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Correspondence Memorandum

Date: April 29, 2019

To: Deferred Compensation Investment Committee

From: Shelly Schueller, Director
 Wisconsin Deferred Compensation Program

Subject: Actively Managed Intermediate Bond Fund Finalists

ETF suggests that the Investment Committee make a recommendation regarding the addition of an actively managed intermediate bond fund option to the Wisconsin Deferred Compensation Program (WDC).

This memo recaps what has been done to select an actively managed intermediate bond fund for potential inclusion in the Wisconsin Deferred Compensation Program (WDC) investment option core lineup. If added, this fund would complement the existing Blackrock U.S. Debt Index bond fund in the WDC.

In 2018 the Board discussed adding an actively managed intermediate bond fund to the lineup. Intermediate bond funds are those with maturities in the three- to ten-year range. On the Board's behalf, Bill Thornton of Great-West Financial did [a fund search in August 2018](#) that indicated nine funds met the WDC's Investment Policy Statement criteria and additional criteria suggested by Mr. Thornton. The Board reviewed and discussed the fund selection analysis in [November 2018](#), then requested that three finalist firms present information on their offerings to the Board. These presentations occurred at the April 2019 Board meeting. The three finalist funds are:

- [Dodge and Cox Income](#). This fund's management team seeks both high and stable rate of current income consistent with the preservation of capital. Investments are made in a diversified portfolio of high-quality bonds and other debt securities. Dodge and Cox uses a committee approach to fund management. Their fixed income investment philosophy is "using fundamental research, we construct and manage a diversified portfolio of generally investment-grade fixed income securities with the goal of producing above-market returns over a three- to five-year period." Dodge and Cox does not offer a CIT equivalent to the Dodge and Cox Income fund; mutual funds are the firm's least expensive option currently.

Reviewed and approved by Matt Stohr, Administrator, Division of Retirement Services

Electronically Signed 5/2/19

Board	Mtg Date	Item #
DCIC	5.16.19	4

This fund has:

- the shortest duration of the finalists
 - top quartile performance for 5- and 10-year periods, and top decile performance for the 3-year period
 - tenured management – management team averages 22 years on the fund
 - currently holds 13% in international bonds (3% in emerging market)
- [Fidelity Advisor Total Bond Fund Z](#). This fund seeks a high level of current income and is managed using a team approach by Fidelity. Fidelity's investment philosophy for the Total Bond Fund includes a "dynamic multi-sector strategy" that utilizes the entire opportunity set of global fixed income securities to help add value in different market environments," evaluating risk based on historical and expected assumptions across sectors and securities, a "gradual contrarian approach" and "delivering a competitive risk/return experience commensurate with shareholder expectations of a "core" bond fund." Fidelity uses the Bloomberg Barclays U.S. Universal Bond Index as a guide in allocating assets across the investment-grade, high yield, and emerging market asset classes. It may invest up to twenty percent of assets in high yield and emerging market debt securities.

This fund has:

- top decile performance for the 5-year period and top quintile performance for 1, 3- and 10-year periods
- may hold up to 20% in high-yield and emerging market bonds
- currently holds 10% in international bonds (3% emerging market)

Fidelity also briefly presented information on its Total Bond Fund CIT, Core Plus, which is similar but not identical to the mutual fund. Core Plus is managed by the same team but may allocate up to thirty percent of assets to the "plus sector" (high yield, emerging market debt, global, etc.). The expense ratio for the Core Plus CIT is 30 bps for the WDC. However, because the initial actively managed intermediate bond fund search did not include "core plus" funds, the Fidelity Core Plus CIT is not under consideration for inclusion at this time.

- [Western Asset Core Bond Fund](#). This is the flagship fund for Western Asset, which uses a team-based management approach. Western Asset seeks to "maximize total return from a high-quality, U.S. dollar denominated core fixed-income portfolio. It uses the global breadth of Western Asset's investment platform, fundamental value-oriented investment philosophy and a process that combines top down macro-economic views with bottom up fundamental research." The Core Bond Fund seeks to maximize total return, consistent with prudent investment management and liquidity needs. The fund invests in a portfolio of fixed income securities of various maturities and under normal market conditions, will invest at least eighty percent of its net assets in debt and fixed

income securities. Western Asset does not have a comparable CIT that is suitable for the WDC currently.

