COST EFFECTIVENESS AND FEE ANALYSIS

SAN BERNARDINO COUNTY EMPLOYEES’ RETIREMENT ASSOCIATION

APRIL 11, 2024

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OBJECTIVES

Measuring Fees Paid and Evaluating Cost Effectiveness

- Provide an overview of the types of fees paid across asset classes

- Outline investment management fees paid across all SBCERA asset classes and portfolios

- Evaluate cost effectiveness of the fund's overall portfolio structure based on the following criteria:
  - Examine fee efficiency within asset classes
  - Consider fees in conjunction with active return
  - Consider fees in conjunction with risk adjusted returns (Sharpe ratio)

PUBLIC MARKETS FEE OVERVIEW

Within Public Markets (Both Equity & Fixed) there are 3 general types of Fee structures:

1. **Flat Fee**
   - A flat basis point fee that is charged no matter the size of the mandate
   - Typically used for passive or indexed mandates
2. **Tier or Asset-Based Fee (Declining Marginal Rate Fee Structure)**
   - A fee schedule that includes breakpoints or "Tiers" based on the size of the mandate
   - The breakpoints will provide lower fees as the amount of assets grows
   - These fee structures are offered by passive and active managers and are the most prominently used (100 bps on the first $50 mm, 75 bps on the next $50 mm, with 50 bps on assets over $100mm)
3. **Performance-Based Fee**
   - A fee schedule that includes the ability for the manager to profit from the performance of a portfolio
   - The fee is comprised of a base fee, which is substantially lower than the customary or normal fee, and a performance component that is earned or exceeded only when the manager earns a required excess returns

Notes:
Performance fees do not lead to better performance
Clients may be able to negotiate better fees using the performance fee approach, since manager most-favored-nation restrictions are less binding
When managers seriously underperform, the optics are better, but in rising markets fees can be noticeably higher

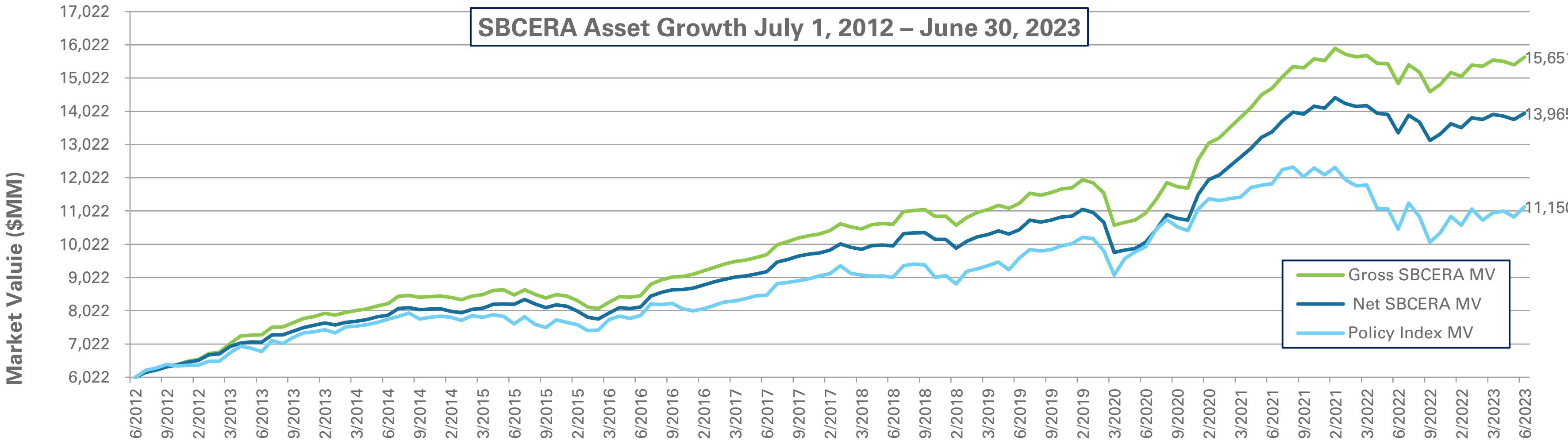
PRIVATE EQUITY/HEDGE FUND FEE OVERVIEW

Within the private markets and hedge fund fees, there are different types of fee structures which depend on the type of vehicle:

