



Account Number

Trust Account Application

Type on screen or fill in using CAPITAL letters and black ink. If you need more room for information or signatures, use a copy of the relevant page.

For Authorized agent/ Advisor Use Only

To provide information on more Authorized agent(s)/ Advisor(s), owners, etc., make additional copies of necessary page(s).

Primary Authorized agent/Advisor	DTC Number	G Number
		G
Additional Authorized agent/Advisor		G Number
		G
Additional Authorized agent/Advisor		G Number
		G
Additional Authorized agent/Advisor		G Number
		G
Additional Authorized agent/Advisor		G Number
		G

For Advisor Use Only: Account referred through Wealth Advisor Solutions program (Use WAS specific G Number in Primary Authorized agent/Advisor G Number field above.)

Optional: Transfer Assets From or Change Registration of Existing Fidelity Account Complete if applicable.

To change the registration of an existing account, by signing and dating this application you acknowledge and agree that the account will be registered as instructed on this account application, and you may be changing your ownership interests in this account. For eligible scenarios, review the *Change of Registration* policies and procedures. If this request cannot be granted, there will be a new account number provided and all assets will be transferred.

Transfer All Assets from Existing Fidelity Account.* **OR** **Re-register this account, keeping my same account number, if applicable.†**

Account Number

* Both accounts must have identical registrations.

† You cannot complete a re-registration request online. Once you have filled out the application, print and check the option before signing.

Registration Information Check one type only and fill in applicable blanks.

Complete the information below. You must provide information regarding the Grantor in the Personal Information section. To certify the trust, you may either complete the **Certification of Trust section** or attach copies of first and signatures pages of the trust document.

Exempt payee for Trusts only Check one, if applicable.

- A real estate investment trust
- A trust exempt from tax under Section 664 or described in Section 4947

Tax reporting number for trust.

Name of Trust			
Date of Trust MM DD YYYY	State/Country Where Organized	Social Security/Taxpayer ID Number*	Required <input type="checkbox"/> SSN <input type="checkbox"/> TIN

Address of Record

Required for all accounts. Unless you request otherwise in the Document Delivery and Frequency section, account information will be mailed to the mailing address below. The mailing address should not be your Authorized agent's/Advisor's address.

Permanent Address of Account Cannot be a P.O. Box or Mail Drop.

Mailing Address of Account Complete if different than Permanent Address.

Address		
City	State/Province	Zip/Postal Code
Country		

Address		
City	State/Province	Zip/Postal Code
Country		



1. Personal Information

Complete the information below for all trustees, grantors, and any other individual(s) with the ability to appoint and/or remove trustees or revoke/amend authority. If the grantor is deceased, enter only the grantor name below. To provide more personal information than this application will hold, duplicate this page, as well as the Agreement Signatures section.

- Required.** Check all that apply.
- | | | |
|--|--|--|
| <input type="checkbox"/> Trustee and Grantor | <input type="checkbox"/> Grantor/Settlor* | <input type="checkbox"/> Individual with Appoint/Remove Authority* |
| <input type="checkbox"/> Trustee | <input type="checkbox"/> DECEASED Grantor/Settlor* | <input type="checkbox"/> Individual with Revoke/Amend Authority* |

* These individuals will be listed as Beneficial Owners and will not have any authority or be able to take any action on this account or receive any account documentation. If the beneficial owner is an Entity, a separate Beneficial Ownership for Trust Accounts, or Beneficial Ownership for Entity Accounts, as applicable, must be attached.

Enter full name as evidenced by a government-issued, unexpired document (e.g., driver's license, passport, permanent resident card).

First Name		Middle Name	Last Name		
Social Security/Taxpayer ID Number	Required <input type="checkbox"/> SSN <input type="checkbox"/> TIN	Date of Birth MM DD YYYY	U.S. Driver's License Number	State	
Institution Name Enter full entity name as evidenced by the relevant formation document (e.g., trust document, partnership agreement, corporate resolution).					
Evening Phone		Daytime Phone		Extension	
Email*					

Provide a phone number for Fidelity to verify a transaction or request for your account.

U.S. Mail – Send the following document types to me by U.S. mail instead of electronically:

- | | |
|--|--|
| <input type="checkbox"/> Monthly Account Statement | <input type="checkbox"/> Immediate and Quarterly Trade Confirm |
| <input type="checkbox"/> Tax Documents and Related Disclosures | <input type="checkbox"/> Prospectuses, other financial reports, etc. |

* Fidelity will use this email address for electronic delivery of account documents. Unless U.S. Mail is checked for all document types, you will receive a follow-up email from Fidelity and will need to consent to begin receiving documents electronically. See Document Delivery and Frequency section for more information regarding eDelivery.

Permanent Address

Complete if different than Permanent Address of Account on Page 1. Cannot be a P.O. Box or Mail Drop.

Address		
City	State/Province	Zip/Postal Code
Country		

Mailing Address

Complete if different than Mailing Address of Account on Page 1.

Address		
City	State/Province	Zip/Postal Code
Country		

Tax Residence and Citizenship

Citizenship U.S. Skip to Employment Information. Other

Country of Citizenship

- Foreign citizens choose one.
- | | | |
|--|--|---|
| <input type="checkbox"/> Permanent U.S. Resident | <input type="checkbox"/> Non-Permanent U.S. Resident | <input type="checkbox"/> Non-Resident of U.S. |
|--|--|---|

Government Identification

Unexpired ID must include reference number and photo. Attach copy of ID.

<input type="checkbox"/> Passport	<input type="checkbox"/> Other Government-Issued ID
ID Number	Country of Issuance

Country of Tax Residence

<input type="checkbox"/> U.S. <input type="checkbox"/> Other	Country
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1. Personal Information *continued*

Employer Information & Affiliations

Check one. Employed Not Employed Retired *List Income Source if Retired or Not Employed.*

Employer/Income Source <i>required for margin privileges</i>		Occupation	
Address			
City		State/Province	Zip/Postal Code
Country			

You are, or an immediate family/household member is, a control person or affiliate of a publicly traded company under SEC Rule 144. This would include, but is not limited to, a director, 10% shareholder, policy-making officer, and members of the board of directors.

Company Name	CUSIP or Symbol
Company Name	CUSIP or Symbol
Company Name	CUSIP or Symbol

If you are affiliated, include the compliance officer's letter of approval and indicate the member firm's name and address. Fidelity will transmit duplicate copies of confirmations and statements or the transactional data contained therein to the member firm upon their request for all transactions in your account.

Check this box if any of these scenarios applies to you. You are registered with or employed by a Financial Industry Regulatory Authority ("FINRA") member firm ("associated person"), you are the spouse of an associated person, you are a child who resides in the same household or is financially dependent on the associated person, you are related to an associated person who has control over your account, or an associated person materially contributes financial support to you and has control over your account, or you are affiliated with or employed by FINRA, any other self-regulatory organization (SRO), or a municipal securities dealer.

Same as employer above. *If different, provide the information below.*

Company Name		Address	
City	State/Province	Zip/Postal Code	Country

Failure to include an approval letter may delay the processing of your request.

Trusted Contact *Optional.*

Fidelity will contact this individual if there are questions or concerns about your health or welfare due to potential diminished capacity, financial exploitation or abuse, endangerment, and/or neglect. We will:

- Provide the trusted contact with information about you and/or your account(s), but not the ability to transact on your account(s).
- Inquire about your current contact information or health status.
- Inquire about whether another person or entity has legal authority to act on your behalf (e.g., legal guardian or conservator, or trustee).

Enter information if you want to designate a person who is 18 years or older for this account. Name, Phone and Address are all required.

First Name	Middle Name	Last Name
Email		Relationship to Owner
Phone	Extension	<input type="checkbox"/> Check here if phone number is a mobile number.

This cannot be a P.O. box, Mail Drop, or C/O.

Address		
City	State/Province	Zip/Postal Code
Country		



1. Personal Information

Complete the information below for all trustees, grantors, and any other individual(s) with the ability to appoint and/or remove trustees or revoke/amend authority. If the grantor is deceased, enter only the grantor name below. To provide more personal information than this application will hold, duplicate this page, as well as the Agreement Signatures section.

- Required.** Check all that apply.
- | | | |
|--|--|--|
| <input type="checkbox"/> Trustee and Grantor | <input type="checkbox"/> Grantor/Settlor* | <input type="checkbox"/> Individual with Appoint/Remove Authority* |
| <input type="checkbox"/> Trustee | <input type="checkbox"/> DECEASED Grantor/Settlor* | <input type="checkbox"/> Individual with Revoke/Amend Authority* |

* These individuals will be listed as Beneficial Owners and will not have any authority or be able to take any action on this account or receive any account documentation. If the beneficial owner is an Entity, a separate Beneficial Ownership for Trust Accounts, or Beneficial Ownership for Entity Accounts, as applicable, must be attached.

Enter full name as evidenced by a government-issued, unexpired document (e.g., driver's license, passport, permanent resident card).

First Name		Middle Name	Last Name	
Social Security/Taxpayer ID Number	Required <input type="checkbox"/> SSN <input type="checkbox"/> TIN	Date of Birth MM DD YYYY	U.S. Driver's License Number	State
Institution Name Enter full entity name as evidenced by the relevant formation document (e.g., trust document, partnership agreement, corporate resolution).				
Evening Phone		Daytime Phone	Extension	
Email*				

Provide a phone number for Fidelity to verify a transaction or request for your account.

U.S. Mail – Send the following document types to me by U.S. mail instead of electronically:

- | | |
|--|--|
| <input type="checkbox"/> Monthly Account Statement | <input type="checkbox"/> Immediate and Quarterly Trade Confirm |
| <input type="checkbox"/> Tax Documents and Related Disclosures | <input type="checkbox"/> Prospectuses, other financial reports, etc. |

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Country		

Mailing Address

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Address		
City	State/Province	Zip/Postal Code
Country		

Tax Residence and Citizenship

Citizenship U.S. Skip to Employment Information. Other

Country of Citizenship

- Foreign citizens choose one.
- | | | |
|--|--|---|
| <input type="checkbox"/> Permanent U.S. Resident | <input type="checkbox"/> Non-Permanent U.S. Resident | <input type="checkbox"/> Non-Resident of U.S. |
|--|--|---|

Government Identification

Unexpired ID must include reference number and photo. Attach copy of ID.

<input type="checkbox"/> Passport	<input type="checkbox"/> Other Government-Issued ID
ID Number	Country of Issuance

Country of Tax Residence

<input type="checkbox"/> U.S. <input type="checkbox"/> Other	Country
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1. Personal Information *continued*

Employer Information & Affiliations

Check one. Employed Not Employed Retired *List Income Source if Retired or Not Employed.*

Employer/Income Source <i>required for margin privileges</i>		Occupation	
Address			
City		State/Province	Zip/Postal Code
Country			

You are, or an immediate family/household member is, a control person or affiliate of a publicly traded company under SEC Rule 144. This would include, but is not limited to, a director, 10% shareholder, policy-making officer, and members of the board of directors.

Company Name	CUSIP or Symbol
Company Name	CUSIP or Symbol
Company Name	CUSIP or Symbol

If you are affiliated, include the compliance officer's letter of approval and indicate the member firm's name and address. Fidelity will transmit duplicate copies of confirmations and statements or the transactional data contained therein to the member firm upon their request for all transactions in your account.

Check this box if any of these scenarios applies to you. You are registered with or employed by a Financial Industry Regulatory Authority ("FINRA") member firm ("associated person"), you are the spouse of an associated person, you are a child who resides in the same household or is financially dependent on the associated person, you are related to an associated person who has control over your account, or an associated person materially contributes financial support to you and has control over your account, or you are affiliated with or employed by FINRA, any other self-regulatory organization (SRO), or a municipal securities dealer.

Same as employer above. *If different, provide the information below.*

Company Name		Address	
City	State/Province	Zip/Postal Code	Country

Failure to include an approval letter may delay the processing of your request.

Trusted Contact *Optional.*

Fidelity will contact this individual if there are questions or concerns about your health or welfare due to potential diminished capacity, financial exploitation or abuse, endangerment, and/or neglect. We will:

- Provide the trusted contact with information about you and/or your account(s), but not the ability to transact on your account(s).
- Inquire about your current contact information or health status.
- Inquire about whether another person or entity has legal authority to act on your behalf (e.g., legal guardian or conservator, or trustee).

Enter information if you want to designate a person who is 18 years or older for this account. Name, Phone and Address are all required.

First Name	Middle Name	Last Name
Email		Relationship to Owner
Phone	Extension	<input type="checkbox"/> Check here if phone number is a mobile number.

This cannot be a P.O. box, Mail Drop, or C/O.

Address		
City	State/Province	Zip/Postal Code
Country		



1. Personal Information

Complete the information below for all trustees, grantors, and any other individual(s) with the ability to appoint and/or remove trustees or revoke/amend authority. If the grantor is deceased, enter only the grantor name below. To provide more personal information than this application will hold, duplicate this page, as well as the Agreement Signatures section.

- Required.** Check all that apply.
- | | | |
|--|--|--|
| <input type="checkbox"/> Trustee and Grantor | <input type="checkbox"/> Grantor/Settlor* | <input type="checkbox"/> Individual with Appoint/Remove Authority* |
| <input type="checkbox"/> Trustee | <input type="checkbox"/> DECEASED Grantor/Settlor* | <input type="checkbox"/> Individual with Revoke/Amend Authority* |

* These individuals will be listed as Beneficial Owners and will not have any authority or be able to take any action on this account or receive any account documentation. If the beneficial owner is an Entity, a separate Beneficial Ownership for Trust Accounts, or Beneficial Ownership for Entity Accounts, as applicable, must be attached.

Enter full name as evidenced by a government-issued, unexpired document (e.g., driver's license, passport, permanent resident card).

First Name	Middle Name	Last Name
Social Security/Taxpayer ID Number	Required <input type="checkbox"/> SSN <input type="checkbox"/> TIN	Date of Birth MM DD YYYY
U.S. Driver's License Number		State
Institution Name Enter full entity name as evidenced by the relevant formation document (e.g., trust document, partnership agreement, corporate resolution).		
Evening Phone	Daytime Phone	Extension
Email*		

Provide a phone number for Fidelity to verify a transaction or request for your account.

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Address		
City	State/Province	Zip/Postal Code
Country		

Tax Residence and Citizenship

Citizenship U.S. Skip to Employment Information. Other

Country of Citizenship

- Foreign citizens choose one.
- | | | |
|--|--|---|
| <input type="checkbox"/> Permanent U.S. Resident | <input type="checkbox"/> Non-Permanent U.S. Resident | <input type="checkbox"/> Non-Resident of U.S. |
|--|--|---|

Government Identification

Unexpired ID must include reference number and photo. Attach copy of ID.

<input type="checkbox"/> Passport	<input type="checkbox"/> Other Government-Issued ID
ID Number	Country of Issuance

Country of Tax Residence

U.S. Other

Country

continued on next page

1. Personal Information *continued*

Employer Information & Affiliations

Check one. Employed Not Employed Retired *List Income Source if Retired or Not Employed.*

Employer/Income Source <i>required for margin privileges</i>		Occupation	
Address			
City		State/Province	Zip/Postal Code
Country			

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Company Name	CUSIP or Symbol
Company Name	CUSIP or Symbol
Company Name	CUSIP or Symbol

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Same as employer above. *If different, provide the information below.*

Company Name		Address	
City	State/Province	Zip/Postal Code	Country

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- Inquire about your current contact information or health status.
- Inquire about whether another person or entity has legal authority to act on your behalf (e.g., legal guardian or conservator, or trustee).

Enter information if you want to designate a person who is 18 years or older for this account. Name, Phone and Address are all required.

First Name	Middle Name	Last Name
Email		Relationship to Owner
Phone	Extension	<input type="checkbox"/> Check here if phone number is a mobile number.

This cannot be a P.O. box, Mail Drop, or C/O.

Address		
City	State/Province	Zip/Postal Code
Country		



2. Account Characteristics

These features can be modified or withdrawn upon written notice to Fidelity. For Cash Management or Options Trading, obtain the appropriate form(s) from your Authorized agent(s)/Advisor(s).

Trading and Asset Movement Authorizations

Trading Authorization

Authorizes Fidelity to accept trades, servicing, or account-related instructions on your account from your Authorized agent(s)/Advisor(s), without direct instructions from you. Trading authorization is a feature of all accounts opened with this application; you grant trading authorization when you sign the application. By granting trading authorization to your Authorized agent(s)/Advisor(s), you understand and agree that your Authorized agent(s)/Advisor(s) will have the ability to instruct Fidelity to initiate transfers of cash from your bank account to your Fidelity account, based on standing written funds transfer instructions provided by you to Fidelity. See the Client Agreement for more complete information.

Asset Movement Authorization *Check one only.*

Authorizes Fidelity to accept instructions from your Authorized agent(s)/Advisor(s) to move assets in and out of your account, without direct instructions from you. If no Asset Movement option below is chosen, your Authorized agent/Advisor will not be able to move money from this account without your signature. See the Client Agreement for more complete information. Fidelity may require direct instructions from you for transactions over a certain amount.

By checking Level 1 Limited, Level 1, or Level 2, you direct Fidelity to accept instructions from your Authorized agent(s)/Advisor(s) concerning the types of transactions indicated for that level. In the descriptions below, "same-registration" means the same owner or owners and the same registration type.

No Asset Movement Authority on this Account Your Authorized agent/Advisor will not be able to move money from this account without your signature.

Level 1 Limited (First-Party Only) This authorization includes one-time disbursements and the establishment of, and changes to, periodic disbursements (Periodic Distribution Plans) from your account, including:

- checks made payable to you and sent to your address.
- bank wires or electronic funds transfers (EFTs) to any first-party account you have authorized through standing written instructions and first-party check disbursements you have authorized through standing written instructions.
- transfers of cash or securities from this account to other same registration accounts at Fidelity, if this account is an individual or transfer on death account (accounts owned by you individually), contributions from this account to any IRA you own at Fidelity.

Level 1 (First- and Third-Party) This includes all Level 1 Limited authorizations, plus:

- bank wires or electronic funds transfers (EFTs) to any third-party account you have authorized through standing written instructions and third-party check disbursements to any payee and address you have authorized through standing written instructions.
- transfers of cash or securities from this account to other third-party accounts at Fidelity you have authorized through standing written instructions.

Level 2 This includes all Level 1 authorizations, plus:

- bank wires to any same-registration account outside Fidelity, without direct instructions from you.

Note that you agree that Fidelity cannot confirm the account registration at the receiving bank and will rely solely on the representations of your Authorized agent(s)/Advisor(s) as to the registration of the receiving account.

Margin Privileges *Subject to approval by Fidelity; involves additional costs and risks.*

Apply for Margin Privileges

Margin allows you to borrow money from Fidelity using certain securities in your account as collateral.

Note: Employment status is required for each account owner in order to be considered for margin.

Core Transaction Account *Check one only.*

The core account is used for settling transactions in your account and for holding balances awaiting investment. Availability of core account options may change. If you have not chosen a fund or if the one you have selected is not available, the default option listed will be the core account. You understand and agree that Fidelity may change your core account selection with notice to you. You may make a different core account selection from available options. Contact your advisor to change your core account option. See the Core Transaction section of the Client Agreement for details.

FCASH Taxable Cash Account
Taxable Interest-bearing account. Default if no choice is indicated.

FDRXX Fidelity Government Cash Reserves Money Market Fund
U.S. Accounts Only

FZFX Fidelity Treasury Money Market Fund
U.S. Accounts Only

QFUPQ Federated Short-Term U.S. Prime Offshore Fund - Institutional Service Series
Non-U.S. Accounts Only. Not eligible for residents of Ireland. Default for non-U.S. accounts if not elected.

OTHER Authorized Agent or Service
If you have authorization from Fidelity to use a different core fund option, enter the fund name and/or symbol.

Other

2. Account Characteristics *continued*

Dividend and Capital Gain Payments *Check one only.*

These choices concern handling of any dividends, capital gains, and similar payments made by securities you own. Any payments that you choose to have reinvested will be used to purchase additional shares of the security that is making the payment. Any payments that you choose to have paid into your core account (along with any interest from debt securities that you own) will be invested in the core account vehicle for your account. Note that only certain domestic stocks and closed-end funds held in a Fidelity brokerage account are eligible for dividend reinvestment. For more information on reinvestment policies, see Dividend Reinvestment section in Client Agreement.

- | | |
|---|---|
| <input type="checkbox"/> Reinvest: Payments from all mutual funds
Pay to Core Account: Payments from all eligible U.S. equities and closed-end funds (3) <i>Default choice if you make no indication</i> | <input type="checkbox"/> Pay All to Account Do not distribute by check (4) |
| <input type="checkbox"/> Reinvest: Payments from all eligible U.S. equities and closed-end funds
Pay to Core Account: Payments from all mutual funds (S) | <input type="checkbox"/> Pay All to Account Send checks every week (1) |
| <input type="checkbox"/> Reinvest: Payments from all eligible securities; any payments from ineligible securities will be paid to your core account (D) | <input type="checkbox"/> Pay All to Account Send checks twice a month (5) |
| | <input type="checkbox"/> Pay All to Account Send checks every month (2) |
| | <input type="checkbox"/> Pay All to Account Send checks every quarter (6) |

Document Delivery and Frequency

Electronic Delivery

By providing your email address in this form, you have elected to receive Statements, Trade Confirmations, Tax Forms and related disclosures, Prospectuses, Financial Reports, and other documents electronically. If you do not want any of these document types to be delivered to you electronically, you can choose U.S. Mail delivery for that document type.

By receiving documents electronically, you may be eligible for reduced trading commissions. Consult your Authorized agent/Advisor for more details. In order to begin receiving documents electronically, you will need to read the Electronic Delivery Agreement and agree to its terms. You will receive this agreement at the email address you provide.

Note:

- Your delivery preferences are applied across all eligible Fidelity accounts owned by you based upon your most recent election. Therefore, your choice of electronic or paper delivery for this new account will be applied to all eligible accounts unless you elect otherwise in the future.
- For trust accounts, any trustee may consent to Electronic Delivery to suppress mailed documents for this account.
- The email address provided should not be your Authorized agent/Advisor's email address.
- This email address will replace any existing email address already on our system.

Document Redirection *Election to redirect the document below to your advisor will supersede electronic delivery selection above.*

	Send to My Advisor	OR	Send to Me	
Proxies¹ Includes all proxy-voting materials.	<input type="checkbox"/>	OR	<input type="checkbox"/>	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: right; margin: 0;"><i>For Authorized agent/Advisor Use Only</i></p> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;"> Proxy Voting G Number (Agent/Advisor or Administrator) </div> <p style="margin: 0;">G </p> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;"> Name (Administrator Only) </div> </div>
Reports Includes annual reports and information statements.	<input type="checkbox"/>	OR	<input type="checkbox"/>	
Prospectuses	<input type="checkbox"/>	OR	<input type="checkbox"/>	
Corporate Actions²	<input type="checkbox"/>	OR	<input type="checkbox"/>	

¹ In choosing this option, you also direct Fidelity to accept votes regarding these proxies from your Primary Authorized agent/Advisor. If your Primary Authorized agent/Advisor has a Proxy Voting G Number or uses a proxy administrator, provide the G Number and administrator name as appropriate.

² Notwithstanding your election to receive Corporate Actions/Reorganization Notices at your account's mailing address. Fidelity will accept decisions on the corporate actions/reorganization notices from your Primary Authorized agent/ Advisor.

