Plan and Investment Notice

UNIVERSITY OF SAN FRANCISCO VOLUNTARY RETIREMENT PLAN

Your participation in your employer's retirement plan is the first step to ensuring adequate retirement income. The purpose of this Plan and Investment Notice is to help you make informed decisions when managing your retirement account. It contains important information regarding your plan's services, investments and expenses. While no action is required at this time, please review the notice and file it with your other retirement plan documents for future reference.

Section I: Summary of Plan Services and Costs

This section provides important information to assist you in making decisions related to your participation in your employer's plan. It outlines the services available under this plan, explains your right to select the investments for your account, and any fees and plan restrictions that may apply.

Section II: Investment Options Comparative Chart

This section is designed to make it easier for you to compare investments that align with your retirement goals. It provides detailed information about your plan's investment options, including long-term performance and expenses.

Summary of Plan Services and Costs

Multiple providers have been selected to offer retirement services and investment options to employees in the plan. There are costs associated with these services and investments, some of which may be paid by you. In addition to explaining how to direct your investments, this section details the administrative and individual expenses associated with your plan.

The information is sorted by service provider to make it easier to compare. Your plan offers a range of investment options and services from the following providers:

TIAA Fidelity Investments Variable Annuity Life Insurance Company (VALIC)

TIAA

RIGHT TO DIRECT INVESTMENTS

You may specify how your future contributions to the retirement plan are invested or make changes to existing investments in your plan as described in the Summary Plan Document. These changes can be made:

- 1. Online by visiting **TIAA.org**
- By phone at 800 842-2252, Monday Friday 8 a.m. to 10 p.m. and Saturday, 9 a.m. to 6 p.m. (ET)

RESTRICTIONS

Changes to existing investments usually takeplace at the close of the business day if a change is requested prior to 4:00 p.m. (ET). Refer to Section II: Investment Options Comparative Chart for investment-specific restrictions.

ADDITIONAL RIGHTS AND PRIVILEGES

Certain investments that you may holdmay give you the opportunity to vote on proposals. If and when such opportunities arise, you will receive a notice with instructions on how to take advantage of what is being offered.

INVESTMENT OPTIONS

A variety of investment options are available in theplan. Please refer to Section II: Investment Options Comparative Chart for a current list of investment options available to you. Additional information, as well as up-to-date investment performance, is available online at www.TIAA.org/planinvestmentoptions. After entering your plan ID, 100976, you will be directed to plan and investment information.

COST OF PLAN SERVICES

There are three categories of services provided to your plan:

1. GENERAL ADMINISTRATIVE SERVICES

General administrative services include recordkeeping, legal, accounting, consulting, investment advisory and other plan administration services. Some of the expenses for general administrative services are fixed and other expenses such as legal or accounting may vary from year to year. These costs are allocated to each participant in a uniform way.

Other than your specific investment services fees, your plan has no additional administrative expenses paid to TIAA.

2. SPECIFIC INVESTMENT SERVICES

Each investment offered within the plan charges a fee for managing the investment and for associated services. This is referred to as the expense ratio and is paid by all participants in that investment in proportion to the amount of their investment. The specific expense ratio for each investment option is listed in Section II: Investment Options Comparative Chart.

3. PERSONALIZED SERVICES

Personalized services provide access to a number of plan features and investments that you pay for, only if you use them. The personalized services used most often are:

Collateralized loans	The cost to you based upon the difference between what you earn on collateral and what you pay in interest. This applies to plan(s): 100976

Qualified Domestic Relations Orders
(QDRO)No chargeSales Charges, Purchase, Withdrawal
And Redemption Fees For Certain
InvestmentsCertain cha
Investment
prospectus

Certain charges may apply. See Section II: Investment Options Comparative Chart or the

prospectus for applicable charges.

FIDELITY INVESTMENTS

RIGHT TO DIRECT INVESTMENTS

You have the right to direct your account balance and any future contributions among the Plan's investment options, subject to any restrictions. To access your Plan account with Fidelity, make any changes to your investment options, direct any future contributions, or seek additional information, log on to www.fidelity.com/atwork or call 800-558-9179.

RESTRICTIONS

Any frequent trading restrictions imposed by the Plan and/or by the Plan's investment options are listed in the Investment Options Comparative Chart. Keep in mind that restrictions are subject to change.

ADDITIONAL RIGHTS AND PRIVILEGES

You have the right to exercise voting, tender, and similar rights related to the following investments you may have in your Plan account. You will receive information regarding such rights and how to exercise them at the time of a vote, tender, or other event. I Mutual Funds

INVESTMENT OPTIONS

Additional information about the Plans investment options, including a glossary of investment terms to help you better understand the Plans investment options, is available online at http://mv.participantdisclosure.com (Password: 54569). To request additional investment-related information, or a paper copy of certain information available online, free of charge, contact a Fidelity representative at Fidelity Investments, PO Box # 770003, Cincinnati, OH 45277-0065 or call 800-558-9179.

COST OF PLAN SERVICES - GENERAL ADMINISTRATIVE SERVICES

Plan administrative fees may include legal, accounting, trustee, recordkeeping, and other administrative fees and expenses associated with maintaining the plan. Some plans may deduct these fees and expenses from individual accounts in the plan.

Based on the information and direction Fidelity had on file at the time this Notice was prepared, no plan administrative fees will be deducted from accounts in the Plan. However, the Plan's administrative services may be paid for through offsets and/or payments associated with one or more of the Plans investment options. Please keep in mind that fees are subject to change.

If any plan administrative fees are actually deducted from your account, they will be reflected on your Plan account statement.

COST OF PLAN SERVICES - SPECIFIC INVESTMENT SERVICES

Asset-based fees reflect an investment option's total annual operating expenses and include management and other fees. They are often the largest component of retirement plan costs and are paid by all shareholders of the investment option. Typically, asset-based fees are reflected as a percentage of assets invested in the option and often are referred to as an expense ratio. You may multiply the expense ratio by your balance in the investment option to estimate the annual expenses associated with your holdings. Refer to the Investment Options Comparative Chart for information about the Plans investment options, including their expense ratios (where applicable).

Asset-based fees are deducted from an investment option's assets, thereby reducing its investment return. Fee levels can vary widely among investment options, depending in part on the type of investment option, its management (including whether it is active or passive), and the risks and complexities of the option's strategy. In some instances, a plan's administrative services may be paid for through offsets and/or payments associated with a plan's investment options.

COST OF PLAN SERVICES - PERSONALIZED SERVICES

Individual fees and expenses include those associated with a service or transaction that an individual may select. In some instances, they may be deducted from the accounts of those individuals who utilize the service or engage in the transaction.

If you have an account in the Plan and you select or execute the following service(s) or transaction(s), the fee(s) outlined below may be deducted from your account based on the information and direction Fidelity had on file at the time this disclosure was prepared. As you review this information, please keep in mind that fees are subject to change and that certain individual fees may not be deducted in some circumstances.

Type of Individual Fee Amount In-Service Withdrawal Fee: \$25.00 per transaction Minimum Required Distribution Fee: \$25.00 per transaction Return of Excess Contribution Fee: \$25.00 per transaction Overnight Mailing Fee: \$25.00 per transaction Qualified Domestic Relations Order (QDRO) Fee: \$300.00 per standard Fidelity web generated order, \$1,200.00 per modified Fidelity web-generated or custom order covering more than one plan

Participant Hired Advisory (Adv) Fee: varies based on advisor

Also please note that you may incur short-term redemption fees, commissions, and similar expenses in connection with transactions associated with your Plans investment options. Please see the Investment Options Comparative Chart for details regarding the specific fees that may apply to the investment options available under the Plan.

If any individual fees are actually deducted from your account, they will be reflected on your Plan account statement.

VARIABLE ANNUITY LIFE INSURANCE COMPANY (VALIC)

RIGHT TO DIRECT INVESTMENTS

In order to direct your Plan investment with VALIC, and subject to any Plan and investment restrictions described below, you may make your election on VALIC's website, www.valic.com, or you may contact VALIC at 800-448-2542.

For security reasons, you will be asked to verify your identity by logging into your account on VALIC.com. Should you need to register for VALIC.com, please visit https://login.valic. com/sso/ and click on "Register for individual access" under "Need to register for online access?" in the middle of the screen.

You may give your instructions on any day. Instructions include updates to the investment allocations on your account(s) and transfers of assets between the available investments offered by the Plan. Instructions completed by close of the New York Stock Exchange (NYSE) (Eastern Time) will be effective that day. Instructions completed after the close of the NYSE (Eastern Time) will be effective on the next business day.

RESTRICTIONS

Your instructions may be subject to limitations or restrictions imposed by the investment options as described in the Investment Options Comparative Chart.

Beginning August 31, 2012, SunAmerica 2020 High Watermark Fund will no longer be allowed in the VALIC Portfolio Director Fixed and Variable Annuity Product. Current investors should update their investment contribution allocations to replace this fund with another one. Existing shareholders may sell shares of the fund at any time; however, if shares are sold prior to the Protected Maturity Date (not yet declared), the shares will be sold for the current value and will not receive the future Protected High Watermark Value. If you are considering redeeming your shares, you should read the funds prospectus carefully before doing so and should also consult your financial adviser. More information is available at www.valic.com.

COST OF PLAN SERVICES - GENERAL ADMINISTRATIVE SERVICES

PORTFOLIO DIRECTOR (A042) Policy Form UIT-194 is a fixed and variable annuity issued by The Variable Annuity Life Insurance Company, Houston, Texas and is available for investment by Participants in employer-sponsored retirement plans and arrangements. Transfers by the Participant into and out of the fixed option(s) (and, if applicable, including certain withdrawals and surrenders) may be limited as described in the contract and/or the appropriate prospectus.

This product is closed to new Participants and eligible employees. Subject to the Plan, the product may be available only to participants who have a current account balance and only for certain types of contributions to existing accounts.

There is a \$3.75 quarterly fee charged to Participant accounts. Charges are deducted pro rata from variable investment options.

Participant Surrender/Withdrawal Charges: In the first 15 contract/certificate years withdrawals in excess of 10% per contract/certificate year have a 5% surrender charge. Charges are deducted pro rata from all investment options. Waivers may apply. Please see your contract or certificate for more information.

COST OF PLAN SERVICES - GENERAL ADMINISTRATIVE SERVICES

PORTFOLIO DIRECTOR (A073) Policy Form UITG-194-TRMC is a fixed and variable annuity issued by The Variable Annuity Life Insurance Company, Houston, Texas and is available for investment by Participants in employer-sponsored retirement plans and arrangements. Transfers by the Participant (and, if applicable, by the Plan Sponsor) into and out of the fixed option(s) (and, if applicable, including certain withdrawals and surrenders) may be limited as described in the contract and/or the appropriate prospectus.

This product is generally available to Participants and eligible employees. Subject to the Plan, certain restrictions may apply. Example: the product may be available only for certain types of contributions.

Quarterly fees are currently waived.

Participant Surrender/Withdrawal Charges: There are no surrender or withdrawal charges.

COST OF PLAN SERVICES - GENERAL ADMINISTRATIVE SERVICES

Separate Account Fees (annuity products)

This separate account charge applies at stated levels to each of the variable investment options, which for some of the investment options reflects an offset for certain amounts received with respect to that investment option, including amounts commonly referred to as "12b-1 fees." The rate of this charge is fixed and cannot be increased by VALIC. This charge compensates VALIC for assuming certain risks and obligations under the contract. VALIC assumes the obligation to provide payments during the payout period for your lifetime, no matter how long that might be. In addition, VALIC assumes the obligation, prior to annuitization, to pay a guaranteed death benefit. The separate account charges also may cover the costs of issuing and administering and marketing the variable investment options including, but not limited to, local support to plan sponsors and participants including enrollment and education.

The Plan may incur charges or fees outside of the investment alternative product(s) that may be deducted from participant accounts as directed or authorized by the Plan Administrator. These fees may include third-party administration, consultant, legal, audit, and other fees directly related to the operation of the Plan. Any such charges or fees deducted from VALIC participant accounts will be reflected on quarterly participant account statements.

COST OF PLAN SERVICES - SPECIFIC INVESTMENT SERVICES

Withdrawal or surrender charges, if any, are described in the Investment Options Comparative Chart.

Loans

Each loan from an annuity contract is assessed:

• A one-time \$60 loan processing fee.

• Loan set-up fee not currently applicable if the state of issue is New York, New Jersey, Vermont, Texas or Oregon.

Guided Portfolio Services® ("GPS")

Guided Portfolio Services® ("GPS") is a participant investment advisory service offered in accordance with Department of Labor Advisory Opinion 2001-09A issued to VALIC's sister company, SunAmerica Retirement Markets, Inc., in 2001. GPS must be authorized by the Plan Sponsor to be available in the plan and must be elected by the participant. Fees for GPS are paid to VALIC Financial Advisors, Inc. ("VFA") and are charged to the account of any participant who elects GPS. GPS is available in 2 formats:

• GPS Portfolio Advisor is an option for those participants who want to monitor and manage their investment

portfolios themselves, but still value expert advice. For Portfolio Advisor, a fixed annual fee of \$25.00 is charged

following enrollment, which entitles the participant to use the service for one year. At the end of the year, the participant will be required to re-enroll to continue the service.

