

# ATTACHMENT D: COMPREHENSIVE INVESTMENT PLANS

## COMPREHENSIVE INVESTMENT PLAN

### STANLEY G. TATE FLORIDA PREPAID COLLEGE PROGRAM

*Effective Date: August 1, 2018*

#### OVERVIEW

The Stanley G. Tate Florida Prepaid College Program (Program) was created pursuant to Section 1009.98, Florida Statutes, to provide a medium through which the cost of enrollment in a state postsecondary institution may be paid in advance at a rate lower than the projected corresponding cost at the time of actual enrollment. Payments are combined and invested in a manner that yields, at a minimum, sufficient earnings to generate the difference between the prepaid amount and the cost of enrollment. Program funds are held in the Florida Prepaid College Trust Fund (Fund), established by Section 1009.972, Florida Statutes, within the State Board of Administration. The Fund may be invested pursuant to Section 215.47, Florida Statutes. Pursuant to Section 1009.972(4), Florida Statutes, the Fund is exempt from the investment requirements of Section 17.57.

#### GOVERNANCE

The Program is administered by the Florida Prepaid College Board (Board) which was created pursuant to Section 1009.97, Florida Statutes.

In accordance with Section 1009.973, Florida Statutes, the Board has established this Comprehensive Investment Plan (CIP), subject to approval by the State Board of Administration. This CIP formally documents the investment policy and strategies employed by the Board to meet the projected Program liabilities.

The Board has the necessary powers and duties to carry out the provisions of Section 1009.97, Florida Statutes. This includes, but is not limited to, the responsibility to administer the Program in an actuarially sound manner to defray its obligations and invest funds not required for immediate disbursement in accordance with this CIP. The Board may delegate responsibility for administration of this CIP to a committee of the Board or to a person duly chosen by the Board.

The Executive Director serves at the pleasure of the Board as the chief administrative and operational officer of the Board. The Executive Director is responsible for managing and executing the investment and debt responsibilities of the Board. This includes developing and implementing Investment Guidelines, as approved by the Board, which reflect the goals and objectives of this CIP.

#### CONTRACTUAL RELATIONSHIPS

The Executive Director shall manage all external contractual relationships in accordance with the fiduciary responsibilities of the Board.

Pursuant to Section 1009.971, Florida Statutes, the Board solicits proposals and contracts for investment consultant, trustee, and investment management services. The Board also contracts for actuarial services. There may be more than one provider for each service; their respective responsibilities are summarized below.

### Actuary

The Actuary shall perform periodic valuations of the Program to determine actuarial soundness and provide projections for future asset and liability patterns. The Actuary also conducts special experience and other Program studies to support Program valuation assumptions and policy considerations.

### Investment Consultant

The Investment Consultant shall review the performance of the Investment Manager and advise the Board on investment management, performance matters, portfolio design and structure, asset allocation issues, and investment policy, including the contents of this CIP and the Investment Guidelines.

### Trustee

The Trustee is responsible for the safekeeping of Program investment assets and management of the securities lending program.

Pursuant to Section 1009.971(5)(c), the Trustee shall agree to meet the obligations of the Board to qualified beneficiaries if moneys in the Fund fail to offset the obligations of the Board as a result of imprudent selection or supervision of investment programs by the Trustee.

### Investment Managers

The Board will hire duly qualified investment managers to carry out the daily investment responsibilities. Investment Managers will have investment discretion as to security selection within the requirements expressed in the CIP and Investment Guidelines.

The Investment Managers shall invest Program assets, as specified by the Board, with care, skill, prudence, and diligence. This includes promptly voting all proxies solicited in connection with securities under the investment manager's supervision and maintaining detailed records of the voting of proxies and related actions. The Investment Manager shall evidence superior performance while maintaining strict compliance with all applicable provisions of law and may exercise discretion within the bounds of this CIP and the Investment Guidelines.

Pursuant to Section 1009.971(5)(d), the Investment Manager shall:

- Be limited to authorized insurers as defined in Section 624.09, banks as defined in Section 658.12, associations as defined in Section 665.012, authorized Securities and Exchange Commission investment advisers, and investment companies as defined in the Investment Company Act of 1940.
- Have their principal place of business and corporate charter located and registered in the United States.
- Agree to meet the obligations of the Board to qualified beneficiaries if moneys in the Fund fail to offset the obligations of the Board as a result of imprudent investing by the Investment Manager.

## **CONFLICTS OF INTEREST**

The Board, its designees, and any service provider operating on behalf of the Board has a duty and obligation to disclose conflicts of interest. The Board shall require timely and sufficient disclosure of conflicts of interest that may exist between the Board, service providers, potential service providers, investments, potential investments, and other entities or transactions.

The Investment Consultant and the Trustee shall annually certify that no conflicts of interest exist relative to the services provided for the Program.

## **INVESTMENT OBJECTIVE AND STRATEGY**

The principal objective of the Fund is to meet the projected liability obligations of the Program while earning incremental income on the funds that exceed the liabilities. To achieve this, the Fund is divided into two segments: Liability and Actuarial Reserve.

The liability segment employs a liability driven investment strategy that (1) mitigates the risk of funding status deficiency and (2) maintains appropriate liquidity to address projected Program liability cash flows.

The actuarial reserve segment is invested to seek incremental yield within appropriate risk levels.

## **INVESTMENT GOALS**

To support the Fund objective, the Board has established the following investment goals, listed in order of priority.

### **Safety**

The primary investment priority is to position the Program to meet future liabilities. The Fund shall be maintained with sufficient diversification among security issues and market sectors such that the performance of one security or sector will not have an excessive impact on the Fund.

### **Liquidity**

Program investments must provide adequate liquidity to meet the future liabilities of the Program. Consideration will be given to investment maturities, investment income, and fund receipts.

### **Yield**

After meeting safety and liquidity requirements, the Board aims to maximize investment returns within appropriate levels of risk.

## **COMPREHENSIVE INVESTMENT PLAN**

The Comprehensive Investment Plan (CIP) includes the investment policies utilized by the Board in its administration of the Program. Investment policies included in the CIP provide direction intended to set the framework for the Program's investments. Per Section 1009.973, Florida Statutes, the CIP is subject to the approval of the State Board of Administration.

## **INVESTMENT GUIDELINES**

Investment Guidelines are intended to set forth the specific investment strategies, limitations and targets necessary to implement the CIP. Investment Guidelines are subject to the approval of the Board.

## **ASSET/LIABILITY STUDY**

An asset/liability study shall be conducted at least once every five years. The asset/liability study will provide a fundamental review of the strategic relationship between the overall investment program and the liabilities for which they serve. The focus will be to provide the Board with the information required to manage the risk associated with the Prepaid Plan. It will relate the risk/reward trade-offs of various investment programs to the liabilities relative to the interest rate risk and tuition inflation scenarios. The process will guide the Board to an investment structure which balances the objective of surplus growth with the concern for surplus volatility.

## ASSET ALLOCATION

Asset allocation refers to the strategic deployment of assets among investment types. Assets are allocated to Fund Segments to meet the primary investment goal of positioning the Fund to meet future liabilities.

The board may maintain up to 5% of the Funds balance in cash for operating purposes. The cash shall be invested in 2a7 (actual or like) money market vehicles such as Florida Prime or an equivalent sweep vehicle provided by the Trustee.

The remaining funds shall be allocated as follows:

Fund Segment	Allocation
Liability Segment	100% of Net Actuary projected Program liabilities
Actuarial Reserve Segment	Remaining funds

## LIABILITY SEGMENT

The Liability Segment is established to match participant payments and future investment returns with Program liabilities as projected by the Actuary. The segment allocation shall not be less than future Program liabilities, net of projected participant payments.

The Liability Segment shall utilize an immunized fixed income investment strategy which is reconstituted periodically using the liability profile determined by the Actuary.

Authorized investment vehicles for the Liability Segment:

**Cash or Cash Equivalent** – Maximum allocation 10% of the Liability Segment

1. Deposit accounts and certificates of deposit in banks
2. 2a7 (actual or like) money market funds
3. Collateralized repurchase agreements for which the underlying securities are obligations of the United States Treasury or agencies of the United States Government.
4. Commercial paper of prime quality
  - Must be rated the highest letter and numerical rating provided by at least two nationally recognized rating service.

**Obligations of the United States Treasury** – Maximum allocation 100% of the Liability Segment

1. United States Treasury bonds and notes
2. Interest and principal strips of Treasury securities
3. Treasury Inflation Protection Securities (TIPS).
4. Agencies of the United States Government
  - Not restricted to full-faith and credit obligations.

**Municipal securities** – Maximum allocation of 20% of the Liability Segment

1. General Obligation or Revenue bonds.
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
2. Build America Bonds (BABs) are permitted, but limited to 10% of the Liability Segment
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher

**Corporate debt obligations** – Maximum allocation of 40% of the Liability Segment

1. Registered Bonds
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
  - Convertible securities are not permitted
2. 144(a) securities (with and without registration rights) are permitted
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher

**Residential Mortgage Backed Securities** – Maximum allocation of 20% of the Liability Segment

1. United States Agency Mortgage backed securities
2. Privately Issued Mortgage Backed securities
  - Includes but is not limited to commercial mortgage backed securities and real estate mortgage investment conduits
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
3. Mortgage To Be Announced (TBA) securities.
  - Requires a cash equivalent set aside for future settlement of the forward agreement.

**Other Collateralized Securities** – Maximum allocation of 10% of the Liability Segment

1. Asset-backed securities
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
2. Commercial Mortgage Backed Securities
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher

## **Foreign Debt Securities** – Maximum allocation of 10% of the Liability Segment

1. Supranational Debt Obligations
  - Must be dollar-denominated
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
2. Sovereign Debt Obligations
  - Must be dollar-denominated
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
3. Foreign Debt Obligations
  - Must be dollar-denominated
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher

## **Commingled Investment Funds**

1. Exchange Traded Funds (ETF's) traded on domestic exchanges,
  - Primarily invested in authorized investment vehicles for the Liability Segment
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement
2. Commingled investment funds and mutual funds
  - Primarily invested in authorized investment vehicles for the Liability Segment
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement

## **Derivatives**

4. The following uses of derivatives are authorized:
  - Substitute for physical securities
  - Duration management
  - Risk control

The Program does not engage in short selling of securities.

The Board approves the target allocation for the Liability Segment. Target allocations and benchmarks are set forth in the Investment Guidelines.

Securities included in an approved benchmark that are not specifically identified above are authorized with a limit of 2% above the benchmark weighting.

## ACTUARIAL RESERVE SEGMENT

Any amount in the Fund that exceeds the Liability Segment is the Actuarial Reserve Segment. The Actuarial Reserve Segment is invested to seek incremental yield within appropriate risk levels based on how the Program is operating. Items to consider are market conditions, tuition pricing, product offerings, etc.

