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Correspondence Memorandum

Date: June 19, 2018

To: Deferred Compensation Investment Committee

From: Shelly Schueller, Director
Wisconsin Deferred Compensation Program

Subject: Investment Design Review

Based on the investment design review, the Department of Employee Trust Funds (ETF) suggests that the Investment Committee recommend that the Deferred Compensation Board (Board) reduce the number of fixed options offered in the Wisconsin Deferred Compensation Program.

At the March 2018 meeting, the Board directed the Investment Committee to review the investment options in the Wisconsin Deferred Compensation Program (WDC). The attached review by Bill Thornton, Investment Director at Great West Financial, evaluates the WDC's overall lineup in comparison to other s. 457 plans administered by Empower. It also includes a review of the plan's short-term bond funds and a general overview of stable value funds.

<u>Investment Options Overview</u>
Mr. Thornton's review compared the WDC's data to 20 state retirement programs that are administered by Empower. The WDC's weighted average expense ratio of 0.28 compares very favorably to the 0.40 weighted average expense ratio of the 20 plans reviewed. In fact, the WDC has the overall lowest weighted average expense ratio.

The review shows that like most other state plans, the WDC currently offers options in the major broad asset classes and most major equity styles. While the average number of cash equivalent funds offered by plans in this review is 1.4, the WDC differs in that it offers three cash equivalent options. With seventeen options offered, the WDC is slightly above the median of fifteen and above the average of thirteen options offered.

<u>Fixed Options Review</u>
The review indicates that the WDC has a higher than average number of fixed income options, with a somewhat unusual concentration in the high-quality/short-term bond fund category. The WDC offers four funds in this "fixed" or cash alternative category: the

Reviewed and approved by Matt Stohr, Administrator, Division of Retirement Services
Matt Stohr Electronically Signed 6/21/18

Board	Mtg Date	Item #
DCIC	6.27.18	4

Federated US Gov't Securities fund, a stable value fund, an FDIC-insured option and a money market fund. Table 1 provides data on the number of WDC participants and assets invested in these options as of May 31, 2018.

Table 1: Selected WDC Fixed Investment Options
As of May 31, 2018

Fund Name	Participant Accounts	Approx. % of WDC Participants	$ Average Account Balance	$ WDC Assets in Option	% of All WDC Assets
FDIC (Nationwide)	9,533	15.4	11,909	113,529,623	2.22
Federated US Gov't	6,083	9.8	5,204	31,658,800	0.62
Money Market (Vanguard Admiral)	6,610	10.7	4,805	31,760,821	0.62
Stable Value (Galliard)	24,129	38.9	27,416	661,517,761	12.94

Stable Value Fund Overview
The investment design review includes information regarding what is included in a stable value fund and the investment instruments generally included in a stable value fund separate account. Additional information is provided regarding the general structure of stable value funds as well as details of the WDC's current stable value fund.

Fixed Options Discussion
The Board last reviewed the fixed fund investment options in 2006-2007. The analysis at that time revealed that the WDC offered more fixed fund options than other public deferred compensation plans of similar size. The Investment Committee and ETF recommended that the Board reduce the number of fixed fund options offered through the WDC. However, the Board chose not to take action on this item at that time. In 2008 the economy was facing a financial crisis and the economic downturn influenced the outcome of the fixed investment review. The Board did not want to eliminate any fixed options during a period in which fixed options might have received greater interest and contributions from WDC participants.

This investment design review is particularly timely, as the provider of the WDC's FDIC option announced in May 2018 that it intends to exit the retail bank business by the end of the calendar year. This news requires a decision regarding the FDIC option, unless the Board is comfortable with Nationwide selling the WDC account to another bank. (Please review the Item 5 materials included with the June 27, 2018 Investment Committee agenda for background and alternatives regarding the FDIC option.)

The investment design review confirms that the WDC investment spectrum is over weighted with fixed income options. Further, two of the fixed income options are very similar in investment objective and performance. The investment objective of the FDIC option is to maintain safety of principal while ensuring that the principal plus accrued interest is available to participants. The investment objective of the Vanguard Money Market fund is to provide current income while maintaining liquidity and a stable share price of one dollar.

ETF suggests a reduction in the number of fixed options offered in the WDC. Given the size and number of participants in the Stable Value Fund, ETF recommends keeping this option. However, the other fixed income options are very similar in investment objective and performance and could possibly be combined in an FDIC-insured money market fund or could be replaced entirely by a Core Bond Plus fund[1].

Decision Alternatives

If the Investment Committee proceeds with the ETF suggestion to recommend reducing the number of fixed investment options, possibilities include eliminating one or more of the fixed options, consolidating some combination of the fixed options, or replacing some fixed options.

1. Do nothing: maintain all four fixed options as currently provided. Note that if the Investment Committee recommends no changes (retain all fixed options), the Board must still make a decision regarding the FDIC option due to Nationwide Bank's announced intent to exit the retail bank business.

2. Phase out one of the fixed options. The WDC could eliminate any one of the smaller funds (Federated, FDIC and Money Market) and still offer three fixed options via the Stable Value Fund and the remaining fixed funds.

3. Phase out two of the fixed options. The WDC could eliminate or consolidate any combination of the smaller funds (Federated, FDIC and Money Market) and still offer two fixed options via the Stable Value Fund and another fixed fund.

4. Phase out all three of the smaller fixed options (Federated, FDIC and Money Market) and offer only one fixed option: the Stable Value Fund.

5. Phase out any combination of the smaller funds (Federated, FDIC and Money Market) and replace with either an FDIC-insured money market fund or a Core-Plus bond fund along with the Stable Value Fund. Per the Board's Investment Policy Statement, adding a new fixed option would require a competitive bid process.

Staff will be at the meeting to discuss the contents of this memo and answer questions.