• GPS Portfolio Manager is the managed account option that automatically implements the investment advice,

provides ongoing portfolio monitoring and asset rebalancing, and updates the participant's advice and retirement income forecast annually. For Portfolio Manager, an asset based fee is calculated at each calendar quarter end and will be assessed shortly after quarter end. Following is the GPS Portfolio Manager fee schedule.

GPS Portfolio Manager fee schedule For assets managed by GPS:

- The first \$100,000, the annual participant fee is 0.60% on assets
- The next \$150,000, the annual participant fee is 0.50% on assets
- And amounts over \$250,000, the annual participant fee is 0.45% on assets

Investment Options Comparative Chart

Your plan offers a variety of professionally managed investments. One of the benefits of the plan is that you get to decide how your contributions are invested. When making investment decisions, you should keep in mind how long you have until retirement, your tolerance for risk, how this retirement plan fits into your overall financial picture, and the impact of fees. The information on the following pages will help you compare the investment options and make more informed decisions about your retirement plan.

Part A – Performance and Fee Information

Part A consists of performance and fee information for your plan's investment options. It shows you how well the investments have performed in the past as well as any fees and expenses you will pay if you invest in a particular option.

For more information on the impact of fees and expenses associated with your plan, refer to Section I: Summary of Plan Services and Costs or visit the DOL's website at www.dol. gov/sites/default/files/ebsa/about-ebsa/our-activities/resource-center/publications/a-lookat-401k-plan-fees.pdf. Fees are only one of many factors to consider when making an investment decision.

Part B– Annuity Income Information

Part B contains information about the annuity options available within your employer's retirement plan.

Part A. Performance and Fee Information

The following chart(s) list(s) your plan's investment options whose value may change based on market fluctuations. When evaluating performance of your variable investment options, you should consider comparing the returns of each investment to an appropriate benchmark, which is included in the chart. A benchmark is a generally accepted unmanaged group of securities whose performance is used as a standard point of reference to measure and compare investment gains or losses for variable return investments. Keep in mind that you may not invest in the benchmark indexes which are shown for comparative purposes only. For investments that use a blend of stocks and bonds to limit risk, such as Target Date or Multi-Asset funds, a difference from the benchmark may be due to a difference in the proportion of stocks to bonds in the fund when compared to the benchmark. Benchmark information for fixed-return investments is not provided in this chart. Past performance does not indicate how an investment will perform in the future.

TIAA

For the most up-to-date information about your investment options, prospectuses for available TIAA investments and other helpful resources, visit www.TIAA. org/planinvestmentoptions. After entering your plan ID, 100976, you'll be directed to plan and investment information.

Visit **www.tiaa.org** for information and resources to help you make informed decisions. To request additional plan information or a paper copy of information available online, free of charge, contact TIAA at 800 842-2252 or write to us at TIAA, P.O. Box 1259, Charlotte, NC, 28201.

Table 1 – Variable Return Investment Performance as of September 30, 2019

			-		Average Annual TotalTotal Annual OperatingReturns/BenchmarkExpenses (%/Per \$1000)		_		
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr.	10 Yr. or Since fund Inception if less than 10 years	Gross	Net	Shareholder Fees & Restrictions
Equities									
Mutual Fund									
MFS International Diversification Fund R4	Foreign Large Blend	MDITX	04/01/2005	1.67%	6.00%	6.87%	0.87% \$8.70	0.86% \$8.60	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
MSCI ACWI Ex USA NR USD				-1.23%	2.90%	4.45%	Contractu Exp: 09/3		
TIAA-CREF International Equity Index Fund Institutional	Foreign Large Blend	TCIEX	10/01/2002	-1.00%	3.47%	5.05%	0.06% \$0.60	0.06% \$0.60	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
MSCI EAFE NR USD				-1.34%	3.27%	4.90%	Contract Exp: 02/2		
American Funds Washington Mutual Investors Fund R-5E	Large Blend	RWMHX	11/20/2015	5.98%	-	11.48%	0.41% \$4.10	0.41% \$4.10	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P 500 TR USD				4.25%		11.87%			
TIAA-CREF S&P 500 Index Fund Institutional	Large Blend	TISPX	10/01/2002	4.22%	10.77%	13.15%	0.05% \$0.50	0.05% \$0.50	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P 500 TR USD				4.25%	10.84%	13.24%	Contract Exp: 02/2		
JPMorgan Large Cap Growth Fund R4	Large Growth	JLGQX	09/09/2016	3.08%	-	21.25%	0.80% \$8.00	0.69% \$6.90	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.

			_	Returns/Benchmark		Total Annua Expenses (%		_	
Investment Name /	Morningstar Category	Ticker Symbol	Inception Date	4 1/-	E V-	10 Yr. or Since fund Inception if less	Crace	Nat	Charakaldar Fran & Deskintions
Benchmark Russell 1000 Growth TR				1 Yr. 3.71%	5 Yr.	than 10 years 17.51%	Contractu		Shareholder Fees & Restrictions
USD Vanguard Extended	Mid-Cap Blend	VIEIX	07/07/1997	-3.78%	8.54%	12.44%	Exp: 10/3 0.06%	0.06%	Round Trip: You cannot exchange into the fund
Market Index Fund Institutional		VIEIX	01/01/1001	0.7070	0.0470	12.7770	\$0.60	\$0.60	within 30 calendar days of exchanging out of the fund.
S&P Completion TR USD				-3.96%	8.40%	12.30%			
AB Discovery Growth Fund Advisor	Mid-Cap Growth	CHCYX	10/01/1996	-7.89%	10.44%	14.91%	0.72% \$7.20	0.72% \$7.20	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
Russell 2500 Growth TR USD				-4.11%	10.22%	13.48%			
American Century Mid Cap Value Fund Investor	Mid-Cap Value	ACMVX	03/31/2004	2.66%	8.59%	12.26%	0.98% \$9.80	0.98% \$9.80	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
Russell Mid Cap Value TR USD				1.60%	7.55%	12.29%			
Voya Real Estate Fund I	Real Estate	CRARX	12/31/1996	17.83%	8.66%	12.16%	0.97% \$9.70	0.86% \$8.60	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
MSCI US REIT GR USD				18.31%	10.11%	13.00%	Contractu Exp: 10/0		
Goldman Sachs Small Cap Value Fund Investor	Small Blend	GSQTX	11/30/2007	-5.90%	7.04%	11.69%	1.11% \$11.10	1.08% \$10.80	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
Russell 2000 Value TR USD				-8.24%	7.17%	10.06%	Contractua Exp: 12/2		
TIAA-CREF Quant Small- Cap Equity Fund Institutional	Small Growth	TISEX	10/01/2002	-7.22%	8.82%	11.80%	0.41% \$4.10	0.41% \$4.10	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
Russell 2000 TR USD				-8.89%	8.19%	11.19%	Contract Exp: 02/2		
Variable Annuity CREF Stock Account R2	Allocation85%+	QCSTPX	04/24/2015	-0.06%	7.59%	10.00%	0.35%	0.35%	Round Trip: If a round trip is made within 60
ONLE SIGUR ACCOUNT RZ	Equity	QUUI X	JT/27/201J	0.0078	1.5370	10.0070	\$3.50	\$3.50	calendar days, exchanges into the same account will be restricted for 90 calendar days.

				Returns/Benchmark			al Operating %/Per \$1000)	_	
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr.	10 Yr. or Since fund Inception if less than 10 years	Gross	Net	Shareholder Fees & Restrictions
Morningstar Aggressive Target Risk TR USD				2.44%	7.45%		01033	Net	
CREF Equity Index Account R2	Large Blend	QCEQPX	04/24/2015	2.73%	10.14%	12.71%	0.27% \$2.70	0.27% \$2.70	Contributions and Transfers in not allowed. Round Trip: If a round trip is made within 60 calendar days, exchanges into the same account will be restricted for 90 calendar days.
Russell 3000 TR USD				2.92%	10.44%	13.08%			
CREF Growth Account R2	Large Growth	QCGRPX	04/24/2015	0.58%	12.42%	14.24%	0.29% \$2.90	0.29% \$2.90	Contributions and Transfers in not allowed. Round Trip: If a round trip is made within 60 calendar days, exchanges into the same account will be restricted for 90 calendar days.
Russell 1000 Growth TR USD				3.71%	13.39%	14.94%			
CREF Global Equities Account R2	World Stock	QCGLPX	04/24/2015	-0.92%	6.24%	8.53%	0.32% \$3.20	0.32% \$3.20	Contributions and Transfers in not allowed. Round Trip: If a round trip is made within 60 calendar days, exchanges into the same account will be restricted for 90 calendar days.
MSCI ACWI NR USD				1.38%	6.65%	8.35%			
Fixed Income									
Mutual Fund BlackRock High Yield Bond Fund Institutional	High Yield Bond	BHYIX	11/19/1998	6.34%	5.07%	8.39%	0.61% \$6.10	0.61% \$6.10	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
Bloomberg Barclays US High Yield 2% Issuer Cap TR USD				6.35%	5.38%	7.92%			
PIMCO Total Return Fund Admin	Intermediate Core-Plus Bond	PTRAX	09/08/1994	9.81%	3.32%	4.06%	0.96% \$9.60	0.96% \$9.60	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
Bloomberg Barclays US Aggregate Bond TR USD				10.30%	3.38%	3.75%			
TIAA-CREF Bond Index Fund Institutional	Intermediate- Term Bond	TBIIX	09/14/2009	10.19%	3.25%	3.58%	0.11% \$1.10	0.11% \$1.10	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
Bloomberg Barclays US Aggregate Bond TR USD				10.30%	3.38%	3.75%		tual Cap /31/2020	

Government

			-	Average Annual Total Returns/Benchmark				al Operating %/Per \$1000)	
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr.	10 Yr. or Since fund Inception if less than 10 years	Gross	Net	Shareholder Fees & Restrictions
0.58%							_		
AB Global Bond Fund Advisor	World Bond-USD Hedged	ANAYX	11/05/2007	8.86%	3.83%	4.66%	\$5.80	\$5.70	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
Bloomberg Barclays Global Aggregate TR HdgUSD				10.65%	4.12%	4.17%			
Variable Annuity									
CREF Inflation-Linked Bond Account R2	Inflation-Protected Bond	QCILPX	04/24/2015	5.52%	1.79%	2.94%	0.27% \$2.70	0.27% \$2.70	Round Trip: If a round trip is made within 60 calendar days, exchanges into the same account will be restricted for 90 calendar days.
Bloomberg Barclays US Treasury Inflation Notes 1-10 Yr TR USD				5.75%	1.95%	2.69%			
CREF Bond Market Account R2	Intermediate- Term Bond	QCBMPX	04/24/2015	10.27%	3.53%	3.88%	0.32% \$3.20	0.32% \$3.20	Contributions and Transfers in not allowed. Round Trip: If a round trip is made within 60 calendar days, exchanges into the same account will be restricted for 90 calendar days.
Bloomberg Barclays US Aggregate Bond TR USD				10.30%	3.38%	3.75%			will be restricted for 50 calendar days.
Money Market									
Mutual Fund									
TIAA-CREF Money Market Fund Institutional 7-day current annualized yield 1.99% as of 09/24/2019 7-day effective annualized yield 2.01% as of 09/24/2019	Prime Money Market	TCIXX	07/01/1999	2.22%	0.89%	0.47%	0.14% \$1.40	0.14% \$1.40	
iMoneyNet Money Fund Averages - All Government				1.91%	0.68%	0.35%		ctual Cap /31/2020	
Variable Annuity									
CREF Money Market Account R2 7-day current annualized yield 1.87% as of 09/24/2019 7-day effective annualized yield 1.89% as of 09/24/2019	Money Market- Taxable	QCMMPX	04/24/2015	2.08%	0.68%	0.34%	0.28% \$2.80	0.28% \$2.80	
iMoneyNet Money Fund Averages - All				1.91%	0.68%	0.35%			

INVESTMENT OPTIONS COM	PARATIVE CHART								SECTION II
					ge Annu rns/Ben			al Operating %/Per \$1000)	
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr.	10 Yr. or Since fund Inception if less than 10 years	Gross	Net	Shareholder Fees & Restrictions
Multi-Asset									
Mutual Fund TIAA-CREF Lifecycle Retirement Income Fund Institutional	Retirement Income	TLRIX	11/30/2007	5.24%	5.27%	6.61%	0.53% \$5.30	0.37% \$3.70	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P Target Date Retirement Income TR USD				5.66%	4.36%	5.38%		ual Waiver /30/2022	
TIAA-CREF Lifecycle 2010 Fund Institutional	Target Date 2000- 2010	TCTIX	01/17/2007	5.14%	5.49%	5 7.09%	0.50% \$5.00	0.37% \$3.70	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P Target Date 2010 TR USD				5.24%	4.80%	6.13%		ual Waiver /30/2022	
TIAA-CREF Lifecycle 2015 Fund Institutional	Target-Date 2015	TCNIX	01/17/2007	4.65%	5.76%	5 7.51%	0.50% \$5.00	0.38% \$3.80	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P Target Date 2015 TR USD				4.87%	5.28%	6.86%		ual Waiver /30/2022	
TIAA-CREF Lifecycle 2020 Fund Institutional	Target-Date 2020	TCWIX	01/17/2007	4.25%	6.13%	8.03%	0.51% \$5.10	0.39% \$3.90	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P Target Date 2020 TR USD				4.57%	5.70%	5 7.49%		ual Waiver /30/2022	
TIAA-CREF Lifecycle 2025 Fund Institutional	Target-Date 2025	TCYIX	01/17/2007	3.44%	6.50%	8.55%	0.52% \$5.20	0.41% \$4.10	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P Target Date 2025 TR USD				3.96%	6.10%	8.03%		ual Waiver /30/2022	
TIAA-CREF Lifecycle 2030 Fund Institutional	Target-Date 2030	TCRIX	01/17/2007	2.64%	6.83%	9.02%	0.53% \$5.30	0.42% \$4.20	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P Target Date 2030 TR USD				3.23%	6.48%	8.51%		ual Waiver /30/2022	
TIAA-CREF Lifecycle 2035 Fund Institutional	Target-Date 2035	TCIIX	01/17/2007	1.81%	7.16%	9.45%	0.54% \$5.40	0.43% \$4.30	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.

