GLOBAL ECONOMICS

SCOTIA FLASH

February 14, 2023

Contributors

Derek Holt VP & Head of Capital Markets Economics Scotiabank Economics 416.863.7707 derek.holt@scotiabank.com

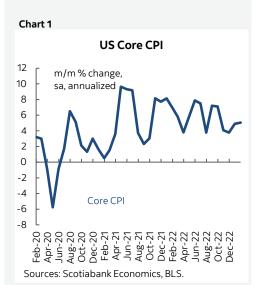
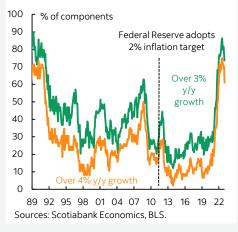


Chart 2

US Inflation Still Showing High Breadth



US Core CPI Picks Up — Lights Up Fed Pricing

- Core CPI is back on an upward trend...
- ...rising to 5.1% m/m SAAR in January
- Breadth remains high
- Markets reacted by pushing Fed terminal rate pricing toward 5½%

US CPI m/m % headline/core, SA, January:

Actual: 0.5 / 0.4 Scotia: 0.4 / 0.3 Consensus: 0.5 / 0.4 Prior: 0.1 / 0.4

US CPI y/y % headline/core, January:

Actual: 6.4 / 5.6 Scotia: 6.1 / 5.4 Consensus: 6.2 / 5.5 Prior: 6.2 / 5.7

Markets are not feeling any love on Valentine's Day. US core CPI put in another hot showing during January while nevertheless matching consensus expectations. It was up by 5.1% m/m at a seasonally adjusted and annualized rate (SAAR). That is definitely not going to tick any boxes in terms of looking for clear evidence of cooling inflation in the US economy. In fact, it is going the other way. Chart 1 shows the reacceleration of this measure over the past couple of months. Core CPI was up by 4.6% m/m SAAR on a threemonth moving average that aims to reduce volatility.

MARKETS AND THE FED

Markets reacted by pushing the US two-year yield about 12bps higher post-data, while adding a touch to USD strength and pushing the S&P500 about ½% lower so far on the day. Markets continue to price a 25bps hike at the March FOMC meeting and pushed terminal rate pricing up another 9bps toward just shy of 5.5%. That implies that the FOMC will raise its terminal rate from 5.25% in December to 5.5% in March when the dots get updated, and possibly higher.

Bear in mind, however, that there is a lot of data between now and the March dots. That includes another PCE reading toward month-end, another nonfarm payrolls and wages report, and another CPI print.

DETAILS—HOUSING STILL HOT, CORE SERVICES FACE A LONG GRINDING ROAD

There remains high breadth to the pace of increases in the CPI basket (chart 2).

Most of the pressure in year-over-year terms continues to be through services as goods price inflation has continued to ebb (chart 3). That's less true in m/m terms as core goods price inflation has picked up a touch recently (chart 4).

Core services ex-energy and ex-housing (Powell's favourite measure) was up 0.3% m/m SA in January after 0.4% m/m the prior month and so it is now back to the October– November pace. There is a rough connection between this measure and wage inflation that Powell is concerned about particularly since this measure represents over half of the core PCE basket (chart 5). It is a lagging relationship with a loose connect to wages such that Powell is likely to remain focused upon how it evolves over a very long period of time ahead and in the context of a tighter job market than thought just before the last nonfarm payrolls report including large positive revisions.

Visit our website at <u>scotiabank.com/economics</u> | Follow us on Twitter at <u>@ScotiaEconomics</u> | Contact us by email at <u>scotia.economics@scotiabank.com</u>

SCOTIA FLASH

February 14, 2023

Charts 6 and 7 break down the weighted contributions to the m/m SA and y/y changes in CPI to show what drove inflation last month. Further charts follow on the following page.

Shelter was up 0.7% m/m including rent that was up 0.7 and OER that was up 0.7. Housing continues to rip higher both in terms of OER and rent of primary residence (chart 8). This will fall in future as the lagging effects of falling market rents works its way through, but not yet and it may be overwhelmed by the services point above.

Gasoline prices were up 2.4% m/m and so that was a minor contributor.

