



# Market Musings

Global Rates, FX & Commodities Strategy

21 July 2021

▶ US

▶ RATES

▶ GLOBAL MARKETS

## One Giant Leap for Term SOFR

- Today the ARRC released a best practice recommendation on the scope of use for the SOFR Term Rate and loan conventions referencing term SOFR and SOFR compounded in advance. Note that term SOFR is the first step of the waterfall for ARRC fallbacks as well as for legacy products under NY State legislation.
- Today's best practices focus on new products and allow the usage of a SOFR term rate where the transition to overnight SOFR has been difficult, such as in loans or securitizations where the underlying assets reference term SOFR.
- For derivatives, the ARRC expects the vast majority of new contracts to reference overnight SOFR in arrears. ARRC envisages the use of term SOFR derivatives only when the end-user is hedging a cash product linked to term SOFR. Since dealers will need to warehouse the basis risk between term SOFR and overnight SOFR in arrears, this will likely result in higher transaction costs and less liquidity in term SOFR derivatives.
- For investors hedging cash products referencing SOFR averages or expressing a view on interest rates, regular SOFR swaps (i.e., SOFR compounded in arrears) should be the most efficient instrument.
- CFTC's MRAC SOFR First initiative launches next week on July 26th, which will result in a shift in interdealer trading conventions for USD linear swaps from Libor to SOFR. We expect the ARRC to endorse term SOFR soon after since ARRC Chair Wipf has previously stated an endorsement will occur "in days not weeks" following SOFR First. Note that ARRC has already picked CME to be the term SOFR vendor, and CME is publishing 1m, 3m, and 6m term SOFR.

### Priya Misra

Head of Global Rates Strategy

### Gennadiy Goldberg

Senior US Rates Strategist

### Penglu Zhao

G10 Rates Quantitative Strategist

### ARRC Releases Term SOFR Scope of Use

Today the Alternative Reference Rates Committee (ARRC) released a best practice recommendation on the scope of use of the forward-looking SOFR Term Rate and loan conventions referencing term SOFR and SOFR averages (compounding in advance). Note that forward-looking term SOFR (which we will refer to as term SOFR in this note) is the first step of the waterfall for ARRC fallbacks as well as for legacy products under NY State legislation.

This report is a marketing communication. It has not been prepared in accordance with legal requirements, as outlined in the UK FCA's COBS, designed to promote the independence of investment research and is also not subject to any prohibition of dealing ahead of the dissemination of investment research, although as a matter of policy TD Securities requires its employees not to deal ahead of the dissemination of this report.

Today's best practices focus on new products and the main takeaway from the ARRC guidance is for the use of a term SOFR where the transition to overnight SOFR has been difficult. This includes products such as some business loans (where the conventions released today can help), securitizations, and derivative hedging of these products. Note that ARRC has and continues to recommended using existing forms of overnight SOFR and SOFR averages where possible, but today's announcement addresses those segments that have not transitioned so far. We believe that term SOFR may also help slow the shift toward credit sensitive rates (CSRs) in some parts of the market since it provides a forward-looking rate and the payment amount can be known in advance.

The derivative guidance is consistent with the Financial Stability Board (FSB) position that most derivatives should reference the overnight rate. However, in the case of hedging of cash products linked to term SOFR, a term SOFR derivative might be desired by end users. Meanwhile, the interdealer market will continue to reference overnight SOFR in arrears. In the case of end users hedging term SOFR linked cash products, we would expect higher transaction costs in term SOFR derivatives compared with regular SOFR derivatives (which reference overnight SOFR) as dealers will need to warehouse the basis risk between term SOFR and overnight SOFR in arrears. For investors hedging a cash product referencing SOFR averages or expressing a view on interest rates, regular SOFR swaps (i.e., SOFR compounded in arrears) should be the most efficient instrument. A regular SOFR swap will match cash flows more closely and will be more liquid.

Figure 1 summarizes the ARRC's recommended usage of overnight or SOFR term rates by product. Note that ARRC is not a regulatory body and the scope of use should be viewed as a guideline. Regulators can choose to issue specific guidance on this issue for their supervised entities. As we discussed [in an earlier note](#), the FHFA recently issued a Supervisory Letter to the FHLBs regarding the use of alternative rates which include term SOFR and credit sensitive rates.

