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AKBLG CONVENTION

Unlocking the Potential of LG Reserves:

MFA's Options for Socially Responsible and Long Term Investing

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Municipal Finance Authority of BC

MFA Lines of Business

MFA Line of Business	Strategic Fit	Description	Market Positioning
Long-Term Financing	Core Business	MFA's core business activity is to provide long-term financing for local governments.	No competitors. By legislation, all long-term borrowing by municipalities and regional districts in British Columbia must be provided by MFA.
Short-Term Financing	Secondary revenue stream (non-core)	MFA provides optional short-term financing to local governments.	Low competition. MFA is able to offer highly competitive short-term lending rates to BC local governments.
Pooled Investment Products	Secondary revenue stream (non-core)	MFA provides optional investment products to local governments through its pooled fund offerings.	Highly competitive. However, MFA is able to provide local governments with broad exposure to different asset classes (vs. strict limitations set out in the Community Charter).

MFA is operating a $10 billion financial institution with a small team of just 17 staff!

ESG Factors and Socially Responsible Investing

Municipal Finance Authority of BC

What is ESG?

E	S	G
Environmental	Social	Governance

E – Environmental

- Climate change and GhG Emissions
- Sustainability
- Air & water pollution
- Water scarcity
- Biodiversity and habitat protection
- Site rehabilitation

S – Social

- Human rights
- Community impact
- Health & safety
- Child and forced labour
- Gender diversity
- Human Capital: Employee engagement/productivity
- Customer satisfaction

G – Governance

- Board independence
- Board accountability
- Executive compensation
- Shareholder rights and voting
- Anti-corruption

A multitude of reporting & disclosure standards

We are still very far from standardizing the way companies and governments report on ESG factors. How can one make investment decisions without reliable and comparable data?

Responsible Investing Spectrum

Traditional Investing	Responsible Investing/ESG Investing	Socially Responsible Investing	Impact Investing
Maximize returns			
	Manage ESG risk		
• Limited or no consideration for ESG factors	• Evaluate ESG risks and opportunities as part of financial analysis • Choosing strong performers	• Narrow investment options by using best in class filters • Or by excluding companies or sectors based on investor values or mission	**Target & Measure Impact** • Investing with the intention of achieving measurable environmental or social impact along with investment returns

Active Ownership

- Rigorous approach to corporate governance and proxy voting
- Attempt to influence company behaviour through voting and engagement

MFA's Suite of Pooled Investment Products

	(3) Pooled High Interest Savings Accounts (FFF)	Money Market Fund (ESG Integrated)	Government Focused Ultra-short Bond Fund (ESG Integrated, FFF)
Key Features	NATIONAL BANK OF CANADA, CIBC, Scotiabank.‖ Best for soon needed funds. Balances favourable interest rates and liquidity. Monies held with Domestic Systemically Important Banks ✓ *Favourable deposit rates negotiated by MFA* ✓ *Monthly Interest*	This Fund is suited for Investors who must maintain adequate liquidity, while benefitting from asset diversification. This Fund holds a portfolio of very short-term securities, focused on high-quality corporates. The Fund seeks a yield advantage through active market and credit analysis. ✓ *Monthly distributions*	The main objective of this Fund is to provide safety and liquidity. This Fund maintains a bias towards safe and favourable Federal and Provincial Securities, holdings may include up to 25% Big 6 Banks debt securities. Securities acquired for the Fund may have a maximum maturity of 2 years. This Fund does not invest in non-bank corporates. ✓ *Monthly distributions*
Suggested Investment Time Horizon	0 – 12 months	0 – 24 months	0 – 24 months
*Trailing 12-month Total Return * ‡*	N/A	0.16%	-0.18%
Current Yield †	**0.97 – 1.05% ‡**	**0.470%**	**1.26%**
Total Annual Fees	3 bps	12.5 bps	12.5 bps

Management and composition of Funds subject to MFA's Pooled Investment Funds Investment Policies, Objectives, and Guidelines Agreement with Fund Manager(s). ‖ Call MFA for details.
* Trailing 12-month Total Return equal to change in NAV value plus distributions over the past 365 days to Feb.28, 2022; past performance does not guarantee future performance. † Before fees. ‡ Net of total fees and expenses.
FFF refers to Fossil Fuel Free defined here as (1) Funds which exclude investments issued by companies directly involved in extracting, processing, or transporting coal, oil or natural gas; and (2) Savings Accounts offered by financial institutions.
ESG integrated refers to Funds which are managed by signatories to the UN's Principles of Responsible Investment.