Trade Confirmation Frequency

Check one. Quarterly Immediately

Duplicate Materials

Account profiles include ownership and investment objectives information. Individuals or entities receiving account statements or trade confirmations will also be granted access to all account information.

To All Trustees If selected, indicate which documents below to send to all account owner's mailing addresses. If not selected, these communications will be mailed to the mailing address of the account and deemed to have been delivered to all account owners.

Check all that apply: Trade Confirmations Account Profiles Account Statements

To Third Party(ies) Attach additional sheet if necessary. Completing this section will be considered your request to instruct Fidelity to send the type(s) of duplicate documents checked to the party or parties indicated.

Check all that apply: Trade Confirmations Statements

Name			
Address <i>not required if providing G Number</i>			G Number
G			
City	State/Province	Zip/Postal Code	Country



3. Signatures and Dates *Form cannot be processed without signatures and dates.*

All Accounts

To help the government fight financial crimes, Federal regulation requires Fidelity to obtain your name, date of birth, address, and a government-issued ID number before opening your account, and to verify the information. In certain circumstances, Fidelity may obtain and verify comparable information for any person authorized to make transactions in an account. Also, Federal regulation requires Fidelity to obtain and verify the beneficial owners and control persons of legal entity customers. Requiring the disclosure of key individuals who own or control a legal entity helps law enforcement investigate and prosecute crimes. Your account may be restricted or closed if Fidelity cannot obtain and verify this information. Fidelity will not be responsible for any losses or damages (including, but not limited to, lost opportunities) that may result if your account is restricted or closed.

All owners must read and sign. Your signature binds you to the terms in "All Accounts" and any other applicable sections.

Note: If you would like this account to be treated as an Omnibus Account, you must complete and provide an Omnibus Certification Form. Omnibus Accounts with non-U.S. mailing addresses cannot be established. The Omnibus Certification Form is required in order to ensure that redemption fees are properly applied in accordance with the terms of mutual fund prospectuses.

By signing below, you:

- Affirm you are at least 18 years old and legally authorized to enter into this agreement in the state in which you reside.
- Certify that all information you have provided to us in this form is true, accurate, and complete.
- Represent and warrant that if you did not check either box in the section titled Employer Information & Affiliations you have determined that none of the scenarios are applicable.
- Affirm that you have read, understand, and agree to the current terms of the Client Agreement and the account features you selected and agree to future amendments to these terms.
These include:
 - your commitments to us
 - your authorizations and statements concerning your Authorized agent(s)/Advisor(s), including your agreement to grant your Authorized agent(s)/Advisor(s) discretion over your account (as described in a written advisory contract) and, if indicated, asset movement authority
 - our privacy policy and other notices and disclosures
- Grant your Authorized agent(s)/Advisor(s) trading authority, as defined in the Client Agreement, and agree that we may accept instructions on your account (such as orders to buy and sell securities) from your Authorized agent(s)/Advisor(s).
- With respect to the fees associated with your account:
 - Authorize your Authorized agent(s)/Advisor(s) to set the fees you pay for their services and the fees you pay for our services.
 - Authorize us to accept instructions from your Authorized agent(s)/Advisor(s) to deduct Authorized agent/Advisor fees directly from your account.
 - Authorize brokerage commissions and termination fees to be deducted from your account (see the Client Agreement for more complete information on fees).
- Understand that all communications with us may be monitored or recorded, and you consent to this monitoring or recording.
- Indemnify and hold us harmless [jointly and severally for accounts with more than one owner] from and against any and all losses, claims, costs, actions, demands, suits, proceedings, damages and expenses, including, without limitation, regulatory fines, attorneys' fees and expenses, costs of collection, and any other costs suffered or incurred by us arising out of or relating to our effecting any transaction or acting upon any instruction given by you or any authorized agent, advisor or any third party you authorize on your account or from your action or inaction, whether intentional or not, including losses resulting from the action or inaction of any authorized agent, advisor or any other third party you authorize on your account.
- Authorize us to accept votes from your Authorized agent/Advisor on proxies if you direct us to deliver your prospectuses, proxies, related materials or corporate actions/reorganization notifications to your Primary Authorized agent/Advisor instead of delivering these documents to you, and you agree to the following:
 - We have no responsibility to verify any of the representations you make concerning these instructions.
 - You represent that if your Primary Authorized agent/Advisor has identified a proxy-related third-party administrator on this form you have separately authorized your Primary Authorized agent/Advisor to use such an administrator, your Primary Authorized agent/Advisor may not delegate to the proxy administrator the right to determine your proxy vote and we may honor instructions from your Primary Authorized agent/Advisor to forward proxy materials to the administrator and may accept your Primary Authorized agent's/Advisor's proxy voting decisions when communicated to us by the administrator.
 - Any and all Authorized agents/Advisors you have designated and authorized are either state or SEC-registered investment advisors, and have discretion over your account pursuant to a separate written advisory contract.
- Understand that unless you provide written notice to the contrary, we may supply your name to issuers of securities held in your account so you can receive important information regarding such securities. As provided by law and/or due to an independent relationship that may exist between an issuer and you, notwithstanding your objection, certain issuers of securities registered under the Investment Company Act of 1940, including the Fidelity Funds, have access to your identity through their transfer agent.
- Certify and agree that the certifications, authorizations, and appointments in this form will continue until we receive written notice of any changes in sufficient time to provide us a reasonable opportunity to act. Any revocation shall not affect any instruction or transaction initiated before its receipt.
- Understand that if requested, you will receive quarterly confirmation statements and not individual transaction confirmations, and you understand the limitations this places on your ability to monitor activity in your account.
- Acknowledge that we are not affiliated with your Authorized agent(s)/Advisor(s).
- Understand that we will act only on authorized instructions, and have no responsibility to monitor or review your account, to determine the suitability of any investment, or to judge the appropriateness of any instruction placed so long as it appears to be authorized. You can revoke this authorization any time by giving us written notice.
- Understand that all transactions and instructions related to your account are subject to Fidelity's policies and procedures, which may result in Fidelity's refusal to accept or execute any order, instruction or transfer related to your account for any reason at any time in its sole discretion.
- Acknowledge that if you or your Authorized agent/Advisor have elected a Bank Deposit Sweep Program as your core account option, your account is an eligible account, as that term is defined in the Bank Deposit Sweep Program disclosure documents. You further acknowledge that by electing a Bank Deposit Sweep Program as your core account option, the cash balance in your core account will be swept to an FDIC insurance-eligible interest-bearing account at a Bank. You also understand that a Bank Deposit Sweep Program is not a security and therefore is not protected by SIPC but when your core account balance is swept to an FDIC account at a Bank, it is eligible for FDIC insurance subject to FDIC insurance coverage limits.
- Acknowledge that you have received the description of the core account in the Client Agreement, including Fidelity's right to change the options available as core account options with notice to you when required, and consent to having free credit balances held or invested in the core account options made available.
- Agree that if an entity is opening the account, you will notify Fidelity if or when beneficial ownership information of the entity changes.

continued on next page

3. Signatures and Dates *continued*

Clients Adding Trusted Contact Only

- You authorize Fidelity, at Fidelity's sole discretion, to communicate with your trusted contact on any designated account(s) you may have on file and disclose information about designated accounts to address possible financial exploitation or confirm specifics about your current contact information, your health status, or inquire about the identity of any legal guardian, executor, trustee, or holder of a power of attorney, or as otherwise permitted. This does not allow your trusted contact to transact on your account(s).
- Certify that your trusted contact is 18 years or older.
- Understand that we may remove any trusted contact from any account at any time for any reason.
- Understand that this designation is optional and you may change or withdraw it at any time by notifying Fidelity in writing.

Margin Privileges Applicants Only

- You authorize us to lend separately or with the property of others, either to ourself or to others, any property we may be carrying for you on margin. This authorization applies to all accounts we carry for you and will remain in force until we receive written notice of revocation.

- Every trustee has signed below (or you are the sole trustee if applicable) and is authorized to make these statements.
- The trust has not been revoked, modified, or amended in any manner that would cause the statements contained in this trust certification to be incorrect.
- All instructions given on this account will be in full compliance with the terms of the trust and all applicable account agreements.
- The trust exists under all applicable laws.
- You have the authority under the trust and applicable law to enter into transactions, delegate trading authorization to the other authorized individuals, issue instructions on this account for and at the risk of, the trust, and that all transactions and instructions will be in full compliance with the trust.
- You authorize us to accept orders and other instructions for this account from any trustee and/or any other authorized individual or entity. This includes the authority to deliver any or all assets in the account to any trustee (personally or otherwise), or according to any trustee's instructions. We, at our option and for our protection, may require approval of other trustees before acting on any such order or instruction.
- We are not responsible for any claim, loss, expense, or other liability for acting upon any instructions given by the trustees and/or implementing any transactions.

- We may verify all information provided in connection with this form and account, and may obtain credit or other financial responsibility reports with respect to the trust, the trustees and any authorized individuals, and you have the express consent of all individuals who may be the subject of these reports. If requested in writing, we will provide the name and address of the credit reporting agency used.
- You will inform us in writing of any change to these certifications (such as a change of trustees).

For Texas Residents Only

- Acknowledge that in accordance with Texas House Bill 1454 Act No. 350, you, as an account owner of shares of a mutual fund, may designate a representative for the purpose of receiving a due diligence notice; however, you are not required to designate a representative.
- Agree that if you add a designated representative, Fidelity is required to mail the written notice upon presumption of abandonment to the representative, in addition to mailing the notice to the owner.
- Acknowledge that the designated representative does not have any rights to the mutual fund shares and may not access the shares.
- Understand that if you want to provide a designated representative, you must complete and attach a separate *Designated Representative—Texas* form.

Asset Based Pricing clients only:

You represent that you have read, understood, and agreed to the terms and conditions set forth in the Asset Based Pricing Supplement and agree to be bound by such terms and conditions as are currently in effect and as may be amended from time to time.

If you are a U.S. person:

- You certify under penalties of perjury that: (1) the Social Security number or Taxpayer identification Number that you provided on this application is correct (or you are waiting for a number to be issued to you); and (2) you are not subject to backup withholding because: (a) you are exempt from backup withholding, or (b) you have not been notified by the Internal Revenue Service (IRS) that you are subject to backup withholding for failure to report all interest or dividends, or (c) the IRS

has notified you that you are no longer subject to backup withholding; and (3) you are a U.S. citizen or other U.S. person, including a U.S. resident alien; and (4) the FATCA code(s) entered on this form (if any) indicating that you are exempt from FATCA reporting are correct.

- If you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return, you must check this box to indicate that you do not certify Item 2.

If you are not a U.S. person:

- You are submitting the applicable Form W-8 with this form to certify your foreign status and, if applicable, claim tax treaty benefits.

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

You acknowledge that this account is governed by a pre-dispute arbitration clause, which appears on the last page of the Client Agreement, and that you have read the pre-dispute arbitration clause.

Margin Applicants Only:

BY SIGNING THIS APPLICATION YOU ACKNOWLEDGE THAT YOUR SECURITIES MAY BE LOANED TO FIDELITY OR OTHERS AND THAT YOU HAVE READ AND RETAINED A COPY OF THE MARGIN DISCLOSURE STATEMENT AND MARGIN AGREEMENT. You agree to be bound by such terms and conditions as are currently in effect and as may be amended from time to time.

Required Signature(s) on Next Page.

3. Signatures and Dates *continued*

Owner Signature(s)

If four or more owners, duplicate the Agreement Signatures section for additional owners to sign. Also fill out a duplicate of the Personal Information section for each owner. Submit this application, along with any other required materials, to your Authorized agent/Advisor. All account owners must sign. Beneficial Owners (as defined in the Personal Information section) do not need to sign.

Account Opening Authorization – Signature and Date Required

Print Trustee Name <i>First, M.I., Last</i>	
Trustee Signature	Date <i>MM - DD - YYYY</i>
SIGN ▶	▶

Print Trustee Name <i>First, M.I., Last</i>	
Trustee Signature	Date <i>MM - DD - YYYY</i>
SIGN ▶	▶

Print Trustee Name <i>First, M.I., Last</i>	
Trustee Signature	Date <i>MM - DD - YYYY</i>
SIGN ▶	▶

4. Certification of Trust

This section applies to domestic trusts only. If you do not wish to complete this certification or if your account is in the name of a foreign trust you must attach the first and signature pages of your trust document. Notary and/or trust document are not required for applications signed electronically.

Trust Information

Name of Trust		
Date of Trust MM DD YYYY	Social Security/Taxpayer ID Number	Required <input type="checkbox"/> SSN <input type="checkbox"/> TIN
Name(s) of Trustee(s)		
Name(s) of Grantor(s)		
Name(s) of Person(s) who can revoke/amend the trust		

Required for Revocable Trusts ▶

- a. The trust exists under applicable state laws.
- b. We understand and acknowledge that the above-referenced agreement may be terminated in the event that Fidelity or any of its agents or affiliates has reasonable grounds to believe the foregoing is untrue, or the form has been altered.
- c. We, the Trustees, certify to Fidelity that we are the currently acting trustees and the trust has not been revoked, modified, or amended in any manner that would cause the representations contained in this trust certification to be incorrect.
- d. We, the Trustee(s), have the power under the trust and applicable law to enter into the transactions and issue the instructions that we make in this account. We further certify any and all transactions effected and instructions given on this account will be in full compliance with the trust.

Certified to Fidelity by Trustees All Trustees must sign and date below. Signatures must be notarized if the box below is not checked. For more trustees, make a copy of this page.

Trust is a Revocable Living Trust where the Grantor(s), Trustee(s) and Beneficiary(ies) are all the same individual(s) (no notary required). All Trustees must sign and date below. Signatures must be notarized where applicable.

Trustee Name

Trustee Name

Trustee Signature	Date MM - DD - YYYY
SIGN ▶	▶

Trustee Signature	Date MM - DD - YYYY
SIGN ▶	▶

Statement of Notary Public
You certify that the individual signing above appeared before you on the date indicated below, that they are known to you to be the individual they claim to be, and that they represented to you that they made the certifications above their signature of their own free will.

State	County
Notarization Date MM DD YYYY	Commission Expires MM DD YYYY

Statement of Notary Public
You certify that the individual signing above appeared before you on the date indicated below, that they are known to you to be the individual they claim to be, and that they represented to you that they made the certifications above their signature of their own free will.

State	County
Notarization Date MM DD YYYY	Commission Expires MM DD YYYY

Name of Notary Public

Name of Notary Public

Notary Signature	Date MM - DD - YYYY
SIGN ▶	▶

Notary Signature	Date MM - DD - YYYY
SIGN ▶	▶

▼ NOTARY STAMP ▼

▼ NOTARY STAMP ▼

Additional Trustee signature, if applicable, must be notarized on the next page.

4. Certification of Trust *continued*

Trustee Name	
Trustee Signature	Date MM - DD - YYYY
SIGN ▶	▶

Statement of Notary Public

You certify that the individual signing above appeared before you on the date indicated below, that they are known to you to be the individual they claim to be, and that they represented to you that they made the certifications above their signature of their own free will.

State	County
Notarization Date MM DD YYYY	Commission Expires MM DD YYYY

Name of Notary Public	
Notary Signature	Date MM - DD - YYYY
SIGN ▶	▶

NOTARY STAMP



Brokerage Account Client Agreement

Client Agreement

Please retain for your records

In this agreement, "Fidelity," and "you" refer to Fidelity Brokerage Services LLC and National Financial Services LLC and their affiliates, and their employees, agents, representatives, shareholders, successors, and assigns as the context may require; "I," "we" and "account owner" refer to the owner indicated on the account form or duly Authorized agent(s)/Advisor(s); and for any account with more than one owner (such as a joint or trust account), "I," "we" and "account owner" or "account owners" refer to all owners, collectively and individually, or duly Authorized agent(s)/Advisor(s).

1. Important Aspects of the Account

Upon approval by Fidelity, I understand that Fidelity will maintain an account for me and buy, sell or exchange securities or other products in accordance with instructions from me or my Authorized agent(s)/Advisor(s). Certain administrative services will be provided to me or my Authorized agent(s)/Advisor(s) by Fidelity. I understand that this Brokerage Account Client Agreement governs my account and my relationship with Fidelity and its affiliates. Without limiting any other provision of this Agreement, I understand and agree that as among me, my Authorized agent(s)/Advisor(s) and Fidelity:

1. I have selected my Authorized agent(s)/Advisor(s) based on criteria I deem appropriate for my investment needs and without any advice or recommendation from Fidelity;
2. All decisions relating to my investment or trading activity shall be made solely by me or my Authorized agent(s)/Advisor(s) identified on my Brokerage Account Application or my Brokerage Account Application for Business Registrations (collectively, Fidelity Brokerage Application) or subsequently in writing; my Authorized agent(s)/Advisor(s) has collected from me such information as is required to determine the suitability of my investment or trading activity;
3. Fidelity is authorized to accept and act upon the instruction of my Authorized agent(s)/Advisor(s) with respect to my account in accordance with this Agreement until you receive written notice revoking such authority;
4. My Authorized agent(s)/Advisor(s) is not affiliated with or an agent of Fidelity and is not authorized to act or make representations on Fidelity's behalf; Fidelity and my Authorized agent(s)/Advisor(s) have no relationship except as described in this agreement;
5. I understand deposits by check shall be made payable to Fidelity Brokerage Services LLC. Deposits to fund a new account may be attached to my account application. Subsequent deposits should be mailed directly to Fidelity Investments. Overnight mail may be sent to: 100 Crosby Parkway, Mailzone KC1J, Covington, KY 41015. Regular mail may be sent to: P.O. Box 770002, Cincinnati, OH 45277-0075;
6. Fidelity has no responsibility and will not undertake to review, monitor or supervise the suitability of the trading decisions made by me or my Authorized agent(s)/Advisor(s) or the frequency of the investment or trading activity in my account. My Authorized agent(s)/Advisor(s) has collected from me such information as is required to determine the suitability of my investment or trading activity;
7. Fidelity will have no duty to inquire into the authority of the Authorized agent(s)/Advisor(s) to engage in particular transactions or investment strategies or to monitor the terms of any oral or written agreement between me and the Authorized agent(s)/Advisor(s). I represent that my Authorized agent/Advisor has disclosed to me all third-party service providers it uses and any data related to my account it makes available to third-party providers in the course of managing my account. I further agree that Fidelity will not undertake nor does it have any obligation to review or monitor these third-party providers.

8. I acknowledge that if I reside outside the United States I have received this application and agreement as a result of my express request for them. I further acknowledge that nothing herein is an offer or solicitation of any security, product or service in any jurisdiction where its offer or sale would be contrary to local law or regulation;
9. I shall indemnify and hold harmless Fidelity and its officers, directors, employees, agents and affiliates from and against any and all losses, claims or financial obligations that may arise from any act or omission of my Authorized agent(s)/Advisor(s) with respect to my account.
10. The Authorized agent(s)/Advisor(s) will comply with, and make all disclosure as required by all applicable state, federal and industry securities laws and regulations, and interpretations promulgated thereunder, including, but not limited to, the Investment Advisers Act of 1940, the Securities Exchange Act of 1934, the Investment Company Act of 1940 and Financial Industry Regulatory Authority (FINRA) Conduct Rules.

Fidelity will not undertake to confirm or ensure that my Authorized agent(s)/Advisor(s) remains in compliance with its obligations.

How Fidelity Supports Your Advisor

Fidelity provides your investment advisor with a range of benefits to help your advisor conduct its business and serve you. These benefits can include providing or paying for the costs of products and services furnished to your advisor or direct payments to your advisor to defray the costs they incur when doing business. The benefits provided to your advisor may not necessarily benefit your account. The following is a general description of the benefits Fidelity provides to advisors and the surrounding arrangements. The benefits and arrangements vary among advisors depending on the business they and their clients conduct with us and other factors. Fidelity's relationship with each advisor is unique. Feel free to contact us or your advisor for information about the benefits and arrangements available to your advisor in managing your account through Fidelity.

Fidelity pays for or provides some advisors with technology solutions to help facilitate advisors' practices, to maintain the advisors' integration with Fidelity's brokerage systems, and to streamline advisors' operations. These technology solutions include, but are not limited to, Fidelity and its affiliates' proprietary products and platforms that allow advisors to communicate electronically with Fidelity or access third-party technology products and services. Fidelity pays some of its affiliates, including eMoney Advisor, to obtain discounts on its affiliates' products and services for some advisors. The discounts may be substantial and are negotiated individually with advisors based on various factors, including the advisor's assets under management with Fidelity, the profitability of the advisor's relationship to Fidelity and, at times, non-financial factors such as the advisor's status in the industry. Consult your advisor to determine if it receives discounts from Fidelity's affiliates and what effect, if any, such discounts have on the choices it makes with respect to your account(s) or investments. We also assist some advisors in their marketing activities, including by providing or paying for marketing materials and initiatives for the advisors, co-sponsoring events with the advisors, or engaging in joint marketing initiatives with the advisors. We assist advisors in transferring client accounts to our platform and in completing documentation to enroll clients to receive our services, such as providing or paying for clerical staff to assist in this process or paying account transfer fees or other charges you or other clients may have to pay when changing custodians or service providers. We also make direct payments to some advisors in the form of reimbursements for reasonable travel expenses incurred when reviewing our business and practices. We also make direct payments to some advisors for performing back-office, administrative, custodial support and clerical services for us in connection with client accounts for which we act as custodian. Some advisors may already perform, or be obligated to perform, these services when servicing client accounts and receive compensation from clients for the services. To the extent

the amount of these direct payments differs based on the types of assets held in client accounts, this differential poses a conflict of interest because the advisor has an incentive to favor certain types of investments over others.

We also offer investment research to help advisors make well-informed decisions for client accounts and access to Fidelity representatives to provide support to advisors. These and other services will provide benefits to advisors who receive them and are made available to advisors at no fee or at a discounted fee. Fidelity's provision of these services and other benefits to advisors may be based on the advisors' clients placing a certain amount of assets in accounts with us within a certain period of time. Such arrangements can pose a conflict of interest in connection with an advisor's recommendation or requirement that its clients establish accounts with us.

In some cases, Fidelity and an advisor agree to pricing (including commissions and transaction account and service fees) for client accounts held at Fidelity based on the nature and scope of business the advisor does with us, including the current and future expected amount of the advisor's client assets in our custody, the types of securities managed by the advisor, and the expected frequency of the advisor's trading. If your advisor has such an agreement with us, your account will be subject to it. We may change the pricing and the services and other benefits we provide if the nature or scope of an advisor's business with us changes or does not reach certain levels, in which case pricing for the advisor's client accounts, including your own account if your advisor has such an agreement with us, may increase to an amount we decide but not to exceed our standard pricing for advisors that custody with Fidelity. These types of arrangements can pose a conflict of interest for advisors and may influence the nature and scope of business the advisors do with Fidelity and their recommendations or advice to clients.

Fidelity may provide information to advisors that may be deemed the solicitation of a particular security. In no event does the providing of this information to an advisor constitute solicitation of a particular security to the client or account owner by Fidelity, and an advisor is responsible for interposing its own judgment when giving recommendations or advice to clients. Any trading decisions are solely between the advisor and the account owner.

As between Fidelity and your advisor, your advisor is responsible for disclosing to you information pertaining to its receipt of the benefits described above, any related conflicts of interest the receipt of those benefits creates for your advisor, and how your advisor addresses those conflicts of interest. Fidelity undertakes no responsibility to monitor or review your advisor's practices or disclosures to determine if they are consistent with applicable law or your advisor's obligations.

