MARCH 17, 2016

AGENDA ITEM 3
ACTION ITEM

SCHOLARSHARE INVESTMENT BOARD

Resolution to Approve Amendment to Agreement No. SIB15-10 with TIAA-CREF Tuition Financing, Inc. for Program Management Services for the ScholarShare 529 College Savings Plan

Recommendation
ScholarShare Investment Board (SIB or Board) staff recommends the Board adopt Resolution No. 2016-01 approving an amendment to Agreement No. SIB 15-10 with TIAA-CREF Tuition Financing, Inc. (TFI) for program management services for the ScholarShare College Savings Plan (Plan).

Background
In 2011, following a competitive request for proposals process, TFI was selected to provide program management services for the Plan. Agreement No. SIB 15-10 (Contract) with TFI provides for an initial five-year term, which is set to expire in November 2016, with options for five (5) one-year extensions.

Discussion
SIB staff reviewed both quantitative and qualitative factors in determining the recommendation to grant a one-year extension to the Contract with TFI. As part of the review process, SIB staff sought input from SIB's 529 industry consultant, AKF Consulting Group (AKF), and SIB's investment consultant, Pension Consulting Alliance, LLC (PCA).

Following a review of the analyses provided by AKF and PCA (Exhibit A and Exhibit B, respectively), SIB staff has found that since TFI assumed the position of program manager in November 2011, ScholarShare remains competitively positioned amongst the 529 industry relative to asset and account growth, investment structure, and fees. ScholarShare's growth performance and overall positioning is in-line within the industry. Investment portfolios and underlying mutual funds have performed well relative to benchmark, industry, and peer group plans. Additionally, TFI has consistently met three of the four Board-approved marketing performance account and asset benchmarks for the Plan. However, TFI has lagged the 529 industry annual asset growth rate benchmark, yet has improved in closing the gap over the last two years. While overall performance and comparison factors for ScholarShare are generally positive and places the Plan competitively within the 529 industry, there are opportunities for growth and improvement. As a result, SIB staff has determined that a one-year extension to the Contract is warranted.

Presenter
Julio Martinez, Executive Director, ScholarShare Investment Board

RESOLUTION NO. 2016-01

RESOLUTION OF THE SCHOLARSHARE INVESTMENT BOARD RELATING TO THE APPROVAL OF AN AMENDMENT TO AGREEMENT NO. SIB 15-10 WITH TIAA-CREF TUITION FINANCING, INC. FOR PROGRAM MANAGEMENT SERVICES FOR THE CALIFORNIA DIRECT-SOLD SCHOLARSHARE COLLEGE SAVINGS PLAN

WHEREAS, the ScholarShare Investment Board (the "SIB" or "Board") was created under Education Code section 69980 et seq. (the "Golden State ScholarShare Trust Act" or "Act");

WHEREAS, the Board, per Education Code Section 69982(b), has authority to contract for goods and services and engage personnel as necessary for the purpose of rendering professional, managerial, and technical assistance and advice to the Board;

WHEREAS, the Board, per Education Code Section 69981(c)(10), may authorize the Executive Director to enter into contracts on behalf of the Board or conduct any business necessary for the efficient operations of the Board;

WHEREAS, a program manager is needed to provide management services for California's ScholarShare College Savings Plan (the "Plan"), which includes maintaining and managing investments, performing administration and customer service, and providing marketing; and

WHEREAS, the term of the Board's existing contract, Agreement No. SIB 15-10 (the "Agreement"), with TIAA-CREF Tuition Financing, Inc. ("TFI") for program management services for the Plan expires on November 6, 2016;

WHEREAS, the Agreement provides for five optional one-year extensions to the term of the Agreement; and

WHEREAS, following a review of the analyses prepared and provided by the Board's investment consultant, Pension Consulting Alliance, LLC, and 529 industry consultant, AKF Consulting Group, SIB staff has determined that a one-year extension term to the Agreement is warranted;

NOW, THEREFORE, BE IT RESOLVED, that the Executive Director is hereby authorized to execute necessary documents and take whatever steps necessary to obtain all required approvals for an amendment to the Agreement with TFI to extend the term of the Agreement for one additional year, expiring on November 6, 2017.

Attest: ______________________________
Chairperson

Date of Adoption: ______________________________

MEMORANDUM

TO:	**JULIO MARTINEZ, EXECUTIVE DIRECTOR**
	STANLEY ZETO, DEPUTY EXECUTIVE DIRECTOR
	SCHOLARSHARE INVESTMENT BOARD
FROM:	**AKF CONSULTING GROUP**
DATE:	**MARCH 4, 2016**
RE:	**SCHOLARSHARE PLAN REVIEW**

I. INTRODUCTION

In November 2011, the ScholarShare Investment Board (the "Board") selected TIAA-CREF Tuition Financing, Inc. ("TFI") to replace Fidelity Investments as the new Plan Manager for the ScholarShare College Savings Plan ("ScholarShare" or "California"). The Board and TFI entered into a five-year Management Agreement, which includes optional one-year extensions for up to five years. The Management Agreement will end on November 6, 2016 and the Board is now considering a potential one-year contract extension. To assist with negotiations, the Treasurer's Staff has asked AKF Consulting Group ("AKF" or "AKF Consulting") to provide certain information about ScholarShare and how it compares to the 529 National Market and certain Peer Plans, including relative asset and account growth rates and comparisons of investment structure and fees. AKF has collected and summarized information on these points in this memorandum, which we hope provides useful information as the Board evaluates a one-year Management Agreement extension.