This fund has:

- highest 5-year credit quality of the finalists - A
- top decile performance for 1, 5- and 10-year time periods, and top quintile for the 3-year period
- currently holds 15% in international bonds (6% emerging market)

Key attributes of each finalist firm’s actively managed intermediate bond fund offering are shown in Table 1.

	Ticker	Expense Ratio	Morningstar Rating	Duration (years) (category = 5.2)	Total Ret. YTD	Total Ret. 1 Year	Total Ret. 3 Year	Total Ret. 5 Year	Total Ret. 10 Year
Dodge & Cox Income	DODIX	0.43	4	4.3	3.7	4.3	3.6	3.2	5.4
Fidelity Adv Total Bond Z	FBKWX	0.36	4	5.4	3.9	4.6	3.4	3.3	5.6
Western Asset Core Bond	WACSX	0.43	5	5.6	3.92	4.74	3.00	3.56	6.97

All three finalist funds are quality options that would be complementary additions to the WDC investment option lineup. Mr. Thornton suggests the Investment Committee consider which fund would be the best fit for the WDC. He had the following comments about the finalist funds:

- The Western Asset Core Fund has really good performance, but it is also the most like the BlackRock U.S. Debt index fund from an allocation and correlation standpoint.
- Dodge & Cox Income might not always be included in the WDC’s managed accounts service, because Morningstar considers it too different from the Bloomberg Barclays U.S. Aggregate Bond Index. Morningstar has suggested that a fund with an R-squared ratio¹ below 85 probably would not be used in the managed accounts service.

¹ R-squared is generally the percentage of a fund’s movements or returns that can be explained by the benchmark returns. Its value lies between 0 and 100. “A high R-squared, between 85% and 100%, indicates the stock or fund’s performance moves relatively in line with the index. A fund with a low R-squared, at 70% or less, indicates the security does not generally follow the movements of the index.” Thus, an R-squared of 100% means that all movements are completely explained by movements in the index. Source: <https://www.investopedia.com/terms/r/r-squared.asp>

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- Fidelity Advisor Total Bond Z fund has a high enough allocation to the “plus” sectors to be different from the Blackrock US Debt Index Fund, but still correlates well enough to the US Aggregate benchmark that it will be used in Managed Accounts.

Mr. Thornton and ETF staff will be available at the meeting to answer any questions.

Attachment: [Wisconsin Deferred Compensation Plan Intermediate-Term Bond Search](#) (April 18, 2019)

Wisconsin Deferred Compensation Plan Intermediate-Term Bond Search

April 18, 2019

Bill Thornton

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Fund Analytics - Active Mutual Funds

Fund Facts

Ticker	Morningstar Category	Morningstar Institutional Category	Primary Prospectus Benchmark	Manager Name	Manager Tenure (Longest)	Fund Size	Fund Size Date	Inception Date
Western Asset Core Bond IS	WACSX US Fund Intermediate-Term Bond	Intermediate Investment Grade (4-6)	BBgBarc US Agg Bond TR USD	Multiple	24.33	10,334,355,823.00	3/29/2019	8/29/2008
Dodge & Cox Income	DODIX US Fund Intermediate-Term Bond Short/Intermediate	Investment Grade (2.5-4)	BBgBarc US Agg Bond TR USD	Multiple	30.25	54,872,711,589.00	2/28/2019	1/3/1989
Fidelity® Total Bond Fund	FTBFX US Fund Intermediate-Term Bond	BBB-Rated	BBgBarc US Agg Bond TR USD	Multiple	14.33	21,796,932,784.00	3/29/2019	10/15/2002
US Fund Large Value	Large Value							5/1/1931

	# of Holdings	Prospectus Net Expense Ratio	Average Eff Maturity	Average Eff Duration	Average Credit Quality	Yield to Maturity	Turnover Ratio %
Western Asset Core Bond IS	1,720	0.43	10.00	5.70	AAA	3.96	115.00
Dodge & Cox Income	1,101	0.43	8.30	4.30	A	4.12	37.00
Fidelity® Total Bond Fund	1,555	0.45		5.38	BBB	3.72	109.00
US Fund Intermediate-Term Bond	480	0.75	7.68	5.24	BBB	3.77	204.20