1. **Private Market Fee Structures**
   - Fees are typically much higher than for public market assets
   - Fees structures often include the following components:
     - Management Fee – Typically 1-2%
     - Performance Fee or “carry” – Typically 20% of performance above a preferred return payable after all capital is returned
     - Preferred return or “hurdle rate” which needs to be attained in order to earn the performance fee– Typically 6-10%
   - Fees often paid on committed, not invested capital, although this is changing

2. **Hedge Fund Fee Structures**
   - Fees are very high compared to traditional managers
   - Fees are made up of two components:
     - Management Fee
       - A fixed fee usually determined as a percentage of assets
       - Typically between 1-2% and have been on a downward trajectory overtime
     - Performance Fee:
       - Based on net new performance
       - Generally subject to a “highwater mark” or max fee
       - Typically between 15-30% of performance, which can be either above a hurdle or simply a positive return

PERFORMANCE SUMMARY AND FEE MARGINS FISCAL YEARS ENDING JUNE 30



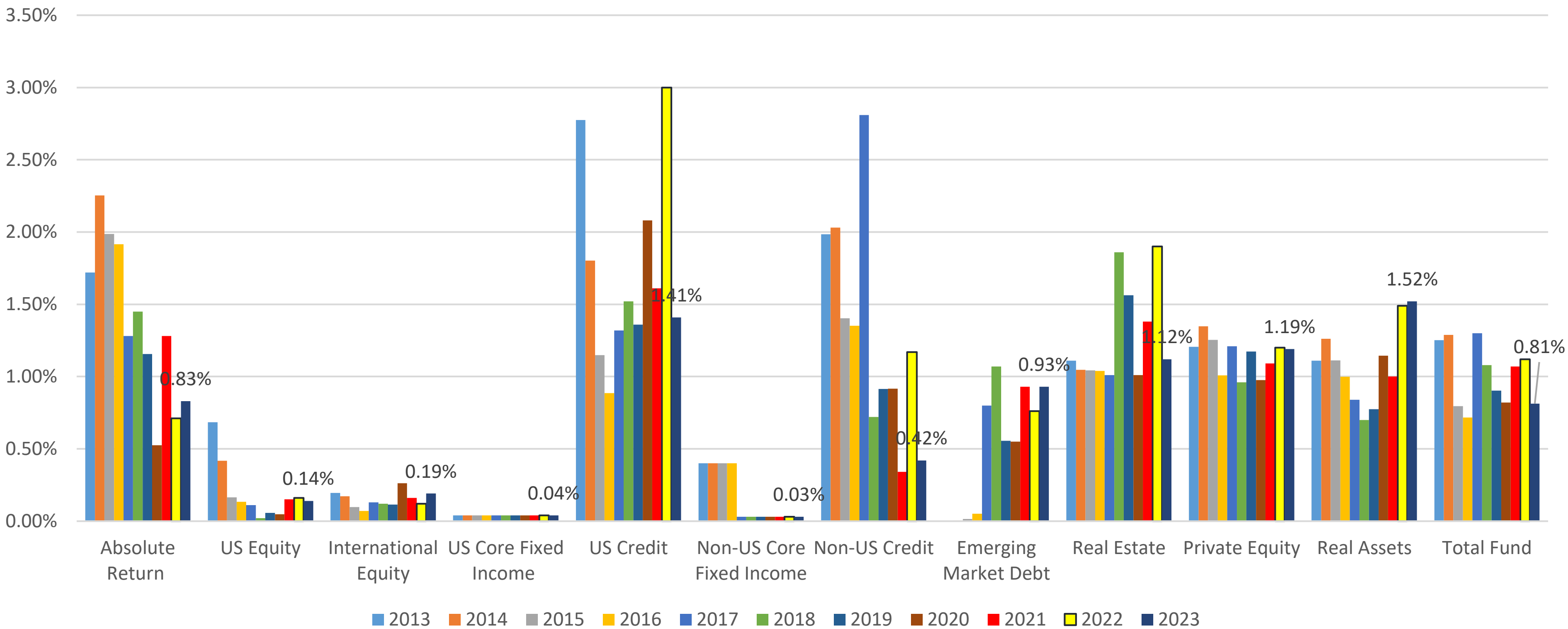
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10 Yr Return Cumulative	10 Yr Return Annualized
SBCERA (Gross of Fees)	12.8	5.2	-0.1	14.7	9.9	5.8	-2.4	34.7	1.1	5.9	122.7	8.3
SBCERA (Net of Fees)	11.5	4.4	-0.8	13.3	8.8	4.8	-3.2	33.3	-0.1	5.0	101.9	7.3
Policy Index	14.4	0.4	3.5	8.0	6.9	6.2	3.7	19.7	-11.3	7.2	72.1	5.5
Excess (Gross of Fees)	-1.6	4.8	-3.6	6.7	3.1	-0.5	-6.1	15.0	12.4	-1.3	50.6	2.8
Excess (Net of Fees)	-2.9	4.0	-4.3	5.2	1.9	-1.4	-6.9	13.6	11.2	-2.2	29.9	1.8