**Figure 1: ARRC Best Practices on SOFR Usage by Product**

| Product                                       | Averages of Overnight SOFR | SOFR Term Rate   |
|---|----------------------------|--|
| Derivatives                                   | Vast majority              | Limited to end-user hedging of cash products referencing term SOFR             |
| Consumer Loans<br>(e.g., ARMs, Student Loans) | All                        | -  |
| Business Loans                                | Some                       | Particularly multi-lender facilities, middle-market loans, trade finance loans |
| Bonds<br>(e.g., FRNs)                         | All                        | -  |
| Securitizations                               | Most                       | Securitizations that hold underlying business loans or other term SOFR assets  |

Source: ARRC, TD Securities

### Scope of Use is the Second to Last Step in the Term Rate Saga

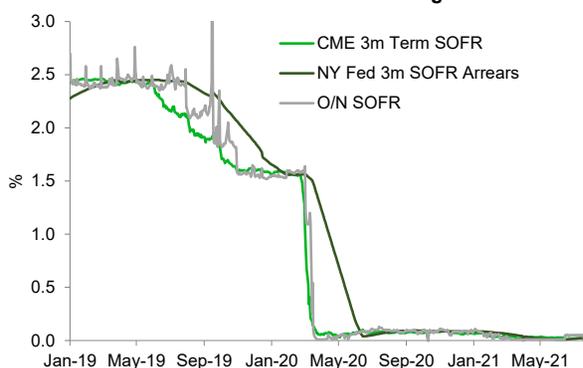
Today's release of the scope of use for term SOFR marks a key step in the long debate about the term rate that the ARRC and individual working groups focused on benchmark transitions in other jurisdictions have grappled with. The demand for the term rate is understandable — it is the fallback for many cash products as well as in the [NY State legislation](#) for tough legacy Libor products. In addition, for products where payment needs to be known in advance or one where a forward-looking rate is important (such as revolvers), the term rate is a

critical component to help transition away from Libor. Figures 2 and 3 show that while term SOFR and average SOFR in arrears tend to trend together, they can vary during Fed rate cycles.

But the biggest sticking point in the debate over the use of the SOFR term rate has been the extent of usage. Ultimately the term rate relies on sufficient liquidity in the overnight market to be a robust and reliable benchmark. ARRC wants to prevent an "inverted pyramid problem" (that existed with Libor) where a vast majority of products use a term SOFR rate that itself relies on few overnight transactions. Thus, ARRC has understandably sought to limit the usage of term SOFR.

The ARRC approach to getting a term rate has gone through a few twists and turns over the last few months. ARRC had initially envisaged getting term SOFR officially approved by mid-2021. However, in March 2021 ARRC suggested that there would be no guarantee that term SOFR would be endorsed by the ARRC by June 2021. SOFR derivative volumes were not very high ("market indicator") and there was no clear consensus about the scope of use for term SOFR. In April the ARRC released a statement of principles highlighting what it would take for them to endorse term SOFR and the CME was endorsed as the term SOFR provider in May. Today's scope of use is a key step in limiting the usage of term SOFR in cash and derivative markets, and the SOFR First change in convention should help meet the "market indicator" for term SOFR endorsement. Thus, we think the term SOFR recommendation will occur in coming days.

**Figure 2: SOFR Averages and Term SOFR are Similar But More Smooth Than Overnight SOFR**



Note: NY Fed 3m SOFR in arrears is delayed by 3m. Term SOFR is 3m ahead. O/N SOFR spiked to 5.25% on 9/17/2019.  
Source: Bloomberg, TD Securities

**Figure 3: Term SOFR and Average SOFR in Arrears Tend to be Similar When Fed Funds Rate is Unchanged**

| Period              | Statistic | 3m Libor vs CME 3m Term SOFR | 3m Libor vs. NY Fed 3m SOFR | O/N SOFR vs. O/N Libor |
|---------------------|-----------|------------------------------|-----------------------------|------------------------|
| Jan 2019 - Aug 2020 | Max       | 139.2                        | 140.3                       | 28.0                   |
|                     | Min       | -2.5                         | 1.5                         | -309.5                 |
|                     | Average   | 30.2                         | 40.5                        | -3.7                   |
| Sep 2020 - Jul 2021 | Max       | 26.5                         | 24.6                        | 7.4                    |
|                     | Min       | 11.6                         | 12.5                        | -2.9                   |
|                     | Average   | 16.8                         | 17.2                        | 2.7                    |

