FUNDAMENTALS OF PUBLIC FUNDS INVESTING

SESSION 3 | FROM POLICY TO CONSTRUCTION: PORTFOLIO STRUCTURE AND DIVERISIFICATION

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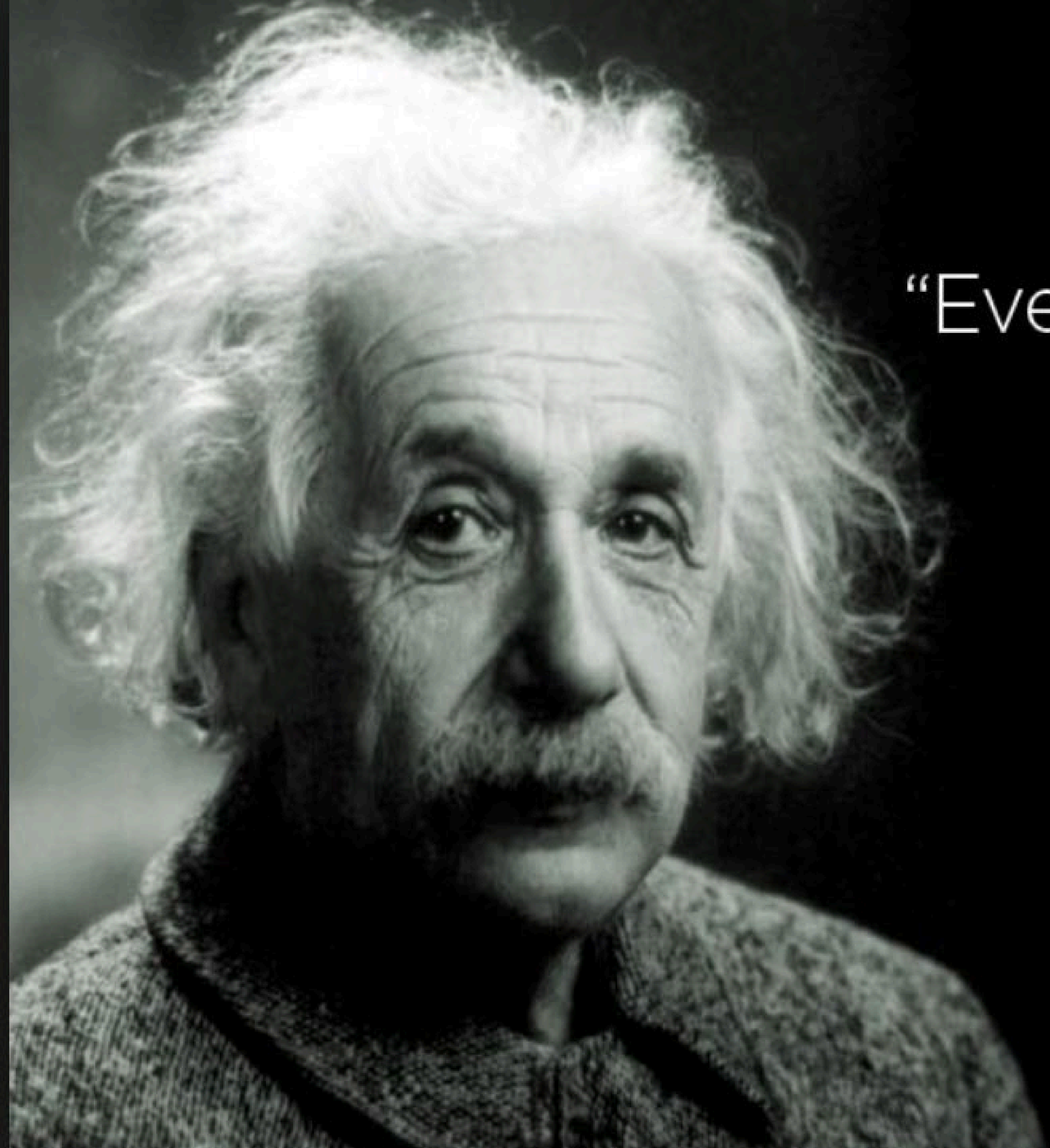


"Everything should be made as simple as possible. But not simpler."