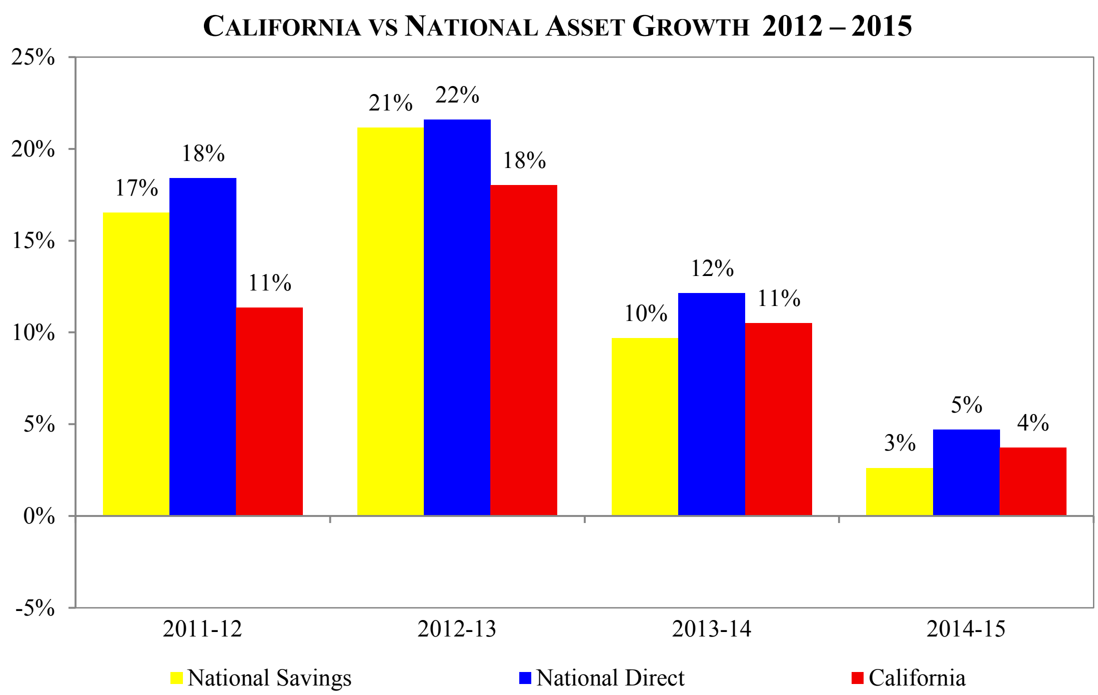
II. RELATIVE GROWTH RATES

To assess relative growth rates, we have compared ScholarShare to (i) the national savings market ("National Total", including advisor and direct plans), (ii) the national direct market ("National Direct") and (iii) select direct plans ("Peer Plans"). In our view, Peer Plans include the direct plans offered in the following States:

- Michigan and Wisconsin – direct plans managed by TFI
- Nevada Vanguard – second largest direct plan nationwide, managed by Ascensus
- New Hampshire – third largest direct plan nationwide, managed by Fidelity
- Kansas – Learning Quest and Schwab combined, high California concentration, managed by American Century
- Illinois – twelfth largest direct plan nationwide, managed by Oppenheimer

For this analysis, we reviewed the time period during which TFI has managed ScholarShare (2012 to 2015). The 2012 California assets and accounts include both ScholarShare Direct and Advisor since the Advisor Plan had not yet rolled into the Direct Plan. We base our analysis on data from the College Savings Plans Network ("CSPN"), with clarifications by certain States.

National Asset Growth. The following chart shows the asset growth of California versus each of National Total and National Direct:



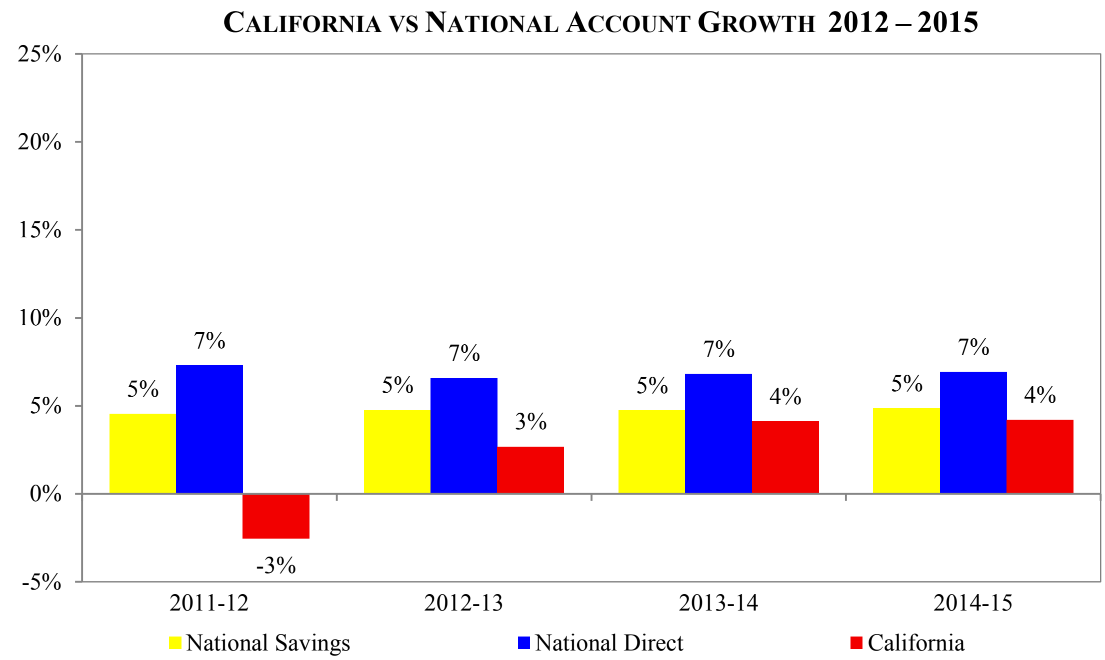
This chart effectively shows that between 2012 and 2015, California asset growth rates lagged National growth in early years but began to catch up in later years:

