AGENDA

RETIREMENT BOARD MEETING

REGULAR MEETING   Board Conference Room
July 26, 2023   1200 Concord Avenue, Suite 350
9:00 a.m.   Concord, California

THE RETIREMENT BOARD MAY DISCUSS AND TAKE ACTION ON THE FOLLOWING:

1.   Pledge of Allegiance.

2.   Appoint audit committee members.

3.   Public Comment (3 minutes/speaker).

4.   Approve minutes from the June 28, 2023 meeting. (Action Item)

CLOSED SESSION

5.   a. CONFERENCE WITH LABOR NEGOTIATORS
       (Gov. Code § 54957.6)

       Agency designated representative*: Joe Wiley, Scott Gordon*
       Unrepresented Employee: Chief Executive Officer

       b. PUBLIC EMPLOYMENT (Gov. Code § 54957(b))
        Title: Chief Executive Officer

OPEN SESSION

6.   Review of report on Risk Diversifying Sub-portfolio. (Presentation Item)

7.   Update on private equity and real estate allocations. (Presentation item)

The Retirement Board will provide reasonable accommodations for persons with disabilities planning to attend Board meetings who contact the Retirement Office at least 24 hours before a meeting.

8.   Pension administration system project update: (Presentation Item)
   a. Update from staff
   b. Presentation from Segal
   c. Presentation from Sagitec

9.   Miscellaneous
   a. Staff Report
   b. Outside Professionals' Report
   c. Trustees' comments

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RETIREMENT BOARD MEETING MINUTES

REGULAR MEETING
June 28, 2023
9:00 a.m.

Board Conference Room
1200 Concord Avenue, Suite 350
Concord, California

Present: Candace Andersen, Dennis Chebotarev, Donald Finley, Scott Gordon, Jerry Holcombe, Louie Kroll, Jay Kwon, David MacDonald, John Phillips, Mike Sloan, Samson Wong, and Belinda Zhu for Russell Watts

Absent: Russell Watts

Staff: Gail Strohl, Chief Executive Officer; Christina Dunn, Deputy Chief Executive Officer; Timothy Price, Chief Investment Officer; Wrally Dutkiewicz, Compliance Officer; Jasmine Lee, Member Services Manager; Henry Gudino, Accounting Manager; Erika McIntosh, Administrative Services Manager; and Erica Grant, Human Resources Manager

Outside Professional Support: Representing:
Andy Paulden   Brown Armstrong, CPA
Scott Whalen   Verus
Jesse Rivera   Segal Company
Aaron Mucha   Sagitec
Srinivas Kolluru   Sagitec

1. **Pledge of Allegiance**

   The Board, staff and audience joined in the *Pledge of Allegiance.*

2. **Accept comments from the public**

   No member of the public offered comment.

3. **Approval of minutes**

   It was **M/S/C** to approve the minutes of the May 24, 2023 meeting. (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, Kroll, MacDonald, Phillips, and Zhu).

   It was the consensus of the Board to move to Item 5.

5. **Presentation from Brown Armstrong on the audit of the December 31, 2022 financial statements**

   Paulden presented the audit of the December 31, 2022 financial statements and was pleased to report there were no internal control weaknesses and they have issued an unmodified opinion.

6. **Consider and take possible action to retain Burgiss Caissa for performance analytics and risk measurement services**

   a. Presentation from Staff – Price introduced Burgiss Caissa and provided a recommendation to retain Burgiss Caissa to provide a Portfolio Analytics and Risk Management System for CCCERA.

   b. Presentation from Burgiss Caissa – Bryant and Dreusicke presented the Total Plan Client Solutions Report.

   It was **M/S/C** to retain Burgiss Caissa to provide a Portfolio Analytics and Risk Management System for CCCERA. (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, Kroll, MacDonald, Phillips, and Zhu).

7. **Presentation from Verus on capital market assumptions and asset class targets**

   Whalen presented the Annual Capital Market Assumptions and Asset Class Targets Report.

8. **Presentation of Annual Funding Plan**

   Price reviewed the Annual Funding Plan.

CLOSED SESSION

The Board moved into Closed Session pursuant to Govt. Code Section 54957.6.

The Board moved into open session.

4. There was no reportable action related to Govt. Code Section 54957.6

9. **Retirement application processing update**

   This item was continued to the July 12, 2023 meeting.

10. **Pension administration system project update:**

    a. Update from staff – Strohl gave an update on the project.

    b. Presentation from Segal – Rivera gave an update on the project.

    c. Presentation from Sagitec – Mucha and Kolluru provided an update on the project.

Andersen was not present for subsequent discussion and voting.

11. **Presentation of 2022 CCCERA budget vs. actual expenses report**

   This item was continued to the July 12, 2023 meeting.

12. **Report from Audit Committee Chair on the June 14, 2023 Audit Committee meeting**

   Phillips reported on the June 14, 2023 Audit Committee meeting.

