# **NOVEMBER 27, 2023**

# FOR THE WEEK ENDING NOVEMBER 24, 2023

42 **ETF Providers** (+5% YoY)

1370 **ETFs** (+15% YoY) \$400 **CAD AUM** (+18% YoY)

\$11.7 **Traded** (Last Week)

## WEEKLY CREATIONS/REDEMPTIONS BY ASSET CLASSES

Equity (C\$615M/+0.2%) and crypto (C\$318M/+8.6%) led inflows last week

	\$ Traded	Short Int	AUM	Net C/R	Net C/R (% AUM)		
	(CAD M)	(% of SO)	(CAD M)	(CAD M)	1-Week	1-Month	1-Year
Equity	5,150.1	1.7%	250,535	615.4	0.2%	1.0%	7.3%
Cryptocurrency	572.9	2.0%	4,158	318.3	8.6%	23.2%	42.4%
Mixed Allocation	173.2	0.0%	14,322	43.1	0.3%	1.7%	15.1%
Commodity	483.4	0.6%	2,717	39.8	1.5%	2.9%	2.3%
Cash	943.5	0.2%	23,089	39.2	0.2%	1.1%	69.9%
Specialty/Alternative	73.3	12.0%	2,896	24.0	0.8%	0.3%	8.1%
Preferreds	141.9	1.5%	5,828	3.4	0.1%	-0.1%	-6.6%
Fixed Income	4,173.9	0.4%	96,235	-111.1	-0.1%	0.3%	23.6%
Total	11,712.2	1.2%	399,781	972.1	0.2%	1.0%	13.7%

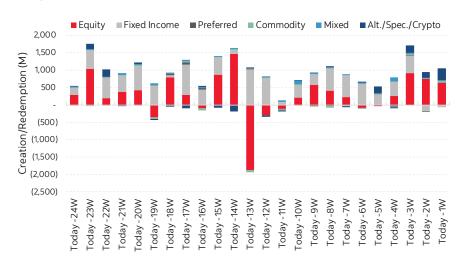
#### WEEKLY LARGEST CREATIONS/REDEMPTIONS

Top inflows and outflows appear to be switches: in short & mid provies (ZMP, ZPS); out short & mid Canadas (ZFM, ZFS)

Ticker	Name	Returns (1-Week)	Short Int (% of SO)	\$ Traded (CAD M)	Net C/R (CAD M)	Net C/R (% of AUM)
ZMP	BMO Mid Provincial Bond Index ETF	-0.1%	0.0%	531.0	519.8	177.8%
ZPS	BMO Short Provincial Bond Index ETF	-	0.0%	309.9	307.0	95.4%
TEC	TD Global Technology Leaders Index	0.4%	0.0%	34.7	112.9	6.0%
ZEB	BMO Equal Weight Banks Index ETF	-1.4%	1.5%	417.9	110.7	3.0%
ZSP	BMO S&P 500 Index ETF	0.4%	2.2%	176.8	102.5	1.0%
XBB	iShares Core Canadian Universe Bond	0.2%	0.5%	195.0	91.9	1.4%
BTCC/B	Purpose Bitcoin ETF	3.0%	2.0%	174.0	85.2	10.7%
ZFM	BMO Mid Federal Bond Index ETF	-0.1%	0.7%	672.1	-665.4	-62.3%
ZFS	BMO Short Federal Bond Index ETF	0.1%	0.4%	608.2	-604.0	-63.9%
ZHY	BMO High Yield US Corporate Bond F	0.7%	0.0%	133.0	-131.7	-14.8%
ZJK	BMO High Yield US Corporate Bond Ir	0.9%	0.0%	4.4	-129.5	-13.6%
XIU	iShares S&P/TSX 60 Index ETF	-0.5%	19.5%	712.4	-116.7	-1.0%
XIC	iShares Core S&P/TSX Capped Comp	-0.3%	8.5%	247.8	-71.2	-0.7%
VSB	Vanguard Canadian Short-Term Bon	0.1%	0.1%	11.2	-31.3	-3.0%

# HISTORICAL CREATIONS/REDEMPTIONS BY ASSET CLASS

Equity and Crypto continue as preferred asset classes, while fixed income sees 2<sup>nd</sup> straight week of outflows



