Principal Asset Management℠

LIABILITY DRIVEN INVESTING

The case for customization

A historic change in the interest rate environment has created significant opportunities to help achieve long-sought funding and de-risking goals. Working with the right custom liability driven investing (LDI) provider can help maximize the chances of seizing this moment—and minimize the added downside risks an investment strategy geared to hedge future obligations brings—by structuring a comprehensive and agile solution— a solution fully informed by your plan's needs.

Introducing a simple concept with a complex reality

LDI has been one of the most important financial innovations over the past 20 years, providing pension plan sponsors a powerful means of helping achieve greater predictability in meeting their obligations. A plan sponsor calculates the duration, or interest rate sensitivity, of its obligations and then holds fixed income assets that have the same duration. Simple, right?

However, oftentimes a plan's liabilities and the market for the assets needed to generate the desired cash flows can be moving targets. This complexity requires a hands-on approach that can carefully manage numerous risks throughout the full LDI life cycle.

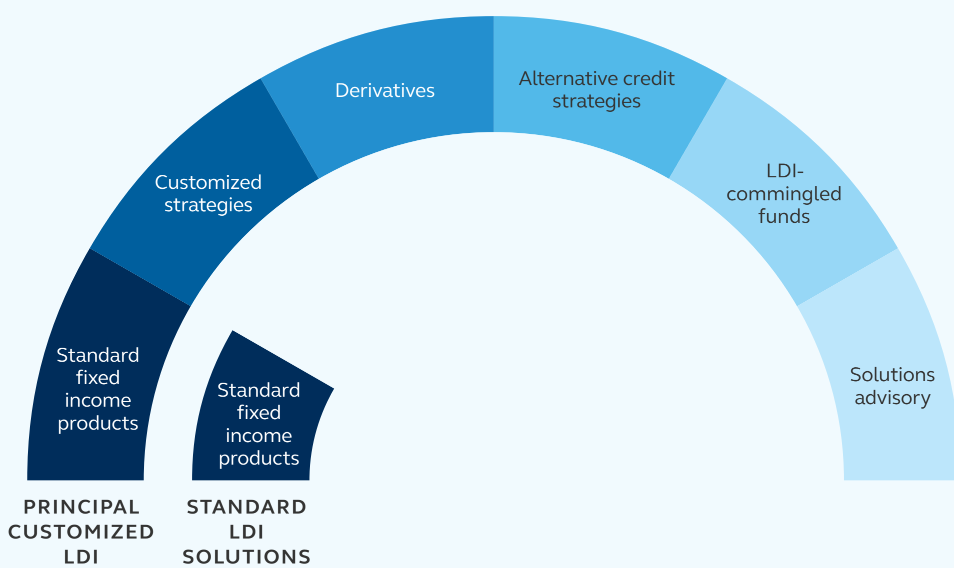
Many LDI providers offer solutions to hedge these risks—specifically interest rate risks. And yet, if these solutions aren't designed with an eye toward the other important risks and constraints affecting a plan's ability to fund its obligations, they can be a poor fit for a sponsor's risk management needs, defeating the purpose of LDI.

OUR CUSTOMIZED LDI SOLUTIONS:

Well-rounded solutions for plans of every shape and size

Principal Asset Management℠ is a global asset management leader. With an insurance company heritage of over 140 years, we have extensive experience[1] in managing liabilities and outcome-oriented investment strategies, including pension risk transfer arrangements as a core part of our business. This has given us a very nuanced understanding of how important customization can be in helping achieve LDI success, be it a seamless handoff to an insurer, a hibernation strategy for maintaining liabilities on a sponsor's own balance sheet, and everything in between. Today, we offer a comprehensive set of strategies customized for plans of every size and funding level.

At-a-glance: Principal® Customized LDI vs. Standard LDI solutions



[1] Experience includes investment management activities of predecessor firms beginning with the investment department of Principal Life Insurance Company® Investment Solutions services since 1987.

It all starts with sensitivity to interest rates

If defined benefit (DB) pension liabilities have one key feature, it's how sensitive they are to interest rates. The profound shift in interest rates that occurred in 2022 showed how this can work in plan sponsors' favor. But the same math can also work in reverse, which is what happened over the decade following the Global Financial Crisis.