Food was up 0.5% m/m through groceries (up 0.4) and food away from home (up 0.6).

New vehicle prices were up by 0.2% m/m which is irrelevant at a 4.3% weight. Used vehicle prices were down 1.9% m/m SA at a 2.7% weight for a very minor drag (against the flawed stories about higher used vehicle prices that used wrong data).

Across pandemic-related service categories, lodging was up 1.2% m/m SA, airfare fell 2.1% m/m, intracity transit was flat, restaurants (ie: food away from home) were up 0.6% and vehicle rental prices were up 3% which is the hottest in a while.

Apparel prices were up 0.8% m/m mostly due to men's and boy's clothing.

Medical care commodity prices were up 1.1%

Medical care service prices were down 0.7%.

Leased vehicle prices were up 1% m/m.

Please also see the full detailed table at the back of this publication that breaks down more of the CPI basket including micro-charts and z-score measures of deviation from historical tendencies.

Chart 3

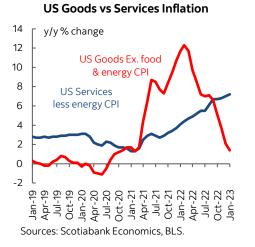
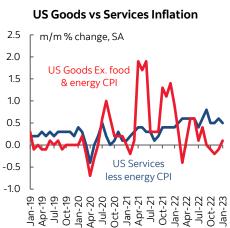


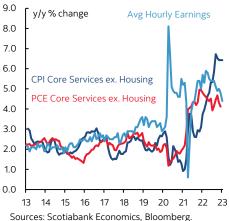
Chart 4



Sources: Scotiabank Economics, BLS.



This is the Inflation that Powell Fears the Most



SCOTIA FLASH

February 14, 2023

Chart 6

January Weighted Contributions to Monthly Change in US Headline CPI

Owner's Equivalent Rent Gasoline Utility Gas Service Rent of Primary Residence Vehicle Insurance **Prescription Drugs** Other Food at Home Eggs Lodging Away from Home Electricity Other Recreation Services **Hospital Services** Men's Apparel New Cars & Trucks Tools & Outdoor Equipment Plumbing Maintenance Pet Services Beef **Cereals & Cereal Products** Fresh Fruits **Dental Services** Cable & Satellite TV Non Alcoholic Beverages Appliances Day Care & Preschool Car & Truck Rental Infant & Toddler Apparel College Tuition Women's Apparel **Miscellaneous Personal Goods** Cigarettes Jewelry & Watches Nursing Homes Alcoholic Beverages at Home A/V Products Miscellaneous Personal... Parking Fees Postage & Delivery Services Elementary & High School... Processed Fruits & Vegetables Internet Service Providers **Professional School Tuition** Other Intercity Transportation Sporting Goods Physicians' Services Pork **Dairy Products** Camera Equipment Fish & Seafood Other Household Equipment Footwear **Telephone Hardware Educational Books** Tovs Other Meats Fuel Oil & Oil Fuels Computers Airline Fare **Fresh Vegetables** Used Cars & Trucks -0.10

0.00 Sources: Scotiabank Economics, US BLS.

0.10

0.20

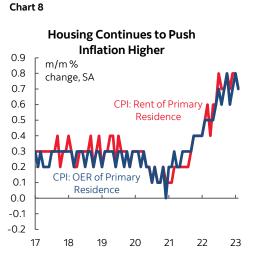
Chart 7

January Weighted Contributions to the 12-Month Change in US Headline CPI



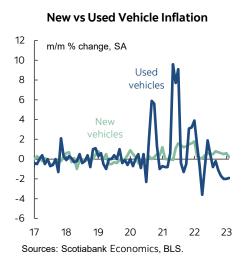
SCOTIA FLASH

February 14, 2023



Sources: Scotiabank Economics, BLS.





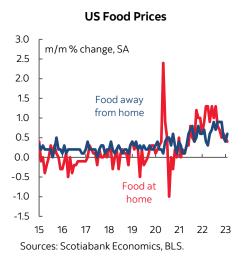
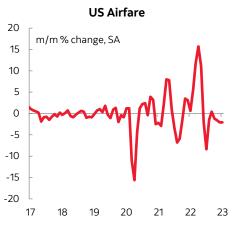


Chart 11



Sources: Scotiabank Economics, BLS.





