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FLORIDA PUBLIC PENSION TRUSTEES ASSOCIATION

SINCE 1984

Fall Trustee School

Impact of Riding the Asset Allocation Rollercoaster

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Importance of Defined Benefit Plans

- Defined Benefit plans (DB) are the only true retirement program
  - DB plans provide a monthly annuity until death or the death of a designated beneficiary
- Defined Contribution plans (DC) were designed to provide supplemental retirement benefits
  - Asking untrained individuals to fund, manage, and then disburse a benefit through a DC plan is poor policy

Defined Benefit Plans – Current Landscape

- Regrettably, DB plans have been disappearing in the private sector for decades
- For myriad reasons, including government deregulation, about 10-15% of multiemployer plans are in difficult financial shape – but help is coming!
- Public pension plans still cover about 85% of public workers, but there are funding challenges among many states and local sponsors

Current Asset Allocation Strategy— A Return Objective?

- The asset consultant, actuary, and plan sponsor determine the appropriate ROA objective
- The objective is a long-term target - >10 years
- The expected ROA may be accompanied by a substantial annual standard deviation
- Traditional approach has the pension plan's assets focused on achieving the singular ROA target
- Asset allocation is memorialized within the Investment Policy Statement (IPS)

US Equity Investment Management – Performance

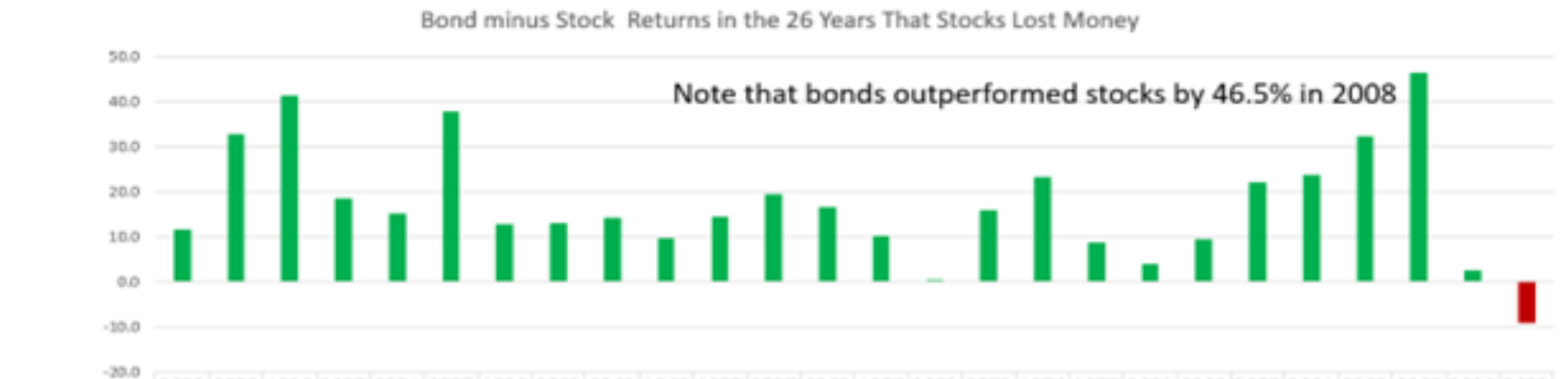
(as of 11/22 using Russell indexes)

Style	YTD (%)	Last 3 Years (%)	Last 5 Years (%)
Mega Cap Core	-14.7	11.3	11.5
Large Cap Core	-14.1	10.6	10.7
Mid Cap Core	-12.6	8.7	8.5
Small Cap Core	-14.9	6.4	5.4
Micro Cap Core	-18.5	7.5	4.5

