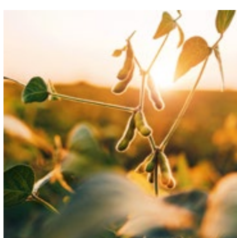
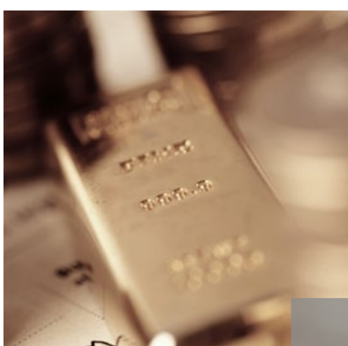
TD Asset Management

Investor Knowledge 10 Minutes

Investing in Commodities

Why Choose TDAM





Investing in Commodities

Commodities get a lot of attention from the media. The price of gold, oil and corn are in the national news nearly every day. Commodities are assets that have tangible properties such as energy and energy related resources, precious metals, and agricultural products. They are most often used as inputs in the production of other goods or services and are tied to demand and supply dynamics.

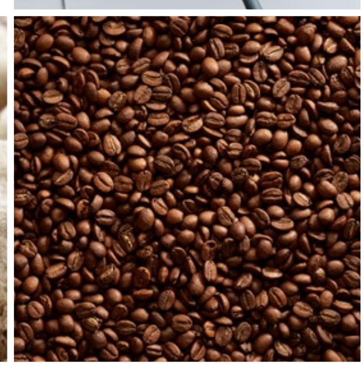
Investing in commodity funds can be a smart tool for portfolio diversification and inflation protection. Commodities have historically moved independently of equity and fixed income markets and, as such, can play an important role in portfolio construction.

Commodity groups

Commodities are raw materials used to create the products consumers buy, from food to shelter to vehicles or petrol. Some commodity groups include:

- Energy (Oil, Gasoline)
- Grains (Wheat, Corn, Rye)
- Industrial and Precious Metals (Gold, Silver, Lead, Iron)
- Softs (Coffee, Cotton, Sugar)
- Livestock (Cattle, Hogs)
- Carbon Credits

The **TD Alternative Commodities Pool** provides investors with potential exposure to, but not limited to, the above commodity groups through commodity linked derivative instruments.



What are some benefits of investing in commodities?