# LAST WEEK'S MOST ACTIVE ETFS

Investors traded C\$11.7B last week, led by Cdn equities and Cdn bonds (XIU, ZFM, ZFS, ZMP, ZPS)

Ticker	Name	Returns (1-Week)	Short Int (% of SO)	B/A Spread (bps)	\$ Traded (CAD M)	\$ Traded vs CR/RD
XIU	iShares S&P/TSX 60 Index ETF	-0.5%	19.5%	1.4	712.4	6.1 x
ZFM	BMO Mid Federal Bond Index ETF	-0.1%	0.7%	2.1	672.1	1.0 x
ZFS	BMO Short Federal Bond Index ETF	0.1%	0.4%	1.9	608.2	1.0 x
ZMP	BMO Mid Provincial Bond Index ETF	-0.1%	0.0%	2.3	531.0	1.0 x
ZEB	BMO Equal Weight Banks Index ETF	-1.4%	1.5%	1.5	417.9	3.8 x
ZPS	BMO Short Provincial Bond Index ETF	0.0%	0.0%	2.0	309.9	1.0 x
XIC	iShares Core S&P/TSX Capped Comp	-0.3%	8.5%	1.8	247.8	3.5 x
CASH	Horizons High Interest Savings ETF	0.1%	0.2%	1.1	225.0	17.9 x
CSAV	CI High Interest Savings ETF	0.1%	0.0%	1.1	224.9	15 x
XBB	iShares Core Canadian Universe Bond	0.2%	0.5%	1.6	195.0	2.1 x
VFV	Vanguard S&P 500 Index ETF	0.6%	0.1%	5.0	182.2	6.1 x
HNU	BetaPro Natural Gas Leveraged Daily	-8.1%	0.7%	1.9	179.8	5.8 x
XEG	iShares S&P/TSX Capped Energy Inde	-1.8%	17.2%	1.5	178.0	2.8 x
ZSP	BMO S&P 500 Index ETF	0.4%	2.2%	3.3	176.8	1.7 x

#### **EQUITY FUND FLOWS**

# Last Week's Net Creations/Redemptions by Strategy & Sector

Investors bought blend (C\$317M/+0.2%) and tech (C\$129M/+2.8%) ETFs

	\$ Traded	Short Int	AUM	1-Week C/R	Ne	et C/R (% AUM	)
	(CAD M)	(% of SO)	(CAD M)	(CAD M)	1-Week	1-Month	1-Year
Leverage/Inverse	191.9	0.0%	686	14.8	2.2%	-2.1%	-17.9%
Multi-Factor	43.7	0.0%	1,995	17.5	0.9%	1.9%	-10.5%
Value	94.7	0.1%	5,761	41.4	0.7%	1.0%	-0.3%
Dividend/Income	417.3	0.1%	15,204	99.0	0.7%	1.6%	15.4%
Growth	463.7	0.5%	34,681	124.1	0.4%	-0.3%	-1.1%
Blend	3,864.7	2.5%	179,797	317.7	0.2%	1.3%	7.6%
Low Volatility	61.2	0.0%	5,608	3.5	0.1%	0.0%	10.2%
Momentum	0.3	0.0%	51	-	-	-3.1%	-14.3%
ESG/SRI	16.9	0.0%	6,753	-2.6	-0.0%	-0.8%	60.8%
Total	5,154.4	1.7%	250,535	615.4	0.2%	1.0%	7.3%
Preferreds	141.9	1.5%	5,828	3.4	0.1%	-0.1%	-6.6%