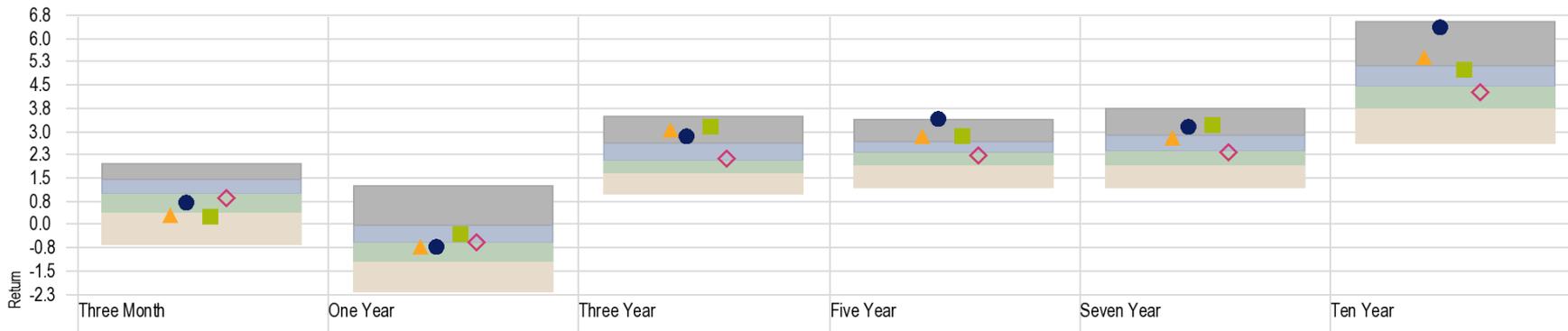
	Asset Alloc Cash %	Asset Alloc US Equity %	Asset Alloc Non-US Equity %	Asset Alloc US Bond %	Asset Alloc Non-US Bond %	Asset Alloc Other %	Portfolio Date
Western Asset Core Bond IS	-1.77	0.00	0.00	86.19	14.46	1.11	12/31/2018
Dodge & Cox Income	1.19	0.00	0.00	82.78	14.71	1.32	12/31/2018
Fidelity® Total Bond Fund	2.75	0.00	0.00	84.60	13.97	-1.32	1/31/2019
US Fund Intermediate-Term Bond	2.89	0.04	0.00	88.58	6.96	1.53	2/28/2019

Fund Analytics - Active Mutual Funds

Trailing Returns

Peer Group (5-95%): Open End Funds - U.S. - Intermediate-Term Bond

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



● Western Asset Core Bond IS
◆ US Fund Intermediate-Term Bond

■ Dodge & Cox Income

▲ Fidelity® Total Bond Fund

Trailing Returns

As of Date: 12/31/2018 Source Data: Monthly Return Peer Group: Open End Funds - U.S. - Intermediate-Term Bond

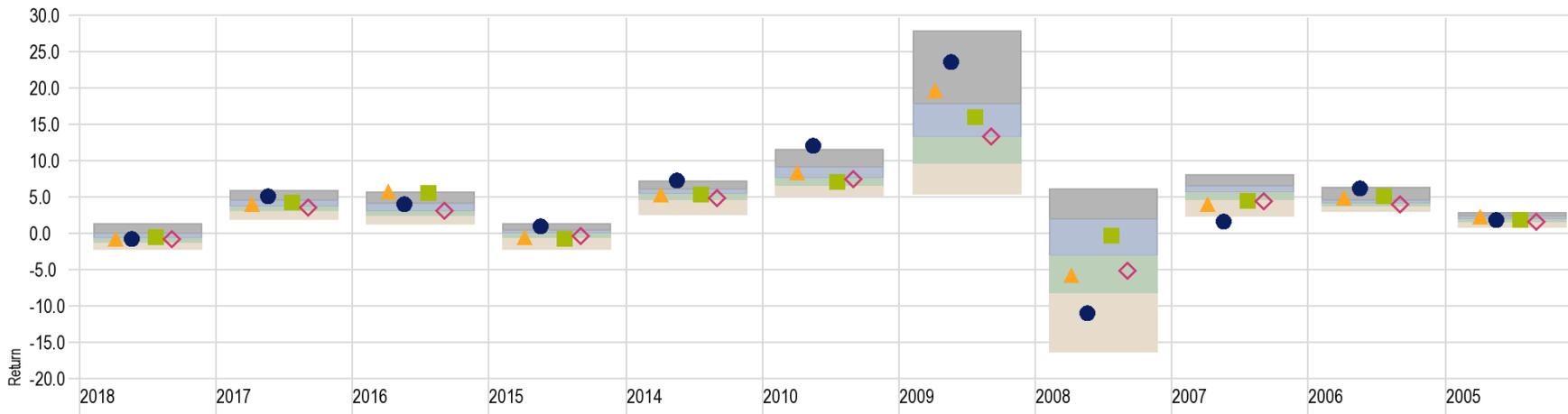
	Three Month	% rank	One Year	% rank	Three Year	% rank	Five Year	% rank	Seven Year	% rank	Ten Year	% rank
Western Asset Core Bond IS	0.72	62	-0.67	54	2.86	15	3.45	5	3.21	14	6.41	6
Dodge & Cox Income	0.29	79	-0.31	36	3.19	8	2.87	17	3.26	13	5.01	29
Fidelity® Total Bond Fund	0.34	77	-0.69	55	3.08	10	2.85	18	2.82	28	5.43	16
BBgBarc US Agg Bond TR USD	1.64	14	0.01	24	2.06	52	2.52	35	2.10	67	3.48	81
US Fund Intermediate-Term Bond	0.87	56	-0.52	46	2.14	47	2.24	54	2.36	51	4.29	57
25th Percentile	1.43		-0.01		2.61		2.68		2.87		5.12	
50th Percentile	0.97		-0.58		2.09		2.30		2.39		4.47	
75th Percentile	0.40		-1.21		1.67		1.89		1.93		3.77	