A New Day – Not Necessarily Better

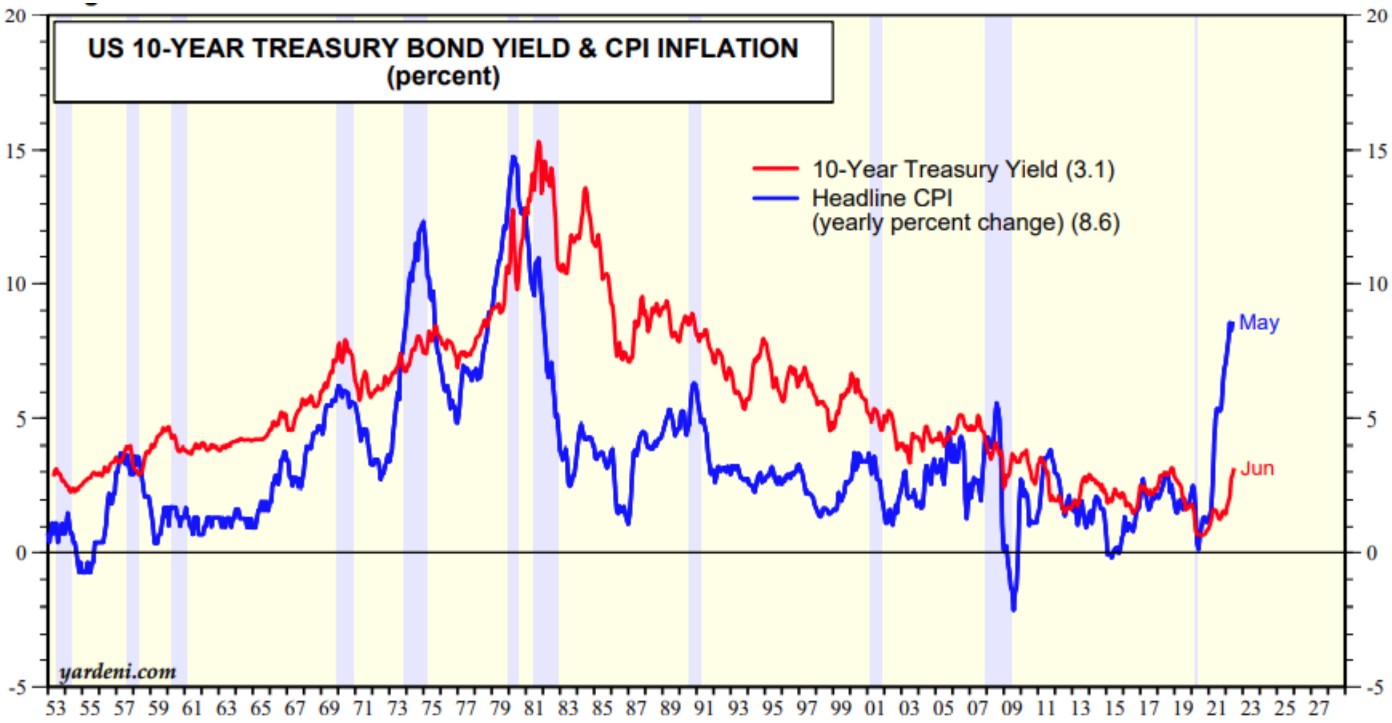
Bonds have always outperformed stocks in down markets, until now