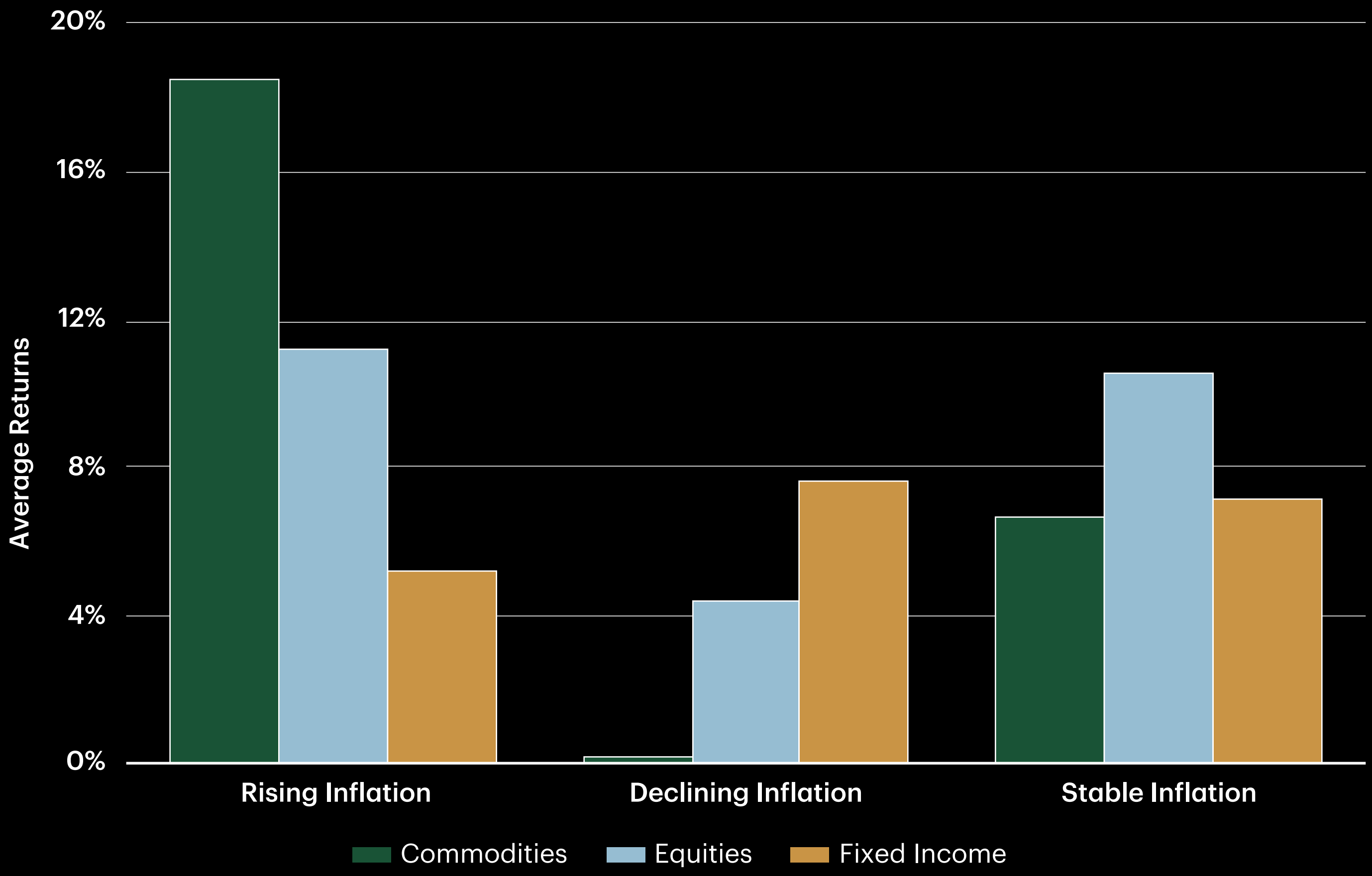
Protect portfolios against inflation: When inflation rises, the prices of goods and services increase. Since commodities are the building blocks of those goods and services, their prices tend to go up as well, making commodities one of the few asset classes that benefit from inflation.

Portfolio diversification: Commodity performance is generally based on current supply and demand dynamics. As commodity prices are tied to supply and demand, the more a commodity is in demand and the lower the supply, the higher its price will be. Commodities' historically low correlation to the prices of stocks and bonds makes them a valuable source of diversification within a portfolio.

Potential to increase risk adjusted returns: Realize the potential benefits of adding commodities to a balanced portfolio, which can improve a portfolio's risk-adjusted performance through a low to negative correlation to traditional investments like fixed income and equities.

