



Client relationship summary, as of June 10, 2021



This summary is provided to help you make informed decisions about the services, products and accounts offered by TIAA-CREF Individual & Institutional Services, LLC (“TC Services,” “we,” “us,” “our”), and includes important information about the recommendations we make and the fees we charge. TC Services is a TIAA affiliate and Securities and Exchange Commission registered broker-dealer (“BD”) and investment adviser (“RIA”). *BD and RIA services and fees differ, and it is important that you understand the differences. Free and simple tools are available to research firms and financial professionals at [Investor.gov/CRS](https://www.investor.gov/crs). The site also provides educational materials about BDs, RIAs and investing.*

1. What investment services and advice can you provide me?

We offer both BD services and RIA services to retail investors. If you have a Plan, we may use data from your Plan to provide these services to you. Plan sponsors do not review or endorse any services, accounts or products available outside of their Plans.

 Broker-dealer services¹	 Registered investment adviser services²	As a BD we recommend:
<p>Through our BD representatives and online tools and calculators we can:</p> <ul style="list-style-type: none"> Recommend that you open, contribute or consolidate your assets (by rolling over or transferring) to accounts/products we recommend as a BD (listed on right) Recommend that you purchase and sell specific investments for your Plans (where available), IRAs offered by TIAA (excluding managed account IRAs) and certain affiliated annuities, but not for brokerage accounts offered by us Recommend annuitizing affiliated annuity products to create lifetime income Buy and sell securities for your accounts at your direction Offer education and enrollment services that do not involve a recommendation <p>We are a distributor for TIAA-affiliated mutual funds and variable annuities and for certain state-issued education savings plans.</p>	<p>Through our RIA representatives we can:</p> <ul style="list-style-type: none"> Provide financial planning to help you understand your goals and make a plan to pursue them Recommend that you open, contribute or consolidate your assets (by rolling over or transferring) to accounts/products we recommend as an RIA (listed on right) <p><i>Financial planning is provided based on your needs at the time of the service and does not include any investment recommendations. Your accounts are not monitored as part of this service, and TC Services does not make any decisions regarding the purchase or sale of investments in your accounts.</i></p>	<ul style="list-style-type: none"> Employer-sponsored plans recordkept by TIAA (“Plans”) Brokerage accounts offered by us Individual Retirement Accounts (“IRAs”) offered by TIAA (excluding managed account IRAs) Affiliated retirement annuity products available in Plans and IRAs Affiliated annuity products available outside of Plans and IRAs Third-party variable life insurance products
<p><i>Our BD services are provided based on your needs at the time of the service.</i></p> <p><i>Recommendations to purchase or sell specific investments for:</i></p> <ul style="list-style-type: none"> Plans—limited to a menu of investments selected by the plan sponsor IRAs offered by TIAA (excluding managed account IRAs)—limited to a menu of TIAA-affiliated mutual funds, annuities and bank deposits <p>Our BD services and accounts/products we recommend as a BD are not subject to minimums and do not provide ongoing monitoring. They are non-discretionary. You make the ultimate decision regarding the purchase or sale of investments.</p>	<p><i>Our managed accounts include a customized model portfolio limited to mutual funds and/or exchange-traded funds (“ETFs”), are subject to minimums and provide ongoing monitoring and discretion by us.</i></p> <p><i>TIAA, FSB managed accounts include a customized portfolio limited to mutual funds, ETFs, individual equity securities and/or bonds, are subject to minimums and provide ongoing monitoring and discretion by TIAA, FSB.</i></p>	<p>As an RIA we recommend:</p> <ul style="list-style-type: none"> Managed accounts offered by us Managed accounts offered by TIAA, FSB (our affiliated bank, under its trust powers)

¹ For BD recommendations you’ll receive the Regulation Best Interest disclosure.

² For RIA services you’ll receive the ADV disclosure.

