Callan

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North Carolina Supplemental Retirement Plans

Stable Value and Money Market Overview

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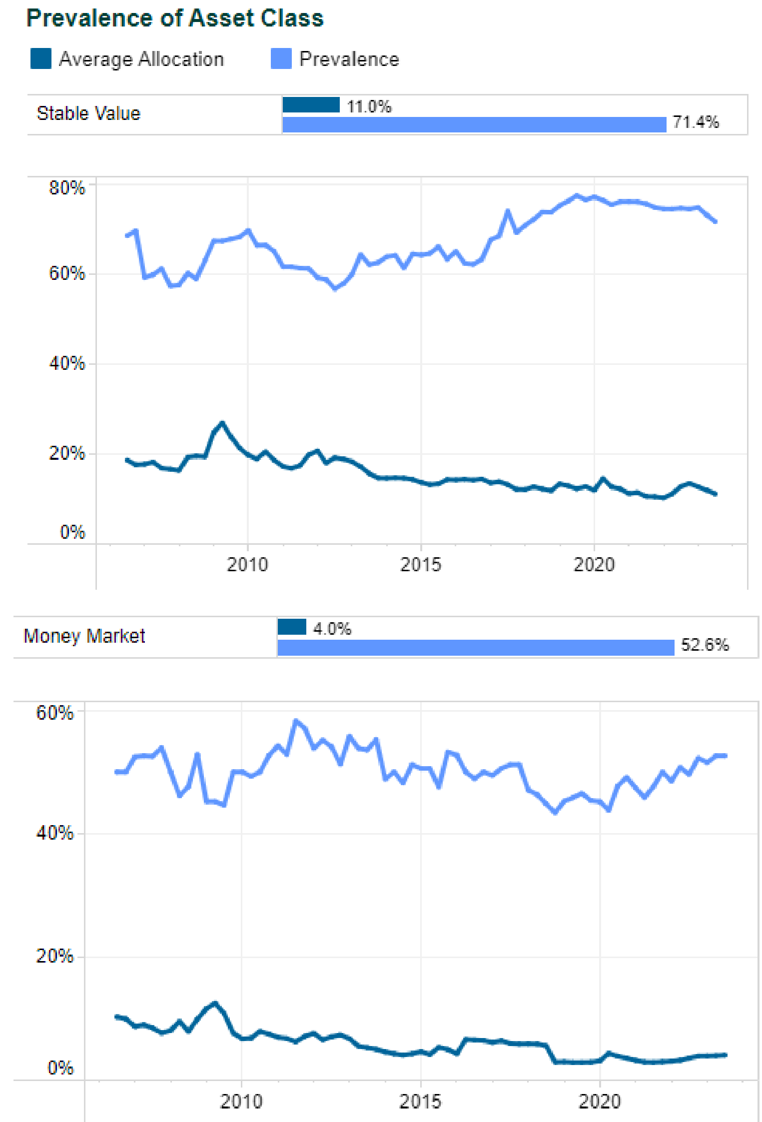
Role of a Capital Preservation in a Retirement Plan

Money Market Funds and Stable Value Funds

1. **Preserve Capital**
   - Both money market and stable value funds utilize book value accounting plus interest to achieve capital preservation.
   - Guaranteed insurance accounts ensure capital preservation plus interest backed by the financial strength of the issuing insurance company.
   - Stable value funds have counterparty risk with insurance wrappers but can be diversified; guaranteed insurance accounts maintain greater counter party risk that is not diversified.
2. **Liquidity**
   - These investment options allow participants to transact daily. The stable value fund does require an equity wash provision when a money market fund is offered.
3. **Preserve Purchasing Power**
   - Stable value funds have done a better job than money markets in keeping up with inflation – they take advantage of credit and term premiums versus money market funds.

Stable Value Fund Popularity

- Stable value funds are popular with DC plans, with 71% offering the option.
- Stable value funds are popular with participants, with 11% of assets being allocated when offered.
- In recent years, money market fund prevalence within DC plans has trended upwards.
- According to the Stable Value Investment Association, over $900 billion was invested in stable value products as of June 2023.



