MACKENZIE
Investments

ETFs as Alpha Enablers

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Current state & consideration

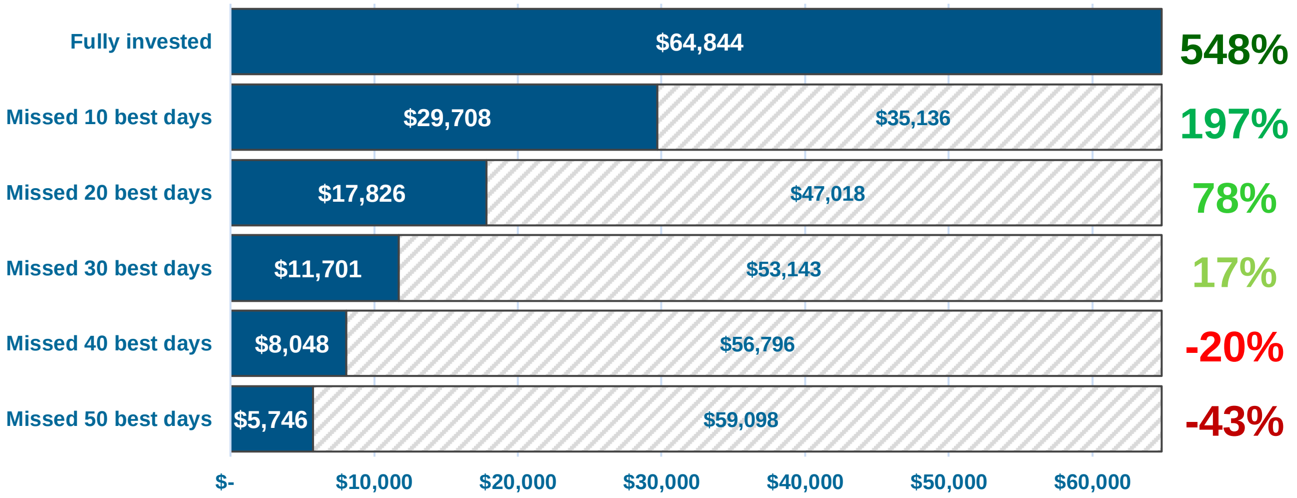
The **importance** of **a disciplined approach to portfolio construction** and **staying invested**

Time in the market almost always beats timing the market.

Average S&P 500 return after bear market trough	
3 months later	22.9%
6 months later	31.7%
1 year later	49.8%
3 years later (annualized)	20.7%
5 years later (annualized)	18.0%
10 years later (annualized)	13.5%