MFA's Suite of Pooled Investment Products

	Short-term Bond Fund	Fossil Fuel Free Short-term Bond Fund	Pooled Mortgage Fund	Diversified Multi-asset Class Fund
Key Features	Designed for Investors with a 2 to 5 year investment horizon as the Fund maintains a longer duration versus the MM and Ultra-short Funds. This Fund provides instant diversification through a broad asset mix of high-quality government and corporate securities. The Fund seeks a yield advantage through active market and credit analysis. ✓ *Monthly distributions*	This Fund is benchmarked against the same index as the ST Bond Fund, however screens-out companies involved in the extraction, processing and transportation of coal, oil, and natural gas. Designed for Investors with a 2 to 5 year investment horizon. This Fund provides instant diversification through a broad asset mix of high-quality government and corporate securities. The Fund seeks a yield advantage through active market and credit analysis.	This Fund is designed to provide asset class diversification for local government investment portfolios. Best suited for cash not needed for 3+ years. The Fund invests in high-quality 1st mortgages on Canadian income producing commercial properties – such as retail, multi-residential, office and industrial. ✓ *Minimum 1.25x CF coverage* ✓ *Maximum 75% Loan-to-value*	Designed to invest capital over the long-term and grow at a rate that exceeds inflation by 3.5%, while minimizing risk through asset class selection and diversification. The Fund will be broadly invested in Fixed Income, Equities, and Alternative investments. ✓ *Preserve long-term purchasing power* ✓ *Alternative Investments at very attractive pricing.* ✓ *Gain exposure to professionally managed growth assets.*
Suggested Investment Time Horizon	2 – 5 years	2 – 5 years	3 years + (redemption restrictions may apply)	10 years + (redemption restrictions may apply)
*Trailing 12-month Total Return * ‡*	-1.14%	-1.29%	-0.87%	N/A
Current Yield †	**1.96%**	**1.94%**	**2.81%**	**5.90% §**
Total Annual Fees	20 bps	20 bps	25 bps	33 bps

Management and composition of Funds subject to MFA's Pooled Investment Funds Investment Policies, Objectives, and Guidelines Agreement with Fund Manager(s). § estimated.
* Trailing 12-month Total Return equal to change in NAV value plus distributions over the past 365 days to Feb.28, 2022; past performance does not guarantee future performance. † Before fees. ‡ Net of total fees and expenses.
FFF refers to Fossil Fuel Free defined here as (1) Funds which exclude investments issued by companies directly involved in extracting, processing, or transporting coal, oil or natural gas; and (2) Savings Accounts offered by financial institutions.
ESG integrated refers to Funds which are managed by signatories to the UN's Principles of Responsible Investment. "Carbon Light" refers to strategies which minimize a portfolio's carbon impact including up to ~40% FFF.

MFA's FFF Short-term Bond Fund Overview

- The Fossil Fuel Free Short-term Bond Fund provides a credible well-diversified active investment solution for clients who choose to divest from fossil fuel investments
  - Leverages the same PH&N investment team and process with a proven track-record
  - Uses a 3rd party screening service provided by Sustainalytics to identify permissible investments
  - Excludes companies directly involved in the extracting, processing or transporting coal, oil or natural gas
- Fund Characteristics:
  - Benchmark = FTSE Canada Short Term Overall Bond Index
  - Key Investment Guidelines:

Sector Concentration:	*Max*
Government securities	100%
Corporate	70%
Non-Canadian dollar exposure	20%
Non-Canadian securities	30%
Maples	10%
Illiquid assets	10%
RRB and TIPS	10%

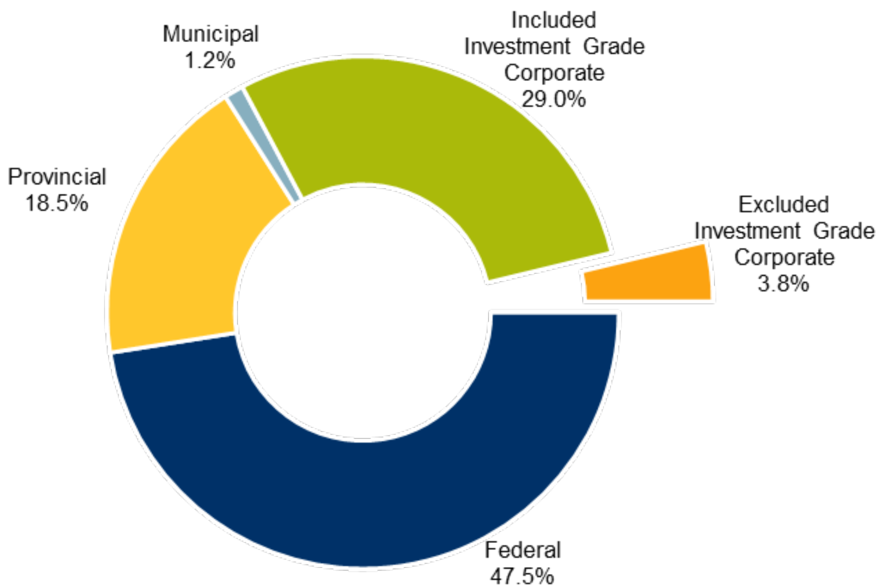
Credit Quality:	*Max*
A- and above	100%
BBB- to BBB+	25%
Below BBB-	0%

