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Understanding Investment Benchmarks

2024 Fall Trustee School – CEU Program



Understanding Investment Benchmarks

1. Public perception of benchmarks
2. Benchmarking investment managers
3. Benchmarking pension funds
4. Trustee guidance

Public Perception of Benchmarks

Benchmark = measuring stick?



Benchmarks help
provide context

Understanding Investment Benchmarks

1. Public perception of benchmarks
 - Heard on TV
 - Benchmark Criteria, Reconstitution
 - Concentration

As seen on TV



Benchmarking Sets Expectations



Silver: Good or Bad?



It Depends. Context Matters



Men's basketball: **16 gold medals**



Men's soccer: **4th place = best finish**

Understanding Differences

	Dow Jones	S&P 500	NASDAQ
What is it?	A “basket” of 30 US “blue-chip” stocks	An “Index” 500 US large cap stocks	A stock exchange of ~2,500 with mainly tech stock listings
Has the average Joe heard of it?	Yes	Yes	Yes
Is it a common benchmark used within Pensions?	No	Yes	No
Why?	Concentration bias	Easy to understand / relate too	Style bias

Who decides what is in a benchmark?



Benchmark Composition

Index	Approach	Characteristics
Dow Jones	Qualitative	Stocks “added if company has an excellent reputation, demonstrates sustained growth and is of interest to a large number of investors” – committee based – change infrequent (~2 years)
S&P 500	Rules based	The largest 500 US stocks by market capitalization – committee based final decision – quarterly
NASDAQ	Stock exchange	Must meet listing requirements and typically “go public” via an initial public offering (IPO)

Benchmark Concentration

- Benchmarks can become more/less concentrated over time -
e.g. Magnificent Seven

Weight of the top 10 stocks in the S&P 500

% of market capitalization of the S&P 500



Benchmarking Investment Managers

Understanding Investment Benchmarks

2. Benchmarking investment managers

- Benchmark-agnostic vs. benchmark-hugging
- Peer group benchmarks, multiple benchmarks
- Changing benchmarks

Benchmark Agnostic

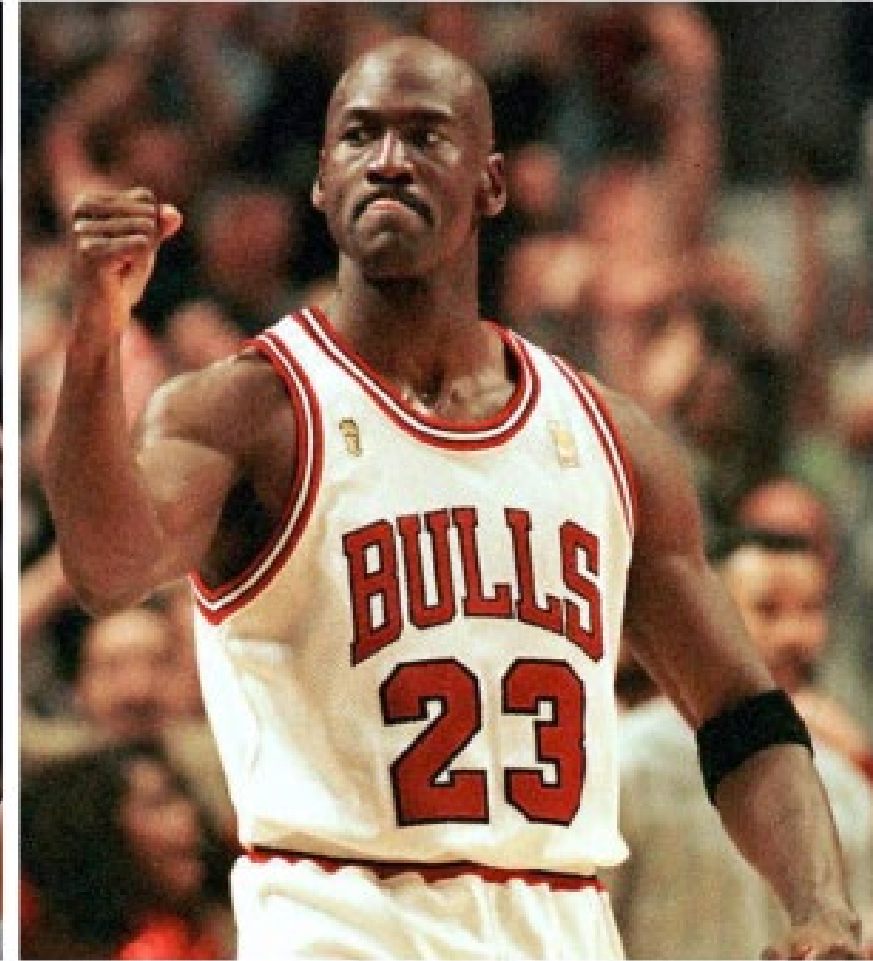
- Invest with little (to no) regard for constraints or guardrails of benchmark holdings.
- Willingness to look different ~ “Go anywhere” approach.