Authorized investment vehicles for the Actuarial Reserve Segment:

### Cash or Cash Equivalent

1. Deposit accounts and certificates of deposit in banks
2. 2a7 (actual or like) money market funds
3. Collateralized repurchase agreements for which the underlying securities are obligations of the United States Treasury or agencies of the United States Government.
4. Commercial paper of prime quality
  - Must be rated the highest letter and numerical rating provided by at least two nationally recognized rating service

### Obligations of the United States Treasury

1. United States Treasury bonds and notes
2. Interest and principal strips of Treasury securities
3. Treasury Inflation Protection Securities (TIPS)
4. Agencies of the United States Government without restriction to full-faith and credit obligations.

### Municipal securities

1. General Obligation or Revenue bonds.
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
2. Build America Bonds (BABs) are permitted, but limited to 10% of the Liability Segment
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher

### Corporate debt obligations

5. Registered Bonds
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
2. 144(a) securities (with and without registration rights) are permitted
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher

### Residential Mortgage Backed Securities

1. United States Agency Mortgage backed securities
2. Privately Issued Mortgage Backed securities
  - Includes but is not limited to commercial mortgage backed securities and real estate mortgage investment conduits

- Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
3. Mortgage To Be Announced (TBA) securities.
    - Requires a cash equivalent set aside for future settlement of the forward agreement.

#### **Other Collateralized Securities**

1. Asset-backed securities
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
2. Commercial Mortgage Backed Securities
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher

#### **Foreign Debt Securities**

1. Supranational Debt Obligations
  - Must be dollar-denominated
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
2. Sovereign Debt Obligations
  - Must be dollar-denominated
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
3. Foreign Debt Obligations
  - Must be dollar-denominated
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher

#### **Common Stock**

1. Domestic Equities
  - Traded on domestic exchanges, including over-the-counter markets and recognized third and fourth markets
2. American Depositary Receipts
  - Traded on domestic exchanges, including over-the-counter markets and recognized third and fourth markets
3. Foreign Equities
  - Foreign-domiciled companies traded on domestic or non-U.S. exchanges, including over-the-counter markets

#### **Commingled Investment Funds**

1. Exchange Traded Funds (ETF's) traded on domestic exchanges,
  - Primarily invested in authorized investment vehicles for the Actuarial Reserve Segment
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement

2. Commingled investment funds and mutual funds
  - Primarily invested in authorized investment vehicles for the Actuarial Reserve Segment
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement

## **Derivatives**

1. The following uses of derivatives are authorized:
  - Substitute for physical securities
  - Duration management
  - Risk control
  - Foreign currency hedging

The Program does not engage in short selling of securities.

The Board approves the target allocation for the Actuarial Reserve Segment. Target allocations and benchmarks are set forth in the Investment Guidelines.

Securities included in an approved benchmark that are not specifically identified above are authorized with a limit of 2% above the benchmark weighting.

## **ALLOCATION MONITORING AND REBALANCING**

The Board shall review the Segment and Security Type allocations not less than quarterly. The Board shall adopt guidelines for rebalancing the Segment and Security Types in the Investment Guidelines.

## **COMPLIANCE**

At a minimum, each Investment Manager shall certify compliance with this CIP and the Investment Guidelines at least quarterly. In the event of noncompliance, exceptions shall be reported to the Board with proposed actions to bring the portfolio into compliance.

## **NON-COMPLIANT INVESTMENTS**

Any purchased investment that is not in compliance with the CIP and/or Guidelines must be sold immediately. Any loss on the sale will be the responsibility of the Investment Manager.

Investments that are in compliance with the CIP and/or Guidelines at time of purchase but fall out of compliance due to a rating downgrade are not required to be immediately sold. The Investment Manager must notify the Board of such securities within 10 days of the downgrade. If an Investment Manager believes that it is in the best interest of the Board to hold the security, the Investment Manager can present a recommendation to hold the investment along with justification in writing to the Board.

If determined to be in the best interest of the Board, downgraded securities can be required to be sold immediately.

## **PERFORMANCE MEASUREMENT**

The Investment Consultant shall calculate official performance results for the Board monthly, pursuant to the recommended guidelines of the CFA Institute, currently Global Investment Performance Standards (GIPS), where applicable, and in accordance with the Investment Guidelines.

## REPORTING

The Executive Director shall create, or cause to be created, quarterly reports for the Board of investment matters including, but not limited to, investment management, investment performance, asset allocation, and rebalancing.

## SECURITIES LENDING

The Board may loan one or more securities held in the Fund. Loans must be collateralized at no less than 102% of the market value of the borrowed securities or 105% if the borrowed securities and collateral are denominated in different currencies. Collateral shall be obtained at the time the transaction is executed and maintained throughout the term of the loan. At no time, shall the market value of collateral be less than the market value of the loan.

### Authorized non-cash collateral:

1. Obligations issued or guaranteed by the U.S. Government or its agencies
2. Irrevocable letters of credit issued by banks approved by the Agent's Trust Credit Department.

### Authorized investment vehicles for reinvestment of cash collateral:

#### **Cash or Cash Equivalent** – Maximum allocation 100% of the cash collateral

1. Deposit accounts and certificates of deposit in banks
2. 2a7 (actual or like) money market funds
3. Collateralized repurchase agreements for which the underlying securities are obligations of the United States Treasury or agencies of the United States Government.
4. Commercial paper of prime quality
  - Must be rated the highest letter and numerical rating provided by at least two nationally recognized rating service.

#### **Obligations of the United States Treasury** – Maximum allocation 100% of the cash collateral

1. United States Treasury bonds and notes
2. Interest and principal strips of Treasury securities
3. Treasury Inflation Protection Securities (TIPS).
4. Agencies of the United States Government
  - Not restricted to full-faith and credit obligations.

#### **Municipal securities** – Maximum allocation of 20% of the cash collateral

1. General Obligation or Revenue bonds.
  - Must be rated by at least two nationally recognized rating services A-/A3 or higher. If rated by only one nationally recognized rating service, then the rating must be AA-/Aa3 or higher
2. Build America Bonds (BABs) are permitted, but limited to 10% of the cash collateral
  - Must be rated by at least two nationally recognized rating services A-/A3 or higher. If rated by only one nationally recognized rating service, then the rating must be AA-/Aa3 or higher

**Corporate debt obligations** – Maximum allocation of 40% of the cash collateral

1. Registered Bonds
  - Rated by at least two nationally recognized rating services AA-/Aa3 or higher. If rated by only one nationally recognized rating service, then the rating must be AAA-/Aaa3 or higher
2. 144(a) securities (with and without registration rights) are permitted
  - Rated by at least two nationally recognized rating services AA-/Aa3 or higher. If rated by only one nationally recognized rating service, then the rating must be AAA-/Aaa3 or higher

**Foreign Debt Securities** – Maximum allocation of 10% of the cash collateral

1. Supranational Debt Obligations
  - Must be dollar-denominated and registered with the SEC
  - Must be rated by at least two U.S. nationally recognized rating services AA-/Aa3 or higher. If rated by only one nationally recognized rating service, then the rating must be AAA-/Aaa3 or higher
2. Sovereign Debt Obligations
  - Must be dollar-denominated and registered with the SEC
  - Must be rated by at least two U.S. nationally recognized rating services AA-/Aa3 or higher. If rated by only one nationally recognized rating service, then the rating must be AAA-/Aaa3 or higher
3. Foreign Debt Obligations
  - Must be dollar-denominated and registered with the SEC
  - Must be rated by at least two U.S. nationally recognized rating services AA-/Aa3 or higher. If rated by only one nationally recognized rating service, then the rating must be AAA-/Aaa3 or higher

# INVESTMENT GUIDELINES

## STANLEY G. TATE FLORIDA PREPAID COLLEGE PROGRAM

Effective Date: August 1, 2018

### OVERVIEW

The Florida Prepaid College Board (Board) has established the following Investment Guidelines to support implementation of the policy and strategy set forth in the Comprehensive Investment Plan (CIP) for the Stanley G. Tate Florida Prepaid College Program (Program). The Investment Guidelines are maintained with the CIP but they are managed separately by the Board to allow for timely response to market conditions and environmental factors that may affect the Program.

### ASSET ALLOCATION TARGET

Where applicable, the Board has established target allocations within the fund segments. The allocation may deviate from the target allocation, within the allowable range(s) provided in the CIP.

#### Liability Segment

The Liability Segment represents the total liability obligations (including benefits, cancellation refunds and other expenses) less the present value of projected future premium contributions as calculated by the Actuary.

The target security type allocation for the Liability Segment of the Fund and the related benchmarks are as follows:

Security Type	Short-Term Target Allocation	Long-Term Target Allocation	Benchmark Index
U.S. Government Backed Securities	76%	60%	Policy weighted by security selection
Investment Grade Corporate Bonds	14%	30%	Bloomberg Barclays U.S. Intermediate Corporate/ Bloomberg Barclays U.S. Long Corporate
Mortgage Backed Securities	10%	10%	Bloomberg Barclays U.S. MBS

The target allocation above represents an allocation to be achieved over time. Currently, the allocation is overweight U.S. Government Backed Securities and underweight Investment Grade Corporate Bonds. The Board will direct the transition to the target based on factors including, but not limited to: (1) plan prices, (2) anticipated tuition and fee inflation, (3) the strength of the actuarial reserve, and (4) plan sales.

Performance of the Liability Segment is evaluated against a custom target-weighted blend of the benchmarks for each security type in the segment. The custom benchmark is developed to replicate the behavior of the Program liabilities; thus, mitigating volatility in the funding status.

### Actuarial Reserve Segment

The target Security Type allocation for the Actuarial Reserve Segment of the Fund and the related benchmark is as follows:

Security Type	Target Allocation	Benchmark Index
<b>Fixed Income</b>		
Fixed Income	30%	Bloomberg Barclays Aggregate Bond Index
<b>Domestic Equity</b>		
Large Cap Growth Equity	10%	Russell 1000 Growth
Large Cap Value Equity	10%	Russell 1000 Value
Large Cap Core Equity	20%	S&P 500
Mid Cap Equity	10%	S&P Mid Cap 400
Small Cap Equity	10%	Russell 2000
<b>International Equity</b>		
International Equity	10%	MSCI EAFE

At least quarterly, the Board shall review the target allocations.

Each Security Type has a range of +/- 5% relative to its target allocation. In order to maintain the target allocation for each Security Type, the allocation shall be monitored monthly and rebalanced to the target when the allowable ranges are exceeded. The allocation should be brought back into compliance within five business days.

Performance of the Actuarial Reserve Segment will be evaluated at the Security Type level against the benchmark for each security type.

### EXCESS RETURN AND TRACKING ERROR TARGETS

Each Investment Manager has established gross excess return and tracking error targets.

