July 2023

Voya Enhanced Long Duration Government/ Credit: A Five-Year Track Record to Celebrate

The Voya Enhanced Long Duration Government/Credit (ELGC) Strategy celebrated its fifth anniversary in March 2023, with a successful track record as a differentiated investment. We explore what makes ELGC stand out.

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Highlights

- Since its 2018 inception, ELGC has outperformed the Bloomberg U.S. Long Government/Credit Index and bested other asset managers — landing ELGC in the top quartile of its peer group since inception (as of 6/30/2023).
- ELGC enhances diversification through allocations to private credit investment grade (PCIG) as a complement to public corporate securities, historically providing higher yield and total return while reducing overall risk.
- Its longer duration can benefit a variety of corporate pension plan types, boosting total portfolio duration and hedge ratio.

What has been the reason for ELGC's strong results?

The Strategy uses a differentiated approach that has produced attractive results since inception:

- Outperformed its benchmark (the Bloomberg U.S. Long Government/Credit Index) with a similar risk profile (Exhibit 1)
- Exhibited superior performance and solid risk-adjusted returns within its eVestment peer group (top quartile since inception; Exhibit 2)[1]
- Provided improved portfolio diversification, stronger downside resilience and potentially higher yields

We believe a key reason for these results is the way we thoughtfully expand the investment opportunity set. ELGC manages investment risks in the same vein as traditional long-duration portfolios, but we can also allocate to off-benchmark asset classes such as PCIG and securitized credit, which traditionally have not been included in the long-duration tool kit.[2]

[1] As of 06/30/2023. Source: eVestment. Category: US Long Duration — Gov/Cred Fixed Income.
[2] The ELGC Strategy doesn't have an allocation to securitized assets today, but they have been included in the past and could be in the future (given securitized is more of a tactical allocation, rather than a strategic one).

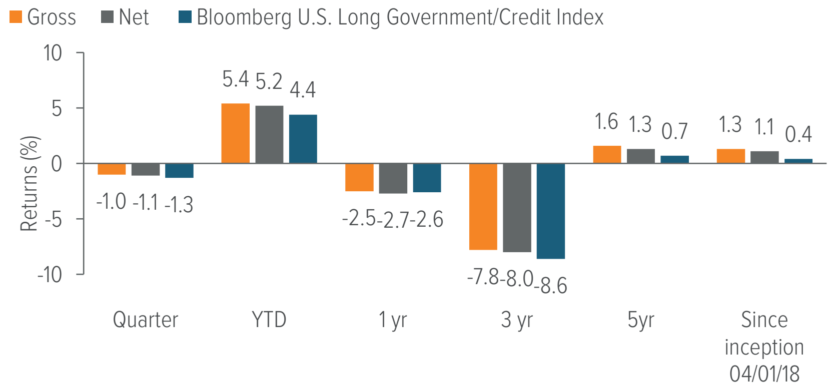
Exhibit 1: Benchmark-beating returns over time

Voya Enhanced Long Duration Government/Credit composite performance vs. benchmark

Performance summary (trailing five years)

	Voya	Index
Annualized returns (%)		
Gross	1.56	0.66
Net	1.30	0.66
Return peer ranking	26	–
Standard deviation (%)	12.55	12.46
Information ratio	0.70	–
Information ratio peer ranking	19	–