Albert Einstein

What do you manage?

I know you think you understand what you thought I said but I'm not sure you realize that what you heard is not what I meant.

Alan Greenspan

You manage expectations!

Session Overview

- Discuss some key challenges in linking policy to portfolio construction?
- Introduce a framework for linking investment policy objectives to portfolio construction.
- Book Yield vs Total Return
  * How are they different?

Linking Policy To Portfolio

- A local agency sets forth its objectives, risk preferences, authorized investments and other investment related priorities in an investment policy.*
- An ideal policy merges the constraints and objectives of the local agency investor with the opportunities and risks available in the investment marketplace.*
- A thoughtful and comprehensive investment policy not only provides a level of accountability for investment officials, it promotes a public trust in investment decisions.*

*CDIAC – Investment Primer

How To Think About The Link

Challenge #1 – How to Link Static to Dynamic?

- Think of the Investment Policy as the Rule Book!

It defines what is legally permitted to be purchased.

It specifies how you are to prioritize the three policy objectives; Safety, Liquidity, and Yield (SLY).

The investment portfolio shall be designed with the objective of attaining a market rate of return throughout budgetary and economic cycles, considering the investment risk constraints and liquidity needs.

Return on investment is of secondary importance compared to the safety and liquidity objectives described above.[1]

The policy itself is neither a protection against investment losses nor a guarantee of good performance.[2]

[1] GFOA Sample Investment Policy

[2] CDIAC Investment Primer

"Return on investment is of secondary importance compared to the safety and liquidity objectives…"

Rank The Risk

Safety	***40 %***
Liquidity	***40 %***
Yield	***20 %***
Total	***100 %***

What is the most frequent question asked about the portfolio?

What's the Return?

Challenge #2: When constructing the portfolio, all policy objectives should be benchmarked not just return.

Challenge #3: Create a decision process where the policy objectives of safety and liquidity are addressed in their appropriate priority before income.

“The policy itself is neither protection against investment losses nor a guarantee of good performance.”

How is one to apply that thinking when constructing a portfolio?

First: Simply constructing a portfolio solely by complying with State code is not enough.

Second: All investments even US Treasuries backed by the full faith and credit of the United States have a risk.

News Flash!!!!!!

After constructing a portfolio that complies with all the investment policy objectives (SLY), you will likely experience a recognized unrealized loss at some point during a budget or economic cycle.

Challenge #4: In constructing the portfolio focus is not on avoiding a loss but determining how much of a loss (risk tolerance) is suitable.

Beware Of GASB 31

The Politics in Portfolio Construction

- Under the GASB fair market value reporting requirements GASB No. 31, a local agency is required to show unrealized losses or gains for any reporting period.
- When constructing an investment portfolio, the unintended consequence of this reporting standard is to indirectly pressure many public funds into building portfolios with shorter maturities to avoid reporting unrealized losses.
- A critical consideration when constructing a portfolio is how much will you allow a reporting standard to influence your investment strategy.

Does Legal Mean Suitable?

- Is it possible to construct an investment portfolio that complies with California State Code while avoiding GASB 31 mark-to-market losses?
- What about a portfolio with a 100% in cash? Are there other fixed income securities that comply with State Code that would not be subject to mark-to-market?
- What's the problem with a portfolio that is 100% in cash solely to avoid reporting an unrealized loss?
- Concentration risk, lack of diversification, and income opportunity loss.