All are calendar years, except 2022 is the year ending 8/19/22



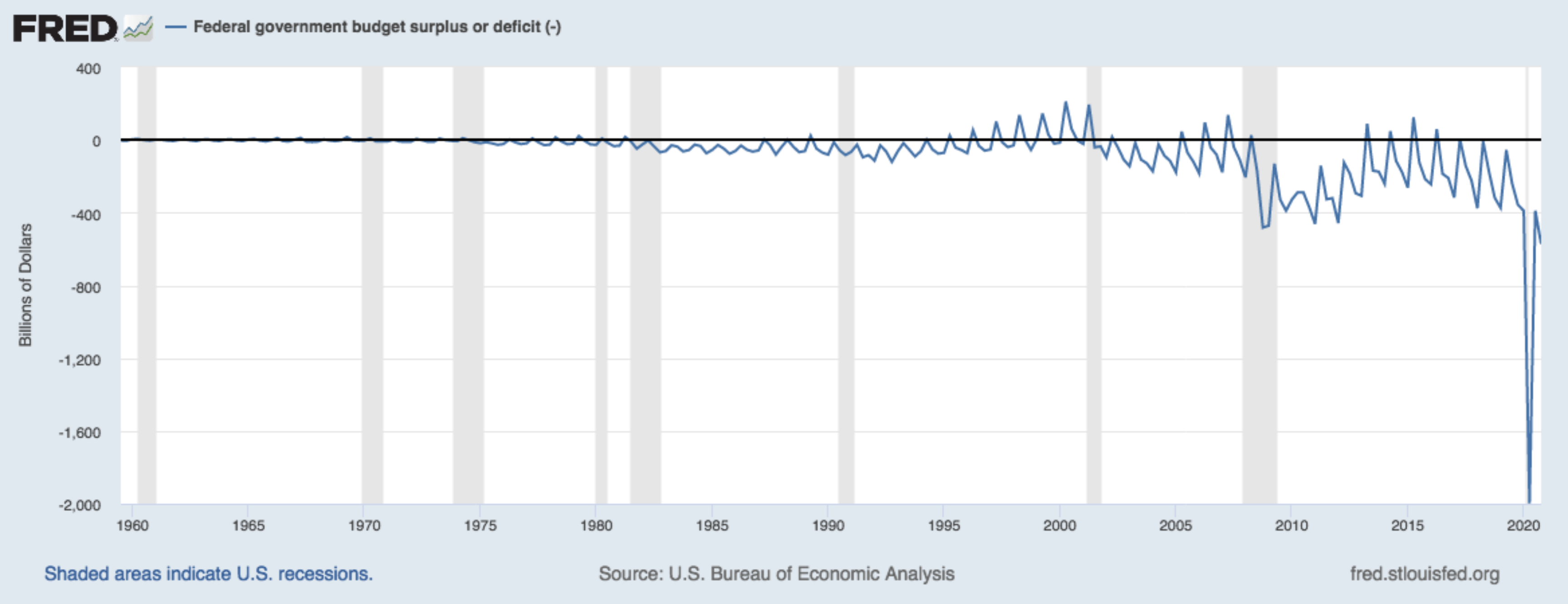
	1929	1930	1931	1932	1934	1937	1939	1940	1941	1946	1953	1957	1962	1966	1969	1973	1974	1977	1981	1990	2000	2001	2002	2008	2018	2022
Bond-Stock	11.7	32.9	41.5	18.6	15.3	37.8	12.9	13.2	14.3	9.8	14.4	19.5	16.7	10.3	0.4	15.8	23.4	8.9	4.0	9.4	22.1	23.8	32.5	46.5	2.7	-9.0
Stock	-8.4	-24.	-43.	-8.2	-1.4	-35.	-0.4	-9.8	-11.	-8.1	-1.0	-10.	-8.7	-10.	-8.5	-14.	-26.	-7.2	-4.9	-3.1	-9.1	-11.	-22.	-37.	-4.4	-4.0
Bond	3.3	8.0	-1.9	10.4	13.8	2.8	12.5	3.4	2.7	1.7	13.5	8.7	8.0	0.2	-8.1	1.1	-3.1	1.7	-1.0	6.3	13.0	12.1	10.4	9.3	-1.7	-13.

CPI vs. 10-year Treasury – Where's the Inflation Premium?

