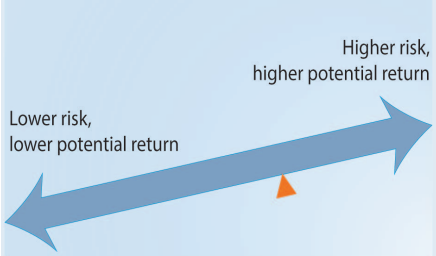
2050 Retirement Date Fund

DEFERRED COMPENSATION PLAN
Supplemental Benefit

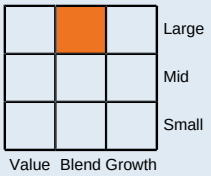
Risk/Potential Return Spectrum



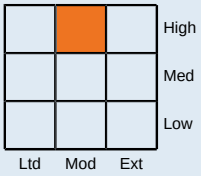
FOR ILLUSTRATIVE PURPOSES ONLY

Morningstar Style[3]

Stock
Style / Capitalization
Large Blend



Fixed Income
Credit Quality / Interest Rate Sensitivity
Moderate Sensitivity High Quality



Fund Issuer

BlackRock Institutional Trust Company NA

Asset Category

Target-Date 2050

Investment Objective & Strategy

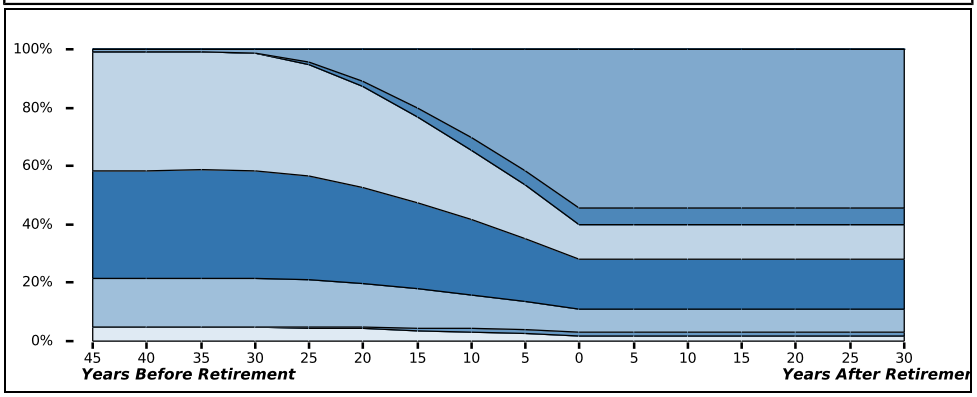
The LifePath(R) Index 2050 Fund (the "Fund") seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. The Fund will be diversified across global asset classes, with allocations changing over the investment horizon to become more heavily oriented toward debt and debt-like securities, on the premise that individuals investing for retirement desire to reduce investment risk in their retirement accounts as their retirement date approaches.

Risk Profile

This investment option may be most appropriate for someone with a high priority for capital growth and willing to accept a greater degree of risk. The investor may have a long investment horizon, or may prefer to take less risk than more aggressive investors. Investors choosing this option want to invest in a mixture of diverse investments suiting their needs but may not have the time, desire, or knowledge to select their own portfolios. 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. Asset allocation and balanced investment options and models are subject to the risks of the underlying funds, which can be a mix of stocks/stock funds and bonds/bond funds.

Enhanced Portfolio Diversification: Glide Path[4]

Category	Allocation At Target Date
Short-Term and Cash	0.00%
Medium/Long Term Maturity Bond	54.21%
TIPS	5.79%
Foreign Equity	11.88%
Large Cap Equities	17.15%
Small/Mid Cap Equities	7.82%
Commodities	1.57%
Real Estate	1.58%



Asset Allocation

Period Ending: 06/30/2020

Expense[1]	Total Net Assets (MM)	Inception Date	Data Effective Date
.0775%	$27.020	09/30/2007	06/30/2020

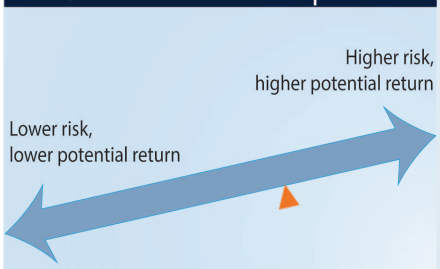
Carefully consider the investment option's objectives, risks, fees and expenses. The fund is a collective investment fund and is privately offered. Prospectuses are not required. Investments in the fund are not registered with the Securities and Exchange Commission ("SEC") or any state securities commission.