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Gross of Fee Investment P/L ($MM)	954	434	-13	1,262	974	617	-275	3,828	170	873	8,823
Actual Mgmt & Incentive Fees ($MM)	-93	-64	-60	-107	-100	-91	-86	-112	-152	-108	-974
Actual Net Investment P/L ($MM)	888	292	-67	1,110	804	473	-358	3,393	4	665	7,205
Policy Index P/L ($MM)	990	34	263	638	594	566	356	1,972	-1,336	753	4,830
Gross of Fee Excess Return ($MM)	-37	400	-276	624	380	51	-631	1,856	1,506	120	3,993
Net of Fee Excess Return ($MM)	-102	258	-330	472	210	-93	-714	1,421	1,340	-88	2,374
Multiple of Excess Return to Fees	-0.4x	6.2x	-4.6x	5.8x	3.8x	0.6x	-7.3x	16.5x	9.9x	1.1x	4.1x

For every $1 in fee paid, the Plan gained $4.1 in excess return

Note – The fee data is sourced from SBCERA Fiscal Services. There may be timing differences between this analysis and NEPC's performance reports as this analysis combines SBCERA Fiscal Services data with time weighted rates of return. The calculations shown are cumulative, i.e., considers SBCERA gross of fee and net of fee asset growth from the year fee data is available (FY 2013 forward). Note, 2022 fees were revised by SBCERA Fiscal Services, and the charting and analysis includes those revisions.

