SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO:	DATE: 4/24/2019
Retirement Board of Authority	
SUBJECT:	ITEM #: 2018/2019-015
Public Comments	Enclosure: No
	Action Item No

Prepared by: Keenan Financial Services

Requested by: Retirement Board of Authority

BACKGROUND:

The public may address the Retirement Board of Authority on any matter pertaining to the Board that is not on the agenda.

RECOMMENDATION:

The Chair reserves the right to limit the time of presentations by individual or topic.

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO:	DATE: 4/24/2019
Retirement Board of Authority	
SUBJECT:	ITEM #: 2018/2019-016
Approval of Agenda	Enclosure: Yes
	Action Item Yes

Prepared by: Keenan Financial Services

Requested by: Retirement Board of Authority

BACKGROUND:

Under California Government Code Section §54950 (The Ralph M. Brown Act) the "Legislative Body" is required to post an agenda detailing each item of business to be discussed. The Authority posts the agenda in compliance with California Government Code Section §54954.2.

STATUS:

Unless items are added to the agenda according to G.C. §54954.2 (b) (1) (2) (3) the agenda is to be approved as posted.

RECOMMENDATION:

Subject to changes or corrections, the agenda is to be approved.

AGENDA

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING
April 24, 2019
1:30 PM - 3:00 PM

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
College Vista
3401 CSM Drive
San Mateo, CA. 94402
(650) 358-6828

I. CALL TO ORDER

II. ROLL CALL

MEMBERS

Chief Financial Officer	Bernata Slater
Vice Chancellor of Human Resources & Employee Relations	Eugene Whitlock
Controller	Nicole Wang
Classified Representative	Kathy McEachron
Academic Representative	Bruce Maule

PROGRAM COORDINATOR

Assistant Vice President, Keenan Financial Services	Roslyn Washington

CONSULTANTS

Morgan Stanley (MS)	Cary Allison
Benefit Trust Company (BTC)	Scott Rankin

GUESTS

OTHER
None

III. PUBLIC COMMENTS — Information 2018/2019-015

The public may address the Retirement Board of Authority (RBOA) on any matter pertaining to the Retirement Board that is not on the agenda. The Chair reserves the right to limit the time of presentations by individual or topic.

IV. APPROVAL OF AGENDA — Action 2018/2019-016

The Retirement Board of Authority (RBOA) retains the right to change the order in which agenda items are discussed. Subject to review by the Retirement Board, the agenda is to be approved as presented. Items may be deleted or added for discussion only according to G.C. Section 54954.2.
PUBLIC COMMENTS:

V. APPROVAL OF MINUTES

Action
2018/2019-017

The Retirement Board of Authority (RBOA) will review the Minutes from the previous meeting on **October 30, 2018**, for any adjustments and adoption.
PUBLIC COMMENTS:
BOARD CONSIDERATION:

VI. INVESTMENTS

PORTFOLIO PERFORMANCE REVIEW

Action
2018/2019-018

Morgan Stanley (MS) will review the overall performance of the District's Public Entity Investment Trust Portfolio.
PUBLIC COMMENTS:

MARKET OVERVIEW

Information
2018/2019-019

Morgan Stanley (MS) will provide an overview of the actions of the capital markets since the last Retirement Board of Authority (RBOA) meeting.
PUBLIC COMMENTS:
BOARD CONSIDERATION:

INVESTMENT POLICY STATEMENT REVIEW

Action
2018/2019-020

The Retirement Board of Authority shall, with the assistance of Benefit Trust Company and Morgan Stanley, review the Investment Policy Statement setting forth the investment objectives for the Trust. Key to this process is a review of the Board's time horizon for investment, short-term liquidity needs, attitudes as well as the capacity to accept investment risk.
PUBLIC COMMENTS:
BOARD CONSIDERATION:

VII. EDUCATION

Information
2018/2019-021

The purpose of this and all Retirement Board of Authority meetings is the continuing education of Retirement Board members on the status of the funds held in the Trust and the fiduciary duties of the Retirement Board members. All of the agenda items are included in furtherance of that purpose. Investment in monies for the long term carries with it a fiduciary liability. A discussion led by Morgan Stanley will present the annual update of their capital market assumptions.
PUBLIC COMMENTS:
BOARD CONSIDERATION:

VIII. ADMINISTRATION

ELECTION OF NEW RETIRMENT BOARD OF AUTHORITY (RBOA) CHAIR

Action
2018/2019-022

The Retirement Board of Authority (RBOA) has been duly appointed by San Mateo County Community College District and in accordance with the provisions of **the RBOA Bylaws** the RBOA shall elect a new Chair to facilitate the management/operational activities of the Retirement Board of Authority.
PUBLIC COMMENTS:
BOARD CONSIDERATION:

ELECTION OF VICE-CHAIR FOR THE RETIREMENT BOARD OF AUTHORITY

Action
2018/2019-023

The Retirement Board of Authority (RBOA) has been duly appointed by the San Mate County Community College District Board of Trustees, and will elect a Vice-Chair to facilitate the management/operational activities of the Retirement Board of Authority in the absence of the RBOA Chair.
PUBLIC COMMENTS:
BOARD CONSIDERATION:

DISBURSEMENT REPORT

Action
2018/2019-024

The Retirement Board of Authority (RBOA) members will ratify "reasonable fees" associated with GASB compliance and the Management/Operational duties of the District's OPEB Investment Trust.
PUBLIC COMMENTS:
BOARD CONSIDERATION:

ACTUARIAL VALUATION STUDY REVIEW

Information
2018/2019-025

The Retirement Board of Authority (RBOA) membership will review and analyze the status of updates to the Actuarial Valuation Study to maintain compliance with GASB 74/75 standards.
PUBLIC COMMENTS:
BOARD CONSIDERATION**:**

STATUS OF DISTRICT'S CURRENT OPEB PLAN INDEPENDENT AUDITOR'S REPORT

Action
2018/2019-026

The Independent Auditors Report provides the District's OPEB Plan with an Independent Auditor's certification of GASB accounting and financial reporting standards for OPEB expenses, OPEB liabilities, Note disclosures and Required Supplementary Information (RSI).
PUBLIC COMMENTS:
BOARD CONSIDERATION:

FUTURE TRANSFER OF ASSETS INTO THE TRUST **Information**
2018/2019-027

Based on the current Actuarial Valuation Study, the Retirement Board of Authority (RBOA) will discuss the OPEB deposits scheduled by the District to be transferred into the Investment Trust.
PUBLIC COMMENTS:
BOARD CONSIDERATION:

IX. INFORMATION REPORTS

RETIREMENT BOARD OF AUTHORITY COMMENTS **Information**
2018/2019-028

Each member may report about various matters involving the Retirement Board of Authority. There will be no Retirement Board discussion except to ask questions or refer matters to staff, and no action will be taken unless listed on a subsequent agenda.

PROGRAM COORDINATOR/CONSULTANT COMMENTS **Information**
2018/2019-029

The Program Coordinator and Consultants will report to the Retirement Board of Authority about various matters involving the Authority. There will be no Authority discussion except to ask questions, and no action will be taken unless listed on a subsequent agenda.

X. DATE, TIME AND AGENDA ITEMS FOR NEXT MEETING **Information**
2018/2019-030

In addition to standing Agenda items, members and visitors may suggest additional items for consideration at the next Retirement Board of Authority meeting.
PUBLIC COMMENTS*:*

XI. ADJOURNMENT

Americans with Disabilities Act The San Mateo County Community College District Retirement Board of Authority conforms to the protections and prohibitions contained in Section 202 of the Americans with Disabilities Act of 1990 and the federal rules and regulations adopted in implementation thereof. A request for disability-related modification or accommodation, in order to participate in a public meeting of the San Mateo County Community College District Retirement Board of Authority meeting, shall be made to: Bernata Slater, Chief Financial Services, San Mateo County Community College District, 3401 CMS Drive, San Mateo, CA 94402.

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO: Retirement Board of Authority	DATE: 4/24/2019
SUBJECT: Approval of Minutes	ITEM #: 2018/2019-017
	Enclosure: Yes
	Action Item Yes

Prepared by: Keenan Financial Services

Requested by: Retirement Board of Authority

BACKGROUND:

As a matter of record and in accordance with the Brown Act, minutes of each meeting are kept and recorded.

STATUS:

The Retirement Board of Authority will review the Minutes from the previous meeting on **October 30, 2018.**

RECOMMENDATION:

Subject to changes or corrections, the minutes are to be approved.

MINUTES

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING
October 30, 2018
10:00 AM–12:00 PM

I. CALL TO ORDER

1. The meeting was called to order at 10:16 AM by Roslyn Washington.

II. ROLL CALL

1. All Retirement Board of Authority (RBOA) members were present:
   Bernata Slater, Chief Financial Officer,
   Harry Joel, Vice President of Special Projects.
   Nicole Wang, Controller,
   Kathy McEachron, Classified Representative,
   Bruce Maule, Academic Representative AFT 1493.

2. All Coordinators/Consultants were present:
   Roslyn Washington, Senior Account Manager, Keenan Financial Services,
   Cary Allison, Senior Vice President, Morgan Stanley,
   Mark Payne, Morgan Stanley,
   Scott Rankin, Senior Vice President, Benefit Trust Company.

3. The following Guests were present:
   Peter Fitzsimmons, District Budget Officer.

III. PUBLIC COMMENTS

1. There were no public comments.
2. This item is information only.

IV. APPROVAL OF AGENDA

1. Bruce Maule Moved to approve the Agenda as presented; Motion was seconded by Bernata Slater and was unanimously approved by all of the RBOA members present.

V. APPROVAL OF MINUTES

1. Kathy McEachron Moved to approve the Minutes as presented; Motion was seconded by Bruce Maule and was unanimously approved by all of the RBOA members present.

VI. INVESTMENTS

1. Portfolio Performance Review

a. Mark Payne of Morgan Stanley (MS) reviewed the performance of the Trust's accounts as of **September 30. 2018**.
b. The Portfolio Value as of **September 30, 2018** was **$117,108,418.63.**

Time weighted return net of fees

Month to Date	Quarter to Date	Year to Date	Latest 1 Year	Annualized latest 3 Year	Annualized latest 5 Year	Annualized Inception to Date
-0.24	1.85	2.06	4.71	7.70	5.64	6.57

c. Bruce Maule Moved to approve the Portfolio Performance Review as presented; Motion was seconded by Bernata Slater and was unanimously carried by all RBOA members present.

2. Market Overview

a. Cary Allison gave an overview of the Markets since the last RBOA meeting.
b. Why have we seen a correction? The District is worried about earnings growth next year. This year Earnings have been up 20-25% over last year. We are also concerned about tariffs. We don't think there will be a trade war, but the fear is still affecting the market.
c. We think they are raising rates because they are afraid of inflation.
d. With the 10-year US Treasury yield rising more rapidly and piercing 3% for the first time since 2011, stocks have started to struggle in a way investors haven't had to face in a long time.
e. Rising interest rates have reached a point at which they have become a constraint on valuations.
f. Gross domestic product is up to 4.2%. Morgan Stanley feels the GDP will hit 3% and we are not too concerned about inflation.
g. The Federal Reserve has been the largest buyer of treasuries. You would think the cost of treasuries would go down, but it hasn't yet.
h. Cary also advised that short term rates are controlled by the Federal Reserve. Last year they raised interest rates 1x. This year rates have been raised 2x's and we expect them to raise another two more times this year and 2-4 more times next year.
i. Stocks are still controlled by earnings. Earnings are still doing very well.
j. The mid-term elections should bring a positive effect in the market. Historically markets have always done well in the 12 months following mid-term elections.
k. This item is information only.

VII. ADMINISTRATION

1. Annual Reporting on the Status of the Trust

a. Roslyn Washington presented the Annual Report on the Status of the Trust for the fiscal year ending June 30, 2018.
b. Bruce Maule Moved to approve the Annual Report on the Status of the Trust; Motion was seconded by Kathy McEachron and was unanimously approved by all of the RBOA members present.

2. Disbursement Report

a. Roslyn Washington presented a Trust Disbursement Report reflecting fiduciary withdrawals and fees paid to Keenan, BTC & Morgan Stanley for their services for the period August 1, 2018 - October 1, 2018.

b. Bruce Maule Moved to ratify the Disbursement Report as presented; Motion was seconded by Kathy McEachron and was unanimously carried by all RBOA members present.

3. **Updates to the Comprehensive Compliance Plan, including the "Substantive Plan"**
    a. Roslyn Washington addressed the RBOA and advised that the Service Rep. worked with the District to gather information to update the Substantive Plan for the fiscal year ended June 30, 2018. One disk was missing.
    b. It needs to be redone to include the new Actuarial Valuation Study.
    c. This is information only.

4. **Actuarial Valuation Study Update**
    a. The District's current Actuarial Valuation Study has an effective date of **September 26, 2017**.
    b. This is the first year they won't pull entire $8M paygo from gen fund. They will be taking a portion (approx. $3.5M) from the reserve fund. .
    c. This item is information only.

5. **Future Transfer of Assets into the Trust**
    a. $2.6M will be transferred into the Trust between this fiscal year…may be even more.
    b. This item is information only.

6. **Report to the Governing Board of Trustees**
    a. A presentation was given to the San Mateo County CCD governing Board of Trustees on August 23, 2018.
    b. This item is information only

VIII. INFORMATION REPORTS

1. **Retirement Board of Authority Comments**
    a. There were no RBOA comments.
    b. This is information only.

2. **Program Coordinator/Consultant Comments**
    a. There were no Coordinator/Consultant comments.
    b. This is information only.

IX. DATE, TIME AND AGENDA ITEMS FOR NEXT MEETING

a. **April 25, 2019 10:00 AM – 11:30 PM**.
b. This is information only.

X. ADJOURNMENT

a. The meeting was adjourned by Roslyn Washington at 12:20 AM.

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO:	DATE: 4/24/2019
Retirement Board of Authority	
SUBJECT:	ITEM #: 2018/2019-018
Portfolio Performance Review	Enclosure: Yes
	Action Item Yes

Prepared by: Morgan Stanley

Requested by: Retirement Board of Authority

BACKGROUND:

As Board members of the Retirement Board of Authority you have a fiduciary responsibility as described in Government Code section 53215, et seq. As part of fulfilling your fiduciary responsibility, it is important to periodically review the District's OPEB Trust Portfolio.

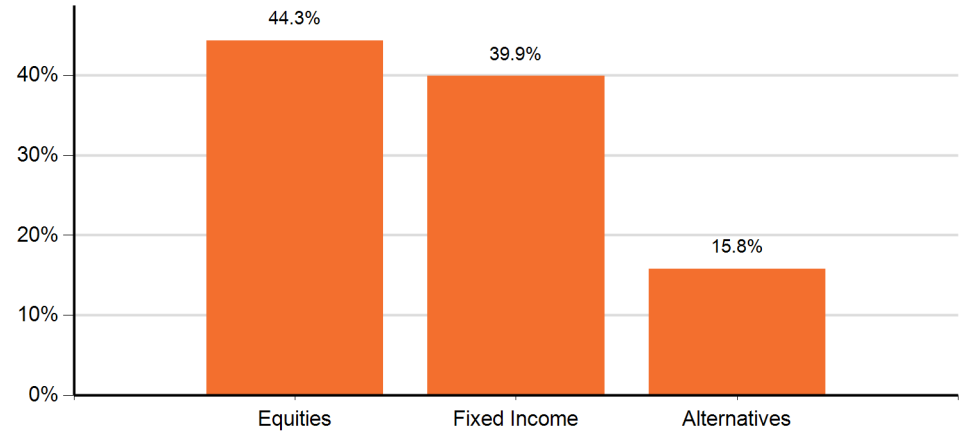
STATUS:

Morgan Stanley (MS) will provide a review of the District's OPEB Trust Portfolio Performance Report.

RECOMMENDATION:

The Retirement Board of Authority should review and accept the District's Public Entity Investment Trust Portfolio Report and file as appropriate.

Asset Allocation



Portfolio Summary

		Year to Date
Beginning Value	$	108,484,476.20
Net Contributions		-
Interest		-
Dividends		256,403.53
Change in Market Value		6,731,586.22
Management Fees		(67,055.08)
Ending Value	$	115,405,410.87

YTD: 12/31/2018 - 2/28/2019

Performance

	Market Value	Current Yield	Month to Date	Quarter to Date	Year to Date	Last 12 Months	Last 3 Years	Last 5 Years	Inception* to Date
Fixed Income	46,023,643.57	3.0	-0.35	1.16	1.16	2.01	3.46	2.45	4.04
Equities	51,155,290.82	0.9	2.96	12.52	12.52	-0.99	12.31	6.39	8.53
Alternatives	18,226,476.49	3.5	0.32	3.69	3.69	4.91	-	-	-
Total Account	**115,405,410.87**	**2.1**	**1.20**	**6.33**	**6.33**	**1.12**	**8.07**	**4.60**	**6.45**
Total Account (Net of Fees)		**2.1**	**1.17**	**6.27**	**6.27**	**0.76**	**7.68**	**4.23**	**6.08**
S&P 500 TR			*3.21*	*11.48*	*11.48*	*4.68*	*15.29*	*10.68*	*12.95*
MSCI EAFE			*2.55*	*9.29*	*9.29*	*-6.04*	*9.32*	*2.07*	*4.87*
MSCI ACWI Ex US Net			*1.95*	*9.66*	*9.66*	*-6.45*	*10.72*	*2.52*	*4.46*
Barclays Aggregate			*-0.06*	*1.00*	*1.00*	*3.17*	*1.69*	*2.32*	*3.07*
Barclays Global Agg Bd Unhedged			*-0.58*	*0.93*	*0.93*	*-0.58*	*1.96*	*0.77*	*1.62*
Futuris 7.0 Moderate Growth 45% ACWI & 55% BC Agg				-	-	-	-	-	-

* Inception date: 11/30/2009

Performance for periods greater than one year are annualized.

PORTFOLIO APPRAISAL

SAN MATEO COUNTY COMMUNITY COLLEGE FUTURIS PUBLIC ENTITY INVESTMENT TR BENEFIT TRUST ACCOUNT 0382

February 28, 2019

Quantity	Security	Security Symbol	Unit Cost	Total Cost	Price	Market Value	Pct. Assets	Cur. Yield
FIXED INC MUTUAL FUNDS								
Taxable Funds								
835,347.173	BLACKROCK TOTAL RETURN FD BD FD BLKRK CL	MPHQ.X	11.81	9,862,297.96	11.31	9,447,776.53	8.2	3.0
510,460.756	GUGGENHEIM FDS TR INVT GD BD INSTL	GIUS.X	18.35	9,365,073.35	18.28	9,331,222.62	8.1	3.7
450,184.617	HARTFORD WORLD BOND Y	HWDY.X	10.42	4,689,407.45	10.58	4,762,953.25	4.1	0.2
339,438.777	LEGG MASON BW GLOBAL OPPS BD IS	GOBS.X	10.81	3,667,754.23	10.12	3,435,120.42	3.0	0.0
675,206.772	PRUDENTIAL TOTAL RETURN BD FD	PTRQ.X	14.48	9,774,090.87	14.08	9,506,911.35	8.2	3.0
836,812.228	WESTERN ASSET FDS INC	WAPS.X	11.76	9,841,720.44	11.40	9,539,659.40	8.3	4.8
				47,200,344.30		46,023,643.57	39.9	3.0
				47,200,344.30		46,023,643.57	39.9	3.0
DOMESTIC EQUITY FUNDS								
Large Cap Funds								
198,393.779	ALGER FUNDS CAP APP FOCS Y	ALGY.X	36.61	7,264,115.83	34.64	6,872,360.50	6.0	0.0
190,854.154	COLUMBIA FDS SER TR I	COFY.X	23.27	4,441,182.98	24.44	4,664,475.52	4.0	1.0
130,109.667	OAKMARK SELECT INSTITUTIONAL	OANL.X	44.08	5,735,400.69	39.28	5,110,707.72	4.4	0.6
71,334.607	PRUDENTIAL WORLD FD INC JENNISON GBL Q	PRJQ.X	22.66	1,616,446.73	24.24	1,729,150.87	1.5	0.0
				19,057,146.24		18,376,694.62	15.9	0.4
Mid Cap Funds								
98,219.224	HARTFORD MIDCAP Y	HMDY.X	27.99	2,748,943.84	35.24	3,461,245.45	3.0	0.0
Small Cap Funds								
232,941.910	ALGER FDS SMALL CP FOCUS Z	AGOZ.X	12.51	2,913,780.81	20.99	4,889,450.69	4.2	0.0
51,772.395	UNDISCOVERED MANAGERS FDS BEHAVR VAL R6	UBVF.X	59.35	3,072,444.63	63.08	3,265,802.68	2.8	1.1
				5,986,225.44		8,155,253.37	7.1	0.4
				27,792,315.52		29,993,193.44	26.0	0.4
INTERNATIONAL FUNDS								
International								
55,195.082	AMERICAN FUNDS NEW PERSPECTIVE F2	ANWF.X	38.53	2,126,715.31	41.94	2,314,881.74	2.0	0.9
191,925.331	BRANDES INTERNATIONAL SMALL CAP R6	BISR.X	13.24	2,540,419.16	11.16	2,141,886.69	1.9	3.3

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PORTFOLIO APPRAISAL

SAN MATEO COUNTY COMMUNITY COLLEGE FUTURIS PUBLIC ENTITY INVESTMENT TR BENEFIT TRUST ACCOUNT 0382

February 28, 2019

Quantity	Security	Security Symbol	Unit Cost	Total Cost	Price	Market Value	Pct. Assets	Cur. Yield
299,299.353	HARTFORD INTERNATIONAL VALUE Y	HILY.X	14.55	4,354,436.12	14.59	4,366,777.56	3.8	2.4
105,576.609	JOHN HANCOCK FDS III INTL GROWTH R6	JIGT.X	28.41	2,999,029.77	25.98	2,742,880.30	2.4	0.6
138,739.553	OAKMARK INTERNATIONAL INVESTOR	OANI.X	28.58	3,964,912.31	22.83	3,167,423.99	2.7	1.9
221,233.426	THORNBURG INVESTMENT INCOME BUILDER	TIBO.X	20.97	4,638,275.73	21.20	4,690,148.63	4.1	1.0
				20,623,788.40		19,423,998.92	16.8	1.7
Emerging Markets								
27,401.836	AMERICAN FUNDS NEW WORLD F-2	NFFF.X	58.56	1,604,527.55	63.43	1,738,098.46	1.5	1.0
				22,228,315.95		21,162,097.38	18.3	1.6
ALTERNATIVE INVESTMENT FUNDS								
186,441.864	COHEN & STEERS RLTY INCM NEW SHS CL Z	CSZI.X	15.49	2,887,583.61	16.21	3,022,222.62	2.6	2.6
357,529.583	GUGGENHEIM MACRO OPPORTUNITIES INSTL	GIOI.X	26.41	9,441,071.53	26.01	9,299,344.45	8.1	4.1
339,832.413	LEGG MASON BW ALT	LMAM.X	10.31	3,504,946.63	10.29	3,496,875.53	3.0	3.7
98,327.231	PRUDENTIAL GLOBAL REAL ESTATE	PGRQ.X	24.77	2,435,114.15	24.49	2,408,033.89	2.1	2.3
				18,268,715.93		18,226,476.49	15.8	3.5
TOTAL PORTFOLIO				**115,489,691.70**		**115,405,410.87**	**100.0**	**2.1**

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SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO:	DATE: 4/24/2019
Retirement Board of Authority	
SUBJECT:	ITEM #: 2018/2019-019
Market Overview	Enclosure: Yes
	Action Item No

Prepared by: Morgan Stanley

Requested by: Retirement Board of Authority

BACKGROUND:

As Board members of the Retirement Board of Authority you have a fiduciary responsibility as described in Government Code section 53215, et seq. In fulfilling your fiduciary responsibility, it is important to understand the impact of market conditions on the assets in the Investment Trust.

STATUS:

Morgan Stanley (MS) will provide an overview of current capital market conditions.

RECOMMENDATION:

The Retirement Board of Authority should receive the information and file accordingly.

Portfolio Update – 1st Quarter 2019

Cary M. Allison, CIMA®
Senior Institutional Consultant
U.S. Government Entity Specialist

Morgan Stanley

Portfolio Returns

As of March 31st, 2019

Portfolio	*3 Mo*	*1-Yr*	*3-Yr*	*5-Yr*	*10-Yr*
Fixed Income	2.60%	2.68%	3.47%	3.07%	6.67%
Benchmark (Barclay's Aggregate)	*2.94%*	*4.48%*	*2.03%*	*2.74%*	*3.77%*
Conservative	4.22%	2.78%	4.45%	3.41%	7.55%
Benchmark (15% ACWI / 85% BC Agg)	*4.33%*	*4.20%*	*3.34%*	*3.36%*	*5.14%*
Moderate	6.06%	2.77%	5.63%	4.16%	8.83%
Benchmark (30% ACWI / 70% BC Agg)	*5.72%*	*3.88%*	*4.64%*	*3.94%*	*6.49%*
Moderate Growth	7.41%	2.98%	6.59%	4.74%	9.74%
Benchmark (45% ACWI / 55% BC Agg)	*7.11%*	*3.51%*	*5.93%*	*4.50%*	*7.80%*
Growth	9.12%	2.86%	7.69%	5.35%	10.84%
Benchmark (60% ACWI / 40% BC Agg)	*8.51%*	*3.09%*	*7.21%*	*5.03%*	*9.07%*
Aggressive Growth	11.00%	3.43%	9.04%	6.08%	12.22%
Benchmark (75% ACWI / 25% BC Agg)	*9.92%*	*2.62%*	*8.48%*	*5.54%*	*10.31%*

NOTE: The portfolios listed above are sample representations only and may be altered from time to time at the discretion of the trustee.