	\$ Traded	Short Int	AUM	1-Week C/R	Ne	t C/R (% AUM	)
	(CAD M)	(% of SO)	(CAD M)	(CAD M)	1-Week	1-Month	1-Year
Info Tech	106.5	0.1%	4,739	129.0	2.8%	3.9%	18.2%
Energy	222.6	7.4%	3,933	74.4	1.9%	1.5%	-11.7%
Materials	159.9	1.1%	2,022	25.6	1.3%	3.1%	-5.7%
Financials	654.2	0.4%	13,529	109.0	0.8%	-0.1%	23.3%
Real Estate	109.2	0.8%	2,785	16.5	0.6%	2.2%	0.4%
Utilities	75.5	2.0%	2,700	4.0	0.1%	4.2%	15.8%
Communications	0.8	1.2%	35	-	-	15.6%	63.1%
Consumer Staples	9.6	0.5%	246	-	-	0.4%	2.6%
Industrials	1.4	0.1%	138	-	-	-0.5%	-20.0%
Health Care	34.2	0.0%	3,140	-2.8	-0.1%	0.0%	13.4%
Thematic	119.7	0.1%	13,260	-30.1	-0.2%	-1.0%	41.8%
Cons. Discretionary	-	0.1%	358	-2.4	-0.7%	0.7%	28.5%
Sector Subtotal	1,493.6	1.3%	46,884	323.1	0.3%	1.0%	7.7%

# Last Week's Net Creations/Redemptions by Geography

Investors added across regions, favouring global/international & US equities

	\$ Traded	Short Int	AUM	1-Week C/R	Ne	t C/R (% AUM)	)
	(CAD M)	(% of SO)	(CAD M)	(CAD M)	1-Week	1-Month	1-Year
Global/International	847.7	0.1%	61,854	220.1	0.4%	-0.0%	9.4%
United States	1,469.4	0.4%	86,531	262.9	0.3%	1.2%	1.7%
EM Regional/Country	16.3	0.1%	3,547	10.4	0.3%	-3.1%	359.1%
DM Regional/Country	206.4	0.1%	14,906	37.5	0.3%	0.1%	10.1%
Canada	2,610.4	4.3%	83,697	84.5	0.1%	1.9%	7.4%
Total	5,150.1	1.7%	250,535	615.4	0.2%	1.0%	7.3%

#### FIXED INCOME, CURRENCIES AND COMMODITIES FUND FLOWS

# **Last Week's Net Creations/Redemptions by Strategy & Term/Rating** Fixed income investors sold credit, govies, HY & A, mid- & shor-term maturities

	\$ Traded	Short Int	AUM	1-Week C/R		Ne	t C/R (% AUM)	1
	(CAD M)	(% of SO)	(CAD M)	(CAD M)	1-Wee	k	1-Month	1-Year
Target Date	36.2	0.5%	1,223	27.2	2	.3%	10.9%	222.3%
Aggregate	2063.1	0.2%	52,312	375.4	0	.7%	1.3%	34.0%
Convertible	1.2	0.0%	144	-	-		-0.9%	-8.4%
Bank Loans	6.1	0.1%	989	-0.6	-0	.1%	0.2%	-12.7%
Inflation Protected	8.9	0.1%	857	-2.8	-0	.3%	0.3%	-8.7%
Corporate	388.3	0.7%	22,285	-240.0	-1	.1%	-2.1%	8.8%
Government	2545.3	0.2%	18,423	-270.4	-1	.4%	-0.4%	51.2%
FI Subtotal	5,049.1	0.4%	96,235	(111.1)	-0	.1%	0.3%	23.6%
Commodity	483.4	0.6%	2,717	39.8	1	.5%	2.9%	2.3%
Cash/Currency	943.5	0.2%	23,089	39.2	0	.2%	1.1%	69.9%
FICC Total	6,476.0		122,041	(32.1)	0	.0%		

	\$ Traded	Short Int	AUM	1-Week C/R	Ne	t C/R (% AUM)	)
	(CAD M)	(% of SO)	(CAD M)	(CAD M)	1-Week	1-Month	1-Year
IG BBB or higher	740.2	0.6%	38,096	331.1	0.9%	-0.1%	18.6%
IG A or Higher	3267.3	0.2%	50,689	-177.9	-0.3%	1.0%	26.3%
High Yield	166.4	0.1%	7,449	-264.2	-3.4%	-2.2%	33.0%
FI Total	4,173.9	0.4%	96,235	(111.1)	-0.1%	0.3%	23.6%