Interest Rate Guidelines

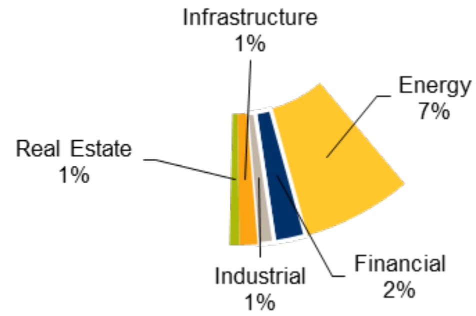
- Benchmark +/-1 year duration
- Average term to maturity between 2 and 4 years
- Max 7 years and 3 months for any individual security

FFF Screen has minimal impact on investable universe in MFA FFF Bond Fund

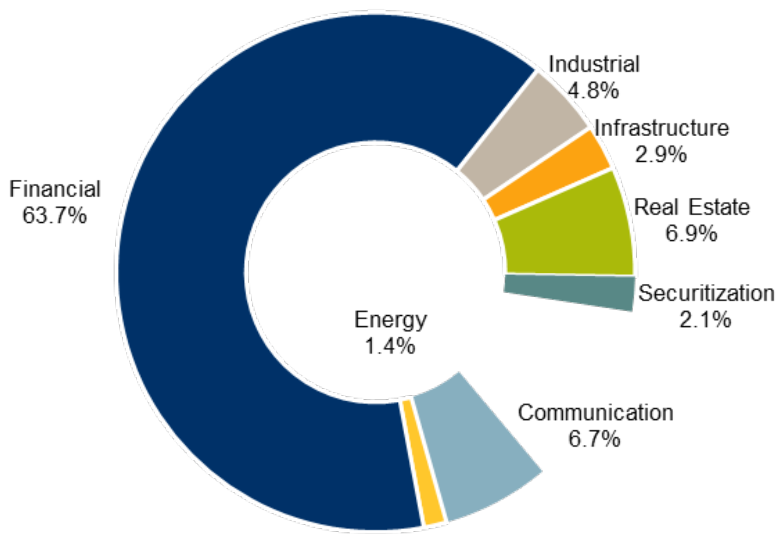
FTSE Canada Short Term Overall Bond Index



Sector breakdown of excluded investment grade corporate bonds (% of overall investment grade corporate)



Sector breakdown of remaining investment grade corporate bonds (% of overall investment grade corporate)



Estimated in 2019

Improving MFA's Disclosures to Bond Investors– Impact Measurement Reporting Metrics

MFABC's project categories have numerous options for impact measurement reporting

Borrowing Purpose	Green and/or Social Category	Illustrative Reporting Metrics
Sewer/Drainage	• Sustainable Water and Wastewater Management • Affordable Basic Infrastructure	• Wastewater treated to appropriate standards or raw/untreated wastewater discharges avoided (liters) • Wastewater avoided, reused or minimized at source (liters) • Number of people with access to improved sanitation facilities under the project
Water	• Sustainable Water and Wastewater Management • Affordable Basic Infrastructure	• Number of people with access to clean drinking water • Reduction in water losses in water transfer and/or distribution (liters) • Number of new household water connections
Parks/Recreation/ Culture	• Environmentally sustainable management of natural resources and land use • Access to Essential Services	• Maintenance/safeguarding/increase of natural landscape area in urban areas in km^2 • Percentage of residents with access to green space • Number of people reached through cultural programs
Health/ Social Services	• Access to Essential Services • Socioeconomic Advancement and Empowerment	• Number of hospitals and other healthcare facilities built/upgraded • Number of education facilities built and/or initiatives provided • Number of vulnerable individuals benefiting from training/education programs
Solid Waste Management/ Recycling	• Pollution Prevention and Control • Affordable Basic Infrastructure	• Recycling rates in a given municipality • Energy recovered from waste (MWh or KJ) • Number of people or percentage of population provided with improved municipal waste treatment or disposal services
Environmental Conservation/ Remediation	• Environmentally sustainable management of natural resources and land use	• Maintenance/safeguarding/increase of protected area/habitat in km^2 • Absolute number of indigenous species, flora or restored through the project • Annual GHG emissions reduced/avoided in $tCO2_e$