Quarter	Fixed Income	Conservative	Moderate	Moderate Growth	Growth	Aggressive Growth
Quarterly Returns						
3/31/2008	0.72%	-0.37%	-1.49%	-3.40%	-5.13%	-6.50%
6/30/2008	-1.51%	-1.76%	-1.75%	-1.47%	-1.25%	-0.97%
9/30/2008	-3.19%	-4.12%	-5.53%	-7.08%	-8.88%	-11.99%
12/31/2008	0.28%	-2.90%	-6.76%	-9.65%	-13.11%	-17.53%
3/31/2009	-0.34%	-2.21%	-4.38%	-5.50%	-7.11%	-9.17%
6/30/2009	7.63%	9.64%	12.08%	13.79%	15.91%	19.16%
9/30/2009	8.04%	9.48%	11.18%	12.23%	13.84%	15.75%
12/31/2009	2.06%	2.26%	2.60%	2.90%	3.18%	3.67%
3/31/2010	3.31%	3.59%	3.83%	3.97%	4.23%	4.46%
6/30/2010	1.74%	-0.35%	-2.38%	-3.89%	-5.73%	-7.85%
9/30/2010	4.69%	6.20%	7.61%	8.68%	9.87%	11.45%
12/31/2010	-0.30%	0.98%	2.45%	3.57%	5.03%	6.92%
3/31/2011	1.50%	1.88%	2.26%	2.58%	3.09%	3.58%
6/30/2011	2.15%	1.93%	1.61%	1.28%	0.91%	0.49%
9/30/2011	0.17%	-2.89%	-5.81%	-7.78%	-10.68%	-13.70%
12/31/2011	1.52%	2.35%	3.30%	3.98%	4.96%	6.08%
3/31/2012	2.75%	4.06%	5.37%	6.27%	7.62%	9.09%
6/30/2012	1.89%	0.57%	-0.66%	-1.62%	-2.93%	-4.29%
9/30/2012	3.75%	4.14%	4.37%	4.57%	4.92%	5.18%
12/31/2012	1.52%	1.89%	2.22%	2.39%	2.63%	2.83%
3/31/2013	0.60%	1.47%	2.55%	3.32%	4.37%	5.57%
6/30/2013	-2.99%	-2.48%	-1.80%	-1.36%	-0.74%	-0.09%
9/30/2013	0.94%	1.64%	2.58%	3.30%	4.29%	5.24%
12/31/2013	0.94%	1.90%	2.85%	3.43%	4.36%	5.33%
3/31/2014	2.14%	2.04%	1.97%	2.05%	1.89%	1.85%
6/30/2014	2.52%	2.87%	3.30%	3.65%	4.02%	4.37%
9/30/2014	-0.04%	-0.60%	-1.11%	-1.56%	-2.17%	-2.61%
12/31/2014	0.83%	0.59%	0.91%	1.18%	1.50%	1.61%
3/31/2015	1.54%	1.63%	1.89%	2.15%	2.37%	2.48%
6/30/2015	-1.70%	-1.40%	-1.03%	-0.87%	-0.60%	-0.30%
9/30/2015	-0.38%	-1.97%	-3.16%	-3.99%	-5.19%	-6.33%
12/31/2015	-0.42%	0.57%	1.53%	2.06%	2.89%	3.74%
3/31/2016	2.62%	2.10%	1.76%	1.64%	1.36%	1.05%
6/30/2016	2.26%	1.92%	1.75%	1.68%	1.54%	1.42%
9/30/2016	1.27%	2.05%	2.89%	3.48%	4.27%	5.05%
12/31/2016	-1.78%	-1.20%	-0.85%	-0.55%	0.08%	0.47%
3/31/2017	1.95%	2.52%	3.32%	3.85%	4.41%	5.12%
6/30/2017	2.05%	2.35%	2.73%	3.00%	3.32%	3.67%
9/30/2017	1.37%	1.82%	2.44%	2.79%	3.33%	3.81%
12/31/2017	0.80%	1.32%	1.95%	2.43%	3.03%	3.69%
3/31/2018	-0.24%	-0.33%	-0.33%	-0.22%	-0.24%	-0.18%
6/30/2018	-0.57%	-0.17%	0.21%	0.63%	1.11%	1.91%
9/30/2018	0.18%	0.66%	1.43%	1.93%	2.43%	3.05%
12/31/2018	0.47%	-1.86%	-4.67%	-6.53%	-8.98%	-11.27%
3/31/2019	2.60%	4.22%	6.06%	7.41%	9.12%	11.00%

Quarter	Fixed Income	Conservative	Moderate	Moderate Growth	Growth	Aggressive Growth
Annualized Rolling Returns (per year)						
1 Year	2.68%	2.78%	2.77%	2.98%	2.86%	3.43%
2 Years	3.35%	4.00%	4.83%	5.56%	6.24%	7.34%
3 Years	3.47%	4.45%	5.63%	6.59%	7.69%	9.04%
4 Years	2.61%	3.13%	3.94%	4.57%	5.25%	6.14%
5 Years	3.07%	3.41%	4.16%	4.74%	5.35%	6.08%
6 Years	2.71%	3.35%	4.40%	5.21%	6.12%	7.17%
7 Years	3.45%	4.04%	5.00%	5.72%	6.54%	7.47%
8 Years	3.85%	4.21%	4.90%	5.40%	5.94%	6.56%
9 Years	4.28%	4.72%	5.46%	6.00%	6.61%	7.33%
10 Years	6.67%	7.55%	8.83%	9.74%	10.84%	12.22%
Annual Returns						
2008	-3.70%	-8.88%	-14.75%	-20.09%	-25.83%	-32.79%
2009	18.28%	20.03%	22.25%	24.18%	26.47%	29.88%
2010	9.71%	10.70%	11.74%	12.48%	13.39%	14.71%
2011	5.44%	3.21%	1.10%	-0.38%	-2.47%	-4.71%
2012	10.27%	11.05%	11.67%	11.94%	12.49%	12.93%
2013	-0.56%	2.49%	6.25%	8.89%	12.75%	16.92%
2014	5.54%	4.95%	5.11%	5.35%	5.24%	5.19%
2015	-0.98%	-1.21%	-0.85%	-0.78%	-0.74%	-0.72%
2016	4.38%	4.92%	5.63%	6.36%	7.40%	8.17%
2017	6.31%	8.25%	10.85%	12.62%	14.85%	17.30%
2018	-0.16%	-1.71%	-3.42%	-4.34%	-5.96%	-6.99%
2019 YTD	2.60%	4.22%	6.06%	7.41%	9.12%	11.00%
Statistics						
Worst Quarter	-3.19%	-4.12%	-6.76%	-9.65%	-13.11%	-17.53%
Average Quarter	1.23%	1.25%	1.32%	1.35%	1.40%	1.47%
Best Quarter	8.04%	9.64%	12.08%	13.79%	15.91%	19.16%
Worst 1-Year Period	-4.71%	-10.56%	-17.25%	-21.83%	-27.37%	-34.71%
Average 1-Year Period	5.31%	5.47%	5.89%	6.18%	6.56%	7.00%
Best 1-Year Period	22.61%	27.15%	32.75%	36.63%	41.91%	49.37%
Worst 3-Year Rolling Period	1.30%	2.09%	3.29%	3.73%	2.12%	0.04%
Average 3-Year Rolling Period	5.69%	6.07%	6.79%	7.28%	7.89%	8.56%
Best 3-Year Rolling Period	13.68%	15.32%	17.40%	18.83%	20.68%	23.50%
Worst 5-Year Rolling Period	2.87%	3.15%	3.57%	3.96%	3.34%	1.55%
Average 5-Year Rolling Period	5.68%	6.19%	7.12%	7.76%	8.59%	9.51%
Best 5-Year Rolling Period	10.75%	12.57%	14.95%	16.63%	18.91%	22.03%

MODEL PORTFOLIOS									
EQUITIES	**Style**	**Ticker**	**Expenses**	**Fixed Income**	**Conservative**	**Moderate**	**Moderate Growth**	**Growth**	**Aggressive Growth**
Domestic Equities									
Large Cap Domestic Equities									
Alger Focus Equity	Large Growth	ALGYX	0.65%	0%	1%	3.5%	6%	6%	8%
Columbia Contrarian Core	Large Blend	COFYX	0.66%	0%	2%	3%	4%	5%	7%
Oakmark Select	Large Value	OANLX	0.82%	0%	2%	4%	4%	6%	7%
				0%	5%	11%	14%	17%	22%
Small/Mid Cap Domestic Equities									
Hartford Midcap	Mid Growth	HMDYX	0.76%	0%	0%	1%	2%	4%	6%
Alger Small Cap Focus	Small Growth	AGOZX	0.90%	0%	1%	3.0%	4%	5%	6%
Undiscovered Managers Behavioral Value	Small Blend	UBVFX	0.79%	0%	1%	1%	2%	4%	5%
				0%	2%	5%	8%	13%	17%
Real Estate Investment Trusts									
Cohen & Steers Real Estate Securities	Real Estate	CSZIX	0.88%	0%	1%	2%	2%	3%	4%
PGIM Global Real Estate	Real Estate	PGRQX	0.80%	0%	0%	1%	2%	2.5%	3%
				0%	1%	3%	4%	5.5%	7%
Total Domestic Equities & REITs				0%	8%	19%	26%	35.5%	46%
International/Global Equities									
John Hancock International Growth	Int'l Growth	JIGTX	0.93%	0%	2%	2.0%	3%	3.5%	4%
Brandes International Small Cap	Int'l SMID	BISRX	1.00%	0%	1%	1.5%	2%	3%	4%
American Funds New Perspectives Fund	Global Growth	ANWFX	0.55%	0%	1%	2%	2.0%	3%	4%
American Funds New World Fund	Emerging Markets	NFFFX	0.76%	0%	1%	1%	1.5%	2%	3%
PGIM Jennison Global Opportunities	Global Growth	PRJQX	0.84%	0%	0%	1%	1.5%	2%	3%
Oakmark International	Int'l Value	OANIX	0.81%	0%	1%	2%	3%	3%	3%
Hartford International Value	Int'l Value	HILYX	0.91%	0%	1%	2%	3%	4%	4%
Thornburg Investment Income Builder	Global Blend	TIBOX	0.85%	0%	1%	3%	3%	5%	5%
				0%	8%	15%	19%	25.5%	30%
Total Equities				*0%*	*16%*	*33%*	*45%*	*61%*	*76%*
FIXED INCOME									
BlackRock Total Return	Domestic Bond	MPHQX	0.39%	16%	14%	11%	9%	6%	4%
Guggenheim Investment Grade Bond	Domestic Bond	GIUSX	0.50%	16%	14%	11%	9%	6%	4%
PGIM Total Return Bond	Domestic Bond	PTRQX	0.46%	16%	14%	11%	9%	6%	4%
Western Asset Core Plus Bond	Domestic Bond	WAPSX	0.42%	16%	14%	11%	9%	6%	4%
Guggenheim Macro Opportunities	Domestic Bond	GIOIX	0.97%	16%	12%	11%	9%	6%	4%
Hartford World Bond	Global Bond	HWDYX	0.67%	8%	7%	4%	4%	3%	1%
Brandywine Global Opportunities Bond	Global Bond	GOBSX	0.56%	6%	5%	4%	3%	3%	1.5%
Brandywine Global Alternative Credit	Global Bond	LMAMX	1.25%	6%	4%	4%	3%	3%	1.5%
Total Bonds			*Subtotals*	*100.0%*	*84.0%*	*67.0%*	*55.0%*	*39.0%*	*24.0%*
SUMMARY									
Total Equities				0%	16%	33%	45%	61%	76%
Total Fixed Income				100%	84%	67%	55%	39%	24%
Grand Total				100%	100%	100%	100%	100%	100%
Expense Ratio				0.60%	0.60%	0.65%	0.66%	0.70%	0.71%

NOTE: The portfolios listed above are sample representations only and may be altered from time to time at the discretion of the Trustee.

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO: Retirement Board of Authority	DATE: 4/24/2019
SUBJECT: Review of Investment Policy Statement	ITEM #: 2018/2019-020
	Enclosure: Yes
	Action Item Yes

Prepared by: Benefit Trust Company

Requested by: Retirement Board of Authority

BACKGROUND:

The Investment Policy Statement for the Trust must be reviewed periodically to ensure that it reflects the current investment objectives of the Retirement Board of Authority. The Investment Policy Statement governs the actions of the Discretionary Trustee and its Advisor in the selection and monitoring of investments for the trust.

STATUS:

The current members of the San Mateo County CCD Retirement Board of Authority, with the assistance of Benefit Trust Company (BTC) will review the Investment Policy Statement. No changes have been made nor recommended at this time.

RECOMMENDATION:

The Retirement Board of Authority shall discuss and reaffirm or take any action deemed necessary by the RBOA.

INVESTMENT POLICY STATEMENT

San Mateo County Community College District

The purpose of this Investment Policy Statement is to establish a comprehensive strategy for the acceptance and accumulation of invested assets under the **Futuris Public Entity Investment Trust** (the "**Trust**"), which has been adopted for use by **San Mateo County Community College District** (the "**Employer**") for, among other things, to assist the Employer in meeting applicable funding requirements for the payment of future retiree health and welfare obligations and other post-employment benefit obligations (generally referred to as "**OPEB Liability**"), but may also be used to fund other purposes related to excess funds of the Employer as allowable under applicable law.

This Investment Policy Statement shall be consistent with the governing law, including the Internal Revenue Code of 1986 as amended from time to time (the "**Code**"), applicable provisions of Governmental Accounting Standards Board Statement Nos. 43 and 45, California laws, including applicable provisions of the California Government Code.

TRUST FUNDING STATEMENT

The purpose of the Trust is to provide a uniform method of investing contributions and earnings of all contributed amounts between funds deposited within the Trust Fund, as such term is defined within the Trust. The Trust shall be funded primarily by irrevocable contributions made by the Employer, but may also include other contributions made by any Participant as determined necessary and appropriate under applicable circumstances and in compliance with underlying legal requirements. These contributions shall be remitted to the Trust on a discretionary basis, as determined by and through the direction of the Employer, or such delegated Trust.

RETIREMENT BOARD OF AUTHORITY

The Retirement Board of Authority (the "**RBOA**") is directly responsible for the implementation and oversight of this Investment Policy Statement. This responsibility includes the selection and ongoing evaluation of investments and/or investment managers in accordance with applicable laws and regulations. However, these investment responsibilities may be delegated to an authorized third-party trustee. In this case, the RBOA has appointed Benefit Trust Company ("**BTC**") as Discretionary Trustee and Trust Fund custodian, who may further designate and delegate any corresponding Investment Manager responsibilities as set forth below. On behalf of the Trust, and as approved by the RBOA, BTC shall administer the assets of the Trust in such a manner that the investments are:

- Prudent; in consideration of the stated purpose of the Trust, any underlying Plan and in accordance with Article 16, Section 17 of the California Constitution creating a Retirement System, and California Government Code Sections 53620 through 53622, as applicable;
- Diversified; among a broad range of investment alternatives;

- Permitted; in accordance with the terms of the Trust, any applicable Plan document and in accordance with California Government Code Sections 53620 through 53622 and other applicable requirements;
- Selected; for the exclusive benefit of the Plan participants as it relates to the funding of retiree health and welfare benefits, or as otherwise deemed appropriate for the purposes set forth by the Trust.

The above notwithstanding, the RBOA retains the responsibility to oversee the management of the Trust, including BTC's, or any successor trustee's, requirement that investments and assets held within the Trust continually adhere to the requirements of California Government Code.

INVESTMENT OBJECTIVES

The Trust authorizes the use of a broad range of investment choices that have distinctly different risk and return characteristics. In general, assets held in the Trust Fund will be for the primary purpose of meeting present and future OPEB Liability obligations and may be invested in accordance with California Government Code Sections 53600 through 53622 that subject to applicable legal requirements may provide greater latitude to increase purchasing power and capital growth potential if deemed prudent to do so.

Though investment responsibilities are delegated to the Trustee, the RBOA determines the target return that is applicable for this Trust as it relates to those assets held in the Trust Fund. Attachment A of this Investment Policy details the target return selected by the RBOA. The target return may be modified from time to time by amending the Appendix. Related to the investments and the holding of investments themselves, the Trustee may cause any or all of the assets of the Trust to be commingled, to the extent such investment and the issuance thereof would be exempt under the provisions of Sections 2(a)(36), 3(b)(1) or 3(c)(11) of the Investment Company Act of 1940 or Section 3(a)(2) of the Securities Act of 1933, with the assets of trusts created by others, causing such money to be invested as part of a common and/or collective trust fund.

PERIODIC ANALYSIS AND EVALUATION

The RBOA and/or its designees shall periodically meet with the Trustee to review investment performance reports that analyze the performance of the managers selected in each market sector that take into consideration:

- adherence to applicable legal constraints on investment prudence;
- consistency and adherence to stated investment management style and discipline;
- risk adjusted performance relative to managers with similar style;
- long-term investment performance relative to appropriate benchmarks; and
- changes in investment personnel managing the portfolio

ETHICS AND CONFLICT OF INTEREST

Officers, employees, and agents involved in the investment process shall refrain from personal business activities that could conflict with proper execution of the investment program, or which could impair their ability to make impartial decisions. Officers, employees, and agents involved in the investment process shall abide by the California Government Code Section 1090 et seq. and the California Political Reform Act (California Government Code Section 81000 et seq.)

AMENDMENT

The RBOA shall have the right to amend this Policy, in whole or in part, at any time and from time to time.

ADOPTION

The RBOA hereby adopts the provisions of this Investment Policy Statement as of this 16th day of September, 2014.

By: _____
Chief Financial Officer – Ray Chow

By: _____
Vice Chancellor of Human Resources & Employee Relations – Eugene Whitlock

By: _____
Controller – Anita Leong

By: _____
Academic Representative - Bruce Maule

By: _____
Kathy McEachron, Classified Representative

APPENDIX A: Target Return

Subject to the ability of the Retirement Board of Authority and Trustee to deviate from these guidelines as set forth under the heading "Investment Objectives" in the Statement, the Retirement Board of Authority has determined after due consideration to the time horizon of the trust, trust liquidity needs, and the District's risk tolerance and capacity for risk, that the Trust Fund shall be invested with the objective of achieving an annualized target net rate of return of 7% in order to meet the Plan's actuarial assumption (as determined by Retirement Board of Authority's Actuarial Consultant), as well as an additional 0.4% to cover the costs of trust administration, GASB 43 and GASB 45 compliance.

In accordance with Article 16 Section 17 of the California Constitution creating a retirement system and California Government Code sections 53620 through 53622, the Retirement Board of Authority has the authority to invest or reinvest funds intended for the payment of employee retiree health benefits under a prudent investor standard and shall diversify investments so as to minimize the risk of loss and to maximize the rate of return. The Trustee shall establish investment portfolios on a discretionary basis to meet the diverse needs of the Trust and its applicable purposes. Applicable provisions and requirements of, in particular, the California Government Code (specifically provisions under Sections 53216.1, 53216.5 and 53216.6, as applicable) shall be examined before selecting the investment portfolios to achieve the targets stated above.

The Trustee shall manage the Trust investments on a discretionary basis such that the total allocation among various investment styles, capitalizations, fund managers and securities is established and re-balanced from time-to-time so as to meet the Trust's overall target return objectives with the least amount of risk. The Trust assets shall not be invested in any proprietary investment vehicles of the Trustee or any of its affiliates or advisors.

Equity Investments

The purpose of the aggregate equity allocation within the Trust is to provide a total return consisting primarily of appreciation, with dividend income a secondary consideration. In order to maximize return opportunity while minimizing risk, the Trustee shall, in its discretion, allocate the Trust's equity allocation among a diverse group of equity fund managers, taking into consideration such factors as investment style (value, growth, international, etc.) as well as the capitalization (large, mid, small, etc.) of the investment.

Permitted equity investments shall include:

- ☐ Publicly traded common stocks, preferred stocks, securities convertible into common stocks, and securities which carry the right to buy common stocks, listed on a major United States stock exchange, including stocks traded through the NASDAQ Stock Market;

- ☐ American Depository Receipts ("ADRs");

- ☐ SEC-registered open-end mutual funds and Bank, Insurance Company or Trust Company commingled funds which invest primarily in stocks and other instruments which are allowable securities under these policies and objectives;

- ☐ Closed-end SEC-registered mutual funds which invest primarily in stocks and other instruments which are allowable securities under these policies and objectives; and

- ☐ Exchange Traded Funds ("ETFs") which invest primarily in stocks and other instruments which are allowable securities under these policies and objectives.

In managing the equity portfolio, the Trustee shall not do any of the following:

- buy equity securities on margin;
- short-sell equity securities;
- buy or sell futures contracts in any form, except that the Trustee is authorized to buy or sell such contracts specifically for purposes of, and only for purposes of, a hedge against portfolio loss;
- buy or sell put or call options on stocks, indexes or futures contracts;
- buy or sell foreign securities not registered through an SEC filing or not denominated in U.S. dollars; or
- buy or sell any securities which are not publicly traded.

However, all of the above restrictions shall be permitted in open-end or closed-end mutual funds, comingled funds, or ETFs, if in the opinion of the Trustee these activities are consistent with fund objectives and prudent management, and the investments provide for daily liquidity.

Additionally, certain securities may not be held directly, but only in open-end or closed-end mutual funds, comingled funds, or ETFs. These include common stocks, preferred stocks, and securities convertible into common stocks and securities that carry the right to purchase common stocks of non-U.S. companies traded on global exchanges, traded in any currency, as well as restricted securities of U.S. and non-U.S. companies, including securities issued through private offerings, and forward currency contracts or currency futures contracts to hedge foreign currency exposure.

Not more than 5% of the Trust assets shall be invested in any single equity security issue or issuer. The foregoing limitation is not intended to apply to the percentage of Trust assets invested in a single diversified mutual fund.

Both an investment fund manager's performance and the performance of individual securities, if purchased, will be compared to the following benchmarks based upon the particular investment style and capitalization range:

Domestic Equities:	S&P 500
International:	MSCI EAFE and ACWI ex.U.S

The Trustee shall pay particular attention to rolling 3 and *5* year time frames as well as shorter periods should the situation warrant. In addition, the Trustee shall measure and compare the exposure to risk of the Trust's equity portfolio with benchmarks appropriate for the investment style and capitalization range of each such investment.

Fixed Income Investments

The purpose of the aggregate fixed income allocation within the Trust is to provide a total return consisting of income and appreciation, while preserving capital by investing in a diversified portfolio of high quality fixed income securities. The investment objective of the fixed income portfolio is to achieve a total return commensurate with the overall bond market as measured by the Barclay's Aggregate Bond Index for domestic securities, and the Barclay's Global Bond Index for international securities, with attention given to rolling 3 and *5* year time frames as well as shorter periods should the situation warrant. In addition, the Trustee shall measure and compare the exposure to risk of the Trust's fixed income portfolio with benchmarks appropriate for the investment style and capitalization range of each such investment.

Permitted securities shall include:

- ☐ Obligations of the U.S. Government and its agencies;
- ☐ Bonds issued by U.S. Corporations or U.S. subsidiaries of foreign companies that are incorporated within the U.S. and carry a minimum BBB rating;
- ☐ Certificates of Deposit issued by banks or savings and loans of sound financial condition under FDIC management, with never more than $100,000 (including interest) in any single institution;
- ☐ Money market funds and money market instruments of an investment grade commonly held in money market funds such as repurchase agreements, banker's acceptances, commercial paper, etc.
- ☐ SEC-registered open-end mutual funds and Bank, Insurance Company and Trust Company commingled funds which invest primarily in bonds and other instruments which are allowable securities under these policies and objectives;
- ☐ Closed-end SEC registered mutual funds which invest primarily in bonds and other instruments which are allowable securities under these policies and objectives;
- ☐ Exchange Traded Funds ("ETFs") which invest primarily in bonds and other instruments which are allowable securities under these policies and objectives;
- ☐ Investment grade foreign government or corporate bonds carrying a minimum BBB rating, whether or not denominated in U.S currency, and whether or not

hedged for foreign currency risk.

- ☐ Securities backed by pools of consumer or corporate receivables other than mortgages ("Asset-backed Securities"), provided that these securities have been registered with the SEC for public offering and that they meet the requirements of these policies and objectives and carry a minimum BBB rating; and

- ☐ U.S. Agency mortgage-backed pass-through securities.

In managing the fixed income portion of the Trust assets, the Trustee shall not do any of the following:

- buy fixed income securities on margin;
- short-sell fixed income securities;
- buy or sell futures contracts in any form, except that the Trustee is authorized to buy or sell such contracts specifically for purposes of, and only for purposes of, a hedge against portfolio loss;
- buy or sell put or call options on bonds, indexes or futures contracts;
- buy or sell foreign securities not registered through an SEC filing or not denominated in U.S. dollars; or
- buy or sell any securities which are not publicly traded except U.S. Government or agency-backed mortgages.

However, all of the above restrictions shall be permitted only in open-end or closed-end mutual funds, comingled funds, or ETFs, if in the opinion of the Trustee these activities are consistent with fund objectives, prudent management, risk mitigation, and the investments provide for daily liquidity. In addition, investment in non-investment grade bonds or loans by such funds shall be permitted so long as the average aggregate rating of the funds are investment grade, and in the opinion of the Trustee the proportion of non-investment grade bonds to investment grade bonds in the portfolio is prudent.

Not more than 5% of the Trust assets shall be invested in any single debt security issue or issuer. The foregoing limitation is not intended to apply to the percentage of Trust assets invested in a single diversified mutual fund, nor does the limitation apply to obligations of the U.S. Government and its agencies, U.S. agency mortgage-backed pass-through securities or to a mutual fund that invests in such obligations or securities.

Use of Mutual Funds

The Retirement Board of Authority envisions that the Trustee will invest predominantly in open and closed-end mutual funds. The Board recognizes that the limitations and restrictions set forth in this Statement cannot be imposed on the managers of such mutual funds and that mutual funds held by the Trust may be managed outside of the requirements of this Statement. Nonetheless, the Trustee shall seek to identify mutual funds that comply as closely as possible to these guidelines and shall diligently monitor for prompt removal and replacement of those that do not.

Performance Review

In the execution of its fiduciary responsibilities, the Trustee shall review, on a regular basis, the performance of the various investments and fund managers employed by the Trust to determine if assets are being properly managed according to the stated objectives and policies set forth in the Trust Agreement and in this Statement. The Trustee shall view performance and investment risk on the basis of a full 3 to 5-year market cycle, though the stated objectives and policies of the Trustee may result in the prompt sale of a security or dismissal of a fund manager based upon shorter term results. In addition, any deviation or change in the structure, management or investment style of any fund manager employed shall precipitate a review by the Trustee to determine whether or not that manager should be retained.

Change of Target Return

The Retirement Board of Authority may, from time to time, discuss with Trustee the need to change target investment returns for the trust as conditions or characteristics of the Trust, or applicable Fund requirements change. In the event a change is made, a new Appendix A will be adopted by the Retirement Board of Authority to reflect the change.

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO:	DATE: 4/24/2019
Retirement Board of Authority	

SUBJECT:	ITEM #: 2018/2019-021
Education:	Enclosure: Yes
	Action Item No

Prepared by: Morgan Stanley

Requested by: Retirement Board of Authority

BACKGROUND:

The purpose of this and all Retirement Board of Authority (RBOA) meetings is the continuing education of Retirement Board members on the status of the funds held in the Trust and the fiduciary duties of the Retirement Board members. All of the agenda items are included in furtherance of that purpose. Investment in monies for the long term carries with it a fiduciary liability. A discussion, led by Morgan Stanley will present the annual update of their capital market assumptions.

STATUS:

Morgan Stanley will present the RBOA with educational information about the current markets.

RECOMMENDATION:

The Retirement Board of Authority shall hear and receive the information presented and file accordingly.

Inputs for GIC Asset Allocation

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Annual Update of Capital Market Assumptions

In these pages, we present the annual update of our capital market assumptions. These forecasts estimate returns and volatility of global asset classes over the strategic, or seven-year, horizon and the secular, or 20+ year, horizon. The strategic estimates are the key inputs into the Global Investment Committee's (GIC) strategic asset allocations. This year's forecasts reflect the significant market movements of the past year that have resulted in lower equity valuations, as well as incorporate our outlook for moderating global growth.

Alongside the annual update of our strategic assumptions is a rebalancing of our GIC strategic asset allocation models. These models are optimized annually using our goals-based framework and targeted risk parameters. It's important to keep in mind that these strategic models, which are developed with a seven-year investment horizon in mind, do not immediately impact our tactical models.

The tactical models, updates to which are published separately, target an investment horizon of 12 to 18 months and are adjusted based on the collective deliberations of the Global Investment Committee.

Executive Summary

Following our March 2018 update, asset markets have experienced notable volatility, including equities' first cyclical bear market since 2008.

After experiencing a brief stint of "global synchronous growth" in late 2017 and early 2018, global economic momentum has decelerated, on the back of slowing growth in central bank assets. While global companies delivered strong earnings, investors demanded lower valuations, in part due to tighter financial conditions and a less sanguine outlook for future profitability. US tax cuts boosted corporate and economic performance, pulling forward activity into 2018 and setting up tough comparisons for 2019.

In 2018, global equities suffered through a "rolling bear market," claiming the last-standing asset classes—US equities, particularly momentum and technology stocks, and crude oil—in a challenging fourth quarter. Diversification opportunities disappeared, as no major asset class delivered returns in excess of US inflation, unmatched even in 2008.

Thus far in 2019, risk assets have recouped those fourth-quarter losses on optimism for a dovish tilt from the US Federal Reserve and European Central Bank, stimulative measures from Chinese policymakers and progress on trade negotiations. The path forward has become less clear, however, given still-weakening earnings estimates and elevated corporate leverage. At this juncture, a bullish stance requires confidence that economic activity will trough neatly in the first quarter and inflect higher in the wake of China's fiscal stimulus and global monetary stimulus.

Notable changes to our seven-year strategic forecasts include a slight increase in our US equity forecast, to 4.7% annualized returns, from the previous 4.3%, mainly due to slightly lower valuations (see Exhibit 1). Similarly, the forecast for international equities has been increased to 6.1% from the previous 5.7%; and emerging markets now stand at 7.5% versus last year's 6.4% forecast. While interest rates fluctuated somewhat over the past 12 months, yields as of the end of February closely resembled those of a year ago. As a result, forward curves suggested similar return forecasts for 2019, pointing to 3.3% for broad US fixed income and 2.3% for ultrashort fixed income.

To align our models with these forecasts, we also update our strategic allocations, which can be found on pages 13 and 14. The overall impact of these changes is to modestly reduce the risk profile of our models. We have decreased overall equity exposures, particularly from US large-cap. We largely maintained fixed income allocations but shifted slightly toward lower-risk exposures. The portfolios now feature greater allocations to alternative strategies, which may provide diversification among the lower forecasted returns over the strategic horizon. We expect these allocations to improve our risk-adjusted return for the seven-year strategic horizon.