#### Liability Segment

Investment Manager	Excess Return Target	Tracking Error Target
Neuberger Berman	20 bps	50 bps
Standish	20 bps	50 bps
Northern Trust	0 bps	10 bps

## Actuarial Reserve Segment

Security Type	Investment Manager	Excess Return Target	Tracking Error Target
<i>Fixed Income</i>			
Fixed Income	Columbia	50 bps	100 bps
<i>Domestic Equity</i>			
Large Cap Growth Equity	BMO	150 bps	500 bps
Large Cap Value Equity	QMA	100 bps	400 bps
Large Cap Core Equity	AB	0 bps	25 bps
Mid Cap Equity	Boston Company	300 bps	700 bps
Small Cap Equity	Fiduciary	200 bps	700 bps
<i>International Equity</i>			
International Equity	PanAgora	100 bps	325 bps

## ALLOCATION MONITORING AND REBALANCING

The Board shall review the Segment and Security Type allocations not less than quarterly. At least annually, the Board shall review and consider rebalancing of the Segment allocation between the Liability and Actuarial Reserve Segments. In addition, the Board may transfer funds between Investment Managers to maintain a reasonable and appropriate distribution of funds.

## LIABILITY SEGMENT GUIDELINES

### Objective

The investment objective of the Liability Segment is to immunize the liabilities of the Program by structuring the assets in such a way that the value of the Program's assets increase/decrease in conjunction with increases/decreases in the value of the liabilities.

### Benchmark

Performance of the Liability Segment is evaluated against a custom benchmark consisting of a weighted blend of the benchmarks for the security types in the segment. Section II of these guidelines provide the individual security types and benchmarks.

### Allocation

The portfolio is expected to be fully invested at all times, relying on the Investment Manager's ability to generate return primarily through security selection, sector rotation and/or curve positioning, not timing of market movements. However, cash holdings may represent an integral part of an Investment Manager's desired portfolio structure. Therefore, for these purposes the Investment Manager shall be allowed to maintain a maximum cash position of 5% of the portfolio.

The portfolio is expected to be invested in securities within the benchmark. However, active management strategies are allowed to maintain out-of-benchmark authorized investment vehicles, as limited below, of up to 10% of the portfolio for any security that is not backed by the full faith and credit of the U.S. Government.

The use of margin is prohibited except as may be required in the use of approved Derivatives.

Asset allocation shall be determined based on the average position over any three month time period and shall operate within the following constraints set forth herein.

### Investment Manager

The Board may hire multiple Investment Managers for this mandate. Investment Managers will be selected as a result of a competitive procurement process. Selected Investment Managers' authority is limited to these guidelines for this mandate. All references to portfolio in these guidelines refer to the market value of funds provided to each Investment Manager under this mandate.

### Authorized investment vehicles for the portfolio:

**Cash or Cash Equivalent** – Maximum allocation 5% of the portfolio

1. Deposit accounts and certificates of deposit in banks
2. 2a7 (actual or like) money market funds
3. Collateralized repurchase agreements for which the underlying securities are obligations of the United States Treasury or agencies of the United States Government.
4. Commercial paper of prime quality
  - Must be rated the highest letter and numerical rating provided by at least two nationally recognized rating service.

**Obligations of the United States Treasury** – Maximum allocation 100% of the portfolio

1. United States Treasury bonds and notes
2. Interest and principal strips of Treasury securities

3. Treasury Inflation Protection Securities (TIPS).
4. Agencies of the United States Government
  - Not restricted to full-faith and credit obligations.

**Municipal securities** – Maximum allocation of 20% of the portfolio

1. General Obligation or Revenue bonds.
  - Must be rated by at least two nationally recognized rating services A-/A3 or higher. If rated by only one nationally recognized rating service, then the rating must be AA-/Aa3 or higher
2. Build America Bonds (BABs) are permitted, but limited to 10% of the portfolio
  - Must be rated by at least two nationally recognized rating services A-/A3 or higher. If rated by only one nationally recognized rating service, then the rating must be AA-/Aa3 or higher

**Corporate debt obligations** – Maximum allocation of 40% of the portfolio

1. Registered Bonds
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher.
  - Convertible securities are not permitted.
2. 144(a) securities (with and without registration rights) are permitted, but limited to 10% of the portfolio
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher.

**Residential Mortgage Backed Securities** – Maximum allocation of 20% of the portfolio

1. United States Agency Mortgage backed securities
  - Sub-prime mortgage backed securities are not permitted
  - Alt-A mortgage backed securities are not permitted
2. Privately Issued Mortgage Backed securities
  - Includes but is not limited to commercial mortgage backed securities and real estate mortgage investment conduits
  - Must be rated AAA/Aaa by at least one nationally recognized rating service
3. Mortgage To Be Announced (TBA) securities.
  - Require a cash equivalent set aside for future settlement of the forward agreement

**Other Collateralized Securities** – Maximum allocation of 10% of the portfolio

1. Asset-backed and commercial mortgage backed securities
  - Must be rated AA/Aa by at least one nationally recognized rating service

## **Foreign Debt Securities** – Maximum allocation of 10% of the portfolio

1. Supranational Debt Obligations, Sovereign Debt Obligations, Foreign Debt Obligations
  - Must be dollar-denominated
  - Must be rated by at least one U.S. nationally recognized rating services A-/A3 or higher

## **Commingled Investment Funds**

1. Exchange Traded Funds (ETF's), commingled investment funds and mutual funds
  - Traded on domestic exchanges,
  - Primarily invested in authorized investment vehicles provided in this Guideline
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement
  - Before a Commingled Investment Fund is used by an Investment Manager, approval must be obtained by the Board.

## **Derivatives**

1. Derivatives shall only be used to substitute for physical securities, duration management or risk control
2. Derivative strategies must demonstrate one or more of the following benefits:
  - Increase liquidity
  - Stabilize and enhance portfolio returns
  - Lower transaction costs, including market impact costs
  - Reduction in the time required to change the mix of the portfolio
3. Before a Derivative strategy is used by an Investment Manager, approval must be obtained by the Board.

## **Other Restrictions**

Maximum investment in the securities of any issuer, except securities backed by the U.S. Government, is the 2% of the portfolio.

Active and Passive management is permitted. Passive strategies shall replicate the returns of the custom benchmark for the Liability Segment.

## Passive Management

1. Only securities eligible for inclusion in the benchmark indices are permitted.
2. Sector allocation shall be made consistent with the benchmark sector weights.
3. Total duration, as calculated by the manager's preferred pricing source, shall not differ from benchmark duration, plus or minus, by more than one-tenth of one year (0.10 years).
4. Tracking error to the benchmark shall be less than 10 basis points.
5. The average credit quality rating must equal the benchmark.

### Active Management

1. Total duration, as calculated by the manager's preferred pricing source, shall not differ from benchmark duration, plus or minus, by more than one-half of one year (0.50 years).
2. Tracking Error to the benchmark shall be less than 70 bps.
3. Aggregate investment in corporate debt, asset backed securities, and mortgage backed securities shall not exceed 50% of the portfolio.
4. The average credit quality rating cannot be more than one level below the benchmark.

### **Performance**

The Board may elect to employ multiple investment managers with complementary investment skills and/or styles. As part of this structure, managers are hired for their expected contribution to the overall portfolio performance over the various market cycles based on their style, stated strategy and asset mix. As a result, non-performance information is also considered in the evaluation process.

Investment Manager performance will be evaluated using the following metrics by investment strategy.

### Passive Management

Passive investment strategies will be assessed on a gross of fee basis.

1. Rolling gross performance shall meet the benchmark for the 3 and 5 year periods.
2. Tracking error shall not exceed 10 bps for the rolling 3 and 5 year periods.

### Active Management

While comparative performance and risk-adjusted returns may be calculated gross of fees, Active investment strategies will be assessed on a net of fee basis. Further, while 3 and 5 year periods are used to assess performance, the Board may consider longer time periods as part of the assessment.

1. Rolling net performance shall exceed the benchmark for the 3 and 5 year periods.
2. Excess return targets shall be set for each Investment Manager. Investment Managers shall meet or exceed their excess return target for the rolling 3 and 5 year periods.
3. Rolling Alpha, calculated in accordance to the Jensen methodology, shall be positive for the 3 and 5 year periods.
4. Tracking error targets shall be set for each Investment Manager. Investment Managers shall meet or be less than their tracking error target for the rolling 3 and 5 year periods.
5. Tracking error shall not exceed 70 bps for the rolling 3 and 5 year periods.

In addition to the objectives listed above, other quantitative criteria should be considered with a focus on the interpretation of results. These criteria include risk metrics (e.g. standard deviation, downside risk, beta) and risk-adjusted performance metrics (e.g. Sharpe ratio, Treynor ratio, information ratio, excess return ratio).

Several non-performance factors may prompt the Board to re-evaluate a manager's retention. Any of the following may warrant immediate termination or further review:

- Significant changes in firm ownership and/or structure.
- Loss of one or more key personnel.
- Significant loss of clients and/or assets under management.

- Shifts in the firm's philosophy or process.
- Significant and persistent lack of responsiveness to client requests.

If an Investment Manager fails to meet any of these performance objectives, the Investment Consultant will review the situation and make a recommendation to the board as to any action the Board should take. Investment Managers serve at the pleasure of the Board and may be terminated or have their funds reduced at the Board's discretion due to any qualitative or quantitative factor listed or not listed above.

## ACTUARIAL RESERVE SEGMENT - FIXED INCOME GUIDELINES

### Objective

The investment objective for this Segment is to bring broad exposure to the fixed income market and assist in limiting actuarial reserve volatility.

### Benchmark

Section II of these guidelines provide the benchmark for this Segment.

### Investment Manager

The Board may hire multiple Investment Managers for this mandate. Investment Managers will be selected as a result of a competitive procurement process. Selected Investment Managers' authority is limited to these guidelines for this mandate. All references to portfolio in these guidelines refer to the market value of funds provided to each Investment Manager under this mandate.

### Allocation

The portfolio is expected to be fully invested at all times, relying on the Investment Manager's ability to generate return primarily through security selection, sector rotation and/or curve positioning, not timing of market movements. However, cash holdings may represent an integral part of an Investment Manager's desired portfolio structure. Therefore, for these purposes the Investment Manager shall be allowed to maintain a maximum cash position of 5% of the portfolio.

The portfolio is expected to be invested in securities within the benchmark. However, active management strategies are allowed to maintain out-of-benchmark authorized investment vehicles, as limited below, or up to 10% of the portfolio for any security that is not backed by the full faith and credit of the U.S. Government.

The use of margin is prohibited except as may be required in the use of approved Derivatives.

Asset allocation shall be determined based on the average position over any three month time period and shall operate within the following constraints set forth herein.

### Authorized investment vehicles for the portfolio:

#### **Cash or Cash Equivalent** – Maximum allocation 5% of the portfolio

1. Deposit accounts and certificates of deposit in banks
2. 2a7 (actual or like) money market funds
3. Collateralized repurchase agreements for which the underlying securities are obligations of the United States Treasury or agencies of the United States Government.
4. Commercial paper of prime quality
  - Must be rated the highest letter and numerical rating provided by at least two nationally recognized rating service.