Other services


Separate from our BD and RIA services, we may also:

- **Offer you nonsecurities products** such as fixed annuity products and life insurance products
- **Refer you to TIAA Bank** for bank deposits and lending products, trust services and quarterly rebalancing services for employer-sponsored plan assets
- **Refer you to TIAA-CREF Tuition Financing, Inc.** for education savings
- **Refer you to third-party providers** for life insurance, long-term care and charitable giving

2. What fees will I pay?

There are fees associated with our BD and RIA services and the accounts/products we recommend (see fee chart on page 3). **You will pay fees and costs whether you make or lose money on your investments. Fees and costs will reduce any amount of money you make on your investments over time. Please make sure you understand what fees and costs you are paying.**

These fees create conflicts of interest. We have an incentive to encourage you to invest or consolidate your assets into the accounts/products we recommend because TC Services and its affiliates and representatives are compensated when you do so. Specific conflicts of interest are addressed in the next question.

 **Fee types and definitions**—A fee is the principal amount you pay for the product or service
For more information about fees and their frequencies, see [TIAA.org/relationshipdisclosures](https://www.tiaa.org/relationshipdisclosures).

Account fees

These fees can include various account maintenance fees, transfer fees, a termination fee, contingent deferred sales charges or other charges that may be incurred upon the sale of a security transferred into an account at your request and/or redemption fees.

Asset-based fee

The account's monthly fee determined by the market value of assets in an account.

Asset-based wrap fee

The account's quarterly fee determined by the market value of assets in an account and inclusive of most transaction costs and fees charged by TC Services and its clearing firm. A wrap fee is higher than a typical asset-based advisory fee.

Brokerage commissions

Fees for the purchase or sale of securities in an account.

General administrative expenses

Expenses charged to or deducted from Plan balances to pay service providers like TIAA for plan administrative service.

Insurance fees

These fees can include state premium taxes, upfront sales loads, surrender charges, cost of insurance charges, administrative charges and mortality and expense risk charges.

Investment expenses

Expenses associated with the investments held, whether directly or in an account, as disclosed in a prospectus or similar document. Such expenses vary by product and share class and depend on the distribution arrangement we have in place with the product sponsor.

Transaction fees

Transaction charges for each applicable transaction.



What to ask a representative

Given my financial situation, should I choose a registered investment adviser service? Should I choose a broker-dealer service? Should I choose both types of services? Why or why not?

How will you choose investments to recommend to me?

What is your relevant experience, including your licenses, education and other qualifications? What do those qualifications mean?



Additional information

You can find detailed information about each of our BD and RIA services, the accounts/products we recommend, fees and costs at [TIAA.org/relationshipdisclosures](https://www.tiaa.org/relationshipdisclosures).

You do not pay a fee for recommendations, but you do for any account/product you choose or for buying or selling securities within certain accounts.



	What we recommend/provide	Fees
Broker-dealer services	Plans	General administrative expenses, investment expenses
	Brokerage accounts offered by us (including retail, IRA and accounts associated with employer-sponsored retirement plans)	Account fees, brokerage commissions, investment expenses, transaction fees Important: You are charged more when there are more trades in your account.
	IRAs offered by TIAA (excluding managed account IRAs)	No brokerage commissions, except for brokerage account windows (which charge brokerage commissions and transaction fees), investment expenses
	Affiliated annuities (available both in and out of Plans and IRAs)	Account fees, investment expenses
	Third-party variable life insurance products	Insurance fees, investment expenses
Registered investment adviser services	Financial planning	No fee (but if you choose an account/product we recommend or buy or sell securities after receiving financial planning services, you will pay the fees associated with that account/product, purchase or sale)
	Managed accounts offered by us	Asset-based wrap fee, account fees, investment expenses
	Managed accounts offered by TIAA, FSB	Asset-based fee, transaction fees, account fees, investment expenses

Important: The more assets in your managed account, the more TC Services or TIAA, FSB will receive in fees.

What to ask a representative

Help me understand how these fees and costs might affect my investments. If I give you \$10,000 to invest, how much will go to fees and costs, and how much will be invested for me?

How might your conflicts of interest affect me, and how will you address them?



Additional information

You should recognize there are differences between our RIA and BD services. The fiduciary duty that extends to RIA services is broader than the best interest standard under Regulation Best Interest that applies to our BD services. You can find more information about conflicts of interest specific to our RIA and BD services and accounts/products we recommend at [TIAA.org/relationshipdisclosures](https://www.tiaa.org/relationshipdisclosures).

3. What are your legal obligations to me when providing recommendations as my broker-dealer or when acting as my investment adviser? How else does your firm make money and what conflicts of interest do you have?