Benchmark Hugging



Peer Group Benchmarks



Why use multiple benchmarks?



- Sometimes one benchmark does not tell the full story
- Multiple benchmarks might be needed
- Sometimes they provide conflicting results
- If you have a good understanding of why, it is fine

Changing Benchmarks



What makes a “good” benchmark?

Bailey¹ Benchmark Characteristics:

- **Unambiguous** - clearly identifiable components
- **Investible** - possible to “own” and invest in it
- **Measurable** - on a frequent and timely basis
- **Appropriate** - consistent with a manager’s style
- **Reflective of current investment options**
- **Specified in advance** - constructed in advance

1) Financial Analysts Journal, CFA Institute, 1992

Benchmarking Pension Funds

Understanding Investment Benchmarks

3. Benchmarking pension funds
 - Policy benchmark
 - Peer group benchmark
 - Understanding the lag for alternatives

Policy Benchmark

Are asset allocation decisions meeting our goal?

	Market Value % of Portfolio		Ending December 31, 2019					
			2019 Q4	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund	\$961,409,924	100.0%	4.7%	16.9%	9.1%	7.9%	9.6%	9.6%
<i>Total Fund Benchmark</i>			4.8%	17.0%	8.6%	7.5%	8.9%	9.1%
Total Domestic Large Cap Equity	\$226,859,596	23.6%	9.7%	31.9%	15.6%	11.9%	15.2%	13.6%
Total Domestic Small/Mid Cap Equity	\$125,592,040	13.1%	8.0%	24.7%	9.7%	9.5%	13.5%	13.5%
Total International Equity	\$62,256,229	6.5%	9.5%	27.0%	12.5%	8.4%	8.2%	6.2%
Total Investment Grade Fixed Income	\$103,012,795	10.7%	0.3%	6.4%	3.2%	2.6%	2.0%	3.2%
Total High Yield Fixed Income	\$79,458,894	8.3%	2.4%	14.6%	6.4%	6.5%	6.4%	8.0%
Total Real Estate - Core	\$133,456,713	13.9%	1.4%	5.4%	6.6%	8.4%	9.7%	11.2%
Total Real Estate - Value Add	\$77,459,758	8.1%	3.2%	9.5%	9.6%	11.0%	--	--
Total Hedge Fund of Funds - Multi Strategy	\$9,918,951	1.0%						
Total Opportunistic Strategies	\$79,481,967	8.3%						
Total Global Tactical Asset Allocation	\$48,430,983	5.0%	5.1%	20.9%	8.5%	7.4%	8.1%	--
Total Private Equity	\$9,532,634	1.0%						
Total Other	\$5,430,242	0.6%						
Total Cash Equivalents	\$519,123	0.1%						