[1]Maximum possible expense that can be charged.

2050 Retirement Date Fund

DEFERRED COMPENSATION PLAN
Supplemental Benefit

Risk/Potential Return Spectrum



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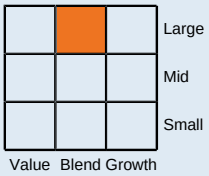

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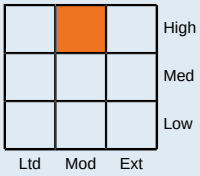

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Geographic Diversification

	% of Assets
United States	57.51
Japan	7.42
United Kingdom	4.33
China	4.29
Canada	2.78
Switzerland	2.77
Germany	2.56
France	2.52
Australia	1.97
Taiwan	1.49

Bond Sector Diversification

	% of Assets
Cash & Equivalents	35.46
Government	32.03
Corporate	15.10
AgencyMtgBacked	12.15
Government/Agency	3.41
Collateralized Mortgage Oblig	0.75
Convertible	0.44
Municipal	0.39
Asset Backed	0.27

Equity Sector Diversification

	% of Assets
Technology	17.73
Financial Svc	14.00
Healthcare	12.44
Consumer Cyclical	10.55
Industrials	9.71
Communication Svc	8.90
Real Estate	8.32
Consumer Defensive	7.65
Basic Materials	4.40
Energy	3.32
Utilities	2.98

Largest Holdings

	% of Assets
Russell 1000 Index Fund	52.30
BlackRock MSCI ACWI ex-US IMI Index Fd E	39.90
Developed Real Estate Index Fund E	4.74
Russell 2000 Index Fund	1.36
U.S. Debt Index Fund E	1.36
U.S. TIPS Fund E	0.25
Commodity Index Daily Fund E	0.10
Percent of Total Net Assets	***100.00%***
Number of Holdings	***8***
Portfolio Turnover (%)	***18.30%***

Risk Statistics (3 Year)^

Alpha	-1.61
Beta	1.56
R-Squared	99.26
Sharpe Ratio	0.34
Standard Deviation	15.96

^Risk Statistics are measured using the Russell 1000 TR USD benchmark, where applicable. The rating, risk, and return values are relative to each fund's asset category.

Credit Quality - Bond[2]

	% of Assets
AAA	75.31
AA	2.48
A	10.41
BBB	11.80

Bond Characteristics

Average Effective Duration	6.07 yrs
Effective Maturity	7.99 yrs

Maturity Allocation

	% of Assets
91 - 182 Days	0.90
183 - 364 Days	1.44
1 - 3 Years	18.30
3 - 5 Years	15.58
5 - 7 Years	11.05
7 - 10 Years	13.67
10 - 15 Years	3.14
15 - 20 Years	3.53
20 - 30 Years	31.04
Over 30 Years	1.34

Asset Allocation

Period Ending: 06/30/2020

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Glossary & Investment Option Disclosures