- California asset growth lagged National Total and National Direct growth rates in 2012 by approximately 6% and 7%, respectively
- The gap narrowed in 2013, with California asset growth rates lagging National Total and National Direct by 3% and 4%, respectively
- In 2014 and 2015, California asset growth rates exceeded National Total growth rates while falling just short of National Direct growth rates by 1% in each year

Over the long term, California asset growth has slightly lagged National growth rates:

- Over the 4-year period, California assets increased on average 10.9% annually, while the National Total increased by 12.5% and National Direct increased by 14.2%
- Removing the impact of the 2012 transition year (thus measuring the average annual growth over 3 years), the gap in growth rates is smaller (10.7% growth in California versus 11.1% growth in National Total and 12.8% growth in National Direct)

National Account Growth. The following chart shows the account growth of California versus each of National Total and National Direct:



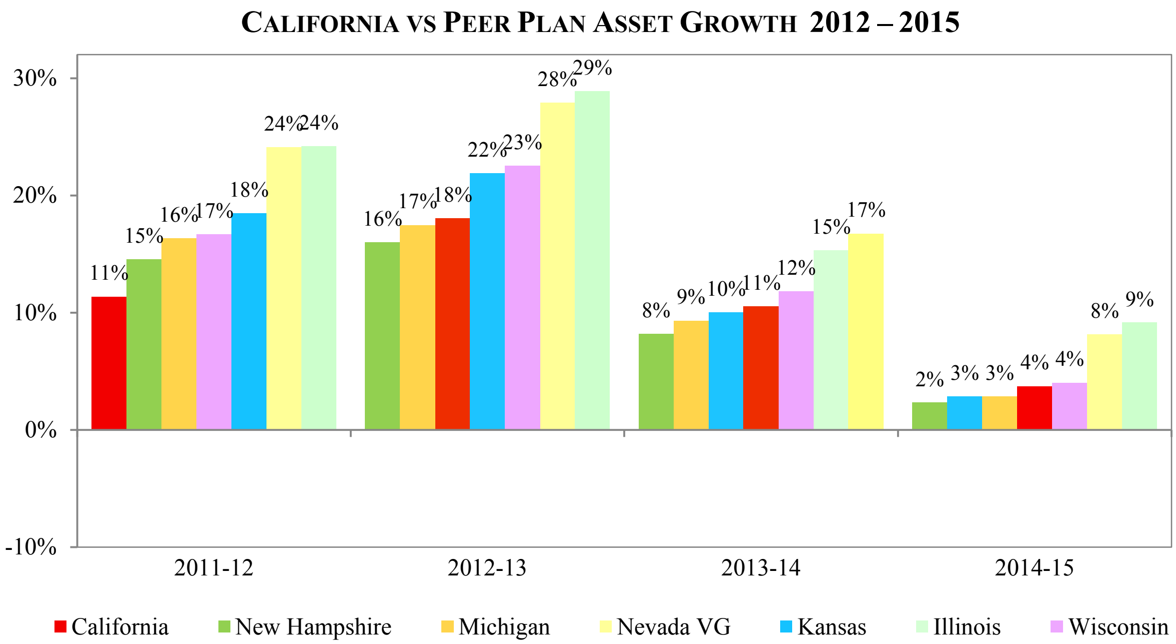
This chart effectively shows that between 2012 and 2015, California account growth rates lagged National in early years but began to approximate National growth rates in later years:

- Reflecting the conversion from Fidelity to TFI, California account growth lagged National Total and National Direct in 2012 by 8% and 10%, respectively
- California account growth rebounded strongly in 2013
- California account growth has been steady in the last two years, with growth at 4% versus 7% growth for the National Direct and 5% for the National Total and maintained consistent growth into 2014

Over the long term, California account growth has lagged National account growth rates:

- Over the 4-year period, California accounts increased on average 2.1% annually while the National Total accounts increased on average by 4.7% and National Direct increased on average 6.9%
- Removing the impact of the transition year, over the 3-year period, California accounts increased on average 3.7% annually versus 4.8% for the National Total and 6.8% National Direct