Commodities outperform in periods of rising inflation

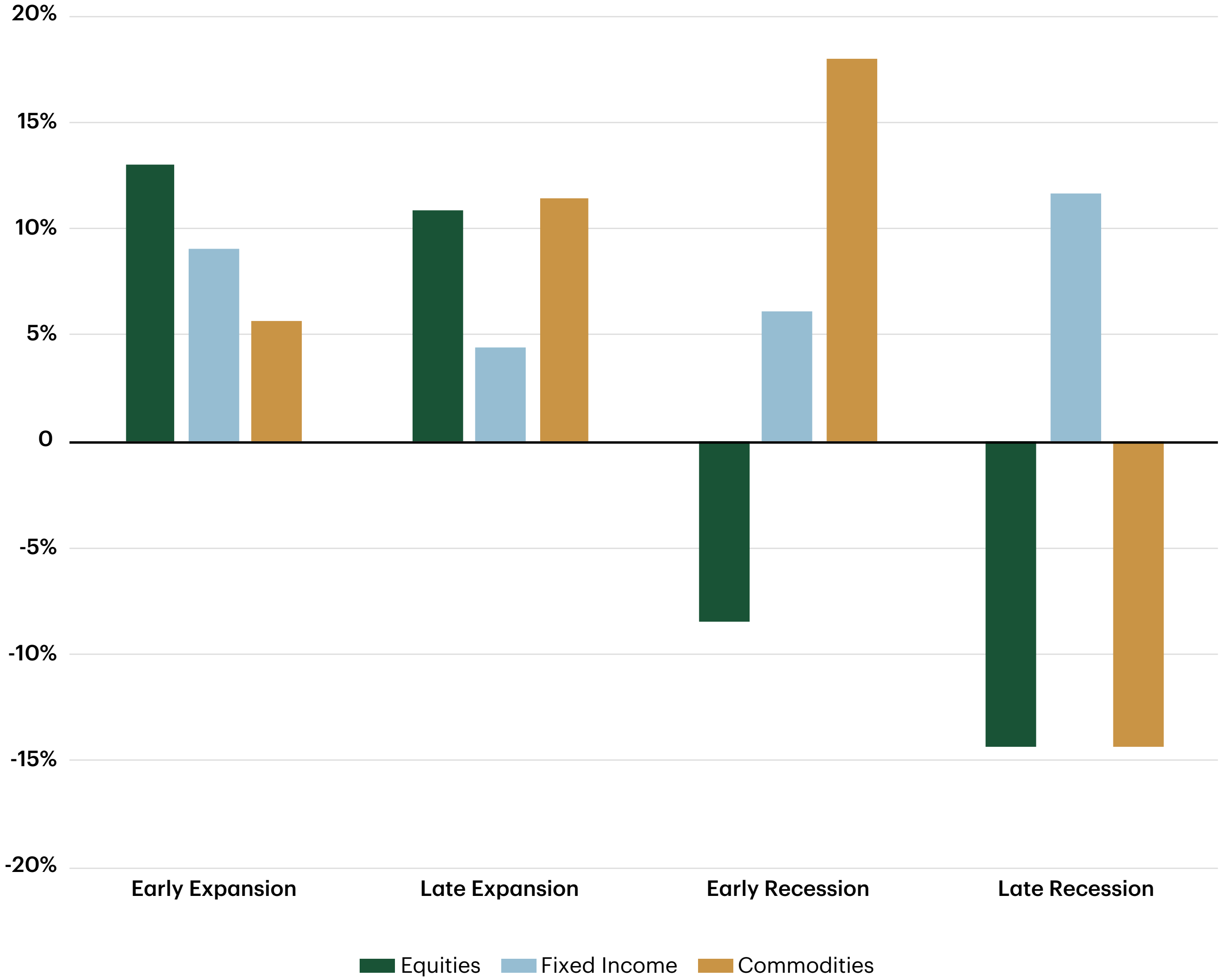
Having a low correlation to traditional fixed income and equity investments, commodities may provide a significant and ongoing hedge against inflation.



Source: Bloomberg Finance L.P., as of April 30, 2023. Data since 1977. Rising Inflation = Month-Over-Month (MoM) increase in Consumer Price Index (CPI) great than 25 basis points (bps). Declining Inflation = MoM decrease in CPI greater than 25 bps. Stable Inflation = MoM change in CPI less than 25 bps and greater than -25 bps.

Asset class returns during different phases of the business cycle

Historically, commodities have exhibited a low or negative correlation to other asset classes. The chart below highlights the resulting benefits of diversification from a commodities allocation through different phases of the business cycle.