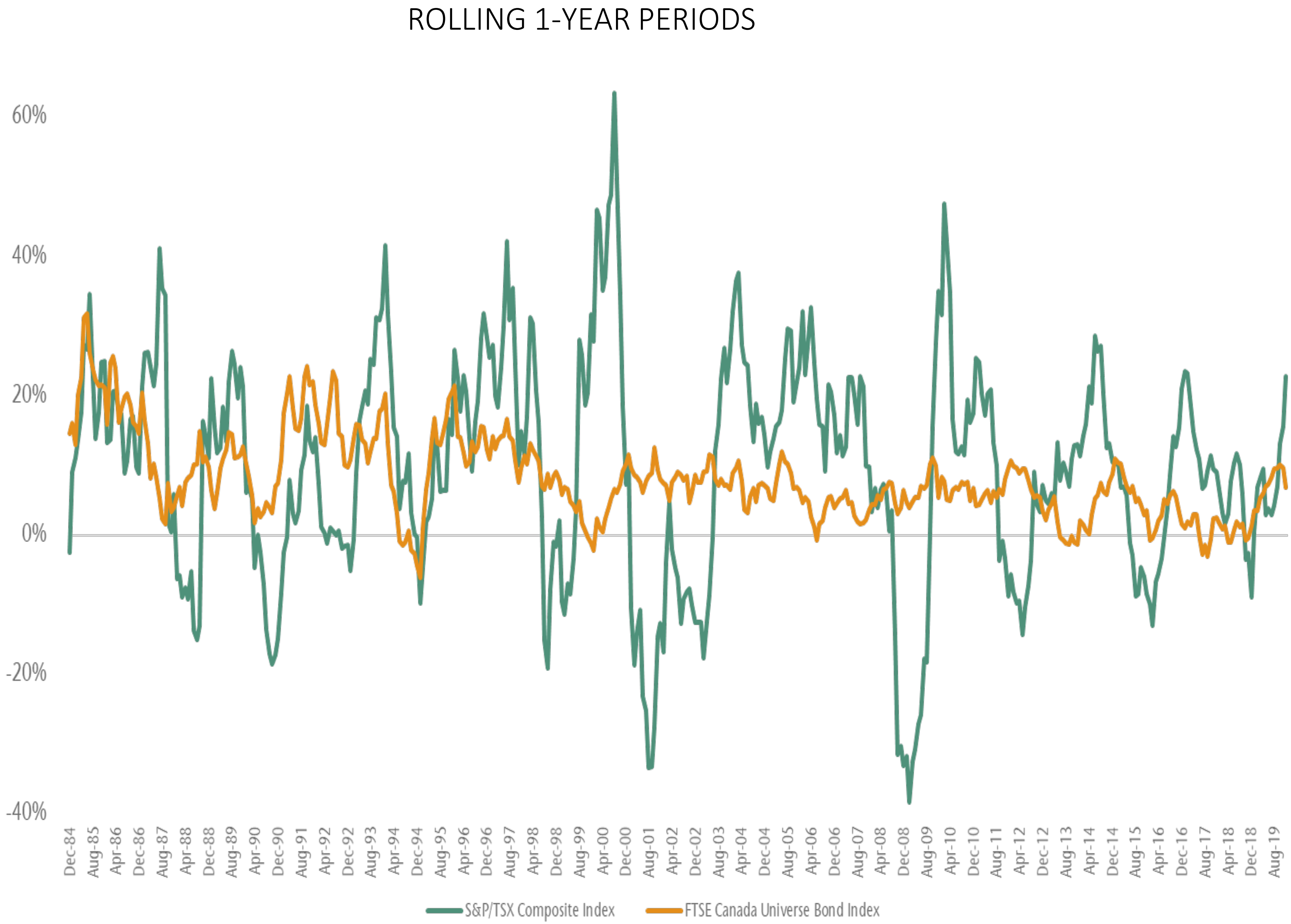
Investing in DMAC:
The Importance of Thinking Long Term