			_	Returns/Benchmark		Total Annual Expenses (%			
Investment Name /	Morningstar Category	Ticker Symbol	Inception Date			10 Yr. or Since fund Inception if less	•	N - 4	
Benchmark S&P Target Date 2035 TR USD				1 Yr. 2.52%	5 Yr. 6.82%	than 10 years 8.91%	Gross Contractua Exp: 09/3		Shareholder Fees & Restrictions
TIAA-CREF Lifecycle 2040 Fund Institutional	Target-Date 2040	TCOIX	01/17/2007	0.76%	7.41%	9.71%	0.55% \$5.50	0.44% \$4.40	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P Target Date 2040 TR USD				2.09%	7.06%	9.19%	Contractua Exp: 09/3		
TIAA-CREF Lifecycle 2045 Fund Institutional	Target-Date 2045	TTFIX	11/30/2007	-0.07%	7.52%	9.74%	0.56% \$5.60	0.45% \$4.50	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P Target Date 2045 TR USD				1.83%	7.21%	9.38%	Contractua Exp: 09/3		
TIAA-CREF Lifecycle 2050 Fund Institutional	Target-Date 2050	TFTIX	11/30/2007	-0.19%	7.57%	9.77%	0.57% \$5.70	0.45% \$4.50	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P Target Date 2050 TR USD				1.59%	7.34%	9.54%	Contractua Exp: 09/3		
TIAA-CREF Lifecycle 2055 Fund Institutional	Target-Date 2055	TTRIX	04/29/2011	-0.38%	7.61%	8.21%	0.59% \$5.90	0.45% \$4.50	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P Target Date 2055 TR USD				1.57%	7.41%	8.03%	Contractua Exp: 09/3		
TIAA-CREF Lifecycle 2060 Fund Institutional	Target-Date 2060+	TLXNX	09/26/2014	-0.47%	7.68%	7.51%	0.71% \$7.10	0.45% \$4.50	Round Trip: You cannot exchange into the fund within 30 calendar days of exchanging out of the fund.
S&P Target Date 2060+ TR USD				1.56%	7.49%	7.31%	Contractua Exp: 09/3		
Variable Annuity									
CREF Social Choice Account R2	Allocation50% to 70% Equity	QCSCPX	04/24/2015	6.33%	6.35%	8.11%	0.29% \$2.90	0.29% \$2.90	Round Trip: If a round trip is made within 60 calendar days, exchanges into the same account will be restricted for 90 calendar days.
Morningstar Moderate Target Risk TR USD				5.41%	5.91%	7.51%			
Real Estate									
Variable Annuity									

INVESTMENT OPTIONS COM	PARATIVE CHART								SECTION II
			_		ge Annua ms/Benc			al Operating %/Per \$1000)	
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr.	10 Yr. or Since fund Inception if less than 10 years	Gross	Net	Shareholder Fees & Restrictions
TIAA Real Estate Account	N/A	QREARX	10/02/1995	5.26%	6.12%		0.83% \$8.30	0.83% \$8.30	Transfers out: Limit 1 per quarter. Limitations may apply to any transaction resulting in a balance > \$150,000.
S&P 500 TR USD				4.25%	10.84%	13.24%			

Table 1 shows fee and expense information for the investment options listed including the Total Annual Operating Expenses expressed as a percentage and a dollar amount based upon a \$1,000 accumulation both as net andgross of expenses. Total Annual Operating Expenses is a measure of what it costs to operate an investment, expressed as a percentage of its assets, as a dollar amount or in basis points. These are costs the investor pays through a reduction in the investment's rate of return.

FIDELITY INVESTMENTS

To request additional plan information from this service provider or a paper copy of information available online, free of charge, contact: Fidelity Investments, PO Box # 770003, Cincinnati, OH 45277-0065; web site: www.fidelity.com/atwork or you may contact Fidelity at 800-558-9179

Table 1 – Variable Return Investment Performance as of September 30, 2019

				Average Annual Total Returns/Benchmark		Total Annual Operating Expenses (%/Per \$1000)			
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr.	10 Yr. or Since Inception	Gross	Net	Shareholder Fees & Restrictions
Equities									
Mutual Fund									
Fidelity® International Index	Foreign Large Blend	FSPSX	09/07/2011	-0.99%	3.43%	6.53%	0.05% \$0.50	0.05% \$0.50	
MSCI EAFE NR USD				-1.34%	3.27%	4.90%			
American Funds Washington Mutual Investors Fund R4	Large Blend	RWMEX	05/20/2002	5.77%	9.71%	12.69%	0.62% \$6.20	0.62% \$6.20	
S&P 500 TR USD				4.25%	10.84%	13.24%			
ClearBridge Appreciation A	Large Blend	SHAPX	03/10/1970	7.69%	10.25%	12.00%	0.97% \$9.70	0.97% \$9.70	
S&P 500 TR USD				4.25%	10.84%	13.24%			
Fidelity® 500 Index	Large Blend	FXAIX	05/03/2011	4.24%	10.83%	12.21%	0.02% \$0.20	0.02% \$0.20	
S&P 500 TR USD				4.25%	10.84%	13.24%			
Fidelity® Contrafund®	Large Growth	FCNTX	05/17/1967	-1.29%	11.59%	13.65%	0.82% \$8.20	0.82% \$8.20	
S&P 500 TR USD				4.25%	10.84%	13.24%			
Fidelity® Extended Market Index	Mid-Cap Blend	FSMAX	09/07/2011	-3.80%	8.55%	12.59%	0.05% \$0.50	0.05% \$0.50	
DJ US Completion Total Stock Mkt TR USD				-3.96%	8.36%	12.31%			
AB Discovery Growth Fund A	Mid-Cap Growth	CHCLX	07/07/1938	-8.18%	10.18%	14.63%	0.96% \$9.60	0.96% \$9.60	
Russell 2500 Growth TR USD				-4.11%	10.22%	13.48%			

					Average Annual Total Returns/Benchmark		Total Annual Operating Expenses (%/Per \$1000)		
Investment Name /	Morningstar	Ticker	Inception			10 Yr. or			
Benchmark	Category	Symbol	Date	1 Yr.		Since Inception	Gross	Net	Shareholder Fees & Restrictions
American Century Mid Cap Value Fund A	Mid-Cap Value	ACLAX	01/13/2005	2.42%	8.32%	11.99%	1.23% \$12.30	1.23% \$12.30	
Russell Mid Cap Value TR USD				1.60%	7.55%	12.29%			
Fidelity® Low-Priced Stock	Mid-Cap Value	FLPSX	12/27/1989	-3.38%	6.28%	10.97%	0.52% \$5.20	0.52% \$5.20	
Russell 2000 TR USD				-8.89%	8.19%	11.19%			
Voya Real Estate Fund A	Real Estate	CLARX	12/20/2002	17.53%	8.47%	11.85%	1.31% \$13.10	1.21% \$12.10	
MSCI US REIT GR USD				18.31%	10.11%	13.00%	Contractual Exp: 10/0		
Fidelity® Small Cap Discovery	Small Blend	FSCRX	09/26/2000	0.25%	6.66%	12.15%	0.61% \$6.10	0.61% \$6.10	
Russell 2000 TR USD				-8.89%	8.19%	11.19%			
Fidelity® Small Cap Value	Small Value	FCPVX	11/03/2004	-5.01%	7.73%	11.01%	0.66% \$6.60	0.66% \$6.60	
Russell 2000 Value TR USD				-8.24%	7.17%	10.06%			
Fixed Income									
Mutual Fund									
BlackRock High Yield Bond Fund A	High Yield Bond	BHYAX	11/19/1998	6.00%	4.73%	8.04%	0.96% \$9.60	0.93% \$9.30	
Bloomberg Barclays US High Yield 2% Issuer Cap TR				6.35%	5.38%	7.92%	Contractual Exp: 01/3	1/2020	
PIMCO Real Return Fund A	Inflation- Protected Bond	PRTNX	01/29/1997	6.11%	1.72%	3.10%	1.38% \$13.80	1.38% \$13.80	
Bloomberg Barclays US Treasury US TIPS TR USD				7.13%	2.45%	3.46%			
Fidelity® US Bond Index	Intermediate Core Bond	FXNAX	05/03/2011	10.26%	3.33%	3.38%	0.03% \$0.30	0.03% \$0.30	
BBgBarc US Agg Bond TR USD				10.30%	3.38%	3.75%			
PIMCO Total Return Fund A	Intermediate Core-Plus Bond	ΡΤΤΑΧ	01/13/1997	9.71%	3.20%	3.92%	1.05% \$10.50	1.05% \$10.50	