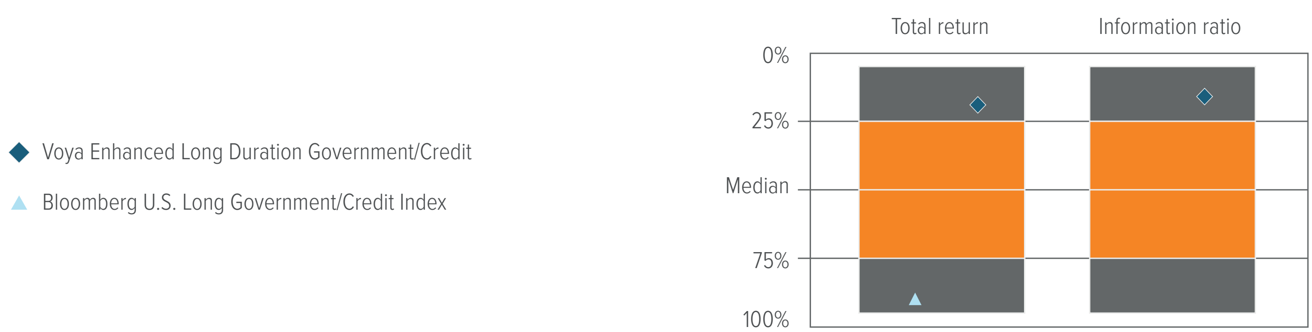
Annualized returns



As of 06/30/23. Source: Voya Investment Management and eVestment Alliance. **Past performance does not guarantee future results.** Performance numbers for time periods greater than one year are annualized. Index shown is the Bloomberg U.S. Long Government/Credit Index. The composite represents the investment results of a group of fully discretionary portfolios managed according to the Strategy. Returns include the reinvestment of income. Gross-of-fees returns are presented before management and custodial fees but after all trading expenses. Net-of-fees returns are calculated by deducting a hypothetical management fee from the gross return on a monthly basis and geometrically linking the results to produce returns shown. The hypothetical management fee is equal to or greater than the asset-weighted average of each accounts' fee schedule in the composite. The model fee used will result in a net return that is equal to or lower than a net return using actual fees. For a description of advisory fees, please see Form ADV, Part II. Gross returns should be used as Supplemental Information only. Please see "Schedule of Composite Performance" at the end of this document.

Exhibit 2: Strong results vs. peers

Total return and information ratio vs. eVestment category, since inception (04/01/18)



	Total return		Information ratio	
	Value	Rank	Value	Rank
5th percentile	1.97		1.18	
25th percentile	1.24		0.61	
Median	0.96		0.40	
75th percentile	0.72		0.25	
95th percentile	-0.66		-0.14	
# of observations	55		45	
▲ Bloomberg U.S. Long Government/Credit Index	0.35	93	-	-
◆ Voya Enhanced Long Duration Government/Credit	1.32	20	0.76	18

As of 06/30/23. Source: eVestment Alliance. **Past performance does not guarantee future results.** Performance numbers for time periods greater than one year are annualized. The composite represents the investment results of a group of fully discretionary portfolios managed according to the Strategy. Returns include the reinvestment of income. Gross returns are shown, and are presented after transaction costs, but before management fees, which in addition to other fees incurred in the management of the portfolio, would further reduce returns. For a description of advisory fees, please see Form ADV, Part II. Gross returns should be used as supplemental information only. Please see "Schedule of Composite Performance" at the end of this document.

Why is "enhanced" in the Strategy's name?

The word "enhanced" refers to the way we designed ELGC as a strategy seeking to deliver a benchmark-like risk profile, but with superior risk-adjusted returns by virtue of an expanded toolkit.

In the process of developing ELGC more than five years ago, we found that most portfolios in the long-duration government/credit peer group looked similar, typically overweighting corporate credit. Not surprisingly, these portfolios were concentrated in many of the same credits, given that the top 100 corporate issuers represent nearly 70% of the index in terms of market value.[3] We took a different approach that still fit the spirit of long-duration government/credit sought by plan sponsors.

We felt strongly that a high-octane, alpha-seeking strategy is generally not suitable for liability hedging portfolios. We wanted to deliver a benchmark-like risk profile in terms of duration and spread duration, but with an "enhanced" opportunity set with the potential for a more efficient return profile in addition to broader issuer diversification.

Comparing the portfolio with its benchmark (Exhibit 3), our approach is not to replace public credit, but rather to complement the allocation to public credit with private credit investment grade (PCIG). The allocation to PCIG tends to hover around 35%, adjusted up or down, based on relative value. The result is a higher-yielding portfolio (an incidental outcome; more on that below) but with similar duration and credit quality relative to the benchmark.