The green bars indicate the prevalence of asset classes within DC plans, while the blue bars show the average allocation to particular asset classes when offered as an option.

Source: Callan's DC Index, Stable Value Investment Association

Money Market Funds

Merits	Considerations
Money market funds are the most conservative capital preservation option given its focus on cash investments	In most environments, money market funds maintain a lower yield than stable value or guaranteed insurance accounts
Ability to offer a money market fund is not dependent on plan size	Depending on the liquidity of the fund, it could incur liquidity fees and gates
Can be offered by various types of defined contribution plans	Generally a poor investment option for a long-term investor seeking returns to grow their retirement fund assets (i.e. increases the potential for shortfall risk)
No limitations on exiting a money market fund, except in a scenario where a fund imposes a “gate” due to low liquidity within the fund	
Plan participant education is straightforward relative to stable value and guaranteed insurance accounts	

Stable Value Investment Contracts

Key Considerations: Liquidity and Other Restrictions

Wrap contract issuers prefer to limit major cash flow events in order to minimize the impact on the market-to-book value ratio.

- "Equity Wash Provision" requires participant withdrawals to be invested into a "non-competing option" for a period of up to 90 days. Competing options generally include:
  - *Money market funds*
  - *Short-duration bond funds*
- Termination of a stable value collective trust may be subject to a "put" provision
  - Waiting period of 12 to 24 months
  - Protects remaining commingled fund investors
  - Participants may continue to transact at book value
- Sponsor-driven events, such as a revised early retirement program, may result in the loss of wrap coverage

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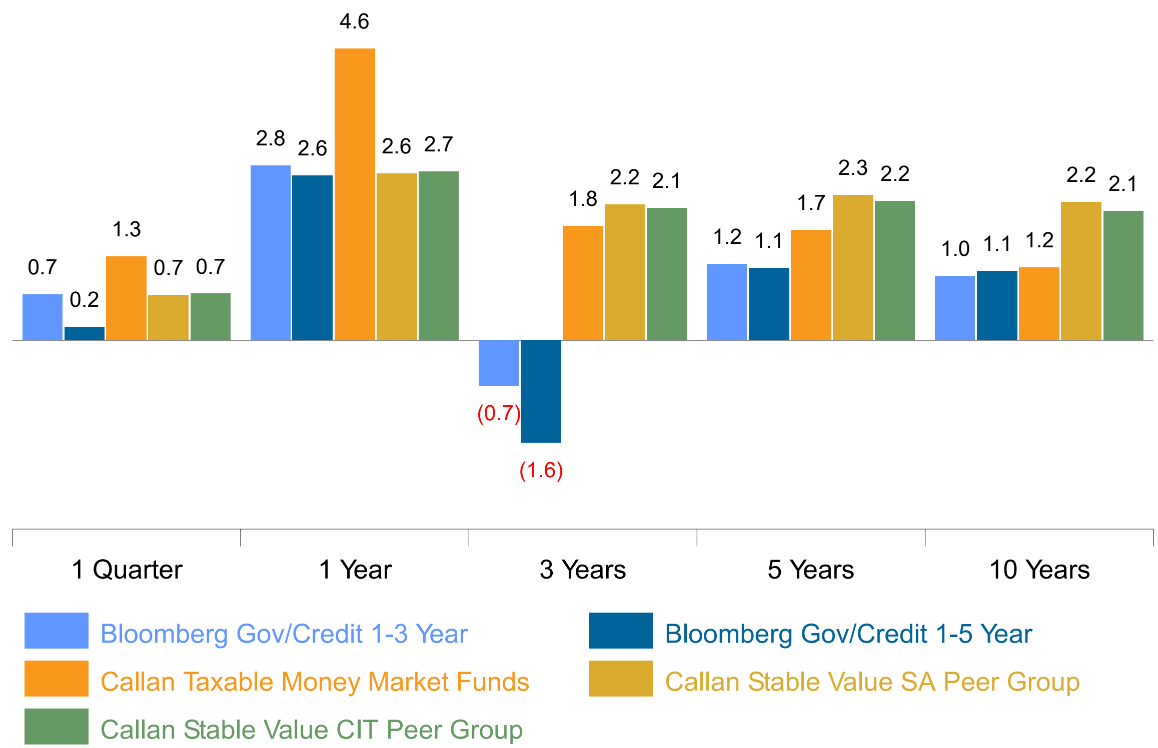
Performance