13. **Consider authorizing the attendance of Board:**

   a. It was **M/S/C** to authorize the attendance of 1 Board member at the IDAC Global Summit, September 19-20, 2023, Chicago, IL. (Yes: Chebotarev, Finley, Gordon, Holcombe, Kroll, MacDonald, Phillips, and Zhu).

   b. It was **M/S/C** to authorize the attendance of 1 Board member at the 69th Annual Employees Benefits Conference, IFEBP, October 1-4, 2023, Boston, MA. (Yes: Chebotarev, Finley, Gordon, Holcombe, Kroll, MacDonald, Phillips, and Zhu).

   c. There was no action taken on this item. The SCCE 22nd Annual Compliance & Ethics Institute, October 2-5, 2023, Chicago, IL & October 3-5, 2023, Virtual.

   d. There was no action taken on this item. The Annual Investment Summit, Torchlight Investors, October 10-11, 2023, New York, NY.

   e. It was **M/S/C** to authorize the attendance of 3 Board members at the StepStone 360 Conference, October 18-19, 2023, New York, NY. (Yes: Chebotarev, Finley, Gordon, Holcombe, Kroll, MacDonald, Phillips, and Zhu).

14. **Miscellaneous**

   a. Staff Report – Strohl thanked staff involved with the 2022 audit.

   b. Outside Professionals' Report – None

   c. Trustees' Comments – MacDonald reported he attended the Catalyst: California's Diverse Investment Manager Forum in Burlingame. He noted it was a good conference that focused on emerging managers.

It was **M/S/C** to adjourn the meeting. (Yes: Chebotarev, Finley, Gordon, Holcombe, Kroll, MacDonald, Phillips, and Zhu)

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Scott W. Gordon, Chairman   Jerry R. Holcombe, Secretary

Risk Diversifying Sub-Portfolio Review

July 26, 2023

Timothy Price, CFA

Chief Investment Officer

Mitchell Taylor, CFA

Investment Officer
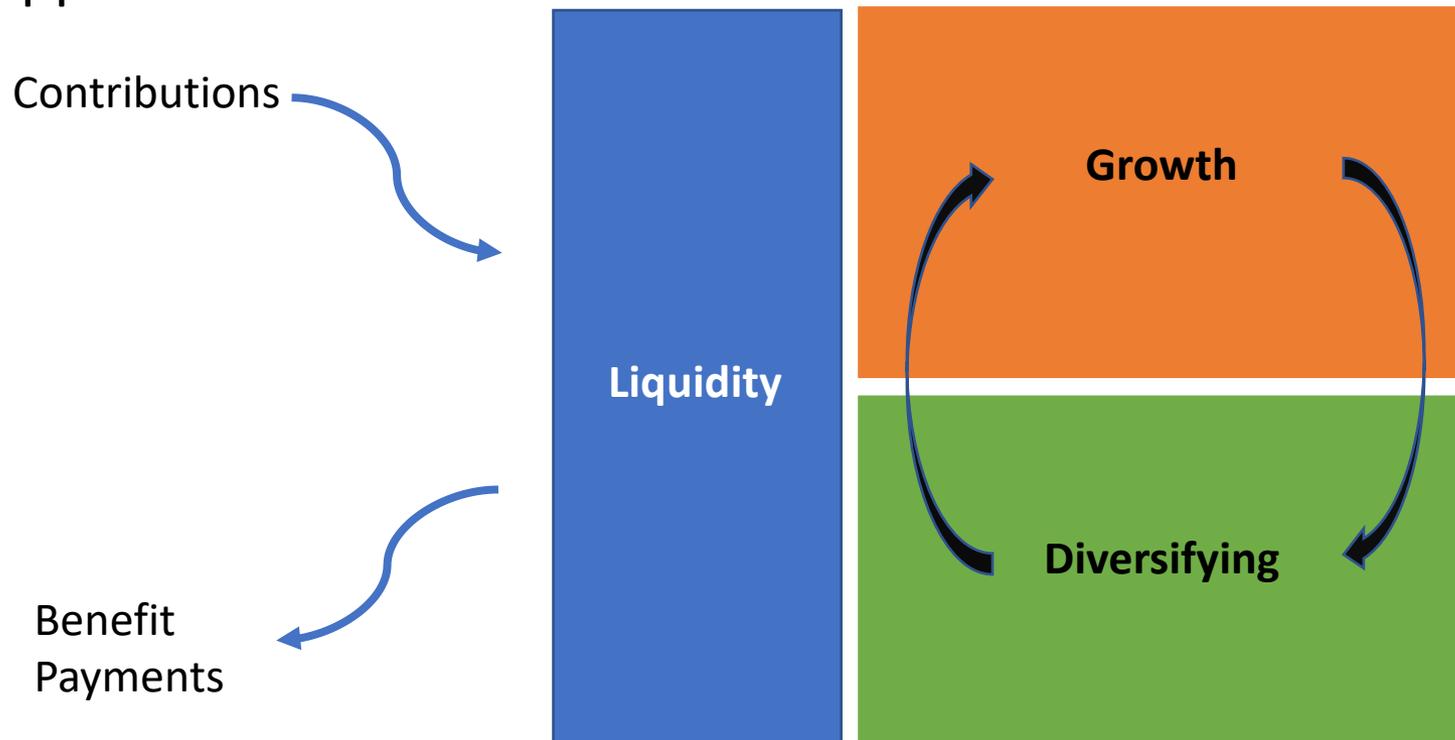
CCCERA
Contra Costa County Employees'
Retirement Association