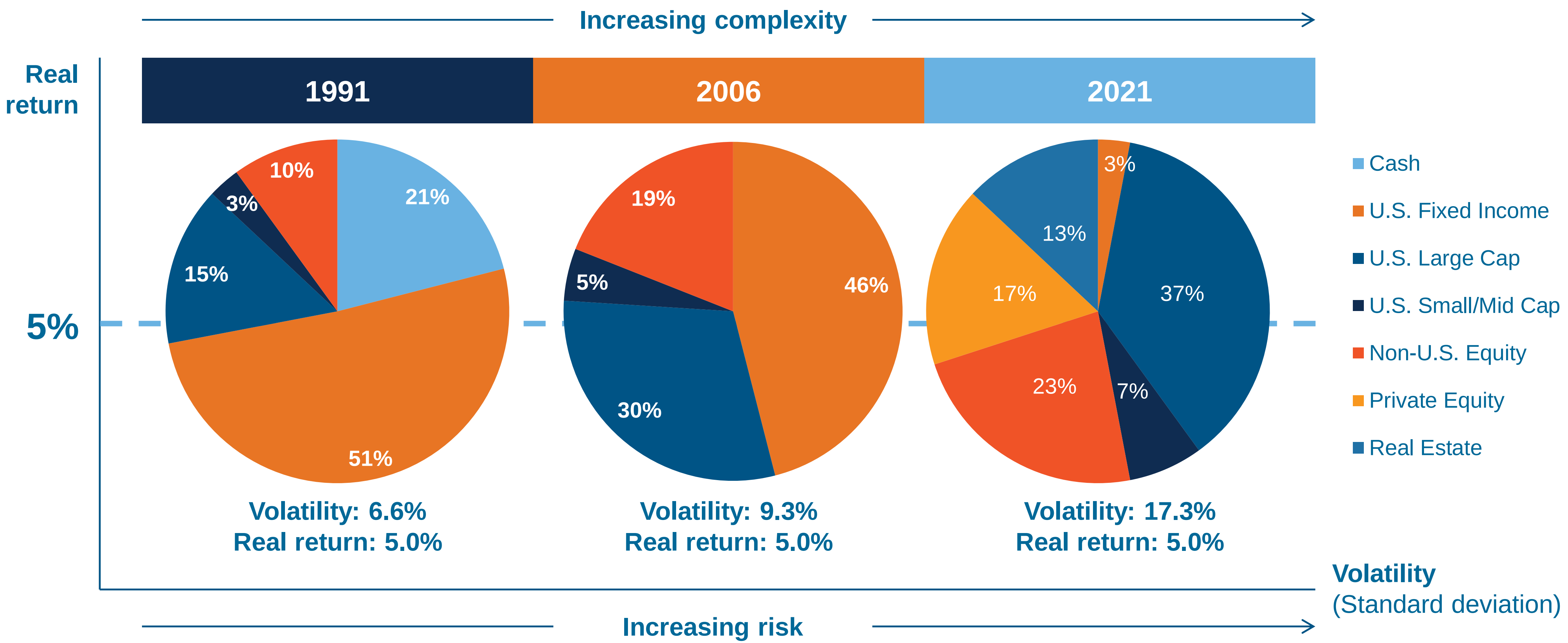
Missing just the **10 best days** in **2 decades** **cuts an investor's return in half.** **7 of these 10 best days** occurred **within 2 weeks of the 10 worst days,** often immediately following the worst days.

Performance of $10,000 invested in S&P 500 for 20 years to end of 2022



Source: JPMorgan Asset Management, Bloomberg. Returns as of December 31, 2022.

To maintain the same expected 5% real return today vs 30 years ago requires a much more complex portfolio.



Source: Callan Associates

Diversification among different asset classes may reduce portfolio risk

10-year correlations

Canadian equities	1.00								QCN
US equities	0.70	1.00							QUU
International developed market equities	0.54	0.51	1.00						QDX
Emerging market equities	0.41	0.40	0.64	1.00					QEE
Canadian fixed income	-0.01	0.02	-0.01	-0.01	1.00				QBB
US fixed income	-0.05	-0.10	-0.01	-0.07	0.06	1.00			QUB
Developed ex-US aggregate bond	-0.01	0.01	-0.01	-0.05	0.10	0.59	1.00		QDXB
EM local currency bonds	0.38	0.13	0.41	0.40	0.01	0.15	0.09	1.00	QEBL

Mackenzie Asset Allocation ETFs:
Single-ticket solutions

	MCON	MBAL	MGRW
QCN	12.0%	18.0%	24.0%
QUU	18.0%	27.0%	36.0%
QDX	7.2%	10.8%	14.4%
QEE	2.8%	4.2%	5.6%
QBB	35.4%	23.6%	11.8%
QUB	13.8%	9.2%	4.6%
QDXB	9.6%	6.4%	3.2%
QEBL	1.2%	0.8%	0.4%

Source: Morningstar Direct as of March 31, 2023. All returns in CAD.
Exposures are represented by the following indices: Canadian equities: Solactive Canada Broad Market TR CAD, US equities: Solactive US Large Cap TR CAD, International Developed Market equities: Solactive GBS DM ex NA L&M C TR CAD, Canadian Fixed Income: FTSE Canada Universe Bond, US Fixed Income: BBgBarc US Agg Float Adj TR Hedged CAD, Developed ex-US Aggregate Bond: BBgBarc Gbl Agg xUSD 10% IC TR Hdg USD, EM local currency bonds: JPM GBI-EM Global Core TR USD

