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The Importance of Structured Liquidity in Stable Value Portfolios

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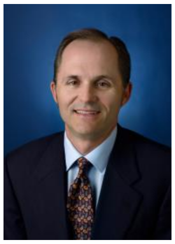

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"Cash is king" is an anecdotal refrain often heard in the world of investing. Generally, this statement refers to portfolio liquidity and the notion, all else equal, that the more liquid the portfolio the better, especially in times of market stress. This drives investment managers to seek the increased safety and flexibility of cash and cash equivalents despite relatively low returns. The stable value asset class is no different. In fact, one could argue that the need for liquidity in stable value funds today is perhaps now more imperative than ever.

Why the Demand for Stable Value Fund Liquidity?

Three broad trends have driven outflows from the stable value investments and the greater need for liquidity. First, aging American workers have shifted from contributions to withdrawals in 401(k) plans. Demographic changes in the American population began in earnest in 2011 when the first baby boomers turned 65 years and started to retire. The aging domestic population will continue to impact the defined contribution and 401(k) market as older plan participants enter retirement and begin to withdraw investments to fund living expenses. Typically the most conservative investment option offered within a defined contribution plan, stable value funds usually attract larger balances from older plan participants who are at or near retirement and serve as the primary source for withdrawals. These demographic realities have contributed to the consistent flow of participant-directed transfers out of stable value funds. Second, immediately following the global financial crisis of 2007 to 2009, equity returns took off. March 2009 signaled the start of an equity rally that has been practically uninterrupted for nine consecutive years. With the S&P 500 Index generating an average annual return of over 15% during this period, plan participants pursued those returns instead of the 2% to 3% performance generated by stable value funds, creating another source of transfer activity.

Finally, over the past decade, behavioral science has increasingly crept into defined contribution investing through automatic plan enrollment and Target Date Funds (TDFs). In 2017, 68% of defined contribution plans surveyed by Alight Solutions had automatic enrollment features—up from only 14% in 2001.[1] The same survey found 95% of employers with automatic enrollment used a balanced default fund

[1]Source: Alight Solutions 2017 Trends & Experience in Defined Contribution Plans

(either traditional balanced, target risk or TDF), while only 2% used a stable value fund.[2] Most automatically enrolled plan participants are "defaulted" into balanced funds absent specific plan participant investment direction.

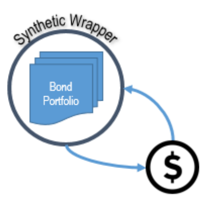
Synthetic GIC Instruments

There are two distinct types of book value synthetic wrap contracts employed by stable value managers: constant duration (evergreen) contracts or fixed maturity (buy/hold) contracts. Both contracts constitute a book value wrap around a portfolio of bonds intended to insulate plan participants from interest rate fluctuations and maintain the book value of the portfolio.

The primary difference between the two contracts is the treatment of principal and interest payments. Constant duration contracts capture all principal and interest payments from underlying bonds, and these cash flows are reinvested within the contract. Fixed maturity contracts experience the same type of principal and interest payments; however, these cash flows are "pulled" out of the contracts as they occur and used for liquidity or ultimately reinvested. The book value balance of the contract declines as underlying bonds pay interest and eventually mature.

Constant Duration Contracts

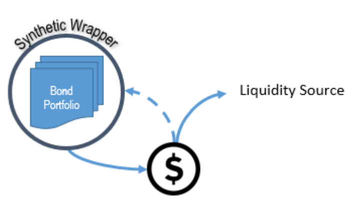
Evergreen



Stable book value with interest and principal payments reinvested

Fixed Maturity Contracts

Buy/Hold



Book value declines as interest and principal is paid

The appeal of "set it and forget it" TDFs has drawn plan sponsor and plan participant focus—as well as cash flow. Ongoing payroll contributions and corporate matching dollars have been increasingly allocated to TDFs. Alight Solutions noted that TDFs received the highest percentage of cash flow in their 2017 survey—at 43% of all contributions for the year.[3] Not surprisingly, total TDF assets in the Alight Solutions survey have grown from only 1% of total invested assets in 1997 to 25% in 2017.[4]

With stable value funds acting as a source of living expenses for retirees without balancing inflows, the asset class is experiencing an industry-wide thirst for liquidity. Further, persistent outflows in a rising interest rate environment can be particularly challenging for stable value managers. We offer our insights on how portfolio managers can most efficiently meet this challenge.

Sourcing Liquidity

The most prevalent form of liquidity within a stable value fund is a cash buffer. The cash buffer, typically with a target range of 2.5% to 5.0%, serves the primary purpose of providing participants book value liquidity. The downside to a cash buffer, particularly during the low interest rate environment of the past nine years, is the lower yields associated with shorter-duration assets. Historically, stable value managers used traditional guaranteed investment contracts (GICs) to structure fund liquidity, while enhancing yield relative to cash. A very simple structure, investors use traditional GICs to create a laddered portfolio of investment contracts that mature at book value. However, with significant credit risk associated with traditional GICs, the stable value industry migrated to a superior product—a synthetic GIC, as explained in the side bar.