#### **Obligations of the United States Treasury** – Maximum allocation 100% of the portfolio

1. United States Treasury bonds and notes
2. Interest and principal strips of Treasury securities
3. Treasury Inflation Protection Securities (TIPS)

4. Agencies of the United States Government
  - Not restricted to full-faith and credit obligations

**Municipal securities** – Maximum allocation of 20% of the portfolio

1. General Obligation or Revenue bonds.
  - Must be rated by at least two nationally recognized rating services A-/A3 or higher. If rated by only one nationally recognized rating service, then the rating must be AA-/Aa3 or higher
2. Build America Bonds (BABs) are permitted, but limited to 10% of the portfolio
  - Must be rated by at least two nationally recognized rating services A-/A3 or higher. If rated by only one nationally recognized rating service, then the rating must be AA-/Aa3 or higher

**Corporate debt obligations** – Maximum allocation of 70% of the portfolio

1. Registered Bonds
  - Rated by at least one nationally recognized rating services BBB-/Baa3 or higher
  - Convertible securities are not permitted
2. 144(a) securities (with and without registration rights) are permitted
  - Must be rated by at least One nationally recognized rating services BBB-/Baa3 or higher

**Residential Mortgage Backed Securities** – Maximum allocation of 50% of the portfolio

1. United States Agency Mortgage backed securities
  - Sub-prime mortgage backed securities are not permitted
  - Alt-A mortgage backed securities are not permitted
2. Privately Issued Mortgage Backed securities
  - Includes but is not limited to commercial mortgage backed securities and real estate mortgage investment conduits
  - Must be rated AAA/Aaa by at least one nationally recognized rating service
3. Mortgage To Be Announced (TBA) securities.
  - Require a cash equivalent set aside for future settlement of the forward agreement

**Other Collateralized Securities** – Maximum allocation of 20% of the portfolio

1. Asset-backed and commercial mortgage backed securities
  - Must be rated AA/Aa by at least one nationally recognized rating service

### **Foreign Debt Securities** – Maximum allocation of 10% of the portfolio

1. Supranational Debt Obligations, Sovereign Debt Obligations and Foreign Debt Obligations
  - Must be dollar-denominated
  - Must be rated by at least one U.S. nationally recognized rating services A-/A3 or higher

### **Commingled Investment Funds** – Maximum allocation of 100% of the portfolio

1. Exchange Traded Funds (ETF's), commingled investment funds and mutual funds
  - Traded on domestic exchanges,
  - Primarily invested in authorized investment vehicles provided in this Guideline
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement
  - Before a Commingled Investment Fund is used by an Investment Manager, approval must be obtained by the Board

### **Derivatives**

1. Derivatives shall only be used to substitute for physical securities, duration management or risk control
2. Derivative strategies must demonstrate one or more of the following benefits:
  - Increase liquidity
  - Stabilize and enhance portfolio returns
  - Lower transaction costs, including market impact costs
  - Reduction in the time required to change the mix of the portfolio
3. Before a Derivative strategy is used by an Investment Manager, approval must be obtained by the Board.

### **Other Restrictions**

Maximum investment in the securities of any issuer, except securities backed by the U.S. Government, is 2% of the portfolio.

Active and Passive management is permitted. Passive strategies shall replicate the returns of the benchmark.

### Passive Management

1. Only securities eligible for inclusion in the benchmark indices are permitted.
2. Sector allocation shall be made consistent with the benchmark sector weights.
3. Total duration, as calculated by the manager's preferred pricing source, shall not differ from benchmark duration, plus or minus, by more than one-tenth of one year (0.10 years).
4. Tracking error to the benchmark shall be less than 10 basis points.
5. Average credit quality rating must equal the benchmark.

### Active Management

1. Total duration, as calculated by the manager's preferred pricing source, shall not differ from benchmark duration, plus or minus, by more than 20% of benchmark duration.
2. Tracking Error to the benchmark shall be less than 300 bps.

### **Performance**

The Board may elect to employ multiple investment managers with complementary investment skills and/or styles. As part of this structure, managers are hired for their expected contribution to the overall portfolio performance over the various market cycles based on their style, stated strategy and asset mix. As a result, non-performance information is also considered in the evaluation process.

Investment manager performance will be evaluated using the following metrics by investment strategy.

### Passive Management

Passive investment strategies will be assessed on a gross of fee basis.

1. Rolling gross performance shall meet the benchmark for the 3 and 5 year periods.
2. Tracking error shall not exceed 10 bps for the rolling 3 and 5 year periods.

### Active Management

Active investment strategies will be assessed on a net of fee basis. Further, while 3 and 5 year periods are used to assess performance, the Board may consider longer time periods as part of the assessment.

1. Rolling net performance shall exceed the benchmark for the 3 and 5 year periods.
2. Excess return targets shall be set for each Investment Manager. Investment Managers shall meet or exceed their excess return target for the rolling 3 and 5 year periods.
3. Rolling Alpha, calculated in accordance to the Jensen methodology, shall be positive for the 3 and 5 year periods.
4. Tracking error targets shall be set for each Investment Manager. Investment Managers shall meet or be less than their tracking error target for the rolling 3 and 5 year periods.
5. Tracking error shall not exceed 300 bps for the rolling 3 and 5 year periods.

In addition to the objectives listed above, other quantitative criteria should be considered with a focus on the interpretation of results. These criteria include risk metrics (e.g. standard deviation, downside risk, beta) and risk-adjusted performance metrics (e.g. Sharpe ratio, Treynor ratio, information ratio, excess return ratio).

Several non-performance factors may prompt the Board to re-evaluate a manager's retention. Any of the following may warrant immediate termination or further review:

- Significant changes in firm ownership and/or structure.
- Loss of one or more key personnel.
- Significant loss of clients and/or assets under management.
- Shifts in the firm's philosophy or process.
- Significant and persistent lack of responsiveness to client requests.

If an Investment Manager fails to meet any of these performance objectives, the Investment Consultant will review the situation and make a recommendation to the board as to any action the Board should

take. Investment Managers serve at the pleasure of the Board and may be terminated or have their funds reduced at the Board's discretion due to any qualitative or quantitative factor listed or not listed above.

## ACTUARIAL RESERVE SEGMENT – DOMESTIC EQUITY GUIDELINES

### Objective

The investment objective shall be to provide broad exposure to the domestic equity market for companies that offer the best combination of earnings, growth and valuation.

### Benchmark

Section II of these guidelines provide the domestic equity mandates and related benchmarks.

### Investment Manager

The Board may hire multiple Investment Managers for this mandate. Investment Managers will be selected as a result of a competitive procurement process. Selected Investment Managers' authority is limited to these guidelines for this mandate. All references to portfolio in these guidelines refer to the market value of funds provided to each Investment Manager under this mandate.

### Allocation

The portfolio is expected to be fully invested at all times, relying on the Investment Manager's ability to generate return through security and/or sector selection, not timing of market movements. However, cash holdings may represent an integral part of an Investment Manager's desired portfolio structure. Therefore, for these purposes the Investment Manager shall be allowed to maintain a maximum cash position of 5%.

The use of margin is prohibited except as may be required in the use of approved Derivatives.

Asset allocation shall be determined based on the average position over any three month time period and shall operate within the following constraints set forth herein.

### Authorized investment vehicles for the portfolio:

#### **Common Stock** – Maximum allocation of 100% of the portfolio

1. Domestic Equities and American Depositary Receipts
  - Traded on domestic exchanges, including over-the-counter markets and recognized third and fourth markets

#### **Commingled Investment Funds** – Maximum allocation of 100% of the portfolio

1. Exchange Traded Funds (ETF's), commingled investment funds and mutual funds
  - Traded on domestic exchanges,
  - Primarily invested in authorized investment vehicles provided in this Guideline
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement
  - Before a Commingled Investment Fund is used by an Investment Manager, approval must be obtained by the Board.

## Derivatives

1. Derivatives shall only be used to substitute for physical securities or control risk
2. Derivative strategies must demonstrate one or more of the following benefits:
  - Increase liquidity
  - Stabilize and enhance portfolio returns
  - Lower transaction costs, including market impact costs
  - Reduction in the time required to change the mix of the portfolio
3. Before a Derivative strategy is used by an Investment Manager, approval must be obtained by the Board.

## Other Restrictions

Maximum investment in any security is the greater of 5% of the portfolio or 2% greater than the benchmark weight.

Active and Passive management is permitted. Passive strategies shall replicate the returns of the benchmark.

### Passive Management

1. Only securities eligible for inclusion in the benchmark indices are permitted.
2. Sector allocation shall be made consistent with the benchmark sector weights.
3. Tracking Error to the benchmark shall be equal to or less than 25 bps.

### Active Management

1. Tracking Error to the benchmark shall be equal to or less than the tracking error target.

## Performance

The Board may elect to employ multiple investment managers with complementary investment skills and/or styles. As part of this structure, managers are hired for their expected contribution to the overall portfolio performance over the various market cycles based on their style, stated strategy and asset mix. As a result, non-performance information is also considered in the evaluation process.

Investment Manager performance will be evaluated using the following metrics by investment strategy.

### Passive Management

Passive investment strategies will be assessed on a gross of fee basis:

1. Rolling performance shall meet the benchmark for the 3 and 5 year periods.
2. Beta, as calculated using monthly data, shall not be less than 0.98 and not more than 1.02 relative to the benchmark over any 3 year rolling period.
3. Annualized tracking error to the benchmark shall be less than 25 basis points.

## Active Management

Active investment strategies will be assessed on a net of fee basis. Further, while 3 and 5 year periods are used to assess performance, the Board may consider longer time periods as part of the assessment.

1. Rolling net performance shall exceed the benchmark for the 3 and 5 year periods.
2. Rolling gross performance shall rank above the median of a peer universe managing similar portfolios in a similar style for the 3 and 5 year periods.
3. Excess return targets shall be set for each Investment Manager. Investment Managers shall meet or exceed their excess return target, gross of fees, for the rolling 3 and 5 year periods.
4. Alpha, calculated in accordance to the Jensen methodology, shall be positive, net of fees for the 3 and 5 year periods.
5. Tracking error targets shall be set for each Investment Manager. Investment Managers shall not exceed their tracking error target for the rolling 3 and 5 year periods.
6. The coefficient of determination (or R-squared) relative to the benchmark, calculated using monthly data, shall not be less than 0.80 for the 3 and 5 year periods.

In addition to the objectives listed above, other quantitative criteria should be considered with a focus on the interpretation of results. These criteria include risk metrics (e.g. standard deviation, downside risk, beta) and risk-adjusted performance metrics (e.g. Sharpe ratio, Treynor ratio, information ratio, excess return ratio).

Several non-performance factors may prompt the Board to re-evaluate a manager's retention. Any of the following may warrant immediate termination or further review:

- Significant changes in firm ownership and/or structure.
- Loss of one or more key personnel.
- Significant loss of clients and/or assets under management.
- Shifts in the firm's philosophy or process.
- Significant and persistent lack of responsiveness to client requests.