Municipal Finance
Authority of BC

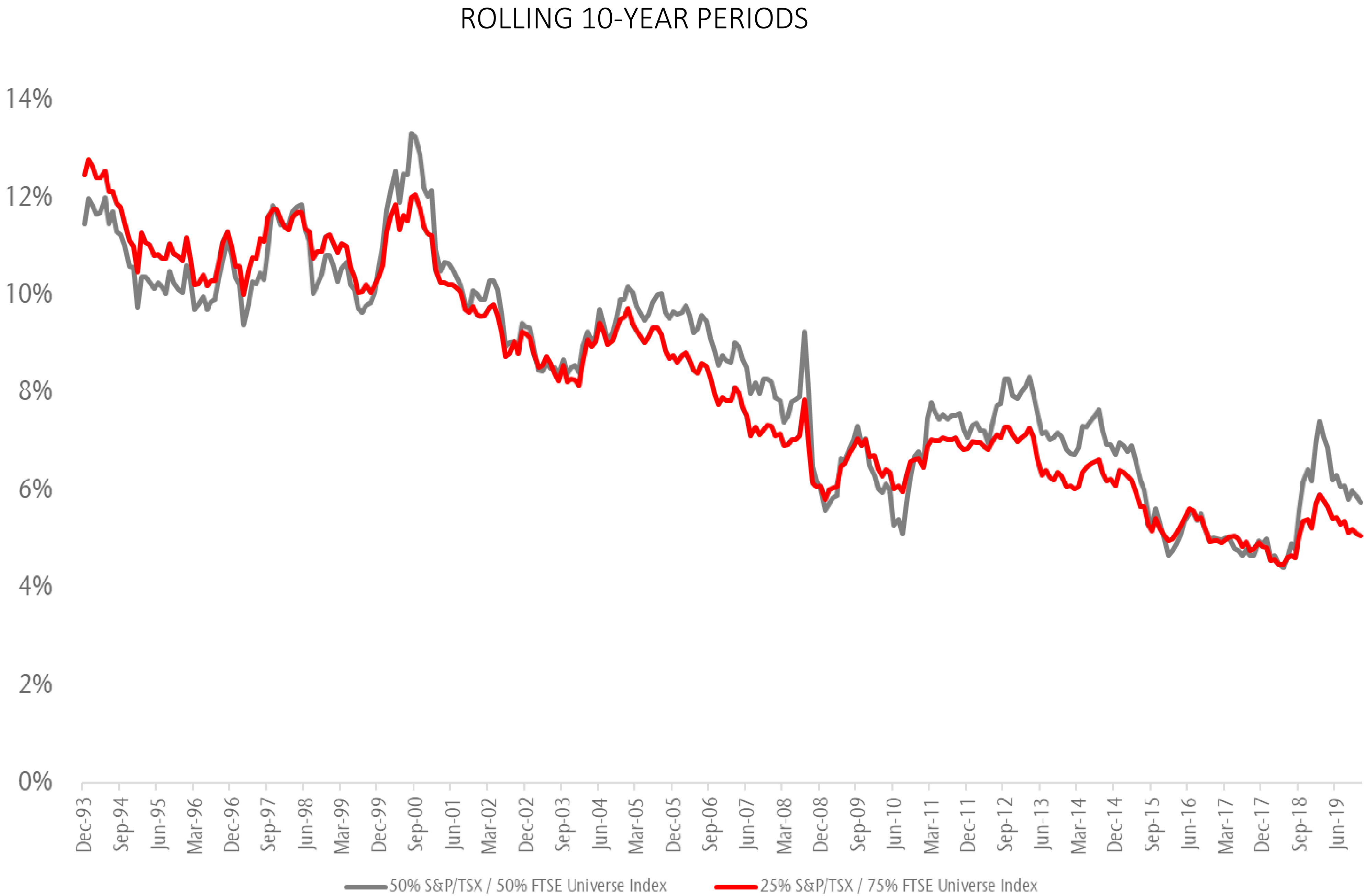
Executive Summary – MFA DMAC

- MFA is offering a new **optional** investment vehicle intended for **long-term** investments by BC local governments (“LGs”): The Diversified Multi-asset Class pooled investment fund (“DMAC”)
- In order to support long-term capital growth and reduce certain risks, MFA endorses the ability for **well-suited** LGs to invest a portion of reserves into a professionally-managed global portfolio of stocks, bonds and alternative assets
- A multi-asset class portfolio can offer superior risk-adjusted returns and can enhance some risk characteristics of a fixed-income only reserves portfolio - **as long as the time horizon for the investment is truly long-term in nature**
- The DMAC Fund <u>is not</u> appropriate <u>for all</u> LGs. While MFA will help educate and support LGs, <u>LGs will need to do their own due diligence</u> before investing. LGs are considered professional investors by Canadian securities regulators
- In addition to strict on-boarding requirements to ensure suitability prior to entering into the Fund, investments are limited to either 25% or 10% of ‘Total Cash & Investments’ dependent upon a LG’s population

Year over year investment returns are more volatile for stocks vs. bonds



Asset class diversification reduces volatility and increases risk-adjusted returns



ESG integration and SRI: DMAC is a low carbon footprint fund

RBC Global Asset Management
PH&N Institutional

Municipal Finance Authority of BC

ALL Strategies in the DMAC are managed using ESG integration

Taking concrete actions for 20+ years

Fully integrated ESG (environmental, social & governance)

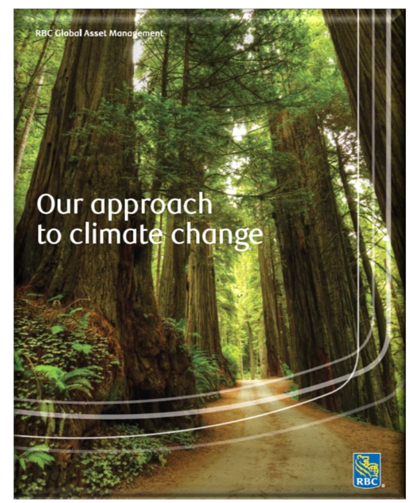
- **A+ grade on all assessed modules in 2020 - UN Principles of Responsible Investment (UN PRI)***
- Developed Approach to Climate Change