As stable value managers shifted their product allocation from traditional GICs to synthetic GICs in the mid-to-late 1990s, the role for active fixed income management within stable value funds increased. Some managers effectively thought of a stable value fund as a single underlying total return strategy with a book value "wrap contract" around it—with little regard for either maturing assets or interim liquidity strategies. This type of product is typically referred to as a constant duration or

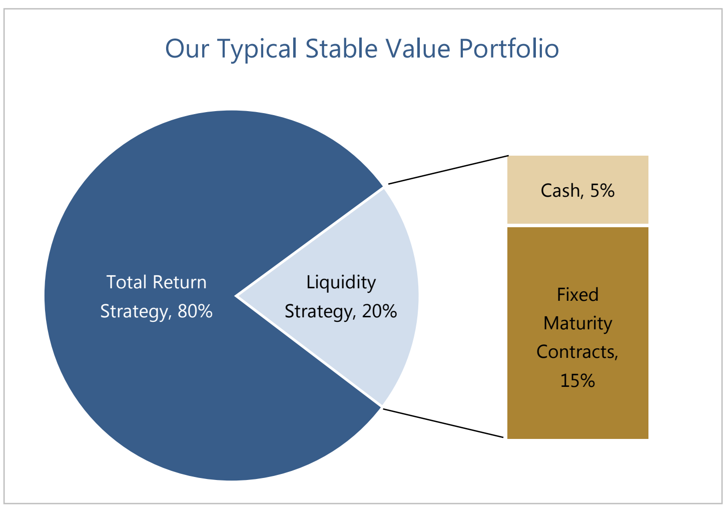
[2]Ibid.
[3]Alight Solutions 401(k) Index™: 2017 Observations
[4]Alight Solutions 401(k) Index™

evergreen product, and it worked well when incoming cash flow fueled fund growth. As defined contribution industry dynamics have changed, however, that structure may not be most efficient in the current environment.

From our perspective, another compelling stable value product with a number of salient attributes is the fixed maturity synthetic contract (or buy/hold synthetic contract), which is a cornerstone in the stable value funds we manage. For over 20 years, we have incorporated this type of contract in our stable value portfolios as part of our liquidity strategy.

Our Approach to Liquidity

We place a premium on liquidity and manage our stable value portfolios with this in mind. Where a typical stable value fund has a 5% cash position (usually a Government cash/STIF product) and the balance of the fund in longer, constant duration contracts, we take the additional step of adding a 10% to 15% allocation to fixed maturity contracts in our stable value portfolios. This structure enhances our liquidity while providing incremental yield compared to cash/STIF yields. We often refer to this as our Liquidity Strategy.



A fixed maturity contract wraps a short duration portfolio of securities with a laddered schedule of maturing assets. We target an average duration of 1.5 to 2.0 years for this segment of portfolio. The cash flows from the underlying securities in the contract (principal and interest payments) create an ongoing stream of liquidity that is readily available for participant-directed redemption requests. This liquidity reduces the need to sell longer-duration assets from our constant duration contracts at perhaps an inopportune time (e.g., market value less than book value). If the liquidity needs are benign, the maturities can be strategically reinvested at prevailing interest rates. All else being equal, reinvesting can have a positive impact on the yield of the contract, the market-to-book value ratio (MV/BV) and ultimately the contract crediting rate.

In order to ensure the timely delivery of principal and interest payments, securities within the liquidity strategy focus on strong credit quality and stable cash flows. Sample liquidity contract holdings can be seen in Table 1. In creating a well-defined, laddered maturity schedule, securities with solid cash flows are a priority. The mortgage allocation focuses on well-structured agency collateralized mortgage obligations (CMOs) to limit negative convexity[5] and minimize cash flow variation. Within the asset-backed security (ABS) sector, we focus on automobile loans, credit card receivables and rate reduction bonds due to their high credit

[5]Convexity is the propensity for fixed income asset duration to lengthen in periods of increasing interest rates or shorten in periods of decreasing interest rates.

quality and consistent cash flow profile. Finally, commercial mortgage backed securities (CMBS) provide additional cash flow diversification as the focus is on structures with high credit enhancement (30% minimum) and minimum exposure to extension risk.