Note: Both 3m Libor and 3m CME term SOFR rate have lagged 3 months.  
Source: Bloomberg, TD Securities

### Next Step: ARRC Term SOFR Endorsement After SOFR First

As discussed above, we expect ARRC to endorse term SOFR in the very near term. At a SOFR symposium last month and earlier today, ARRC Chair Tom Wipf stated that an ARRC recommended term SOFR will occur "in days not weeks" following the first step of the SOFR First initiative on July 26th. Note that this date will shift trading conventions for Libor linear swaps to SOFR, with dealers set to begin quoting all interdealer linear derivatives using SOFR as the base rate. Dealers are then expected to encourage clients to move their activity to SOFR as well. Note, however, that the SOFR First scope currently does not include basis swaps, FRAs, and single-period swaps, but may be addressed by MRAC later this year.

The FCA and Bank of England also put out an announcement supporting the SOFR First Initiative. The FCA engaged with and surveyed UK market participants in the USD swaps market, including liquidity providers and interdealer brokers and identified strong support for a change in the interdealer trading conventions. Note that the July 26th shift will be only the first step of the SOFR First transition, with the ARRC recently expanding the

scope to address linear swaps, cross currency basis swaps, nonlinear derivatives, and other exchange traded derivatives.

We expect ARRC to formally recommend term SOFR very soon after July 26th. Note that CME has already been chosen as the vendor, and they are publishing 1m, 3m and 6m term SOFR. At the ARRC's SOFR Symposium earlier today CME's Agha Mirza mentioned that end-user hedging related usage of term SOFR derivatives will most likely be allowed (a formal announcement is forthcoming). Note that currently CME does not license term SOFR for derivatives, but it sounds like that will change for end user hedging.



# Recent Publications

## Global Rates, FX & Commodities Strategy

| Global Macro |  |        |
|--------------|--|--------|
| Region       | Publication  | Date   |
| Weekly       | Upcoming Week - The Big Three (19 Jul)                             | 16 Jul |
|              | Week Ahead: Canada Macro Market Movers                             | 19 Jul |
|              | Week Ahead: US Macro Market Movers                                 | 19 Jul |
| Commentary   | Trading the ECB  | 21 Jul |
|              | Overshoot Risk Locks in RBNZ Aug Hike                              | 16 Jul |
|              | Risks of BoE Curtailing QE in August                               | 15 Jul |
|              | Powell's the Name, Patient's the Game                              | 14 Jul |
| US           | The Treasury Market's Summer Scaries                               | 19 Jul |
|              | Delta in the US: A First Look at Impact                            | 15 Jul |
|              | G10 Inflation: More Surprising than Scary                          | 15 Jul |
|              | US Social Distancing Tracker                                       | 9 Jul  |
| Canada       | G10 Inflation: More Surprising than Scary                          | 15 Jul |
|              | Is Growth at a Turning Point?                                      | 14 Jul |
|              | Reassessing the Front-end in Canada                                | 8 Jul  |
| Europe       | Europe Social Distancing Tracker                                   | 20 Jul |
|              | Still No Covidflation in the Eurozone                              | 19 Jul |
|              | G10 Inflation: More Surprising than Scary                          | 15 Jul |
| Asia-Pacific | G10 Inflation: More Surprising than Scary                          | 15 Jul |
|              | Is Growth at a Turning Point?                                      | 14 Jul |
| Rates        |  |        |
| Weekly       | Do the Right Thing   | 16 Jul |
| US           | The Treasury Market's Summer Scaries                               | 19 Jul |
|              | Did China Add to the US Treasury Bid?                              | 19 Jul |
|              | SOFR First: The Scope Expands                                      | 15 Jul |
|              | What Do Intraday US 10y Yield Moves Tell Us?                       | 15 Jul |
| Canada       | CAD: Can BAXs and 10s Both Be Right?                               | 14 Jul |
|              | Reassessing the Front-end in Canada                                | 8 Jul  |
| Europe       | Syndicated supply of the UKT Jan39s                                | 9 Jul  |
| Asia-Pacific | RBNZ - Change of Call - 1st Hike Nov'21                            | 9 Jul  |
| Trades       | Taking Profit on 5y Treasury Longs                                 | 19 Jul |
|              | Stop Triggered on Short 10y USTs vs. Bunds                         | 19 Jul |
|              | CAD: Exit Outright Breakevens, Wait for Cross-Market Opportunities | 16 Jul |
|              | Enter 5s30s Bund Steepeners  | 14 Jul |
|              | Take Profit on ONT J25/J24 Flatteners                              | 13 Jul |
| FX           |  |        |
| Analysis     | USDJPY On the Verge of a Break Lower?                              | 15 Jul |
| Trades       | Close NOKSEK Longs   | 20 Jul |