Review of Risk Diversifying Sub-Portfolio

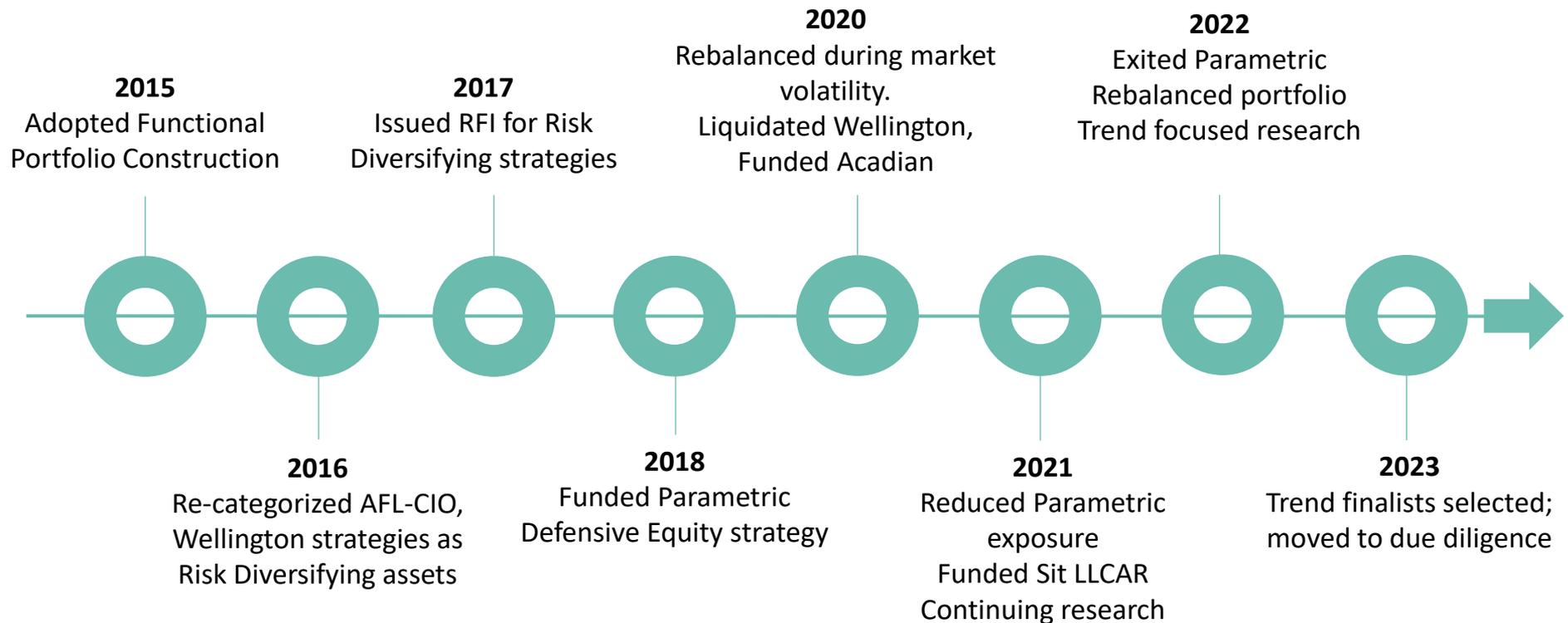1. Role of Risk Diversifying in CCCERA portfolio
2. Characteristics of diversifying assets
3. Structure and Performance of Risk Diversifying
4. Trend strategy update

Risk Diversifying Role in CCCERA Portfolio

- Downside protection to diversify the growth allocation
- Liquid pool of capital to capture stressed growth opportunities

Contributions

Benefit Payments

Liquidity

Growth

Diversifying

Evolution of Risk Diversifying Allocation

2015
Adopted Functional
Portfolio Construction

2016
Re-categorized AFL-CIO,
Wellington strategies as
Risk Diversifying assets

2017
Issued RFI for Risk
Diversifying strategies

2018
Funded Parametric
Defensive Equity strategy

2020
Rebalanced during market
volatility.
Liquidated Wellington,
Funded Acadian

2021
Reduced Parametric
exposure
Funded Sit LLCAR
Continuing research

2022
Exited Parametric
Rebalanced portfolio
Trend focused research

2023
Trend finalists selected;
moved to due diligence

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Risk Diversifying Strategy – Characteristics

Quality	Rationale
Low to negative correlation with growth assets	Act as diversifying offset to CCCERA's large growth (equity) allocation with positive returns in downturns.
High liquidity during periods of equity market stress	Must be able to redeploy these assets to capture opportunities in stressed environment.
Positive expected real return	We want strategies that can be held on a permanent basis without acting as a drag on overall expected returns
Diversification	Portfolio strategies must be diversified and provide required return characteristics under various macro scenarios

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Risk Diversifying Universe

- Two camps: explicit and <u>implicit</u> market hedges.