ELGC seeks to enhance returns over the benchmark within a more risk-aware framework than those of high-beta, risk-seeking strategies.

Exhibit 3: A higher allocation to PCIG

Representative account characteristics vs. benchmark

Top sector weights (%)	Portfolio	Index	Over/under weight
IG corporates	39.7	46.7	-7.1
US Treasury & cash	36.4	46.2	-9.8
Privates	22.1	0.0	22.1
Emerging markets	1.7	3.6	-1.8
Government related	0.1	3.6	-3.4
Information ratio	0.70	–	–
Information ratio peer ranking	**19**	**–**	**–**

Holdings-based characteristics	Portfolio	Index
Yield-to-worst (%)	5.0	4.8
Effective duration (yrs.)	14.0	14.4
Average credit quality	A+	AA–

As of 06/30/23. Source: Blackrock Aladdin and Voya IM. The returns-based characteristics presented are based on the gross-of-fee composite returns. Characteristics are based on a representative account in the composite that we believe best represents the portfolio management style of the composite. Characteristics may be adjusted to exclude securities for which data is not available or for extreme data outliers via commonly used trimming methodologies. **Past performance does not guarantee future results.** Benchmark index: Bloomberg U.S. Long Government/Credit Index. Additional information on the composition and results of the representative account portfolio is available upon request.

[3] Source: Bloomberg as of 06/30/23. Benchmark is the Bloomberg U.S. Long Government/Credit Index.

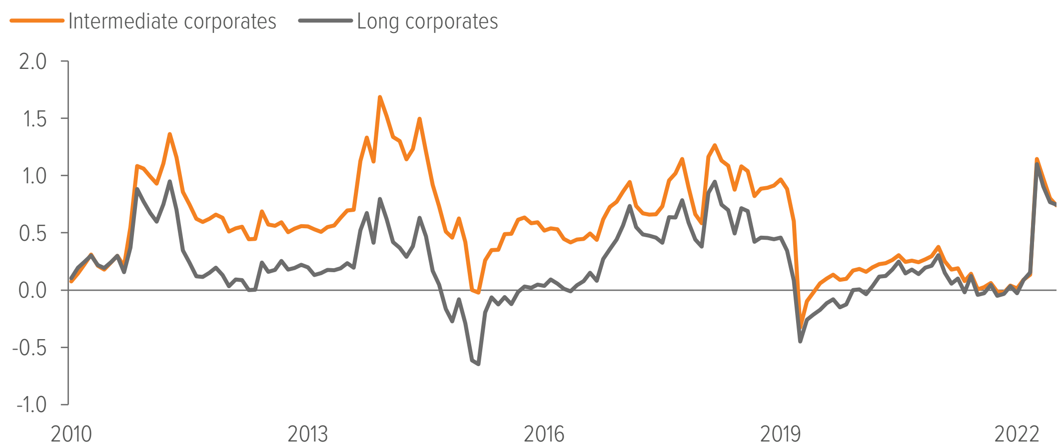
Why PCIG?

There are three main reasons why we built in a sizeable allocation to private credit.

1. PCIG is more efficient than public long-duration corporates. We aim to take spread risk in the belly of the yield curve — instead of at the long end — because there is lower spread volatility and less spread duration, which helps us capture more of the spread over time. Consider that a small change in long corporate spreads can wipe out the carry, compared with the same change in the intermediate part of the curve. Exhibit 4 illustrates how intermediate corporates (represented by the Bloomberg U.S. Credit Corporate 5–10 Year Index, which has a duration comparable to PCIG) have superior risk-adjusted returns compared with long corporates (represented by the Bloomberg U.S. Credit Corporate Index).