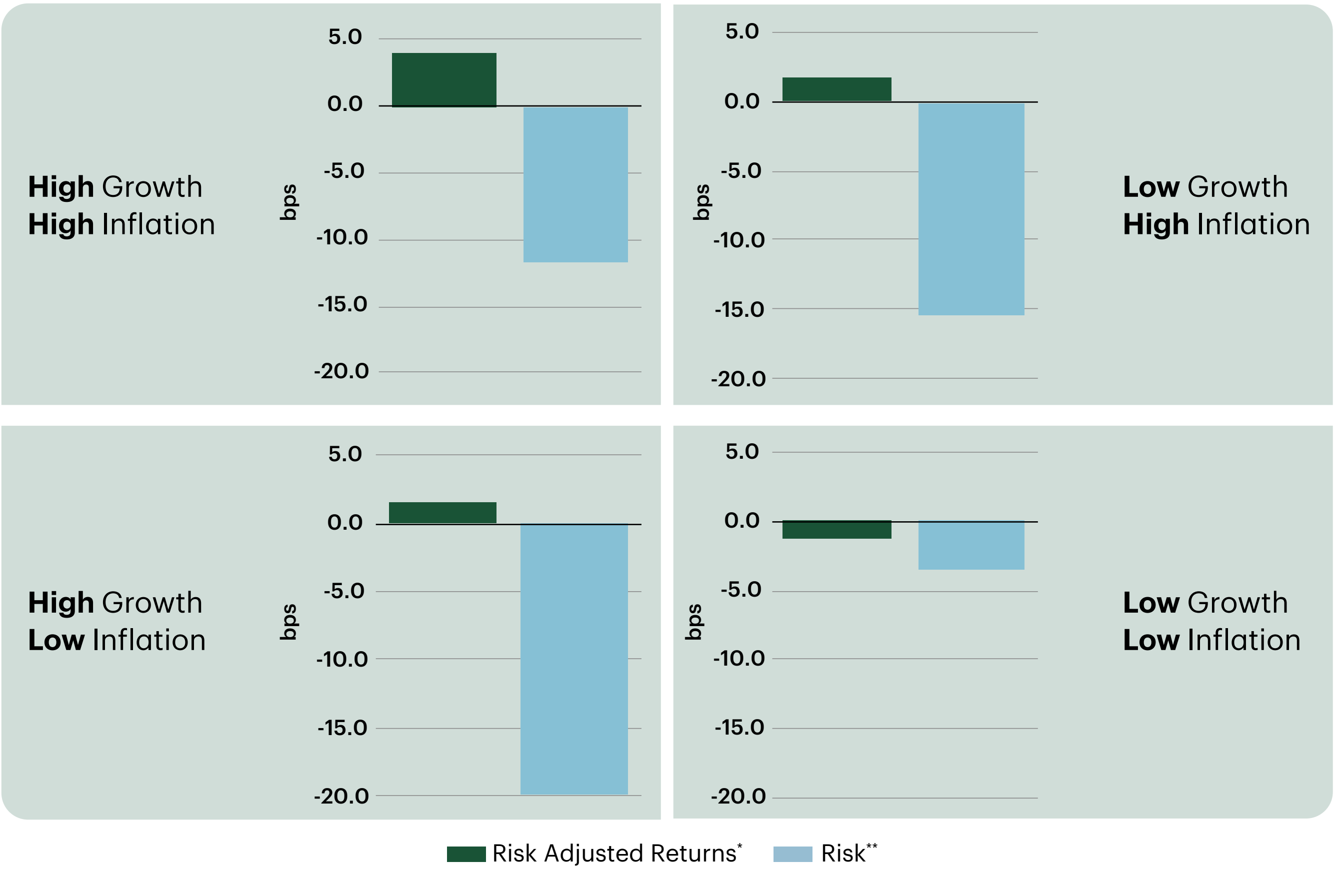


Source: Bloomberg Finance L.P., as of April 28, 2023. Data from 1977 - 2023.

