### **TD Global Investment Solutions**

Annual Glide Path Update 🕓 15 Minutes



**TD Greystone Target Date Plus Funds:** Annual Glide Path Update

### **Creating the 2024 Strategic Glide Path**

Consistent with the process for the TD Greystone Target Date Plus Funds (the Funds), on an annual basis the glide path is formally examined through the Annual Glide Path Update. This involves running the proprietary TD Asset Management Glide Path Analytics (GPA) to help incorporate any evolutions in available asset classes or funds, long-term asset class assumptions or demographics. The most recent Annual Glide Path Update was conducted in November 2023 and the resulting changes were implemented in December 2023 and January 2024.

# **Long-Term Asset Class Assumptions**

Consistent with the firm-wide approach for multi-asset solutions, TD Asset Management Inc. (TDAM) sets its Long-Term Asset Class Assumptions using an objective building block approach for expected returns, and historical quarterly returns for standard deviations and correlations.

TDAM's asset class assumptions are long-term in nature, seven to ten years. The strategic asset mix decisions rely on intermediate and long-term trends rather than attempting to time the business cycle itself. For more information on how long-term asset class assumptions are set, please reference our Methodology paper, which is available upon request. The data in **Figure 1** is based on inputs as of September 30, 2023.

### Figure 1: TDAM's Long-Term Asset Class Assumptions for Target Date Plus Funds

Equities				
2024 Annual Assumptions	Expected Return	<b>Standard Deviation</b>		
Canadian Core	7.2	14.1		
Canadian Low Volatility	7.5	9.9		
North American Small Cap	7.9	19.0		
Global Core	5.9	12.3		
Global Income & Growth	5.9	11.4		
All Country Low Volatility	5.8	8.7		
China A-Shares	8.5	24.7		
Fixed Income				
2024 Annual Assumptions	Expected Return	<b>Standard Deviation</b>		
Canadian Money Market	3.8	0.5		
Canadian Short Bonda	5.2	2.0		

Canadian Short Bonds	5.2	2.0
Canadian Universe Bonds	5.1	4.2
Canadian Long Bonds	5.3	8.0
Global Unconstrained Bonds	5.6	2.9
Canadian Real Return Bonds	4.6	7.3
High Yield Bonds	6.9	9.3

#### Alternatives

2024 Annual Assumptions	Expected Return	<b>Standard Deviation</b>
Private Commercial Mortgages	7.6	3.0
Canadian Real Estate	5.5	8.61 <sup>1</sup>
Global Infrastructure	7.4	7.01 <sup>1</sup>

<sup>1</sup>We use a de-smoothing technique on the historical returns of real estate and infrastructure to correct for serial correlation. There is no assurance that expected returns will be achieved. Source: TD Asset Management Inc. As of September 30, 2023.

In the 2024 Strategic Glide Path, no new asset classes were added as available strategic investments.

Within GPA, the long-term asset class assumptions are used to construct the efficient frontier, which provides the optimal asset mix at a given standard deviation. Each point along the strategic glide path is then defined by a standard deviation, which corresponds to this efficient frontier.

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# **Canadian Socio-Economic and Demographic Assumptions**

Demographic assumptions used by GPA can be broken down to two categories: government-driven assumptions and population-driven demographic assumptions.

#### **Government-Driven Assumptions**

Government-driven assumptions are published directly on the Government of Canada or Bank of Canada website and are updated each year through the annual process (**Figure 2**). The year-over-year changes were lower than last year's increase, but above the historical average. This was in line with expectations due to the inflationary environment witnessed through 2023.

#### **Figure 2: Government-Driven Assumptions**

Metric	2023	2022	Change
Yearly Maximum Pensionable Earnings (YMPE) (\$)	66,600	64,900	2.6%
Old Age Security (\$) – Age 65 to 74	8,492	8,226	3.2%
Old Age Security (\$) – Age 75 and over	9,341	9,049	3.2%
Canada Pension Plan (\$)	15,678	15,043	4.2%
Inflation Target (%)	2.0	2.0	_

Source: Bank of Canada, Government of Canada. As of October 31, 2023. The 2023 assumptions are used to create the 2024 Strategic Glide Path.

#### **Population-Driven Assumptions**

Population-driven demographic assumptions are primarily derived from Statistics Canada's annual surveys or its quadrennial Census of Population.

