STATE OF ILLINOIS ILLINOIS STUDENT ASSISTANCE COMMISSION ILLINOIS PREPAID TUITION PROGRAM

FINANCIAL AUDIT

June 30, 2018

Performed as Special Assistant Auditors for the Auditor General, State of Illinois

STATE OF ILLINOIS ILLINOIS STUDENT ASSISTANCE COMMISSION ILLINOIS PREPAID TUITION PROGRAM

FINANCIAL AUDIT June 30, 2018

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STATE OF ILLINOIS ILLINOIS STUDENT ASSISTANCE COMMISSION ILLINOIS PREPAID TUITION PROGRAM AGENCY OFFICIALS

Executive Director Eric Zarnikow

Chief Financial Officer Shoba Nandhan

Chief Investment Officer (September 24, 2018 to present)

Carmen Heredia-Lopez

Chief Investment Officer (June 27, 2018 to September 23, 2018) Vacant

Chief Investment Officer (through June 26, 2018)

Kent Custer

General Counsel Karen Salas

Agency offices are located at:

1755 Lake Cook Road Deerfield, IL 60015-5209

500 West Monroe Springfield, IL 62704

100 West Randolph Suite 3-200 Chicago, IL 60601



STATE OF ILLINOIS ILLINOIS STUDENT ASSISTANCE COMMISSION ILLINOIS PREPAID TUITION PROGRAM SUMMARY June 30, 2018

SUMMARY

The audit of the accompanying financial statements of the Illinois Prepaid Tuition Program of the State of Illinois, Illinois Student Assistance Commission (Program) was performed by Crowe LLP.

Based on their audit, the auditors expressed an unmodified opinion on the Program's financial statements.

EXIT CONFERENCE

In correspondence received from Wendy Funk, Director of Accounting and Finance, on December 21, 2018, the Commission elected to waive an exit conference.



Independent Auditor's Report

Honorable Frank J. Mautino Auditor General State of Illinois, and

Mr. Kevin B. Huber Chair of the Governing Board Illinois Student Assistance Commission

Report on the Financial Statements

As Special Assistant Auditors for the Auditor General, we have audited the accompanying financial statements of the Illinois Prepaid Tuition Program of the State of Illinois, Illinois Student Assistance Commission as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the Illinois Prepaid Tuition Program of the State of Illinois, Illinois Student Assistance Commission's basic financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Illinois Prepaid Tuition Program of the State of Illinois, Illinois Student Assistance Commission, as of June 30, 2018, and the changes in financial position and its cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matters

As discussed in Note 2, the financial statements present only the Illinois Prepaid Tuition Program, and do not purport to, and do not present fairly the financial position of the State of Illinois or the State of Illinois, Illinois Student Assistance Commission, as of June 30, 2018, and the changes in its financial position or, where applicable, its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

As discussed in Notes 9 and 10, the Illinois Prepaid Tuition Program has a net position deficit as of June 30, 2018 of \$280 million. The amount of the net position deficit is highly dependent on the actuarial assumptions used to calculate the actuarial present value of future tuition benefit obligations.

Our opinion is not modified with respect to these matters.

Other Matters

Required Supplementary Information

Management has omitted management's discussion and analysis for the Illinois Prepaid Tuition Program that accounting principles generally accepted in the United States of America requires to be presented to supplement the financial statements. Such missing information, although not a required part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic or historical context. Our opinion on the financial statements is not affected by this missing information.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements of the Illinois Prepaid Tuition Program of the State of Illinois, Illinois Student Assistance Commission. The Other Information, consisting of the actuarial soundness reports, are presented for purposes of additional analysis and are not a required part of the financial statements. The actuarial soundness reports have not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated April 26, 2019, on our consideration of the State of Illinois, Illinois Student Assistance Commission's internal control over financial reporting of the Illinois Prepaid Tuition Program and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Illinois Student Assistance Commission's internal control over financial reporting of the Illinois Prepaid Tuition Program and its compliance.

Signature on File

Crowe LLP

Oak Brook, Illinois April 26, 2019

STATE OF ILLINOIS ILLINOIS STUDENT ASSISTANCE COMMISSION ILLINOIS PREPAID TUITION PROGRAM STATEMENT OF NET POSITION June 30, 2018

ASSETS Current	
Cash and cash equivalents	\$ 14,530,776
Investments	150,606,366
Receivables:	
Contracts receivable	10,170,115
Recoverable Taxes	50,535
Accrued interest on investments	3,171
Total current assets	175,360,963
Noncurrent	
Investments	648,177,329
Contracts receivable	22,863,502
Total non-current assets	671,040,831
Total assets	846,401,794
LIABILITIES	
Current	
Accounts payable and accrued expenses	714,763
Due to other ISAC funds	213,094
Due to State of Illinois component units	518,797
Tuition obligation	<u>150,055,581</u>
Total current liabilities	151,502,235
Noncurrent	
Tuition obligation	975,229,356
Total liabilities	1,126,731,591
Net position, unrestricted (deficit)	\$ (280,329,797)

STATE OF ILLINOIS

ILLINOIS STUDENT ASSISTANCE COMMISSION ILLINOIS PREPAID TUITION PROGRAM

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

For the Year Ended June 30, 2018

Operating revenues: Income from investment securities (net of closed end funds investment management fees of \$1,790,802; see Note 3) Interest revenue, other Fees Total operating revenues	49,233,774 147,785 240,138 49,621,697
Operating expenses: Salaries and employee benefits Accreted tuition expense Management and professional services Investment management fees Investment advisory fees Total operating expenses	2,102,134 36,772,683 2,116,195 396,975 2,170,070 43,558,057
Operating gain, change in net position	6,063,640
Net position (deficit), July 1, 2017	(286,393,437)
Net position (deficit), June 30, 2018	(280,329,797)

STATE OF ILLINOIS ILLINOIS STUDENT ASSISTANCE COMMISSION ILLINOIS PREPAID TUITION PROGRAM STATEMENT OF CASH FLOWS

For the Year Ended June 30, 2018

Cash flows from operating activities Cash receipts from tuition contracts Cash received from fees Cash paid for refund of contracts Cash paid for tuition Cash payments to suppliers for goods and services Cash payments to employees for services Net cash used by operating activities	\$ 14,334,111 240,138 (22,591,194) (125,981,521) (2,320,332) (2,102,134) (138,420,932)
Cash flows from investing activities Purchase of investment securities Proceeds from sales and maturities of investment securities Interest and dividends on investments Cash paid to investment managers Net cash provided by investing activities	(221,941,458) 345,934,458 4,324,227 (396,975) 127,920,252
Net increase in cash and cash equivalents	(10,500,680)
Cash and cash equivalents, July 1, 2017	25,031,456
Cash and cash equivalents, June 30, 2018	\$ 14,530,776

STATE OF ILLINOIS ILLINOIS STUDENT ASSISTANCE COMMISSION ILLINOIS PREPAID TUITION PROGRAM STATEMENT OF CASH FLOWS

For the Year Ended June 30, 2018

Reconciliation of operating gain to net cash used in operating activities

Operating gain, change in net position	\$	6,063,640
Adjustments to reconcile operating loss to net cash		
used by operating activities:		
Investment income and other interest income		(49,381,558)
Investment management fees		396,975
Investment advisory fees		2,170,070
Accreted tuition expense		36,772,683
Decrease in assets:		
Contracts receivable		12,962,904
Increase (decrease) in liabilities:		
Accounts payable and accrued expenses		(569,827)
Due to other ISAC funds		(71,192)
Due to State of Illinois component units		436,880
Tuition obligation	([147,201,507]
Total adjustments	(144,484,572)
Net cash used by operating activities	<u>\$ (</u>	138,420,932)
Supplemental disclosure of noncash investing activities:		
Net appreciation in fair value of investments	\$	33,556,705

NOTE 1 - DESCRIPTION OF PROGRAM

The Illinois Student Assistance Commission (ISAC or Commission) administers the nonshared proprietary fund, Illinois Prepaid Tuition Program (*College Illinois!*® or Program) described below. A nonshared fund is a fund in which a single State agency is responsible for administering substantially all financial transactions of the fund.

Legislation authorizing ISAC to administer an Illinois Prepaid Tuition Program was passed in November 1997. The purpose of this program is to provide Illinois families with an affordable tax-advantaged method to pay for college. Illinois Prepaid Tuition contracts will allow participants to prepay the cost of tuition and mandatory fees at Illinois public universities and community colleges. Benefits of the contracts can also be used at private and out-of-state colleges and universities. Contracts can be purchased in a lump sum payment or in installments.

The Illinois Prepaid Tuition Program Fund is a non-appropriated fund.

<u>Program Administration</u>: Oversight of the Program is provided by the Illinois Student Assistance Commission, an agency of the State of Illinois, which was established more than 50 years ago with the mission of helping to make college accessible and affordable for Illinois students. The agency is governed by the Commission, a board of ten persons (barring temporary vacancies) appointed by the Governor. The Commission employs and provides direction to an Executive Director who is responsible for overseeing and implementing the Commission's day-to-day operations. The Commission's administrative powers include, but are not limited to: adopting a sound Investment Policy; approving any changes to the investment manager structure; and monitoring and evaluating the investment performance of the Fund.

The Investment Committee (or Committee) refers to a committee consisting of at least three members of the Commission with knowledge of investing. Investment Committee members shall be selected by the Chair of the Commission and approved by a vote of the Commission. The Investment Committee is generally responsible for monitoring Fund investments and performance to ensure compliance with the Investment Policy and making related recommendations to the Commission.

The Commission also appoints the members of the Investment Advisory Panel. The Panel consists of seven persons (barring temporary vacancies) with expertise in the areas of accounting, actuarial practice, risk management or investment management. It provides advice to the Commission on issues related to the Program's financial policies and practices and its investment strategy and asset allocation with the objective of obtaining the best possible return on investments, consistent with the actuarial soundness of the Program. The Investment Advisory Panel may also advise on other aspects of the Program.

The Program has been designed to comply with all requirements relating to qualified tuition programs under Section 529 of the Internal Revenue Code of 1986 and Illinois law.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The financial statements of the Illinois Prepaid Tuition Program administered by ISAC have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB). To facilitate the understanding of data included in the financial statements, summarized below are the more significant accounting policies.

Reporting Entity: The Illinois Prepaid Tuition Program does not have component units, nor is it a component unit of any other entity. The Illinois Prepaid Tuition Program is not legally separate from the State of Illinois; it is included in the financial statements of the State as a proprietary fund. The State of Illinois' Comprehensive Annual Financial Report may be obtained by writing to the State Comptroller's Office, Financial Reporting Department, 325 West Adams Street, Springfield, Illinois 62704-1871.

The financial statements present only the Illinois Prepaid Tuition Program administered by the State of Illinois, Illinois Student Assistance Commission (ISAC) and do not purport to, and do not, present fairly the financial position of the State of Illinois or ISAC as of June 30, 2018, and changes in their financial positions and cash flows, where applicable, for the year then ended in conformity with accounting principles generally accepted in the United States of America.

The assets of the Fund are to be preserved, invested and expended solely pursuant to and for the purposes of the Fund and may not be loaned or otherwise transferred or used by the State for any other purpose.

<u>Basis of Presentation</u>: In government, the basic accounting and reporting entity is a fund. A fund is a self-balancing set of accounts segregated for specific purposes/activities generally in accordance with laws and regulations or specific restrictions or limitations on resource use. As a proprietary fund, a statement of net position, statement of revenues, expenses, and changes in net position, and statement of cash flows have been presented for the Illinois Prepaid Tuition Program administered by ISAC.

Operating revenues result from exchange transactions associated with the principal activity of the fund. Exchange transactions are those in which each party receives and gives up essentially equal values. Due to the nature of the Illinois Prepaid Tuition Program activities, income from investments is considered an operating activity in the Statement of Revenues, Expenses, and Changes in Net Position. The fund has no nonoperating activities.

<u>Basis of Accounting</u>: The Illinois Prepaid Tuition Program is reported as an enterprise fund, using the economic resources measurement focus and the accrual basis of accounting.

Revenues are recorded when earned and expenses are recorded at the time liabilities are incurred, regardless of when the related cash flow takes place. The fund accounts for resources received and used for financing self-supporting activities of the Illinois Prepaid Tuition Program that offers services (prepaid tuition contracts) on a user-charge basis to the general public.

<u>Cash and Cash Equivalents</u>: Cash and cash equivalents consist principally of deposits held in the State Treasury. Cash and cash equivalents include cash on hand, cash in banks, interest bearing deposits with banks, and investments in the Illinois Fund.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

<u>Investments</u>: The Illinois Prepaid Tuition Program presents investments on its Statement of Net Position at fair value or amortized cost which approximates fair value – see Note 3 for information on the determination of fair value. The net appreciation or depreciation in the fair value of investments since the prior fiscal year (or purchase date for Fiscal Year 2018 purchases) is included in investment income in the Statement of Revenues, Expenses, and Changes in Net Position. Dividend and interest income are recorded in the period earned.

<u>Contracts Receivable</u>: Contracts receivable represents the amount the Program expects to receive from contract holders for contracts purchased on an installment basis. The actuarially determined present value of future contributions was \$33,033,617 as of June 30, 2018 using a 6.25% discount rate. The Program expects to receive contributions totaling \$10,170,115 in Fiscal Year 2019. This amount has been classified as current contracts receivable on the Statement of Net Position. The total contract receivable balance is expected to be received over the next fourteen years.

<u>Interfund Transactions</u>: The Illinois Prepaid Tuition Program has the following type of interfund transactions with other funds of the State:

Loans—amounts provided with a requirement for repayment. Interfund loans are reported as interfund receivables (i.e. due from other funds) in lender funds and interfund payables (i.e. due to other funds) in borrower funds.

Reimbursements—repayments from the funds responsible for particular expenditures or expenses to the funds that initially paid for them. Reimbursements are reported as expenditures/expenses in the reimbursing fund and as a reduction of expenditures/expenses in the reimbursed fund.

Transfers—flows of assets (such as cash or goods) without equivalent flow of assets in return and without a requirement for repayment. Transfers are reported after nonoperating revenues and expenses.

<u>Tuition Obligation</u>: The tuition obligation in the Illinois Prepaid Tuition Program represents the net contract amount for the 35,183 contracts held by the fund as of June 30, 2018, plus the actuarially-determined present value of future benefits the Program expects to provide to contract holders for all contracts.

<u>Net Position (Deficit)</u>: Net position at year-end (when positive) is restricted by the provisions of the tuition contracts, for tuition payments for beneficiaries of the contract owners. Net deficits however are categorized as unrestricted, and represent the unfunded liability of the Program.

<u>Use of Estimates</u>: The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, deferred inflows of resources, liabilities, deferred outflows of resources, and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

<u>Funding and Actuarial Assistance</u>: Program funding is derived entirely from payments received from contract purchasers and the investment income earned by the Fund. The Commission has obtained actuarial assistance in order to measure the Fund's obligations. The assets of the Fund are to be preserved, invested, and expended solely pursuant to and for the purposes of the Fund and may not be loaned or otherwise transferred or used by the State for any other purpose.

NOTE 3 - DEPOSITS AND INVESTMENTS

Investment Authority and Legal Compliance: The State Treasury is the custodian of the State's cash and cash equivalents for the Illinois Prepaid Tuition Program maintained in the State Treasury. The investment authority for the State Treasury is found in the State Treasurer Act (15 ILCS 505), which authorizes the State of Illinois primary government and its component units to engage in a wide variety of investment activities. For further details please refer to the State of Illinois Comprehensive Annual Financial Report (CAFR). A copy of the CAFR can be obtained from the Illinois Office of the Comptroller at 325 West Adams, Springfield, Illinois 62704.

The Illinois Prepaid Tuition Program independently manages cash and cash equivalents maintained outside the State Treasury.

The Commission board members have ultimate responsibility for the success and safety of the investment program. Specific responsibilities of the Commission include, but are not limited to, the following:

- 1. Adopting a sound investment policy. The Policy may be modified from time to time by action of the Commission and shall be adopted annually by the Commission in accordance with the Act.
- 2. Adopting a sound asset allocation. The asset allocation shall be reviewed annually for reasonableness and a formal asset allocation study will be conducted at least every three years.
- 3. Approving any changes to the investment manager structure.
- 4. Approving the selection and termination of any investment service provider.
- 5. Monitoring and evaluating the investment performance of the Fund and ensuring the risk profile is consistent with Policy objectives.
- 6. Establishing the primary duties and responsibilities of those accountable for achieving and reviewing investment results.
- 7. Adopting and reviewing, at least annually, the diversity policies required by section 30(b-5) of the Prepaid Tuition Act (110 ILCS 979/30(b-5).

The Commission may not delegate its oversight and management responsibilities but will be assisted in its functions by other sub committees, panels and agency staff.

The Commission by statute (Illinois Prepaid Tuition Act, 110 ILCS 979) is required to appoint an investment advisory panel to offer advice and counseling regarding the investments of the Illinois Prepaid Tuition Program.

The Commission appoints members to the panel in a manner consistent with the representation prescribed in the Act. The panel is required to annually review and advise the Commission on provisions of the strategic comprehensive investment plan.

The Investment Policy (Policy) represents the comprehensive investment plan as referred to in the Act. The Policy is reviewed by the Commission annually and identifies a set of investment objectives, guidelines, and performance standards for the investment of the assets of the Fund.

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

The Commission also appoints an Investment Committee consisting of at least three (3) members of the Commission with knowledge of investing. Investment Committee members are selected by the Chair of the Commission and approved by a vote of the Commission. The Investment Committee meets at least quarterly with the Chief Investment Officer and the Investment Consultant.

The Investment Committee is generally responsible for monitoring Fund investments and performance to ensure compliance with the Investment Policy and for considering investment initiatives for potential recommendation to the full Commission.

The Chief Investment Officer (CIO) is responsible for the day to day operation and oversight of the Fund and for coordinating the activities of the Investment Committee, the Investment Advisory Panel, and investment related activities of the Commission. The CIO reports directly to the Executive Director and has a "dotted-line" reporting relationship to the Commission. The CIO has the authority and responsibility to ensure that the Commission is adequately informed on matters and concerns relating to Fund investments. The CIO will work closely with the Executive Director, Investment Consultant and Investment Staff to carry out the duties and responsibilities of this role.

In accordance with the Prepaid Tuition Act, the Commission may arrange to compensate for personalized investment advisory services rendered with respect to any or all of the investments under its control to an investment advisor registered under Section 8 of the Illinois Securities Law of 1953 or any bank or other entity authorized by law to provide those services.

A qualified investment consultant, on an ongoing basis, evaluates the Illinois Prepaid Tuition Program. The primary role of the Investment Consultant is to provide the information, analysis, and advice required by the Investment Staff, Investment Advisory Panel, Investment Committee, and Commission to carry out their duties and to assist them in developing and implementing a prudent process for monitoring and evaluating Fund investments. The Investment Consultant will work closely with the CIO, but is expected to provide an independent perspective to the Investment Committee and Commission.

Written reports are provided to the Commission by the investment consultant no later than 45 days after the end of each calendar quarter. The CIO and investment consultant meet with the various investment managers on a regular basis to review the investment guidelines and the asset/liability structure of the Program. The investment consultant also assists the CIO, Investment Committee, Commission and the Investment Advisory Panel with the selection of investment managers and custodians.

The qualified investment consultant retained by the Commission is expected to provide an independent prospective within the parameters set forth in the investment policy guidelines. The Program has contracted with Callan Associates to evaluate the investment performance of the Illinois Prepaid Tuition Program on an ongoing basis.

The investment policy authorizes the Commission to utilize a third party custodian to safe-keep the assets of the Fund and to provide reports on a monthly basis to all relevant parties. The custodian retained by the Commission is required to exercise discretion within the parameters set forth in the investment policy guidelines for the portfolio(s) they manage on behalf of the Fund.

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

The Custodian has three primary responsibilities, namely: (1) Safekeeping of Assets – custody, pricing and accounting and reporting of assets owned by the Fund; (2) Trade Processing – track and reconcile assets that are acquired and disposed; and, (3) Asset Servicing – maintain all economic benefits of ownership such as income collection, corporate actions, and proxy notification issues.

The Commission may direct that assets of the Program's Funds be placed in savings accounts or may use the same to purchase fixed or variable life insurance or annuity contracts, securities, evidence of indebtedness, or other investment products pursuant to the comprehensive investment plan and in such proportions as may be designated or approved under that plan.

The Commission also authorizes the hiring of professional investment managers to manage the assets of the Fund. Investment managers are hired who, by their record and experience have demonstrated their fiduciary responsibility, their investment expertise, their investment experience, and their capacity to undertake the mandate for which they are being considered. Investment managers retained for the Illinois Prepaid Tuition Program acknowledge in writing that they are a fiduciary with respect to the Fund or that they are a fiduciary to a limited partnership or commingled fund in which the College Illinois Prepaid Tuition Trust Fund is an investor.

Unless otherwise exempt from registration, investment managers need to be currently registered and maintain registration as an investment advisor under the Investment Advisors Act of 1940, a bank (as defined in the Act), or an insurance company qualified to perform investment management services under the law of more than one state unless otherwise approved on an exception basis.

The Commission has established strict guidelines to ensure that hiring decisions are made in a full-disclosure environment characterized by competitive selection, objective evaluation, and proper documentation. The overriding consideration with respect to all decisions is that they shall be made solely in the best interest of participants and beneficiaries of the Fund.

The Illinois Prepaid Tuition Program investment policy dictates certain guidelines and restrictions that apply to each approved asset class. Such restrictions may include certain prohibited transactions, as well as restrictions on portfolio composition. In accordance with the investment policy approved on June 25, 2012, the Fund will not make any new direct private investments or new co-investments that are tied to a single company or investment.

<u>Custodial Credit Risk - Deposits</u>: Custodial credit risk is the risk that in the event of a bank failure, the Illinois Prepaid Tuition Program's deposits may not be returned to it. State law (30 ILCS 230/2C) requires that all deposits of public funds be covered by FDIC insurance or eligible collateral. The Illinois Prepaid Tuition Program has no policy that would further limit the requirements under State law. As of June 30, 2018, the Illinois Prepaid Tuition Program's deposits held outside the State Treasury were not exposed to custodial credit risk.

<u>Investments</u>: ISAC is required annually to adopt a comprehensive investment policy to invest the funds received through contract payments. The Commission approved the Illinois Prepaid Tuition Program's most recent revision to the investment policy in June 2018.

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

The comprehensive investment plan specifies the investment policies to be utilized by the Commission in its administration of the Illinois Prepaid Tuition Program. The Commission may direct that assets of the Program be invested in a manner that will meet or exceed the return of the Policy Benchmark consistent with the actuarial soundness of the Fund and the risk level expected from the asset allocation. The investments should be in compliance with all applicable federal and state laws and other statutes governing the investment of Illinois Prepaid Tuition Program resources.

The Commission is required to adopt a sound asset allocation that is reviewed at least once every three years. The asset allocation establishes target weights for each asset class and is designed to maximize the long-term expected return of the Program within an acceptable risk tolerance while providing liquidity to meet Program liabilities.

The table below establishes the interim and long-term asset allocation targets. In order to minimize trading costs and market risk associated with transitioning to the long-term targets, Program cash flows will be used to move gradually toward the long-term target weights. Interim target weights are established for purposes of calculating the policy benchmark and for rebalancing controls.

	Targets		Rebalanci	ing Range
Asset Allocation	Long-term	<u>Interim</u>	Lower Limit	<u>Upper Limit</u>
U.S. equity	17.00%	18.00%	15.00%	21.00%
Non-U.S. equity	17.00%	18.00%	15.00%	21.00%
Fixed income	39.00%	32.00%	29.00%	35.00%
High yield	6.00%	5.00%	4.00%	6.00%
REIT	6.00%	5.00%	3.00%	7.00%
Absolute return	6.00%	8.00%	6.00%	10.00%
Realestate	4.00%	5.00%	N/A	N/A
Infrastructure	2.00%	5.00%	N/A	N/A
Private equity	1.00%	2.00%	N/A	N/A
Cash	2.00%	2.00%	0.00%	4.00%

The primary benchmark (the Policy Benchmark) for evaluating the performance of the Program is a Target Index consisting of a market index or equivalent for each asset class, weighted in accordance with the target allocation (or interim target allocation if applicable). Over a three to five year period the Program is expected to generate returns, after payment of all fees and expenses, which exceed the returns of the Target Index.

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

The Target Index components are as follows.

<u>Asset Class</u>	<u>In d e x</u>	<u>W eight</u>
U.S. Equity	Russell 3000	18.00%
Non-U.S. Equity	M S C I A C W I x U S I M I	18.00%
Fixed Income	BC U.S. Aggregate	32.00%
High Yield	BofA MLHY	5.00%
REIT	MSCIUS REIT	5.00%
Absolute Return	90-day T Bills +4%	8.00%
Real Estate	NCREIF ODCE	5.00%
Infrastructure	90-day T Bills +4%	5.00%
Private Equity	Russell 3000 + 3%	2.00%
Cash	90-day T-Bills	2.00%

ISAC has established investment guidelines for the investment managers and conducts thorough due diligence before the appointment of all investment managers. ISAC has retained Alinda Capital Partners, Ativo Capital Management, CM Growth Capital Partners LP, DDJ Capital Management, Dimensional Fund Advisors, Garcia Hamilton and Associates, Kennedy Wilson, Lyrical-Antheus Realty Partners, Mesirow Financial, Morgan Stanley AIP, Neuberger Berman, Pinnacle Asset Management, Portfolio Advisors, RhumbLine Advisers, Security Capital Research and Management, State Street Global Advisors, T. Rowe Price Associates and The Rohatyn Group as investment managers to assist with the investment of the Program assets for the Illinois Prepaid Tuition Program.

Use of funds invested on behalf of the Illinois Prepaid Tuition Program by the investment managers is restricted to the payout of tuition and fee benefits for Program beneficiaries and the administrative costs of running the program.

As of June 30, 2018, 19.1% of the funds were invested in Domestic Equities, 28.0% in Fixed Income, 17.8% in International Equities, 5.7% in Infrastructure Funds, 9.6% in Absolute Return Funds, 1.6% in Private Equity Funds, 6.1% in Real Estate, 5.6% in Real Estate Investment Trust, 4.7% in High Yield, and 1.8% in cash and equivalents.

Investments owned are reported at fair value or amortized cost as follows:

- 1. U.S. Government and Agency, Foreign and Corporate Obligations, Convertible Bonds prices quoted by a major dealer in such securities;
- 2. Common Stock and Equity Funds, Preferred Stock, Foreign Equity Securities (a) Listed closing prices as reported on the composite summary of national securities exchanges; (b) Over-the-counter bid prices;
- Money Market Instruments amortized cost which approximates fair values;
- 4. Real Estate Investments fair values as determined by its investment managers and reviewed by Program investment staff and the investment consultant;

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

5. Private Equity, Absolute Return, and Infrastructure Funds – fair values as determined by its investment managers and reviewed by Program investment staff and the investment consultant. Valuations generally are based on the investee's last audited financial statements (generally December 31) and differences attributed to cash flows and subsequent events through June 30.

The Program's investment in REITs represents convertible debt, senior unsecured debt securities, and preferred and common equity securities. Investment strategies of private equity funds include secondary funds.

The Program's investments in infrastructure represent investments used to seek capital appreciation and current income by acquiring, holding, financing, refinancing and disposing of infrastructure investment and related assets. Infrastructure assets include various public works such as water utility, toll roads, inland barge terminals and a gas pipeline system.

The Program's investments in absolute return funds (funds of hedge funds) employ a broad range of diversifying investment strategies including arbitrage, global commodities, and global macro.

Private equity, real estate and infrastructure investment portfolios consist of passive interests in non-publicly traded companies. The Program had outstanding unfunded commitments of approximately \$4 million to private equity partnerships and \$5 million to infrastructure funds as of June 30, 2018.

Recoverable taxes are taxes paid by legacy international equity investment managers to foreign governments. ISAC's custodian then reclaims tax withheld on dividends and interest in markets where tax reclaim benefits are available. These legacy investment managers no longer have assets under management. Their accounts at the custodian consist solely of recoverable taxes.

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

The Illinois Prepaid Tuition Program's cash and investments at June 30, 2018 are presented below by investment type and by investment manager:

Investment Managers Asset Allocation at June 30, 2018

Asset Class	Investment Manager	Fair Value	Asset Allocation
Large-cap core equity	Rhumbline Advisers	\$ 56,413,464	6.94%
All-cap core equity	Rhumbline Advisers	99,006,230	12.17%
Total U.S. Equity		155,419,694	19.11%
International equity	Ativo	72,852,664	8.96%
International equity	Dimensional Fund Advisors	71,920,714	8.84%
International equity recoverable taxes	Northern Trust	50,535	0.01%
Total Non-U.S. equity		144,823,913	17.81%
Fixed income - Passive core	State Street Global Advisors	77,530,102	9.53%
Fixed income - Core Plus	T. Rowe Price	77,742,949	9.56% 8.98%
Fixed income - U.S. Intermediate Total fixed income	Garcia Hamilton	73,021,915	28.07%
rotal lixed income		228,294,966	28.07%
High yield	DDJ Strategic Income Plus	38,521,489	<u>4.74</u> %
Total high yield		38,521,489	4.74%
REIT Preferred Growth	Security Capital Research	45,137,877	5.55%
Total REIT		45,137,877	5.55%
Real estate - Private Equity	Kennedy Wilson IV	6,339,775	0.78%
Real estate - Private Equity	Mesirow	4,813,898	0.59%
Real estate - Private Equity	Lyrical - Antheus	38,660,582	<u>4.75</u> %
Total Real Estate		49,814,255	6.12%
Infrastructure-Diversified Value Add	Alinda Infrastructure	26,108,059	3.21%
Infrastructure-Asia Opportunities	The Rohatyn Group (formerly JP Morgan)	19,927,530	<u>2.45</u> %
Total infrastructure		46,035,589	5.66%
Absolute return fund-Conservative	Neuberger Berman	50,792,328	6.24%
Absolute return fund-Commodities	Pinnacle Natural Resources	27,280,235	<u>3.35</u> %
Total Absolute Return Funds		78,072,563	9.60%
Private equity secondary FoFs	CM Growth Capital Partners LP	6,858,415	0.84%
Private equity secondary FoFs	Morgan Stanley	868,994	0.11%
Private equity secondary FoFs	Portfolio Advisors	4,986,475	0.61%
Total Private Equity		12,713,884	<u>1.56</u> %
Total investments		798,834,230	98.21%
Cash and equivalents	Northern Trust	\$ 13,761,637	1.69%
Cash and equivalents	Illinois Funds, Treasury and lock box	769,139	0.10%
Total cash and cash equivalents		14,530,776	1.79%
Total portfolio		\$ 813,365,006	<u>100.00%</u>

(Continued)

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

<u>Investment Management Fees</u>: The Program has contracted with Commission-approved investment managers to manage the assets of the Program. The investment managers serve as investors and investment advisors to the Program.

For investment managers who invest moneys in publicly held securities the Program pays an investment management fee for investment management services. The investment management fee is based upon contractually agreed upon conditions and provisions. Investment management fees expense for investments in publicly held securities amounted to \$396,975 for the year ended June 30, 2018 and is accounted for in the Statement of Revenues, Expenses, and Changes in Net Position.

For investment managers of alternative investments (not publicly held securities) the Program pays an investment advisory fee. The investment advisory fees are calculated based upon the terms and conditions agreed upon with each individual contractual agreement and are recognized as investment advisory fees expense in the Statement of Revenues, Expenses, and Changes in Net Position. Investment advisory expense as reflected in the Statement of Revenues, Expenses, and Changes in Net Position for Fiscal Year 2018 amounts to \$2,170,070.

For certain alternative investment managers of private equity, infrastructure and real estate which are closed end funds and ISAC is a limited partner, the investment advisory fee is reflected in a slightly different way. If the investment management fees are outside of the Limited Partner's capital account then the fees are included as part of the investment advisory fees expense in the Statement of Revenues, Expenses, and Changes in Net Position. If the closed-end fund accounts for management fees within the Limited Partner's capital account, then management fee expense is included in the Net Asset Value calculation and would therefore be included in the income from investment securities on the Statement of Revenues, Expenses and Changes in Net Position.

Investment managers who fall into the last category are listed below:

- Kennedy Wilson
- Lyrical-Antheus Realty Partners
- Mesirow Financial
- Alinda Capital Partners
- The Rohatyn Group
- CM Growth Capital Partners
- Portfolio Advisors
- Morgan Stanley AIP

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

Approximately \$1,790,802 in investment advisory fees are included in the amount reported for income from investment securities for the Fiscal Year ending June 30, 2018 and is accounted for as a part of the income from investment securities in the Statement of Revenues, Expenses, and Changes in Net Position. Additionally, these amounts are reflected in the carrying value on the Statement of Net Position.