Trailing Performance History

Stable value has outperformed both cash and limited duration benchmarks over longer time periods

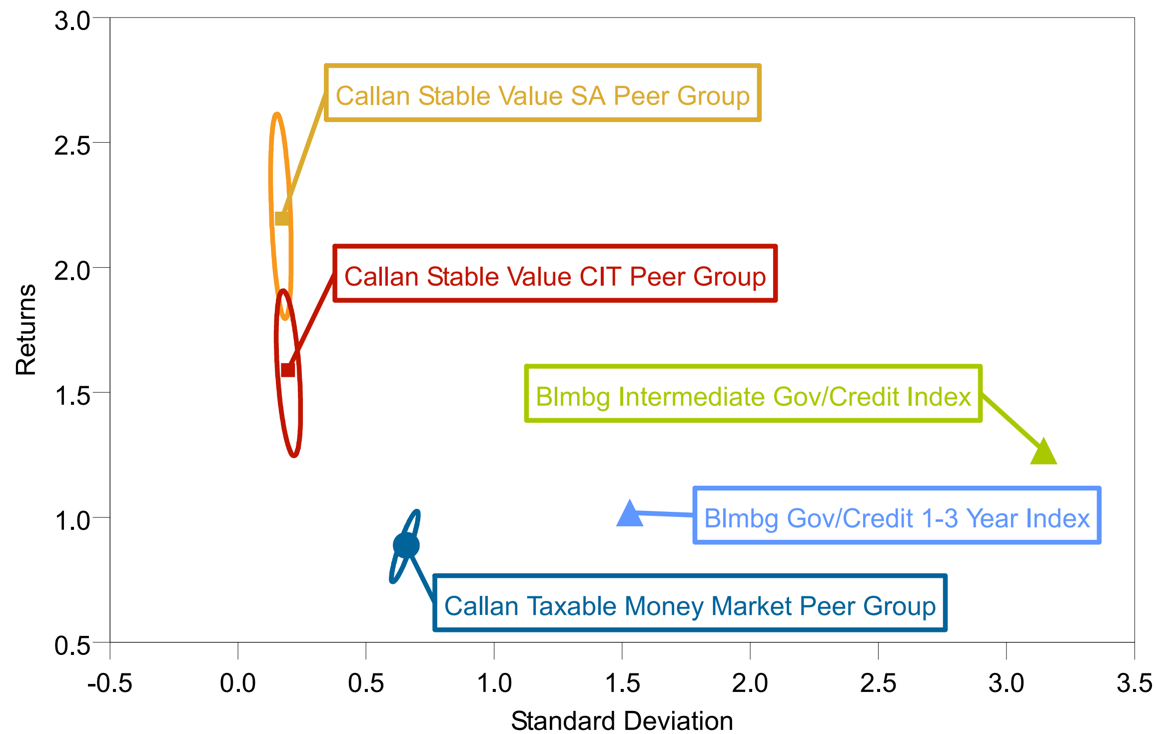
Returns for Periods ending September 30, 2023



Return Versus Risk Characteristics

Stable value funds have exhibited better returns than the Bloomberg Intermediate Government/Credit Index and risk similar to cash