Attachment: *WDC Program – Investment Design Review* by Bill Thornton of Great-West Financial (June 2018)

[1] From Investopedia: "Core plus is an investment management style that permits managers to add instruments with greater risk and greater potential return to a core base of holdings with a specified objective. Core plus funds are typically associated with fixed income funds, adding alternative investments such as high-yield, global and emerging market debt to a core portfolio of investment-grade bonds. Core plus equity funds may also exist with a similar strategy using alternative investing to enhance the return from a core market segment."

Great-West Investments™
Wisconsin Deferred Compensation Program

Wisconsin Deferred Compensation Program – Investment Design Review

Bill Thornton
Investment Director, Govt. Markets

GREAT-WEST FINANCIAL™

Contents

Fund Lineup Review

Expense Summary

As one might expect, plans with larger asset bases tend to have lower overall investment expenses. Several of the larger Empower state plans use commingled investment trusts (CITs), which typically provide lower expense ratios than their mutual fund counterparts.

State Asset Size	Number of States	Weighted Avg. Expense Ratio
States with $100 million to $500 million	4	0.48
States with $500 million to $1 billion	13	0.42
States with over $1billion	3	0.31
Total	**20**	**0.40**
State of Wisconsin	**1**	**0.28**

[1] Excludes funds that typically do not have explicit expense ratios. Assets held in self-directed brokerage, FDIC-insured cash savings funds, and general account products were excluded.

Data Summary

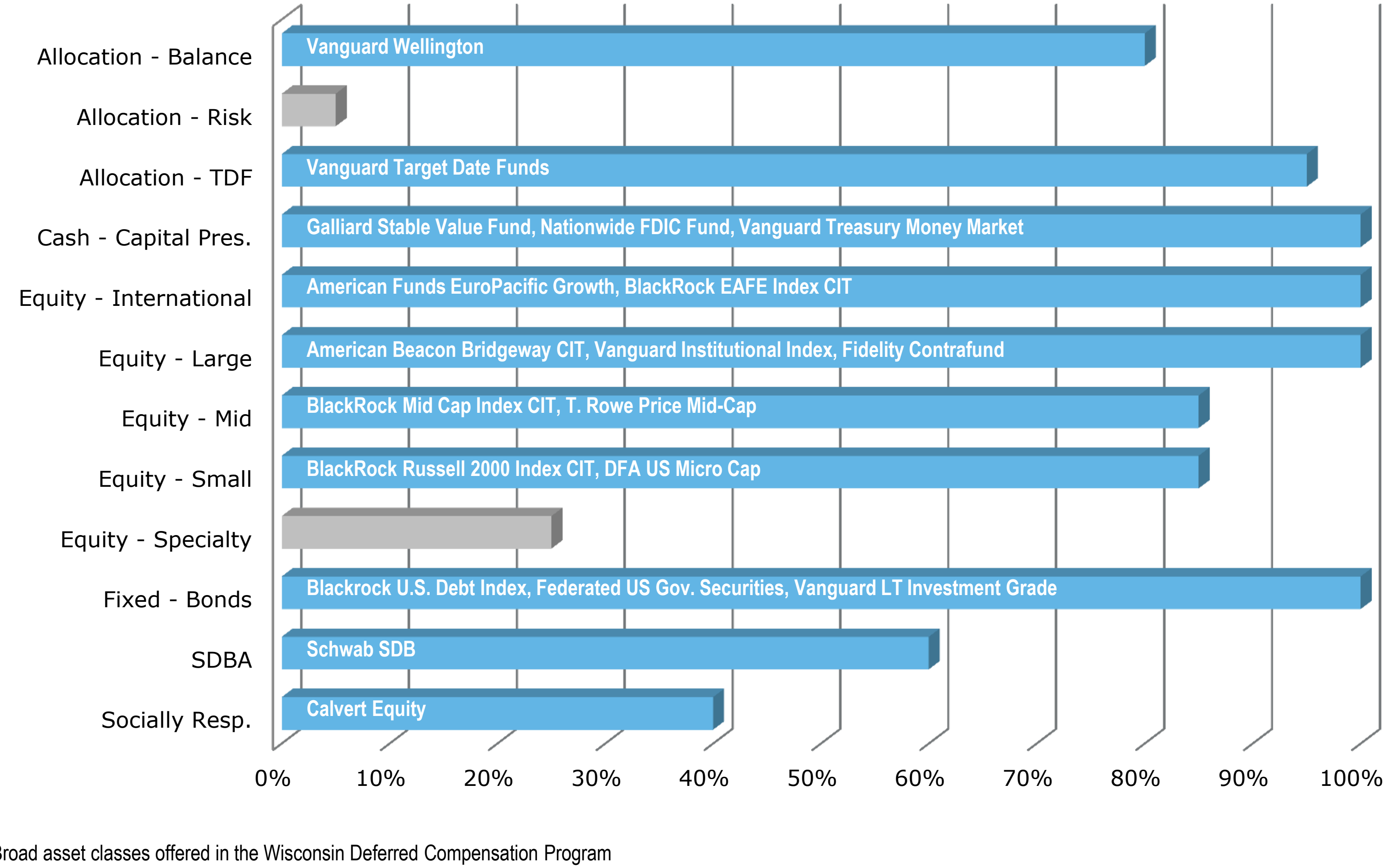
The following slides were created from an extensive study of data collected from Empower Retirement's state-level recordkeeping clients. Although the study does not include every state in the U.S., it does leverage Empower Retirement's position as the largest record keeper for government entities in the country. This study encompasses data from 20 distinct state retirement programs[1], which comprise 59 separate retirement plans.