Active Stewardship

- **Founding member, former Chair CCGG (Canadian Coalition for Good Governance)**
- Climate Action 100+
- 30% Club Investor Group
- Proxy voting focus: Gender & CEO/Chair separation

Client-driven solutions and reporting

- **Long history of SRI & Fossil Fuel Free investment capabilities[1]**
- Integrated ESG reporting for clients & consultants



[1] Began offering SRI strategies in 2002 and Fossil Fuel Free strategies in 2016.
*As part of the paid annual membership services, the PRI evaluates signatories' approaches to the Principles based on its assessment methodology. Once the responses are assessed, all indicator scores are aggregated and modules are assigned a performance band (from A+ down to E). Our firm's full transparency report as one of over 2,000 signatories can be found here: RBC GAM PRI Transparency Report. Our firm's full private Assessment Report from the UNPRI is available upon request..

3 out of 8 of the DMAC strategies use a Fossil Fuel Free screen

Fossil fuel free exclusionary framework

	Fossil Fuel Free
No companies directly involved in extracting, processing or transporting coal, oil or natural gas	✓
No companies included in ‘The Carbon Underground 200’*	✓
Excludes pipelines and railways	✓
Environmental, Social, Governance (ESG) integration	✓

*The Carbon Underground 200™ identifies the top 100 coal and the top 100 oil and gas publicly-traded reserve holders globally, ranked by the potential carbon emissions content of their reported reserves.

The DMAC is a Socially Responsible Fund

A low carbon footprint fund with over 94% of assets meeting the FFF definiton

Asset Class/Strategy	Target Exposure	FFF	FFF Content
Short Core Plus Bonds	15%	✗	~90%
Multi-Asset Global Credit	10%	✗	~90%
Fixed Income	**25%**		
Canadian Equities	10%	✗	~70%
Canadian Low Volatility Equities	5%	✓	100%
Global Equities	24%	✓	100%
Global Low Volatility Equities	11%	✗	~90%
Emerging Market Equities	10%	✓	100%
Equites	**60%**		
Core Real Estate	5%	✗	>90%
High Yield Mortgages	5%	✗	>90%
Infrastructure - Renewables	5%	✗	100%
Alternatives	**15%**		

- The Fund will align with a shared focus among BC's local governments on ESG and climate change considerations
- All components of the Fund will be managed under the UN's Principles for Responsible Investing and incorporate broad ESG considerations into the investment process
- DMAC will be a low carbon fund with a significant portion of the asset classes employing a strict Fossil Fuel Free (FFF) screen. An estimated 94% of the underlying funds are currently invested in FFF entities - as defined by most local governments

DMAC Structure

RBC Global Asset Management
PH&N Institutional

Municipal Finance
Authority of BC

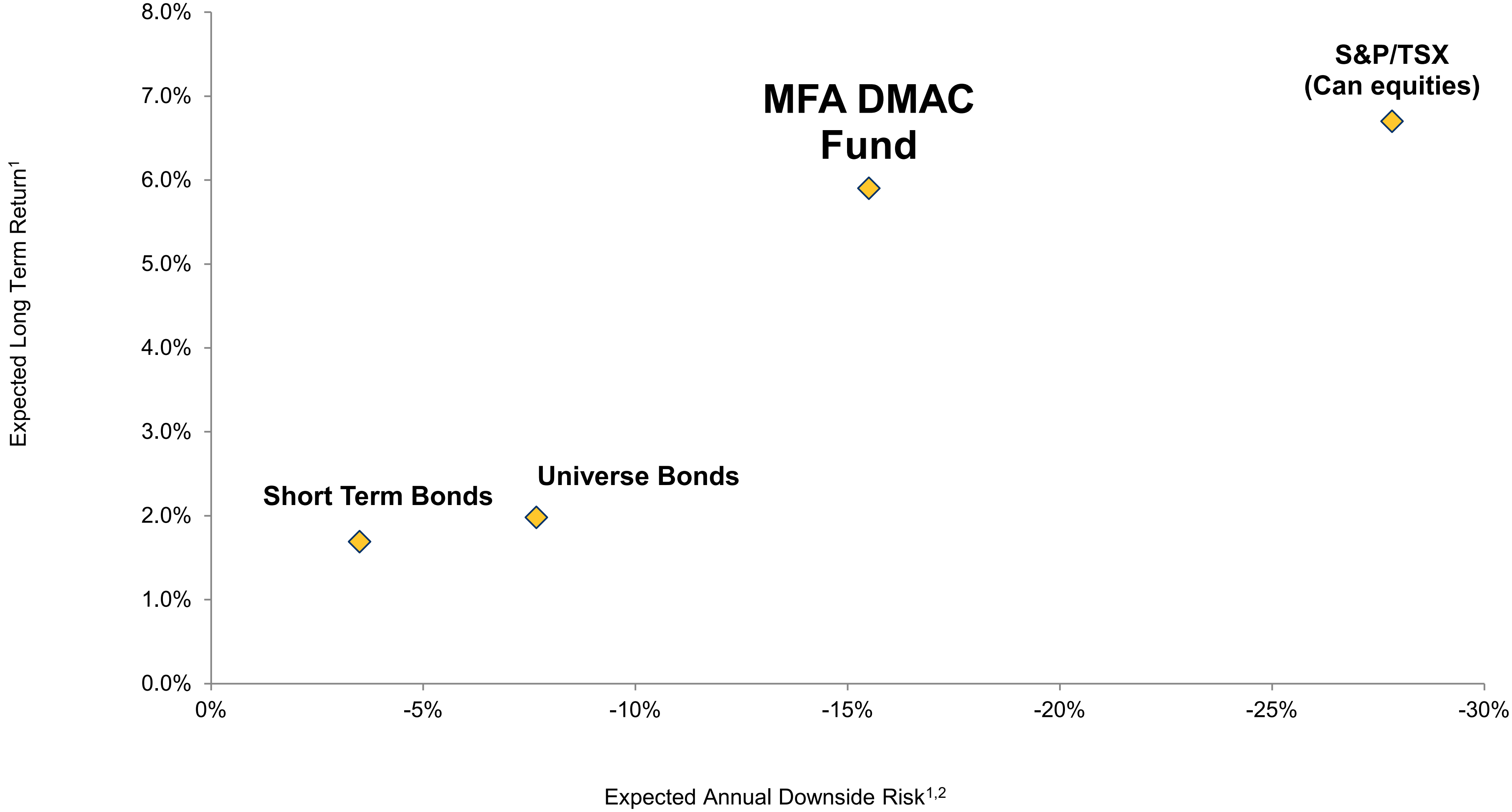
DMAC aims to provide global diversification and optimize risk-adjusted returns