Asset allocation remains the most important aspect of portfolio construction

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Emerging market equities 15.61	US equities 40.65	US equities 23.5	US equities 21.43	Canadian equities 24.78	Emerging market equities 28.26	Developed ex-US aggr bond 12.36	US equities 24.77	US equities 18.52	US equities 27.11	Canadian equities -5.58
EM bond (local currency) 14.88	International dev market Eq 31.04	Developed ex-US aggr bond 19.52	Developed ex-US aggr bond 21.41	Emerging market equities 7.34	International dev market Eq 17.02	US equities 4.04	Canadian equities 21.67	Emerging market equities 16.23	Canadian equities 25.71	International dev market Eq -8.13
International dev market Eq 14.74	Canadian equities 11.5	Canadian equities 9.79	International dev market Eq 19.29	US equities 7.30	US equities 13.63	EM bond (local currency) 1.49	International dev market Eq 16.21	Canadian Fixed Income 8.68	International dev market Eq 10.34	EM bond (local currency) -10.18
US equities 12.86	Developed ex-US aggr bond 7.70	Canadian Fixed Income 8.79	Canadian Fixed Income 3.52	EM bond (local currency) 6.15	Canadian equities 9.18	Canadian Fixed Income 1.41	Emerging market equities 12.45	US Fixed Income 7.53	US Fixed Income -1.60	Developed ex-US aggr bond -10.68
Canadian equities 6.00	Emerging market equities 3.93	US Fixed Income 6.81	EM bond (local currency) 2.81	US Fixed Income 2.51	EM bond (local currency) 7.13	US Fixed Income -0.79	US Fixed Income 8.07	International dev market Eq 6.02	Developed ex-US aggr bond -2.48	Canadian Fixed Income -11.69
Developed ex-US aggr bond 5.34	Canadian Fixed Income -1.19	Emerging market equities 6.63	Emerging market equities 2.04	Canadian Fixed Income 1.66	US Fixed Income 3.14	International dev market Eq -5.87	Canadian Fixed Income 6.87	Canadian equities 5.91	Canadian Fixed Income -2.54	US Fixed Income -13.44
US Fixed Income 5.13	US Fixed Income -1.25	International dev market Eq 4.16	US Fixed Income 1.05	Developed ex-US aggr bond 1.32	Canadian Fixed Income 2.52	Emerging market equities -6.88	EM bond (local currency) 4.57	Developed ex-US aggr bond 2.86	Emerging market equities -3.37	Emerging market equities -13.9
Canadian Fixed Income 3.60	EM bond (local currency) -2.15	EM bond (local currency) 3.35	Canadian equities -8.58	International dev market Eq -2.42	Developed ex-US aggr bond -4.10	Canadian equities -9.27	Developed ex-US aggr bond 2.84	EM bond (local currency) 1.64	EM bond (local currency) -10.01	US equities -16.79

Picking “winning” asset classes is a near-impossible endeavour. Instead, a more practical approach to getting the right exposures is leveraging **ETF building blocks and regularly rebalancing to** achieve **low-cost, broadly-diversified exposure** to target allocations and risk levels.

Source: Morningstar Direct. All returns calendar annual returns in CAD.
Canadian equities: Solactive Canada broad market TR CAD, US equities: Solactive US large cap TR CAD, International developed market equities: Solactive GBS DM ex NA L&M C TR CAD, Canadian fixed income: FTSE Canada universe bond, US fixed income: Bloomberg US agg float adj TR hedged CAD, Developed ex-US aggregate bond: Bloomberg Gbl agg xUSD 10% IC TR Hdg USD, EM local currency bonds: JPM GBI-EM Global Core TR USD