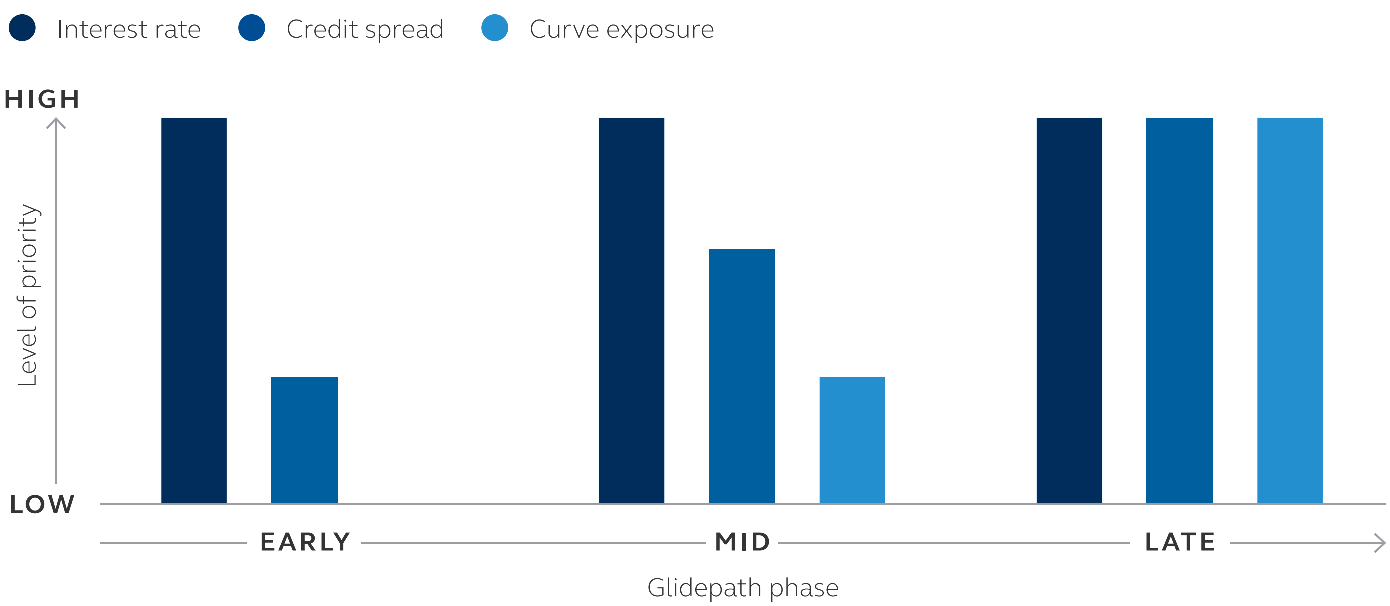
The sensitivity is derived from the way pension liabilities are valued. As pension plans have long-dated obligations, their present value is typically calculated the same way as other bond-like instruments—by discounting future cash flows using a high-credit quality bond discount curve based on the liabilities' duration. If a plan has a duration of 12 years, every 1% change in rates results in an opposite change in the liability value by approximately 12%. In 2022, as central banks raised rates to stem inflation, indirectly pushing up longer-term interest rates as well, many plans saw a massive fall in their liabilities' value and an enormous shift in their funded status, for the better. However, just as interest rates rose (and liabilities shrank), they could easily come down (and liabilities balloon) just as fast.

Managing the risks of de-risking

The real test of a customized LDI strategy is how well it manages the challenges of balancing second- and third-order risks—each of which directly relates to a DB plan's own liability structure, funded status, and risk appetite. For example, at every successive step along the glidepath, it may make sense to start reducing equity market risk and begin investing in fixed income. Corporate bonds are frequently used for this purpose, given their close match to the high-credit quality discount rate used to value liabilities. Corporates, however, carry their own risks, primarily that credit spreads could widen.

In the latter phases of de-risking, transitioning to bonds of very long duration can create a better match with liabilities but could also increase the exposure to a flattening of the yield curve. Pension cash flows, after all, are not just a lump sum payment at a single point in the future. Rather, they must be paid throughout the future life of the plan, making the cash flows sensitive to changes in interest rates at various points along that timeline. These risks need to be quantified, understood, and addressed in our framework for helping improve the efficacy of hedging liability risks.