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Investment Name / Bonchmark Morningstar Ticker Symbol Inception Date 10 Yr. or SY. Since Inception 10.30% Gross Net Shareholder Fees & Restrictions Boochmark Boochmark Gross Net Shareholder Fees & Restrictions Shareholder Fees & Restrictions Boochmark AB Global Bond Fund A Agregate Data Fuldy Siched agregate Data Fuldy Siched Agregate Data Fuldy Siched Agregate Data Fuldy Siched Agregate Data Fuldy Siched Tanable NANGX 03/27/1992 8.5% 3.5% 4.38% 0.83% 0.82% 58.0 Bloomberg Barclays (Bobd Agregate Data Fuldy Siched Agregate Data Fuldy Siched Tanable NANGX 03/27/1992 8.5% 3.5% 4.38% 0.83% 0.82% 58.0 Money Market Matual Fund T. Rever Price Retirement Incom TR USD Money Market Tanable SPAX 02/05/1990 1.96% 0.70% 0.36% 0.42% 0.4					Average Annual Total Returns/Benchmark		Total Annual Operating Expenses (%/Per \$1000)			
AB Global Bond Fund A USD Hedged World Bond- USD Hedged ANAGX 0.32/7/1992 8.58% 3.56% 4.38% 0.83% S3.0 0.82% S3.0 Bloomberg Barclays Global Aggregate TR HdgUSD ID.65% 4.12% 4.17% 58.30 58.20 Money Market Taxable ID.65% 4.12% 4.17% 4.17% 58.30 58.20 Money Market Taxable SPAXX 02/05/1990 1.96% 0.70% 0.36% 0.42% 6.42% ICE BorAML USD 3M Dep OR CMT R USD Money Market Taxable SPAXX 02/05/1990 1.96% 0.70% 0.36% 0.42% 6.420 Multi-Asset Mutual Fund Income TR USD TRRX 09/30/2002 5.06% 4.65% 6.00% 0.52% 0.52% S&P Target Date Retirement Income TR USD Tanget Date 2005 Fund Tanget Date 2002 2010 TRRX 09/30/2002 5.66% 4.38% 5.38% .54% 5.54% 5.54% 5.54% 5.54% 55.40 S&P Target Date Retirement Income TR USD Tanget Date 2002 2010 5.47% 5.24% 5.46%	Benchmark Bloomberg Barclays US	-		•			nce Inception	Gross	Net	Shareholder Fees & Restrictions
Aggregate TR HdgUSD Money Market SPAXX 02/05/1990 1.86% 0.70% 0.36% 0.42% 5.420 Fidelity® Government MMkt Money Market SPAXX 02/05/1990 1.86% 0.70% 0.36% 0.42% 5.420 ICE Bor/AML USD 3M Dep OR 2.64% 1.24% 0.78% 5.420 5.420 Multe Asset 1 0.78% 0.42% 5.420 5.420 Multe Asset 1.24% 0.78% 5.420 5.420 5.420 Multe Asset 1.24% 0.78% 5.420 5.52% 5.52% Safe Target Date Retirement Allocation-5% 5.66% 4.36% 5.38% 5.38% Income TR USD Target Date Retirement Target Date Retirement 5.66% 4.36% 5.38% 5.40 5.40 SAP Target Date Retirement Target Date Retirement Target Date Retirement 5.66% 4.36% 5.38% 5.40 5.40 SAP Target Date Retirement Target Date Retirement Target Date Retirement 5.66% 6.19% 7.83% 0.54% 5.40 SAP Target Date Retirement Ta			ANAGX	03/27/1992	8.58%	3.55%	4.38%			
Mutual Fund Money Market- Taxable SPAXX 02/05/1990 1.96% 0.70% 0.36% 0.42% 0.52% 0.52% 0.52% 0.52% 0.52% 0.52% 0.52% 0.52% 0.52% 0.52% 0.52% 0.52% 0.52%					10.65%	4.12%	4.17%			
Fidelity® Government MMkt Morey Market- Taxable SPAXX 02/05/1990 1.96% 0.70% 0.36% 0.42% \$4.20 0.42% \$4.20 ICE Bor/AML USD 3M Dep OR CM TR USD 2.64% 1.24% 0.78%	Money Market									
Taxable \$4.20 \$4.20 ICE BotAML USD 3M Dep OR WT RUSD 2.64% 1.24% 0.78% Multi-Asset Mutual Fund	Mutual Fund									
CM TR USD Multi-Asset Multi-Asset Multi-Asset Allocation- Stander Fund Allocation- Stander Fund No.52% S5.20 0.52% S5.20 0.52% S5.20 S&P Target Date Retirement Income TR USD TRRIX 09/30/2002 5.06% S6 4.36% 5.38% 5.38% S.Rowe Price Retirement Income TR USD Target Date 2000-2010 TRRFX 02/27/2004 5.85% 4.87% 6.52% 0.54% S5.40 0.54% S5.40 S&P Target Date Retirement Income TR USD Target Date 2000-2010 TRRFX 02/27/2004 5.85% 4.87% 6.52% 0.54% S5.40 0.54% S5.40 S&P Target Date Retirement Income TR USD Target Date 2000-2010 TRRAX 09/30/2002 5.66% 5.38% 5.38% T. Rowe Price Retirement 2010 Fund Target Date 2015 Target Date 2015 5.24% 4.80% 6.13% USD Target Date 2015 Target-Date 2015 TRRGX 02/27/2004 5.37% 5.86% 7.83% 0.57% 0.57% S&P Target Date 2015 TR USD 2020 TRRBX 09/30/2002 5.06% 6.86% 56.10 56.10 S&P Target Date 2020 TR USD	Fidelity® Government MMkt		SPAXX	02/05/1990	1.96%	0.70%	0.36%			
Mutual Fund T. Rowe Price Retirement Balanced Fund Micoation 30% to 50% Equity TRRIX 09/30/2002 5.06% 4.65% 6.00% 0.52% \$5.20 0.52% \$5.20 S&P Target Date Retirement Income TR USD Target Date Retirement 2000-2010 TRRFX 02/27/2004 5.85% 4.87% 6.52% 0.54% \$5.40 0.54% \$5.40 S&P Target Date Retirement 2005 Fund Target Date 2000-2010 TRRFX 02/27/2004 5.85% 4.87% 6.52% 0.54% \$5.40 0.54% \$5.40 S&P Target Date Retirement Income TR USD Target Date 2000-2010 TRRAX 09/30/2002 5.64% 5.18% 7.08% 0.54% \$5.40 0.54% \$5.40 S&P Target Date 2010 TR USD Target-Date 2000-2010 TRRAX 09/30/2002 5.64% 5.18% 7.83% 0.57% \$5.70 0.57% \$5.70 S&P Target Date 2010 TR USD Target-Date 2015 TRRGX 02/27/2004 5.37% 5.68% 7.83% 0.57% \$5.70 \$5.70 S&P Target Date 2015 TR USD Target-Date 2015 TR 4.87% 5.28% 6.86% 0.61% \$6.10 \$6.10 S&P Target Date 2020 TR USD					2.64%	1.24%	0.78%			
T. Rowe Price Retirement Balanced Fund Allocation	Multi-Asset									
Balanced Fund 30% to 50% Equity \$5.20 \$5.20 S&P Target Date Retirement Income TR USD 5.66% 4.36% 5.38% T. Rowe Price Retirement Date Retirement Income TR USD Target Date 2000-2010 TRRFX 02/27/2004 5.85% 4.87% 6.52% 0.54% \$5.40 0.54% \$5.40 S&P Target Date Retirement Income TR USD Target Date 2000-2010 TRRAX 09/30/2002 5.66% 4.36% 5.38% T. Rowe Price Retirement Ducome TR USD Target Date 2000-2010 TRRAX 09/30/2002 5.64% 5.19% 7.08% 0.54% \$5.40 5.64% S&P Target Date 2010 TR USD Target Date 2000-2010 TRRAX 09/30/2002 5.64% 6.13% 5.70 5.70 S&P Target Date 2010 TR USD Target-Date 2015 TRRGX 02/27/2004 5.37% 5.68% 7.83% 0.57% \$5.70 0.57% \$5.70 S&P Target Date 2015 TR USD Target-Date 2020 TRRBX 09/30/2002 5.06% 6.27% 8.56% 0.61% \$6.10 6.61% \$6.10 S&P Target Date 2020 TR USD Target-Date 2020 TRRBX 09/30/2002 5.06% 6.27% 8.56% 0.61% \$6.10 6.61% <td>Mutual Fund</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Mutual Fund									
Income TR USD Target Date 2005 Fund Target Date 2000-2010 TRRFX 02/27/2004 5.85% 4.87% 6.52% 0.54% 5.54% S&P Target Date Retirement Income TR USD 5.66% 4.36% 5.38% 5.38% 5.38% T. Rowe Price Retirement Income TR USD Target Date 2010 R 5.66% 4.36% 5.38% 0.54% \$5.40 S&P Target Date 2010 TR 2000-2010 TRRAX 09/30/2002 5.64% 5.19% 7.08% 0.54% \$5.40 S&P Target Date 2010 TR 2000-2010 TRRAX 09/30/2002 5.64% 5.19% 7.08% 0.54% \$5.40 S&P Target Date 2010 TR 2000-2010 TRRAX 09/30/2002 5.64% 6.13% \$5.40 \$5.40 S&P Target Date 2010 TR 2000-2010 TRRGX 02/27/2004 5.37% \$6.86% \$5.70 \$5.70 S&P Target Date 2015 TR 2015 TRRGX 09/30/2002 \$0.67% \$6.86% \$6.10 \$6.10 S&P Target Date 2020 TR 2020 TRRBX 09/30/2002 \$5.00% \$7.49% \$6.10 \$6.10		30% to 50%	TRRIX	09/30/2002	5.06%	4.65%	6.00%			
2005 Fund 2000-2010 \$5.60% \$5.80% \$5.40 S&P Target Date Retirement Income TR USD Target Date 2000-2010 TRRAX 09/30/2002 5.66% \$1.9% 7.08% 0.54% 0.54% 0.54% S&P Target Date 2010 TR USD Target Date 2000-2010 TRRAX 09/30/2002 5.64% 5.19% 7.08% 0.54% 0.54% 0.54% 0.54% S&P Target Date 2010 TR USD Target-Date 2015 TRRGX 02/27/2004 5.37% 5.68% 7.83% 0.57% 0.57% 5.70% S&P Target Date 2015 TR USD Target-Date 2015 TRRGX 02/27/2004 5.37% 5.28% 6.86% 5.70% 5.70% 5.70% S&P Target Date 2015 TR USD Target-Date 2020 TRRBX 09/30/2002 5.06% 6.27% 8.56% 0.61% 6.10% S&P Target Date 2020 TR USD Target-Date 2020 TRRBX 09/30/2002 5.07% 7.49% 5.49% 0.64% 0.64%					5.66%	4.36%	5.38%			
Income TR USD T. Rowe Price Retirement 2000-2010 Target Date 2020 TR 2000-2010 TRRAX 09/30/2002 5.64% 5.19% 7.08% 0.54% \$5.40 \$5.40 S&P Target Date 2010 TR USD S.24% 4.80% 6.13% \$5.40 \$5.40 T. Rowe Price Retirement USD Target-Date 2010 TR 2015 TRRGX 02/27/2004 5.37% 5.68% 7.83% 0.57% 0.57% S&P Target Date 2015 TR 2015 TRRGX 02/27/2004 5.37% 5.68% 7.83% 0.57% 0.57% S&P Target Date 2015 TR 2015 TRRGX 02/27/2004 5.37% 5.28% 6.86% \$5.70 \$5.70 S&P Target Date 2015 TR 2020 TRRBX 09/30/2002 5.06% 6.27% 8.56% 0.61% 6.61% S200 Fund Target-Date 2020 TR 2020 TRRBX 09/30/2002 5.06% 6.27% 8.56% 0.61% 6.61% S&P Target Date 2020 TR 2020 TRRBX 09/30/2002 5.06% 5.70% 7.49% 56.10 \$6.10 S&P Target Date 2020 TR 2020 TRRBX </td <td></td> <td></td> <td>TRRFX</td> <td>02/27/2004</td> <td>5.85%</td> <td>4.87%</td> <td>6.52%</td> <td></td> <td></td> <td></td>			TRRFX	02/27/2004	5.85%	4.87%	6.52%			
2010 Fund 2000-2010 \$5.40 \$5.40 S&P Target Date 2010 TR 5.24% 4.80% 6.13% T. Rowe Price Retirement Target-Date TRRGX 02/27/2004 5.37% 5.68% 7.83% 0.57% 5.70 S&P Target Date 2015 TR Target-Date TRRBX 02/27/2004 5.37% 5.28% 6.86% 5.70 5.70 S&P Target Date 2015 TR Target-Date TRRBX 09/30/2002 5.06% 6.27% 8.56% 0.61% 6.61% S&P Target Date 2020 TR Target-Date TARBX 09/30/2002 5.06% 6.27% 8.56% 0.61% 6.61% S&P Target Date 2020 TR Target-Date TRRBX 09/30/2002 5.06% 6.27% 8.56% 0.61% 6.10 S&P Target Date 2020 TR Target-Date TRRBX 02/27/2004 4.57% 5.70% 7.49% 2.64% 0.64% 0.64%					5.66%	4.36%	5.38%			
USD Target-Date 2015 Target-Date 2015 TRRGX 02/27/2004 5.37% 5.68% 7.83% 0.57% \$5.70 0.57% \$5.70 S&P Target Date 2015 TR USD 2015 4.87% 5.28% 6.86%			TRRAX	09/30/2002	5.64%	5.19%	7.08%			
2015 Fund 2015 \$5.70 \$5.70 S&P Target Date 2015 TR USD 4.87% 5.28% 6.86% 6.86% T. Rowe Price Retirement 2020 Fund Target-Date 2020 TRRBX 09/30/2002 5.06% 6.27% 8.56% 0.61% \$6.10 0.61% \$6.10 S&P Target Date 2020 TR USD *** * ** <					5.24%	4.80%	6.13%			
USD T. Rowe Price Retirement Target-Date TRRBX 09/30/2002 5.06% 6.27% 8.56% 0.61% 0.61% 2020 Fund 2020 1			TRRGX	02/27/2004	5.37%	5.68%	7.83%			
2020 Fund 2020 \$6.10 \$6.10 S&P Target Date 2020 TR USD 4.57% 5.70% 7.49% T. Rowe Price Retirement Target-Date TRRHX 02/27/2004 4.74% 6.74% 9.14% 0.64% 0.64%					4.87%	5.28%	6.86%			
USD T. Rowe Price Retirement Target-Date TRRHX 02/27/2004 4.74% 6.74% 9.14% 0.64% 0.64%			TRRBX	09/30/2002	5.06%	6.27%	8.56%			
T. Rowe Price Retirement Target-Date TRRHX 02/27/2004 4.74% 6.74% 9.14% 0.64% 0.64%					4.57%	5.70%	7.49%			
			TRRHX	02/27/2004	4.74%	6.74%	9.14%			

				Average Annual Total Returns/Benchmark		Total Annual Operating Expenses (%/Per \$1000)			
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr.	10 Yr. or Since Inception	Gross	Net	Shareholder Fees & Restrictions
S&P Target Date 2025 TR USD				3.96%	6.10%	8.03%			
T. Rowe Price Retirement 2030 Fund	Target-Date 2030	TRRCX	09/30/2002	4.38%	7.16%	9.67%	0.67% \$6.70	0.67% \$6.70	
S&P Target Date 2030 TR USD				3.23%	6.48%	8.51%			
T. Rowe Price Retirement 2035 Fund	Target-Date 2035	TRRJX	02/27/2004	4.01%	7.44%	9.99%	0.70% \$7.00	0.70% \$7.00	
S&P Target Date 2035 TR USD				2.52%	6.82%	8.91%			
T. Rowe Price Retirement 2040 Fund	Target-Date 2040	TRRDX	09/30/2002	3.74%	7.66%	10.21%	0.72% \$7.20	0.72% \$7.20	
S&P Target Date 2040 TR USD				2.09%	7.06%	9.19%			
T. Rowe Price Retirement 2045 Fund	Target-Date 2045	TRRKX	05/31/2005	3.53%	7.73%	10.25%	0.72% \$7.20	0.72% \$7.20	
S&P Target Date 2045 TR USD				1.83%	7.21%	9.38%			
T. Rowe Price Retirement 2050 Fund	Target-Date 2050	TRRMX	12/29/2006	3.49%	7.73%	10.25%	0.72% \$7.20	0.72% \$7.20	
S&P Target Date 2050 TR USD				1.59%	7.34%	9.54%			
T. Rowe Price Retirement 2055 Fund	Target-Date 2055	TRRNX	12/29/2006	3.47%	7.72%	10.24%	0.72% \$7.20	0.72% \$7.20	
S&P Target Date 2055 TR USD				1.57%	7.41%	9.67%			
T. Rowe Price Retirement 2060 Fund	Target-Date 2060+	TRRLX	06/23/2014	3.44%	7.72%	6.96%	0.72% \$7.20	0.72% \$7.20	
<i>Morningstar Lifetime Allocation Moderate 2060 TR U</i>				2.22%	6.71%	5.75%			

Table 1 shows fee and expense information for the investment options listed including the Total Annual Operating Expenses expressed as a percentage and a dollar amount based upon a \$1,000 accumulation both as net and gross of expenses. Total Annual Operating Expenses is a measure of what it costs to operate an investment, expressed as a percentage of its assets, as a dollar amount or in basis points. These are costs the investor pays through a reduction in the investment's rate of return.