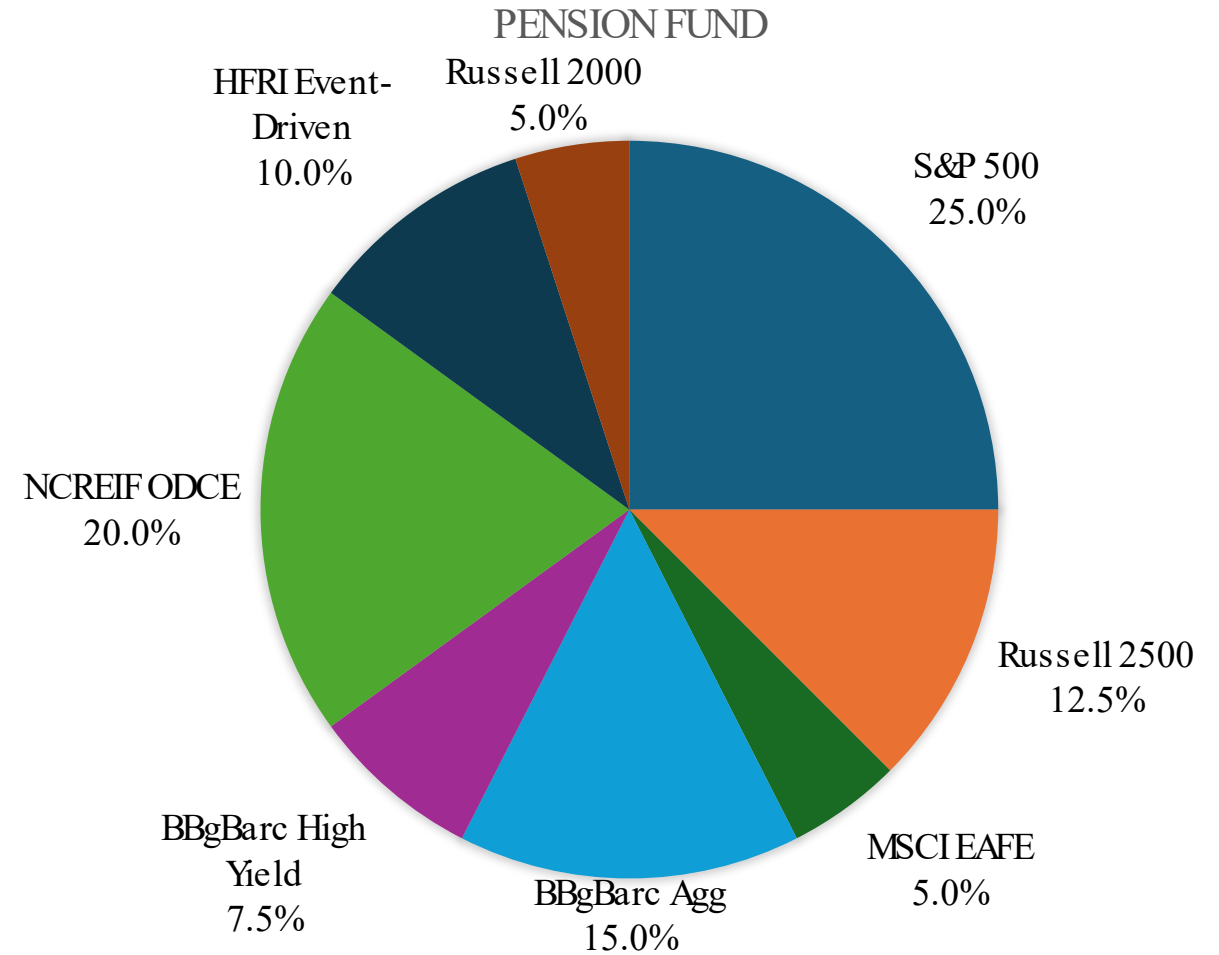
Is manager selection adding value?

Note: Time-weighted returns are not shown for asset classes for which internal rate of return (IRR) is a more appropriate measure. IRR can be found on the corresponding manager page.

