

The diminishing returns of monetary policy?

By Warren Lovely, Taylor Schleich & Ethan Currie

Over the past two weeks, consensus has been building around the idea that the end of the Fed's tightening cycle is further than previously thought, even after delivering 450 basis points of rate hikes in less than 12 months. And despite the Bank of Canada declaring a (conditional) pause, markets will tell you policymakers aren't done there either. Some might cite financial conditions as a contributing factor to the need for ever-higher rates. Certainly, Fed Chair Powell drew criticism earlier this month for allowing exuberant market pricing to persist and failing to concede that conditions had loosened in recent months. But is it even fair to say that financial conditions are loose and/or loosening? Are recent rate adjustments exhibiting diminishing marginal returns? Not quite. We're with Mr. Powell on this one. Taking a step back and putting everything into context suggests to us that conditions aren't broadly misaligned with where they "should" be.

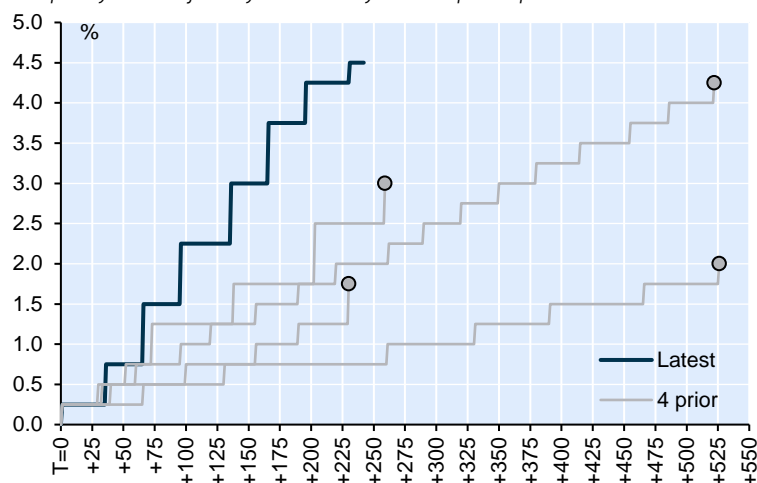
The fast and furious increase in policy rates unsurprisingly dwarfs any cycle in the past few decades (Charts 1A-B). No, that hasn't meant a one-for-one increase in longer term interest rates (Charts 2A-2B), but it *never* has in the ten North American tightening cycles in our 30-year sample. If anything, the pass-through of rate hikes out the curve is greater than has historically been true (Charts 3A-B). Moreover, there's no reason to expect long-term rates to set much higher from here when inflation expectations are anchored (and *falling* from earlier in 2022), and central banks reiterate the "neutral" policy rate is ~2.5%. To the extent that markets believe central banks and trust they'll achieve their mandates, rates out the curve are naturally capped within a tighter range. Nonetheless, yields have gapped higher as a bout of stronger-than-expected data has led market participants pricing in more hikes in the coming months and fewer cuts later this year. In hindsight, Powell's decision in early February to *not* fight the market was appropriate, as subsequent data reshaped market psyche and traders came around in less than a couple weeks anyways. That's undoubtedly a better outcome than the FOMC strong-arming markets into specific asset valuations.

Rates aside, other key components of financial conditions—equities and credit—have been off to a hot start to the year. Many may view this inappropriate and counterproductive to the central banks' goals but again, consider the context. Equities and credit are both materially weaker than they were prior to the start of the hiking cycle, even with an impressive rebound in recent months (Charts 4A-B). But more fundamentally, the backdrop today is different than it had been when risk bottomed in the fall. Recall, we were coming off of two quarters of negative growth. Expectations were for imminent labour market weakness and most importantly, inflation was still near its peak. Today, the jobs market is even stronger, growth is holding up okay, and even with recent disappointing inflation data, price pressures have subsided materially. Should we be stuck in a higher inflation/interest rate environment, we'd prefer to be in one with low unemployment and positive (albeit below-trend) growth, not the more sluggish stagflationary environment that had been feared. So yes, risk assets might not be as weak as they were six months ago. So by this measure, financial conditions *are* more loose. But they're still not *loose* and any "loosening" that's occurred has been directionally consistent with developments in the real economy and on inflation.

