

How I Learned To Stop Worrying And Love Losses

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The easy part of public fund investing is buying bonds.

The hard part of public fund investing is explaining why!

Bonds 101



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!

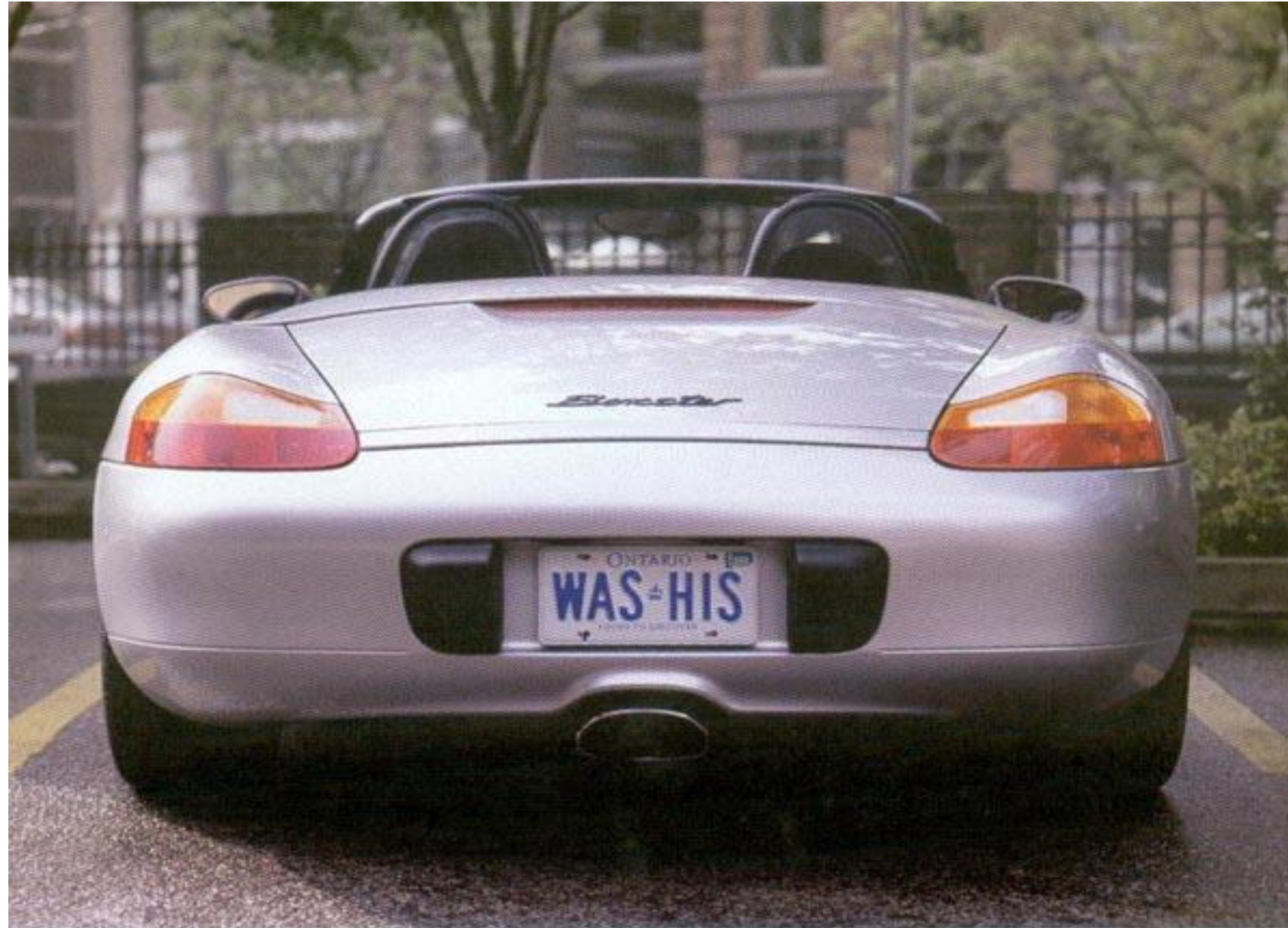
Bonds 102

When managing a public fund portfolio what is the greatest risk you face?



Job Risk

What is the most valuable skill a public fund portfolio manager can develop for managing expectations?



Communication Skill

Part 1: Session Goals

- *Participants will stop worrying about reporting portfolio losses.*
- *Participants will learn how to frame discussions surrounding portfolio losses.*
- *Participants will be able to educate their stakeholders to the vital role losses play in maintaining good stewardship.*



News Reporter: “Madam Treasurer, how can you claim to be a good steward of the public’s money when your financial reports show a loss?”