When we provide you with a recommendation as your broker-dealer or act as your investment adviser, we have to act in your best interest and not put our interest ahead of yours. At the same time, the way we make money creates some conflicts with your interests. You should understand and ask us about these conflicts because they can affect the recommendations and investment advice we provide you. Here are some examples to help you understand what this means.

TC Services and/or TIAA affiliates benefit when:	This creates a conflict of interest that gives TC Services an incentive to:
1 You invest in TIAA-affiliated mutual funds, annuities and bank deposits because these products result in higher compensation to TC Services and/or TIAA affiliates than third-party products	Recommend (or invest your assets in) TIAA-affiliated products over third-party products
2 You hold or own third-party mutual funds, exchange-traded funds, annuities and third-party variable life insurance products because they result in compensation to TC Services and/or TIAA affiliates	Recommend (or invest your assets in) third-party products that result in compensation to TC Services and/or TIAA affiliates over other third-party products that compensate TC Services and/or TIAA affiliates less
3 We include on our platforms share classes of both proprietary as well as third-party mutual funds that pay us administrative, distribution and/or service fees	Offer a more expensive share class than a lower cost alternative, even though higher investment expenses decrease your investment performance
4 Uninvested cash in your account is swept into a TIAA Bank cash sweep option or a limited selection of other cash sweep options (with whom TC Services and its clearing firm have an arrangement in place) because these cash sweep options result in higher compensation to TC Services and/or TIAA affiliates than other cash sweep options	Offer cash sweep options that compensate TC Services and/or TIAA affiliates more than other available cash sweep options, even if such options generate a higher yield for you than the options we include
5 You open, roll over, consolidate or transfer assets to the accounts/products we recommend	Recommend that you move your assets to TIAA

4. How do your financial professionals make money?

Our financial professionals are paid a **salary plus an annual variable bonus**. The bonus is primarily based on gathering and in some cases retaining client assets at TIAA. As a result, they have a conflict of interest. For more details, see [TIAA.org/relationshipdisclosures](https://www.tiaa.org/relationshipdisclosures).



What to ask a representative

As a financial professional, do you have any disciplinary history? For what type of conduct?

Who is my primary contact person? Is he or she a representative of an investment adviser or a broker-dealer?

Who can I talk to if I have concerns about how this person is treating me?

Wealth Management Advisors (WMAs) <i>Registered as both BD and RIA representatives</i>	Advisory Consultants (ACs) <i>Registered as both BD and RIA representatives</i>	Other representatives <i>Registered as BD representatives</i>
<p>Have an incentive to encourage you to bring in and keep assets at TIAA and enroll in accounts/products we recommend including:</p> <ul style="list-style-type: none"> Plans, IRAs and Managed Accounts, where we compensate the same regardless of the account or product type After-tax annuities, insurance and brokerage accounts, where we compensate differently, including among such products 	<ul style="list-style-type: none"> Have an incentive to encourage you to bring in and keep assets at TIAA as well as to enroll in accounts/products we recommend regardless of the particular account/product, except as described below 	<ul style="list-style-type: none"> Have an incentive to encourage you to bring in assets at TIAA as well as to enroll in accounts/products we recommend regardless of the particular account/product Are paid for making successful referrals to WMAs and ACs regardless of the particular account/product

Compensation for insurance policies varies by policy type. We compensate more for permanent life insurance than term life insurance.

5. Do you or your financial professionals have legal or disciplinary history?

Yes. Visit [Investor.gov/CRS](https://www.investor.gov/crs) or [brokercheck.finra.org](https://www.brokercheck.finra.org) for free and simple search tools to research TIAA-CREF Individual & Institutional Services, LLC and its financial professionals.

Additional information: For detailed information about our BD and RIA services and the accounts/products we recommend, go to [TIAA.org/relationshipdisclosures](https://www.tiaa.org/relationshipdisclosures). For up-to-date information or a copy of this disclosure, please call 888-583-2535.



Please review the Option Agreement and complete the Application if you would like to add options trading capacity to your TIAA Brokerage account. The Option Agreement should be kept for your records.

Questions? Please call 800-842-2252, weekdays, 8 a.m. - 7 p.m. (ET).