Exhibit 1: Modestly Higher Estimates for Equities and Real Assets, Similar for Fixed Income and Cash

	Annualized Return (2019)	Annualized Volatility (2019)	Annualized Return (2018)	Annualized Volatility (2018)
Global Equities	5.7%	14.3%	5.2%	14.7%
US Equities	4.7	14.3	4.3	14.2
International Equities	6.1	16.8	5.7	16.8
Emerging & Frontier Mkt. Equities	7.5	21.0	6.4	21.6
Ultrashort Fixed Income	2.3	0.9	2.3	0.9
US Fixed Income Taxable	3.3	5.3	3.3	5.3
High Yield Fixed Income	3.3	8.2	3.5	8.3
Real Assets	5.6	12.8	5.1	12.7
Absolute Return Assets	3.7	3.9	3.4	4.0
Equity Hedge Assets	4.2	8.2	4.3	8.2
Equity Return Assets	4.8	8.1	4.4	8.1

Note: Ultrashort Fixed Income represented by 90-day T-bills, US fixed income taxable represented by Bloomberg Barclays Global US Aggregate Index and high yield fixed income represented by Bloomberg Barclays Global Corporate High Yield Index.
Source: Robert J Shiller of Yale University, Standard and Poors, Bloomberg, FactSet, Moody's, Haver Analytics, Datastream/IBES, Morgan Stanley Wealth Management GIC, Morgan Stanley & Co., Morgan Stanley Alternative Investment Partners

The Big Picture

For the past several years, we have stressed the importance of analyzing the market through the unique prism of our era—the Federal Reserve's Quantitative Easing (QE) policy. The decade since the financial crisis has been immeasurably influenced by the combination of both low real federal funds rates and the manipulation of long-term interest rates through Fed purchases of US Treasuries and mortgage-backed securities; the Fed's actions swelled its balance sheet to more than $4 trillion by the end of 2018 from less than $900 billion in 2009. Although we believe that these extraordinary policies may have saved the US and if not the world economy from a potential repeat of the 1930s, their outsized impact on market results and thus forward forecasts of expected returns cannot be ignored.

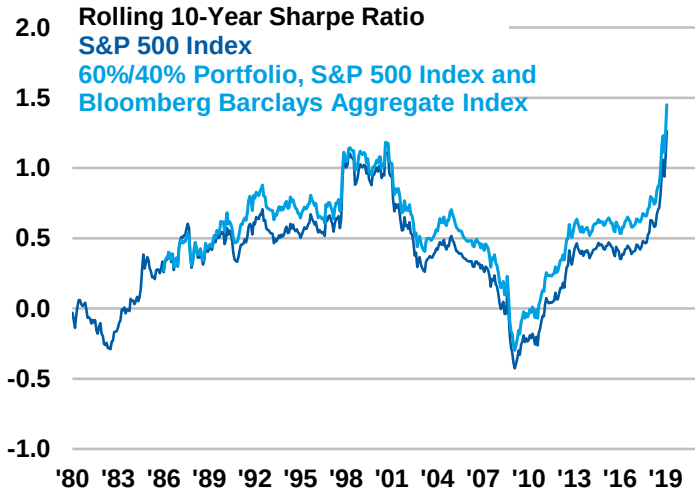
Specifically, against a backdrop of US GDP growth that trailed the post-World War II average by more than a full percentage point for an entire decade, US financial markets turned in remarkable results: Stocks, as measured by the S&P 500 Index, compounded annually at 16.7% between March 2009 and February 2019, nearly 75% higher than the long-run average; US bonds as measured by the Bloomberg Barclays US Aggregate Bond Index, delivered an annualized 3.7%.

What's more, these above-average results were achieved amid historically low volatility, thanks to the heavy hand of the Fed. All told, a blended US-only portfolio of 60% stocks/40% bonds enjoyed one of the best 10-year Sharpe ratios on record (see Exhibit 2).

Let's be clear about these results: They are highly unlikely to be repeated in the decade ahead. Furthermore, the policy impact was so powerful it produced a set of extremes in relationships that challenge our thinking around the mean reversion of most financial market variables. US stocks outperformed those in the rest of the world measurably; US growth stocks systematically trumped value stocks; and passive indexes trounced the efforts of active stock-pickers (see Exhibits 3, 4 and 5). In each case we see the fingerprints of the Fed, a factor that raises the question of the sustainability of these trends under a regime of policy normalization.

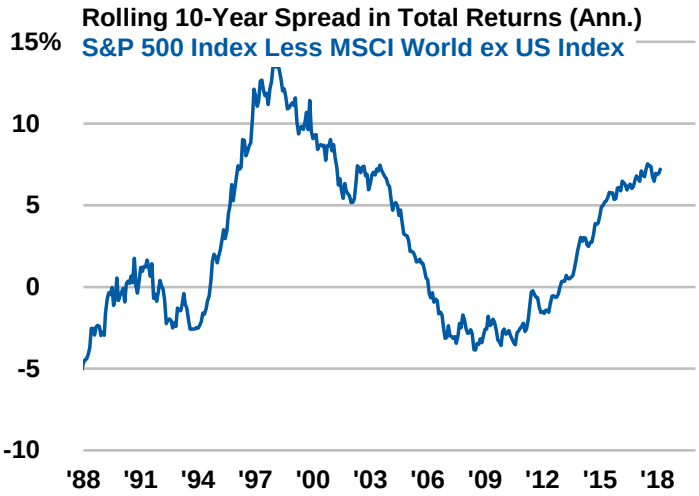
In addition to understanding and contextualizing these anomalies in our forecast, we also incorporate our broader works of the past several years that support our view that US stocks likely remain in a secular bull market, albeit one whose annual returns may not rival other periods let alone the recent past. From our 2016 report "Beyond Secular Stagnation," we note that the next decade is likely to benefit from much more advantageous demographics as the huge millennial cohort moves into their prime working years, benefitting both economic growth and productivity; from more normal fiscal spending policies; and from a less restrictive regulatory backdrop. Policies to restrict immigration can be counter to growth, but are unlikely to offset the size and power of this coming demographic wave. In our 2017 paper, "The Capex Conundrum and Productivity Paradox,"

Exhibit 2: QE Helped Deliver High Risk-Adjusted Returns



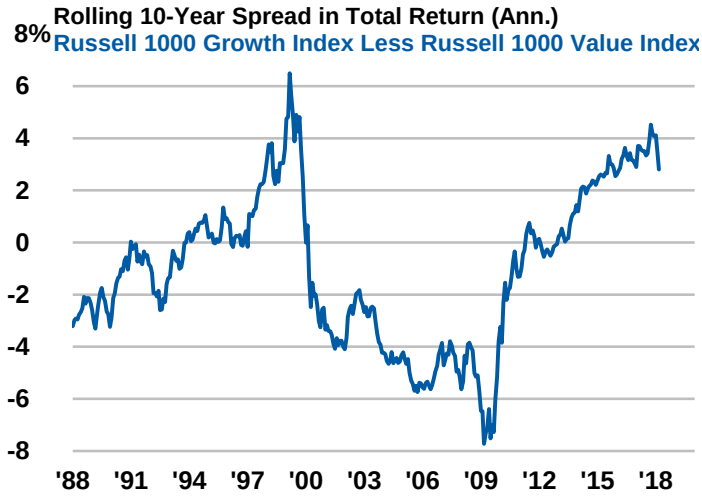
Source: Bloomberg as of Feb. 28, 2019

Exhibit 3: US Equities Outpaced on the Back of a Stronger Postcrisis Recovery



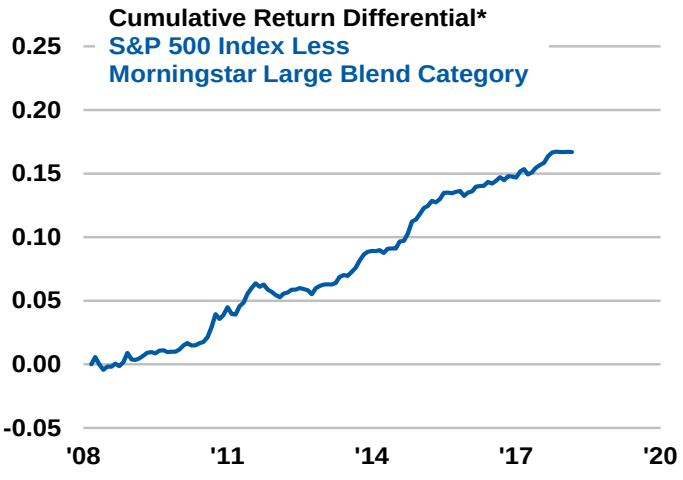
Source: Bloomberg as of Feb. 28, 2019

Exhibit 4: Low Interest Rates Boosted Long-Duration Assets Like Growth Stocks



Source: Bloomberg as of Feb. 28, 2019

Exhibit 5: Passive Strategies Persistently Outperformed Active Management



*log normal

Source: Bloomberg, Morningstar as of Feb. 28, 2019

we have emphasized the likelihood that the US economy will benefit from a rebound in both capital investment and, in turn, productivity as the critical emerging technologies of the next decade hit their inflection points. Unlike the consumer-focused technologies that dominated the past 10 years, we believe this decade's important new technologies will be mainly in the industrial sector.

Counterbalancing these significant positives, are some additional trends that bear watching. One was highlighted in "Debt and Deficits: The Legacy of QE," our most recent report. There we examine the implications of the surge in both corporate debt—investment grade issuance, concentrated in the lowest-quality BBB tranche, and high yield—and government debt markets. Indeed, the Fed's policy of financial repression produced more, not less, debt.

FISCAL POLICY. Current fiscal policies, which suggest annual government deficits of at least $1 trillion per year, add to a set of forces that already were pointing to materially higher real interest costs in the years ahead. These deficits could potentially crowd out investment but make cash and real assets materially more attractive on a relative basis than they have been recently. Debates around the rising fiscal deficits have recently been met in the political arena by advocates of "modern monetary theory," which posits that governments with fiat and reserve currencies can always fund their debts through printing money; we are not convinced and have thus not dismissed the US swelling debt load in our forecasts.

Additionally, a decade's worth of excessively low interest rates has sustained a growing swath of "zombie companies"—those that in more normal times would have failed but are kept alive by low-cost funds. Such companies divert dollars from innovation and productive use, while lenient enforcement of antitrust laws has allowed emergence of category-killer monopolies that put industry profit concentration at multidecade highs. This raises the specter of renewed regulatory scrutiny, which could prove a headwind to the current highfliers. A final issue weighing on the US asset outlook is the potential role of the growing income inequality gap in the country, which has now surpassed levels that preceded the 1929 stock market crash and the Great Depression. Beyond the obvious linkages to political division and populism, rising income inequality reduces the multiplier effects of fiscal and monetary policies and does little to unleash needed animal spirits in the economy. Relative to GDP, the portion of wealth creation that has accrued to corporate shareholders versus labor is near an all-time high. As those excesses correct, corporate profit margins and thus earnings growth in the next decade could be subpar.

CHINA'S ROLE. As we contemplate capital market returns, we must consider the role of China. While China has transformed itself in the past 20 years to become the world's second largest economy, it could displace the US as the world's largest economy by 2023. Of its 1.3 billion people, only 25%—roughly 350 million, a number equivalent to the US population—have reached their definition of "middle class," per-capita income of roughly $11,000 a year. During the next 20 years, we forecast another 25% of China's population will be lifted from poverty.

Beyond its economic potential, China is moving from being a country with chronic current account surpluses, a net saver, to current account deficits, a net borrower. As China's imports outgrow its exports, it will be forced to rely on foreign capital. Accessing that capital will only be enabled by a complete opening of China's equity and bond markets, and allowing the renminbi to trade freely and become a global reserve currency. In our view, it is inevitable that Chinese assets are revalued as their weights in financial benchmark indexes double and triple from current levels. Furthermore, we see global competition for capital increasing sovereign borrowing costs, with implications for US Treasuries being the most obvious point of consideration.

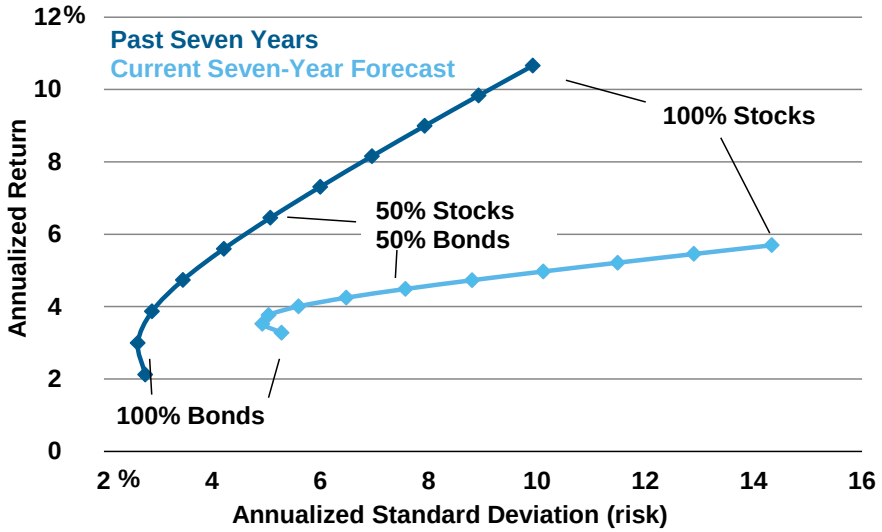
THE INFLATION FACTOR. A final point to consider is inflation. In our forecast period, we assume that inflation normalizes globally as rising wages, commodity scarcity and high real costs of capital exert their force. If globalization has reached its extremes and trade conflict is the new order of the day, pricing distortions through tariffs will become the norm. That said, the shadow of deflation remains a material risk over the forecast horizon. On one hand, many investors will continue to point to the unending march of technology as solidifying the deflationary trends and posing an ongoing threat to global employment. We have always been more sanguine on that score, believing that for every job technology, automation and robotics eliminates it creates a new one.

Our concern on the deflation debate rests with the policymakers themselves, specifically the Fed. We believe the Fed's recent 180-degree pivot away from normalizing both the federal funds rate and the size of its balance sheet bears serious watching. A more concrete signal of concern about the achievability of hitting 2% inflation sustainably could become a self-fulfilling prophecy, putting the US on the path that Japan followed, reliant on very large central bank balance sheets and negative real interest rates. Under such a scenario, our outlook for capital markets returns would deteriorate materially.

Rebalancing Our Strategic Models

As we detail below, changes in underlying financial market variables have shifted our strategic (seven-year) capital markets assumptions, summarized in Exhibits 6 and 7 (see page 5). As such, we are updating and rebalancing our strategic models, as can be seen in Exhibits 14 and 15 on pages 13 and 14. We are modestly decreasing our overall exposure to equities, primarily by reducing our US large-cap allocation, with a slight adjustment to international and emerging markets equities. We reallocate these proceeds into ultrashort and high-quality US fixed income and alternative strategies,

Exhibit 6: Next Seven-Year Outlook Calls for Lower Returns and Higher Volatility



Note: Stocks represented by the MSCI All Country World Index, bonds represented by the Bloomberg Barclays US Aggregate Index.
Source: FactSet, Morgan Stanley Wealth Management GIC as of Feb. 28, 2019

including real assets, absolute return assets, equity hedge assets and opportunistic assets. These alternative strategies may potentially reduce overall portfolio risk by providing some diversification versus traditional equity and fixed income exposures.

The overall impact of these changes is, at the margin, to reduce the risk associated with these portfolios, as the prospective risk/reward available according to our strategic forecasts has become less favorable. Investors should keep in mind that our strategic models target an investment horizon of at least seven years and are designed to maximize risk-adjusted returns and minimize turnover. Investors seeking to take advantage of short-term market opportunities and who are comfortable with 12-to-18-month holding periods should consider the tactical GIC model portfolios, which can make opportunistic or defensive short-term adjustments to the strategic models.

The majority of the reduction in our equity exposure is sourced from US large-cap stocks, due to the relatively unattractive risk/reward picture versus other global equity markets over the strategic horizon. Our international equity exposure remains above its benchmark, as our return forecasts for Europe, Japan and emerging markets suggest higher return potential than for the US.

Within fixed income, we also reduce risk slightly by shifting some allocations from high yield fixed income to US high-quality fixed income. Selected model portfolios include a small allocation to emerging market fixed income.

Within alternatives, we increase our exposures to real assets, equity hedge assets and opportunistic assets, where appropriate. In real assets, we raise allocations to master limited partnerships (MLPs), given a modest increase to strategic return forecasts on structural changes toward less aggressive equity issuance. We boost our exposure to equity hedge assets as the investment strategies of these alternatives attempt to reduce exposure to broad equity movements and support the portfolio during major market drawdowns while seeking to generate higher returns than high-quality fixed income, a traditional portfolio diversifier. For clients with more than $25 million in investable assets, our recommended model portfolios include larger allocations to private real estate, private equity and private credit, given the positive return differentials versus comparable public investments.

Building Our Forecasts

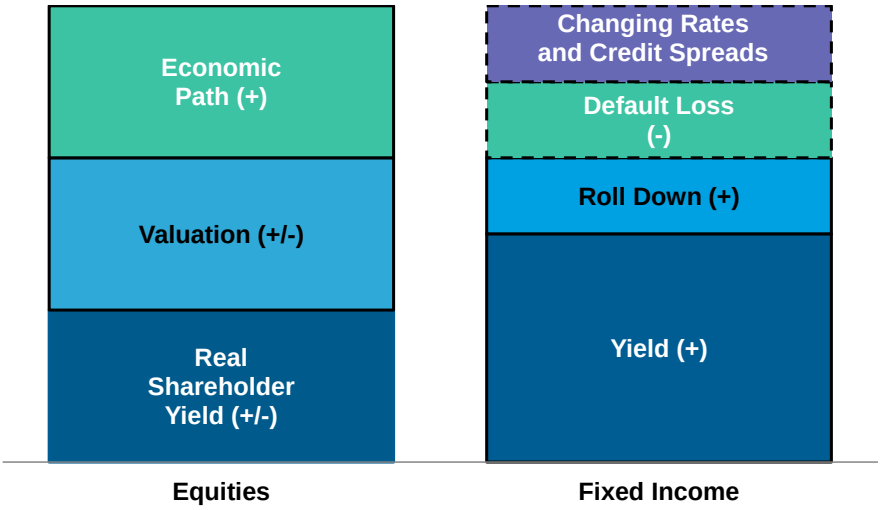
Our methodology for forecasting equity and fixed income returns uses a framework we implemented in 2017 (see Exhibit 8, page 6). For equities, we build return estimates by combining the inflation-adjusted return to shareholders, the impact of changes in valuation and the likely economic path in the next seven years. For fixed income, we construct estimates from current yields and appreciation due to expected “roll down”—the price appreciation that comes as bonds near maturity—and adjust for potential losses from credit exposure, rising interest rates and widening credit spreads. For other asset classes, we estimate returns based on our estimates for equities and fixed income, the likely economic path over the strategic horizon and specific analysis of each

Exhibit 7: Strategic Return, Volatility And Correlation Forecasts

	Return	Volatility	Correlation to Equities
Equities	5.7%	14.3%	1.00
REITs	6.4	16.7	0.72
Master Limited Partnerships	7.1	16.6	0.46
Commodities	3.1	15.9	0.47
Private Real Estate	7.4	9.6	0.24
Equity Hedge Assets	4.2	8.2	0.12
US Fixed Income Taxable	3.3	5.3	0.03

Note: Seven-year annualized forecast
Source: Robert J Shiller of Yale University, Standard and Poor’s, Bloomberg, FactSet, Moody's, Haver Analytics, Datastream/IBES, Morgan Stanley & Co, Morgan Stanley Alternative Investment Partners, Morgan Stanley Wealth Management GIC as of Feb. 28, 2019

Exhibit 8: Building Blocks of Our Return Estimates



Source: Bloomberg, FactSet, Haver Analytics, Morgan Stanley Wealth Management GIC as of Feb. 28, 2019

individual asset class.

Equities: Our Strategic Methodology

Our methodology for forecasting strategic equity returns has three main components. First, we examine what earnings companies are likely to pay out to investors either through dividends or share repurchases in inflation-adjusted terms. Second, we anticipate the effects of potential repricing by examining current valuations and assuming asset prices will normalize during the seven-year period. Finally, we examine the likely economic path, which will influence earnings growth. By breaking our forecasts into these components, we can contextualize our estimates in the current market environment.

What Yields Will Companies Deliver to Investors?

Financial asset prices are fundamentally determined by the present value of cash flows paid to the investor. Accordingly, our analysis begins by assessing the extent to which cash is delivered to equity owners through dividends and share repurchases, which we may term "shareholder yield." We measure shareholder yield by examining what companies in each region have paid out in both forms over the previous 10 years, tracking a market cycle. This year, we computed the real shareholder yield by analyzing index-level shareholder payout ratios in inflation-adjusted (real) terms. This calculation avoids the attempt to differentiate between dividends and share repurchases, but rather groups the two sources of returns under a single metric. This year, we lengthened the period for consideration from one year to 10 years, reasoning that this longer-term horizon would mitigate the observed cyclicality in payout ratios and the extraordinary impact of 2018's above-trend shareholder yield. With the passage of the 2017 US tax cuts, US companies, in particular, were able to distribute cycle-high shareholder yields, making it important to consider a longer-term horizon.

These estimates of real shareholder yield (see Exhibit 9) form the base of our return forecasts, to which we add effects from changes in valuation, real earnings growth and inflation.

Exhibit 9: We Expect International Equities to Outperform US in Next Seven Years

	Real Shareholder Yield	Valuation		Economic Path			Total
		Price/ Earnings	Equity Risk Premium	Growth Trend	Recession Impact	Inflation	
US Large-Cap Equities	1.6%	-1.0%	0.1%	2.5%	-0.5%	1.9%	**4.6%**
US Small/Mid-Cap Equities	0.0	-0.6	0.4	3.9	-0.7	1.9	**4.9**
European Equities	1.8	0.3	1.1	2.1	-0.4	1.3	**6.2**
Japan Equities	2.8	0.3	1.3	1.1	-0.3	1.0	**6.3**
Asia Pacific ex Japan Equities	1.7	-0.1	0.4	3.3	-0.6	1.4	**6.1**
Developed International Equities	1.9	0.3	1.0	2.1	-0.4	1.3	**6.1**
Emerging Markets Equities	0.5	0.4	1.1	4.4	-0.8	1.9	**7.5**
Global Equities	1.5	-0.3	0.6	2.7	-0.5	1.7	**5.7**

Source: Robert J. Shiller of Yale University, Standard and Poor's, Bloomberg, FactSet, Haver Analytics, Datastream/IBES, Morgan Stanley Wealth Management GIC, Morgan Stanley & Co. as of Feb. 28, 2019

Are Valuations Likely to Boost or Drag Down Returns?

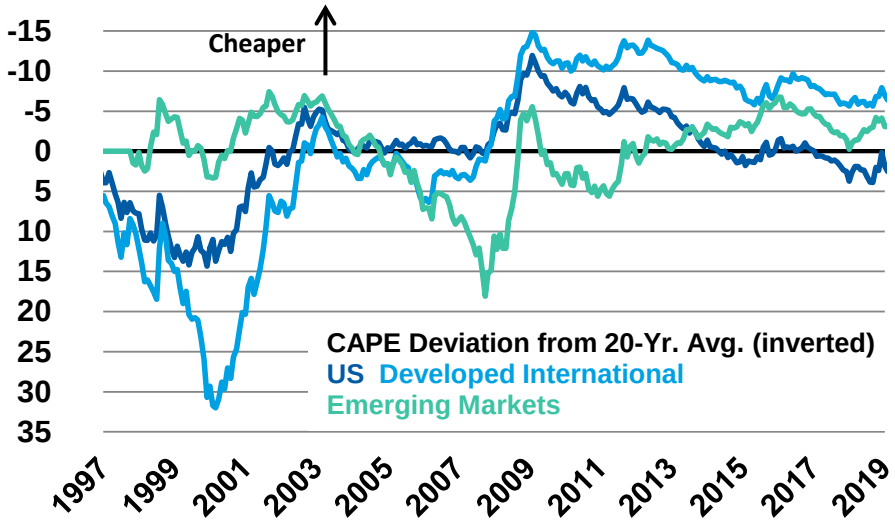
Return forecasts are not simply a matter of projecting what companies are likely to earn and return to investors, but also whether the pricing, or valuation, of that cash flow is attractive or unattractive in a historical context. We focus on two measures of valuation appropriate over a multiyear horizon: cyclically-adjusted price/earnings (CAPE) multiples, which compare market price levels to the average real earnings generated over the course of a business cycle, and the equity risk premium, which compares the yield generated by an equity position to the yield of a comparable fixed income substitute. We believe that by combining these two measures of valuation into our forecast rather than relying on either individually, we are able to improve the accuracy of our forecasts.

First, we estimate valuation-driven returns based on the CAPE ratio. This metric attempts to smooth volatile swings in company earnings that can occur over the course of a business cycle and adjusts for inflation in order to gain a better picture of the true earning potential of the equity market and how much investors are paying for it. Popularized by Yale University professor Robert Shiller, a version of the CAPE ratio that employs a 10-year average to smooth earnings has shown a historical correlation to average equity returns over the long term.[1] The theory behind this relationship suggests that more expensive CAPE ratios imply lower average future returns.

We use this observation as a baseline for our methodology. Because the recent rate of earnings growth has outpaced the growth we expect for the next seven years, we believe it is more appropriate to utilize the CAPE ratio to estimate how much of the return may come from changes in valuation alone.

Our work suggests that equity multiples demonstrate mean reversion over our seven-year strategic horizon. Future expansion and contraction in multiples have been associated with initial valuations: When equities are purchased at unusually cheap or expensive levels, as measured by a CAPE ratio with a trailing seven-year cyclical adjustment, they tend to rise or fall over the next seven years.

Exhibit 10: Based on CAPE, Developed International and Emerging Market Stocks Appear Cheaper Than US



Source: Note: CAPE uses a trailing seven-year time period except in the case of EM and Europe. Trailing seven year CAPE shown for Japan for comparability reasons, although trailing P/E is used for the calculation of our return estimates.
Source: Robert J. Shiller of Yale University, Standard and Poor's, Bloomberg, FactSet, Haver Analytics, Morgan Stanley Wealth Management GIC as of Feb. 28, 2019

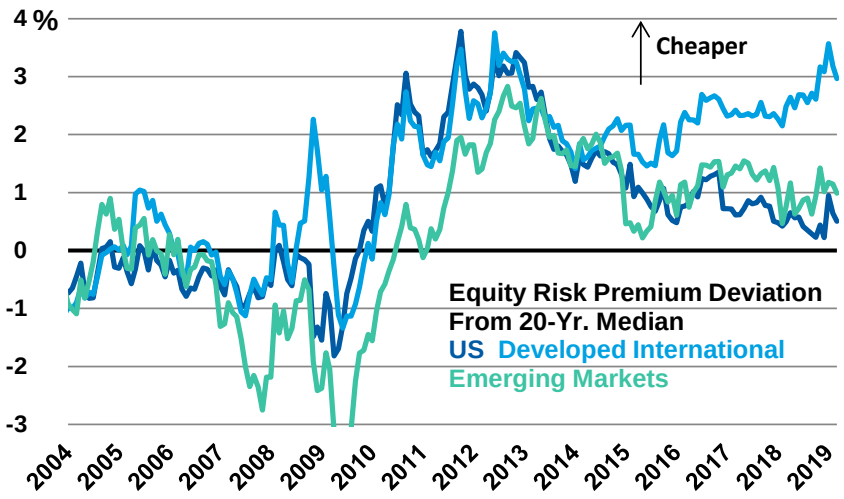
Similarly to last year, we use a trailing 10-year cyclical adjustment for emerging markets and European equities, which we believe appropriately normalizes for earnings potential by effectively down-weighting the idiosyncratic data points that have been a feature of this exceptional cycle. We also adjust our methodology for Japanese equities, where speculative activity drove valuations to extremes in the late 1980s, only to be followed by decades of deflationary fear and economic stagnation. Our analysis suggests that trailing price/earnings (P/E) ratios provide a better estimate of mean reversion in forward multiples, and better correspond to our view that Japan's change in monetary dynamics and corporate governance is a new reality, distinct from historical context.

We find that current US CAPE ratios suggest modest multiple contraction in the next seven years, while developed international and emerging market (EM) CAPE ratios suggest equity returns are likely to be boosted by modest multiple expansion (see Exhibit 10).

The equity risk premium component of our valuation analysis measures the degree of additional compensation investors require to hold stocks. We measure this premium by comparing the yield generated by an equity position to the yield of corporate bonds, which are driven by similar fundamentals but offer additional levels of security in the form of fixed payments and a superior standing in the capital structure. A higher equity risk premium suggests that equities are cheap relative to bonds, as they offer a high degree of compensation for bearing equity risk. While the multiyear equity rally, especially in US growth stocks, has caused equity risk premiums to decline, they remain at elevated levels, particularly for international developed equities (see Exhibit 11, page 8).

Over the strategic horizon, we expect interest rates to rise globally as loose global monetary policy normalizes and inflation and growth return to more typical levels. During the next seven years, we expect modestly higher rates, at levels consistent with our estimates of growth

Exhibit 11: Equity Risk Premiums Remain Above Average



Source: Bloomberg, FactSet, Haver Analytics, Morgan Stanley Wealth Management GIC as of Feb. 28, 2019

and inflation. Accordingly, we embed assumptions of finishing the cycle with the 10-year US Treasury bond at 3.16%, the German Bund at 1.28%, the UK Gilt at 3.13%, the Canadian 10-year sovereign bond at 2.40% and the 10-year Japanese government bond at 1.32%. For a detailed explanation of our seven-year rate target methodology, see below.