As for where conditions go from here, that will of course depend on incoming data. We have our views on the economy/inflation (which we outline [here](#)) but it'd be an understatement to say that forecasting has been challenging in recent years. Many will have differing views on how the economy progresses and how persistent price pressures prove to be. One thing we feel comfortable definitively saying is that the *real* policy setting will only tighten from here. And that's without any further Fed/BoC rate increases. Indeed, even the more pessimistic forecasters are likely to concede CPI inflation will be *well* below 6% by mid-year. That will push real rates, which have already climbed significantly in the past year (Charts 5A-B), further up and into unequivocally restrictive territory. In a vacuum, that's a clear net negative for risk assets. But as we've seen in recent months, that doesn't necessitate asset price depreciation. If the economy is still able to achieve a soft landing and immaculate disinflation amidst ever-increasing policy real policy rates (which seemed to be the consensus view just two weeks ago), spreads and equities could and probably should rally. What it shouldn't mean is central banks delivering blow after blow to the economy until it's left without a pulse.

Chart 1A: A historically aggressive Fed hiking cycle continues...

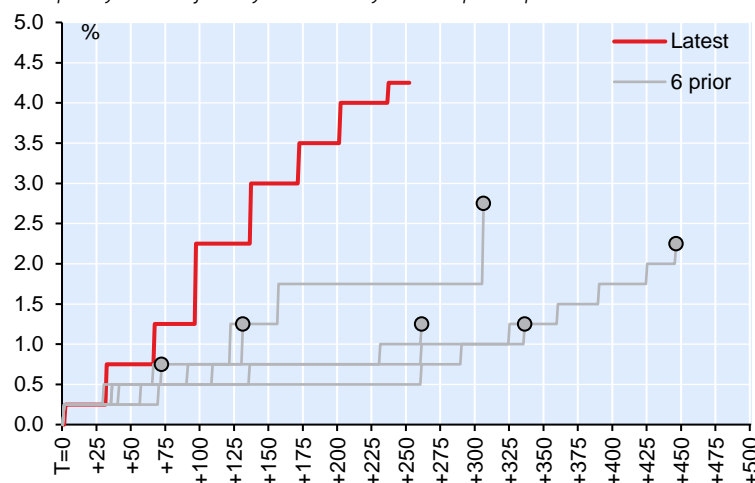
Fed policy rate trajectory: 2022-23 cycle vs. 4 prior episodes



Source: NBF, FRB, Bloomberg | Note: Bullets denote end of 4 prior tightening cycle

Chart 1B: ...while the BoC pauses after a fast & furious year

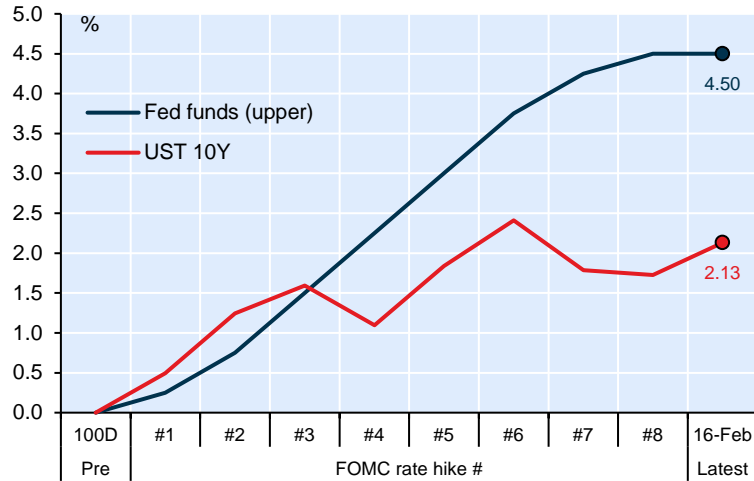
BoC policy rate trajectory: 2022-23 cycle vs. 6 prior episodes



Source: NBF, BoC, Bloomberg | Note: Bullets denote end of 6 prior tightening cycle

Chart 2A: Assessing the relative impact out the curve in US...