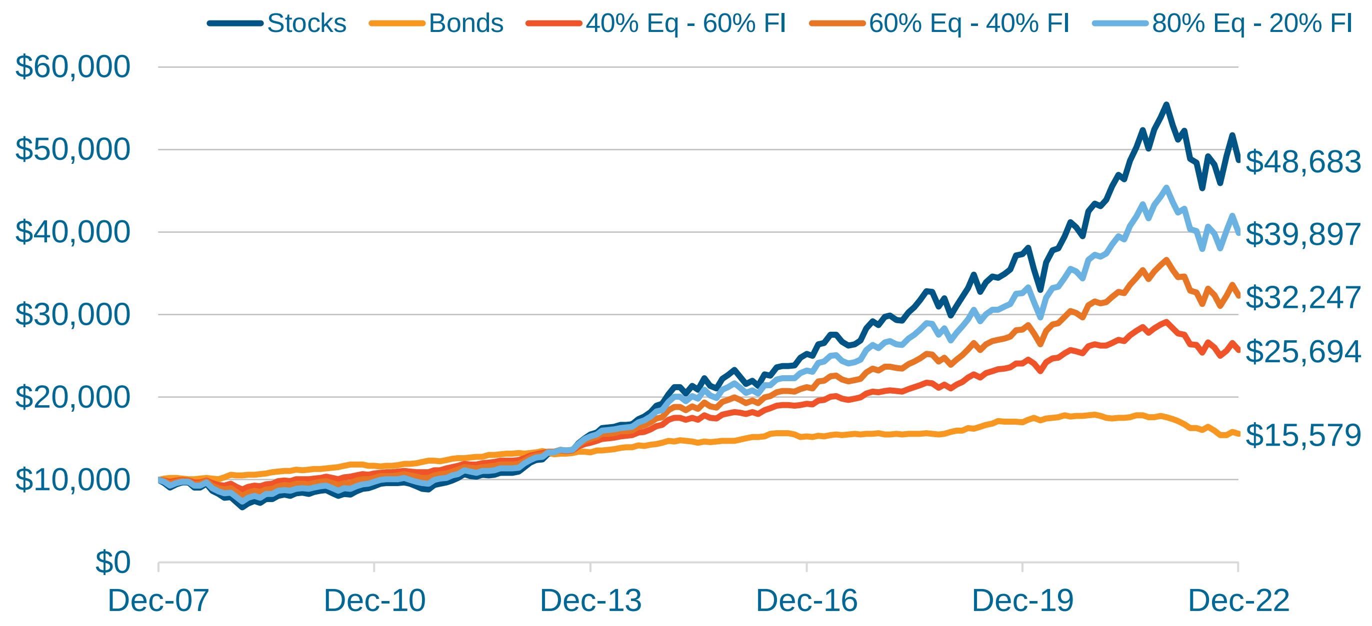
Asset allocation drives 92% of variability in a portfolio's returns

(Brinson, Hood, and Brian D. Singer)

Investments (Eq/FI)	Cumulative return %	15yr return %	15yr std dev %	Max drawdown %
Bonds	55.8	3.0	3.4	-13.8
Stocks	386.8	11.1	12.6	-33.7
40%/60%	156.9	6.5	5.8	-14.3
60%/40%	222.5	8.1	7.9	-19.3
80%/20%	299.0	9.7	10.2	-26.7

Markets do not go up in straight lines.

- Diversification matters: asset classes, geographies, industries, etc.
- Regular rebalancing is essential to ensure diversification benefits are realized
- Assumptions must be revisited regularly in light of dynamic market conditions



Source: Morningstar Direct as of December 31, 2022. S&P 500 TR CAD; Bonds: Barclay Global Aggregate TR Hedged CAD. Monthly returns. Assumes quarterly rebalancing.

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Part 1: Portfolio construction considerations

The **importance** of a **disciplined approach**
to portfolio construction and **staying invested**

A tailored, client-centric framework for portfolio construction

With **continued volatility, cash on the sidelines,** and a **plethora of investment options,** calibrating the portfolio construction process to achieve client goals is more important than ever.

01

Setting goals, preferences

Understand both **financial goals** and **personal goals** as well as **investment time horizon. Preferences** also need to considered.

02

Determining risk tolerance & constraints

Consider the level of **volatility** the client would be comfortable with. **Be intentional** about the risks being taken and set appropriate **risk budgets.**

03

Strategic asset allocation (core)

Determine an appropriate **strategic asset mix** that will **anchor the portfolio** in the long-run.

04

Setting tactical tilts (satellite)

Express short-term views through satellite investments that can dial up or down various desired exposures.

Leveraging ETFs as building blocks & alpha enablers

Key considerations to effective strategic & tactical portfolio allocations

Balance, cost, and **discipline** are crucial pillars to portfolio construction, both as they pertain to long-term strategic asset allocation and effective short-term tactical tilts.

Fundamental principles for successful investing

- **Balance:** Use building blocks to adequately diversify the core asset mix of the portfolio to minimize idiosyncratic (uncompensated) risk.
- **Cost:** Consider fees, taxes, trading costs, and liquidity costs when making strategic and tactical allocations. Alpha-seeking strategies should deliver excess risk-adjusted returns net of fees.
- **Discipline:** Maintain a long-term perspective and avoid emotional reactions. Understand the importance of staying invested and regularly rebalancing.