Typically, population-driven assumptions have a lag of one or two years before they are published. Our approach is to adjust each assumption as needed to help ensure a consistent base year for the data used in GPA. There were no updates required for TDAM's assumption for Year of Entry and Year of Retirement. The assumption for starting salary at age 25 increased by 13% to approximately \$58,200. The increase was driven by a 4.2% annualized salary increase between the 2016 census and the 2020 census. This was larger than our adjustment of 1.7% applied to prior years without updated census data available. The assumption for retirement expenditure increased by 4.1% to approximately \$73,700. TDAM's assumed contribution rate continues to follow a step pattern and ranges from approximately 9% to 10%.

# **Strategic Glide Path**

The long-term asset class assumptions and demographic and socio-economic assumptions are inputs into GPA for the Strategic Glide Path. TDAM imposes constraints on its Annual Glide Path Update to help ensure that the Strategic Glide Path does not see volatile year-over-year swings between asset classes or individual funds resulting from changes in asset class assumptions (**Figure 3**).

#### Figure 3: Constraints for Year-Over-Year Glide Path Changes

Strategy	Constraint	Asset Class	Constraint	
Canadian Core Equity	+/- 10%			
Canadian Low Volatility Equity	+/- 10%		+/- 5%	
North American Small Cap Equity	+/- 10%			
Global Core Equity	+/- 10%	Equity		
Global Income & Growth Equity	+/- 10%			
China A-Shares	+/- 10%			
ACWI Low Volatility Equity	+/- 10%			
Canadian Money Market	+/- 10%		+/- 5%	
Canadian Short Bonds	+/- 10%			
Canadian Universe Bonds	+/- 10%			
Global Unconstrained Bonds	+/- 10%	Fixed Income		
Canadian Long Bonds	+/- 10%			
Canadian Real Return Bonds	+/- 10%			
High Yield Bonds	+/- 10%			
Private Commercial Mortgages	+/- 2%			
Canadian Real Estate	+/- 2%	Alternatives	+/- 5%	
Infrastructure	+/- 2%			

Source: TD Asset Management Inc. As of September 30, 2023.

The output of the Annual Glide Path Update process is the TDAM Strategic Glide Path, shown in Figure 4.

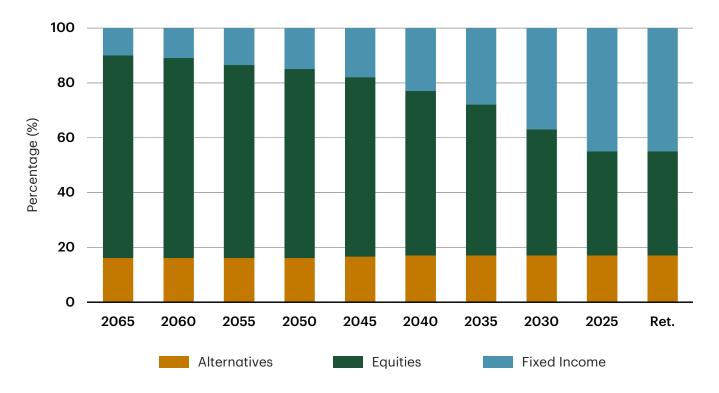
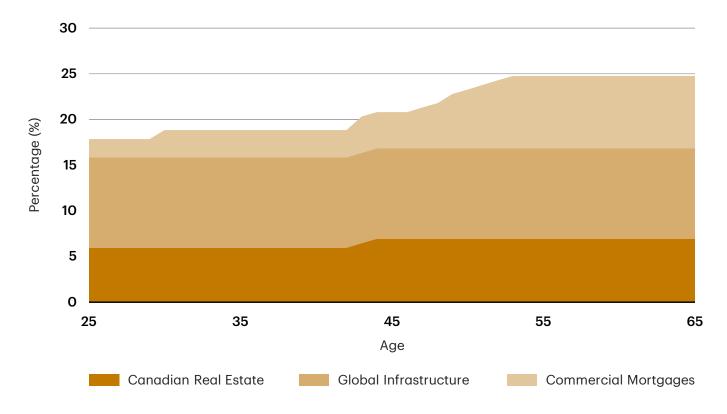
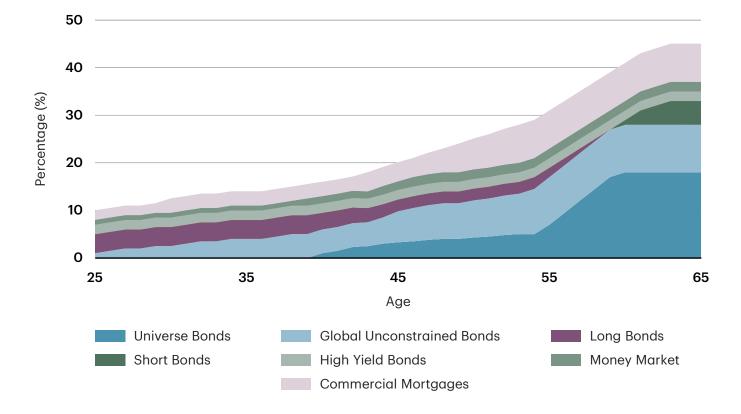


