**Economics and Strategy** 



January 2021

## **Highlights**

By Warren Lovely, Taylor Schleich and Jocelyn Paquet

- Certainly, there remains an uncomfortable amount of uncertainty attached to many key forecasts (for the real economy and by
  extension financial markets). But even if Q1 growth stumbles, as seems increasingly likely, we're not exactly talking about a replay
  of what we saw in 2020 and is more likely to be a Canadian story. Moreover, we'd be tempted to label this a temporary disruption
  (and mechanical pause) in an otherwise solid recovery trajectory.
- A paring of the BoC's QE pace to \$3 billion/week is still very much needed as the Bank's ownership share of GoC bonds trudges higher towards the 50% mark. However, with COVID case counts soaring, the central bank isn't really in a position to withdraw stimulus at next week's meeting, if only to avoid "bad optics". Ultimately, a step lower on QE now looks to be a March (or at the latest April) story. And while the virus trajectory is no doubt concerning, we do not expect this to result in the "mini" rate cut that many have speculated.
- Do we think the Fed's forecasts are too pessimistic? Yes. But at this point, there's little to be gained by rapidly shifting its published forecasts. A cautious approach from the central bank makes sense here given the still-elevated level of uncertainty. We do think that, in time, they will grow more enthusiastic as our more optimistic economic outlook materializes. We ultimately see the rebound in inflation (and unemployment) culminating in the Fed's first rate hike coming early in 2023. Before that comes, however, it will need to begin winding down its other key policy tool—asset purchases.
- Markets now expect the Bank of England to take its policy rate into negative territory this year (from 0.1% currently), despite the post-pandemic outlook having improved with the signing of an EU trade agreement. The central bank is expected to publish its views on the topic after next month's policy meeting, but policymakers are already preparing the ground for such a move.

## Forecast dated January 12, 2020

| United States |          |            |      |      |      |      |  |  |
|---------------|----------|------------|------|------|------|------|--|--|
| Quarters      | Fed Fund | 3 Mth Bill | 2YR  | 5YR  | 10YR | 30YR |  |  |
| 01/12/21      | 0.25     | 0.09       | 0.15 | 0.50 | 1.13 | 1.87 |  |  |
| Q1/21         | 0.25     | 0.10       | 0.20 | 0.55 | 1.20 | 1.90 |  |  |
| Q2            | 0.25     | 0.10       | 0.25 | 0.65 | 1.30 | 1.95 |  |  |
| Q3            | 0.25     | 0.10       | 0.30 | 0.75 | 1.40 | 2.00 |  |  |
| Q4            | 0.25     | 0.15       | 0.35 | 0.85 | 1.45 | 2.00 |  |  |
| Q1/22         | 0.25     | 0.20       | 0.45 | 0.95 | 1.55 | 2.05 |  |  |
| Q2            | 0.25     | 0.20       | 0.55 | 1.05 | 1.60 | 2.05 |  |  |
| Q3            | 0.25     | 0.25       | 0.65 | 1.15 | 1.65 | 2.10 |  |  |
| Q4            | 0.25     | 0.40       | 0.75 | 1.25 | 1.70 | 2.15 |  |  |
| Q1/23         | 0.50     | 0.55       | 0.90 | 1.40 | 1.75 | 2.20 |  |  |

| Canada   |           |            |      |      |      |      |  |
|----------|-----------|------------|------|------|------|------|--|
| Quarters | Overnight | 3 Mth Bill | 2YR  | 5YR  | 10YR | 30YR |  |
| 01/12/21 | 0.25      | 0.07       | 0.18 | 0.46 | 0.84 | 1.47 |  |
| Q1/21    | 0.25      | 0.10       | 0.20 | 0.50 | 0.85 | 1.45 |  |
| Q2       | 0.25      | 0.15       | 0.25 | 0.55 | 0.95 | 1.50 |  |
| Q3       | 0.25      | 0.15       | 0.35 | 0.60 | 1.05 | 1.50 |  |
| Q4       | 0.25      | 0.20       | 0.45 | 0.70 | 1.10 | 1.55 |  |
| Q1/22    | 0.25      | 0.20       | 0.50 | 0.75 | 1.20 | 1.60 |  |
| Q2       | 0.25      | 0.25       | 0.55 | 0.80 | 1.25 | 1.60 |  |
| Q3       | 0.25      | 0.30       | 0.60 | 0.85 | 1.25 | 1.60 |  |
| Q4       | 0.25      | 0.35       | 0.65 | 0.90 | 1.30 | 1.65 |  |
| Q1/23    | 0.25      | 0.40       | 0.75 | 0.95 | 1.35 | 1.70 |  |

**Economics and Strategy** 



## Back down the rabbit hole? Not exactly

Resurgent virus cases count; renewed restrictions on individuals and businesses; fresh economic fault lines. Such is our reality here in early 2021. On the face of it, the worrying trajectory for COVID-19 suggests we could be headed back down the proverbial rabbit hole early in 2021. But not so fast.