If an Investment Manager fails to meet any of these performance objectives, the Investment Consultant will review the situation and make a recommendation to the Board as to any action the Board should take. Additionally, Investment Managers serve at the pleasure of the Board and may have their funds reduced at the Board's discretion due to any qualitative or quantitative factor listed or not listed above.

### Objective

The investment objective shall be to provide exposure to companies in developed markets outside of the United States.

### Benchmark

Section II of these guidelines provide the benchmark for this mandate.

### Investment Manager

The Board may hire multiple Investment Managers for this mandate. Investment Managers will be selected as a result of a competitive procurement process. Selected Investment Managers' authority is limited to these guidelines for this mandate. All references to portfolio in these guidelines refer to the market value of funds provided to each Investment Manager under this mandate.

### Allocation

The portfolio is expected to be fully invested at all times, relying on the manager's ability to generate return through security and/or sector selection, not timing of market movements. However, cash holdings may represent an integral part of an Investment Manager's desired portfolio structure. Therefore, for these purposes the Investment Manager shall be allowed to maintain a maximum cash position of 5%.

The use of margin is prohibited except as may be required in the use of approved Derivatives.

Asset allocation shall be determined based on the average position over any three month time period and shall operate within the following constraints set forth herein.

### Authorized investment vehicles for this mandate:

#### **Common Stock** – Maximum allocation of 100% of the portfolio

1. Foreign Equities
  - Foreign-domiciled companies traded on domestic or non-U.S. exchanges, including over-the-counter markets
  - Securities domiciled, incorporated, or traded in a benchmark country

#### **Commingled Investment Funds** – Maximum allocation of 100% of the portfolio

1. Exchange Traded Funds (ETF's), commingled investment funds and mutual funds
  - Primarily invested in authorized investment vehicles provided in this Guideline
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement
  - Before a Commingled Investment Fund is used by an Investment Manager, approval must be obtained by the Board.

### Derivatives

1. Derivatives shall only be used to substitute for physical securities, control risk or foreign currency hedging.
2. Derivative strategies must demonstrate one or more of the following benefits:
  - Increase liquidity

- Stabilize and enhance portfolio returns
  - Lower transaction costs, including market impact costs
  - Reduction in the time required to change the mix of the portfolio
3. Before a Derivative strategy is used by an Investment Manager, approval must be obtained by the Board.

### **Other Restrictions**

Maximum investment in any security is the greater of 5% of the portfolio or 2% greater than the benchmark weight.

Active and Passive management is permitted. Passive strategies shall replicate the returns of the benchmark.

#### Passive Management

1. Only securities eligible for inclusion in the benchmark indices are permitted.
2. Sector allocation shall be made consistent with the benchmark sector weights.
3. Tracking Error to the benchmark shall be equal to or less than 25 bps.

#### Active Management

1. Tracking Error to the benchmark shall be equal to or less than the tracking error target.

### **Performance**

The Board may elect to employ multiple investment managers with complementary investment skills and/or styles. As part of this structure, managers are hired for their expected contribution to the overall portfolio performance over the various market cycles based on their style, stated strategy and asset mix. As a result, non-performance information is also considered in the evaluation process.

Investment manager performance will be evaluated using the following metrics by investment strategy.

#### Passive Management

Passive investment strategies will be assessed on a gross of fee basis:

1. Rolling performance shall meet the benchmark for the 3 and 5 year periods.
2. Beta, as calculated using monthly data, shall not be less than 0.98 and not more than 1.02 relative to the benchmark over any 3 year rolling period.
3. Annualized tracking error to the benchmark shall be less than 25 basis points.

#### Active Management

Active investment strategies will be assessed on a net of fee basis. Further, while 3 and 5 year periods are used to assess performance, the Board may consider longer time periods as part of the assessment.

1. Rolling net performance shall exceed the benchmark for the 3 and 5 year periods.
2. Rolling gross performance shall rank above the median of a peer universe managing similar portfolios in a similar style for the 3 and 5 year periods.
3. Excess return targets shall be set for each Investment Manager. Investment Managers shall meet or exceed their excess return target, gross of fees, for the rolling 3 and 5 year periods.

4. Alpha, calculated in accordance to the Jensen methodology, shall be positive, net of fees for the 3 and 5 year periods.
5. Tracking error targets shall be set for each Investment Manager. Investment Managers shall not exceed their tracking error target for the rolling 3 and 5 year periods.
6. The coefficient of determination (or R-squared) relative to the benchmark, calculated using monthly data, shall not be less than 0.80 for the 3 and 5 year periods.

In addition to the objectives listed above, other quantitative criteria should be considered with a focus on the interpretation of results. These criteria include risk metrics (e.g. standard deviation, downside risk, beta) and risk-adjusted performance metrics (e.g. Sharpe ratio, Treynor ratio, information ratio, excess return ratio).

Several non-performance factors may prompt the Board to re-evaluate a manager's retention. Any of the following may warrant immediate termination or further review:

- Significant changes in firm ownership and/or structure.
- Loss of one or more key personnel.
- Significant loss of clients and/or assets under management.
- Shifts in the firm's philosophy or process.
- Significant and persistent lack of responsiveness to client requests.

If an Investment Manager fails to meet any of these performance objectives, the Investment Consultant will review the situation and make a recommendation to the Board as to any action the Board should take. Additionally, Investment Managers serve at the pleasure of the Board and may have their funds reduced at the Board's discretion due to any qualitative or quantitative factor listed or not listed above.

## SECURITIES LENDING GUIDELINES

### **Mandate**

The selected Investment Manager(s) shall not exceed the authority provided within this guideline for the mandate. All references to percentages refer to the market value of funds provided to the Investment Manager under this mandate.

### **Objective**

The investment objective shall be to provide additional income from loaning securities to third parties and reinvesting the cash collateral.

### **Benchmark**

The performance for the securities lending program shall be measured against the 2a7 like money market fund Florida PRIME.

### **Investment Manager**

The Investment Managers' authority is limited to these guidelines for securities lending. All references to portfolio in these guidelines refer to the cash collateral received by the Investment Manager under this mandate.

### **Allocation**

The portfolio is expected to be fully invested at all times, relying on the manager's ability to generate return through security and/or sector selection, not timing of market movements.

The use of margin is prohibited.

### **Authorized investment vehicles for this portfolio:**

**Cash or Cash Equivalent** – Maximum allocation 100% of the portfolio

1. Deposit accounts and certificates of deposit in banks
2. 2a7 (actual or like) money market funds
3. Collateralized repurchase agreements for which the underlying securities are obligations of the United States Treasury or agencies of the United States Government.
4. Commercial paper of prime quality
  - Must be rated the highest letter and numerical rating provided by at least two nationally recognized rating service.

**Obligations of the United States Treasury** – Maximum allocation 100% of the portfolio

1. United States Treasury bonds and notes
2. Agencies of the United States Government
  - Not restricted to full-faith and credit obligations.

## **Corporate debt obligations** – Maximum allocation of 40% of the portfolio

1. Registered Bonds
  - Must be rated by at least two nationally recognized rating services AA-/Aa3 or higher. If rated by only one nationally recognized rating service, then the rating must be AAA-/Aaa3 or higher
2. 144(a) securities (with and without registration rights) are permitted, but limited to 10% of the cash collateral
  - Must be rated by at least two nationally recognized rating services AA-/Aa3 or higher. If rated by only one nationally recognized rating service, then the rating must be AAA-/Aaa3 or higher

## **Foreign Debt Securities** – Maximum allocation of 10% of the portfolio

1. Supranational Debt Obligations, Sovereign Debt Obligations, Foreign Debt Obligations
  - Must be dollar-denominated and registered with the SEC
  - Must be rated by at least two U.S. nationally recognized rating services AA-/Aa3 or higher. If rated by only one nationally recognized rating service, then the rating must be AAA-/Aaa3 or higher

## **Other Restrictions**

1. A maximum of 30% of the portfolio may be with a single borrower.
2. A maximum of 40% of the Fund may be on loan.
3. A maximum of 20% of the portfolio may be invested in securities or instruments which have a maturity exceeding 97 days.
4. A minimum of 20% of the portfolio must be available each business day.
5. The rate sensitivity of the portfolio will be limited to 60 days.
6. Floating rate instruments and variable rate instruments must have interest rates that may be reset at least every 97 days, and a maturity not exceeding 18 months from the date of purchase.
7. Commercial paper, certificates of deposit and time deposits must have a maturity date or demand feature not exceeding 9 months.
8. Fixed rate securities must have a maturity date or demand feature not exceeding 13 months from the date of purchase.
9. A maximum of 25% of the portfolio may be invested in repurchase agreements with one counterparty.
10. A maximum of 25% of the portfolio may be invested in the same industry.
11. A maximum of 5% of the portfolio may be invested in any one issuer, except securities backed by the U.S.

## Term loans

1. Investment for term loans will follow all guidelines above with the following exceptions:
  - A term loan investment must be selected so that its rate sensitivity matches closely with the agreed date of maturity, rebate reset or renegotiation of the underlying term loan.
  - Greater than 20% of the portfolio may be invested in securities or instruments which have a maturity exceeding 60 days
  - Less than 20% of the portfolio may be available each day
  - The rate sensitivity of the portfolio may exceed 600 days

## Performance

Investment manager performance shall be evaluated using the following metric.

1. Rolling net performance shall exceed the benchmark for the 1 and 3 year periods.

If an Investment Manager fails to meet any of these performance requirements, the Investment Consultant will review the situation and make a recommendation to the Board as to any action the Board should take. Additionally, Investment Managers serve at the pleasure of the Board and may have their funds reduced at the Board's discretion due to any qualitative or quantitative factor listed or not listed above.

# COMPREHENSIVE INVESTMENT PLAN FLORIDA COLLEGE SAVINGS PROGRAM

*Effective Date: August 1, 2018*

## OVERVIEW

The Florida College Savings Program (“Savings Program” or “Program”) is a program created to provide a medium through which families and individuals may save for qualified educational expenses. The Savings Program is intended to be an alternative to the Prepaid Program, though participants in the Savings Program do have the option to enroll a qualified beneficiary in the Savings Program, the Prepaid Program, or both.

## GOVERNANCE

The Program is administered by the Florida Prepaid College Board which was created pursuant to Section 1009.981 of the Florida Statutes.

In accordance with Section 1009.973, Florida Statutes, the Board has established this Comprehensive Investment Plan (CIP), subject to approval by the State Board of Administration. This CIP formally documents the investment policy and strategies employed by the Board to meet the projected Program liabilities.

The Board has the necessary powers and duties to carry out the provisions of Section 1009.97, Florida Statutes. The Board may delegate responsibility for administration of this CIP to a committee of the Board or to a person duly chosen by the Board.