The State Treasurer is the custodian of the State's cash and cash equivalents for the Illinois Prepaid Tuition Program maintained in the State Treasury. Amounts on deposits in the custody of the State Treasurer totaled \$628,256 at June 30, 2018. These deposits are pooled and invested with other State funds in accordance with the Deposit of State Moneys Act of the Illinois Compiled Statutes (15 ILCS 520/11). Funds held by the State Treasurer have not been addressed as to custodial credit risk because the Illinois Prepaid Tuition Program does not own individual securities. Funds held by the State Treasurer are not rated for credit risk and the interest rate risk cannot be determined because the weighted average maturity information for these amounts is not available for individual funds. Details on the nature of these deposits and investments, along with risk disclosures, are available within the State of Illinois' Comprehensive Annual Financial Report.

<u>Interest Rate Risk</u>: Interest rate risk is the risk that changes in interest rates of debt investments will adversely affect the fair value of an investment. The Illinois Prepaid Tuition Program's policy for managing interest rate risk is to monitor duration against an appropriate benchmark index.

The duration of the portfolios, by Manager, for the fixed income securities (excluding real estate portfolio), compared to the benchmark index(s) is as follows:

Fixed Income <u>Portfolio Manager</u>	A verage <u>D uration</u>	Bloomberg Aggregate <u>Bond Index</u>	Bloomberg Int. Government/ Credit Index
Garcia Hamilton	2.7 years	N/A	3.9 years
SSGA U.S. Aggregate Bond Index (common collective trust)	6.0 years	6.0 years	N/A
T. Rowe Price	5.7 years	6.0 years	N/A

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

Portfolio Weighted Average Maturity

Portfolio Weighted Average

Portiolio vveignted Average			
Investment Type		Fair Value	Weighted Average Maturity (in Years)
,,-			<u> </u>
U.S. Treasury notes	\$	32,377,748	5.94
U.S. Treasury bonds		6,886,053	28.08
U.S. Agency obligations		12,760,862	1.24
Index linked government bonds (U.S. Treasuries)		2,337,126	6.70
Bond common collective trust		77,530,102	8.37
Municipal/provincial bonds		1,589,792	13.30
Non U.S. government bonds denominated in U.S. dollars		820,829	8.86
Non U.S. government bonds denominated in foreign currency		669,376	9.49
Foreign government agencies denominated in U.S. dollars		412,711	13.34
Multi-sector funds		41,461,181	8.52
Government agency short-term bills and notes		1,749,909	0.01
Corporate debt securities		24,536,186	3.77
Corporate asset-backed securities		6,729,217	12.39
Mortgage back securities (MBS):			
Government agencies		9,153,151	12.29
Non-government backed		2,353,789	33.97
Commercial		4,277,338	26.64
Total fair value	<u>\$</u>	225,645,370	
Portfolio weighted average maturity			8.61

<u>Credit Risk</u>: Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The operational guidelines for actively-managed bond managers set forth in the Illinois Prepaid Tuition Program investment policy are:

- The weighted average credit quality of portfolio holding will not fall below A- or equivalent.
- No more than 20% of the portfolio will be invested in issues rated below Baa3 or BBB-, A2 or P2.
- No more than 10% in non-U.S. securities (dollar and non-dollar) rated below investment grade.
- Should a security be downgraded to a rating of "B" or below, the investment manager will determine
 the appropriate action (sell or hold) based on the perceived risk and expected return of the position
 and will inform the CIO and the Investment Consultant in writing of the action taken.

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

The following tables indicate credit ratings, as of June 30, 2018, for the Program's debt security investments (other than obligations of the U.S. Government or obligations explicitly guaranteed by the U.S. Government which are not considered to have credit risk). Ratings for debt security investments that have multiple ratings are on the following page:

Credit Ratings (Excludes Multiple-Rated Securities) June 30, 2018

	Total <u>Fair Value</u>	<u>M o o d y 's</u> **
Money market mutual funds	\$ 13,761,637	NR
Illinois Funds	57,952	NR
Bond common collective trust	77,530,102	NR
Multi-sector funds	41,461,181	NR
Government agencies short term bills and notes	1,749,909	NR
Non U.S. government agencies denominated in U.S. dollars	412,711	Ваа
U.S. Agency obligations	12,760,862	Aaa

*NR - Not rated

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

Credit Ratings (Multiple-Rated Securities) June 30, 2018

	55 55, <u>1</u> 5.15		
Rating Agency		Credit <u>Rating</u>	Total <u>Fair Value</u>
Moody's	Commercial Mortgage-Backed	Aaa	\$ 1,269,922
	Commercial Mortgage-Backed	Aa	698,911
	Commercial Mortgage-Backed	A	466,737
	Commercial Mortgage-Backed	NR	1,841,768
	Commordia Mortgago Zaokea	NIX	4,277,338
Moody's	Corporate Asset Backed Securities	Aaa	1,975,665
	Corporate Asset Backed Securities	Aa	1,164,292
	Corporate Asset Backed Securities	Α	463,040
	Corporate Asset Backed Securities	Ваа	655,515
	Corporate Asset Backed Securities	Ва	74,502
	Corporate Asset Backed Securities	NR	2,396,203
			6,729,217
Moody's	Corporate Bonds	Aa	1,403,252
,	Corporate Bonds	A	21,011,633
	Corporate Bonds	Baa	1,692,901
	Corporate Bonds	NR	428,400
			24,536,186
Moody's	Municipal/Provincial Bonds	Aaa	207,761
	Municipal/Provincial Bonds	Aa	1,063,652
	Municipal/Provincial Bonds	Α	112,447
	Municipal/Provincial Bonds	NR	67,202
	Municipal/Provincial Bonds	WR	138,732
			1,589,792
Moody's	Non-Government Backed C.M.O.s	Aaa	301,610
	Non-Government Backed C.M.O.s	Aa	579,838
	Non-Government Backed C.M.O.s	Baa	290,031
	Non-Government Backed C.M.O.s	Ва	201
	Non-Government Backed C.M.O.s	В	215
	Non-Government Backed C.M.O.s	NR	1,181,893
			2,353,789

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

Credit Ratings (Multiple-Rated Securities) June 30, 2018

	·		
Rating Agency		Credit <u>Rating</u>	Total <u>Fair Value</u>
Moody's	Non U.S. government bonds denominated in U.S. dollars	Aa A Baa Ba B	\$ 203,538 48,709 202,333 193,358 172,890 820,829
Moody's	Non-U.S. government bonds in foreign currency Non-U.S. government bonds in foreign currency Non-U.S. government bonds in foreign currency	A Ba NR	184,716 161,637 323,023 669,376
Moody's	Mortgage-backed securities, government agencies	A Aa Baa B NR	419,840 148,067 650,242 149,797 7,785,204 9,153,151

NR - not rated, WR withdrawn

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

<u>Custodial Credit Risk</u>: Custodial credit risk for investments is the risk that, in the event of a failure of the counterparty, the Illinois Prepaid Tuition Program will not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. The Program does not have an investment policy for custodial credit risk for investments.

The Illinois Prepaid Tuition Program is not exposed to custodial credit risk at June 30, 2018.

<u>Concentration of Credit Risk</u>: Concentration of credit risk is the risk of loss attributed to the magnitude of an investment in a single issuer.

The operational guidelines as set forth in the Illinois Prepaid Tuition Program's investment policy indicate:

- For fixed income managers no more than 5% of the fixed income portfolio at time of purchase may be invested in any one company, except for U.S. government or agency issues.
- For investments in international equity, investment in any one issuer shall not exceed five percent of the market value of the portfolio at the time of purchase. No more than ten percent of the market value of the portfolio may be held in any one issuer at any time. Investment in any one company in the portfolio may be no more than ten percent of the total market value of that company.
- For investments in domestic equity, investment in any one issuer shall not exceed five percent of the market value of the portfolio at the time of purchase. No more than ten percent of the market value of the portfolio may be held in any one issuer at any time. Investment in any one company in the portfolio may be no more than ten percent of the total market value of that company.

As of June 30, 2018, there were no investments subject to concentration of credit risk.

<u>Foreign Currency Risk</u>: Foreign currency risk is the risk that changes in currency exchange rates will adversely affect the fair value of an investment.

The Illinois Prepaid Tuition Program's investments in international equity are in compliance with the guidelines of the investment policy. As of June 30, 2018, 17.8% is invested in international equities all denominated in U.S. dollars.

Certain alternative investments also hold investments located outside of the United States. These investments denominated in U.S. dollars have underlying investments in other currencies including the Indian rupee. Fluctuations in foreign exchange rates between the U.S. dollar and other currencies could have an effect on the amounts realized in U.S. dollars involving these investments. The Program has the following investments denominated in foreign currency.

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

Foreign Currency		Fixed	Pending Trades (ed Income	
<u>Denomination</u>		<u>Income</u>	 vestments	<u>Totals</u>
Brazilian real	\$	161,637	\$ -	\$ 161,637
Hungarian forint		323,023	(347,642)	(24,619)
Peruvian nuevo sol		184,716	 <u>-</u>	 184,716
Total	\$	669,376	\$ (347,642)	\$ 321,734

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NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

<u>Valuation</u>: The Program categorizes its fair value measures within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs (see pages 16-17); and leveling is not required for investments held at amortized cost. The Program has the following as of June 30, 2018:

	Quoted Prices								
			ir	Active		Significant			
			N	1arkets		Other			
			for	Identical		Observable			
		June 30,	A	Assets		Inputs	L	eveling Not	
Investments by fair value level		2018	<u>(L</u>	<u>-evel 1)</u>		(Level 2)		Required	
Debt securities									
U.S. Treasury notes	\$	32,377,748	\$	-	\$	32,377,748	\$	-	
U.S. Treasury bonds		6,886,053		-		6,886,053		-	
U.S. agency obligations		12,760,862		-		12,760,862		-	
U.S. index linked government bonds		2,337,126		-		2,337,126		-	
Municipal/provincial debt		1,589,792		-		1,589,792		-	
Corporate debt securities		24,536,186		-		24,536,186		-	
Corporate asset-backed securities		6,729,217				6,729,217		-	
Foreign government bonds denominated in U.S. dollars		820,829		-		820,829		-	
Foreign government agencies denominated in U.S. dollars		412,711		-		412,711		-	
Foreign debt securities (non U.S. government bonds denominated in foreign currency)		669,376		_		669,376		_	
Government agency short-term bills and notes		1,749,909		-		1,749,909		-	
Commercial mortgage backed		4,277,338		-		4,277,338		-	
Government mortgage backed		9,153,151		-		9,153,151		-	
Multi-sector funds		41,461,181		-		41,461,181		-	
Common collective trust		77,530,102		-		77,530,102		-	
Non government backed CMO		2,353,789		-		2,353,789		-	
Corporate equity securities		155,419,694	15	55,419,694		-		-	
Foreign equity securities		71,920,714	7	1,920,714		-		-	
Money market mutual funds		13,761,637		-		-		13,761,637	
Cash and pending trades		2,997,237		-		-		2,997,237	
Cash and pending trades in foreign currency		(347,642)						(347,642)	
Equity in public treasurer's investment pool (Illinois Funds)	_	57,952			_	<u>-</u>	_	57,952	
Total investments by fair value level	\$	469,454,962	\$ 22	27,340,408	\$	225,645,370	\$	16,469,184	

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

Investments measured at the net asset value (NAV)		June 30, 2018
Real estate investment trust	\$	45,137,877
Real estate Private equity		49,814,255 12,713,884
Infrastructure		46,035,589
Foreign equity Absolute return		72,852,664 78,072,563
High yield fund		38,521,489
Total investment measured at the NAV	<u>\$</u>	343,148,321
Total investments measured at fair value or amortized cost	\$	812,603,283

The valuation method of investments measured at the net asset value (NAV) per share (or its equivalent) is presented on the following table.

		Fair <u>Value</u>	Unfunded ommitments	Redemption Frequency If Currently Eligible	Redemption Notice <u>Period</u>
Real estate investment trust Real estate	\$	45,137,877 49,814,255	\$ -	Quarterly N/A	30 days notice N/A
Private equity		12,713,884	3,547,127	N/A	N/A
Infrastructure		46,035,589	4,737,511	N/A	N/A
Foreign equity		72,852,664		Monthly	15 days notice
Absolute return		78,072,563	-	Annual	65 and 180 days notice
High yield fund	_	38,521,489	 <u>-</u>	Quarterly	60 days notice
Total investments measured					
at NAV	\$	343,148,321	\$ 8,284,638		

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

Real estate investment trust: This investment manager opportunistically sources, structures and executes investments in real estate operating companies. The fair values of the investment in this type have been determined using the NAV per share of the investment. This investment can be redeemed quarterly with 30 days' notice. A liquidating account may be used during period of market stress to provide orderly liquidation.

Real estate: This type includes three real estate funds that invest primarily in U.S. commercial and residential real estate. The fair values of the investments in this type have been determined using the NAV per share of the Program's ownership investment in partners' capital with the exception of Lyrical Antheus Realty Partners III, LP where the partners' capital which is recognized at cost basis on their financial statements has been adjusted to reflect the investment on a fair value basis. These investments can never be redeemed with the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over the next six years with 10%, 50% and 100% (varies by investment manager) within state Fiscal Year 2019.

<u>Private equity</u>: This type includes three private equity funds. One holds portfolio securities. A second fund acquires, holds and disposes of investments in secondary opportunities. The third fund invests in a diversified portfolio of private equity limited partnerships purchased in the secondary market. The fair values of the investments in this type have been determined using the NAV per share of the Program's ownership investment in partners' capital. These investments can never be redeemed within the funds. Instead, the nature of the investments in this type is that distributions are received through the liquidation of the underlying assets of the funds. It is expected that the underlying assets of the funds will be liquidated over the next four years with 20% to 100% (varies by investment manager) within state Fiscal Year 2019.

<u>Infrastructure</u>: This type includes two infrastructure funds which invest in infrastructure and related assets in the United States, Asia and Europe. The fair values of the investments in this type have been determined using the NAV per share of the Program's ownership investment in partners' capital. These investments can never be redeemed with the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over the next six years with 10% to 20% (varies by investment manager) within state Fiscal Year 2019.

<u>Absolute return</u>: This type includes two absolute return funds of funds. One targets consistent, positive absolute returns with minimal beta to major equity and fixed income markets. The other is a multi-manager fund in the global commodity and commodity related markets. The fair values of the investments in this type have been determined using the NAV per share of the Program's ownership investment in partners' capital. Both have annual liquidity with quarterly liquidity available for a fee. Both have fund level gate thresholds of 20% to 25% of fund assets. Both will withhold a percentage pending the completion of the annual audit. A ten million redemption was initiated in June 2018 for distribution September 30, 2018.

<u>High yield</u>: This type seeks income and gains through trading and investing in securities. The fair value of the investment in this type has been determined using the NAV per share of the Program's ownership investment in partners' capital. Ninety percent of liquid securities are available within 30 days of quarter end with 60 days' notice prior to quarter end. Up to 25% of the fund may be invested in illiquid securities. Ten percent of any withdrawal may be held until 30 days following the annual audit. As of June 30, 2018, \$199,231 was held in a liquidating account related to prior redemptions.

NOTE 3 - DEPOSITS AND INVESTMENTS (Continued)

<u>Foreign equity</u>: This type includes two international equity funds. DFA World ex US Core Equity Portfolio is a mutual fund. They strike a daily price each evening following a trading day. The other fund Ativo International Equity Fund invests in undervalued companies that display above average growth characteristics, domiciled in, or primarily exposed to developed and emerging countries outside of the United States.

NOTE 4 - BALANCE DUE TO OTHER ISAC FUND

As of June 30, 2018, the Illinois Prepaid Tuition Program owed \$213,094 to the Student Loan Operating Fund for expense reimbursements. In addition, the Illinois Prepaid Tuition Program owed \$518,797 to Illinois Universities for payment of tuition and fee benefits.

NOTE 5 - PERSONNEL COST ALLOCATION

Based on a revised cost allocation policy, beginning in Fiscal Year 2013, all payroll-related costs are paid out of the Student Loan Operating Fund. This includes salary, benefits, and any vacation or sick payout should they be incurred. On a monthly basis, College Illinois is charged back for the related hours worked and costs incurred.

NOTE 6 - TUITION OBLIGATION

The tuition obligation is management's estimate of the present value of the estimated tuition payments to be made and is expected to be financed from investments of prepaid tuition contracts. The estimate for the future tuition obligation is based on a closed group projection for existing contracts assuming no new contract sales after June 30, 2018. See actuarial assumptions and additional information in Note 10.

Tuition obligation activity for the year ended June 30, 2018 is as follows:

Balance, July 1, 2017	\$ 1,235,713,761
Add:	
Contributions received in FY 2018	14,334,111
Change in contracts receivable, at present value*	(12,962,904)
Adjust tuition obligation based on actuarial valuation	36,772,683
Less:	
Return of contributions	(22,591,194)
Tuition payments	(125,981,521)
Balance June 30, 2018**	\$ 1,125,284,937
Reported as:	
Current	\$ 150,055,581
Noncurrent	975,229,356
	\$ 1,125,284,937

^{*} See Note 10. Discount rate used in determining present value was 6.25%.

(Continued)

NOTE 6 - TUITION OBLIGATION (continued)

** The accreted tuition expense is calculated at least annually by the Commission's actuary and is an estimate based on the average increase in tuition for Illinois colleges. Accreted tuition expense is reflected as an expense in the Statement of Revenues, Expenses, and Changes in Net Position and as an increase (or decrease) to the tuition obligation on the Statement of Net Position.

NOTE 7 - PENSION PLAN

A majority of ISAC's full-time employees who are not eligible for participation in another state-sponsored retirement plan participate in the State Employees' Retirement System (SERS), which is a pension trust fund in the State of Illinois reporting entity. The SERS is a single-employer defined/benefit public employee retirement system (PERS) in which State employees participate, except those covered by the State Universities, Teachers', General Assembly, and Judges' Retirement Systems. The financial position and results of operations of the SERS for Fiscal Year 2018 are included in the State of Illinois' Comprehensive Annual Financial Report (CAFR) for the year ended June 30, 2018. The SERS issues a separate CAFR that may be obtained by writing to the SERS, 2101 South Veterans Parkway, Springfield, Illinois 62794-9255.

A summary of SERS benefit provisions, changes in benefit provisions, employee eligibility requirements including eligibility for vesting, and the authority under which benefit provisions are established are included as an integral part of the SERS' CAFR. Also included is a discussion of employer and employee obligations to contribute and the authority under which those obligations are established.

The Commission pays employer retirement contributions for the Illinois Prepaid Tuition Program based upon an actuarially determined percentage of its payroll. For Fiscal Years 2018, 2017, and 2016, the employer contribution rate was 47.3%, 44.6%, and 45.6%, respectively. The required and actual contribution for Fiscal Years 2018, 2017, and 2016 was \$486,445, \$624,356, and \$467,660, respectively. Contributions to SERS and the net pension liability related to the SERS pension plan are recorded by the Commission's Student Loan Operating Fund.

NOTE 8 - POST-EMPLOYMENT BENEFITS

The State provides health, dental, vision, and life insurance benefits for retirees and their dependents in a program administered by the Department of Healthcare and Family Services along with the Department of Central Management Services. Substantially all State employees become eligible for post-employment benefits if they eventually become annuitants of one of the State sponsored pension plans. Health, dental, and vision benefits include basic benefits for annuitants and dependents under the State's self-insurance plan and insurance contracts currently in force. Annuitants may be required to contribute towards health, dental, and vision benefits in accordance with Public Act 97-0695.

The total cost of the State's portion of health, dental, vision, and life insurance benefits of all members, including post-employment health, dental, vision, and life insurance benefits, is recognized as an expenditure by the State in the Illinois Comprehensive Annual Financial Report. The State finances the costs on a pay-as-you-go basis.

The total costs incurred and related liabilities for health, dental, vision, and life insurance benefits are not separated by department, fund or component unit for annuitants and their dependents nor active employees and their dependents.

NOTE 8 - POST-EMPLOYMENT BENEFITS (continued)

A summary of post-employment benefit provisions, changes in benefit provisions, employee eligibility requirements, including eligibility for vesting, and the authority under which benefit provisions are established are included as an integral part of the financial statements of the Department of Healthcare and Family Services. A copy of the financial statements of the Department of Healthcare and Family Services may be obtained by writing to the Department of Healthcare and Family Services, 201 South Grand Ave., Springfield, Illinois 62763-3838.

NOTE 9 - FUND DEFICITS

As of June 30, 2018, the Illinois Prepaid Tuition Program has a deficit in net position of \$280,329,797. The table below details a reconciliation of the fund deficit in the financial statements to the fund deficit in the Actuarial Soundness Report as of June 30, 2018.

Reconciliation of Fund Deficit with Unfunded Liability in the Actuarial Report:

Unfunded liability per actuarial soundness report	\$ (307,711,673)
Present value of accrued future administrative expense	28,825,358
Other accrued liabilities	 (1,443,482)
Fund deficit per Statement of Net Position	\$ (280,329,797)

NOTE 10 - PROGRAM RISKS AND ACTUARIAL DATA

The Program's ability to honor existing and future contracts depends primarily upon three factors: (i) resumption of contract sales within projections; (ii) achieving a projected annual net return on Program investments; and (iii) actual tuition/fee increases being within projected amounts.

Gabriel, Roeder, Smith and Company, the independent actuarial firm retained by College Illinois! ®, has performed an actuarial soundness valuation of College Illinois!®, the State's section 529 prepaid tuition program, as of June 30, 2018 to evaluate the financial viability of the Program as of June 30, 2018. The complete Actuarial Soundness Report as of June 30, 2018 is included in the Other Information Section.

As detailed in the attached Actuarial report the Program enrollment has been on hold for the 2017/2018 enrollment period and will continue to be on hold for the 2018/2019 enrollment period pending continuing discussions with policymakers to help define and advance proposals that will strengthen the Program. The Program continues to operate as usual with no change in benefit payments, customer service, or plan administration. Those with beneficiaries in college continue to see benefit payments paid as usual. The Program retains a substantial investment portfolio in a separate trust fund to pay obligations for a number of years without requiring funding from the state. Based on the current actuarial soundness report, funds would be sufficient to cover payments through fiscal year 2025 even if the program never sold another contract.

NOTE 10 - PROGRAM RISKS AND ACTUARIAL DATA (continued)

The Program is not supported by the full faith and credit of the State of Illinois, nor is it guaranteed by the State's general fund. The Program is a moral obligation of the State of Illinois requiring the Governor to request an appropriation from the State General Assembly in case the Commission and the Governor determine that the Program does not have adequate assets to meet its contractual obligations in an upcoming fiscal year. While the General Assembly has fulfilled other moral obligations of the State of Illinois in the past, it is not obligated to appropriate, and no assurances can be made that the General Assembly will appropriate sufficient moneys to meet the Program's contractual obligations.

If it is determined by the Commission, with the concurrence of the Governor, that the Program is financially infeasible, the Commission may prospectively discontinue the Program. Pursuant to the

prepaid tuition statute, if the Program is discontinued, beneficiaries who are or will enroll within five years at an eligible institution shall be entitled to exercise the complete benefits specified in the contract; all other contract holders shall receive an appropriate refund of all contributions and accrued interest up to the time the Program is discontinued.

The following is a summary of the actuarial present value (APV) of the future benefits obligation, funded ratio, and significant assumptions used.

APV of future benefits obligation*	\$ 1,125,284,937
Funded ratio	73.30%
Actuarial assumptions: Actuarial valuation date	June 30, 2018
Assumed net investment return	6.25% in FY 19 then grading down in annual increments of 0.393 to an ultimate investment rate of 3.75 percent for fiscal years on and after 2026
Rates of cancellation	Varies according to years from projected college entrance year
Tuition increase all contract types: All future years	5.00%

^{*} For all existing contracts as of June 30, 2018

The actuarial present value of the future benefits obligation decreased by approximately \$110 million compared to the balance reported at June 30, 2017. Contributing to the overall decrease was tuition paid.

STATE OF ILLINOIS ILLINOIS STUDENT ASSISTANCE COMMISSION ILLINOIS PREPAID TUITION PROGRAM NOTES TO FINANCIAL STATEMENTS June 30, 2018

NOTE 11 - RISK MANAGEMENT

The Commission is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; workers' compensation and natural disasters. The State retains the risk of loss (i.e., self-insured) for these risks except for insurance purchased by the Commission for the building and EDP equipment. There has been no reduction in insurance coverage from coverage in the prior year. Settlement amounts have not exceeded coverage for the current or prior two years. The Commission's risk management activities for workers' compensation are financed through appropriations to the Illinois Department of Central Management Services and are accounted for in the general fund of the State. The claims are not considered to be a liability of the Commission and, accordingly, have not been reported in the Commission's financial statements for the year ended June 30, 2018.

NOTE 12 - NEW GOVERNMENTAL ACCOUNTING STANDARDS

The Governmental Accounting Standards Board (GASB) has issued the following statements:

GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions, is effective for the Commission beginning with its year ended June 30, 2018. This Statement addresses accounting and financial reporting for OPEB that is provided to employees of State and local governmental employers. This statement is not applicable to College Illinois.



College Illinois!® Prepaid Tuition Program

Actuarial Soundness Valuation Report as of June 30, 2018





October 5, 2018

Mr. Eric Zarnikow Executive Director Illinois Student Assistance Commission 1755 Lake Cook Road Deerfield, Illinois 60015-5209

Re: College Illinois!® Prepaid Tuition Program Actuarial Valuation as of June 30, 2018

Dear Mr. Zarnikow:

In accordance with the request of the Illinois Student Assistance Commission ("ISAC"), Gabriel, Roeder, Smith & Company ("GRS") has performed an actuarial soundness valuation of the College Illinois!® Prepaid Tuition Program ("CIPTP") as of June 30, 2018. Although the term "actuarial soundness" is not specifically defined, the primary purpose of this actuarial valuation is to evaluate the financial status of the program as of June 30, 2018.

This report presents the principal results of the actuarial soundness valuation of the CIPTP including the following:

- A comparison of the actuarial present value of the obligations for prepaid tuition contracts purchased through June 30, 2018, with the value of the assets associated with the program as of that same date;
- An analysis of the factors which caused the deficit/surplus to change since the prior actuarial valuation; and
- A summary of the actuarial assumptions and methods utilized in the actuarial calculations.

This report was prepared at the request of ISAC and is intended for use by ISAC and those designated or approved by ISAC. This report may be provided to parties other than ISAC only in its entirety and only with the permission of ISAC. This report should not be relied on for any purpose other than the purpose described above.

The actuarial soundness valuation results set forth in this report are based upon data and information furnished by ISAC, concerning program benefits, financial transactions and beneficiaries of the CIPTP. We reviewed this information for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Illinois Student Assistance Commission. Further, the data and information provided is through June 30, 2018, and does not reflect subsequent market volatility.

The actuarial soundness valuation results summarized in this report involve actuarial calculations that require assumptions about future events. Most of the actuarial assumptions used in this valuation were based on an experience review for the period from July 1, 2011 to June 30, 2014, and were adopted for use commencing with the June 30, 2015, actuarial valuation. The following changes were made beginning with the actuarial valuation as of June 30, 2018:

- The "select and ultimate" rate structure for the investment return assumption and related discount rate for liabilities was changed from an initial rate of 6.50 percent for fiscal year 2018 and grading down to the ultimate rate of 3.75 percent for fiscal years 2025 and after to an initial rate of 6.25 percent for fiscal year 2019 (compared to the expected rate of 6.107 percent under the previous assumption) and grading down to the ultimate rate of 3.75 percent for fiscal years 2026 and after.
- Total administrative expenses were assumed to be all non-marketing related due to the ongoing deferment in open enrollment. The amount of administrative expenses assumed to be nonmarketing related is the basis for the present value of future administrative expenses for current contract beneficiaries.

The major actuarial assumptions used in this analysis were provided by and are the responsibility of ISAC.

The College Illinois!® Prepaid Tuition Program stopped accepting new contracts as of the 2017/2018 enrollment period and is still not accepting new contracts for the 2018/2019 enrollment period. According to the College Illinois!® Prepaid Tuition Program website, program enrollment is on hold pending continuing discussions with policymakers to help define and advance proposals that will address the College Illinois!® Prepaid Tuition Program unfunded liability and strengthen the Program.

Considering the current asset allocation, current and future liquidity requirements and the fact that program enrollment is on hold, we believe the net investment rate of return assumption of 6.25 percent in fiscal year 2019 grading down to 3.75 percent in 2026, on a select and ultimate basis, is consistent with applicable Actuarial Standards of Practice.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law. We have performed an analysis of the sensitivity of certain changes in future assumptions.

We believe that the actuarial methods used in this report are reasonable and appropriate for the purpose for which they have been used. In addition, because it is not possible or practical to consider every possible contingency, we may use summary information, estimates or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that are deemed to be immaterial.



Mr. Eric Zarnikow Illinois Student Assistance Commission Page 3

To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the College Illinois!® Prepaid Tuition Program as of June 30, 2018. All calculations have been made in conformity with generally accepted actuarial principles and practices commonly applicable to similar types of arrangements.

There are currently no Actuarial Standards of Practice which specifically relate to prepaid tuition plans. We have looked to the Actuarial Standards of Practice related to pensions for guidance due to their similar nature.

Lance J. Weiss and Amy Williams are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. Lance J. Weiss and Amy Williams are independent of ISAC.

Respectfully submitted,

SIGNED ORIGINAL ON FILE

Lance J. Weiss, EA, MAAA, FCA Senior Consultant and Team Leader

SIGNED ORIGINAL ON FILE

Amy Williams, ASA, MAAA, FCA Consultant





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SECTION A

EXECUTIVE SUMMARY

Summary of Results

Principal Actuarial Soundness Valuation Results

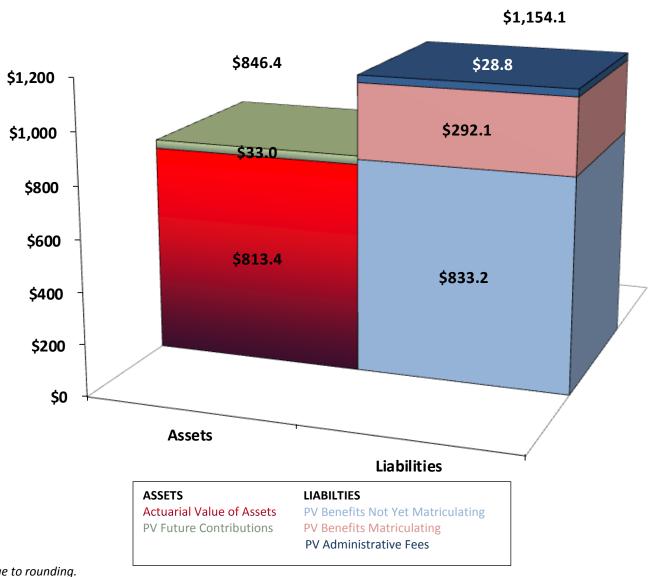
Valuation Date:	June 30, 2018	June 30, 2017
Membership Summary:		
Counts		
Not yet Matriculating	21,701	25,146
, Matriculating ^a	13,482	13,251
Total	35,183	38,397
Average years until Enrollment if Not yet Matriculating	3.8	4.1
Assets ^b		
· Actuarial Value of Assets (AVA)	\$846,398,622	\$950,969,333
· Estimated Return	5.60%	7.22%
Actuarial Liabilities (Present Value of Future Tuition		
Payments, Fees, and Administrative Expenses)	\$1,154,110,295	\$1,271,206,337
Unfunded Liabilities	\$307,711,673	\$320,237,004
Funded Ratio	73.3%	74.8%

^aCounts include 4,897 in contracts in 2018 and 4,592 contracts in 2017 that are classified as "Matriculating" but have not used any credits within the past year.



^bAsset values include present value of expected future contract payments from current contract holders.

Summary of Assets and Liabilities as of June 30, 2018 \$\\$ in Millions



Numbers may not add due to rounding.



Summary of Results

Funded Status as of June 30, 2018

	June 30, 2018
Actuarial Present Value of Future Tuition Payments, Fees and Expenses	\$1,154,110,295
Actuarial Value of Assets (Including the Present Value of Installment Contract Receivables)	\$846,398,622
Deficit/(Surplus) as of June 30, 2018	\$307,711,673

Gain/Loss Summary

	Unfunded Liability
Value at June 30, 2017	\$ 320,237,004
Expected Value at June 30, 2018	\$ 341,052,409
(Gain)/Loss Due to: Investment Experience Change in Assumptions and Methods Tuition/Fee Inflation Other Demographic Experience* Total	\$ 7,573,155 (4,384,888) (25,580,322) (10,948,681) (33,340,736)
Actual Value at June 30, 2018	\$ 307,711,673

^{*}Other Demographic Experience includes deviations in actual contract beneficiary experience from our assumptions related to rates of enrollment and utilization of benefits and contract terminations and refunds.

Additional Details on the development of the Expected Value at June 30, 2018, can be found on page B-3.



Actuarial Soundness Valuation

Gabriel, Roeder, Smith & Company ("GRS") has performed an actuarial soundness valuation of the College Illinois!® Prepaid Tuition Program ("CIPTP") as of June 30, 2018.

The primary purposes of the actuarial soundness valuation are to:

- Determine the actuarial present value of the obligations for prepaid tuition contracts purchased through June 30, 2018, and compare such liabilities with the value of the assets associated with the program as of that same date; and
- Analyze the factors which caused the deficit/surplus to change since the prior actuarial valuation.