ASSET CLASS SUMMARY - YOY TOTAL MANAGEMENT FEES + INCENTIVE FEES PAID

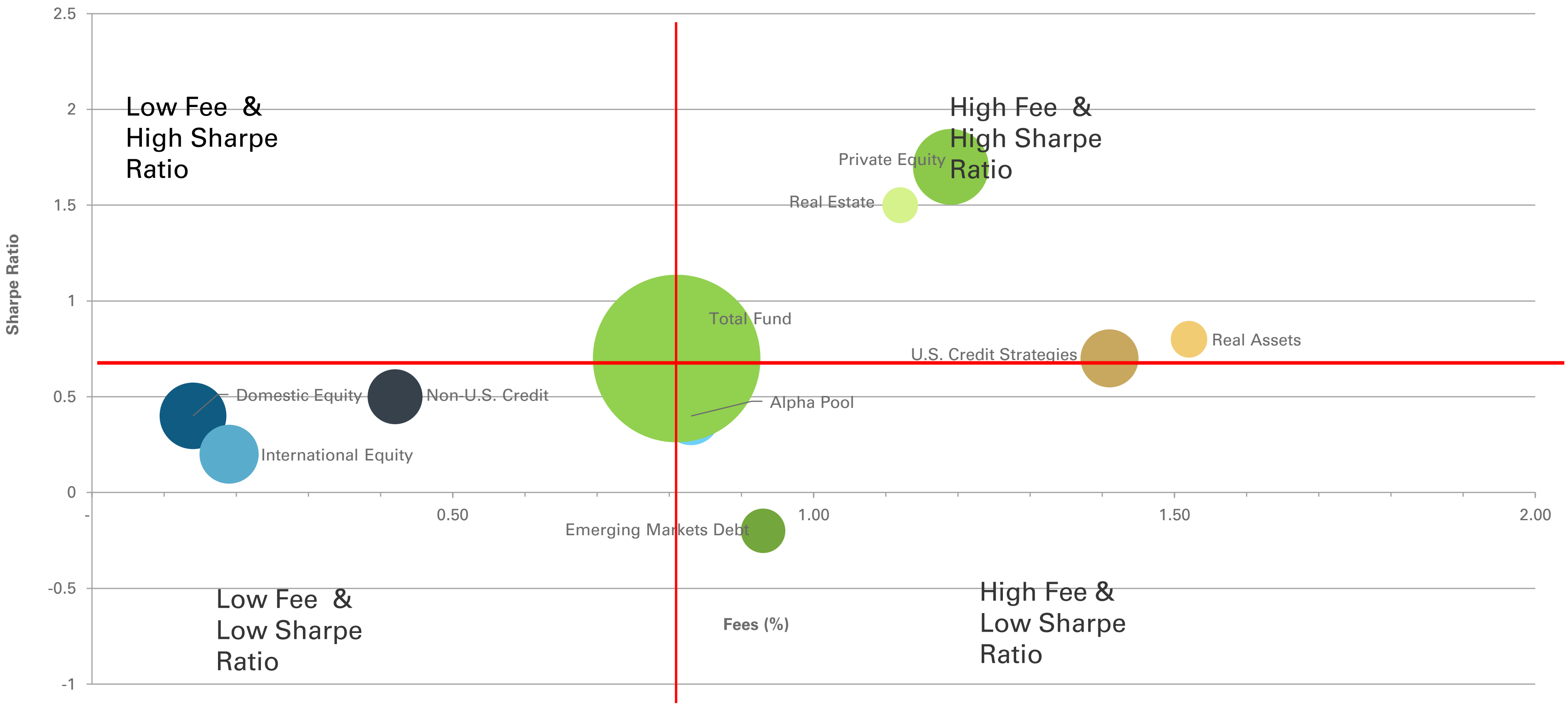


- **Observed fee structures align interests of the plan with fees paid**
  - Total Fund Fees decreased over last year after increasing over the previous several years
  - The 10 Year average fee paid was 0.99%
  - Total Fund performance ranked in the 89th percentile over the past year in a period of particularly strong public market performance. 3 yr, 5 yr performance is particularly strong ended FY 2023 ranking 4th and 22nd
  - 3 yr, 5 yr and 10 yr returns are above the actuarial rate of return ended FY 2023
  - Private markets asset classes exhibit higher fees as expected, though when returns are lower, incentive fees paid are lower which is reflected in the relatively lower fee ended FY 2023

Note – Fee data sourced from SBCERA Fiscal Services

Exhibit A: Page 7

COST EFFECTIVENESS 5 YEARS



- **Total Fund net of fee Sharpe Ratio of 0.7 ranked in the 13th percentile in PF>$1B Net of Fee Universe**
  - Private Equity, Real Estate, Credit and Real Assets contributed to high Sharpe Ratio
- **Total Fund's assets returned 7.3% and ranked in the 22nd percentile**
- **Strong risk adjusted returns suggests active management benefitted the plan**

CONCLUSIONS

- **Overall, costs in fiscal year 2023 were lower, yet, in line with expectations**
  - Private Equity, Real Estate, Credit and Real Assets contributed to high Sharpe Ratio
- **Total Fund underperformed the benchmark in fiscal year 2023**
  - Commitments to private markets are expected to result in a higher cost portfolio with higher expected return and Sharpe ratio
  - Lower fees in a vast majority of public markets and private markets reflects Staff and Plan investment beliefs
- **Over the past 10 years, the plan has returned $4.10 for every dollar paid in investment fees**
- **A majority of assets rank highly versus peer universe investment management fees**
- **The lowest cost portfolio is not necessarily a portfolio that will meet your risk/return objectives**
  - Private market and alternative investments have produced the highest risk adjusted returns at attractive fee levels when ranked against peers
- **SBCERA's overall fees are generally in line with fees paid by other NEPC clients with similar asset structures**

APPENDIX

EXAMPLE OF A PRIVATE EQUITY FUND WITH ONE LP AND ONE PORTFOLIO COMPANY

- **Simplified example of a private equity fund structure**
  - $100 million fund with one $100 million LP investor
  - Fund has a two year investment period
  - GP charges a management fee of 2.0% of commitments during investment period
  - GP charges a management fee of 2.0% of invested capital thereafter
  - Fund has an 8% cumulative preferred return
  - GP carry rate is 20%

- **Simplified example of how it was invested**
  - ***Year One:***
    - Capital called for management fees (based on commitments)
    - No investments are made
  - Year Two:
    - Capital called for management fees (based on commitments)
    - A $90 million investment is made into Company A
  - Year Three:
    - Capital called for management fees (based on invested capital)
    - Company A is doing well and its valuation is increased by $10 million
  - Year Four:
    - Capital called for management fees (based on invested capital)
    - Company A is sold for $200 million