Certainly, there remains an uncomfortable amount of uncertainty attached to many key forecasts (for the real economy and by extension financial markets). But even if Q1 growth stumbles, as seems increasingly likely, we're not exactly talking about a replay of what we saw in 2020. As always, we'd refer you to fresh baseline projections for the global and North American economies, which came out alongside this publication. The Q1 growth wobble we alluded to above is more likely to be a Canadian story. Moreover, we'd be tempted to label this a temporary disruption (and mechanical pause) in an otherwise solid recovery trajectory.

Critically, the survivability of U.S. GDP growth assumptions looks much better now than a year ago. Without placing undue faith in fresh fiscal supports on the delayed Blue Wave, fiscal policy will be providing important marginal support in the U.S. Think of this as added fuel for a consumer class that already had significant financial firepower stored up. As American consumers throw off mandated or self-imposed virus-related shackles, we'll be looking for a decidedly forceful expansion in the second half of 2021, carrying over into 2022.

#### Americans have plenty of firepower stored up

US personal savings by year (January-November)

US\$III

25

10

201

2011

2012

2013

2014

2015

2016

2017

2018

2019

2020

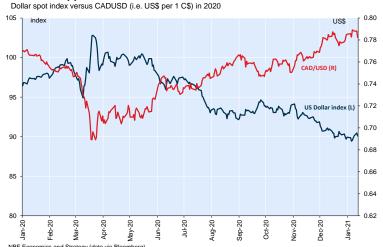
Factor in last year's capacity destruction and a still-worrying number of permanently unemployed (which implies a higher NAIRU than previrus days), and it's not hard to see the seeds of an inflation overshoot. This is a risk factor we've been highlighting for months now, and to us, the balance of risks on U.S. inflation remain asymmetric (i.e. biased higher). Market-based measures of inflation will likely continue to heat up; ditto for softer data, such as expected rates of inflation from purchasing managers. In our view of the world, the U.S. core PCE deflator will be back to 2% at least one year quicker than what FOMC participants anticipated back in December. So notwithstanding a decidedly flexible policy framework, we continue to make the case that the first Fed tightening arrives early in 2023. Two to three hikes in 2023, followed by additional moves in 2024

should be thought of as a removal of stimulus, as opposed to a legitimately restrictive policy stance.

Ditto for Fed bond purchases, which can be expected to moderate in advance of the first Fed rate hike. And while the level of purchases is far more likely to move lower rather than higher, we're not ruling out the possibility of a weighted average maturity extension should rates move beyond what the Fed sees as appropriately accommodative.

As for Canada, we continue to argue against a final "mini rate cut" that some have suggested could insulate against C\$ strength. One should never lose sight of the impact a stronger Canadian dollar has on our small, open economy. But we see a bit more willingness to tolerate currency strength at the central bank, particularly if this year's gains are less about USD weakness and more a by-product of firmer commodity prices. (It's enough to put us in mind of the old 'type 1, type 2' currency appreciation the BoC used to talk about.) As our Economics and Strategy colleagues argued in this month's Forex Monitor, the loonie is fundamentally *under*valued. If there's a less-than-compelling argument for further policy accommodation, there's similarly little reason to expect the BoC will eventually be tightening ahead of Fed—even if Canada's monetary policy framework remains less flexible and more singularly focused than at the Fed.

### CADUSD appreciation consistent with broader US dollar weakness



Rate hikes for Canada? There's a case to be made that gradual economic healing, alongside the federal government's apparent willingness to provide stimulus longer term, will also give rise to rate hikes in 2023. A much nearer-term consideration will be the pace of QE, which needs to moderate in our opinion—and soon(ish). January's upcoming rate decision may be too early to adjust QE lower, but the Bank's footprint is simply growing too heavy in Canada's bond market. To us, 2021 will be about managing the step down and terming out of purchases, conditional on an economic recovery that we see resuming in earnest in Q2.