This report summarizes those results and also illustrates the sensitivity of the deficit/surplus to changes in the rate of tuition and fee increases as well as the rate of investment return on assets.

In addition, the report provides summaries of the contract beneficiary data, financial data, plan provisions and actuarial assumptions and methods.

Background

Legislation authorizing ISAC to administer an Illinois Prepaid Tuition Program was passed in November 1997. The purpose of the program is to provide Illinois families with an affordable tax-advantaged method to pay for college. CIPTP is open to all Illinois residents and non-Illinois residents purchasing for Illinois-resident beneficiaries. CIPTP contracts may allow participants to prepay the cost of tuition and mandatory fees at Illinois public universities and community colleges at expected projected costs, which may be more stable than actual future costs.

Benefits of the program can also be used at private and out-of-state colleges and universities. Contracts can be purchased in a lump sum or in installments. As a Section 529 plan, CIPTP earnings are exempt from state and federal income taxes.

The first CIPTP contracts were offered for sale in 1998. As of June 30, 2018, the CIPTP had 35,183 contracts in force.

The College Illinois!® Prepaid Tuition Program stopped accepting new contracts as of the 2017/2018 enrollment period and is still not accepting new contracts for the 2018/2019 enrollment period. According to the College Illinois!® Prepaid Tuition Program website, program enrollment is on hold pending continuing discussions with policymakers to help define and advance proposals that will address the College Illinois!® Prepaid Tuition Program unfunded liability and strengthen the Program.

Actuarial Assumptions

The actuarial soundness valuation results summarized in this report involve actuarial calculations that require assumptions about future events. Most of the actuarial assumptions used in this actuarial soundness valuation were based on an experience review for the period from July 1, 2011 to June 30, 2014, and were approved and adopted for use commencing with the June 30, 2015, actuarial soundness valuation by ISAC. The tuition and fee increase assumption was updated first commencing with the June



30, 2016, actuarial soundness valuation to a flat rate of 5.00 percent for all future years for all contract types. These actuarial assumptions are the responsibility of ISAC.

Changes in Actuarial Assumptions Since Prior Valuation

The net investment return assumption under the "select and ultimate" rate structure was changed from an initial rate of 6.50 percent for fiscal year 2018 and grading down to the ultimate rate of 3.75 percent in fiscal years on and after 2025 (in 0.393 percent annual increments) to an initial rate of 6.25 percent for fiscal year 2019 and grading down to the ultimate rate of 3.75 percent in fiscal years on and after 2026 (in 0.357 percent annual increments).

The assumption for the percentage of total administrative expenses assumed to be related to marketing was decreased from 28 percent to zero since all of the expenses provided to us this year are considered to be non-marketing related. The amount of administrative expenses assumed to be non-marketing related is the basis for the present value of future administrative expenses for current contract beneficiaries. The major actuarial assumptions used in this analysis were provided by and are the responsibility of ISAC.

Considering the current asset allocation, current and future liquidity requirements, and the fact that the program enrollment is on hold (and has been since the 2017/2018 enrollment period), we believe the net investment rate of return assumption being used in the June 30, 2018, actuarial soundness valuation is consistent with applicable Actuarial Standards of Practice.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law. We have performed an analysis of the sensitivity of certain changes in assumptions.

Financial Status of Program as of June 30, 2018

As of June 30, 2018, the present value of all future tuition obligations under contracts outstanding (and including future administrative expenses) at that date is \$1,154,110,295. The value of fund assets as of June 30, 2018, including the market value of program assets and the present value of installment contract receivables, is \$846,398,622.

The difference between the present value of future tuition obligations and the value of assets as of June 30, 2018, represents a program deficit of \$307,711,673. The comparable program deficit as of the last valuation as of June 30, 2017, was \$320,237,004. This represents an improvement (i.e., decrease) in the deficit of \$12,525,331.

Gain/Loss Analysis

As described above, the program deficit decreased from \$320.2 million as of June 30, 2017, to \$307.7 million as of June 30, 2018. Based on the actuarial assumptions used during the June 30, 2017, actuarial soundness valuation, the deficit was expected to increase to \$341.1 million. The primary factors which caused the expected deficit to decrease by \$33.4 million were (1) the change in the investment return assumption (the rate for fiscal year 2019 was expected to be 6.107 and was changed to 6.25 percent), (2)



tuition and fee increases that were less than expected (increases that were lower than the assumption of 5.00 percent) and (3) other demographic experience (which includes deviations in actual contract beneficiary experience from our assumptions related to rates of enrollment and utilization of benefits and contract terminations and refunds). This decrease was partially offset by losses due to investment returns that were less than expected (an actual rate of return less than the assumption of 6.50 percent).

Although there was an improvement in the program deficit, the funded ratio decreased from 74.8 percent as of June 30, 2017, to 73.3 percent as of June 30, 2018.

Benefit Provisions

The basic terms and conditions of the College Illinois!® Prepaid Tuition Program (the "Program") are included in the Illinois Prepaid Tuition Act, 110 ILCS 979 (the "Act") and ISAC Administrative Rules (23 Ill. Adm. Code 2775, et. seq.) ("ISAC Rules").

We understand there were no changes in the program provisions since the last actuarial soundness valuation as of June 30, 2017.

Assets

CIPTP assets are held in trust. ISAC provided the asset information used in the June 30, 2018, actuarial valuation.

This report contains several exhibits summarizing the plan's assets, including a summary of the market value of assets broken down by asset category and a reconciliation of the assets from the last actuarial valuation date to the current actuarial valuation date. The approximate return on market value of assets was 5.60 percent for the year ended June 30, 2018.

Commencing with the June 30, 2015, valuation, the actuarial value of assets is equal to the market value of assets plus the present value of expected future contract payments from current contract holders.

Contract Prices

Contract prices are determined for each enrollment period based upon a variety of factors and include a built-in stabilization factor. The stabilization factor is intended to help insulate the Program from unexpected market volatility and improve the funded status of the Program over time. Each year, ISAC reviews the actuarial soundness report, the Mean Weighted Average Tuition and Fees and the stabilization factor amount to establish contract pricing. In effect, contract prices are reviewed in order to reflect tuition and fee increases at Illinois public institutions, as well as other actuarial criteria.

Contracts Sold by Enrollment Year

The chart on page D-1 illustrates the number of contracts sold by enrollment year.

As this chart indicates, the number of contracts sold has decreased significantly during the last five enrollment years from the number sold per year in previous years.



- The average annual number of contracts sold beginning with the enrollment period 1999/2000 and ending with the enrollment period 2009/2010 was 5,235.
- The average annual number of contracts sold during the last seven year period 2010/2011 to 2016/2017 was 559 including 2011/2012 when the plan was not open for new contract sales.
- The average annual number of contracts sold during the last seven year period 2010/2011 to 2016/2017 was 652 excluding 2011/2012 when the plan was not open for new contract sales.
- Program enrollment was placed on hold commencing with the 2017/2018 enrollment period. Therefore, there were zero contracts sold during the 2017/2018 enrollment period.

Projection Scenarios

Full projection scenarios are included in a separate report.

The College Illinois!® Prepaid Tuition Program stopped accepting new contracts as of the 2017/2018 enrollment period and is still not accepting new contracts for the 2018/2019 enrollment period. While the closing of the CIPTP has not occurred, we have completed a projection assuming that the program continues to operate but with no new contract sales after June 30, 2018. Based on an investment return assumption that grades down from 6.25% for the 2019 fiscal year to 3.75% for the 2026 fiscal year, future payments from current contract holders, current Trust assets and future investment income are projected to be insufficient by the year 2026 to make the required tuition payments and additional funds will be required to maintain solvency. The results of this "closed group" projection are included in a separate report.

Future actuarial measurements may differ significantly from the measurements presented in this projection due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law.

Disclosure

This report is not a recommendation to anyone to participate or not participate in the CIPTP. GRS makes no representations or warranties to any person participating in or considering future participation in the CIPTP.



SECTION B

ACTUARIAL SOUNDNESS VALUATION RESULTS

Exhibit I Principal Actuarial Soundness Valuation Results

Valuation Date:	June 30, 2018	June 30, 2017
Number of Members		
a. Not yet Matriculating:	21,701	25,146
b. Matriculating: ^a	13,482	13,251
c. Total	35,183	38,397
Average Years until Enrollment if Not Yet Matriculating	3.8	4.1
2. Assets		
a. Market Value of Assets (in Trust)	\$ 813,365,005	\$ 904,972,812
b. PV Future Member Contributions	33,033,617	45,996,521
c. Total Actuarial Value of Assets (AVA) (2a + 2b)	\$ 846,398,622	\$ 950,969,333
3. Actuarial Results		
Liabilities		
a. Not yet Matriculating - Tuition and Fees	\$ 833,162,370	\$ 949,953,385
b. Matriculating - Tuition and Fees	292,122,567	285,760,376
c. Present Value of Future Administrative Expenses	28,825,358	35,492,576
d. Total	\$ 1,154,110,295	\$ 1,271,206,337
Unfunded Liability	\$ 307,711,673	\$ 320,237,004
Funded Ratio	73.3%	74.8%

^aCounts include 4,897 contracts in 2018 and 4,592 contracts in 2017 that are classified as "Matriculating" but have not used any credits within the past year.



Exhibit I (Continued) Principal Actuarial Soundness Valuation Results

Valuation Date:	June 30, 2018	June 30, 2017
1. Assets		
a. Market Value of Assets (in Trust)	\$ 813,365,005	\$ 904,972,812
b. PV Future Member Contributions (Short Term) ^a	10,170,115	12,865,968
c. PV Future Member Contributions (Long Term) ^b	22,863,502	33,130,553
d. Total Market Value of Assets (MVA)	\$ 846,398,622	\$ 950,969,333
Actuarial Present Value of Tuition, Fees and Admin Expenses		
a. Short Term ^a	\$ 150,055,581	\$ 152,765,034
b. Long Term ^b	1,004,054,714	1,118,441,303
c. Total	\$ 1,154,110,295	\$ 1,271,206,337
Unfunded Liability (Surplus)	\$ 307,711,673	\$ 320,237,004
Funded Ratio	73.3%	74.8%

^a Present value of amounts in following year.



^b Present value of amounts after first year.

Exhibit II Gain/Loss Summary

	Present Value of Benefits		Plan Assets ^a	Un	funded Liability
1. Values at June 30, 2017	\$	1,271,206,337	\$950,969,333	\$	320,237,004
Actual Tuition Payments, Refunds and Administrative Expenses	\$	(153,003,993)	\$ (153,003,993)	\$	-
3. Interest on 1. and 2. at 6.50%	\$	77,734,063	\$ 56,918,658	\$	20,815,405
4. New Contracts	\$	-	\$ -	\$	-
5. Projected Values at June 30, 2018 (1. + 2. + 3. + 4.)	\$	1,195,936,407	\$ 854,883,998	\$	341,052,409
6. (Gain)/Loss Due to: Investment Experience Change in Assumptions and Methods Tuition/Fee Inflation Other Demographic Experience ^b Total	\$	(4,471,507) (25,580,322) (11,774,283) (41,826,112)	\$ 7,573,155 86,619 - 825,602 8,485,376	\$	7,573,155 (4,384,888) (25,580,322) (10,948,681) (33,340,736)
7. Actual Values at June 30, 2018 (5. + 6.)	\$	1,154,110,295	\$ 846,398,622	\$	307,711,673

^aEquals the sum of the market value of trust assets plus the present value of expected future contract payments from current contract holders. Actual values at June 30, 2018, are equal to (5.-6.) which is the projected value minus the (gain)/loss total.



^bOther Demographic Experience includes deviations in actual contract beneficiary experience from the assumptions related to rates of enrollment and utilization of benefits and contract terminations and refunds. Other Demographic Experience for Plan Assets is the change in the present value of expected future contract payments from current contract holders.

Exhibit III Gain/Loss History

	June 30, 2012	June 30, 2013	June 30, 2014	June 30, 2015	June 30, 2016	June 30, 2017	June 30, 2018	Total 7-Year Change
Unfunded Liability at Prior Valuation Date	\$ 536,337,123	\$ 467,404,585	\$ 448,506,323	\$ 328,182,173	\$ 292,111,181	\$264,313,965	\$ 320,237,004	
Projected Unfunded Liability at Valuation Date	\$ 585,357,342	\$ 491,441,672	\$ 474,596,839	\$ 346,104,498	\$ 309,309,748	\$278,495,729	\$ 341,052,409	
(Gain)/Loss Due to:								
Investment Experience	\$ 50,941,188	\$ (13,003,926)	\$ (44,221,698)	\$ 31,916,454	\$ 8,218,414	\$ (4,435,878)	\$ 7,573,155	\$ 36,987,709
Change in Assumptions	(81,435,163)	24,441,468	(53,755,927)	(49,845,761)	(21,711,495)	78,869,711	(4,384,888)	(107,822,055)
Tuition/Fee Inflation*	N/A	(66,164,363)	(45,359,154)	(47,420,647)	(40,802,985)	(31,916,630)	(25,580,322)	(257,244,101)
Other Demographic Experience	(87,458,782)	11,791,472	(3,077,887)	11,356,637	9,300,283	(775,927)	(10,948,681)	(69,812,885)
Total	\$ (117,952,757)	\$ (42,935,349)	\$ (146,414,666)	\$ (53,993,317)	\$ (44,995,783)	\$ 41,741,276	\$ (33,340,736)	\$ (397,891,332)
Unfunded Liability at Valuation Date	\$ 467,404,585	\$ 448,506,323	\$ 328,182,173	\$ 292,111,181	\$ 264,313,965	\$320,237,004	\$ 307,711,673	

^{*}Prior to the June 30, 2013, actuarial soundness valuation, Tuition and Fee Inflation was included with "Other Demographic Experience".

Changes in Actuarial Assumptions

June 30, 2012	Decrease in the investment return assumption from 7.50 percent to 7.25 percent, change in the tuition and fee increase assumption from a flat rate
	increase assumption to a select and ultimate rate increase assumption.

June 30, 2013 Decrease in the investment return assumption from 7.25 percent to 7.00 percent.

June 30, 2014 Decrease in the tuition and fee select and ultimate rate increase assumption for Legacy, University and University Plus contracts.

June 30, 2015	Based on an experience review covering the period July 1, 2011 through June 30, 2014, changes in the matriculation rates, benefit utilization rates,
	cancellation rates, bias loads and growth rate for administrative expenses. No changes were made to the investment return or the tuition and fee
	increase assumptions.

June 30, 2016	Decrease in the investment return assumption from 7.00 percent to 6.75 percent, change in the tuition and fee increase assumption from a select
	and ultimate rate increase assumption with an ultimate increase rate of 5.00 percent to a flat rate of 5.00 percent for all future years

June 30, 2017	Decrease in the investment return assumption from a flat rate of 6.75 percent to a select and ultimate rate structure with an initial rate of 6.50
	percent, grading down in annual increments of 0.393 percent to an ultimate investment return rate of 3.75 percent. Change in the calculation of
	the total administrative expenses related to marketing from an assumption of 12 percent of total administrative expenses to actual marketing
	expenses in the prior fiscal year (which affects the present value of future administrative expenses for current contract heneficiaries)

June 30, 2018	The select and ultimate rate structure was changed from an initial rate of 6.50 percent for fiscal year 2018, and grading down in annual increments
	of 0.393 percent to the ultimate rate of 3.75 percent in fiscal years on and after 2025 to an initial rate of 6.25 percent for fiscal year 2019, and
	grading down in annual increments of 0.357 percent to the ultimate rate of 3.75 percent in fiscal years on and after 2026.



Exhibit IV Historical Rate of Investment Return and WAT Increases

Year Ending June 30	Estimated Rate of Return on Market Value of Assets	WAT Increases For Community College	WAT Increases For University	WAT Increases For University Plus	WAT Increases For Legacy
2017	7.22 %	4.79 %	1.74 %	(0.46)%	1.57 %
2018	5.60 %	2.02 %	2.95 %	0.77 %	2.14 %
2-Year Average	6.41 %	3.40 %	2.34 %	0.15 %	1.85 %
10-Year Average	N/A	N/A	N/A	N/A	N/A



Exhibit V Sensitivity Testing Results

The actuarial assumptions regarding future increases in tuition costs and fees and the future rate of investment return were provided to us by ISAC. In our opinion, the actuarial assumptions provided to us are reasonable for the purpose of the measurement. However, no one really knows what the future holds with respect to economic conditions and other contingencies. For example, while it is assumed that the assets of the fund will earn 6.25 percent in Fiscal Year 2019 graded down in yearly increments to 3.75 percent on and after Fiscal Year 2026, actual returns are expected to vary from year to year. Therefore, we have projected CIPTP results under alternative assumptions for future investment income, tuition increases and fee increases.

- 1. Tuition increases are 100 basis points higher/lower (6.00%/4.00% compared to 5.00%) in each future year than assumed in the baseline valuation (measurement of soundness).
- 2. Fee increases are 100 basis points higher/lower (6.00%/4.00% compared to 5.00%) in each future year than assumed in the baseline valuation (measurement of soundness).
- 3. The investment return is 50 basis points higher/lower (6.75% initial and 4.25% ultimate/5.75% initial and 3.25% ultimate compared to 6.25% initial and 3.75% ultimate) in each future year than assumed in the baseline valuation (measurement of soundness).

The impact of each of these scenarios on the principal actuarial soundness valuation results is presented on the following page.



Exhibit V Sensitivity Testing Results \$ in Millions

	Current Valuation Assumptions	Assumed Tuition Increases 100 Basis Points	Assumed Tuition Decreases 100 Basis Points	Assumed Fee Increases 100 Basis Points	Assumed Fee Decreases 100 Basis Points	Assumed Investment Return Increases 50 Basis Points	Assumed Investment Return Decreases 50 Basis Points
1 Assets							
a. Market Value of Assets (in Trust)	\$813.4	\$813.4	\$813.4	\$813.4	\$813.4	\$813.4	\$813.4
b. PV Future Member Contributions	33.0	33.0	33.0	33.0	33.0	32.6	33.5
c. Total Actuarial Value of Assets (AVA) (2a + 2b)	\$846.4	\$846.4	\$846.4	\$846.4	\$846.4	\$846.0	\$846.9
2 Actuarial Results Liabilities							
a. Not yet Matriculating - Tuition and Fees	\$833.2	\$856.6	\$811.1	\$846.0	\$823.8	\$809.0	\$858.5
b. Matriculating - Tuition and Fees	292.1	292.7	290.3	292.9	290.6	289.2	295.1
c. Present Value of Future Administrative Expenses	28.8	28.8	28.8	28.8	28.8	28.2	29.5
d. Total	\$1,154.1	\$1,178.1	\$1,130.2	\$1,167.7	\$1,143.2	\$1,126.4	\$1,183.1
Unfunded Liability	\$307.7	\$331.7	\$283.8	\$321.3	\$296.8	\$280.4	\$336.2
Funded Ratio	73.3%	71.8%	74.9%	72.5%	74.0%	75.1%	71.6%
Difference From Current Assumptions							
Unfunded Liability	\$0.0	\$24.0	-\$23.9	\$13.6	-\$10.9	-\$27.3	\$28.5
Funded Ratio	0.0%	-1.5%	1.6%	-0.8%	0.7%	1.8%	-1.7%

In all scenarios, trust assets are projected to be depleted in year 2026.



SECTION C

FUND ASSETS

Statement of Net Plan Assets (Assets at Market or Fair Value)

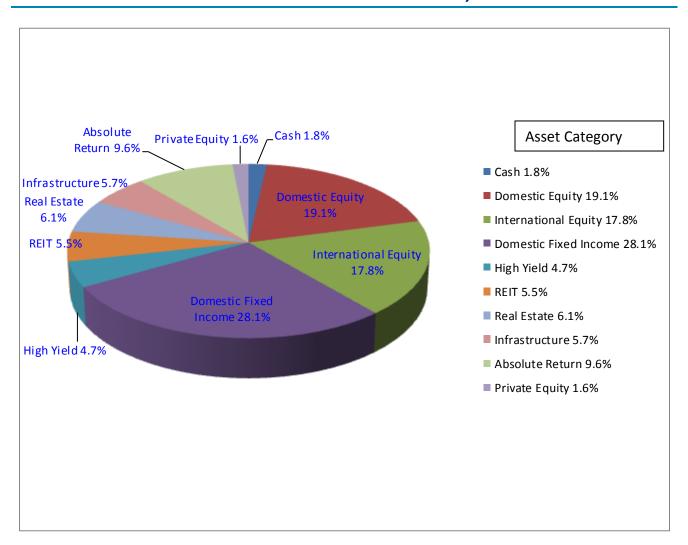
College Illinois!® Prepaid Tuition Program Statement of Plan Net Assets Year ended June 30, 2018

Cash	\$ 14,530,776	% of Total 1.8%
Investments		
Domestic Equity	\$ 155,419,695	19.1%
International Equity	144,823,913	17.8%
Domestic Fixed Income	228,294,965	28.1%
High Yield	38,521,489	4.7%
REIT	45,137,877	5.5%
Real Estate	49,814,255	6.1%
Infrastructure	46,035,589	5.7%
Absolute Return	78,072,563	9.6%
Private Equity	 12,713,884	1.6%
Total Investments	\$ 798,834,229	98.2%
Total Assets	\$ 813,365,005	100.0%

Numbers may not add due to rounding.



Allocation of Assets at June 30, 2018





Reconciliation of Market Value of Plan Assets

College Illinois!® Prepaid Tuition Program Statement of Changes in Plan Net Assets Twelve Month Period ended June 30, 2018

Beginning of Period	7/1/2017		
End of Period		6/30/2018	
Additions:			
Contributions received	\$	14,574,249	
Gross investment income		13,440,766	
Realized/Unrealized investment gains/(losses)		35,939,404	
Total Additions	\$	63,954,419	
Deductions:			
Tuition payments	\$	125,630,975	
Refunds to Purchasers		23,058,872	
Investment expenses & advisory fees		2,558,233	
Administrative expenses		4,314,146	
Total Deductions	\$	155,562,226	
Net increase/(decrease)	\$	(91,607,807)	
Market Value of Assets:			
Beginning of period		904,972,812	
End of period (6/30/2018)		813,365,005	
Present Value of Future Contributions by Current Contract Holders		33,033,617	
Market Value of Total Fund Assets as of June 30, 2018		846,398,622	

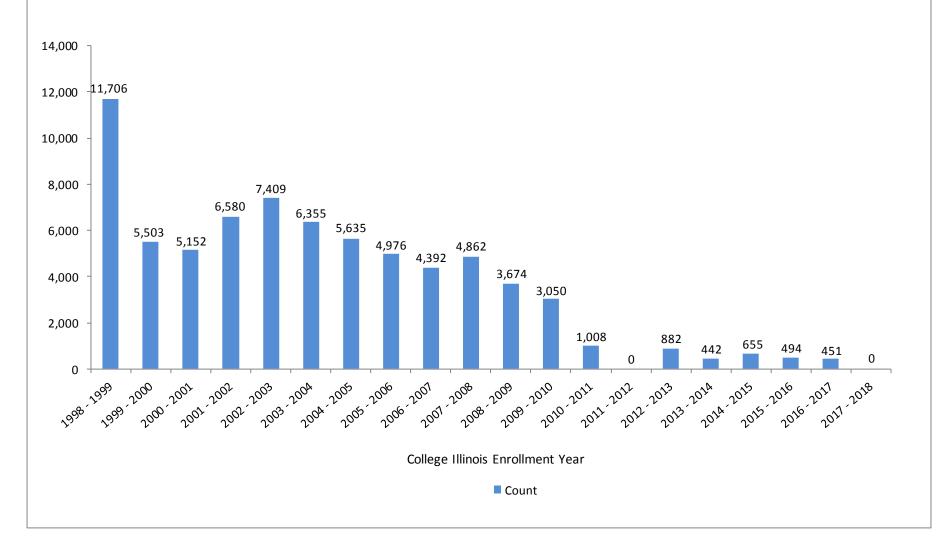


SECTION D

PARTICIPANT DATA

College Illinois!® Prepaid Tuition Program Contract Counts by Enrollment Year All Current and Past Members as of 6/30/2018

73,226 Total

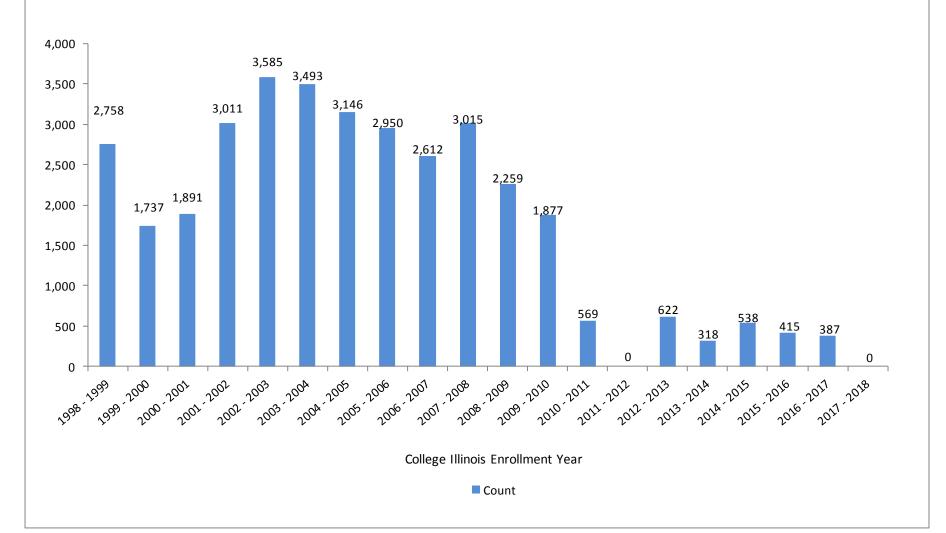




Number

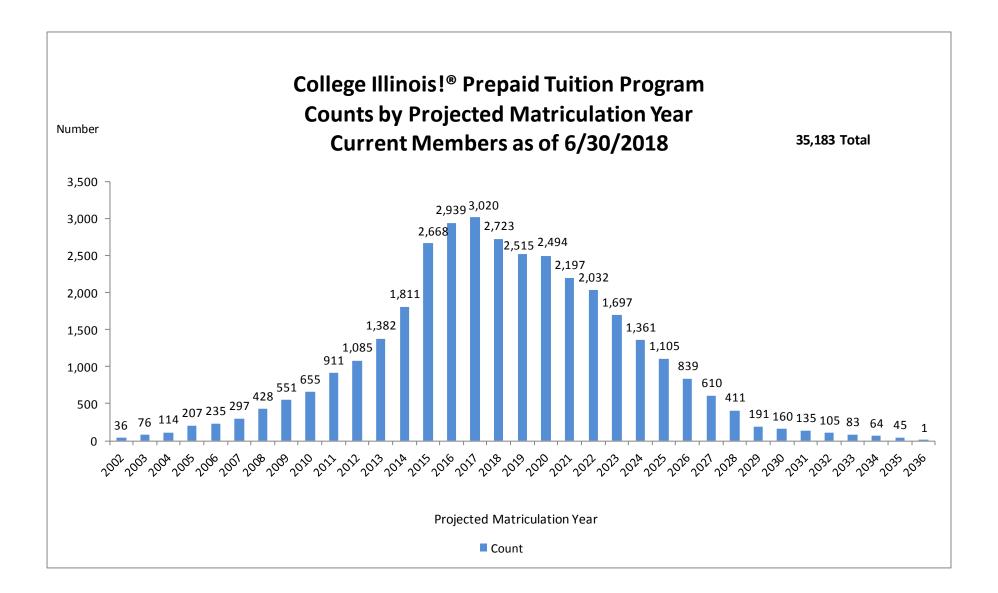
College Illinois!® Prepaid Tuition Program Contract Counts by Enrollment Year Current Members as of 6/30/2018

35,183 Total

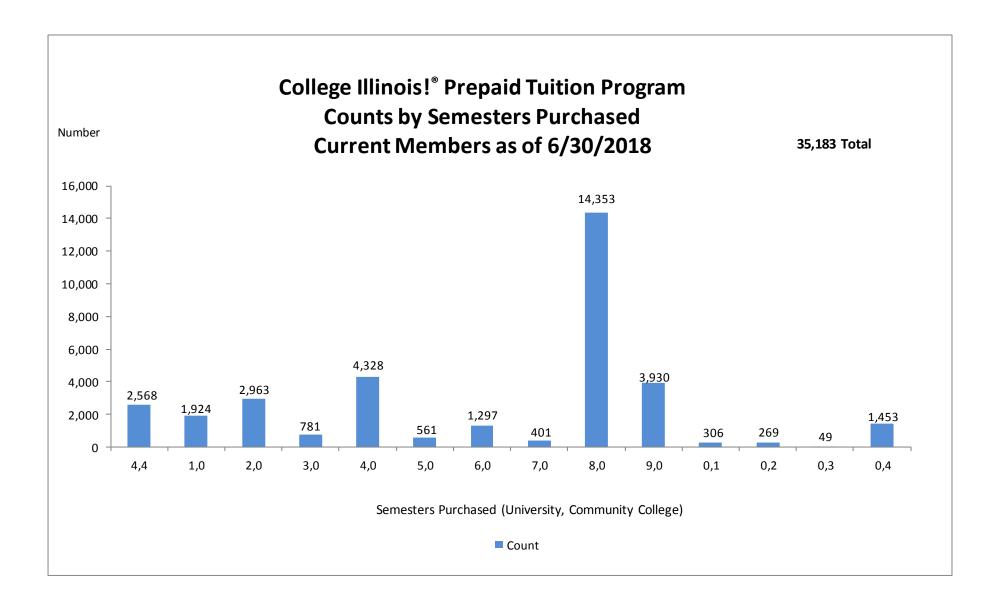




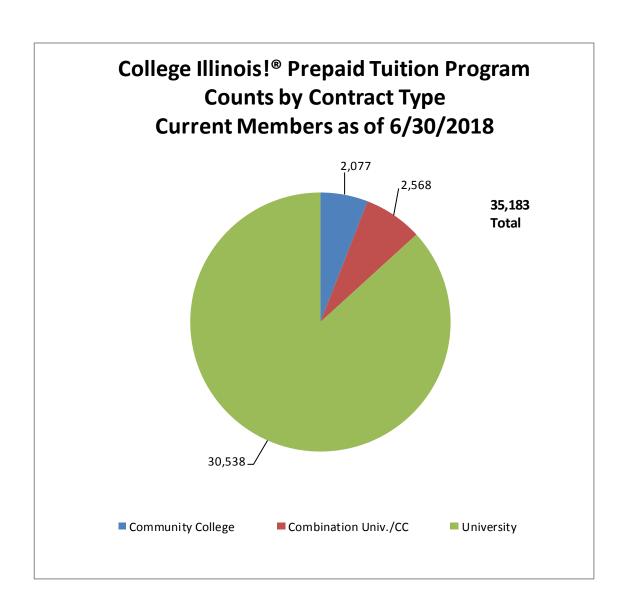
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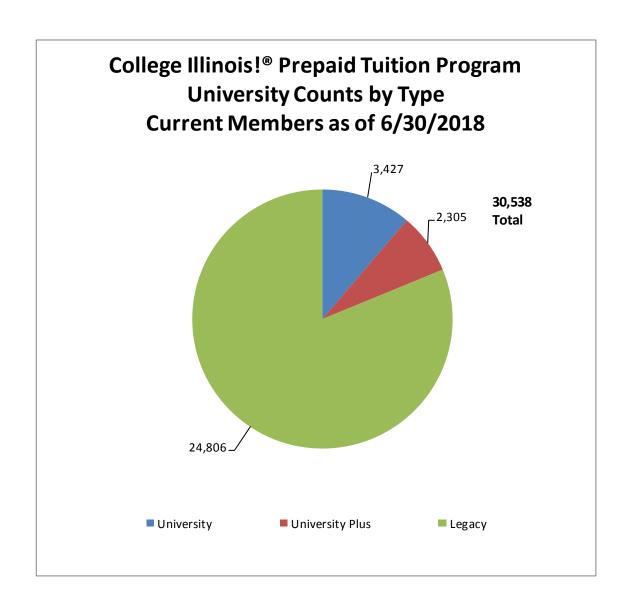














SECTION **E**

ACTUARIAL VALUATION METHODS & ASSUMPTIONS

Actuarial Valuation Methods and Assumptions

Actuarial Valuation Methods

Actuarial Value of Assets – The Actuarial Value of Assets is equal to the Market Value of Assets plus the present value of expected future contract payments from current contract holders.

Actuarial Valuation Assumptions

The rationale for the assumptions (except as indicated) may be found in the experience study report covering the period July 1, 2011 through June 30, 2014, which was issued on August 26, 2015. The assumptions were adopted for first use in the actuarial soundness valuation as of June 30, 2015.

The actuarial assumptions used in the actuarial soundness valuation are shown in this Section.

Measurement Date

June 30, 2018

Net Investment Return Rate

The following select and ultimate rate structure, net of investment expenses and compounded annually, is assumed. Includes inflation assumption of 2.50 percent. (First effective with the actuarial soundness valuation as of June 30, 2018, and prescribed to us by ISAC.)