Alpha	Alpha is a measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. A positive Alpha figure indicates the portfolio has performed better than its beta would predict. In contrast, a negative Alpha indicates the portfolio has underperformed, given the expectations established by beta.
Beta	Beta is a measure of a portfolio's sensitivity to market movements. The beta of the market is 1.00 by definition. Morningstar calculates beta by comparing a portfolio's excess return over T-bills to the benchmark's excess return over T-bills, so a beta of 1.10 shows that the portfolio has performed 10% better than its benchmark in up markets and 10% worse in down markets, assuming all other factors remain constant. Conversely, a beta of 0.85 indicates that the portfolio's excess return is expected to perform 15% worse than the benchmark's excess return during up markets and 15% better during down markets.
Effective Duration	Effective duration for all long fixed income positions in a portfolio. Morningstar asks fund companies to calculate and send average effective duration (also known as "option adjusted duration") for each of their fixed income or allocation funds. We ask for effective duration because the measure gives better estimation of how the price of bonds with embedded options, which are common in many mutual funds, will change as a result of changes in interest rates. Effective duration takes into account expected mortgage prepayment or the likelihood that embedded options will be exercised if a fund holds futures, other derivative securities, or other funds as assets, the aggregate effective duration should include the weighted impact of those exposures. Standard practice for calculating this data point requires determination of a security's option-adjusted spread, including the use of option models or Monte Carlo simulation, as well as interest-rate scenario testing Morningstar requests that the fund only report data in this field that has been specifically labeled effective or option-adjusted duration, or that fund is certain has been calculated in the fashion described.
Effective Maturity	Average effective maturity is a weighted average of all the maturities of the bonds in a portfolio, computed by weighting each bond's effective maturity by the market value of the security. Average effective maturity takes into consideration all mortgage prepayments, puts, and adjustable coupons. Longer-maturity funds are generally considered more interest-rate sensitive than their shorter counterparts. We list Average Effective Maturity for Taxable Fixed-Income and Hybrid funds and Average Nominal Maturity for Municipal Bond Funds.
Equity Style Box	The Morningstar U.S. Equity Style Box™ is a grid that provides a graphical representation of the investment style of stocks and portfolios. It classifies securities according to market capitalization (the vertical axis) and 10 growth and value factors (the horizontal axis) and allows us to provide analysis on a 3-by-3 Style Box - as well as providing the traditional style box assignment, which is the basis for the Morningstar Category. Two of the style categories, value and growth, are common to both stocks and portfolios. However, for stocks, the central column of the style box represents the core style (those stocks for which neither value nor growth characteristics dominate); for portfolios, it represents the blend style (a mixture of growth and value stocks or mostly core stocks). Furthermore, the core style for stocks is wider than the blend style for portfolios. In general, a growth-oriented fund will hold the stocks of companies that the portfolio manager believes will increase earnings faster than the rest of the market. A value-oriented fund contains mostly stocks the manager thinks are currently undervalued in price and will eventually see their worth recognized by the market. A blend fund might be a mix of growth stocks and value stocks, or it may contain stocks that exhibit both characteristics.
Fixed Income Style Box	The model for the fixed income style box is based on the two pillars of fixed-income performance: interest-rate sensitivity and credit quality. The three interest sensitivity groups are limited, moderate and extensive and the three credit quality groups are high, medium and low. These groupings display a portfolio's effective duration and third party credit ratings to provide an overall representation of the fund's risk orientation given the sensitivity to interest rate and credit rating of bonds in the portfolio. On a monthly basis Morningstar calculates duration breakpoints based around the 3 year effective duration of the Morningstar Core Bond Index (MCBI). By using the MCBI as the duration benchmark, Morningstar is letting the effective duration bands to fluctuate in lock-steps with the market which will minimize market-driven style box changes. Municipal bond funds with duration of 4.5 years or less qualify as low; more than 4.5 years but less than 7 years, medium; and more than 7 years, high. For hybrid funds, both equity and fixed-income style boxes appear.
Portfolio Turnover	Portfolio turnover is a measure of the portfolio manager's trading activity which is computed by taking the lesser of purchases or sales (excluding all securities with maturities of less than one year) and dividing by average monthly net assets. A turnover ratio of 100% or more does not necessarily suggest that all securities in the portfolio have been traded. In practical terms, the resulting percentage loosely represents the percentage of the portfolio's holdings that have changed over the past year.
R^2 R-squared	R^2, also known as the Coefficient of Determination, reflects the percentage of a portfolio's movement that can be explained by the movement of its primary benchmark over the past three years. An R-squared of 100 indicates that all movement of a fund can be explained by the movement of the index.
Sharpe Ratio	A risk-adjusted measure developed by Nobel Laureate William Sharpe. It is calculated by using standard deviation and excess return to determine reward per unit of risk. The higher the Sharpe Ratio, the better the fund's historical risk-adjusted performance. The Sharpe ratio is calculated for the past 36-month period by dividing a fund's annualized excess returns by the standard deviation of a fund's annualized excess returns. Since this ratio uses standard deviation as its risk measure, it is most appropriately applied when analyzing a fund that is an investor's sole holding. The Sharpe Ratio can be used to compare two funds directly on how much risk a fund had to bear to earn excess return over the risk-free rate.
Standard Deviation	Standard deviation is a statistical measurement of dispersion about an average, which, for a mutual fund, depicts how widely the returns varied over the past three years. Investors use the standard deviation of historical performance to try to predict the range of returns that are most likely for a given fund. When a fund has a high standard deviation, the predicted range of performance is wide, implying greater volatility. Standard deviation is most appropriate for measuring risk if it is for a fund that is an investor's only holding. The figure can not be combined for more than one fund because the standard deviation for a portfolio of multiple funds is a function of not only the individual standard deviations, but also of the degree of correlation among the funds' returns. If a fund's returns follow a normal distribution, then approximately 68 percent of the time they will fall within one standard deviation of the mean return for the fund, and 95 percent of the time within two standard deviations. Morningstar computes standard deviation using the trailing monthly total returns for the appropriate time period. All of the monthly standard deviations are then annualized.