- Trade-offs: efficiency, reliability, and cost.
  - Explicit hedges are contractual; implicit hedges rely on the persistence of risk-return profiles.
  - Bond/Equity correlations positive in stagflation and periods of rate and inflation uncertainty. Bond/Equity return correlations reversed course and turned positive in 2022.

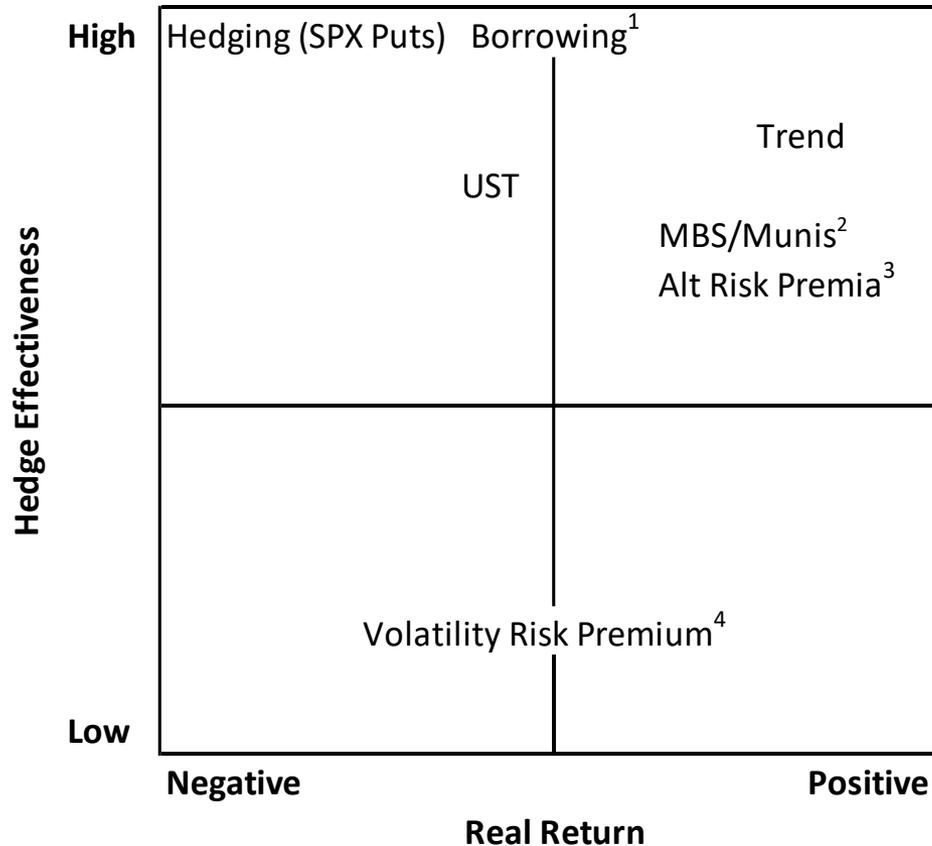| Hedge Type	Example	Efficiency of Hedge	Opportunity Cost
Explicit	Tail risk hedge (buying equity put options)	High, creates an explicit positive payoff when equity market conditions deteriorate	High, essentially an insurance premium is paid every month that the puts expire worthless
Implicit	US government guaranteed debt	Medium, not an explicit negative correlation, typically an uncorrelated return	Medium-low. Economic rationale for a positive expected return

Dimensioning Risk Diversifying Strategies

Strategies	CCCERA	Cost	Most Effective Markets	Correlation	Alpha
Borrowing					
Revolver	No	Very Low	Sharp, Sustained Drawdowns	NM*	NM
Long SPX Futures	No	Very Low	Sharp, Sustained Drawdowns	NM*	NM
Hedging					
Long SPX Puts	No	High	Sharp Drawdowns	NM*	High**
Long SPX/Short SPX Calls	No	High	Sharp Drawdowns	NM*	High**
Fixed Income					
US Treasuries	No	Very Low	Sharp Drawdowns	Negative	Moderate
MBS	AFL-CIO	Low	Sustained Drawdowns	Negative	Moderate
Muni Bonds	Sit LLCAR	Low	Sustained Drawdowns	Negative	Moderate
Alternative Risk Premium					
Systematic Multi Asset Macro Managed Futures	Acadian	Low	Sharp Drawdowns	Negative	Low
Volatility Risk Premia	No	Low	Non-Trending	Positive	Negative
Sytematic Momentum/Trend	No	Low	Sustained Drawdowns	Negative	Low

NM* These strategies are contractual and therefore effectivenes is not based on correlation of returns.