STEP 1: BROKERAGE ACCOUNT INFORMATION (REQUIRED)

Brokerage Account Number

Brokerage Account Owner Name(s)

STEP 2: INVESTMENT OBJECTIVE AND EXPERIENCE

Investment Objective (Please select only one)

- | | | | |
|--|---|---|--|
| <input type="checkbox"/> Capital Preservation
A capital preservation strategy values preservation of capital above return. | <input type="checkbox"/> Income
An investment approach in which an investor generally seeks current income over time. | <input type="checkbox"/> Growth
An investment approach in which an investor generally seeks capital appreciation through buying and holding securities over an extended period. | <input type="checkbox"/> Speculation
The process of selecting investments with higher risk in order to profit from an anticipated price. |
|--|---|---|--|

Investment Experience (Please select only one value per row. If left blank, zero or none will be used.)

Stocks	Years of Experience	<input type="checkbox"/> Less than 1 year	<input type="checkbox"/> 1-2 years	<input type="checkbox"/> 3-4 years	<input type="checkbox"/> 5-9 years	<input type="checkbox"/> 10+ years
	Total Transactions per Year	<input type="checkbox"/> 0-9	<input type="checkbox"/> 10-14	<input type="checkbox"/> 15-24	<input type="checkbox"/> 25-74	<input type="checkbox"/> 75+
	Average Transaction Size	<input type="checkbox"/> \$0-\$9,999	<input type="checkbox"/> \$10,000-\$24,999	<input type="checkbox"/> \$25,000+		
Bonds	Years of Experience	<input type="checkbox"/> Less than 1 year	<input type="checkbox"/> 1-2 years	<input type="checkbox"/> 3-4 years	<input type="checkbox"/> 5-9 years	<input type="checkbox"/> 10+ years
	Total Transactions per Year	<input type="checkbox"/> 0-9	<input type="checkbox"/> 10-14	<input type="checkbox"/> 15-24	<input type="checkbox"/> 25-74	<input type="checkbox"/> 75+
	Average Transaction Size	<input type="checkbox"/> \$0-\$9,999	<input type="checkbox"/> \$10,000-\$24,999	<input type="checkbox"/> \$25,000+		
Options	Years of Experience	<input type="checkbox"/> Less than 1 year	<input type="checkbox"/> 1-2 years	<input type="checkbox"/> 3-4 years	<input type="checkbox"/> 5-9 years	<input type="checkbox"/> 10+ years
	Total Transactions per Year	<input type="checkbox"/> 0-9	<input type="checkbox"/> 10-14	<input type="checkbox"/> 15-24	<input type="checkbox"/> 25-74	<input type="checkbox"/> 75+
	Average Transaction Size	<input type="checkbox"/> \$0-\$9,999	<input type="checkbox"/> \$10,000-\$24,999	<input type="checkbox"/> \$25,000+		





STEP 2: INVESTMENT OBJECTIVE AND EXPERIENCE (CONTINUED)

Commodities	Years of Experience	<input type="checkbox"/> Less than 1 year	<input type="checkbox"/> 1-2 years	<input type="checkbox"/> 3-4 years	<input type="checkbox"/> 5-9 years	<input type="checkbox"/> 10+ years
	Total Transactions per Year	<input type="checkbox"/> 0-9	<input type="checkbox"/> 10-14	<input type="checkbox"/> 15-24	<input type="checkbox"/> 25-74	<input type="checkbox"/> 75+
	Average Transaction Size	<input type="checkbox"/> \$0-\$9,999	<input type="checkbox"/> \$10,000-\$24,999	<input type="checkbox"/> \$25,000+		

STEP 3: OPTION LEVEL REQUEST (SELECT ONE)

Level One: Covered Calls* (Capital Preservation, Income, Growth, Speculation) Level Two: Level One plus Long Calls and Puts (Speculation)

*Maximum level permitted for IRA, Custodial, and Conservator accounts

STEP 4: INDIVIDUAL PROFILE

Answers provided below will be used to determine approval and may change the investment profile on the above account number. This section must be completed by each ACCOUNT OWNER (Individual/Joint/IRA Account) OR AUTHORIZED PERSON (Corporate/Trust).

1. Primary Account Owner/Authorized Person (Corporate/Trust) Date of Birth (mm/dd/yyyy) / / / / Marital Status Married Other

Number of Dependents: **Note:** If blank, this indicates no dependents.