03

Strategic asset allocation (core)

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Setting tactical tilts (satellite)

Express short-term views through satellite investments that can dial up or down various desired exposures.

Leveraging ETFs as building blocks & alpha enablers

Key considerations to effective product selection in a portfolio

Inform product selection

03

Strategic asset allocation (core)

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Setting tactical tilts (satellite)

Express short-term views through satellite investments that can dial up or down various desired exposures.

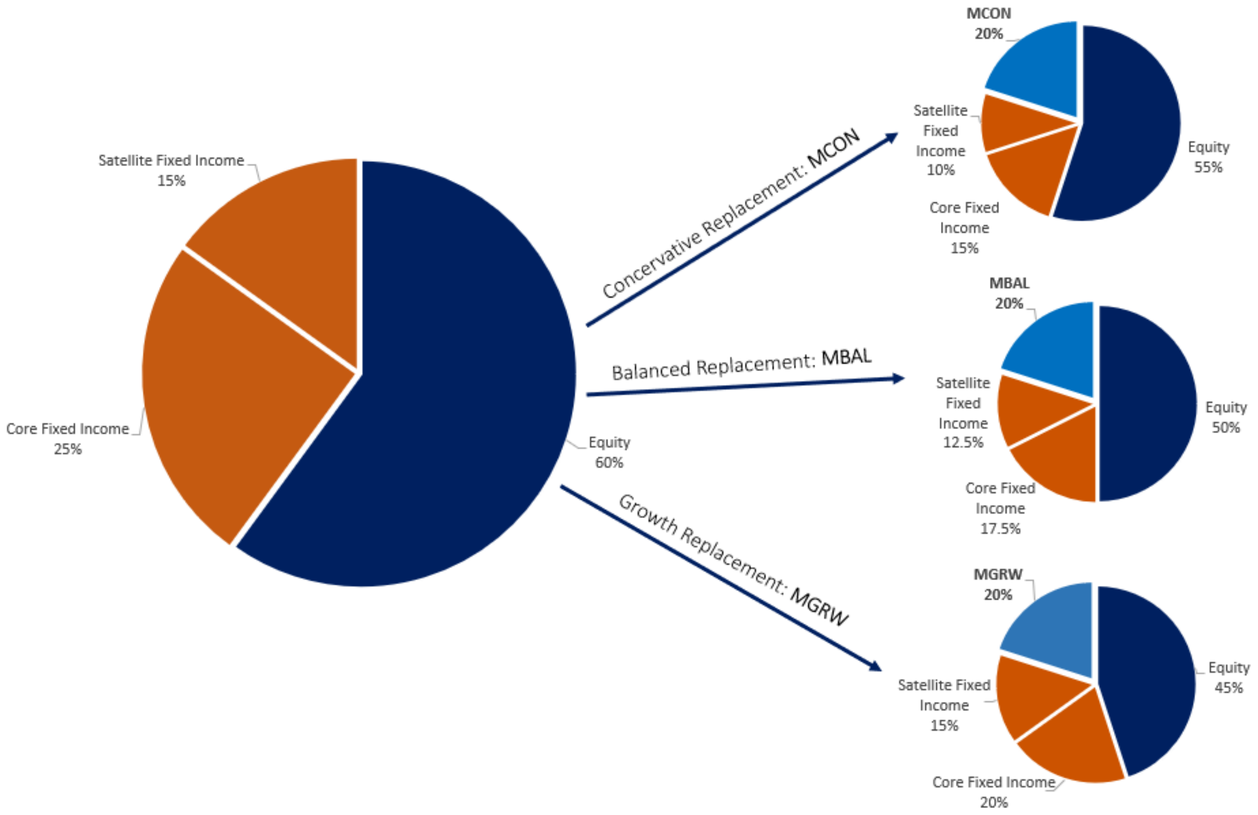
Leveraging asset allocation ETFs as a single-ticket core solution to round out your strategic asset allocation

Simple, single-ticket solutions

- **MCON, MBAL,** and **MGRW** combine the benefits of broad global diversification **(8 Mackenzie ETF building blocks)** with **strategic asset allocation** provided by the Mackenzie Multi-Asset Team.