Fund Analytics - Active Mutual Funds

Calendar Year Returns

Peer Group (5-95%): Open End Funds - U.S. - Intermediate-Term Bond

■ Top Quartile ■ 2nd Quartile ■ 3rd Quartile ■ Bottom Quartile



● Western Asset Core Bond IS ■ Dodge & Cox Income ▲ Fidelity® Total Bond Fund
 ◆ US Fund Intermediate-Term Bond

Calendar Year Returns

Peer Group: Open End Funds - U.S. - Intermediate-Term Bond

	2018	2017	2016	2015	2014	2010	2009	2008	2007	2006	2005
Western Asset Core Bond IS	-0.67	5.23	4.13	1.22	7.54	12.25	23.72	-10.78	1.74	6.24	1.91
Dodge & Cox Income	-0.31	4.36	5.61	-0.59	5.48	7.17	16.05	-0.29	4.68	5.30	1.98
Fidelity® Total Bond Fund	-0.69	4.19	5.86	-0.42	5.54	8.55	19.80	-5.56	4.13	5.15	2.46
BBgBarc US Agg Bond TR USD	0.01	3.54	2.65	0.55	5.97	6.54	5.93	5.24	6.97	4.33	2.43
US Fund Intermediate-Term Bond	-0.52	3.76	3.24	-0.27	5.13	7.71	13.47	-5.07	4.62	4.11	1.79
25th Percentile	-0.01	4.51	4.19	0.48	6.17	9.22	17.97	1.94	6.49	4.60	2.40
50th Percentile	-0.58	3.81	3.08	0.00	5.55	7.71	13.34	-3.00	5.69	4.11	2.03
75th Percentile	-1.21	3.10	2.36	-0.69	4.66	6.61	9.59	-8.20	4.69	3.77	1.64

Fund Analytics - Active Mutual Funds

Returns-Based Style Map

Time Period: 1/1/2014 to 12/31/2018



- Western Asset Core Bond IS
- Dodge & Cox Income
- Fidelity® Total Bond Fund
- BBgBarc US Agg Bond TR USD
- US Fund Intermediate-Term Bond