	\$ Traded	Short Int	AUM	1-Week C/R	Ne	)	
	(CAD M)	(% of SO)	(CAD M)	(CAD M)	1-Week	1-Month	1-Year
Ultra Short	356.1	0.8%	5,203	95.0	1.9%	0.8%	84.3%
Long-Term	316.2	0.3%	10,109	156.0	1.6%	8.2%	59.4%
Mixed	842.6	0.5%	50,961	328.6	0.6%	0.9%	22.0%
Short-Term	1166.0	0.2%	14,630	-316.9	-2.1%	-1.9%	-3.3%
Intermediate	1493.0	0.1%	15,332	-373.9	-2.4%	-4.5%	29.1%
FI Total	4,173.9	0.4%	96,235	(111.1)	-0.1%	0.3%	23.6%

# Last Week's Net Commodity-Linked Creations/Redemptions

Energy ETFs lead commodity inflows for a 3<sup>rd</sup> week, preference remains for Nat Gas

	\$ Traded	Short Int	AUM	1-Week C/R	Ne	t C/R (% AUM)	)
	(CAD M)	(% of SO)	(CAD M)	(CAD M)	1-Week	1-Month	1-Year
Natural Gas	273.8	1.1%	245	28.3	12.4%	29.0%	113.0%
Crude Oil	170.9	3.5%	216	13.8	6.7%	13.7%	-11.9%
Energy Subtotal	444.7	2.2%	462	42.0	9.7%	21.8%	41.2%
Silver	11.1	0.2%	326	0.2	0.1%	-0.9%	-11.6%
Gold	26.3	0.1%	1,795	-2.5	-0.1%	-0.6%	-8.0%
Broad Based	1.3	0.1%	135	-	-	-2.8%	128.0%
Commodity Total	483.4	0.6%	2,717	39.8	1.5%	2.9%	2.3%

#### 3

#### CRYPTOCURRENCY FUND FLOWS

#### Last Week's Net Creations/Redemptions by Strategy

Demand for bitcoin ETFs continues, with some tailwinds for Ether

	\$ Traded	Short Int	AUM	1-Week C/R	Ne	et C/R (% AUM)	)
	(CAD M)	(% of SO)	(CAD M)	(CAD M)	1-Week	1-Month	1-Year
Bitcoin	415.1	1.8%	3,173	273.3	9.7%	29.6%	71.3%
Ether	157.0	2.5%	944	44.7	5.3%	5.6%	-11.0%
Multi-Crypto	0.8	1.8%	41	0.3	0.7%	2.8%	-8.2%
Total	572.9	2.0%	4,158	318.3	8.6%	23.2%	42.4%

### Last Week's Net Creations/Redemptions by Provider

Crypto ETFs from 3iQ, Fidelity, and CI saw the largest inflows (as % of AuM)

	# of Crypto	AUM	Market	Net C/R	Ne	t C/R (% AUM	)
	ETFs	(CAD M)	Share	(CAD M)	1-Week	1-Month	1-Year
Purpose	13	2,148	51.7%	153.9	8.0%	22.2%	69.2%
CIETFs	6	1,331	32.0%	104.6	8.9%	23.1%	51.1%
3iQ	2	254	6.1%	39.3	19.1%	57.2%	-64.4%
Evolve	6	236	5.7%	4.4	2.0%	-3.3%	25.2%
Fidelity	3	167	4.0%	15.8	10.8%	52.6%	295.6%
Horizons	1	23	0.5%	0.2	1.0%	-0.1%	9.9%
Total	31	4,158	100.0%	318.3	8.6%	23.2%	42.4%

#### **ACTIVE STRATEGIES FUND FLOWS**

#### Last Week's Net Creations/Redemptions by Strategy

Inflows into active ETFs wake up vs. prev weeks, favouring most strategies

	\$ Traded	Short Int	AUM	1-Week C/R	Net C/R (% AUM)		)
	(CAD M)	(% of SO)	(CAD M)	(CAD M)	1-Week	1-Month	1-Year
Factor/Multi-Factor	110.5	0.1%	6,341	69.9	1.1%	2.5%	-0.6%
Dividend/Income	297.6	0.1%	9,994	81.3	0.8%	3.2%	23.7%
True Active	1,349.8	0.1%	70,653	315.1	0.4%	0.9%	18.4%
Mixed Allocation	145.5	0.0%	13,081	21.0	0.2%	1.3%	16.7%
Proprietary	20.5	1.3%	2,764	-6.1	-0.2%	-2.4%	-12.9%
Smart Beta	7.4	0.1%	676	-2.6	-0.4%	-1.5%	-48.7%
Total	1,931.4	0.3%	103,509	478.6	0.5%	0.7%	21.8%