	Fiscal Year Ends December 31										
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total Fund	16.9%	-1.9%	13.2%	8.6%	3.5%	8.8%	19.4%	11.6%	3.4%	13.8%	16.0%
<i>Total Fund Benchmark</i>	17.0%	-2.3%	12.1%	8.6%	3.2%	7.2%	17.7%	12.4%	2.9%	14.3%	15.0%

Total Fund Composite Benchmark

- Should reflect the target asset allocation
- Not all asset classes have benchmarks



Not the only measurement for the success of a Fund

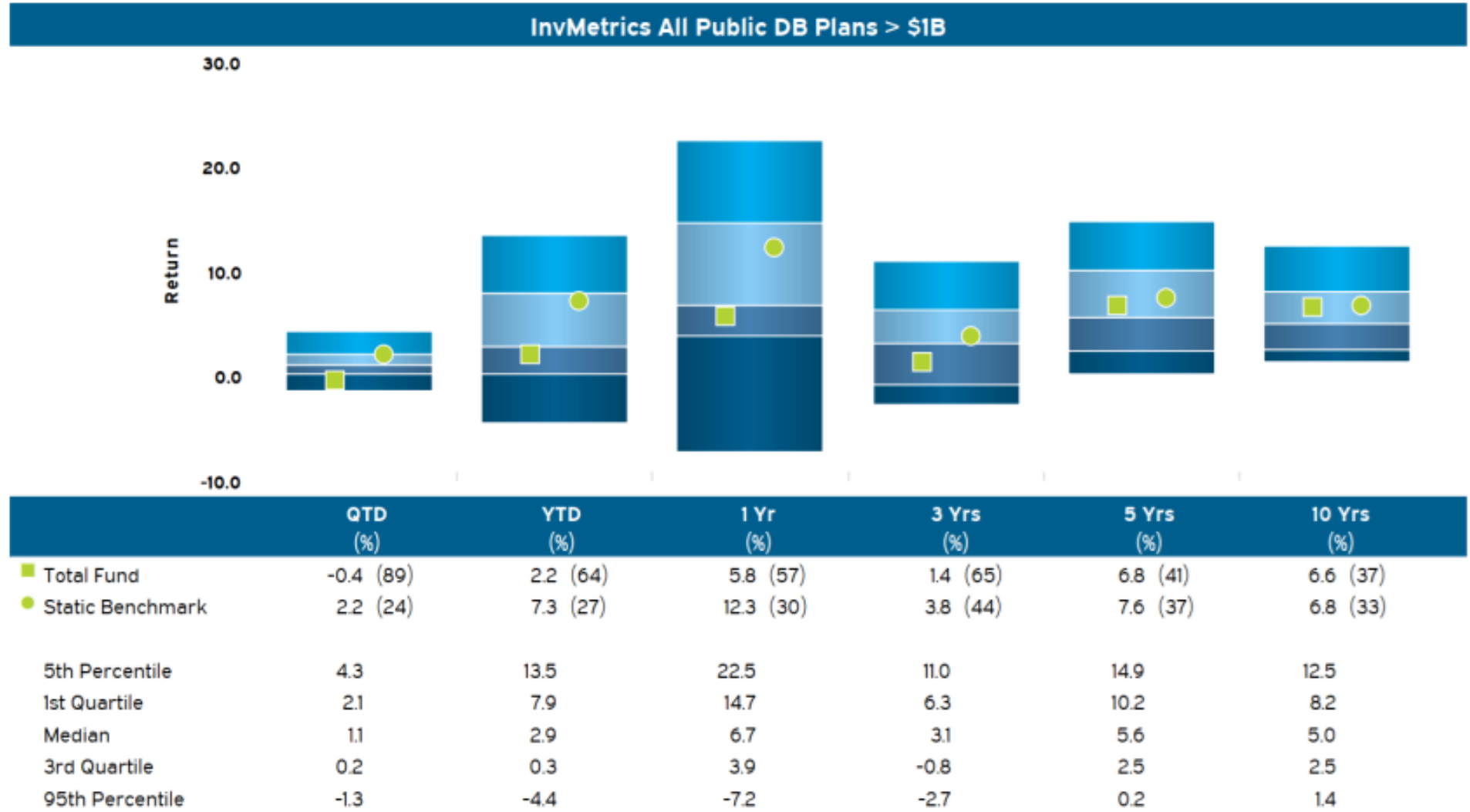
Peer Plan Comparisons



- Comparison against your neighbors
- Judging performance vs. peers
- Pros and cons
- Goal: Pay benefits or outperform peers?