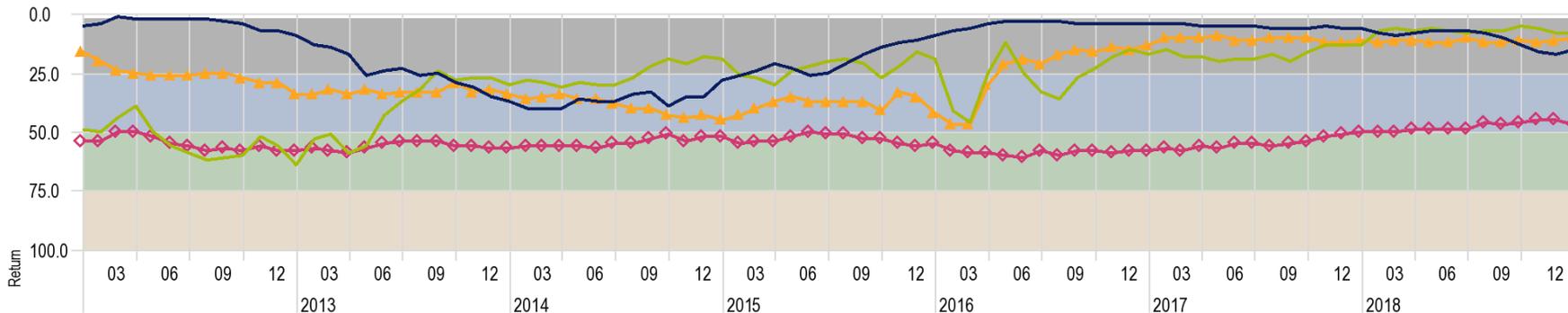
Fund Analytics - Active Mutual Funds

3 Year Rolling Returns

Time Period: 1/1/2009 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Intermediate-Term Bond Rolling Window: 3 Years 1 Month shift

1st to 25th Percentile 26th to Median 51st to 75th Percentile 76th to 100th Percentile



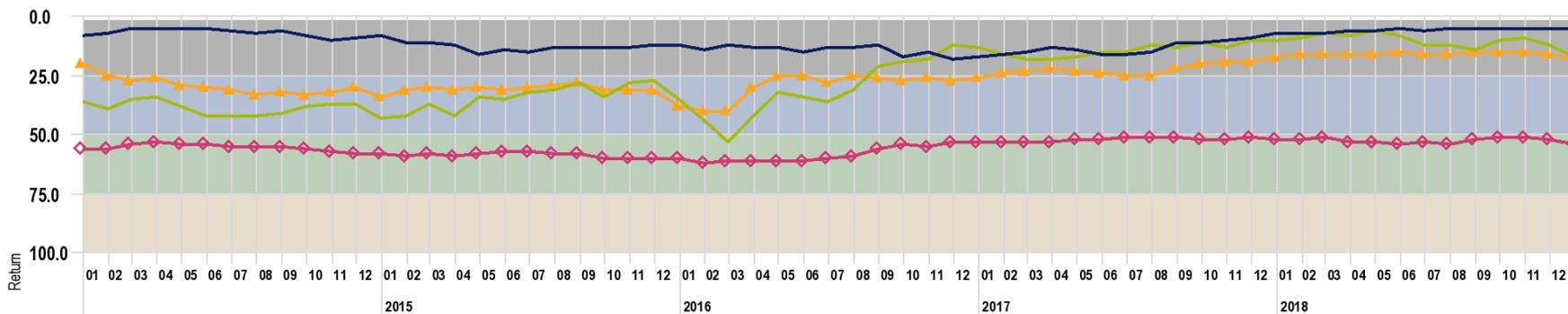
Western Asset Core Bond IS US Fund Intermediate-Term Bond Dodge & Cox Income Fidelity Total Bond Fund

5 Year Rolling Returns

Time Period: 1/1/2009 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Intermediate-Term Bond Rolling Window: 5 Years 1 Month shift

1st to 25th Percentile 26th to Median 51st to 75th Percentile 76th to 100th Percentile

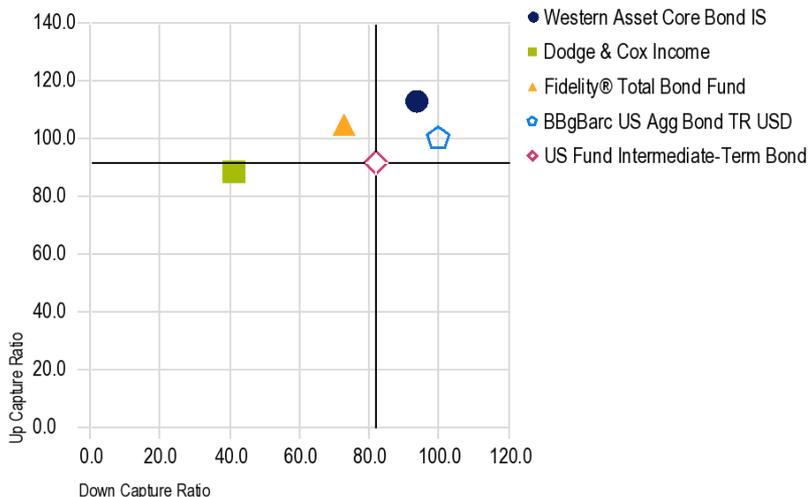


Western Asset Core Bond IS US Fund Intermediate-Term Bond Dodge & Cox Income Fidelity Total Bond Fund