Profiting From Unrealized Losses

GASB 31's Income Loss

Strategy Portfolio Enhancment Table			
	Scenario #1	Scenario #2	Scenario #3
Current Portfolio Par:	$100,000,000	$100,000,000	$100,000,000
Current Purchase Yield:	0.50%	0.50%	0.50%
Proposed Yield Pickup(bp):	11	33	58
Proposed New Purchase Yield:	0.610%	0.83%	1.08%
Additional Income Produced:	$110,000	$330,000	$580,000
Portfolio Additional $ Needed to Produce Proposed Income:	$22,000,000	$66,000,000	$116,000,000
Treasury 1 (Shorter Maturity):	3Mo CMT	3Mo CMT	3Mo CMT
Treasury 2 (Longer Maturity):	1Yr CMT	2Yr CMT	3Yr CMT
Begin Date:	10/31/10	10/31/10	10/31/10
End Date:	10/31/20	10/31/20	10/31/20
	Median Spread	Median Spread	Median Spread
Basis Point Pickup	11	33	58
Addition Income from Pickup	$110,000	$330,000	$580,000
Portfolio Purchase Yield	$ Needed @ Current Purchase Yield to get new income		
0.250%	44,000,000	132,000,000	232,000,000
0.300%	36,666,667	110,000,000	193,333,333
0.350%	31,428,571	94,285,714	165,714,286
0.400%	27,500,000	82,500,000	145,000,000
0.450%	24,444,444	73,333,333	128,888,889
0.500%	**22,000,000**	**66,000,000**	**116,000,000**
0.550%	20,000,000	60,000,000	105,454,545
0.600%	18,333,333	55,000,000	96,666,667
0.650%	16,923,077	50,769,231	89,230,769
0.700%	15,714,286	47,142,857	82,857,143
0.750%	14,666,667	44,000,000	77,333,333

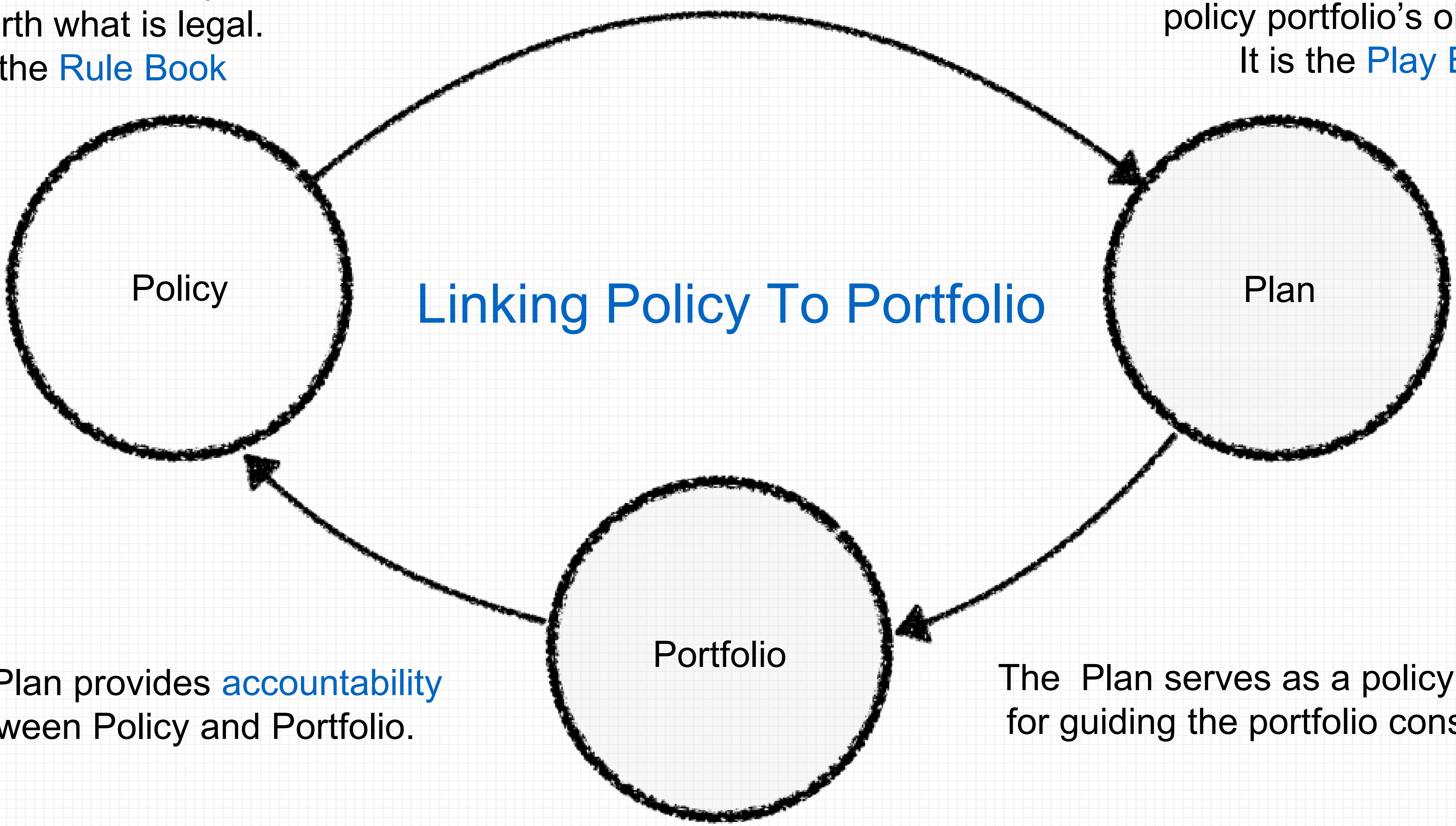
Does Safe Mean Liquid?