State Asset Size	Number of States	Number of Plans
States with $100 million to $500 million	4	7
States with $500 million to $1 billion	13	47
States with over $1billion	3	5
Total	**20**	**59**

[1] States with less than $100 million in assets on the Empower platform were excluded

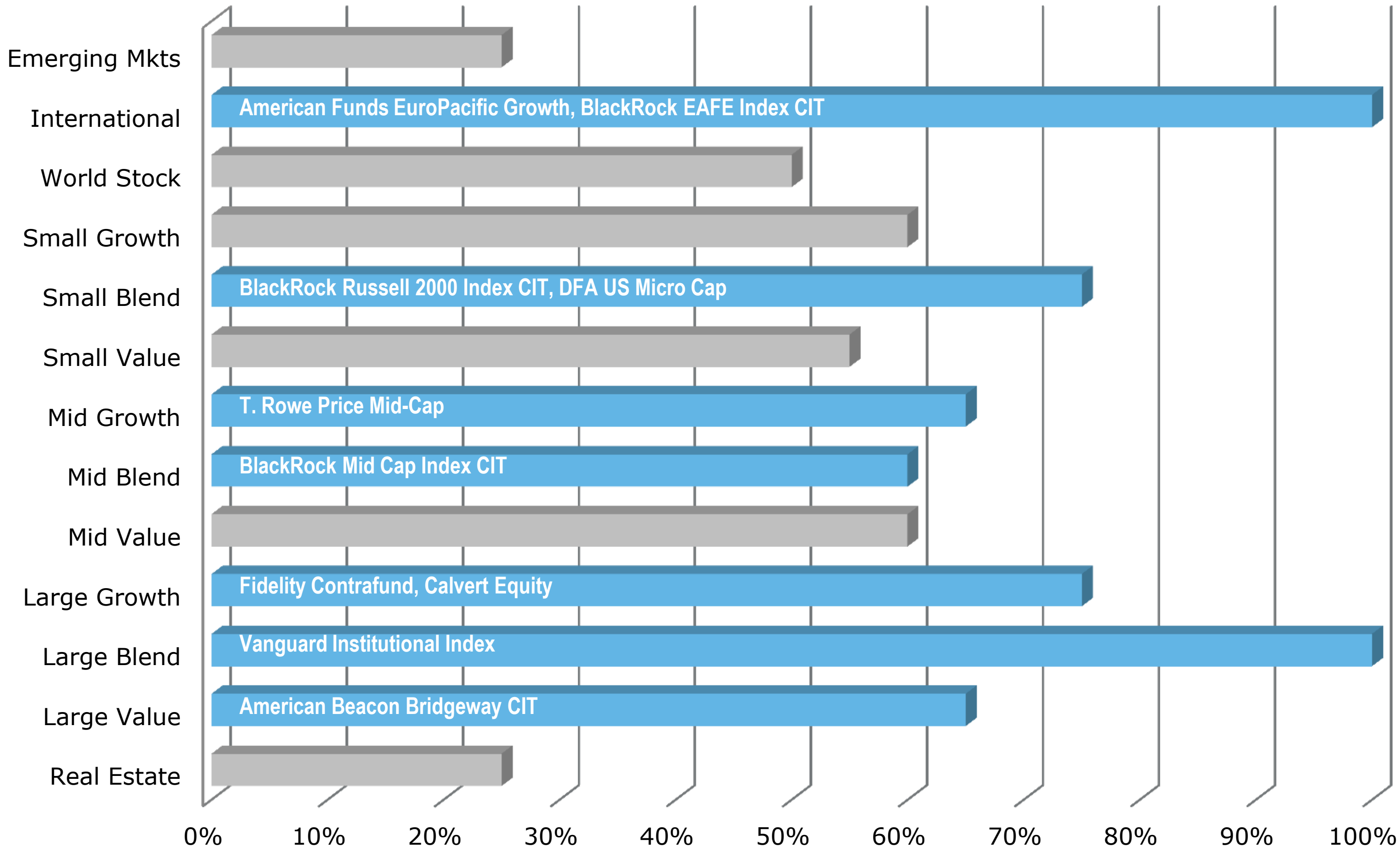
Broad Asset Class Offering

The Wisconsin plan has all the major broad asset classes available to participants in other large state plans