Exhibit 4: Intermediate corporates offer higher Sharpe ratio and annualized excess returns

3-year rolling Sharpe ratio, intermediate corporates vs. long corporates



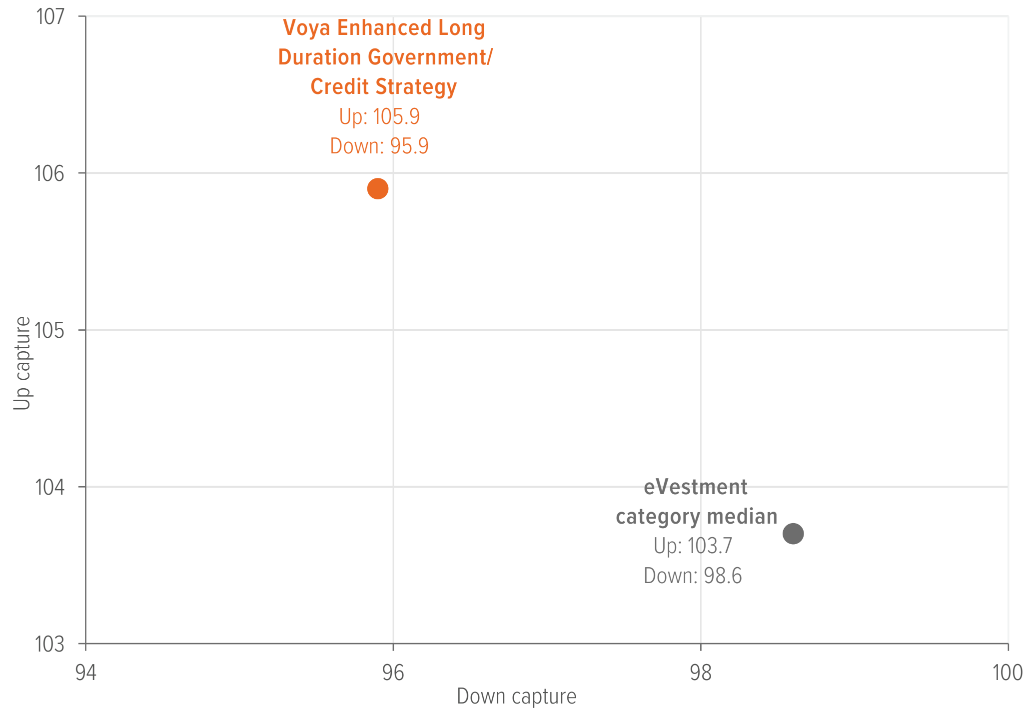
	Intermediate corporates	Long corporates
Annualized excess return	1.41%	1.20%
Annualized volatility	6.0%	9.4%
Sharpe ratio	0.24	0.13

Period from 12/31/07 through 06/30/2023. Source: Voya IM. Returns are monthly excess returns. Excess return is defined as the return attributed to carry and spread change and excludes any change in interest rates (i.e., it is duration neutral and thus provides a common basis for comparison). Intermediate corporates are represented by the Bloomberg U.S. Credit Corporate 5–10 Year Index; long corporates are represented by the Bloomberg U.S. Credit Corporate Index.

Over time, ELGC demonstrated better risk adjusted returns than the average "regular" long government/credit strategy, with a top-quartile information ratio over the trailing five years. In addition, ELGC demonstrated greater upside capture and less downside capture than the benchmark (Exhibit 5) — one of only seven strategies above the median in both upside and downside capture.

Exhibit 5: Greater upside capture, less downside capture vs. peers

Composite up/down capture vs. eVestment category



As of 06/30/23. Source: eVestment. **Past performance does not guarantee future results.** Performance for time periods greater than one year are annualized. The composite represents the investment results of a group of fully discretionary portfolios managed according to the Strategy. Returns include the reinvestment of income. Gross returns are presented before management and custodial fees but after all trading expenses.

Even for plans not seeking to diversify a multi-manager roster, ELGC has shown an ability to deliver better results than most of the long-duration government/credit managers in its peer group.