Sources: Scotiabank Economics, BLS.

Chart 12

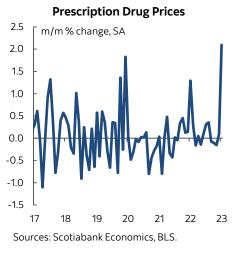


Chart 10



Chart 14



Sources: Scotiabank Economics, BLS.

SCOTIA FLASH

Jan 2023				Weighted C	ontributions	s (ppts)*	5-Year	Pre-Pander	nic	10-Year Pre-Pandemic			
US INFLATION COMPONENT BREAKDOWN	y/y % change	10-year trend (J	Pandemic trend Ian 2019–Present)	m/m % change	Weights (%)	y/y	m/m	2015–2019 avg. y/y	Std. Dev.	Z-Score	2011–2019 avg. y/y	Std. Dev.	Z-Score
Food	10.1	~~~~~	~~~~	0.5	13.78	1.39	0.07	1.3	0.8	11.6	1.7	1.1	7.4
Food, home	11.3	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		0.4	8.53	0.96	0.03	0.2	1.1	9.8	1.2	1.9	5.5
Cereals & bakery products	15.6			1.0	1.12	0.17	0.01	0.4	0.9	17.3	0.9	1.7	8.7
Meats, poultry, fish & eggs	8.1	man and a second	\sim	0.7	1.90	0.15	0.01	-0.2	3.2	2.6	2.1	3.9	1.5
Dairy & related products	سر 14.0	~		0.0	0.81	0.11	0.00	-0.6	1.6	9.1	1.1	3.1	4.1
Fruits & vegetables	7.2~~~	~~~~~		-0.5	1.43	0.10	-0.01	0.4	1.7	4.0	1.0	2.0	3.1
Non-alcoholic beverages	13.1			0.4	0.98	0.13	0.00	0.6	1.0	12.0	0.5	1.6	8.0
Other food at home	13.2	^		0.7	2.29	0.30	0.02	0.5	0.6	19.7	1.0	1.6	7.8
Food, away	8.2			0.6	5.26	0.43	0.03	2.7	0.3	18.5	2.5	0.5	10.9
Full services meals & snacks	8.1			0.5	2.44	0.20	0.01	2.6	0.4	15.0	2.4	0.5	11.4
Limited services meals and snacks	6.7	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		0.7	2.53	0.17	0.02	2.8	0.3	12.1	2.5	0.7	5.9
Food at employee sites and school	130.3			0.1	0.08	0.10	0.00	2.8	2.4	52.1	2.8	1.9	66.4
Food from vending machines & mobile vendors	13.8		^	1.7	0.04	0.01	0.00	3.1	1.0	10.8	2.5	1.3	8.7
Other food away from home	5.9~~~	man hand have		0.0	0.17	0.01	0.00	2.5	1.3	2.6	2.3	1.0	3.6
Energy	8.7~~~	man -	\sim	2.0	7.87	0.68	0.16	-1.9	10.0	1.1	1.6	9.6	0.7
Energy comm.	2.8~~~	mmmm -	\sim	1.9	4.31	0.12	0.08	-2.8	17.0	0.3	3.0	17.1	0.0
Fuel oils & other fuels	18.3~~~	- man -	\sim	-3.9	0.26	0.05	-0.01	-2.3	15.8	1.3	2.7	14.4	1.1
Motor fuel	1.9 ~~~~	mmmm -	\sim	2.3	4.05	0.08	0.09	-2.8	17.1	0.3	3.0	17.3	-0.1
Gasoline	<u>1.5</u> ~~~	mmmm -	\sim	<u>2.4</u>	<u>3.95</u>	0.06	<u>0.09</u>	<u>-2.8</u>	<u>17.1</u>	<u>0.3</u>	<u>3.0</u>	<u>17.4</u>	<u>-0.1</u>
<u>Other</u>	<u>26.0</u> ~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~	-4.2	<u>0.10</u>	<u>0.03</u>	<u>0.00</u>	<u>-2.3</u>	<u>19.5</u>	<u>1.5</u>	<u>3.6</u>	<u>17.9</u>	<u>1.3</u>
Energy serv.	15.6	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		2.1	3.56	0.56	0.07	0.0	2.4	6.4	0.5	2.7	5.7
Electricity	11.9			0.5	2.61	0.31	0.01	0.5	1.5	7.7	1.0	1.7	6.5
Utility (piped gas service)	26.7 ~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		6.7	0.95	0.25	0.06	-1.4	7.5	3.7	-0.9	7.3	3.8
All items less food and energy	5.6			0.4	78.35	4.39	0.31	2.0	0.2	16.0	1.8	0.4	9.3
Commodities less food and energy	1.4			0.1	20.88	0.29	0.02	-0.3	0.4	4.4	0.2	0.9	1.4
Household furnishings	6.4			0.5	3.80	0.24	0.02	-0.8	1.2	6.0	-0.9	1.2	6.1
Window & floor coverings	6.7	www.m	m	3.4	0.29	0.02	0.01	-2.3	1.7	5.2	-2.8	1.8	5.4
Furniture & bedding	2.2		~~~~	0.0	0.95	0.02	0.00	-0.3	1.7	1.5	-0.9	2.1	1.5
Appliances	1.4	month of the second second	m	1.4	0.24	0.00	0.00	-1.2	3.1	0.8	-1.6	3.0	1.0
Other household equipment	2.5 ~~~~	man and a	$\sim\sim\sim\sim$	1.5	0.55	0.01	0.01	-3.5	1.8	3.3	-3.7	1.5	4.2
Tools & hardware	9.6	manun and a		0.6	0.96	0.09	0.01	-0.1	1.0	9.4	-0.3	1.2	8.1
Housekeeping supplies	11.3			1.4	0.96	0.11	0.01	0.3	1.2	9.2	0.4	1.3	8.3