Performance Relative to Peers

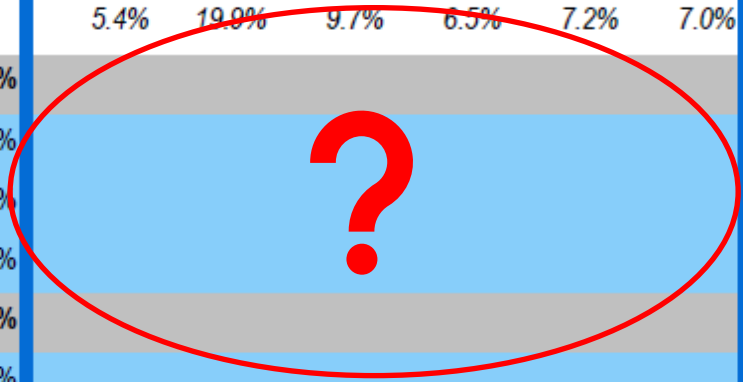
Plan Sponsor Peer Group Analysis | As of June 30, 2024



Source: InvMetrics

Understanding the lag for alternatives

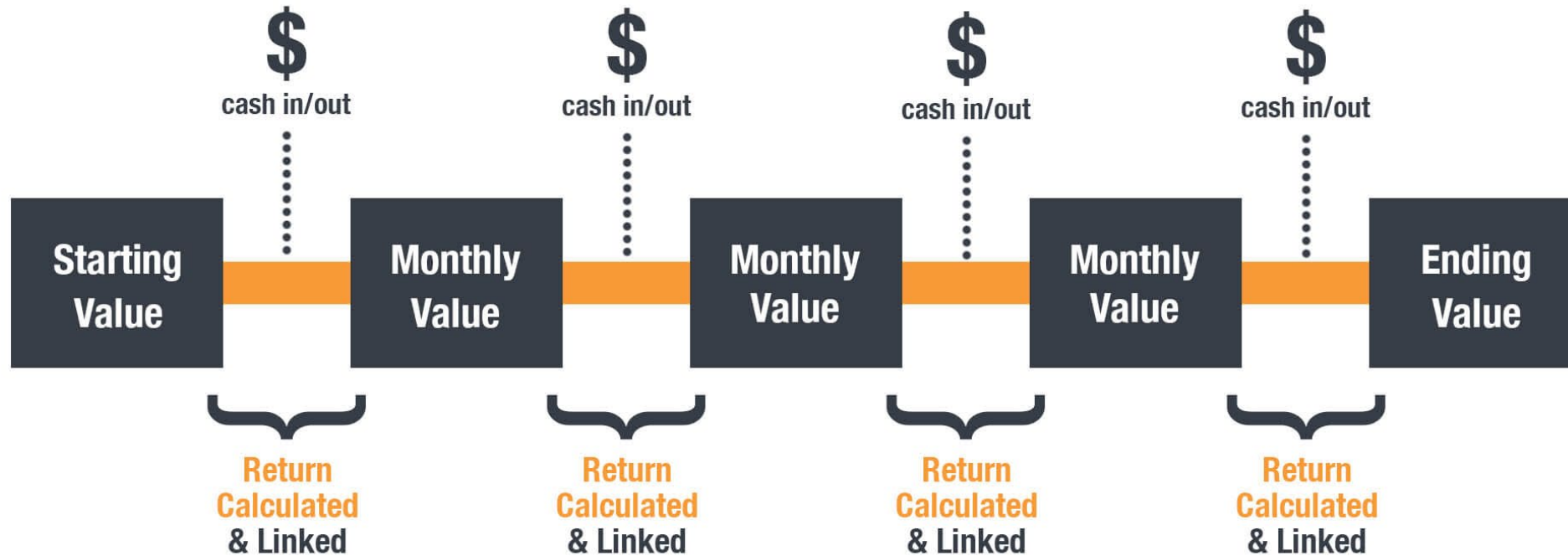
	Market Value	% of Portfolio	Ending December 31, 2019						Inception	Inception Date
			2019 Q4	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs		
Total Opportunistic Strategies	\$79,481,967	8.3%								
Manager N	\$53,269,666	5.5%	0.8%	6.1%	--	--	--	--	5.1%	May-18
<i>HFRI Credit Index</i>			1.7%	6.5%	4.1%	3.9%	4.5%	5.4%	3.0%	May-18
Manager O	\$23,471,757	2.4%								
Manager P	\$2,740,544	0.3%	0.0%	--	--	--	--	--	7.9%	Jun-19
Total Global Tactical Asset Allocation	\$48,430,983	5.0%	5.1%	20.9%	8.5%	7.4%	8.1%	--	7.8%	Jul-11
Manager Q	\$48,430,983	5.0%	5.1%	20.9%	8.5%	7.4%	8.1%	--	7.8%	Jul-11
<i>65% MSCI World Index/35% CitigroupWGBI</i>			5.4%	19.9%	9.7%	6.5%	7.2%	7.0%	6.6%	Jul-11
Total Private Equity	\$9,532,634	1.0%								
Manager R	\$24,424	0.0%								
Manager S	\$200,447	0.0%								
Manager T	\$9,307,763	1.0%								
Total Other	\$5,430,242	0.6%								
Manager U	\$5,430,242	0.6%								
Total Cash Equivalents	\$519,123	0.1%								
Manager V	\$519,123	0.1%								