# Last Week's Net Creations/Redemptions by Asset Class

Within active, equity and fixed income were favoured asset classes

	\$ Traded	Short Int	AUM	Net C/R	Net C/R (% AUM)		
	(CAD M)	(% of SO)	(CAD M)	(CAD M)	1-Week	1-Month	1-Year
Specialty/Alternative	113.2	1.0%	3,338	39.0	1.2%	1.7%	11.2%
Fixed Income	660.7	0.2%	32,158	175.9	0.6%	1.5%	21.0%
Equity	982.2	0.1%	53,514	220.6	0.4%	0.9%	12.4%
Mixed Allocation	173.0	0.0%	14,302	43.1	0.3%	1.7%	15.3%
Commodity	2.2	0.1%	197	-	-	-2.1%	49.2%
Total	1,931.4	0.3%	103,509	478.6	0.5%	0.7%	21.8%

#### **ESG-FOCUSED FUND FLOWS**

# Last Week's Net Creations/Redemptions by ESG Attribute

Though insti activity still lacks, ESG still sees concentration: 1 ETF dominates flows

	\$ Traded	Short Int	AUM	1-Week C/R	Net C/R (% AUM)		)
	(CAD M)	(% of SO)	(CAD M)	(CAD M)	1-Week	1-Month	1-Year
Clean Energy	1.8	3.9%	120	-	-	3.4%	-1.2%
Socially Responsible	7.7	0.0%	1,221	-	-	0.5%	7.4%
Broad ESG	42.9	0.1%	12,475	-3.2	-0.0%	0.9%	70.5%
Climate Change	0.9	0.1%	120	-0.9	-0.7%	-3.2%	-8.1%
Env. Friendly	36.0	0.0%	1,366	-30.7	-2.2%	0.0%	-7.4%
Total	89.4	0.8%	15,301	-34.9	-0.2%	0.3%	12.2%

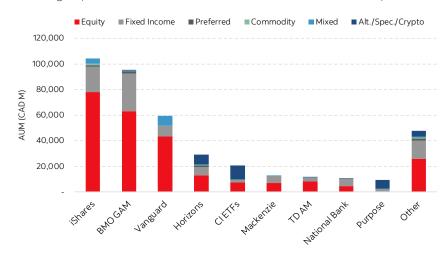
#### **PROVIDER MARKET SHARE**

42 Providers have total AuM of C\$400B (+18% YoY)

	# of	AUM Market		Net C/R (% AUM)			
Providers	ETFs	(CAD M)	Share	1-Week	1-Month	1-Year	
iShares	161	104,233	26.1%	0.0%	1.9%	6.5%	
BMO GAM	193	94,947	23.7%	-0.2%	-0.7%	8.0%	
Vanguard	37	59,465	14.9%	0.0%	0.3%	11.1%	
Horizons	124	28,947	7.2%	0.5%	1.8%	25.7%	
CIETFs	135	20,682	5.2%	0.4%	2.2%	35.4%	
Mackenzie	52	12,608	3.2%	1.1%	-2.0%	-1.8%	
TD AM	47	11,384	2.8%	1.4%	1.7%	31.2%	
National Bank	15	10,541	2.6%	-0.1%	1.5%	59.4%	
Purpose	71	9,377	2.3%	1.3%	3.1%	33.4%	
RBC GAM	49	5,640	1.4%	1.1%	5.8%	51.8%	
Fidelity	43	5,228	1.3%	2.7%	7.7%	53.2%	
Invesco	56	5,136	1.3%	-0.3%	-0.4%	14.5%	
Harvest Portfolios	30	3,592	0.9%	0.1%	1.6%	27.7%	
Evolve	51	3,450	0.9%	0.9%	1.5%	47.9%	
Other (28)	306	24,550	6.1%	0.7%	2.1%	12.1%	
Total	1,370	399,781	100.0%	0.2%	1.0%	13.7%	