GASB 31

Observation – GASB 31

Is reporting a market value loss indicative of poor stewardship?

Is reporting a market value gain indicative of good stewardship?

Is GASB 31 a reporting standard or a performance measure?



Treasurer: “Board of Supervisors, I am excited to report the County of Sweet Returns is in the top 1% quartile of all professional money managers benchmarked to the BAML 1-5 year Government Index.

*We only lost **2.00%** of our citizens money compared to our benchmark that lost **2.50%**.”*

Total Return

Observation #2 – Total Return

Is beating a market index on a total return basis a measure of good stewardship?

Is reporting a negative total return a measure of poor stewardship?

Takeaway

Why are two of the highest profile topics, GASB 31 and Total Return, unable to adequately differentiate good stewardship from poor?

Prospect Theory

Developed by Kahneman and Tversky

➤ What is a loss?

A loss, according to theory, was when a person wound up worse off than his “reference point”. The reference point is an expectation of what you expect to receive.

➤ Prospect Theory demonstrated the reference point was a state of mind. It was a psychological state.

“What constitutes a gain or loss depends on the representation of the problem and on the context in which it arises.”

Risk Aversion vs Loss Aversion¹

What's the difference?

Risk Aversion:

Is a general preference for safety and certainty over uncertainty and the potential for loss or pain. Faced with a choice between two investments that have the same expected return, will choose the one with lower risk.

Loss Aversion:

A complex behavioral bias in which people express both risk aversion and risk seeking behavior. Loss averse investors are quick to lock in investment gains (risk averse), and hold on to their losing positions (risk seeking).

¹ Jay Mooreland, *The Emotional Investor*

Risk Averse

Problem A. In addition to whatever you own, you have been given \$1,000. You are now required to choose between the following options:

Option 1: A 50% chance to win \$1,000.

Option 2: A gift of \$500

Most every one picked **Option 2**, the sure thing.

Loss Averse

Problem B. In addition to whatever you own, you have been given \$2,000. You are now required to choose between the following options:

Option 3: A 50% chance to lose \$1,000.

Option 4: A sure loss of \$500

Most every one picked **Option 3**, the gamble.

Framing

The two questions were effectively identical. In both cases, if you picked the gamble, you wound up with a 50-50 shot at being worth \$2,000. In both cases, if you picked the sure thing, you wound up being worth \$1,500.

*But when you framed the sure thing as a loss, people chose **the gamble**. When you framed it as a gain, people picked **the sure thing**. The reference point, the point that enabled you to distinguish between a gain and loss was not a fixed number. **It was a psychological state.***

Takeaway

There is an asymmetrical relationship between gains and losses. The regret we experience from losing \$50 is significantly greater than the pleasure of finding \$50.

It is imperative to put any discussion of losses in their proper context. As Prospect Theory demonstrates, careful thought must be given to how the questions are being framed.



News Reporter: “Madam Treasurer, how can you claim to be a good steward of the public’s money when your financial reports show a loss?”

Recall the question

Takeaway

*The reporter's question is being framed as a performance evaluation! The **context** is your stewardship and the **reference point** is the reported loss on the financial statement.*

In framing a response, attention should be given to the inherent flaws created whenever reported losses are used as the sole means to measure stewardship.



Your question implies if I had only avoided a reported loss on our financial statements or even better had they reported a gain than I would be considered a good steward and we wouldn't be having this conversation.

I think we both can agree assessing my stewardship would require more in-depth analysis.

1st of a two part reply



To your question regarding the reported loss. As my Investment Policy explicitly directs, I have a fiduciary duty to our taxpayers to earn a responsible rate of return after ensuring obligations can be paid on a timely basis.

To avoid reporting the loss you are referencing would have cost our taxpayers millions in lost revenue.

2nd of a two part reply

Rationale

Reply 1: *Financial reports while useful in judging loan applications or valuing a company, they are not designed to evaluate stewardship.*

GASB 31 is a reporting standard not an investment strategy.

Reply 2: *The governing document exerting control over the portfolio is your Investment Policy (The Rule Book).*

*You have a fiduciary duty to manage **all** the policy objectives not just safety and liquidity.*

Policy directs you to manage not eliminate risk.

Q & A Master Library

Q: How does avoiding a loss cost the County revenue?

A: “First, what is a loss? Mark-to-market losses are similar to paper losses in the sense they are recognized not realized losses. The County does not experience an actual principal loss because the investment has not been sold.