Risk vs. Return for 10 Years ended September 30, 2023

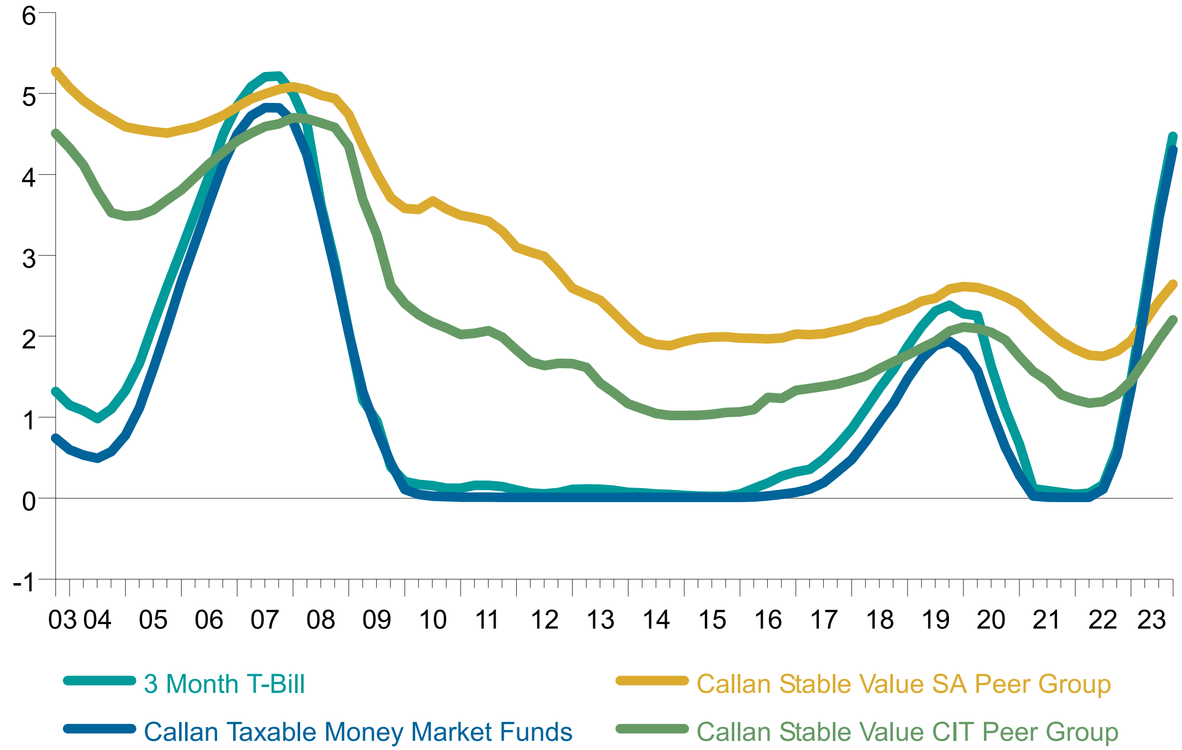


Impact of Wrap Contracts on Return Consistency

Wrap contracts provide greater return consistency versus money market funds

Money market funds have outperformed in periods when rates rise quickly

Rolling 1 Year Returns for 20 Years ended September 30, 2023



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Current Environment

Factors Impacting Stable Value Environment

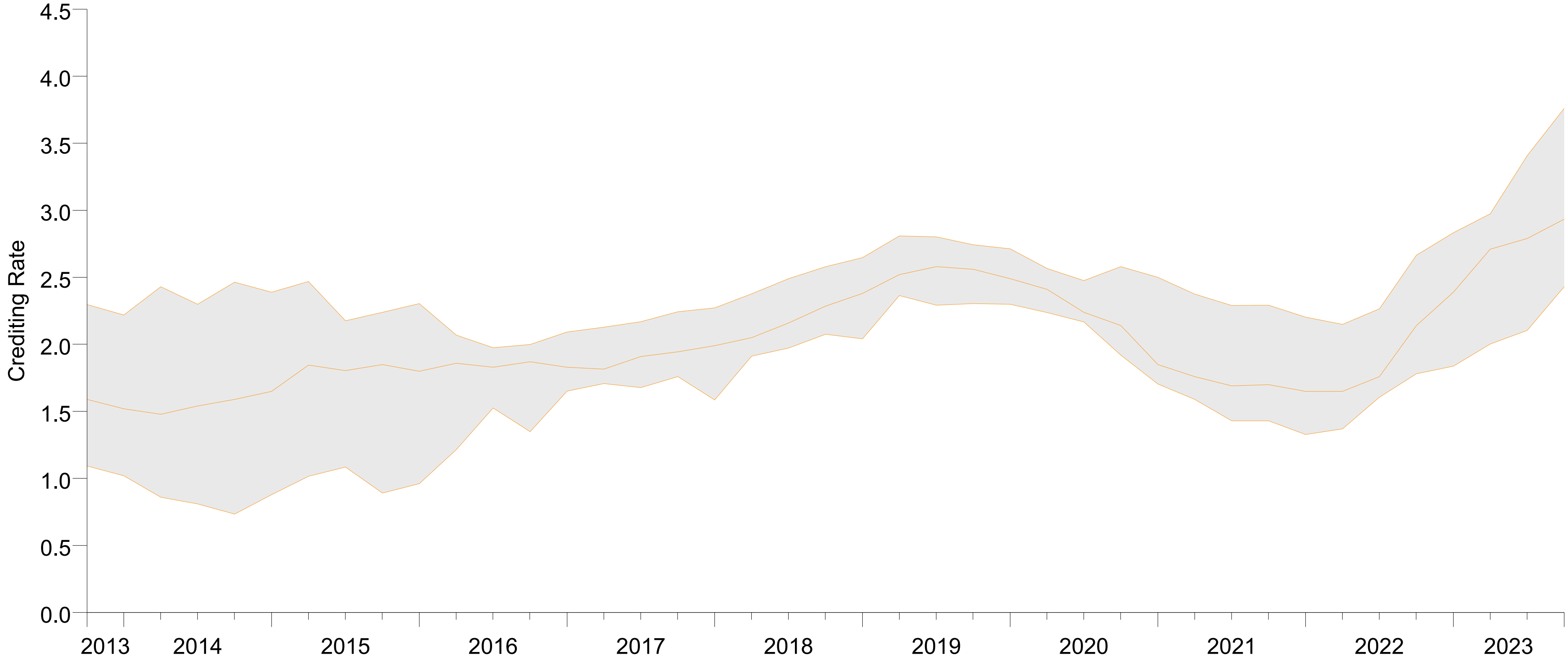
Current Rate Environment

- Stable value funds reflect changes in interest rates more slowly than money market funds. In 2022, money market funds began generating competitive yields as a result of the historic response by the Federal Reserve to stem inflation by hiking its benchmark interest rate to its highest level in 15-years.
- Market-to-book ratios have decreased below par which is expected during a rising rate environment. Stable value wrap contracts protect investors from mark-to-market losses resulting from rising interest rates by smoothing the bond portfolio’s returns over time via the crediting rate formula.
- Stable value has underperformed money markets following rate hikes in the past. Relative underperformance is expected to continue in the near-term given how quickly rates have risen.
- Callan continues to favor stable value over money market funds given its long-term outperformance and pricing smoothing mechanics.