Table 1: Representative Account Allocation

Universes	Market Value (%)	Yield-to-Worst	Mod-Dur-to-Worst	Moody Rating	S&P Rating
Collateralized Mortgage Obligation	**38.2**	**2.71**	**2.14**	**AAA**	**AA+**
GNR	14.0	2.68	2.09	AAA	AA+
FNR	12.3	2.73	2.07	AAA	AA+
FHR	11.9	2.72	2.26	AAA	AA+
Asset-Backed Securities	**29.0**	**2.65**	**1.48**	**AAA**	**AAA**
Credit Cards	8.9	2.71	2.07	AAA	AAA
Autos	7.3	2.67	1.04	AAA	AAA
Rate Reduction	6.9	2.63	1.10	AAA	AAA
ABS Other	6.0	2.55	1.59	AAA	AAA
Commercial Mortgage-Backed Securities (CMBS)	**18.9**	**2.73**	**1.47**	**AAA**	**AAA**
Treasury	**8.4**	**2.28**	**2.08**	**AAA**	**AA+**
Agency CMBS	**3.6**	**2.54**	**2.89**	**AAA**	**AA+**
Mortgage-Backed Securities-Passthrough	**2.0**	**2.25**	**2.31**	**AAA**	**AA+**
Total	**100.0**	**2.64**	**1.85**	**AAA**	**AAA/AA+**

Source: BNY Mellon AMNA, as of March 31, 2018

Benefits of Our Liquidity Strategy

Cash Flow Impact on Market-to-Book-Value Ratios (MV/BV): As illustrated in previous white papers, the ratio between the market value of the underlying assets and book value of a synthetic wrap contract (MV/BV) is an integral metric for stable value portfolios. In a rising interest rate environment, cash outflows negatively impact this ratio. When a sale is made out of a contract with MV/BV below par, this exacerbates the deficit. For example, take a contract with a book value of $100 and a market value of $98. The MV/BV on this contract would equal 98/100 or $0.98. A $1 reduction to the contract will result in a new, lower, MV/BV of 97/99 or $0.9797. As withdrawals from the contract increase, the impact on the contract MV/BV is greater. Since MV/BV is one of the key inputs in the contract crediting rate formula, this detrimentally impacts the crediting rate over the life of a contract. To the extent a stable value fund has maturing assets that can help to offset liquidity needs and limit forced selling out of contracts, this benefits plan participants.

Improves Fund Level Underwriting: Book value wrap providers consider numerous factors when underwriting the risks of synthetic GIC contracts for a stable value fund. These include, but are not limited to, plan sponsor characteristics, plan-specific demographics, the underlying investment strategy and fund liquidity. Fixed maturity contracts provide several benefits for fund underwriting. Specifically, at the fund level, wrap providers view the enhanced liquidity as favorable because it lessens the chance that their contract will be accessed for benefit payments. On a more granular level, the shorter duration of a fixed maturity contract, combined with the high credit quality and liquidity of underlying assets, makes the underwriting process easier. In our experience, this can result in lower wrap fees, and in some cases, additional wrap capacity to more challenged funds.

An Upgrade from Traditional GICs: From a structural perspective, we view fixed maturity contracts as superior to traditional GICs and a way to enhance fund liquidity. Traditional GICs, which are typically issued by insurance companies, guarantee principal and interest to the plan, but the insurance company's general account is the backstop for this guarantee. Therefore, the plan is fully exposed to the credit of the insurance company. In addition, these contracts are highly illiquid at the plan level. In contrast, a fixed maturity contract wraps a portfolio of *bonds owned by the plan*. Thus, the plan is only exposed to the wrap provider in the event that the market value of the bonds is below the book value of the contract and there are massive liquidations. Since the plan owns the bonds, the fixed maturity structure is much more portable, allowing a manager to switch out the wrap provider if need be. Further, underlying assets can be sold out of the contract, as needed, for partial liquidations.

Yield Curve Diversification: A fixed maturity contract fits nicely into our overall diversification objective of exposure across multiple points on the yield curve. With an average duration of approximately 1.75 years, our Liquidity Strategy complements some of our longer Total Return Strategies while still adding additional yield over cash.

Managing Liquidity as Market Dynamic Change

Currently, three trends are driving an increased need for liquidity within stable value portfolios. Specifically, an aging population and nine years of generally positive equity market returns have resulted in increased transfer activity out of stable value funds, just as the rise of Target Date Funds has limited offsetting inflows. Stable value managers can meet these increased liquidity needs in three ways: running a higher cash buffer in a portfolio, accessing existing wrap contracts when liquidity needs arise or building additional portfolio liquidity by using maturing assets. A higher cash buffer can result in "cash drag" for the overall portfolio, and as illustrated above, continually accessing wrap contracts can be detrimental to stable value crediting rates in a rising interest rate environment. Due to these reasons, we use maturing assets to address the increased liquidity needs. Contracts wrapping our Liquidity Strategy enjoy significant yield over cash assets while limiting the need to access contracts. Thus, we believe our Liquidity Strategy is an approach that has served our clients well over the past twenty years and will continue to do so in the years to come.

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