Net Investment Return Rate

<u>Fiscal Year</u>	
Ending 6/30	Net Investment Return Rate
2019	6.250%
2020	5.893%
2021	5.536%
2022	5.179%
2023	4.822%
2024	4.465%
2025	4.108%
2026 +	3.750%

Considering the current asset allocation, current and future liquidity requirements and the fact that the program enrollment is on hold, we believe the current select and ultimate net investment rate of return assumption is consistent with applicable Actuarial Standards of Practice.



Weighted Average Tuition and Fees (WATF) by Contract Type Based on the Freshman Tuition Rates Adjusted for Differential Tuition (Blended)

	Contract Type						
	Choice 1	Choice 2	Choice 3				
	Community College	University	University Plus	Legacy†			
2018-2019 Weighted Tuition	\$3,942	\$10,925	\$13,885	\$11,687			
2018-2019 Weighted Fees	502	3,904	3,968	3,921			
2018-2019 Total WATF	4,444	14,829	17,853	15,608			

[†]Legacy contracts refer to contracts sold prior to October 2008. These contracts can be used for full tuition and fees at any public University in the State of Illinois, including UIUC.

For continuing students at public universities and students attending community colleges, fees are combined with tuition in our projections and follow their respective tuition inflation assumptions.

Weighted Average Tuition and Fees (WATF) Increase from Prior Year

	Choice 1	Choice 2	Choice 3		
	Community College	University	University Plus	Legacy	
2018-2019 Total WATF	\$4,444	\$14,829	\$17,853	\$15,608	
2017-2018 Total WATF	4,356	14,404	17,716	15,281	
WATF Increase	2.02%	2.95%	0.77%	2.14%	

Bias Load

"Legacy," Choice 1 and Choice 2 contract beneficiaries were assumed on average to attend more expensive schools than indicated by the headcount information that was used to determine the 2018-2019 WATF. The following bias loads were used to recognize this bias toward enrollment at more expensive schools. No bias load was applied to the "University Plus" beneficiaries due to the separation of UIUC.

	Contract Type					
	Choice 1	Choice 2	Choice 3			
	Community College	University	University Plus	Legacy		
Bias Load	5.50%	2.50%	0.00%	4.00%		



Tuition and Fee Increase Assumption

Tuition and Fee Increase Assumption - June 30, 2018, Actuarial Valuation								
Effective Date	Community College	University	University Plus	Legacy				
6/30/2018 and Beyond	5.00%	5.00%	5.00%	5.00%				

(First effective with the actuarial soundness valuation as of June 30, 2016, and provided by ISAC.)

These assumptions were chosen by ISAC and consider historical Illinois public tuition and fee inflation, typically over a 20-year horizon, as well as current economic and political conditions.

Truth in Tuition

Under Illinois' Truth-in-Tuition law, the state's 12 public colleges and universities are required to charge incoming resident freshmen a fixed tuition rate for the first four years of college. The Truth in Tuition law does not apply to community colleges.

For contract beneficiaries with a Choice 2, Choice 3 or Legacy contract, it was assumed that their tuition will not increase in their second, third and fourth year of school. If they attend school beyond four years, it was assumed that their tuition would increase to the amount charged the year after the year they first enrolled. For contract beneficiaries with a Choice 1 contract, it was assumed that tuition will increase for each year enrolled. The fee portion of the WATF is assumed to increase each year for all contract types.

The following table shows the WAT (excluding fees) for the past four years that would be used for contract beneficiaries under the Truth-in-Tuition law. (Choice 1 is shown for informational purposes only.)

	Contract Type					
	Choice 1	Choice 2	Choice 3			
	Community College	University	University Plus	Legacy		
2018-2019 Weighted Tuition	\$3,942	\$10,925	\$13,885	\$11,687		
2017-2018 Weighted Tuition	3,862	10,675	13,884	11,525		
2016-2017 Weighted Tuition	3,698	10,410	14,136	11,318		
2015-2016 Weighted Tuition	3,549	10,082	14,136	11,022		
2014-2015 Weighted Tuition	3,331	9,903	14,145	10,871		

Rates of Cancellation

These rates are used to measure the probability of eligible contract beneficiaries cancelling their contracts before and after projected college entrance date. The rates apply to contract beneficiaries who have not yet matriculated and those who have matriculated, but have not used credits within the past year. Once the contract beneficiaries are assumed to have matriculated and started using benefits, the cancellation rates do not apply.



Years From Projected College Entrance Year	Cancellation Rate	Years From Projected College Entrance Year	Cancellation Rate
-17	8.0%	-3	1.0%
-16	7.0%	-2	1.0%
-15	6.0%	-1	1.5%
-14	4.0%	0	1.5%
-13	4.0%	1	3.0%
-12	3.0%	2	3.0%
-11	3.0%	3	5.0%
-10	3.0%	4	5.0%
-9	2.0%	5	7.5%
-8	1.5%	6	7.5%
-7	1.5%	7	5.0%
-6	1.5%	8	5.0%
-5	1.5%	9	5.0%
-4	1.0%	10	100.0%

In the event of a cancellation, it was assumed that a refund will be paid equal to the amount of all contract payments made accumulated with applicable interest, less benefits paid. (Two percent annual interest is applicable to contracts purchased prior to the 2013/2014 enrollment period.) No interest is applicable to contracts purchased during or after the 2013/2014 enrollment period.)

Rates of Enrollment

These rates are used to measure the probability of eligible contract beneficiaries matriculating at and beyond their projected college entrance date. The rates apply to contract beneficiaries who have not yet matriculated and those who have matriculated, but have not used credits within the past year.

Years From Projected College Entrance Year	Matriculation Rate
0	70%
1	35%
2	40%
3	30%
4	20%
5	15%
6	15%
7	10%
8	10%
9	10%
10	0%



Utilization of Benefits

The following rates apply to contract beneficiaries who have not yet matriculated and those who have matriculated, but have not used credits within the past year. For those who have matriculated, the projected college entrance year is assumed to be the valuation year. Contract beneficiaries are assumed to use the benefits as described by the CIPTP Master Agreement.

Distribution of Benefit Utilization									
Number of Years			Nu	mber of	Semeste	rs Purcha	sed		
Since Matriculation	1	2	3	4	5	6	7	8	9
1	73%	73%	49%	37%	29%	24%	21%	18%	16%
2	20%	20%	28%	35%	26%	24%	21%	18%	16%
3	7%	7%	14%	17%	19%	22%	21%	18%	16%
4			5%	6%	13%	15%	21%	18%	16%
5			5%	6%	7%	9%	8%	13%	16%
6					3%	4%	3%	6%	8%
7					2%	2%	2%	4%	6%
8							1%	2%	4%
9							1%	2%	1%

For contract beneficiaries who have matriculated and have used credits within the past year, it is assumed that the contract beneficiaries will utilize 22 credits per year until benefits are fully depleted.

Administrative Expenses

Administrative expenses of the Program are assumed to be paid through a combination of investment earnings and fees assessed on purchasers. Marketing expenses were excluded from the liabilities (present value of future administrative expenses) for current contract beneficiaries as it is assumed those costs should be applicable to future contracts. Administrative expenses are projected to increase by the rate of the inflation assumption of 2.50 percent for two years and then decline at the same rate the present value of benefits declines (combined with a 2.50 percent increase for inflation). The present value of future administrative expenses was determined to be equal to approximately 2.5 percent of the total liabilities.

Effective with the actuarial soundness valuation as of June 30, 2018, total administrative expenses were assumed to be all non-marketing related due to the ongoing deferment in open enrollment. The amount of administrative expenses assumed to be non-marketing related is the basis for the present value of future administrative expenses for current contract beneficiaries.

_	Assumed Current Contract Beneficiary Expenses									
Fiscal		Other	Total Administrative	Marketing						
Year	Marketing	Administration	Expenses	% of Total						
2018	\$0	\$4,314,146	\$4,314,146	0.00%						
2019	0	4,422,000	4,422,000							
2020	0	4,532,550	4,532,550							



Mortality and Disability

No assumption is made for death or disability. Valuing the rate of incidence is expected to be immaterial.

Data Adjustments

The following contract beneficiary records were excluded from the actuarial valuation:

- Records with a payment status indicating they were cancelled;
- Records with a contract usage status of depleted; and
- Records with the number of contract units used equal to the number of contract units purchased.

The projected college entrance year was adjusted for contract beneficiaries who are not scheduled to have completed payments for the contract by the college entrance year provided in the data.

The account balance that is eligible to be refunded is calculated by GRS based on the contract payment information provided, increased with applicable interest, less any tuition and fee benefits paid to date. Two percent annual interest is applicable to contracts purchased prior to the 2013/2014 enrollment period. No interest is applicable to contracts purchased during or after the 2013/2014 enrollment period.



SECTION **F**

PLAN PROVISIONS

Plan Provisions

(This is a summary only; the full terms and conditions of the College Illinois!® Prepaid Tuition Program are included in the Illinois Prepaid Tuition Act, 110 ILCS 979 (the "Act") and ISAC Administrative Rules (23 Ill. Adm. Code 2775, et. seq.) ("ISAC Rules").

A. Type of Contract

Three types of contracts are available for purchase: Choice 1 - Community College, Choice 2 – University and Choice 3 – University Plus.

B. Benefit

Covered benefits include tuition and mandatory fees at an Illinois public university or community college based on the instate or in-district undergraduate rate for a full-time student.

Mandatory fees are fees that are required upon enrollment for all students attending the particular institution.

The benefit does not include any optional fees, expenses or cost of supplies.

The benefit shall never be less than the amount paid for the contract.

Benefits are available for use three years after the first payment due date. The plan must be paid in full prior to the use of any benefits. In addition, the beneficiary has up to 10 years from the projected college enrollment date to start using program benefits. Once the beneficiary starts using the prepaid benefits, they have 10 years to finish using benefits.

C. Contract Payments

The Program offers a variety of payment options, including the following:

- Lump Sum;
- 5-year installment plans paid monthly or annually;
- Extended installment plans of 6 to 15 years, depending on age, paid monthly or annually; and
- Down payment options are available for monthly installment plans.

D. Private or Out-of-State Institutions

For beneficiaries attending a private or out-of-state institution, the plan will pay an amount based upon the weighted average tuition and mandatory fees at Illinois public universities or community colleges depending on the type of contract purchased.



Plan Provisions

E. Scholarship

If a qualified beneficiary is awarded a grant or scholarship that duplicates the benefits covered by a prepaid tuition contract, the purchaser may request a refund in semester installments.

Illinois public university or community college – the installments will be in an amount equal to the current cost of in-state or in-district registration fees at that institution, less any benefits used to pay registration fees not covered by the scholarship and any applicable fees.

Illinois Private Institution or an eligible Out-of-State Institution – the installments will be in an amount equal to the current average mean-weighted credit hour value of registration fees at Illinois public universities or Illinois community colleges, depending on the type of the purchased contract, less any benefits used to pay registration fees not covered by the scholarship and any applicable fees.

F. Not Attending an Institution of Higher Education (Transfer)

Benefits can be transferred to a member of the "family" as defined in Section 529 of the Internal Revenue Code.

Purchasers can also choose to postpone the beneficiary's use of contract benefits to a later time or receive a refund.

G. Cancellation/Refunds

Refund equal to all contract payments made accumulated with applicable interest, less benefits paid and applicable cancellation fees. (Two percent annual interest is applicable to contracts purchased prior to the 2013/2014 enrollment period. No interest is applicable to contracts purchased during or after the 2013/2014 enrollment period.)

H. Death/Disability of Qualified Beneficiary

Refund equal to the value of the mean-weighted average cost of tuition at the colleges for the type of contract purchased will be made to the purchaser.

I. Other Ancillary Benefits

There are no ancillary benefits.

J. Truth in Tuition

Under Illinois' Truth-in-Tuition law, enacted with the Fall 2004 semester, the state's 12 public colleges and universities are required to charge incoming resident freshmen a fixed tuition rate for the first four years of college.

K. Changes from Previous Valuation

None.



College Illinois!® Prepaid Tuition Program

Supplemental Actuarial Soundness Valuation Report as of June 30, 2018





December 20, 2018

Mr. Eric Zarnikow Executive Director Illinois Student Assistance Commission 1755 Lake Cook Road Deerfield, Illinois 60015-5209

Re: College Illinois!® Prepaid Tuition Program
Supplemental Actuarial Soundness Valuation Report as of June 30, 2018

Dear Mr. Zarnikow:

In accordance with the request of the Illinois Student Assistance Commission ("ISAC"), Gabriel, Roeder, Smith & Company ("GRS") has performed projections of the College Illinois!® Prepaid Tuition Program ("Program" or "CIPTP") under alternative open group and closed group scenarios. The purpose of these projections is to provide additional information to ISAC regarding a range of potential outcomes of different future year contract sales scenarios.

Although program enrollment is currently on hold pending discussions with policymakers, we have provided alternate open group projections assuming new contract sales after June 30, 2018, beginning in fiscal year 2020. Please note that the open group scenarios included in this report (1) were specifically requested by ISAC, (2) are presented for illustrative purposes only and (3) do not consider how increases in contract prices can impact future sales. Because there are many factors that may impact the decision to purchase or not to purchase a prepaid tuition contract in Illinois, including but not limited to (1) increasingly unaffordable college tuition, (2) uncertainty about the state's support and funding for higher education in Illinois, (3) contract prices, (4) the level of contribution premium over the expected costs, and (5) competing savings vehicles, etc., it is very difficult to assess the likelihood of selling a particular number of contracts. Therefore, GRS is unable to judge the reasonableness of these open group contract sales scenarios.

While the closing of the CIPTP has not occurred (although program enrollment is currently on hold), we have also provided an alternate closed group projection assuming no new contract sales after June 30, 2018. Please note that this closed group scenario was specifically requested by ISAC and is also presented for illustrative purposes only.

For purposes of this analysis, we used the actuarial soundness valuation results from the June 30, 2018 Actuarial Soundness Valuation, and unless noted differently, the same actuarial assumptions and methods as used for the June 30, 2018 Actuarial Soundness Valuation.

The projection results summarized in this report involve actuarial calculations that require assumptions about future events. The major actuarial assumptions used in this analysis were provided by and are the responsibility of ISAC. We are unable to judge the reasonableness of some of these assumptions without performing a substantial amount of additional work beyond the scope of the assignment.

This supplemental report was prepared at the request of ISAC and is intended for use by ISAC and those designated or approved by ISAC. This report may be provided to parties other than ISAC only in its entirety and only with the permission of ISAC. This report should not be relied on for any purpose other than the purpose described above. GRS is not responsible for unauthorized use of this report.

Please understand that future actuarial measurements may differ significantly from the current measurements presented in this analysis due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law.

This supplemental report is one of multiple documents providing actuarial soundness valuation results for the College Illinois!® Prepaid Tuition Program as of June 30, 2018. Additional information regarding the underlying financial and beneficiary data and important additional disclosures are provided in the June 30, 2018 Actuarial Soundness Valuation. Section D of this report contains a summary of the actuarial assumptions and methods.

This supplemental report is not a recommendation to anyone to participate or not participate in the CIPTP. GRS makes no representations or warranties to any person participating in or considering participation in the CIPTP.

All calculations have been made in conformity with generally accepted actuarial principles and practices commonly applicable to similar types of arrangements. There are currently no Actuarial Standards of Practice which specifically relate to prepaid tuition plans. We have looked to the Actuarial Standards of Practice related to pensions for guidance due to their similar nature.

Lance J. Weiss and Amy Williams are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Lance J. Weiss and Amy Williams are independent of ISAC.

Respectfully submitted,

Gabriel, Roeder, Smith and Company

SIGNED ORIGINAL ON FILE

Lance J. Weiss, EA, MAAA, FCA Senior Consultant and Team Leader

SIGNED ORIGINAL ON FILE

Amy Williams, ASA, MAAA, FCA Consultant





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SECTION A

BACKGROUND

Background

Purpose of Projections

In accordance with the request of the Illinois Student Assistance Commission ("ISAC"), Gabriel, Roeder, Smith & Company ("GRS") has performed projections of the College Illinois!® Prepaid Tuition Program ("Program" or "CIPTP") under alternative open group and closed group scenarios. The purpose of these projections is to provide additional information to ISAC regarding a range of potential outcomes of different future year contract sales scenarios.

There are currently no Actuarial Standards of Practice which specifically relate to prepaid tuition plans. We have looked to the Actuarial Standards of Practice related to pensions for guidance due to their similar nature.

The Actuarial Standards Board (ASB) recently adopted Actuarial Standards of Practice (ASOP) No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions. ASOP No. 51 provides guidance to actuaries with regard to the assessment and disclosure of the risk that actual future measurements may differ significantly from expected future measurements when measuring obligations under a defined benefit pension plan and calculating actuarially determined contributions for such plans. The standard will be effective for any actuarial work product with a measurement date on or after November 1, 2018. Future supplemental projection reports for CIPTP may contain additional risk metrics, projections or calculations in accordance with guidance from ASOP No. 51 due to the similar nature of prepaid tuition plans to pension plans.

Illustrative Open and Closed Group Scenarios

Although program enrollment is currently on hold pending discussions with policymakers, we have provided alternate open group projections assuming new contract sales after June 30, 2018, beginning in fiscal year 2020. Please note that the open group scenarios included in this report (1) were specifically requested by ISAC, (2) are presented for illustrative purposes only and (3) do not consider how increases in contract prices can impact future sales. Because there are many factors that may impact the decision to purchase or not to purchase a prepaid tuition contract in Illinois, including but not limited to (1) increasingly unaffordable college tuition, (2) uncertainty about the state's support and funding for higher education in Illinois, (3) contract prices, (4) the level of contribution premium over the expected costs, and (5) competing savings vehicles, etc., it is very difficult to assess the likelihood of selling a particular number of contracts. Therefore, GRS is unable to judge the reasonableness of these open group contract scenarios.

While the closing of the CIPTP has not occurred (although program enrollment is currently on hold), we have also provided an alternate closed group projection assuming no new contract sales after June 30, 2018. Please note that this closed group scenario was specifically requested by ISAC and is also presented for illustrative purposes only.

Historical Number of Contracts Sold by Enrollment Year

The chart on page D-1 in Section D of the June 30, 2018 Actuarial Soundness Valuation Report illustrates the number of contracts sold by enrollment year.

As this chart indicates, the number of contracts sold has decreased significantly during the last five enrollment years from the number sold per year in previous years.

- The average annual number of contracts sold beginning with the enrollment period 1999/2000 and ending with the enrollment period 2009/2010 was 5,235.
- The average annual number of contracts sold during the last seven-year period 2010/2011 to 2016/2017 was 559 including 2011/2012 when the plan was not open for new contract sales.
- The average annual number of contracts sold during the last seven-year period 2010/2011 to 2016/2017 was 652 excluding 2011/2012 when the plan was not open for new contract sales.
- Program enrollment was placed on hold commencing with the 2017/2018 enrollment period.
 Therefore, there were zero contracts sold during the 2017/2018 enrollment period and expected to be sold during the 2018/2019 enrollment period.

Projection Assumptions

The projection results summarized in this supplemental report involve actuarial calculations that require assumptions about future events. The major actuarial assumptions used in this analysis were provided by and are the responsibility of ISAC. We are unable to judge the reasonableness of some of these assumptions without performing a substantial amount of additional work beyond the scope of the assignment.

For purposes of this analysis, we used the actuarial soundness valuation results from the June 30, 2018 Actuarial Soundness Valuation, and unless noted differently, the same actuarial assumptions and methods as used for the June 30, 2018 Actuarial Soundness Valuation. The contract prices for future new contracts were based on the prices for the most recent enrollment period from January 18, 2017 through May 31, 2017 increased by actual tuition and fee increases for fiscal years 2018 and 2019, and are assumed to increase each year by the tuition and fee increase assumption thereafer. The contract prices for the enrollment period from January 18, 2017, through May 31, 2017 were based on different investment return and tuition and fee increase assumptions than the assumptions used for the Actuarial Soundness Valuation as of June 30, 2018. (We have not recalculated prices for future contracts using the current assumptions for purposes of the open-group projections.)

For the June 30, 2018 Actuarial Soundness Valuation, and for those projection scenarios where the Trust assets are depleted in the future and the funded ratio remains low thereafter, we have incorporated a "select and ultimate" approach to the investment return assumption (and also the related discount rate for the liabilities). Under this "select and ultimate" approach to the investment return assumption, we have assumed that the net investment return and discount rate grade down from 6.25% to 3.75% in yearly increments based on the number of years until the Trust assets are projected to be depleted and are no longer available to pay benefits. Implicit in this approach is the assumption that once the Trust is completely exhausted, and ISAC is relying on additional payments from the State of Illinois, the State will be making payments to the College Illinois!® Prepaid Tuition Program from the State Portfolio. (The State Portfolio has assets of approximately \$12-\$14 billion, and provides the necessary liquidity to meet the state's daily obligations while investing remaining funds in authorized short/long-term investment opportunities.) Based on input from ISAC, we have assumed that the underlying return on such assets in the State Portfolio is 3.75%.

Important Disclosure

This supplemental report is not a recommendation to anyone to participate or not participate in the CIPTP. GRS makes no representations or warranties to any person or persons participating in or considering participation in the CIPTP.

SECTION B

PROJECTION RESULTS

Discussion of Scenario Results

Scenario 1 - Closed Group -- Run-Off Scenario; Zero New Contracts Sold Per Year

Under this illustrative closed group scenario, we have assumed that the program continues to operate but with no new contract sales after June 30, 2018. Under this scenario, future payments from current contract holders, current Trust assets and future investment income are projected to be insufficient by the year 2026 to make the required tuition payments and additional funds will be required to maintain solvency (\$501.2 million for the period 2026 to 2053). The CIPTP funded status is projected to decrease from 73.3% in 2018 to 0.5% in 2026 (when additional solvency contributions are required) and then remain at about 0.0% for the remaining years in the projection period.

Under this scenario, the Trust assets are projected to be depleted in 2026. Therefore, we have incorporated a "select and ultimate" approach to the investment return assumption (and also the related discount rate for the liabilities). Under this "select and ultimate" approach to the investment return assumption, we have assumed that the net investment return and discount rate grade down from 6.25% for year ending June 30, 2019 to 3.75% beginning for year ending June 30, 2026, in equal yearly increments of 0.357%.

Scenario 2 - Open Group -- 500 New Contracts Sold Per Year

Scenario 2 illustrates the results of an open group projection scenario assuming 500 new contracts are sold each year, beginning in fiscal year 2020. Under this illustrative new contract sales assumption, future payments from current and future contract holders, current Trust assets and future investment income are projected to be insufficient to make the required tuition payments in the year 2026 and additional funds will be required to maintain solvency (\$405.1 million for the period 2026 to 2055). The CIPTP funded status is projected to decrease from 73.3% in 2018 to a low of 6.9% in 2026 (when additional solvency contributions are required) and then very slowly increase to only 14.8% in 2055.

Under this scenario, the Trust assets are projected to be depleted in 2026, and the funded ratio remains low for the remaining years in the projection period. Therefore, we have incorporated a "select and ultimate" approach to the investment return assumption (and also the related discount rate for the liabilities). Under this "select and ultimate" approach to the investment return assumption, we have assumed that the net investment return and discount rate grade down from 6.25% for year ending June 30, 2019 to 3.75% beginning for year ending June 30, 2026, in equal yearly increments of 0.357%.

Scenario 3 – Open Group -- 1,000 New Contracts Sold Per Year

Scenario 3 illustrates the results of an open group projection scenario assuming 1,000 new contracts are sold each year, beginning in fiscal year 2020. Under this illustrative new contract sales assumption, future payments from current and future contract holders, current Trust assets and future investment income are projected to be insufficient to make the required tuition payments in the year 2028 and additional funds will be required to maintain solvency (\$101.4 million for the period 2028 to 2032). The CIPTP funded status is projected to decrease from 74.0% in 2018 to a low of 13.1% in 2028 (when additional solvency contributions are required) and then very slowly increase to only 25.7% in 2055.

Under this scenario, the Trust assets are projected to be depleted in 2028, and the funded ratio remains low for the remaining years in the projection period. Therefore, we have incorporated a "select and

ultimate" approach to the investment return assumption (and also the related discount rate for the liabilities). Under this "select and ultimate" approach to the investment return assumption, we have assumed that the net investment return and discount rate grade down from 6.25% for year ending June 30, 2018 to 3.75% beginning for year ending June 30, 2028, in equal yearly increments of 0.278%.

Scenario 4 – Open Group -- 1,500 New Contracts Sold Per Year

Scenario 4 illustrates the results of an open group projection scenario assuming 1,500 new contracts are sold each year, beginning in fiscal year 2020. Under this illustrative new contract sales assumption, future payments from current and future contract holders, current Trust assets and future investment income are projected to be sufficient to make the required tuition payments in all projection years. The CIPTP funded status is projected to decrease from 77.3% in 2018 to a low of 36.6% in 2029 before increasing to 76.1% in 2055.

Under this scenario, the Trust assets are not projected to be depleted during the projection period. Therefore, we have used a flat investment return (and discount rate) assumption of 6.25% for this projection scenario. This assumes that ISAC is able to maintain the current asset allocation throughout the entire projection period.

Scenario 5 - Open Group -- 2,500 New Contracts Sold Per Year

Scenario 5 illustrates the results of an open group projection scenario assuming 2,500 new contracts are sold each year, beginning in fiscal year 2020. Under this illustrative new contract sales assumption, future payments from current and future contract holders, current Trust assets and future investment income are projected to be sufficient to make the required tuition payments in all projection years. However, the CIPTP funded status is projected to decrease from 77.3% in 2018 to a low of 59.2% in 2025 before increasing to 126.7% in 2055. The funded status is projected to first reach 100% in 2044.

Under this scenario, the Trust assets are not projected to be depleted during the projection period. Therefore, we have used a flat investment return (and discount rate) assumption of 6.25% for this projection scenario. This assumes that ISAC is able to maintain the current asset allocation throughout the entire projection period.

Scenario 6 – Open Group -- 5% Annual Contract Sales Growth from 500 Contracts Sold in FY20 to 2,500 Contracts Sold and then Stable at 2,500 Contracts Per Year

Scenario 6 illustrates the results of an open group projection scenario assuming 500 new contracts are sold in 2020 and then the number of new contract sales increases by 5.0% each year to 2,500 new contracts sold in 2053 and each future year. Under this illustrative new contract sales assumption, future payments from current and future contract holders, current Trust assets and future investment income are projected to be insufficient to make the required tuition payments in years 2027 through 2032 and additional solvency contributions will be required to maintain solvency (\$207.8 million for the period 2027 to 2032). The CIPTP funded status is projected to decrease from 77.3% in 2018 to a low of 10.2% in 2027 (and additional solvency contributions are required) before increasing to 93.1% in 2055.

Under this scenario, the Trust assets are projected to be depleted in 2027. However, because additional solvency contributions are only required for six years before the funded status is projected to increase, we have used a flat investment return (and discount rate) assumption of 6.25% for this projection

scenario. This assumes that ISAC is able to maintain the current asset allocation throughout most of the projection period.

Scenario 7 – Open Group -- 10% Annual Contract Sales Growth from 500 Contracts Sold in FY20 to 2,500 Contracts Sold and then Stable at 2,500 Contracts Per Year

Scenario 7 illustrates the results of an open group projection scenario assuming 500 new contracts are sold in 2020 and then the number of new contract sales increases by 10.0% each year to 2,500 new contracts sold in 2037 and each future year. Under this illustrative new contract sales assumption, future payments from current and future contract holders, Trust assets and future investment income are projected to be insufficient to make the required tuition payments in years 2027 through 2030 and additional solvency contributions will be required to maintain solvency (\$130.0 million for the period 2027 through 2030). The CIPTP funded status is projected to decrease from 77.3% in 2018 to a low of 12.2% in 2027 (and additional solvency contributions are required) before increasing to 111.3% in 2055. The funded status is projected to first reach 100% in 2051.

Under this scenario, the Trust assets are projected to be depleted in 2027. However, because additional solvency contributions are only required for four years before the funded status is projected to increase, we have used a flat investment return (and discount rate) assumption of 6.25% for this projection scenario. This assumes that ISAC is able to maintain the current asset allocation throughout most of the projection period.

Scenario 8 – Open Group -- 15% Annual Contract Sales Growth from 500 Contracts Sold in FY20 to 2,500 Contracts Sold and then Stable at 2,500 Contracts Per Year

Scenario 8 illustrates the results of an open group projection scenario assuming 500 new contracts are sold in 2020 and then the number of new contract sales increases by 15.0% each year to 2,500 new contracts sold in 2032 and each future year. Under this illustrative new contract sales assumption, future payments from current and future contract holders, Trust assets and future investment income are projected to be insufficient to make the required tuition payments in years 2027 through 2029 and additional solvency contributions will be required to maintain solvency (\$65.2 million for the period 2027 through 2029). The CIPTP funded status is projected to decrease from 77.3% in 2018 to a low of 14.3% in 2027 (and additional solvency contributions are required) before increasing to 112.6% in 2055. The funded status is projected to first reach 100% in 2050.

Under this scenario, the Trust assets are projected to be depleted in 2027. However, because additional solvency contributions are only required for three years before the funded status is projected to increase, we have used a flat investment return (and discount rate) assumption of 6.25% for this projection scenario. This assumes that ISAC is able to maintain the current asset allocation throughout most of the projection period.

Summary

Under the scenarios in which 2,500 contracts are assumed to ultimately be sold each year (Scenarios 5 through 8), the funded status is projected to reach 90% or higher during the projection period.

Summary Table

						Ft	unded R	latio	Funded Ra	itio Year
Scenario	Scenario Description	Discount Rate/Type	Tuition/Fee Increase	Year of Asset Ro	equired Solvency Contributions	2018	2055	Minimum	Minimum	100%
1	Closed Group (Run-Off)	Select and Ultimate	5.00%	2026 \$	501,243,688	73.3%	0.0%	0.0%	2032	NA
2	Open Group (500 New Contracts Per Year)	Select and Ultimate	5.00%	2026 \$	405,070,701	73.3%	14.8%	6.9%	2026	NA
3	Open Group (1,000 New Contracts Per Year)	Select and Ultimate	5.00%	2028 \$	101,396,923	74.0%	25.7%	13.1%	2028	NA
4	Open Group (1,500 New Contracts Per Year)	6.25%	5.00%	NA \$	-	77.3%	76.1%	36.6%	2029	NA
5	Open Group (2,500 New Contracts Per Year)	6.25%	5.00%	NA \$	-	77.3%	126.7%	59.2%	2025	2044
6	Open Group (5% Annual Growth)*	6.25%	5.00%	2027 \$	207,791,463	77.3%	93.1%	10.2%	2027	NA
7	Open Group (10% Annual Growth)*	6.25%	5.00%	2027 \$	130,018,635	77.3%	111.3%	12.2%	2027	2051
8	Open Group (15% Annual Growth)*	6.25%	5.00%	2027 \$	65,246,786	77.3%	112.6%	14.3%	2027	2050

^{*500} contracts assumed to be sold in FY 2020, with an annual increase in contract sales until a maximum of 2,500 contracts per year are sold annually.