Assuming we realize these yield targets, investment grade corporate spreads return to historical medians and equity risk premiums revert to their historical median from current elevated levels, we then calculate the implied future earnings yields associated with these equity regions. This methodology allows us to estimate the impact of changing valuations on the return for each region. Similarly to this year, we include an adjustment for our anticipated EM spreads, using a weighted average between median EM spreads and median international spreads rather than solely the historical median for EM. This change reflects the significant and continuing structural improvements made in these markets as well as the strength of the underlying issuers.

What Is the Likely Economic Path?

The final component to equity returns involves the likely path of the economy, as it has a strong impact on the ability of companies to grow their earnings. We begin with OECD estimates of real GDP growth for the next seven years. We believe real GDP growth is a good proxy for the rate of index-level real earnings growth, as consumption and production, which constitute the lion's share of GDP growth, are closely related to index-level revenue values.

We include several refinements for smaller companies and for growth and value equities. We adjust our growth estimates for mid- and small-cap equities relative to large cap according to realized seven-year earnings growth premium. We also incorporate a similar adjustment to account for the differences in US growth and value equities.

Next, we add a downward adjustment to these growth rates to account for our expectation of a mild recession. Given that we are well into the current economic cycle and that the time horizon of our forecast approximates the average length of a business cycle, we believe that a recession will occur at some time in the next seven years. To incorporate this into our growth forecast, we assume a 1% decline in real earnings growth, spanning one year. Across the different regions, the reduction to the trend real growth forecast varies between -0.3% and -1.2%.

Finally, we incorporate expected inflation—based on market-based inflation breakeven rates—to the preceding analysis to convert our real forecasts to nominal values. Inflation breakevens compare yields on nominal government bonds to liquid inflation-indexed government securities, which pay investors a fixed rate of interest on a par value that increases in line with headline inflation. By subtracting the real yield of the inflation-indexed bond from the nominal bond, we find the implied inflation rate for the time period associated with the maturity of the underlying bonds. To match our seven-year forecast horizon, our analysis focuses on inflation breakevens based on bonds set to mature in seven years, based on data availability.[2]

These implied inflation rates suggest that global inflation may remain moderate in the coming years. We continue to be slightly more optimistic than the market concerning inflation in Japan, where we assume it will reach 1.0% versus the market-implied 0.2%. This increase is driven by our more optimistic view of the country's economic path and is also intended to offset potential bias from a constrained supply of Japanese inflation-protection securities.

Fixed Income: Our Strategic Methodology

Our forecasts for fixed income returns for the strategic horizon begin by approximating the likely returns based on current yields and price appreciation due to the roll down. They are then adjusted downward for the effect of likely rising rates and mean-reverting credit spreads, along with potential credit losses (see Exhibit 12, page 9). Our methodology leverages the work of Andrew Sheets, Morgan Stanley & Co.'s chief cross-asset strategist and a member of the Global Investment Committee.[3]

Initial Yield and Roll Down

Our approach sets a baseline for fixed income returns using the current yield on each index. Historically, the yield at which fixed income instruments have been purchased has been a good predictor of forward returns, especially over long horizons and for bonds of higher credit quality. This concept is relatively straightforward: When a bond is purchased, the yield is locked in and, barring credit losses and assuming the bond is held to term, will be paid to investors during the life of the bond.

In addition to the yield of a fixed income security, changes in market value account for the rest of the return to investors. The roll of a bond down the yield curve is one relatively predictable component of expected changes in market value. Generally, yield curves are upward-sloping, a phenomenon associated with additional compensation for the higher uncertainty associated with longer time horizons. As time passes, longer-maturity bonds roll down the curve, growing closer to their maturity date and effectively becoming shorter-maturity bonds. As dictated by the typically upward-sloping yield curve, this entails price appreciation as yields decline. The magnitude of appreciation differs according to the different yield curves. Similarly to last year, we interpolate the roll for each index using its average maturity and the current shape of the yield curve.

Allowances for Rising Rates and Widening Credit Spreads

Fixed income instruments have benefitted from a 30-year secular bull market because rates fell to historical lows. We believe, however, that during the next seven years, rates are likely to continue rising from 2016's lows and potentially reach higher levels as growth and inflation normalize. To maintain consistency, we must account for the drop in price that higher rates would imply, offsetting a portion of the returns from initial yield and the roll down.

Exhibit 12: Higher Starting Yields Don't Always Result in Stronger Returns

	Starting Yield	Return from Roll Down	Default Loss	Impact of Yields/ Spreads Changes	Total
US 10-Yr. Treasury	2.8%	0.2%	0.0%	-0.8%	**2.3%**
US Aggregate	3.2	0.5	0.0	-0.4	**3.3**
Global High Yield	6.1	0.2	-2.6	-0.4	**3.3**
International Agg.	0.9	0.8	-0.1	-1.2	**0.4**
Emg. Mkt. Credit*	6.6	0.6	-0.7	-0.1	**6.5**
Global Aggregate	2.0	0.8	-0.1	-0.8	**1.9**

*US dollar
The above asset classes are represented by the following indexes in order of appearance: Bloomberg Barclays US Treasury: 10-20 Year Index; Bloomberg Barclays US Aggregate Bond. Index; Bloomberg Barclays Global Corporate High Yield Index; Bloomberg Barclays Global Aggregate Non USD (hedged) Index, JPMorgan EMBI Global; and Bloomberg Barclays Global Aggregate Index.
Source: Morgan Stanley Wealth Management GIC, Bloomberg, Datastream, Moody's as of Feb. 28, 2019

Similarly to last year, we utilize a broader range of interest rate forecasts to incorporate region-specific factors to our estimates. Given our belief that a secular upturn in interest rates from 2016's lows remains likely, we generate seven-year forecasts based on our long-run estimates for fair-value rates across various regions. Historically, secular trends in interest rates have occurred over a multicycle horizon. Accordingly, we expect only partial progress toward our long-run target over a seven-year strategic horizon. We forecast that the 10-year US Treasury yield will rise to 3.16%, the German Bund to 1.28%, the UK Gilt to 3.13%, the Canadian 10-year sovereign bond to 2.40%, and Japanese government bonds to 1.32%. These forecasts also feed into our equity risk premium methodology.

Given our seven-year horizon, which encompasses the average length of a business cycle, we make no assumptions about changes in the shape of the yield curve because they tend to average out over the course of a cycle. Instead, we assume a parallel upward shift in the curve for all fixed income instruments and adjust for duration, or interest rate sensitivity, to estimate the impact on returns for each fixed income asset class. Long-duration bonds are most affected.

We also incorporate the impact on credit-sensitive fixed income asset classes from potentially rising credit spreads. In line with our equity risk premium methodology, we assume corporate bond spreads will revert to their 20-year medians in each region relative to their government benchmark (see Exhibit 13, page 10). We incorporate an adjustment for anticipated spreads in emerging markets using a weighted average between median EM spreads and median international spreads in order to account for structural improvements in these markets and the strength of the underlying issuers. Bonds of lower credit quality, especially those with longer duration, are the most affected.

Allowances for Default Loss

Fixed income securities are also subject to losses associated with default risk. This risk is especially important for bonds with lower credit ratings, such as high yield bonds or debt issued by emerging market countries.

Sheets has found the relationship between default losses and the time to maturity varies depending on the credit rating of the bond. Investment grade bonds generally face higher risk of default loss as the maturity of the bond grows closer, as the issuers are likely to grow larger and take on greater risks as time passes since their bond issuance. High yield bonds, on the other hand, generally face lower risk of

default losses as time goes on. These riskier, generally younger companies face the highest default risk in the first few years, suggesting companies that succeed in making it past the first few years are likely able to sustain or even improve their credit quality.

Accordingly, we adjust our forecasts based on the historical default losses associated with bonds of similar credit ratings and time to maturity.

Ultrashort Fixed income

Our strategic ultrashort fixed income return forecast is based on the market-implied expected return of the three-month US Treasury bill for the next seven years. We derive this figure from the prices of a set of instruments including the on-the-run three-month T-bill and a selection of longer-term swaps (T-bill vs. three-month Libor) up to a maturity of seven years. Our forecast this year is similar to 2018, at 2.3%, suggesting a relatively consistent path for short-term interest rates over the strategic horizon.

Inflation-Protection Securities

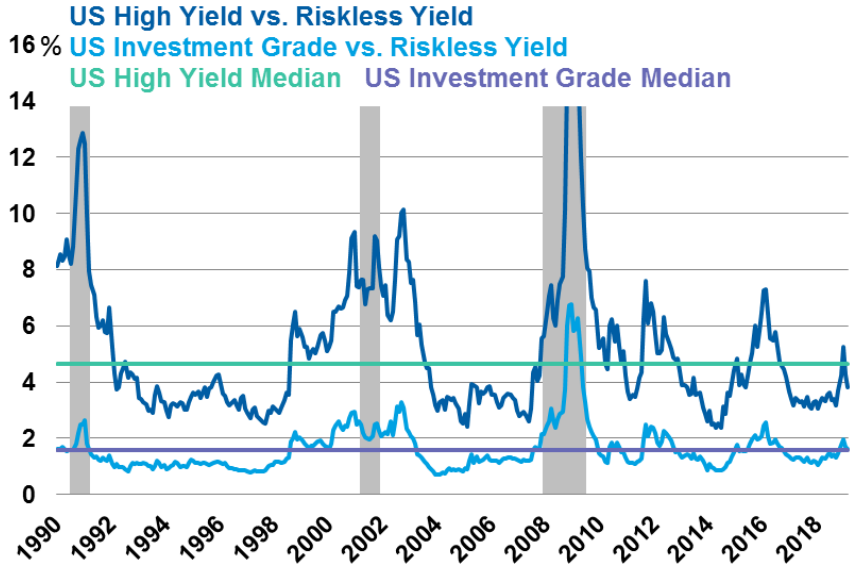
We forecast strategic returns for inflation-linked securities by adding together the real yield associated with global inflation-protection securities and the same inflation breakeven measures used in our equity forecasts, weighting each country's breakeven according to the country's respective weight in the Bloomberg Barclays Global Inflation-Linked Index.[4] We expect a return of 1.4% this year, lower than the inflation forecasts due to the negative real yield associated with these securities in many developed international regions.

Alternatives: Our Strategic Methodology

Global REITs

We estimate the return on global real estate investment trusts (REITs) using a similar methodology to our equity methodology. For the earnings payout contribution to return, we examine what these companies have paid out via dividends and share repurchases in the past 10 years. We take into account their current valuations by using the CAPE ratio to project forward multiple expansion and acknowledge the impact of our forecast for higher interest rates and mean-reverting credit spreads via the equity risk premium. Our earnings growth forecast is the same as our forecast for global equities. By our estimates, we expect global REITs to deliver an annualized 6.4% return.

Exhibit 13:We Anticipate Credit Spreads Will Revert to Their 20-Year Median



Source: Morgan Stanley Wealth Management GIC, Bloomberg as of Feb. 28, 2019

Master Limited Partnerships

Our strategic forecast for MLPs uses a methodology similar to that used for equities. For the earnings payout contribution to return, we balance the high yield associated with these securities against their historical reliance on equity issuance as a form of funding, computing the implied real shareholder yield over a 10-year window. We take into account their current depressed valuations by using the CAPE ratio to project forward multiple expansion and acknowledge their relatively high equity risk premiums. Our earnings growth forecast, however, differs from our equity methodology. For MLPs, the fundamental driver of earnings is volume growth; therefore, our estimate is based on the seven-year production growth for crude and natural gas estimate of the US Energy Information Administration. Finally, we factor in a mild recession and expected inflation as with our equity forecast. Overall, this takes our MLP estimate to 7.1%. This forecast reflects expectations for high returns, supported by potentially lower equity issuance and relatively inexpensive valuations.

Commodities

We estimate the return to commodities based on the three sources of returns of commodity futures: changes in the spot price of the commodity, the yield from collateral set aside by investors and the appreciation or depreciation from rolling along the futures curve. We assume that the spot price will appreciate with expected inflation and expect that collateral set aside for commodities trading to deliver a return in line with our ultrashort fixed income estimate. Finally, the roll yield is based on the historical return from the Bloomberg Roll Select Commodities Index. We believe our framework is appropriate for a seven-year horizon and estimate that commodities will return an annualized 3.1% over this period.

Hedged Strategies and Managed Futures

Hedged strategies are not themselves asset classes. Instead, they are investment strategies that have historically shown an ability to deliver returns in a manner that diversifies stock and bond holdings within portfolios by leveraging exposures to traditional asset classes. We thank our colleagues at Morgan Stanley Investment Management's Alternative Investment Partners for their assistance in creating this methodology.

To develop return assumptions, we deconstruct historical returns into their fundamental sources. In the case of directional strategies, including equity long-short and event driven, we use betas and correlations to stock and bond markets to determine return forecasts consistent with our estimates of these traditional asset classes.

In contrast, absolute return strategies like managed futures and global macro are less directional; in other words, they do not rely on being systematically invested and frequently take short positions. For these strategies, we attribute expected return based on modestly positive effects from "skill" factors, such as market timing and security selection, in proportions consistent with recent history.

When we consider the performance of alternative investment strategies broadly, we face difficulties that are not present with traditional asset classes. Private indexes designed to track the performance of funds following these strategies rely on independent investment managers to report their own performance, which can impart selection bias and survivorship bias from selective disclosures of existing and now-extinct funds. Furthermore, managers of hedged strategies often hold less liquid securities, and so reported returns appear excessively "smooth" due to lagging price discovery. We use statistical methods to mitigate these effects and establish estimated returns as closely aligned with the underlying economics as possible.

Private Equity, Private Debt and Private Real Estate

Private equity, private debt and private real estate have also earned a reputation for delivering strong returns in a manner uncorrelated to traditional asset classes. Due to their illiquidity and the lack of published high-frequency return data, however, their performance can also be difficult to measure at an index level.

To forecast returns for these illiquid asset classes, we add an expected illiquidity premium to our forecasted returns for a corresponding liquid asset class: for private equity, US small- and mid-cap equites; for private debt, US high yield corporate bonds; and private real estate, REITs. We determined this expected illiquidity from studying the historical spreads between the illiquid asset classes and the liquid asset classes. Based on the market cycle and this historical data, we forecast these illiquidity premiums as follows: 2.7% for private equity; 2.0% for private debt; and 1.0% for private real estate. These illiquidity premiums represent approximate long-term averages versus comparable public market investments. We have cut the illiquidity premium for private equity in half, however, judging today's significant "dry powder" and elevated valuations to dampen investment return prospects over the strategic horizon. Overall, we expect an annualized return of 9.0% for private equity; 5.3% for private debt; and 7.4% for private real estate.

Secular Returns

In addition to our strategic return estimates, we also project returns over the secular horizon, which we consider to be a 20+ year horizon. As a primary guide for long-term return potential, we use the real geometric average returns over a long history of market data for both global equities and bonds. We then add back our forward-looking forecast of inflation to estimate the long-term sustainable level. We have incorporated this change in the methodology due to the increasing difference between our long-term inflation forecast, now 1.9%, and long-term historical inflation, which has generally been 3.0% or higher, depending on the extended historical window.

For developed market asset classes, long-term return histories reach back to 1900. For certain assets, we do face limitations on data history. As an example, for emerging markets, the data begins in 1987. In such cases, for those asset classes for which long histories are not available, we base our estimates on the typical relative return differentials versus comparable asset classes over the longest available period of returns.

For equities, MLPs and REITs, we computed each asset class's returns by adding together a long-term average real return for global equities, the asset class's historical return differential versus global equities over a common period and an estimate of 20-year breakeven inflation. As expected, this methodology produced lower forecasted returns for 2019 versus 2018, approximately in line with the differential in long-term historical inflation and the estimate of 20-year breakeven inflation.

For the US, Japan and EM, we found that the historical relative return may not represent a reasonable picture of forward-looking returns. In each case, we dampened the historical spread by 50% to account for significant outperformance or underperformance indicated by the common-period returns history. US equities have produced gains that have outpaced all other developed markets since the late 1970s, which represents our common-period sample for size-style combinations. Due to a stretch of deflation from the late 1990s through the 2010s, the Japanese economy and equity markets languished, making the common-period sample potentially unrepresentative of the secular horizon. Finally, EM equities demonstrated sizable outperformance at the outset of the common-period returns, but their returns profile has since converged somewhat toward the developed markets as the underlying economies have matured.

For MLPs, the earliest returns history showed very positive spreads versus

global equities, boosting the overall relative return value. Given changing dynamics with MLPs, particularly the propensity of management to finance growth from retained earnings, we believe that this asset class will perform in-line with global equities over the secular horizon.

For the fixed income asset classes, we followed a similar pattern as with equities, substituting US government bonds for global equities. In line with equities, this approach resulted in slightly lower secular return forecasts.

Among commodities, hedged strategies and opportunistic assets, data availability once again poses a challenge to using the same methodology that we use for equities and fixed income. To account for this, we employ similar methodologies to those used in our strategic estimates over the longest available horizon to provide secular return estimates for alternatives. For private equity, we anticipate the return to the long-term average of illiquidity premium, reasoning that today's environmental factors will exercise less influence over the 20-year versus seven-year horizon.

Volatility

Volatility is a measure of the variability of returns around their average value, and is one measure of the risk associated with an investment. In order to estimate volatility for liquid asset classes, we calculate the average volatility over the available history of each asset class and give a slightly higher weight to the past seven years. Using long-term data mitigates the impact of specific regimes and business cycle stages that could skew our results. We largely expect a normalization of volatility in coming years relative to the extreme lows of late 2017 and early 2018.

For strategies with values that are not continuously marked on public markets, including hedge funds, private equity and private real estate, historical returns may understate the true volatility of underlying assets. For these classes, we use the aforementioned statistical methodologies to eliminate serial correlation and estimate a more representative volatility of underlying assets.

Correlation

A critical factor in asset allocation is correlation, or the degree to which asset class returns move together. Correlations can vary considerably over different historical periods due to changes in economic regime, market structure, stage of the business cycle or myriad other factors. Therefore, we calculate long-run correlations based on asset-class returns for the past 20 years. For illiquid asset classes, we include the statistical adjustments to return series discussed above. We use these 20-year correlations as a proxy for expected future correlations. Please refer to Exhibit 17 starting on page 16. ■

Exhibit 14: New Strategic Weights for GIC Asset Allocation Models Level 1

	Wealth Conservation	Income	Balanced Growth	Market Growth	Opportunistic Growth
Ultrashort Fixed Income	**15%**	**11%**	**7%**	**5%**	**4%**
Equities					
US Equities	6	10	14	21	27
US Large-Cap Growth	1	3	3	6	9
US Large-Cap Value	1	4	5	8	11
US Mid-Cap Growth	0	0	1	1	1
US Mid-Cap Value	2	1	1	2	2
US Small-Cap Growth	0	0	1	1	1
US Small-Cap Value	2	2	3	3	3
International Equities	10	13	20	24	32
European Equities	6	9	14	17	20
Japan Equities	4	4	6	6	9
Asia Pacific ex Japan Equities	0	0	0	1	3
Emerging & Frontier Markets	3	5	5	7	9
Total Equities	**19**	**28**	**39**	**52**	**68**
Total US Equities	6	10	14	21	27
Total International Equities	10	13	20	24	32
Total Emerging & Frontier Mkt. Equities	3	5	5	7	9
Fixed Income & Preferreds					
Short-Term Fixed Income	22	18	11	5	0
US Fixed Income Taxable	27	23	17	12	0
International Fixed Income	1	1	1	0	0
Inflation-Protection Securities	0	0	0	0	0
High Yield Fixed Income	4	3	2	1	0
Emerging Mkt Fixed Income	1	1	1	1	0
Total Fixed Income	**55**	**46**	**32**	**19**	**0**
Alternatives					
Real Assets	6	8	9	7	6
REITs	2	3	4	2	2
Commodities	0	0	0	0	0
MLP/Energy Infrastructure	4	5	5	5	4
Absolute Return Assets	4	6	6	2	0
Equity Hedge Assets	1	1	7	7	10
Equity Return Assets	0	0	0	8	12
Private Investments	0	0	0	0	0
Private Real Estate	0	0	0	0	0
Private Equity	0	0	0	0	0
Private Credit	0	0	0	0	0
Total Alternative Investments	**11**	**15**	**22**	**24**	**28**

Note: Strategic allocations effective Mar. 28, 2019, for investors with less than $25 million in investable assets.
Source: Morgan Stanley Wealth Management GIC

Exhibit 15: New Strategic Weights for GIC Asset Allocation Models Level 2

	Wealth Conservation	Income	Balanced Growth	Market Growth	Opportunistic Growth
Ultrashort Fixed Income	**15%**	**13%**	**8%**	**4%**	**3%**
Equities					
US Equities	6	8	14	21	26
US Large-Cap Growth	2	2	5	7	9
US Large-Cap Value	2	4	7	8	11
US Mid-Cap Growth	0	0	0	1	1
US Mid-Cap Value	1	1	1	2	2
US Small-Cap Growth	0	0	0	1	1
US Small-Cap Value	1	1	1	2	2
International Equities	8	12	17	21	27
European Equities	5	7	12	14	19
Japan Equities	3	4	4	6	7
Asia Pacific ex Japan Equities	0	1	1	1	1
Emerging & Frontier Markets.	3	3	5	6	8
Total Equities	**17**	**23**	**36**	**48**	**61**
Total US Equities	6	8	14	21	26
Total International Equities	8	12	17	21	27
Total Emerging & Frontier Mkt. Equities	3	3	5	6	8
Fixed Income & Preferreds					
Short-Term Fixed Income	20	16	10	5	0
US Fixed Income Taxable	25	21	14	8	0
International Fixed Income	1	1	2	1	0
Inflation-Protection Securities	0	0	0	0	0
High Yield Fixed Income	6	3	4	1	0
Emerging Mkt Fixed Income	0	0	0	0	0
Total Fixed Income	**52**	**41**	**30**	**15**	**0**
Alternatives					
Real Assets	4	4	5	6	6
REITs	1	1	2	2	2
Commodities	0	0	0	0	0
MLP/Energy Infrastructure	3	3	3	4	4
Absolute Return Assets	2	4	2	1	0
Equity Hedge Assets	0	1	5	5	6
Equity Return Assets	0	0	0	3	6
Private Investments	10	14	14	18	18
Private Real Estate	6	6	4	6	6
Private Equity	3	6	8	9	8
Private Credit	1	2	2	3	4
Total Alternative Investments	**16**	**23**	**26**	**33**	**36**

Note: Strategic allocations effective Mar. 28, 2019, for investors with more than $25 million in investable assets.
Source: Morgan Stanley Wealth Management GIC

Exhibit 16: Strategic and Secular Return and Volatility Estimates

	Strategic Return and Volatility Estimates		Secular Return and Volatility Estimates	
	Annualized Return (2019)	Annualized Volatility (2019)	Annualized Return (2019)	Annualized Volatility (2019)
Ultrashort Fixed Income	**2.3%**	**0.9%**	**2.9%**	**0.9%**
Equities	**5.7**	**14.3**	**7.6**	**15.1**
US Equities	4.7	14.3	7.7	15.1
US Large-Cap Growth	4.0	15.8	7.3	16.8
US Large-Cap Value	5.2	13.7	7.9	14.4
US Mid-Cap Growth	2.5	18.4	8.0	19.8
US Mid-Cap Value	6.0	14.8	8.6	15.5
US Small-Cap Growth	5.0	21.0	6.3	22.3
US Small-Cap Value	7.5	16.7	8.4	17.2
International Equities	6.1	16.8	7.1	17.8
European Equities	6.2	16.5	6.9	17.2
Japan Equities	6.3	19.0	6.2	20.6
Asia Pacific ex Japan Equities	6.1	21.3	8.7	22.9
Emerging & Frontier Markets	7.5	21.0	8.8	22.5
Fixed Income & Preferreds	**3.3**	**5.3**	**3.7**	**5.3**
Short-Term Fixed Income	2.7	1.4	3.3	1.4
US Fixed Income Taxable	3.3	5.3	3.7	5.3
International Fixed Income	0.4	4.1	3.4	4.1
Inflation-Protection Securities	1.4	7.3	4.7	7.3
High Yield Fixed Income	3.3	8.2	5.5	8.2
Emerging Mkt Fixed Income	6.5	12.1	6.5	12.1
Alternatives	**4.3**	**5.8**	**5.9**	**5.8**
Real Assets	5.6	12.8	5.9	12.8
REITs	6.4	16.7	6.9	16.7
Commodities	3.1	15.9	3.8	15.9
MLP/Energy Infrastructure	7.1	16.6	7.0	16.6
Absolute Return Assets	3.7	3.9	5.2	3.9
Equity Hedge Assets	4.2	8.2	5.5	8.2
Equity Return Assets	4.8	8.1	6.7	8.1
Private Investments	8.2	9.4	10.3	9.4
Private Real Estate	7.4	9.6	7.9	9.6
Private Equity	9.0	13.2	12.8	13.2
Private Credit	5.3	6.9	5.7	6.9

Note: Ultrashort Fixed Income represented by 90-day T-bills, Fixed Income & Preferreds by Bloomberg Barclays Aggregate Bond Index, Short-Term Fixed Income by Bloomberg Barclays Aggregate 1-3 Year Index, US Fixed Income Taxable by Bloomberg Barclays US Aggregate Index, International Fixed Income by Barclays Global Aggregate Non USD (hedged) Index, Inflation Linked Securities by Bloomberg Barclays Global Inflation Linked Index, High Yield Fixed Income by Barclays Global Corporate High Yield Index and Emerging Market Fixed Income JP Morgan EMBI Global Index. All other others are based on proprietary models.
Source: Morgan Stanley Wealth Management GIC as of Feb. 28, 2019
Strategic annualized return and volatility estimates are based on a seven-year time horizon. Secular annualized return and volatility estimates are based on a 20-year-plus time horizon. Annualized volatility estimates are based on data with longest available history through Feb. 28, 2019. Estimates are for illustrative purposes only, are based on proprietary models and are not indicative of the future performance of any specific investment, index or asset class. Actual performance may be more or less than the estimates shown in this table. Estimates of future performance are based on assumptions that may not be realized.
Investor Suitability: Morgan Stanley Wealth Management recommends that investors independently evaluate each asset class, investment style, issuer, security, instrument or strategy discussed. Legal, accounting and tax restrictions, transaction costs and changes to any assumptions may significantly affect the economics and results of any investment. Investors should consult their own tax, legal or other advisors to determine suitability for their specific circumstances. Investments in private funds (including hedge funds, managed futures funds and private equity funds) are speculative and include a high degree of risk.