- Designed for investors with **different risk tolerance levels**, with **regular rebalancing** to maintain target allocations/risk levels, enabling you to dedicate more time to other alpha-generating areas of your portfolio.

- A **20% allocation** to Mackenzie ETFs could be an efficient way to fulfill risk and fee budgeting to round out your strategic asset allocation and achieve long-term portfolio objectives.



Leveraging ETF building blocks to unlock alpha through asset allocation

Strategy #1

Allocate to **single-ticket ETF solutions** to build out your core exposures

- Low cost
- Quarterly rebalancing
- Broad diversification
- Target allocations & risk levels are **self-maintaining**

MCON

MBAL

MGRW

Strategy #2

Use **ETF building blocks** to achieve desired core exposures and enable asset allocation alpha

Building blocks in AA ETFs

QCN	Canadian equity
QUU	US equity
QDX	International equity
QEE	EM equity
QBB	Canadian bond
QUB	US bond
QDXB	International bond
QEBL	EM bond

Complementary core solutions

MUB	Unconstrained FI
MFT	Floating rate
MIVG	Global active equity
MDVD	Sustainable dividend
MCKG	Global ESG equity
QTIP	US TIPS
QINF	Global infrastructure
QRET	Real estate

Unlock alpha in asset allocation through:

- **Active management of exposures** to underlying building block ETFs.
- **Active/Strategic beta ETFs** to enhance yields, introduce factor exposure, etc.
- Allocation to **other asset classes** with attractive risk profiles (US TIPS, infrastructure, real estate).

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Part 2: ETFs as tools in managing assets & enabling alpha

How **ETFs** can be deployed as **powerful tools** to **improve client portfolios** and **unlock alpha**

ETFs as tools in portfolio construction/management

ETFs can serve various purposes in building more **efficient client portfolios** from a **cost, risk,** and **alpha** perspective.

Tax optimization	Possible tax loss harvesting and other considerations to improve after-tax investor returns
Enhanced liquidity	Complement core allocations with ETF liquidity sleeves that allow for the tactical dialing up/down of specific exposures
Diversification	Cost-effective diversification across different asset classes, geographies, factors, etc.
Active-passive combinations	Use a combination of low-cost index ETFs and active funds / ETFs with exposures to different asset classes/market cycles

Tax optimization – ETF structure matters

Objective: Avoid costly level 2 withholding taxes that erode investor returns by selecting solutions that can improve portfolio alpha through tax-efficient outcomes

3 primary ETF structures in Canada:

1 US-listed ETF that invests in international stocks

$5.00 Dividend from foreign corp. → **-$0.75** Foreign withholding tax (15%) → **$4.25** Dividend received by US ETF → **-$0.65** US withholding tax (15%) → **$3.60** Dividend received by investor

2 Canadian-listed ETF that holds US-listed ETFs which invest internationally

$5.00 Dividend from foreign corp. → **-$0.75** Foreign withholding tax (15%) → **$4.25** Dividend received by US ETF → **-$0.65** US withholding tax (15%) → **$3.60** Dividend received by investor

3 Canadian-listed ETF that invests directly in international stocks

$5.00 Dividend from foreign corp. → **-$0.60** Foreign withholding tax (12%) → **$4.40** Dividend received by investor

Potential $0.80 (16%) of **alpha** for every **$5.00** in dividends for choosing tax efficient ETF building blocks.

ETF Structure	Account Type					
	RRSP, RRIF		TFSA, RDSP, RESP		Taxable Accounts	
	Level 1 Tax (underlying ETF / exposure)	Level 2 Tax (if applicable)	Level 1 Tax (underlying ETF / exposure)	Level 2 Tax (if applicable)	Level 1 Tax (underlying ETF / exposure)	Level 2 Tax (if applicable)
US Equities						
US Listed ETF	N/A	X	N/A	✓	N/A	TC
Canadian Listed ETF (holding US. Listed ETF)	N/A	✓	N/A	✓	N/A	TC
Canadian Listed ETF (Investing directly in US. equities)	N/A	✓	N/A	✓	N/A	TC
US Fixed Income (Qualified interest income only)						
US Listed ETF	N/A	R	N/A	R	N/A	R
Canadian Listed ETF (holding US Listed ETF)	N/A	R	N/A	R	N/A	R
Canadian Listed ETF (Investing directly in US. fixed income)	N/A	X	N/A	X	N/A	✓
Foreign Equities & Fixed Income						
US Listed ETF	✓	X	✓	✓	✓	TC
Canadian Listed ETF (holding US Listed ETF)	✓	✓	✓	✓	✓	TC
Canadian Listed ETF (Investing directly in foreign equities or fixed income)	✓	N/A	✓	X	TC	N/A