SCOTIA FLASH

February	14.	2023
i coraary	•••,	2020

Jan 2023					Weighted C	ontribution	s (ppts)*	5-Year	Pre-Pander	nic	10-Year Pre-Pandemic		
US INFLATION COMPONENT BREAKDOWN	y/y % change	10-year trend	Pandemic trend (Jan 2019–Present)	m/m % change	Weights (%)	y/y	m/m	2015–2019 avg. y/y	Std. Dev.	Z-Score	2011–2019 avg. y/y	Std. Dev.	Z-Score
Apparel	3.1	man the		0.8	2.41	0.07	0.02	-0.5	1.0	3.7	0.3	1.7	1.6
Men's & boys apparel	3.1	mon man -		1.4	0.60	0.02	0.01	-0.3	1.5	2.2	0.5	2.3	1.2
Women's & girls apparel	3.7	munny .	~~~~~	0.3	0.96	0.04	0.00	-1.3	1.9	2.7	-0.1	2.5	1.5
Footwear	0.4	mmm m.	\sim	-0.2	0.59	0.00	0.00	0.2	1.3	0.2	0.8	1.7	-0.2
Infant & toddler's apparel	5.1	man -		3.7	0.11	0.01	0.00	0.4	3.8	1.2	0.5	3.6	1.3
Jewlery & watches	4.9	man man mar,	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1.3	0.15	0.01	0.00	1.0	3.4	1.2	1.5	3.8	0.9
Trans. less fuel	-2.3			-0.7	8.21	-0.19	-0.06	-0.3	0.9	-2.3	0.4	1.5	-1.8
New vehicles	5.8	^		0.2	4.07	0.24	0.01	0.1	0.7	8.7	0.8	1.2	4.1
Used cars & trucks	-11.6	M		-1.9	3.62	-0.42	-0.07	-1.3	2.1	-5.0	1.1	4.8	-2.6
Motor vehicle parts & equipment	8.3	······		0.3	0.44	0.04	0.00	0.2	1.1	7.6	0.9	2.2	3.4
Medical comm.	3.4	man .		1.1	1.47	0.05	0.02	2.1	1.7	0.8	2.3	1.5	0.8
Medicinal Drugs	3.2	man .		1.2	1.37	0.04	0.02	2.2	1.8	0.6	2.3	1.6	0.6
Medical equipment & supplies	7.0	- marine -	~~~~	-0.8	0.10	0.01	0.00	0.4	1.2	5.3	0.3	1.2	5.6
Recreation comm.	3.3		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	0.1	1.87	0.06	0.00	-2.6	1.1	5.6	-2.3	0.9	6.2
Video & audio products	-6.2	~~~~~.		0.7	0.27	-0.02	0.00	-10.1	2.4	1.6	-9.2	2.2	1.4
Pets & pet products	11.9			0.2	0.58	0.07	0.00	0.4	1.5	7.8	0.5	1.5	7.8
Sporting goods	1.5	mmmmmm,	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	0.5	0.55	0.01	0.00	-0.7	1.5	1.4	-0.6	1.2	1.7
Photographic Equipment & supplies	5.4	man haven,	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	-0.3	0.02	0.00	0.00	-1.7	4.6	1.5	-3.0	4.0	2.1
Recreational reading materials	3.1	mm when he !	mm	-0.4	0.10	0.00	0.00	1.6	1.9	0.8	1.5	1.8	0.9
Other recreational goods	1.2	man .	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	-0.8	0.36	0.00	0.00	-6.5	1.3	5.8	-5.2	1.7	3.7
Educ. & communication comm.	-10.3	man and a start -	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	-0.1	0.73	-0.07	0.00	-3.7	1.0	-6.5	-3.5	0.9	-7.5
Educational books & supplies	2.2	man han have -	m	-0.4	0.09	0.00	0.00	2.2	3.0	0.0	3.6	2.7	-0.5
IT commodities	-11.7		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	0.0	0.64	-0.07	0.00	-6.1	1.9	-3.0	-6.8	1.8	-2.7
Alcohol	5.8	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~	0.4	0.88	0.05	0.00	1.3	0.3	13.1	1.4	0.4	12.1
Alcoholic beverages at home	5.3	may marked -	$\sim\sim\sim\sim$	0.4	0.58	0.03	0.00	0.8	0.6	7.5	0.8	0.5	8.5
Alcoholic beverages away from home	6.9	man when a second s		0.6	0.29	0.02	0.00	1.9	0.5	10.8	2.2	0.7	7.1
Other goods	7.2			0.8	1.36	0.10	0.01	1.4	0.9	6.8	1.4	0.7	8.1
Tobacco & smoking products	6.3	munth	m	0.7	0.52	0.03	0.00	4.3	1.5	1.3	4.4	3.8	0.5
Personal care products	7.1	man .		0.3	0.65	0.05	0.00	-0.3	0.6	12.7	-0.1	0.8	8.7
Miscellaneous personal goods	10.3	man and a second		3.1	0.19	0.02	0.01	-2.4	3.1	4.1	-1.7	2.4	5.0