Exhibit 17 Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11
1 Ultrashort Fixed Income	1.00	-0.04	-0.07	-0.09	-0.03	-0.02	-0.02	-0.04	0.00	0.00	0.00
2 Equities	-0.04	1.00	0.95	0.91	0.88	0.88	0.86	0.84	0.80	0.97	0.94
3 US Equities	-0.07	0.95	1.00	0.95	0.93	0.86	0.89	0.80	0.80	0.87	0.85
4 US Large-Cap Growth	-0.09	0.91	0.95	1.00	0.78	0.93	0.76	0.85	0.70	0.82	0.79
5 US Large-Cap Value	-0.03	0.88	0.93	0.78	1.00	0.71	0.96	0.69	0.85	0.82	0.81
6 US Mid-Cap Growth	-0.02	0.88	0.86	0.93	0.71	1.00	0.73	0.95	0.74	0.79	0.76
7 US Mid-Cap Value	-0.02	0.86	0.89	0.76	0.96	0.73	1.00	0.73	0.91	0.81	0.80
8 US Small-Cap Growth	-0.04	0.84	0.80	0.85	0.69	0.95	0.73	1.00	0.84	0.75	0.72
9 US Small-Cap Value	0.00	0.80	0.80	0.70	0.85	0.74	0.91	0.84	1.00	0.73	0.72
10 International Equities	0.00	0.97	0.87	0.82	0.82	0.79	0.81	0.75	0.73	1.00	0.97
11 European Equities	0.00	0.94	0.85	0.79	0.81	0.76	0.80	0.72	0.72	0.97	1.00
12 Japan Equities	-0.03	0.70	0.60	0.59	0.55	0.57	0.54	0.53	0.47	0.74	0.60
13 Asia Pacific ex Japan Equities	0.02	0.88	0.77	0.74	0.72	0.73	0.74	0.69	0.67	0.88	0.83
14 Emerging & Frontier Market Equities	0.04	0.88	0.76	0.75	0.70	0.75	0.70	0.72	0.64	0.86	0.81
15 Fixed Income & Preferreds	0.07	-0.03	-0.10	-0.10	-0.08	-0.09	-0.02	-0.13	-0.09	0.01	0.00
16 Short-Term Fixed Income	0.35	-0.12	-0.20	-0.20	-0.17	-0.18	-0.13	-0.21	-0.16	-0.07	-0.07
17 US Fixed Income Taxable	0.07	-0.03	-0.10	-0.10	-0.08	-0.09	-0.02	-0.13	-0.09	0.01	0.00
18 International Fixed Income	0.05	-0.15	-0.17	-0.20	-0.12	-0.19	-0.08	-0.21	-0.14	-0.12	-0.11
19 Inflation-Protection Securities	0.02	0.12	0.05	0.05	0.05	0.06	0.13	0.02	0.05	0.15	0.12
20 High Yield Fixed Income	-0.13	0.72	0.64	0.61	0.63	0.62	0.69	0.60	0.62	0.71	0.69
21 Emerging Market Fixed Income	0.07	0.57	0.48	0.46	0.45	0.49	0.47	0.44	0.40	0.58	0.55
22 Alternatives	0.11	0.81	0.68	0.68	0.61	0.73	0.66	0.72	0.63	0.81	0.76
23 Real Assets	0.11	0.72	0.62	0.54	0.67	0.56	0.72	0.54	0.65	0.73	0.70
24 REITs	0.04	0.72	0.65	0.55	0.72	0.54	0.79	0.56	0.74	0.73	0.70
25 Commodities	0.15	0.47	0.36	0.32	0.37	0.36	0.39	0.32	0.32	0.52	0.46
26 MLP/Energy Infrastructure	0.08	0.46	0.43	0.38	0.46	0.39	0.48	0.38	0.43	0.45	0.44
27 Absolute Return Assets	0.09	0.76	0.65	0.61	0.63	0.63	0.69	0.61	0.62	0.76	0.73
28 Equity Hedge Assets	0.09	0.12	0.04	0.04	0.04	0.07	0.08	0.07	0.06	0.15	0.14
29 Equity Return Assets	0.11	0.89	0.79	0.80	0.71	0.87	0.74	0.87	0.75	0.86	0.82
30 Opportunistic Assets	0.11	0.46	0.43	0.42	0.41	0.43	0.41	0.41	0.37	0.43	0.42
31 Private Real Estate	0.11	0.24	0.26	0.22	0.28	0.21	0.29	0.20	0.25	0.21	0.21
32 Private Equity	0.08	0.51	0.47	0.47	0.42	0.50	0.41	0.47	0.37	0.49	0.47
33 Private Credit	0.03	0.33	0.32	0.36	0.26	0.43	0.25	0.39	0.24	0.28	0.26

Source: Bloomberg, Datastream, Morgan Stanley Alternative Investment Partners, Morgan Stanley Wealth Management GIC
Above is based on last 20-year returns through Feb. 2019. Correlation is a statistical method of measuring the strength of a linear relationship between two variables. The correlation between two variables can assume any value from -1.00 to +1.00, inclusive. Past performance is not indicative of future results. We apply significant statistical adjustments to correct for distortions typically associated with index returns for hedge funds, private equity and private real estate. Correlation assumptions are the same for the secular and strategic horizons.

Exhibit 17: Correlation Matrix (continued)

	12	13	14	15	16	17	18	19	20	21	22
1 Ultrashort Fixed Income	-0.03	0.02	0.04	0.07	0.35	0.07	0.05	0.02	-0.13	0.07	0.11
2 Equities	0.70	0.88	0.88	-0.03	-0.12	-0.03	-0.15	0.12	0.72	0.57	0.81
3 US Equities	0.60	0.77	0.76	-0.10	-0.20	-0.10	-0.17	0.05	0.64	0.48	0.68
4 US Large-Cap Growth	0.59	0.74	0.75	-0.10	-0.20	-0.10	-0.20	0.05	0.61	0.46	0.68
5 US Large-Cap Value	0.55	0.72	0.70	-0.08	-0.17	-0.08	-0.12	0.05	0.63	0.45	0.61
6 US Mid-Cap Growth	0.57	0.73	0.75	-0.09	-0.18	-0.09	-0.19	0.06	0.62	0.49	0.73
7 US Mid-Cap Value	0.54	0.74	0.70	-0.02	-0.13	-0.02	-0.08	0.13	0.69	0.47	0.66
8 US Small-Cap Growth	0.53	0.69	0.72	-0.13	-0.21	-0.13	-0.21	0.02	0.60	0.44	0.72
9 US Small-Cap Value	0.47	0.67	0.64	-0.09	-0.16	-0.09	-0.14	0.05	0.62	0.40	0.63
10 International Equities	0.74	0.88	0.86	0.01	-0.07	0.01	-0.12	0.15	0.71	0.58	0.81
11 European Equities	0.60	0.83	0.81	0.00	-0.07	0.00	-0.11	0.12	0.69	0.55	0.76
12 Japan Equities	1.00	0.63	0.63	0.02	-0.06	0.02	-0.11	0.16	0.49	0.42	0.59
13 Asia Pacific ex Japan Equities	0.63	1.00	0.90	0.10	0.02	0.10	-0.03	0.21	0.70	0.63	0.81
14 Emerging & Frontier Market Equities	0.63	0.90	1.00	0.03	-0.02	0.03	-0.09	0.18	0.69	0.63	0.83
15 Fixed Income & Preferreds	0.02	0.10	0.03	1.00	0.79	1.00	0.76	0.76	0.15	0.49	0.10
16 Short-Term Fixed Income	-0.06	0.02	-0.02	0.79	1.00	0.79	0.56	0.53	0.02	0.31	0.09
17 US Fixed Income Taxable	0.02	0.10	0.03	1.00	0.79	1.00	0.76	0.76	0.15	0.49	0.10
18 International Fixed Income	-0.11	-0.03	-0.09	0.76	0.56	0.76	1.00	0.68	-0.02	0.31	-0.02
19 Inflation-Protection Securities	0.16	0.21	0.18	0.76	0.53	0.76	0.68	1.00	0.30	0.49	0.25
20 High Yield Fixed Income	0.49	0.70	0.69	0.15	0.02	0.15	-0.02	0.30	1.00	0.60	0.68
21 Emerging Market Fixed Income	0.42	0.63	0.63	0.49	0.31	0.49	0.31	0.49	0.60	1.00	0.58
22 Alternatives	0.59	0.81	0.83	0.10	0.09	0.10	-0.02	0.25	0.68	0.58	1.00
23 Real Assets	0.49	0.74	0.71	0.12	0.12	0.12	-0.02	0.23	0.70	0.51	0.73
24 REITs	0.50	0.73	0.68	0.21	0.10	0.21	0.13	0.32	0.68	0.55	0.62
25 Commodities	0.37	0.54	0.52	0.04	0.10	0.04	-0.12	0.18	0.39	0.34	0.56
26 MLP/Energy Infrastructure	0.27	0.45	0.44	0.02	0.09	0.02	-0.07	0.03	0.54	0.29	0.51
27 Absolute Return Assets	0.54	0.76	0.73	0.07	0.05	0.07	-0.09	0.22	0.79	0.53	0.88
28 Equity Hedge Assets	0.08	0.19	0.18	0.32	0.31	0.32	0.32	0.36	0.03	0.18	0.50
29 Equity Return Assets	0.63	0.83	0.85	-0.04	-0.05	-0.04	-0.15	0.11	0.70	0.56	0.93
30 Opportunistic Assets	0.28	0.39	0.41	-0.16	-0.22	-0.16	-0.17	0.05	0.35	0.17	0.43
31 Private Real Estate	0.11	0.20	0.18	-0.09	-0.15	-0.09	-0.10	0.06	0.19	0.07	0.23
32 Private Equity	0.34	0.44	0.48	-0.17	-0.22	-0.17	-0.18	0.03	0.38	0.20	0.48
33 Private Credit	0.25	0.23	0.28	(0.18)	(0.28)	(0.18)	(0.15)	0.00	0.18	0.13	0.26

Source: Bloomberg, Datastream, Morgan Stanley Alternative Investment Partners, Morgan Stanley Wealth Management GIC
Above is based on last 20-year returns through Feb. 2019. Correlation is a statistical method of measuring the strength of a linear relationship between two variables. The correlation between two variables can assume any value from -1.00 to +1.00, inclusive. Past performance is not indicative of future results. We apply significant statistical adjustments to correct for distortions typically associated with index returns for hedge funds, private equity and private real estate. Correlation assumptions are the same for the secular and strategic horizons.

Exhibit 17: Correlation Matrix (continued)

	23	24	25	26	27	28	29	30	31	32	33
1 Ultrashort Fixed Income	0.11	0.04	0.15	0.08	0.09	0.09	0.11	0.11	0.11	0.08	0.03
2 Equities	0.72	0.72	0.47	0.46	0.76	0.12	0.89	0.46	0.24	0.51	0.33
3 US Equities	0.62	0.65	0.36	0.43	0.65	0.04	0.79	0.43	0.26	0.47	0.32
4 US Large-Cap Growth	0.54	0.55	0.32	0.38	0.61	0.04	0.80	0.42	0.22	0.47	0.36
5 US Large-Cap Value	0.67	0.72	0.37	0.46	0.63	0.04	0.71	0.41	0.28	0.42	0.26
6 US Mid-Cap Growth	0.56	0.54	0.36	0.39	0.63	0.07	0.87	0.43	0.21	0.50	0.43
7 US Mid-Cap Value	0.72	0.79	0.39	0.48	0.69	0.08	0.74	0.41	0.29	0.41	0.25
8 US Small-Cap Growth	0.54	0.56	0.32	0.38	0.61	0.07	0.87	0.41	0.20	0.47	0.39
9 US Small-Cap Value	0.65	0.74	0.32	0.43	0.62	0.06	0.75	0.37	0.25	0.37	0.24
10 International Equities	0.73	0.73	0.52	0.45	0.76	0.15	0.86	0.43	0.21	0.49	0.28
11 European Equities	0.70	0.70	0.46	0.44	0.73	0.14	0.82	0.42	0.21	0.47	0.26
12 Japan Equities	0.49	0.50	0.37	0.27	0.54	0.08	0.63	0.28	0.11	0.34	0.25
13 Asia Pacific ex Japan Equities	0.74	0.73	0.54	0.45	0.76	0.19	0.83	0.39	0.20	0.44	0.23
14 Emerging & Frontier Mkt. Equities	0.71	0.68	0.52	0.44	0.73	0.18	0.85	0.41	0.18	0.48	0.28
15 Fixed Income & Preferreds	0.12	0.21	0.04	0.02	0.07	0.32	-0.04	-0.16	-0.09	-0.17	(0.18)
16 Short-Term Fixed Income	0.12	0.10	0.10	0.09	0.05	0.31	-0.05	-0.22	-0.15	-0.22	(0.28)
17 US Fixed Income Taxable	0.12	0.21	0.04	0.02	0.07	0.32	-0.04	-0.16	-0.09	-0.17	(0.18)
18 International Fixed Income	-0.02	0.13	-0.12	-0.07	-0.09	0.32	-0.15	-0.17	-0.10	-0.18	(0.15)
19 Inflation-Protection Securities	0.23	0.32	0.18	0.03	0.22	0.36	0.11	0.05	0.06	0.03	0.00
20 High Yield Fixed Income	0.70	0.68	0.39	0.54	0.79	0.03	0.70	0.35	0.19	0.38	0.18
21 Emerging Market Fixed Income	0.51	0.55	0.34	0.29	0.53	0.18	0.56	0.17	0.07	0.20	0.13
22 Alternatives	0.73	0.62	0.56	0.51	0.88	0.50	0.93	0.43	0.23	0.48	0.26
23 Real Assets	1.00	0.80	0.74	0.79	0.78	0.22	0.71	0.36	0.29	0.34	0.16
24 REITs	0.80	1.00	0.38	0.44	0.67	0.15	0.62	0.36	0.28	0.35	0.16
25 Commodities	0.74	0.38	1.00	0.38	0.54	0.27	0.51	0.27	0.22	0.25	0.13
26 MLP/Energy Infrastructure	0.79	0.44	0.38	1.00	0.59	0.11	0.51	0.19	0.16	0.18	0.06
27 Absolute Return Assets	0.78	0.67	0.54	0.59	1.00	0.22	0.84	0.46	0.33	0.46	0.19
28 Equity Hedge Assets	0.22	0.15	0.27	0.11	0.22	1.00	0.22	0.05	0.01	0.07	(0.02)
29 Equity Return Assets	0.71	0.62	0.51	0.51	0.84	0.22	1.00	0.45	0.22	0.51	0.33
30 Opportunistic Assets	0.36	0.36	0.27	0.19	0.46	0.05	0.45	1.00	0.82	0.93	0.61
31 Private Real Estate	0.29	0.28	0.22	0.16	0.33	0.01	0.22	0.82	1.00	0.54	0.32
32 Private Equity	0.34	0.35	0.25	0.18	0.46	0.07	0.51	0.93	0.54	1.00	0.69
33 Private Credit	0.16	0.16	0.13	0.06	0.19	(0.02)	0.33	0.61	0.32	0.69	1.00

Source: Bloomberg, Datastream, Morgan Stanley Alternative Investment Partners, Morgan Stanley Wealth Management GIC
Above is based on last 20-year return through Feb. 2019. Correlation is a statistical method of measuring the strength of a linear relationship between two variables. The correlation between two variables can assume any value from -1.00 to +1.00, inclusive. Past performance is not indicative of future results. We apply significant statistical adjustments to correct for distortions typically associated with index returns for hedge funds, private equity and private real estate. Correlation assumptions are the same for the secular and strategic horizons.

Appendix

Hedge Fund Index Performance Biases

It should be noted that the majority of hedge fund indexes are comprised of hedge fund manager returns. This is in contrast to traditional indexes, which are comprised of individual securities in the various market segments they represent and offer complete transparency as to membership and construction methodology. As such, some believe that hedge fund index returns have certain biases that are not present in traditional indexes. Some of these biases inflate index performance, while others may skew performance negatively. However, many studies indicate that overall hedge fund index performance has been biased to the upside. Some studies suggest performance has been inflated by up to 2.6% or more annually, depending on the types of biases included and the time period studied. Although there are numerous potential biases that could affect hedge fund returns, we identify some of the more common ones throughout this paper.

Self-selection bias results when certain manager returns are not included in the index returns and may result in performance being skewed up or down. Because hedge funds are private placements, hedge fund managers are able to decide which fund returns they want to report and are able to opt out of reporting to the various databases. Certain hedge fund managers may choose only to report returns for funds with strong returns and opt out of reporting returns for weak performers. Other hedge funds that close may decide to stop reporting in order to retain secrecy, which may cause a downward bias in returns.

Survivorship bias results when certain constituents are removed from an index. This often results from the closure of funds due to poor performance, “blow-ups” or other such events. As such, this bias typically results in performance being skewed higher. As noted, hedge fund index performance biases can result in positive or negative skew. Nonetheless, it would appear that the skew is more often positive. While it is difficult to quantify the effects precisely, investors should be aware that idiosyncratic factors may be giving hedge fund index returns an artificial “lift” or upwards bias.

Endnotes

[1]Campbell, John and Robert Shiller, "Valuation Ratios and the Long-Run Stock Market Outlook," *The Journal of Portfolio Management*, July 1997. http://www.econ.yale.edu/~shiller/online/jpmalt.pdf.

[2]In order to account for lack of available data, we employed the following proxies: UK: 60% weight in five-year UK breakeven and 40% weight in 10-year UK breakeven; Europe ex UK: 30% weight in Germany five-year breakeven, 20% weight in Germany 10-year breakeven, plus 50% weight in France seven-year breakeven; EM: seven-year US breakeven; Canada: 10-year Canada breakeven.

[3]Tang, Serena W, Andrew Sheets, Phanikiran L Naraparaju, Wanting Low, and Elizabeth Volynsky, "What Will Markets Return?," *Cross-Asset Dispatch*, Oct. 23, 2016, Morgan Stanley & Co.

[4]Including the adjustment for Japanese inflation to 1.0% from 0.6%.

For indexes referenced in this report please visit the following: http://www.morganstanleyfa.com/public/projectfiles/id.pdf

Glossary

BETA A measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole.

DRAWDOWN refers to the largest cumulative percentage decline in net asset value or the percentage decline from the highest value or net asset value (peak) to the lowest value net asset value (trough) after the peak.

EFFICIENT FRONTIER The efficient frontier is the set of optimal portfolios that offers the highest expected return for a defined level of risk or the lowest risk for a given level of expected return.

EQUITY RISK PREMIUM The excess return that an individual stock or the overall stock market provides over a risk-free rate.

EXCESS RETURN This term represents the average quarterly total return of the portfolio relative to its benchmark. A portfolio with a positive excess return has on average outperformed its benchmark on a quarterly basis. This statistic is obtained by subtracting the benchmark return from the portfolio's return.

MEAN REVERSION This theory suggests that prices and returns eventually move back toward the mean or average. This mean or average can be the historical average of the price or return or another relevant average such as the growth in the economy or the average return of an industry.

SHARPE RATIO This statistic measures a portfolio's rate of return based on the risk it assumed and is often referred to as its risk-adjusted performance. Using standard deviation and returns in excess of the returns of T-bills, it determines reward per unit of risk. This measurement can help determine if the portfolio is reaching its goal of increasing returns while managing risk.

SHILLER PE RATIO also known as the cyclically adjusted P/E ratio (CAPE), uses a 10-year average of inflation-adjusted earnings to value the stock market.

STANDARD DEVIATION This statistic quantifies the volatility associated with a portfolio's returns by measuring the variation in returns around the mean return. Unlike beta, which measures volatility relative to the aggregate market, standard deviation measures the absolute volatility of a portfolio's return.

The **Global Investment Committee (GIC)** is a committee of seven senior Morgan Stanley & Co. and Morgan Stanley Wealth Management thought leaders who meet regularly to discuss the global economy and markets, set asset allocation recommendations and portfolio weightings, and produce a suite of strategic and tactical market publications.

Daniel Hunt, Steve Edwards, Aili Chen and Lisha Ge are not members of the Global Investment Committee, and any implementation strategies suggested have not been reviewed or approved by the Global Investment Committee.

Risk Considerations

Master Limited Partnerships (MLPs)

Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk.

For tax purposes, MLP ETFs are taxed as C corporations and will be obligated to pay federal and state corporate income taxes on their taxable income, unlike traditional ETFs, which are structured as registered investment companies. These ETFs are likely to exhibit tracking error relative to their index as a result of accounting for deferred tax assets or liabilities (see funds' prospectuses).

The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund's value.

MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV; and, as a result, the MLP fund's after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely tracked.

Duration

Duration, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. Generally, if interest rates rise, bond prices fall and vice versa. Longer-term bonds carry a longer or higher duration than shorter-term bonds; as such, they would be affected by changing interest rates for a greater period of time if interest rates were to increase. Consequently, the price of a long-term bond would drop significantly as compared to the price of a short-term bond.

Alternative investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are suitable only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing. Certain of these risks may include but are not limited to: Loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices; Lack of liquidity in that there may be no secondary market for a fund; Volatility of returns; Restrictions on transferring interests in a fund; Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized; Absence of information regarding valuations and pricing; Complex tax structures and delays in tax reporting; Less regulation and higher fees than mutual funds; and Risks associated with the operations, personnel, and processes of the manager. Further, opinions regarding Alternative Investments expressed herein may differ from the opinions expressed by Morgan Stanley Wealth Management and/or other businesses/affiliates of Morgan Stanley Wealth Management.

Certain information contained herein may constitute forward-looking statements. Due to various risks and uncertainties, actual events, results or the performance of a fund may differ materially from those reflected or contemplated in such forward-looking statements. Clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing.

Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Individual funds have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice.

Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Smith Barney LLC and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley or any of its affiliates, (3) are not guaranteed by Morgan Stanley and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Smith Barney LLC is a registered broker-dealer, not a bank.

Managed futures investments are speculative, involve a high degree of risk, use significant leverage, have limited liquidity and/or may be generally illiquid, may incur substantial charges, may subject investors to conflicts of interest, and are usually suitable only for the risk capital portion of an investor's portfolio. Before investing in any partnership and in order to make an informed decision, investors should read the applicable prospectus and/or offering documents carefully for additional information, including charges, expenses, and risks. Managed futures investments are not intended to replace equities or fixed income securities but rather may act as a complement to these asset categories in a diversified portfolio.

Risks of **private real estate** include: illiquidity; a long-term investment horizon with a limited or nonexistent secondary market; lack of transparency; volatility (risk of loss); and leverage.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention.

Physical precious metals are non-regulated products. Precious metals are speculative investments, which may experience short-term and long term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. If sold in a declining market, the price you receive may be less than your original investment. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be suitable for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor. The Securities Investor Protection Corporation ("SIPC") provides certain protection for customers' cash and securities in the event of a brokerage firm's bankruptcy, other financial difficulties, or if customers' assets are missing. SIPC insurance does not apply to precious metals or other commodities.

Bonds are subject to interest rate risk. When interest rates rise, bond prices fall; generally the longer a bond's maturity, the more sensitive it is to this risk. Bonds may also be subject to call risk, which is the risk that the issuer will redeem the debt at its option, fully or partially, before the scheduled maturity date. The market value of debt instruments may fluctuate, and proceeds from sales prior to maturity may be more or less than the amount originally invested or the maturity value due to changes in market conditions or changes in the credit quality of the issuer. Bonds are subject to the credit risk of the issuer. This is the risk that the issuer might be unable to make interest and/or principal payments on a timely basis. Bonds are also subject to reinvestment risk, which is the risk that principal and/or interest payments from a given investment may be reinvested at a lower interest rate.

Bonds rated below investment grade may have speculative characteristics and present significant risks beyond those of other securities, including greater credit risk and price volatility in the secondary market. Investors should be careful to consider these risks alongside their individual circumstances, objectives and risk tolerance before investing in high-yield bonds. High yield bonds should comprise only a limited portion of a balanced portfolio.

Interest on municipal bonds is generally exempt from federal income tax; however, some bonds may be subject to the alternative minimum tax (AMT). Typically, state tax-exemption applies if securities are issued within one's state of residence and, if applicable, local tax-exemption applies if securities are issued within one's city of residence.

Rebalancing does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

Treasury Inflation Protection Securities' (TIPS) coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation.

Ultrashort-term fixed income asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

The majority of $25 and $1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per $25 or $1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price.

The initial interest rate on a **floating-rate security** may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk.

The market value of **convertible bonds** and the underlying common stock(s) will fluctuate and after purchase may be worth more or less than original cost. If sold prior to maturity, investors may receive more or less than their original purchase price or maturity value, depending on market conditions. Callable bonds may be redeemed by the issuer prior to maturity. Additional call features may exist that could affect yield.

Some $25 or $1000 par **preferred securities** are QDI (Qualified Dividend Income) eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible preferreds qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.

Principal is returned on a monthly basis over the life of a **mortgage-backed security**. Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. Yields and average lives are estimated based on prepayment assumptions and are subject to change based on actual prepayment of the mortgages in the underlying pools. The level of predictability of an MBS/CMO's average life, and its market price, depends on the type of MBS/CMO class purchased and interest rate movements. In general, as interest rates fall, prepayment speeds are likely to increase, thus shortening the MBS/CMO's average life and likely causing its market price to rise. Conversely, as interest rates rise, prepayment speeds are likely to decrease, thus lengthening average life and likely causing the MBS/CMO's market price to fall. Some MBS/CMOs may have "original issue discount" (OID). OID occurs if the MBS/CMO's original issue price is below its stated redemption price at maturity, and results in "imputed interest" that must be reported annually for tax purposes, resulting in a tax liability even though interest was not received. Investors are urged to consult their tax advisors for more information.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment.

Companies paying **dividends** can reduce or cut payouts at any time.

Investing in smaller companies involves greater risks not associated with investing in more established companies, such as business risk, significant stock price fluctuations and illiquidity.

Stocks of medium-sized companies entail special risks, such as limited product lines, markets, and financial resources, and greater market volatility than securities of larger, more-established companies.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets.

REITs investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions.

Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies.

Investing in foreign markets entails greater risks than those normally associated with domestic markets, such as political, currency, economic and market risks. These risks are magnified in **emerging and frontier markets. Investing in currency** involves additional special risks such as credit, interest rate fluctuations, derivative investment risk, and domestic and foreign inflation rates, which can be volatile and may be less liquid than other securities and more sensitive to the effect of varied economic conditions. In addition, international investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economies.

Value investing does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations.

Yields are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision.

Credit ratings are subject to change.

The **indices** are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment.

The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Smith Barney LLC retains the right to change representative indices at any time.

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SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO: Retirement Board of Authority	DATE: 04/24/2019
SUBJECT: Election of a Chair for the Retirement Board of Authority	ITEM #: 2018/2019-0022
	Enclosure: Yes
	Action Item Yes

Prepared by: Keenan Financial Services

Requested by: Retirement Board of Authority

BACKGROUND:

The Governing Board of San Mateo County Community College District approved a Board Resolution authorizing the establishment of the District's OPEB Investment Trust and the creation of the Retirement Board of Authority (RBOA) with a mandate to manage and operate the District's OPEB Investment Trust.

STATUS:

The Retirement Board of Authority (RBOA) has been duly appointed by the Governing Board of the San Mateo County Community College District. The RBOA will nominate and elect a Chair to facilitate the management/operational activities of the RBOA.

RECOMMENDATION:

The formally designated Retirement Board of Authority shall take action to elect a Chair to the RBOA.

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
FUTURIS TRUST RETIREMENT BOARD OF AUTHORITY
BYLAWS

PREAMBLE

The objectives of the San Mateo County Community College (SMCCCD) in establishing a Trust for the pre-funding of its OPEB liabilities is to comply with the requirements of GASB Statements No. 74 & No. 75 and to create a retirement system that complies with the California Constitution and Government Code provisions related to such systems with a Governing Board (referred to as the "Retirement Board of Authority") consisting of officials of the SMCCCD.

The Trust is to be managed in accordance with the following principles:

- **Trust assets are managed in accordance with all applicable laws, trust documents, and a written Investment Policy Statement (IPS).**
- **Trust assets are diversified to a specific risk/return profile.**
- **A written Investment Policy Statement (IPS) contains the detail to define, implement, and monitor the trust's investment strategy.**
- **Appropriate fiduciary standards are applied in the management of trust assets and the supervision of persons hired to assist in the management of the trust.**
- **Due diligence is documented.**
- **Control procedures are in place to monitor and account for trust investment and administrative expenses.**
- **There are safeguards to avoid conflicts of interest, such as the use of funding instruments that are non-proprietary funds of any service provider to the Trust.**

1: A Retirement Board of Authority

1.1: The SMCCCD governing body has established by resolution a Retirement Board of Authority (the "Board") to supervise the trust.

1.2: The Board has been established to manage, direct and control the Fiduciary, Trust Settlor and Administrative functions, such as Consultants, Actuaries, Auditors and Accountants, Legal Counsel, Financial Advisors of the Trust.

1.3: The Board will sign such documents as are necessary to adopt and maintain an irrevocable trust which complies with the California Constitution, California Government Code, GASB Statements No. 74 & No. 75, and Section 115 of the Internal Revenue Code.

1.4: As mandated by the California Government Code, the Board shall perform all its duties with the care, skill, and diligence that a Prudent Person would utilize.

1.5: The Board shall also act solely in the interest of plan participants and beneficiaries with the sole purpose of providing benefits to them and paying only necessary and reasonable expenses for administrating the Trust.

1.6: The Board shall oversee the operation of the Trust as outlined in the Trust agreement. The Board shall delegate investment decision-making to a Trustee with a discretionary

mandate and thereafter monitor the performance of the Discretionary Trustee. For the management of the Trust's assets, an appropriate Registered Investment Advisor (RIA) shall be appointed and monitored by the Discretionary Trustee.

1.7: The Board shall adhere to the terms of the written documents governing the Trust and ensure that they comply with all applicable laws, rules and regulations that may impact the Trust.

1.8: The Board shall facilitate and oversee the preparation and centralized maintenance of the SMCCCD's Comprehensive Compliance Plan. To aid the SMCCCD in meeting its fiduciary requirements, the Substantive Plan, as described in GASB 74 and 75, will be set forth as an essential element in the development of a Comprehensive Compliance Plan.

1.9: The Board will have the exclusive authority to establish, execute and interpret the Trust's written Investment Policy Statement (IPS) which profiles the long-term investment objectives of the Trust.

1.10: The Board shall facilitate any efforts and processes necessary to ensure the SMCCCD executes applicable written agreements providing any required consent to compliance with the terms of the Trust.

1.11: The Board will require that compensation paid to the Trust's service providers is identifiable, transparent, and reasonable and adheres to the terms of the written documents governing the Trust.

2: Retirement Board of Authority – Member Appointments

2.1: The members of the Board are appointed by resolution of the governing body of the SMCCCD. Board members may be replaced or terminated by the governing body of the SMCCCD at any time as Board members serve at the pleasure of the SMCCCD.

2.2: Board members shall be appointed to the Board by the SMCCCD Board of Trustees. The Board will consist of three appointees of the district based solely on their titles, one recommended by AFT and one recommended by CSEA, both approved by the SMCCCD Board of Trustees. If the Title of an existing Board member changes and that new title is not one of the designated titles included in the resolution of the governing body of the SMCCCD, the Board member will no longer be a Board member unless there is a new resolution from the governing body of the SMCCCD. If the governing body determines alternates are required, positions will be appointed by resolution.