2. Private credit helps decrease idiosyncratic risk, which is a potential benefit to plans with multiple managers. ELGC's 20% minimum allocation to PCIG also reduces the idiosyncratic risk that can arise from the high concentration of corporate issuers in the long-duration benchmarks. For plans that seek long-duration government/credit exposure, ELGC provides that in a more risk-efficient manner. In other words, even for plans not seeking to diversify a multi-manager roster, ELGC has shown an ability to deliver better results than most of the long-duration government/credit strategies in its peer group.

3. Private credit's covenant packages provide downside protection to help mitigate credit events. This has resulted in fewer downgrades historically and, in the rare event of a default in an investment grade corporate bond, recoveries were generally higher with superior economics.[4] This is an important point, as credit events such as ratings downgrades do not affect the liability discount rate. Thus, allocating to assets that have features to help mitigate downgrades is paramount in a liability-hedging portfolio.

[4] Overall recovery rates based on present value computations using pre-CRE (credit-risk-event) coupon rates, per the Society of Actuaries' Approximate Rating Agency (ARA) methodology published January 2016. Private placement recovery rates based on 2003-2012 Credit Risk Loss Experience Study on Private Placement Bonds, published in January 2016 by the Society of Actuaries. There were 15 contributors of experience data to the study, who collectively hold about 22% of life insurance industry general account investment private placements at year-end 2012. **Past performance does not guarantee future results.**

Why the tendency of a 35% weight to PCIG?

In designing ELGC, our view was that PCIG — with all its desirable diversifying properties — could be included in a long-duration construct. Proving that hypothesis was not straightforward and required iterative backtesting. Among the challenges we uncovered:

- Add too much PCIG, and portfolios would fall far short of the target spread duration due to the inherent shorter spread duration of this asset class.
- Correcting for this shortfall would require extending the duration of public bonds, resulting in an undesirable "barbell" that exposes the portfolio to significant curve risk. The public corporate portion would become a de facto "completion" portfolio with an overweight to financial issuers, as PCIG has almost no exposure to financials.
- "Best ideas" approaches may become significantly compromised for both public corporate and PCIG investment teams. If we were to construct a public corporate bond portfolio that serves to "complete" around the private allocation, we may prevent Voya's public investment grade team from doing what it does best — picking bonds — by potentially forcing it to invest in a narrower subset of longer duration to achieve the desired spread duration profile.

After multiple iterations, we found that a 35% allocation to PCIG was the sweet spot, engendering a symbiosis of best ideas and duration goals that helps to achieve the desired benefits while avoiding unintended risks.

Why is the yield-to-worst the same or only slightly better than the long government/credit benchmark?

We do not allocate to PCIG for the sole purpose of maximizing yield. This is not a high-beta, alpha-oriented "plus" strategy. The objective is to beat the benchmark with benchmark-like risk, and to do so more efficiently. We allocate to off-benchmark investment-grade securities to expand the investment grade corporate spread product universe. The yield advantage is also a function of the shape of the yield curve. Unless the curve is flat or inverted, long corporates will have greater yield compared to intermediates, even with the spread pick-up for PCIG. Also, some of the economic benefits of allocating to PCIG are captured in its total return (rather than its yield). Examples include the "back-end income" from prepayments, yield bumps, and other fees paid by the borrower for amendments — none of which show up in the stated yield.

Is ELGC right for my corporate plan?

Plan duration is a key factor in determining the fit for a pension plan. Given that the duration of ELGC is around 14 years, it may be an attractive option for certain corporate pension plans, including:

- Longer-duration plans that are open and accruing benefits
- Plans that are taking early steps towards long-duration fixed income and that have a de-risking posture within their hedging portfolio
- Plans that want exposure to PCIG but lack the size for a meaningful allocation to a separately managed account
- Plans that need longer duration than they could get from a standalone allocation to PCIG, since the duration of a mature PCIG allocation tends to be around six years
- Plans that are not fully hedged or fully funded (and may be closed/frozen), but seek to achieve a total portfolio duration in line with liability duration (Exhibit 6)