Equity Style Offering

The Wisconsin plan has most major equity styles currently included in the plan

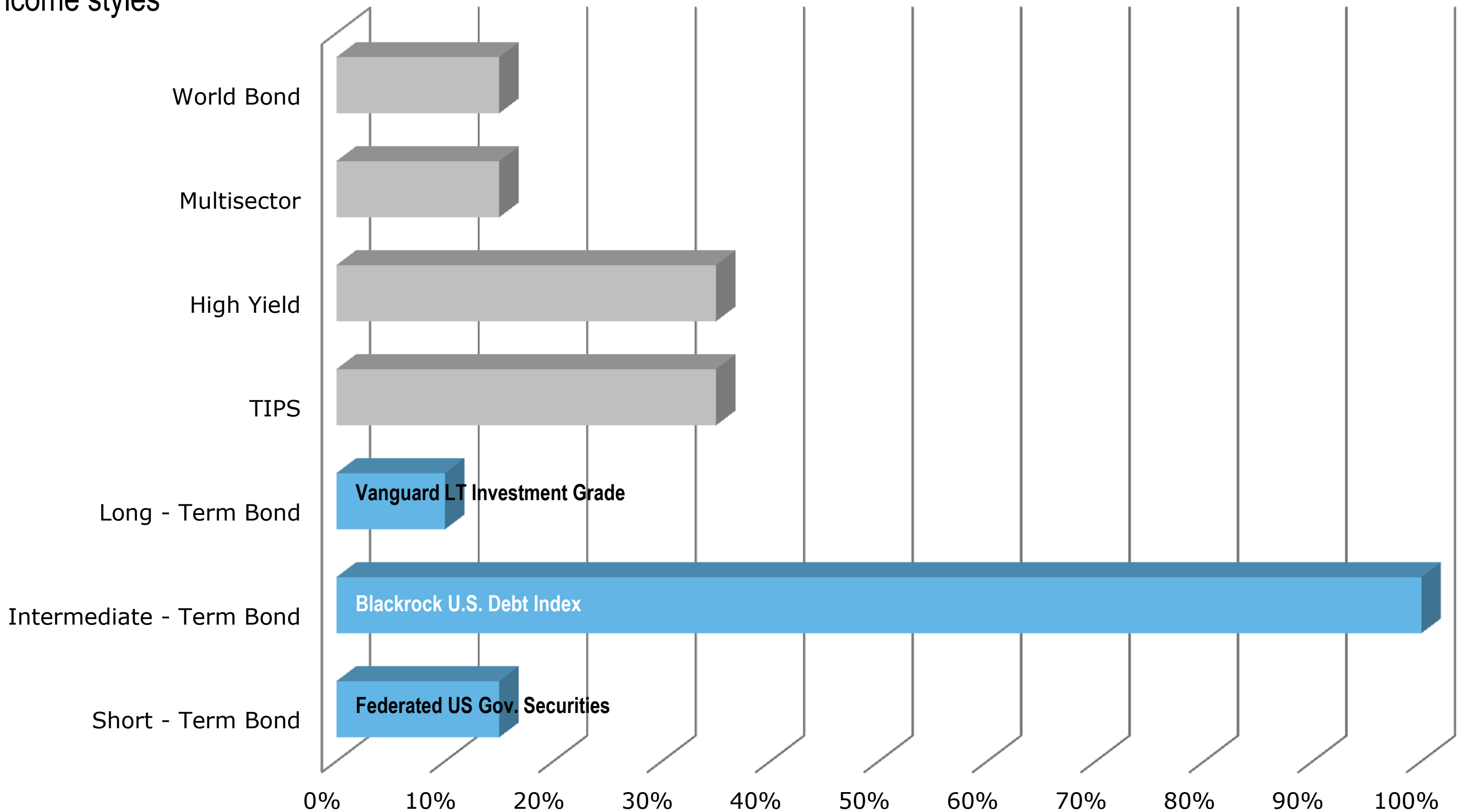


Equity styles offered in the Wisconsin Deferred Compensation Program

The styles are classified according to their Morningstar category

Fixed Income Style Offering

Approximately 40% of states offer at least one fund geared specifically toward corporate bonds (high yield, multi-sector, or long-term corporate funds). Like Wisconsin, only 30% of states (20% of plans) offer more than two fixed income styles

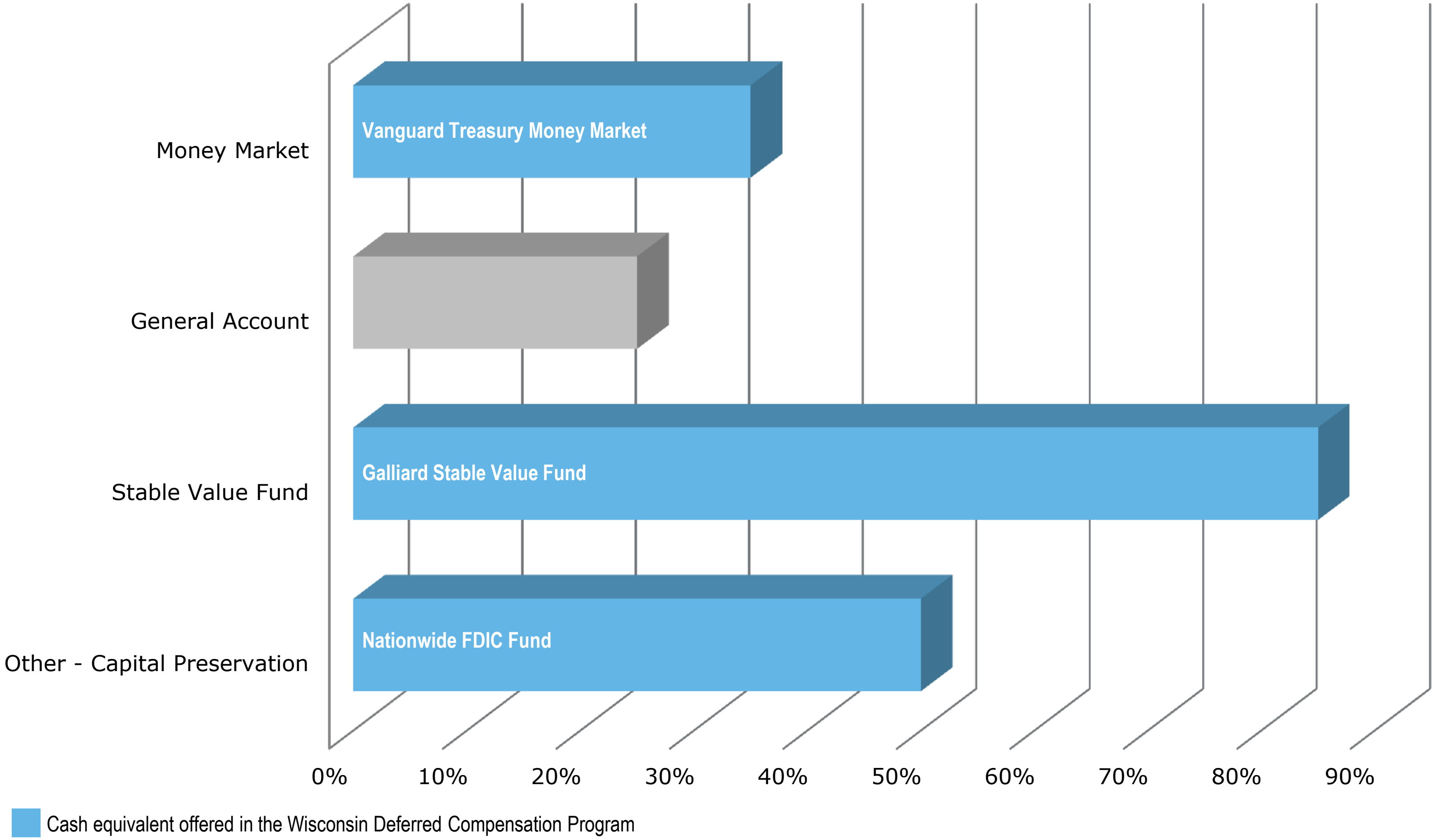


Fixed Income Styles offered in the Wisconsin Deferred Compensation Program

The styles are classified according to their Morningstar category

Cash Equivalent Offering

The average number of cash equivalent funds / products offered by the plans in the study is 1.4. With 3 cash equivalent options (excluding the short term bond fund), the Wisconsin plan offers more cash equivalent options relative to the other plans in the study