Prioritization for liability hedging risk factors



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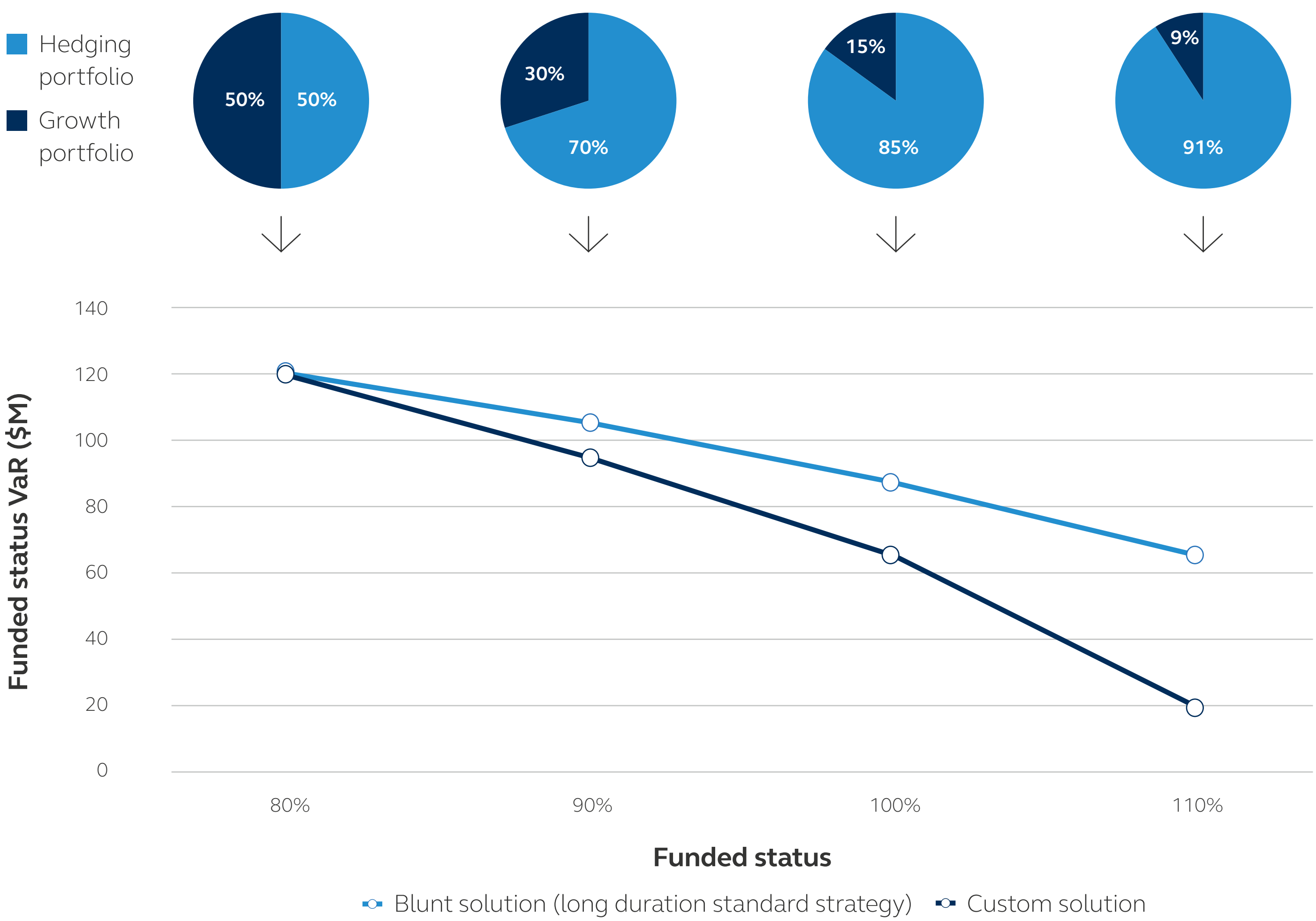
The value of a customized LDI strategy

Customized LDI strategies can be especially valuable in helping protect against the interest rate risk that can derail a pension glidepath just as it's approaching the finish line—the very situation so many plans find themselves in after dramatic improvements in their funding status. The probability of such a loss is typically calculated in terms of Value-at-Risk (VaR), or the maximum amount expected to be lost over a 12-month time frame at a 5% confidence level.