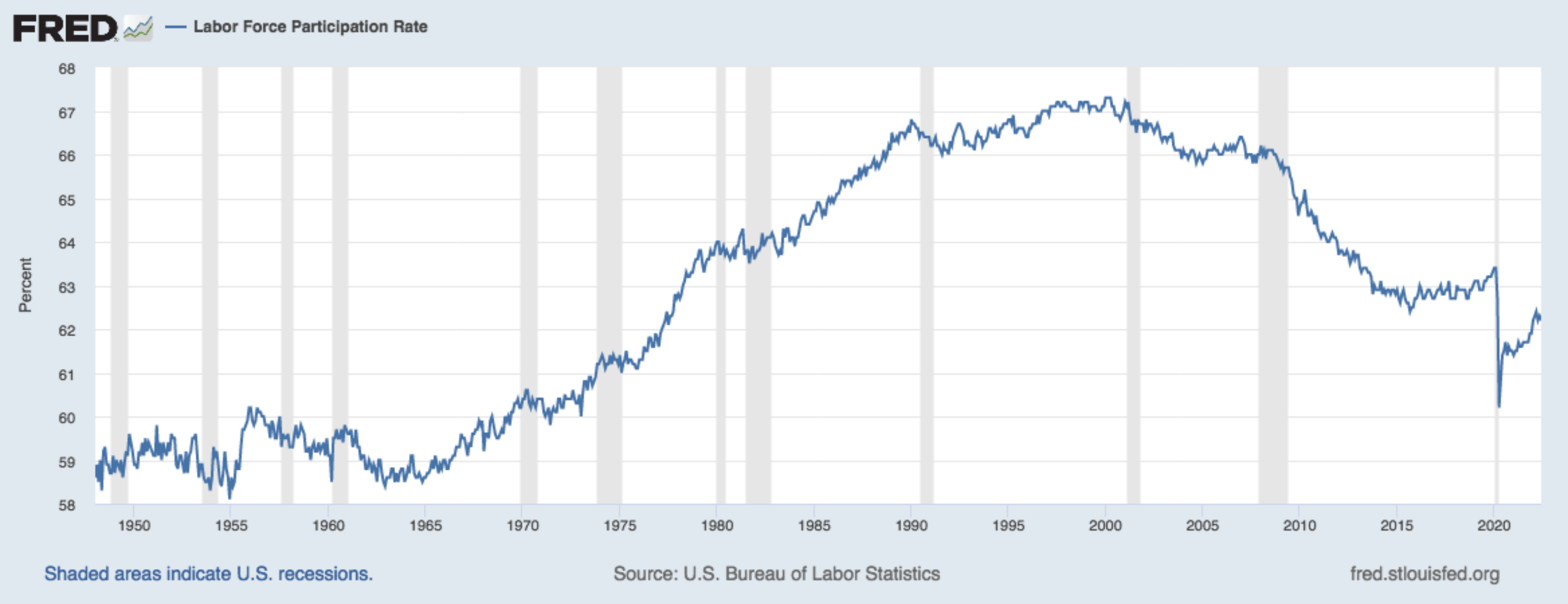


Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Board of Governors of the Federal Reserve System and Bureau of Labor Statistics.

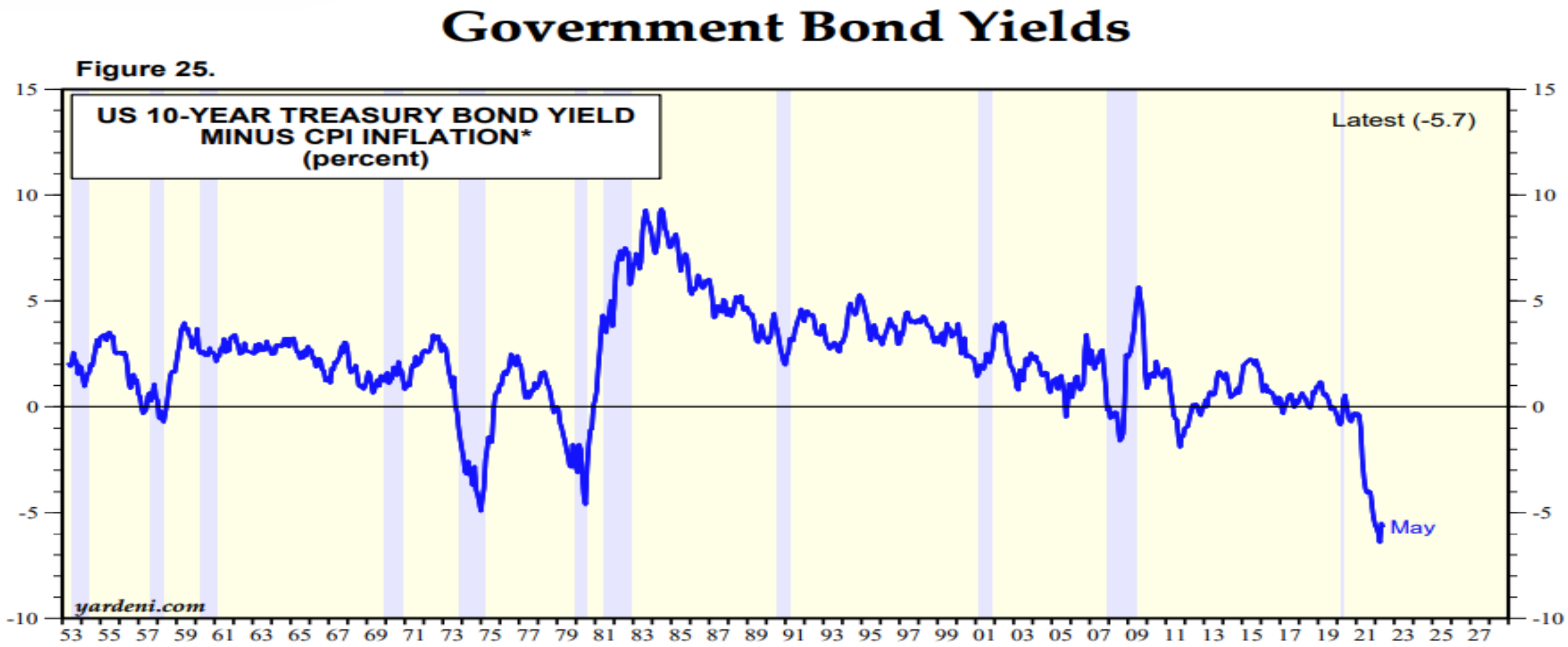
U.S. Federal Budget Deficit



Labor Force Participation Rate



Real Yields on 10-Year Treasury



* Yearly percent change in CPI.
Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Board of Governors of the Federal Reserve System and Bureau of Labor Statistics.