The styles are classified according to their Morningstar category

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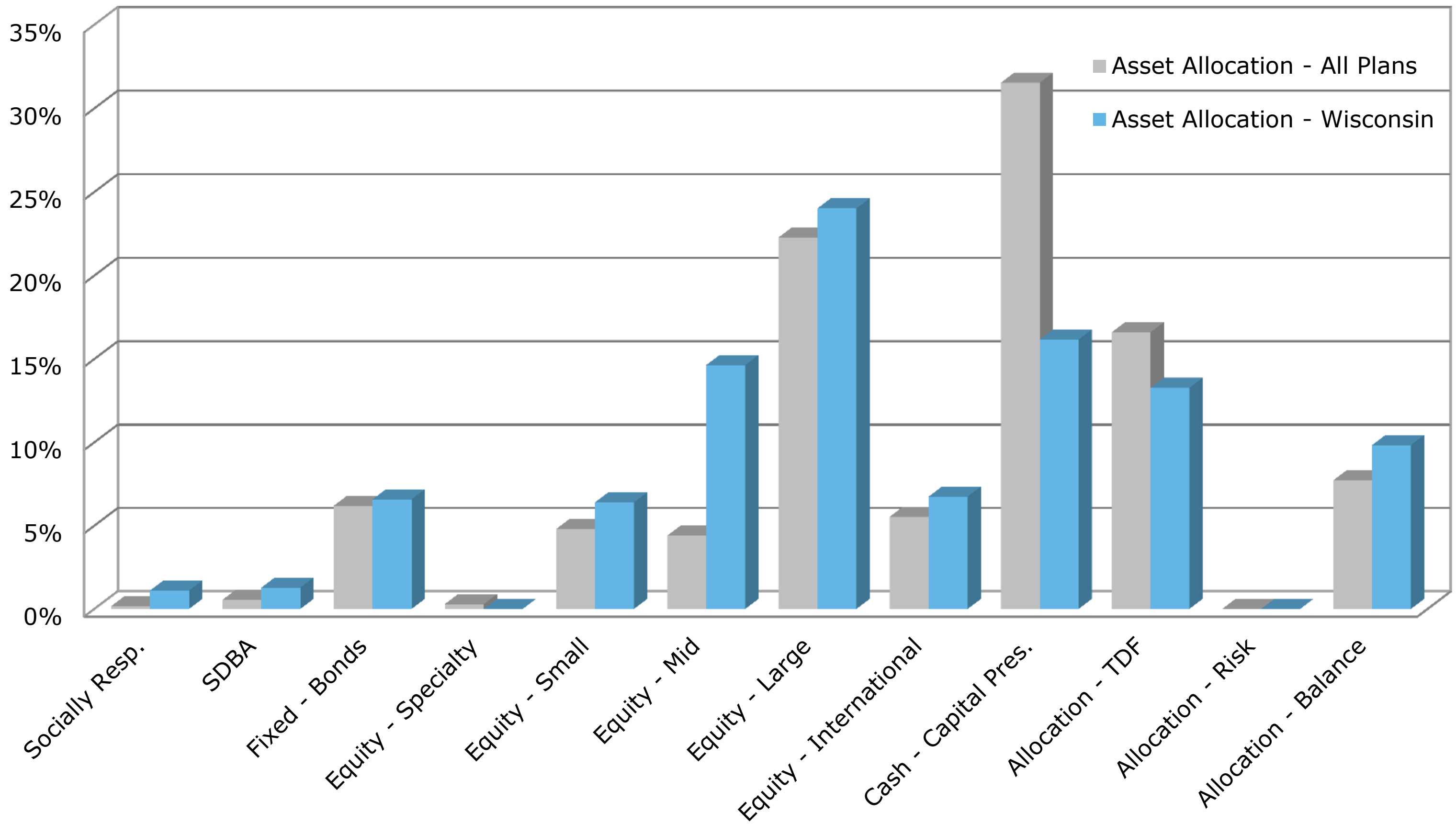
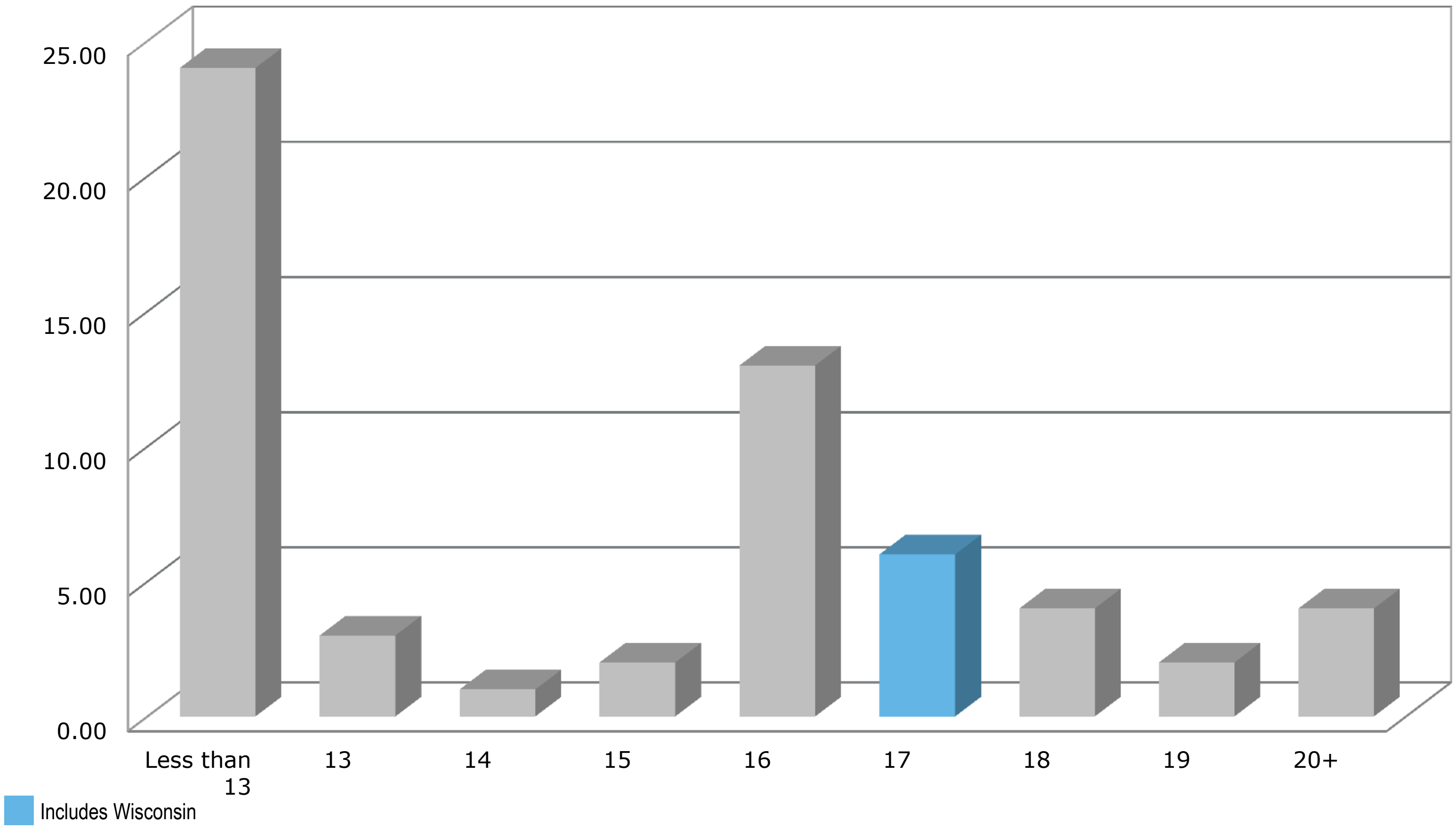
Broad Asset Class Usage