YEAR BY YEAR ACCOUNTING FOR THE FUND INVESTMENT BY THE LP

Accounting Entries

- **Year One**
  - DR Management Fee Expense $2.0 million
    CR Cash $2.0 million
  - Pay management fees at 2.0% of committed capital
- **Year Two**
  - DR Management Fee Expense $2.0 million
    DR Investments @ Cost $90.0 million
    CR Cash $92.0 million
  - Pay management fees at 2.0% of committed capital
  - Record $90 million cost of investment
- **Year Three**
  - DR Management Fee Expense $1.8 million
    CR Cash $1.8 million
  - DR Investments @ Fair Value $10.0 million
    CR Unrealized Gain $10.0 million
  - Pay management fees at 2.0% of invested capital (since fund is fully invested)
  - Record $10 million appreciation in value of investment (unrealized gain)
- **Year Four**
  - DR Management Fee Expense $1.8 million
    CR Cash $1.8 million
  - DR Cash $178.0 million
    DR Unrealized Gain $10.0 million
    CR Investments @ Cost $90.0 million
    CR Realized Gain $88.0 million
  - Pay management fees at 2.0% of invested capital (since fund is fully invested)
  - Receive $178.0 million in distributions (see next page for distribution waterfall of how this amount was computed)
  - Reduce investment cost by $90 million to $0
  - Record new net gains of $88.0 million ($98.0 million of realized gain less $10 million of prior unrealized gain)

DR = Debit; CR = Credit

HOW A HEDGE FUND'S PERFORMANCE WOULD BE REPORTED BY THE LP

Year End Performance Reporting

- **Performance Reporting:**
  - *Year One*: Investment multiple of 0.0x and IRR of -100.0% reflect that all capital contributions during the 1st year were to pay management fees
  - *Year Two*: Performance multiple and IRR are still negative, reflecting that cumulative management fees were in excess of any investment appreciation
  - *Year Three*: Performance multiple and IRR turn positive as unrealized gains on the investment were in excess of cumulative management fees
  - *Year Four*: Represents fully realized performance of the fund, net of management fees and net of carried interest paid to GP

- **Performance Table:**

Date (End of Year)	Commitment	Unfunded Commitment	Capital Contributed	Distributions	Current Value	Total Value	Total Gain (Loss)	Total Value to Paid-In Capital	Net IRR
Year 1	$ 100,000,000	$ 98,000,000	$ 2,000,000	$ -	$ -	$ -	$ (2,000,000)	0.00 x	-100.0%
Year 2	$ 100,000,000	$ 6,000,000	$ 94,000,000	$ -	$ 90,000,000	$ 90,000,000	$ (4,000,000)	0.96 x	-4.2%
Year 3	$ 100,000,000	$ 4,200,000	$ 95,800,000	$ -	$ 102,000,000	$ 102,000,000	$ 4,200,000	1.06 x	3.2%
Year 4	$ 100,000,000	$ 2,400,000	$ 97,600,000	$ 178,000,000	$ -	$ 178,000,000	$ 80,400,000	1.82 x	22.4%

IMPORTANT CONSIDERATIONS

- **Important Considerations**
  - Focus on investment management fees and incentive fees
  - Fees paid are primarily driven by plan investment beliefs and two decisions:
    - How much in alternatives
    - How much in passive vs. active strategies
  - While fee efficiency should be a focus of every fiduciary, over long time periods, investors may be rewarded by investing in higher fee strategies

ANALYSIS CONSIDERATIONS

- **5 – year return statistics used in the analysis ending June 30, 2023 to evaluate performance relative to appropriate benchmarks.**
  - Some level of caution is appropriate as this analysis is time period specific

- **Alternative asset classes present evaluation difficulties.**
  - Subject to a variety of style and implementation differences
    - Program maturity and J-Curve effect can dramatically impact results
    - Management fees are often rebated before performance fees are assessed in private markets asset classes
    - Miscellaneous fees not always tracked

- **Universe comparisons are subject to nuance:**
    - Peer group definition
    - Changing composition of peer group
    - Survivorship bias and back fill bias in manager universes
    - Fee definition and treatment