For further information about the benefits and arrangements available to your advisor in managing your account through Fidelity, feel free to contact us or your advisor directly. We encourage you to discuss directly with your advisor any conflicts of interest that receiving these benefits may create for your advisor and how your advisor addresses those conflicts of interest.

To help the government fight financial crimes, Federal regulation requires Fidelity to obtain my name, date of birth, address, and a government-issued ID number before opening my account, and to verify the information. In certain circumstances, Fidelity may obtain and verify comparable information for any person authorized to make transactions in an account. Also, Federal regulation requires Fidelity to obtain and verify the beneficial owners and control persons of legal entity customers. Requiring the disclosure of key individuals who own or control a legal entity helps law enforcement investigate and prosecute crimes. My account may be restricted or closed if Fidelity cannot obtain and verify this information. Fidelity will not be responsible for any losses or damages (including, but not limited to, lost opportunities) that may result if my account is restricted or closed. Any information I provide to Fidelity may be shared with third parties for the purpose of validating my identity and may be shared for other purposes in accordance with Fidelity's Privacy Policy. Any information I give to Fidelity may be subject to verification, and I authorize Fidelity to obtain a credit report about me at any time.

Upon written request, I will be provided the name and address of the credit reporting agency used. Fidelity also may monitor or tape-record conversations with me in order to verify data about any transactions I request, and I consent to such monitoring or recording.

I hereby acknowledge Fidelity Brokerage Services LLC ("FBS") as my broker and National Financial Services LLC ("NFS," together with FBS, "Fidelity"), an affiliate of FBS, as custodian of the securities held in the account opened with this application, of which I am the beneficial owner. I also understand that my account is carried by NFS and that all terms of this Agreement also apply between me and NFS.

Industry regulations require that FBS and its clearing firm, NFS, allocate between them certain functions regarding the administration of my account. The following is a summary of the allocation of those functions performed by FBS and NFS.

FBS is responsible for:

(1) Obtaining and verifying account information and documentation; (2) Opening and approving my account; (3) Acceptance of orders and other instructions from me or my Authorized agent/Advisor regarding my account, and for promptly and accurately transmitting those orders and instructions to NFS; (4) Determining that those persons placing instructions for my account are authorized to do so. Neither NFS nor FBS will give me advice about my investments or evaluate the suitability of investments made by me, my Authorized agent/Advisor or any other party; (5) Operating and supervising my account and its own activities in compliance with applicable laws and regulations, including compliance with federal, industry and NFS margin rules pertaining to my margin account and for advising me of margin requirements; (6) Maintaining the required books and records for the services it performs; (7) Investigating and responding to any questions or complaints I have about my account(s), confirmations, my periodic statement or any other matter related to my account(s). FBS will notify NFS with respect to matters involving services performed by NFS.

NFS is responsible, at the direction of FBS, for:

(1) The clearance and settlement of securities transactions; (2) The execution of securities transactions, in the event NFS accepts orders from FBS; (3) Preparing and sending transaction confirmations and periodic statements of my account (unless FBS has undertaken to do so); (4) Acting as custodian for funds and securities received by NFS on my behalf; (5) Following the instructions of FBS with respect to transactions and the receipt and delivery of funds and securities for my account; (6) Extending margin credit for purchasing or carrying securities on margin; (7) Maintaining the required books and records for the services it performs.

If I have so indicated on the application, I authorize and instruct Fidelity to accept such votes regarding proxies from my Authorized agent/Advisor on my behalf.

Fidelity does not promote day-trading strategies. I understand that trading in volatile markets can present increased challenges and risks which may include:

- the risk of market orders being executed at unexpectedly high prices. If I have limited assets to pay for a transaction, such as in a retirement account with contribution restrictions, I will consider placing a limit order. If I cannot pay for a transaction, Fidelity may be required to liquidate account assets at my risk.
- delays in quotes, order execution and reporting. In volatile markets, transmission of quotes, orders and execution reports may be delayed, even for information which appears to be real time. Security prices can change dramatically during such delays.
- it may not be possible to cancel an order previously submitted, even if I have received a confirmation that you have received my cancellation order. As a result, I understand that I will be sure my prior order is actually cancelled before entering a replacement order.
- certain securities, such as IPOs trading in the secondary market and Internet and other technology-related stocks, are subject to particular volatility. I will consider managing market risk with limit orders.
- access to Fidelity or my account can be delayed by factors such as high telephone volume or systems capacity limitations. I may have alternative ways of reaching Fidelity such as the Web and telephone representatives in addition to the automated telephone system.

- the effect of using margin is amplified during periods of high price volatility. If I am a margin investor, I will periodically examine how the use of margin fits within my investment objectives, risk tolerance and financial resources.

For more complete information regarding this topic, please contact Fidelity.

Before establishing a Non-Fidelity Prototype Retirement Account, the plan/program must meet the requirements as set forth in the Non-Fidelity Prototype Retirement Application. Depending on the plan type, I may be required to send certain pages of the plan or trust documents to Fidelity. Fidelity provides only the investment vehicle for non-Fidelity prototype retirement plans and does not provide any trustee recordkeeping, tax withholding or tax reporting services. As Trustee, I or my recordkeeper will be responsible for tracking each participant's ownership share in the investment account(s). I am applying for a Non-Fidelity Prototype Retirement Plan, the trustees/custodians of the plan can grant trading authority as defined in this agreement to the plan participant by completing a Trading Authorization form.

If there are more than two account owners/holders, make a copy of the Joint Owner/Minor/Trustee Personal Information page and complete with the additional account holders' information. All account holders must sign the application in the Signature section. In order to establish the account, Fidelity is required to request the information in the Personal Information section for all account owners. Failure to provide this information will restrict the account, including transfer of assets.

Estate or Other Non-Trust Fiduciary account registrations types are not eligible for Margin. Non-Fidelity Prototype Retirement Accounts are not eligible for Level 2 Asset Movement Authorization. If Level 2 is selected, the request will default to Level 1 authorization.

Estate Accounts require a court appointment/letter of testamentary. Additional paperwork may be required.

2. Custodial Accounts

(Uniform Gifts to Minors Act or Uniform Transfers to Minors Act)

If this is a custodial account, I understand Fidelity will maintain an account established under Uniform Gifts to Minors Act or Uniform Transfers to Minors Act and for which I act as custodian. I understand that I represent and warrant the assets in the account belong to the minor, and all such assets, whether or not transferred out of the Fidelity UGMA/UTMA accounts, will only be used by me for the benefit of the minor. As used herein, "I" or "my" shall refer to the custodian or to the minor as the context may require. As Custodian, I am required to sign the application.

These accounts are not eligible for Margin.

3. Joint Accounts

If this is a joint account, "I" also refers to all account holders, jointly and severally. All account holders agree that any account holder has authority on behalf of the joint account to:

- Buy, sell (including short sales) and otherwise deal in stock, bonds, options, and other eligible securities or other investments on margin or otherwise.
- Receive notices, confirmations, account statements, shareholder and any other communications of every kind and set the delivery preferences to electronic or paper for the receipt of such communications on behalf of the joint account.
- Receive money, securities and property of every kind, and dispose of the same on behalf of the joint account.
- Make agreements relating to any of the foregoing matters, and terminate, modify or waive any of the provisions of the Agreement on behalf of the joint account.
- Deal with Fidelity as fully and completely as if he(she) alone were interested in this account and without notice to the other account participants.
- Elect and terminate account-related products and services.

All obligations and liabilities arising under this account are joint and several and may be enforced by Fidelity against any or all account holders.

Fidelity is authorized to follow the instruction in every respect of any joint account holder without notice to any other account holder, and to deliver any or all monies, securities or other property to any joint

account holder upon the instructions of any joint account holder, or to any other duly authorized person upon such instructions, even if such delivery or payment is to that joint account holder personally and not to the other(s). Fidelity will be under no obligation to inquire into the purpose or propriety of such delivery or payment and is not bound to inquire into the disposition or application of such delivery or payment. This authority remains in force until written notice to the contrary is addressed and delivered to Fidelity. Fidelity, in its sole discretion and for its sole protection, may terminate the account upon receipt of such notice and may require the written consent of all account holders prior to acting upon the instruction of any account holder.

Laws governing joint ownership of property vary from state to state. I understand that I am responsible for verifying that the joint registration I select is valid in my state. Generally, however, for **joint tenants with rights of survivorship**, in the event of the death of either tenant, the entire interest in the joint account shall be vested in the surviving joint tenant(s) on the same terms and conditions. For **tenants in common**, joint tenants are responsible for maintaining records of the percent of ownership. In the event of death of either tenant, the interest in their shares of the tenancy shall vest in the decedent's legal representative. Fidelity will take instruction from any joint tenants as if from all joint tenants, but Fidelity reserves the right to require all parties to authorize a transaction. State laws regulating **community property** vary. I may consult my own legal advisor.

4. Trust, Plan, and Business Accounts

For most trust accounts, a notarized certification of trust or copies of the first page and signature page of the trust documents are required to establish the account.

If this account is a trust or business account, or this account is not owned by individual person(s), "I" also refers to all account holders, trustees, corporate officers, partners, club members, custodians, guardians, executors, and any other authorized person(s) who hold(s) any position of ownership or fiduciary responsibility for this account.

Trustee powers include, without limitation, the authority to buy, sell (including short sales), exchange, convert, tender, redeem and withdraw assets (including delivery of securities to and from the account) to receive notices, confirmations, account statements, shareholder and communications of every kind on behalf of the trust and set the delivery preferences to electronic or paper for the receipt of such communications and to trade securities on margin or otherwise (including the purchase and/or sale of option contracts) for and at the risk of the Trust. All orders and transactions will be governed by the terms and conditions of all other account agreements applicable to this account.

Please note that Margin privileges on a Fidelity-Non Prototype Account are limited to purchases or sales of securities. Securities purchased on margin may be considered a "debt-financed property" and subject to unrelated business taxable income (UBTI). Any filing or taxes, including UBTI, are the responsibility of You, the account holder; the Plan's trustee; or IRA Custodian.

National Financial Services LLC ("NFS") and Fidelity Brokerage Services LLC ("FBS") are not responsible for filing this tax form or remitting the applicable taxes.

The plan's trustee or IRA Custodian is responsible for the administration of the retirement plan or IRA including following the governing plan document or custodial agreement and for additional reporting, tax filing, and disclosures required on this account.

FBS and NFS may not provide necessary information required for you, or your plan's trustee to complete these additional filings and/or disclosures.

Non-Fidelity Prototype Accounts are not eligible for Non-Purpose Loans.

For Corporate, LLC and Unincorporated Accounts, the authorized individuals are authorized to purchase, trade, sell, assign, transfer and/or deliver any and all stocks, bonds, options, or any other securities, listed or unlisted, in said account and to execute any and all instruments necessary, proper and desirable for the purpose, including executing any and all documentation necessary to establish cash, margin and/or option account(s) and to receive notices, confirmations, account statements, shareholder and other communications of every kind on behalf of the entity and set the delivery preferences to electronic or paper for the receipt of such communications; further, that any past action in accordance herewith is hereby ratified and confirmed.

For Partnership Accounts, the authorized individuals jointly and severally agree that each shall have authority on behalf of the partnership to establish and maintain one or more accounts (including, but not limited to, margin accounts) to buy, sell, trade and otherwise deal in, through you as brokers, stocks, bonds, options and any other securities, listed or unlisted on margin or otherwise (including short sales); to receive on behalf of the partnership account demands, notices, confirmations, reports, statements of account, and communications of every kind; to receive on behalf of the partnership account money, securities and property of every kind, and to dispose of same; and to receive notices, confirmations, account statements, shareholder and other communications of every kind on behalf of the partnership and set the delivery preferences to electronic or paper for the receipt of such communications to make on behalf of the partnership account agreements relating to any of the foregoing matters and to terminate or modify same or waive any of the provisions thereof; and generally to deal with Fidelity on behalf of the partnership account as fully and completely as if he alone were interested in said account, all without notice to the other or others interested in said account.

5. For Corporate Accounts: Corporate Resolution and Authorization

Copy of certain resolutions (certified in the Business Information section of the Brokerage Account Application for Business Registrations) adopted by the Board of Directors whereby the establishment and maintenance of trading accounts have been authorized.

RESOLVED

FIRST: That the individuals listed in the Personal Information section of the Brokerage Account Application for Business Registrations are, and each of them hereby is, authorized and empowered, for and on behalf of this Corporation (herein called the "Corporation"), to establish and maintain one or more accounts (which may be margin accounts) with Fidelity Brokerage Services LLC and National Financial Services LLC (herein called the "Brokers") for the purpose of purchasing, investing in, or otherwise acquiring, selling (including short-sales), possessing, transferring, exchanging, or otherwise disposing of, or turning to account of, or realizing upon, and generally dealing in and with any and all forms of securities including, but not by way of limitation, shares, stocks, bonds, debentures, notes, scrip, participation certificates, rights to subscribe, options, warrants, certificates of deposit, mortgages, evidences of indebtedness, commercial paper, certificates of indebtedness and certificates of interest of any and every kind and nature whatsoever, secured or unsecured, whether represented by trust, participating and/or other certificates or otherwise.

The fullest authority at all times with respect to any such commitment or with respect to any transaction deemed by any of the said officers and/or agents to be proper in connection therewith is hereby conferred, including authority (without limiting the generality of the foregoing) to give written or oral instructions to the Brokers with respect to said transactions; to borrow money and securities and to borrow such money and securities from or through the Brokers, and to secure repayment thereof with the property of the Corporation; to bind and obligate the Corporation to and for the carrying out of any contract, arrangement, or transaction, which shall be entered into by any such officer and/or agent for and on behalf of the Corporation with or through the Brokers; to pay by checks and/or drafts drawn upon the funds of the Corporation such sums as may be necessary in connection with any of the said accounts; (to deliver securities and contracts to the Brokers); to deliver securities to/and deposit funds with the Brokers; to order the transfer or delivery of securities to any other person whatsoever, and/or to order the transfer of record of any securities, to any name selected by any of the said officers or agents; to affix the corporate seal to any documents or securities to any name selected by any of the said officers or agents; to affix the corporate seal to any documents or agreements, or otherwise; to endorse any securities and/or contracts in order to pass title thereto; to direct the sale or exercise of any rights with respect to any securities; to sign for the Corporation all releases, powers of attorney, and/or other documents in connection with any such account, and to agree to any terms or conditions to control any such account; to direct the Brokers to surrender any securities to the proper agent or party for the purpose of effecting any exchange or conversion, or for the purpose of deposit with any protective or similar committee, or otherwise; to accept delivery of any securities; to appoint any other person or persons to do any and all things which any of the said officers and/or agents is hereby empowered to do, and generally to do and take all action necessary in connection with the account, or considered desirable by such officer and/or agent with respect thereto.

SECOND: That the Brokers may deal with any and all of the persons directly or indirectly, by the foregoing resolution empowered, as though they were dealing with the Corporation directly.

THIRD: That the Secretary of the Corporation be, and he hereby is, authorized, empowered and directed to certify, under the seal of the Corporation, or otherwise, to the Brokers:

- (a) a true copy of these resolutions;
- (b) specimen signatures of each and every person by these resolutions empowered;
- (c) a certificate (which, if required by the Brokers, shall be supported by an opinion of the general counsel of the Corporation, or other counsel satisfactory to the Brokers) that the Corporation is duly organized and existing, that its charter empowers it to transact the business by these resolutions defined, and that no limitation has been imposed upon such powers by the By-Laws or otherwise.

FOURTH: That the Brokers may rely upon any certification given in accordance with these resolutions, as continuing fully effective, unless and until the Brokers shall receive due written notice of a change in or the rescission of the authority so evidenced, and the dispatch or receipt of any other form of notice shall not constitute a waiver of this provision, nor shall the fact that any person hereby empowered ceases to be an officer of the Corporation or becomes an officer under some other title, in any way affect the powers hereby conferred. The failure to supply any specimen signature shall not invalidate any transaction if the transaction is in accordance with authority actually granted.

FIFTH: That in the event of any change in the office or powers of persons hereby empowered, the Secretary shall certify such changes to the Brokers in writing to the manner herein above provided, which notification, when received, shall be adequate both to terminate the powers of the persons theretofore authorized, and to empower the persons thereby substituted.

SIXTH: That the foregoing resolutions and the certificates actually furnished to the Brokers by the Secretary of the Corporation pursuant thereto be, and they hereby are, made irrevocable until written notice of the revocation thereof shall have been received by the Brokers.

6. Applicable Rules, Regulations and Policies

All transactions through Fidelity are subject to the constitution, rules, regulations, customs and usages of the exchange, market or clearinghouse where executed; to any applicable policies and/or procedures of Fidelity; and to any applicable federal or state laws, rules and regulations.

I also understand that all transactions and instructions related to my account are subject to Fidelity's policies and procedures which may result in Fidelity's refusal to accept or execute any order, instruction or transfer related to my account for any reason at any time in its sole discretion.

I am aware that various federal and state laws or regulations may be applicable to transactions in my account regarding the resale, transfer, delivery or negotiation of securities, including the Securities Act of 1933 ("Securities Act"), the Securities Exchange Act of 1934, and Rules 144, 144A, 145 and 701 thereunder. I agree that it is my responsibility to notify you of the status of such securities and to ensure that any transaction I effect with you will be in conformity with such laws and regulations. I will notify you if I am or become an "affiliate" or "control person" within the meaning of the Securities Act with respect to any security held in my account. I will comply with such policies, procedures and documentation requirements with respect to "restricted" and "control" securities (as such terms are contemplated under the Securities Act) as you may require. In order to induce you to accept orders with respect to securities in my account, I represent and agree that, unless I notify you otherwise, such securities or transactions therein are not subject to the laws and regulations regarding "restricted" and "control" securities. I understand that if I engage in transactions which are subject to any special conditions under applicable law, there may be a delay in the processing of the transaction pending fulfillment of such conditions. I acknowledge that if I am an employee or "affiliate" of the issuer of a security, any transaction in such security may be governed by the issuer's inside trading policy, and I agree to comply with such policy.

7. Commissions/Fees/Pricing

I hereby authorize my Authorized agent(s)/Advisor(s) to enter into such schedule of interest rates, commission rates and any other fee schedules for my account as may be determined between my Authorized agent(s)/Advisor(s) and Fidelity, and I hereby certify that my Authorized agent(s)/Advisor(s) has informed me of such interest rates, commission rates and other fee schedules, and I agree to be bound thereby.

Use of Funds Held Overnight

As compensation for services provided with respect to accounts, NFS receives use of: amounts from the sale of securities prior to settlement; amounts that are deposited in the accounts before investment; and disbursement amounts made by check prior to the check being cleared by the bank on which it was drawn. Any above amounts will first be netted against outstanding account obligations. The use of such amounts may generate earnings (or "float") for NFS or instead may be used by NFS to offset its other operational obligations. Information concerning the time frames during which NFS may have use of such amounts and rates at which float earnings are expected to accrue is provided as follows:

- 1) Receipts.** Amounts that settle from the sale of securities or that are deposited into an account (by wire, check, ACH (Automated Clearing House) or other means) will generally be invested in the account's core account investment vehicle (core account) by close of business on the business day following NFS's receipt of such funds. NFS gets the use of such amounts from the time it receives funds until the core account purchase settles on the next business day. Note that amounts disbursed from an account (other than as referenced in Section (2) below) or purchases made in an account will result in a corresponding "cost" to NFS. This occurs because NFS provides funding for these disbursements or purchases one day prior to the receipt of funds from the account's core account. These "costs" may reduce or eliminate any benefit that NFS derived from the receipts described previously.
- 2) Disbursements.** NFS gets the use of amounts disbursed by check from accounts from the date the check is issued by NFS until the check is presented and paid.
- 3) Float Earnings.** To the extent that such amounts generate float earnings, such earnings will generally be realized by NFS at rates approximating the Target Federal Funds Rate.

8. Security Interest

Any credit balances, securities, assets or related contracts, and all other property in which I may have an interest held by Fidelity or carried for my accounts shall be subject to a general lien for the discharge of my obligations to Fidelity, and Fidelity may sell, transfer, or assign any such assets or property to satisfy a margin deficiency or other obligation whether or not Fidelity has made advances with regard to such property.

Shares of any investment company in which I have an interest and for which Fidelity Management & Research Company serves as investment advisor and which are custodied, recordkept, or otherwise administered by an affiliate of Fidelity or NFS, also are subject to a general lien for the discharge of my obligations to Fidelity and NFS, and Fidelity and NFS may redeem any such shares to satisfy my obligation without further notice or demand. However, no provision of this agreement concerning liens or security interests shall apply to any account to the extent such application would be in conflict with any provisions of ERISA or the Internal Revenue Code relating to retirement accounts.

9. Settlement of Transactions

In the absence of a specific demand, all transactions in any of my accounts are to be paid for, securities delivered or required margin deposited no later than 2 p.m. Eastern Time on the settlement date. Fidelity reserves the right to cancel or liquidate, at my risk, any transaction not timely settled. Margin calls are due on or before the date indicated regardless of the settlement date of any transaction.

10. Money Market Same-Day Trading and Settlement (SDS)

I agree that my use of the Money Market Fund Same Day Settlement Program (SDS) is governed by the terms and conditions in this section. I understand and acknowledge that SDS purchase trades (buy orders) are funded by cash wired into my account on the day I place an SDS purchase trade (buy). I cannot use the available balance in my Core Transaction Account (defined below) to fund an SDS purchase trade. I understand that cash wired into my account and not used

that day will settle overnight into my Core Transaction Account and become ineligible to fund SDS purchase trades. Fidelity may cancel any purchase trade if I have not wired cash into my account by the last transmission intervals available for the SDS fund I want to buy. I understand that transmission intervals are determined by Fidelity and the applicable fund company at their discretion. Sale/redemption (sell order) proceeds will not be released to me until the wire is received by Fidelity. All orders must be placed during trading hours; overnight orders will not be accepted. Once an order has been transmitted to the fund company by Fidelity, it cannot be canceled. Retirement accounts are not eligible for this program.

11. Account Protection

Securities in accounts carried by NFS, a Fidelity Investments company, are protected in accordance with the Securities Investor Protection Corporation ("SIPC") up to \$500,000. The \$500,000 total amount of SIPC protection is inclusive of up to \$250,000 protection for claims for cash, subject to periodic adjustments for inflation in accordance with terms of the SIPC statute and approval by SIPC's Board of Directors. NFS also has arranged for coverage above these limits. Neither coverage protects against a decline in the market value of securities, nor does either coverage extend to certain securities that are considered ineligible for coverage. For more details on SIPC, or to request a SIPC brochure, visit www.sipc.org or call 1-202-371-8300.

12. Fidelity Equity Dividend Reinvestment Service Agreement

Upon my enrollment, I agree to the following terms and conditions governing the Fidelity Equity Dividend Reinvestment Service (the "Service") to be provided by Fidelity ("you" or "Fidelity") and its affiliate, National Financial Services LLC ("NFS"):

Provision of Fidelity Equity Dividend Reinvestment Service

My enrollment in the Service will be activated on the day I notify you by telephone, or within 24 hours after receipt of any written notification, that I wish to enroll an eligible security. Upon activation of my enrollment, I agree to be bound by this Fidelity Equity Dividend Reinvestment Service Agreement (this "Agreement") as well as any other agreements between us that apply to my brokerage account.