Asset Class/Strategy	Asset Class/Strategy Characteristics	Exposure Range *	Expected Return Range	Expected Annual Volatility	Expected Annual Downside Risk
Short & Universe Bonds	• Key source of stability and modest income • Tactical management of multi-sector-credit and illiquidity	5.0% to 15.0%	2.0% to 2.3%	2.3% to 4.3%	-3.0% to -7.5%
Multi-asset Global Credit	• Diversified global exposure to investment grade and sub-investment grade credit • Not benchmark driven, providing more flexible approach to credit markets	5.0% to 15.0%	4.0% to 5.0%	9.3%	-18.7%
Canadian & Global Equities	• Actively managed fundamental equities • Significant component of portfolio return • Large global component reduces exposure to concentrated Canadian markets	20.0% to 40.0%	5.6% to 6.4%	14.3% to 17.0%	-25.0% to -27.8%
Low Volatility Equities	• Reduce risk embedded in traditional equity allocations • Typically resilient in drawdowns but trail in strong up-markets	10.0% to 20.0%	5.1% to 5.8%	11.0% to 11.7%	-15.5% to -16.4%
Emerging Market Equities	• Exposure to faster growing emerging markets • Increases portfolio expected return	5.0% to 8.0%	7.6%	23.3%	-33.9%
Alternatives	• High Yield Mortgages, Real Estate, and/or Infrastructure Funds are being considered • Strong risk-adjusted returns that are less correlated with equities and low volatility	10.0% to 20.0%	5.8% to 6.0%	1.7% to 9.6%	-13.4% to -13.9%

* MFA is currently refining the asset allocation parameters - these ranges are preliminary. The Fund Manager will have latitude to operate within approved ranges by asset class to allow for tactical asset allocation decisions and rebalancing.

MFA Diversified Multi Asset Class Fund

Meaningful increase in expected return and risk vs short term bonds



[1] Refer to appendix for modelling assumptions and disclosures. [2] CVaR95 which represents the expected loss during the worst 5% of return outcomes.
Representative Data Series: Short Term Bonds (FTSE Canada Short Term Overall Bond Index), Universe Bonds (FTSE Canada Universe Bond Index), S&P/TSX (S&P/TSX Composite Index).
Hypothetical performance analyses are for illustrative purposes only and there is no guarantee that hypothetical returns or projections will be realized

Change in risk profile: Introducing Equities into a LG's Investment Portfolio

The impact of investing 20% of "City A's" existing portfolio into a global stock portfolio is shown below. This is a conservative illustration of the increased volatility of introducing the DMAC Fund, as that DMAC will have lower risk characteristics than a 100% global stock portfolio.