## **BoC: Review and preview**

Safe to say, 2020 was an extraordinary year. There's not been a more behaviour-altering time in recent memory as individuals, businesses and governments alike were forced to radically change the way they operate. The Bank of Canada (and central banks more generally) was no different, having unleashed a slew of new programs, facilities

## **Economics and Strategy**



and initiatives on the fly to combat the economic and financial market meltdown that initiated last March. (We also went through a leadership change in the midst of it all). Behold the exhaustive (and exhausting) list of programs and facilities that were launched and/or utilized last year:

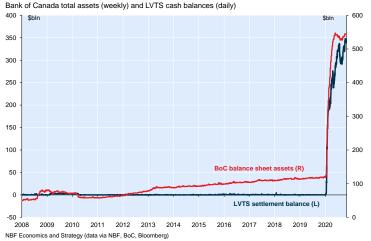
## Reviewing the alphabet soup of policy tools

Monetary policy programs announced/utilized during the COVID crisis

| Program                                     | Announced | Utilization<br>\$mln, since 1-Mar | Active? |
|---|-----------|-----------------------------------|---------|
| Term Repos                                  | NA        | 219,590                           | Yes     |
| BA Purchase Facility                        | 13-Mar-20 | 47,050                            | No      |
| CMB purchase program                        | 16-Mar-20 | 8,025                             | No      |
| Insured Mortgage Purchase<br>Program*       | 16-Mar-20 | 5,817                             | No      |
| Provincial Money Market<br>Purchase Program | 24-Mar-20 | 12,357                            | No      |
| Government Bond Purchase<br>Program (QE)    | 27-Mar-20 | 198,248                           | Yes     |
| Commercial Paper Purchase<br>Program        | 27-Mar-20 | NA                                | Yes     |
| Provincial bond purchase program            | 15-Apr-20 | 13,995                            | Yes     |
| Corporate Bond Purchase Program             | 15-Apr-20 | 182                               | Yes     |

Source: NBF, Bank of Canada | Notes: \*IMPP conducted via CMHC. Bank of Canada also conducts Securities Repo Operations and operates the Standing Liquidity Facility, Standing Term Liquidity Facility and Contingent Term Repo Facility. CPPP take up not published on an operational basis. Currently, there is no commercial paper on the BoC balance sheet.

## Balance sheet bloated, market flush with cash

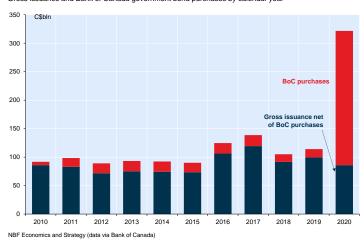


While the worst of the financial market/liquidity crisis has passed and many of the emergency-style programs have been discontinued, the BoC's footprint on the market is still visible. Its balance sheet remains elevated and the broader financial system remains flush with cash, keeping interest rates and credit spreads well contained. For credit specifically, two targeted programs remain in operation (i.e. the PBPP and the CBPP) but are on track to significantly undershoot their initially stated maximum program size. We'd now argue that the effect of these programs is pretty limited, serving more of a symbolic

role. Rather, there are really just two letters doing the heavy lifting at this juncture: QE.

In just over eight months, the Bank of Canada's second most important monetary policy tool after the policy rate (and the one subject to the greatest marginal tweaking), has removed just under \$200 billion in Government of Canada bonds from the market. Meanwhile, over the entire 2020 calendar year, issuance came in at \$322 billion (with the BoC continuing to take 13% off the top as part of its regular balance sheet management). All told, supply to market net of BoC purchases came in at a paltry \$86 billion in 2020. That's fewer bonds being placed in the market than in each of the four years before COVID. And once you consider maturities, net supply to the street was just barely positive in 2020—a trend that, depending on a number of factors (i.e. QE, additional stimulus) could well continue into 2021. Overall, it's clear that the BoC's outsized QE program has ensured that there is plenty of room for provincial, municipal and corporate borrowers to place bonds with investors. Add in the other ongoing and recently discontinued programs, as well as the increased household savings and there's more cash in the system to chase fewer bonds. In this environment, it's no wonder credit spreads are back to within pre-COVID indications and equities are surging to all-time highs.