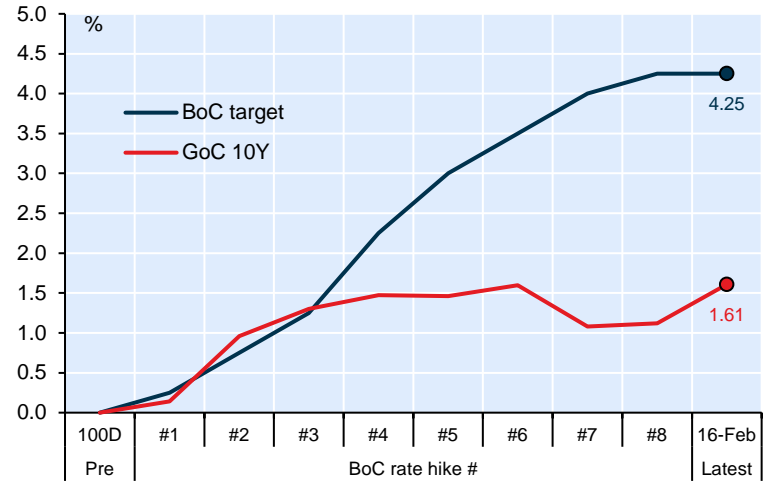
Cumulative change in fed funds target & UST 10Y yield: 2022-23 cycle



Source: NBF, FRB, Bloomberg

Chart 2B: ... and in Canada

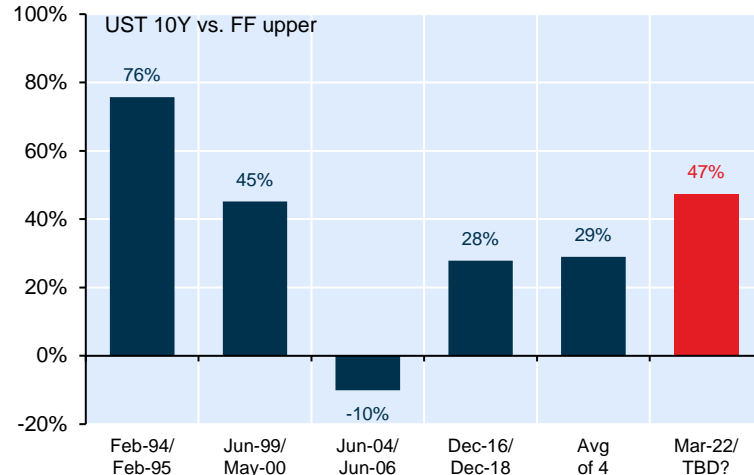
Cumulative change in BoC target & GoC 10Y yield: 2022-23 cycle



Source: NBF, BoC, Bloomberg

Chart 3A: Comparing the longer-term yield response in US...

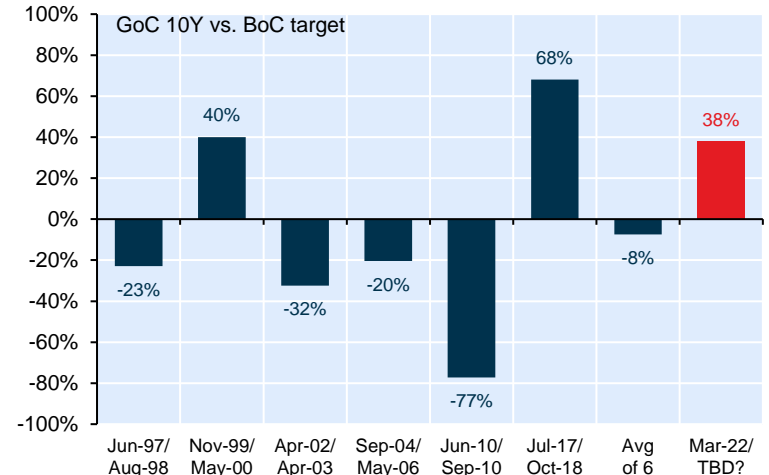
Relative change in UST 10Y yield vs. fed funds target: Current vs. past cycles