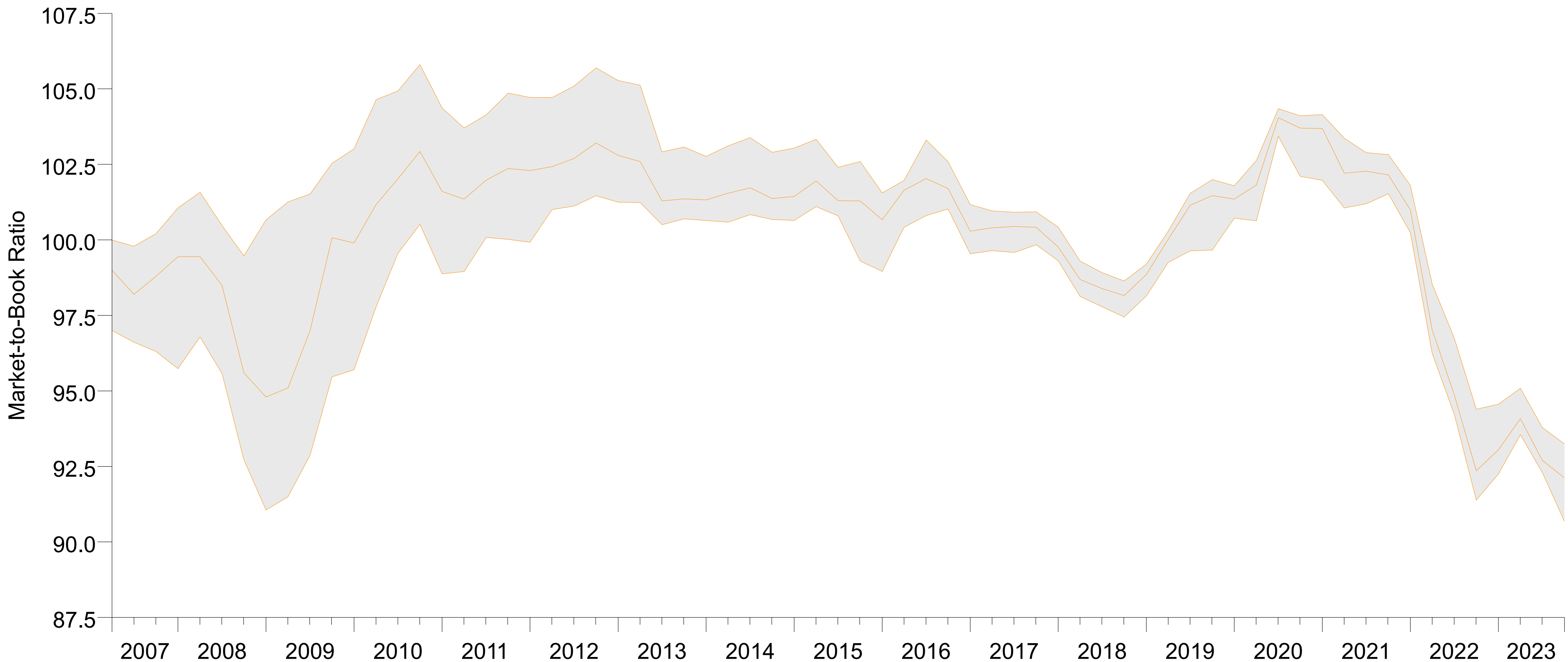
Wrap Capacity and Fees

- Insurance companies have become the dominant players within the wrap industry since the GFC.
  - Wrap fees now average 15 bps, down from the 25-30 bps range immediately after the GFC due to increase competition.
  - Investment guideline negotiation leverage has shifted back in favor of stable value managers, allowing some flexibility to position the fixed income portfolio with additional credit risk.