Time Weighted vs. Dollar Weighted Returns

Time-Weighted Return

Doesn't include impact of cash flows in/out

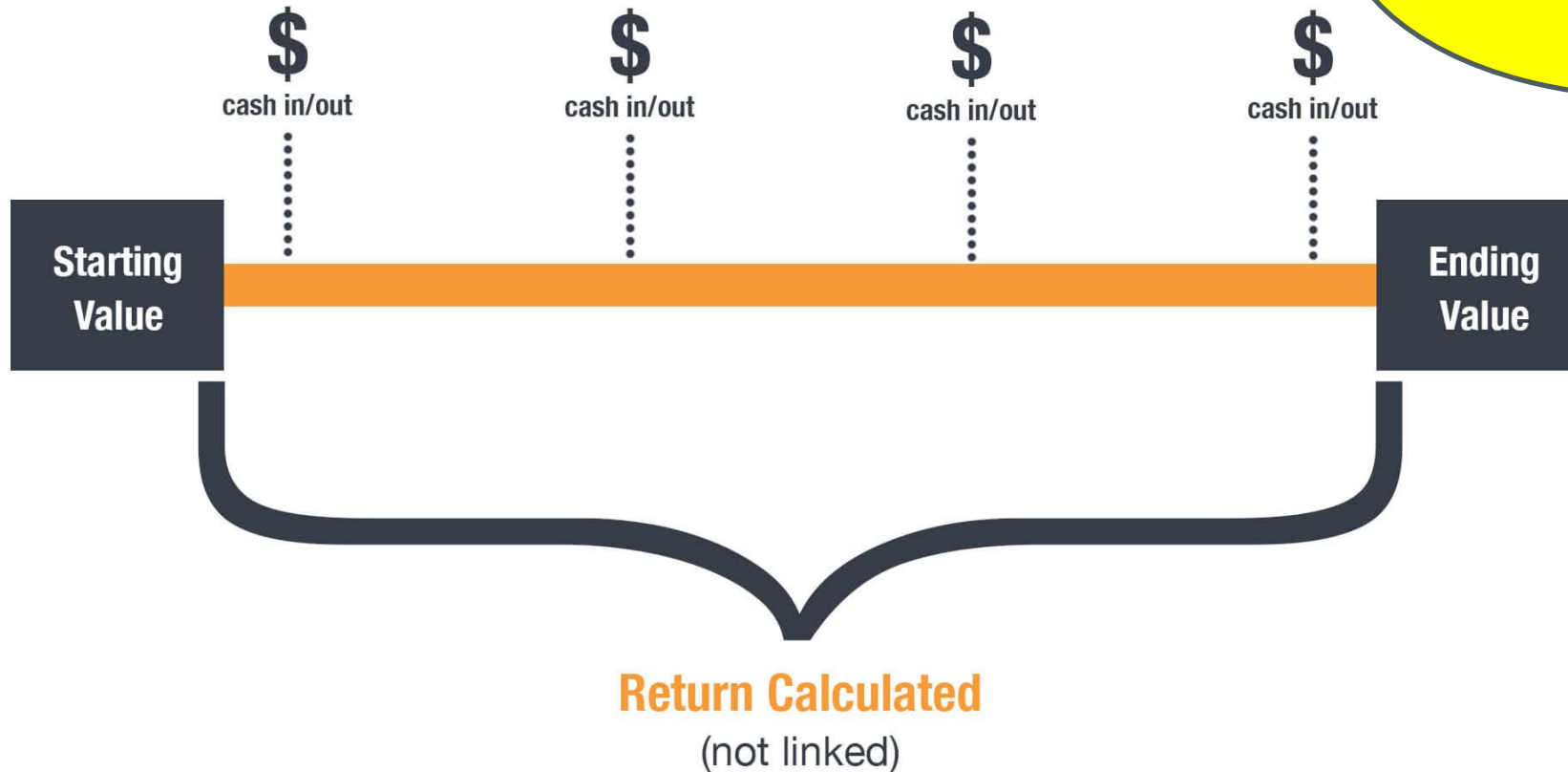


Time Weighted vs. Dollar Weighted Returns

Money-Weighted Return

Includes impact of cash flows in/out

“IRR”



Trustee Guidance

Understanding Investment Benchmarks

- 4. Trustee guidance
 - Equities
 - Fixed Income
 - Private Markets

Benchmarking Equities

Key Considerations: Equity Indices will differ based on their inclusion methodology. The stocks held in the investment manager's portfolio should resemble the stocks in the benchmark.

Large Cap US Equities – S&P 500 vs. Russell 1000

- **S&P 500:** Fewer Constituents = More Concentrated; Proxy for the largest US companies.
- **Russell 1000:** More diversified and includes some “Mid Cap” companies.

Small Cap US Equities – S&P 600 vs. Russell 2000

- **S&P 600:** More concentrated; Includes only profitable companies.
- **Russell 2000:** Includes the 2000 smallest US companies; “Full opportunity set”

Benchmarking Equities

International Equities – MSCI EAFE vs. MSCI ACWI ex US

- **MSCI EAFE**: Large & Mid-Cap Companies in Developed Markets
- **MSCI ACWI ex US**: Includes companies in both Developed & Emerging Markets

Benchmarking Fixed Income

Key Considerations: Bond markets are considerably larger than equity markets. Bond Indices are typically constructed based on the type of bonds (sectors), maturity profile, and credit risk. The bonds held in the investment manager's portfolio should resemble the characteristics of the benchmark.