Unemployed or Retired If Employed, Self-Employed or Consultant, complete the following:

Employer's Name or Name of Business and Industry if Self-Employed Your Occupation/Title

Business Street Address City State / Zip Code

Total Annual Income:
 \$0 - \$24,999 \$25,000 - \$49,999 \$50,000 - \$99,999 \$100,000 - \$250,000 \$250,000+

Approximate Net Worth, excluding residence:
 \$0 - \$49,999 \$50,000 - \$99,999 \$100,000 - \$249,999 \$250,000 - \$1 Million \$1 Million+

Liquid Net Worth:
 \$0 - \$14,999 \$15,000 - \$24,999 \$25,000 - \$49,999 \$50,000 - \$99,999
 \$100,000 - \$199,999 \$200,000 - \$499,999 \$500,000 - \$999,999 \$1 Million+



STEP 4: INDIVIDUAL PROFILE (CONTINUED)

2. Additional Account Owner/Authorized Person Date of Birth (mm/dd/yyyy) / / Marital Status Married Other

Number of Dependents: **Note:** If blank, this indicates no dependents.

Unemployed or Retired If Employed, Self-Employed or Consultant, complete the following:

Employer's Name or Name of Business and Industry if Self-Employed Your Occupation/Title

Business Street Address City State Zip Code

Total Annual Income:

\$0 - \$24,999 \$25,000 - \$49,999 \$50,000 - \$99,999 \$100,000 - \$250,000 \$250,000+

Approximate Net Worth, excluding residence:

\$0 - \$49,999 \$50,000 - \$99,999 \$100,000 - \$249,999 \$250,000 - \$1 Million \$1 Million+

Liquid Net Worth:

\$0 - \$14,999 \$15,000 - \$24,999 \$25,000 - \$49,999 \$50,000 - \$99,999

\$100,000 - \$199,999 \$200,000 - \$499,999 \$500,000 - \$999,999 \$1 Million+

3. Additional Account Owner/Authorized Person Date of Birth (mm/dd/yyyy) / / Marital Status Married Other

Number of Dependents: **Note:** If blank, this indicates no dependents.

Unemployed or Retired If Employed, Self-Employed or Consultant, complete the following:

Employer's Name or Name of Business and Industry if Self-Employed Your Occupation/Title

Business Street Address City State Zip Code

Total Annual Income:

\$0 - \$24,999 \$25,000 - \$49,999 \$50,000 - \$99,999 \$100,000 - \$250,000 \$250,000+

Approximate Net Worth, excluding residence:

\$0 - \$49,999 \$50,000 - \$99,999 \$100,000 - \$249,999 \$250,000 - \$1 Million \$1 Million+

Liquid Net Worth:

\$0 - \$14,999 \$15,000 - \$24,999 \$25,000 - \$49,999 \$50,000 - \$99,999

\$100,000 - \$199,999 \$200,000 - \$499,999 \$500,000 - \$999,999 \$1 Million+





STEP 5: ACCOUNT OWNER(S)/AUTHORIZED PERSON(S) SIGNATURE(S) (REQUIRED)

By signing this application, you are acknowledging that you have read and agree to the terms as specified in the Option Agreement provided, are in receipt of the Options Disclosure Document, and **acknowledge that you have read, understand, and agree to the terms and conditions of the TIAA Brokerage Account Customer Agreement. You also acknowledge that you have received and read the Predispute Arbitration Clause on Pages 2 and 3, Paragraphs 14 and 15 of the Option Agreement.**

To TIAA-CREF Individual & Institutional Services, LLC and Pershing LLC: In order to induce you to open or continue to maintain accounts for the undersigned for transaction in option contracts, however designated, including, without limitations, purchase, sale, transfer, exercise, and endorsement ("Option Transaction"), I ("Client") hereby warrant and represent that the above information is true and correct and agrees with you as set forth in the Option Agreement hereof.

This section must be signed and dated by each ACCOUNT OWNER (Individual/Joint/IRA Account) OR AUTHORIZED PERSON (Trust). Please note: For Trust accounts, the authorization to trade options must be reflected in the Trustee Certification of Investment Powers. Authorized individuals of the Trust must be Trustees named on the Trust.