Peer Plan Asset Growth. The following chart shows the asset growth of California versus Peer Plans:



The chart above effectively shows that between 2012 and 2015, California's relative asset growth rates have improved:

- California asset growth (11%) underperformed all Peer Plans in 2012 (lagging the fastest growing Illinois and Nevada Vanguard Plans by approximately 13%)
- In 2013, California asset growth (18%) surpassed Michigan (17%) and New Hampshire (16%), while in 2014, California (11%) also surpassed Kansas (10%)
- By 2015, California asset growth approximated most Peers

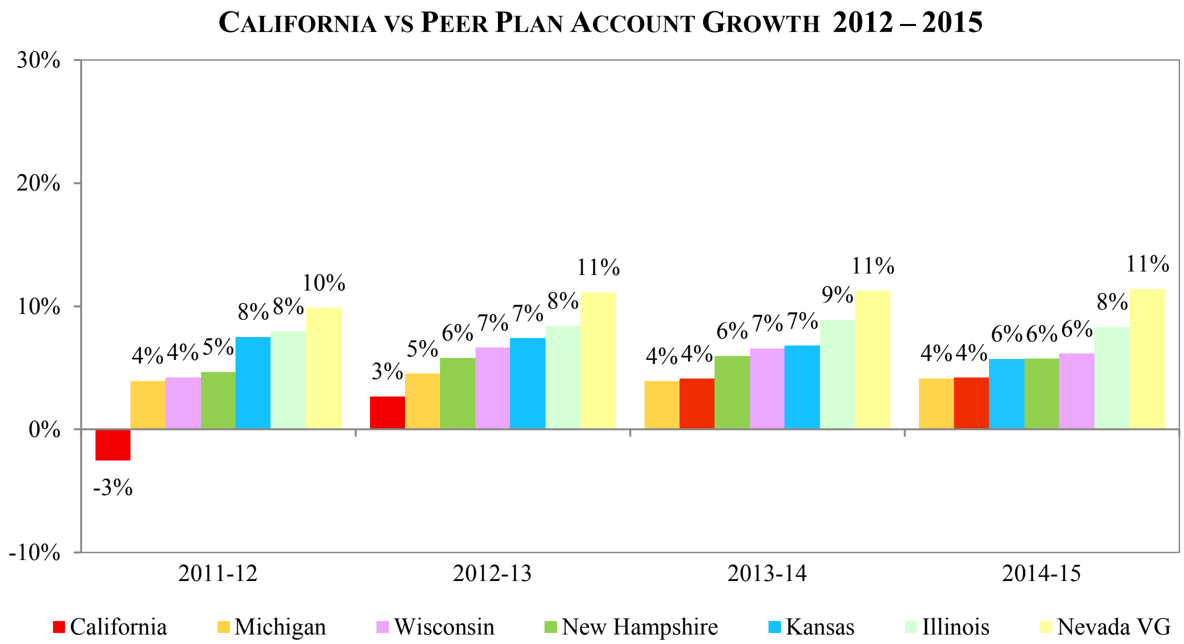
Peer Plan relative positions shifted overtime:

- While California's position improved, New Hampshire and Kansas relative asset growth rates have lagged overtime
- Wisconsin's comparatively strong asset growth performance is partially explained by its small asset base compared to other Peer Plans
- Nevada Vanguard and Illinois consistently outpace Peer Plans overtime, although by decreasing margins

Over the long term, California assets grew steadily:

- Between 2012 and 2015, average annual California asset growth (10.9%) slightly outpaced New Hampshire (10.3%), while lagging TFI-managed Michigan (11.5%) and Wisconsin (13.8%) over the same period
- Removing the impact of the transition year, California assets increased on average 10.7%, outpacing Michigan (9.9%) and New Hampshire (8.8%) over the 3-year period

Peer Plan Account Growth. The following chart shows the account growth of California versus Peer Plans:



The chart above effectively shows that between 2012 and 2015, California relative account growth rates have improved slightly:

- California accounts experienced negative growth in 2012 reflecting the conversion to TFI as well as termination of the ScholarShare Advisor Plan
- Wisconsin account growth rate surpassed Michigan and New Hampshire in 2013, partially boosted by its small account base compared to Peers
- In 2014 and 2015, California account growth rates surpassed Michigan, while lagging all other Peer Plans
- Nevada and Illinois consistently outpaced Peers overtime, despite larger account bases

Over the long term, California account growth rates lagged Peer Plans:

- California and Michigan lagged all Peers over the 4-year and 3-year periods
- Removing the impact of the transition year, California accounts increased on average 3.7% annually, slightly lagging Michigan's average annual growth rate (4.2%)

In general, while California has made notable improvements in relative asset and account growth overtime, there still is room for improvement in account growth rates. Importantly, it is worth mentioning that in absolute terms, California has maintained its status as the fifth largest direct plan in terms of 529 assets and accounts since 2012[1].