Figure 4A: TD Greystone Target Date Plus Funds - 2024 Strategic Glide Path

#### Figure 4B: TD Greystone Target Date Plus Funds – Alternatives Sub Glide Path

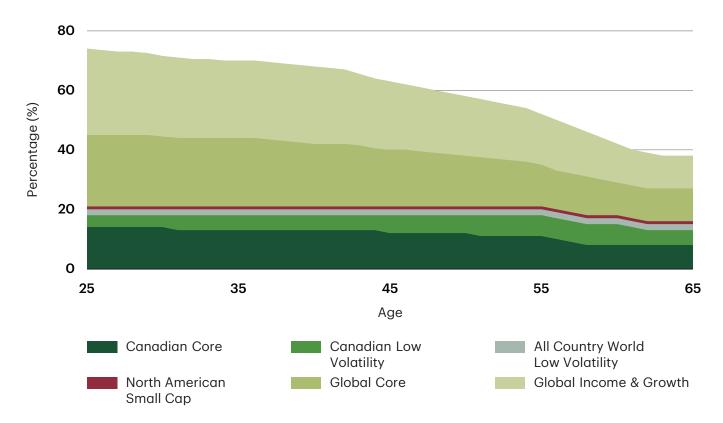


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### Figure 4C: TD Greystone Target Date Plus Funds - Fixed Income Sub Glide Path

#### Figure 4D: TD Greystone Target Date Plus Funds – Public Equities Sub Glide Path



Source: TD Asset Management Inc. As of December 31, 2023. Glide path effective January 1, 2024 - December 31, 2024.

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### **Summary of Changes**

Due to continued worldwide central bank tightening, bond yields increased significantly over the course of 2023. Long-term expected returns for equities decreased modestly and the spread between expected returns for fixed income and equities continued to narrow. The risk premium for real estate over fixed income also decreased. At the same time, retirement expenditure needs have continued to increase with inflation requiring higher expected returns to achieve objectives. As a result, we witnessed the following shifts:

- A modest decrease to equity allocations across vintages.
- Within equities, there were modest style re-allocations based on overall asset mix shifts.
- China equities as a strategic allocation was removed. The fund will remain as a tactical tool.
- Within fixed income, high yield credit continued to be preferred over investment grade credit. This was implemented directly through high yield bonds as well as global unconstrained bonds.

The Funds have demonstrated strong absolute and peer-relative performance since inception.

- The level of yields resulted in a modest extension of duration for longer dated vintages.
- Real estate decreased by 2% due to the narrowing risk premium over public markets and commercial mortgages. The reduction in real estate provided room for a higher allocation to commercial mortgages.



### Performance

We are proud of the demonstrated track record of the TD Greystone Target Date Plus Funds. The Funds have demonstrated strong absolute and peer-relative performance since inception. This performance has been achieved with below-median peer-relative standard deviation, resulting in a high peer-relative Sharpe Ratio. We believe this is particularly relevant as plan members may be subject to behavioural biases triggered by investment volatility, which can negatively impact overall savings.