The Executive Director serves at the pleasure of the Board as the chief administrative and operational officer of the Board. The Executive Director is responsible for managing and executing the investment and debt responsibilities of the Board. This includes developing and implementing Investment Guidelines, as approved by the Board, which reflect the goals and objectives of this CIP.

## CONTRACTUAL RELATIONSHIPS

The Executive Director shall manage all external contractual relationships in accordance with the fiduciary responsibilities of the Board.

Pursuant to Section 1009.971, Florida Statutes, the Board solicits proposals and contracts for investment consultant, trustee, and investment management services. There may be more than one provider for each service; their respective responsibilities are summarized below.

### Investment Consultant

The Investment Consultant shall review the performance of the Investment Manager and advise the Board on investment management, performance matters, portfolio design and structure, asset allocation issues, and investment policy, including the contents of this CIP and the Investment Guidelines.

### Trustee

The Trustee is responsible for the safekeeping of Program investment assets. Pursuant to Section 1009.971(5)(c), the Trustee shall agree to meet the obligations of the Board to qualified beneficiaries if moneys in the Fund fail to offset the obligations of the Board as a result of imprudent selection or supervision of investment programs by the Trustee.

## Investment Managers

The Board will hire duly qualified investment managers to carry out the daily investment responsibilities. Investment Managers will have investment discretion as to security selection within the requirements expressed in the CIP and Investment Guidelines.

The Investment Managers shall invest Program assets, as specified by the Board, with care, skill, prudence, and diligence. This includes promptly voting all proxies solicited in connection with securities under the investment manager's supervision and maintaining detailed records of the voting of proxies and related actions. The Investment Manager shall evidence superior performance while maintaining strict compliance with all applicable provisions of law and may exercise discretion within the bounds of this CIP and the Investment Guidelines.

Pursuant to Section 1009.971(5)(d), the Investment Manager shall:

- Be limited to authorized insurers as defined in Section 624.09, banks as defined in Section 658.12, associations as defined in Section 665.012, authorized Securities and Exchange Commission investment advisers, and investment companies as defined in the Investment Company Act of 1940.
- Have their principal place of business and corporate charter located and registered in the United States.
- Agree to meet the obligations of the Board to qualified beneficiaries if moneys in the Fund fail to offset the obligations of the Board as a result of imprudent investing by the Investment Manager.

## **CONFLICTS OF INTEREST**

The Board, its designees, and any service provider operating on behalf of the Board has a duty and obligation to disclose conflicts of interest. The Board shall require timely and sufficient disclosure of conflicts of interest that may exist between the Board, service providers, potential service providers, investments, potential investments, and other entities or transactions.

The Investment Consultant and the Trustee shall annually certify that no conflicts of interest exist relative to the services provided for the Program.

## **INVESTMENT OBJECTIVE AND STRATEGY**

The principal objective of the Program is to enable Account Owners to contribute funds that are combined and invested to pay the subsequent higher education expenses of a Beneficiary.

The investment strategy is for the Board to provide a sufficient range of investment options for Account Owners, with various investment knowledge and risk, return, and cost objectives, to save for future college expenses.

## **INVESTMENT GOALS**

To support the Program objective, the Board has established the following investment goals, listed in order of priority.

### **Safety**

The primary investment priority is to offer Investment Options with reasonable risk levels for the underlying securities. Investment Options shall be maintained with sufficient diversification among security issues and market sectors such that the performance of one security or sector will not have an excessive impact on the Fund.

## **Yield**

After meeting safety requirements, Investment Options aim to maximize investment returns.

## **Fees**

The Board shall assess reasonable fees for Investment Options based on the underlying investment style and Investment Manager and operational costs.

## **COMPREHENSIVE INVESTMENT PLAN**

The Comprehensive Investment Plan (CIP) includes the investment policies utilized by the Board in its administration of the Program. Investment policies included in the CIP provide direction intended to set the framework for the Program's investments. Per Section 1009.973, Florida Statutes, the CIP is subject to the approval of the State Board of Administration.

## **INVESTMENT GUIDELINES**

Investment Guidelines are intended to set forth the specific investment strategies, limitations and targets necessary to implement the CIP. Investment Guidelines are subject to the approval of the Board.

## **AUTHORIZED INVESTMENTS**

### **Cash or Cash Equivalent**

1. Deposit accounts and certificates of deposit in banks
2. 2a7 (actual or like) money market funds
3. Collateralized repurchase agreements for which the underlying securities are obligations of the United States Treasury or agencies of the United States Government.
4. Commercial paper of prime quality
  - Rated the highest letter and numerical rating provided by at least two nationally recognized rating service.

### **Obligations of the United States Treasury**

1. United States Treasury bonds and notes
2. Interest and principal strips of Treasury securities
3. Treasury Inflation Protection Securities (TIPS).
4. Agencies of the United States Government
  - Not restricted to full-faith and credit obligations.

### **Municipal securities**

1. General Obligation or Revenue bonds
  - Rated by at least one nationally recognized rating services BBB-/Baa3 or higher
2. Build America Bonds (BABs)
  - Rated by at least one nationally recognized rating services BBB-/Baa3 or higher

## Corporate debt obligations

1. Registered Bonds
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
  - Convertible securities are not permitted.
2. 144(a) securities (with and without registration rights)
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher

### Residential Mortgage Backed Securities

1. United States Agency Mortgage backed securities
2. Privately Issued Mortgage Backed securities
  - Includes but is not limited to commercial mortgage backed securities and real estate mortgage investment conduits
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
3. Mortgage To Be Announced (TBA) securities.
  - Require a cash equivalent set aside for future settlement of the forward agreement.

### Other Collateralized Securities

1. Asset-backed securities
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
2. Commercial Mortgage Backed Securities
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher

## Foreign Debt Securities

1. Supranational Debt Obligations
  - Must be dollar-denominated
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
2. Sovereign Debt Obligations
  - Must be dollar-denominated
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
3. Foreign Debt Obligations
  - Must be dollar-denominated
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher

## Commingled Investment Funds

1. Exchange Traded Funds (ETF's) traded on domestic exchanges,
  - Primarily invested in authorized investment vehicles for the Investment Option
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement
2. Commingled investment funds and mutual funds
  - Primarily invested in authorized investment vehicles for the Investment Option
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement

## Common Stock

1. Domestic Equities
  - Traded on domestic exchanges, including over-the-counter markets and recognized third and fourth markets
2. American Depositary Receipts
  - Traded on domestic exchanges, including over-the-counter markets and recognized third and fourth markets
3. Foreign Equities
  - Foreign-domiciled companies traded on domestic or non-U.S. exchanges, including over-the-counter markets

## Derivatives

1. The following uses of derivatives are authorized:
  - Substitute for physical securities
  - Duration management
  - Risk control
  - Foreign currency hedging

The Program does not engage in short selling of securities.

The Board approves the target allocations for the Program. Target allocations and benchmarks are set forth in the Investment Guidelines.

Securities included in an approved benchmark that are not specifically identified above are authorized with a limit of 2% above the benchmark weighting.

## COMPLIANCE

At a minimum, each Investment Manager shall certify compliance with this CIP and the Investment Guidelines at least quarterly. In the event of noncompliance, exceptions shall be reported to the Board with proposed actions to bring the portfolio into compliance.

## **NON-COMPLIANT INVESTMENTS**

Any purchased investment that is not in compliance with the CIP and/or Guidelines must be sold immediately. Any loss on the sale will be the responsibility of the Investment Manager.

Investments that are in compliance with the CIP and/or Guidelines at time of purchase but fall out of compliance due to a rating downgrade are not required to be immediately sold. The Investment Manager must notify the Board of such securities within 10 days of the downgrade. If an Investment Manager believes that it is in the best interest of the Board to hold the security, the Investment Manager can present a recommendation to hold the investment along with justification in writing to the Board. The Board will review each request and approve or deny them. Requests can be subject to further Board review and any point after approval.

If determined to be in the best interest of the Board, downgraded securities can be required to be sold immediately.

## **PERFORMANCE MEASUREMENT**

The Investment Consultant shall calculate official performance results for the Board monthly, pursuant to the recommended guidelines of the CFA Institute, currently Global Investment Performance Standards (GIPS), where applicable, and in accordance with the Investment Guidelines.

## **REPORTING**

The Executive Director shall create, or cause to be created, quarterly reports for the Board of investment matters including, but not limited to, investment management, investment performance, asset allocation, and rebalancing.

# INVESTMENT GUIDELINES

## FLORIDA COLLEGE SAVINGS PROGRAM

Effective Date: August 1, 2018

### OVERVIEW

The Florida Prepaid College Board (Board) has established the following Investment Guidelines to support implementation of the policy and strategy set forth in the Comprehensive Investment Plan (CIP) for the Florida College Savings Program (Program). The Investment Guidelines are maintained with the CIP but they are managed separately by the Board to allow for timely response to market conditions and environmental factors that may affect the Program.

### ASSET CLASS OPTIONS AND BENCHMARKS

The Board has approved the following Asset Class options and related benchmarks:

Asset Class	Benchmark
Money Market	3-Month Treasury Bill
Fixed Income	Bloomberg Barclays Aggregate Bond Index
Large Cap Growth	Russell 1000 Growth
Large Cap Value	Russell 1000 Value
Large Cap Core	S&P 500
Mid Cap	S&P Mid Cap 400
Small Cap	Russell 2000
International	MSCI EAFE
Equity Option	Weighted on pro-rata share of benchmarks for included Asset Classes
Balanced Option	Weighted on pro-rata share of benchmarks for included Asset Classes
Age Based Option	Weighted on pro-rata share of benchmarks for included Asset Classes

### EQUITY AND BALANCED OPTION ASSET CLASS ALLOCATION

The Board has established the following asset class allocation ranges and targets for the investment choices. The allocation may deviate from the target allocation, only within the allowable range(s).

Equity Option	Target Allocation	Allowable Range
Large Cap Growth	20%	17% - 23%
Large Cap Value	20%	17% - 23%
Large Cap Core	20%	17% - 23%
Mid Cap	10%	8% - 12%
Small Cap	10%	8% - 12%
International	20%	17% - 23%
<b>Balanced Option</b>		
Equity Option	50%	48% - 52%
Fixed Income Asset Class	50%	48% - 52%

In order to maintain the target for each respective option, the asset class allocation shall be monitored monthly and rebalanced to the target when the allowable ranges are exceeded. The portfolio should be brought back into compliance within five business days.

## AGE BASED OPTION ASSET CLASS ALLOCATON

The Board has established the following Age Brackets, Years to Enrollment, target allocations and allowable ranges. The allocation may deviate from the target allocation, within the allowable range(s). As the age brackets move closer the enrollment, the asset class allocation shall become more conservative.