I may direct you to add the Service to either all eligible securities in my account or selected eligible individual securities. My enrollment authorizes you to automatically reinvest cash dividends and capital gain distributions paid on such eligible securities held in my account (collectively, "dividends") in additional shares of the same security.

To add or remove the Service with respect to securities in my account, I must notify you of my election on or before 9 p.m. Eastern Standard Time (EST) on the dividend record date for such security. If the dividend record date falls on a non-business day, then I must notify you on or before 9 p.m. EST one business day prior to the dividend record date for such security. Dividends will be reinvested on any shares of all enrolled securities provided that I own such shares on both the dividend record date and the dividend payable date.

Dividend reinvestment does not assure profits on my investments and does not protect against loss in declining markets.

You reserve the right to terminate or amend the Service and this Agreement at any time, including instituting commissions or transaction fees. Prior to the effective date of any such amendments, you shall send prior written notice thereof to me.

The reinvestment of dividends may be delayed in certain circumstances. NFS reserves the right to suspend or completely remove securities from participation in dividend reinvestment and credit such dividends in cash at any time without notice.

Eligible Accounts

The Service is available to Fidelity Brokerage customers who maintain cash, margin, or retirement brokerage accounts.

Eligible Securities

To be eligible for the Service, the enrolled security must be a closed-end fund or domestic common stock (including ADRs), which is margin eligible (as defined by NFS). In order for my enrollment to be in effect for a given security, my position in that security must be settled on or before the dividend record date. Foreign securities and short positions are not eligible for the Service. Eligible securities must be held in street name by NFS or at a securities depository on behalf of NFS.

If I attempt to enroll a security for which I have placed a buy limit order which has not been filled, my enrollment election will be held for five (5) consecutive business days, at which point I must notify Fidelity of my desire to re-enroll the security for another five (5) consecutive business days.

If I am holding a security in my account that is ineligible for enrollment, and the security subsequently becomes eligible, any existing account-level reinvestment instructions will take effect for that security.

Eligible Cash Distributions for Reinvestment

Most cash distributions from eligible securities selected for participation in the Service may be reinvested in additional shares of such securities, including cash dividends and capital gain distribution. Cash-in-lieu payments, late ex-dividend payments, and special dividend payments, however, may not be automatically reinvested. If I enroll a security in the Service, I must reinvest all of its eligible cash distributions. I understand that I cannot partially reinvest cash distributions. I also understand that I cannot use any other funds in my brokerage account to make automatic reinvestment purchases.

Dividend Reinvestment Transactions in Eligible Securities

On the dividend payable date for each security participating in the Service, you will credit my account in the amount of the cash dividend to be paid (less any amounts required by law or agreement to be withheld or debited). Three (3) business days prior to the dividend payable date, (note, however, to occur two (2) business days prior to the dividend payable date beginning September 5, 2017, to coincide with the SEC's amended rule to shorten the settlement cycle for securities transactions), you will combine cash distributions from my account with those from other customers requesting dividend reinvestment in the same security and use these funds to purchase securities for me and the other customers on a best efforts basis. You will credit to my account the number of shares equal to the amount of my funds to be reinvested in a particular security divided by the purchase price per share. If several purchase transactions are required in order to reinvest my and other customers' eligible cash distributions in a particular security, the purchase price per share will be the weighted average price per share for all such shares purchased. Under certain conditions a dividend may be put on hold by the issuing company. If a dividend is on hold on the payable date, reinvestment will not be performed. If a dividend is released from hold status after dividend payable date, dividend reinvestment will be performed on the day the dividend is actually paid.

If I liquidate shares of an enrolled security between the dividend record and the business day prior to the payable date, such shares will not participate in the Service, and I will receive the dividend as cash in my core account. If I liquidate shares of an enrolled security on dividend payable date, such shares will participate in the Service.

I will be entitled to receive proxy voting materials and voting rights for an enrolled security based on my proportionate shares. For mandatory reorganizations, I will receive cash in lieu of my partial shares. For voluntary reorganizations, instructions I give you will be applied to my whole shares and the partial shares will be liquidated at market price.

Partial Shares

Automatic reinvestment of my eligible cash distributions may give me interests in partial shares of securities, which you will calculate to three decimal places. I will be entitled to receive dividend payments proportionate to my partial share holdings. If my account is transferred, if a stock undergoes a reorganization, or if stock certificates are ordered out of an account, partial share positions, which cannot be transferred, reorganized, or issued in certificate form, will be liquidated at the closing price on the settlement date. The partial share liquidation transaction will be posted to my account on the day following the settlement date. I may not liquidate partial shares at my discretion. If I enter an order to sell my entire whole share position, any remaining partial share position will be liquidated at the execution price of the sell and will be posted to my account on the settlement day. No commission will be charged for the liquidation of the partial share position.

Confirmations and Monthly Statements

In lieu of separate immediate trade confirmation statements, all transactions made through the Service will be confirmed on my regular monthly brokerage account statement. I may obtain immediate information regarding a dividend reinvestment transaction on the day after the reinvestment date by calling my local Fidelity Investor Center or Fidelity's 24-hour toll-free number.

Continuing Effect of Authorization; Termination

I authorize you to purchase, for my account, shares of the securities I have selected for the Service. Authorizations under this section will remain in effect until I give you notice to the contrary on or before 9 p.m. EST on the dividend record date. If the dividend record date falls on a non-business day, then notice must be given on or before 9 p.m. EST at least one business day prior to the dividend record date. Such notice will not affect any obligations resulting from transactions initiated prior to your receipt of the notice. I may withdraw completely or selectively from the program. If I transfer my account within Fidelity, I must re-enroll my securities for reinvestment. Enrollment elections for securities that become ineligible for the Service will be canceled after 90 days of continuous ineligibility.

Automatic Dividend Reinvestment Transactions through the Depository Trust Company

I understand that if I elect to participate in the Service, reinvestment for certain securities may occur through the Depository Trust Company dividend reinvestment service (the "DTC program"). DTC and the issuer determine which securities participate in the DTC program. Only certain eligible DTC program securities will participate in the Service, and such eligibility is determined by you. I can obtain immediate information regarding DTC-eligible securities by calling my Fidelity Representative.

Securities eligible for reinvestment through the DTC program portion of the Service cannot participate in the cash reinvestment portion of the Service. If a DTC-eligible security subsequently becomes DTC-ineligible, and I have elected dividend reinvestment for that security, I will automatically continue to participate in the cash reinvestment portion of the Service for that security, provided that it is eligible for the Service. If a DTC-ineligible security subsequently becomes DTC-eligible, and I have elected dividend reinvestment for that security, then I will continue to participate in the Service through the DTC program portion of the Service for that security. No communication regarding these changes will be provided to me.

You will post the DTC program transaction to my account when the details, including determination of any discounts, are made available to you by DTC. Such transactions, although not posted to my account on the dividend payable date, will be effective as of such date. If I liquidate my shares after the dividend record date but before the DTC program reinvestment is posted to my account, then I will receive the dividend in cash.

13. Receipt of Communications

Communications may be sent to me at the U.S. postal or electronic mail address of record listed on my application or at such other address I may hereafter give Fidelity, and all communications so sent, whether by mail, electronic means, telegraph, messenger or otherwise, shall be deemed given to me personally, whether actually received or not. I understand that I should promptly and carefully review the transaction confirmations and periodic statements and notify Fidelity of any errors. Information contained on transaction confirmations and account statements is conclusive unless I object in writing immediately after its being transmitted to me or my Authorized agent(s)/Advisor(s).

Account mailings may include: confirmation of the new account profile, confirmations of changes to the investment objectives, and the tri-annual account profile confirmation.

All account mailings of the account being established with this application will be sent to the account address in conjunction with the paper or electronic delivery preference on the account and be deemed to have been received by all account holders at such address.

14. Periodic Reports

I will receive a statement of all transactions quarterly, and monthly in the months where there is activity in my account, unless I have authorized on the application to direct all written trade confirmations to my Authorized agent(s)/Advisor(s) in lieu of sending them to me directly. If I have elected to receive quarterly account statements detailing all trade confirmations in lieu of immediate trade confirmations, I understand that receiving quarterly account statements impacts my ability to monitor as promptly the trading activity and investment decisions made by my Authorized agent(s)/Advisor(s). I acknowledge my Authorized agent(s)/Advisor(s) is my fiduciary and has investment discretion over the account, that Fidelity has no responsibility for the trading activity in the account or for monitoring the trading in my account, and that Fidelity's role is limited to carrying out my Authorized agent(s)/Advisor's instructions

relating to the trading activity and investments in my account. I can revoke these instructions with written notice to you. The brokerage statement will detail: securities bought or sold in my securities account, whether on margin or on a fully paid basis; all purchases of merchandise, services and cash advances made with the check or debit card; redemption checks; margin loans and repayments and interest charges, if any; the number of fund shares that were purchased or redeemed for me; and electronic funds transfers and monthly fees assessed.

By authorizing Fidelity to deliver prospectuses to my Authorized agent(s)/Advisor(s) in lieu of sending them to me, I acknowledge that I will not receive prospectuses on securities held in my account and that it is my responsibility to evaluate the appropriateness of trading decisions made by my Authorized agent(s)/Advisor(s).

15. Extraordinary Events

Fidelity shall not be liable for loss caused directly or indirectly by government restrictions, exchange or market rulings, suspension of trading, war, strikes or other conditions beyond its control, including, but not limited to, extreme market volatility or trading volumes.

16. Choice of Marketplace

I understand and acknowledge that when securities can be traded in more than one marketplace, in the absence of specific instructions from me, Fidelity may use its discretion in selecting the market in which to enter my orders.

17. Payment for Order Flow

Fidelity transmits customer orders for execution to various exchanges or market centers based on a number of factors. Such factors include: size of order, trading characteristics of the security, favorable execution prices (including the opportunity for price improvement), access to reliable market data, speed of execution, liquidity enhancement opportunities, availability of efficient automated transaction processing, and reduced execution costs through price concessions from the market centers. Certain of the market centers may execute orders at prices superior to the publicly quoted market in accordance with their rules or practices. While a customer may specify that an order be directed to a particular market center for execution, the order-routing policies, taking into consideration all of the factors listed above, are designed to result in favorable transaction processing for customers. Fidelity will furnish payment for order flow and order routing policies to me on an annual basis.

Fidelity receive(s) remuneration, compensation or other consideration for directing customer orders for equity securities to particular Broker/Dealers or market centers for execution. Such consideration, if any, takes the form of financial credits, monetary payments or reciprocal business.

Please note: Orders placed through Fidelity's telephone, electronic, wireless or online trading systems cannot specify a particular market center for execution.

18. Purchase of Precious Metals

If I direct Fidelity to purchase precious metals for me, I understand: a) the Securities Investor Protection Corporation (SIPC) does not provide protection for precious metals, but if stored through Fidelity, they are insured by the depository at market value; b) precious metals are not marginable; c) precious metal investments can involve substantial risk due to rapid and abrupt price changes and, therefore, Fidelity cannot guarantee an advantageous purchase or liquidation price; and d) if I take delivery of my metals, I am subject to delivery charges and applicable sales and use taxes.

19. Callable Securities Lottery

When street name or bearer securities held for me are subject to a partial call or partial redemption by the issuer, Fidelity may or may not receive an allocation of called/redeemed securities by the issuer, transfer agent and/or depository. If Fidelity is allocated a portion of the called/redeemed securities, Fidelity utilizes an impartial lottery allocation system, in accordance with applicable rules, that randomly selects the securities within customer accounts that will be called/redeemed. Fidelity's allocations are not made on a pro rata basis and it is possible for me to receive a full or partial allocation, or no allocation. I have the right to withdraw uncalled fully paid securities at any time prior to the cutoff date and time established by the issuer, transfer agent and/or depository with respect to the partial call, and also to withdraw excess margin securities provided my account is not subject to restriction under Regulation T or such withdrawal will not cause an undermargined

condition. A more detailed description of the Lottery Process may be accessed by visiting Fidelity.com/callable-securities. You may also request a hard copy of the Lottery Process by writing to National Financial Services LLC, P.O. Box 770001, Cincinnati, OH 45277.

20. Modification and Miscellaneous

I understand that no provision of this Agreement can be amended or waived except by Fidelity and I agree to the terms and conditions set forth in this Client Agreement as they are today and as they be amended in the future. If any provision of this Agreement becomes inconsistent with any present or future law or regulation of any entity having regulatory jurisdiction over it, that provision will be superseded or amended to conform with such law and regulation, but the remainder of this Agreement remains in full force and effect.

The failure of Fidelity at any time to require performance by me or my Authorized agent(s)/Advisor(s) of any provision of these terms and conditions will not limit the right to require such performance at any time thereafter. Fidelity reserves the right, at its sole discretion and without prior notice, to restrict or limit any transaction or series of transactions in any investment company advised or managed by Fidelity or its affiliates that Fidelity determines may adversely affect the investment company or its shareholders. Any failure to provide accurate trading or allocation instruction, including options transactions, may result in losses in my account. I may not assign this or any related agreement without the prior written consent of Fidelity.

This Agreement and its enforcement shall be governed by the laws of the Commonwealth of Massachusetts; shall cover individually and collectively all accounts that I may open or reopen with Fidelity; and shall inure to the benefit of Fidelity's successors and assigns, whether by merger, consolidation or otherwise. Fidelity may transfer my account to your successors and assigns, and this agreement shall be binding upon my heirs, executors, administrators, successors and assigns.

21. Core Transaction Account

Amounts contributed and received may be invested while awaiting reinvestment in a free credit balance which is a taxable income-earning account (note, this is a different option from the Intra-day Free Credit Balance described in this Agreement), the Bank Deposit Sweep Program, the money market mutual fund I choose, or any other fund Fidelity makes available (the "Core Transaction Account") subject to prior payment by me, and on my behalf, of any outstanding margin loan balances or other debit items or authorized payments of securities account settlements. I authorize Fidelity to change my core transaction account option at its discretion with notice to me when required. I agree to indemnify and hold Fidelity harmless for any actions that might result from Fidelity changing my core transaction account option. My account statement details all activity in the Core Transaction Account. This is provided in lieu of a confirmation that might otherwise be provided by Fidelity with respect to those transactions. Any free credit balances in the securities account (i.e., any cash that may be transferred out of the securities account without giving rise to interest charges) automatically will be invested on a daily basis in my Core Transaction Account and be paid monthly. A variable rate of interest may be paid on cash balances awaiting reinvestment (excluding any short credit balances) providing that accrued interest for any particular day equals or exceeds \$.0050. The variable rate of interest paid will be determined by the daily balance in the account. Fidelity reserves the right to increase or decrease the rate at any time without notice. I acknowledge that I have received the description of the Core Transaction Account and available options in the Account Application and Agreement, including Fidelity's right to change the options available to me, and consent to having free credit balances held or invested in the Core Transaction Account.

In the event I hold a money market mutual fund as my Core Transaction Account that is subject to a liquidity fee or redemption gate (as described in more detail in the fund's prospectus), upon notice to Fidelity by the fund that a liquidity fee or redemption gate has been imposed, Fidelity will remove the impacted fund from my Core Transaction Account and I will hold that fund as a non-core position in my account. Any future core transaction sweeps to the impacted money market mutual fund will cease and amounts in my account awaiting reinvestment will be held in a fee credit balance as described in this agreement. The cash available and running collected balance in my account will be reduced by the amount of the value of the impacted money market mutual fund. Payment of debit items from my account will continue to

be paid as described in this agreement, but Fidelity will only pay items from a money market fund that has imposed a liquidity fee as part of that payment process after the other sources are attempted. Fidelity and/or my Authorized agent/Advisor will help facilitate the selection of a different Core Transaction Account.

I could lose money by investing in a money market fund. Although the fund seeks to preserve the value of my investment at \$1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund sponsor has no legal obligation to provide financial support to the fund, and I should not expect that the sponsor will provide financial support to the fund at any time.

Fidelity's government and U.S. Treasury money market funds will not impose a fee upon the sale of my shares, nor temporarily suspend my ability to sell shares if the fund's weekly liquid assets fall below 30% of its total assets because of market conditions or other factors.

I understand and agree that Fidelity may change my core account selection with notice to me when required. I may make a different core account selection from available options. I can contact my Authorized agent/Advisor or Fidelity to change my core account option.

Fidelity may change the interest rates and annual percentage yields (APY) for a Bank Deposit Sweep Program and the money market mutual fund options available for the Core Transaction Account without prior notice to me. Fidelity will notify me of changes to the terms and conditions of products available through the Core Transaction Account. The notice will describe the new terms, conditions or products. I may ask Fidelity to remit my available cash balances to me, or place them in another core account option for which I am eligible.

If my account is eligible (as defined in the Bank Deposit Sweep Program (BDSP) Disclosure documents), and a BDSP is available, a BDSP may be selected as the Core Position in my Account. If elected by me or my Authorized agent/Advisor at any time, the cash balance in my core account will be swept to an FDIC insurance-eligible interest-bearing account at a Bank(s), subject to applicable FDIC insurance coverage limits. A Bank Deposit Sweep Program is not a security and therefore is not protected by SIPC. Funds received into an account are immediately covered by SIPC (up to applicable SIPC coverage limits) and when swept to an FDIC insured account at a Bank, are eligible for FDIC insurance subject to FDIC insurance coverage limits. I understand my account must continue to remain eligible for the BDSP as defined in the BDSP Disclosure documents.

If at any time a Bank Deposit Sweep Program is not available for investment, I understand the core account option will be the then-current default option for that applicable account type until such time as I or my Authorized agent/Advisor elect otherwise.

Each of the Banks in a Bank Deposit Sweep Program are eligible to receive some or all of my cash balances as more fully described within the BDSP Disclosure Documents. Once deposited at a Bank(s), my cash balance is eligible for FDIC insurance subject to applicable FDIC insurance coverage limits. Note that the Bank Lists may be different for each Bank Deposit Sweep Program and for each account I own, and may change from time to time. I may contact my Authorized agent/Advisor or Fidelity at any time to request a copy of the BDSP Disclosure Documents, a Bank List, to obtain the current balances I may have in each Bank or to opt out of any Bank in my list.

For more information about the methodology used to assign a Bank to receive my cash balances, how my cash balances will be swept to and from the Banks on the Bank Lists, interest rates or the relationship between a Bank and Fidelity, including fees paid to Fidelity by the Bank(s), I can refer to the BDSP Disclosure Documents.

Cash balances held on my behalf at a Bank(s) earn a rate of interest that will vary over time. For more information about interest rates I can refer to the BDSP Disclosure Documents. For current interest rates and information about comparable investment options, I can contact my Authorized agent/Advisor or visit Fidelity.com.

IMPORTANT: In the event that my total assets at a Bank (including assets held in multiple accounts at Fidelity Brokerage Services or assets that I hold with a Bank(s) outside of the BDSP) exceed the FDIC insurance limits, my assets in excess of FDIC limits are not covered by SIPC or insured by FDIC.

Notwithstanding the available number of eligible Banks, Program limitations require that deposits made into a Bank Deposit Sweep

Program are only eligible for up to a maximum of \$2.5 million in FDIC insurance at any given time (for an individual account) or up to a maximum of \$5 million in FDIC insurance at any given time (for a joint account), subject to the total amount on deposit in an account, applicable FDIC rules (generally, the standard FDIC insurance protects up to \$250,000 per depositor, per depository bank, for each account ownership category; see FDIC rules for details) and other factors (such as up to only \$500,000 per joint account, regardless of the number of account holders). Refer to the Bank Deposit Sweep Program Disclosure Documents. **Deposits over the maximums or limits will not be FDIC or SIPC insured.**

A Bank Deposit Sweep Program is not SIPC insured. Once my cash balance is deposited at a Bank(s), it is no longer covered by SIPC (subject to applicable SIPC rules). The deposit is eligible for FDIC insurance subject to FDIC insurance coverage limits and in accordance with FDIC rules. All of the account holder's assets at a Bank, including assets outside the BDSP, will generally be counted toward the FDIC aggregate limit. In accordance with the BDSP Disclosure Documents, customers are responsible for monitoring their total assets at a Bank to determine the extent of available FDIC insurance.

If I or my Authorized agent/Advisor elect a Bank Deposit Sweep Program, I understand that I am responsible for monitoring my total assets at a Bank(s) including assets held in multiple accounts at Fidelity or assets that I hold with Banks outside of a Bank Deposit Sweep Program to determine the extent of available FDIC insurance. Information regarding deposits at Banks can be found on account statements. All FDIC insurance coverage is in accordance with FDIC rules. For additional information see the Bank Deposit Sweep Program Disclosure Documents or the Bank Deposit Direct Investment Disclosure Document.

Amounts in excess of FDIC limits in any Bank, assets held in multiple accounts at Fidelity Brokerage Services or assets that I hold with Banks outside of a Bank Deposit Sweep Program or a Bank Deposit Direct Investment exceed the FDIC insurance limits, my assets in excess of FDIC limits are not covered by SIPC or insured by FDIC. For more information about FDIC insurance coverage, visit the FDIC website at www.FDIC.gov or call 877-ASK-FDIC.

Core Options for Non-U.S. Customers

If Fidelity determines that I am a non-U.S. customer at any point in time after I open this account (e.g., as a result of a subsequent change of address) my core account will not operate as described above, but will be subject to the terms and conditions as described below.

If I have an existing account that utilizes the Taxable Interest Bearing Option as my core position (or if I subsequently change my election to the Taxable Interest Bearing Option), I may be unable to change my core option election even if other options are available to me.

If I have an existing account that utilizes any option for my core option other than the Taxable Interest Bearing Option, the process of sweeping the Intra-day Free Credit Balance to my core account will be suspended. This will not affect any balance held in the core position at the time of the suspension. Although, while I will be able to liquidate that position should I elect to do so, I will generally be unable to add to it for so long as Fidelity determines I am a non-U.S. customer, except for automatically reinvested dividends on money market fund positions and the deposit of accrued interest in the case of a bank sweep. As a result, uninvested cash in the Account will be held in the Intra-day Free Credit Balance. I also may be unable to make any change to my core option election, except that I may change my election to the Taxable Interest Bearing Option, if that option is available to me. Should I make that change, my core account will operate as if I had an existing account that utilizes the Taxable Interest Bearing Option.

Should Fidelity determine I am no longer a non-U.S. customer, if my account was subject to a suspension, this suspension will be lifted, the Intra-day Free Credit Balance will be swept to my core account and held in the core option that I selected or defaulted into, and on a going-forward basis my account will operate as otherwise described herein.

During normal hours when the market is open ("Intraday"), any new deposit to my account or settlement proceeds from a transaction in my Fidelity Account are held as a free credit balance (the "Intra-day Free Credit Balance"). Each business day, the Intra-day Free Credit Balance is automatically swept into my core account, where it is handled as described herein. Like any free credit balance, the Intra-day Free Credit Balance represents an amount payable to me on demand by Fidelity. Subject to applicable law, Fidelity may use this free credit balance in

connection with its business. Fidelity may, but is not required to, pay me interest on this free credit balance, provided that the accrued interest for a given day is at least \$.0050. Interest, if paid, will be based upon a schedule set by Fidelity, which may change from time to time at Fidelity's sole discretion.

Investments by check* may be promptly credited to my Core Transaction Account and will earn interest on the Core Transaction Account prior to final collection of such checks. I understand that access to the redemption proceeds of Core Transaction Account shares purchased with monies so advanced may be withheld for up to 4 business days to assure that such checks have been collected. Such withholding may result in dishonor of checks or other debit items if monies are not otherwise available to me within the account.

