and withdraw your consent to receive Paperless Documents.

It is your responsibility to notify Schwab or Schwab Bank of any change in your email address by logging in to the Schwab site and going to Service > My Profile > Email Addresses or using the contact information above. In addition to the unenrollment process outlined above, if we receive any indication either that the email notification did not reach you successfully or that there is a problem with your email address or service, we will take the following actions:

- Tax Forms—Send a letter by postal mail within two business days to inform you that we were unable to deliver your tax form electronically. In certain circumstances, as may be required by law or regulation or for other reasons, we may send you the tax form itself by postal mail within the time period prescribed by the relevant legal or regulatory requirements.
- Trade Confirmation—Send a paper copy of trade confirmation by postal mail within 24 hours. Also send a letter by postal mail to inform you that we were unable to deliver your Trade Confirmation to you electronically.

- Statements and Account Documents—Send a letter by postal mail informing you that we were unable to deliver your statement or account document electronically.
- Shareholder Materials—Send a paper copy of the shareholder materials via postal mail within 24 hours. We will send you a letter informing you that we were unable to deliver your shareholder materials electronically. The account will be unenrolled from Paperless Documents, and we will begin to send you paper shareholder materials.

Hardware and Software Requirements

Paperless Documents requires you to have access to a device (computer or smartphone) with Internet service and an active email account and address, along with the following:

- A current version of a common Internet browser, with JavaScript enabled.
- A current version of a program, such as Adobe[®] Reader[®] that accurately reads and displays PDF documents. If you do not have Adobe Acrobat installed on your device, you can download the free software at adobe.com.
- An operating system on your device that supports the above.
- A printer that connects to your device, if you wish to print documents.
- Electronic storage connected to your device, if you wish to retain records in electronic form. (If you are using your computer, just save documents to your local hard drive.)

If you use your smartphone, you must access the full Schwab website to view and print your documents. If you have questions relating to hardware and software requirements, please call or email Schwab using the contact information on the previous page.

Security and Privacy Information

Unless expressly stated, email notifications for Paperless Documents are not encrypted. For security and confidentiality, unencrypted emails will not include your name, full account number, or any other personal identifier. Be aware, however, that some email addresses may use part of your name or your entire name. If you use a work email address, your employer or other employees may have access to your email. To help you identify your account, we may include some portion, but not all, of your account number. Schwab or Schwab Bank may use a vendor to deliver Paperless Documents.

Whether Schwab, Schwab Bank, or a vendor delivers the documents, Schwab's privacy policy applies.

Records and Disclosures Included in Schwab and Schwab Bank's Paperless Documents Program

Tax Forms ("eTax Documents")

A tax document provides important information you need to complete your tax returns. Much of the information we provide in tax documents is also reported to the IRS. This includes any corrected tax documents and accompanying notices. When a tax document is ready, we will send an email notification with the subject line "IMPORTANT TAX RETURN DOCUMENT AVAILABLE" and containing a web link to the document available after you log in.

Trade Confirmations ("eConfirms")

A trade confirmation is an official record of your securities transaction. It includes the price, number of shares, and the commission we charge you, as well as disclosures required under federal law. If you choose to receive paperless trade confirmations, the terms and conditions of your transaction will appear in the email and on a web page you can link to from the email. Your consent to receive paperless trade confirmations also includes paperless delivery of prospectuses or other regulatory information we provide to you at the time of your trade. Your consent to receive paperless trade confirmations also covers paperless delivery of Trade Confirmation Reports (TCRs) if you elect this alternative as part of your Managed Account enrollment.

Statements and Account Documents ("eStatements")

An account statement provides important information about your account, including the price and quantity of securities you hold, the transactions

conducted, other activity in your account, and terms and conditions governing your account. Account statements are sent at the end of each month in which you conducted activity in your account or at the end of each calendar quarter, regardless of any account activity. With your account statements, we often include accompanying account-related notices and other regulatory information, including, but not limited to, Schwab's Statement of Financial Condition, pricing changes, changes to payment features, privacy policy, annual notices, amendments to your account agreements, and any other documents, notices, and disclosures required by law or regulatory rules to be provided to you. At account opening and from time to time thereafter, we also send you notifications about your account. Collectively, we call these documents, notices, and disclosures "account documents." When you consent to paperless account statements, you also consent to paperless account documents.

Investment Advisory Service Disclosures (A Sub-Category of Account Documents)

Your consent to paperless Statements and Account Documents includes investment advisory program disclosures, brochure supplements with information about individual Schwab representatives, and related materials such as periodic updates or annual summaries of any changes to those documents ("Form ADV Disclosures") as Schwab makes these available in the future. The investment advisory programs may include Schwab Private Client[™] Schwab Managed Portfolios[™] Schwab Managed Account Services™ the Schwab Advisor Network® Schwab Intelligent Portfolios SolutionsTM and other similar advisory services, and fee-based Financial Planning Services. In addition to Schwab's and its affiliates' own Form ADV Disclosures, your consent also covers ADV Disclosures from third-party investment advisors whose services you select through Schwab. Paperless Form ADV Disclosures may accompany your account statements or be sent independently. If the third party does not make its Form ADV Disclosures available electronically, you will instead receive the standard printed materials by postal mail.

Shareholder Materials ("Electronic Delivery")

Shareholder materials include regulatory information such as prospectuses; prospectus supplements; quarterly, semi-annual, and annual reports; and proxy materials. You will receive an email notification with a web link to shareholder materials if you have a position in an equity or mutual fund as of the record date for a particular shareholder distribution and the materials are made available electronically by the issuer or third party. If the issuer or third party does not make shareholder materials available electronically, you will instead receive the standard printed materials by postal mail. By providing your consent to receive electronic delivery of shareholder material, you also consent to electronic householding. This means that if you and someone else enroll in this paperless service using the same email address, we may send one email announcement to this email address if each account holds securities of the same issuer. This avoids duplicate mailings of shareholder documents. If you no longer want electronic householding of your shareholder materials, you must modify your Paperless Documents enrollment as described above. Your shareholder materials may include electronic proxies. You may elect to vote your proxy online at proxyvote.com by entering the control number included in your email announcement and the last four digits of your Social Security number or Taxpayer Identification Number as your PIN.

Addendum for Schwab Bank Paperless Statements ("eStatements")

Schwab Bank Paperless Documents categories include statements and account documents and tax forms. The above information regarding the purpose and effect of your consent, including how to request paper delivery, how to ask questions, how to withdraw consent for paperless delivery, electronic notification of ready statements, keeping a current email address, hardware and software requirements, and security and privacy information, are all applicable to Schwab Bank accounts. Paperless Documents include account statements and tax forms. In addition, account statements for your Investor Checking account(s), Investor Savings account(s), and Pledged Asset Line® account shalance; the transactions conducted; other activity in your accounts; and other information, terms, and conditions governing your accounts.

Brokerage Products: Not FDIC-Insured = No Bank Guarantee = May Lose Value

Charles Schwab Bank and Charles Schwab & Co., Inc. are separate but affiliated companies and subsidiaries of The Charles Schwab Corporation. Brokerage products offered by Charles Schwab & Co., Inc. are not insured by the FDIC, are not deposits or obligations of Charles Schwab Bank, and are subject to investment risk, including the possible loss of principal invested. Deposit and other lending products and services are offered by Charles Schwab Bank, Member FDIC and an Equal Housing Lender. Charles Schwab Bank is not acting or registered as a securities broker-dealer or investment advisor. ESIG