|                    |                                    |        |
|--------------------|------------------------------------|--------|
|                    | Taking Profit on AUDNZD Short      | 19 Jul |
|                    | Taking Profit on Short CADJPY      | 19 Jul |
|                    | Sell AUDNZD                        | 13 Jul |
| <b>EM</b>          |                                    |        |
| Analysis           | Is Growth at a Turning Point?      | 14 Jul |
|                    | China Signals Very Targeted Easing | 7 Jul  |
| Trades             | Tactical Short USDKRW              | 15 Jul |
| <b>Commodities</b> |                                    |        |
| Analysis           | Death by Radio Silence             | 16 Jul |



# Global Strategy

## Global Rates, FX & Commodities Strategy

| Global Strategy    |                                      |                                    |                    |
|--------------------|--------------------------------------|------------------------------------|--------------------|
| Rich Kelly         | Head of Global Strategy              | richard.kelly@tdsecurities.com     | 44 (0)20 7786 8448 |
| Global Macro       |                                      |                                    |                    |
| James Rossiter     | Head of Global Macro Strategy        | james.rossiter@tdsecurities.com    | 44 (0)20 7786 8422 |
| Jim O'Sullivan     | Chief US Macro Strategist            | jim.osullivan@tdsecurities.com     | 1 212 827 6922     |
| Jacqui Douglas     | Chief European Macro Strategist      | jacqui.douglas@tdsecurities.com    | 44 (0)20 7786 8439 |
| Andrew Kelvin      | Chief Canada Strategist              | andrew.kelvin@tdsecurities.com     | 1 416 983 7184     |
| Robert Both        | Macro Strategist                     | robert.both@tdsecurities.com       | 1 416 983 0859     |
| Oscar Munoz        | Macro Strategist                     | oscar.munoz@tdsecurities.com       | 1 212 827 7405     |
| Alex Loo           | Macro Strategist                     | alex.loo@tdsecurities.com          | +65 6500 8047      |
| Dragos Bealcu      | Macro Intern                         | dragos.bealcu@tdsecurities.com     | 44 (0)20 7786 8422 |
| Darneet Kaur       |                                      | darneet.kaur@tdsecurities.com      |                    |
| Global Rates       |                                      |                                    |                    |
| Priya Misra        | Head of Global Rates Strategy        | priya.misra@tdsecurities.com       | 1 212 827 7156     |
| Andrew Kelvin      | Chief Canada Strategist              | andrew.kelvin@tdsecurities.com     | 1 416 983 7184     |
| Prashant Newnaha   | Senior Asia-Pacific Rates Strategist | prashant.newnaha@tdsecurities.com  | 65 6500 8047       |
| Gennadiy Goldberg  | Senior US Rates Strategist           | gennadiy.goldberg@tdsecurities.com | 1 212 827 7180     |
| Pooja Kumra        | Senior European Rates Strategist     | pooja.kumra@tdsecurities.com       | 44 (0)20 7786 8433 |
| Chris Whelan       | Senior Canada Rates Strategist       | chris.whelan@tdsecurities.com      | 1 416 983 0445     |
| Penglu Zhao        | G10 Rates Quantitative Strategist    | penglu.zhao@tdsecurities.com       | 1 212 827 7643     |
| Portfolio          |                                      |                                    |                    |
| Cristian Maggio    | Head of Portfolio Strategy           | cristian.maggio@tdsecurities.com   | 44 (0)20 7786 8436 |
| Izidor Flajsman    | EM and Quant Strategist              | izidor.flajsman@tdsecurities.com   | 44 (0)207 786 8414 |
| FX Strategy        |                                      |                                    |                    |
| Mark McCormick     | Global Head of FX Strategy           | mark.mccormick@tdsecurities.com    | 1 416 982 7784     |
| Ned Rumpeltin      | European Head of FX Strategy         | ned.rumpeltin@tdsecurities.com     | 44 (0)20 7786 8420 |
| Mazen Issa         | Senior FX Strategist                 | mazen.issa@tdsecurities.com        | 1 212 827 7182     |
| Ray Ng             | FX Quantitative Strategist           | ray.ng@tdsecurities.com            |                    |
| Sam (Xiaohan) Wang | Quantitative Associate               | xiaohan.wang@tdsecurities.com      |                    |
| EM Strategy        |                                      |                                    |                    |
| Cristian Maggio    | Head of Portfolio Strategy           | cristian.maggio@tdsecurities.com   | 44 (0)20 7786 8436 |
| Sacha Tihanyi      | Head of Emerging Markets Strategy    | sacha.tihanyi@tdsecurities.com     | 1 416 307 7699     |
| Mitul Kotecha      | Chief EM Asia and Europe Strategist  | mitul.kotecha@tdsecurities.com     | 65 6500 8047       |
| Izidor Flajsman    | EM and Quant Strategist              | izidor.flajsman@tdsecurities.com   | 44 (0)207 786 8414 |
| Commodities        |                                      |                                    |                    |
| Bart Melek         | Head of Commodity Strategy           | bart.melek@tdsecurities.com        | 1 416 983 9288     |
| Ryan McKay         | Commodity Strategist                 | ryan.mckay@tdsecurities.com        | 1 416 982 5816     |
| Daniel Ghali       | Commodity Strategist                 | daniel.ghali@tdsecurities.com      | 1 416 983 8075     |