VARIABLE ANNUITY LIFE INSURANCE COMPANY (VALIC)

To request additional plan information from this service provider or a paper copy of information available online, free of charge, contact: The Variable Annuity Life Insurance Company, 2929 Allen Parkway, Houston, Texas 77019; web site: www.valic.com or you may contact VALIC at 800-448-2542.

Table 1 – Variable Return Investment Performance as of September 30, 2019

				Average Annual Total Returns/Benchmark		Total Annual Operating Expenses (%/Per \$1000)			
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr.	10 Yr. or Since Inception	Gross	Net	Shareholder Fees & Restrictions
Equities									
Other									
EMERGING ECONOMIES [0087] - PORTFOLIO DIRECTOR (A042)		NA	12/04/2005	-7.08%	0.11%	o 1.47%		1.93% \$19.30	
MSCI EM NR USD				-2.02%	2.33%	3.37%			
EMERGING ECONOMIES [0087] - PORTFOLIO DIRECTOR (A073)		NA	12/04/2005	-2.69%	1.05%	0 1.48%		1.93% \$19.30	
MSCI EM NR USD				-2.02%	2.33%	3.37%			
GLOBAL STRATEGY [0088] - PORTFOLIO DIRECTOR (A042)		NA	12/04/2005	-9.82%	-0.43%	9 4.86%		1.65% \$16.50	
60% MSCI ACWI & 40% JPMorgan GBI Global (unhdg)				4.67%	5.01%	6.00%			
GLOBAL STRATEGY [0088] - PORTFOLIO DIRECTOR (A073)		NA	12/04/2005	-5.56%	0.50%	4.88%		1.65% \$16.50	
60% MSCI ACWI & 40% JPMorgan GBI Global (unhdg)				4.67%	5.01%	6.00%			
INTERNATIONAL GROWTH FUND [0020] - PORTFOLIO DIRECTOR (A042)		NA	12/07/2000	0.05%	4.28%	6.40%		1.88% \$18.80	
MSCI EAFE NR USD				-1.23%	2.90%	4.45%			

				Average Annual Total Returns/Benchmark		Total Annua Expenses (%	al Operating %/Per \$1000)		
Investment Name /	Morningstar	Ticker	Inception			10 Yr. or		•• ·	
Benchmark INTERNATIONAL GROWTH	Category	Symbol NA	Date 12/07/2000	1 Yr. 4.77%	5 Yr. 3	Since Inception 6.42%	Gross	Net 1.88%	Shareholder Fees & Restrictions
FUND [0020] - PORTFOLIO DIRECTOR (A073)								\$18.80	
MSCI EAFE NR USD				-1.23%	2.90%	4.45%			
SMALL CAP FUND [0018] - PORTFOLIO DIRECTOR (A042)		NA	12/07/2000	-6.80%	6.83%	10.95%		1.93% \$19.30	
Russell 2000 TR USD				-8.89%	8.19%	11.19%			
SMALL CAP FUND [0018] - PORTFOLIO DIRECTOR (A073)		NA	12/06/2000	-10.04%	6.94%	9.90%		1.40% \$14.00	
Russell 2000 TR USD				-8.89%	8.19%	11.19%			
Variable Annuity									
AMER BEACON BRDWY LRG CP GRW I [0090] - PORTFOLIO DIRECTOR (A042)		NA	02/05/2016	-9.07%	-	13.11%		2.20% \$22.00	
Russel 1000 Growth TR USD				3.71%					
AMER BEACON BRDWY LRG CP GRW I [0090] - PORTFOLIO DIRECTOR (A073)		NA	02/05/2016	-4.78%	-	14.10%		2.20% \$22.00	
Russell 1000 Growth TR USD				3.71%					
ARIEL APPRECIATION FUND [0069] - PORTFOLIO DIRECTOR (A042)		NA	11/28/1989	-9.46%	3.34%	9.64%		2.13% \$21.30	
Russell Mid Cap Value TR USD				1.60%	7.55%	12.29%			
ARIEL APPRECIATION FUND [0069] - PORTFOLIO DIRECTOR (A073)		NA	11/29/1989	-5.18%	4.22%	9.66%		2.13% \$21.30	
Russell Mid Cap Value TR USD				1.60%	7.55%	12.29%			
ARIEL FUND [0068] - PORTFOLIO DIRECTOR (A042)		NA	11/04/1986	-12.25%	4.75%	10.32%		2.01% \$20.10	

						ual Total nchmark	Total Annua Expenses (%	l Operating ⁄/Per \$1000)	
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr.	10 Yr. or Since Inception	Gross	Net	Shareholder Fees & Restrictions
Russell 2500 Value TR USDRussell Mid Cap Value TR USD				-4.35%	6.98%	11.00%			
ARIEL FUND [0068] - PORTFOLIO DIRECTOR (A073)		NA	11/04/1986	-8.11%	5.58%	10.33%		2.01% \$20.10	
Russell 2500 Value TR USD				-4.35%	6.98%	11.00%			
CORE EQUITY FUND [0015] - PORTFOLIO DIRECTOR (A042)		NA	04/28/1994	-5.94%	7.03%	10.43%		1.75% \$17.50	
Russell 1000 TR USD				3.87%	10.62%	13.23%			
CORE EQUITY FUND [0015] - PORTFOLIO DIRECTOR (A073)		NA	04/27/1994	-1.50%	7.79%	10.44%		1.75% \$17.50	
Russell 1000 TR USD				3.87%	10.62%	13.23%			
DIVIDEND VALUE [0021] - PORTFOLIO DIRECTOR (A042)		NA	12/06/2000	-4.16%	6.37%	10.27%		1.81% \$18.10	
Russell 1000 Value TR USD				4.00%	7.79%	11.46%			
DIVIDEND VALUE [0021] - PORTFOLIO DIRECTOR (A073)		NA	12/07/2000	0.36%	7.15%	10.28%		1.81% \$18.10	
Russell 1000 Value TR USD				4.00%	7.79%	11.46%			
GROWTH & INCOME FUND [0016] - PORTFOLIO DIRECTOR (A042)		NA	04/28/1994	-3.22%	7.89%	10.20%		1.85% \$18.50	
S&P 500 TR USD				4.25%	10.84%	13.24%			
GROWTH & INCOME FUND [0016] - PORTFOLIO DIRECTOR A073)		NA	04/28/1994	1.35%	8.63%	10.21%		1.85% \$18.50	
S&P 500 TR USD				4.25%	10.84%	13.24%			
GROWTH FUND [0078] - PORTFOLIO DIRECTOR (A042)		NA	12/04/2005	-4.18%	9.89%	12.17%		1.74% \$17.40	

					age Ann urns/Ben		Total Annua Expenses (⁶	ll Operating %/Per \$1000)	
Investment Name / Benchmark Russell 1000 Growth TR USD	Morningstar Category	Ticker Symbol	Inception Date	1 Yr. 3.71%	5 Yr. 13.39%	10 Yr. or Since Inception 14.94%	Gross	Net	Shareholder Fees & Restrictions
GROWTH FUND [0078] - PORTFOLIO DIRECTOR (A073)		NA	12/04/2005	0.35%	10.58%	12.19%		1.74% \$17.40	
Russell 1000 Growth TR USD				3.71%	13.39%	14.94%			
HEALTH SCIENCES FUND [0073] - PORTFOLIO DIRECTOR (A042)		NA	10/31/2000	-13.81%	7.52%	16.28%		1.97% \$19.70	
S&P 500 Sec/Health Care TR				-3.57%	8.95%	14.21%			
HEALTH SCIENCES FUND [0073] - PORTFOLIO DIRECTOR (A073)		NA	10/31/2000	-9.74%	8.27%	16.30%		2.06% \$20.60	
S&P 500 Sec/Health Care TR				-3.57%	8.95%	14.21%			
INTERNATIONAL VALUE FUND [0089] - PORTFOLIO DIRECTOR (A042)		NA	12/05/2005	-14.06%	-2.90%	1.79%		1.72% \$17.20	
MSCI ACWI Ex USA NR USD				-1.23%	2.90%	4.45%			
INTERNATIONAL VALUE FUND [0089] - PORTFOLIO DIRECTOR (A073)		NA	12/05/2005	-10.00%	-1.99%	1.81%		1.72% \$17.20	
MSCI ACWI Ex USA NR USD				-1.23%	2.90%	4.45%			
INTERNATL EQUITIES INDEX FUND [0011] - PORTFOLIO DIRECTOR (A042)		NA	10/01/1989	-14.06%	-2.90%	1.79%		1.43% \$14.30	
MSCI ACWI Ex USA NR USD				-1.23%	2.90%	4.45%			
INTERNATL EQUITIES INDEX FUND [0011] - PORTFOLIO DIRECTOR (A073)		NA	10/01/1989	-2.46%	1.96%	3.31%		1.43% \$14.30	
MCSI EAFE NR USD				-1.34%	3.27%	4.90%			
INTL OPPORTUNITIES [0033] - PORTFOLIO DIRECTOR (A042)		NA	09/19/1998	-11.41%	5.24%	5.98%		1.75% \$17.50	
MSCI EAFE Small Cap NR USD				-5.93%	6.02%	7.45%			

1

				Average Annual Total Returns/Benchmark		Total Annual Operating Expenses (%/Per \$1000)			
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr S	10 Yr. or ince Inception	Gross	Net	Shareholder Fees & Restrictions
INTL OPPORTUNITIES [0033] - PORTFOLIO DIRECTOR (A073)	Galegory	NA	09/20/1998	-7.22%	6.05%	5.99%	01033	1.75% \$17.50	
MSCI EAFE Small Cap NR USD				-5.93%	6.02%	7.45%			
INTL SOCIALLY RESPONSIBLE FUND [0012] - PORTFOLIO DIRECTOR (A042)		NA	10/02/1989	-5.12%	5.39%	8.40%		1.62% \$16.20	
MSCI World NR USD					1.83%	7.18%			
INTL SOCIALLY RESPONSIBLE FUND [0012] - PORTFOLIO DIRECTOR (A073)		NA	10/01/1989	-5.12%	5.39%	8.40%		1.62% \$16.20	
MSCI World NR USD				1.83%	7.18%	9.01%			
LARGE CAP CORE [0076] - PORTFOLIO DIRECTOR (A042)		NA	12/03/2005	-1.97%	7.70%	11.87%		1.84% \$18.40	
Russell 1000 TR USD				3.87%	10.62%	13.23%			
LARGE CAP CORE [0076] - PORTFOLIO DIRECTOR (A073)		NA	12/03/2005	2.66%	8.45%	11.88%		1.84% \$18.40	
Russell 1000 TR USD				3.87%	10.62%	13.23%			
LARGE CAP VALUE FUND [0040] - PORTFOLIO DIRECTOR (A042)		NA	09/18/1998	-4.26%	6.03%	9.74%		1.56% \$15.60	
Russell 1000 Value TR USD				4.00%	7.79%	11.46%			
LARGE CAP VALUE FUND [0040] - PORTFOLIO DIRECTOR (A073)		NA	09/20/1998	0.26%	6.82%	9.76%		1.56% \$15.60	
Russell 1000 Value TR USD				4.00%	7.79%	11.46%			
LARGE CAPITAL GROWTH [0079] - PORTFOLIO DIRECTOR (A042)		NA	12/19/2004	6.78%	11.82%	11.70%		1.75% \$17.50	
Russell 1000 Growth TR USD				3.71%	13.39%	14.94%			
									2