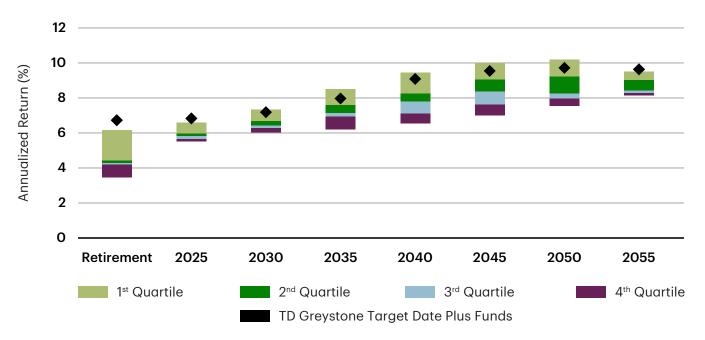
#### Figure 5: Performance of the TD Greystone Target Date Plus Funds

			Annualized				
	3	1	2	3	4	5	Since
Returns as of Dec 31, 2023	months	year	years	years	years	years	Inception <sup>1</sup>
Retirement Plus Fund	5.89%	7.64%	1.88%	4.93%	5.68%	6.83%	6.45%
Benchmark	5.45%	9.65%	0.51%	3.39%	4.93%	6.13%	5.83%
Difference	0.43%	-2.02%	1.37%	1.54%	0.75%	0.70%	0.61%
2025 Target Date Plus Fund	6.03%	7.59%	2.03%	4.91%	5.64%	6.90%	6.53%
Benchmark	5.47%	9.76%	0.54%	3.41%	4.95%	6.15%	5.88%
Difference	0.56%	-2.17%	1.48%	1.50%	0.70%	0.75%	0.66%
2030 Target Date Plus Fund	6.19%	8.19%	2.18%	5.20%	5.86%	7.27%	6.89%
Benchmark	5.70%	10.66%	0.98%	3.93%	5.36%	6.65%	6.26%
Difference	0.49%	-2.47%	1.21%	1.27%	0.50%	0.62%	0.62%
2035 Target Date Plus Fund	6.17%	8.55%	2.78%	6.03%	6.48%	8.00%	7.64%
Benchmark	5.95%	11.71%	1.60%	4.84%	6.11%	7.45%	7.00%
Difference	0.22%	-3.16%	1.18%	1.19%	0.37%	0.54%	0.64%
2040 Target Date Plus Fund	6.17%	9.52%	3.41%	7.30%	7.44%	9.24%	8.73%
Benchmark	6.12%	12.69%	2.11%	6.14%	7.33%	8.83%	8.08%
Difference	0.05%	-3.17%	1.30%	1.16%	0.11%	0.40%	0.65%
2045 Target Date Plus Fund	6.27%	9.85%	3.66%	7.85%	7.91%	9.77%	9.17%
Benchmark	6.49%	13.52%	2.51%	6.86%	7.93%	9.48%	8.59%
Difference	-0.22%	-3.67%	1.14%	0.99%	-0.02%	0.29%	0.58%
2050 Target Date Plus Fund	6.33%	9.89%	3.96%	8.04%	8.01%	9.90%	9.34%
Benchmark	6.54%	13.80%	2.69%	7.07%	8.05%	9.66%	8.78%
Difference	-0.21%	-3.91%	1.27%	0.97%	-0.04%	0.23%	0.56%
2055 Target Date Plus Fund	6.33%	10.26%	3.62%	7.62%	7.78%	9.63%	9.24%
Benchmark	6.64%	14.01%	2.79%	7.13%	8.14%	9.75%	8.88%
Difference	-0.31%	-3.75%	0.83%	0.49%	-0.36%	-0.11%	0.37%
2060 Target Date Plus Fund	6.42%	10.30%	3.87%	9.21%	8.22%	-	8.22%
Benchmark	6.83%	14.36%	2.76%	7.47%	8.43%	-	8.43%
Difference	-0.41%	-4.06%	1.11%	1.74%	-0.21%	-	-0.21%
2065 Target Date Plus Fund	6.52%	-	-	-	-	-	3.76%
Benchmark	7.73%	_	_	_	_	_	3.87%
Difference	-1.21%	_			_	-	-0.11%

<sup>1</sup>Inception date for all funds except the 2060 and 2065 Target Date Plus Funds is December 31, 2014. Inception date for the 2060 Target Date Plus Fund is December 31, 2019. Inception date for the 2065 Target Date Plus Fund is September 7, 2023. Each Target Date Plus Fund Benchmark is set at the beginning of each quarter based on the strategic asset mix for the following quarter. Details regarding benchmark mix are available upon request. Returns presented are in Canadian dollars. Includes cash. Gross of investment management fees; may be subject to rounding.