If a check issued to me from my account remains uncashed and outstanding for at least six months, I authorize and instruct Fidelity to cancel the check and return the underlying proceeds to me by depositing the proceeds into my Core Transaction Account.

I agree that the Core Transaction Account shall be automatically redeemed to satisfy debit balances in the securities account, check usage, electronic funds transfers, over-drafts and other authorized debit items.

If I so elect, and upon my instructions, monies representing the redemption of Core Transaction Account shares may be transferred to a bank account designated by me. Such monies shall be submitted, at Fidelity's election, via the Federal Reserve wire system or an automated clearinghouse system.

I hereby ratify any instructions given on this account and any account of another Fidelity fund into or from which I exchange and agree that neither you nor the fund's transfer agent will be liable for any loss, cost or expense for acting upon such instructions (by telephone or writing) believed by you or them to be genuine and in accordance with the procedures described in the fund prospectus. I understand that it is my responsibility to read the prospectus of any other Fidelity or non-Fidelity fund into which I purchase or exchange.

I understand certain fees may be applicable for services, that you may change the amount of the fees, and that the Core Transaction Account will assume various charges in connection with the account.

Fidelity Management & Research Company will receive a fee for serving as investment advisor to the Fidelity Funds. I further understand that for any special services that are not part of your regular account and that are requested by me or my Authorized agent(s)/Advisor(s) and performed by you, I will pay your customer service charges. If I select a money market fund, it is a request for a prospectus which will be sent to me or will be available on www.fidelity.com. Making the first investment into that fund is my acknowledgment that I have received and read a prospectus for that fund.

*Fidelity will not accept for deposit, checks in non-U.S. currency or checks drawn on non-U.S. bank accounts.

22. Payment of Items

I understand that all debit items, including checks, debit card transactions, securities account transactions and electronic funds transfers, will be accumulated daily and that Fidelity will promptly pay each on my behalf to the extent sufficient funds are available. I will maintain sufficient assets in my account to satisfy all obligations as they become due. I understand that payment of any debit item in my account will be made: first, from amounts contributed by me or on my behalf and available that day; second, from the proceeds of redemption of Core Transaction Account shares which you are authorized to redeem to pay such items; third, any shares in another eligible Fidelity money market fund, including any in another non-retirement account with the same registration which you are authorized to redeem to pay such items; fourth, should these sources prove insufficient, and I have selected the margin option, from margin loans made by Fidelity within the available margin loan value of my securities account; and fifth, any securities in any other account at Fidelity in which you have an interest. As used in this Agreement, the total cash and margin loan value shall be the "Collected Balance." Any such amount will be a loan by Fidelity to me and will be secured by the securities in my account. If Fidelity extends credit to me, interest will be charged from the date credit is extended, and is subject to the terms of the Margin Account Agreement. Payments for debit items will be made on my behalf in the following order as they become due:

First, securities transactions (including margin calls) and other account fees;

Second, my checks, if this account has checkwriting.

Fidelity shall not be responsible for the dishonor of any transaction due to insufficient Collected Balance. Other transactions that I initiate or to which I have consented may also reduce my Collected Balance. I understand that if funds in my account are insufficient to pay any item, such items will not be honored. I will promptly return to Fidelity any assets that Fidelity distributes to me but to which I am not entitled.

Note that at any time, Fidelity may reduce my available balance to cover obligations that have occurred but not yet been debited, including but not limited to withholding taxes that should have been deducted from my account.

In the event I hold a money market mutual fund in my account that impacts my cash available and is subject to a liquidity fee or redemption gate (as described in more detail in the fund's prospectus), upon notice to Fidelity by the fund that a liquidity fee or redemption gate has been imposed, the cash available and running collected balance in my account will be reduced by the amount of the value of the impacted money market mutual fund and payment of debit items from my account will continue to be paid as described in this agreement, but Fidelity will only pay items from a money market fund that has imposed a liquidity fee as part of that payment process after the other sources are attempted.

I acknowledge that if a money market mutual fund held in my account imposes a liquidity fee or redemption gate, the money market mutual fund may not provide Fidelity with advance notice of such liquidity fee or redemption gate. As a result, I may not be notified of such liquidity fee or redemption gate when I submit a trade. However, as instructed by the fund (and disclosed in the fund prospectus), my trade will be subject to such liquidity fee or redemption gate, and it may be applied to my trade retroactively.

23. Liability for Costs of Collection

I am liable for payment upon demand of any debit balance or other obligation owed in any of my accounts or any deficiencies following a whole or partial liquidation, and I agree to satisfy any such demand or obligation. I agree to reimburse Fidelity for all reasonable costs and expenses incurred in the collection of any debit balance or unpaid deficiency in any of my accounts, including, but not limited to, attorneys' fees.

24. Trading Authorization

A. I have indicated on the Fidelity Brokerage Application that I have authorized one or more Authorized agent(s)/Advisor(s) to execute trades on my account, and Fidelity is authorized and directed to accept any trading, servicing, or account-related instruction of the Authorized agent(s)/Advisor(s) on my behalf. Fidelity reserves the right, but is not obligated, to confirm with me any of my Authorized agent's(s')/Advisor's(s') instructions prior to acting on such instructions, **including requests to change the address or email address on my account.** The Authorized agent(s)/Advisor(s) may inquire in and trade in my account as specified, and Fidelity is authorized and directed to accept the instructions of the Authorized agent(s)/Advisor(s). The authorization shall be applicable to all assets I hold in the specified account. Except as otherwise provided, for through a separate Asset Movement Authorization, the Authorized agent(s)/Advisor(s) is not authorized to withdraw, or direct the withdrawal of, assets from my account as part of the servicing instructions.

B. I understand and agree that:

1. Fidelity is authorized and directed to accept the instructions of my Authorized agent(s)/Advisor(s) on my behalf. This authorization shall be applicable to all assets I hold in the specified account. Fidelity reserves the right, but is not obligated, to confirm with me any of my Authorized agent's(s')/Advisor's(s') instructions prior to acting on such instructions, **including requests to change the address or email address on my account.**
2. By granting trading authorization to my Authorized agent(s)/Advisor(s), I understand and agree that my advisor will have the ability to instruct Fidelity to initiate transfers of cash from my bank account to my Fidelity account, based on standing written funds transfer instructions provided by me to Fidelity.

3. Fidelity is further authorized to act upon my Authorized agent(s)/Advisor(s)' instructions to aggregate transaction orders for my Account with orders for one or more other accounts over which the Authorized agent(s)/Advisor(s) has trading authorization, or to accept or deliver assets pursuant to a separately executed authorization I have granted to my Authorized Agent(s)/advisor(s) in transactions executed by other Broker/Dealers where Authorized agent(s)/Advisor(s) 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 at the weighted average of the prices at which all of such transactions were executed.

25. Asset Movement Authorization

I understand that if I do not select Level I or Level II asset movement authority or if I choose to have no asset movement authority on this account, each cashing or money movement request will require my signature.

Level I Limited (First-Party Only)

By selecting Level I Limited asset movement authorization on my account application, I authorize and direct Fidelity to accept instructions from my Authorized agent(s)/Advisor(s) for one time disbursements and the establishment of and changes to periodic disbursements (Periodic Distribution Plans) from my account, including: (1) for redemptions and payment of monies from my account by check made payable to me and sent to me at my address of record, (2) to disburse funds electronically, including bank wires and Electronic Funds Transfers (EFTs), to any first-party bank account pursuant to a standing written instruction provided to Fidelity and signed by me, and first-party check disbursements to any payee and address I have authorized through standing written instructions provided to Fidelity and signed by me, and (3) transfers of cash or securities from this account to other same-registration accounts at Fidelity, if this account is an individual or transfer on death account (accounts owned by me individually), contributions from this account to any IRA I own at Fidelity.

Level I (First- and Third-Party)

By selecting Level I asset movement authorization on my account application, I authorize and direct Fidelity to accept instructions from my Authorized agent(s)/Advisor(s) as described in Level I Limited and, in addition, to accept instructions from my Authorized agent(s)/Advisor(s), without receiving instructions directly from me, to (1) disburse funds electronically, including bank wires or Electronic Funds Transfers (EFTs) to any third-party account I have authorized through standing written instructions and third-party check disbursements to any payee and address I have authorized through standing written instructions, and (2) transfers of cash or securities from this account to other third-party accounts at Fidelity I have authorized through standing written instructions.

Level II

By Selecting Level II asset movement authorization on my account application, I authorize and direct Fidelity to accept instructions from my Authorized agent(s)/(Advisor(s) as described in Level I and, in addition, to accept instructions from my Authorized agent(s)/(Advisor(s), without receiving instructions directly from me, to transfer monies from my Fidelity account by wire to accounts at banks or other financial institutions that my Authorized agent(s)/(Advisor(s) represents to Fidelity have the same account owner or owners and the same registration type as this account. **By granting this authorization, I understand and agree that Fidelity will not undertake to confirm my Authorized agent's(s')/Advisor's(s') representations and cannot confirm the account registration at the receiving bank or financial institution. Therefore, Fidelity will not undertake to monitor my Authorized agent's(s')/Advisor's(s') compliance with my instructions to him or her and will rely solely upon the instructions of my Authorized agent(s)/Advisor(s) for these transfers. I understand that I should carefully review my account documentation and monitor all activity on my account. Fidelity may require direct instructions from me for transactions over a certain amount.**

A. Upon requests for any account-related activity on my account from my Authorized agent(s)/Advisor(s), including, but not limited to, requests for bank wires or EFTs, Fidelity reserves the right, but is not obligated to confirm with me any of my Authorized agent's(s')/Advisor's(s') instructions prior to acting on them and to restrict or not accept requests for these transfers, at its own discretion. The Authorized agent(s)/Advisor(s) is

authorized to act for me and on my behalf in the same manner and with the same force and effect as I might or could do to the extent necessary or incidental to the furtherance or conduct of the account, in accordance with this agreement or my separate standing instructions. This authorization shall apply only with respect to my brokerage account opened with this application. The Authorized agent(s)/Advisor(s) will place no trading orders or conduct activity in my account that exceeds its authority under this authorization or any other agreement governing the account.

B. I understand and agree that Fidelity is authorized and directed to accept the instructions of the Authorized agent(s)/Advisor(s) on my behalf. This authorization shall be applicable to all assets I hold in the specified account. Fidelity reserves the right, but is not obligated, to confirm with me any of my Authorized agent's(s)/ Advisor's(s') instructions, at its own discretion.

26. Authorization to Pay Fees to Advisor

By signing the account application, I authorize Fidelity to pay management fees to my Authorized agent(s)/Advisor(s) and/or his/her agent. I authorize Fidelity to pay Authorized agent(s)/Advisor(s) from my account. Fidelity may use money from the Core Transaction Account and/or cash in my account to the extent necessary to pay such fees. Fidelity may rely on the fee calculation submitted by Authorized agent(s)/Advisor(s) to Fidelity to deduct from my account. I understand that it is my responsibility to verify the fee and the accuracy of the fee calculation and that Fidelity will not determine whether the fee or the calculation is accurate and appropriate. I indemnify and hold Fidelity and its directors, employees and control persons harmless from all liabilities and costs, including attorneys' fees, that Fidelity may incur by relying upon the Authorized agent's(s')/Advisor's(s') representations or upon the above authorization.

Fidelity, Authorized agent(s)/Advisor(s) or I may terminate any fee deduction authorization at any time by giving written notice to the others, but such termination shall not affect any obligation or liabilities arising prior to termination. This agreement may be modified or amended only pursuant to a written agreement signed by a duly authorized representative of Fidelity.

27. Fidelity Stock Plan Services

If I am a participant in equity compensation plans ("Stock Plans") and associated equity compensation rights under those Stock Plans (collectively "Rights") of my employer (together with its affiliates the "Issuer") for which Fidelity Stock Plan Services provides recordkeeping and administrative services (the "Stock Plan Services"), then with respect to the Stock Plan Services and my individual brokerage account identified to be used in connection with the Stock Plan Services, I agree as follows:

- I acknowledge that the terms of the Stock Plans and of my Rights are determined by the Issuer, and that I have received, reviewed, and understand the information distributed to me by the Issuer in connection with such Stock Plans and Rights, including any applicable prospectus, grant, or enrollment agreement, or other Stock Plan document (collectively "Plan Documents").
- I acknowledge that various federal and state laws or regulations may be applicable to my transactions, including, without limitation, Rule 144 under the Securities Act of 1933 and Section 16(b) of the Securities Exchange Act of 1934, and I agree to conduct these transactions in conformity with all applicable laws and regulations.
- I acknowledge that my rights and obligations with respect to the Rights (including, without limitation, quantities, vesting dates, and expiration dates) are determined under the Plan Documents, and that if any information provided by Fidelity to me (whether verbally or in writing) conflicts with the provisions of the Plan Documents, the information in the Plan Documents will control.
- I acknowledge that certain events may affect my rights and obligations with respect to the Rights (including, without limitation, changes in my employment relationship with the Issuer), and that I am responsible for understanding my rights and obligations with respect to the Rights.
- I authorize Fidelity to act on my instructions (given in writing, by telephone, or electronically) with respect to Rights in connection with the Issuer, including, without limitation, to exercise, purchase shares, or take other actions with respect to the Rights on my behalf, or to hold, transfer, or sell shares in my account.

- I understand that my instructions to Fidelity are irrevocable, except in the case of an unexecuted limit order, which I may attempt to cancel.
- I authorize the Issuer or its agent to rely without further investigation on this authorization as conclusive evidence of my irrevocable election to authorize Fidelity to act on my behalf with respect to the Rights, including exercising my Rights in accordance with and subject to the terms, provisions, and conditions of the Issuer's Stock Plans and the Plan Documents.
- In connection with certain Stock Plans, I may agree to certain contractual limitations on the shares that I obtain through the Stock Plan, including, without limitation, contractual restrictions on my ability to sell securities I obtain in connection with Stock Plans, and I hereby consent to and authorize Fidelity to take actions reasonable and necessary to enforce such contractual limitations in accordance with the Stock Plans and the Plan Documents.
- I authorize Fidelity, the Issuer, and their agents to exchange information regarding the exercise of my Rights and my purchase and sale of shares, including, without limitation, notice of exercise, number of shares, sale date, sale price, and income tax information relating to compensation income and tax withholding in relation to these transactions and subsequent sales, transfers, and dispositions of shares.
- In the case of Rights which are stock options, for any option exercise-and-sell order for which I give Fidelity instructions, I authorize Fidelity to make full payment to the Issuer or its agent for the option exercise price and, when required, tax withholding as instructed by the Issuer.
- Fidelity reserves the right to reject any order to sell shares in my account until shares are properly delivered by the Issuer and deposited into my account.
- I authorize the Issuer or its agent to issue shares in connection with any Rights to Fidelity in street name and to forward the shares (plus any dividend, split, or similar distribution paid by the Issuer or its agent with respect to such shares) directly to Fidelity for my account.
- I acknowledge that the Rights were granted in connection with my employment and, at the time of exercise, purchase, or other direction I give to Fidelity, I will be authorized to exercise, purchase, or take such other action.
- I understand that the Rights and/or the subsequent sale of the shares may have significant tax consequences. I further understand that Fidelity and its agents and employees are not authorized to give me tax or investment advice, and I have consulted such other sources I deem appropriate in connection with my transactions.
- I will indemnify Fidelity for any losses Fidelity may suffer as a result of our compliance with the authorizations set forth herein and any instructions given by me.

28. Assignment

Authorized agent(s)/Advisor(s) may not assign this or any related agreement without the prior written consent of me and Fidelity. All authorizations granted to my Authorized agent(s)/(Advisor(s) shall inure to the benefit of my Authorized agent(s)/(Advisor(s)' successors, whether by merger, consolidation or otherwise, and assigns, and you may transfer the Authorized agent(s)/(Advisor(s)' authorizations to the successor and assigns.

29. Termination of Account

My account may be terminated by me or Fidelity at any time. This agreement will remain in effect until its termination is acknowledged in writing by an authorized representative of Fidelity. I will remain responsible for all charges, debit items liquidation, or other transactions initiated or authorized by me, whether arising before or after termination.

I understand that Fidelity reserves the right to charge an account termination fee whether the account is terminated by me or by Fidelity.

If my Fidelity brokerage account is terminated, whether by me or you, I will promptly destroy or return all unused checks and cards to you. I understand that failure to do so may result in a delay in complying with my instructions as to the disposition of assets in my account. Fidelity reserves the right to charge a service fee or close any account that fails to maintain minimum activity or balance requirements, and further reserves the right to close an account or remit credit balances because of insufficient investment-related activity. Fidelity may periodically review my account activity, and reserves the right to charge reasonable

inactivity fees or to close or change the optional account features, fees, and services, or to cease paying interest on account credit balances for any reason, including, but not limited to, insufficient investment activity in accordance with the regulations of the New York Stock Exchange and Securities Investor Protection Corporation. Fidelity will notify me if any changes or charges are imposed. Termination will result in cancellation of my account and other features or privileges.

My account balance and certain uncashed checks issued from my account may be transferred to a state unclaimed property administrator if no activity occurs in the account or the check remains outstanding within the time period specified by the applicable state law.

Texas Residents only: In accordance with Texas House Bill 1454, I, as an account owner, may designate a representative for the purpose of receiving a due diligence notice. If I add a designated representative, Fidelity is required to mail the written notice upon presumption of abandonment to the representative, in addition to mailing the notice to me, the account owner.

30. Termination of Authorizations

The authorizations I have granted in this Application and Agreement is a continuing one and shall remain in full force and effect until Fidelity is notified in writing of my death, disability or incapacity or unless revoked through written notice actually received by Fidelity. Such revocation, however, shall not affect any prior liability or obligation in any way resulting from any transaction initiated before receipt of the revocation. Furthermore, it is understood that the authorizations and indemnity is in addition to, and in no way restricts, any rights that may exist at law or under any other agreement(s) between me and Fidelity. The authorizations and indemnity shall be construed, administered and enforced according to the laws of the Commonwealth of Massachusetts. It shall inure to the benefit of Fidelity and of any successor firm or firms (whether by merger, consolidation or otherwise) irrespective of any change(s) at any time in the personnel thereto for any cause whatsoever and to the benefit of the affiliates and the assigns of Fidelity or any successor firm. It is further understood that Fidelity reserves the right, but is not obligated, to request authorization from me prior to executing any transaction requested from my Authorized agent/Advisor, and to cease accepting instructions from my Authorized agent/Advisor at Fidelity's sole discretion and for its sole protection. I understand that if Fidelity terminates its relationship with my Authorized agent(s)/Advisor(s), Fidelity will not be obligated to honor any authorization I have granted to my Authorized agent(s)/Advisor(s) in this Agreement, and I will have exclusive control over, and responsibility for, my account; and unless Fidelity notifies me otherwise, my account will become a Fidelity retail brokerage account. I understand that the fees and commissions applicable to my account may change if my account becomes a Fidelity retail brokerage account and I can view the Fidelity retail brokerage account fees and commissions on Fidelity.com or obtain them from Fidelity by calling 800-544-6666.

31. Pre-Dispute Arbitration Agreement

This agreement contains a pre-dispute 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.

All controversies that may arise between me, my Authorized agent/Advisor, and you, concerning any subject matter, issue or circumstance whatsoever (including, but not limited to, controversies concerning any account, order, distribution, rollover, advice interaction or transaction, or the continuation, performance, interpretation or breach of this or any other agreement between me, my Authorized agent, and you, whether entered into or arising before, on or after the date this account is opened) shall be determined by arbitration in accordance with the rules then prevailing of the Financial Industry Regulatory Authority (FINRA) or any United States securities self-regulatory organization or United States securities exchange of which the person, entity or entities against whom the claim is made is a member, as I may designate. If I designate the rules of a United States self-regulatory organization or United States securities exchange and those rules fail to be applied for any reason, then I shall designate the prevailing rules of any other United States securities self regulatory organization or United States securities exchange of which the person, entity or entities against

whom the claim is made is a member. If I do not notify you in writing of my designation within five (5) days after such failure or after I receive from you a written demand for arbitration, then I authorize you to make such designation on my behalf. The designation of the rules of a self-regulatory organization or securities exchange is not integral to the underlying agreement to arbitrate. I understand that judgment upon any arbitration award may be entered in any court of competent jurisdiction.

No person shall bring a putative or certified class action to arbitration, nor seek to enforce any pre-dispute 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: (i) the class certification is denied; or (ii) the class is decertified; or (iii) 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.

Margin Account Agreement

Please retain for your records.

To: Fidelity Brokerage Services LLC ("FBS") and National Financial Services LLC ("NFS," together with FBS, "Fidelity" or "You")

In consideration of Fidelity accepting one or more accounts, I acknowledge that I have read, understood and agree to the terms set forth below.

Brokerage Margin Account

I understand that I must qualify for margin privileges before I am eligible for margin trading. The settlement of securities purchases and other debit items in my account comes first from Core Transaction Account balances and second from any margin availability. Any cash, bank deposit sweep, or money market fund balance in my Core Transaction Account will then be automatically applied to my margin debit balance. Further, I have carefully examined my financial resources, investment objectives, and tolerance for risk along with the terms of the margin agreement and have determined that margin financing is appropriate for me. I understand that investing on margin involves the extension of credit to me and that my financial exposure could exceed the value of my securities. Any information I give you on this account agreement will be subject to verification, and I authorize you to obtain a credit report about me at any time. Upon written request, you will provide the name and address of the credit reporting agency used.

If my account is approved for margin, all marginable assets will be held in a margin account, unless I or my Authorized agent(s)/Advisor(s) instructs you to the contrary.

Loan of Margin Securities: Security Interest

Any and all credit balances, securities, or contracts relating thereto, and all other property of whatsoever kind belonging to me or in which I may have an interest held by you or carried for my accounts, shall be subject to a general lien for the discharge of my obligations to you (including un-matured and contingent obligations), however arising and without regard to whether or not you have made advances with respect to such property and without notice to me, may be carried in your general loans, and all securities may be pledged, re-pledged, hypothecated or re-hypothecated, separately or in common with other securities or any other property, for the sum due to you thereon or for a greater sum and without retaining in your possession and control for delivery a like amount of similar securities or other property. Fidelity may use certain securities in my Margin Account for, among other things, settling short sales and lending the securities for short sales, and as a result may receive compensation in connection therewith. At any time and from time to time you may, at your discretion, without notice to me, apply and/or transfer any securities, contracts relating thereto, cash or any other property therein, interchangeably between any of my accounts, whether individual or joint from any of my accounts, to any account guaranteed by me. You are specifically authorized to transfer to my Cash Account, on the settlement day following a purchase made in that brokerage account, excess funds available in any of my other accounts, including, but not limited to, any free balances in any margin account, sufficient to make full payment of this cash purchase. I agree that any debit occurring in any of my accounts may be transferred by you at your option to my Margin Account.

Shares of any investment company in which the account holder(s) has an interest and for which Fidelity Management & Research Company serves as investment advisor also are subject to a general lien for the discharge of my obligations to Fidelity, and Fidelity may redeem any such shares to satisfy my obligation without further notice or demand. However, no provision of this agreement concerning liens or security interests shall apply to any account to the extent such application would be in conflict with any provisions of ERISA or the Internal Revenue Code relating to retirement accounts.