Top-level: Quantifying the merits of customization and timing

Compared to a blunt liability-matching solution employing more standard fixed income allocations, the reduction in funded status VaR achieved from a customized solution can widen considerably at higher funding levels, as illustrated on the chart below.



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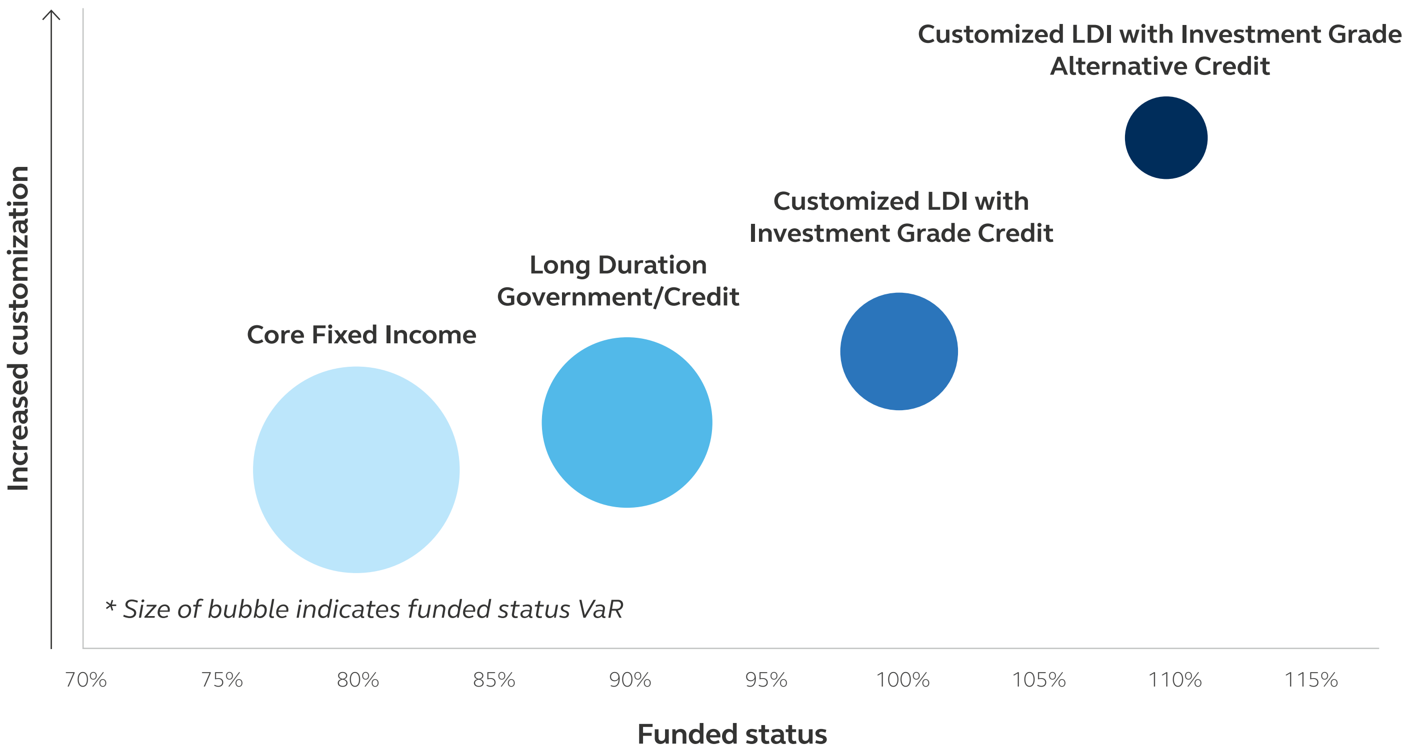
Earlier in a glidepath, most of the risk faced by the sponsor is equity market risk. Still, even early on, being more intentional about matching fixed income to liabilities can lower funded status VaR. As seen in the chart below, a standard early-stage allocation to core fixed income does little to mitigate funded status risk. That's partly a function of the limited size of the hedge portfolio at a point when growth remains the priority. But another reason is that the duration (typically 4-5-years) of core fixed income is much lower than that of most pension liabilities. Thus, simply shifting the allocation to long-duration government-credit strategy can improve funded status VaR without sacrificing growth.