Crediting rates have gradually increased following the rate environment

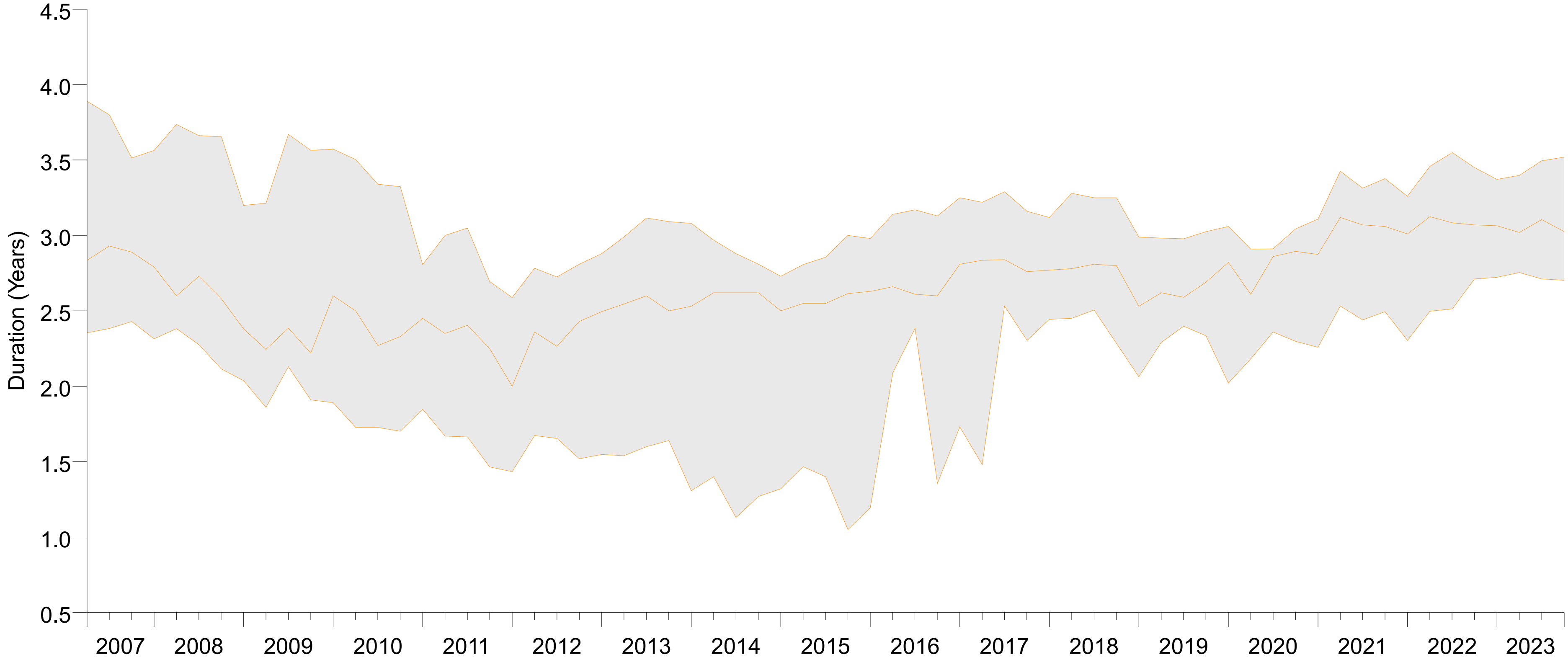


Market-to-book ratios have declined due to rising rates



- Market-to-book generally decreases below par (100) during a rising rate environment.
- Wrap contracts are designed to amortize the decline in market value.

Duration has remained within range



Appendix

Money Market Funds

Overview

Three types of money market funds:

1. **Retail** – defined as having "policies and procedures reasonably designed to limit beneficial ownership to natural persons." Defined contribution plans count as natural persons. Retail Funds may include retail prime or retail municipal money market funds.
2. **Government** – these funds must hold 99.5% government securities. Government Funds may be owned by natural persons, institutional investors or a combination of both.
3. **Institutional** – funds that are neither retail nor government are deemed institutional. Institutional funds may include institutional prime or institutional municipal money market funds. They are typically owned by institutional investors or a combination of natural persons and institutional investors.

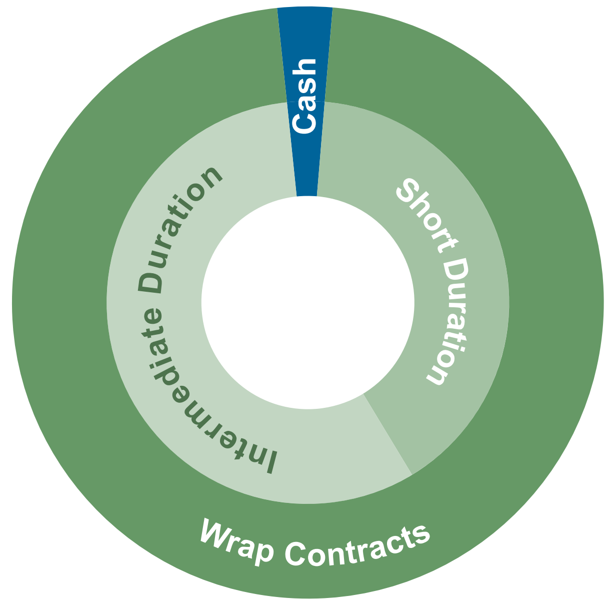
	Stable NAV	Liquidity Gates/ Redemption Fees	Eligibility
Government	Yes	Possible though must be disclosed	All
Retail	Yes	Yes	Ownership limited to "natural persons" (includes DC plans)
Prime / Institutional	No	Yes	All

How Stable Value Works

Architecture

- Stable value managers invest in a diversified portfolio of high-quality, intermediate duration fixed income securities. These securities may include:
  - Treasuries, U.S. agencies, agency mortgage-backed securities, corporate bonds, asset-backed securities, commercial mortgage-backed securities
- Wrap contracts, issued by insurance companies and banks, allow for book value accounting
  - $1.00 net asset value
  - Daily participant cash flows to "non-competing" options.
- Wrap contracts generally have strict guidelines
  - Sector
  - Quality
  - Duration
- Quarterly Crediting Rate
  - A periodically adjusted rate of return
  - Market value gains or losses are amortized over time
  - Calculated based on the market value, book value, yield-to-maturity and duration of the underlying assets.
- Assets not covered by a wrap contract are usually held in short-term money market instruments.