In return for your extension or maintenance of credit in connection with my account, I acknowledge that the securities in my margin account, together with all attendant rights of ownership, may be lent to you or lent by you to others. In connection with such loans and in connection with securities loans made to me to facilitate short sales, you may receive and retain certain benefits to which I will not be entitled. Such loans may limit, in whole or in part, my ability to exercise voting rights and/or my entitlement to interest, dividends, and/or other distributions with respect to the securities lent.

I understand that, while a security in my account is lent to you or to others, the borrower or the party to whom the borrower has sold the security may be entitled to interest, dividends, and/or other distributions, and I may be allocated and receive substitute payments in lieu of such interest, dividends, and/or other distributions. I understand that substitute payments may not be afforded the same tax treatment as actual interest, dividends, and/or other distributions, and that I may incur additional tax liability for substitute payments that I receive. Fidelity may allocate substitute payments in any manner permitted by law, rule, or regulation, including, but not limited to, means of a lottery allocation method. I acknowledge that I am not entitled to any compensation in connection with securities lent from my account or for additional taxes I may be required to pay as a result of any tax treatment differential between substitute payments and actual interest, dividends, and/or other distributions.

Payment upon Demand

I will maintain such margins as you may in your discretion require from time to time and will pay on demand any debit balance owing with respect to any of my accounts. I will be liable to you for any deficiencies in such account in the event of the liquidation of such accounts, in whole or in part, by you or the undersigned. Whenever in your discretion you deem it desirable for your protection (and without the necessity of a margin call), including, but not limited to, extreme market volatility or trading volumes, or an instance where a petition in bankruptcy or for the appointment of a receiver is filed by or against me, or an attachment is levied against my brokerage account, or in the event of notice of my death or incapacity, an account owner's death, including a transfer arising in connection therewith, or a petition for bankruptcy or in compliance with the orders of any Stock Exchange, you may, without prior demand, tender and, without any notice of the time or place of sale, all of which are expressly waived, sell any or all securities or contracts relating thereto that may be in your possession, or that you may be carrying for me, or buy any securities, or contracts relating thereto of which my account or accounts may be short, in order to close out in whole or in part any commitment on my behalf, or you may place stop orders with respect to such securities, and such sale or purchase may be made at your discretion on any Stock Exchange or other market, including before or after hours markets, where such business is then transacted, or at public auction or private sale, with or without advertising and neither any demands, calls, tenders or notices that you may make or give in any one or more instances nor any prior course of conduct or dealings between us shall invalidate the aforesaid waivers on my part. You shall have the right to purchase for your own account any or all of the aforesaid property at such sale, discharged of any right of redemption, which is hereby waived. I understand that my financial exposure could exceed the value of securities in my account.

I am liable for payment upon demand of any debit balance or other obligation owed in any of my accounts or any deficiencies following a whole or partial liquidation, and I agree to satisfy any such demand or obligation. Interest will accrue on any such deficiency at prevailing margin rates until paid. I agree to reimburse Fidelity for all reasonable costs and expenses incurred in the collection of any debit balance or unpaid deficiency in any of my accounts, including, but not limited to, attorneys' fees.

By signing this Agreement, I hereby grant to Fidelity and its affiliates, to secure the payment and performance in full of all of the Obligations (as hereinafter defined), a security interest in, and pledge and assign to Fidelity and its affiliates, the following properties, assets and rights, whether now owned or hereafter acquired or arising, whether individually or jointly owned and/or held by me with others, and all proceeds and products thereof (all of the same being hereinafter called the "Property"): any and all securities, other investment properties (including investment company securities and securities accounts), monies, credit balances, assets or related contracts and deposit accounts, to the extent any of the foregoing may now or hereafter be (i) held, carried and/or maintained by Fidelity and/or any of its affiliates, (ii) held, carried or maintained by Fidelity and/or any of its affiliates through any correspondent broker/dealer of NFS ("broker/dealer"), (iii) in the possession or control of Fidelity or any of its affiliates for any purpose, including for safekeeping, or (iv) held, carried or maintained or in the possession or control of the Fidelity Group of Funds, Fidelity Service Company, Inc., as a transfer agent for the Fidelity Group of Funds, or any

sub-transfer agent of the Fidelity Group of Funds. All terms defined in the Uniform Commercial Code of the Commonwealth of Massachusetts and used herein shall have the same definitions herein as specified therein; however, if a term is defined in Article 9 of the Uniform Commercial Code of the Commonwealth of Massachusetts differently than in another Article of the Uniform Commercial Code of the Commonwealth of Massachusetts, the term has the meaning specified in Article 9. For purposes hereof, the term "Obligations" shall mean any and all indebtedness, liabilities or other obligations (including unmatured and contingent obligations) now or hereafter owed by me to Fidelity, any of Fidelity's affiliates, or any broker/dealer, including, but not limited to, any such indebtedness, liabilities or other obligations arising under this Agreement.

If a default shall have occurred and is continuing, Fidelity and its affiliates, without any other notice to or demand upon me, shall have in any jurisdiction in which enforcement hereof is sought, in addition to all other rights and remedies, the rights and remedies of a secured party under Article 9 of the Uniform Commercial Code of the Commonwealth of Massachusetts and any additional rights and remedies as may be provided to a secured party in any jurisdiction in which Property is located, including, without limitation, the right to take possession of the Property. Without limiting the foregoing, I understand that in the event any Obligations remain unpaid after payment is requested of me, Fidelity shall have the right to sell, liquidate, transfer or assign such Property to satisfy any such Obligation whether or not Fidelity has made advances with respect to such Property. No further demand or notice shall be required prior to taking such an action. Fidelity shall have the discretion to determine which Property is to be sold, liquidated, transferred, or assigned. Neither Fidelity nor any of its affiliates shall be required to marshal any present or future collateral security (including, but not limited to, the Property) for, or other assurances of payment of, the Obligations of any of them, or resort to such collateral security or other assurances of payment in any particular order.

I agree to cooperate with Fidelity and its affiliates and to execute such further instruments and documents as Fidelity or its affiliates shall reasonably request to carry out to their satisfaction the transactions contemplated by this Agreement.

Settlement of Transactions

In the absence of a specific demand, all transactions in any of my accounts are to be paid for, securities delivered or required margin deposited no later than 2 p.m. Eastern time on the settlement date. And I agree to deliver my securities I have in my possession in sufficient time to be received by Fidelity one day before the settlement date. Fidelity reserves the right to cancel or liquidate, at my risk, any transaction not timely settled. Margin calls are due on or before the date indicated regardless of the settlement date of the transaction. For most stocks and bonds, the settlement date is the third business day following the trade date. Settlement dates for U.S. government issues vary. Options settle on the next business day. Interest will be charged on any debit balance which remains in my brokerage account past the settlement date as explained in the Disclosure of Credit Terms on Transactions section of this Agreement.

Receipt of Communications

Communications by mail, electronic means, messenger, telegraph or otherwise, sent to me at the U.S. postal mail address listed on the account application, or any other address I may give Fidelity, are presumed to be delivered to and received by me whether actually received or not. I understand that I should promptly and carefully review the transaction confirmations and monthly statements and notify you of any errors. Information contained on transaction confirmations and account statements is conclusive unless I object in writing immediately after its being transmitted to me or my Authorized agent(s)/Advisor(s).

Rate of Interest

I agree to be charged interest on any credit extended to, or maintained for, me by you for the purpose of purchasing, carrying, or trading in any security. The annual rate of interest that will be charged on U.S. Dollar debit balances will be calculated by means of a formula based on the Fidelity Advisor Base Lending Rate ("FABLR"). This rate shall be made

available to me through my Authorized agent(s)/Advisor(s). The rate of interest is subject to change without prior notice in accordance with changes in the FABLR. The Fidelity Advisor Base Lending Rate ("FABLR") is set at the discretion of Fidelity with reference to commercially recognized interest rates, industry conditions regarding the extension of margin credit, and general credit conditions. Contact your Advisor to obtain the most recent FABLR base rate. Fed Funds target rate and Call Money rate are both subject to change based on market conditions. Fidelity will apply the Fed Funds target rate and Call Money rate as published in the Wall Street Journal. Should the Targeted Fed Funds rate or Call Money rate represent a range, the high end of the range shall be used for purposes of applying the following schedule. With the exception of credit balances in the Type 3-Short account and Type 9-Income accounts, all other balances in all of my accounts opened through my Authorized agent(s)/Advisor(s) are combined to determine the daily balance, and interest is charged to the Margin Account based on the average of any resulting daily debit balance. Interest is computed monthly on the average debit balances during the month. If during the month there is a change in interest rates, separate charges will be shown for each interest period under the different rate. Interest on International balances is calculated daily according to actual daily debit balances during the month and the interest rate applicable to each currency in the account. Interest rates will vary according to actual daily debit balances and applicable international interest rates, and therefore may change without notice to me. Separate charges will be shown for each currency in the account at the end of the month. The combining of balances, as well as the actual interest calculations, are done by computer, but the interest is arrived at by multiplying the average debit balance for U.S. dollar balances by the effective rate of interest, dividing by 360, and multiplying by the number of days a daily debit balance was maintained during the interest period. Interest from International balances are calculated by multiplying the daily debit of International balances by the effective rate of interest, dividing by 360 and summing for each day a daily debit balance was maintained.

I agree that in giving orders to sell, all "short" sale orders will be designated as "short" and all "long" sale orders shall be designated as "long," and that the designation of a sell order as "long" is a representation on my part that I own the security and that I have delivered or will deliver by settlement date such security to you.

Maintenance of Margin Requirements

In the event there is a decline in the market value of the securities in the margin account, Fidelity may have to request additional collateral. Fidelity retains the right to require additional margin at any time you deem it necessary or advisable. Any such call for additional collateral may be met by delivery of additional marginable securities or cash. Any securities in any of the accounts of the undersigned are collateral for any debit balances in the account with you. A lien is created by these debits to secure the amount of money owed you. This means that, in accordance with the terms of this agreement, securities in the said accounts can be sold by you to redeem or to liquidate any debit balances in these accounts. Fidelity reserves the right to increase maintenance requirements and to request additional collateral at any time at Fidelity's discretion. I understand that you may borrow securities in the amount and class for which I may be carrying a short position and that you may be forced to liquidate all or part of my short position if the lender recalls the borrowed securities, which liquidation may result in a loss to me. The Federal Equal Credit Opportunity Act prohibits creditors from discriminating against credit applicants on the basis of race, color, religion, national origin, sex, marital status, age (provided the applicant has the capacity to enter into a binding contract); because all or part of the applicant's income derives from a public assistance program, or because the applicant has, in good faith, exercised any right under the Consumer Credit Protection Act. The Federal agency that administers compliance with this law concerning this creditor is:

Securities and Exchange Commission, 450 Fifth Street NW, Washington, DC 20549.

Disclosure of Credit Terms on Margin Transactions

Securities and Exchange Commission Rule 10b-16 requires a broker who extends credit to a customer in connection with any security transaction to furnish the customer specified information describing the terms, conditions, and methods pursuant to which interest charges are made to customers' accounts. This disclosure is provided to you, the customer, in conformity with that rule.

Interest on debit balances held in U.S. Dollars or International currency will be charged on all accounts for any credit extended to or maintained for customers by the firm for the purpose of purchasing, carrying, or trading in securities or otherwise.

The annual rate of interest you will be charged may vary, depending upon the amount of your average debit balance and the applicable Fidelity Advisor Base Lending Rate, which is set at the discretion of Fidelity with references to commercially recognized interest rates, industry conditions regarding the extension of margin credit, and general credit conditions.

Standard rates are below. See your account statement for your rate.

The annual rate of interest you will be charged on United States Dollar (USD) credit may vary from a minimum of 0.2% to a maximum of 2% above the Fidelity Advisor Base Lending Rate ("FABLR"), depending upon the amount of your average debit balance.

<u>Average Debit Balance</u>	<u>Interest to Be Charged Above FABLR</u>
\$0-\$9,999	2.00%
\$10,000-\$24,999	1.50%
\$25,000-\$49,999	1.00%
\$50,000-\$249,999	0.75%
\$250,000-\$999,999	0.50%
\$1,000,000-\$4,999,999	0.25%
\$5,000,000 and over	0.20%

If your debit balance is in Australian Dollars, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for Australian Dollars ("FABLR-AUD").

<u>Daily Debit Balance</u>	<u>Interest to Be Charged Above FABLR-AUD</u>
\$0-\$124,999	2.00%
\$125,000-\$599,999	1.50%
\$600,000-\$1,499,999	0.50%
\$1,500,000 and over	0.00%

If your debit balance is in British Pounds, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for British Pounds ("FABLR-GBP").

<u>Daily Debit Balance</u>	<u>Interest to Be Charged Above FABLR-GBP</u>
£0-£69,999	2.00%
£70,000-£349,999	1.50%
£350,000-£699,999	0.50%
£700,000 and over	0.00%

If your debit balance is in Canadian Dollars, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for Canadian Dollars ("FABLR-CAD").

<u>Daily Debit Balance</u>	<u>Interest to Be Charged Above FABLR-CAD</u>
\$0-\$99,999	2.00%
\$100,000-\$499,999	1.50%
\$500,000-\$999,999	0.50%
\$1,000,000 and over	0.00%

If your debit balance is in Danish Kroner, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for Danish Kroner ("FABLR-DKK").

<u>Daily Debit Balance</u>	<u>Interest to Be Charged Above FABLR-DKK</u>
0 kr-649,999 kr	2.00%
650,000 kr-2,999,999 kr	1.50%
3,000,000 kr-5,999,999 kr	0.50%
6,000,000 kr and over	0.00%

If your debit balance is in Euros, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for Euros ("FABLR-EUR").

<u>Daily Debit Balance</u>	<u>Interest to Be Charged Above FABLR-EUR</u>
€0-€99,999	2.00%
€100,000-€499,999	1.50%
€500,000-€999,999	0.50%
€1,000,000 and over	0.00%

If your debit balance is in Hong Kong Dollars, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for Hong Kong Dollars ("FABLR-HKD").

<u>Daily Debit Balance</u>	<u>Interest to Be Charged Above FABLR-HKD</u>
\$0-\$799,999	2.00%
\$800,000-\$3,999,999	1.50%
\$4,000,000-\$7,999,999	0.50%
\$8,000,000 and over	0.00%

If your debit balance is in Japanese Yen, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for Japanese Yen ("FABLR-JPY").

<u>Daily Debit Balance</u>	<u>Interest to Be Charged Above FABLR-JPY</u>
¥0-¥9,999,999	2.00%
¥10,000,000-¥49,999,999	1.50%
¥50,000,000-¥99,999,999	0.50%
¥100,000,000 and over	0.00%

If your debit balance is in Mexican Pesos, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for Mexican Pesos ("FABLR-MXN").

<u>Daily Debit Balance</u>	<u>Interest to Be Charged Above FABLR-MXN</u>
\$0-\$1,499,999	2.00%
\$1,500,000-\$6,499,999	1.50%
\$6,500,000-\$12,999,999	0.50%
\$13,000,000 and over	0.00%

If your debit balance is in New Zealand Dollars, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for New Zealand Dollars ("FABLR-NZD").

<u>Daily Debit Balance</u>	<u>Interest to Be Charged Above FABLR-NZD</u>
\$0-\$149,999	2.00%
\$150,000-\$799,999	1.50%
\$800,000-\$1,499,999	0.50%
\$1,500,000 and over	0.00%

If your debit balance is in Norwegian Kroner, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for Norwegian Kroner ("FABLR-NOK").

<u>Daily Debit Balance</u>	<u>Interest to Be Charged Above FABLR-NOK</u>
0 kr-699,999 kr	2.00%
700,000 kr-3,499,999 kr	1.50%
3,500,000 kr-6,499,999 kr	0.50%
6,500,000 kr and over	0.00%

If your debit balance is in Polish Zlotys, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for Polish Zlotys ("FABLR-PLN").

<u>Daily Debit Balance</u>	<u>Interest to Be Charged Above FABLR-PLN</u>
0 zł-349,999 zł	2.00%
350,000 zł-1,699,999 zł	1.50%
1,700,000 zł-3,499,999 zł	0.50%
3,500,000 zł and over	0.00%

If your debit balance is in Singapore Dollars, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for Singapore Dollars ("FABLR-SGD").

Daily Debit Balance	Interest to Be Charged Above FABLR-SGD
\$0-\$149,999	2.00%
\$150,000-\$699,000	1.50%
\$700,000-\$1,499,999	0.50%
\$1,500,000 and over	0.00%

If your debit balance is in South African Rand, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for South African Rand ("FABLR-ZAR").

Daily Debit Balance	Interest to Be Charged Above FABLR-ZAR
R 0-R 749,999	2.00%
R 750,000-R 3,999,000	1.50%
R 4,000,000-R 7,999,999	0.50%
R 8,000,000 and over	0.00%

If your debit balance is in Swedish Kronor, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for Swedish Kronor ("FABLR-SEK").

Daily Debit Balance	Interest to Be Charged Above FABLR-SEK
0 kr-799,999 kr	2.00%
800,000 kr-3,999,999 kr	1.50%
4,000,000 kr-7,999,999 kr	0.50%
8,000,000 kr and over	0.00%

If your debit balance is in Swiss Francs, then the annual rate of interest you will be charged may vary from a minimum of 0% to a maximum of 2% above the FABLR for Swiss Francs ("FABLR-CHF").

Daily Debit Balance	Interest to Be Charged Above FABLR-CHF
0 Fr-99,999 Fr	2.00%
100,000 Fr-499,999 Fr	1.50%
500,000 Fr-999,999 Fr	0.50%
1,000,000 Fr and over	0.00%

If your debit balance is in a foreign currency not specified in this disclosure, then the annual rate of interest you will be charged will be 4% above the FABLR-EUR.

Daily Debit Balance	Interest to Be Charged Above FABLR-EUR
\$0-and over	4.00%

In determining the daily debit balance for USD credit and the resulting rate of interest, Fidelity will combine the margin account balances in all accounts, except Type 3-Short Accounts and Type 9-Income accounts. To determine the daily debit balance and the resulting rate of interest we will combine the margin account balances in all accounts of the same currency, except Type 3-Short Accounts and Type 9-Income Accounts. Interest is then computed for each account based on the rate resulting from averaging the daily debit balances during the interest period.

My rate of interest will be changed without notice in accordance with changes in the FABLR and in my average debit balance. When my interest rate is to be increased for any other reason, I will be given at least 30 days' written notice. If FABLR is expressed as a range, Fidelity may apply the highest end of the range.

My monthly statement will show the dollar amount of interest and the interest rate charged to my account. There will be no interest charge reflected on my statement if my monthly charge for U.S. Dollar Interest is less than \$1.00. An interest cycle will cover the period beginning with the first business day following the 20th of each month. If the last day of a margin period falls on a U.S. holiday, then the prior day's interest rate will be used for calculations on that day.

All securities or other property held by Fidelity in any of my accounts are collateral for any debit balances. A lien is created by those debits to secure the amount of money owed to you. This means securities in any of my accounts can be sold to reduce or liquidate entirely any debit balances in my accounts, as authorized in the Margin Account Agreement.

Credit Extended by The Clearing Broker, National Financial Services LLC.

If there is a decline in the market value of the securities that are collateral for my debits, it may be necessary for you to request additional margin. Ordinarily, a request for additional margin will be made when the equity in the margin account (the market value of the securities in the account in excess of the debit balances) falls below your margin maintenance requirements, which may change from time to time without notice. You retain the right to require additional margin any time you deem it desirable. Margin calls can be met by delivery of cash or additional securities.

Other Charges

Separate interest charges at an annual rate of 2% above FABLR may be made in the Type 1-Cash account in connection with:

- Prepayments (by approval only) – payments to a customer of the proceeds of a security sale before the regular settlement date.
- "When-issued" transactions – when the market price of the "when-issued" security deteriorates from the customer's contract price by an amount that exceeds the customer's cash deposit, interest may be charged on such excess.
- Late payments – payments for securities purchased that are received past settlement date.

USD Interest Computation

Interest on debit balances is computed by multiplying the average daily debit balance of the account by the applicable interest rate in effect and dividing by 360, times the number of days a daily debit balance was maintained during the interest period. The daily debit balance of the account is the aggregate daily debit balance for all accounts other than my Type 3-Short and Type 9-Income Accounts.

Example for USD: FABLR of 8% – Applicable Interest Rate 10%

Date	Daily Debit Balance
June 17	\$ 0
June 18	\$5,000
June 19	\$10,500
June 20	\$8,000
Total of 3 days	\$23,500

\$23,500 divided by 3 equals \$7,833 (daily average balance), times 10% (applicable rate) divided by 360 equals \$2.18 (daily interest charge) times 3 (the number of days the account had a net debit balance during the interest period) equals an interest charge of \$6.53.

International Interest Computation

Interest on debit balances in foreign currencies is computed daily on the actual debit balance for that day. Depending on the index rate applicable to each currency in the account, rates may change on a daily basis. Calculated by computer, the interest on combined balances from all cash and margin accounts is arrived at by multiplying the daily debit of International balances by the applicable rate of interest, dividing by 360 and summing for each day.

Example for International Margin Interest Computation:

Date	CAD Daily Debit Balance	FABLR-CAD	Applicable Interest Rate	Interest to be Charged
June 17	\$ 0	5.3%	0.0%	\$ 0.00
June 18	\$90,000	5.2%	7.2%	\$18.00
June 19	\$120,000	5.2%	6.7%	\$22.33
June 20	\$85,000	5.1%	7.1%	\$16.76
Total for billing cycle				\$57.10

Total interest owed would be \$57.10 CAD.

Marking to Market

The credit balance in the Type 3-Short account will be decreased or increased in accordance with the corresponding market values of all short positions. Corresponding debits or credits will be posted to the Type 2-Margin account. These entries in the Type 2-Margin account will, of course, affect the balance on which interest is computed. Credits in your Type 3-Short account, other than marking to market, will not be used to offset your Type 2-Margin account balance for interest computation.

Payment for Order Flow

NFS/FBS transmits customer orders for execution to various exchanges or market centers based on a number of factors. These include: size of order, trading characteristics of the security, favorable execution prices (including the opportunity for price improvement), access to reliable market data, availability of efficient automated transaction processing and reduced execution costs through price concessions from the market centers. Certain of the market centers may execute orders at prices superior to the publicly quoted market in accordance with their rules or practices. While a customer may specify that an order be directed to a particular market center for execution,* the order-routing policies, taking into consideration all of the factors listed above, are designed to result in favorable transaction processing for customers.

NFS/FBS may receive remuneration, compensation or other consideration for directing customer orders for equity securities to particular Broker/Dealers or market centers for execution. Such consideration may take the form of financial credits, monetary payments or reciprocal business.

*Please note: Orders placed through any telephone, electronic, wireless or online trading systems cannot specify a particular market center for execution.

I understand that you may deliver margin calls and other notices to my Authorized agent(s)/Advisor(s) for the sole purpose of collection of my obligations under this Agreement. I agree to the foregoing and further understand that my Authorized agent(s)/Advisor(s) and/or FBS may act on behalf of NFS with respect to margin calls in its discretion.

Governing Law

THIS AGREEMENT AND ITS ENFORCEMENT SHALL BE GOVERNED BY THE LAWS OF THE COMMONWEALTH OF MASSACHUSETTS; SHALL COVER INDIVIDUALLY AND COLLECTIVELY ALL FIDELITY BROKERAGE ACCOUNTS WHERE APPROPRIATE THAT THE UNDERSIGNED MAY OPEN OR REOPEN WITH FIDELITY; SHALL INURE TO THE BENEFIT OF FIDELITY'S SUCCESSORS AND ASSIGNS, WHETHER BY MERGER, CONSOLIDATION OR OTHERWISE, AND FIDELITY MAY TRANSFER THE ACCOUNT OF THE UNDERSIGNED TO YOUR SUCCESSORS AND ASSIGNS, AND THIS AGREEMENT SHALL BE BINDING UPON THE HEIRS, EXECUTORS, ADMINISTRATORS, SUCCESSORS AND THE ASSIGNS OF THE UNDERSIGNED.