## Despite record gross issuance, BoC buying limiting bonds in market Gross issuance and Bank of Canada government bond purchases by calendar year



## Spreads back to (or through) pre-crisis levels

NBF Economics and Strategy (data via NBF, Bloomberg)

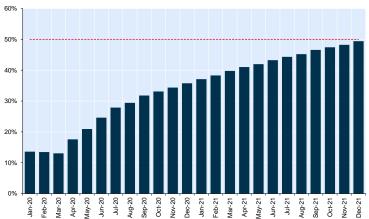
## **Economics and Strategy**



No matter how you slice it, the pace of QE at the Bank of Canada is considerably faster than asset purchases stateside (more than 4 times faster as a share of outstandings). Moreover, Tiff Macklem has pointed to a 50% central bank ownership share as a 'problematic' level. As we wrote about recently, at the current pace we should reach this level by the end of the year unless changes are made. No doubt, with COVID case counts soaring, the Bank of Canada isn't really in a position to withdraw stimulus at next week's meeting, if only to avoid "bad optics" (though, as we mentioned in the intro, the worsening virus trajectory shouldn't translate to the "mini" rate cut many have speculated). However, even a reduction to \$3 billion/week, when not if it comes, would keep the Bank's ownership share moving higher. A March (or at the latest April) move on this front could be very much needed. If by this time, the virus outlook hasn't materially improved and a further paring seems to be removing too much accommodation too quickly, the Bank still has room to continue moving its purchases out the curve, with the increased duration removal making up for some (or all) of the decreased absolute amount of bond purchases.

### BoC on track to hit 50% by year-end

Actual and projected BoC ownership share of GoC bonds outstanding based on \$4 bln/week QE



NBF Economics and Strategy (data via NBF, BoC) | Note: Issuance assumed at a pace of \$315 bln for the calendar year. Projections begin after December 2020

Importantly, our ownership share analysis assumes an issuance trajectory that's more or less in line with what we'll be getting this quarter (roughly \$315 billion for the calendar year). If, as we've been seeing to date, supply continues to surprise to the downside, the trajectory toward the Bank owning half of the market only accelerates. And we'd be remiss if we didn't mention the wild card in the form of marginal stimulus for affected consumers and businesses. The government signalled \$70-100 billion in new, yet-to-be-allocated stimulus over the next three years, but more restrictive COVID measures could introduce additional fiscal costs. We'll be getting more clarity here when a springtime budget and accompanying Debt Management Strategy drop in the coming months.

## The Fed's transition to tightening

Despite surging COVID case counts stateside, economic optimism is winning the day on the back of the promised Blue Wave fiscal stimulus and encouraging vaccine developments. Data from the real economy and market-based measures are reflecting the more sanguine outlook, with inflation expectations (more than) fully recovering from the pandemic-inflicted blow.

The Fed, for its part, remains cautious in its forecasts. Based on its latest Summary of Economic Projections, core PCE inflation isn't expected to hit 2% until 2023. It follows then, that the majority of the FOMC has no policy tightening in their base case through 2023. Do we think the Fed's forecasts are too pessimistic? Yes. But at this point in the recovery, there's little to be gained by rapidly shifting its published forecasts and risk driving a further sell-off in rates. A cautious approach from the central bank makes sense here given the still-elevated level of uncertainty. We do think that, in time, they will grow more enthusiastic as our more optimistic economic outlook materializes. We ultimately see the rebound in inflation (and unemployment) culminating in the Fed's first rate hike coming early in 2023. Before that comes, however, it will need to begin winding down its other key policy tool—asset purchases.

#### Inflation expectations soaring to multi-year highs



NBF Economics and Strategy (data via Bureau of Economic Analysis)

With headline inflation likely hitting 2% by the end of the year, the Fed will need to start thinking about removing some of the extraordinary stimulus put in place last year to mitigate the effects of the crisis. We recognize that the central bank's new mandate, which aims not only to achieve 2% inflation over the long run (i.e. by making up for past misses), but also to return to full employment, will allow it to err on the side of prudence for longer than would have otherwise been the case. Still, we believe that, with the economy reopening fully in the second half of 2021, the conditions for a full-fledged barrage of stimulus measures will simply no longer exist. This has been and will continue to be a key focus for the market going forward, with reflections being made back to the 2013 taper tantrum.

Recall that, at the last Fed meeting (December 15-16), a "number of participants" believed that a gradual tapering of asset purchases would be warranted "once substantial further progress had been made toward the Committee's maximum employment and price stability goals". Policymakers remained deliberately vague as to what "substantial progress" would look like in practice, but we believe the necessary conditions for a tapering of QE will exist before year's end.