Source: NBF, FRB, Bloomberg

Chart 3B: ... and in Canada

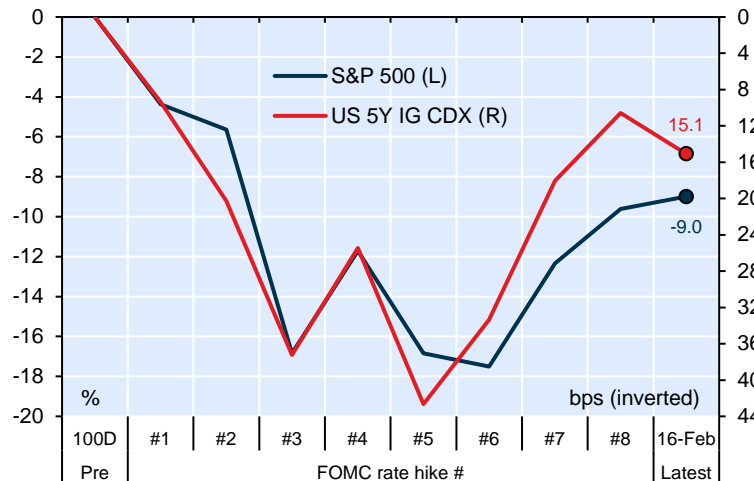
Relative change in GoC 10Y yield vs. BoC target: Current vs. past cycles



Source: NBF, BoC, Bloomberg

Chart 4A: Gauging equity/credit market reaction in US...

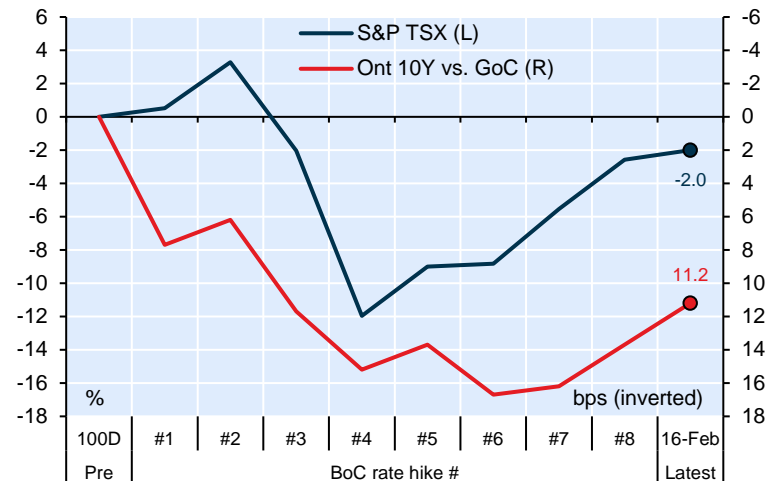
Cumulative change in S&P 500 & US IG CDX: 2022-23 cycle



Source: NBF, FRB, Bloomberg

Chart 4B: ... and in Canada

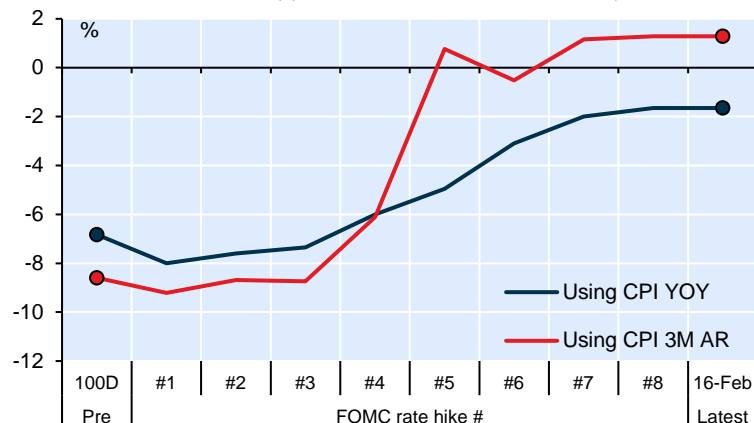
Cumulative change in S&P TSX & Ontario spread: 2022-23 cycle



Source: NBF, BoC, Bloomberg

Chart 5A: Real policy rate tighten appreciably in US...

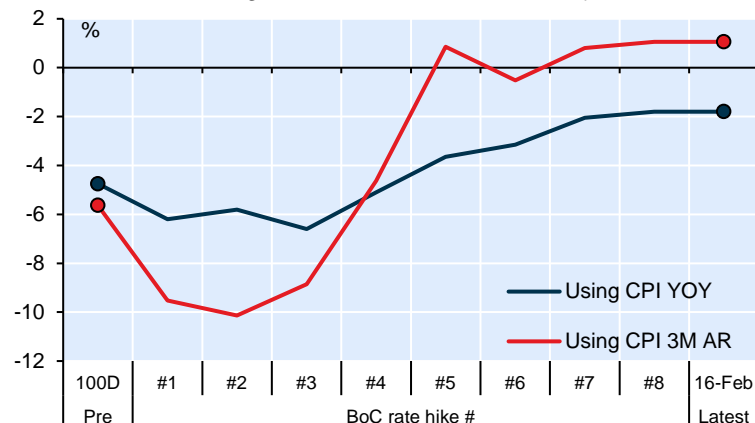
Evolution of real fed funds upper (based on US CPI): 2022-23 cycle