** Put gain is perfect offset to underlying index loss

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Dimensioning Hedge Effectiveness

High — Hedging (SPX Puts)   Borrowing[1]

UST

Trend

MBS/Munis[2]
Alt Risk Premia[3]

Volatility Risk Premium[4]

Low

Negative ——————— Positive

Real Return

Hedge Effectiveness

1 Commited line of credit utilized in drawdowns cost p.a. ~10bps
2 AFL-CIO and Sit LLCAR
3 Acadian
4 Parametric Volatility Risk Premium

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Review. Risk Diversifying Strategies

Strategy	Correlation to Equities	Performs well in	CCCERA Manager
Fixed Income	Low or Negative	"Flight to quality" regime. Lower returns and potential for positive correlation.	AFL-CIO
Alternative Risk Premia	Low or Negative	Most regimes, including inflation.	Acadian
Fixed Income Hybrid	Low or Negative	"Flight to quality" regime. Ability to hedge equity risk and exploit behavioral biases.	Sit LLCAR
Trend	Low or Negative	Most regimes, specifically in times of strong market trends, both positive and negative.	RFI identified two firms

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Risk Diversifying Markets

- AFL-CIO, Sit LLCAR: discretionary (with respect to regarding timing, asset mix).

- Acadian: systematic, multi asset, relative value: managers chose specific assets (e.g., long oil/short gas).

Index	5/30/2021	5/30/2022	5/30/2023	Yr/Yr 2022	Yr/Yr 2023
MSCI World (global developed)	2,979.3	2,814.8	2,825.6	-5.5%	0.4%
Taxable Municipals	245.6	218.5	214.9	-11.0%	-1.6%
Mortgage Backed Securities (MBS)	2,306.5	2,142.2	2,063.1	-7.1%	-3.7%
S&P PutWrite (short puts, 2% OTM)	912.8	975.2	1,057.3	6.8%	8.4%
S&P CallWrite (short calls, 2% OTM)	2,603.6	2,593.9	2,701.1	-0.4%	4.1%
US 10-Year TIPS	286.6	283.9	263.6	-0.9%	-7.1%
Bloomberg Momentum*	971.7	998.6	987.9	2.8%	-1.1%
SG Trend Index**	3,058.1	3,802.1	3,834.2	24.3%	0.8%
Multi Asset components below					
MSCI ACWI (all country)	711.2	656.9	652.4	-7.6%	-0.7%
Volatility (US SPX)	16.8	26.5	17.5	58.4%	-34.2%
Global Sovereigns	242.6	209.5	195.7	-13.7%	-6.6%
US Dollar	90.0	101.7	104.2	12.9%	2.5%
Commodities	519.2	792.7	532.6	52.7%	-32.8%

*Bloomberg returns to the Momentum Factor
**Index of Momentum Funds

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Equity Drawdowns: Not all Created Equal

- **Drawdowns are unique in depth and length.** Can be sharp or sustained. Depth and length are correlated. Recovery speed varies. During stagflation of 1971-1981, SPX provided a nominal zero rate of return before dividends.

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Recessions	Real GDP Decline	Duration
Average*	-4.8% (-0.4% to -26.3%)	15 mos. (4 to 63 mos.)
COVID	-3.4%	~9 mos.
GFC	-4.0%	~24 mos.

*Since Great Depression.

- **2022.** Uncertain inflation, rate and growth paths, market expectation of a mild recession. GDP remains in positive territory on a year-over-year basis. S&P 500 declined 18.1% .

- **March 2023.** Sudden reversal associated with regional banking 7.6% lower from 4,180 to 3,862 in six weeks.

Returns, Correlation Macro-dependent

- **Benefit from Diversification.** No single strategy performs well in all environments.
  - With Acadian and Sit LLCAR, RDP one-year correlation decreased from 0.7 to 0.5 despite bond/equity return correlation turning positive in 2022.

- **Correlations are not static. AFL-CIO correlation to ACWI** (1Q23)
  - 5-year: 0.3 (low); 1-year: 0.8 (high).

		Indices					Actual Strategies	
Downturn Type	**Downturn Example**	**Equity (ACWI)**	**MBS**	**Taxable Munis**	**Alt. Risk Risk Premia**	**Momentum**	**Volatility Risk Premium**	**Hybrid**
Sharp Downturn	COVID*	-26.0%	2.0%	-2.8%	4.3%	-1.3%	-13.2%	-2.2%
Sustained Downturn	GFC**	-55.8%	12.9%	0.6%	0.6%	31.1%	8.9%	11.1%
Infl. & Rates	YTD Sep. '22	-25.3%	-13.7%	-19.3%	-8.0%	35.6%	-9.9%	-2.3%
	Example:	*Artisan*	*AFL-CIO*	*Sit slice*	*Acadian*	*Trend (TBD)*	*Parametric*	*Sit LLCAR*

Sources: Bloomberg, Northern Trust, CCCERA investment managers.

*COVID: 02/19/2020 - 04/03/2020 (Hybrid uses simply March 2020 due to data availability).

**GFC: 10/01/2007 - 03/06/2009 (VRP and Hybrid end February 2020 due to data availability).

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Asset Allocation

- Reduced level of core bond assets, increased alternative risk premia focused assets.

- Returns with low or negative correlation to equity.