A case for customization and diversification throughout the glidepath



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As funding improves, allocation to the hedge portfolio increases, and the attribution of funded status VaR shifts more towards interest rate and related credit-spread and curve-matching risks, the investment strategy typically needs to be even more intentional and specific. The closer a sponsor gets to full funding, the less there can be to gain in chasing more growth, and the more there can be to lose in not protecting against various interest rate-related risks.

"Fully funded plans can make their LDI assets work even harder by customizing their LDI strategy."

Owais Rana
Head of Investment Solutions

Our approach to building a customized LDI strategy

We develop our customized LDI portfolios based on a clear understanding of the desired outcome and objectives of each individual plan sponsor.

At a high level, our approach involves:

- Customized benchmarks based on the full complement of investment vehicles
- Portfolio construction and management aligned with the client's risk tolerance and excess return expectations
- Rigorous ongoing performance and risk monitoring
- Rebalancing and reassessment

Customized de-risking starts with an outcome-oriented risk framework

At the core, our LDI strategies are housed in a framework centered around risk reduction. This outcome-oriented approach is designed to serve pension plans of every size and situation with a host of investment options that are tailored to meet their specific objectives and constraints. Our strategies have the ultimate goal of meeting the sponsor obligation to make payments as they come due and to ensure that the plan continues on a planned de-risking journey, reducing risk along the way as funded status improves.

Key elements to deliver outcome-oriented solutions

Because every solution is anchored on a client's objectives, no two portfolios are the same.

1 Defining the hedging strategy

Our team will develop tailored fixed income portfolios designed to hedge the plan liabilities. Our hedging strategies can target a defined interest rate (and credit spread) hedge ratio—the percentage of the liability value increase intended to be protected, via an increase in bond asset values, in the event interest rates (or credit spreads) decline.

2 Completion strategy

Within the various LDI portfolios, we will identify mismatches in the duration of assets to liabilities and develop completion portfolios featuring assets of varying, yet targeted, maturities intended to smooth out the match all along the liability curve. STRIPS—Treasury bonds whose principal and coupon payments are stripped out and sold separately—are a key vehicle we use to help achieve this more granular level of duration matching. We can also utilize the derivatives market, purely from a risk reduction standpoint, to help overcome capital constraints a sponsor may have in meeting its LDI objectives. Lastly, we have corporate bond maturity bucket strategies that can also be utilized for a credit spread duration completion strategy.

3 Enhancing diversification

In addition to long-duration government, and long- and shorter-duration corporate bonds, we will also utilize alternative fixed income assets such as private investment grade credit and commercial mortgage loans (CMLs) to enhance the diversification in LDI portfolios and diversify investment risks.

Our investment toolkit

The fixed income asset classes that we use to develop an LDI strategy include the following—all of which can be mixed and matched to curate a customized solution. We are able to add private alternative credit as a diversifying component, which not only has the potential to enhance risk-adjusted returns but also looks to reduce the funded status volatility.

RISK-REMOTE

- Treasury futures
- Interest rate swaps
- Treasury STRIPS

PUBLIC MARKET STRATEGY

- Long government/credit
- Long credit
- Corporate 5-15 years
- Corporate 15-25 years
- Corporate 25+ years

PRIVATE ALTERNATIVE CREDIT

- Private investment grade credit
- Commercial mortgage loans (CMLs)

For big plans and small, we have vehicles to potentially drive desired outcomes

No two pension plans are exactly alike. Understanding how critical these differences can be for the success of an LDI strategy, we have built a highly customizable and innovative LDI platform that helps deliver and manages solutions specifically structured to the unique needs of each plan sponsor. Our approach is consistent, and we seek to provide customized investment strategies to our entire pension client base, from some of the world's largest plans to many that are much smaller in size.

One of the ways we cater to clients with smaller accounts is through our LDI suite of collective investment trust (CIT) funds, which clients can use as building blocks to augment or create cost-effective bespoke outcome-oriented solutions.