Source: NBF, FRB, BLS, Bloomberg

Chart 5B: ... and in Canada

Evolution of real BoC target (based on Cdn CPI): 2022-23 cycle



Source: NBF, BoC, StatCan, Bloomberg

Table 1A-B: Mapping the evolution of North American financial conditions

Evolution & cumulative change in US/Cdn policy rates, longer-term yields & key risk assets during 2022-23 FOMC/BoC tightening cycle

	FOMC rate hike #									
	Pre									Latest
	100D Avg	#1 16-Mar-22	#2 4-May-22	#3 15-Jun-22	#4 27-Jul-22	#5 21-Sep-22	#6 2-Nov-22	#7 14-Dec-22	#8 1-Feb-23	16-Feb-23
Level										
Fed funds upper (%)	0.25	0.50	1.00	1.75	2.50	3.25	4.00	4.50	4.75	4.75
CPI YOY (%)	7.1	8.5	8.6	9.1	8.5	8.2	7.1	6.5	6.4	6.4
CPI 3M SAAR (%)	8.8	9.7	9.7	10.5	8.6	2.5	4.5	3.3	3.5	3.5
Real FF 1 (%)	-6.83	-8.00	-7.60	-7.35	-6.00	-4.95	-3.10	-2.00	-1.65	-1.65
Real FF 2 (%)	-8.60	-9.21	-8.69	-8.74	-6.10	0.77	-0.51	1.15	1.28	1.28
UST 10Y (%)	1.69	2.19	2.94	3.29	2.79	3.53	4.10	3.48	3.42	3.83
S&P 500 (Index)	4,557	4,358	4,300	3,790	4,024	3,790	3,760	3,995	4,119	4,148
US 5Y IG CDX (bps)	57.9	67.3	78.2	95.2	83.4	100.6	91.3	76.0	68.5	73.0

Cumulative change (vs. 100D avg preceeding first hike)										
Fed funds upper (%)	0	0.25	0.75	1.50	2.25	3.00	3.75	4.25	4.50	4.50
UST 10Y (%)	0	0.49	1.24	1.59	1.09	1.84	2.41	1.79	1.73	2.13
S&P 500 (Index)	0	-4.4	-5.6	-16.8	-11.7	-16.8	-17.5	-12.3	-9.6	-9.0
US 5Y IG CDX (bps)	0	9.4	20.3	37.2	25.5	42.6	33.4	18.1	10.6	15.1

Reference ratio:

Chg in UST 10Y vs. chg in FF target 198% 166% 106% 49% 61% 64% 42% 38% 47%

	BoC rate hike #									
	Pre									Latest
	100D 100D avg	#1 2-Mar-22	#2 13-Apr-22	#3 1-Jun-22	#4 13-Jul-22	#5 7-Sep-22	#6 26-Oct-22	#7 7-Dec-22	#8 25-Jan-23	16-Feb-23
Level										
BoC O/N (%)	0.25	0.50	1.00	1.50	2.50	3.25	3.75	4.25	4.50	4.50
CPI YOY (%)	5.0	6.7	6.8	8.1	7.6	6.9	6.9	6.3	6.3	6.3
CPI 3M SAAR (%)	5.9	10.0	11.1	10.4	7.1	2.4	4.3	3.4	3.4	3.4
Real BoC 1 (%)	-4.75	-6.20	-5.80	-6.60	-5.10	-3.65	-3.15	-2.05	-1.80	-1.80
Real BoC 2 (%)	-5.63	-9.52	-10.14	-8.85	-4.63	0.86	-0.52	0.81	1.06	1.06
GoC 10Y (%)	1.68	1.82	2.64	2.98	3.15	3.14	3.27	2.76	2.80	3.28
S&P TSX (Index)	21,144	21,256	21,838	20,714	18,615	19,241	19,280	19,973	20,600	20,720
Ont 10Y vs. GoC (bps)	63.3	71.0	69.5	75.0	78.5	77.0	80.0	79.5	77.0	74.5