Fund Analytics - Active Mutual Funds

3 Year Upside-Downside Capture

Time Period: 1/1/2016 to 12/31/2018



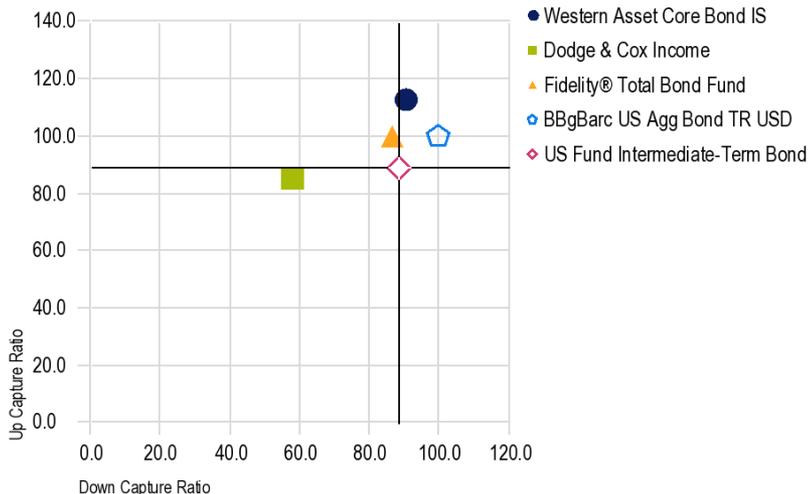
3 Year Upside-Downside Statistics

Time Period: 12/1/2015 to 12/31/2018 Calculation Benchmark: BBgBarc US Agg Bond TR USD

	Up Period Percent	Down Period Percent	Up Capture Ratio	Down Capture Ratio
Western Asset Core Bond IS	64.86	35.14	112.65	96.17
Dodge & Cox Income	67.57	32.43	88.37	49.09
Fidelity® Total Bond Fund	67.57	32.43	104.74	82.13
BBgBarc US Agg Bond TR USD	59.46	40.54	100.00	100.00
US Fund Intermediate-Term Bond	62.16	37.84	91.30	85.55
25th Percentile	59.46	45.95	241.74	184.59
50th Percentile	56.76	43.24	218.82	154.44
75th Percentile	54.05	40.54	192.68	122.11

5 Year Upside-Downside Capture

Time Period: 1/1/2014 to 12/31/2018



5 Year Upside-Downside Statistics

Time Period: 12/1/2013 to 12/31/2018 Calculation Benchmark: BBgBarc US Agg Bond TR USD

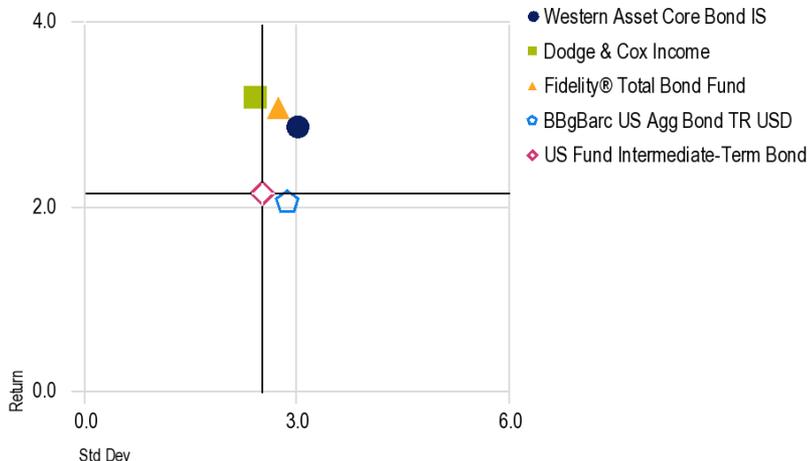
	Up Period Percent	Down Period Percent	Up Capture Ratio	Down Capture Ratio
Western Asset Core Bond IS	63.93	36.07	112.95	90.57
Dodge & Cox Income	63.93	36.07	85.31	55.97
Fidelity® Total Bond Fund	60.66	39.34	99.63	86.29
BBgBarc US Agg Bond TR USD	59.02	40.98	100.00	100.00
US Fund Intermediate-Term Bond	59.02	40.98	88.74	88.06
25th Percentile	55.74	47.54	135.24	217.79
50th Percentile	54.10	45.90	115.47	189.48
75th Percentile	52.46	44.26	98.78	164.90