2.3: The number of Board members will consist of such number of individuals that are deemed necessary by the governing body of the SMCCCD.

2.4: The Board will designate one of its members by majority vote to serve as Chairperson and a second member as Vice Chairperson.

2.5 The Chairperson and Vice Chairperson will serve in this capacity for two years at which time the Board will act again to select a Chairperson and Vice Chairperson for a second term. The Chairperson and Vice Chairperson can serve multiple terms.

2.6: The Chairperson will act as the presiding officer for Board meetings.

2.7: Based on the minimum number of signatures required therein and/or specific people required by the Board, authorizations for withdrawals, distributions, benefit payments and reasonable fees are restricted to individuals with specimen signatures listed on the Trust's Signature Authorization Form.

2.8: Board meetings shall be conducted by the Chairperson. When the Chairperson is not present, the Vice Chairperson will conduct the meeting.

2.9: A majority of the Board members must be present or attend by teleconference, per the provisions of the Ralph M. Brown Act, in order to conduct a Board meeting and is considered a quorum. A vote, under the protocols of the Ralph M. Brown Act, of the majority of the Board members, shall be sufficient to transact business.

2.10: Each Board member shall have one vote in accordance with the protocols of the Ralph M. Brown Act. No proxy votes shall be permitted. If a member is attending by teleconference, all votes must be by roll-call.

2.11: In recognition of the importance of the work of the Board, regular attendance at Board meetings is expected from all members.

2.12: No Board member shall have the authority to bind the Board to any contract or endeavor without the approval of the Board.

2.13: No member serving on the Board will receive a salary or compensation from the Board.

2.14: The Board may approve reimbursement for reasonable expenses incurred by Board members. All expenditures of funds shall be subject to Board approval.

2.15: The Board shall designate the SMCCCD, 3401 CSM Drive, San Mateo, CA as the location at which it will receive notices, correspondence, and other communications and shall designate the Chairperson of the Board as the officer for the purpose of receiving service on behalf of the Board.

3: Retirement Board of Authority – Meeting Agendas

3.1: All Board meeting agendas shall be prepared and posted in a public location, to comply with the Ralph M. Brown Act

3.2: The Board shall hold their meetings at a minimum of once a year, giving advanced notice to comply with the Ralph M. Brown Act.

3.3: The Board shall engage, at least annually, in analysis of any applicable modifications to the Investment Policy Statement (IPS) through meetings and consulting with the trustee and Registered Investment Advisor (RIA), as applicable.

3.4: Full and complete minutes detailing records of deliberations and decisions from each meeting of the Board shall be maintained In compliance with the Ralph M. Brown Act.

4: Retirement Board of Authority – Actuarial, Contribution & Withdrawal Parameters

4.1: The Board will ratify the amount of any contributions from the SMCCCD and deliver contributions and allocation instructions to the Trustee. Such contributions and allocation instructions shall be delivered in accordance with the Trust's written provisions and agreements.

4.2 The Board will establish procedures to review all expenditures and disbursements from the Trust.

4.3: In accordance with GASB Statement No. 75 schedules, the Board will work with the SMCCCD's governing body in obtaining the necessary calculations to identify the "Actuarial Present Value of Total Projected Benefits" (APVTPB), the " "Actuarially Determined Contribution" (ADC) as well as all other calculations and information necessary to comply with GASB's actuarial valuation requirements.

4.4: The Board will provide any necessary plan participant information to the Trustee on a timely basis. The Board shall provide response to all information requested by the Discretionary Trustee in a timely fashion.

5: Retirement Board of Authority -- Disclosure & Conflict of Interest

5.1: No Board member shall vote or participate in a determination of any matter in which the Board member shall receive a special compensation or gain.

5.2: Board members have a duty of loyalty precluding them from being influenced by motives other than the accomplishment of the Trust's objectives.

5.3: Board members, in the performance of their duties, must act pursuant to the documents & instruments establishing and governing the Trust.

6: Retirement Board of Authority -- Rules of Order/Bylaws

6.1: Amendment of these Bylaws may be proposed by any member of the Board.

6.2: All amendments to the Bylaws must be approved by a majority vote of the Board members present, before the amendment shall become effective.

6.3: Such amendments shall be binding upon all members of the Board.

6.4: The effective date of any amendment shall be on the first day of the month following adoption, unless otherwise stated.

7: Retirement Board of Authority -- Appearance before the Board

7.1: All persons who wish to make appearances before the Board shall be scheduled in compliance with the provisions of the Ralph M. Brown Act.

7.2: Appearances before the Board may be in person or through a representative.

7.3: Communications with the Board may be in any form that complies with the provisions of the Ralph M. Brown Act.

8: Retirement Board of Authority – Fiduciary & Governance Parameters

8.1: The Trust will be structured so that the Board shall reduce its legal liability for investment risk by appropriately delegating investment decision-making.

8.2: The Board shall delegate investment decision-making to a Trustee with a discretionary mandate and thereafter monitor the performance of the Discretionary Trustee. For the management of the Trust's assets, an appropriate Registered Investment Advisor (RIA) shall be appointed and monitored by the Discretionary Trustee.

8.3: The Board will monitor the performance and acts of the Discretionary Trustee in accordance with the limits and constraints of applicable laws, trust documents and the written Investment Policy Statement (IPS) as well as the Trust's investment goals, objectives, fees and expenses.

8.4: The Board shall monitor the Discretionary Trustee to determine that Trust assets are diversified as directed by the Investment Policy Statement (IPS) and applicable laws.

8.5: The Board through periodic reports will compare investment performance against appropriate indices, peer groups and Investment Policy Statement (IPS) objectives.

8.6: The Board will require that all service agreements and contracts are in writing, and do not contain provisions that conflict with fiduciary standards. Fees paid to each service provider shall be consistent with agreements, contracts and with all applicable laws.

9: Discretionary Trustee & Investment Management

9.1: The agreement appointing the Discretionary Trustee shall require the discretionary trustee to invest Trust assets in compliance with applicable laws, trust documents, and the written Investment Policy Statement (IPS).

9.2: The agreement appointing the Discretionary Trustee shall require the Discretionary Trustee document the specific duties and requirements of the parties involved in the investment process.

9.3: The Board shall require the Discretionary Trustee to acknowledge, in writing, that it is a fiduciary to the Trust and to the SMCCCD.

9.4: The Board shall prohibit the Discretionary Trustee from investing trust assets in its own proprietary investment products or those of its Registered Investment Adviser so as to avoid any potential conflicts of interest.

9.5: The Board shall require the Discretionary Trustee to manage Trust assets with the care, skill and diligence of a Prudent Person under California law.

10: Registered Investment Advisor (RIA):

10.1: The RIA engaged by the Discretionary Trustee must have the following qualifications and responsibilities:

(a) It shall work with the Discretionary Trustee to establish a long-term, target net rate of return objective for the trust, constructing an investment portfolio which gives due consideration to the SMCCCD's time horizon of investment, as well as its attitudes and capacity for risk.

(b) It shall recommend the appropriate combination of asset classes that optimizes the Trust's return objectives, while minimizing risk consistent with the Trust's constraints.

(c) It shall provide investment recommendations derived from a disciplined approach to investment selection; considering risk-adjusted performance comparable to managers with similar style; a long-term superior performance profile; an analysis of investment expenses with a preference for investments with no-load, no redemption charges, and no transaction fees or revenue-sharing schedules.

(d) It shall have access to appropriate databases and external research, and shall be supported with adequate technology and report production tools.

11: Program Coordinator

11.1: The Board has appointed a Program Coordinator with responsibility to assist the Board with the processes, procedures and protocols of the Trust's fiduciary decision making.

11.2: The Board shall require the Program Coordinator to facilitate all aspects of the Board's Fiduciary and Administrative mandates and work to assist the Board in ensuring that trust assets are managed in accordance with all applicable laws, trust documents and the written Investment Policy Statement (IPS).

11.3: The Board shall require the Program Coordinator to provide comprehensive assistance in conducting Board meetings and agendas in compliance with the provisions of the Ralph M. Brown Act.

11.4: The Program Coordinator will provide support to the Board in the preparation and centralized maintenance of the SMCCCD's Comprehensive Compliance Plan, including the Substantive Plan.

12: Program Definitions:

12.1: "Actuarial Present Value of Total Projected Benefits" (APVTPB)) is the projected benefit payments discounted to reflect the expected effects of the time value (present) of money and the probabilities of payment.
12.2: "Actuarially Determined Contribution" (ADC) is the target or recommended contribution to a defined benefit OPEB plan for the reporting period determined in conformity with the Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted .
12.3: "Comprehensive Compliance Plan" shall mean a broad compliance and fiduciary process incorporating the SMCCCD's substantive plan obligations; the actuarial cost of those obligations; the plan for meeting those costs; the fiduciary strategies and steps in meeting plan requirements.

12.4: "Discretionary Trustee" shall mean a trust structure whereby the Trustee will accept the delegation of investment duties and work as the sole authority in the selection, monitoring and disposition of Trust's assets.

12.5: "Investment Policy Statement"(IPS) shall mean a written statement that establishes the Futuris SMCCCD Investment Trust's investment related policies, goals, objectives and criteria for evaluating investment performance that are critical for the successful management of the Trust's investments.

12.6: "Net OPEB Liability" is the liability of employers and nonemployer contributing entities to plan members for benefits provided through a defined benefit OPEB plan that is administered through a GASB-compliant trust.

12.7: "Quorum" shall mean the majority of the Board members as are required to conduct a Board meeting or to transact business on behalf of the Board.

12.8: "Registered Investment Advisor" (RIA) shall mean the investment entity charged with the responsibility for recommending comprehensive and continuous investment advice for the Futuris SMCCCD Investment Trust.

12.9: "Retirement Board of Authority" is established by the governing body of the SMCCCD and shall mean the entity charged with the discretion, responsibility and authority to oversee the management of the SMCCCD Investment Trust. Specifically, the Board shall determine the investment policy and strategy for the Trust and is empowered to inquire and resolve any matter it considers appropriate to carry out its responsibilities.

12.10: "Substantive Plan" shall mean the terms of the OPEB plans as they are understood by the employer and employees. It is generally comprised of the OPEB plan documents as well as other communications between the employer and the employees as well as the historical pattern of practice with regard to the sharing of benefit-related costs with inactive employees.12.11: "The Trust" shall mean the SMCCCD's Investment Trust established for the pre-funding of its OPEB liabilities and maintained in compliance with GASB Statement No. 74 & No 75, the California Constitution and the California Government Code with a governing Board consisting of officials of the SMCCCD.

Updated 04-13-2018

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO: Retirement Board of Authority	DATE: 04/24/2019
SUBJECT: Election of a Vice-Chair for the Retirement Board of Authority	ITEM #: 2018/2019-023
	Enclosure: No
	Action Item Yes

Prepared by: Keenan Financial Services

Requested by: Retirement Board of Authority

BACKGROUND:

The Governing Board of San Mateo County Community College District approved a Board Resolution authorizing the establishment of the District's OPEB Investment Trust and the creation of the Retirement Board of Authority (RBOA) with a mandate to manage and operate the District's OPEB Investment Trust.

STATUS:

The Retirement Board of Authority (RBOA) has been duly appointed by the Governing Board of the San Mateo County Community College District, will nominate and elect a Vice-Chair to facilitate the management/operational activities of the RBOA in the absence of the RBOA Chair.

RECOMMENDATION:

The formally designated Retirement Board of Authority shall take action to elect a Vice-Chair to the RBOA.

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO:	DATE: 4/24/2019
Retirement Board of Authority	
SUBJECT:	ITEM #: 2018/2019-024
Disbursement Report	Enclosure: Yes
	Action Item Yes

Prepared by: Keenan Financial Services

Requested by: Retirement Board of Authority

BACKGROUND:

The District's OPEB Trust is positioned to make withdrawals for the reimbursement of retiree benefits for eligible participants and for the "reasonable fees" associated with the management and operation of the Trust.

STATUS:

The Retirement Board of Authority (RBOA) shall ratify the "reasonable fees" associated with GASB 74/75 compliance and the Management/Operational duties of the District's Investment Trust.

RECOMMENDATION:

The Retirement Board of Authority will hear the information and take appropriate action as deemed necessary.

San Mateo CCD

10.01.2018 – 03.20.2019

	DISBURSEMENT TRANSACTIONS	
10/16/2018	MONTHLY FEE TO KEENAN AND ASSOCIATES EFFECTIVE 10/15/2018 SEPTEMBER 2018	($11,810.84)
10/16/2018	MONTHLY FEE TO BENEFIT TRUST COMPANY EFFECTIVE 10/15/2018 SEPTEMBER 2018	($1,365.71)
10/16/2018	MONTHLY FEE TO MORGAN STANLEY EFFECTIVE 10/15/2018 SEPTEMBER 2018	($1,187.37)
10/16/2018	MONTHLY FEE TO MORGAN STANLEY EFFECTIVE 10/15/2018 SEPTEMBER 2018	($11,710.84)
10/16/2018	MONTHLY FEE TO BENEFIT TRUST COMPANY EFFECTIVE 10/15/2018 SEPTEMBER 2018	($11,773.34)
11/16/2018	MONTHLY FEE TO BENEFIT TRUST COMPANY EFFECTIVE 11/15/2018 OCTOBER 2018	($11,199.06)
11/16/2018	MONTHLY FEE TO KEENAN AND ASSOCIATES EFFECTIVE 11/15/2018 OCTOBER 2018	($11,236.56)
11/16/2018	MONTHLY FEE TO MORGAN STANLEY EFFECTIVE 11/15/2018 OCTOBER 2018	($11,136.56)
12/17/2018	MONTHLY FEE TO BENEFIT TRUST COMPANY EFFECTIVE 12/14/2018 NOVEMBER 2018	($11,292.02)
12/17/2018	MONTHLY FEE TO KEENAN AND ASSOCIATES EFFECTIVE 12/14/2018 NOVEMBER 2018	($11,329.52)
12/17/2018	MONTHLY FEE TO MORGAN STANLEY EFFECTIVE 12/14/2018 NOVEMBER 2018	($11,229.52)
01/18/2019	MONTHLY FEE TO BENEFIT TRUST COMPANY DECEMBER 2018	($10,910.95)
01/18/2019	MONTHLY FEE TO KEENAN AND ASSOCIATES DECEMBER 2018	($10,948.45)
01/18/2019	MONTHLY FEE TO MORGAN STANLEY DECEMBER 2018	($10,848.45)
02/12/2019	MONTHLY FEE TO BENEFIT TRUST COMPANY JANUARY 2019	($11,457.41)
02/12/2019	MONTHLY FEE TO KEENAN AND ASSOCIATES JANUARY 2019	($11,494.91)
02/12/2019	MONTHLY FEE TO MORGAN STANLEY JANUARY 2019	($11,394.91)
03/13/2019	MONTHLY FEE TO BENEFIT TRUST COMPANY EFFECTIVE 03/12/2019 FEBRUARY 2019	($11,603.04)
03/13/2019	MONTHLY FEE TO KEENAN AND ASSOCIATES EFFECTIVE 03/12/2019 FEBRUARY 2019	($11,640.54)
03/13/2019	MONTHLY FEE TO MORGAN STANLEY EFFECTIVE 03/12/2019 FEBRUARY 2019	($11,540.54)
	TOTAL FOR DISBURSEMENT	**($207,110.54)**

	REVERSAL OF A PRIOR TRANSACTION TRANSACTIONS	
10/16/2018	REVERSAL TO TRANSACTION # 718 OF 10/16/2018 TRANSACTION WAS: MONTHLY FEE TO MORGAN STANLEY EFFECTIVE 10/15/2018 SEPTEMBER 2018	$1,187.37
10/16/2018	REVERSAL TO TRANSACTION # 717 OF 10/16/2018 TRANSACTION WAS: MONTHLY FEE TO BENEFIT TRUST COMPANY EFFECTIVE 10/15/2018 SEPTEMBER 2018	$1,365.71

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO: Retirement Board of Authority	DATE: 4/24/2019
SUBJECT: Actuarial Valuation Study Update	ITEM #: 2018/2019-025
	Enclosure: Yes
	Action Item No

Prepared by: Keenan Financial Services

Requested by: Retirement Board of Authority

BACKGROUND:

GASB Statement 74, states that an Actuarial Valuation Study should be performed at least biannually. The Retirement Board of Authority should discuss the need for obtaining an updated Actuarial Valuation Study.

STATUS:

The District's current Actuarial Valuation Study has an effective date of **September 26, 2017**. The RBOA membership will review and analyze the status of updates to the current Actuarial Valuation Study.

RECOMMENDATION:

The Retirement Board of Authority shall hear and receive the information presented.

San Mateo County Community College District

Actuarial Study of
Retiree Health Liabilities Under GASB 74/75
Roll-forward Valuation
Valuation Date: June 30, 2017
Measurement Date: June 30, 2018

Prepared by:
Total Compensation Systems, Inc.

Date: October 4, 2018

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San Mateo County Community College District
Actuarial Study of Retiree Health Liabilities

PART I: EXECUTIVE SUMMARY

A. Introduction

San Mateo County Community College District engaged Total Compensation Systems, Inc. (TCS) to analyze liabilities associated with its current retiree health program as of June 30, 2018 (the measurement date). This valuation report is based on an earlier GASB 75 valuation as of June 30, 2017 . We used standard actuarial "roll-forward" methodology to estimate the Total OPEB Liability (TOL) as of the measurement date. The Fiduciary Net Position (FNP) is based on the actual FNP at June 30, 2018. The numbers in this report are based on the assumption that they will first be used to determine accounting entries for the fiscal year ending June 30, 2018. If the report will first be used for a different fiscal year, the numbers may need to be adjusted accordingly.

This report does not reflect any cash benefits paid unless the retiree is required to provide proof that the cash benefits are used to reimburse the retiree's cost of health benefits. Costs and liabilities attributable to cash benefits paid to retirees are reportable under applicable Governmental Accounting Standards Board (GASB) Standards.

This actuarial study is intended to serve the following purposes:

- To provide information to enable San Mateo CCD to manage the costs and liabilities associated with its retiree health benefits.
- To provide information to enable San Mateo CCD to communicate the financial implications of retiree health benefits to internal financial staff, the Board, employee groups and other affected parties.
- To provide information needed to comply with Governmental Accounting Standards Board Accounting Standards 74 and 75 related to "other postemployment benefits" (OPEB's).

Because this report was prepared in compliance with GASB 74 and 75, San Mateo CCD should not use this report for any other purpose without discussion with TCS. This means that any discussions with employee groups, governing Boards, etc. should be restricted to the implications of GASB 74 and 75 compliance.

We calculated the following estimates separately for active employees and retirees. As requested, we also separated results by the following employee classifications: AFSCME, Certificated Management, Faculty, Classified and Classified Management. We estimated the following:

- the total liability created. (The actuarial present value of total projected benefit payments or APVPBP)
- ten years of projected benefit payments.
- the "total OPEB liability (TOL)." (The TOL is the portion of the APVPBP attributable to employees' service prior to the measurement date.)
- the "net OPEB liability" (NOL). For plans funded through a trust, this represents the unfunded portion of the liability.

- the service cost (SC). This is the value of OPEB benefits earned for one year of service.
- deferred inflows and outflows of resources attributable to the OPEB plan.
- "OPEB expense." This is the amount recognized in accrual basis financial statements as the current period expense. The OPEB expense includes service cost, interest and certain changes in the OPEB liability, adjusted to reflect deferred inflows and outflows. This amount may need to be adjusted to reflect any contributions received after the Measurement Date.
- Amounts to support financial statement Note Disclosures and Required Supplementary Information (RSI) schedules.

We summarized the data used to perform this study in Appendix A. No effort was made to verify this information beyond brief tests for reasonableness and consistency.

All cost and liability figures contained in this study are estimates of future results. Future results can vary dramatically and the accuracy of estimates contained in this report depends on the actuarial assumptions used. Service costs and liabilities could easily vary by 10 - 20% or more from estimates contained in this report.

B. General Findings

We estimate the "pay-as-you-go" cost of providing retiree health benefits in the year beginning July 1, 2018 to be $7,432,730 (see Section IV.A.). The "pay-as-you-go" cost is the cost of benefits for current retirees.

For current employees, the value of benefits "accrued" in the year beginning July 1, 2018 (the service cost) is $3,359,195. This service cost would increase each year based on covered payroll. Had San Mateo CCD begun accruing retiree health benefits when each current employee and retiree was hired, a substantial liability would have accumulated. We estimate the amount that would have accumulated at June 30, 2018 to be $121,063,333. This amount is called the "Total OPEB Liability" (TOL). San Mateo CCD has set aside funds to cover retiree health liabilities in a GASB 75 qualifying trust. The Fiduciary Net Position of this trust at June 30, 2018 was $114,912,841. This leaves a Net OPEB Liability (NOL) of $6,150,492.

Based on the information we were provided, the OPEB Expense for the fiscal year ending June 30, 2018 is $4,813,321. As noted in this report, adjustments may be needed – particularly if the reporting date is not the same as the measurement date.

We based all of the above estimates on employees as of March, 2017. Over time, liabilities and cash flow will vary based on the number and demographic characteristics of employees and retirees.

C. Description of Retiree Benefits

Following is a description of the current retiree benefit plan. District practices are based on Government Code sections collectively known as PEMHCA, which vary from collective bargaining agreements.

	AFSCME	*Certificated Management*	*Certificated*	*Classified*	*Classified Management*
Benefit types provided	Medical, Part B	Medical, Part B	Medical, Part B	Medical, Part B	Medical, Part B
Duration of Benefits	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime
Minimum Age Required Service	Retirement from Applicable Retirement System	Retirement from Applicable Retirement System	Retirement from Applicable Retirement System	Retirement from Applicable Retirement System	Retirement from Applicable Retirement System
Dependent Coverage	Yes	Yes	Yes	Yes	Yes
District Contribution %	100%	100%	100%	100%	100%
District Cap	$704 per month*	$704 per month*	$704 per month*	$704 per month*	$704 per month*

*The District contribution is changed periodically. Grandfathered employees and retirees receive benefits that may exceed this cap.

D. Recommendations

It is outside the scope of this report to make specific recommendations of actions San Mateo CCD should take to manage the liability created by the current retiree health program. Total Compensation Systems, Inc. can assist in identifying and evaluating options once this report has been studied. The following recommendations are intended only to allow the District to get more information from this and future studies. Because we have not conducted a comprehensive administrative audit of San Mateo CCD's practices, it is possible that San Mateo CCD is already complying with some or all of our recommendations.

- We recommend that San Mateo CCD maintain an inventory of all benefits and services provided to retirees – whether contractually or not and whether retiree-paid or not. For each, San Mateo CCD should determine whether the benefit is material and subject to GASB 74 and/or 75.

- We recommend that San Mateo CCD conduct a study whenever events or contemplated actions significantly affect present or future liabilities, but no less frequently than every two years, as required under GASB 74/75.

- Under GASB 75, it is important to isolate the cost of retiree health benefits. San Mateo CCD should have all premiums, claims and expenses for retirees separated from active employee premiums, claims, expenses, etc. To the extent any retiree benefits are made available to retirees over the age of 65 – ***even on a retiree-pay-all basis*** – all premiums, claims and expenses for post-65 retiree coverage should be segregated from those for pre-65 coverage. Furthermore, San Mateo CCD should arrange for the rates or prices of all retiree benefits to be set on what is expected to be a self-sustaining basis.

- San Mateo CCD should establish a way of designating employees as eligible or ineligible for future OPEB benefits. Ineligible employees can include those in ineligible job classes; those hired after a

designated date restricting eligibility; those who, due to their age at hire cannot qualify for District-paid OPEB benefits; employees who exceed the termination age for OPEB benefits, etc.

- Several assumptions were made in estimating costs and liabilities under San Mateo CCD's retiree health program. Further studies may be desired to validate any assumptions where there is any doubt that the assumption is appropriate. (See Appendices B and C for a list of assumptions and concerns.) For example, San Mateo CCD should maintain a retiree database that includes – in addition to date of birth, gender and employee classification – retirement date and (if applicable) dependent date of birth, relationship and gender. It will also be helpful for San Mateo CCD to maintain employment termination information – namely, the number of OPEB-eligible employees in each employee class that terminate employment each year for reasons other than death, disability or retirement.

Respectfully submitted,

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PART II: BACKGROUND

A. Summary

Accounting principles provide that the cost of retiree benefits should be "accrued" over employees' working lifetime. For this reason, the Governmental Accounting Standards Board (GASB) issued in June of 2015 Accounting Standards 74 and 75 for retiree health benefits. These standards apply to all public employers that pay any part of the cost of retiree health benefits for current or future retirees (including early retirees), whether they pay directly or indirectly (via an "implicit rate subsidy"),

B. Actuarial Accrual

To actuarially accrue retiree health benefits requires determining the amount to expense each year so that the liability accumulated at retirement is, on average, sufficient (with interest) to cover all retiree health expenditures without the need for additional expenses. There are many different ways to determine the annual accrual amount. The calculation method used is called an "actuarial cost method."

The actuarial cost method mandated by GASB 75 is the "entry age actuarial cost method". Under this method, there are two components of actuarial cost – a "service cost" (SC) and the "Total OPEB Liability" (TOL). GASB 75 allows certain changes in the TOL to be deferred (i.e. deferred inflows and outflows of resources).

The service cost can be thought of as the value of the benefit earned each year if benefits are accrued during the working lifetime of employees. Under the entry age actuarial cost method, the actuary determines the annual amount needing to be expensed from hire until retirement to fully accrue the cost of retiree health benefits. This amount is the service cost. Under GASB 75, the service cost is calculated to be a level percentage of each employee's projected pay.

The service cost is determined using several key assumptions:

- The current ***cost of retiree health benefits*** (often varying by age, Medicare status and/or dependent coverage). The higher the current cost of retiree benefits, the higher the service cost.
- The ***"trend" rate*** at which retiree health benefits are expected to increase over time. A higher trend rate increases the service cost. A "cap" on District contributions can reduce trend to zero once the cap is reached thereby dramatically reducing service costs.
- ***Mortality rates*** varying by age and sex. (Unisex mortality rates are not often used as individual OPEB benefits do not depend on the mortality table used.) If employees die prior to retirement, past contributions are available to fund benefits for employees who live to retirement. After retirement, death results in benefit termination or reduction. Although higher mortality rates reduce service costs, the mortality assumption is not likely to vary from employer to employer.
- ***Employment termination rates*** have the same effect as mortality inasmuch as higher termination rates reduce service costs. Employment termination can vary considerably between public agencies.
- The ***service requirement*** reflects years of service required to earn full or partial retiree benefits. While a longer service requirement reduces costs, cost reductions are not usually substantial unless the service period exceeds 20 years of service.

- ***Retirement rates*** determine what proportion of employees retire at each age (assuming employees reach the requisite length of service). Retirement rates often vary by employee classification and implicitly reflect the minimum retirement age required for eligibility. Retirement rates also depend on the amount of pension benefits available. Higher retirement rates increase service costs but, except for differences in minimum retirement age, retirement rates tend to be consistent between public agencies for each employee type.

- ***Participation rates*** indicate what proportion of retirees are expected to elect retiree health benefits if a significant retiree contribution is required. Higher participation rates increase costs.

- The ***discount rate*** estimates investment earnings for assets earmarked to cover retiree health benefit liabilities. The discount rate depends on the nature of underlying assets for funded plans. The rate used for a funded plan is the real rate of return expected for plan assets plans plus long term inflation assumption. For an unfunded plan, the discount rate is based on an index of 20 year General Obligation municipal bonds. For partially funded plans, the discount rate is a blend of the funded and unfunded rates.

The assumptions listed above are not exhaustive, but are the most common assumptions used in actuarial cost calculations. If all actuarial assumptions are exactly met and an employer expensed the service cost every year for all past and current employees and retirees, a sizeable liability would have accumulated (after adding interest and subtracting retiree benefit costs). The liability that would have accumulated is called the Total OPEB Liability (TOL). The excess of TOL over the value of plan assets is called the Net OPEB Liability (NOL). Under GASB 74 and 75, in order for assets to count toward offsetting the TOL, the assets have to be held in an irrevocable trust that is safe from creditors and can only be used to provide OPEB benefits to eligible participants.

The total OPEB liability (TOL) can arise in several ways - e.g., as a result of plan changes or changes in actuarial assumptions. TOL can also arise from actuarial gains and losses. Actuarial gains and losses result from differences between actuarial assumptions and actual plan experience.

Under GASB 74 and 75, a portion of actuarial gains and losses can be deferred as follows:

- Investment gains and losses can be deferred five years

- Experience gains and losses can be deferred over the expected average remaining service lives (EARSL) of plan participants. In calculating the EARSL, terminated employees (primarily retirees) are considered to have a working lifetime of zero. This often makes the EARSL quite short.