Age Bracket	Years to Enrollment	Targeted Equity Allocation	Allowable Equity Range	Targeted Fixed Income Allocation	Allowable Fixed Income Range
0 – 4 years	14 or more years	100%	98 - 100%	0%	0 – 2%
5 – 8 years	10 – 13 years	75%	73 – 77%	25%	23 – 27%
9 – 12 years	6 – 9 years	50%	48 – 52%	50%	48 – 52%
13 – 15 years	3 – 5 years	25%	23 – 27%	75 %	73 – 77 %
Age 16 & above	0 – 2 years	0%	0 – 2%	100%	98 - 100%

Beneficiary account balances shall be moved to the next age bracket on the day following their birthdate during which they reach the age of the first year of each bracket. Accounts established based on the year's to enrollment option will move to the next age bracket on the day following the beneficiaries birthdate when their projected enrollment year is 13, 9, 5 and 2 years from enrollment in college.

## INVESTMENT OPTION FEES

The Board has approved the following fees for the Investment Options:

Fund Option	Fee	Portfolio Option	Fee
Money Market	0 bps	Equity Option	68 bps
Fixed Income	75 bps	Balanced Option	71 bps
Large Cap Growth	75 bps	Age Based (Age 0-4)	68 bps
Large Cap Value	75 bps	Age Based (Age 5-8)	70 bps
Large Cap Core	39 bps	Age Based (Age 9-12)	71 bps
Mid Cap	75 bps	Age Based (Age 13-15)	73 bps
Small Cap	75 bps	Age Based (Age 16+)	75 bps
International	75 bps		

## EXCESS RETURN AND TRACKING ERROR TARGETS

Each Investment Manager, other than the Investment Manager for the money market portfolio, has the following established excess return and tracking error targets:

Security Type	Investment Manager	Excess Return	Tracking Error Target
<b><i>Fixed Income</i></b>			
Fixed Income	Columbia	50 bps	100 bps
<b><i>Domestic Equity</i></b>			
Large Cap Growth Equity	BMO	150 bps	500 bps
Large Cap Value Equity	QMA	100 bps	400 bps
Large Cap Core Equity	AB	0 bps	25 bps
Mid Cap Equity	Boston Company	300 bps	700 bps
Small Cap Equity	Fiduciary	200 bps	700 bps
<b><i>International Equity</i></b>			
International Equity	PanAgora	100 bps	325 bps

## MONEY MARKET GUIDELINES

### Objective

The objective of the money market portfolio is to provide participants with a capital preservation option for saving for college expenses. It is expected that this option will be used by those participants with a short horizon to matriculation or with little appetite for short term investment volatility.

### Benchmark

Section II of these guidelines provide the benchmark for this portfolio.

### Investment Manager

The Board may hire multiple Investment Managers for this mandate. Investment Managers will be selected as a result of a competitive procurement process. Selected Investment Managers' authority is limited to these guidelines for this mandate. All references to portfolio in these guidelines refer to the market value of funds provided to each Investment Manager under this mandate.

### Authorized investment vehicles for the portfolio:

**Money Market Funds** – 2a7 (actual or like) money market funds

### Performance

Investment manager performance shall be evaluated using the following metrics on a net of fee basis:

1. Rolling net performance shall exceed the benchmark for the 1 and 3 year periods.
2. Rolling Alpha, calculated in accordance to the Jensen methodology, shall be positive for the 1 and 3 year periods.

If an Investment Manager fails to meet any of these performance requirements, the Investment Consultant will review the situation and make a recommendation to the board as to any action the Board should take. Investment Managers serve at the pleasure of the Board and may be terminated or have their funds reduced at the Board's discretion due to any qualitative or quantitative factor listed or not listed above.

## FIXED INCOME GUIDELINES

### Objective

The objective of the fixed income portfolio is to provide participants with a low risk, low volatility option for saving for college expenses. It is expected that this option will be used by those participants with a short horizon to matriculation or with little appetite for short term investment volatility.

### Benchmark

Section II of these guidelines provide the benchmark for this portfolio.

### Investment Manager

The Board may hire multiple Investment Managers for this mandate. Investment Managers will be selected as a result of a competitive procurement process. Selected Investment Managers' authority is limited to these guidelines for this mandate. All references to portfolio in these guidelines refer to the market value of funds provided to each Investment Manager under this mandate.

### Allocation

The portfolio is expected to be fully invested at all times, relying on the Investment Manager's ability to generate return primarily through security selection, sector rotation and/or curve positioning, not timing of market movements. However, cash holdings may represent an integral part of an Investment Manager's desired portfolio structure. Therefore, for these purposes the Investment Manager shall be allowed to maintain a maximum cash position of 5% of the portfolio.

The portfolio is expected to be invested in securities within the benchmark. However, active management strategies are allowed to maintain out-of-benchmark authorized investment vehicles, as limited below, or up to ten percent of the portfolio for any security that is not backed by the full faith and credit of the U.S. Government.

The use of margin is prohibited except as may be required in the use of approved Derivatives.

Asset allocation shall be determined based on the average position over any three month time period and shall operate within the following constraints set forth herein.

### Authorized investment vehicles for the portfolio:

#### **Cash or Cash Equivalent** – Maximum allocation 5% of the portfolio

1. Deposit accounts and certificates of deposit in banks
2. 2a7 (actual or like) money market funds
3. Collateralized repurchase agreements for which the underlying securities are obligations of the United States Treasury or agencies of the United States Government.
4. Commercial paper of prime quality
  - Must be rated the highest letter and numerical rating provided by at least two nationally recognized rating service.

#### **Obligations of the United States Treasury** – Maximum allocation 100% of the portfolio

1. United States Treasury bonds and notes
2. Interest and principal strips of Treasury securities
3. Treasury Inflation Protection Securities (TIPS).

4. Agencies of the United States Government
  - Not restricted to full-faith and credit obligations.

**Municipal securities** – Maximum allocation of 20% of the portfolio

1. General Obligation or Revenue bonds.
  - Must be rated by at least two nationally recognized rating services A-/A3 or higher. If rated by only one nationally recognized rating service, then the rating must be AA-/Aa3 or higher
2. Build America Bonds (BABs) are permitted, but limited to 10% of the portfolio
  - Must be rated by at least two nationally recognized rating services A-/A3 or higher. If rated by only one nationally recognized rating service, then the rating must be AA-/Aa3 or higher

**Corporate debt obligations** – Maximum allocation of 70% of the portfolio

1. Registered Bonds
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher
2. 144(a) securities (with and without registration rights) are permitted
  - Must be rated by at least one nationally recognized rating services BBB-/Baa3 or higher

**Residential Mortgage Backed Securities** – Maximum allocation of 50% of the portfolio

1. United States Agency Mortgage backed securities
2. Privately Issued Mortgage Backed securities
  - Includes but is not limited to commercial mortgage backed securities and real estate mortgage investment conduits
  - Must be rated AAA/Aaa by at least one nationally recognized rating service
3. Mortgage To Be Announced (TBA) securities.
  - Require a cash equivalent set aside for future settlement of the forward agreement.

**Other Collateralized Securities** – Maximum allocation of 20% of the portfolio

1. Asset-backed and commercial mortgage backed securities
  - Must be rated AA/Aa by at least one nationally recognized rating service

**Foreign Debt Securities** – Maximum allocation of 10% of the portfolio

1. Supranational Debt Obligations, Sovereign Debt Obligations and Foreign Debt Obligations
  - Must be dollar-denominated
  - Must be rated by at least one U.S. nationally recognized rating services A-/A3 or higher

## **Commingled Investment Funds** – Maximum allocation of 100% of the portfolio

1. Exchange Traded Funds (ETF's), commingled investment funds and mutual funds
  - Traded on domestic exchanges,
  - Primarily invested in authorized investment vehicles provided in this Guideline
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement
  - Before a Commingled Investment Fund is used by an Investment Manager, approval must be obtained by the Board.

## **Derivatives**

- I. Derivatives shall only be used to substitute for physical securities, duration management or risk control
- II. Derivative strategies must demonstrate one or more of the following benefits:
  - Increase liquidity
  - Stabilize and enhance portfolio returns
  - Lower transaction costs, including market impact costs
  - Reduction in the time required to change the mix of the portfolio
- III. Before a Derivative strategy is used by an Investment Manager, approval must be obtained by the Board.

## **Other Restrictions**

Maximum investment in the securities of any issuer, except securities backed by the U.S. Government, is 2% of the portfolio.

Active and Passive management is permitted. Passive strategies shall replicate the returns of the benchmark.

### Passive Management

- I. Only securities eligible for inclusion in the benchmark indices are permitted.
- II. Sector allocation shall be made consistent with the benchmark sector weights.
- III. Total duration, as calculated by the manager's preferred pricing source, shall not differ from benchmark duration, plus or minus, by more than one-tenth of one year (0.10 years).
- IV. Tracking error to the benchmark shall be less than 10 basis points.
- V. Average credit quality rating must equal the benchmark.

### Active Management

- I. Total duration, as calculated by the manager's preferred pricing source, shall not differ from benchmark duration, plus or minus, by more than 20% of the benchmark duration.
- II. Tracking Error to the benchmark shall be less than 300 bps.
- III. Credit quality rating cannot be more than one level below the benchmark.

## Performance

The Board may elect to employ multiple investment managers with complementary investment skills and/or styles. As part of this structure, managers are hired for their expected contribution to the overall portfolio performance over the various market cycles based on their style, stated strategy and asset mix. As a result, non-performance information is also considered in the evaluation process.

Investment manager performance will be evaluated using the following metrics by investment strategy.

### Passive Management

Passive investment strategies will be assessed on a gross of fee basis.

- I. Rolling gross performance shall meet the benchmark for the 3 and 5 year periods.
- II. Tracking error shall not exceed 10 bps for the rolling 3 and 5 year periods.

### Active Management

While comparative performance and risk-adjusted returns may be calculated gross of fees, Active investment strategies will be assessed on a net of fee basis. Further, while 3 and 5 year periods are used to assess performance, the Board may consider longer time periods as part of the assessment.

- I. Rolling net performance shall exceed the benchmark for the 3 and 5 year periods.
- II. Performance shall rank at or above the median when compared to a universe of peers managing similar portfolios for the 3 and 5 year periods.
- III. Excess return targets shall be set for each Investment Manager. Investment Managers shall meet or exceed their excess return target for the rolling 3 and 5 year periods.
- IV. Rolling Alpha, calculated in accordance to the Jensen methodology, shall be positive for the 3 and 5 year periods.
- V. Tracking error targets shall be set for each Investment Manager. Investment Managers shall not exceed their tracking error target for the rolling 3 and 5 year periods.
- VI. Tracking error shall not exceed 300 bps for the rolling 3 and 5 year periods.

In addition to the objectives listed above, other quantitative criteria should be considered with a focus on the interpretation of results. These criteria include risk metrics (e.g. standard deviation, downside risk, beta) and risk-adjusted performance metrics (e.g. Sharpe ratio, Treynor ratio, information ratio, excess return ratio).

Several non-performance factors may prompt the Board to re-evaluate a manager's retention. Any of the following may warrant immediate termination or further review:

- Significant changes in firm ownership and/or structure.
- Loss of one or more key personnel.
- Significant loss of clients and/or assets under management.
- Shifts in the firm's philosophy or process.
- Significant and persistent lack of responsiveness to client requests.