The County can benefit from paper or unrealized losses on investments not earmarked for liquidity. These purchases enable us to buy investments with a higher return than cash. Since the purchases are not for operations, the changes in market value have little impact for our budgeting purposes.

Sidebar – What’s Best For Community

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.

Q & A Master Library

Q: How does avoiding a loss cost the County revenue?
(cont'd)

A: Second, an investment strategy whose sole focus is to avoid temporary losses on financial statements would have to ignore their investment policy objective to earn a “market rate of return throughout budgetary and economic cycles.”

This type of strategy requires investments to be made in cash or some kind of cash equivalent which historically, has meant less income for the taxpayer.

Sidebar – Manipulating Policy

“Hiding Behind Safety”

“Gaming the system” means using the rules of the system, otherwise meant to protect the system, to manipulate it instead.

“Gaming the system” in public fund investing means instead of using an investment strategy to help manage risk it is used instead to **manipulate** mark-to-market reporting risk.

Q & A Master Library

Portfolio Level Trade-Off

Q: How much would it have cost to avoid a reported loss?

Option 1: Maintain 3 month T-Bill (cash equivalent)

Trade-Off: Exchanges little risk of reporting a loss on financial report for earning less income for taxpayer.

Option 2: Maintain 2 year USTN (Policy objective #3)

Trade-Off: Exchanges reporting a paper loss for earning more income for taxpayer.

Caveat: Past performance is no guarantee of future results

Profiting From Losses

GASB 31's Income Loss

| Strategy Portfolio Enhancement Table | | | |
|--|--|-------------------|-------------------|
| | Scenario #1 | Scenario #2 | Scenario #3 |
| Current Portfolio Par: | \$100,000,000 | \$100,000,000 | \$100,000,000 |
| Current Purchase Yield: | 1.50% | 1.50% | 1.50% |
| Proposed Yield Pickup(bp): | 51 | 51 | 45 |
| Proposed New Purchase Yield: | 2.010% | 2.01% | 1.95% |
| Additional Income Produced: | \$510,000 | \$510,000 | \$450,000 |
| Portfolio Additional \$ Needed to Produce Proposed Income: | \$34,000,000 | \$34,000,000 | \$30,000,000 |
| Treasury 1 (Shorter Maturity): | 3Mo CMT | 3Mo CMT | 3Mo CMT |
| Treasury 2 (Longer Maturity): | 2Yr CMT | 2Yr CMT | 2Yr CMT |
| Begin Date: | 2/29/16 | 2/28/14 | 2/28/09 |
| End Date: | 2/28/19 | 2/28/19 | 2/28/19 |
| | Median Spread | Median Spread | Median Spread |
| Basis Point Pickup | 51 | 51 | 45 |
| Addition Income from Pickup | \$510,000 | \$510,000 | \$450,000 |
| Portfolio Purchase Yield | \$ Needed @ Current Purchase Yield to get new income | | |
| 0.750% | 68,000,000 | 68,000,000 | 60,000,000 |
| 0.900% | 56,666,667 | 56,666,667 | 50,000,000 |
| 1.050% | 48,571,429 | 48,571,429 | 42,857,143 |
| 1.200% | 42,500,000 | 42,500,000 | 37,500,000 |
| 1.350% | 37,777,778 | 37,777,778 | 33,333,333 |
| 1.500% | 34,000,000 | 34,000,000 | 30,000,000 |
| 1.650% | 30,909,091 | 30,909,091 | 27,272,727 |
| 1.800% | 28,333,333 | 28,333,333 | 25,000,000 |
| 1.950% | 26,153,846 | 26,153,846 | 23,076,923 |
| 2.100% | 24,285,714 | 24,285,714 | 21,428,571 |
| 2.250% | 22,666,667 | 22,666,667 | 20,000,000 |

Sidebar – 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 and 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.