- Liability changes resulting from changes in economic and demographic assumptions are also deferred based on the average working lifetime

- Liability changes resulting from plan changes, for example, cannot be deferred.

PART III: LIABILITIES AND COSTS FOR RETIREE BENEFITS

A. Introduction.

The liability for OPEB benefits was calculated in the valuation as of June 30, 2017 and the methodology used was described in our GASB 75 valuation report dated September 26, 2017. In Part III, we show the tables included in our September 26, 2017 valuation report and provide details of our roll-forward valuation.

We summarized actuarial assumptions used for this study in Appendix C.

B. Liability for Retiree Benefits.

Below is the actuarial present value of projected benefit payments (APVPBP) table presented in our September 26, 2017 valuation report.

Actuarial Present Value of Projected Benefit Payments at June 30, 2017

	Total	*AFSCME*	*Certificated Management*	*Faculty*	*Classified*	*Classified Management*
Active: Pre-65	$16,808,530	$1,567,787	$750,650	$6,365,017	$5,416,091	$2,708,985
Post-65	$51,890,784	$4,483,082	$3,085,602	$20,233,337	$16,157,941	$7,930,822
Subtotal	$68,699,314	$6,050,869	$3,836,252	$26,598,354	$21,574,032	$10,639,807
Retiree: Pre-65	$2,620,675	$952,894	$32,252	$332,024	$903,583	$399,922
Post-65	$67,772,835	$1,444,095	$683,596	$33,336,922	$28,750,701	$3,557,521
Subtotal	$70,393,510	$2,396,989	$715,848	$33,668,946	$29,654,284	$3,957,443
Grand Total	$139,092,824	$8,447,858	$4,552,100	$60,267,300	$51,228,316	$14,597,250
Subtotal Pre-65	$19,429,205	$2,520,681	$782,902	$6,697,041	$6,319,674	$3,108,907
Subtotal Post-65	$119,663,619	$5,927,177	$3,769,198	$53,570,259	$44,908,642	$11,488,343

C. Cost to Prefund Retiree Benefits

1. Service Cost

Below is the service cost table included in our September 26, 2017 valuation report. This service cost is used in calculating the pension expense.

Service Cost Year Beginning June 30, 2017

	Total	*AFSCME*	*Certificated Management*	*Faculty*	*Classified*	*Classified Management*
# of Employees	947	87	54	322	339	145
Per Capita Service Cost						
Pre-65 Benefit	N/A	$1,142	$1,170	$1,268	$1,012	$1,078
Post-65 Benefit	N/A	$2,218	$3,398	$2,856	$2,008	$2,153
First Year Service Cost						
Pre-65 Benefit	$1,070,208	$99,354	$63,180	$408,296	$343,068	$156,310
Post-65 Benefit	$2,288,987	$192,966	$183,492	$919,632	$680,712	$312,185
Total	$3,359,195	$292,320	$246,672	$1,327,928	$1,023,780	$468,495

2. Total OPEB Liability (TOL) and Net OPEB Liability (NOL)

The table below shows the TOL included in the September 26, 2017 valuation report. This TOL is used as the beginning of year TOL to roll forward the TOL to June 30, 2018.

Total OPEB Liability (TOL) and Net OPEB Liability (NOL) as of June 30, 2017

	Total	*AFSCME*	*Certificated Management*	*Faculty*	*Classified*	*Classified Management*
Active: Pre-65	$9,733,470	$912,634	$403,159	$3,739,408	$3,017,800	$1,660,469
Active: Post-65	$36,842,525	$3,210,640	$2,076,394	$14,319,506	$11,399,276	$5,836,709
Subtotal	$46,575,995	$4,123,274	$2,479,553	$18,058,914	$14,417,076	$7,497,178
Retiree: Pre-65	$2,620,675	$952,894	$32,252	$332,024	$903,583	$399,922
Retiree: Post-65	$67,772,835	$1,444,095	$683,596	$33,336,922	$28,750,701	$3,557,521
Subtotal	$70,393,510	$2,396,989	$715,848	$33,668,946	$29,654,284	$3,957,443
Subtotal: Pre-65	$12,354,145	$1,865,528	$435,411	$4,071,432	$3,921,383	$2,060,391
Subtotal: Post-65	$104,615,360	$4,654,735	$2,759,990	$47,656,428	$40,149,977	$9,394,230
Total OPEB Liability (TOL)	$116,969,506	$6,520,264	$3,195,401	$51,727,860	$44,071,360	$11,454,621
Fiduciary Net Position as of June 30, 2017	$97,061,619					
Net OPEB Liability (NOL)	$19,907,887					

In order to determine the June 30, 2018 NOL, we used a "roll-forward" technique for the TOL. The FNP is based on the actual June 30, 2018 FNP. The following table shows the results of the roll-forward.

Changes in Net OPEB Liability as of June 30, 2018

	TOL	*FNP*	*NOL*
Balance at June 30, 2017	$116,969,506	$97,061,619	$19,907,887
Service Cost	$3,359,195	$0	$3,359,195
Interest on TOL	$8,049,420	$0	$8,049,420
Employer Contributions	$0	$19,514,788	($19,514,788)
Employee Contributions	$0	$0	$0
Assumption Changes	$0	$0	$0
Expected Investment Income	$0	$7,208,125	($7,208,125)
Investment Gains/Losses	$0	($1,180,091)	$1,180,091
Administrative Expense	$0	($376,812)	$376,812
Expected Benefit Payments	($7,314,788)	($7,314,788)	$0
Actual minus Expected Benefit Payments	$0	$0	$0
Other	$0	$0	$0
Net Change during 2017-18	$4,093,827	$17,851,222	($13,757,395)
Balance at June 30, 2018 *	$121,063,333	$114,912,841	$6,150,492

***** May include a slight rounding error.

3. OPEB Expense

Under GASB 74 and 75, OPEB expense includes service cost, interest cost, change in TOL due to plan changes; all adjusted for deferred inflows and outflows. Following is the pension expense for the fiscal year ending June 30, 2018. The OPEB expense shown below is considered to be preliminary because there can be employer specific deferred items (e.g., contributions made after the measurement date, and active employee contributions toward the OPEB plan).

OPEB Expense Fiscal Year Ending June 30, 2018

	Total
Service Cost	$3,359,195
Interest on Total OPEB Liability (TOL)	$8,049,420
Employee Contributions	$0
Recognized Experience Gains/Losses	$0
Recognized Assumption Changes	$0
Expected Investment Income	($7,208,125)
Recognized Investment Gains/Losses	$236,019
Contributions After Measurement Date*	$0
Liability Change Due to Benefit Changes	$0
Administrative Expense	$376,812
OPEB Expense**	$4,813,321

***** Should be added by San Mateo CCD if reporting date is after the measurement date.
****** May include a slight rounding error.

The above OPEB expense does not include an estimated $19,514,788 in employer contributions.

4. Deferred Inflows and Outflows

Certain types of TOL changes are subject to deferral, as are investment gains/losses. Appendix F provides details of any deferred inflows and/or outflows included in the pension expense.

PART IV: "PAY AS YOU GO" FUNDING OF RETIREE BENEFITS

We used the actuarial assumptions shown in Appendix C to project the District's ten year retiree benefit outlay, including any implicit rate subsidy. Because these cost estimates reflect average assumptions applied to a relatively small number of employees, estimates for individual years are **certain** to be ***in***accurate. However, these estimates show the size of cash outflow.

The following table shows a projection of annual amounts needed to pay the District's share of retiree health costs, including any implicit rate subsidy, that was included in the September 26, 2017 valuation report.

Year Beginning July 1	*Total*	*AFSCME*	*Certificated Management*	*Faculty*	*Classified*	*Classified Management*
2017	$7,314,788	$191,647	$70,469	$3,548,404	$3,128,744	$375,524
2018	$7,432,730	$218,226	$87,241	$3,607,605	$3,117,697	$401,961
2019	$7,760,083	$268,491	$110,577	$3,751,754	$3,166,081	$463,180
2020	$8,064,880	$314,259	$135,172	$3,867,195	$3,222,086	$526,168
2021	$8,341,011	$359,540	$156,935	$3,955,606	$3,278,088	$590,842
2022	$8,563,287	$387,822	$180,464	$4,019,277	$3,327,941	$647,783
2023	$8,816,012	$416,144	$206,627	$4,103,325	$3,379,229	$710,687
2024	$9,034,350	$435,607	$231,946	$4,165,609	$3,423,891	$777,297
2025	$9,237,976	$467,438	$262,203	$4,210,173	$3,460,958	$837,204
2026	$9,446,255	$501,158	$295,362	$4,254,545	$3,499,199	$895,991

PART V: RECOMMENDATIONS FOR FUTURE VALUATIONS

To effectively manage benefit costs, an employer must periodically examine the existing liability for retiree benefits as well as future annual expected premium costs. GASB 74/75 require biennial valuations. In addition, a valuation should be conducted whenever plan changes, changes in actuarial assumptions or other employer actions are likely to cause a material change in accrual costs and/or liabilities.

Following are examples of actions that could trigger a new valuation.

- An employer should perform a valuation whenever the employer considers or puts in place an early retirement incentive program.
- An employer should perform a valuation whenever the employer adopts a retiree benefit plan for some or all employees.
- An employer should perform a valuation whenever the employer considers or implements changes to retiree benefit provisions or eligibility requirements.
- An employer should perform a valuation whenever the employer introduces or changes retiree contributions.
- An employer should perform a valuation whenever the employer forms a qualifying trust or changes its investment policy.
- An employer should perform a valuation whenever the employer adds or terminates a group of participants that constitutes a significant part of the covered group.

We recommend San Mateo CCD take the following actions to ease future valuations.

- We have used our training, experience and information available to us to establish the actuarial assumptions used in this valuation. We have no information to indicate that any of the assumptions do not reasonably reflect future plan experience. However, the District should review the actuarial assumptions in Appendix C carefully. If the District has any reason to believe that any of these assumptions do not reasonably represent the expected future experience of the retiree health plan, the District should engage in discussions or perform analyses to determine the best estimate of the assumption in question.

PART VI: APPENDICES

APPENDIX A: MATERIALS USED FOR THIS STUDY

We relied on the following materials to complete this study.

- We used paper reports and digital files containing employee demographic data from the District personnel records.
- We used relevant sections of collective bargaining agreements provided by the District.

APPENDIX B: EFFECT OF ASSUMPTIONS USED IN CALCULATIONS

While we believe the estimates in this study are reasonable overall, it was necessary for us to use assumptions which inevitably introduce errors. We believe that the errors caused by our assumptions will not materially affect study results. If the District wants more refined estimates for decision-making, we recommend additional investigation.

APPENDIX C: ACTUARIAL ASSUMPTIONS AND METHODS

Following is a summary of actuarial assumptions and methods used in this study. The District should carefully review these assumptions and methods to make sure they reflect the District's assessment of its underlying experience. It is important for San Mateo CCD to understand that the appropriateness of all selected actuarial assumptions and methods are San Mateo CCD's responsibility. Unless otherwise disclosed in this report, TCS believes that all methods and assumptions are within a reasonable range based on the provisions of GASB 74 and 75, applicable actuarial standards of practice, San Mateo CCD's actual historical experience, and TCS's judgment based on experience and training.

ACTUARIAL METHODS AND ASSUMPTIONS:

ACTUARIAL COST METHOD: GASB 74/75 require use of the entry age actuarial cost method.

Entry age is based on the age at hire for eligible employees. The attribution period is determined as the difference between the expected retirement age and the age at hire. The APVPBP and present value of future service costs are determined on an employee by employee basis and then aggregated.

To the extent that different benefit formulas apply to different employees of the same class, the service cost is based on the benefit plan applicable to the most recently hired employees (including future hires if a new benefit formula has been agreed to and communicated to employees). This greatly simplifies administration and accounting; as well as resulting in the correct service cost for new hires.

SUBSTANTIVE PLAN: As required under GASB 74 and 75, we based the valuation on the substantive plan. The formulation of the substantive plan was based on a review of written plan documents as well as historical information provided by San Mateo CCD regarding practices with respect to employer and employee contributions and other relevant factors.

ECONOMIC ASSUMPTIONS:

Economic assumptions are set under the guidance of Actuarial Standard of Practice 27 (ASOP 27). Among other things, ASOP 27 provides that economic assumptions should reflect a consistent underlying rate of general inflation. For that reason, we show our assumed long-term inflation rate below.

INFLATION: We assumed 2.75% per year used for pension purposes. Actuarial standards require using the same rate for OPEB that is used for pension.

INVESTMENT RETURN / DISCOUNT RATE: We assumed 7% per year net of expenses. This is based on assumed long-term return on plan assets assuming 100% funding through Futuris. We used the "Building Block Method". (See Appendix E, Paragraph 53 for more information).

TREND: We assumed 4% per year. Our long-term trend assumption is based on the conclusion that, while medical trend will continue to be cyclical, the average increase over time cannot continue to outstrip general inflation by a wide margin. Trend increases in excess of general inflation result in dramatic increases in unemployment, the number of uninsured and the number of underinsured. These effects are nearing a tipping point which will inevitably result in fundamental changes in health care finance and/or delivery which will bring increases in health care costs more closely in line with general inflation. We do not believe it is reasonable to project historical trend vs. inflation differences several decades into the future.

PAYROLL INCREASE: We assumed 2.75% per year. Since benefits do not depend on salary (as they do for pensions), using an aggregate payroll assumption for the purpose of calculating the service cost results in a negligible error.

FIDUCIARY NET POSITION (FNP): The following table shows the beginning and ending FNP numbers that were provided by San Mateo CCD.

Fiduciary Net Position as of June 30, 2018

	06/30/2017	*06/30/2018*
Cash and Equivalents	$0	$0
Contributions Receivable	$0	$0
June trading	$206,423	$161,645
Total Investments	$97,090,909	$114,947,488
Capital Assets	$0	$0
Total Assets	$97,297,332	$115,109,133
Benefits Payable	$0	$0
Due to broker	($206,423)	($161,645)
June expenses incurred	($29,290)	($34,647)
Total Liabilities	($235,712)	($196,292)
Fiduciary Net Position	$97,061,619	$114,912,841

NON-ECONOMIC ASSUMPTIONS:

Economic assumptions are set under the guidance of Actuarial Standard of Practice 35 (ASOP 35). See Appendix E, Paragraph 52 for more information.

MORTALITY

Participant Type	*Mortality Tables*
Certificated	2009 CalSTRS Mortality
Classified	2014 CalPERS Active Mortality for Miscellaneous Employees

RETIREMENT RATES

Employee Type	*Retirement Rate Tables*
Certificated	2009 CalSTRS Retirement Rates
Classified	Hired before 1/1/2013: 2009 CalPERS Retirement Rates for School Employees Hired after 12/31/2012: 2009 CalPERS Retirement Rates for Miscellaneous Employees 2%@60 adjusted to minimum retirement age of 52

SERVICE REQUIREMENT

Employee Type	*Service Requirement Tables*
Certificated	Retirement from applicable retirement system
AFSCME	Retirement from applicable retirement system
Classified	Retirement from applicable retirement system
Classified Management	Retirement from applicable retirement system

COSTS FOR RETIREE COVERAGE

The costs below are those used in the September 26, 2017 valuation for this roll-forward, we used increased costs shown below by the applicable trend rate.

Actuarial Standard of Practice 6 (ASOP 6) provides that, as a general rule, retiree costs should be based on actual claim costs or age-adjusted premiums. This is true even for many medical plans that are commonly considered to be "community-rated." However, ASOP 6 contains a provision – specifically section 3.7.7(c) – that allows use of unadjusted premiums in certain circumstances.

Following are the criteria we applied to San Mateo CCD to determine that it is reasonable to assume that San Mateo CCD's future participation in PEMHCA is likely and that the CalPERS medical program as well as its premium structure are sustainable. (We also have an extensive white paper on this subject that provides a basis for our rationale entirely within the context of ASOP 6. We will make this white paper available upon request.)

- **Plan qualifies as a "pooled health plan."** ASOP 6 defines a "pooled health plan" as one in which premiums are based at least in part on the claims experience of groups other than the one being valued." Since CalPERS rates are the same for all employers in each region, rates are clearly based on the experience of many groups.

- **Rates not based to any extent on the agency's claim experience.** As mentioned above, rates are the same for all participating employers regardless of claim experience or size.

- **Rates not based to any extent on the agency's demographics.** As mentioned above, rates are the same for all participating employers regardless of demographics.

- **No refunds or charges based on the agency's claim experience or demographics.** The terms of operation of the CalPERS program are set by statute and there is no provision for any refunds and

charges that vary from employer to employer for any reason. The only charges are uniform administrative charges.

- **Plan in existence 20 or more years.** Enabling legislation to allow "contracting agencies" to participate in the CalPERS program was passed in 1967. The CalPERS medical plan has been successfully operating for almost 50 years. As far back as we can obtain records, the rating structure has been consistent, with the only difference having been a move to regional rating which is unrelated to age-adjusted rating.

- **No recent large increases or decreases in the number of participating plans or enrollment.** The CalPERS medical plan has shown remarkably stable enrollment. In the past 10 years, there has been small growth in the number of employers in most years – with the maximum being a little over 2% and a very small decrease in one year. Average year over year growth in the number of employers over the last 10 years has been about 0.75% per year. Groups have been consistently leaving the CalPERS medical plan while other groups have been joining with no disruption to its stability.

- **Agency is not expecting to leave plan in foreseeable future.** The District does not plan to leave CalPERS at present.

- **No indication the plan will be discontinued.** We are unaware of anything that would cause the CalPERS medical plan to cease or to significantly change its operation in a way that would affect this determination.

- **The agency does not represent a large part of the pool.** The District is in the CalPERS Bay Area region. Based on the information we have, the District constitutes no more than 1.5% of the Bay Area pool. In our opinion, this is not enough for the District to have a measurable effect on the rates or viability of the Bay Area pool.

Retiree liabilities are based on actual retiree costs. Liabilities for active participants are based on the first year costs shown below. Subsequent years' costs are based on first year costs adjusted for trend and limited by any District contribution caps.

Employee Type	*Future Retirees Pre-65*	*Future Retirees Post-65*
AFSCME	Hired < 2/1/88: $16,387 Hired 2/1/88 to 6/30/95: $12,298 Hired > 6/30/95: $11,104	Hired < 2/1/88: $10,124 Hired 2/1/88 to 6/30/95: $8,613 Hired > 6/30/95: $7,302
Certificated	Hired < 1/1/87: $16,387 Hired 2/1/88 to 9/6/93: $12,298 Hired > 9/6/93: $11,333	Hired < 2/1/87: $10,124 Hired 2/1/87 to 9/6/93: $8,613 Hired > 9/6/93: $7,670
Certificated Management	Hired < 5/1/87: $16,387 Hired 5/1/87 to 6/30/94: $12,298 Hired > 6/30/94: $11,333	Hired < 5/1/87: $10,124 Hired 5/1/87 to 6/30/94: $8,613 Hired > 6/30/94: $7,670
Classified	Hired < 5/1/87: $16,387 Hired 5/1/87 to 6/30/94: $12,298 Hired > 6/30/94: $11,104	Hired < 5/1/87: $10,124 Hired 5/1/87 to 6/30/94: $8,613 Hired > 6/30/94: $7,302
Classified Management	Hired < 5/1/87: $16,387 Hired 5/1/87 to 6/30/94: $12,298 Hired > 6/30/94: $11,104	Hired < 5/1/87: $10,124 Hired 5/1/87 to 6/30/94: $8,613 Hired > 6/30/94: $7,302

PARTICIPATION RATES

Employee Type	*<65 Non-Medicare Participation %*	*65+ Medicare Participation %*
Certificated	100%	100%
Classified	100%	100%

TURNOVER

Employee Type	*Turnover Rate Tables*
Certificated	2009 CalSTRS Termination Rates
Classified	2009 CalPERS Termination Rates for School Employees

SPOUSE PREVALENCE

To the extent not provided and when needed to calculate benefit liabilities, 80% of retirees assumed to be married at retirement. After retirement, the percentage married is adjusted to reflect mortality.

SPOUSE AGES

To the extent spouse dates of birth are not provided and when needed to calculate benefit liabilities, female spouse assumed to be three years younger than male.

APPENDIX D: DISTRIBUTION OF ELIGIBLE PARTICIPANTS BY AGE

ELIGIBLE ACTIVE EMPLOYEES

Age	*Total*	*AFSCME*	*Certificated Management*	*Faculty*	*Classified*	*Classified Management*
Under 25	5	1	0	0	3	1
25-29	53	5	0	2	40	6
30-34	108	6	3	25	62	12
35-39	127	14	5	44	45	19
40-44	103	9	7	36	29	22
45-49	119	13	5	49	29	23
50-54	123	11	13	45	36	18
55-59	128	16	6	44	46	16
60-64	104	11	7	38	30	18
65 and older	77	1	8	39	19	10
Total	947	87	54	322	339	145

ELIGIBLE RETIREES

Age	*Total*	*AFSCME*	*Certificated Management*	*Faculty*	*Classified*	*Classified Management*
Under 50	0	0	0	0	0	0
50-54	1	0	0	0	0	1
55-59	16	10	0	2	1	3
60-64	49	0	1	14	28	6
65-69	77	2	2	44	22	7
70-74	131	0	2	64	60	5
75-79	128	0	0	84	44	0
80-84	113	0	0	64	46	3
85-89	95	0	0	47	46	2
90 and older	76	0	0	22	50	4
Total	686	12	5	341	297	31

APPENDIX E: GASB 74/75 ACCOUNTING ENTRIES AND DISCLOSURES

This report does not necessarily include the entire accounting values. As mentioned earlier, there are certain deferred items that are employer-specific. The District should consult with its auditor if there are any questions about what, if any, adjustments may be appropriate.

GASB 74/75 include a large number of items that should be included in the Note Disclosures and Required Supplementary Information (RSI) Schedules. Many of these items are outside the scope of the actuarial valuation. However, following is information to assist the District in complying with GASB 74/75 disclosure requirements:

Paragraph 50: **Information about the OPEB Plan**

Most of the information about the OPEB plan should be supplied by San Mateo CCD. Following is information to help fulfill Paragraph 50 reporting requirements.

50.c: Following is a table of plan participants

	Number of Participants
Inactive Employees Receiving Benefits	686
Inactive Employees Entitled to But Not Receiving Benefits*	0
Participating Active Employees	947
Total Number of participants	1633

*We were not provided with information about any terminated, vested employees

Paragraph 51: **Significant Assumptions and Other Inputs**

shown in Appendix C.

Paragraph 52: **Information Related to Assumptions and Other Inputs**

The following information is intended to assist San Mateo CCD in complying with the requirements of Paragraph 52.

52.b: Mortality Assumptions Following are the tables the mortality assumptions are based upon. Inasmuch as these tables are based on appropriate populations, and that these tables are used for pension purposes, we believe these tables to be the most appropriate for the valuation.

Mortality Table	2009 CalSTRS Mortality
Disclosure	The mortality assumptions are based on the 2009 CalSTRS Mortality table created by CalSTRS. CalSTRS periodically studies mortality for participating agencies and establishes mortality tables that are modified versions of commonly used tables. This table incorporates mortality projection as deemed appropriate based on CalSTRS analysis.

Mortality Table	2014 CalPERS Retiree Mortality for Miscellaneous Employees
Disclosure	The mortality assumptions are based on the 2014 CalPERS Retiree Mortality for Miscellaneous Employees table created by CalPERS. CalPERS periodically studies mortality for participating agencies and establishes mortality tables that are modified versions of commonly used tables. This table incorporates mortality projection as deemed appropriate based on CalPERS analysis.
Mortality Table	2014 CalPERS Active Mortality for Miscellaneous Employees
Disclosure	The mortality assumptions are based on the 2014 CalPERS Active Mortality for Miscellaneous Employees table created by CalPERS. CalPERS periodically studies mortality for participating agencies and establishes mortality tables that are modified versions of commonly used tables. This table incorporates mortality projection as deemed appropriate based on CalPERS analysis.

52.c: Experience Studies Following are the tables the retirement and turnover assumptions are based upon. Inasmuch as these tables are based on appropriate populations, and that these tables are used for pension purposes, we believe these tables to be the most appropriate for the valuation.

Retirement Tables

Retirement Table	2009 CalSTRS Retirement Rates
Disclosure	The retirement assumptions are based on the 2009 CalSTRS Retirement Rates table created by CalSTRS. CalSTRS periodically studies the experience for participating agencies and establishes tables that are appropriate for each pool.

Retirement Table	2009 CalPERS 2.0%@60 Rates for Miscellaneous Employees
Disclosure	The retirement assumptions are based on the 2009 CalPERS 2.0%@60 Rates for Miscellaneous Employees table created by CalPERS. CalPERS periodically studies the experience for participating agencies and establishes tables that are appropriate for each pool.

Retirement Table	2009 CalPERS Retirement Rates for School Employees
Disclosure	The retirement assumptions are based on the 2009 CalPERS Retirement Rates for School Employees table created by CalPERS. CalPERS periodically studies the experience for participating agencies and establishes tables that are appropriate for each pool.

Turnover Tables

Turnover Table	2009 CalSTRS Termination Rates
Disclosure	The turnover assumptions are based on the 2009 CalSTRS Termination Rates table created by CalSTRS. CalSTRS periodically studies the experience for participating agencies and establishes tables that are appropriate for each pool.

Turnover Table	2009 CalPERS Termination Rates for School Employees
Disclosure	The turnover assumptions are based on the 2009 CalPERS Termination Rates for School Employees table created by CalPERS. CalPERS periodically studies the experience for participating agencies and establishes tables that are appropriate for each pool.

For other assumptions, we use actual plan provisions and plan data.

52.d: The alternative measurement method was not used in this valuation.

52.e: NOL Using alternative trend assumptions The following table shows the Net OPEB Liability with a health care cost trend rate 1% higher and 1% lower than assumed in the valuation.

	Trend 1% Lower	Valuation Trend	Trend 1% Higher
Net OPEB Liability	($11,867,708)	$6,150,492	$28,575,126

Paragraph 53: **Discount Rate**

The following information is intended to assist San Mateo CCD to comply with Paragraph 53 requirements.

53.a: A discount rate of 7% was used in the valuation.

53.b: We assumed that contributions would be sufficient to fully fund the obligation over a period not to exceed 30 years.

53.c: We used historic 28 year real rates of return for each asset class along with our assumed long-term inflation assumption to set the discount rate. We offset the expected investment return by investment expenses of 25 basis points.

53.d and 53.e.: Not applicable.

53.f: Following is the assumed asset allocation and assumed rate of return for each.
Futuris - Custom San Mateo CCD

Asset Class	Percentage of Portfolio	Assumed Gross Return
Fixed Income	25%	4%
Equities	75%	8%

We looked at rolling periods of time for all asset classes in combination to appropriately reflect correlation between asset classes. That means that the average returns for any asset

class don't necessarily reflect the averages over time individually, but reflect the return for the asset class for the portfolio average. We used geometric means.

53.g: The following table shows the Net OPEB liability with a discount rate 1% higher and 1% lower than assumed in the valuation.

	Discount Rate 1% Lower	Valuation Discount Rate	Discount Rate 1% Higher
Net OPEB Liability	$19,336,881	$6,150,492	($4,923,225)

Paragraph 55: **Changes in the Net OPEB Liability**

Please see reconciliation on page 10. Please see the notes for Paragraph 244 below for more information.

Paragraph 56: **Additional Net OPEB Liability Information**

The following information is intended to assist San Mateo CCD to comply with Paragraph 56 requirements.

56.a: The valuation date is June 30, 2017.
The measurement date is June 30, 2018.
56 b; 56 c; 56.d; 56.e; 56.f: Not applicable
56.g: To be determined by the employer
56.h.(1) through (4): Not applicable
56.h.(5): To be determined by the employer
56.i: Not applicable

Paragraph 57: **Required Supplementary Information**

57.a: Please see reconciliation on page 10. Please see the notes for Paragraph 244 below for more information.
57.b: These items are provided on page 10 for the current valuation, except for covered payroll, which should be determined based on appropriate methods.
57.c: We have not been asked to calculate an actuarially determined contribution amount. We assume the District contributes on an ad hoc basis, but in an amount sufficient to fully fund the obligation over a period not to exceed 28 years.
57.d: We are not aware that there are any statutorily or contractually established contribution requirements.

Paragraph 58: **Actuarially Determined Contributions**

We have not been asked to calculate an actuarially determined contribution amount. We assume the District contributes on an ad hoc basis, but in an amount sufficient to fully fund the obligation over a period not to exceed 28 years.

Paragraph 244: **Transition Option**

Prior periods were not restated due to the fact that prior valuations were not rerun in accordance with GASB 75. It was determined that the time and expense necessary to rerun prior valuations and to restate prior financial statements was not justified.