Scenario Summary - Projected Funded Ratio
Projection Based on Data as of June 30, 2018
Assumed Net Investment Return and Discount Rates Vary by Scenario
Other Assumptions Based on Those Used in the Actuarial Valuation as of June 30, 2018

Scenario Description Annual New Contracts		1 Closed Group 0	2 Open Group 500	3 Open Group 1,000	4 Open Group 1,500	5 Open Group 2,500	6 Open Group ^a 500	7 Open Group ^a 500	8 Open Group ^a 500
Increase in Annual New Contracts Annual WAT/Price Increase Ultimate Discount Rate (UDR) Year of Asset Depletion		5.00% 3.75%	5.00% 3.75%	5.00% 3.75%	5.00% 6.25%	5.00% 6.25%	5% 5.00% 6.25%	10% 5.00% 6.25%	15% 5.00% 6.25%
·		2026	2026	2028	NA	NA	2027	2027	2027
Year Ending 6/30	2018	73.3%	73.3%	74.0%	77.3%	77.3%	77.3%	77.3%	77.3%
	2019	69.4%	69.4%	70.1%	73.7%	73.7%	73.7%	73.7%	73.7%
	2020	64.5%	63.4%	64.0%	67.9%	67.6%	68.2%	68.2%	68.2%
	2021	58.2%	57.3%	58.6%	64.0%	65.3%	62.5%	62.5%	62.5%
	2022	49.8%	49.6%	52.3%	59.5%	63.0%	55.4%	55.5%	55.5%
	2023	39.0%	40.6%	45.3%	54.8%	61.0%	46.9%	47.2%	47.5%
	2024	25.1%	30.1%	37.9%	50.3%	59.6%	37.1%	37.9%	38.7%
	2025	5.7%	17.7%	30.1%	46.0%	59.2%	25.5%	27.3%	29.2%
	2026	0.5%	6.9%	22.3%	42.2%	59.4%	12.5%	16.1%	20.0%
	2027	0.4%	8.2%	14.9%	39.2%	60.5%	10.2%	12.2%	14.3%
	2028	0.4%	9.4%	13.1%	37.4%	62.3%	12.1%	14.5%	17.1%
	2029	0.3%	10.6%	14.0%	36.6%	64.6%	14.0%	16.9%	19.9%
	2030	0.1%	11.7%	14.7%	36.9%	67.2%	15.6%	18.8%	23.2%
	2031	0.1%	12.5%	15.1%	38.0%	70.0%	16.9%	20.7%	29.1%
	2032	0.0%	13.2%	15.3%	39.6%	72.8%	17.9%	24.8%	36.4%
	2033	0.0%	13.6%	15.5%	41.5%	75.6%	19.1%	30.2%	43.6%
	2034	0.0%	13.9%	16.0%	43.4%	78.2%	21.3%	36.2%	49.9%
	2035	0.0%	14.1%	16.7%	45.4%	80.8%	24.3%	42.4%	55.5%
	2036	0.0%	14.2%	17.5%	47.2%	83.2%	27.8%	48.7%	60.6%
	2037	0.0%	14.3%	18.3%	49.0%	85.6%	31.4%	54.7%	65.0%
	2038	0.0%	14.3%	19.0%	50.8%	87.9%	35.2%	60.4%	69.0%
	2039	0.0%	14.3%	19.6%	52.4%	90.2%	39.0%	65.4%	72.6%
	2040	0.0%	14.3%	20.2%	53.9%	92.4%	42.8%	69.8%	75.9%
	2041	0.0%	14.4%	20.6%	55.4%	94.6%	46.6%	73.7%	79.0%
	2042	0.0%	14.4%	21.0%	56.7%	96.7%	50.2%	77.3%	81.8%
	2043	0.0%	14.4%	21.3%	58.1%	98.9%	53.9%	80.6%	84.4%
	2044	0.0%	14.4%	21.7%	59.5%	101.0%	57.5%	83.7%	87.0%
	2045	0.0%	14.5%	22.0%	60.8%	103.2%	61.0%	86.6%	89.4%
	2046	0.0%	14.5%	22.3%	62.2%	105.4%	64.5%	89.3%	91.8%
	2047	0.0%	14.5%	22.6%	63.6%	107.6%	67.9%	91.9%	94.1%
	2048	0.0%	14.6%	22.9%	65.1%	109.9%	71.2%	94.4%	96.4%
	2049	0.0%	14.6%	23.3%	66.6%	112.2%	74.5%	96.9%	98.7%
	2050	0.0%	14.6%	23.7%	68.1%	114.5%	77.8%	99.3%	101.0%
	2051	0.0%	14.7%	24.0%	69.6%	116.9%	80.9%	101.7%	103.3%
	2051	0.0%	14.7%	24.4%	71.2%	119.3%	84.0%	104.1%	105.6%
	2052	0.0%	14.7%	24.8%	72.8%	121.7%	87.1%	106.5%	107.9%
	2053	0.0%	14.7%	25.3%	74.4%	124.2%	90.2%	108.9%	110.2%
	2055	0.0%	14.7%	25.7%	76.1%	124.2%	93.1%	111.3%	110.2%
Minimum Fo		0.0%	6.9%	13.1%	36.6%	59.2%	10.2%	12.2%	14.3%

a 500 contracts assumed to be sold in FY 2020, with an annual increase in contract sales until a maximum of 2,500 contracts per year are sold annually.

Scenario Summary - Projected Additional Required Solvency Contributions Projection Based on Data as of June 30, 2018 Assumed Net Investment Return and Discount Rates Vary by Scenario Other Assumptions Based on Those Used in the Actuarial Valuation as of June 30, 2018

Scenario Description Annual New Contracts Increase in Annual New Contracts Annual WAT/Price Increase Ultimate Discount Rate (UDR) Year of Asset Depletion		1 Closed Group 0 5.00% 3.75% 2026	2 Open Group 500 5.00% 3.75% 2026	3 Open Group 1,000 5.00% 3.75% 2028	4 Open Group 1,500 5.00% 6.25% NA	5 Open Group 2,500 5.00% 6.25% NA	6 Open Group ^a 500 5% 5.00% 6.25% 2027	7 Open Group ^a 500 10% 5.00% 6.25% 2027	8 Open Group ^a 500 15% 5.00% 6.25% 2027
Year Ending 6/30	2018	\$ -	\$ -	\$ -	\$ -	\$ -	. \$ -	\$ -	\$ -
3 7, 1	2019	-	-	-	-			-	
	2020	-	-	-	-			-	-
	2021	-	-	-	-			-	-
	2022	-	-	-	-			-	-
	2023	-	-	-	-			-	-
	2024	-	-	-	-			-	-
	2025	-	-	-	-			-	-
	2026	80,542,379	18,604,533	-	-	-		-	-
	2027	92,083,192	80,158,475	-	-		53,655,325	33,535,392	10,136,567
	2028	75,808,574	64,306,966	27,013,285	-		57,467,571	48,551,321	37,047,040
	2029	64,612,146	53,803,599	36,049,811	-			33,723,123	18,063,179
	2030	49,140,801	39,265,895	21,956,495	-	-	28,982,652	14,208,799	-
	2031	37,509,474	28,711,837	12,047,210	-		16,465,817	-	-
	2032	27,961,764	20,274,414	4,330,122	-		5,898,286	-	-
	2033	20,950,425	14,444,671	-	-	-		-	-
	2034	15,446,964	10,214,255	-	-	-	-	-	-
	2035	11,489,857	7,397,064	-	-		-	-	-
	2036	8,454,037	5,552,314	-	-			-	-
	2037	5,909,165	4,075,516	-	-	-	-	-	-
	2038	4,104,650	3,243,309	-	-	-	-	-	-
	2039	2,782,556	3,088,437	-	-	-	-	-	-
	2040	1,735,927	3,108,803	-	-	-	-	-	-
	2041	1,062,469	3,260,444	-	-	-	-	-	-
	2042	694,848	3,498,313	-	-			-	-
	2043	419,562	3,645,702	-	-		-	-	-
	2044	255,639	3,733,338	-	-	-	-	-	-
	2045	136,615	3,730,246	-	-	-	-	-	-
	2046	90,630	3,723,038	-	-	-	-	-	-
	2047	25,848	3,628,495	-	-	-	-	-	-
	2048	13,728	3,534,081	-	-	-	-	-	-
	2049	6,950	3,421,164	-	-	-	-	-	-
	2050	3,235	3,274,616	-	-		-	-	-
	2051	1,460	3,100,931	-	-		-	-	-
	2052	597	2,907,727	-	-		-	-	-
	2053	196	2,694,697	-	-			-	-
	2054	-	2,461,238	-	-			-	-
	2055	-	2,206,583	-	-		-	-	-
	Total	501,243,688	405,070,701	101,396,923	-	-	207,791,463	130,018,635	65,246,786

^a 500 contracts assumed to be sold in FY 2020, with an annual increase in contract sales until a maximum of 2,500 contracts per year are sold annually.

SECTION C

ALTERNATIVE SCENARIOS PROJECTION TABLES

Closed Group Projections

Scenario 1 — Run-Off Scenario

Projection Based on Data as of June 30, 2018

Assumed Net Investment Return and Discount Rates Graded Down from 6.25% to 3.75% in 0.357% Yearly Increments

Other Assumptions Based on Those Used in the Actuarial Valuation as of June 30, 2018

Zero New Contracts Per Year

				Assets								Liabilities			
Year Ending 6/30	Assumed Net Rate of Return	Annual New Contracts	Contributions	Additional Required Solvency Contributions ^a	Tuition Payments, Refunds and Fees	Administrative Expenses	Net Investment Return	Market Value of Assets (EOY)	Total Present Value of Future Contributions	Total Fund Assets (MVA + PVFC)	Total Present Value of Future Benefits	Present Value of Future Admin Expenses	Total Present Value of Future Benefits, Fees and Expenses	Unfunded Liability	Funded Ratio
2018			\$ 14,574,249	\$ -	\$ 148,689,847	\$ 4,314,146	\$ 46,821,937	\$ 813,365,005	\$ 33,033,617	\$ 846,398,622	\$ 1,125,284,937	\$ 28,825,358	\$ 1,154,110,294	\$ 307,711,672	73.3%
2019	6.250%	0	10,483,115	-	150,251,752	4,422,000	46,397,643	715,572,011	24,292,470	739,864,481	1,040,739,284	26,068,849	1,066,808,133	326,943,652	69.4%
2020	5.893%	0	7,534,932	-	145,963,226	4,532,550	38,016,612	610,627,779	17,970,255	628,598,034	951,867,579	22,940,896	974,808,475	346,210,441	64.5%
2021	5.536%	0	5,637,849	-	146,390,225	4,249,140	29,844,774	495,471,037	13,173,285	508,644,322	854,175,242	19,845,732	874,020,974	365,376,652	58.2%
2022	5.179%	0	4,667,453	-	145,690,793	3,908,367	21,954,812	372,494,142	9,068,739	381,562,881	748,997,143	16,865,246	765,862,389	384,299,508	49.8%
2023	4.822%	0	3,201,900	-	135,301,933	3,512,792	14,730,535	251,611,852	6,227,844	257,839,696	646,588,127	14,082,000	660,670,127	402,830,431	39.0%
2024	4.465%	0	2,252,346	-	122,494,864	3,108,307	8,510,734	136,771,762	4,203,837	140,975,599	550,258,588	11,533,819	561,792,407	420,816,808	25.1%
2025	4.108%	0	1,436,498	-	114,995,338	2,711,358	3,254,430	23,755,994	2,910,824	26,666,818	455,529,640	9,241,140	464,770,780	438,103,962	5.7%
2026	3.750%	0	983,442	80,542,379	103,422,437	2,300,703	441,326	-	2,018,268	2,018,268	367,268,240	7,244,239	374,512,480	372,494,212	0.5%
2027	3.750%	0	766,447	92,083,192	90,948,337	1,901,302	-	-	1,313,267	1,313,267	288,402,875	5,579,275	293,982,150	292,668,883	0.4%
2028	3.750%	0	525,757	75,808,574	74,803,980	1,530,351	-	-	826,991	826,991	223,024,337	4,229,716	227,254,053	226,427,062	0.4%
2029	3.750%	0	393,923	64,612,146	63,793,050	1,213,019	-	-	456,762	456,762	166,409,588	3,152,777	169,562,365	169,105,603	0.3%
2030	3.750%	0	286,949	49,140,801	48,500,028	927,722	-	-	181,610	181,610	123,248,913	2,326,050	125,574,963	125,393,353	0.1%
2031	3.750%	0	129,215	37,509,474	36,934,408	704,281	-	-	56,805	56,805	90,250,193	1,695,911	91,946,104	91,889,299	0.1%
2032	3.750%	0	55,079	27,961,764	27,488,233	528,610	-	-	2,833	2,833	65,635,681	1,221,078	66,856,759	66,853,926	0.0%
2033	3.750%	0	2,886	20,950,425	20,559,262	394,050	-	-	-	-	47,155,819	865,498	48,021,318	48,021,318	0.0%
2034	3.750%	0	-	15,446,964	15,156,782	290,182	-	-	-	-	33,485,806	602,382	34,088,188	34,088,188	0.0%
2035	3.750%	0	-	11,489,857	11,278,645	211,212	-	-	-	-	23,253,351	409,835	23,663,186	23,663,186	0.0%
2036	3.750%	0	-	8,454,037	8,303,699	150,338	-	-	-	-	15,667,391	272,073	15,939,464	15,939,464	0.0%
2037	3.750%	0	-	5,909,165	5,805,340	103,825	-	-	-	-	10,341,730	176,522	10,518,252	10,518,252	0.0%
2038	3.750%	0	-	4,104,650	4,034,404	70,246	-	-	-	-	6,620,192	111,590	6,731,782	6,731,782	0.0%
2039	3.750%	0	-	2,782,556	2,736,464	46,092	-	-	-	-	4,081,148	68,827	4,149,975	4,149,975	0.0%
2040	3.750%	0	-	1,735,927	1,706,803	29,125	-	-	-	-	2,495,681	41,742	2,537,422	2,537,422	0.0%
2041	3.750%	0	-	1,062,469	1,044,214	18,255	-	-	-	-	1,525,656	24,713	1,550,369	1,550,369	0.0%
2042	3.750%	0	-	694,848	683,409	11,439	-	-	-	-	886,763	13,988	900,751	900,751	0.0%
2043	3.750%	0	-	419,562	412,747	6,815	-	-	-	-	499,602	7,571	507,173	507,173	0.0%
2044	3.750%	0	-	255,639	251,704	3,935	-	-	-	-	261,957	3,847	265,804	265,804	0.0%
2045	3.750%	0	-	136,615	134,500	2,115	-	-	-	-	134,782	1,836	136,619	136,619	0.0%
2046	3.750%	0	-	90,630	89,515	1,115	-	-	-	-	48,659	769	49,428	49,428	0.0%
2047	3.750%	0	-	25,848	25,435	413	-	-	-	-	24,576	377	24,953	24,953	0.0%
2048	3.750%	0	-	13,728	13,514	214	-	-	-	-	11,732	174	11,906	11,906	0.0%
2049	3.750%	0	-	6,950	6,845	105	-	-	-	-	5,200	74	5,274	5,274	0.0%
2050	3.750%	0	-	3,235	3,187	48	-	-	-	-	2,149	28	2,177	2,177	0.0%
2051	3.750%	0	-	1,460	1,440	20	-	-	-	-	763	9	772	772	0.0%
2052	3.750%	0	-	597	590	7	-	-	-	-	190	2	192	192	0.0%
2053	3.750%	0	-	196	194	2	-	-	-	-	-	-	-	-	0.0%
2054	3.750%	0	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
2055	3.750%	0	-		-	-	-	-	-	-	-	-	-	-	0.0%

 $^{^{}a}$ Additional contributions in the amount of \$501,243,688 are needed over the years 2026 through 2053 to pay all benefits due.

Open Group Projections
Scenario 2 — Continuing Business Scenario
Projection Based on Data as of June 30, 2018
Assumed Net Investment Return and Discount Rates Graded Down from 6.25% to 3.75% in 0.357% Yearly Increments
Other Assumptions Based on Those Used in the Actuarial Valuation as of June 30, 2018
500 New Contracts Per Year Beginning in FY 2020

				Assets								Liabilities			
Year Ending 6/30	Assumed Net Rate of Return	Annual New Contracts	Contributions	Additional Required Solvency Contributions ^a	Tuition Payments, Refunds and Fees	Administrative Expenses	Net Investment Return	Market Value of Assets (EOY)	Total Present Value of Future Contributions	Total Fund Assets (MVA + PVFC)	Total Present Value of Future Benefits	Present Value of Future Admin Expenses	Total Present Value of Future Benefits, Fees and Expenses	Unfunded Liability	Funded Ratio
2018			\$ 14,574,249	\$ -	\$ 148,689,847	\$ 4,314,146	\$ 46,821,937	\$ 813,365,005	\$ 33,033,617	\$ 846,398,622	\$ 1,125,284,937	\$ 28,825,358	\$ 1,154,110,294	\$ 307,711,672	73.3%
2019	6.250%	0	10,483,115	-	150,251,752	4,422,000	46,397,643	715,572,011	24,292,470	739,864,481	1,040,739,284	26,068,849	1,066,808,133	326,943,652	69.4%
2020	5.893%	500	7,534,932	-	145,963,226	6,532,550	37,958,525	608,569,692	25,616,067	634,185,759	967,667,802	32,220,107	999,887,909	365,702,150	63.4%
2021	5.536%	500	14,909,212	-	146,411,436	6,695,864	29,916,621	500,288,225	27,691,927	527,980,152	887,436,971	34,054,172	921,491,143	393,510,991	57.3%
2022	5.179%	500	16,011,311	-	145,981,490	6,863,260	22,411,351	385,866,137	29,584,485	415,450,622	801,346,282	35,697,135	837,043,417	421,592,795	49.6%
2023	4.822%	500	16,675,040	-	135,887,422	7,034,842	15,598,479	275,217,392	31,751,800	306,969,192	719,600,486	37,187,458	756,787,944	449,818,752	40.6%
2024	4.465%	500	17,923,158	-	123,388,056	7,210,713	9,800,443	172,342,225	33,623,123	205,965,348	645,145,054	38,759,661	683,904,715	477,939,367	30.1%
2025	4.108%	500	19,383,804	-	116,489,762	7,390,981	4,955,053	72,800,339	35,868,183	108,668,522	573,307,954	40,251,058	613,559,012	504,890,490	17.7%
2026	3.750%	500	20,423,444	18,604,533	105,605,004	7,575,756	1,352,444	-	38,176,334	38,176,334	508,577,693	41,521,715	550,099,409	511,923,075	6.9%
2027	3.750%	500	21,664,640	80,158,475	94,057,966	7,765,149	-	-	40,467,105	40,467,105	453,897,060	42,502,004	496,399,064	455,931,959	8.2%
2028	3.750%	500	22,884,344	64,306,966	79,232,033	7,959,277	-	-	42,820,932	42,820,932	413,111,250	43,495,188	456,606,438	413,785,506	9.4%
2029	3.750%	500	24,214,058	53,803,599	69,859,397	8,158,260	-	-	45,204,689	45,204,689	381,312,755	44,189,639	425,502,394	380,297,705	10.6%
2030	3.750%	500	25,554,539	39,265,895	56,458,217	8,362,217	-	-	47,640,435	47,640,435	363,039,719	44,751,821	407,791,540	360,151,105	11.7%
2031	3.750%	500	26,861,763	28,711,837	47,002,329	8,571,271	-	-	50,209,766	50,209,766	354,950,875	45,277,281	400,228,156	350,018,390	12.5%
2032	3.750%	500	28,291,216	20,274,414	39,780,076	8,785,554	-	-	52,855,993	52,855,993	355,180,765	45,905,336	401,086,101	348,230,108	13.2%
2033	3.750%	500	29,788,952	14,444,671	35,228,431	9,005,193	-	-	55,573,920	55,573,920	361,369,732	46,568,710	407,938,443	352,364,523	13.6%
2034	3.750%	500	31,394,821	10,214,255	32,378,754	9,230,322	-	-	58,352,616	58,352,616	372,335,726	47,359,796	419,695,522	361,342,906	13.9%
2035	3.750%	500	33,044,114	7,397,064	30,980,098	9,461,080	-	-	61,270,246	61,270,246	386,715,979	48,243,760	434,959,739	373,689,493	14.1%
2036	3.750%	500	34,696,320	5,552,314	30,551,027	9,697,607	-	-	64,333,759	64,333,759	403,833,388	49,206,112	453,039,500	388,705,741	14.2%
2037	3.750%	500	36,431,136	4,075,516	30,566,605	9,940,047	-	-	67,550,447	67,550,447	423,393,763	50,422,787	473,816,550	406,266,103	14.3%
2038	3.750%	500	38,252,693	3,243,309	31,307,454	10,188,548	-	-	70,927,969	70,927,969	444,543,942	51,810,205	496,354,147	425,426,178	14.3%
2039	3.750%	500	40,165,327	3,088,437	32,810,502	10,443,262	-	-	74,474,367	74,474,367	466,960,876	53,268,852	520,229,728	445,755,361	14.3%
2040	3.750%	500	42,173,594	3,108,803	34,578,054	10,704,344	-	-	78,198,086	78,198,086	490,663,394	54,768,880	545,432,273	467,234,187	14.3%
2041	3.750%	500	44,282,273	3,260,444	36,570,765	10,971,952	-	-	82,107,990	82,107,990	515,549,834	56,296,253	571,846,087	489,738,097	14.4%
2042	3.750%	500	46,496,387	3,498,313	38,748,449	11,246,251	-	-	86,213,390	86,213,390	541,545,696	57,823,814	599,369,510	513,156,120	14.4%
2043	3.750%	500	48,821,206	3,645,702	40,939,500	11,527,408	-	-	90,524,059	90,524,059	568,777,846	59,343,556	628,121,402	537,597,343	14.4%
2044	3.750%	500	51,262,267	3,733,338	43,180,013	11,815,592	-	-	95,050,262	95,050,262	597,322,675	60,864,241	658,186,916	563,136,654	14.4%
2045	3.750%	500	53,825,380	3,730,246	45,444,644	12,110,982	-	-	99,802,775	99,802,775	627,267,167	62,390,819	689,657,987	589,855,212	14.5%
2046	3.750%	500	56,516,649	3,723,038	47,825,930	12,413,757	-	-	104,792,914	104,792,914	658,664,465	63,923,338	722,587,803	617,794,889	14.5%
2047	3.750%	500	59,342,481	3,628,495	50,246,875	12,724,101	-	-	110,032,560	110,032,560	691,646,243	65,479,775	757,126,018	647,093,458	14.5%
2048	3.750%	500	62,309,605	3,534,081	52,801,482	13,042,204	-	-	115,534,188	115,534,188	726,247,775	67,061,840	793,309,615	677,775,427	14.6%
2049	3.750%	500	65,425,086	3,421,164	55,477,991	13,368,259	-	-	121,310,897	121,310,897	762,566,603	68,681,198	831,247,801	709,936,904	14.6%
2050	3.750%	500	68,696,340	3,274,616	58,268,490	13,702,466	-	-	127,376,442	127,376,442	800,698,505	70,347,188	871,045,693	743,669,251	14.6%
2051	3.750%	500	72,131,157	3,100,931	61,187,061	14,045,027	-	-	133,745,264	133,745,264	840,735,210	72,065,998	912,801,208	779,055,944	14.7%
2052	3.750%	500	75,737,715	2,907,727	64,249,290	14,396,152	-	-	140,432,527	140,432,527	882,772,806	73,841,241	956,614,047	816,181,520	14.7%
2053	3.750%	500	79,524,601	2,694,697	67,463,242	14,756,056	-	-	147,454,153	147,454,153	926,911,821	75,673,466	1,002,585,287	855,131,134	14.7%
2054	3.750%	500	83,500,831	2,461,238	70,837,111	15,124,958	-	-	154,826,861	154,826,861	973,257,593	77,564,810	1,050,822,403	895,995,542	14.7%
2055	3.750%	500	87,675,872	2,206,583	74,379,373	15,503,082	-	-	162,568,204	162,568,204	1,021,920,504	79,515,962	1,101,436,466	938,868,262	14.8%

^a Additional contributions in the amount of \$405,070,701 are needed over the years 2026 through 2055 to pay all benefits due.

Open Group Projections
Scenario 3 — Continuing Business Scenario
Projection Based on Data as of June 30, 2018
Assumed Net Investment Return and Discount Rates Graded Down from 6.25% to 3.75% in 0.278% Yearly Increments
Other Assumptions Based on Those Used in the Actuarial Valuation as of June 30, 2018
1,000 New Contracts Per Year Beginning in FY 2020

				Assets								Liabilities			
Year Ending 6/30	Assumed Net Rate of Return	Annual New Contracts	Contributions	Additional Required Solvency Contributions ^a	Tuition Payments, Refunds and Fees	Administrative Expenses	Net Investment Return	Market Value of Assets (EOY)	Total Present Value of Future Contributions	Total Fund Assets (MVA + PVFC)	Total Present Value of Future Benefits	Present Value of Future Admin Expenses	Total Present Value of Future Benefits, Fees and Expenses	Unfunded Liability	Funded Ratio
2018			\$ 14,574,249	\$ -	\$ 148,689,847	\$ 4,314,146	\$ 46,821,937	\$ 813,365,005	\$ 32,922,430	\$ 846,287,435	\$ 1,114,971,113	\$ 28,600,488	\$ 1,143,571,601	\$ 297,284,166	74.0%
2019	6.250%	0	10,483,115	-	150,251,752	4,422,000	46,397,643	715,572,011	24,174,334	739,746,345	1,029,780,846	25,829,925	1,055,610,772	315,864,427	70.1%
2020	5.972%	1,000	7,534,932	-	145,963,226	6,532,550	38,468,194	609,079,361	33,028,848	642,108,209	971,963,762	31,969,179	1,003,932,941	361,824,732	64.0%
2021	5.694%	1,000	24,180,574	-	146,432,647	6,695,864	31,060,653	511,192,077	41,858,149	553,050,226	909,306,379	33,805,914	943,112,293	390,062,067	58.6%
2022	5.416%	1,000	27,355,170	-	146,272,188	6,863,260	24,324,944	409,736,743	49,641,196	459,377,939	843,043,342	35,453,735	878,497,077	419,119,138	52.3%
2023	5.138%	1,000	30,148,181	-	136,472,910	7,034,842	18,176,543	314,553,715	56,744,972	371,298,687	783,303,938	36,946,130	820,250,067	448,951,380	45.3%
2024	4.860%	1,000	33,593,970	-	124,281,248	7,210,713	12,936,612	229,592,337	62,505,728	292,098,065	732,668,836	38,506,670	771,175,506	479,077,441	37.9%
2025	4.582%	1,000	37,331,110	-	117,984,185	7,390,981	8,525,423	150,073,704	68,390,307	218,464,011	686,284,626	39,964,262	726,248,888	507,784,877	30.1%
2026	4.304%	1,000	39,863,445	-	107,787,572	7,575,756	4,851,531	79,425,352	74,162,417	153,587,769	648,292,698	41,326,708	689,619,405	536,031,636	22.3%
2027	4.026%	1,000	42,562,834	-	97,167,594	7,765,149	1,954,547	19,009,990	79,620,943	98,630,933	619,391,246	42,423,431	661,814,677	563,183,744	14.9%
2028	3.750%	1,000	45,242,931	27,013,285	83,660,086	7,959,277	353,157	-	84,814,872	84,814,872	603,198,163	43,432,894	646,631,057	561,816,185	13.1%
2029	3.750%	1,000	48,034,193	36,049,811	75,925,744	8,158,260	-	-	89,952,616	89,952,616	596,215,922	44,144,429	640,360,351	550,407,735	14.0%
2030	3.750%	1,000	50,822,129	21,956,495	64,416,407	8,362,217	-	-	95,099,260	95,099,260	602,830,526	44,722,331	647,552,857	552,453,597	14.7%
2031	3.750%	1,000	53,594,311	12,047,210	57,070,250	8,571,271	-	-	100,362,727	100,362,727	619,651,557	45,260,232	664,911,789	564,549,062	15.1%
2032	3.750%	1,000	56,527,352	4,330,122	52,071,920	8,785,554	-	-	105,709,154	105,709,154	644,725,848	45,897,982	690,623,830	584,914,676	15.3%
2033	3.750%	1,000	59,575,018	-	49,897,599	9,005,193	12,488	684,715	111,147,839	111,832,554	675,583,645	46,567,122	722,150,768	610,318,214	15.5%
2034	3.750%	1,000	62,789,642	-	49,600,726	9,230,322	99,217	4,742,526	116,705,231	121,447,757	711,185,646	47,361,875	758,547,521	637,099,764	16.0%
2035	3.750%	1,000	66,088,228	-	50,681,551	9,461,080	288,299	10,976,422	122,540,493	133,516,915	750,178,608	48,247,415	798,426,023	664,909,108	16.7%
2036	3.750%	1,000	69,392,640	-	52,798,355	9,697,607	539,738	18,412,838	128,667,517	147,080,355	791,999,384	49,209,722	841,209,106	694,128,751	17.5%
2037	3.750%	1,000	72,862,272	-	55,327,871	9,940,047	831,565	26,838,757	135,100,893	161,939,650	836,445,796	50,428,506	886,874,302	724,934,652	18.3%
2038	3.750%	1,000	76,505,385	-	58,580,505	10,188,548	1,150,175	35,725,264	141,855,938	177,581,202	882,467,691	51,819,687	934,287,378	756,706,176	19.0%
2039	3.750%	1,000	80,330,654	-	62,884,539	10,443,262	1,469,792	44,197,909	148,948,735	193,146,644	929,840,603	53,281,752	983,122,355	789,975,711	19.6%
2040	3.750%	1,000	84,347,187	-	67,449,304	10,704,344	1,772,482	52,163,931	156,396,172	208,560,103	978,831,107	54,783,263	1,033,614,369	825,054,266	20.2%
2041	3.750%	1,000	88,564,547	-	72,097,317	10,971,952	2,058,236	59,717,445	164,215,980	223,933,425	1,029,574,011	56,309,373	1,085,883,384	861,949,959	20.6%
2042	3.750%	1,000	92,992,774	-	76,813,489	11,246,251	2,331,047	66,981,526	172,426,779	239,408,305	1,082,204,628	57,831,598	1,140,036,226	900,627,921	21.0%
2043	3.750%	1,000	97,642,413	-	81,466,253	11,527,408	2,598,169	74,228,447	181,048,118	255,276,565	1,137,056,090	59,344,046	1,196,400,136	941,123,571	21.3%
2044	3.750%	1,000	102,524,533	-	86,108,322	11,815,592	2,869,034	81,698,100	190,100,524	271,798,624	1,194,383,392	60,859,299	1,255,242,691	983,444,067	21.7%
2045	3.750%	1,000	107,650,760	-	90,754,787	12,110,982	3,152,572	89,635,663	199,605,550	289,241,213	1,254,399,552	62,383,057	1,316,782,610	1,027,541,397	22.0%
2046	3.750%	1,000	113,033,298	-	95,562,344	12,413,757	3,455,287	98,148,147	209,585,828	307,733,975	1,317,280,272	63,914,964	1,381,195,236	1,073,461,261	22.3%
2047	3.750%	1,000	118,684,963	-	100,468,314	12,724,101	3,782,593	107,423,288	220,065,119	327,488,407	1,383,267,910	65,472,640	1,448,740,550	1,121,252,143	22.6%
2048	3.750%	1,000	124,619,211	-	105,589,450	13,042,204	4,139,607	117,550,452	231,068,375	348,618,827	1,452,483,818	67,056,892	1,519,540,710	1,170,921,883	22.9%
2049	3.750%	1,000	130,850,171	-	110,949,136	13,368,259	4,529,504	128,612,732	242,621,794	371,234,526	1,525,128,007	68,678,535	1,593,806,542	1,222,572,016	23.3%
2050	3.750%	1,000	137,392,680	-	116,533,794	13,702,466	4,955,925	140,725,077	254,752,884	395,477,961	1,601,394,862	70,346,454	1,671,741,316	1,276,263,355	23.7%
2051	3.750%	1,000	144,262,314	-	122,372,683	14,045,027	5,422,923	153,992,604	267,490,528	421,483,132	1,681,469,656	72,066,686	1,753,536,342	1,332,053,210	24.0%
2052	3.750%	1,000	151,475,430	-	128,497,991	14,396,152	5,934,141	168,508,032	280,865,054	449,373,086	1,765,545,422	73,842,730	1,839,388,152	1,390,015,066	24.4%
2053	3.750%	1,000	159,049,201	-	134,926,289	14,756,056	6,493,063	184,367,951	294,908,307	479,276,258	1,853,823,642	75,675,256	1,929,498,898	1,450,222,640	24.8%
2054	3.750%	1,000	167,001,661	-	141,674,222	15,124,958	7,103,334	201,673,766	309,653,722	511,327,488	1,946,515,187	77,566,629	2,024,081,816	1,512,754,328	25.3%
2055	3.750%	1,000	175,351,744	-	148,758,745	15,503,082	7,768,788	220,532,471	325,136,408	545,668,879	2,043,841,007	79,517,649	2,123,358,656	1,577,689,777	25.7%

 $[^]a$ Additional contributions in the amount of \$101,396,923 are needed over the years 2028 through 2032 to pay all benefits due.