Fund Analytics - Active Mutual Funds

3 Year Risk-Reward

Time Period: 1/1/2016 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Intermediate-Term Bond



3 Year Risk Statistics

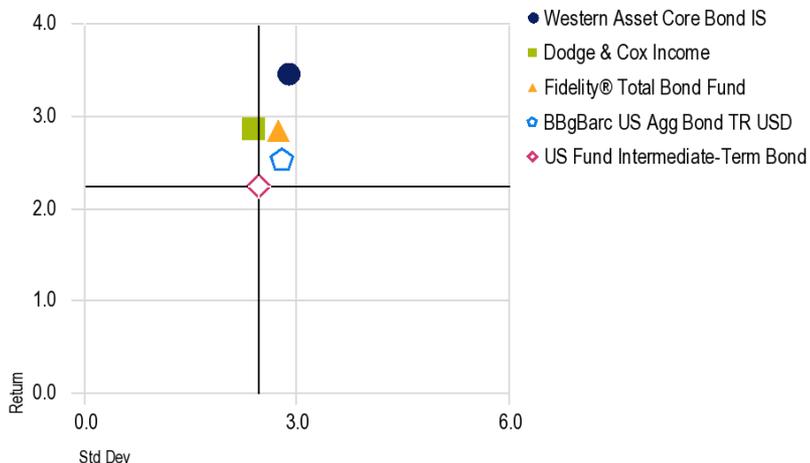
Time Period: 12/1/2015 to 12/31/2018 Peer Group: Open End Funds - U.S. - Intermediate-Term Bond

	Return	Std Dev	Alpha	Beta	Sharpe Ratio	Tracking Error
Western Asset Core Bond IS	2.62	3.01	0.70	1.02	0.51	0.87
Dodge & Cox Income	2.83	2.46	1.18	0.66	0.69	1.90
Fidelity® Total Bond Fund	2.65	2.81	0.84	0.88	0.55	1.38
BBgBarc US Agg Bond TR USD	1.89	2.85	0.00	1.00	0.29	0.00
US Fund Intermediate-Term Bond	1.90	2.52	0.11	0.86	0.33	0.75
25th Percentile	2.34	2.85	0.55	0.95	0.46	1.30
50th Percentile	1.85	2.71	0.04	0.89	0.29	1.00
75th Percentile	1.44	2.56	-0.36	0.81	0.15	0.63

5 Year Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Intermediate-Term Bond



5 Year Risk Statistics

Time Period: 1/1/2014 to 12/31/2018 Peer Group: Open End Funds - U.S. - Intermediate-Term Bond

	Return	Std Dev	Alpha	Beta	Sharpe Ratio	Tracking Error
Western Asset Core Bond IS	3.45	2.90	0.91	1.00	0.94	0.86
Dodge & Cox Income	2.87	2.39	0.94	0.67	0.90	1.78
Fidelity® Total Bond Fund	2.85	2.75	0.53	0.89	0.78	1.26
BBgBarc US Agg Bond TR USD	2.52	2.79	0.00	1.00	0.66	0.00
US Fund Intermediate-Term Bond	2.24	2.47	-0.02	0.86	0.63	0.73
25th Percentile	2.68	2.81	0.41	0.95	0.74	1.32
50th Percentile	2.30	2.66	-0.03	0.90	0.60	1.00
75th Percentile	1.89	2.51	-0.37	0.80	0.47	0.65



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Wisconsin Deferred Compensation Board
Intermediate-Term Bond Performance Update
Data as of April 17, 2019

Name	Ticker	Morningstar Category	Morningstar Rating	Expense Ratio	Total Ret YTD	Total Ret 1 Yr	Total Ret 3 Yr	Total Ret 5 Yr	Total Ret 10 Yr
Dodge & Cox Income	DODIX	Intermediate-Term Bond	4	0.43	3.77	4.31	3.46	3.08	5.22
Fidelity® Total Bond Fund	FTBFX	Intermediate-Term Bond	4	0.45	3.72	4.18	3.04	3.10	5.39
Western Asset Core Bond IS	WACSX	Intermediate-Term Bond	5	0.43	3.92	4.74	3.00	3.56	6.97