Diversification

The potential to improve risk adjusted returns

Adding a 5% commodity allocation to a balanced portfolio (60/40) has the potential to improve risk adjusted returns. We see the allocation to commodities improving portfolio risk adjusted returns through time, especially in environments where inflation is elevated.



Source: Bloomberg Finance L.P., TD Asset Management, as of March 31, 2023. For illustrative purposes only. *Risk Adjusted Returns are measured using Sharpe Ratio **Risk is measured using standard deviation Note: Data from March 31, 1976 to March 31, 2023. High inflation = periods with inflation above its 3 years moving average. High Growth = periods with GDP growth higher than its 5-year moving average. The charts compare the risk and return profile of a portfolio with 5% allocation to commodities relative to a 60-40 portfolio. The commodity exposure in the portfolio is funded with Equities. Asset class assumptions correspond with TD Asset Management's Long Term Asset Class Assumptions.

True commodities vs commodity equity funds

The table below represents a correlation matrix highlighting the strong diversification benefits of direct commodities. XLE, XOP and XEG represent baskets of energy stocks, showing that the benefits of diversification decrease across the board when compared to true commodities. There is a meaningful positive correlation between these ETFs and equity markets in general. This relationship is magnified during times of stress, which is when portfolio diversification matters most.

Asset Allocation	Commodities	Canadian Fixed Income	Canadian Corporate Bonds	U.S. Fixed Income	Canadian Equity	U.S. Equity	International Equity	XLE	XOP	XEG
Commodities	1.00									
Canadian Fixed Income	-0.14	1.00								
Canadian Corp. Bonds	0.00	0.95	1.00							
U.S. Fixed Income	-0.13	0.82	0.72	1.00						
Canadian Equity	0.16	0.24	0.35	0.17	1.00					
U.S. Equity	-0.02	0.19	0.25	0.18	0.66	1.00				
International Equity	0.06	0.18	0.24	0.14	0.53	0.59	1.00			
XLE	0.44	-0.09	0.08	-0.05	0.68	0.39	0.47	1.00		
XOP	0.43	-0.05	0.12	-0.03	0.64	0.32	0.39	0.92	1.00	
XEG	0.49	-0.08	0.12	-0.04	0.73	0.29	0.40	0.89	0.89	1.00

Source: TD Asset Management Inc. as at August 31, 2023.

Capital Market Assumptions

We anticipate commodity returns to outperform our long-term capital market assumptions in the coming years as commodity supply is constrained, following years of underinvestment. Historically, commodity returns have exceeded long-term averages through the investment phase of the commodity cycle.

- From an allocation standpoint, there is no single answer defining the optimal commodity allocation, which can depend on existing portfolio structure, overall risk appetite and most importantly, capital market assumptions on asset class returns and risk.
- Assuming an expected long-term commodity return of 5%, our modelling shows that risk-adjusted return for a traditional 60/40 portfolio can be improved with a commodity allocation of 4.3%. Importantly, if returns average 8%, the optimal commodity allocation increases to 9.4%[1].