CIT funds suite: Building blocks made to assemble cost-effective customized LDI solutions

FULL MARKET	Long Government/Credit	All Government/Credit	
CUSTOM CREDIT	Corporate 5–15 Year	Corporate 15–25 Year	Corporate 25+ Year
RISK-REMOTE	STRIPS 20+ Year		
LEVERED INTEREST RATE (3X)	Ultra T-bond Futures 25-30 Year		

- Dedicated access to LDI team for strategy design and other advisory services
- No minimum investment
- Daily NAV pricing
- Annual and/or market-driven review or reset of investment strategy
- Asset management fees based on the total mandate level

Why Principal Asset Management LDI

At Principal Asset Management, we have predicated our entire LDI business on structuring customized LDI solutions. We are a team of seasoned LDI specialists spanning five pension sub-specialties[1], supported by a deep bench of 25 actuaries[2] and backed by a specialized risk modeling system, all housed within one of the world's most highly rated insurers[3] and top pension risk transfer managers[4].

chief investment officer
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Asset Management and Servicing
Pension Risk Transfer

Whatever your vision for ensuring financial security of your organization and plan participants, we can help you get there, with greater confidence.

[1] The five sub-specialties comprise structuring specialists – analytics, derivatives execution, portfolio management, actuarial services, and pension risk transfer.

[2] As of December 31, 2024.

[3] Determined by fully-insured employer groups in-force. Based on participants in LIMRA's Fourth Quarter 2023 U.S. Workplace Benefits Life Insurance, Disability Insurance, Dental and Vision Plans, and Supplemental In-force surveys (April 2024).

[4] Principal Asset Management received CIO Industry Innovation Award – Pension Risk Transfer category as of December 10, 2024 (Award based on 1/1/2022 – 6/30/2024). This award was created by Chief Investment Officer, and winners are selected by a panel of internal judges at CIO. Principal Asset Management paid a fee to use the award logo.

Important information

Investing involves risk, including possible loss of principal. Past Performance does not guarantee future return. All financial investments involve an element of risk. Therefore, the value of the investment and the income from it will vary and the initial investment amount cannot be guaranteed. The risk management techniques discussed seek to mitigate or reduce risk but cannot remove it. Fixed income investment options are subject to interest rate risk, and their value will decline as interest rates rise. Potential investors should be aware that Investment grade corporate bonds carry credit risks, default risk, liquidity risks, currency risks, operational risks, legal risks, counterparty risk and valuation risks. Private credit involves an investment in non-publicly traded securities which are subject to illiquidity risk. Portfolios that invest in private credit may be leveraged and may engage in speculative investment practices that increase the risk of investment loss. Investments in Private Credit may also be subject to real estate-related risks, which include new regulatory or legislative developments, the attractiveness and location of properties, the financial condition of tenants, potential liability under environmental and other laws, as well as natural disasters and other factors beyond a manager's control. Asset allocation and diversification do not ensure a profit or protect against a loss.

Collective investment trusts (CITs) are available for investment only by eligible retirement plans and entities. Participation in CITs is generally governed by the terms of a Declaration of Trust and a Participation or Adoption Agreement, which is signed by the retirement plan's fiduciary at the time the plan invests in the CITs. In addition, various other documents may contain important information about the CITs including Fund Descriptions, Statement of Characteristics, or Investment Guidelines, and/or other fee or investment disclosure documents. All these documents may contain important information about CIT fees, investment objectives, and risks and expenses of the underlying investments in the CITs and should be read carefully before investing. To obtain a copy, you will need to contact the plan sponsor or trustee of the CIT.

CITs are not insured by FDIC or any other type of deposit insurance; are not deposits or other obligations of and are not guaranteed by any firm or their affiliates; and involve investment risks, including possible loss of principal invested. CITs are not mutual funds and are exempt from registration and regulation under the Investment Company Act of 1940 (the "1940 Act"), and their units are not registered under the Securities Act of 1933, or applicable securities laws of any state or other jurisdiction. Unit holders of the Funds are not entitled to the protections of the 1940 Act. The decision to invest in CITs should be carefully considered. The CITs unit values will fluctuate and may be worth when redeemed, so unit holders may lose money. CITs are not sold by prospectus and are not available for investment by the public; Fund prices are not quoted in newspapers.

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LDI solutions are provided by Investment Solutions, an advisory team within Principal Asset Management℠. Principal Asset Management leads global asset management at Principal®.

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