This material is for general informational purposes only and is not investment advice nor does it constitute an offer, recommendation or solicitation to buy or sell a particular financial instrument. It does not have regard to the specific investment objectives, financial situation, risk profile or the particular needs of any specific person who may receive this material. No representation is made that the information contained herein is accurate in all material respects, complete or up to date, nor that it has been independently verified by TD Securities. Recipients of this analysis or report are to contact the representative in their local jurisdiction with regards to any matters or questions arising from, or in connection with, the analysis or report.

Historic information regarding performance is not indicative of future results and investors should understand that statements regarding future prospects may not be realized. All investments entail risk, including potential loss of principal invested. Performance analysis is based on certain assumptions, the results of which may vary significantly depending on the modelling inputs assumed. This material, including all opinions, estimates and other information, constitute TD Securities' judgment as of the date hereof and is subject to change without notice. The price, value of and income from any of the securities mentioned in this material can fall as well as rise. Any market valuations contained herein are indicative values as of the time and date indicated. Such market valuations are believed to be reliable, but TD Securities does not warrant their completeness or accuracy. Different prices and/or valuations may be available elsewhere and TD Securities suggests that valuations from other sources be obtained for comparison purposes. Any price or valuation constitutes TD Securities' judgment and is subject to change without notice. Actual quotations could differ subject to market conditions and other factors. TD Securities disclaims any and all liability relating to the information herein, including without limitation any express or implied representations or warranties for, statements contained in, and omissions from, the information. TD Securities is not liable for any errors or omissions in such information or for any loss or damage suffered, directly or indirectly, from the use of this information. TD Securities may have effected or may effect transactions for its own account in the securities described herein. No proposed customer or counterparty relationship is intended or implied between TD Securities and a recipient of this document.

TD Securities makes no representation as to any tax, accounting, legal or regulatory issues. Investors should seek their own legal, financial and tax advice regarding the appropriateness of investing in any securities or pursuing any strategies discussed herein. Investors should also carefully consider any risks involved. Any transaction entered into is in reliance only upon the investor's judgment as to financial, suitability and risk criteria. TD Securities does not hold itself out to be an advisor in these circumstances, nor do any of its representatives have the authority to do so.

The information contained herein is not intended for distribution to, or use by, any person in any jurisdiction where such distribution or use would be contrary to applicable law or regulation or which would subject TD Securities to additional licensing or registration requirements. It may not be copied, reproduced, posted, transmitted or redistributed in any form without the prior written consent of TD Securities. If you would like to unsubscribe from our email distribution lists at any time, please contact your TD Securities Sales Contact. If you are located in Europe, Asia, Australia or New Zealand you may also unsubscribe by emailing us at [Privacy.EAP@tdsecurities.com](mailto:Privacy.EAP@tdsecurities.com).

You can access our Privacy Policy here ([tdsecurities.com/tds/content/AU\\_PrivacyPage](https://tdsecurities.com/tds/content/AU_PrivacyPage)).