If an Investment Manager fails to meet any of these performance objectives, the Investment Consultant will review the situation and make a recommendation to the board as to any action the Board should take. Investment Managers serve at the pleasure of the Board and may be terminated or have their

funds reduced at the Board's discretion due to any qualitative or quantitative factor listed or not listed above.

## DOMESTIC EQUITY GUIDELINES

### Objective

Provide participants an opportunity for meaningful growth of capital over a long investment horizon through participation in equity investments.

### Benchmark

Section II of these guidelines provide the domestic equity options and related benchmarks.

### Investment Manager

The Board may hire multiple Investment Managers for this mandate. Investment Managers will be selected as a result of a competitive procurement process. Selected Investment Managers' authority is limited to these guidelines for this mandate. All references to portfolio in these guidelines refer to the market value of funds provided to each Investment Manager under this mandate.

### Allocation

The portfolio is expected to be fully invested at all times, relying on the Investment Manager's ability to generate return through security and/or sector selection, not timing of market movements. However, cash holdings may represent an integral part of an Investment Manager's desired portfolio structure. Therefore, for these purposes the Investment Manager shall be allowed to maintain a maximum cash position of 5%.

The use of margin is prohibited except as may be required in the use of approved Derivatives.

Asset allocation shall be determined based on the average position over any three month time period and shall operate within the following constraints set forth herein.

### Authorized investment vehicles for the portfolio:

**Common Stock** – Maximum allocation of 100% of the portfolio

- I. Domestic Equities and American Depositary Receipts
  - Traded on domestic exchanges, including over-the-counter markets and recognized third and fourth markets
  - Has at least three years of publically available operating history

**Commingled Investment Funds** – Maximum allocation of 100% of the portfolio

1. Exchange Traded Funds (ETF's), commingled investment funds and mutual funds
  - Traded on domestic exchanges,
  - Primarily invested in authorized investment vehicles provided in this Guideline
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement
  - Before a Commingled Investment Fund is used by an Investment Manager, approval must be obtained by the Board.

### Derivatives

- I. Derivatives shall only be used to substitute for physical securities or control risk

2. Derivative strategies must demonstrate one or more of the following benefits:
  - Increase liquidity
  - Stabilize and enhance portfolio returns
  - Lower transaction costs, including market impact costs
  - Reduction in the time required to change the mix of the portfolio
3. Before a Derivative strategy is used by an Investment Manager, approval must be obtained by the Board.

### **Other Restrictions**

Maximum investment in any security is the greater of 5% of the portfolio or 2% greater than the benchmark weight.

Active and Passive management is permitted. Passive strategies shall replicate the returns of the benchmark.

#### Passive Management

1. Only securities eligible for inclusion in the benchmark indices are permitted.
2. Sector allocation shall be made consistent with the benchmark sector weights.
3. Tracking Error to the benchmark shall be equal to or less than 25 bps.

#### Active Management

1. Tracking Error to the benchmark shall be equal to or less than the tracking error target.

### **Performance**

The Board may elect to employ multiple investment managers with complementary investment skills and/or styles. As part of this structure, managers are hired for their expected contribution to the overall portfolio performance over the various market cycles based on their style, stated strategy and asset mix. As a result, non-performance information is also considered in the evaluation process.

Investment Manager performance will be evaluated using the following metrics by investment strategy.

#### Passive Management

Passive investment strategies will be assessed on a gross of fee basis:

1. Rolling performance shall meet the benchmark for the 3 and 5 year periods.
2. Beta, as calculated using monthly data, shall not be less than 0.98 and not more than 1.02 relative to the benchmark over any 3 year rolling period.
3. Annualized tracking error to the benchmark shall be less than 25 basis points.

#### Active Management

While comparative performance and risk-adjusted returns may be calculated gross of fees, Active investment strategies will be assessed on a net of fee basis. Further, while 3 and 5 year periods are used to assess performance, the Board may consider longer time periods as part of the assessment.

1. Rolling net performance shall exceed the benchmark for the 3 and 5 year periods.
2. Rolling gross performance shall rank above the median of a peer universe managing similar portfolios in a similar style for the 3 and 5 year periods.

3. Excess return targets shall be set for each Investment Manager. Investment Managers shall meet or exceed their excess return target for the rolling 3 and 5 year periods.
4. Rolling Alpha, calculated in accordance to the Jensen methodology, shall be positive for the 3 and 5 year periods.
5. Tracking error targets shall be set for each Investment Manager. Investment Managers shall not exceed their tracking error target for the rolling 3 and 5 year periods.
6. The coefficient of determination (or R-squared) relative to the benchmark, calculated using monthly data, shall not be less than 0.80 for the 3 and 5 year periods.

In addition to the objectives listed above, other quantitative criteria should be considered with a focus on the interpretation of results. These criteria include risk metrics (e.g. standard deviation, downside risk, beta) and risk-adjusted performance metrics (e.g. Sharpe ratio, Treynor ratio, information ratio, excess return ratio).

Several non-performance factors may prompt the Board to re-evaluate a manager's retention. Any of the following may warrant immediate termination or further review:

- Significant changes in firm ownership and/or structure.
- Loss of one or more key personnel.
- Significant loss of clients and/or assets under management.
- Shifts in the firm's philosophy or process.
- Significant and persistent lack of responsiveness to client requests.

If an Investment Manager fails to meet any of these performance objectives, the Investment Consultant will review the situation and make a recommendation to the Board as to any action the Board should take. Additionally, Investment Managers serve at the pleasure of the Board and may have their funds reduced at the Board's discretion due to any qualitative or quantitative factor listed or not listed above.

## INTERNATIONAL EQUITY GUIDELINES

### Objective

Provide participants an opportunity for meaningful growth of capital over a long investment horizon through participation in equity investments.

### Benchmark

Section II of these guidelines provide the benchmark for this mandate.

### Investment Manager

The Board may hire multiple Investment Managers for this mandate. Investment Managers will be selected as a result of a competitive procurement process. Selected Investment Managers' authority is limited to these guidelines for this mandate. All references to portfolio in these guidelines refer to the market value of funds provided to each Investment Manager under this mandate.

### Allocation

The portfolio is expected to be fully invested at all times, relying on the manager's ability to generate return through security and/or sector selection, not timing of market movements. However, cash holdings may represent an integral part of an Investment Manager's desired portfolio structure. Therefore, for these purposes the Investment Manager shall be allowed to maintain a maximum cash position of 5%.

The use of margin is prohibited except as may be required in the use of approved Derivatives.

Asset allocation shall be determined based on the average position over any three month time period and shall operate within the following constraints set forth herein.

### Authorized investment vehicles for this mandate:

**Common Stock** – Maximum allocation of 100% of the portfolio

1. Foreign Equities
  - Foreign-domiciled companies traded on domestic or non-U.S. exchanges, including over-the-counter markets
  - Securities domiciled, incorporated, or traded in a benchmark country

**Commingled Investment Funds** – Maximum allocation of 100% of the portfolio

1. Exchange Traded Funds (ETF's), commingled investment funds and mutual funds
  - Primarily invested in authorized investment vehicles provided in this Guideline
  - Compliance and monitoring shall be reviewed relative to the commingled investment funds' prospectus or participation agreement
  - Before a Commingled Investment Fund is used by an Investment Manager, approval must be obtained by the Board.

### Derivatives

- I. Derivatives shall only be used to substitute for physical securities, control risk or foreign currency hedging.
2. Derivative strategies must demonstrate one or more of the following benefits:
  - Increase liquidity

- Stabilize and enhance portfolio returns
  - Lower transaction costs, including market impact costs
  - Reduction in the time required to change the mix of the portfolio
3. Before a Derivative strategy is used by an Investment Manager, approval must be obtained by the Board.

### **Other Restrictions**

Maximum investment in any security is the greater of 5% of the portfolio or 2% greater than the benchmark weight.

Active and Passive management is permitted. Passive strategies shall replicate the returns of the benchmark.

#### Passive Management

1. Only securities eligible for inclusion in the benchmark indices are permitted.
2. Sector allocation shall be made consistent with the benchmark sector weights.
3. Tracking Error to the benchmark shall be equal to or less than 25 basis points.

#### Active Management

1. Tracking Error to the benchmark shall be equal to or less than the tracking error target.

### **Performance**

The Board may elect to employ multiple investment managers with complementary investment skills and/or styles. As part of this structure, managers are hired for their expected contribution to the overall portfolio performance over the various market cycles based on their style, stated strategy and asset mix. As a result, non-performance information is also considered in the evaluation process.

Investment manager performance will be evaluated using the following metrics by investment strategy.

#### Passive Management

Passive investment strategies will be assessed on a gross of fee basis:

1. Rolling performance shall meet the benchmark for the 3 and 5 year periods.
2. Beta, as calculated using monthly data, shall not be less than 0.98 and not more than 1.02 relative to the benchmark over any 3 year rolling period.
3. Annualized tracking error to the benchmark shall be less than 25 basis points.

#### Active Management

While comparative performance and risk-adjusted returns may be calculated gross of fees, Active investment strategies will be assessed on a net of fee basis. Further, while 3 and 5 year periods are used to assess performance, the Board may consider longer time periods as part of the assessment.

1. Rolling net performance shall exceed the benchmark for the 3 and 5 year periods.
2. Rolling gross performance shall rank above the median of a peer universe managing similar portfolios in a similar style for the 3 and 5 year periods.
3. Excess return targets shall be set for each Investment Manager. Investment Managers shall meet or exceed their excess return target for the rolling 3 and 5 year periods.

4. Rolling Alpha, calculated in accordance to the Jensen methodology, shall be positive for the 3 and 5 year periods.
5. Tracking error targets shall be set for each Investment Manager. Investment Managers shall not exceed their tracking error target for the rolling 3 and 5 year periods.
6. The coefficient of determination (or R-squared) relative to the benchmark, calculated using monthly data, shall not be less than 0.80 for the 3 and 5 year periods.

In addition to the objectives listed above, other quantitative criteria should be considered with a focus on the interpretation of results. These criteria include risk metrics (e.g. standard deviation, downside risk, beta) and risk-adjusted performance metrics (e.g. Sharpe ratio, Treynor ratio, information ratio, excess return ratio).

Several non-performance factors may prompt the Board to re-evaluate a manager's retention. Any of the following may warrant immediate termination or further review:

- Significant changes in firm ownership and/or structure.
- Loss of one or more key personnel.
- Significant loss of clients and/or assets under management.
- Shifts in the firm's philosophy or process.
- Significant and persistent lack of responsiveness to client requests.

If an Investment Manager fails to meet any of these performance objectives, the Investment Consultant will review the situation and make a recommendation to the Board as to any action the Board should take. Additionally, Investment Managers serve at the pleasure of the Board and may have their funds reduced at the Board's discretion due to any qualitative or quantitative factor listed or not listed above.