Open Group Projections
Scenario 4 — Continuing Business Scenario
Projection Based on Data as of June 30, 2018
6.25% Assumed Net Investment Return
Other Assumptions Based on Those Used in the Actuarial Valuation as of June 30, 2018
1,500 New Contracts Per Year Beginning in FY 2020

				Assets								Liabilities			
Year Ending 6/30	Assumed Net Rate of Return	Annual New Contracts	Contributions	Additional Required Solvency Contributions	Tuition Payments, Refunds and Fees	Administrative Expenses	Net Investment Return	Market Value of Assets (EOY)	Total Present Value of Future Contributions	Total Fund Assets (MVA + PVFC)	Total Present Value of Future Benefits	Present Value of Future Admin Expenses	Total Present Value of Future Benefits, Fees and Expenses	Unfunded Liability	Funded Ratio
2018			\$ 14,574,249	\$ -	\$ 148,689,847	\$ 4,314,146	\$ 46,821,937	\$ 813,365,005	\$ 32,504,816	\$ 845,869,821	\$ 1,066,832,783	\$ 27,587,658	\$ 1,094,420,441	\$ 248,550,620	77.3%
2019	6.250%	0	10,483,115	-	150,251,752	4,422,000	46,397,643	715,572,011	23,730,619	739,302,630	978,633,871	24,753,793	1,003,387,664	264,085,034	73.7%
2020	6.250%	1,500	7,534,932	-	145,963,226	6,532,550	40,261,877	610,873,044	39,403,574	650,276,618	927,467,470	30,424,342	957,891,812	307,615,194	67.9%
2021	6.250%	1,500	33,451,937	-	146,453,857	6,695,864	34,495,698	525,670,958	54,134,054	579,805,012	873,739,189	32,010,862	905,750,051	325,945,039	64.0%
2022	6.250%	1,500	38,699,028	-	146,562,885	6,863,260	29,323,546	440,267,387	66,858,911	507,126,298	818,467,233	33,415,155	851,882,388	344,756,090	59.5%
2023	6.250%	1,500	43,621,321	-	137,058,399	7,034,842	24,424,547	364,220,014	77,884,604	442,104,618	771,603,075	34,682,712	806,285,787	364,181,169	54.8%
2024	6.250%	1,500	49,264,782	-	125,174,440	7,210,713	20,205,605	301,305,249	86,468,849	387,774,098	735,362,412	35,994,899	771,357,311	383,583,213	50.3%
2025	6.250%	1,500	55,278,417	-	119,478,609	7,390,981	16,628,259	246,342,335	94,891,517	341,233,852	704,780,085	37,184,988	741,965,073	400,731,221	46.0%
2026	6.250%	1,500	59,303,447	-	109,970,139	7,575,756	13,603,903	201,703,790	103,029,089	304,732,879	683,785,719	38,268,064	722,053,783	417,320,904	42.2%
2027	6.250%	1,500	63,461,027	-	100,277,223	7,765,149	11,234,433	168,356,878	110,775,148	279,132,026	672,819,126	39,078,652	711,897,778	432,765,752	39.2%
2028	6.250%	1,500	67,601,518	-	88,088,139	7,959,277	9,646,842	149,557,822	118,295,689	267,853,511	675,429,058	39,909,178	715,338,235	447,484,724	37.4%
2029	6.250%	1,500	71,854,329	-	81,992,091	8,158,260	8,784,278	140,046,078	125,686,086	265,732,164	686,522,921	40,476,813	726,999,734	461,267,570	36.6%
2030	6.250%	1,500	76,089,718	-	72,374,596	8,362,217	8,609,859	144,008,842	133,045,449	277,054,291	710,512,114	40,933,414	751,445,528	474,391,237	36.9%
2031	6.250%	1,500	80,326,859	-	67,138,172	8,571,271	9,142,660	157,768,918	140,501,050	298,269,968	744,155,476	41,374,011	785,529,487	487,259,519	38.0%
2032	6.250%	1,500	84,763,489	-	64,363,763	8,785,554	10,218,000	179,601,090	148,035,596	327,636,686	785,552,865	41,936,483	827,489,348	499,852,662	39.6%
2033	6.250%	1,500	89,361,084	-	64,566,768	9,005,193	11,711,001	207,101,215	155,665,966	362,767,181	832,214,892	42,532,585	874,747,477	511,980,296	41.5%
2034	6.250%	1,500	94,184,463	-	66,822,698	9,230,322	13,501,847	238,734,505	163,449,264	402,183,769	883,295,324	43,255,390	926,550,713	524,366,944	43.4%
2035	6.250%	1,500	99,132,342	-	70,383,004	9,461,080	15,514,530	273,537,293	171,621,728	445,159,021	937,473,770	44,060,670	981,534,441	536,375,420	45.4%
2036	6.250%	1,500	104,088,959	-	75,045,684	9,697,607	17,691,471	310,574,432	180,202,814	490,777,246	994,300,668	44,931,672	1,039,232,340	548,455,094	47.2%
2037	6.250%	1,500	109,293,407	-	80,089,136	9,940,047	20,003,786	349,842,442	189,212,955	539,055,397	1,053,655,433	46,070,659	1,099,726,092	560,670,695	49.0%
2038	6.250%	1,500	114,758,078	-	85,853,555	10,188,548	22,441,163	390,999,580	198,673,602	589,673,182	1,114,260,346	47,387,155	1,161,647,501	571,974,319	50.8%
2039	6.250%	1,500	120,495,982	-	92,958,577	10,443,262	24,963,570	433,057,293	208,607,282	641,664,575	1,175,936,490	48,770,325	1,224,706,815	583,042,240	52.4%
2040	6.250%	1,500	126,520,781	-	100,320,555	10,704,344	27,542,988	476,096,164	219,037,647	695,133,811	1,239,142,894	50,186,092	1,289,328,986	594,195,175	53.9%
2041	6.250%	1,500	132,846,820	-	107,623,868	10,971,952	30,194,605	520,541,769	229,989,529	750,531,298	1,304,199,312	51,616,223	1,355,815,535	605,284,237	55.4%
2042	6.250%	1,500	139,489,161	-	114,878,529	11,246,251	32,945,168	566,851,318	241,489,005	808,340,323	1,371,401,037	53,029,216	1,424,430,253	616,089,930	56.7%
2043	6.250%	1,500	146,463,619	-	121,993,006	11,527,408	35,826,553	615,621,076	253,563,456	869,184,532	1,441,241,247	54,418,175	1,495,659,423	626,474,891	58.1%
2044	6.250%	1,500	153,786,800	-	129,036,632	11,815,592	38,874,397	667,430,049	266,241,628	933,671,677	1,514,112,133	55,797,530	1,569,909,663	636,237,986	59.5%
2045	6.250%	1,500	161,476,140	-	136,064,931	12,110,982	42,123,711	722,853,987	279,553,710	1,002,407,697	1,590,313,763	57,175,732	1,647,489,495	645,081,798	60.8%
2046	6.250%	1,500	169,549,947	-	143,298,759	12,413,757	45,604,241	782,295,659	293,531,395	1,075,827,054	1,670,106,097	58,556,361	1,728,662,457	652,835,403	62.2%
2047	6.250%	1,500	178,027,444	-	150,689,754	12,724,101	49,343,232	846,252,480	308,207,965	1,154,460,445	1,753,804,514	59,960,405	1,813,764,919	659,304,474	63.6%
2048	6.250%	1,500	186,928,816	-	158,377,418	13,042,204	53,368,097	915,129,771	323,618,363	1,238,748,134	1,841,578,140	61,390,335	1,902,968,475	664,220,341	65.1%
2049	6.250%	1,500	196,275,257	-	166,420,282	13,368,259	57,703,013	989,319,500	339,799,282	1,329,118,782	1,933,689,529	62,859,484	1,996,549,013	667,430,231	66.6%
2050	6.250%	1,500	206,089,020	-	174,799,097	13,702,466	62,373,747	1,069,280,704	356,789,246	1,426,069,950	2,030,390,829	64,376,854	2,094,767,683	668,697,733	68.1%
2051	6.250%	1,500	216,393,471	-	183,558,304	14,045,027	67,408,337	1,155,479,181	374,628,708	1,530,107,889	2,131,918,468	65,947,735	2,197,866,202	667,758,313	69.6%
2052	6.250%	1,500	227,213,145	-	192,746,691	14,396,152	72,835,141	1,248,384,624	393,360,143	1,641,744,767	2,238,518,030	67,574,310	2,306,092,340	664,347,573	71.2%
2053	6.250%	1,500	238,573,802	-	202,389,337	14,756,056	78,683,528	1,348,496,561	413,028,150	1,761,524,711	2,350,445,422	69,255,468	2,419,700,890	658,176,179	72.8%
2054	6.250%	1,500	250,502,492	-	212,511,332	15,124,958	84,984,775	1,456,347,538	433,679,558	1,890,027,096	2,467,968,229	70,993,331	2,538,961,560	648,934,464	74.4%
2055	6.250%	1,500	263,027,616	-	223,138,118	15,503,082	91,772,247	1,572,506,201	455,363,536	2,027,869,737	2,591,366,731	72,788,546	2,664,155,277	636,285,540	76.1%

Open Group Projections
Scenario 5 — Continuing Business Scenario
Projection Based on Data as of June 30, 2018
6.25% Assumed Net Investment Return
Other Assumptions Based on Those Used in the Actuarial Valuation as of June 30, 2018
2,500 New Contracts Per Year Beginning in FY 2020

						Ass	ets					Liabilities			
Year	Assumed Net	Annual		Additional Required			Net		Total Present Value of	Total Fund	Total Present	Present	Total Present Value of Future		
Ending	Rate of	New		Solvency	Tuition Payments,	Administrative	Investment	Market Value of	Future	Assets	Value of	Value of Future	Benefits, Fees	Unfunded	Funded
6/30	Return	Contracts	Contributions	Contributions	Refunds and Fees	Expenses	Return	Assets (EOY)	Contributions	(MVA + PVFC)	Future Benefits	Admin Expenses	and Expenses	Liability	Ratio
2018			\$ 14,574,249	\$ -	\$ 148,689,847	\$ 4,314,146	\$ 46,821,937	\$ 813,365,005	\$ 32,504,816	\$ 845,869,821	\$ 1,066,832,783	\$ 27,587,658	\$ 1,094,420,441	\$ 248,550,620	77.3%
2019	6.250%	0	10,483,115	-	150,251,752	4,422,000	46,397,643	715,572,011	23,730,619	739,302,630	978,633,871	24,753,793	1,003,387,664	264,085,034	73.7%
2020	6.250%	2,500	7,534,932	-	145,963,226	6,532,550	40,261,877	610,873,044	54,041,321	664,914,365	952,883,758	30,424,342	983,308,100	318,393,735	67.6%
2021	6.250%	2,500	51,994,662	-	146,496,279	6,695,864	35,065,070	544,740,633	81,739,406	626,480,039	926,877,722	32,010,862	958,888,584	332,408,545	65.3%
2022	6.250%	2,500	61,386,745	-	147,144,280	6,863,260	31,195,754	483,315,592	105,624,651	588,940,243	901,789,575	33,415,155	935,204,730	346,264,487	63.0%
2023	6.250%	2,500	70,567,602	-	138,229,376	7,034,842	27,908,331	436,527,307	125,838,172	562,365,479	887,764,850	34,682,712	922,447,562	360,082,083	61.0%
2024	6.250%	2,500	80,606,406	-	126,960,824	7,210,713	25,634,414	408,596,591	141,444,930	550,041,521	886,650,273	35,994,899	922,645,172	372,603,651	59.6%
2025	6.250%	2,500	91,173,029	-	122,467,456	7,390,981	24,346,689	394,257,872	156,302,984	550,560,856	893,518,106	37,184,988	930,703,094	380,142,238	59.2%
2026	6.250%	2,500	98,183,450	-	114,335,274	7,575,756	23,910,867	394,441,159	170,425,814	564,866,973	912,028,058	38,268,064	950,296,122	385,429,149	59.4%
2027	6.250%	2,500	105,257,414	-	106,496,480	7,765,149	24,375,455	409,812,399	183,782,019	593,594,418	942,022,743	39,078,652	981,101,395	387,506,977	60.5%
2028	6.250%	2,500	112,318,691	-	96,944,245	7,959,277	25,841,487	443,069,055	196,624,844	639,693,899	986,567,845	39,909,178	1,026,477,022	386,783,123	62.3%
2029	6.250%	2,500	119,494,599	-	94,124,785	8,158,260	28,221,526	488,502,135	209,179,455	697,681,590	1,040,198,493	40,476,813	1,080,675,306	382,993,716	64.6%
2030	6.250%	2,500	126,624,898	-	88,290,975	8,362,217	31,453,805	549,927,646	221,623,662	771,551,308	1,107,008,539	40,933,414	1,147,941,953	376,390,645	67.2%
2031	6.250%	2,500	133,791,954	-	87,274,014	8,571,271	35,538,340	623,412,655	234,131,037	857,543,692	1,183,637,909	41,374,011	1,225,011,920	367,468,228	70.0%
2032	6.250%	2,500	141,235,762	-	88,947,450	8,785,554	40,302,149	707,217,562	246,724,126	953,941,688	1,267,984,214	41,936,483	1,309,920,697	355,979,009	72.8%
2033	6.250%	2,500	148,933,216	-	93,905,105	9,005,193	45,617,518	798,857,999	259,443,277	1,058,301,276	1,357,302,850	42,532,585	1,399,835,435	341,534,159	75.6%
2034	6.250%	2,500	156,974,105	-	101,266,642	9,230,322	51,359,024	896,694,164	272,415,441	1,169,109,605	1,450,994,781	43,255,390	1,494,250,170	325,140,565	78.2%
2035	6.250%	2,500	165,220,571	-	109,785,909	9,461,080	57,458,287	1,000,126,033	286,036,213	1,286,162,246	1,547,719,944	44,060,670	1,591,780,615	305,618,369	80.8%
2036	6.250%	2,500	173,481,599	-	119,540,340	9,697,607	63,869,538	1,108,239,223	300,338,023	1,408,577,246	1,647,216,591	44,931,672	1,692,148,263	283,571,017	83.2%
2037	6.250%	2,500	182,155,679	-	129,611,667	9,940,047	70,576,148	1,221,419,336	315,354,924	1,536,774,260	1,749,508,587	46,070,659	1,795,579,246	258,804,986	85.6%
2038	6.250%	2,500	191,263,463	-	140,399,656	10,188,548	77,590,547	1,339,685,142	331,122,671	1,670,807,813	1,852,877,667	47,387,155	1,900,264,822	229,457,009	87.9%
2039	6.250%	2,500	200,826,636	-	153,106,652	10,443,262	84,877,565	1,461,839,429	347,678,804	1,809,518,233	1,957,287,764	48,770,325	2,006,058,089	196,539,856	90.2%
2040	6.250%	2,500	210,867,968	-	166,063,056	10,704,344	92,414,457	1,588,354,455	365,062,744	1,953,417,199	2,063,641,759	50,186,092	2,113,827,851	160,410,652	92.4%
2041	6.250%	2,500	221,411,366	-	178,676,971	10,971,952	100,249,687	1,720,366,585	383,315,882	2,103,682,467	2,172,686,915	51,616,223	2,224,303,138	120,620,671	94.6%
2042	6.250%	2,500	232,481,935	-	191,008,609	11,246,251	108,453,192	1,859,046,852	402,481,676	2,261,528,528	2,285,098,254	53,029,216	2,338,127,470	76,598,942	96.7%
2043	6.250%	2,500	244,106,031	-	203,046,512	11,527,408	117,099,321	2,005,678,284	422,605,759	2,428,284,043	2,401,746,605	54,418,175	2,456,164,781	27,880,738	98.9%
2044	6.250%	2,500	256,311,333	-	214,893,250	11,815,592	126,265,951	2,161,546,726	443,736,047	2,605,282,773	2,523,350,914	55,797,530	2,579,148,444	(26,134,329)	101.0%
2045	6.250%	2,500	269,126,900	-	226,685,218	12,110,982	136,030,140	2,327,907,566	465,922,850	2,793,830,416	2,650,435,474	57,175,732	2,707,611,206	(86,219,210)	103.2%
2046	6.250%	2,500	282,583,245	-	238,771,588	12,413,757	146,460,537	2,505,766,003	489,218,992	2,994,984,995	2,783,478,745	58,556,361	2,842,035,105	(152,949,890)	105.4%
2047	6.250%	2,500	296,712,407	-	251,132,633	12,724,101	157,621,555	2,696,243,231	513,679,942	3,209,923,173	2,922,991,622	59,960,405	2,982,952,027	(226,971,146)	107.6%
2048	6.250%	2,500	311,548,027	-	263,953,354	13,042,204	169,578,603	2,900,374,303	539,363,939	3,439,738,242	3,069,289,292	61,390,335	3,130,679,627	(309,058,615)	109.9%
2049	6.250%	2,500	327,125,429	-	277,362,573	13,368,259	182,393,489	3,119,162,389	566,332,136	3,685,494,525	3,222,812,501	62,859,484	3,285,671,985	(399,822,540)	112.2%
2050	6.250%	2,500	343,481,700	-	291,329,704	13,702,466	196,130,988	3,353,742,907	594,648,743	3,948,391,650	3,383,983,314	64,376,854	3,448,360,168	(500,031,482)	114.5%
2051	6.250%	2,500	360,655,785	-	305,929,546	14,045,027	210,860,953	3,605,285,072	624,381,180	4,229,666,252	3,553,196,947	65,947,735	3,619,144,681	(610,521,571)	116.9%
2052	6.250%	2,500	378,688,574	-	321,244,092	14,396,152	226,655,190	3,874,988,592	655,600,239	4,530,588,831	3,730,863,259	67,574,310	3,798,437,569	(732,151,262)	119.3%
2053	6.250%	2,500	397,623,003	-	337,315,432	14,756,056	243,588,699	4,164,128,806	688,380,251	4,852,509,057	3,917,409,036	69,255,468	3,986,664,504	(865,844,553)	121.7%
2054	6.250%	2,500	417,504,153	-	354,185,554	15,124,958	261,741,277	4,474,063,724	722,799,263	5,196,862,987	4,113,280,382	70,993,331	4,184,273,713	(1,012,589,274)	124.2%
2055	6.250%	2,500	438,379,361	-	371,896,863	15,503,082	281,197,946	4,806,241,086	758,939,226	5,565,180,312	4,318,944,552	72,788,546	4,391,733,098	(1,173,447,214)	126.7%

Open Group Projections
Scenario 6 — Continuing Business Scenario
Projection Based on Data as of June 30, 2018
6.25% Assumed Net Investment Return
Other Assumptions Based on Those Used in the Actuarial Valuation as of June 30, 2018
5% Annual Sales Growth from 500 Contracts Sold in FY 2020 to 2,500 New Contracts Per Year

				Assets								Liabilities			
Year Ending 6/30	Assumed Net Rate of Return	Annual New Contracts	Contributions	Additional Required Solvency Contributions ^a	Tuition Payments, Refunds and Fees	Administrative Expenses	Net Investment Return	Market Value of Assets (EOY)	Total Present Value of Future Contributions	Total Fund Assets (MVA + PVFC)	Total Present Value of Future Benefits	Present Value of Future Admin Expenses	Total Present Value of Future Benefits, Fees and Expenses	Unfunded Liability	Funded Ratio
2018			\$ 14,574,249	\$ -	\$ 148,689,847	\$ 4,314,146	\$ 46,821,937	\$ 813,365,005	\$ 32,504,816	\$ 845,869,821	\$ 1,066,832,783	\$ 27,587,658	\$ 1,094,420,441	\$ 248,550,620	77.3%
2019	6.250%	0	10,483,115	-	150,251,752	4,422,000	46,397,643	715,572,011	23,730,619	739,302,630	978,633,871	24,753,793	1,003,387,664	264,085,034	73.7%
2020	6.250%	500	7,534,932	-	145,963,226	6,532,550	40,261,877	610,873,044	24,765,827	635,638,871	902,051,183	30,424,342	932,475,525	296,836,654	68.2%
2021	6.250%	525	14,909,212	-	146,411,436	6,695,864	33,926,325	506,601,281	26,912,943	533,514,224	821,267,833	32,010,862	853,278,695	319,764,471	62.5%
2022	6.250%	551	16,498,058	-	145,982,604	6,863,260	27,466,285	397,719,760	29,241,438	426,961,198	737,275,340	33,415,155	770,690,495	343,729,297	55.4%
2023	6.250%	579	17,807,231	-	135,903,911	7,034,842	21,006,386	293,594,624	32,214,601	325,809,225	659,977,331	34,682,712	694,660,043	368,850,818	46.9%
2024	6.250%	608	19,878,738	-	123,436,974	7,210,713	14,940,594	197,766,270	35,269,179	233,035,449	592,124,774	35,994,899	628,119,673	395,084,224	37.1%
2025	6.250%	638	22,362,549	-	116,590,586	7,390,981	9,232,924	105,380,176	39,086,664	144,466,840	528,888,740	37,184,988	566,073,728	421,606,888	25.5%
2026	6.250%	670	24,649,743	-	105,794,620	7,575,756	3,855,759	20,515,302	43,425,708	63,941,010	474,661,214	38,268,064	512,929,278	448,988,268	12.5%
2027	6.250%	704	27,344,736	53,655,325	94,381,602	7,765,149	631,387	-	48,129,602	48,129,602	430,684,281	39,078,652	469,762,933	421,633,331	10.2%
2028	6.250%	739	30,243,804	57,467,571	79,752,098	7,959,277	-	-	53,306,325	53,306,325	401,200,189	39,909,178	441,109,366	387,803,041	12.1%
2029	6.250%	776	33,501,689	45,321,812	70,665,241	8,158,260	-	-	58,955,977	58,955,977	381,707,925	40,476,813	422,184,738	363,228,761	14.0%
2030	6.250%	814	37,044,709	28,982,652	57,665,144	8,362,217	-	-	65,140,431	65,140,431	377,168,458	40,933,414	418,101,872	352,961,441	15.6%
2031	6.250%	855	40,856,224	16,465,817	48,750,770	8,571,271	-	-	71,988,440	71,988,440	384,707,003	41,374,011	426,081,014	354,092,574	16.9%
2032	6.250%	898	45,123,567	5,898,286	42,236,299	8,785,554	-	-	79,496,760	79,496,760	402,895,372	41,936,483	444,831,855	365,335,095	17.9%
2033	6.250%	943	49,829,017	-	38,581,737	9,005,193	69,003	2,311,091	87,719,268	90,030,359	429,791,433	42,532,585	472,324,018	382,293,659	19.1%
2034	6.250%	990	55,052,761	-	36,845,906	9,230,322	420,709	11,708,333	96,710,493	108,418,826	464,617,034	43,255,390	507,872,423	399,453,597	21.3%
2035	6.250%	1,039	60,775,221	-	36,809,287	9,461,080	1,178,178	27,391,365	106,623,318	134,014,683	506,425,545	44,060,670	550,486,216	416,471,533	24.3%
2036	6.250%	1,091	67,004,681	-	38,012,034	9,697,607	2,305,792	48,992,197	117,552,208	166,544,405	554,969,446	44,931,672	599,901,118	433,356,713	27.8%
2037	6.250%	1,146	73,872,661	-	39,960,350	9,940,047	3,799,792	76,764,253	129,601,309	206,365,562	610,418,454	46,070,659	656,489,113	450,123,551	31.4%
2038	6.250%	1,203	81,444,609	-	42,964,024	10,188,548	5,668,493	110,724,783	142,885,444	253,610,227	672,418,503	47,387,155	719,805,658	466,195,431	35.2%
2039	6.250%	1,263	89,792,682	-	47,093,705	10,443,262	7,913,014	150,893,512	157,531,202	308,424,714	741,168,886	48,770,325	789,939,211	481,514,497	39.0%
2040	6.250%	1,327	98,996,431	-	51,904,173	10,704,344	10,550,734	197,832,161	173,678,150	371,510,311	817,262,995	50,186,092	867,449,087	495,938,776	42.8%
2041	6.250%	1,393	109,143,566	-	57,398,552	10,971,952	13,619,358	252,224,581	191,480,160	443,704,741	901,242,215	51,616,223	952,858,438	509,153,697	46.6%
2042	6.250%	1,463	120,330,781	-	63,576,228	11,246,251	17,164,618	314,897,501	211,106,877	526,004,378	993,749,000	53,029,216	1,046,778,216	520,773,838	50.2%
2043	6.250%	1,536	132,664,686	-	70,310,541	11,527,408	21,245,358	386,969,596	232,745,331	619,714,927	1,095,710,254	54,418,175	1,150,128,430	530,413,503	53.9%
2044	6.250%	1,613	146,262,816	-	77,689,240	11,815,592	25,932,407	469,659,987	256,601,728	726,261,715	1,208,095,855	55,797,530	1,263,893,385	537,631,670	57.5%
2045	6.250%	1,693	161,254,755	-	85,744,803	12,110,982	31,304,942	564,363,899	282,903,405	847,267,304	1,331,987,378	57,175,732	1,389,163,110	541,895,806	61.0%
2046	6.250%	1,778	177,783,368	-	94,635,638	12,413,757	37,449,681	672,547,553	311,901,004	984,448,557	1,468,540,992	58,556,361	1,527,097,352	542,648,795	64.5%
2047	6.250%	1,867	196,006,163	-	104,360,739	12,724,101	44,463,137	795,932,013	343,870,857	1,139,802,870	1,619,111,254	59,960,405	1,679,071,659	539,268,789	67.9%
2048	6.250%	1,960	216,096,794	-	115,098,644	13,042,204	52,452,719	936,340,678	379,117,620	1,315,458,298	1,785,087,618	61,390,335	1,846,477,953	531,019,655	71.2%
2049	6.250%	2,058	238,246,716	-	126,931,980	13,368,259	61,535,733	1,095,822,888	417,977,176	1,513,800,064	1,968,064,718	62,859,484	2,030,924,202	517,124,138	74.5%
2050	6.250%	2,161	262,667,004	-	139,958,748	13,702,466	71,843,737	1,276,672,415	460,819,836	1,737,492,251	2,169,794,546	64,376,854	2,234,171,400	496,679,149	77.8%
2051	6.250%	2,269	289,590,372	-	154,309,499	14,045,027	83,523,230	1,481,431,491	508,053,870	1,989,485,361	2,392,200,104	65,947,735	2,458,147,838	468,662,477	80.9%
2052	6.250%	2,382	319,273,385	-	170,129,023	14,396,152	96,736,534	1,712,916,235	560,129,391	2,273,045,626	2,637,401,388	67,574,310	2,704,975,698	431,930,072	84.0%
2053	6.250%	2,500	351,998,907	-	187,568,704	14,756,056	111,663,697	1,974,254,079	617,425,897	2,591,679,976	2,907,532,654	69,255,468	2,976,788,122	385,108,146	87.1%
2054	6.250%	2,500	387,930,890	-	206,794,855	15,124,958	128,500,104	2,268,765,260	671,002,306	2,939,767,566	3,188,653,867	70,993,331	3,259,647,198	319,879,632	90.2%
2055	6.250%	2,500	415,491,716	-	227,959,594	15,503,082	147,092,264	2,587,886,564	721,574,467	3,309,461,031	3,480,376,951	72,788,546	3,553,165,497	243,704,466	93.1%

^a Additional contributions in the amount of \$207,791,463 are needed over the years 2027 through 2032 to pay all benefits due.

Open Group Projections
Scenario 7— Continuing Business Scenario
Projection Based on Data as of June 30, 2018
6.25% Assumed Net Investment Return
Other Assumptions Based on Those Used in the Actuarial Valuation as of June 30, 2018
10% Annual Sales Growth from 500 Contracts Sold in FY 2020 to 2,500 New Contracts Per Year