[1] Only New York, Nevada, New Hampshire and Utah exceeds California

III. COMPARISON OF INVESTMENT STRUCTURES

We reviewed the investment structure of California and seven Peer Direct Plans to identify any meaningful differences in open/closed architecture, portfolio management style and the breadth of options offered. For purposes of this analysis, we modified the Peer Plans defined on page 1 of this memorandum to include the TFI-managed Connecticut Direct Plan and to exclude the Kansas Learning Quest Plan. Thus, the Peer Plans for investment purposes include:

- Connecticut, Michigan and Wisconsin – managed by TFI
- Nevada Vanguard – managed by Ascensus
- New Hampshire – managed by Fidelity
- Kansas Schwab – managed by American Century
- Illinois – managed by Oppenheimer

Data for this section was provided by Morningstar Direct and Savingforcollege.com as of November 10, 2015[2].

Overall Structure. In terms of overall investment structure and fund families involved, all but Nevada Vanguard include non-proprietary investments:

OVERVIEW OF PLAN INVESTMENT STRUCTURE			
Direct Plan - *Program Manager*	**Management Style[3]**	**Open Architecture**	**Underlying Funds**
California - *TFI*	**Mostly Passive**	**Yes**	**Mostly TIAA-CREF (Others: DFA, T. Rowe Price and PIMCO)**
Connecticut - *TFI*	Passive	Yes	Mostly TIAA-CREF (Others: BlackRock, DFA, T. Rowe Price, etc.)
Illinois - *Oppenheimer*	Passive and Blended	Yes	Mostly Vanguard – Passive Oppenheimer and American Century – Blended
Kansas Schwab - *American Century*	Mostly Active	Yes	100% Schwab – Passive Mostly American Century and Schwab – Active
Michigan - *TFI*	Passive	Yes	Almost 100% TIAA-CREF (Other: Vanguard)
Nevada Vanguard - *Ascensus*	Passive	No	100% Vanguard
New Hampshire - *Fidelity*	Mostly Passive	Yes	Almost 100% Fidelity
Wisconsin - *TFI*	Passive	Yes	Mostly TIAA-CREF (Others: DFA, T. Rowe Price, etc.)

While the Peer Plans might be considered "open architecture" (based on at least one fund unrelated to the Program Manager), most of the funds offered are still proprietary to the Program Manager.[4] For example, the chart above shows that the TFI-managed Plans predominantly use TIAA-CREF funds. Illinois includes Vanguard funds for passive options but still relies upon Oppenheimer-managed funds for the blended portfolios.

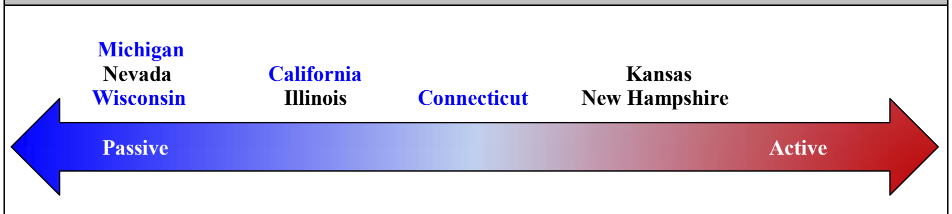
[2] Kansas Schwab Plan assets (as of September 30, 2015) were provided by American Century

[3] This column represents asset-weighted management style of age-based options only. See next section, *Management Style*

[4] In the case of Nevada Vanguard, we consider Ascensus a proxy for Vanguard given the dependent relationship between the two firms in direct plans generally

Management Style. The following chart shows additional information about the portfolio management style for the Peer Plans. Not surprisingly, the style skews towards passive management since seven out of eight Plans, including California, offer passively managed age-based options.

OVERVIEW OF ASSET-WEIGHTED AGE-BASED MANAGEMENT STYLE



Note: TFI-managed states shown in **blue**

As further detailed in the following chart, it is interesting to note that the TFI-managed Plans in Michigan and Wisconsin as well as Nevada Vanguard employ 100% passive management for all three of their age-based options. Four out of eight Plans – California, Illinois, Kansas and New Hampshire – offer a choice of passive and/or blended and active management. One Plan, Connecticut, uses a 100% blended management style.

MANAGEMENT STYLE OF AGE-BASED OPTIONS

	Number of Options		
Direct Plan	**Passive**	**Blend or Active**	**Asset Weighting**
California	**1 Passive**	**1 Active**	**69% Passive / 31% Active**
Connecticut	--	3 Blend	100% Blend
Illinois	1 Passive	1 Blend	49% Passive / 51% Blend
Kansas Schwab	4 Passive	4 Active	14% Passive / 86% Active[5]
Michigan	3 Passive	--	100% Passive
Nevada Vanguard	3 Passive	--	100% Passive
New Hampshire	1 Passive	2 Active	16% Passive / 84% Active
Wisconsin	3 Passive	--	100% Passive

[5] The Kansas Schwab index options were created only two years ago (versus 12 ago years for active options), so we caution against drawing any conclusions about the asset weighting at this point. We do note that while most of the Plan's age-based assets are currently invested in active portfolios, 14% in passive represents a significant accumulation in just two years. In fact, according to American Century, 40% of total purchases year-to-date through September 30, 2015 were for the passive age-based and static options, which suggests that when given the choice, investors are increasingly choosing passive management

Breadth of Investment Options. With respect to investment choice, California offers a healthy selection that is on par with or exceeds Peer Plans. The following chart shows that with 19 different investment options, California exceeds the average number of options offered by the Peer Plans (approximately 16 options). We also see differences in the TFI Plans: Michigan offers just 9 investment options while Wisconsin offers 22. Kansas Schwab offers the greatest number of age-based options – four passively managed and four actively managed options. Nevada Vanguard with 14 individual options is also worth noting.