	City A Current Portfolio (Portfolio Size: $1.7B)	City A Adjusted Portfolio w/ 20% Equity Exposure (Portfolio Size: $1.7B)
Expected Annual Return ($ / %)	$36.0M (2.12%)	$50.2M (2.95%)
Volatility**	+/- $30.8M (1.81%)	+/- $55.7M (3.27%)
Avg. Max. Drawdown†	**-$15.1M (-0.89%)**	**-$42.0M (-2.47%)**
VaR (99%) (~1 in 100)	-$70.3M (-4.14%)	-$157.7M (-9.27%)
Worst Drawdown◊ (~1 in 2,000)	-$101.9M (-5.99%)	-$249.7M (-14.69%)

10-year investment horizon. ** 1 standard deviation; ~67% of the time actual returns are +/- x from the expected return. † Calculated by running 2,000 simulations across 10 years and finding the worst annual peak-to-trough decline by scenario, the average is then taken across those 2,000 scenarios. ◊ Of the 2,000 simulations the worst drawdown; theoretically a 1 in 2,000 scenario.

A Board or Council-approved Investment Policy must allow for long-term investing before investing in the DMAC. MFA is available to help adapt your Investment Policy to meet this requirement. Example of language that can be added to your existing policy:

Long-term Portfolio (10 years+)

After first ensuring adequate short & mid-term liquidity, if [position assigned responsibility for financial administration, (i.e. Chief Financial Officer, etc.)] identifies monies not needed for 10 years or longer they may request [Council/Board] acknowledge those monies as “long-term: 10 years+” and suitable for investments with long investment horizons. If funds have been designated as “long-term: 10 years+” the [position assigned responsibility for financial administration, (i.e. Chief Financial Officer, etc.)] may invest those monies in:

- Any MFA Pooled Investment Fund created specifically for investment of long-term reserves; or
- Section 183 investments with a minimum long-term credit rating of A-.

MFA constructs its *long-term* Pooled Investment Funds as a stand-alone Funds with appropriate diversification, risk and return characteristics for long-term investing requirements. As such, these Funds do not apply to concentration, credit or other investment policy limits described elsewhere in this Policy.

It is typical for multi-asset class Funds to exhibit volatile performance in the short-to-mid term, but with overall positive results over the long-run. Risks which cause performance fluctuation for multi-asset class funds include but are not limited to equity, interest rate, and credit risks. It is [name of local government]’s intent to hold long-term fixed income investments to maturity. It is the [name of local government]’s intent to hold perpetual long-term MFA Funds for 10 years or longer – in alignment with but redeemed prior to future obligations.

For the purposes of assessing performance of the long-term portfolio (10 years+), quarterly returns will be evaluated on a rolling three, four, and five-year basis versus a suitable benchmark.

Subscriptions and Redemptions

Subscribing to the Fund

- Investor may decide to make a lump sum investment or 'dollar-cost average' into the Fund. Both strategies have merit. MFA and PH&N can help you assess the pros and cons of both approaches. Subscriptions will be settled T+2.

Redeeming from the Fund

- LGs need a redemption plan in mind as the initial long-term holding period approaches. In many cases, the DMAC can be viewed as a permanent long-term component of one's portfolio and "earmark" DMAC holdings to a new set of spending initiatives after the initial long-term holding period has expired. If the DMAC funds are needed in the near future, a redemption plan will mitigate adverse short-term investment value fluctuations. Undertake smaller structured drawdowns in advance of your needs. Redemptions will be settled T+30+3 (33 days)

Redemption Restriction

- The DMAC will hold illiquid investments which necessitate imposition of a redemption period of up to 3 years. In the case of emergency need for funds prior to the expiration of the long-term holding period, and especially if a redemption is of a significant size, MFA and PH&N will consider the circumstances and will likely allow early redemptions which must be structured in a way to not adversely impact other DMAC participants

Summary

Preservation of capital through **diversification** of investments into the broadest selection of asset categories possible, and picking the right **exposures** within those categories, **should be the main priority** for local government investors. If the investments are not needed until well into the future, in the current market environment, the purchasing power of short dated bonds and deposit investments are being diminished over time – as inflation is higher than the expected returns on those investments.

Cash flow forecasting is critical to the analysis process which supports the ability and accuracy of matching investments with future requirements. A well-designed cash flow forecast can support a longer-term investment horizon and improve risk-adjusted returns.

MFA's DMAC Fund is **professionally designed** for LG reserves not needed for 10 years or longer **at very low cost (33 bps all-in annual fees)**. Among the biggest risks involved in buying the DMAC fund is the risk of a LG selling the Fund earlier than originally anticipated (and crystalizing losses during a downturn). **Managing expectations and educating all stakeholders on volatility will be key to limiting bad outcomes. Segregation or "earmarking" of suitable long-term reserves along with continuous education should limit divestment of holdings at inopportune times**. Whether due to accounting practices, or from the actual performance of the Fund, higher than normal volatility should be expected. While MFA cannot dictate how LGs manage their investment process and practices, MFA will require evidence of staff and council discourse about the potential short-term volatility of the DMAC Fund and the intent to hold on to it for the long term.

Investment best practices call for a **Council-approved Investment Policy** to guide risk tolerance and the **Objectives** of an investment portfolio. MFA has sample policies and expertise to assist in this area.

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