All Glossary terms are sourced from Morningstar, Inc., except "Fixed" and/or "Stable Value" when shown.

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The Inception Date listed is the date the fund began operations. The Data Effective Date is the date for which the most current data is available. The Period Ending Date is the date for which the fund fact sheet is produced.

Asset allocation funds may be subject to operating expenses for the fund and for each underlying fund.

The responsibility for the content contained in the website(s) provided (if shown) is entirely that of the website owner. Endorsement is neither declared nor implied. Fee and performance information on the website(s) listed may differ for funds offered through an individual or group variable annuity.

A benchmark index, if shown, is not actively managed, does not have a defined investment objective, and does not incur fees or expenses. Therefore, performance of a fund will generally be less than its benchmark index. You cannot invest directly in a benchmark index.

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subsidiaries and affiliates, including registered investment advisers Advised Assets Group, LLC and Great-West Capital Management, LLC.

Investing involves risk, including possible loss of principal.

[2] Morningstar seeks credit rating information from fund companies on a periodic basis (e.g., quarterly). In compiling credit rating information, Morningstar instructs fund companies to only use ratings that have been assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). If two NRSROs have rated a security, fund companies are to report the lowest rating; if three or more NRSROs have rated the same security differently, fund companies are to report the rating that is in the middle. For example, if NRSRO X rates a security AA-, NRSRO Y rates the same security an A and NRSRO Z rates it a BBB+, the fund company should use the credit rating of 'A' in its reporting to Morningstar. Additionally, Morningstar accepts foreign credit ratings from widely recognized or registered ratings agencies. An NRSRO rating on a fixed-income security can change from time-to-time. PLEASE NOTE: Morningstar, Inc. is not itself an NRSRO nor does it issue a credit rating on a fund's fixed-income securities. For a list of all NRSROs, please visit https://www.sec.gov/answers/nrsro.htm.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low", "medium", or "high" based on their average credit quality. Funds with a low credit quality are those whose weighted-average credit quality determined to be less than "BBB-"; medium are those less than "AA-", but greater or equal to "BBB-"; and high are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

[3] The Morningstar Style Box™ reveals a fund's investment strategy. For equity funds the vertical axis shows the market capitalization of the stocks owned and the horizontal axis shows investment style (value, blend or growth). A darkened square in the style box indicates the weighted average style of the portfolio.

For fixed-income funds, the vertical axis shows the credit quality of the bonds owned and the horizontal axis shows interest rate sensitivity as measured by a bond's effective duration. Morningstar seeks credit rating information from fund companies on a periodic basis (e.g, quarterly). In compiling credit rating information, Morningstar instructs fund companies to only use ratings that have been assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). If two NRSROs have rated a security, fund companies are to report the lowest rating; if three or more NRSROs have rated the same security differently, fund companies are to report the rating that is in the middle. For example, if NRSRO X rates a security AA-, NRSRO Y rates the same security an A and NRSRO Z rates it a BBB+, the fund company should use the credit rating of 'A' in its reporting to Morningstar. PLEASE NOTE: Morningstar, Inc. is not itself an NRSRO nor does it issue a credit rating on the fund. An NRSRO rating on a fixed-income security can change from time-to-time.

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For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest rate sensitivity based on the effective duration of the Morningstar Core Bond Index (MCBI), which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

For municipal bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases static breakpoints are utilized. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-US taxable and non-US domiciled fixed income funds static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: greater than 3.5 and less than equal to 6 years; (iii) Extensive: greater than 6 years.

Interest-rate sensitivity for non-U.S. domiciled funds (excluding funds in convertible categories) may be measured with modified duration when effective duration is not available.

[4] A glide path is how the fund expects to allocate to those underlying investments over time, essentially "gliding" from more aggressive investments to more conservative ones In general, the underlying investments are made up of stocks (or stock funds), bonds (or bond funds), and cash alternatives.

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