Part							As	sets					Liabilities			
	Ending	Net Rate of	New	Contributions	Required Solvency			Investment		Value of Future	Assets	Value of	Value of Future	Value of Future Benefits, Fees		
	2018			\$ 14.574.249	\$ -	\$ 148.689.847	\$ 4.314.146	\$ 46.821.937	\$ 813.365.005	\$ 32.504.816	\$ 845.869.821	\$ 1.066.832.783	\$ 27.587.658	\$ 1.094.420.441	\$ 248.550.620	77.3%
Column C		6.250%	0													
	2020	6.250%	500		-			40,261,877								68.2%
2023 6.20% 666 18.903.50 - 18.500.517 7.084.842 21.073.79 295.320.089 34.65.32 32.994.21 66.817.973 34.82.712 699.500.885 389.95.618 47.78	2021	6.250%	550	14,909,212	-	146,411,436	6,695,864	33,926,325	506,601,281	27,297,184	533,898,465	821,935,011	32,010,862	853,945,873		62.5%
2024 6.290% 732 22.012.228 - 12.48.778 7.210.713 15.113.008 2017.75.941 34.078.015 15.096.709 27.578.116 37.98.981 38.98.981 37.98.981 37.98.981 37.98.981 37.98.981 38.98.981 38.98.981 38.98.981 38.98.981 38.98.981 38.98.981 38.98.981 38.98.981 38.98.981 39.98.981	2022	6.250%	605	16,984,804	-	145,983,717	6,863,260	27,481,231	398,220,339	30,430,049	428,650,388	739,475,843	33,415,155	772,890,998	344,240,610	55.5%
2005 6.590% 805 2.57.2.116 - 116.698.70 7.301.981 9.583.270 113.001.646 45.889.130 54.587.151 37.184.988 58.772.141 42.190.749 27.38	2023	6.250%	666	18,990,530	-	135,920,517	7,034,842	21,073,579	295,329,089	34,665,332	329,994,421	664,817,973	34,682,712	699,500,685	369,506,264	47.2%
2026 6.29% 9.48 8.6	2024	6.250%	732	22,012,228	-	123,487,758	7,210,713	15,113,096	201,755,943	39,478,441	241,234,384	601,003,103	35,994,899	636,998,002	395,763,618	37.9%
2027 6.250K .072 39,762,454 48,551,321 80,354,098 7,959,277 37,875,120 10,33,099 - 6,1185,080 61,185,080 443,721,960 39,078,652 502,800,621 414,615,611 12,285 12,286 12,596	2025	6.250%	805	25,752,116	-	116,698,702	7,390,981	9,583,270	113,001,646	45,589,746	158,591,392	543,537,153	37,184,988	580,722,141	422,130,749	27.3%
2028 6.250% 1,072 39,782,454 45,551,251 80,354,088 7,959,277 .	2026	6.250%	886	29,663,310	-	106,003,245	7,575,756	4,479,979	33,565,934	52,843,166	86,409,100	497,208,955	38,268,064	535,477,019	449,067,919	16.1%
2029 6.250% 1.779	2027	6.250%	974	34,377,887	33,535,392	94,747,103	7,765,149	1,033,039	-	61,185,080	61,185,080	463,721,969	39,078,652	502,800,621	441,615,541	12.2%
2010 6.250% 1.267 53,283,011 14,208,799 59,126,593 8,362,217 94,794,037 94,794,037 44,2916,331 40,933,414 503,849,745 409,055,708 18,8% 2013 6.250% 1,569 71,152,995 45,566,019 878,554 655,090 19,766,036 126,771,013 146,537,049 548,874,077 41,956,483 590,810,500 442,736,131 24,8% 2013 6.250% 1,766 82,259,033 42,570,838 90,013 91,000,401 1	2028	6.250%	1,072	39,762,454	48,551,321	80,354,498	7,959,277	-	-	70,845,802	70,845,802	447,846,424	39,909,178	487,755,601	416,909,799	14.5%
2031 6.250% 1,569 1,7152 61,541,245 5 50,923,377 8,571,271 62,987 2,109,584 109,648,876 111,758,460 497,469,347 41,374,011 538,843,358 427,084,888 20.7% 1,009,000 1,000	2029	6.250%	1,179	46,055,927	33,723,123	71,620,790	8,158,260	-	-	81,970,552	81,970,552	445,689,491	40,476,813	486,166,304	404,195,752	16.9%
2032 6.250% 1,569 71,152,935 - 42,366,1019 8,78,554 655,000 19,766,036 12,677,013 146,537,049 548,874,077 41,936,848 590,810,560 444,273,511 24,88 2034 6.250% 1,899 95,125,301 - 42,861,497 9,210,322 4,879,942 99,837,842 169,201,105 269,038,947 700,256,474 43,255,390 743,511,863 44,7472,916 2035 6,250% 2,089 109,949,275 - 44,895,973 9,461,080 7,590,794 163,808,581 185,427,277 358,808,135 801,314,820 44,606,670 845,375,941 485,567,356 42,48 2037 6,250% 2,297 126,991,412 - 48,69,2515 36,967,607 122,2260 244,304,753 225,718,504 47,002,3275 20,993,413 44,916,72 69,591,268 2038 6,250% 2,500 146,675,081 - 33,855,994 9,90,047 17,819,766 34,003,559 259,791,134 604,794,693 1,059,941,803 46,070,659 1,106,102,462 501,217,769 54,78 2039 6,250% 2,500 182,974,123 - 69,683,627 104,43,262 23,41,473 602,007,979 318,294,346 20,302,325 1,558,970,333 48,770,325 1,407,740,588 487,485,333 2041 6,250% 2,500 216,898,225 - 91,675,431 109,195,25 201,462,251 60,176,78 10,767,890 39,145,991 1,448,953,002 25,247,878 2042 6,250% 2,500 225,468,220 - 104,890,333 11,246,251 60,176,78 10,767,890 39,148,991,60 12,779,40,404 1,443,620 1,443,620 1,443,420 1,444,420	2030	6.250%	1,297	53,283,011	14,208,799	59,129,593	8,362,217	-	-	94,794,037	94,794,037	462,916,331	40,933,414	503,849,745	409,055,708	18.8%
2034 6.250% 1,726 82,250,033	2031	6.250%	1,427	61,541,245	-	50,923,377	8,571,271	62,987	2,109,584	109,648,876	111,758,460	497,469,347	41,374,011	538,843,358	427,084,898	20.7%
2034 6.250% 1,899 95,125,301	2032	6.250%	1,569	71,152,935	-	45,366,019	8,785,554	655,090	19,766,036	126,771,013	146,537,049	548,874,077	41,936,483	590,810,560	444,273,511	24.8%
2035 6.250% 2,089 109,949,275 - 44,895,973 9,461,080 7,950,794 163,380,858 195,427,277 358,808,135 801,314,820 44,060,670 845,375,491 486,567,356 42,48 2036 6.250% 2,500 146,675,081 - 86,675,811 - 86,802,515 9,697,607 12,322,605 244,304,753 225,718,504 470,023,257 920,993,413 44,931,672 965,925,085 495,001,828 48,796 2038 6.250% 2,500 168,252,218 - 60,803,983 10,188,548 24,556,026 466,819,272 290,488,093 757,307,365 1,206,203,444 47,387,155 1,253,990,599 496,283,234 60.478 2038 6.250% 2,500 182,974,123 - 60,863,867 10,443,262 32,341,473 602,007,979 318,294,446 920,302,325 1,358,970,533 48,770,325 1,407,740,858 487,435,333 65.4% 2040 6.250% 2,500 121,698,225 - 91,675,431 10,971,952 50,216,686 909,035,418 368,010,986 1,277,046,404 1,681,202,831 51,616,223 1,732,819,505 455,777,303 2041 6.250% 2,500 211,698,225 - 91,675,431 10,971,952 50,216,686 909,035,418 368,010,986 1,277,046,404 1,681,202,831 51,616,223 1,732,819,505 455,777,303 2042 6.250% 2,500 225,468,220 - 104,980,333 11,246,251 60,176,778 1,078,433,812 391,745,937 1,470,199,749 1,848,953,022 53,029,216 1,901,982,238 431,782,489 77.3% 2044 6.250% 2,500 252,497,785 - 135,512,817 1,181,559 2 81,782,397 1,443,580,847 439,023,793 1,882,604,640 2,194,173,738 55,797,530 2,427,49,670 326,396,903 86,696 2046 6.250% 2,500 266,205,072 - 152,709,468 12,110,982 93,344,057 1,638,309,526 463,043,178 2,101,352,704 2,370,573,875 57,175,732 2,427,749,607 326,396,903 86,696 2046 6.250% 2,500 286,510,566 - 170,969,154 12,413,757 105,383,865 1,840,830,166 463,900,839 1,324,4004 2,549,148,523 55,797,530 2,247,498,005 165,283,017 94,498 2049 6.250% 2,500 326,605,593 - 209,690,016 13,042,04 117,901,455 2,051,321,073 512,898,394 2,564,219,467 2,729,949,129 59,960,405 2,729,949,603 326,969,03 86,696 2046 6.250% 2,500 326,605,593 - 209,690,016 13,042,04 117,901,455 2,051,321,073 512,898,394 2,564,219,467 2,729,949,129 59,960,405 2,728,999,356 313,686,299 144,449,386 2,479,943,996 566,263,902 3,369,515,50 4,260,269 3,399,515,50 5 4,260,249 3,384,910,158 3,344,1	2033	6.250%	1,726	82,259,033	-	42,970,838	9,005,193	2,167,379	52,216,418	146,494,463	198,710,881	616,298,787	42,532,585	658,831,372	460,120,491	30.2%
2036 6.25% 2.97 126,991,412 - 48,692,515 9,697,607 12,322,605 244,304,753 225,718,504 470,023,257 920,993,413 44,931,672 965,925,085 495,901,828 48.7% 2037 6.250% 2.500 146,675,081 - 53,855,994 9,940,047 17,819,766 345,003,559 259,791,134 604,794,693 1,059,941,803 46,070,659 1,105,012,462 501,217,769 34.7% 2038 6.250% 2.500 182,974,123 - 69,683,627 10,443,262 32,341,473 602,007,799 318,294,346 920,302,325 1,358,970,533 48,770,325 1,407,740,858 487,438,533 65.4% 2040 6.250% 2.500 197,489,916 - 79,993,499 10,704,344 40,913,837 749,767,890 343,853,835 10,93,621,725 1,517,608,836 50,186,092 1,573,819,928 474,173,203 69.8% 2041 6.250% 2.500 21,668,222 18 10,940,803 11,246,251 60,176,778 1,076,789 10,748,404 1,818,105 1,105,105,105,105,105,105,105,105,105,10	2034	6.250%	1,899	95,125,301	-	42,861,497	9,230,322	4,587,942	99,837,842	169,201,105	269,038,947	700,256,474	43,255,390	743,511,863	474,472,916	36.2%
2037 6.25% 2,500 146,675,081 - 53,855,994 9,940,047 17,819,766 345,003,559 259,791,134 604,794,693 1,059,941,803 46,070,659 1,106,012,462 501,217,769 54.7% 2038 6.250% 2,500 168,252,218 - 60,803,983 10,188,488 24,556,026 466,819,272 290,488,093 757,307,365 1,206,203,444 47,387,155 1,253,590,599 496,283,234 60.4% 2040 6.250% 2,500 197,489,916 - 79,939,499 10,704,344 40,913,837 749,767,890 343,853,835 1,093,621,725 1,517,608,865 50,186,092 1,567,794,928 474,173,203 69.8% 2040 6.250% 2,500 211,688,225 - 91,675,431 10,971,952 50,216,686 90,9015,418 368,010,986 1,277,046,404 1,681,202,831 51,616,223 1,732,819,054 455,772,650 73,7% 2042 6.250% 2,500 225,468,220 - 104,980,353 11,246,251 60,176,778 1,076,853,812 391,745,937 1,470,199,749 1,848,255,325 2,500 238,745,303 - 119,559,340 11,525,208 70,716,707 1,256,829,074 415,336,108 1,672,165,182 2,020,165,774 54,418,75 2,070,488,950 402,418,768 80.6% 2044 6.250% 2,500 252,297,785 - 135,512,817 11,815,592 81,782,397 1,443,580,847 439,023,793 1,882,604,640 2,194,173,738 55,797,530 2,249,971,268 367,366,628 83.7% 2045 6.250% 2,500 266,205,072 - 152,709,468 12,110,982 93,344,057 1,638,309,526 463,043,178 2,101,352,704 2,370,573,875 57,175,732 2,427,749,607 326,396,903 86.6% 2046 6.250% 2,500 295,305,189 - 189,991,606 12,724,101 117,901,455 2,051,310,326 2,200,316,310 40,320,320 3,089,1834 6.250% 2,500 360,585,51 2,007,704,833 279,648,79 89,3% 2045 6.250% 2,500 360,585,51 2,007,048,300,526 13,004,266 185,552,816 2,267,149,732 594,648,79 89,3% 2045 6.250% 2,500 360,585,51 2,007,048,300,526 13,004,266 185,552,816 2,275,495,607 31,004,800,504 2,290,335 165,283,017 94,4% 2049 6.250% 2,500 360,585,51 2,007,704,801 11,004,204 130,913,286 2,270,149,732 594,648,74 3,330,145,848 3,287,339,450 64,376,585 4,336,522,145 4,404,404 10,704,40	2035	6.250%	2,089	109,949,275	-	44,895,973	9,461,080	7,950,794	163,380,858	195,427,277	358,808,135	801,314,820	44,060,670	845,375,491	486,567,356	42.4%
2038 6.250% 2,500 168,252,218 - 60,803,983 10,188,548 24,556,026 466,819,272 290,488,093 757,307,365 1,206,203,444 47,387,155 1,253,590,599 496,283,234 60.48 2039 6,250% 2,500 182,974,123 - 69,683,627 10,443,262 32,414,73 602,007,979 318,294,346 920,302,325 1,358,870,533 48,770,325 1,407,40,858 487,438,533 65,48 2041 6,250% 2,500 211,698,225 - 91,675,431 10,91,91,92 50,216,686 909,035,418 368,010,986 1,277,046,404 1,681,202,831 15,161,223 1,732,819,054 455,772,507 73,78 2042 6,250% 2,500 225,468,220 - 104,980,353 11,246,251 60,176,778 1,078,453,812 391,745,937 1,470,199,749 1,848,953,022 53,029,216 1,901,982,238 431,782,489 73,38 2043 6,250% 2,500 258,745,303 - 119,557,408 70,716,707 12,568,290,744 415,336,108 <td>2036</td> <td>6.250%</td> <td>2,297</td> <td>126,991,412</td> <td>-</td> <td>48,692,515</td> <td>9,697,607</td> <td>12,322,605</td> <td>244,304,753</td> <td>225,718,504</td> <td>470,023,257</td> <td>920,993,413</td> <td>44,931,672</td> <td>965,925,085</td> <td>495,901,828</td> <td>48.7%</td>	2036	6.250%	2,297	126,991,412	-	48,692,515	9,697,607	12,322,605	244,304,753	225,718,504	470,023,257	920,993,413	44,931,672	965,925,085	495,901,828	48.7%
2039 6.25% 2,500 182,974,123 - 69,683,627 10,443,262 32,341,473 602,007,979 318,294,346 920,302,325 1,358,970,533 48,770,325 1,407,740,858 487,438,533 65.4% 2040 6.250% 2,500 197,489,916 - 79,939,499 10,704,344 40,913,837 749,767,890 343,853,835 1,093,621,725 1,517,608,836 50,186,092 1,567,794,928 474,173,203 69,8% 2041 6.250% 2,500 215,468,220 - 104,980,353 11,246,251 60,167,778 10,784,453,812 391,745,937 1,470,199,749 1,848,953,022 53,029,216 1,901,982,238 431,782,489 77.3% 2042 6.250% 2,500 238,745,303 - 119,559,340 11,527,408 70,716,707 1,256,829,074 415,336,108 1,672,165,182 2,020,165,774 54,418,175 2,074,583,950 402,418,768 80.6% 2046 6.250% 2,500 252,297,785 - 135,512,817 11,815,592 81,782,397 1,443,580,847 499,023,793 1,882,604,640 2,194,173,738 55,797,530 2,249,971,268 367,366,628 83.7% 2046 6.250% 2,500 266,205,072 - 152,709,468 12,110,982 93,344,057 1,638,309,526 463,043,178 2,101,352,704 2,370,573,875 57,175,732 2,242,749,607 326,396,903 86,66% 2046 6.250% 2,500 280,519,566 - 170,969,154 12,413,757 105,383,865 1,840,830,136 487,609,688 2,328,440,004 2,549,148,523 85,556,61 2,607,704,883 279,264,879 89.3% 2047 6.250% 2,500 380,647,593 - 209,600,16 13,042,20 413,013,286 2,701,497,312 539,065,26 2,809,214,988 2,913,107,670 61,339,0335 2,749,498,005 165,283,017 94.449,386 2,499,430,096 66,250% 2,500 343,240,021 - 250,536,62 13,302,466 158,552,816 2,473,491,015 594,648,743 3,330,145,848 3,288,349,400 4,2549,448,341 62,859,444 3,161,777,825 97,570,827 96.9% 2050 6.250% 2,500 340,240,21 - 250,536,620 13,302,466 158,552,816 2,473,491,015 594,648,743 3,330,145,848 3,287,394,50 64,376,854 3,352,246,00 42,194,777,825 97,570,827 96.9% 2050 6.250% 2,500 340,240,21 - 250,536,620 13,302,466 158,552,816 2,473,491,015 594,648,743 3,330,145,848 3,899,71,510 69,947,715 3,546,61,044 (61,740,224) 101.7% 2050 6.250% 2,500 340,240,21 - 250,536,620 13,302,466 158,552,816 2,473,491,05 594,648,743 3,330,145,848 3,289,345 06,450,491,184,185 214,485,485 06,485 06,485 06,485 06,485 06,485 06,485 06,485 06,485 06,485 06,485 06,4	2037	6.250%	2,500	146,675,081	-	53,855,994	9,940,047	17,819,766	345,003,559	259,791,134	604,794,693	1,059,941,803	46,070,659	1,106,012,462	501,217,769	54.7%
2040 6.25% 2,500 197,489,916 - 79,939,499 10,704,344 40,913,837 749,767,890 343,853,835 1,093,621,725 1,517,608,836 50,186,092 1,567,794,928 474,173,203 69.8% 2041 6.250% 2,500 211,698,225 - 91,675,431 10,971,952 50,216,686 909,035,418 368,010,986 1,277,046,404 1,681,202,831 51,616,223 1,732,819,054 455,772,650 73.7% 2042 6.250% 2,500 252,468,220 - 104,980,353 11,246,251 60,176,778 1,078,453,812 391,745,937 1,470,199,749 1,848,953,002 53,0029,216 1,901,982,238 431,782,489 77.3% 2043 6.250% 2,500 238,745,303 - 119,559,340 11,557,408 70,716,707 1,256,829,074 415,336,108 1,672,165,182 2,020,165,774 54,418,775 2,074,583,950 402,489,616,620 46,250% 2,500 252,297,785 - 135,512,817 11,815,592 81,782,397 1,443,580,847 439,023,793 1,882,604,640 2,194,173,738 55,797,530 2,249,971,268 367,366,628 83.7% 2046 6.250% 2,500 266,205,072 - 152,709,468 12,110,982 93,344,057 1,638,309,526 463,043,178 2,101,352,704 2,370,573,875 57,175,732 2,427,749,607 326,396,903 86.6% 2046 6.250% 2,500 280,519,656 - 170,969,154 12,413,757 105,383,865 1,840,830,136 487,609,868 2,328,440,004 2,549,148,523 58,556,361 2,607,704,883 279,264,879 89.3% 2046 6.250% 2,500 295,305,189 - 189,91,666 12,724,101 117,901,455 2,051,321,073 512,898,394 2,564,219,467 2,729,949,1129 59,960,405 2,789,909,534 225,660,067 91.9% 2048 6.250% 2,500 310,647,593 - 209,600,161 13,042,204 130,913,286 2,270,149,732 539,065,256 2,809,214,988 2,913,107,670 61,390,335 2,794,498,005 165,283,017 94.4% 2049 6.250% 2,500 343,240,021 - 250,536,362 13,702,466 158,552,816 2,735,497,105 594,648,743 3,330,145,848 3,287,839,450 64,376,854 3,352,216,304 22,070,456 99.3% 2051 6.250% 2,500 343,240,021 - 250,536,362 13,702,466 158,552,816 2,735,497,105 594,648,743 3,330,145,848 3,287,839,450 64,376,854 3,352,216,304 22,070,456 99.3% 2051 6.250% 2,500 343,240,021 - 250,536,362 13,702,466 158,552,816 2,735,497,105 594,648,743 3,330,145,848 3,287,839,450 64,376,854 3,352,216,304 22,070,456 99.3% 2051 6.250% 2,500 343,240,021 - 250,536,362 13,702,466 158,552,816 2,948,240,340 2,549,240,340 2,54	2038	6.250%	2,500	168,252,218	-	60,803,983	10,188,548	24,556,026	466,819,272	290,488,093	757,307,365	1,206,203,444	47,387,155	1,253,590,599	496,283,234	60.4%
2041 6.250% 2,500 21,698,225 - 91,675,431 10,971,952 50,216,686 909,035,418 368,010,986 1,277,046,404 1,681,202,831 51,616,223 1,732,819,054 455,772,650 73.7% 2042 6.250% 2,500 225,468,220 - 104,980,353 11,246,251 60,176,778 1,078,453,812 391,745,937 1,470,199,749 1,848,953,022 53,029,216 1,901,982,238 431,782,489 77.3% 2043 6.250% 2,500 238,745,303 - 119,559,340 11,527,408 70,716,707 1,256,829,074 415,346,108 1,672,165,182 2,020,165,774 54,418,175 2,074,583,950 402,418,768 80.6% 2044 6.250% 2,500 252,297,785 - 135,512,817 11,815,559 81,782,397 1,443,580,847 439,023,793 1,882,604,640 2,194,73,738 55,71,75,732 2,427,749,607 326,366,628 83.7% 2045 6.250% 2,500 280,519,656 - 170,969,154 12,413,757 105,383,865 1,840,830,136 487,609,868 2,328,440,004 2,549,148,523 58,556,361 2,607,704,883 279,264,879 89.3% 2047 6.250% 2,500 285,305,189 - 189,991,606 12,724,101 117,901,455 2,051,321,073 512,898,394 2,564,219,467 2,729,949,129 59,960,405 2,789,909,534 225,690,067 91.9% 2048 6.250% 2,500 326,609,993 - 209,690,016 13,042,04 130,913,286 2,270,149,732 539,065,256 2,809,214,988 2,913,107,670 61,390,335 2,974,498,005 165,283,017 94.4% 2049 6.250% 2,500 343,240,021 - 209,897,366 13,362,291 14,045,027 173,278,178 2,988,2208 62,381,180 3,604,206,998 3,098,918,341 62,859,484 3,161,777,825 97,570,827 96.9% 2050 6.250% 2,500 343,240,021 - 250,536,362 13,702,466 158,552,816 2,735,497,105 594,648,743 3,330,145,848 3,287,839,450 64,376,854 3,352,216,304 22,070,456 99.3% 2051 6.250% 2,500 360,585,451 - 271,495,619 14,045,027 173,278,178 2,988,220,88 624,381,180 3,608,201,268 3,480,513,310 65,947,735 3,546,640,044 (61,740,224) 101.7% 2052 6.250% 2,500 387,632,003 - 314,115,852 14,756,056 204,875,366 3,540,777,777 688,380,21 4,061,470,224 101.7% 2053 6.250% 2,500 397,623,003 - 314,115,852 14,756,056 204,875,366 3,540,777,777,777 688,380,21 4,000,475,294 1,000,475 3,400,475 1,000,586 1,000,470,244 1,000,586 1,000,470,244 1,000,586 1,000,470,244 1,000,586 1,000,470,244 1,000,586 1,000,470,244 1,000,586 1,000,470,470 1,000,470,470 1,000,5	2039	6.250%	2,500	182,974,123	-	69,683,627	10,443,262	32,341,473	602,007,979	318,294,346	920,302,325	1,358,970,533	48,770,325	1,407,740,858	487,438,533	65.4%
2042 6.25% 2,500 225,468,220 - 104,980,353 11,246,251 60,176,778 1,078,453,812 391,745,937 1,470,199,749 1,848,953,022 53,029,216 1,901,982,238 431,782,489 77.3% 2,043 6.25% 2,500 238,745,303 - 119,559,340 11,527,408 70,716,707 1,256,829,074 415,336,108 1,672,165,182 2,020,165,774 54,418,175 2,074,583,950 402,418,768 80.6% 6.250% 2,500 252,297,785 - 135,512,817 11,815,592 81,782,397 1,443,580,847 439,023,793 1,882,604,640 2,194,173,738 55,797,530 2,249,971,268 367,366,628 83.7% 2,046 6.250% 2,500 266,025,072 - 152,709,468 12,110,982 93,344,057 1,638,309,526 463,043,178 2,101,352,704 2,370,573,875 57,175,732 2,427,749,607 326,396,003 86.6% 2,406 6.250% 2,500 280,519,656 - 170,969,154 12,413,757 105,383,865 1,840,830,136 487,609,868 2,328,440,004 2,549,148,523 58,556,361 2,607,704,883 279,264,879 49.3% 2,048 6.250% 2,500 295,305,189 - 189,991,606 12,724,101 117,901,455 2,051,321,073 512,898,394 2,564,219,467 2,729,949,129 59,960,405 2,789,905,534 225,690,067 91.9% 2,048 6.250% 2,500 310,647,593 - 209,690,016 13,042,04 130,913,286 2,701,49,732 539,065,256 2,809,214,988 2,913,107,670 61,390,335 2,974,498,005 165,283,017 94.4% 2,049,400 4,049,	2040	6.250%	2,500	197,489,916	-	79,939,499	10,704,344	40,913,837	749,767,890	343,853,835	1,093,621,725	1,517,608,836	50,186,092	1,567,794,928	474,173,203	69.8%
2043 6.25% 2,500 238,745,303 - 119,559,340 11,527,408 70,716,707 1,256,829,074 415,336,108 1,672,165,182 2,020,165,774 54,418,175 2,074,583,950 402,418,768 80.6% 2,044 6.250% 2,500 252,297,785 - 135,512,817 11,815,592 81,782,397 1,443,580,847 439,023,793 1,882,604,640 2,194,173,738 55,797,530 2,249,971,268 367,366,628 83.7% 2,045 6.250% 2,500 266,205,072 - 152,709,468 12,110,982 93,344,057 1,638,309,526 463,043,178 2,101,352,704 2,370,573,875 57,175,732 2,427,749,607 326,396,903 86.6% 2,046 6.250% 2,500 280,519,656 - 170,969,154 12,413,757 105,383,865 1,840,830,136 487,609,868 2,328,440,004 2,549,148,523 58,556,361 2,607,704,883 279,264,879 89.3% 2,047 6.250% 2,500 295,305,189 - 189,991,606 12,724,101 117,901,455 2,051,321,073 512,898,394 2,564,219,467 2,729,949,129 59,960,405 2,789,909,534 225,690,067 91.9% 2,048 6.250% 2,500 310,647,593 - 209,690,016 13,042,204 130,913,266 2,270,149,732 539,065,256 2,809,214,988 2,913,107,670 61,390,335 2,974,49,005 165,283,017 94.5% 2,054,249,386 2,497,943,096 566,263,902 3,064,266,998 3,098,918,341 62,859,484 3,161,777,825 97,570,827 96.9% 2,050 326,609,593 - 250,536,622 13,702,466 158,552,816 2,735,497,105 594,648,743 3,330,145,848 3,287,839,450 64,376,854 3,352,216,304 22,070,458 99.3% 2,054 6,250% 2,500 360,885,451 - 271,495,619 14,045,027 173,278,178 2,983,820,088 624,381,180 3,608,201,268 3,480,513,310 65,947,735 3,546,461,044 (61,740,224) 101.7% 2,053 6,255 6,250% 2,500 397,623,003 - 292,654,750 14,396,152 188,693,506 3,244,151,266 655,600,239 3,899,751,505 3,677,550,475 67,574,310 3,745,124,785 (154,626,720) 104.1% 2,054 6,255 6,250% 2,500 397,623,003 - 292,654,750 14,396,152 188,693,506 3,244,151,266 655,600,239 3,899,751,505 3,677,550,475 67,574,310 3,745,124,785 (154,626,720) 104.1% 2,054 6,255 6,250% 2,500 397,623,003 - 292,654,750 14,396,152 188,693,506 3,244,151,266 655,600,239 3,899,751,505 3,677,550,475 67,574,310 3,745,124,785 (154,626,720) 104.1% 2,054 6,255 6,250% 2,500 397,623,003 - 20,545 6,256 2,250,250 3,250 397,623,003 - 20,545 6,256 2,250 2,250 3,250	2041	6.250%	2,500	211,698,225	-	91,675,431	10,971,952	50,216,686	909,035,418	368,010,986	1,277,046,404	1,681,202,831	51,616,223	1,732,819,054	455,772,650	73.7%
2044 6.25% 2,500 252,297,785 - 135,512,817 11,815,592 81,782,397 1,443,580,847 439,023,793 1,882,604,640 2,194,173,738 55,797,530 2,249,971,268 367,366,628 83.7% 2045 6.250% 2,500 266,205,072 - 152,709,468 12,110,982 93,344,057 1,638,309,526 463,043,178 2,101,352,704 2,370,573,875 57,175,732 2,427,749,607 326,396,903 86.6% 2046 6.250% 2,500 280,519,656 - 170,969,154 12,413,757 105,383,865 1,840,830,136 487,609,868 2,328,440,004 2,549,148,523 58,556,361 2,607,704,883 279,264,879 89.3% 2047 6.250% 2,500 295,305,189 - 189,991,606 12,724,101 117,901,455 2,051,321,073 512,898,394 2,564,219,467 2,729,949,129 59,960,405 2,789,909,534 225,690,067 91.9% 2048 6.250% 2,500 310,647,593 - 209,690,016 13,042,204 130,913,286 2,270,149,732 539,065,256 2,809,214,988 2,913,107,670 61,390,335 2,974,498,005 165,280,107 94.4% 2049 6.250% 2,500 326,609,593 - 229,897,356 13,368,259 144,449,386 2,497,943,096 566,263,902 3,064,206,998 3,098,918,341 62,859,484 3,161,777,825 97,570,827 99.5% 2051 6.250% 2,500 343,240,021 - 250,536,362 13,702,466 158,552,816 2,735,497,105 594,648,743 3,330,145,848 3,287,839,450 64,376,854 3,352,216,304 22,070,456 99.5% 2051 6.250% 2,500 378,688,574 - 271,495,619 14,045,027 173,728,178 2,983,820,088 624,381,180 3,608,201,268 3,480,513,310 65,947,35 3,546,461,044 (61,740,224) 101.7% 2052 6.250% 2,500 376,685,451 - 271,495,619 14,045,027 173,728,178 2,983,820,088 624,381,180 3,608,201,268 3,480,513,310 65,947,35 3,546,461,044 (61,740,224) 101.7% 2052 6.250% 2,500 376,868,574 - 292,654,750 14,396,152 188,693,506 3,244,151,266 655,600,239 3,899,751,505 3,677,550,475 67,574,310 3,745,124,785 (154,626,720) 104.1% 2053 6.250% 2,500 376,2500 376,250,303 - 314,115,852 14,756,056 204,875,366 3,517,777,727 688,380,251 4,206,157,978 3,879,654,690 69,255,468 3,948,910,158 (257,247,820) 106.5% 2054 6.250% 2,500 376,250,33 376,24,153 6.250% 2,500 376,250,33 376,24,153 6.250% 2,500 376,250,33 376,24,153 6.250% 2,500 376,250,33 376,24,153 6.250% 2,500 376,250,33 376,24,153 6.250% 2,250 376,250,33 376,24,153 6.250% 2,250 37	2042	6.250%	2,500	225,468,220	-	104,980,353	11,246,251	60,176,778	1,078,453,812	391,745,937	1,470,199,749	1,848,953,022	53,029,216	1,901,982,238	431,782,489	77.3%
2045 6.25% 2,500 266,205,072 - 152,709,468 12,110,982 93,344,057 1,638,309,526 463,043,178 2,101,352,704 2,370,573,875 57,175,732 2,427,749,607 326,396,903 86.6% 2,004 6.25% 2,500 280,519,656 - 170,969,154 12,413,757 105,383,865 1,840,830,136 487,609,868 2,328,440,004 2,549,148,523 58,556,361 2,607,704,883 279,264,879 89.3% 2047 6.25% 2,500 295,305,189 - 189,991,606 12,724,101 117,901,455 2,051,321,073 512,898,394 2,564,219,467 2,729,949,129 59,960,405 2,789,909,534 225,690,067 91.9% 2048 6.25% 2,500 310,647,593 - 209,690,016 13,042,204 130,913,286 2,270,149,732 539,065,256 2,809,214,988 2,913,107,670 61,390,335 2,974,498,005 165,283,017 94.4% 2049 6.25% 2,500 326,609,593 - 229,897,356 13,368,259 144,449,386 2,497,943,096 566,263,902 3,064,206,998 3,098,918,341 62,859,484 3,161,777,825 97,570,827 96.9% 2050 6.250% 2,500 343,240,021 - 250,536,362 13,702,466 158,552,816 2,735,497,105 594,648,743 3,330,145,848 3,287,839,450 64,376,854 3,352,216,61,044 (61,740,24) 101.7% 2052 6.250% 2,500 378,688,574 - 271,495,619 14,045,027 173,278,178 2,983,820,088 624,381,180 3,608,201,268 3,480,513,310 65,947,35 3,546,61,044 (61,740,24) 101.7% 2052 6.250% 2,500 376,685,451 - 271,495,619 14,045,027 173,278,178 2,983,820,088 624,381,180 3,608,201,268 3,480,513,310 65,947,35 3,546,61,044 (61,740,24) 101.7% 2052 6.250% 2,500 378,688,574 - 292,654,750 14,396,152 188,693,506 3,244,151,266 655,600,239 3,899,751,505 3,677,550,475 67,574,310 3,745,124,785 (154,626,720) 104.1% 2053 6.250% 2,500 376,250,337 41,504,153 - 314,115,852 14,756,056 204,875,366 3,517,777,727 688,380,251 4,206,157,978 3,879,654,690 69,255,468 3,948,910,158 (257,247,820) 106.5% 2054 6.250% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2054 6.250% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2054 2054 2054 2054 2054 2054 2054 2054	2043	6.250%	2,500	238,745,303	-	119,559,340	11,527,408	70,716,707	1,256,829,074	415,336,108	1,672,165,182	2,020,165,774	54,418,175	2,074,583,950	402,418,768	80.6%
2046 6.25% 2,500 280,519,656 - 170,969,154 12,413,757 105,383,865 1,840,830,136 487,609,868 2,328,440,004 2,549,148,523 58,556,361 2,607,704,883 279,264,879 89.3% 2047 6.25% 2,500 295,305,189 - 189,991,606 12,724,101 117,901,455 2,051,321,073 512,898,394 2,564,219,467 2,729,949,129 59,960,405 2,789,909,534 225,690,067 91.9% 2048 6.25% 2,500 310,647,593 - 209,690,016 13,042,204 130,913,286 2,727,0149,732 539,065,256 2,809,214,988 2,913,107,670 61,390,335 2,974,498,005 165,283,017 94.4% 2049 6.25% 2,500 326,609,593 - 229,897,356 13,368,259 144,449,386 2,497,943,096 566,263,902 3,064,206,998 3,098,918,341 62,859,484 3,161,777,825 97,570,827 96.9% 2050 6.25% 2,500 343,240,021 - 250,536,362 13,702,466 158,552,816 2,735,497,105 594,648,743 3,330,145,848 3,287,839,450 64,376,854 3,352,216,304 22,070,456 99.3% 2051 6.25% 2,500 360,585,451 - 271,495,619 14,045,027 173,278,178 2,983,820,088 624,381,180 3,608,201,268 3,480,513,310 65,947,735 3,546,461,044 (61,740,224) 101.7% 2052 6.25% 2,500 378,688,574 - 292,654,750 14,396,152 188,693,506 3,244,151,266 655,600,239 3,899,751,505 3,677,550,475 67,574,310 3,745,124,785 (154,626,720) 104.1% 2053 6.25% 2,500 397,623,003 - 314,115,852 14,756,056 204,875,366 3,517,777,727 688,380,251 4,206,157,978 3,879,654,690 69,255,468 3,948,910,158 (257,247,820) 106.5% 2054 6.25% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,008) 108.9% 2054 6.25% 2,500 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,008) 108.9% 2054 2,500 2,	2044	6.250%	2,500	252,297,785	-	135,512,817	11,815,592	81,782,397	1,443,580,847	439,023,793	1,882,604,640	2,194,173,738	55,797,530	2,249,971,268	367,366,628	83.7%
2047 6.25% 2,500 295,305,189 - 189,91,606 12,724,101 117,901,455 2,051,321,073 512,898,394 2,564,219,467 2,729,949,129 59,960,405 2,789,909,534 225,690,067 91.9% 2048 6.25% 2,500 310,647,593 - 209,690,016 13,042,204 130,913,286 2,707,149,732 539,065,256 2,809,214,988 2,913,107,670 61,390,335 2,974,498,005 165,283,017 94.4% 2049 6.25% 2,500 326,609,593 - 229,897,356 13,368,259 144,449,386 2,497,943,096 566,263,902 3,064,206,998 3,098,918,341 62,859,484 3,161,777,825 97,570,827 96.9% 2050 6.25% 2,500 343,240,021 - 250,536,362 13,702,466 158,552,816 2,735,497,105 594,648,743 3,330,145,848 3,287,839,450 64,376,854 3,352,216,304 22,070,456 99.3% 2051 6.25% 2,500 360,585,451 - 271,495,619 14,045,027 173,278,178 2,983,820,088 624,381,180 3,608,201,268 3,480,513,310 65,947,735 3,546,461,044 (61,740,224) 101.7% 2052 6.25% 2,500 378,688,574 - 292,654,750 14,396,152 188,693,506 3,244,151,266 655,600,239 3,899,751,505 3,677,550,475 67,574,310 3,745,124,785 (154,626,720) 104.1% 2053 6.25% 2,500 397,623,003 - 314,115,852 14,756,056 204,875,366 3,517,777,727 688,380,251 4,206,157,978 3,879,654,690 69,255,468 3,948,910,158 (257,247,820) 106.5% 2054 6.25% 2,500 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2054 2,500 2,5	2045	6.250%	2,500	266,205,072	-	152,709,468	12,110,982	93,344,057	1,638,309,526	463,043,178	2,101,352,704	2,370,573,875	57,175,732	2,427,749,607	326,396,903	86.6%
2048 6.25% 2,500 310,647,593 - 209,690,016 13,042,204 130,913,286 2,701,149,732 539,065,256 2,809,214,988 2,913,107,670 61,390,335 2,974,498,005 165,283,017 94.4% 2049 6.25% 2,500 326,609,593 - 229,897,356 13,368,259 144,449,386 2,497,943,096 566,263,902 3,064,206,998 3,098,918,341 62,859,484 3,161,777,825 97,570,827 96.9% 2050 6.250% 2,500 343,240,021 - 250,536,362 13,702,466 158,552,816 2,735,497,105 594,648,743 3,330,145,848 3,287,839,450 64,376,854 3,352,216,304 22,070,456 99.3% 2051 6.250% 2,500 360,585,451 - 271,495,619 14,045,027 173,278,178 2,983,820,088 624,381,180 3,608,201,268 3,480,513,310 65,947,735 3,546,461,044 (61,740,224) 101.7% 2052 6.250% 2,500 378,688,574 - 292,654,750 14,396,152 188,693,506 3,244,151,266 655,600,239 3,899,751,505 3,677,550,475 67,574,310 3,745,124,785 (154,626,720) 104.1% 2053 6.250% 2,500 397,623,003 - 314,115,852 14,756,056 204,875,366 3,517,777,727 688,380,251 4,206,157,978 3,879,654,690 69,255,468 3,948,910,158 (257,247,820) 106.5% 2054 6.250% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2054 2,500 2,50	2046	6.250%	2,500	280,519,656	-	170,969,154	12,413,757	105,383,865	1,840,830,136	487,609,868	2,328,440,004	2,549,148,523	58,556,361	2,607,704,883	279,264,879	89.3%
2049 6.25% 2,500 326,609,593 - 229,897,356 13,368,259 144,449,386 2,497,943,096 566,263,902 3,064,206,998 3,098,918,341 62,859,484 3,161,777,825 97,570,827 96.99 2050 6.250% 2,500 343,240,021 - 250,536,362 13,702,466 158,552,816 2,735,497,105 594,648,743 3,330,145,848 3,287,839,450 64,376,854 3,352,216,304 22,070,456 99.3% 2051 6.250% 2,500 360,585,451 - 271,495,619 14,045,027 173,278,178 2,983,820,088 624,381,180 3,608,201,268 3,480,513,310 65,947,735 3,546,461,044 (61,740,224) 101.7% 2052 6.250% 2,500 378,688,574 - 292,654,750 14,396,152 188,693,506 3,244,151,266 655,600,239 3,899,751,505 3,677,550,475 67,574,310 3,745,124,785 (154,626,720) 104.1% 2053 6.250% 2,500 397,623,003 - 314,115,852 14,756,056 204,875,366 3,517,777,727 688,380,251 4,206,157,978 3,879,654,690 69,255,468 3,948,910,158 (257,247,820) 106.5% 2054 6.250% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2054 6.250% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2054 6.250% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2054 6.250% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2054 6.250% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2054 6.250% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2055 6.250% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2056 6.250% 2,500 417,504,15	2047	6.250%	2,500	295,305,189	-	189,991,606	12,724,101	117,901,455	2,051,321,073	512,898,394	2,564,219,467	2,729,949,129	59,960,405	2,789,909,534	225,690,067	91.9%
2050 6.25% 2,500 343,240,021 - 250,536,362 13,702,466 158,552,816 2,735,497,105 594,648,743 3,330,145,848 3,287,839,450 64,376,854 3,352,216,304 22,070,456 99.3% 2051 6.25% 2,500 360,585,451 - 271,495,619 14,045,027 173,278,178 2,983,820,088 624,381,180 3,608,201,268 3,480,513,310 65,947,735 3,546,461,044 (61,740,224) 101.7% 2052 6.25% 2,500 378,688,574 - 292,654,750 14,396,152 188,693,506 3,244,151,266 655,600,239 3,899,751,505 3,677,550,475 67,574,310 3,745,124,785 (154,626,720) 104.1% 2053 6.25% 2,500 397,623,003 - 314,115,852 14,756,056 204,875,366 3,517,777,727 688,380,251 4,206,157,978 3,879,654,690 69,255,468 3,948,910,158 (257,247,820) 106.5% 2054 6.25% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2054 2054 2054 2054 2054 2054 2054 2054	2048	6.250%	2,500	310,647,593	-	209,690,016	13,042,204	130,913,286	2,270,149,732	539,065,256	2,809,214,988	2,913,107,670	61,390,335	2,974,498,005	165,283,017	94.4%
2051 6.25% 2,500 360,585,451 - 271,495,619 14,045,027 173,278,178 2,983,820,088 624,381,180 3,608,201,268 3,480,513,310 65,947,735 3,546,461,044 (61,740,224) 101.7% 2052 6.25% 2,500 378,688,574 - 292,654,750 14,396,152 188,693,506 3,244,151,266 655,600,239 3,899,751,505 3,677,550,475 67,574,310 3,745,124,785 (154,626,720) 104.1% 2053 6.25% 2,500 397,623,003 - 314,115,852 14,756,056 204,875,366 3,517,777,727 688,380,251 4,206,157,978 3,879,654,690 69,255,468 3,948,910,158 (257,247,820) 106.5% 2054 6.25% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2054 2054 2054 2054 2054 2054 2054 2054	2049	6.250%	2,500	326,609,593	-	229,897,356	13,368,259	144,449,386	2,497,943,096	566,263,902	3,064,206,998	3,098,918,341	62,859,484	3,161,777,825	97,570,827	96.9%
2052 6.25% 2,500 378,688,574 - 292,654,750 14,396,152 188,693,506 3,244,151,266 655,600,239 3,899,751,505 3,677,550,475 67,574,310 3,745,124,785 (154,626,720) 104.1% 2053 6.25% 2,500 397,623,003 - 314,115,852 14,756,056 204,875,366 3,517,777,727 688,380,251 4,206,157,978 3,879,654,690 69,255,468 3,948,910,158 (257,247,820) 106.5% 2054 6.25% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9% 2054 2054 2054 2054 2054 2054 2054 2054	2050	6.250%	2,500	343,240,021	-	250,536,362	13,702,466	158,552,816	2,735,497,105	594,648,743	3,330,145,848	3,287,839,450	64,376,854	3,352,216,304	22,070,456	99.3%
2053 6.250% 2,500 397,623,003 - 314,115,852 14,756,056 204,875,366 3,517,777,727 688,380,251 4,206,157,978 3,879,654,690 69,255,468 3,948,910,158 (257,247,820) 106.5% 2054 6.250% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9%	2051	6.250%	2,500	360,585,451	-	271,495,619	14,045,027	173,278,178	2,983,820,088	624,381,180	3,608,201,268	3,480,513,310	65,947,735	3,546,461,044	(61,740,224)	101.7%
2054 6.250% 2,500 417,504,153 - 335,859,090 15,124,958 221,908,358 3,806,206,190 722,799,263 4,529,005,453 4,087,528,914 70,993,331 4,158,522,245 (370,483,208) 108.9%	2052	6.250%	2,500	378,688,574	-	292,654,750	14,396,152	188,693,506	3,244,151,266	655,600,239	3,899,751,505	3,677,550,475	67,574,310	3,745,124,785	(154,626,720)	104.1%
	2053	6.250%	2,500	397,623,003	-	314,115,852	14,756,056	204,875,366	3,517,777,727	688,380,251	4,206,157,978	3,879,654,690	69,255,468	3,948,910,158	(257,247,820)	106.5%
2055 6.250% 2,500 438,379,361 - 357,963,166 15,503,082 239,885,679 4,111,004,982 758,939,226 4,869,944,208 4,301,934,921 72,788,546 4,374,723,467 (495,220,741) 111.3%	2054	6.250%	2,500	417,504,153	-	335,859,090	15,124,958	221,908,358	3,806,206,190	722,799,263	4,529,005,453	4,087,528,914	70,993,331	4,158,522,245	(370,483,208)	108.9%
	2055	6.250%	2,500	438,379,361	-	357,963,166	15,503,082	239,885,679	4,111,004,982	758,939,226	4,869,944,208	4,301,934,921	72,788,546	4,374,723,467	(495,220,741)	111.3%