Cumulative change (-100D)										
BoC O/N	0	0.25	0.75	1.25	2.25	3.00	3.50	4.00	4.25	4.25
CAN 10Y	0	0.14	0.96	1.30	1.47	1.46	1.60	1.08	1.12	1.61
S&P TSX	0	0.5	3.3	-2.0	-12.0	-9.0	-8.8	-5.5	-2.6	-2.0
Ont 10Y	0	7.7	6.2	11.7	15.2	13.7	16.7	16.2	13.7	11.2

Reference ratio:

Chg in GoC 10Y vs. chg in BoC target 56% 128% 104% 66% 49% 46% 27% 26% 38%

Source: NBF, FRB, BoC, BLS, StatCan, Bloomberg



Economics and Strategy

Montreal Office

514-879-2529

Stéfane Marion

Chief Economist and Strategist
stefane.marion@nbc.ca

Kyle Dahms

Economist
kyle.dahms@nbc.ca

Alexandra Ducharme

Economist
alexandra.ducharme@nbc.ca

Matthieu Arseneau

Deputy Chief Economist
matthieu.arseneau@nbc.ca

Daren King, CFA

Economist
daren.king@nbc.ca

Angelo Katsoras

Geopolitical Analyst
angelo.katsoras@nbc.ca

Jocelyn Paquet

Economist
jocelyn.paquet@nbc.ca

Toronto Office

416-869-8598

Warren Lovely

Chief Rates and Public Sector Strategist
warren.lovely@nbc.ca

Taylor Schleich

Rates Strategist
taylor.schleich@nbc.ca

General

This Report was prepared by National Bank Financial, Inc. (NBF), (a Canadian investment dealer, member of IIROC), an indirect wholly owned subsidiary of National Bank of Canada. National Bank of Canada is a public company listed on the Toronto Stock Exchange.

The particulars contained herein were obtained from sources which we believe to be reliable but are not guaranteed by us and may be incomplete and may be subject to change without notice. The information is current as of the date of this document. Neither the author nor NBF assumes any obligation to update the information or advise on further developments relating to the topics or securities discussed. The opinions expressed are based upon the author(s) analysis and interpretation of these particulars and are not to be construed as a solicitation or offer to buy or sell the securities mentioned herein, and nothing in this Report constitutes a representation that any investment strategy or recommendation contained herein is suitable or appropriate to a recipient's individual circumstances. In all cases, investors should conduct their own investigation and analysis of such information before taking or omitting to take any action in relation to securities or markets that are analyzed in this Report. The Report alone is not intended to form the basis for an investment decision, or to replace any due diligence or analytical work required by you in making an investment decision.

This Report is for distribution only under such circumstances as may be permitted by applicable law. This Report is not directed at you if NBF or any affiliate distributing this Report is prohibited or restricted by any legislation or regulation in any jurisdiction from making it available to you. You should satisfy yourself before reading it that NBF is permitted to provide this Report to you under relevant legislation and regulations.

National Bank of Canada Financial Markets is a trade name used by National Bank Financial and National Bank of Canada Financial Inc.

Canadian Residents

NBF or its affiliates may engage in any trading strategies described herein for their own account or on a discretionary basis on behalf of certain clients and as market conditions change, may amend or change investment strategy including full and complete divestment. The trading interests of NBF and its affiliates may also be contrary to any opinions expressed in this Report.

NBF or its affiliates often act as financial advisor, agent or underwriter for certain issuers mentioned herein and may receive remuneration for its services. As well NBF and its affiliates and/or their officers, directors, representatives, associates, may have a position in the securities mentioned herein and may make purchases and/or sales of these securities from time to time in the open market or otherwise. NBF and its affiliates may make a market in securities mentioned in this Report. This Report may not be independent of the proprietary interests of NBF and its affiliates.

This Report is not considered a research product under Canadian law and regulation, and consequently is not governed by Canadian rules applicable to the publication and distribution of research Reports, including relevant restrictions or disclosures required to be included in research Reports.