Distribution of Investment Options				
Direct Plan	**Total**	**Age-based**	**Static**	**Individual**
California	**19**	**2**	**12**	**5**
Connecticut	11	3	4	4
Illinois	10	2	7	1
Kansas Schwab	21	8	12	1
Michigan	9	3	4	2
Nevada Vanguard	22	3	5	14
New Hampshire	15	3	6	6
Wisconsin	22	2	12	8
Average of Plans Shown	**16.1**	**3.3**	**7.8**	**5.1**

Taking a closer look at individual options offered, we note that the total number of individual options ranges widely from 1 to 14, with California right in the middle of the pack, as shown in the following chart:

Individual Options Offered					
Direct Plan	**# Options**	**Passively-Mgd**	**Actively-Mgd**	**Guaranteed**	**Short Term**
California	**5**	**Bond** **Equity**	**Social Choice**	**Principal Plus**	**--**
Connecticut	4	Bond	Social Choice	Principal Plus	Money Market
Illinois	1	--	--	--	Money Market
Kansas Schwab	1	--	--	--	Money Market
Michigan	2	Equity	--	Principal Plus	--
Nevada Vanguard	14	Equity Int'l Equity Bond TIPS	Large Cap Value Large Cap Growth Balanced High Yield	--	Short Term Reserves
New Hampshire	6	Equity Int'l Equity Bond	--	--	Money Market
Wisconsin	8	--	Social Choice	Principal Plus	Bank
Total Plans	**--**	**5**	**4**	**4**	**5**

As shown in the chart immediately above, six of eight Plans offer passively-managed or actively-managed individual options, which likely is appealing to investment savvy, do-it-yourself investors. We also note that Nevada Vanguard – with the highest number of individual investment options – offers the most diverse selection of passively- and actively-managed individual options across asset classes. TFI-managed California, Connecticut and Wisconsin each offer the actively-managed Social Choice Portfolio, while all four TFI Plans offer the TFI Principal Plus Interest Portfolio (all using the TIAA Life Funding Agreement). Two Plans – Illinois and Kansas – only offer the bare minimum of one Money Market.

More broadly, we also reviewed asset classes offered by California and Peer Plans as compared to the rest of the industry. The following chart shows a list of non-traditional asset classes that can play important roles in diversifying an investment portfolio to enhance the risk-return profile over time. California includes most of the asset classes either as part of its asset allocation strategies or as an individual option, as do other TFI-managed Plans and New Hampshire. Surprisingly, Illinois and Nevada Vanguard – the two Plans with consistently higher asset and account growth rates – only offer a few of the listed asset classes.

ASSET CLASSES OFFERED						
Direct Plan	**International Equity**	**Emerging Market Equity**	**Real Estate**	**Commodities**	**ETF**	**Guaranteed**
California	**X**	**X**	**X**			**X**
Connecticut	X	X	X			X
Illinois	X					
Kansas Schwab	X					
Michigan	X	X	X			X
Nevada Vanguard	X					
New Hampshire	X	X	X	X		
Wisconsin	X	X	X			X
529 Savings Plans[6]	**91%**	**52%**	**46%**	**16%**	**17%**	**22%**

[6] Represents data compiled as of October 15, 2014

IV. COMPARISON OF FEES

The following chart shows the weighted average total fees by management style for the age-based options. As you can see, the range of fees varies widely but California passive and active fees are the lowest among all Peer Plans. This is consistent with California's positive Morningstar Pillar rating on Price.

WEIGHTED AVERAGE TOTAL FEES OF AGE-BASED OPTIONS[7]

Direct Plan	AUMs	Passive	Blend	Active
California	**$6,373,408,518**	**0.17%**	**--**	**0.53%**
Connecticut	$2,359,817,380	--	0.41 – 0.50%	--
Illinois	$3,820,713,845	0.20%	0.60%	--
Kansas Schwab	$2,800,311,503	0.30%	--	0.64 – 0.91%
Michigan	$4,141,935,791	0.17 – 0.18%	--	--
Nevada Vanguard	$11,818,446,309	0.19%	--	--
New Hampshire	$9,953,551,896	0.27%	--	0.80 – 1.29%
Wisconsin	$2,264,673,893	0.22 – 0.27%	--	--
Range	**--**	**0.17 – 0.30%**	**0.41 – 0.60%**	**0.53 – 1.29%**

In looking at pricing across Program Managers, it is interesting to note that despite much larger AUMs, the Nevada Vanguard and New Hampshire passive fees (0.19% and 0.27% (19 and 27 basis points), respectively) are higher than California's (0.17% or 17 basis points). This certainly distinguishes the California pricing among direct plans nationwide. But, we also note the same approximate basis point fee for passive options in California and Michigan despite the difference in AUMs. This may reflect Michigan's use of purely TIAA-CREF and a handful of Vanguard funds in contrast to California's inclusion of non-proprietary funds (e.g., DFA, T. Rowe Price and PIMCO). Nonetheless, there may still be room to fine-tune California's fees in the future.