Risk Diversifying Portfolio Allocation Year over Year				
Investment Manager	**$ in MMs as of 6/30/2022**	**% of RDP**	**$ in MMs as of 5/31/2023**	**% of RDP**
AFL-CIO	232.9	30.4%	220.5	28.5%
Acadian	255.5	33.4%	248.5	32.1%
Sit LLCAR*	277.0	36.2%	304.1	39.3%
Total Risk Diversifying	**765.5**	**100.0%**	**773.1**	**100.0%**
Total CCCERA	10,083.2	7.6%	10,293.3	7.5%

$25MM added to Sit LLCAR in August 2022 rebalancing

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Returns – Risk Diversifying Portfolio

- One-year return as of 3/31/23: CCCERA Public Equity returned -7.0%, CPI was 5.0%, Risk Diversifying Portfolio returned -1.5%.

- Over one-year through 6/30/23, CCCERA added $25MM to Sit LLCAR.

Returns, net of fees (3/31/2023)	1Q2023	YTD	1 Yr.	3 Yrs	5 Yrs	7 Yrs.	ITD	Inception
Risk Diversifying Portfolio	1.4%	1.4%	-1.5%	0.3%	0.2%	0.7%	2.6%	9/30/2016
CPI	1.7%	1.7%	5.0%	5.4%	3.9%	3.4%	2.6%	
Delta	-0.3%	-0.3%	-6.5%	-5.0%	-3.7%	-2.7%	0.0%	
AFL-CIO	2.9%	2.9%	-5.2%	-3.3%	0.4%	0.5%	5.0%	08/31/1991
BBG US Aggregate	3.0%	3.0%	-4.8%	-2.8%	0.9%	0.9%	4.9%	
Delta	-0.1%	-0.1%	-0.5%	-0.5%	-0.5%	-0.4%	0.1%	
Acadian Multi Asset	-0.9%	-0.9%	1.5%	NA	NA	NA	1.0%	07/31/2020
91 Day T-Bill + 5%	2.4%	2.4%	8.3%	NA	NA	NA	6.3%	
Delta	-3.4%	-3.4%	-6.9%				-5.3%	
Sit LLCAR	2.3%	2.3%	-0.9%	NA	NA	NA	1.1%	03/31/2021
BB Barclays US Agg + 1%	3.2%	3.2%	-3.8%	NA	NA	NA	-3.5%	
Delta	-1.0%	-1.0%	2.9%				4.6%	

CCCERA Performance

- **Returns and Correlation.** Five-year correlation to MSCI ACWI is increased from 0.53 to 0.55. The trailing five-year <u>real returns</u> are unchanged y/y at -3.8%.

- **LTM Returns.** For the LTM ended 3/31/23, SPX declined 7.7%, while the RDP declined 1.7%.

- **Short track record.** Initial RDP strategies were presented by Verus in 2Q2017.

- **Evolution.** Identified and funded strategies are diversified that function across drawdown and market scenarios.

Objective	Measurement	Current Period Data	Status
Volatility Offset to Growth Portfolio	Correlation	0.6 over trailing 5 years; LTM 0.5	Below Expectations
Positive Real Returns	Returns	Trailing 5-year real return -3.8%	Below Expectations
High Liquidity	% of Portfolio that can be liquidated within 90 days	100%	Meeting Expectations

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Trend: S&P and SG Trend Index

- Trend is negatively correlated in equity drawdowns (magenta circles) while capturing equity upside (green trend line).

Trend Summary Return Statistics

- (1) Real positive returns, (2) negative correlation to bonds and equity, and (3) equity-like returns and Sharpe ratios.

Trend RFI Summary Statistics: 7-Years ended 12/30/2022			
Index	**Mean**	**Low**	**High**
Trend (16 RFI Respondents)			
Returns	**7.3**	1.7	11.8
Sharpe Ratio	**0.52**	0.07	0.90
Equity Correlation	**-0.39**	-0.13	-0.55
Bond Correlation	**-0.75**	-0.52	-0.90
CPI	**3.3**		
MSCI ACWI	**4.8**		
SPX			
Returns	**11.5**		
Sharpe Ratio	**0.64**		
Equity Correlation	**1.00**		
Bond Correlation	**0.31**		
Bloomberg Agg (US bonds)			
Returns	**0.9**		
Sharpe Ratio	**-0.03**		
Equity Correlation	**0.31**		
Bond Correlation	**1.00**		

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Trend

- **Assets.** Equities, Bonds, Rates, Currencies and Commodities.

- **Long/Short Strategy.** Positive returns in up and down markets.

- **Positions.** Follow price movements, long as price trends up and short as price trends down.

- **Leverage.** Positions are established in the futures market.

- **Negative Correlation.** Returns are negatively correlated to both equity and bond markets.

- **Equity-like Positive Real Returns.**

- **Outperforms in Inflationary Periods.**

Trend: SG Trend Index Return Statistics

- **Equity-like** Absolute and Risk-Adjusted Returns.

- **Negative Correlation** to equity and bond returns.

- **Inflation.** Positive returns in inflationary environment.