^o Additional contributions in the amount of \$130,018,635 are needed over the years 2027 through 2030 to pay all benefits due.

Open Group Projections
Scenario 8 — Continuing Business Scenario
Projection Based on Data as of June 30, 2018
6.25% Assumed Net Investment Return
Other Assumptions Based on Those Used in the Actuarial Valuation as of June 30, 2018
15% Annual Sales Growth from 500 Contracts Sold in FY 2020 to 2,500 New Contracts Per Year

		Assets										Liabilities			
Year Ending 6/30	Assumed Net Rate of Return	Annual New Contracts	Contributions	Additional Required Solvency Contributions ^a	Tuition Payments,	Administrative Expenses	Net Investment Return	Market Value of Assets (EOY)	Total Present Value of Future Contributions	Total Fund Assets (MVA + PVFC)	Total Present Value of Future Benefits	Present Value of Future Admin Expenses	Total Present Value of Future Benefits, Fees and Expenses	Unfunded Liability	Funded Ratio
2018			\$ 14,574,249	ċ .	\$ 148,689,847	\$ 4,314,146	\$ 46,821,937	\$ 813,365,005	\$ 32,504,816	\$ 845,869,821	\$ 1,066,832,783	\$ 27,587,658	\$ 1,094,420,441	\$ 248,550,620	77.3%
2019	6.250%	0	10,483,115		150,251,752	4,422,000	46,397,643	715,572,011	23,730,619	739,302,630	978,633,871	24,753,793	1,003,387,664	264,085,034	73.7%
2020	6.250%	500	7,534,932	_	145,963,226	6,532,550	40,261,877	610,873,044	24,765,827	635,638,871	902,051,183	30,424,342	932,475,525	296,836,654	68.2%
2021	6.250%	575	14,909,212	_	146,411,436	6,695,864	33,926,325	506,601,281	27,681,425	534,282,706	822,602,188	32,010,862	854,613,050	320,330,344	62.5%
2022	6.250%	661	17,471,551	_	145,984,831	6,863,260	27,496,177	398,720,918	31,659,006	430,379,924	741,746,400	33,415,155	775,161,555	344,781,631	55.5%
2023	6.250%	760	20,224,937	_	135,937,240	7,034,842	21,142,341	297,116,114	37,289,583	334,405,697	669,974,257	34,682,712	704,656,969	370,251,272	47.5%
2024	6.250%	875	24,331,678	_	123,540,427	7,210,713	15,294,549	205,991,202	44,154,557	250,145,759	610,770,838	35,994,899	646,765,737	396,619,978	38.7%
2025	6.250%	1,006	29,590,245	_	116,814,427	7,390,981	9,962,535		53,098,525	174,437,099	560,191,749	37,184,988	597,376,737	422,939,638	29.2%
2026	6.250%	1,157	35,574,422	_	106,232,409	7,575,756	5,175,907	48,280,738	64,157,827	112,438,565	523,717,244	38,268,064	561,985,308	449,546,743	20.0%
2027	6.250%	1,330	43,021,247	10,136,567	95,159,311	7,765,149	1,485,908		77,520,265	77,520,265	503,909,533	39,078,652	542,988,185	465,467,920	14.3%
2028	6.250%	1,530	51,963,912	37,047,040	81,051,675	7,959,277	1,403,500	_	93,716,351	93,716,351	506,595,091	39,909,178	546,504,268	452,787,917	17.1%
2029	6.250%	1,759	62,849,114	18,063,179	72,754,033	8,158,260	_	_	113,264,041	113,264,041	529,182,598	40,476,813	569,659,411	456,395,370	19.9%
2030	6.250%	2,023	75,958,040	10,003,173	60,908,940	8,362,217	205,798		136,860,962	143,753,643	578,942,453	40,933,414	619,875,867	476,122,224	23.2%
2031	6.250%	2,326	91,703,636	_	53,629,991	8,571,271	1,338,770		165,412,024	203,145,849	655,796,205	41,374,011	697,170,216	494,024,367	29.1%
2032	6.250%	2,500	110,798,153	_	49,368,676	8,785,554	3,978,555	94,356,303	195,255,073	289,611,376	753,718,569	41,936,483	795,655,052	506,043,676	36.4%
2033	6.250%	2,500	128,031,594	_	48,729,288	9,005,193	8,060,761	172,714,178	221,645,550	394,359,728	862,923,059	42,532,585	905,455,644	511,095,916	43.6%
2033	6.250%	2,500	140,590,201		50,792,597	9,230,322	13,274,208	266,555,668	245,040,906	511,596,574	981,837,938	43,255,390	1,025,093,327	513,496,753	49.9%
2035	6.250%	2,500	152,816,765		55,339,877	9,461,080	19,368,540	373,940,016	266,194,949	640,134,965	1,108,484,724	44,060,670	1,152,545,395	512,410,430	55.5%
2036	6.250%	2,500	164,513,428		62,065,289	9,697,607	26,225,779	492,916,327	286,067,041	778,983,368	1,241,448,988	44,931,672	1,286,380,660	507,397,292	60.6%
2030	6.250%	2,500	175,548,658		70,510,762	9,940,047	33,734,040	621,748,216	305,391,924	927,140,140	1,379,669,489	46,070,659	1,425,740,148	498,600,008	65.0%
2037	6.250%	2,500	186,218,801		80,940,612	10,188,548	41,785,781	758,623,638	324,418,902	1,083,042,540	1,521,429,799	47,387,155	1,568,816,954	485,774,414	69.0%
2039	6.250%	2,500	197,060,622		93,436,899	10,188,348	50,281,737	902,085,836	343,373,781	1,245,459,617	1,665,601,301	48,770,325	1,714,371,626	468,912,009	72.6%
2039	6.250%	2,500	208,134,367	-	107,391,848	10,704,344	59,151,416		362,473,513	1,413,748,941	1,811,613,157	50,186,092	1,861,799,249	448,050,308	75.9%
2040	6.250%	2,500	219,485,774	-	122,517,105	10,704,344	68,351,384	1,205,623,529	381,906,359	1,587,529,888	1,958,984,101	51,616,223	2,010,600,324	423,070,436	79.0%
2041	6.250%	2,500	231,180,454	-	138,545,654	11,246,251	77,856,318		401,825,979	1,766,694,375	2,107,452,520	53,029,216	2,160,481,736	393,787,361	81.8%
2042	6.250%	2,500	243,289,248	-	155,108,370	11,527,408	87,663,393	1,529,185,259	401,823,979			54,418,175		359,966,217	84.4%
2043	6.250%			-						1,951,558,951	2,257,106,992		2,311,525,168		
2044	6.250%	2,500	255,860,594	-	172,101,253	11,815,592	97,788,249	1,698,917,257	443,690,164	2,142,607,421	2,408,118,568	55,797,530	2,463,916,098	321,308,677	87.0% 89.4%
2045	6.250%	2,500 2,500	268,932,204	-	189,385,915	12,110,982	108,257,745		465,922,850	2,340,533,159	2,560,872,845	57,175,732 58,556,361	2,618,048,577	277,515,418	91.8%
2046	6.250%	2,500	282,535,949		206,881,317	12,413,757	119,109,471 130,392,390	2,056,960,655	489,218,992	2,546,179,647	2,715,821,422		2,774,377,782	228,198,135	94.1%
			296,712,407	-	224,450,832	12,724,101		2,246,890,519	513,679,942	2,760,570,461	2,873,509,621	59,960,405	2,933,470,026	172,899,565	
2048	6.250%	2,500	311,548,027	-	242,218,373	13,042,204	142,162,983	2,445,340,952	539,363,939	2,984,704,891	3,034,438,001	61,390,335	3,095,828,336	111,123,445	96.4%
2049	6.250%	2,500	327,125,429	-	260,168,414	13,368,259	154,483,079	2,653,412,787	566,332,136	3,219,744,923	3,199,162,775	62,859,484	3,262,022,259	42,277,336	98.7%
2050	6.250%	2,500	343,481,700	-	278,349,418	13,702,466	167,421,124		594,648,743	3,466,912,470	3,368,434,089	64,376,854	3,432,810,943	(34,101,527)	101.0%
2051	6.250%	2,500	360,655,785	-	296,636,932	14,045,027	181,054,498	3,103,292,051	624,381,180	3,727,673,231	3,543,270,572	65,947,735	3,609,218,306	(118,454,925)	103.3%
2052	6.250%	2,500	378,688,574	-	314,846,315	14,396,152	195,477,527	3,348,215,685	655,600,239	4,003,815,924	3,724,708,860	67,574,310	3,792,283,170	(211,532,754)	105.6%
2053	6.250%	2,500	397,623,003	-	333,054,203	14,756,056	210,796,538		688,380,251	4,297,205,218	3,913,698,730	69,255,468	3,982,954,198	(314,251,020)	107.9%
2054	6.250%	2,500	417,504,153	-	351,441,270	15,124,958	227,119,247	3,886,882,139	722,799,263	4,609,681,402	4,111,106,352	70,993,331	4,182,099,683	(427,581,719)	110.2%
2055	6.250%	2,500	438,379,361	-	370,181,486	15,503,082	244,551,890	4,184,128,822	758,939,226	4,943,068,048	4,317,715,539	72,788,546	4,390,504,085	(552,563,963)	112.6%

^a Additional contributions in the amount of \$65,246,786 are needed over the years 2027 through 2029 to pay all benefits due.

SECTION D

ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Valuation Methods

Actuarial Value of Assets – The Actuarial Value of Assets is equal to the Market Value of Assets plus the present value of expected future contract payments from contract holders.

Actuarial Valuation Assumptions

The rationale for the assumptions (except as indicated) may be found in the experience study report covering the period July 1, 2011 through June 30, 2014, which was issued on August 26, 2015. The assumptions were adopted for first use in the actuarial valuation as of June 30, 2015.

The actuarial assumptions used in the actuarial soundness valuation and the projection scenarios are shown in this Section.

Measurement Date

June 30, 2018

Net Investment Return Rate

Select and ultimate rate structure beginning with 6.25 percent for fiscal year 2019 and grading down in increments of 0.357 percent to an ultimate investment return rate of 3.75 percent for fiscal years on and after fiscal year 2026, compounded annually. Includes inflation assumption of 2.50 percent. (First effective with the actuarial soundness valuation as of June 30, 2018, and provided by ISAC.)

Considering the current asset allocation, liquidity requirements and deferment of the next enrollment period, we believe the net investment rate of return assumption of 6.25 percent in fiscal year 2019 grading down to 3.75 percent in 2026, on a select and ultimate basis, is consistent with applicable Actuarial Standards of Practice.

For the open group scenarios in which new contracts are assumed to be sold, a net investment rate of return assumption of 6.25 percent was used for scenarios in which (1) there was no depletion date, or (2) there was a depletion date, but the funded status increased significantly after the depletion date. A select and ultimate rate was used for scenarios in which there was a depletion date and the funded status remained low for the duration of the projection period.

Weighted Average Tuition and Fees (WATF) by Contract Type Based on the Freshman Tuition Rates Adjusted for Differential Tuition (Blended)

		Contrac	t Type	
	Choice 1	Choice 2	Choice 3	
	Community College	University	University Plus	Legacy†
2018-2019 Weighted Tuition	\$3,942	\$10,925	\$13,885	\$11,687
2018-2019 Weighted Fees	502	3,904	3,968	3,921
2018-2019 Total WATF	4,444	14,829	17,853	15,608

[†]Legacy contracts refer to contracts sold prior to October 2008. These contracts can be used for full tuition and fees at any public University in the State of Illinois, including UIUC.

For continuing students at public universities and students attending community colleges, fees are combined with tuition in our projections and follow their respective tuition inflation assumptions.

Weighted Average Tuition and Fees (WATF) Increase from Prior Year

		Contrac	t Type	
	Choice 1	Choice 2	Choice 3	
	Community College	University	University Plus	Legacy
2018-2019 Total WATF	\$4,444	\$14,829	\$17,853	\$15,608
2017-2018 Total WATF	4,356	14,404	17,716	15,281
WATF Increase	2.02%	2.95%	0.77%	2.14%

Bias Load

"Legacy," Choice 1 and Choice 2 contract beneficiaries were assumed on average to attend more expensive schools than indicated by the headcount information that was used to determine the 2018-2019 WATF. The following bias loads were used to recognize this bias toward enrollment at more expensive schools. No bias load was applied to the "University Plus" beneficiaries due to the separation of UIUC.

		Contrac	t Type	
	Choice 1	Choice 2	Choice 3	
	Community College	University	University Plus	Legacy
Bias Load	5.50%	2.50%	0.00%	4.00%

Tuition and Fee Increase Assumption

Tuition and Fee Increase Assumption - June 30, 2018, Actuarial Valuation					
Effective Date	Community University U		University Plus	Legacy	
6/30/2018 and Beyond	5.00%	5.00%	5.00%	5.00%	

(First effective with the actuarial soundness valuation as of June 30, 2016, and provided by ISAC.)

These assumptions were chosen by ISAC and consider historical Illinois public tuition and fee inflation, typically over a 20-year horizon, as well as current economic and political conditions.

Truth in Tuition

Under Illinois' Truth-in-Tuition law, the state's 12 public colleges and universities are required to charge incoming resident freshmen a fixed tuition rate for the first four years of college. The Truth in Tuition law does not apply to community colleges.

For contract beneficiaries with a Choice 2, Choice 3 or Legacy contract, it was assumed that their tuition will not increase in their second, third and fourth year of school. If they attend school beyond four years, it was assumed that their tuition would increase to the amount charged the year after the year they first enrolled. For contract beneficiaries with a Choice 1 contract, it was assumed that tuition will increase for each year enrolled. The fee portion of the WATF is assumed to increase each year for all contract types.

The following table shows the WAT (excluding fees) for the past four years that would be used for contract beneficiaries under the Truth-in-Tuition law. (Choice 1 is shown for informational purposes only.)

	Contract Type						
	Choice 1 Choice 2		Choice 3				
	Community College	University	University Plus	Legacy			
2018-2019 Weighted Tuition	\$3,942	\$10,925	\$13,885	\$11,687			
2017-2018 Weighted Tuition	3,862	10,675	13,884	11,525			
2016-2017 Weighted Tuition	3,698	10,410	14,136	11,318			
2015-2016 Weighted Tuition	3,549	10,082	14,136	11,022			
2014-2015 Weighted Tuition	3,331	9,903	14,145	10,871			

Rates of Cancellation

These rates are used to measure the probability of eligible contract beneficiaries cancelling their contracts before and after projected college entrance date. The rates apply to contract beneficiaries who have not yet matriculated and those who have matriculated, but have not used credits within the past year. Once the contract beneficiaries are assumed to have matriculated and started using benefits, the cancellation rates do not apply.

Years From Projected College Entrance Year	Cancellation Rate	Years From Projected College Entrance Year	Cancellation Rate
-17	8.0%	-3	1.0%
-16	7.0%	-2	1.0%
-15	6.0%	-1	1.5%
-14	4.0%	0	1.5%
-13	4.0%	1	3.0%
-12	3.0%	2	3.0%
-11	3.0%	3	5.0%
-10	3.0%	4	5.0%
-9	2.0%	5	7.5%
-8	1.5%	6	7.5%
-7	1.5%	7	5.0%
-6	1.5%	8	5.0%
-5	1.5%	9	5.0%
-4	1.0%	10	100.0%

In the event of a cancellation, it was assumed that a refund will be paid equal to the amount of all contract payments made accumulated with applicable interest, less benefits paid. (Two percent annual interest is applicable to contracts purchased prior to the 2013/2014 enrollment period. No interest is applicable to contracts purchased during or after the 2013/2014 enrollment period.)

Rates of Enrollment

These rates are used to measure the probability of eligible contract beneficiaries matriculating at and beyond their projected college entrance date. The rates apply to contract beneficiaries who have not yet matriculated and those who have matriculated, but have not used credits within the past year.

Years From Projected College Entrance Year	Matriculation Rate
0	70%
1	35%
2	40%
3	30%
4	20%
5	15%
6	15%
7	10%
8	10%
9	10%
10	0%

Utilization of Benefits

The following rates apply to contract beneficiaries who have not yet matriculated and those who have matriculated, but have not used credits within the past year. For those who have matriculated, the projected college entrance year is assumed to be the valuation year. Contract beneficiaries are assumed to use the benefits as described by the CIPTP Master Agreement.

Distribution of Benefit Utilization									
Number of Years		Number of Semesters Purchased							
Since Matriculation	1	2	3	4	5	6	7	8	9
1	73%	73%	49%	37%	29%	24%	21%	18%	16%
2	20%	20%	28%	35%	26%	24%	21%	18%	16%
3	7%	7%	14%	17%	19%	22%	21%	18%	16%
4			5%	6%	13%	15%	21%	18%	16%
5			5%	6%	7%	9%	8%	13%	16%
6					3%	4%	3%	6%	8%
7					2%	2%	2%	4%	6%
8							1%	2%	4%
9							1%	2%	1%

For contract beneficiaries who have matriculated and have used credits within the past year, it is assumed that the contract beneficiaries will utilize 22 credits per year until benefits are fully depleted.

Administrative Expenses

Administrative expenses of the Program are assumed to be paid through a combination of investment earnings and fees assessed on purchasers. Marketing expenses were excluded from the liabilities (present value of future administrative expenses) for current contract beneficiaries as it is assumed those costs should be applicable to future contracts. Administrative expenses are projected to increase by the rate of the inflation assumption of 2.50 percent for two years and then decline at the same rate the present value of benefits declines (combined with a 2.50 percent increase for inflation). The present value of future administrative expenses was determined to be equal to approximately 2.5 percent of the total liabilities.

First effective with the actuarial soundness valuation as of June 30, 2017 the calculation of the total administrative expenses related to marketing was changed from an assumption of 12 percent of total administrative expenses to incorporate actual marketing expenses in the prior fiscal year, as provided by ISAC. The amount of administrative expenses assumed to be non-marketing related is the basis for the present value of future administrative expenses for current contract beneficiaries.

_	Assumed Current Contract Beneficiary Expenses							
Fiscal		Other	Total Administrative	Marketing				
Year	Marketing	Administration	Expenses	% of Total				
2018	\$0	\$4,314,146	\$4,314,146	0.00%				
2019	0	4,422,000	4,422,000					
2020	0	4,532,550	4,532,550					

For the open group scenarios (in which new contracts are assumed to be sold), marketing expenses are allocated to the year the contracts were sold and non-marketing expenses are allocated over the duration of the contract period until all tuition benefits are assumed to be paid. In fiscal year 2020, marketing expenses are assumed to be \$2,000,000 for the open group scenarios. Marketing expenses are assumed to increase from the amount in fiscal year 2020 by 2.5 percent annually.

Mortality and Disability

No assumption is made for death or disability. Valuing the rate of incidence is expected to be immaterial.

Data Adjustments

The following contract beneficiary records were excluded from the actuarial valuation:

- Records with a payment status indicating they were cancelled;
- Records with a contract usage status of depleted; and
- Records with the number of contract units used equal to the number of contract units purchased.

The projected college entrance year was adjusted for contract beneficiaries who are not scheduled to have completed payments for the contract by the college entrance year provided in the data.

The account balance that is eligible to be refunded is calculated by GRS based on the contract payment information provided, increased with applicable interest, less any tuition and fee benefits paid to date. Two percent annual interest is applicable to contracts purchased prior to the 2013/2014 enrollment period. No interest is applicable to contracts purchased during or after the 2013/2014 enrollment period.

Future Beneficiary Profile

The characteristics of future beneficiaries are assumed to be the same as the characteristics of 2016 new beneficiaries, including the following:

- Distribution of number of years until projected college entrance date at time of contract purchase;
- Distribution of contract type and number of years of tuition benefits purchased; and
- Distribution of contract payment options (lump sum, monthly or annual payment s over a period of between five and 15 years depending on beneficiary age at contract purchase).

Assumed Future Contract Prices

Pricing for contracts sold for the period January 18, 2017 through May 31, 2017 were based on the following pricing methodology and underlying assumptions which were developed by and are the responsibility of ISAC.

- Discount Rate of 7.0 percent.
- Tuition and Fee Increases of 6.0 percent for all years for all contract types
- Stabilization Fee of 15 percent of the Present Value of Tuition and Fee Benefits ("PVB") for Choice 1 contracts, 23 percent of the PVB for Choice 2 contracts and 25 percent of the PVB for Choice 3 contracts.
- Administrative Fee of 3.0 percent of the sum of the PVB and the Stabilization Fee.
- Weighted Average Tuition and Fees ("WATF") for FY 2018 equal to the WATF for FY 2017 increased by 6.0 percent for Choice 1, 3.0 percent for Choice 2, and 0.0 percent for Choice 3. Increase amounts are based on expected increases in the WATF.
- All payments are assumed to be made at the beginning of the year.
- The price increase limitation of 9.0 percent more than the prior year price for Choice 1 contracts has been eliminated.
- The provisions of Truth in Tuition will be included in the PVB calculations for multi-year contracts with credit values greater than 30. Please note that the provisions of Truth in Tuition do not apply towards fees. Fees are assumed to increase by 6.0 percent for all years.
- Benefits are assumed to be utilized in the first year in which the contract holder is eligible to attend college and also are assumed to be used at a rate of 30 credits per year.
- Prices will be determined according to single year age groups.
- Benefits may not be used until the third anniversary after the First Payment Date.
- Prices for "Combo" packages consisting of either (1) four University semesters combined with four Community College semesters or (2) four University Plus semesters combined with four Community College semesters were based on present values assuming the four Community College semesters were used first and as such are not equal to the sum of the separate lump sum prices for four University or University Plus semesters combined with four Community College semesters.
- Monthly and annual installment payments are calculated assuming an interest rate of 7.75
 percent.
- A \$3 processing fee per payment for monthly and annual installment payments.

Contract prices are assumed to increase each year by the tuition and fee increase assumption, which is 5.00 percent per year. Prices were not recalculated for future years to take into account the change in the investment return assumption from 6.50 percent to 6.25 percent. Changes in assumptions affect the stabilization fees that were calculated for the 2016-2017 enrollment period.

SECTION **E**

PLAN PROVISIONS

Plan Provisions

(This is a summary only; the full terms and conditions of the College Illinois!® Prepaid Tuition Program are included in the Illinois Prepaid Tuition Act, 110 ILCS 979 (the "Act") and ISAC Administrative Rules (23 Ill. Adm. Code 2775, et. seg.) ("ISAC Rules").

A. Type of Contract

Three types of contracts are available for purchase: Choice 1 - Community College, Choice 2 – University and Choice 3 – University Plus.

B. Benefit

Covered benefits include tuition and mandatory fees at an Illinois public university or community college based on the instate or in-district undergraduate rate for a full-time student.

Mandatory fees are fees that are required upon enrollment for all students attending the particular institution.

The benefit does not include any optional fees, expenses or cost of supplies.

The benefit shall never be less than the amount paid for the contract.

Benefits are available for use three years after the first payment due date. The plan must be paid in full prior to the use of any benefits. In addition, the beneficiary has up to 10 years from the projected college enrollment date to start using program benefits. Once the beneficiary starts using the prepaid benefits, they have 10 years to finish using benefits.

C. Member Contributions

The Program offers a variety of payment options, including the following:

- Lump Sum;
- 5-year installment plans paid monthly or annually;
- Extended installment plans of 6 to 15 years, depending on age, paid monthly or annually; and
- Down payment options are available for monthly installment plans.

D. Private or Out-of-State Institutions

For beneficiaries attending a private or out-of-state institution, the plan will pay an amount based upon the weighted average tuition and mandatory fees at Illinois public universities or community colleges depending on the type of contract purchased.

E. Scholarship

If a qualified beneficiary is awarded a grant or scholarship that duplicates the benefits covered by a prepaid tuition contract, the purchaser may request a refund in semester installments.

Illinois public university or community college – the installments will be in an amount equal to the current cost of in-state or in-district registration fees at that institution, less any benefits used to pay registration fees not covered by the scholarship and any applicable fees.

Illinois Private Institution or an eligible Out-of-State Institution – the installments will be in an amount equal to the current average mean-weighted credit hour value of registration fees at Illinois public universities or Illinois community colleges, depending on the type of the purchased contract, less any benefits used to pay registration fees not covered by the scholarship and any applicable fees.

F. Not Attending an Institution of Higher Education (Transfer)

Benefits can be transferred to a member of the "family" as defined in Section 529 of the Internal Revenue Code.

Purchasers can also choose to postpone the beneficiary's use of contract benefits to a later time or receive a refund.

G. Cancellation/Refunds

Refund equal to all contract payments made accumulated with applicable interest, less benefits paid and applicable cancellation fees. (Two percent annual interest is applicable to contracts purchased prior to the 2013/2014 enrollment period. No interest is applicable to contracts purchased during or after the 2013/2014 enrollment period.)

H. Death/Disability of Qualified Beneficiary

Refund equal to the value of the mean-weighted average cost of tuition at the colleges for the type of contract purchased will be made to the purchaser.

I. Other Ancillary Benefits

There are no ancillary benefits.

J. Truth in Tuition

Under Illinois' Truth-in-Tuition law, enacted with the fall 2004 semester, the state's 12 public colleges and universities are required to charge incoming resident freshmen a fixed tuition rate for the first four years of college.

K. Changes from Previous Valuation

None.



Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed In Accordance with Government Auditing Standards

Honorable Frank J. Mautino Auditor General State of Illinois, and

Mr. Kevin B. Huber Chair of the Governing Board Illinois Student Assistance Commission

As Special Assistant Auditors for the Auditor General, we have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Illinois Prepaid Tuition Program of the State of Illinois, Illinois Student Assistance Commission, as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the Illinois Prepaid Tuition Program of the State of Illinois, Illinois Student Assistance Commission's basic financial statements and have issued our report thereon dated April 26, 2019. That report contains an emphasis of matter paragraph which states "as discussed in Notes 9 and 10, the Illinois Prepaid Tuition Program Fund has a deficit as of June 30, 2018 of \$280 million. The amount of the fund deficit is highly dependent on the actuarial assumptions used to calculate the present value of the future tuition benefits obligation." Our opinion is not modified with respect to this matter.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the State of Illinois, Illinois Student Assistance Commission's internal control over financial reporting (internal control) of the Illinois Prepaid Tuition Program to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the State of Illinois, Illinois Student Assistance Commission's internal control. Accordingly, we do not express an opinion on the effectiveness of the State of Illinois, Illinois Student Assistance Commission's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control of the Illinois Prepaid Tuition Program that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the State of Illinois, Illinois Student Assistance Commission, Illinois Prepaid Tuition Program's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with these provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the State of Illinois, Illinois Student Assistance Commission's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the State of Illinois, Illinois Student Assistance Commission's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Signature on File

Crowe LLP

Oak Brook, Illinois April 26, 2019