Rationale

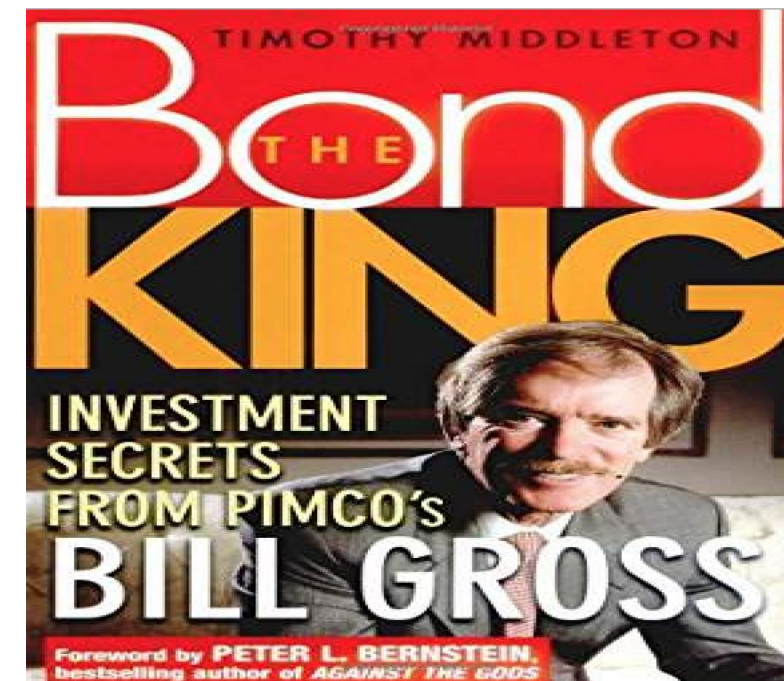
For me to make investments, other than in cash or some cash equivalent that would have ensured no risk of a market value loss requires one to be perfect at forecasting or market timing. Accurately and consistently predicting the future of interest rates is a skill set I have yet to find anyone possesses.

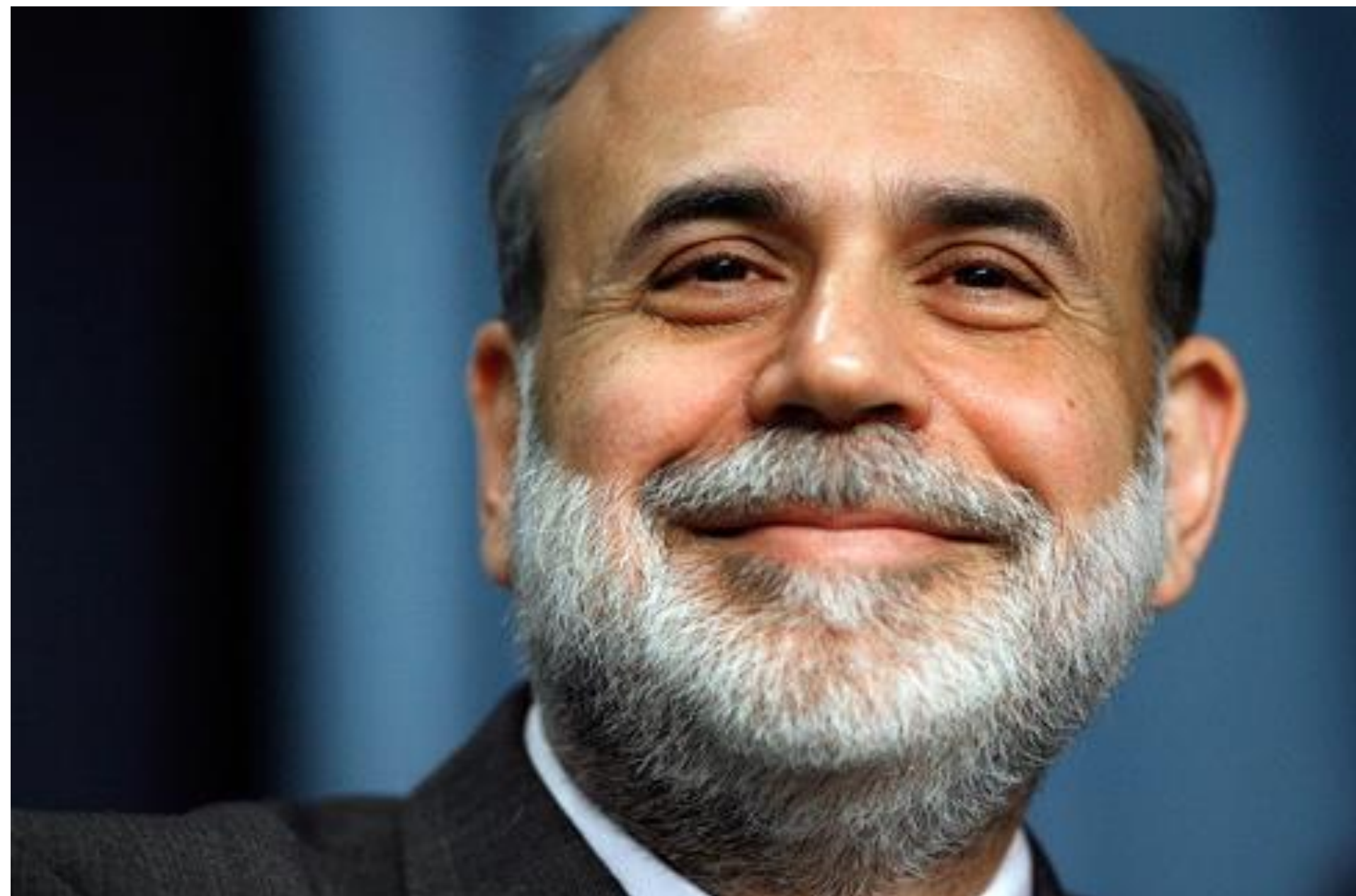
Our investment policy recognizes this fact and allows us, when prudent, to make investments that will at various times in the “budgetary and economic cycles” report market values above or below our cost.