Exhibit 6: Longer-duration investments can boost total portfolio duration and hedge ratio

Hypothetical scenario

Holdings-based characteristics	Curent FI allocation (duration match to liability)	ELGC FI allocation (duration beyond liability)
a. Funded status	90%	90%
b. Liability duration	10	10
c. Fixed income asset duration	10	14
d. Fixed income asset allocation	50%	50%
e. Growth-seeking asset allocation	50%	50%
f. Total asset portfolio duration (c * d)	5	7
g. Hedge ratio (a * f/b)	45%	63%

Source: Voya IM. For illustrative purposes only.

The sample portfolio on the left has a duration of 10 years (the same as the liability duration), diluted by both the growth-seeking allocation and the underfunded position, which proves insufficient to match liability duration when aggregated with the rest of the asset portfolio.

A longer-duration fixed income portfolio such as ELGC results in a higher total portfolio duration (+2 years) and a higher hedge ratio (63% vs. 45%).

What are the primary takeaways for investors?

Off-benchmark allocations to PCIG can provide long-duration government/credit investors with three potential benefits, in our view:

- **Portfolio diversification:** By expanding the investment universe, we can mitigate ithe issuer concentration risk found in long duration indexes.
- **Stronger downside protection:** PCIG's robust covenant packages may lead to lower credit losses, mitigating downside risk by minimizing credit rating migration.
- **Higher yield potential:** By allocating to PCIG, we earn a potential yield pickup from its upfront spread advantage and non-coupon income (e.g., prepayment and/or amendment fees).

Since its inception over five years ago, the Voya Enhanced Long Duration Government/Credit Strategy has been a successful investment solution for corporate pension plans. It has outperformed the benchmark and reduced risk through diversification, resulting in better risk-adjusted returns compared with "regular" long government/credit strategies. As such, we believe it represents an attractive option for corporate pension plans seeking a reliable and successful investment strategy.

Appendix: Schedule of composite performance

Voya Enhanced Long Duration Government/Credit composite

Year	Gross returns (%)	Net returns (%)	Bloomberg U.S. Long Government/ Credit Returns (%)	Composite 3-yr. st. dev. (%)	Benchmark 3-yr. st. dev. (%)	Dispersion of portfolio returns (%)		Number of portfolios	Assets in this composite ($mm)	Total firm assets ($mm)
						High	Low			
2022	-26.4	-26.6	-27.09	13.27	13.23	N/A	N/A	≤5	438	227,973
2021	-1.98	-2.23	-2.52	10.5	9.98	N/A	N/A	≤5	65	188,869
2020	18.18	17.88	16.12	N/A	N/A	18.18	18.18	≤5	277	154,392
2019	20.46	20.15	19.59	N/A	N/A	20.46	20.46	≤5	235	136,301
2018*	-0.97	-1.17	-1.14	N/A	N/A	N/A	N/A	≤5	195	106,335

*Cumulative return for the period is from April 1, 2018 (inception of strategy) to December 31, 2019.

Voya Investment Management claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS Standards. Voya Investment Management has been independently verified for the periods January 1,

1996, through December 31, 2021. The verification report is available upon request. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides

assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firmwide basis. Verification does not provide assurance on the accuracy of any specific performance report.

Notes

Firm Definition:

Voya Investment Management (the "Firm") is defined as all investment portfolios managed by Voya Investment Management Co. LLC and its subsidiary Voya Investment Trust Co. As of July 2022, Voya Investment Management acquired the investment personnel and assets from Allianz Global Investors.The total firm assets for 2022 are reflective of this acquisition.

Composite Definition:

This is a fixed income strategy whose primary objective is to maximize total return mainly through security selection of long-dated corporate and treasury bonds, while maintaining duration similar to the portfolio's index. Further, this strategy typically includes allocations to off-benchmark securities, including investment grade private credit and securitized assets. Portfolio valuations and returns for this composite are computed and stated in U.S. dollars. A $25 million minimum has been set for inclusion in the composite. This composite incepted and created on April 1, 2018.