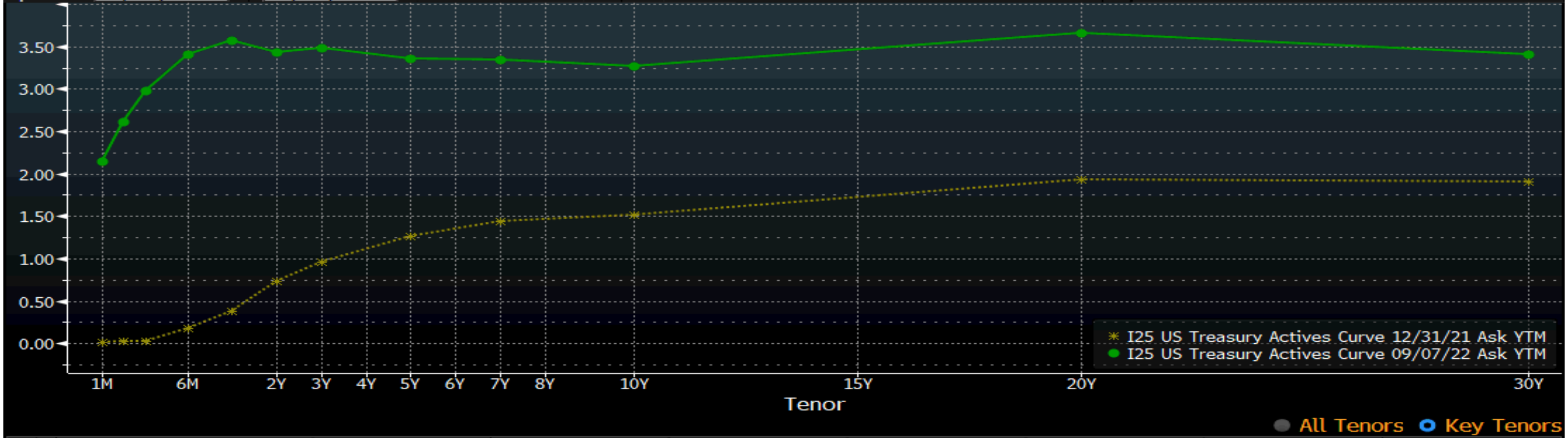
Yield Curve Move in 2022

Running as C15. Run GC for more features.

US Treasury Actives Curve | Actions | 98) Table | Export | Settings | Graph Curves

X-Axis Tenor | Y-Axis Ask YTM | Currency None | PCS BGN | Lower Chart History Table

Specific 12/31/21 | 09/07/22 | Relative | Last | 1D | 1W | Modify | Curves & Relative Value



	Curve Id	1M	3M	2Y	5Y	10Y	20Y	30Y
11)	I25 09/07/22	2.145	2.980	3.431	3.358	3.263	3.660	3.411
12)	I25 12/31/21	0.015	0.030	0.732	1.263	1.510	1.933	1.903
13)	I25 (09/07/22-12/31/2...	213.0	295.0	269.9	209.5	175.3	172.7	150.8

Traditional Asset Allocation?

Asset Allocation—An Alternative Approach

- Bifurcate the plan's assets into alpha and beta buckets
- The beta assets are used to meet benefits/expenses
- The alpha (growth) assets are used to meet future liabilities, as they can now grow unencumbered
- This asset allocation is focused on the plan's specific liabilities to drive investment structure
- ***As the funded ratio/status improves, plans should reduce risk***
- This process helps to stabilize contribution expenses

Pension Game – Identify the Objective

- What's the Goal?