The plans in the study have more assets allocated to capital preservation but less assets allocated to domestic mid cap equity relative to Wisconsin



Distribution of Number of Investment Options

The average number of investment options offered in the state plans considered was approximately 13. Nevertheless, above 50% offer up to 15 investment options while the remaining 50% offer more than 15 investment options



The series of asset allocation funds and target date funds were considered as one fund. Non-core funds such as self directed brokerage window, annuity products, and life insurance products were excluded from the count

Short Term Bond Fund Review

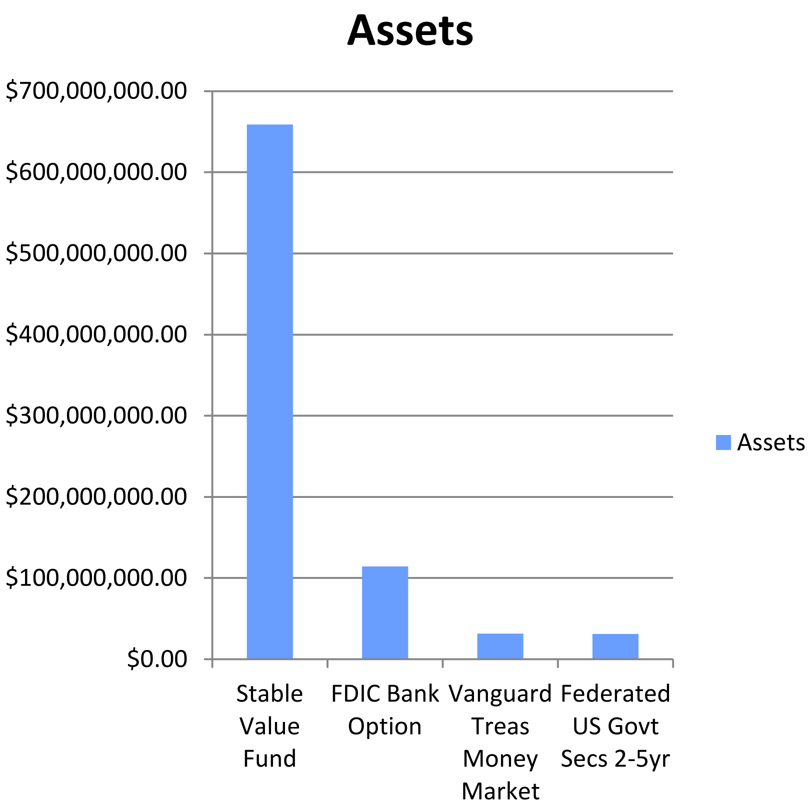
Fixed Income Categories

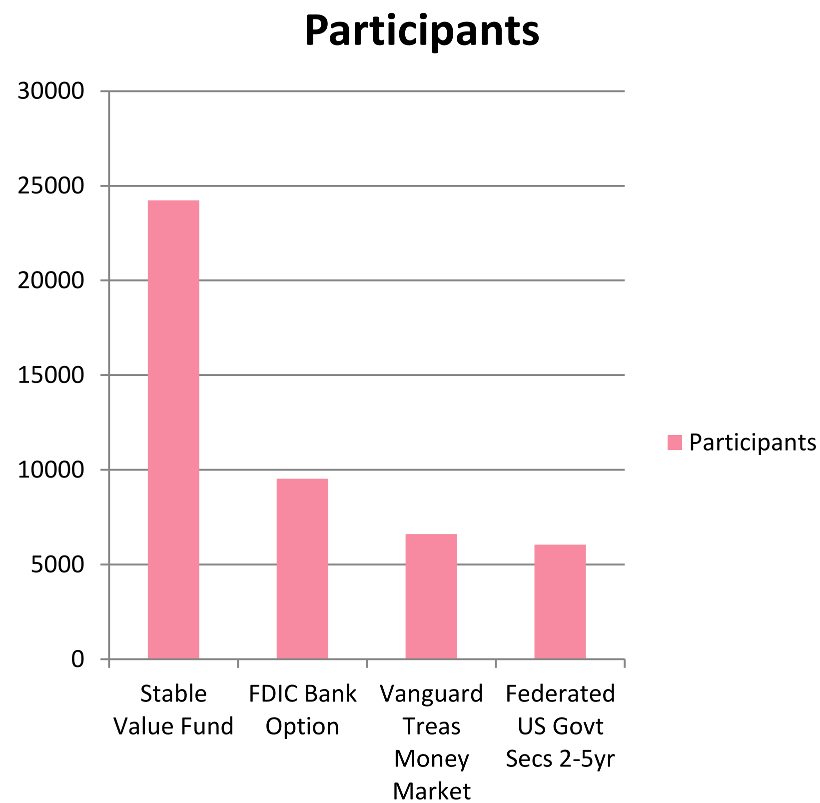
The Wisconsin Deferred Compensation Plan has a higher than average number of fixed income fund options, however most of them are in the High Quality/Short-Term bond category.

Credit Quality

Maturity	High	Mid	Low
Long		Vanguard Long-Term Inv Grade	
Mid		Blackrock U.S. Debt Index	
Short	Federated US Govt Secs Galliard Stable Value Vanguard Money Market Nationwide FDIC Fund		

Short Term Bond Fund Assets & Participants





Data as of June 15, 2018.

Short Term Bond Comparison

	Avg Credit Quality	Avg Maturity	Avg Duration	Expense Ratio
Federated US Govt 2-5 Yr Fund	AAA	6.9 yrs	4.8 yrs	0.59
Galliard Stable Value Fund	A+/AA	-	2.98 yrs	0.34
Vanguard Treas Money Market Fund	AAA	56 days	-	0.09
Nationwide FDIC Fund	-	-	-	0.00

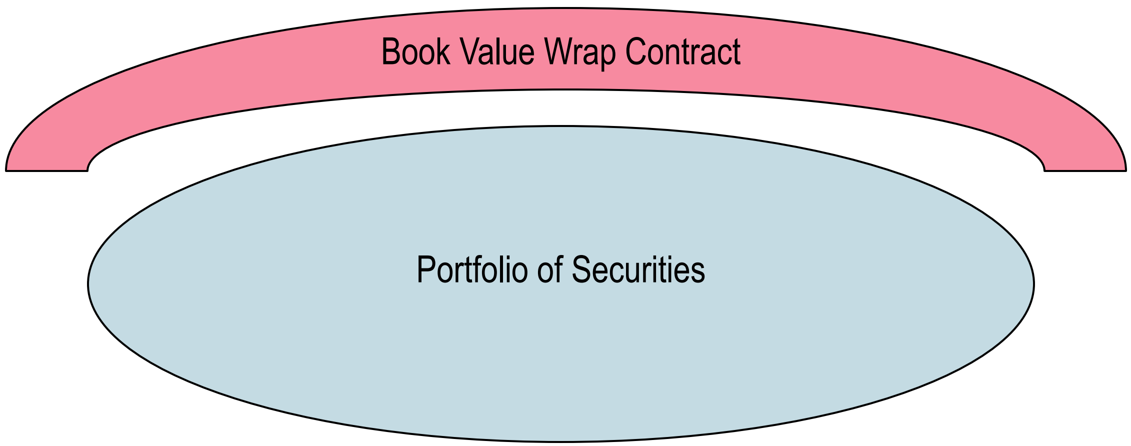
Data as of March 31, 2018, for the Federated and Galliard funds. For the Vanguard fund, data is as of May 31, 2018.

Stable Value Fund Overview

Stable Value Funds