Pre-Dispute Arbitration Agreement

This agreement contains a pre-dispute arbitration clause. By signing an arbitration agreement, the parties agree as follows:

- (A) 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.
- (B) Arbitration awards are generally final and binding; a party's ability to have a court reverse or modify an arbitration award is very limited.
- (C) The ability of the parties to obtain documents, witness statements and other discovery is generally more limited in arbitration than in court proceedings.
- (D) 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.
- (E) The panel of arbitrators will typically include a minority of arbitrators who were or are affiliated with the securities industry.
- (F) 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.
- (G) The rules of the arbitration forum in which the claim is filed, and any amendments thereto, shall be incorporated into this agreement.

All controversies that may arise between me, my Authorized agent/Advisor, and you, concerning any subject matter, issue or circumstance whatsoever (including, but not limited to, controversies concerning any account, order, distribution, rollover, advice interaction or transaction, or the continuation, performance, interpretation or breach of this or any other agreement between me, my Authorized agent, and you, whether entered into or arising before, on or after the date this account is opened) shall be determined by arbitration in accordance with the rules then prevailing of the Financial Industry Regulatory Authority (FINRA) or any United States securities self-regulatory organization or United States securities exchange of which the person, entity or entities against whom the claim is made is a member, as I may designate. If I designate the rules of a United States self-regulatory organization or United States securities exchange and those rules fail to be applied for any reason, then I shall designate the prevailing rules of any other United States securities self-regulatory organization or United States securities exchange of which the person, entity or entities against whom the claim is made is a member. If I do not notify you in writing of my designation within five (5) days after such failure or after I receive from you a written demand for arbitration, then I authorize you to make such designation on my behalf. The designation of the rules of a self-regulatory organization or securities exchange is not integral to the underlying agreement to arbitrate. I understand that judgment upon any arbitration award may be entered in any court of competent jurisdiction.

No person shall bring a putative or certified class action to arbitration, nor seek to enforce any pre-dispute arbitration agreement against any person who has initiated in court a putative class; or who is a member of a putative class action who has not opted out of the class with respect to any claims encompassed by the putative class action until: (i) the class certification is denied; or (ii) the class is decertified; or (iii) 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.

Margin Disclosure Statement

Important Information About Using Margin

Fidelity is furnishing this document to you to provide some basic information about purchasing securities in a margin account and to alert you to the risks involved with trading securities in a Margin Account. Before trading securities in a margin account, you should carefully review the margin terms in your account application and agreement. Not all securities are marginable and Fidelity reserves the right in its sole discretion to determine whether to extend margin on any securities. Please contact your investment advisor regarding any questions or concerns you may have with your margin accounts.

When you purchase securities, you may pay for the securities in full or you may borrow part of the purchase price from your brokerage firm. If you choose to borrow funds from your firm, you will open a margin account with Fidelity. The securities in your accounts are Fidelity's collateral for the loan to you. The actual amount you can borrow and Fidelity's margin maintenance requirements may vary depending on Fidelity's internal margin policies which exceed the margin requirements of FINRA and NYSE. Fidelity's margin policies are subject to review and revision at any time in Fidelity's sole discretion. Fidelity reserves the right to alter the terms on your margin loan at any time to comply with changes in Fidelity's policies. If the securities in your account decline in value, so does the value of the collateral supporting your loan, and, as a result, Fidelity can take action, such as issue a margin call and/or sell securities or other assets in any of your accounts held with Fidelity, or with certain of Fidelity's affiliates, in order to maintain the required equity in the account.

Risks of Borrowing on Margin

It is important that you fully understand the risks involved in trading securities on margin. These risks include the following:

- **You can lose more funds than you deposit in the margin account.** Fidelity uses internal methodologies to determine whether there is insufficient equity in your account. This valuation may differ from your valuation and may differ from the valuation that Fidelity is able to obtain if it sells these assets to meet a margin deficiency in your account. A decline in the value of securities you purchased on margin may require you to provide additional funds or margin-eligible securities to Fidelity to avoid the forced sale of any securities or assets in your account(s).
- **Fidelity can force the sale of securities or other assets in your account(s).** If the equity in your account falls below the maintenance margin requirements or Fidelity's higher "house" requirements, Fidelity can sell the securities or other assets in any of your accounts held at Fidelity, or with certain of Fidelity's affiliates, to cover the margin deficiency. You also will be responsible for any shortfall in the account after such a sale, possibly including Fidelity's costs related to collecting the shortfall. If you are a director, officer or 10% shareholder of an issuer whose securities Fidelity sells to cover a margin deficiency in your account, you could be liable to this issuer for profits from the forced sale, as compared with any purchases you may have made of securities of the same issuer within six months of the sale (note that you could receive such a profit even if a shortfall remains in the account after the sale).
- **Fidelity can sell your securities or other assets without contacting you.** Some investors mistakenly believe that a firm must contact them for a margin call to be valid, and that the firm cannot liquidate securities or other assets in their accounts to meet the call unless the firm has contacted them first. This is not the case. Most firms will attempt to notify their customers of margin calls, but they are not required to do so. In addition, even if a firm has contacted a customer and provided a specific date by which the customer can meet a margin call, the firm can still take necessary steps to protect its financial interests prior to that date, including immediately selling the securities without notice to the customer.
- **You are not entitled to choose which securities or other assets in your account(s) are liquidated or sold to meet a margin call.** Because the securities and any other assets in your account(s) are collateral for the margin loan, Fidelity has the right to decide which assets to sell in order to protect its interests.

Fidelity can increase its "house" maintenance margin requirements at any time and is not required to provide you advance notice. These changes in firm policy often take effect immediately and may result in the issuance of a maintenance margin call. Your failure to satisfy the call may cause Fidelity to liquidate or sell securities or any other assets in your account(s). Fidelity may set account or security specific margin requirements on an individual basis and takes into consideration the following factors in determining margin maintenance requirements: (i) market volatility, which may include general market, issuer, industry and country conditions; (ii) the quality and composition of the securities in your account, including issuer capitalization and issuer, industry, liquidity and ownership concentrations; (iii) the quality and composition of your portfolio, including domestic and foreign exchange exposure, fixed-income exposure, frequency of activity in your account and liquidity of your account; (iv) Fidelity's ability generally to obtain financing for its margin loans; and (v) regulatory requirements and applicable law. Fidelity may place different weight on each of these factors, which may result in Fidelity determining, in its sole discretion, to immediately increase your margin maintenance requirement, which will require you to provide additional funds or securities to avoid the forced sale of assets in your account.

Fidelity's review of any of the factors described above may require you to provide additional funds or securities, in an amount determined by Fidelity in its sole discretion, to avoid the forced sale of those securities or other securities in your account.

- **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.
- **Short selling is a margin account transaction and entails the same risks as described above.** Fidelity can buy in your account securities to cover a short position without contacting you, and may use all or any portion of the assets in your account to make such a purchase. If the assets in your account are not sufficient to cover the cost of such a purchase, you will be responsible for any shortfall, possibly including Fidelity's costs in collecting the shortfall.
- **Fidelity can loan securities held in your margin account which collateralize your margin borrowing.** In connection with the extension or maintenance of margin credit, Fidelity may loan securities in your margin account to itself or to others. As a result of these loans, you may not be entitled to receive certain benefits of a securities owner, such as the ability to exercise voting rights and/or receive interest, dividends, and/or other distributions with respect to the securities lent. While a security in your account is lent, you may only be allocated and receive substitute payments in lieu of such interest, dividends, and/or other distributions. Substitute payments may not be afforded the same tax treatment as actual interest, dividends, and/or other distributions, and you may incur additional tax liability for substitute payments that you receive. Fidelity may allocate substitute payments in any manner permitted by law, rule, or regulation, including, but not limited to, by means of a lottery allocation method. You are not entitled to any compensation in connection with securities lent from your account or for additional taxes you may be required to pay as a result of any tax treatment differential between substitute payments and actual interest, dividends, and/or other distributions.
- **In addition to market volatility, the use of bank card, check-writing and similar features with your margin account may increase the risk of a margin call.**
- **Fidelity may use certain securities in your account in connection with short sales and may receive compensation in connection therewith.**

Please contact your Authorized agent/Advisor or Fidelity to request additional information concerning Fidelity's margin policies or concerning questions you may have with your margin account.

Asset-Based Pricing Supplement

This supplement sets forth the terms and conditions for Asset-Based Pricing. Contact your Authorized agent(s)/Advisor(s) to determine if this supplement applies to your account.

This Fidelity Asset-Based Pricing Supplement ("Supplement") is part of my Client Account Agreement. Unless otherwise defined in this Supplement, defined terms have the same meaning as in my Client Account Agreement. In the event any provision in this Supplement conflicts or is inconsistent with any provision of my applicable Client Account Agreement, the provisions of this Supplement will control for matters related to my or my Authorized agent(s)/Advisor(s) having chosen Asset-Based Pricing for my Account(s). In the event that any provisions in this Supplement or my Client Account Agreement conflicts or is inconsistent with any provision of the Premiere Select IRA Custodial Agreement and Disclosure Statement, or Premiere Select Roth IRA Custodial Agreement and Disclosure Statement, as applicable, the provisions of the Premiere Select IRA (or Roth IRA) Custodial Agreement and Disclosure Statement will control. As noted in the Client Account Agreement, I have authorized my Authorized agent(s)/Advisor(s) to enter into such schedule of interest rates, commission rates and any other fee schedules for my accounts. More specifically, my Authorized agent(s)/Advisor(s) have entered into an Asset-Based Pricing relationship for my account(s) established at Fidelity. Account(s) chosen for Asset-Based Pricing ("ABP Account(s)") will, subject to certain restrictions, receive Fidelity's customary securities brokerage and execution services for an asset-based fee ("Asset-Based Fee" or "ABF") based on the value of certain assets in ABP Accounts, generally in lieu of paying commissions and similar costs at the time of each transaction. I understand that the ABF for each account is calculated and charged based only on the assets held in that account and does not take into consideration any other accounts or assets held at Fidelity.

1. Chargeable Assets. As used in this Supplement, "Chargeable Assets" mean:

- all assets in the account excluding the following assets which are defined as non-chargeable: cash, cash equivalents, alternative investments, no transaction fee mutual funds, mutual funds with a load or sales charge, Fidelity Mutual Funds, same day settlement Money Market Funds, Unit Investment Trusts (UITs), and international securities that settle and are held in local currency. Note that an international security that is held in USD will be charged an asset-based fee.

Fidelity may change the definition of Chargeable Assets anytime, and any change will be effective in the following billing cycle with notice to me and my Authorized agent(s)/Advisor(s). Changes in these definitions may affect the ABF rate I am charged. In the event an Asset is deemed at any time to be non-chargeable, I understand transaction fees shall apply.

2. Asset-Based Fee. I agree to pay Fidelity an ABF calculated by applying the ABF as it has been communicated to me by my Authorized agent(s)/Advisor(s) to the average daily balance of Chargeable Assets held in each ABP Account. I understand that I may be subject to a minimum fee per billing cycle. The fees shall be communicated to me by my Authorized agent(s)/Advisor(s). I authorize Fidelity to provide notice of my fees or any changes in my fees to my Authorized agent(s)/Advisor(s) and I will be bound by such notice. It is my responsibility to determine from my Authorized agent(s)/Advisor(s) the fees being charged. A copy of my fee schedule can be obtained from Fidelity upon request.

For each ABP account, the ABF is calculated by applying the Annual Percentage Rate (measured by "basis points" or "BPS") to the average daily balance of the Chargeable Assets in each ABP Account (schedule may be dependant on turnover classification of my account). The ABF shall be charged in arrears based on the average daily balance of Chargeable Assets in the ABP account for the billing period. Fidelity will calculate the ABF for each Billing Period by multiplying the average daily balance of Chargeable Assets for each month by the corresponding BPS (adjusted to a monthly amount by multiplying the annual percentage rate by the number of days in the month divided by 365 days (or, 366 days in the case of a leap year) of the applicable tiers of the schedule of my Authorized agent/Advisor. The ABF for the Billing Period will be the sum of the monthly amounts for said Billing Period. This shall be the ABF

fee billed for said billing period unless the sum is less than the period's applicable minimum Account fee ("Minimum Fee") described below. The ABF shall be charged to an account on or about the seventh day of the second month following the end of each billing period.

Accounts may be subject to a Minimum Fee to be billed on the same day as the ABF. The Minimum Fee does not apply when the ABP Account's ABF for the billing period exceeds the applicable Minimum Fee. The amount charged, if applicable, will be shown on my account statement. The Minimum Fee charged will be reduced by the amount of the ABF charged to the ABP Account. Accounts may also be subject to an annual trade cap and excess trade fee applied to all trades in excess of the trade cap. The trade cap is based on the number of trades executed on all asset types and is calculated on an annual basis at the anniversary of the funding of the account or the establishment of the ABP on the account ("Anniversary Date"). Trade counting is done on a 12-month basis from the account's Anniversary Date. Certain assets may be excluded from the trade cap. For further details, contact your Authorized agent(s)/Advisor(s).

The ABF, Minimum Fee and Trade Cap Fee may be changed by Fidelity in its discretion. I authorize Fidelity to provide notice of my fees or any changes in my fees to my Authorized agent(s)/Advisor(s) and I will be bound by such notice. It is my responsibility to determine from my Authorized agent(s)/Advisor(s) the fees being charged.

I authorize my Authorized agent/Advisor to determine which securities and other property are to be sold and to liquidate or withdraw the securities and other property in each ABP Account, without notice to me, to pay the ABF and any other fees due to Fidelity under this Supplement. Payment of the ABF generally will be made first from free credit balances (from my core money market mutual fund, in the case of IRAs), next from the liquidation of shares of money market funds, and finally from the liquidation of any remaining securities or other property. Transfers into the ABP Account(s) of Chargeable Assets will be subject to the ABF or Minimum Fee, if applicable.

3. Other Fees and Charges. The ABF does not cover all fees and charges that apply to my ABP Accounts. The ABF does not cover brokerage and execution costs associated with Non-Chargeable Assets held in my ABP Accounts or with securities and other property held outside my ABP Accounts. The ABF does not cover certain charges including but not limited to transfer taxes, regulatory and exchange fees electronic fund and wire transfer fees, storage, fabrication and delivery fees for precious metals, auction fees, debit balances, margin interest, certain odd-lot differentials, other charges imposed by law, charges imposed by custodians other than Fidelity, fees in connection with custodial, trustee and other services rendered by a Fidelity affiliate, certain fees in connection with trust accounting, or the establishment, administration, or termination of retirement or profit sharing plans, and fees for other products and services that Fidelity or its affiliates may offer. Customary brokerage and execution costs will apply to purchases and sales of Non-Chargeable Assets in my ABP Account, and these charges may be applied on a per-trade basis. My ABP Account also may be subject to Supplemental Charges and Closing Fees (defined below).

- a. Closing Fee.** Fidelity may charge a fee ("Closing Fee") at the time of the termination of this Supplement or the closing of an ABP Account. This fee is in addition to any IRA termination/liquidation fees that may be applied.
- b. Agency and Principal Trades.** For agency transactions, I will pay the ABF in lieu of the commission, if any, that otherwise would be charged on a per-trade basis. However, I understand that principal transactions will be effected at a net price reasonably related to the prevailing market price and will include a dealer spread (normally the difference between the bid and the offer price). The dealer spread will vary based on a number of factors such as the nature and liquidity of the security. I further understand that Fidelity's affiliate, National Financial Services LLC ("NFS"), generally will receive additional compensation or other benefits

from principal trades because of the dealer spread or because of any gains resulting from changes in the prices of securities and other property held for NFS's own account before sale to, or after purchase from, me. Fidelity will not receive any additional compensation.

c. **Underwritten Offerings.** ABP Fees will be applied to underwritten offerings of eligible individual equities and fixed income securities purchased or held in my ABP Accounts. Underwritten offerings generally will be purchased only at the public offering price, which includes sales compensation. Fidelity's affiliate, NFS, may receive a selling concession or other compensation which is part of the underwriting commission that is described generally in the relevant offering documents. Fidelity will not receive any additional compensation.

d. **Commissions and Other Charges of other Broker-Dealers.** The ABF does not cover commissions, commission equivalents, or other charges on transactions my Authorized agent(s)/Advisor(s) place with broker-dealers other than Fidelity that settle into or from my ABP Account. Any such charges will be separately charged to my ABP Account. ABP Fees will be applied to Chargeable Assets in my ABP Account that are purchased or sold through other broker-dealers but custodied at Fidelity. I understand that my Authorized agent(s)/Advisor(s)' use of Fidelity's Prime Brokerage Services or other trade away programs will involve execution of transactions for my ABP Account by broker-dealers other than Fidelity, and that such transactions will be subject to additional fees charged by Fidelity for its Prime Brokerage Services or other trade-away program. Because I will be charged commissions, commission equivalents, dealer markups, markdowns, or other charges on transactions my Authorized agent(s)/Advisor(s) place with broker-dealers other than Fidelity – which will be in addition to the ABF I pay Fidelity under this Supplement – I recognize that my Authorized agent(s)/Advisor(s) may have an incentive to execute most transactions for settlement into my ABP Account through Fidelity. This incentive could, in some circumstances, conflict with my Authorized agent(s)/Advisor(s)' duties to obtain best execution of transactions for my ABP Account.

4. **Valuation of Chargeable Assets.** For purposes of determining the market value of the Chargeable Assets in my ABP Accounts, securities listed on a national securities exchange will be valued, as of the valuation date, at the closing price on the principal exchange on which they are traded. Securities and other property in my ABP Account will be valued in a manner determined by Fidelity in good faith to reflect their estimated fair market value. Fidelity may use prices obtained from third-party vendors. While Fidelity believes these sources to be reliable, Fidelity's valuation of Chargeable Assets for purposes of this Supplement should not be considered a guarantee of any kind whatsoever of the value of any assets in my ABP Accounts. The actual prices at which securities may be bought and sold may be different from those used for purposes of this Supplement. The ABF and other ABP Fees will apply to short market positions in Chargeable Assets. Chargeable Assets purchased on margin are subject to the ABF and the market value of the Chargeable Assets will not be reduced by the amount of any margin indebtedness or increased by the amount of any credits. I understand that margin is not available on my Premiere Select IRAs (or Premiere Select Roth IRAs).

5. **Acknowledgements.** I understand and agree that:

a. **Special Considerations.** I have determined in consultation with my Authorized agent(s)/Advisor(s) that participation in this ABP arrangement ("ABP Arrangement") is suitable and appropriate for me. **ABP Arrangements are not right for everyone.** In deciding whether this arrangement is appropriate, I have carefully considered, in consultation with my Authorized agent(s)/Advisor(s), all relevant factors, including my past and anticipated trading practices and holdings of Chargeable Assets, my Authorized agent(s)/Advisor(s)' investment strategies and trading patterns (including the frequency of trading and the number and size of the transactions that my Authorized agent(s)/Advisor(s) order for my ABP Accounts), the costs and potential benefits of this arrangement as compared to paying commissions on a per-trade basis, and my investment objectives and goals. I understand that, depending on

the circumstances, the brokerage and execution services offered through this arrangement would be available for less money if I paid commissions and execution costs on a per-trade basis. I have also considered whether this arrangement is appropriate if I primarily intend to hold the types of Chargeable Assets or engage in the trading strategies described below:

- "Buy and Hold" Investors. This arrangement is designed for investors who trade with some regularity and may not be appropriate if I do not intend to trade or intend to make only a small number of trades. It may not be appropriate for me to include in my ABP Account existing securities or other property that I intend to hold for a long time.
- Short-Term Trading Activity. ABP Accounts are not intended for day trading (i.e., the practice of purchasing and selling or selling and purchasing the same positions in one trading day) or other short-term or excessive trading activity, including excessive options trading. If I engage in trading activities Fidelity views as excessive, I may be subject to additional charges and/or Fidelity may restrict my ABP Account and/or convert it to a transaction based account which shall effectively terminate this Supplement.
- Prior Commission Payments. I may transfer Chargeable Assets on which I have previously paid a commission or similar fee on a per-trade basis into my ABP Account. The ABF will be applied to these transferred securities even though a commission or other similar fee has previously been charged, and I will consider whether it is appropriate to transfer such securities and other property into my ABP Account.

b. **Arrangement Is Appropriate for Me.** I have determined, in consultation with my Authorized agent(s)/Advisor(s) that participation in this ABP Arrangement is suitable and appropriate for me. Accordingly, I have carefully considered all relevant factors, including the factors described in this Supplement. I acknowledge that Fidelity has not recommended participation in this ABP Arrangement. I agree that Fidelity is not responsible for determining whether participation in this ABP Arrangement remains suitable or appropriate for me. Rather, such determination is solely mine and my Authorized agent(s)/Advisor(s)' responsibility. Because the relevant factors bearing on the appropriateness of my participation in this ABP Arrangement may change over time, I will periodically reevaluate, in consultation with my Authorized agent(s)/Advisor(s), whether continued enrollment in this ABP Arrangement remains suitable and appropriate for me. I acknowledge that I have been given notice of all fees and other charges related to my having chosen Asset-Based Pricing for my managed accounts. I further represent that all such fees are reasonable in light of the services being provided to me.

c. **No Investment Advice.** This ABP Arrangement is a pricing alternative, not an investment advisory service. My ABP Account is a brokerage account in which, subject to certain restrictions, Fidelity provides securities brokerage and execution services on a non-discretionary basis for an ABF. Any information or assistance Fidelity provides to me in this ABP Arrangement is solely incidental to Fidelity's business as a broker-dealer and is customarily provided or available without charge where brokerage and execution charges are paid on a per-trade basis. Neither Fidelity nor any of its affiliates or employees is acting or will act as an "investment adviser" as defined in the Investment Advisers Act of 1940 ("Advisers Act") with respect to my ABP Account. The Advisers Act will not apply to the relationship between me and Fidelity (including its affiliates and employees) with respect to my ABP Account. Fidelity is not an "investment manager" and does not provide investment advice within the meaning of the Employee Retirement Income Security Act of 1974 as a result of the services provided under this Supplement, and Fidelity does not, nor will it, render advice or any other services.

d. **Payments to Affiliates; Multiple Layers of Fees.** Fidelity, its affiliates and employees may receive additional compensation in connection with specific types of Chargeable Assets as described in the Supplement. These Chargeable Assets will also be included for purposes of calculating the ABP Fees. This may result in me paying multiple layers of fees on certain Chargeable Assets.