Returns, net of fees (3/31/2023)	1 Yr.	3 Yrs	5 Yrs	7 Yrs.
Returns				
S&P 500 (SPX)	-7.7%	18.6%	11.1%	12.4%
SG Trend Index (SGT)	0.3%	10.2%	7.4%	3.6%
Bloomgberg Bond Index (AGG)	-4.8%	-2.8%	0.9%	0.9%
Inflation (CPI)	5.0%	5.4%	3.8%	3.4%

Risk-Adjusted Return (Sharpe Ratio)	1 Yr.	3 Yrs	5 Yrs	7 Yrs.
S&P 500	(0.44)	0.92	0.53	0.69
SG Trend Index	(0.15)	0.74	0.50	0.20
Bloomgberg Bond Index (AGG)	(0.76)	(0.59)	(0.09)	(0.07)

5-Year Return Correlation (3/31/2023)	SPX	SGT	AGG	CPI
S&P 500 (SPX)	1.00	(0.17)	0.40	(0.05)
SG Trend Index	(0.17)	1.00	(0.44)	0.27
Bloomgberg Bond Index (AGG)	0.40	(0.44)	1.00	(0.27)
Inflation (CPI)	(0.05)	0.27	(0.27)	1.00

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Trend. Why does it work?

- **Investors are Emotional: Behavioral Biases.**

- **Information.** Information that impacts asset prices tend to be absorbed slowly. Investors can underreact/overreact to new information.

- **Economic Cycles.** Economic cycles evolve over multiple-year periods.

- **When can it fail?**
  - Non-trending, low volatility markets
    - Trend strategies underperformed in periods with significant central bank intervention.

Behavioral Biases

- **Initial under-reaction.** Slows price discovery, trend-following strategy profits by being an early entrant if trend continues as market catches up.

  - **Anchor and insufficient adjustment.** Investors are anchored on historical data and make insufficient adjustment to news, and as a result, there is an under-reaction.

  - **Disposition Effect.** Investors sell winners early and losers late. Selling winners early realizes gains, selling losers late avoids the pain of a realized loss.

  - **Non-Profit seeking activities.** Central banks operate in FX and treasury markets, to reduce exchange and interest rate volatility, potentially slowing price adjustments. Likewise, pensions mechanically rebalancing against the trend to maintain target allocations; rebalancing portfolios reinforces the "sell winners" and "buy/hold losers" activities.

- **Delayed Over-Reaction.** Once started, other biases extend the trend beyond fundamental value.

  - **Herding and Feedback Trading.** Investors eventually notice the trend and seek to monetize by buying into the trend, extending the trend beyond fundamentals.

  - **Confirmation Bias and Representativeness.** Investors look for information that confirms what they already believe, and see recent price moves as being representative of the future. In both cases investors may add to winners and sell losers, both of which extend the trend.

  - **Fund Flows and Risk Management.** Fund flows chase recent performance due to herding, confirmation and representativeness. Stop-loss, corporate hedging and portfolio insurance extend trends as well.

RDP Portfolio Actions: 2022 and 2023

2022 Macro Change

- **Rates & Inflation**
  - CPI peaks June 2022 at 9.1%
  - Policy rate increases from 0.25% to 4.50%

- **Rebalancing & Funding**
  - Added to assets with low sensitivity to positive bond equity correlation: $75MM to Acadian and $75MM to Sit LLCAR.
  - No additions to AFL-CIO

2023 Rate Change Impact

- **Rates & Inflation**
  - Policy rate increased from 4.50% to 5.25%, CPI 4.0%
  - Rates negatively impact high duration assets, Commercial Real Estate and Regional Banking

- **Rebalancing & Research**
  - Added to assets with low sensitivity to positive bond equity correlation: $25MM to Sit LLCAR.
  - Trend research

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Future Enhancements

Identifying complementary strategies is a priority for the CCCERA investment team. Develop battle plan for specific drawdown depths and lengths.

Ongoing research for potential inclusion/replacement of existing strategies:

- Multi-asset absolute return strategies
- Alternative risk premia
- Trend

- Identify trend strategy to be funded in SH2023. Pro Forma analysis indicates a 25% allocation to Trend adds 1.5-2.0% to trailing 5-year returns and reduces correlation to 0.2-0.3.
- Evaluation of existing strategies

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Questions?

- Q&A from Trustees.

CCCERA
Contra Costa County Employees'
Retirement Association

Memorandum

Date: July 26, 2023

To: CCCERA Board of Retirement

From: Timothy Price, Chief Investment Officer

Subject: Update on Private Equity and Real Estate Allocations

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Overview

CCCERA recently made commitments to one private equity and two real estate funds using the delegated authority granted in the Investment Policy Statement. A brief description of each fund/strategy is included below. This memo is for informational purposes only and no action is required from the Board at this time.

Investment Policy Statement

The CCCERA Investment Policy Statement adopted by the Board on September 28, 2016 (amended on April 24, 2019 and May 26, 2021) outlines the hiring process for new investment mandates. Commitments up to a $150 million per strategy may be approved via a staff review process, while mandates above this threshold require approval by the Board.

Genstar Capital Partners XI

Genstar, organized in 1986, is a San Francisco-headquartered private equity firm focused on control buyouts in North America. Genstar targets control transactions in growth-oriented North American businesses across four targeted sectors: financial services, software, industrials, and healthcare. Genstar will target 15-18 platform investments and drive value creation by accelerating revenue growth and targeting M&A opportunities. CCCERA committed $75 mm to Genstar XI after having previously invested in Genstar IX and X.