### **ASSET MIX BY PROVIDER**

The five largest providers account for ~77% of the ETF Canadian landscape



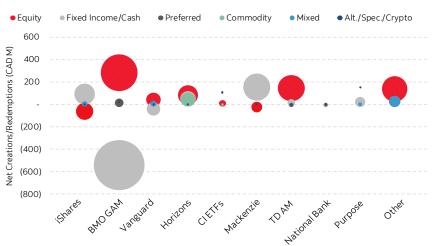
#### LAST WEEK'S LARGEST NET CREATIONS/REDEMPTIONS BY PROVIDER

3iQ and Fidelity gathered the most assets (as % of AuM) last week

	Average Fund Size	AUM	Net C/R	Net C/R (% AUM)		
Providers	(CAD M)	(CAD M)	(CAD M)	1-Week	1-Month	1-Year
3iQ	126.8	253.6	39.3	19.1%	57.2%	-64.4%
Fidelity	121.6	5,228.4	136.0	2.7%	7.7%	53.2%
Manulife	104.1	2,707.0	69.9	2.6%	2.3%	6.4%
Guardian Capital	19.8	376.9	8.8	2.4%	26.7%	60.9%
Hamilton Capital	181.7	3,088.6	43.9	1.4%	7.1%	76.1%
TD AM	242.2	11,384.2	156.2	1.4%	1.7%	31.2%
Purpose	132.1	9,377.3	176.8	1.3%	3.1%	33.4%
FT Portfolio	14.7	396.6	5.0	1.3%	1.9%	-5.9%
Middlefield	76.1	456.6	-9.6	-2.1%	-3.6%	-5.3%
Franklin Liberty	63.7	1,336.9	-15.2	-1.1%	3.9%	-2.9%
Mulvihill	26.2	78.5	-0.3	-0.4%	2.3%	66.3%
AGF Investments	90.4	1,084.4	-3.4	-0.3%	-4.7%	-13.4%
Invesco	91.7	5,136.5	-14.4	-0.3%	-0.4%	14.5%
BMO GAM	492.0	94,947.1	-222.4	-0.2%	-0.7%	8.0%
National Bank	702.7	10,541.2	-7.9	-0.1%	1.5%	59.4%
Dynamic	143.0	1,859.6	-1.2	-0.1%	-0.6%	-11.5%

#### WEEKLY CREATIONS/REDEMPTIONS BY ASSET CLASS

With various BMO Gov ETFs dominating activity, BMO GAM clearly leads fixed income RD



# Contacts

#### Alex Perel, CFA

MD & Head of ETF services 416.862.3158 Scotia capital Inc. Canada alex.perel@scotiabank.com

#### Jean-Francois Boilard, CFA

Associate Director, ETF Services 416.863.7295 Scotia Capital Inc. Canada jean-francois.boilard@scotiabank.com

#### Daniela Fajardo, MBA

Associate Director, ETF Services 416.860.1023 Scotia Capital Inc. Canada daniela.fajardogarcia@scotiabank.com

## Morley Conn, CFA

Director, ETF Services 416.863.7882 Scotia Capital Inc. Canada morley.conn@scotiabank.com

© The Bank of Nova Scotia 2023

To unsubscribe from this specific note/publication, email etfcommentary@scotiabank.com

TM Trademark of The Bank of Nova Scotia. Used under license, where applicable. Scotiabank, together with "Global Banking and Markets", is a marketing name for the global corporate and investment banking and capital markets businesses of The Bank of Nova Scotia and certain of its naffiliates in the countries where they operate, including Scotia Capital (IUSA) Inc., Scotia Capital (USA) Inc., Scotiabank Inc., Scotia Capital (IUSA) Inc., Scotia Capital (IUSA) Inc., Scotia Capital (IUSA) Inc., Institución de Banca Múltiple, Scotia Inverlat Casa de Bolsa S.A. de C.V., Scotia Capital Inc. apital Inc. is a member of the Mass of Nova Scotia is incorporated in Canada with limited liability. Scotia Capital Inc. is a member of CIPF. Scotia Capital (IUSA) Inc. is a registered broker-dealer with the SEC and is a member of the NASD and SIPC. The Bank of Nova Scotia is authorised and regulated by the Office of the Superintendent of Financial Institutions of Canada. Scotia Capital Inc. is authorised and regulated by the Institutions of Canada. The Bank of Nova Scotia (Indon) and Scotiabank Europe pic. are authorised by the UK Financial Conduct Authority, Scotiabank Europe pic in regulated by the UK Financial Conduct Authority and the VEN Prudential Regulation Authority. Scotiabank Europe pic in regulated by the UK Financial Conduct Authority and the Ventential Regulation Authority. Scotiabank Europe pic are available upon request. Scotiabank (Ireland) Designated Activity Company is authorised and regulated by the CBI Scotiabank Inverlat, S.A., Scotia Inverlat Casa de Bolsa, S.A. de C.V., are each authorized and regulated by the Mexican financial authorities.