- e. **Limitation of Liability; Risk Acknowledgement.** All investments involve risk, and certain types of investments involve substantially more risk than others. I (or my Authorized agent(s)/Advisor(s)) will select investments for my ABP Account, and neither Fidelity nor any of its affiliates or employees will have any discretionary authority or control over my ABP Account. Fidelity, its affiliates and employees will execute transactions for my ABP Account only as specifically instructed by me or my Authorized agent/Advisor or other authorized representative. I am responsible for any trades placed in my ABP Account and for all losses arising from or related to my ABP Account.
- f. **Tax Considerations.** The ABF paid in connection with my ABP Account may be considered by the Internal Revenue Service as an investment expense, rather than a transaction charge, which may result in less favorable tax treatment for me. If I sell or redeem Chargeable Assets, including as part of a transfer described in paragraph 5, that sale or redemption of Chargeable Assets may result in adverse tax consequences. Notwithstanding anything herein to the contrary, I understand that distributions from IRAs are subject to ordinary income tax and a possible 10% penalty if I am under age 59½. I understand that Fidelity does not, and will not, offer tax advice and I am encouraged to consult a tax advisor or other qualified professional.
6. **Duration and Termination.** I agree that, even though I have signed the Client Account Agreement and agreed to this Supplement, Fidelity may refrain from providing the services described in this

Supplement until all of Fidelity's internal procedures for establishing ABP Accounts have been completed and any necessary internal approvals have been obtained. This Supplement will become effective when accepted by Fidelity. Either party may terminate the Supplement. Fidelity will accept verbal termination instructions from me directly or my Authorized agent(s)/Advisor(s). In the event of the termination of an ABP Account, this Supplement will terminate with respect to such account, but will remain in full force and effect as to any remaining ABP Accounts. Termination of this Supplement will not result in termination of the Client Account Agreement, the terms and conditions of which will continue to remain in full force and effect and the Client Account will be subject to transaction based pricing which shall be communicated to me by my Authorized agent(s)/Advisor(s). In the case of any termination by me, the "Termination Date" is the last business day of the quarter in which my notice is received by Fidelity. In the case of any termination by Fidelity, the "Termination Date" is the date on which any such notice is sent by Fidelity to me. Termination of this Supplement or any particular ABP Account will not affect or preclude the consummation of any trade initiated, or any liability or obligation arising before the Termination Date, including payment of any outstanding fees.

7. **Amendments.** Fidelity may amend this Supplement on written notice to my Authorized agent(s)/Advisor(s) or me and any amendment will be effective as of the date specified by Fidelity.

This section applies only to accounts established in the Managed Account Solutions (formerly Managed Account Resources Platform ("MAS Platform")): Be advised that the billing cycle and householding features are unique for this platform. The MAS Platform will bill your ABP Fees at the beginning of the quarter on or about the fifteenth day of the quarter. The ABP Fees will be determined by applying the BPS to your Account(s) previous quarter ending account balance. Within the MAS Platform, any Accounts in each of the MAS Programs will be householded for purposes of calculating and billing the ABF.



Trade-Away Securities Transactions Supplement

To: Account Owner(s) ("I")

From: Fidelity Brokerage Services LLC and National Financial Services, LLC (collectively, "Fidelity")

Pursuant to the terms of my Client Agreement I have authorized Fidelity to accept any trading, servicing or account related instruction from my Authorized Agent(s)/Advisor(s), including authorizing my Authorized agent(s)/Advisor(s) to execute securities transaction directly with broker dealers that are not affiliated with Fidelity, including both domestic and foreign executing brokers ("Executing Brokers"). My Authorized agent (s)/Advisor(s) have indicated to Fidelity my Authorized agent(s)/Advisor(s) may engage in executing securities transactions with Executing Brokers. This notice is a supplement to my Brokerage Account Client Agreement and provides the details of the terms and conditions for Fidelity's role in securities transactions my authorized agent(s)/Advisor(s) execute with Executing Brokers. Defined terms have the same meaning as in my Client Agreement. I have read this information carefully and have contacted my Authorized agent(s)/Advisor(s) with any questions.

The terms of my Client Agreement authorize and direct Fidelity to accept any trading, servicing, account-related, or other instruction of my Authorized agent (s)/Advisor(s) on my behalf. This includes the execution of trade away securities transactions ("Trade Away Transactions") directly through Executing Brokers. If my Authorized agent(s)/Advisor(s) execute Trade Away Transactions directly through Executing Brokers, I understand that I and my Authorized agent(s)/Advisor(s) are solely responsible for the selection of any Executing Brokers. Fidelity will have no obligation to select, monitor or supervise the Executing Brokers.

The Executing Broker will be entirely responsible for the execution and clearance of Trade Away Transactions executed on my behalf. Fidelity, as custodian of my account, will act solely as settlement agent and will have no other responsibility whatsoever with regard to any Trade Away Transactions. Fidelity's duties in this regard will be further conditioned on Fidelity having custody of or receiving the subject securities or other property (including cash) in good deliverable form before settlement. I understand that Fidelity has the right to cancel any Trade Away Transaction if Fidelity does not receive subject securities or other property, including cash to settle the Trade Away Transaction by settlement date.

To facilitate settlement on my behalf, Fidelity may book Trade Away Transactions through its systems in a manner that makes them appear as though they are "buys" and "sells," and may reflect this activity as a "trade" on standardized communications, including but not limited to periodic account statements and trade confirmations. I understand that, notwithstanding the presentation of this information on communications I receive from you, Fidelity is acting solely as settlement agent connection – Trade Away Transactions.

I understand that I may be subject to additional trade-away fees for Trade Away Transactions executed by Executed Brokers and my Authorized agent(s)/Advisor(s) have informed me of the trade-away fees that may apply to my account and I agree to be bound thereby.

I understand that securities positions that are not in the possession or control of Fidelity are not covered by the SIPC protection or any additional insurance secured by Fidelity that covers positions held in my Fidelity brokerage account.

I understand that Fidelity may limit or restrict the number or volume of Trade Away Transactions in my account. I also understand that I may be required to maintain minimum net equity levels in my Fidelity brokerage account. I understand that any such limitations or requirements will be communicated to me on an initial and ongoing basis through my Authorized agent/Advisor.

I acknowledge that direct investments in foreign markets involve various investment risks, including foreign exchange risk (the possibility that foreign currency will fluctuate in value against the U.S. dollar), increased volatility as compared to the U.S. markets, political, economic and social events that may influence foreign markets or affect the prices of foreign securities, lack of liquidity (foreign markets may have lower trading volumes and fewer listed companies, shorter trading hours and restrictions on the types of securities that foreign investors may buy and sell) and less access to information about foreign companies. Emerging markets, in particular, can be subject to greater social, economic, regulatory, and political uncertainties and can be extremely volatile. Foreign securities trading also may be subject to various credit, settlement, operational, financial and legal risks that may affect the ability of my Authorized agent(s)/Advisor(s) to engage in foreign securities transactions on my behalf and may make it more costly to access foreign markets. These risks include:

- **Physical Markets.** Certain markets may have less regulated or less liquid securities markets. In addition, some countries still rely on physical markets that require delivery of properly endorsed share certificates to effect trades. As a result, the settlement process can be lengthy (and erratic in some markets) and carry an increased risk of fails.
- **Misidentification of Securities.** Foreign companies may have multiple classes of securities, including "foreign" and "local" shares. Inadequate understanding of a foreign company's capital structure or imprecision in placing orders with Foreign Executing Brokers can result in my Authorized agent(s)/Advisor(s) purchasing the wrong securities.
- **Non-DVP Transactions.** Local trading and settlement customs frequently require non-DVP ("delivery versus payment") transactions. Unlike DVP transactions, which involve a simultaneous exchange of securities and payment, non-DVP transactions can increase counterparty risk because the purchaser pays before securities are delivered or the seller delivers securities before payment is made.
- **Trading Days and Hours.** Differences in trading days and hours can also create operational issues and complicate clearance and settlement.
- **Cross-Border Settlement.** Cross-border settlement involves the interaction of different settlement systems and differing (and potentially inconsistent) laws in each of the affected countries.
- **Trading Restrictions and Market Operations.** Foreign markets often operate differently from U.S. markets. For example, there may different periods for clearance and settlement of securities transactions and investments in foreign securities may be subject to local market trading restrictions.
- **Limited Recourse under Local Law.** A U.S. investor may not be able to sue a foreign issuer or a Foreign Executing Broker or to enforce a judgment in U.S. courts. The only available remedy may be the legal remedies that are available under foreign law, and those remedies may be limited.

I agree to indemnify and hold harmless Fidelity, its affiliates and their respective officers, directors, employees and agents from and against any and all losses, claims or financial obligations ("Losses") that may arise from any act or omission of my Authorized agent(s)/Advisor(s) with respect to my account, including Losses arising out of or relating to Trade Away Transactions that my Authorized agent(s)/Advisor(s) may execute directly with Executing Brokers.



Notice of Business Continuity Plans

Fidelity Brokerage Services LLC and National Financial Services LLC

December 2014

Fidelity Brokerage Services LLC ("FBS") and National Financial Services LLC ("NFS") are committed to providing continuous customer service and support; however, we recognize that there are potential risks that could disrupt our ability to serve you. We are confident that we have taken the necessary steps that will allow us to reduce or eliminate the impact of a business disruption.


FBS and NFS recognize the responsibility we have to our customers. We have implemented a business continuity management program with a strong governance model and commitment from senior management. Our continuity program's primary objectives are to meet the needs of our customers, maintain the well-being and safety of our employees and meet our regulatory obligations. The planning process is risk based and involves the understanding and prioritization of critical operations across the firm, the anticipation of probable threats, and the proactive development of strategies to mitigate the impact of those events.

Our continuity planning teams work closely with local governments and officials in the event of an outage impacting our operations. Additionally, FBS and NFS have identified three large-scale scenarios that require particular focus: pandemics, events impacting stock and bond market operations, and cyber events. Detailed response plans have been developed and cross-discipline teams have been trained to address day-to-day disruptions as well as these specific events.

All FBS and NFS departments have developed the capability to recover both operations and systems. All continuity plans are designed to account for disruptions of various lengths and scopes, and to ensure that critical functions are recovered to meet their business objectives. Critical business groups operate from multiple sites. Dedicated teams within our technology organizations ensure that critical applications and data have sufficient redundancy and availability to minimize the impact of an event. Key components of FBS's and NFS's continuity and technology recovery plans include:

- Alternate physical locations and preparedness
- Alternative means to communicate with our customers
- Back-up telecommunications and systems
- Employee safety programs

Plans are tested regularly to ensure they are effective should an actual event occur. FBS's and NFS's Business Continuity Plans are reviewed no less than annually to ensure that the appropriate updates are made to account for operations, technology, and regulatory changes. To obtain a copy of this notice at any time, contact NFS directly.

FACTS	<h2 style="margin: 0;">What do Fidelity Investments and the Fidelity Funds do with your personal information?</h2> 	
WHY?	<p>Financial companies choose how they share your personal information. Federal law gives consumers the right to limit some but not all sharing. Federal law also requires us to tell you how we collect, share, and protect your personal information. Please read this notice carefully to understand what we do.</p>	
WHAT?	<p>The types of personal information we collect and share depend on the product or service you have with us. This information can include:</p> <ul style="list-style-type: none"> ■ Social Security number and employment information ■ assets and income ■ account balances and transaction history <p>When you are <i>no longer</i> our customer, we continue to share your information as described in this notice.</p>	
HOW?	<p>All financial companies need to share customers' personal information to run their everyday business. In the section below, we list the reasons financial companies can share their customers' personal information, the reasons Fidelity Investments and the Fidelity Funds (hereinafter referred to as "Fidelity") choose to share, and whether you can limit this sharing.</p>	
REASONS WE CAN SHARE YOUR PERSONAL INFORMATION	DOES FIDELITY SHARE?	CAN YOU LIMIT THIS SHARING?
<p>For our everyday business purposes— such as to process your transactions, maintain your account(s), respond to court orders and legal investigations, or report to credit bureaus</p>	Yes	No
<p>For our marketing purposes— to offer our products and services to you</p>	Yes	No
<p>For joint marketing with other financial companies</p>	No	We don't share
<p>For our affiliates' everyday business purposes— information about your transactions and experiences</p>	Yes	No
<p>For our affiliates' everyday business purposes— information about your creditworthiness</p>	No	We don't share
<p>For nonaffiliates to market to you</p>	No	We don't share
QUESTIONS?	<p>Call 800-343-3548. If we serve you through an investment professional, please contact them directly. Specific Internet addresses, mailing addresses, and telephone numbers are listed on your statements and other correspondence.</p>	

WHO WE ARE	
Who is providing this notice?	Companies owned by Fidelity Investments using the Fidelity name to provide financial services to customers, and the Fidelity Funds. A list of companies is located at the end of this notice.
WHAT WE DO	
How does Fidelity protect my personal information?	To protect your personal information from unauthorized access and use, we use security measures that comply with federal law. These measures include computer safeguards and secured files and buildings.
How does Fidelity collect my personal information?	<p>We collect your personal information, for example, when you</p> <ul style="list-style-type: none"> ■ open an account or direct us to buy/sell your securities ■ provide account information or give us your contact information ■ tell us about your investment portfolio <p>We also collect your personal information from others, such as credit bureaus, affiliates, or other companies.</p>
Why can't I limit all sharing?	<p>Federal law gives you the right to limit only</p> <ul style="list-style-type: none"> ■ sharing for affiliates' everyday business purposes—information about your creditworthiness ■ affiliates from using certain information to market to you ■ sharing for nonaffiliates to market to you <p>State laws and individual companies may give you additional rights to limit sharing.</p>
DEFINITIONS	
Affiliates	<p>Companies related by common ownership or control. They can be financial and nonfinancial companies.</p> <ul style="list-style-type: none"> ■ Fidelity Investments affiliates include companies with the Fidelity name (excluding the Fidelity Funds), as listed below, and other financial companies such as National Financial Services LLC, Strategic Advisers, Inc., and FIAM LLC.
Nonaffiliates	<p>Companies not related by common ownership or control. They can be financial and nonfinancial companies.</p> <ul style="list-style-type: none"> ■ Fidelity does not share with nonaffiliates so they can market to you.
Joint marketing	<p>A formal agreement between nonaffiliated financial companies that together market financial products or services to you.</p> <ul style="list-style-type: none"> ■ Fidelity doesn't jointly market.
OTHER IMPORTANT INFORMATION	
<p>If you transact business through Fidelity Investments life insurance companies, we may validate and obtain information about you from an insurance support organization. The insurance support organization may further share your information with other insurers, as permitted by law. We may share medical information about you to learn if you qualify for coverage, to process claims, to prevent fraud, or otherwise at your direction, as permitted by law. You are entitled to receive, upon written request, a record of any disclosures of your medical record information. Please refer to your statements and other correspondence for mailing addresses.</p> <p>If you establish an account in connection with your employer, your employer may request and receive certain information relevant to the administration of employee accounts.</p> <p>If you interact with Fidelity Investments directly as an individual investor (including joint account holders), we may exchange certain information about you with Fidelity Investments financial services affiliates, such as our brokerage and insurance companies, for their use in marketing products and services as allowable by law. Information collected from investment professionals' customers is not shared with Fidelity Investments affiliates for marketing purposes, except with your consent and as allowed by law.</p> <p>The Fidelity Funds have entered into a number of arrangements with Fidelity Investments companies to provide for investment management, distribution, and servicing of the Funds. The Fidelity Funds do not share personal information about you with other entities for any reason, except for everyday business purposes in order to service your account.</p> <p>For additional information, please visit Fidelity.com.</p>	
WHO IS PROVIDING THIS NOTICE?	
<p>Fidelity Investments companies: Fidelity Brokerage Services LLC; Fidelity Distributors Corporation; Fidelity Investments Institutional Operations Company, Inc.; Fidelity Investments Institutional Services Company, Inc.; Fidelity Management Trust Company; Fidelity Personal Trust Company, FSB; Fidelity Investments Life Insurance Company; Empire Fidelity Investments Life Insurance Company; Fidelity Insurance Agency, Inc.; National Financial Services LLC; Strategic Advisers, Inc.; FIAM LLC.</p> <p>The Fidelity Funds, which include funds advised by Strategic Advisers, Inc.</p>	



Important Information about Electronic Funds Transfer

This document provides important information regarding electronic funds transfers performed via the Automated Clearing House network, including transfers initiated by me or my Authorized agent(s)/Advisor(s). Such transfers are governed by Regulation E, as issued by the Bureau of Consumer Financial Protection pursuant to the Electronic Fund Transfer Act, and other related laws and regulations. This information is provided to me in compliance with these rules and regulations. Similar information regarding transfers initiated using a debit card will be sent to me separately with my debit card.

Privacy Statement

I understand Fidelity Brokerage Services LLC (Fidelity) will disclose information to third parties about my account or the transfers I or my Authorized agent(s)/Advisor(s) make:

- (i) Where it is necessary for completing transfers, or
- (ii) In order to verify the existence and condition of my account for a third party, such as a credit bureau or merchant, or
- (iii) In order to comply with a government agency or court order, or
- (iv) For my Authorized agent(s)/Advisor(s) give Fidelity written permission, or
- (v) For other purposes in accordance with Fidelity's privacy statement

Redemptions

The minimum Electronic Funds Transfer (EFT) transaction initiated on Fidelity.com is \$10 for redemptions and deposits, and the maximum is \$100,000. Redemptions are limited to one per day.

Fees

There is no fee to transfer funds electronically, although my financial institution may charge transaction fees.

EFT Transactions Initiated on Fidelity.com

If I establish EFT on Fidelity.com, I or my Authorized agent(s)/Advisor(s) may be able to immediately transfer funds from my bank account to my Fidelity Brokerage Account ("Immediate Funding EFT"). All Immediate Funding EFTs processed during the first seven (7) business days after I or my Authorized agent(s)/Advisor(s) establish EFT on Fidelity.com, will be limited to a maximum transaction amount of \$25,000 per day for customers with an existing relationship; for new customers, the maximum transaction amount is \$15,000 per day. On the eighth business day following my or my Authorized agent(s)/Advisor(s)' request, the maximum transaction amount for EFTs initiated on Fidelity.com will increase to \$100,000 per day. Transfers from my Fidelity Brokerage Account to my bank account will not be allowed until the eighth business day.

EFT Transactions Initiated by my Authorized agent(s)/Advisor(s)

There are no minimums or maximums for EFT transactions initiated by my Authorized agent/Advisor on my behalf. However, Fidelity reserves the right, but is not obligated, to confirm with me any of my Authorized agent's(s)/Advisor's(s') instructions prior to acting upon such instructions.

Brokerage Account Minimum Balances

There is no minimum account balance to process an EFT transaction; however, my core account must have adequate funds to cover the redemption of funds.

Business Days

For purposes of these disclosures, Fidelity's business days are Monday through Friday. Bank and New York Stock Exchange holidays are not included.

Documentation Periodic Statement

I will receive a monthly account statement from Fidelity. If there is no activity in my account, I can receive my statement quarterly if elected.

Direct Deposits

If I have arranged to have direct deposits made to my Fidelity Brokerage Account at least once every sixty (60) days from the same person or company, I can call Fidelity at 800-544-5555 to find out whether or not the deposit has been made.

Special Disclosure for Covered Transfers

In general, my use of the EFT service for transfer of funds electronically other than those for which the primary purpose is the purchase or sale of securities ("Covered Transfers") is covered under the Electronic Funds Transfer Act and the Bureau of Consumer Financial Protection's Regulation E and related laws and regulations. The following terms and disclosures apply to Covered Transfers:

Unauthorized Transfers

I will tell Fidelity promptly if I believe my PIN to authorize an EFT has been lost or stolen or may have been used without my permission. Telephoning Fidelity at the number listed below is the best way of keeping my possible losses down. If I believe my PIN has been lost or stolen, and I tell Fidelity within two (2) business days after I learn of the loss or theft, I can lose no more than \$50 for transfers if someone used my PIN without my permission. If I do NOT tell Fidelity within two (2) business days after I learn of the loss or theft of my PIN, and Fidelity can prove Fidelity could have prevented any unauthorized use if I had told Fidelity, I could lose as much as \$500. Also, if my statement shows transfers that I or my Authorized agent(s)/Advisor(s) did not make, I will tell Fidelity promptly. If I do not tell Fidelity within sixty (60) days after the first statement was mailed to me, I may not get back any money I lost after sixty (60) days if Fidelity can prove that Fidelity could have stopped someone from taking the money if I had told Fidelity in time. In extenuating circumstances Fidelity may extend such time periods. Additional protection may be available from Fidelity for specific accounts under certain circumstances.

Stop Payment Procedures. If I or my Authorized agent(s)/Advisor(s) have told Fidelity in advance to make regular transfers out of my Fidelity Brokerage Account, I can stop any of these payments. Here's how: I can call or write to Fidelity using the Contact Information listed below. My notice must be made in time for Fidelity to receive my request at least three (3) business days or more before the payment is scheduled to be made. If I call, Fidelity may, as an additional measure, require me to put my request in writing and get it to Fidelity within fourteen (14) days after I call. Unless otherwise provided, I may not stop payment of electronic funds transfers; therefore I should not employ electronic access for purchases or services unless I am satisfied that I will not need to stop payment.

Fidelity's Liability for Failure to Complete a Transfer. If Fidelity does not complete a Covered Transfer to or from my Fidelity Brokerage Account on time or in the correct amount, according to Fidelity's agreement with me, Fidelity may reimburse me for my losses or damages. However, there are some exceptions. Fidelity will not be liable for instance:

- If, through no fault of Fidelity's, I do not have enough money in my Fidelity Brokerage Account to make the Covered Transfer.
- If the money in my Fidelity Brokerage Account is subject to legal process or other claim restricting such transfer.
- If the transfer would exceed my margin availability, if any.
- If the bank account information I or my Authorized agent(s)/Advisor(s) provided to Fidelity when I or my Authorized agent(s)/Advisor(s) established EFT was incorrect or has subsequently become incorrect.

- If circumstances beyond Fidelity's control (such as fire or flood) prevent the transaction, despite reasonable precautions taken by Fidelity.
- If there was a technical malfunction that was known to me at the time I or my Authorized agent(s)/Advisor(s) attempted to initiate a Covered Transfer or, in the case of a preauthorized Covered Transfer, at the time the transfer should have occurred.

There may be other exceptions stated in Fidelity's agreement with me.

Error Resolution. In the case of errors or questions about my Covered Transfers, I will call or write Fidelity using the contact information listed below. I will call or write Fidelity promptly if I think my statement is wrong or if I need more information about a Covered Transfer on the statement.

Fidelity must hear from me no later than 60 days after Fidelity sent the FIRST statement on which the problem or error appeared. I will:

- Tell Fidelity my name and account number.
- Describe the error or the Covered Transfer that I am unsure about, and explain as clearly as I can why I believe it is an error or why I need more information.
- Tell Fidelity the dollar amount of the suspected error.

If I notify Fidelity verbally, Fidelity may require that I send my complaint or question in writing within ten (10) business days. Fidelity will tell me the results of its investigation within ten (10) business days after Fidelity hears from me and will correct any error promptly. If Fidelity needs more time, however, Fidelity may take up to forty-five (45) days to investigate my complaint or question. If Fidelity decides to do this, Fidelity will credit my account within ten (10) business days for the amount that I think is in error, so that I will have the use of the money during the time it takes Fidelity to complete its investigation. If Fidelity asks me to put my request or question in writing and does not receive it within ten (10) business days, or if my account is a brokerage account subject to Regulation T of the Board of Governors of the Federal Reserve System (Credit By Brokers and Dealers, 12 CFR 220), Fidelity may not credit my account. If Fidelity decides that there was no error, Fidelity will send me a written explanation within three (3) business days after Fidelity finishes the investigation. I may ask for copies of the documents that Fidelity used in the investigation.

Fidelity Contact Information

By Mail: Fidelity Investments
P.O. Box 770001
Cincinnati, OH 45277-0045

By Phone: 800-544-6666