Benchmark Definition:

The Bloomberg U.S. Long Government/Credit represents the long component of the Bloomberg U.S. Government/Credit Index. The Bloomberg U.S. Long Government/ Credit Index includes treasuries (i.e., public obligations of the U.S. Treasury that have remaining maturities of more than one year) and agencies (i.e., publicly issued debt of U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government), and publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements. Securities prices used to value the benchmark index for the purposes of calculating total return may or may not differ significantly from those used to value securities held within composite portfolios. both corporate and non-corporate sectors.

Treatment of Fees & Expenses:

Gross-of-fees returns are presented before management and custodial fees but after all trading expenses. Net-of-fees returns are calculated by deducting a hypothetical management fee from the gross return on a monthly basis and geometrically linking the results to produce annual returns shown. The hypothetical management fee is equal to the highest fee from any fee schedule offered at the time for the strategy shown. While fee schedules can change over time, any amended fee resulting from a change will not be retroactively applied to performance history, but will rather be applied on a prospective basis from the point of change. The annual management fee will vary according to the size of the account, and will depend on the type of investment vehicle selected. The current fee schedule for an institutional separate account is: 0.26% on the first $100 million; 0.23% on the next $200 million; 0.20% on the next $200 million; and 0.18% over $500 million. The current fee schedule for a Collective Investment Trust (CIT) is: 0.26% on the first $25 million; 0.23% on the next $50 million; and 0.20% over $75 million. Further information regarding applicable fee schedules is available upon request.

Explanation of Risk Measures:

"Dispersion of Portfolio Returns" presented for each annual period is based on gross-of-fees returns and is equal to the highest and lowest annual return among the portfolios that are included in the composite for the full year. If there is not at least 1 account that was in the composite for the entire year, then "N/A" will be displayed. "Composite 3-Yr St Dev" and "Benchmark 3-Yr St Dev" are rolling 3-year standard deviation calculations, which measure the variability of the gross-of-fee monthly performance returns for the composite and benchmark index return over the preceding 36-month period on an annualized basis. If the composite has not been in existence for at least 3 years as of a particular year-end then "N/A" will be displayed.

Other Notes:

Performance includes the reinvestment of income. Policies for valuing investments, calculating performance, and preparing GIPS Reports are available upon request. A list and description of each composite and limited distribution pooled fund, as well as a list of broad distribution pooled funds, is also available upon request. Past performance is no guarantee of future results. GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein.

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Principal Risks: The Strategy's principal risks are generally those attributable to investing in stocks, bonds and related derivative instruments, and short selling. Holdings are subject to market, issuer, credit, prepayment, extension, counterparty and other risks, and their values may fluctuate. Market risk is the risk that securities may decline in value due to factors affecting the securities markets or particular industries. Issuer risk is the risk that the value of a security may decline for reasons specific to the issuer, such as changes in its financial condition. The Strategy may invest in mortgage-related securities, which can be repaid early if the borrowers on the underlying mortgages pay off their mortgages sooner than scheduled. If interest rates are falling, the Strategy will be forced to reinvest this money at lower yields. Conversely, if interest rates are rising, the expected principal payments will slow, thereby locking in the coupon rate at below market levels and extending the security's life and duration while reducing its market value.

Index returns do not reflect fees, brokerage commissions, taxes or other expenses of investing. Investors cannot invest directly in an index. The Bloomberg U.S. Long Government/Credit Index represents the long component of the Bloomberg U.S. Government/Credit Index, which includes Treasuries, agencies and publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity and quality requirements. The Bloomberg U.S. Credit Corporate 5-10 Year Index measures the performance of the investment grade, USD-denominated, fixed-rate, taxable corporate bond market with maturities of 5-10 years. The Bloomberg Long U.S. Corporate Index is designed to measure the performance of U.S. corporate bonds that have a maturity of greater than or equal to 10 years.

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