Common Structure



Benchmark Duration Range

2.0 to 4.0 years depending on vehicle type and investment guidelines

Stable Value Challenges to Consider

Topic	Challenges to Consider
Insurance Wraps	Contract terms vary and may limit plan sponsor's flexibility.
	Collective investment trust contract terms can dictate how long it takes a plan sponsor to exit a fund. This typically can be 1-2 years.
	90-Day equity wash rule when there is a competing option like a Money Market Fund or short duration fund to help eliminate participants timing interest rate movements.
	Lack of available wrap capacity can result in high money market allocations, or an unstable NAV.
	Wrap contracts usually don't cover credit risk of the underlying bond fund.
	Counter party risk with wrap providers can be a concern, but typically mitigated by having multiple wraps and due-diligence by the stable value manager.
	Due to the mismatch between the market to book value ratio, participant cash flows can impact returns favorably or unfavorably given changes to the capital markets.
Rising Rates	A sharp rise in short term interest rates or an inverted yield curve can cause the Stable Value Fund to underperform money market funds in addition to poor asset management implementation. Would normally only be for a small period of time.
Education	Since Stable Value funds or Trusts are unique to 401k plans, many participants may not be very familiar with them and how they work versus what they are accustom to with money market.

Stable Value Investment Contracts

Contract Categories: Three Types of Guaranteed Investment Contracts (GIC)

Synthetic GIC

Combines an actively managed fixed income portfolio within a book value wrap contract, usually issued by an insurance company, bank, or other financial institution.

May be "constant duration" (aka "managed" or "evergreen"), or "fixed maturity" (aka "buy-and-hold")

Insurance Company Separate Account GIC

Customized group annuity contract that pays a periodic crediting rate.

Rate reflects the performance of the underlying assets outside of the issuer's general account.

Separate account assets may not be used by the issuer to satisfy general account liabilities.

General account backs unpaid obligations of the separate account, if necessary.

Traditional GIC

GICs are group annuity contracts that guarantee a fixed rate of return over a specified period of time.

Crediting rate tied to the performance of the insurance company's general account.

Stable Value Glossary of Terms

Book Value: The value of initially deposited principal, plus accumulated interest, plus additional deposits, minus withdrawals and expenses.

Commingled Fund: A fund that combines the assets of unaffiliated plans in to one large group. Also known as pooled funds, collective funds, collective trusts, commingled investment trusts (CITs), or group trusts.

Competing Option: Another investment option offered by a defined contribution plan that has principal preservation as a primary objective or other characteristics similar to stable value. Self-directed brokerage or mutual fund windows often also qualify. Competing options may require an equity wash provision to restrict participant transfers between the stable value option and competing options.

Corporate-Initiated Events: Employer-driven events, such as layoffs, bankruptcy, or a new early retirement program, may result in the loss of book value accounting due to wrap contract language.

Crediting Rate: The interest rate applied to the book value of a stable value fund.

Equity Wash: A provision in a stable value fund that requires participants that transfer assets out of the fund to not invest these assets into a competing option for a period of time (often 90 days).

Fees: Stable value funds pay both management fees and wrap fees. Returns are generally quoted net of wrap fees, but gross of management fees. However, both fees must be disclosed to investors.

Market Value: The value at which an investment would sell on the open market.

Market-to-Book Ratio: The ratio of market value to book value, used to measure the overall “health” of a stable value option, and the degree to which a stable value option has a market value shortfall.

Put Provision: For stable value options, a plan may elect to fully exit a fund or pool provided the investor gives proper notice. The “put provision” term refers to the length of time the investor may have to wait for a full contract value liquidation..

Wrap Contract: An agreement between a stable value fund and a counterparty, usually an insurance company or bank, that allows the stable value fund to maintain book value accounting practices with full participant liquidity.