[7] Morningstar Direct fee data as of November 10, 2015; CSPN AUM data as of December 31, 2015

V. OBSERVATIONS

Based upon our research, we conclude that California is generally well-positioned compared to the industry. This is based upon the following observations:

- Asset growth is on par with the National Direct market and Peer Plans generally
- Despite lagging on account growth, the gap is narrowing between the California growth rate and the National Direct and Peer Plan growth rates
- With respect to investment structures and breadth of investment options, California is well in line with the industry
- California's fees are among the lowest in the industry although there may be room for minor improvement going forward

On a whole, we view the ScholarShare Program favorably and believe that enhancements at the margin will further distinguish it from other 529 plans. Importantly, we also see no reason not to extend the Management Agreement by one year, particularly given recent improvement in account growth rates.

We welcome the opportunity to discuss any part of our analysis in more detail. Thank you.

PCA | PENSION CONSULTING ALLIANCE

MEMORANDUM

Date: February 19, 2016

To: ScholarShare Investment Board (SIB)

From: Pension Consulting Alliance, LLC (PCA)

CC: Allan Emkin – PCA; Eric White, CFA – PCA; Kay Ceserani – PCA

RE: **Tuition Financing, Inc. (TFI) Peer Comparison Review**

Summary

PCA has conducted a peer comparison review of the ScholarShare College Savings Plan. The review included an examination of the Plan's relative performance at both the Age-based and individual fund level, the asset allocation of Age-based options, available investments, and other considerations. In order to accomplish this, we looked at ScholarShare's Age-based portfolios' risk-adjusted performance compared to:

- The Morningstar median direct plan
- Other TFI managed plans
- Other plans with passive and active portfolios of similar size and characteristics to ScholarShare

We also examined the Plan's underlying mutual funds relative to their respective benchmarks and peer groups. We paid particular attention to the relative performance of the Plan's Age-based options as we believe this is the most important differentiator between competing plans within the 529 industry. We'll highlight the reason for this belief in more detail in the Discussion section. Generally, our findings are quite positive. In most circumstances, the performance of the Plan is equal to or superior to plans in the industry as well as the peers selected for comparison purposes on a risk-adjusted basis. As is expected, we found that asset allocation was the main driver of relative performance. In some cases the Plan's asset allocation aided relative performance, whereas in other cases, it weighed on performance. Overall, the Plan has a strong asset allocation and exceedingly strong performance from underlying funds. We believe the results should be viewed positively.

Discussion

As highlighted in the Summary, PCA was tasked with evaluating the performance of the Plan since the engagement of Tuition Financing, Inc. (TFI) as program manager. Our analysis focused on the two areas we believe are most pertinent, from an investment perspective, in comparing one 529 plan to another: the Age-based options and the underlying funds. The majority of our review focuses on the relative performance of the Plan's Age-based options relative to the industry as measured by the Morningstar Direct Plan Median and other peer comparison plans that we view as good proxies for comparison; namely, other TFI managed plans and other plans with passive and active portfolios of similar size and characteristics to ScholarShare.

Our analysis focused heavily on the performance of the Age-based options for a number of important reasons:

- The majority of assets and flows are in and toward Age-based options.
- Individual options are often used as building blocks of the Age-based options and are thus incorporated into the analysis.
- Asset allocation is the largest determinant of a portfolio's risk and return. Asset allocation is determined at the Plan level for Age-based options.
- There are four main factors in determining the outcome of any savings program: size of the investment, timing of the investment, asset allocation, and fund selection. When looking to compare plans, Age-based options represent the only area where the plan determines two of the four factors.

One issue that arises when comparing Age-based options across plans is the fact that plans differ on how often they transition their age bands. For example, one plan may have a single 0-7 age band, while a different plan may have 0-4 and 4-8 age bands. In recognizing this issue, PCA has decided to use Morningstar's four age band buckets: Age 0-6, Age 7-12, Age 13-18, and Age 19+. As an example, both the ScholarShare Age 0-4 and Age 5-8 segments are compared against the Morningstar Age 0-6 segment. While this eliminates the possibility of a true apples-to-apples comparison, we believe the overall conclusions are still worthwhile because the general relationship holds; plans consistently producing above average results are superior to plans consistently producing below average returns.

The remainder of this memo will focus on Age-based performance analysis relative to the industry as measured by the Morningstar Direct Plan Median, other TFI managed plans and other passive and active portfolios of similar size and characteristics to ScholarShare. In addition, we will briefly look at the underlying fund performance relative to their benchmarks and peer groups.

<u>Morningstar Direct Plan Median</u>

We compared the performance of the ScholarShare Age-based options to those of the Morningstar Direct Plan Median. Our analysis finds that both the active and passive portfolios perform well relative to the Morningstar median. In early age bands, both the active and passive portfolios perform in-line with or outperform the Morningstar median. Starting with the Age 13-15 band and persisting until the 19+ age band, a divergence arises in which the active age bands outperform the Morningstar median, while the Passive age bands underperform the median.