- Is it possible for a public fund to fail if a portfolio was constructed using all AAA-rated securities, had no issuer defaults and all holdings complied with California State Code?
- Orange County, California declared bankruptcy on December 6, 1994. Why?
- When constructing a portfolio, it is essential to consider which policy objective creates the greatest threat to principal preservation. Liquidity!

The Framework For

Investment Policy
sets forth what is legal.
It is the Rule Book

The Plan represents the
policy portfolio's objectives.
It is the Play Book



Linking Policy To Portfolio

The Plan provides accountability
between Policy and Portfolio.

The Plan serves as a policy blueprint
for guiding the portfolio construction.

The Plan serves as a Suitability Benchmark for merging the investment objectives
sets forth in policy with the local agency's risk/reward preferences.

Considerations Before Construction

1) Standard of Care: What is the standard of care applied to constructing a portfolio?
2) Benchmark: What performance is to be evaluated?
3) Measurement: How will performance be measured?
4) Steps: What are some basic steps to follow when constructing a Plan or Policy Portfolio?

Standard of Care – Prudence

The standard of prudence to be used by investment officials shall be the ”prudent investor” standard and shall be applied in the context of managing the overall portfolio.

The ”prudent person” standard states that,

Investments shall be made with judgement and care, under circumstances then prevailing, which persons of prudence, discretion and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived.

Standard of Care - Prudence

Investment officers acting in accordance with written procedures and this investment policy and exercising due diligence shall be relieved of personal liability for an individual security's credit risk or market price changes, provided deviations from expectations are reported in a timely fashion and the liquidity and the sale of securities are carried out in accordance with terms of this policy.

Benchmark

In constructing the investment portfolio, be sure to understand the distinction between performance evaluation and performance measurement.

What exactly is the Benchmark evaluating?

Stewardship: How good a steward was the public entity at balancing preservation of principal and liquidity versus income.

Performance Measures

What metric will be chosen to measure your stewardship?

Suitability: The Policy Portfolio or Plan facilitates the construction process by translating the “Rule Book” of legal or permitted investments into a ”Play Book”. The “Play Book” depicts the liquidity needs and risk constraints for the actual portfolio.

Steps To Follow

1) Determine level of strategic liquidity necessary to pay obligations without relying on a security to be sold.

2) Identify what level of portfolio price change (duration) is acceptable to the local agency.

3) Select the sector allocation that captures the optimal risk/reward trade-offs. Reinvestment risk, credit risk and interest rate risk.

4) Establish your appropriate market rate of return.

Why Is Yield A Policy Objective?

….not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived.

- Increase earnings from portfolio means more public services can be provided with fewer layoffs.
- Earnings from taxpayer dollars can help reduce the cost of government operations.
- Every dollar earned from portfolio helps reduce the tax burden on the citizens.

Philosophy

The most important responsibility of the local agency is its stewardship over the public money it is entrusted to manage.