This belief seems to be shared by several members of the Fed. On January 7, Philadelphia Fed President Patrick Harker said bond purchases could indeed be pared before the end of the year, as the economy begins to look "much more normal". Similar comments were made by Dallas Fed President Robert Kaplan, Chicago Fed President Charles Evans and Atlanta Fed President Raphael Bostic. The latter

## **Economics and Strategy**



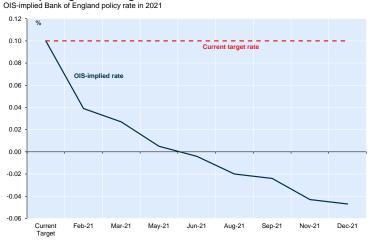
reminded his audience that "a lot will depend on how the virus and the vaccine distribution goes. But if it goes well... I think there is some good upside potential." Other influential Fed members— notably Cleveland Fed President Loretta Mester and Fed Vice Chairman Richard Clarida—still have reserves about an early phase out, but we believe they will come around once post–pandemic economic numbers start to surface.

It remains to be seen whether the Fed will seek to emulate the Bank of Canada and try to combine the tapering of its QE program with a terming out of its purchases. The idea does not seem very popular at the moment-at the last meeting only two participants indicated that they were "open to weighting purchases of Treasury securities toward longer maturities." Still there seems to be a consensus that a terming out could be envisaged "if such adjustments were deemed appropriate to support the attainment of the Committee's objective." In our view, a significant steepening of the yield curve could push the Fed to move shift its purchases further out on the curve since it could put undue pressure on highly-indebted companies as well as the Federal Government companies, a development that would jeopardize the economic revival. We'd also argue that it's not necessarily about the level of interest rates that would prompt Fed action. Rather, it would be the speed at which a sell-off occurred and the underlying reason for it. A continued, gradual move higher in yield on the back of a reopening and healing economy is unlikely to instill much concern among FOMC participants.

## A new addition to the negative rate club?

Across the pond, the COVID situation has deteriorated quickly. Shortly before Christmas, British health authorities announced they had identified a new, more easily transmitted variant of the SARS-CoV-2 virus. To prevent the health system from collapsing under a deluge of new cases, Downing Street decided to make what was already a strict lockdown even tighter. Economic growth in the first quarter will inevitably suffer from these measures.

### Market placing bets on negative rates at the BoE



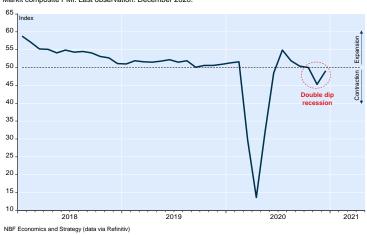
NBF Economics and Strategy (data via Bloomberg)

Adjusting to these developments, markets now expects the Bank of England to take its policy rate into negative territory this year (from 0.1% currently), despite the post-pandemic outlook having improved with the signing of a trade agreement with the European Union. The central bank is expected to publish its views on the topic after next month's policy meeting, but policymakers are already preparing the ground for such a move. The negative impact that this policy would have on banks' profitability remains an important obstacle.

The situation in the Eurozone is equally gloomy. Economic output likely shrank in the last quarter of 2020 and a further contraction is likely in Q1 considering the current epidemiological context. Adding to the bad news, delays in the vaccination campaign means the continent might have to wait longer before it can go back to normal.

Having recently announced it would increase the size of its Pandemic Emergency Purchase Program (PEPP) by €500 billion to €1.85 trillion and extend it until at least March 2022 (the program was previously scheduled to run until at least next June), the ECB seems well-equipped to weather the current downturn. Keep in mind, net purchases by the central bank are currently outpacing net government bond issuance. Doing more on that front could thus prove disruptive for the functioning of the market. The only real option open to the ECB would be to announce an extension to its emergency QE program. We expect the central bank to use this option sooner rather than later.

## Eurozone: Private sector hit by deteriorating health situation Markit composite PMI. Last observation: December 2020.



**Economics and Strategy** 



## **Economics and Strategy**

## **Montreal Office**

514-879-2529

#### Stéfane Marion

Chief Economist and Strategist stefane.marion@nbc.ca

#### Paul-André Pinsonnault

Senior Economist paulandre.pinsonnault@nbc.ca

#### Daren King

Economist daren.king@nbc.ca

#### Matthieu Arseneau

Deputy Chief Economist matthieu.arseneau@nbc.ca

#### **Angelo Katsoras**

Geopolitical Analyst angelo.katsoras@nbc.ca

#### **Jocelyn Paquet**

Economist jocelyn.paquet@nbc.ca

### **Kyle Dahms**

Economist kyle.dahms@nbc.ca

### Camille Baillargeon

Intern Economist camille.baillargeon@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.

## **Economics and Strategy**



#### **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 does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscrible for the securities described herein nor shal

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 71 Fenchurch Street, London, EC3M 4HD.

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

#### **U.S. 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 U.S. Institutional Investors only.

This report is not subject to U.S. 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.