This publication is not a research report and is considered a marketing communication only. Consequently this commentary is not governed by rules applicable to the publication and distribution of research reports, including relevant restrictions or disclosures required to be included in research reports and has not been prepared in accordance with EU legal requirements designed to promote the independence of investment research. This publication is not meant to provide information sufficient upon to base an investment decisions. To ro replace any due to analytical work required by you in making investment decisions. The information contained in this publication is not subject to any prohibition in the EU on dealing a head of the dissemination of investment decisions. The his promation contained in this publication is not subject to any prohibition in the EU on dealing a head of the dissemination of investment decisions. The spinions and statements contained herein are intended for information purposes only and are subject to change without notice. In addition, the opinions and statements contained herein are intended for information purposes only and are subject to change without notice. In addition, the opinions and statements contained herein are based on information taken from sources believed to be reflected to the purpose of the institutional equity Desk or other areas, units, divisions or affiliates of Scotia Capital Inc. Additionally, either the Institutional Equity Desk or other areas or divisions could trade in accordance with the views expressed or trade against these views. Any transactions by US Institutional Investors in any security mentioned or referenced in this publication cannot be effected through Scotia Capital Inc. and must be executed with a U.S. broker-dealer, including Scotia Capital (USA) Inc., an affiliate of Scotia Capital Inc. Scotia Capital Inc. so a registered broker-dealer with the SEC and is a member of FINRA, the NYSF and SINC

Scotia Capital Inc., its directors, officers, employees, affiliates or clients may currently or from time to time own or hold interests in long or short positions in the securities referred to herein, and may at any time make purchases or sales of these securities as principal or agent. Scotia Capital Inc. or its affiliates may have provided or may provide investment banking, capital markets advice or other resvices to the companies referred to in this communication. This email should not be construed as investment advice or as an offer to sell or a solicitation of an offer to buy any securities or other financial instruments. Neither Scotia Capital Inc. nor any of its officers, directors, partners, employees or affiliates accepts any liability for any direct or consequential loss arising from this publication or its contents. Scotia Capital Inc. recommends that investors independently evaluate each issuer and security discussed in this publication, and consult with any advisors they deem necessary prior to making any investment.

Redistribution or onward forwarding of this email is strictly prohibited. If you believe that this email was sent to you in error, please forward a message to that effect as soon as practicable to trade\_supervision@scotiabank.com

The information is not advice, a recommendation, or an offer. The information provided herein is intended for general circulation and does not take into account specific investment objectives, financial circumstances or the particular needs of any recipient. It does not construe an offer or solicitation to buy or sell or subscribe for any security or financial instrument or investment product, or to enter into a transaction or participate in any particular trading or investment strategy.

The information is not for Retail1; no assurances as to results. Trading in securities involves risks, including the risk of loss. This document and the products and strategies described herein (collectively, the "Products") are intended for use only by sophisticated professional and institutional investors as may be defined in the respective jurisdictions. Investors should consult their financial, legal and tax advisors and determine that the Products are suitable for their risk tolerance and investment objectives prior to engaging in any activity related to the Products. Scotiabank cannot provide any assurances that the Products will achieve their intended results or that the Products will outperform other similar products or strategies. While this document describes how the Products are intended to work under normal market conditions, the actual performance of the Products may not achieve their intended results, particularly during periods of unusually high volatility, unusually low liquidity and/or other extraordinary market conditions. Nothing in this document should be construed as tax or investment advice and no description of the Products-related transactions. If there are any matters arising from, or in connection with the materials, investors should contact their Scotiabank representative to seek further clarification.

1GBM&T does not deal with retail clients.