						Annual Total Total Annual Operating /Benchmark Expenses (%/Per \$1000)			
Investment Name / Benchmark LARGE CAPITAL GROWTH [0079] - PORTFOLIO DIRECTOR (A073)	Morningstar Category	Ticker Symbol NA	Inception Date 12/19/2004	1 Yr. 11.80%	5 Yr. S 12.46%	10 Yr. or ince Inception 11.71%	Gross	Net 1.75% \$17.50	Shareholder Fees & Restrictions
Russell 1000 Growth TR USD				3.71%	13.39%	14.94%			
MID CAP GROWTH FUND [0037] - PORTFOLIO DIRECTOR (A042)		NA	09/21/1998	-2.97%	8.89%	10.35%		1.60% \$16.00	
S&P MidCap 400 TR				-2.49%	8.88%	12.56%			
MID CAP GROWTH FUND [0037] - PORTFOLIO DIRECTOR (A073)		NA	09/21/1998	1.61%	9.61%	10.37%		1.60% \$16.00	
S&P MidCap 400 TR				-2.49%	8.88%	12.56%			
MID CAP INDEX FUND [0004] - PORTFOLIO DIRECTOR (A042)		NA	09/30/1991	-8.18%	6.71%	11.10%		1.35% \$13.50	
S&P MidCap 400 TR				-2.49%	8.88%	12.56%			
MID CAP INDEX FUND [0004] - PORTFOLIO DIRECTOR (A073)		NA	09/30/1991	-3.85%	7.48%	11.12%		1.35% \$13.50	
S&P MidCap 400 TR				-2.49%	8.88%	12.56%			
MID CAP STRATEGIC GROWTH [0083] - PORTFOLIO DIRECTOR (A073)		NA	12/19/2004	6.67%	10.17%	11.25%		1.82% \$18.20	
Russell Mid Cap Growth TR USD				5.20%	11.12%	14.08%			
MID CAP STRATEGIC GWTH [0083] - PORTFOLIO DIRECTOR (A042)		NA	12/19/2004	1.86%	9.47%	11.24%		1.82% \$18.20	
Russell Mid Cap Growth TR USD				5.20%	11.12%	14.08%			
MID CAP VALUE FUND [0038] - PORTFOLIO DIRECTOR (A042)		NA	09/21/1998	-5.04%	5.18%	9.68%		1.80% \$18.00	

					age Annua urns/Benc		Total Annua Expenses (%		
Investment Name /	Morningstar	Ticker	Inception			10 Yr. or			
Benchmark	Category	Symbol	Date	1 Yr.		ince Inception	Gross	Net	Shareholder Fees & Restrictions
Russell Mid Cap Value TR USD				1.60%	7.55%	12.29%			
MID CAP VALUE FUND [0038] - PORTFOLIO DIRECTOR (A073)		NA	09/21/1998	-0.55%	5.99%	9.70%		1.80% \$18.00	
Russell Mid Cap Value TR USD				1.60%	7.55%	12.29%			
NASDAQ-100(R) INDEX FUND [0046] - PORTFOLIO DIRECTOR (A042)		NA	09/30/2000	-3.49%	12.79%	15.77%		1.53% \$15.30	
NASDAQ 100 TR USD				2.73%	15.19%	17.58%			
NASDAQ-100(R) INDEX FUND [0046] - PORTFOLIO DIRECTOR (A073)		NA	09/30/2000	1.07%	13.41%	15.79%		1.53% \$15.30	
NASDAQ 100 TR USD				2.73%	15.19%	17.58%			
SCIENCE & TECHNOLOGY [0017] - PORTFOLIO DIRECTOR (A073)		NA	04/27/1994	2.68%	14.81%	15.31%		1.97% \$19.70	
S&P North American Technology TRI				4.90%	18.77%	17.43%			
SCIENCE& TECHNOLOGY FUND [0017] - PORTFOLIO DIRECTOR (A042)		NA	04/27/1994	-11.15%	10.94%	12.65%		1.99% \$19.90	
Russell 2000 Growth TR USD				-9.63%	9.08%	12.25%			
SM CAP AGGRESSIVE GROWTH [0086] - PORTFOLIO DIRECTOR (A073)		NA	12/04/2005	-6.96%	11.61%	12.67%		1.99% \$19.90	
Russell 2000 Growth TR USD				-9.63%	9.08%	12.25%			
SM CAP AGGRESSIVE GWTH [0086] - PORTFOLIO DIRECTOR (A042)		NA	12/04/2005	-11.15%	10.94%	12.65%		1.99% \$19.90	
Russell 2000 Growth TR USD				-9.63%	9.08%	12.25%			
SMALL CAP GROWTH FUND [0035] - PORTFOLIO DIRECTOR (A042)		NA	09/21/1998	-9.48%	12.45%	13.75%		1.91% \$19.10	

						ual Total nchmark	Total Annua Expenses (%	ll Operating %/Per \$1000)	
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr.	10 Yr. or Since Inception	Gross	Net	Shareholder Fees & Restrictions
Russell 2000 Growth TR USD12.34				-9.63%	9.08%	12.25%			
SMALL CAP GROWTH FUND [0035] - PORTFOLIO DIRECTOR (A073)		NA	09/21/1998	-5.20%	13.08%	13.77%		1.91% \$19.10	
Russell 2000 Growth TR USD				-9.63%	9.08%	12.25%			
SMALL CAP INDEX FUND [0014] - PORTFOLIO DIRECTOR (A042)		NA	04/29/1992	-14.10%	6.15%	9.89%		1.40% \$14.00	
Russell 2000 TR USD				-8.89%	7.17%	10.06%			
SMALL CAP INDEX FUND [0014] - PORTFOLIO DIRECTOR (A073)		NA	05/01/1992	19.34%	12.52%	6.61%		1.42% \$14.20	
Russell 2000 TR USD				20.74%	13.79%	7.85%			
SMALL CAP SPECIAL VALUE FUND [0084] - PORTFOLIO DIRECTOR (A042)		NA	12/04/2005	-9.04%	6.96%	10.19%		1.87% \$18.70	
Russell 2000 Value TR USD				-8.24%	7.17%	10.06%			
SMALL CAP SPECIAL VALUE [0084] - PORTFOLIO DIRECTOR (A073)		NA	12/04/2005	-4.74%	7.73%	10.21%		1.87% \$18.70	
Russell 2000 Value TR USD				-8.24%	7.17%	10.06%			
SMALL CAP VALUE FUND [0036] - PORTFOLIO DIRECTOR (A042)		NA	09/21/1998	-9.04%	6.96%	10.19%		1.70% \$17.00	
Russell 2000 Value TR USD				-8.24%	7.17%	10.06%			
SMALL CAP VALUE FUND [0036] - PORTFOLIO DIRECTOR (A073)		NA	09/21/1998	-11.15%	4.62%	8.34%		1.70% \$17.00	
Russell 2000 Value TR USD				-8.24%	7.17%	10.06%			
SMALL MID GROWTH FUND [0085] - PORTFOLIO DIRECTOR (A042)		NA	12/04/2005	-3.31%	8.35%	11.06%		1.95% \$19.50	

				Average Annual Total Returns/Benchmark		Total Annua Expenses (%	al Operating %/Per \$1000)		
Investment Name /	Morningstar	Ticker	Inception			10 Yr. or			
Benchmark Russell 2500 Growth TR USD	Category	Symbol	Date	1 Yr. -4.11%	5 Yr. Si 10.22%	nce Inception 13.48%	Gross	Net	Shareholder Fees & Restrictions
SMALL MID GROWTH FUND		NA	12/03/2005	1.26%	9.08%	11.08%		1.95%	
[0085] - PORTFOLIO DIRECTOR (A073)			12/00/2000	1.2070	5.0070	11.0070		\$19.50	
Russell 2500 Growth TR USD				-4.11%	10.22%	13.48%			
STOCK INDEX FUND [0010] - PORTFOLIO DIRECTOR (A042)		NA	04/19/1987	-1.77%	8.65%	11.73%		1.34% \$13.40	
S&P 500 TR USD				4.00%	7.79%	11.46%			
STOCK INDEX FUND [0010] - PORTFOLIO DIRECTOR (A073)		NA	04/18/1987	2.87%	9.37%	11.75%		1.34% \$13.40	
S&P 500 TR USD				4.25%	10.84%	13.24%			
SYSTEMATIC VALUE [0075] - PORTFOLIO DIRECTOR (A042)		NA	12/05/2005	-5.59%	5.53%	9.97%		1.85% \$18.50	
Russell 1000 Value TR USD				4.00%	7.79%	11.46%			
SYSTEMATIC VALUE [0075] - PORTFOLIO DIRECTOR (A073)		NA	12/05/2005	-1.13%	6.34%	9.98%		1.85% \$18.50	
Russell 1000 Value TR USD				4.00%	7.79%	11.46%			
US SOCIALLY RESPONSIBLE FUND [0041] - PORTFOLIO DIRECTOR (A042)		NA	09/21/1998	0.19%	8.94%	12.46%		1.31% \$13.10	
S&P 500 TR USD				4.25%	10.84%	13.24%			
US SOCIALLY RESPONSIBLE FUND [0041] - PORTFOLIO DIRECTOR (A073)		NA	09/21/1998	4.92%	9.65%	12.47%		1.31% \$13.10	
S&P 500 TR USD				4.25%	10.84%	13.24%			
VALUE FUND [0074] - PORTFOLIO DIRECTOR (A042)		NA	12/30/2001	-3.33%	5.12%	9.06%		1.85% \$18.50	

						Total Annua Expenses (⁴	al Operating %/Per \$1000)		
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr. S	10 Yr. or ince Inception	Gross	Net	Shareholder Fees & Restrictions
Russell 1000 Value TR USD		-		4.00%	7.79%	11.46%			
VALUE FUND [0074] - PORTFOLIO DIRECTOR (A073)		NA	12/30/2001	1.23%	5.93%	9.07%		1.85% \$18.50	
Russell 1000 Value TR USD				4.00%	7.79%	11.46%			
VANGUARD WINDSOR II [0024] - PORTFOLIO DIRECTOR (A042)		NA	06/23/1985	-4.15%	5.29%	9.60%		1.58% \$15.80	
Russell 1000 Value TR USD				4.00%	7.79%	11.46%			
VANGUARD WINDSOR II [0024] - PORTFOLIO DIRECTOR (A073)		NA	06/23/1985	0.37%	6.11%	9.62%		1.58% \$15.80	
Russell 1000 Value TR USD				4.00%	7.79%	11.46%			
Fixed Income									
Other		NIA	04/45/4000	4 4 0 0 /	4.070/	0.700/		4.040/	
CAPITAL CONSERVATION [0007] - PORTFOLIO DIRECTOR (A042)		NA	01/15/1986	4.18%	1.07%	2.78%		1.64% \$16.40	
Barclays US Agg Bond TR USD				10.30%	3.38%	3.75%			
CAPITAL CONSERVATION [0007] - PORTFOLIO DIRECTOR (A073)		NA	01/15/1986	9.10%	2.01%	2.79%		1.64% \$16.40	
Barclays US Agg Bond TR USD				10.30%	3.38%	3.75%			
CORE BOND FUND [0058] - PORTFOLIO DIRECTOR (A042)		NA	09/21/1998	3.84%	1.55%	3.50%		1.52% \$15.20	
Barclays US Agg Bond TR USD				10.30%	3.38%	3.75%			
CORE BOND FUND [0058] - PORTFOLIO DIRECTOR (A073)		NA	09/21/1998	8.75%	2.49%	3.51%		1.52% \$15.20	
Barclays US Agg Bond TR USD				10.30%	3.38%	3.75%			
GOVERNMENT MONEY		NA	01/16/1986	-3.76%	-1.31%	-0.70%		1.51%	

INVESTMENT OPTIONS COMPARATIVE CHART

				Average Annual Total Returns/Benchmark		Total Annua Expenses (%	l Operating %/Per \$1000)		
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Yr.	10 Yr. or Since Inception	Gross	Net	Shareholder Fees & Restrictions
MARKET I FUND [0006] - PORTFOLIO DIRECTOR (A042)		.						\$15.10	
FTSE Treasury Bill 3 Mon USD				2.36%	0.96%	0.52%			
GOVERNMENT MONEY MARKET I FUND [0006] - PORTFOLIO DIRECTOR (A073)		NA	01/15/1986	0.78%	-0.39%	-0.69%		1.51% \$15.10	
FTSE Treasury Bill 3 Mon USD				2.36%	0.96%	0.52%			
GOVERNMENT MONEY MARKET II FUND [0044] - PORTFOLIO DIRECTOR (A042)		NA	09/22/1998	-3.56%	-1.09%	-0.47%		1.30% \$13.00	
FTSE Treasury Bill 3 Mon USD				2.36%	0.96%	0.52%			
GOVERNMENT MONEY MARKET II FUND [0044] - PORTFOLIO DIRECTOR (A073)		NA	09/20/1998	0.99%	-0.16%	-0.45%		1.30% \$13.00	
FTSE Treasury Bill 3 Mon USD				2.36%	0.96%	0.52%			
GOVERNMENT SECURITIES FUND [0008] - PORTFOLIO DIRECTOR (A042)		NA	01/15/1986	3.63%	0.70%	1.76%		1.66% \$16.60	
Barclays US Government TR USD				10.40%	2.90%	3.00%			
GOVERNMENT SECURITIES FUND [0008] - PORTFOLIO DIRECTOR (A073)		NA	01/15/1986	8.52%	1.64%	1.78%		1.66% \$16.60	
Barclays US Government TR USD				10.40%	2.90%	3.00%			
HIGH YIELD BOND FUND [0060] - PORTFOLIO DIRECTOR (A042)		NA	09/21/1998	0.63%	3.14%	6.18%		1.71% \$17.10	
Citi HY Market TR USD				5.72%	4.99%	7.61%			

					age Annual urns/Bench		Total Annua Expenses (%	Il Operating %/Per \$1000)	
Investment Name /	Morningstar	Ticker	Inception		5 Y	10 Yr. or	•		
Benchmark HIGH YIELD BOND FUND [0060] - PORTFOLIO DIRECTOR (A073)	Category	Symbol NA	Date 09/21/1998	1 Yr. 5.39%	4.02%	nce Inception 6.19%	Gross	Net 1.71% \$17.10	Shareholder Fees & Restrictions
Citi HY Market TR USD				5.72%	4.99%	7.61%			
INFLATION PROTECTED FUND [0077] - PORTFOLIO DIRECTOR (A042)		NA	12/18/2004	0.35%	-0.01%	2.40%		1.57% \$15.70	
Barclays US Treasury US TIPS TR USD				7.13%	2.45%	3.46%			
INFLATION PROTECTED [0077] - PORTFOLIO DIRECTOR (A073)		NA	12/19/2004	5.08%	0.93%	2.42%		1.57% \$15.70	
Barclays US Treasury US TIPS TR USD				7.13%	2.45%	3.46%			
INTERNATIONAL GOVERNMENT BOND [0013] - PORTFOLIO DIRECTOR (A042)		NA	09/30/1991	2.92%	0.27%	1.84%		1.65% \$16.50	
30% JP Morgan EMBI Global Diversified Index and 70% Citigroup WGBI				9.18%	2.99%	3.25%			
INTERNATIONAL GOVERNMENT BOND [0013] - PORTFOLIO DIRECTOR (A073)		NA	09/30/1991	7.78%	1.21%	1.85%		1.65% \$16.50	
30% JP Morgan EMBI Global Diversified Index and 70% Citigroup WGBI				9.18%	2.99%	3.25%			
STRATEGIC BOND FUND [0059] - PORTFOLIO DIRECTOR (A042)		NA	09/21/1998	1.87%	1.95%	4.47%		1.62% \$16.20	
Barclays US Agg Bond TR USD				10.30%	3.38%	3.75%			
STRATEGIC BOND FUND [0059] - PORTFOLIO DIRECTOR (A073)		NA	09/21/1998	6.68%	2.87%	4.48%		1.62% \$16.20	