Index Name	Bond Sectors				Credit Quality	
	US Treasuries	Corporate Bonds	Government Bonds	Asset-Backed/Mortgages	Investment Grade	Non-IG/High Yield
Bloomberg US Aggregate Bond Index	✓	✓	✓	✓	✓	
Bloomberg US Government/Credit Index		✓	✓		✓	
Bloomberg US Mortgage-Backed Securities				✓	✓	
Bloomberg US Corporate Bond Index		✓			✓	
Bloomberg US High Yield Bond Index		✓				✓

Benchmarking Private Markets

Key Considerations: Private market strategies (ex. Private Equity, Private Debt, Real Estate) are not transparent and have limited data around asset prices and transactions. This makes it difficult to construct standardized benchmarks.

Two common approaches:

- 1) Peer Group Benchmarks: Use a benchmark that tracks the performance of investment funds with a similar investment strategy. A notable example is the ODCE Real Estate Index which tracks the performance of open-end funds primarily investing in core real estate.

Pros: Representative of asset class performance; Transparent

Cons: Limited availability across asset classes & sub-strategies

Benchmarking Private Markets

2) Public Market Proxy: Use a public market benchmark with similar economic drivers to risk and return. Investors may add premium to justify the illiquidity risk of the investment. An example is the Russell 2000 for private equity or CPI+X% for infrastructure.

Pros: Frequently priced; Represent an investible alternative; Customizable

Cons: It's a proxy – It may misrepresent the risk & return of the asset class

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