SCOTIA FLASH

February 14, 2023

Jan 2023					ontributions	(ppts)*	5-Year Pre-Pandemic			10-Year Pre-Pandemic		
US INFLATION COMPONENT BREAKDOWN	y/y % change	Pandemic trend 10-year trend (Jan 2019–Present)	m/m % change	Weights (%)	у/у	m/m	2015–2019 avg. y/y	Std. Dev.	Z-Score	2011–2019 avg. y/y	Std. Dev.	Z-Score
Services less energy services	7.2		0.5	57.47	4.14	0.29	2.8	0.2	18.9	2.4	0.6	7.6
Shelter	7.9		0.7	32.93	2.60	0.23	3.3	0.2	27.4	2.5	1.2	4.7
Rent of shelter	8.0		0.8	32.57	2.61	0.26	3.3	0.2	25.5	2.5	1.2	4.7
Rent of primary residence	8.6		<u>0.7</u>	7.45	<u>0.64</u>	<u>0.05</u>	<u>3.7</u>	<u>0.1</u>	<u>36.8</u>	<u>2.9</u>	<u>1.1</u>	<u>5.1</u>
Lodging away from home	7.7		<u>1.2</u>	0.89	<u>0.07</u>	0.01	<u>2.3</u>	<u>2.0</u>	<u>2.7</u>	2.2	<u>2.2</u>	2.5
OER of residences	7.8		<u>0.7</u>	<u>24.24</u>	<u>1.89</u>	<u>0.17</u>	<u>3.2</u>	<u>0.2</u>	<u>22.6</u>	<u>2.4</u>	<u>1.1</u>	<u>5.0</u>
Tenants' & household insurance	0.9	man man	0.1	0.36	0.00	0.00	1.4	1.2	-0.4	2.3	1.5	-0.9
Water, sewer, trash collection	5.0 🔪	man man man man	0.9	1.09	0.05	0.01	3.6	0.6	2.4	4.3	1.0	0.7
Water & sewage maintenance	4.2	man man man	0.8	0.78	0.03	0.01	4.0	0.8	0.3	4.8	1.4	-0.5
Garbage & trash collection	7.0	man man	0.9	0.31	0.02	0.00	2.5	1.5	3.1	2.5	1.1	4.2
Household ops.	6.6	man man	0.1	0.83	0.05	0.00	3.8	1.3	2.2	2.6	1.6	2.5
Domestic services	3.2	- man man	0.5	0.24	0.01	0.00	2.0	1.1	1.1	1.6	1.0	1.5
Gardening & lawncare	4.1	month on the	0.2	0.32	0.01	0.00	4.3	2.7	-0.1	2.8	2.6	0.5
Moving, storage, freight	1.6	mount	0.5	0.10	0.00	0.00	5.6	3.9	-1.0	3.3	3.9	-0.4
Repair of household items	5.4 ~~	more von	0.1	0.11	0.01	0.00	4.8	2.1	0.3	4.2	2.0	0.6
Medical serv.	3.0 ~~		-0.7	6.79	0.20	-0.05	2.9	1.0	0.1	3.0	0.8	-0.1