✓ Tax will apply X Tax will not apply TC Tax credit is available R Reclaim is available

Level 1 Tax: Withholding taxes applied by the foreign country where the shares in the ETF originales

Level 2 Tax: Withholding taxes applied by the US to ETFs that pay dividends to non- US shareholders.

Tax optimization – Tax loss harvesting (TLH)

Objective: Realize losses in existing positions by rotating into different ETFs, offsetting capital gains realized on other investments, thereby lowering taxes payable and improving portfolio alpha

TLH examples during 2022 market drawdown

Trade Idea: Sell out of individual Canadian equities and invest in QCN or QCE

Canadian Stock Portfolio Example				Mackenzie ETF Alternatives
Ticker	Name	Price Change YTD	Price Change 1 YR	Mackenzie ETF
SHOP	Shopify Inc	-75.15%	-76.66%	QCN / QCE
BNS	Bank of Nova Scotia	-26.40%	-18.77%	
CM	Canadian Imperial Bank of Commerce	-22.17%	-17.60%	
BAM/A	Brookfield Asset Management Inc	-29.38%	-27.80%	

Source: Bloomberg; as of October 31, 2022

Trade Idea: Sell out of US Large Cap Equity Index ETFs and invest in QUU

US Equity Index ETFs					
Ticker	ETF	Underlying Index	Management Fee	Price Change YTD	Price Change 1 YR
QUU	Mackenzie US Large Cap Equity Index ETF	Solactive US Large Cap CAD Index	0.06%	-13.86%	-9.73%
XUS	iShares Core S&P 500 Index ETF	S&P 500 Index	0.09%	-11.81%	-7.35%
VFV	Vanguard S&P 500 Index ETF	S&P 500 Index	0.08%	-12.40%	-7.43%
ZSP	BMO S&P 500 Index ETF	S&P 500 Index	0.08%	-12.50%	-7.53%

Source: Bloomberg and ETF providers' websites; as of October 31, 2022

Superficial loss rule:
When an investment is sold for a loss, and an identical investment is purchased either 30 days before or after the loss was realized, Canadian tax laws will deny the loss. For this rule not to hinder a TLH strategy, ensure the ETF being rotated into **tracks a different index** to the one sold (e.g. Solactive US Large Cap Index instead of S&P 500)

Cost

Trading costs when selling/buying existing /new ETFs; may be offset by reduction in management fees with new ETFs.

Risk

Relatively unchanged if rotating into ETF with similar mandate (XIU →QCE). May increase/decrease if rotating into ETF with slightly different mandate (XWD → MDVD).

Alpha

May improve tax alpha by lowering the portfolio's overall tax expense.

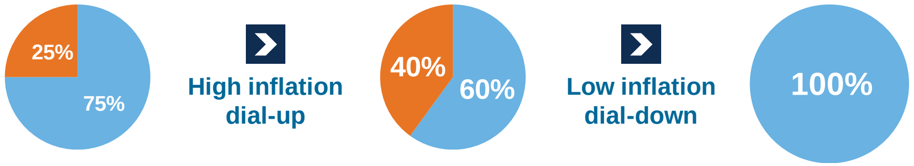
Enhanced liquidity – ETF liquidity sleeves: Northleaf x QINF

Objective: Allow advisors to be more tactical with their allocations by providing flexibility to rapidly dial up/down exposures to specific sectors/risks as market conditions or investor goals change.