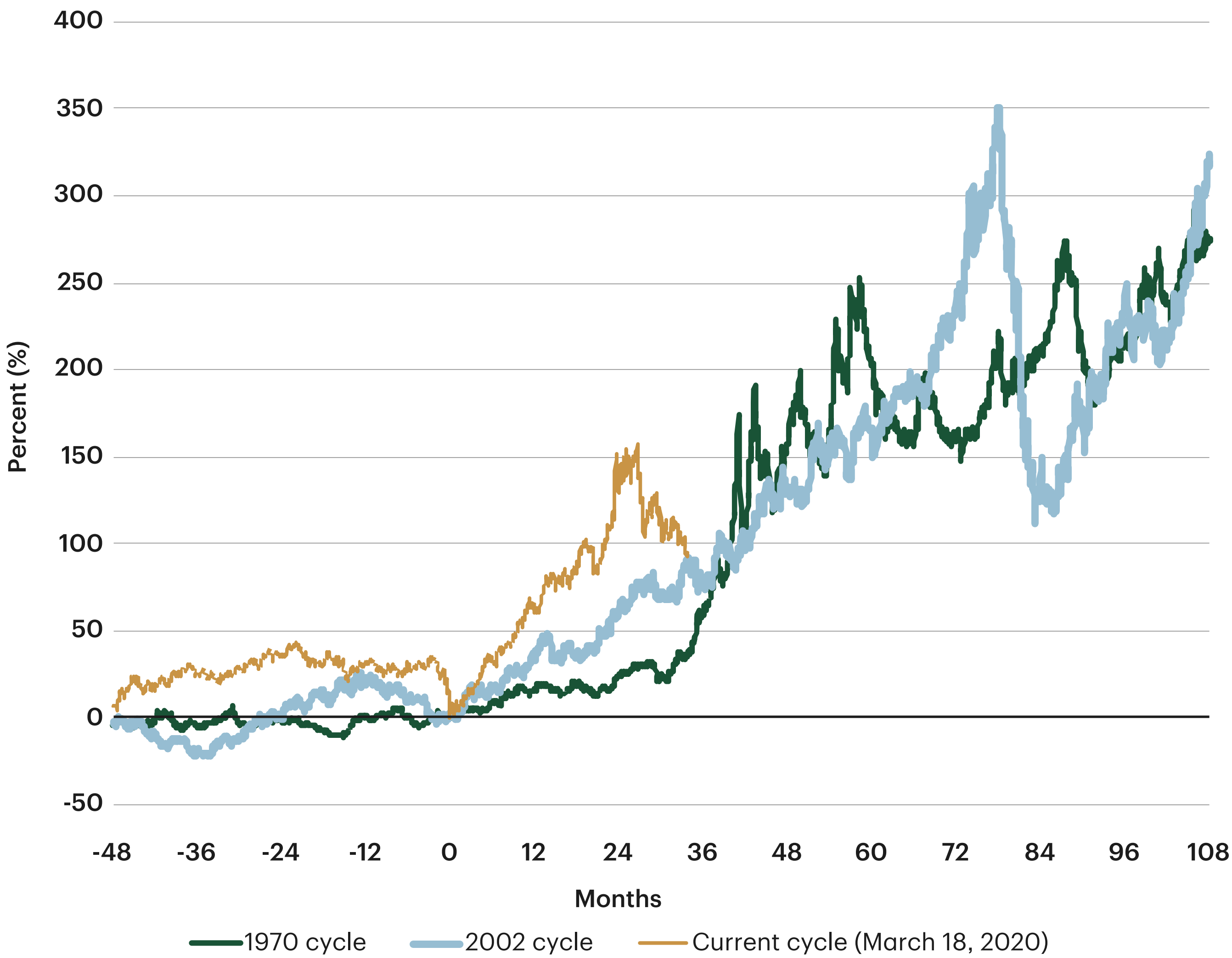
[1] All data related to asset returns, correlation and volatility are as of Dec 31, 2022. All data related to portfolios is as of Q2 2023. Commodities = BCOM Total Return Index, Canadian Fixed Income = FTSE Canada Universe Bond Index, Canadian Corporate Bonds = FTSE Canada All Corporate Bond Index, U.S. Fixed Income = Bloomberg Barclays U.S. Aggregate Index, Canadian Equity = S&P/TSX Composite, U.S. Equity = S&P 500, International Equity = MSCI EAFE, Fixed Income Treasury and Fixed income Corporate = are based on actual fund composition, which are different from the standard U.S. and Canadian benchmark exposure. We break down the risk by this dimension to show the readers that it could have a meaningful impact on the optimization result. XLE = Energy Select Sector SPDR ETF, XOP = S&P Oil & Gas Exploration & Production Select Industry TR Index (XOP ETF data only from 2006), XEG = iShares S&P TSX Capped Energy.