We have analyzed this discrepancy and identified the main cause to be the difference between the active and passive portfolios' Fixed Income composition. The passive portfolios have relatively large allocations to Treasury Inflation Protected Securities (TIPS), which the active portfolios do not. Over the 3-year measurement period, TIPS returned a negative 2% per year, while core fixed income returned a positive 3% per year. Since the active portfolios only have core fixed income exposure (and zero TIPS exposure) and the passive portfolios have a relatively large allocation to TIPS (>10% of total portfolio between Age 11-16) the spread between TIPS and core fixed income (roughly 5%) drives the relative performances. This explains why the active portfolios have done better than the passive portfolios. It also explains why the passive portfolios are below the median, which has a lower average allocation to TIPS than the passive portfolios.

Both the active and passive portfolios greatly outperformed the median in the 19+ age band due to the positive economics of the funding agreement.

Other TFI Managed Plans

PCA compared the performance of ScholarShare to other 529 plans managed by TFI for which they have been the program manager for a similar length of time. This peer group consists of the Connecticut, Mississippi, Oklahoma, and Oregon Direct sold actively managed 529 plans. Our analysis finds that all the Plan's actively managed age bands outperform all actively managed peer group age bands. This indicates that for a participant desiring active management, they would have received the best risk-adjusted results being in ScholarShare than in any of the other peer group plans.

Non-TFI Managed Plans

PCA compared the performance of ScholarShare to other 529 plans not managed by TFI but which had certain characteristics that make them similar to ScholarShare. We broke this analysis into two segments: one for plans with actively managed portfolios and one for plans with passively managed portfolios. The passively managed peer group consists of the Utah, Illinois, Nebraska, and Nevada plans; while the actively managed peer group consists of the Massachusetts, Illinois, Maryland, and Maine plans.

For the passively managed Age 0-6 and Age 7-12 bands, ScholarShare's performance was in-line or better than the peer group. However, for the Age 13-18 band, ScholarShare underperformed much of the peer group. This again can be attributed to the higher than peer group allocation to TIPS relative to core fixed income. ScholarShare significantly outperformed in the Age 19+ band. For the actively managed portfolios, ScholarShare performed in-line or better relative to its peer group in all age bands.

Relative to other non-TFI managed plans, ScholarShare largely performed as well as or outperformed its peer groups. The main outlier was the performance of the later passive age bands for which we have already identified the reason. In regards to this underperformance, we would caution against making any outsized conclusion and note that this is a relatively brief snapshot in time, and results are highly impacted by that fact. The relatively larger allocation to TIPS worked as a drag on performance for the measurement period but does not indicate TIPS are less desirable than core fixed income within the portfolios. We suspect that this drag on performance will be transitory as the economic and capital market environment evolves.

Underlying Fund Performance

In addition to evaluating ScholarShare's Age-based portfolios, PCA also reviewed the underlying mutual funds, which comprise both the building blocks of the Age-based options and the stand-alone fund options for the Plan. Since the revamping of the ScholarShare Plan with TFI as program manager, no underlying mutual fund has been placed on Watch status for performance reasons. This is a feat unmatched by any other PCA client utilizing actively managed funds. Given the realities of actively managed mutual funds, this achievement will surely end; however, it is a surprising and impressive accomplishment over the measurement period.

When evaluating the efficacy of actively managed funds, two key questions are paramount:

1. Has the fund outperformed its stated benchmark on a risk-adjusted basis?
2. How has the fund performed relative to its peers?

Question one is important due simply to the fact that an investor chooses active management to accomplish just that. An investor can usually replicate the performance of a benchmark at very low cost (through a passive index fund), so an active manager unable to outperform the benchmark on a risk-adjusted basis hinders an investor through both foregone returns and higher fees. Question two tries to address (regardless of the answer to question one) whether the active manager is superior to other funds available to the investor.

In general, the actively managed funds within the ScholarShare Plan have outperformed both their respective benchmark and peer groups. Of the actively managed funds in the Plan nine out of 13 (or 69%) have outperformed their respective benchmarks since the inception of TFI as program manager. In addition, 11 out of the 13 funds (or 85%) have produced results in the top half of their respective peer groups, of which eight funds (or 62%) have performed in the top quarter of their peer group.

Based on this, we can see that the underlying funds in the ScholarShare program, in aggregate, can answer affirmatively to both questions. The measurement period happens to coincide with a period, regarded by many in the asset management industry, of being quite challenging for active portfolio management. This makes the fact that 69% of the actively managed funds within the Plan outperformed their respective benchmarks over this time much more impressive.

PCA also evaluated the passively managed underlying mutual funds, which act as building blocks for the Age-based option and represent stand-alone funds within the Plan. We measured how closely the funds tracked their respective benchmarks and concluded that all passively managed funds have tracked their respective benchmark well within what we consider a tolerable level of deviation.

Conclusion

PCA has reviewed the performance of the ScholarShare program since the inception of TFI as program manager. Over this time period, the Plan has performed well on both an absolute and relative basis. The Plan's Age-based portfolios consistently perform in-line with or outperform the Morningstar Direct Median Fund and the custom peer groups PCA created for comparison purposes on a risk-adjusted basis. In the few instances where the Plan underperformed, there is a clearly identified reason for the underperformance; a reason that will likely be transitory in nature as capital markets revert to the mean over time. As such, we do not believe action should be taken at this time to address the underperformance. The Plan's underlying mutual funds have performed extremely well versus both their respective benchmarks and peer groups.

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