Your Signature
(Primary Account Owner/Authorized Person)

Print Name and Title (if applicable)

Today's Date (mm/dd/yyyy)

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	/	<input type="text"/>	<input type="text"/>	/	2	0	<input type="text"/>	<input type="text"/>
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Your Signature
(Additional Account Owner/Authorized Person)

Print Name and Title (if applicable)

Today's Date (mm/dd/yyyy)

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	/	<input type="text"/>	<input type="text"/>	/	2	0	<input type="text"/>	<input type="text"/>
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Your Signature
(Additional Account Owner/Authorized Person)

Print Name and Title (if applicable)

Today's Date (mm/dd/yyyy)

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	/	<input type="text"/>	<input type="text"/>	/	2	0	<input type="text"/>	<input type="text"/>
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PLEASE DO NOT WRITE IN THIS SPACE—FOR FINANCIAL ORGANIZATION USE ONLY:

Type of Option Trading: Level 1 Level 2 Options Disclosure Mailed Yes No Date Mailed (mm/dd/yyyy)

<input type="text"/>	<input type="text"/>	/	<input type="text"/>	<input type="text"/>	/	2	0	<input type="text"/>	<input type="text"/>
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	Initials	Date
A/C Control	<input type="text"/>	<input type="text"/>
Compliance	<input type="text"/>	<input type="text"/>
Customer Files	<input type="text"/>	<input type="text"/>

Registered Options Principal

Today's Date (mm/dd/yyyy)

<input type="text"/>	<input type="text"/>	/	<input type="text"/>	<input type="text"/>	/	2	0	<input type="text"/>	<input type="text"/>
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OPTIONS TO RETURN COMPLETED FORM(S)

OPTION 1: Use the TIAA mobile app to quickly upload your completed document(s). It's as simple as taking a picture. Haven't downloaded the TIAA mobile app? Get it today in the [App Store](#) or [Google Play](#).

- Tap the **Message Center** icon in the upper-right corner of your main screen.
- Go to the **Files** tab, select **Upload** and then follow the instructions.

OPTION 2: If you are using your personal computer, here's what you'll need to do to upload your completed document(s):

- Log in to your [TIAA.org](#) account and select the **Actions** tab.
- Choose **Upload document(s)** from the options presented.
- Select **Upload Files** and follow the step-by-step instructions.

OPTION 3: If you prefer to fax or mail this form, use the information provided below:

FAX:
800-914-8922 (within U.S.)

STANDARD MAIL:
TIAA
P.O. Box 1280
Charlotte, NC 28201-1280

OVERNIGHT DELIVERY:
TIAA
8500 Andrew Carnegie Blvd.
Charlotte, NC 28262



OPTION AGREEMENT
PLEASE RETAIN THIS FOR YOUR RECORDS.

Meaning of terms in the Agreement: "Client" refers to the person(s) who signed this Option Agreement and Approval Form. "Pershing" refers to Pershing LLC. "TIAA Brokerage" refers to TIAA-CREF Individual & Institutional Services, LLC that has introduced my (our) account to Pershing.