A **stable value fund** is an investment option available primarily to qualified retirement plans such as a 401(k). It is a managed portfolio of highly rated corporate or government, short-term and intermediate-term bonds with a principal protection wrapper provided by a life insurance company.

- definition from Investopedia



Separate Account Holdings

Most stable value separate accounts are invested in one or more of the following instruments

- Guaranteed Investment Contracts (GICs)
  - GICs are stable value investment contracts issued by an insurance company that pays a specified rate of return for a specific period of time
- Security Backed Investment Contract (SBIC)
  - Investment contract backed by a pool of securities
- Separate Account GICs (SAGIC)
  - Investment contract purchased from an insurance company backed by assets outside of the company's general account. Insurance company owns assets.
- Synthetic GIC
  - Investment contract where plan owns assets in a trust and purchases a wrap contract to provide book value accounting for participant transactions.

Wrap Contract

What the wrap contract does

- Allows participants to transact at full “book value”
  - Total of all of their contributions and all earnings
- Removes market value fluctuation

What the wrap contract does not do

- Does not provide guarantees around portfolio holdings
- Does not cover defaulted securities

Stable Value Structure

There are several different ways to structure stable value funds, but they mainly fall into two major categories:

- Separate Account
  - The stable value fund is managed specifically for an individual retirement plan
- Pooled Account
  - Also known as a commingled fund
  - Assets from many different retirement plans are included in a single pool of assets

The Wisconsin Deferred Compensation plan has a separate account fund with Galliard.