Example: Dedicated infrastructure sleeve

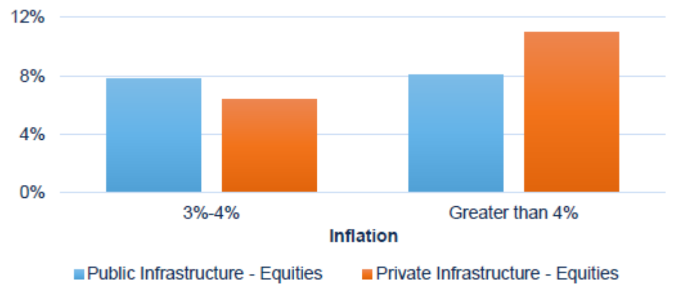
Mackenzie Northleaf Private Infrastructure Fund

Mackenzie Global Infrastructure Index ETF (QINF)



Strategic allocation	Tactical overweight	Tactical underweight
8% of portfolio	**10% of portfolio**	**6% of portfolio**
funded through mix of equities/ fixed income	2% dial-up funded through equities	2% dial-down allocated to equities

Infrastructure average 12M TR relative to equities



Infrastructure assets tend to **outperform broader equities during periods of high inflation.**

With an **ETF liquidity sleeve,** advisors can tactically dial up/down their infrastructure exposure as dictated by the inflationary environment.

Cost

Avoids costly fees/expenses associated with purchasing/liquidating private investments

Risk

Daily liquidity allows for the tactical dialing up and down of exposures as market conditions or investor objectives change, enabling **greater flexibility in risk management.**

Alpha

Pairing private investments with ETF liquidity sleeves may capture higher risk-adjusted returns in specific sectors

Diversification – ETF building blocks for low-cost diversification

Objective: Achieve low-cost diversification across asset classes, geographies, factors, etc. to reduce portfolio risk.

ETFs can help achieve diversification across:

1 Asset classes

Equity/FI	MCON, MBAL, MGRW	0.17%
Equity	QCN, QUU, QDX, QEE	0.04% - 0.22%
Fixed income	QBB, QUB, QDXB, QEBL	0.07% - 0.45%
Infra/Real estate	QINF, QRET	0.40%

2 Geographies

Canada	QCE, QCN, QBB, QCB, QSB	0.04% - 0.14%
US	QUU, QAH, QUB, QHY, QUIG, QTIP	0.06% - 0.40%
International	QDX, QDXH, QDXB	0.17% - 0.30%
EM/China	QEE, QEBL, QEBH, QCH	0.22% - 0.55%

3 Factors

Dividend	MDVD	0.25%
Large Cap	QCE, QUU, QAH	0.04% - 0.06%

Cost

With regular rebalancing and relatively lower fees, ETF building blocks may be a cheaper core alternative to individual stock trading.

Risk

Diversification *within* ETFs holding dozens to thousands of securities reduces *idiosyncratic risk,* while diversification *across* several ETFs spanning various geographies, asset classes, etc. further reduces risk.

Alpha

Active-passive combinations – Low-cost diversification paired with active management to enable alpha

Objective: Improve risk-adjusted returns by leveraging active manager expertise in certain exposures while benefitting from low-cost indexing where broad exposure is desirable

Example: Fixed income carve-out

Index ETFs (50-70%)

- **Low-cost** exposure; broadly diversified across regions, maturities, credit qualities, etc.
- Unlock **asset allocation alpha** by **actively managing exposures** to specific fixed income categories (high-yield, corporate, EM, etc.)
- Can tactically dial up/down passive allocation depending on market conditions.

QBB
QUB
QDXB
QEBL
QSB
QCB
QHY
QUIG
QTIP

Active ETFs (30-50%)

- Benefit from active management in FI categories where opportunities for **alpha through security selection** exist.
- Unlock **asset allocation alpha** through exposure to **unconstrained/floating rate** fixed income.
- Can tactically dial up active exposure when market conditions are conducive to **alpha-generation.**

MUB
MFT
MKB
MGB
MCSB
MGSB
MHYB

Alpha

Unlock **alpha** through **active management** in both asset allocation and security selection

Portfolio construction framework

In summary

DIVERSIFICATION	ACTIVE-PASSIVE COMBINATIONS	ENHANCED LIQUIDITY	TAX OPTIMIZATION

1

Setting goals

2

Determining risk tolerance

3

Strategic asset allocation (core)

4

Setting tactical tilts (satellite)

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Q&A

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Closing Remarks

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