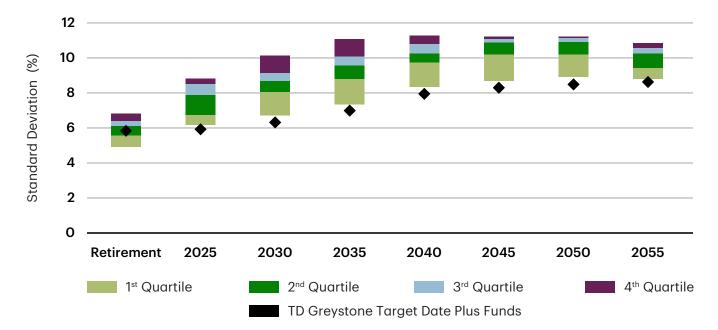
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#### Figure 6: Since Inception Annualized Return

Inception is January 1, 2015 (9 years). eVestment Alliance, LLC – Fund Category: TDF Income Fund – Canadian Universe. Current number of funds in the category 10-15. Note: Each TD Greystone Target Date Plus Fund is compared against Canadian dollar denominated peers within the respective vintage's eVestment peer group. Quartile rankings are intended to measure how well a fund has performed compared to other funds in its peer group. Quartile rankings are compiled by ranking all of the funds in a category by return over a given time period. The top performing 25% of funds in the category are assigned a quartile ranking of 1, the next 25% a 2, the next 25% a 3, and the bottom 25% of funds a 4. Quartile rankings can change over time. Source: eVestment Alliance, LLC. As of December 31, 2023. Data pulled January 15, 2024.

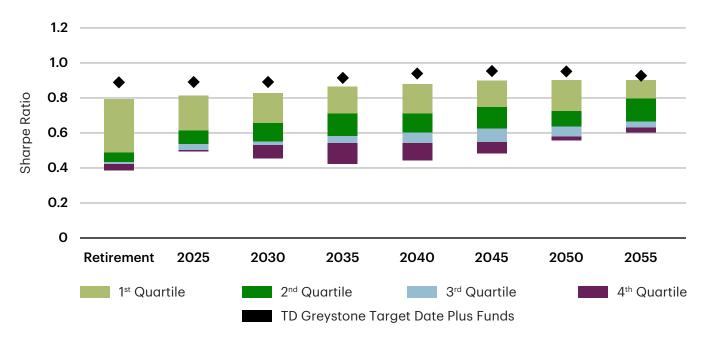


#### **Figure 7: Since Inception Annualized Standard Deviation**

Inception is January 1, 2015 (9 years). eVestment Alliance, LLC – Fund Category: TDF Income Fund – Canadian Universe. Current number of funds in the category: 10-15. Note: Each TD Greystone Target Date Plus Fund is compared against Canadian dollar denominated peers within the respective vintage's eVestment peer group. Quartile rankings are intended to measure how well a fund has performed compared to other funds in its peer group. Quartile rankings are compiled by ranking all of the funds in a category by return over a given time period. The top performing 25% of funds in the category are assigned a quartile ranking of 1, the next 25% a 2, the next 25% a 3, and the bottom 25% of funds a 4. Quartile rankings can change over time. Source: eVestment Alliance, LLC. As of December 31, 2023. Data pulled January 15, 2024.

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#### Figure 8: Since Inception Annualized Sharpe Ratio

Inception is January 1, 2015 (9 years). eVestment Alliance, LLC – Fund Category: TDF Income Fund – Canadian Universe. Current number of funds in the category:10-15. Note: Each TD Greystone Target Date Plus Fund is compared against Canadian dollar denominated peers within the respective vintage's eVestment peer group. Quartile rankings are intended to measure how well a fund has performed compared to other funds in its peer group. Quartile rankings are compiled by ranking all of the funds in a category by return over a given time period. The top performing 25% of funds in the category are assigned a quartile ranking of 1, the next 25% a 2, the next 25% a 3, and the bottom 25% of funds a 4. Quartile rankings can change over time. Source: eVestment Alliance, LLC. As of December 31, 2023. Data pulled January 15, 2024.





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Numbers may not add due to rounding.

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Sharpe Measure is a ratio of returns generated by the fund, over and above the risk-free rate of return and the total risk associated with it and can change monthly. A high and positive ratio shows superior performance and a low and negative ratio is an indication of unfavourable performance.

Standard deviation is a statistical measure of the range of a fund's performance. When a fund has a high standard deviation, its range of performance has been very wide, indicating that there is a greater potential for volatility than those with low standard deviations.

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