Early Stages of a Commodity Super-cycle

A **commodities super-cycle** can be described as a period where commodity supplies fail to keep up with demand, resulting in tighter inventories, and consistent and sustained price increases – a favourable environment for positive commodity investment returns. There are two ingredients required for a commodity super-cycle: a generational demand shock and an extended period of underinvestment in supply. **Today, we believe we have both.**

Super-cycles historically have been driven by both robust demand and constrained supply and typically last 8-12 years. The strong returns on global commodities we experienced in 2022 have led many to believe that this may be the beginning of a new commodity super-cycle. At TD Asset Management Inc. (TDAM), we feel that after spending the better part of a decade in a bear market, commodity prices are likely in the early stages of a super-cycle.

Super-cycle in Perspective



Source: Refinitv Datastream, TD Asset Management, as of March 31, 2023.

Why choose TDAM for commodities?

TDAM was among the first bank owned asset managers to offer an accessible professionally managed asset allocation portfolio to retail investors, pioneering the integration of alternative investments alongside equities and fixed income. Our approach combines three decades of asset allocation experience with innovation that can help improve investment outcomes.

Collectively, TDAM's Asset Allocation Team is comprised of 29 investment professionals, who collaborate every day to manage over $101 billion[2] in assets on behalf of investors while constantly monitoring the impact of global events to help inform our investment decisions - which contrasts the broadly used passive, systematic, or indexing approaches typically found in the marketplace. Our approach to active management allows portfolios to respond to short and long-term market opportunities and risks.

The **TD Alternative Commodities Pool** (the "Pool") offers a more diversified exposure to commodities than single commodity funds such as gold or silver. This can be a great complement for balanced portfolios, featuring an innovative approach that seeks to achieve capital appreciation with low correlation to equity and fixed income markets, which can improve diversification when added to investment portfolios.

[2] Aggregate statistics as of March 31, 2023 for TDAM and Epoch Investment Partners, Inc.

Institutional experience

TDAM draws upon years of experience in successfully managing commodities and alternative strategies for large pension plan managers in Canada (with the largest allocation to commodities across pension plans managed by TDAM), bringing the rigour and sophistication of institutional money management to retail investors.

Using the deep expertise of one of Canada's largest pension plan money managers[3], each portfolio is carefully designed by TDAM to optimize asset allocation and diversification to help investors get more upside while limiting the downside.

Many of the largest Pension funds include a commodities allocation in their portfolios, including the Ontario Teachers' Pension Plan (OTPP)[4]. Collectively, they had a median commodity exposure of 3.39% across all Defined Benefit pension plans in 2022[5]. OTPP looks to commodities to help hedge against inflation with investments in commodities leading the list of inflation sensitive assets, accounting for 10% of the asset mix in 2022[6].

[3] The Top 40 Money Managers (assets as of December 31, 2022)" - Benefits Canada, May 2023 Edition.
[4] Annual Report 2022 - Ontario Teachers' Pension Plan.
[5] Communique, Pension Investment Association of Canada Newsletter, 2022 Asset Mix Report - piacweb.org
[6] Annual Report 2022 - Ontario Teachers' Pension Plan.

Dedicated commodities team

TDAM's dedicated commodities team takes an active quantitative and qualitative approach in combination with high quality fundamental research to seek to add more value and capabilities compared to the broadly used passive, systematic, or indexing approaches used by other funds.

Take advantage of TDAM's extensive market research, portfolio management and industry presence with an intimate understanding of commodity fundamentals (supply and demand) leading to a strategic determination of commodity prices and structures.

The addition of commodities to a portfolio today may be very timely given their performance, both relative and absolute, and during periods of increased inflation and related uncertainty, as we are experiencing today. Hence, the addition of commodities should be an essential consideration in portfolio construction.

For more information, visit www.tdam.com
or contact your investment professional.

Connect with TD Asset Management