Purpose

The portfolio should be structured first, to preserve principal, secondly ensure adequate liquidity to pay obligations on a timely basis, and thirdly earn a responsible amount of income.

Two Popular
Portfolio Management Styles

Book Yield

Total Return

How are they different?

Book Yield

Yield is defined as income return on the investment.[1]

Think of it as cash thrown off with no invasion of principal.[1]

Investors focusing solely on yield typically look to preserve principal and allow that principal to generate income.[1]

Income Portfolio: Group of securities designed to provide high short term income as opposed to long term growth.[2]

[1] Investopedia: https://www.investopedia.com

[2] Bloomberg Financial Dictionary

Total Return

Total Return on a portfolio includes both income and capital appreciation.[1]

Total return investors typically focus on growth in their investment portfolio.[1]

While total return investors do not want to see their overall portfolio value diminished, preservation of capital is not their main investment objective.[1]

Growth Portfolio: A securities portfolio comprised of stocks that are expected to increase quickly in price.[2]

[1] Investopedia: https://www.investopedia.com

[2] Bloomberg Financial Dictionary

Total Return

Capital (Paper) Gains & Losses Count

"Total rate of return measures the increase in the investor's wealth due to both investment income and capital gains (realized or unrealized).
The total rate of return implies a dollar of wealth is equally meaningful to the investor whether the wealth is generated by the secure income from a 90-day Treasury Bill
or by the unrealized appreciation in the price of a share of common stock." [1]

Mark-to-market gains or losses are equally important as is cash flow from coupons.

[1]Managing Investment Portfolios: A Dynamic Process (CFA Institute)

Book Yield – Income

Income referenced in the prudent person standard is the focus. Cash flow is committed to a budget.

Total Return - Growth

Income earned is saved and reinvested to grow investment portfolio. Earnings are not used for budget purposes

Book Yield – Investor

Investor passively seeks to take advantage of market and structure premiums. Does not "intend" to sell before maturity to profit from a price movement in the bond.

Total Return - Trader

Trader actively invests in a bond with the intention of selling before maturity to profit from a change in price (capital appreciation).

Book Yield – Passive

Book yield portfolio's are structured to "be the market". Strategy is to produce stable income with a focus on minimizing the risk of a mid-year budget adjustment due to market volatility.

Total Return - Active

Total return portfolio's are structured to "beat the market". Strategy is hold the most liquid securities to reduce the transaction cost associated with more active turnover.

Book Yield Budgeting

Paper Gains/Losses Ignored

USTN
$1,000,000
100.00
5 years
2% CPN
2% YTM
4.736

Book Yield – Excludes Paper Gains/Losses

Book yield portfolios are structured with securities that take advantage of higher income in exchange for less liquidity (bid/offer spread). Callable vs bullet – Agy vs USTN – Disc Note vs T-Bill, MTN vs Agy.

Total Return – Includes Paper Gains/Losses

Total return portfolios are structured with the most liquid (bid/offer spread) securities to minimize transaction cost. Relies on successfully buying low and selling high to enhance returns.

Book Yield or Total Return

Conclusion - A Different Kind Of Same

Prudence - Constructing a portfolio to achieve a market rate of return throughout budgetary and economic cycles taking into consideration the probable safety of capital as well as probable income to be derived is language that likely favors a book yield approach.

Local agency's who choose not to focus on portfolio income for budgetary purposes but choose to reinvest proceeds to grow the portfolio will likely favor total return.

Linking Policy to Portfolio

Summary

The Plan or Policy Portfolio provides stakeholders a way to compare investment policy objectives with the actual portfolio constructed.

Just as the Investment Policy sets out what is legal, the Investment Plan provides specific performance measures that help stakeholders monitor the investment portfolio's suitability.

GASB 31 is a reporting standard not an investment strategy.

Public Fund professionals should be careful to avoid a reporting regulation to unduly influence their investment strategy and decision making.

It is not the return on my investment that I am concerned about; it's the return of my investment

— Will Rogers —

[redacted]

THANK YOU

We look forward to your participation in the next webinar in this series, *Agency Profile on the Day-to-Day Management of Public Funds.*

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