EQT Exeter Industrial Value Fund VI and Multi-Family Value Fund II

EQT Exeter is a vertically integrated real estate investing company based in Radnor, Pennsylvania. It was founded in 2007 by senior investment professionals from Liberty Property and has since been acquired by EQT. The Industrial Value Fund VI (EIVF VI) focuses on warehouse, light industrial and final mile properties while the Multi-Family Value Fund II (EMVFII) focuses on residential rental properties. CCCERA committed $60 mm to EIVF VI and $40 mm to EMVF II.

CCCERA Pension Administration System (PAS) Modernization Project

Segal's Board Update

July 26, 2023

Segal

Board Recap from June 20 and July 12, 2023

- **Accomplishments**
  - Overall CCCERA PAS Project completion is 72% per Sagitec's proposed schedule.
  - CCCERA continues with testing functionality and re-testing the corresponding fixes Pilot 1 (e.g., Member/Employer Demographics, Employer Reporting, etc.). Results of testing thus far:
    - 94% of Test Cases Completed
    - 70% Pass Rate
  - CCCERA has completed an initial round of testing for two of the Pilot 2 modules (i.e., Withdrawals and Reciprocity); and the other modules (i.e., Benefit Payments, Service Retirement, etc.) are upcoming. Results of Pilot 2 testing thus far (i.e., Withdrawals and Reciprocity):
    - 100% of Test Cases Completed
    - 41% Pass Rate

Board Recap from June 20 and July 12, 2023

- **Risks**
  - Missed milestone: Pilot 1 unable to complete testing on 6/9/23
  - Quality improvement is necessary
  - Significant functionality remains to be developed
- **From July 12, 2023**
  - Sagitec and Segal informed the board that Sagitec successfully completed 1 of 2 key priorities on schedule
- **Summary**
  - The proposed project schedule remained in <mark>Yellow</mark> but was trending negative. The proposed schedule is at risk should the issues identified above not be remediated quickly.

Board Update as of July 14, 2023

- **Accomplishments**
  - Overall CCCERA PAS Project completion is 73% per Sagitec's proposed schedule, up 1% from last month.
  - CCCERA continues with testing functionality and re-testing the corresponding fixes for Pilot 1 (e.g., Member/Employer Demographics, Employer Reporting, etc.). Results of testing thus far:
    - 95% of Test Cases Completed
    - 82% Pass Rate
  - CCCERA has began testing 2 additional Pilot 2 modules; Results of Pilot 2 testing of 4 modules thus far:
    - 96% of Test Cases Completed
    - 83% Pass Rate
  - Improvements in quality observed during Pilot 2 testing

Board Update as of July 14, 2023

- **Upcoming milestones/priorities:**
  - 7/24 – Meeting of exit criteria for Pilot 1 functionality
  - 7/31 – Delivery of Benefit Payment functionality to CCCERA to begin testing.
  - 8/28 – Completion of UAT for Pilot 2.1
- **Risks**
  - Pilot 1 has numerous PIRs (Program Issue Request) that remain outstanding and could impact effort on Pilot 2.
  - A number of tasks have slipped past the current project schedule
  - Sagitec has informed CCCERA and Segal they believe the tasks that are behind schedule can be addressed and they continue to target an 11/16 Go Live
- **Summary**
  - The proposed project schedule remains in Yellow status and must continue to be monitored closely to ensure deliverables meet the proposed schedule and exceed CCCERA quality expectations. The proposed schedule remains at risk and may transition to red status should tasks continue to lag behind.

Questions…?

CCCERA Online Retirement System Project Implementation Progress

July 26, 2023

- Project Overall Performance

- Project Go Live Accomplishments / Risks

Project Phase	Planned Completion Percentage	Actual Completion Percentage
Overall Status	84%	73%
Phase-5 | Line Of Business (LOB) Implementation	90%	84%
Phase-6 | Member/Retiree Self Service (MSS) Implementation	51%	18%

Current Planned Project Go-Live dates	Original	Re-Baseline
LOB Go Live	09/05/2023	11/16/2023
MSS Go Live	01/08/2024	02/14/2024

*** As of the date the Presentation was prepared*
Note – The Go Live dates shown here are still based on the earlier re-baselined plan.

Project Accomplishments

Period	Description
July 2023	Closed out 74 issues out of the initial 88 issues identified in Pilot 1.
July 2023	Released a major Pilot 2 module to UAT which resulted in 83% pass rate.
July 2023	Completed development of 10 out of 12 functionalities for the initial Go Live release.

Project Risks

Risk Identified	Mitigation Strategies/Steps
The configuration and development activities of Pilot 2 modules have been delayed. These delays pose a risk to the currently planned LOB Go-Live and MSS Go-Live dates.	Sagitec has provided three revised project implementation options for mitigating this risk. These options are in discussions to determine the option best suited for CCCERA's operations.
Quality of system configuration is identified as a potential risk.	Steps to mitigate the quality risk – • Closer quality monitoring for quality delivery. • Balance between quality and schedule. • Ensuring initial configuration quality. • Identification and prioritization of design gaps.

Thank You