The Forecast Masters of the Universe

“The Economy, Interest Rates and Forecast”

- Federal Reserve Chairman
- The Bond King – Bill Gross
- Wall Street





Ben Bernanke, January 10, 2008 - "The Federal Reserve is currently not forecasting a recession."

Moneynews

Report: Pimco's Gross Sells All US Treasury Holdings

Wednesday, March 9, 2011 01:36 PM

By: Dan Weil

Pimco's star bond manager Bill Gross has offered a bearish view on Treasuries in his latest market commentary and remarks to the media. And according to a report on ZeroHedge.com, he acted on this bearishness in January, selling all of the Treasury holdings in Pimco's Total Return Fund, the world's largest mutual fund.

| HISTORICAL YIELD CURVE | | | | | PAGE 2 OF 2 |
|------------------------|--------------------|--------------------|-----------|----|---------------|
| DATE RANGE | 3 / 9 / 11 | 9 / 13 / 11 | MTY RANGE | 3M | 30Y |
| | <u>3 / 09 / 11</u> | <u>9 / 13 / 11</u> | | | <u>Change</u> |
| 3 MONTH | 0.091 | 0.005 | | | -0.0862 |
| 6 MONTH | 0.145 | 0.041 | | | -0.1048 |
| 1 YEAR | 0.242 | 0.086 | | | -0.1559 |
| 2 YEAR | 0.689 | 0.205 | | | -0.4840 |
| 3 YEAR | 1.213 | 0.360 | | | -0.8527 |
| 5 YEAR | 2.145 | 0.885 | | | -1.2594 |
| 7 YEAR | 2.847 | 1.415 | | | -1.4321 |
| 10 YEAR | 3.468 | 1.992 | | | -1.4760 |
| 30 YEAR | 4.607 | 3.328 | | | -1.2786 |

Wall Street sees two more Fed hikes in 2018, three in 2019: Reuters poll

(Reuters) - [Wall Street's top banks expect the U.S. Federal Reserve to raise interest rates twice more this year and three times in 2019](#), in line with forecasts issued Wednesday by central bank policy makers who signaled a modest acceleration to their pace of rate hikes along with increased confidence in the economy.

A Reuters poll on Wednesday found the median expectation among the so-called primary dealers, the 23 large banks authorized to transact directly with the Fed, was for the central bank's benchmark overnight lending rate to climb to a range of 2.25 percent to 2.50 percent by the end of this year. It will rise to between 3.00 and 3.25 percent at the end of 2019.

[BUSINESS NEWS](#)

JUNE 13, 2018 / 4:40 PM / 9 MONTHS AGO



*"Prediction is very difficult,
especially about the future"*

Niels Bohr

Danish physicist (1885 - 1962)

Learning Outcome #1

Why Should You Stop Worrying About Losses

No one can predict the future. It is inevitable in some budgetary or economic cycle, the portfolio will experience a paper loss. To avoid a reported loss solely on the basis of a reporting standard means disregarding your fiduciary duty to earn a market rate of return.

Learning Outcome #2

Why You Should Stop Worrying About Losses?

Because your Investment Policy mandates them!

Safety: *Safety of principal is the foremost objective of the investment program. Investments shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio. The objective will be to mitigate credit risk and interest rate risk.*

Yield: *The investment portfolio shall be designed with the objective of attaining a market rate of return throughout budgetary and economic cycles, taking into account the investment risk constraints and liquidity needs.*

Learning Outcome #3

Why You Should Stop Worrying and Love Losses?

\$ Each new dollar is reinvested at a higher rate \$



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