				Average Annual Total Returns/Benchmark		Total Annua Expenses (%	l Operating ⁄/Per \$1000)		
Investment Name / Benchmark Barclays US Agg Bond TR USD	Morningstar Category	Ticker Symbol	Inception Date	1 Yr. 10.30%	5 Yr. Sir 3.38%	10 Yr. or ice Inception 3.75%	Gross	Net	Shareholder Fees & Restrictions
VANGUARD LONG-TERM TREASURY [0023] - PORTFOLIO DIRECTOR (A042)		NA	05/18/1986	18.38%	4.69%	5.59%		1.20% \$12.00	
BBgBarc US Treasury Long TR USD				24.79%	6.77%	6.87%			
VANGUARD LONG-TERM TREASURY [0023] - PORTFOLIO DIRECTOR (A073)		NA	05/18/1986	23.39%	5.52%	5.60%		1.20% \$12.00	
BBgBarc US Treasury Long TR USD				24.79%	6.77%	6.87%			
VANGUARD LT INV-GRADE FUND [0022] - PORTFOLIO DIRECTOR (A042)		NA	07/08/1973	14.52%	5.27%	6.68%		1.22% \$12.20	
BBgBarc US Credit A+ Long TR USD				20.23%	6.96%	7.54%			
VANGUARD LT INV-GRADE FUND [0022] - PORTFOLIO DIRECTOR (A073)		NA	07/08/1973	19.53%	6.08%	6.70%		1.22% \$12.20	
BBgBarc US Credit A+ Long TR USD				20.23%	6.96%	7.54%			
Multi-Asset									
Other									
VANGUARD LIFESTRATEGY CONSER [0054] - PORTFOLIO DIRECTOR (A042)		NA	09/29/1994	0.93%	3.24%	5.19%		1.37% \$13.70	
Vanguard LifeStrategy Conservative Growth Composite Index**				7.14%	5.60%	6.67%			
VANGUARD LIFESTRATEGY CONSER [0054] - PORTFOLIO DIRECTOR (A073)		NA	09/29/1994	5.70%	4.12%	5.20%		1.37% \$13.70	

				Average Annual Total Returns/Benchmark		Total Annua Expenses (%	l Operating ⁄/Per \$1000)		
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception	1 Yr.	5 Yr. Si	10 Yr. or ince Inception	Gross	Net	Shareholder Fees & Restrictions
Vanguard LifeStrategy Conservative Growth Composite Index**	eutoget y	-		7.14%	5.60%	6.67%	0.000		
VANGUARD LIFESTRATEGY GROWTH [0052] - PORTFOLIO DIRECTOR (A042)		NA	09/29/1994	-2.78%	4.78%	7.67%		1.39% \$13.90	
Vanguard LifeStrategy Growth Composite Index*				3.31%	7.14%	9.30%			
VANGUARD LIFESTRATEGY GROWTH [0052] - PORTFOLIO DIRECTOR (A073)		NA	09/29/1994	1.81%	5.60%	7.69%		1.39% \$13.90	
Vanguard LifeStrategy Growth Composite Index*.				3.31%	7.14%	9.30%			
VANGUARD LIFESTRATEGY MODERA [0053] - PORTFOLIO DIRECTOR (A042)		NA	09/29/1998	-0.90%	4.06%	6.53%		1.38% \$13.80	
Vanguard LifeStrategy Moderate Growth Composite Index***				5.25%	6.40%	8.12%			
VANGUARD LIFESTRATEGY MODERA [0053] - PORTFOLIO DIRECTOR (A073)		NA	09/29/1998	3.78%	4.91%	6.54%		1.38% \$13.80	
Vanguard LifeStrategy Moderate Growth Composite Index***				5.25%	6.40%	8.12%			
Other									
Other AGGRESSIVE GROWTH LIFESTYLE [0048] - PORTFOLIO DIRECTOR (A042)		NA	09/19/1998	-3.99%	4.39%	8.01%		1.62% \$16.20	

INVESTMENT OF HONS COMPAR									Section II
			_		age Annu urns/Bend		Total Annua Expenses (%		
Investment Name /	Morningstar	Ticker	Inception	4 1/-	EV. (10 Yr. or	Green	Net	Charabaldar Face & Destrictions
Benchmark 54% Russell 3000 13% EAFE (net) 25% Barclays Capital Aggregate Bond and 8% FTSE/EPRA NAREIT Global Real Estate	Category	Symbol	Date	1 Yr. 0.55%	5.23%	Since Inception 8.03%	Gross	Net	Shareholder Fees & Restrictions
AGGRESSIVE GROWTH LIFESTYLE [0048] - PORTFOLIO DIRECTOR (A073)		NA	09/18/1998	0.55%	5.23%	8.03%		1.62% \$16.20	
54% Russell 3000 13% EAFE (net) 25% Barclays Capital Aggregate Bond and 8% FTSE/EPRA NAREIT Global Real Estate				5.41%	7.70%	9.58%			
ASSET ALLOCATION FUND [0005] - PORTFOLIO DIRECTOR (A042)		NA	09/04/1983	-7.59%	1.92%	5.99%		1.78% \$17.80	
55% S&P 500 Index 35% Barclays Capital Aggregate Bond and 10% TBill 3 month Index				6.61%	7.38%	8.77%			
ASSET ALLOCATION FUND [0005] - PORTFOLIO DIRECTOR (A073)		NA	09/04/1983	-3.23%	2.84%	6.00%		1.78% \$17.80	
55% S&P 500 Index 35% Barclays Capital Aggregate Bond and 10% TBill 3 month Index				6.61%	7.38%	8.77%			
CONSERVATIVE GROWTH LIFESTYLE [0050] - PORTFOLIO DIRECTOR (A073)		NA	09/21/1998	3.43%	3.37%	5.70%		1.64% \$16.40	
24% Russell 3000 8% EAFE (net) 65% Barclays Capital Aggregate Bond and 3% FTSE/EPRA NAREIT Global Real Estate				8.06%	5.36%	6.44%			
CONSERVATIVE GROWTH LIFESTYLE [0050] - PORTFOLIO DIRECTOR		NA	09/21/1998	-1.24%	2.47%	5.69%		1.64%	

INVESTMENT OPTIONS COMPARATIVE CHART

INVESTMENT OPTIONS COMPARATIVE CHART

					age Annı urns/Ben		Total Annua Expenses (%	al Operating %/Per \$1000)	
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Vr	10 Yr. or Since Inception	Gross	Net	Shareholder Fees & Restrictions
(A042)	outegory	Cymbol	Date		5		01033	\$16.40	
24% Russell 3000 8% EAFE (net) 65% Barclays Capital Aggregate Bond and 3% FTSE/EPRA NAREIT Global Real Estate				8.06%	5.36%	6.44%			
MODERATE GROWTH LIFESTYLE [0049] - PORTFOLIO DIRECTOR (A042)		NA	09/21/1998	-2.38%	3.95%	7.20%		1.62% \$16.20	
40% Russell 3000 10% EAFE (net) 45% Barclays Capital Aggregate Bond and 5% FTSE/EPRA NAREIT Global Real Estate				6.76%	6.60%	8.09%			
MODERATE GROWTH LIFESTYLE [0049] - PORTFOLIO DIRECTOR (A073)		NA	09/21/1998	2.23%	4.81%	7.22%		1.62% \$16.20	
40% Russell 3000 10% EAFE (net) 45% Barclays Capital Aggregate Bond and 5% FTSE/EPRA NAREIT Global Real Estate				6.76%	6.60%	8.09%			
VANGUARD WELLINGTON FUND INC [0025] - PORTFOLIO DIRECTOR (A042)		NA	06/30/1929	2.40%	6.00%	8.44%		1.50% \$15.00	
65% S&P 500, 35% BarCap Credit A or Better Bond				7.27%	8.66%	10.42%			
VANGUARD WELLINGTON FUND INC [0025] - PORTFOLIO DIRECTOR (A073)		NA	06/30/1929	7.24%	6.79%	8.45%		1.50% \$15.00	
65% S&P 500, 35% BarCap Credit A or Better Bond				7.27%	8.66%	10.42%			
Variable Annuity		NA	10/21/2000	3 6 2 0 /	10 0/0/	14 469/		1 0 2 0/	
BLUE CHIP GROWTH FUND [0072] - PORTFOLIO		INA	10/31/2000	-3.62%	12.24%	14.45%		1.83%	

					age Annı urns/Ben		Total Annua Expenses (%	l Operating %/Per \$1000)	
Investment Name / Benchmark	Morningstar Category	Ticker Symbol	Inception Date	1 Yr.	5 Vr	10 Yr. or Since Inception	Gross	Net	Shareholder Fees & Restrictions
DIRECTOR (A042)	Category	Symbol	Date		5 11.	Since inception	61033	\$18.30	Shareholder i ees & Restrictions
S&P 500 TR USD				4.25%	10.84%	13.24%			
BLUE CHIP GROWTH FUND [0072] - PORTFOLIO DIRECTOR (A073)		NA	10/31/2000	0.93%	12.87%	14.47%		1.83% \$18.30	
S&P 500 TR USD				4.25%	10.84%	13.24%			
CAPITAL APPRECIATION FUND [0039] - PORTFOLIO DIRECTOR (A042)		NA	09/20/1998	-5.31%	9.03%	12.11%		1.60% \$16.00	
Russell 1000 Growth TR USD				3.71%	13.39%	14.94%			
CAPITAL APPRECIATION FUND [0039] - PORTFOLIO DIRECTOR (A073)		NA	09/20/1998	-0.83%	9.74%	12.13%		1.60% \$16.00	
Russell 1000 Growth TR USD				3.71%	13.39%	14.94%			
Real Estate									
Real Estate									
GLOBAL REAL ESTATE FUND [0101] - PORTFOLIO DIRECTOR (A042)		NA	03/09/2008	8.25%	5.22%	7.82%		1.86% \$18.60	
FTSE EPRA/NAREIT Developed TR USD				14.11%	7.78%	9.50%			
GLOBAL REAL ESTATE FUND [0101] - PORTFOLIO DIRECTOR (A073)		NA	03/09/2008	13.26%	6.03%	7.83%		1.86% \$18.60	
FTSE EPRA/NAREIT Developed TR USD				14.11%	7.78%	9.50%			

Table 1 shows fee and expense information for the investment options listed including the Total Annual Operating Expenses expressed as a percentage and a dollar amount based upon a \$1,000 accumulation both as net and gross of expenses. Total Annual Operating Expenses is a measure of what it costs to operate an investment, expressed as a percentage of its assets, as a dollar amount or in basis points. These are costs the investor pays through a reduction in the investment's rate of return.

TIAA

Table 2 – Fixed Return Investments

The following chart lists the plan's investment options that have a fixed or stated rate of return.