1. The Client acknowledges receipt of the notice pursuant to Financial Industry Regulatory Authority (FINRA) Rule 4311(d), which explains the contractual relationship between Pershing and TIAA Brokerage. The Client understands that this notice also appears on each of the Client's account statements. The Client understands that TIAA Brokerage is not acting as the agent of Pershing. The Client understands that Pershing merely accepts TIAA Brokerage orders for the purchase and sale of securities and instructions relating to other property in the Client's account and that Pershing is not in a position, nor undertakes any responsibility, to give advice, make suitability determinations, supervise, or oversee TIAA Brokerage's handling of the responsibilities undertaken by TIAA pursuant to any agreement the Client may have with TIAA Brokerage.
2. The Client understands and is well aware that option trading may be highly speculative in nature. The Client is also aware that on certain days, option trading may cease and this could result in a financial loss to the Client. The Client agrees to hold TIAA Brokerage harmless for such loss. The Client further understands and agrees that TIAA Brokerage reserves the right to terminate, restrict, or reduce the Client's options trading privileges if it determines that the Client's trading activities or options positions present a risk to TIAA Brokerage.
3. The Client recognizes that by writing or selling an option contract (such as a call or put) without depositing the underlying security, the Client's risk of loss is potentially unlimited. The Client agrees to honor all assignments and to deliver the underlying security or the required funds in the prescribed time to TIAA Brokerage, and upon the Client's failure to do so in the proper time, TIAA Brokerage is hereby authorized to act as agent for the Client and to buy in or sell out such securities at the current market price or otherwise act to properly margin or complete the Client's obligation. The Client agrees to pay TIAA Brokerage a commission and fee for such service and to reimburse TIAA Brokerage for any loss incurred in connection therewith, and TIAA Brokerage is authorized to debit the Client's account for all such amounts.
4. The Client agrees that the Client is responsible for making all final decisions as to transactions effected in any account of the Client at TIAA Brokerage. The Client understands that each order the Client enters (to buy or to sell) must be complete as to security, quantity, price, and duration of the order.
5. The Client is willing and able to assume the financial risks and hazards of option trading, and the Client agrees that the Client will in no way hold Pershing or TIAA Brokerage responsible for such losses whether incurred through following TIAA Brokerage's trading recommendations or suggestions offered to the Client in good faith by TIAA Brokerage or through the Client's own decisions however arrived at by the Client.
6. The Client understands that any Option Transaction made for any account of the Client is subject to the rules, regulations, customs, and usages of The Options Clearing Corporation (OCC) and of the registered national securities exchange, national securities association, clearing organization, or market where such transaction was executed. The Client agrees to abide by such rules, regulations, and usages and the Client agrees that, acting individually or in concert with others, the Client will not exceed any applicable position or exercise limits imposed by such exchange, association, clearing organization, or other market with respect to option trading.
7. If the Client does not satisfy, on a timely basis, your money or security calls, TIAA Brokerage is authorized in TIAA Brokerage's sole discretion, and without notification, to take any and all steps you deem necessary to protect TIAA Brokerage (for any reason) in connection with options transactions for the Client's account, including the right to buy and/or sell (including short or short exempt) for the Client's account and risk any part or all of the shares represented by options handled, purchased, sold, and/or endorsed by TIAA Brokerage for the Client's account or to buy for the Client's account and risk any option as TIAA Brokerage may deem necessary or appropriate. Any and all expenses or losses incurred in this connection will be reimbursed by the Client.
8. The Client bears full responsibility for taking action to exercise an option contract; provided, however, that with respect to certain expiring options, TIAA Brokerage is authorized to permit exercise by exception to take place automatically pursuant to the rules of the OCC as in effect from time to time unless the Client specifically advises TIAA Brokerage to the contrary in writing. This procedure affects options that are in the money by a predetermined amount as set forth in the rules of the OCC. Additional information regarding this procedure is available upon the Client's written request.



OPTION AGREEMENT (CONTINUED)

9. In addition to the terms and conditions hereof, the Client's options account will be subject to all of the terms and conditions of all other agreements heretofore or hereafter at any time entered into with TIAA Brokerage relating to the purchase and sale of securities except to the extent that such other agreements are contrary to or inconsistent herewith.
10. This agreement shall apply to all puts or calls that you may have executed, purchased, sold, or handled for any account of the Client and also shall apply to all puts or calls that you may hereafter purchase, sell, handle, or execute for any account of the Client.
11. The Client agrees to advise TIAA Brokerage of any changes in the Client's financial situation or investment objective insofar as the Client deems such changes material to the Client's options transactions.
12. The Client has received from TIAA Brokerage the most recent Options Disclosure Document and Definitive Supplement. The Client has read and understands the information contained in these documents.
13. The Client understands that TIAA assigns exercise notices on a random basis. The Client understands that upon the Client's request, TIAA Brokerage will provide the Client with further information regarding the procedure used to assign exercise notices. The random selection method utilized by Pershing is automated insofar as a random four-digit number is manually entered into a system, which uses an algorithm to derive the allocation of the assignment. A report is then generated listing the accounts to be assigned and the number of contracts assigned per affected account. In the event that a manual assignment allocation must be performed due to a system failure, the manual allocation follows the same logic as the automated method and will be subject to all of the terms and conditions of all other agreements heretofore or hereafter at any time entered into with TIAA Brokerage relating to the purchase and sale of securities except to the extent that such other agreements are contrary to or inconsistent herewith.