Professional Services	2.7 ~	month mar	-0.1	3.46	0.09	0.00	1.5	0.9	1.3	1.8	0.8	1.1
Hospital & related services	4.0 ***	mannen	0.7	2.49	0.10	0.02	3.8	1.1	0.2	4.5	1.3	-0.4
Health insurance	1.2		-3.6	0.84	0.01	-0.03	5.0	5.8	-0.7	3.6	6.0	-0.4
Transportation serv.	14.6		0.9	6.02	0.88	0.05	2.6	1.1	10.9	2.6	1.0	12.4
Leased cars & trucks	-3.6	man ha	1.0	0.73	-0.03	0.01	0.5	3.0	-1.4	-1.6	3.2	-0.6
Motor vehicle maintenance & repair	14.2		1.3	1.09	0.15	0.01	2.2	0.7	17.2	2.0	0.6	21.2
Motor vehicle insurance	14.7	man have have	1.4	2.53	0.37	0.04	5.5	2.6	3.5	4.8	2.0	4.8
Motor vehicle fees	2.7 -	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1.2	0.50	0.01	0.01	1.8	0.7	1.3	2.2	1.9	0.3
Public transportation	17.1 ~~		-1.8	0.91	0.16	-0.02	-1.2	1.5	12.1	1.0	3.6	4.5
Recreation serv.	5.8		0.7	3.15	0.18	0.02	2.6	0.7	4.9	2.3	0.7	4.7
Video & audio services	3.9 👡	man man	0.6	1.14	0.04	0.01	2.7	1.4	0.8	2.6	1.3	0.9
Pet services	9.4		1.0	0.52	0.05	0.01	3.1	0.8	8.2	3.3	0.9	6.6
Photo services	7.7		2.7	0.03	0.00	0.00	-0.2	2.0	4.0	0.8	1.8	3.7
Other recreation services	5.9		0.7	1.45	0.09	0.01	2.4	0.6	5.8	1.7	1.1	3.9
Educ. & communication serv.	2.8 ~~	man man	0.5	5.32	0.15	0.03	0.4	1.3	1.8	1.1	1.3	1.4
Tuition, school fees, child care	3.4 🔨	min	0.3	2.50	0.09	0.01	2.8	0.6	1.1	3.3	0.8	0.1
Postage & delivery	6.8 🦳	man man	1.5	0.08	0.01	0.00	2.3	2.0	2.3	3.3	2.0	1.8
Telephone services	2.0		0.2	1.81	0.04	0.00	-2.4	3.0	1.5	-1.3	2.4	1.4
Internet services	2.0 🖍	man	1.0	0.92	0.02	0.01	-0.2	1.5	1.5	0.1	1.3	1.4
Other personal serv.	5.3 ~~	- man - man	0.5	1.37	0.07	0.01	2.7	0.7	3.9	2.4	0.6	4.6
Personal care services	5.2	man man	0.2	0.54	0.03	0.00	2.3	0.7	4.2	1.8	0.8	4.1
Miscellaneous personal services	5.4 ~		0.8	0.82	0.04	0.01	2.9	0.9	2.7	2.7	0.7	3.7