Name/Type/Option	Return	Term	Additional Information
Guaranteed Annuity			
TIAA Traditional-Group Retirement Annuity	3.25%	Through 02/29/2020	The current rate shown applies to premiums remitted during the month of November 2019 and will be credited through 2/28/2020. This rate is subject to change in subsequent months. Up-to-date rate of return information is available on your plan-specific website noted above or at 800-842-2733.TIAA Traditional guarantees your principal and a minimum annual interest rate. The guaranteed minimum interest rate is 3.00%, and is effective while the funds remain in the contract. The account also offers the opportunity for additional amounts in excess of the guaranteed minimum interest rate. When declared, additional amounts remain in effect for the twelve-month period that begins each March 1 for accumulating annuities and January 1 for payout annuities. Additional amounts are not guaranteed for the future years. All guarantees are subject to TIAA's claims paying ability.TIAA Traditional is designed primarily to help meet your long-term retirement income needs; it is not a short-term savings vehicle. Therefore, some contracts require that benefits are paid in installments over time and/or may impose surrender charges on certain withdrawals. TIAA has rewarded participants who save in contracts where benefits are paid in installments over time and/or may impose surrender charges on certain withdrawals. TIAA has rewarded participants who save in contracts where benefits are paid in installments over time instead of in an immediate lump-sum by crediting higher interest rates, typically 0.50% to 0.75% higher. Higher rates will lead to higher account balances and more retirement income for you.For Group Retirement Annuity (GRA) contracts, and subject to the terms of your employer's plan, lump-sum withdrawals are available from the TIAA Traditional account only within 120 days after termination of employment and are subject to a 2.5% surrender charge. All other withdrawals and transfers from the account must be paid in ten annual installments. After termination of employment additional income options may be available including
			The current rate shown applies to premiums remitted during the month of November 2019 and will be credited through 2/28/2020. This rate is subject to change in subsequent months. Up-to-date rate of return information is available on your plan-specific website noted above or at 800-842-2733.TIAA Traditional guarantees your principal and a minimum annual interest rate. The guaranteed minimum interest rate is 3.00%, and is effective while the funds remain in the contract. The account also offers the opportunity for additional amounts in excess of the guaranteed minimum interest rate. When declared, additional amounts remain in effect for the twelve-month period that begins each March 1 for accumulating annuities and January 1 for payout annuities. Additional amounts are not guaranteed for the future years. All guarantees are subject to TIAA's claims paying ability.For Group Supplemental Retirement Annuity (GSRA) contracts, and subject to the terms of your employer's plan, lump-sum withdrawals and transfers are available from the TIAA Traditional account without any restrictions or
TIAA Traditional-Group Supplemental Retirement Annuity	3.00%	Through 02/29/2020	charges. After termination of employment additional income options may be available including income for life, income for a fixed period of time, and IRS required minimum distribution payments.

Name/Type/Option	Return	Term	Additional Information
TIAA Traditional-Retirement Annuity	3.25%	Through 02/29/2020	The current rate shown applies to premiums remitted during the month of November 2019 and will be credited through 2/28/2020. This rate is subject to change in subsequent months. Up-to-date rate of return information is available on your plan-specific website noted above or at 800-842-2733.TIAA Traditional guarantees your principal and a minimum annual interest rate. The guaranteed minimum interest rate is 3.00%, and is effective while the funds remain in the contract. The account also offers the opportunity for additional amounts in excess of the guaranteed minimum interest rate. When declared, additional amounts remain in effect for the twelve-month period that begins each March 1 for accumulating annuities and January 1 for payout annuities. Additional amounts are not guaranteed for the future years. All guarantees are subject to TIAA's claims paying ability.TIAA Traditional is designed primarily to help meet your long-term retirement income needs; it is not a short-term savings vehicle. Therefore, some contracts require that benefits are paid in installments over time and/or may impose surrender charges on certain withdrawals. TIAA has rewarded participants who save in contracts where benefits are paid in installments over time instead of in an immediate lump-sum by crediting higher interest rates, typically 0.50% to 0.75% higher. Higher rates will lead to higher account balances and more retirement income for you.For Retirement Annuity (RA) contracts, lump-sum withdrawals are not available from the TIAA Traditional account. Subject to the terms of your plan, all withdrawals and transfers from the account must be paid in ten annual installments. After termination of employment additional income options may be available including income for life, interest-only payments, and IRS required minimum distribution payments.
TIAA Traditional-Supplemental Retirement Annuity	3.00%	Through 02/29/2020	The current rate shown applies to premiums remitted during the month of November 2019 and will be credited through 2/28/2020. This rate is subject to change in subsequent months. Up-to-date rate of return information is available on your plan-specific website noted above or at 800-842-2733.TIAA Traditional guarantees your principal and a minimum annual interest rate. The guaranteed minimum interest rate is 3.00%, and is effective while the funds remain in the contract. The account also offers the opportunity for additional amounts in excess of the guaranteed minimum interest rate. When declared, additional amounts remain in effect for the twelve-month period that begins each March 1 for accumulating annuities and January 1 for payout annuities. Additional amounts are not guaranteed for the future years. All guarantees are subject to TIAA's claims paying ability.For Supplemental Retirement Annuity (SRA) contracts, and subject to the terms of your employer's plan, lump-sum withdrawals and transfers are available from the TIAA Traditional account without any restrictions or charges. After termination of employment additional income options may be available including income for life, income for a fixed period of time, and IRS required minimum distribution payments.

INVESTMENT OPTIONS COMPARATIVE CHART

VARIABLE ANNUITY LIFE INSURANCE COMPANY (VALIC)

Table 2 – Fixed Return Investments

The following chart lists the plan's investment options that have a fixed or stated rate of return.

Name/Type/Option	Return	Term	Additional Information
SHORT TERM FIXED - PORTFOLIO DIRECTOR A073 and A042	1.00%	09/30/2019	Not less frequently than annually, VALIC will declare interest rates that will be credited on a portfolio basis. On the portfolio basis, all amounts accumulated will be credited with the same rate of interest for the current period. The interest rate will be set in advance of the period to which it relates and will never fall below 1%. Transfers out of the Short Term Fixed Account are not allowed during the 90 day period following a transfer in. Please refer to your contract or certificate for specific information.
FIXED ACCOUNT PLUS - PORTFOLIO DIRECTOR A073 and A042	1.65%	09/30/2019	Not less frequently than annually, VALIC will declare interest rates that apply either to the entire accumulation value, or separately to amounts accumulated in separate time periods. The interest rate will be set in advance of the period to which it relates and will never fall below 1%. In-service transfers to another investment option of up to 20% per contract year are allowed. However, if the value remaining under Fixed Account Plus would be less than \$500, such value may be transferred in full at that time. If funds are transferred out of this fund to another investment option, any assets transferred back to this fund within 90 days may receive a different rate of interest than new purchase payments. Please refer to your contract or certificate for specific guarantee information.
MULTI-YEAR ENHANCED FIXED 10YR - PORTFOLIO DIRECTOR A073 and A042	1.70%	09/30/2019	This option provides a guaranteed interest rate for a guaranteed period (ten years). Rates are declared not less frequently than annually and are guaranteed for the term of the investment. The interest rate will be set in advance of the period to which it relates and will never fall below 1%. Withdrawals prior to the contract end of the guaranteed period date may be subject to a market value adjustment. Please refer to your contract or certificate for specific information.

Part B. Annuity Information

The information below focuses on the annuity options under the plan. Annuities are insurance contracts that allow you to receive a guaranteed stream of payments at regular intervals, usually beginning when you retire and lasting for your entire life. Annuities are issued by insurance companies. Guarantees of an insurance company are subject to its long-term financial strength and claims-paying ability.

TIAA

TIAA Traditional Annuity Lifetime Income Option OBJECTIVES / GOALS

To provide a guaranteed stable stream of income for your life and, if you choose, the life of an annuity partner. A TIAA Traditional Annuity provides income stability by providing a minimum guaranteed interest rate as well as the potential for additional interest. TIAA Traditional can be part of a diversified retirement portfolio that may include stocks (equities), bonds (fixed income), real estate, and money market investments. Electing a life annuity is just one of many payout options available under the TIAA Traditional Annuity.

PRICING FACTORS

The amount of your lifetime income is dependent upon many factors including:

- The type of annuity selected (single life, joint life, with or without guaranteed minimum periods), and your selection of either the standard or graded benefit method.
- The amount of accumulations converted to a life annuity.
- Your age and, if applicable, the age of your annuity partner.
- The projected returns of the TIAA Traditional Annuity.

Under no circumstances will you receive less than the guaranteed amount of income required under the annuity contracts. To learn more about investments that offer lifetime annuity income, please access the web link provided in the Performance and Fee Information section.

RESTRICTIONS / FEES

- You may not begin a one-life annuity after you attain age 90, nor may you begin a two-life annuity after you or your annuity partner attains age 90.
- Subject to contract terms, if your accumulation is less than \$5,000 on your annuity starting date, TIAA may choose instead to pay your accumulations to you in a single sum.
- If your TIAA annuity payment would be less than \$100, TIAA has the right to change the payment frequency which would result in a payment of \$100 or more.

• Once you have elected a lifetime annuity, your election is irrevocable.

TIAA Real Estate and CREF Variable Annuity Lifetime Income Options OBJECTIVES / GOALS

To provide a variable stream of income for your life and, if you choose, the life of an annuity partner. This lifetime annuity provides a variable income that you cannot outlive. A variable annuity can be part of a diversified retirement portfolio that may include guaranteed, stocks (equities), bonds (fixed income), real estate, and money market investments. Electing a life annuity is just one of many payout options available.

PRICING FACTORS

The amount of your lifetime income is dependent upon many factors including:

- The type of annuity selected (single life, joint life, with or without guaranteed minimum periods).
- The amount of accumulations converted to a life annuity.
- Your age and, if applicable, the age of your annuity partner.
- The investment performance of the variable annuity account your annuity is based upon.

Variable annuity accounts don't guarantee a minimum income. Income fluctuates based on market performance and is directly tied to the accounts' investment returns. A 4% annual investment return is assumed. Generally, if the actual return in a given year is greater than 4% the amount of annuity income will increase; if it is less than 4%, the income will decrease. To learn more about investments that offer lifetime annuity income, please access the web link provided in the Performance and Fee Information section.

RESTRICTIONS / FEES

• You may not begin a one-life annuity after you attain age 90, nor may you begin a two-life annuity after you or your annuity partner attains age 90.

- Subject to contract terms, if your accumulation is less than \$5,000 on your annuity starting date, TIAA may choose instead to pay your accumulations to you in a single sum.
- If your annuity payment would be less than \$100, TIAA has the right to change the payment frequency which would result in a payment of \$100 or more.
- Once you have elected a lifetime annuity, your election is irrevocable.
- Upon annuitization of CREF accumulations, the expenses associated with CREF will be the same as the R3 Class regardless of the CREF Class prior to annuitization. The R3 Class has the lowest expense of all the CREF Classes.

Fidelity Investments

OBJECTIVES / GOALS

PRICING FACTORS

RESTRICTIONS / FEES

Variable Annuity Life Insurance Company (VALIC) LIFE ONLY PORTFOLIO DIRECTOR (A073 AND A042)

OBJECTIVES / GOALS

Life Only: Provides a guaranteed stream of income for your life. Under this option there is no provision for a death benefit for the beneficiary.

Life Option with Guaranteed Period: Provides a guaranteed stream of income for your life. If you die before the guaranteed period has expired, your beneficiary can receive payments for the rest of the guaranteed period, or take a lump-sum distribution.

Life with Cash or Unit Refund: Provides a guaranteed stream of income for your life. These payments are based upon your life expectancy and will continue for as long as you live. If you do not outlive the life expectancy, your beneficiary may receive an additional payment.

Joint and Survivor Life: Provides a guaranteed payment stream of income during the joint lifetime of you and a second person. Upon the death of one, payments continue during the lifetime of the survivor. There is no death benefit at the death of the last survivor.

Payments for a Designated Period: Provides a guaranteed payment stream of income to you for a select number of years between 5 and 30. Upon your death, payments will continue to your beneficiary until the designated period is completed.

PRICING FACTORS

The cost of each option depends on your age, the interest rates and mortality table when you buy it, and the interest rates and mortality table guaranteed in your contract.

RESTRICTIONS / FEES

Once your payments have begun, the option you chose cannot be stopped or changed.

The first payment must be at least \$25 and the total annual payment must be at least \$100. VALIC reserves the right to reduce the frequency of payments so each payment is at least \$25.

Please visit www.TIAA.org/public/support/help/glossary/index.html for a glossary of investment terms relevant to the investment options under this plan.

Fees and expenses are only one of many factors to consider when you decide to invest in an option. You may also want to think about whether an investment in a particular option, along with your other investments, will help you achieve your financial goals. The cumulative effect of fees and expenses can substantially reduce the growth of your retirement savings. Visit the Department of Labor's website for an example showing the long-term effect of fees and expenses at www.dol.gov/sites/default/files/ebsa/about-ebsa/our-activities/resource-center/publications/a-look-at-401k-plan-fees.pdf.

Other service provider important additional information:

tbd

TIAA important additional information:

The returns quoted represent past performance, which is no guarantee of future results. Returns and the principal value of your investment will fluctuate. Current performance may be higher or lower than that shown, and you may have a gain or a loss when you redeem your investments. Expense ratios shown are based on the most recent information available, but may not reflect all updates. Please consult the most recent prospectus or offering document for more detailed information.

Variable return investments (mutual funds and/or variable annuities) are offered through your plan sponsor's retirement plan. Funds are offered at that day's net asset value (NAV), and the performance is displayed accordingly. Performance at NAV does not reflect sales charges, which are waived through your retirement plan. If included, the sales charges would have reduced the performance as quoted.

If a variable return investment option includes performance for periods beyond its inception date that performance is based on the performance of an older share class of the investment option. Such performance has not been restated to reflectexpense differences between the two classes. If expense differences had been reflected, performance for these periods would be lower or higher than stated.

Expense ratios shown are based on the most recent information available, but may not reflect all updates and may differ slightly from the prospectus due to rounding. Please consult the most recent prospectus or offering document for more detailed information.

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The Morningstar Category classifies an investment option based on its investment style as measured by underlying portfolio holdings (portfolio statistics and compositions over the past three years). If the investment option is new and has no portfolio, Morningstar estimates where it will fall before assigning a more permanent category. When necessary, Morningstar may change a category assignment based on current information.

There are inherent risks in investing in variable return investments including loss of principal. Please read the prospectus and carefully consider the investment objectives, risks, charges and expenses before investing.

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