14. ARBITRATION DISCLOSURES:

THIS AGREEMENT CONTAINS A PREDISPUTE ARBITRATION CLAUSE. BY SIGNING AN ARBITRATION AGREEMENT, THE PARTIES AGREE AS FOLLOWS:

- **ALL PARTIES TO THIS AGREEMENT ARE GIVING UP THE RIGHT TO SUE EACH OTHER IN COURT, INCLUDING THE RIGHT TO A TRIAL BY JURY, EXCEPT AS PROVIDED BY THE RULES OF THE ARBITRATION FORUM IN WHICH A CLAIM IS FILED.**
- **ARBITRATION AWARDS ARE GENERALLY FINAL AND BINDING; A PARTY'S ABILITY TO HAVE A COURT REVERSE OR MODIFY AN ARBITRATION AWARD IS VERY LIMITED.**
- **THE ABILITY OF THE PARTIES TO OBTAIN DOCUMENTS, WITNESS STATEMENTS, AND OTHER DISCOVERY IS GENERALLY MORE LIMITED IN ARBITRATION THAN IN COURT PROCEEDINGS.**
- **THE ARBITRATORS DO NOT HAVE TO EXPLAIN THE REASON(S) FOR THEIR AWARD, UNLESS, IN AN ELIGIBLE CASE, A JOINT REQUEST FOR AN EXPLAINED DECISION HAS BEEN SUBMITTED BY ALL PARTIES TO THE PANEL AT LEAST 20 DAYS PRIOR TO THE FIRST SCHEDULED HEARING DATE.**
- **THE PANEL OF ARBITRATORS WILL TYPICALLY INCLUDE A MINORITY OF ARBITRATORS WHO WERE OR ARE AFFILIATED WITH THE SECURITIES INDUSTRY.**
- **THE RULES OF SOME ARBITRATION FORUMS MAY IMPOSE TIME LIMITS FOR BRINGING A CLAIM IN ARBITRATION. IN SOME CASES, A CLAIM THAT IS INELIGIBLE FOR ARBITRATION MAY BE BROUGHT IN COURT.**
- **THE RULES OF THE ARBITRATION FORUM IN WHICH THE CLAIM IS FILED, AND ANY AMENDMENTS THERETO, SHALL BE INCORPORATED INTO THIS AGREEMENT.**



OPTION AGREEMENT (CONTINUED)

15. ARBITRATION AGREEMENT:

ANY CONTROVERSY THAT SHALL ARISE BETWEEN THE ACCOUNT HOLDER AND TIAA BROKERAGE, PERSHING AND/OR THE CUSTODIAN (INCLUDING BUT NOT LIMITED TO CONTROVERSIES CONCERNING ANY ACCOUNT, ORDER OR TRANSACTION, OR THE CONTINUATION, PERFORMANCE, OR BREACH OF THIS OR ANY OTHER AGREEMENT BETWEEN THE ACCOUNT HOLDER AND TIAA BROKERAGE, PERSHING AND/OR THE CUSTODIAN, WHETHER ENTERED INTO OR ARISING BEFORE, ON OR AFTER THIS ACCOUNT IS OPENED) SHALL BE SUBMITTED TO ARBITRATION BEFORE AND ONLY BEFORE THE FINANCIAL INDUSTRY REGULATORY AUTHORITY. ARBITRATION MUST BE COMMENCED BY SERVICE UPON THE OTHER PARTY OF A WRITTEN DEMAND FOR ARBITRATION OR A WRITTEN NOTICE OF INTENTION TO ARBITRATE, THEREIN INDICATING THE ARBITRATION TRIBUNAL. NO PERSON SHALL BRING PUTATIVE OR CERTIFIED CLASS ACTION TO ARBITRATION, NOR SEEK TO ENFORCE ANY PREDISPUTE ARBITRATION AGREEMENT AGAINST ANY PERSON WHO HAS INITIATED IN COURT A PUTATIVE CLASS ACTION; OR WHO IS A MEMBER OF A PUTATIVE CLASS WHO HAS NOT OPTED OUT OF THE CLASS WITH RESPECT TO ANY CLAIMS ENCOMPASSED BY THE PUTATIVE CLASS ACTION UNTIL: (i) THE CLASS CERTIFICATION IS DENIED; (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. ANY ARBITRATION AWARD SHALL BE FINAL AND BINDING, AND ANY COURT HAVING JURISDICTION MAY ENTER JUDGMENT THEREON.