APPENDIX F: DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES

EXPERIENCE GAINS AND LOSSES

				Increase (Decrease) in OPEB Expense Arising from the Recognition of Effects of Experience Gains and Losses (Measurement Periods)								
Measurement Period	Experience Gain/Loss	Original Recognition Period (Years)	Amounts Recognized in OPEB Expense through 2017	2018	Amounts to be Recognized in OPEB Expense after 2018	2019	2020	2021	2022	2023	Thereafter
2017-18	$0	0	$0	$0	$0						
Net Increase (Decrease) in OPEB Expense			**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

CHANGES OF ASSUMPTIONS

				Increase (Decrease) in OPEB Expense Arising from the Recognition of Effects of Changes of Assumptions (Measurement Periods)						
Measurement Period	Changes of Assumptions	Original Recognition Period (Years)	Amounts Recognized in OPEB Expense through 2017	2018	Amounts to be Recognized in OPEB Expense after 2018	2019	2020	2021	2022	2023	Thereafter
2017-18	$0	0	$0	$0	$0						
Net Increase (Decrease) in OPEB Expense			**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

INVESTMENT GAINS AND LOSSES

				Increase (Decrease) in OPEB Expense Arising from the Recognition of Effects of Investment Gains and Losses (Measurement Periods)								
Measurement Period	Investment Gain/Loss	Original Recognition Period (Years)	Amounts Recognized in OPEB Expense through 2017	2018	Amounts to be Recognized in OPEB Expense after 2018	2019	2020	2021	2022	2023	Thereafter
2017-18	$1,180,091	5	$0	$236,019	$944,072	$236,019	$236,019	$236,019	$236,015		
Net Increase (Decrease) in OPEB Expense			**$0**	**$236,019**	**$944,072**	**$236,019**	**$236,019**	**$236,019**	**$236,015**	**$0**	**$0**

APPENDIX G: GLOSSARY OF RETIREE HEALTH VALUATION TERMS

Note: The following definitions are intended to help a *non*-actuary understand concepts related to retiree health valuations. Therefore, the definitions may not be actuarially accurate.

Actuarial Cost Method:	A mathematical model for allocating OPEB costs by year of service. The only actuarial cost method allowed under GASB 74/75 is the entry age actuarial cost method.
Actuarial Present Value of Projected Benefit Payments:	The projected amount of all OPEB benefits to be paid to current and future retirees discounted back to the valuation or measurement date.
Deferred Inflows/Outflows of Resources:	A portion of certain items that can be deferred to future periods or that weren't reflected in the valuation. The former includes investment gains/losses, actuarial gains/losses, and gains/losses due to changes in actuarial assumptions or methods. The latter includes contributions made to a trust subsequent to the measurement date but before the statement date.
Discount Rate:	Assumed investment return net of all investment expenses. Generally, a higher assumed interest rate leads to lower service costs and total OPEB liability.
Fiduciary Net Position:	Net assets (liability) of a qualifying OPEB "plan" (i.e. qualifying irrevocable trust or equivalent arrangement).
Implicit Rate Subsidy:	The estimated amount by which retiree rates are understated in situations where, for rating purposes, retirees are combined with active employees and the employer is expected, in the long run, to pay the underlying cost of retiree benefits.
Measurement Date:	The date at which assets and liabilities are determined in order to estimate TOL and NOL.
Mortality Rate:	Assumed proportion of people who die each year. Mortality rates always vary by age and often by sex. A mortality table should always be selected that is based on a similar "population" to the one being studied.
Net OPEB Liability (NOL):	The Total OPEB Liability minus the Fiduciary Net Position.
OPEB Benefits:	Other Post Employment Benefits. Generally medical, dental, prescription drug, life, long-term care or other postemployment benefits that are not pension benefits.
OPEB Expense:	This is the amount employers must recognize as an expense each year. The annual OPEB expense is equal to the Service Cost plus interest on the Total OPEB Liability (TOL) plus change in TOL due to plan changes minus projected investment income; all adjusted to reflect deferred inflows and outflows of resources.
Participation Rate:	The proportion of retirees who elect to receive retiree benefits. A lower

	participation rate results in lower service cost and a TOL. The participation rate often is related to retiree contributions.
Retirement Rate:	The proportion of active employees who retire each year. Retirement rates are usually based on age and/or length of service. (Retirement rates can be used in conjunction with the service requirement to reflect both age and length of service). The more likely employees are to retire early, the higher service costs and actuarial accrued liability will be.
Service Cost:	The annual dollar value of the "earned" portion of retiree health benefits if retiree health benefits are to be fully accrued at retirement.
Service Requirement:	The proportion of retiree benefits payable under the OPEB plan, based on length of service and, sometimes, age. A shorter service requirement increases service costs and TOL.
Total OPEB Liability (TOL):	The amount of the actuarial present value of projected benefit payments attributable to employees' past service based on the actuarial cost method used.
Trend Rate:	The rate at which the employer's share of the cost of retiree benefits is expected to increase over time. The trend rate usually varies by type of benefit (e.g. medical, dental, vision, etc.) and may vary over time. A higher trend rate results in higher service costs and TOL.
Turnover Rate:	The rate at which employees cease employment due to reasons other than death, disability or retirement. Turnover rates usually vary based on length of service and may vary by other factors. Higher turnover rates reduce service costs and TOL.
Valuation Date:	The date as of which the OPEB obligation is determined by means of an actuarial valuation. Under GASB 74 and 75, the valuation date does not have to coincide with the statement date, but can't be more than 30 months prior.

SAN MATEO COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO:	DATE:	4/24/2019
Retirement Board of Authority		
SUBJECT:	ITEM #:	2018/2019-026
Status of the District's Current OPEB Trust Independent Auditor's Report	Enclosure:	Yes
	Action Item	Yes

Prepared by: Keenan Financial Services

Requested by: Retirement Board of Authority

The Independent Auditors Report provides the District's OPEB Trust with an independent third-party compliance certification relative to GASB accounting standards, financial reporting for OPEB expenses, OPEB liabilities, Note disclosures and Required Supplemental Information (RSI).

STATUS:

The Retirement Board of Authority will review and discuss the status of the current Independent Auditor's certification relative to the District's OPEB Trust compliance with GASB 74/75 protocols and applicable Regulatory standards.

RECOMMENDATION:

The Retirement Board of Authority will accept the information provided and file accordingly.

SAN MATEO COUNTY
COMMUNITY COLLEGE DISTRICT
RETIREMENT FUTURIS
PUBLIC ENTITY INVESTMENT TRUST

FINANCIAL STATEMENTS
June 30, 2018 and 2017

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT FUTURIS PUBLIC ENTITY INVESTMENT TRUST

FINANCIAL STATEMENTS
June 30, 2018 and 2017

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Crowe LLP
Independent Member Crowe Global

INDEPENDENT AUDITOR'S REPORT

The Retirement Board of Authority of the
San Mateo County Community College District
Retirement Futuris Public Entity Investment Trust
San Mateo, California

Report on the Financial Statements

We have audited the accompanying financial statements of San Mateo County Community College District Retirement Futuris Public Entity Investment Trust (the "Trust"), a fiduciary fund of San Mateo County Community College District (the "District") as of and for the years ended June 30, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the Trust's 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.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits 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 auditors' 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 San Mateo County Community College District Retirement Futuris Public Entity Investment Trust, a fiduciary fund of San Mateo County Community College District as of June 30, 2018 and 2017, and the changes in its financial position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

(Continued)

Emphasis of Matter

As discussed in Note 1, the financial statements present only the District's Trust, and do not purport to, and do not, present fairly the financial position of the San Mateo County Community College District, as of June 30, 2018 and 2017, the changes in its financial position, or where applicable, its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Schedule of Changes in Net OPEB Liability and Related Ratios, and Schedule of Money-Weighted Rate of Return of OPEB Plan Investments on pages 12 - 14 be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 14, 2018 on our consideration of the District's internal control over financial reporting and on our test of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters for the Trust. 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 for the Trust. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering San Mateo County Community College District's internal control over financial reporting and compliance for the Trust.

Crowe LLP

Crowe LLP

Sacramento, California
December 14, 2018

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT FUTURIS PUBLIC ENTITY INVESTMENT TRUST
STATEMENTS OF TRUST NET POSITION
As of June 30, 2018 and 2017

	2018	2017
ASSETS		
Investments:		
Mutual funds – fixed income	$ 57,689,388	$ 48,077,511
Mutual funds – equity	52,064,399	42,467,543
Mutual funds – real estate	5,355,347	6,752,278
Total assets	115,109,134	97,297,332
LIABILITIES		
Accounts payable	196,293	235,713
NET POSITION		
Net position restricted for OPEB	$ 114,912,841	$ 97,061,619

The accompanying notes are an integral part of these financial statements.

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT FUTURIS PUBLIC ENTITY INVESTMENT TRUST
STATEMENTS OF CHANGE IN TRUST NET POSITION
For the years ended June 30, 2018 and 2017

	2018	2017
Additions		
Employer contributions	$ 19,422,945	$ 15,230,215
Net investment income:		
Dividends and other income	3,854,180	2,789,489
Realized and unrealized losses, net	2,173,854	6,253,815
Investment fees	(376,812)	(337,684)
Total additions	25,074,167	23,935,835
Deductions		
Retiree benefits	7,222,945	7,230,215
Net increase in net position	17,851,222	16,705,620
Net position restricted for OPEB:		
Net position, beginning of the year	97,061,619	80,355,999
Net position, end of the year	$ 114,912,841	$ 97,061,619

The accompanying notes are an integral part of these financial statements.

NOTE 1 – ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The following information of the San Mateo County Community College District Retirement Futuris Public Entity Investment Trust (the "Trust"), a fiduciary fund of the San Mateo County Community College District (the "District"), provides only general information of the Trust's provisions. Readers should refer to the Trust agreement for a more complete description. These financial statements include only the resources of the Trust and are not intended to present fairly the financial position and results of operations of the District in compliance with accounting principles generally accepted in the United States of America.

Organization: The Trust is a contributory single-employer defined benefit healthcare plan trust administered by the San Mateo County Community College District through a third party. The Trust provides medical insurance benefits to eligible retirees and their spouses. Membership consists of 687 retirees and beneficiaries currently receiving benefits and 977 active plan members. The Trust is a governmental plan that is not subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA).

Basis of Accounting: The accompanying financial statements are presented on the accrual basis of accounting. Contributions are recognized as revenue in the period in which contributions are due, pursuant to formal commitments as well as statutory or contractual commitments. Benefits and refunds of contributions are recognized when due and payable under the provisions of the Trust.

The financial statements of the Trust have been prepared in accordance with accounting principles generally accepted (GAAP) in the United States of America. In the U.S. the Governmental Accounting Standards Board (GASB) is the established and recognized standard-setting body for governmental accounting and financial reporting. The financial statements have been prepared consistent with GASB Codification Po50, *Postemployment Benefit Plans Other than Pension Plans.*

Funded Status and Funding Progress: Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, investment returns, mortality and the healthcare cost trend. Amounts determined regarding the funded status of the Trust and the annual required contributions of the District are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

Plan Description: The District provides postemployment health care benefits (OPEB) for retired employees in accordance with negotiated contracts with the various bargaining units of the District. The Other Postemployment Benefit Plan (the "Plan") is a single-employer defined benefit healthcare plan. During the year ended June 30, 2010 the District signed an irrevocable trust (the Trust) agreement. The District appointed a Retirement Board of Authority with authority to make decisions on behalf of the District with respect to the Futuris Public Entity Investment Trust Program. The Benefit Trust Company was appointed as the custodian and trustee to administer the Futuris Public Entity Investment Trust. OPEB provisions are established and amended per contractual agreement with employee groups. Management of the Plan is vested in the Retirement Board of Authority, which consists of five members. The following is a description of the current retiree benefit plan:

(Continued)

NOTE 1 – ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Plan membership: At June 30, 2018 and 2017, Plan membership consisted of the following:

	Number of Participants	
	2018	2017
Inactive Employees/Dependents Receiving Benefits	687	686
Inactive Employees/Dependents Entitled to but not yet Receiving Benefits	-	-
Active Employees	977	947
	1,664	1,633

Academic Employees: Employees of the San Mateo County Community College District, upon meeting the years of District service requirement and the "Magic 75" which is employee's Age plus Years of District service, will qualify for retiree benefits as indicated in their Collective Bargaining agreement. Retiree Benefits package may differ depending on hire date. The years of District service required are 10 years if hired prior to September 8, 1993 and 20 years if hired on or after September 8, 1993.

CSEA & All Non-represented Employees: Employees of the San Mateo County Community College District, upon meeting the years of District service requirement and the "Magic 75" which is employee's Age plus Years of District service, will qualify for retiree benefits as indicated in their Collective Bargaining agreement. Retiree Benefits package may differ depending on hire date. The years of District service required are 10 years if hired prior to July 1, 1992 and 20 years if hired on or after July 1, 1992.

AFCSME Employees: Employees of the San Mateo County Community College District, upon meeting the years of District service requirement and the "Magic 75" which is employee's Age plus Years of District service, will qualify for retiree benefits as indicated in their Collective Bargaining agreement. Retiree Benefits package may differ depending on hire date. The years of District service required are 10 years if hired prior to July 1, 1992 and 20 years if hired on or after July 1, 1992.

Benefit Payments: The Plan provides medical and dental insurance benefits to eligible retirees and their spouses. The Plan is included in the District's financial report and separately presented as a fiduciary fund.

Contributions: Eligible employees are not permitted to make contributions to the Trust. The Plan administrator shall, on behalf of the employer, make all contributions to the Trustee. All contributions shall be paid to the Trustee for investment and reinvestment pursuant to the terms of the trust agreement. The District does not have contractually required contributions rates, but contributes in an amount sufficient to fully fund the Net OPEB obligation over a period not to exceed 30 years. Contributions to the Trust from the District was $19,422,945 and $15,230,215 for the years ended June 30, 2018 and 2017, respectively.

(Continued)

NOTE 1 – ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Investment Options: Benefit Trust Company ("BTC"), the Asset Custodian, maintains the Trust's investments in various mutual funds, and is the record keeper. BTC contracted with Morgan Stanley Smith Barney as the investment advisor. Funds allocated to the Asset Custodian are invested according to the investment policy statement (IPS) developed and approved by the Retirement Board of Authority in a combination of equity and fixed income investments.

Investment Valuation: Investments are reported at fair value based upon market prices, when available, or estimates of fair value, and unrealized and realized gains and losses are included in the Statement of Change in Trust Net Position.

Net OPEB Liability of the Trust:

The components of the net OPEB liability of the Trust at June 30, 2018 and 2017, were as follows:

	2018	2017
Total OPEB liability	$ 121,063,333	$ 116,969,506
Fiduciary Net Position	114,912,841	97,061,619
Net OPEB liability	$ (6,150,492)	$ (19,907,887)
Fiduciary Net Position as a percentage of the Total OPEB liability	95%	83%

Actuarial Assumptions: Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimations are made about the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculation

In the June 30, 2017 actuarial valuation date, the entry age actuarial cost method was used. The actuarial assumptions included a 7.0% investment rate of return (net of administrative expenses), based on assumed long return on plan assets assuming 100% funding through the Trust. Healthcare cost trend rates were 4.0%. An inflation rate of 2.75% and an expected payroll increase of 2.75% were utilized. The average hire age for eligible employees is 38 and the average retirement is 61. The actuarial present value of projected benefit payments is added for all employees to get the actuarial present value of total projected benefits and estimates present value of all future retiree health benefits for all employees and retirees. Participation rates were noted at 100% for certificated and classified employees. Mortality rates for certificated employees were based on the 2009 CalSTRS mortality tables. Mortality rates for classified employees were based on the 2014 CalPERS active mortality for miscellaneous employees.

(Continued)

NOTE 1 – ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Plan Investments: The plan discount rate of 7% was determined using the following asset allocation and assumed rate of return:

Asset Class	Percentage of Portfolio		Rate Return*	
	2018	2017	2018	2017
Fixed Income	25%	50%	4%	4%
Equities	75%	50%	8%	8%

*Geometric average

Rolling periods of time for all asset classes in combination we used to appropriately reflect correlation between asset classes. This means that the average returns for any asset class do not necessarily reflect the averages over time individually, but reflect the return for the asset class for the portfolio average. Additionally, the historic 20 year real rates of return for each asset class along with the assumed long-term inflation assumption was used to set the discount rate. The investment return was offset by assumed investment expenses of 25 basis points. It was further assumed that contributions to the plan would be sufficient to fully fund the obligation over a period not to exceed 30 years

Money-weighted rate of return on OPEB plan investments for the years ending June 30, 2018 and 2017 was 7% and 7%, respectively.

Sensitivity of the net pension liability to assumptions: The following presents the net OPEB liability calculated using the discount rate of 7%. The schedule also shows what the net OPEB liability would be if it were calculated using a discount rate that is 1% lower (6%) and 1% higher (8):

	Discount Rate 1% Lower (6%)	Valuation Discount Rate (7%)	Discount Rate 1% Higher (8%)
June 30, 2018			
Net OPEB liability	$ 19,336,881	$ 6,150,492	$ (4,923,225)
June 30, 2017			
Net OPEB liability	$ 32,545,120	$ 19,907,887	$ 9,263,614

(Continued)

NOTE 1 – ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

The following table presents the net OPEB liability calculated using the heath care cost trend rate of 4.0%. The schedule also shows what the net OPEB liability would be if it were calculated using a health care cost trend rate that is 1% lower (3.0%) and 1% higher (5.0%):

	Health Care Trend Rate 1% Lower (3.0%)	Valuation Health Care Trend Rate (4.0%)	Discount Trend Rate 1% Higher (5.0%)
June 30, 2018			
Net OPEB liability	$ (11,867,708)	$ 6,150,492	$ 28,575,126
June 30, 2017			
Net OPEB liability	$ 3,068,448	$ 19,907,887	$ 40,865,489

Plan Termination: In the event of Plan termination, the net position of the Trust would be allocated as prescribed in the Trust documents, generally to pay in the order indicated below:

- District's remaining retiree medical benefit liabilities.
- Reasonable expenses of administering the Trust.

Any assets remaining in the Trust after paying off the above liabilities shall revert back to the District.

NOTE 2 – INVESTMENTS

The Trust has adopted an internally developed investment policy that is governed by the standards established in the California Constitution. In addition, the Trust has written investment policies regarding the type of investments that may be made specifically for the Trust and the amount, which may be invested in any one financial institution or amounts that may be invested in long-term instruments. Management believes the Trust has complied with the provisions of statutes pertaining to the types of investments held, institutions in which deposits were made, and security requirements.

The fair values of the Trust's individual investments at June 30, 2018 and 2017, are as follows:

	2018	2017
Mutual funds – fixed income	$ 57,689,388	$ 48,077,511
Mutual funds – equity	52,064,399	42,467,543
Mutual funds – real estate	5,355,347	6,752,278
Total investments	$ 115,109,134	$ 97,297,332

(Continued)

NOTE 2 – INVESTMENTS (Continued)

During the fiscal years ended June 30, 2018 and 2017, the Trust's investments (including gains and losses on investments bought and sold as well as held during the year) appreciated as follows:

	2018	2017
Dividend and other	$ 3,854,180	$ 2,789,489
Realized gains, net	712,143	1,121,048
Unrealized gains, net	1,461,711	5,132,767
Investment fees	(376,812)	(337,684)
Total investment income	$ 5,651,222	$ 8,705,620

Custodial Credit Risk: The California Government Code requires California banks and savings and loan associations to secure the Trust's deposits by pledging government securities as collateral. The market value of pledged securities must equal 110% of an agency's deposits. California law also allows financial institutions to secure an agency's deposits by pledging first trust deed mortgage notes having a value of 150% of an agency's total deposits and collateral is considered to be held in the name of the Trust.

Credit Risk: The Trust's investment policy requires all fixed income investments to be of investment grade quality or higher at purchase; that is, at the time of purchases, rated no lower than "BBB" by Standard and Poor's. The Retirement Board of Authority, at their discretion, may impose a higher standard on an individual investment manager basis as circumstances or investment objectives dictate. At June 30, 2018 and 2017, the Trust investments consisted of open-end mutual funds, therefore there are no credit ratings to disclose.

The OPEB Trust investments consisted of open and closed-end mutual funds, therefore, there are no significant interest rate risk related to the investments held, as there are no maturities related to the mutual funds held.

Fair Value of Financial Instruments: The following methods and assumptions were used by the Trust to estimate the fair value of its financial instruments at June 30, 2018 and 2017.

Fair Value Hierarchy: Fair value is the exchange price that would be received for an asset or paid to transfer a liability (exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. There are three levels of inputs that may be used to measure fair values:

Level 1: Quoted prices (unadjusted) for identical assets or liabilities in active markets that the entity has the ability to access as of the measurement date.

Level 2: Significant other observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.

Level 3: Significant unobservable inputs that reflect a company's own assumptions about the assumptions that market participants would use in pricing an asset or liability.

(Continued)

NOTE 2 – INVESTMENTS (Continued)

Assets Recorded at Fair Value: The following table presents information about the District's assets measured at fair value on a recurring basis as of June 30, 2018 and 2017:

	Total	Level 1	Level 2	Level 3
2018				
Investments:				
Mutual funds - fixed income	$ 57,689,388	$ 57,689,388	$ -	$ -
Mutual funds - equity	52,064,399	52,064,399	-	-
Mutual funds – real estate	5,355,347	5,355,347	-	-
Total	$ 115,109,134	$ 115,109,134	$ -	$ -
2017				
Investments:				
Mutual funds - fixed income	$ 48,077,511	$ 48,077,511	$ -	$ -
Mutual funds - equity	42,467,543	42,467,543	-	-
Mutual funds – real estate	6,752,278	6,752,278	-	-
Total	$ 97,297,332	$ 97,297,332	$ -	$ -

Mutual funds were valued at closing prices from securities exchanges and are classified as Level 1 investments.

During the years ended June 30, 2018 and 2017, there were no significant transfers in or out of Level 1.

There were no assets or liabilities measured at fair value on a non-recurring basis at June 30, 2018 and 2017.

REQUIRED SUPPLEMENTARY INFORMATION

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT FUTURIS PUBLIC ENTITY INVESTMENT TRUST
REQUIRED SUPPLEMENTARY INFORMATION
For the years ended June 30, 2018 and 2017

I. SCHEDULE OF CHANGES IN NET OPEB LIABILITY AND RELATED RATIOS

For the Years Ended June 30, 2018 and 2017

	2018	2017
Total OPEB liability		
Service cost	$ 3,359,195	$ 3,269,290
Interest	7,957,577	7,305,828
Benefit payments	(7,222,945)	(7,230,215)
Net change in Total OPEB liability	4,093,827	3,344,903
Total OPEB liability, beginning of year	116,969,506	113,624,603
Total OPEB liability, end of year (a)	$ 121,063,333	$ 116,969,506
Plan fiduciary net position		
Employer contributions	19,422,945	15,230,215
Actual investment income	6,028,034	9,043,304
Administrative expense	(376,812)	(337,684)
Benefits payment	(7,222,945)	(7,230,215)
Change in plan fiduciary net position	17,851,222	16,705,620
Fiduciary trust net position, beginning of year	97,061,619	80,355,999
Fiduciary trust net position, end of year (b)	$ 114,912,841	$ 97,061,619
Net OPEB liability, ending (a) - (b)	$ 6,150,492	$ 19,907,887
Covered payroll	$ 91,765,187	$ 83,799,966
Plan fiduciary net position as a percentage of the Total OPEB liability	95%	83%
Net OPEB liability as a percentage of covered payroll	7%	24%

This is a 10 year schedule, however the information in this schedule is not required to be presented retrospectively.

(Continued)

I. SCHEDULE OF CHANGES IN NET OPEB LIABILITY AND RELATED RATIOS (Continued)

Valuation date	June 30, 2017
Measurement date	June 30, 2018 and 2017
Census data	The census was provided by the District as of June 30, 2018 and 2017
Actuarial cost method	Entry age actuarial cost method
Inflation rate	2.75%
Investment rate of return / discount rate	7.00%
Health care cost trend rate	4.00%
Payroll increase	2.75%
Participation rates	100% for certificated and classified employees.
Mortality	For certificated employees the 2009 CalSTRS mortality tables were used. For classified employees the 2014 CalPERS active mortality for miscellaneous employees were used.
Spouse relevance	To the extent not provided and when needed to calculate benefit liabilities, 80% of retirees assumed to be married at retirement. After retirement, the percentage married is adjusted to reflect mortality.
Spouse ages	To the extent spouse dates of birth are not provided and when needed to calculate benefit liabilities, female spouse assumed to be three years younger than male.
Turnover	For certificated employees the 2009 CalSTRS termination rates were used. For classified employees the 2009 CalPERS termination rates for school employees were used.
Retirement rates	For certificated employees the 2009 CalSTRS retirement rates were used. For classified employees the 2009 CalPERS retirement rates for school employees were used.

(Continued)

II. SCHEDULE OF MONEY-WEIGHTED RATE OF RETURN OF OPEB PLAN INVESTMENTS

	2018	2017
Money-weighted rate of return on OPEB plan investments	7%	7%

This is a 10 year schedule, however the information in this schedule is not required to be presented retrospectively.

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*

To the Board of Trustees
San Mateo County Community College District
San Mateo, California

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 accompanying financial statements of San Mateo County Community College Retirement Futuris Public Entity Investment Trust (the "Trust"), a fiduciary fund of San Mateo County Community College District as of and for the years ended June 30, 2018 and 2017, and the related notes to the financial statements, and have issued our report thereon dated December 14, 2018.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the District's internal control over the Trust's financial reporting (internal control) 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 District's internal control over the Trust's financial reporting. Accordingly, we do not express an opinion on the effectiveness of the District's internal control over financial reporting for the Trust.

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 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 that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

(Continued)

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the District's Trust financial statements are free of material misstatement, we performed tests of the Trust's 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 those 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 entity's internal control or on compliance for the Trust. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance for the Trust. Accordingly, this communication is not suitable for any other purpose.

Crowe LLP

Crowe LLP

Sacramento, California
December 14, 2018

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO:	DATE: 4/24/2019
Retirement Board of Authority	
SUBJECT:	ITEM #: 2018/2019-027
Future Transfer of Assets into the Trust	Enclosure: Yes
	Action Item No

Prepared by: Keenan Financial Services

Requested by: Retirement Board of Authority

BACKGROUND:

The Trust was created for the exclusive purpose of prefunding unfunded retiree OPEB liabilities.

STATUS:

A dollar-cost-averaging strategy is currently used for prefunding the District's OPEB Investment Trust requirements. The RBOA membership shall acknowledge recent prefunding transfers to the Trust and review anticipated future schedules for District transfers.

RECOMMENDATION:

The Retirement Board of Authority shall hear the information file accordingly.

	RECEIPT OF CASH TRANSACTIONS	
03/07/2019	RECEIVED FROM SAN MATEO EFFECTIVE 03/05/2019	$600,000.00

Posting Date Range: 10/3/2018 - 4/8/2019
Account Number: 115150003820

Transactions Report
Generated: 4/8/2019 12:45:57 PM CT

Posting Date	Trade Date	Description	CUSIP	Cash	Price	Units
04/08/2019		RECEIVED FROM SMCCD EFFECTIVE 04/05/2019		$1,000,000.00		

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO:	DATE: 4/24/2019
Retirement Board of Authority	
SUBJECT:	ITEM #: 2018/2019-028
Retirement Board of Authority Comments	Enclosure: No
	Action Item No

Prepared by: Keenan Financial Services

Requested by: Retirement Board of Authority

BACKGROUND:

Each member may report about various matters involving the Retirement Board of Authority.

RECOMMENDATION:

There will be no Retirement Board of Authority discussion except to ask questions or refer matters to staff, and no action will be taken unless listed on a subsequent agenda.

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO:	DATE: 4/24/2019
Retirement Board of Authority	

SUBJECT:	ITEM #: 2018/2019-029
Program Coordinator/Consultant Comments	Enclosure: No
	Action Item No

Prepared by: Keenan Financial Services

Requested by: Retirement Board of Authority

BACKGROUND:

The Program Coordinator may address the Board of Authority on any matter pertaining to the Retirement Board of Authority that is not on the agenda

RECOMMENDATION:

There will be no Retirement Board of Authority discussion except to ask questions or refer matters to staff, and no action will be taken unless listed on a subsequent agenda.

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
RETIREMENT BOARD OF AUTHORITY MEETING

PRESENTED TO:	DATE: 4/24/2019
Retirement Board of Authority	

SUBJECT:	ITEM #: 2018/2019-030
Date, Time and Agenda Items for Next Meeting	Enclosure: No
	Action Item No

Prepared by: Keenan Financial Services

Requested by: Retirement Board of Authority

BACKGROUND:

Members and visitors may suggest items for consideration at the next Retirement Board of Authority meeting.

RECOMMENDATION:

The Board will determine Agenda Items for the next meeting.