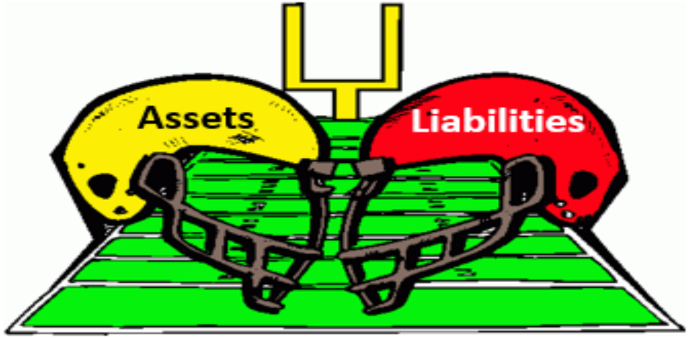
  Secure Benefits in cost efficient and prudent risk manner

- What's the game plan?

  Assets outgrow Liabilities

  Focus on Liabilities (the Opponent)

- ***Achieving the ROA is no guarantee of funding success***

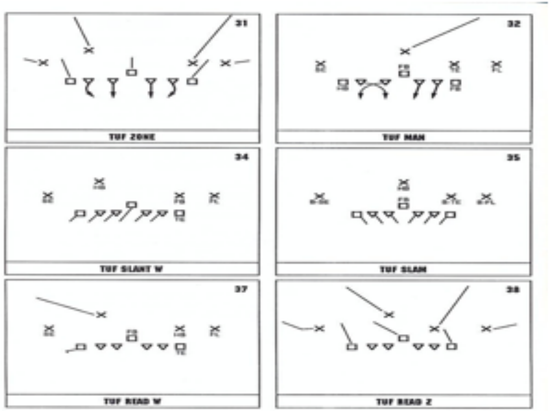


Develop a Game Plan (Asset Allocation)

Predicting each asset class ROA is risky… then what weight?

Instead:

- **Liability-focused asset allocation**



Asset Allocation Strategy—Liability Focus

- **Install Custom Liability Index (CLI)**

  Calculates PV of liabilities + growth rate

  Evaluate plan's asset growth vs. liability growth

  (***Scoreboard: Assets versus Liabilities***)

  Provides data to calculate Funded Ratio/Status monthly

  Knowing the score essential to responsive Asset Allocation

Asset Allocation Strategy – Enhance Liquidity

- Separate *Liquidity* assets from *Growth* assets

  Liquidity assets fund Benefits + Expense

  Growth assets grow unencumbered

  No need for Cash Sweep

Contribution of Dividends to S&P 500 return

- Dividends and dividends reinvested are a major contributor to the total return of the S&P 500
- Since 1940, 47% of the S&P 500's total return on a 10-year moving average was attributable to dividends
- On a 20-year moving average the contribution is an incredible 57%
- The study by Guinness Asset management includes all 500 S&P constituents—not just dividend payers
- Yet, plan sponsors tend to sweep cash from all accounts to meet benefits—This practice keeps growth assets from growing unencumbered

Liquidity Assets

- Objective
  - Fund NET Liabilities (B+E) – (C) chronologically
- Strategy
  - Cash Flow matching (CFM)
  - Bond portfolio that cash flow matches NET liabilities monthly
  - Provides alpha through composition of bond portfolio

Liquidity Assets—Benefits

- Benefits
  - Certainty of cash flows . . . Funds benefits
  - Reduces funding costs by > 1+% per year
  - Reduces volatility of the Funded Ratio/Status

  - **Buys time for Growth Assets to grow unencumbered**

Cash Flow Matching

- Methodology
  - Cost Optimization Model
  - Investment grade bond portfolio
  - Skewed to A/BBB+ ratings and longer maturities
  - Bond Math = Creates the lowest cost bond portfolio
  - Cash flow match and fund monthly Benefits + Expenses

Responsive Asset Allocation (AA)

- As game evolves, AA **responds** to Funding Status

  As funding improves, add to liquidity assets

  Secures more benefits

  Buys more time

Follow your glidepath

Benefits of Responsive Asset Allocation

- **Promised benefit payments are now more secure**
- Glide-path to improved funded status & lower risk
- Liquidity to pay benefit payments is improved
- Less volatility of the funded ratio

Key Takeaways

- Defined Benefit Plans must be protected and preserved for the masses
- A fund is in good harmony if **Assets = Liabilities**
  - Negative cash flow is not a bad development
  - The DB plan is successful if the last $ pays for the last benefit
  - This is not an "inheritance" for the sponsor to pass on
- Adopt a new asset allocation process
- Changing market conditions enhance this new strategy