UK Residents

This Report is a marketing document. This Report has not been prepared in accordance with EU legal requirements designed to promote the independence of investment research and it is not subject to any prohibition on dealing ahead of the dissemination of investment research. In respect of the distribution of this Report to UK residents, NBF has approved the contents (including, where necessary, for the purposes of Section 21(1) of the Financial Services and Markets Act 2000). This Report is for information purposes only and does not constitute a personal recommendation, or investment, legal or tax advice. NBF and/or its parent and/or any companies within or affiliates of the National Bank of Canada group and/or any of their directors, officers and employees may have or may have had interests or long or short positions in, and may at any time make purchases and/or sales as principal or agent, or may act or may have acted as market maker in the relevant investments or related investments discussed in this Report, or may act or have acted as investment and/or commercial banker with respect hereto. The value of investments, and the income derived from them, can go down as well as up and you may not get back the amount invested. Past performance is not a guide to future performance. If an investment is denominated in a foreign currency, rates of exchange may have an adverse effect on the value of the investment. Investments which are illiquid may be difficult to sell or realise; it may also be difficult to obtain reliable information about their value or the extent of the risks to which they are exposed. Certain transactions, including those involving futures, swaps, and other derivatives, give rise to substantial risk and are not suitable for all investors. The investments contained in this Report are not available to retail customers and this Report is not for distribution to retail clients (within the meaning of the rules of the Financial Conduct Authority). Persons who are retail clients should not act or rely upon the information in this Report. This Report does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for the securities described herein nor shall it or any part of it form the basis of or be relied on in connection with any contract or commitment whatsoever.

This information is only for distribution to Eligible Counterparties and Professional Clients in the United Kingdom within the meaning of the rules of the Financial Conduct Authority. NBF is authorised and regulated by the Financial Conduct Authority and has its registered office at 70 St. Mary Axe, London, EC3A 8BE.

NBF is not authorised by the Prudential Regulation Authority and the Financial Conduct Authority to accept deposits in the United Kingdom.

US Residents

With respect to the distribution of this report in the United States of America, National Bank of Canada Financial Inc. ("NBCFI") which is regulated by the Financial Industry Regulatory Authority (FINRA) and a member of the Securities Investor Protection Corporation (SIPC), an affiliate of NBF, accepts responsibility for its contents, subject to any terms set out above. To make further inquiry related to this report, or to effect any transaction, United States residents should contact their NBCFI registered representative.

This report is not a research report and is intended for Major US Institutional Investors only.

This report is not subject to US independence and disclosure standards applicable to research reports.

HK Residents

With respect to the distribution of this report in Hong Kong by NBC Financial Markets Asia Limited ("NBCFMA") which is licensed by the Securities and Futures Commission ("SFC") to conduct Type 1 (dealing in securities) and Type 3 (leveraged foreign exchange trading) regulated activities, the contents of this report are solely for informational purposes. It has not been approved by, reviewed by, verified by or filed with any regulator in Hong Kong. Nothing herein is a recommendation, advice, offer or solicitation to buy or sell a product or service, nor an official confirmation of any transaction. None of the products issuers, NBCFMA or its affiliates or other persons or entities named herein are obliged to notify you of changes to any information and none of the foregoing assume any loss suffered by you in reliance of such information.

The content of this report may contain information about investment products which are not authorized by SFC for offering to the public in Hong Kong and such information will only be available to, those persons who are Professional Investors (as defined in the Securities and Futures Ordinance of Hong Kong ("SFO")). If you are in any doubt as to your status you should consult a financial adviser or contact us. This material is not meant to be marketing materials and is not intended for public distribution. Please note that neither this material nor the product referred to is authorized for sale by SFC. Please refer to product prospectus for full details.

There may be conflicts of interest relating to NBCFMA or its affiliates' businesses. These activities and interests include potential multiple advisory, transactional and financial and other interests in securities and instruments that may be purchased or sold by NBCFMA or its affiliates, or in other investment vehicles which are managed by NBCFMA or its affiliates that may purchase or sell such securities and instruments.

No other entity within the National Bank of Canada group, including National Bank of Canada and National Bank Financial Inc, is licensed or registered with the SFC. Accordingly, such entities and their employees are not permitted and do not intend to: (i) carry on a business in any regulated activity in Hong Kong; (ii) hold themselves out as carrying on a business in any regulated activity in Hong Kong; or (iii) actively market their services to the Hong Kong public.

Copyright

This Report may not be reproduced in whole or in part, or further distributed or published or referred to in any manner whatsoever, nor may the information, opinions or conclusions contained in it be referred to without in each case the prior express written consent of NBF.