February 14, 2023

This report has been prepared by Scotiabank Economics as a resource for the clients of Scotiabank. Opinions, estimates and projections contained herein are our own as of the date hereof and are subject to change without notice. The information and opinions contained herein have been compiled or arrived at from sources believed reliable but no representation or warranty, express or implied, is made as to their accuracy or completeness. Neither Scotiabank nor any of its officers, directors, partners, employees or affiliates accepts any liability whatsoever for any direct or consequential loss arising from any use of this report or its contents.

These reports are provided to you for informational purposes only. This report is not, and is not constructed as, an offer to sell or solicitation of any offer to buy any financial instrument, nor shall this report be construed as an opinion as to whether you should enter into any swap or trading strategy involving a swap or any other transaction. The information contained in this report is not intended to be, and does not constitute, a recommendation of a swap or trading strategy involving a swap within the meaning of U.S. Commodity Futures Trading Commission Regulation 23.434 and Appendix A thereto. This material is not intended to be individually tailored to your needs or characteristics and should not be viewed as a "call to action" or suggestion that you enter into a swap or trading strategy involving a swap or any other transaction. Scotiabank may engage in transactions in a manner inconsistent with the views discussed this report and may have positions, or be in the process of acquiring or disposing of positions, referred to in this report.

Scotiabank, its affiliates and any of their respective officers, directors and employees may from time to time take positions in currencies, act as managers, co-managers or underwriters of a public offering or act as principals or agents, deal in, own or act as market makers or advisors, brokers or commercial and/or investment bankers in relation to securities or related derivatives. As a result of these actions, Scotiabank may receive remuneration. All Scotiabank products and services are subject to the terms of applicable agreements and local regulations. Officers, directors and employees of Scotiabank and its affiliates may serve as directors of corporations.

Any securities discussed in this report may not be suitable for all investors. Scotiabank recommends that investors independently evaluate any issuer and security discussed in this report, and consult with any advisors they deem necessary prior to making any investment.

This report and all information, opinions and conclusions contained in it are protected by copyright. This information may not be reproduced without the prior express written consent of Scotiabank.

™ 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 affiliates in the countries where they operate, including; Scotiabank Europe plc; Scotiabank (Ireland) Designated Activity Company; Scotiabank Inverlat S.A., Institución de Banca Múltiple, Grupo Financiero Scotiabank Inverlat, Scotia Inverlat, Scotia Inverlat Casa de Bolsa, S.A. de C.V., Grupo Financiero Scotiabank Inverlat, Scotia Inverlat, Scotia Inverlat, Scotia Inverlat Casa de Bolsa, S.A. de C.V., Grupo Financiero Scotiabank Inverlat, Scotia Inverlat Derivados S.A. de C.V. – all members of the Scotiabank group and authorized users of the Scotiabank mark. The Bank of Nova Scotia is incorporated in Canada with limited liability and is authorised and regulated by the Office of the Superintendent of Financial Institutions Canada. The Bank of Nova Scotia is authorized by the UK Prudential Regulation Authority and Imited regulation by the UK Prudential Regulation Authority. Details about the extent of The Bank of Nova Scotia's regulation by the UK Prudential Regulation Authority are available from us on request. Scotiabank Europe plc is authorized by the UK Financial Conduct Authority and regulated by the UK Financial Conduct Authority.

Scotiabank Inverlat, S.A., Scotia Inverlat Casa de Bolsa, S.A. de C.V, Grupo Financiero Scotiabank Inverlat, and Scotia Inverlat Derivados, S.A. de C.V., are each authorized and regulated by the Mexican financial authorities.

Not all products and services are offered in all jurisdictions. Services described are available in jurisdictions where permitted by law.