Wisconsin Stable Value Fund

The Wisconsin Stable Value Fund currently has the following general characteristics*:

- Separate Account structure
- Multiple investment managers
  - Galliard (63%), Jennison (10%), Dodge & Cox (12%), TCW (8%), Wells Fargo (7%)
- Multiple wrap providers
  - American General Life (20%), Nationwide (11%), Prudential (20%), Transamerica (23%), Voya (19%)
- Expense ratio of 0.34%
  - Investment Management fees paid to Galliard - .09%
  - Wrap Contract fees – 0.18%
  - Acquired Fund Fees – 0.07%

Data as of March 31, 2018

Considerations

Considerations

- The FDIC Fund is terminating
  - Nationwide announced that it is leaving the business as of December 31, 2018
  - Could seek another provider or merge assets into another fund in the lineup
- Interest rate environment for Vanguard Long-Term Inv Grade Fund
  - In a rising rate environment, the fund could experience relatively large losses
  - Communication to participants needed?
- Redundancy of short term bond funds
  - Four short term bond funds could be reduced to two funds
  - Possibly add Core Plus bond fund
- Leverage stable value fund for substantial cost savings
  - Multi-manager, multi-wrap approach can be expensive
  - Capital preservation fund frequently managed by recordkeeping firm to reduce costs

Disclosures

Carefully consider the investment objectives, risks, fees and expenses of the annuity and/or the investment options. Contact us for a prospectus, a summary prospectus and disclosure document, as available, containing this information. Read them carefully before investing.

You could lose money by investing in a money market fund. Although the fund seeks to preserve the value of your investment at $1 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

The performance data contained herein represents past performance and does not guarantee future results. Investment return and principal value of an investment will fluctuate so that shares or units when redeemed may be worth less than their original cost. Current performance may be lower or higher than the return data quoted herein. For more current fund performance, including the most recent completed calendar month, please call 800-345-2345.

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Certain underlying funds invest in inflation protected bonds ("TIPS"). Unlike conventional bonds, the principal or interest of TIPS is adjusted periodically to a specified rate of inflation (e.g., Consumer Price Index for all Urban Consumers [CPI-U]). There can be no assurance that the inflation index used will accurately measure the actual rate of inflation.

Separately managed accounts are not registered investment products but separate accounts created specifically for the plan. Separately managed funds are not required to file a prospectus or registration statement with the SEC and, accordingly, neither is available.

A collective fund is not a mutual fund and is exempt from SEC registration. Designed for and exclusively sold to qualified retirement plans and their participants, the funds are not available to individual retail investors.

Foreign investments involve special risks, including currency fluctuations, taxation differences and political developments.

Equity securities of companies located in emerging markets involve greater risks than investing in more established markets, including currency fluctuations, political developments and share illiquidity.

The quoted mutual fund performance may includes performance of a predecessor fund/share class prior to the share class commencement of operations. Please refer to the current prospectus for further information.

Funds may impose redemption fees and/or transfer restrictions if assets are held for less than the published holding period. For more information, see the fund's prospectus and/or disclosure documents.

Putnam funds are managed by Putnam Investment Management. Putnam mutual funds are distributed by Putnam Retail Management. Putnam is affiliated with GWL&A and GWL&A of NY and its subsidiaries.

Gross expense ratios are the funds' total annual operating costs expressed as a percentage of the funds' average net assets over a given time period. They are gross of any fee waivers or expense reimbursements. Net expense ratios are the expense ratios after the application of any voluntary or contractual waivers or reimbursements and are the actual ratios that investors paid during the funds' most recent fiscal year. Expense ratios are subject to change.

Disclosures

Morningstar rankings are based on total return and do not reflect of sales charges, which, if reflected, would reduce returns.

The date in a target date fund's name represents an approximate date when an investor is expected to retire (which is assumed to be at age 65) and/or begins withdrawing money. The principal value of the funds is not guaranteed at any time, including the target date. For more information, please refer to the fund prospectus and/or disclosure document. A target date fund will gradually shift its emphasis from more aggressive investments to more conservative ones based on its target date (which is the assumed retirement date for an investor).

Asset allocation and balanced investment options and models are subject to the risks of the underlying investments, which can be a mix of stocks/stock funds and bonds/bond funds. For more information, see the prospectus and/or disclosure documents.

The value of commodity-linked investments may be affected by financial factors, political developments and natural disasters. As such, investment options that invest primarily in commodities may experience greater volatility than investments in traditional securities.

Equity securities of small and mid-sized companies may be more volatile than securities of larger, more established companies.

Real estate securities and trusts involve greater risks than other non-diversified investments, including but not limited to: declining property values, varying economic conditions, changes in zoning laws, or losses from casualty. Real estate securities that invest in foreign real estate involve additional risk, including currency fluctuations and political developments.

Investment return and principal value of a variable investment will fluctuate so that an investor's shares when redeemed, may be worth more or less than the original cost.

There is no guarantee that companies that can issue dividends will declare, continue to pay, or increase dividends .

The JPMCB SmartRetirement Funds indirectly bear their proportionate share of the operating expenses of any underlying funds in which they may invest (excluding management fees and service fees).

The Trustee of the JPMCB SmartRetirement Funds agrees to reimburse the Fund for such fund operating expenses, and/or to waive a portion of the Trustee's management fee, to the extent that the fund's total annual operating expenses (excluding management fees, service fees, underlying fund fees attributable to dividend and interest expenses on short sales, interest, expenses related to litigation and potential litigation, and extraordinary expenses not incurred in the ordinary course of the Fund's business) exceeds 0.04% of the Fund's average daily new assets through the expense cap expiration date.

The price of equity securities may rise or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries selected for the Fund's portfolio or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk" meaning that stock prices in general (or in particular, the prices of the types of securities in which a fund invests) may decline over short or extended periods of time. When the value of a fund's securities goes down, an investment in a fund decreases in value.

Some of the data may have been obtained from Standard & Poor's ("S&P") © 2015 The McGraw-Hill Companies, Inc. S&P is a division of The McGraw-Hill Companies, Inc.

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