**Australia:** If you receive this document and you are domiciled in Australia, please note that this report is intended to be issued for general information purposes only and distributed through the Toronto Dominion Australia Limited ("TDAL"). TDAL does not hold itself out to be providing financial advice in these circumstances. TD Securities is a trademark and represents certain investment dealing and advisory activities of Toronto-Dominion Bank and its subsidiaries, including TDAL. The Toronto-Dominion Bank is not an authorized deposit-taking or financial services institution in Australia. TDAL is a holder of an Australian Financial Services License (404698) and is regulated by the Australian Securities and Investments Commission.

**Canada:** Canadian clients wishing to effect transactions in any security discussed herein should do so through a qualified salesperson of TD Securities or TD Securities Inc. TD Securities Inc. is a member of the Canadian Investor Protection Fund.

**China, India, and South Korea:** Insofar as the document is received by any persons in the People's Republic of China ("PRC"), India and South Korea, it is intended only to be issued to persons who have the relevant qualifications to engage in the investment activity mentioned in this document. The recipient is responsible for obtaining all relevant government regulatory approvals/licenses themselves, and represents and warrants to TD Bank that the recipient's investments in those securities do not violate any law or regulation, including, but not limited to, any relevant foreign exchange regulations and/or overseas investment regulations. The Toronto-Dominion Bank has a representative office in Shanghai, Mumbai and Seoul which should be contacted for any general enquiry related to The Toronto-Dominion Bank or its business. However, neither any of the Toronto-Dominion Bank offshore branches/subsidiaries nor its representative offices are permitted to conduct business within the borders of the PRC, India and South Korea. In locations in Asia where the Bank does not hold licenses to conduct business in financial services, it is not our intention to, and the information contained in this document should not be construed as, conducting any regulated financial activity, including dealing in, or the provision of advice in relation to, any regulated instrument or product. This publication is for general information only, without addressing any particular needs of any individual or entity, and should not be relied upon without obtaining specific advice in the context of specific circumstances.

**Hong Kong SAR (China):** This document, which is intended to be issued in Hong Kong SAR (China) ("Hong Kong") only to Professional Investors within the meaning of the Securities and Futures Ordinance (the "SFO") and the Securities and Futures (Professional Investor) Rules made under the SFO, has been distributed through Toronto-Dominion Bank, Hong Kong Branch, which is regulated by the Hong Kong Monetary Authority.

**Japan:** For Japanese residents, please note that if you have received this document from Toronto-Dominion Bank entities based outside Japan, it is being provided to qualified financial institutions ("QFI") only under a relevant exemption to the Financial Instruments and Exchange Act. If you have received this document from TD Securities (Japan) Co., Ltd., it is being provided only to institutional investors. TD Securities (Japan) Co., Ltd. is regulated by the Financial Services Agency of Japan and is distributing this document in Japan as a Type 1 Financial Instruments Business Operator registered with the Kanto Local Finance Bureau under registration number, Kinsho 2992, and a member of Japan Securities Dealers Association.

**New Zealand:** The Toronto-Dominion Bank is not a "registered bank" in New Zealand under the Reserve Bank Act 1989.

**Singapore:** This report is distributed in Singapore by The Toronto-Dominion Bank, Singapore Branch, and recipients in Singapore of this report are to contact The Toronto-Dominion Bank, Singapore Branch in respect of any matters arising from, or in connection with, this report. The Toronto-Dominion Bank, Singapore Branch is regulated by the Monetary Authority of Singapore. Where this report is issued or promulgated in Singapore, it is only intended for distribution to a person who is an accredited investor, expert investor or institutional investor as defined in the Securities and Futures Act (Cap. 289), the Securities and Futures (Prescribed Specific Classes of Investors) Regulations 2005, or the Securities and Futures (Classes of Investors) Regulations 2018 issued by the Monetary Authority of Singapore.

**United Kingdom and Europe:** This document is prepared, issued or approved for issuance in the UK by TD Securities Limited and in Europe by TD Global Finance unlimited company in respect of investment business. The Toronto-Dominion Bank is authorised by the Prudential Regulation Authority and subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. TD Securities Limited is authorised and regulated by the Financial Conduct Authority. TD Global Finance unlimited company, trading as TD Securities, is regulated by the Central Bank of Ireland. Insofar as the document is issued in or to the United Kingdom, it is intended only to be issued to persons who (i) are persons falling within Article 19(5) ("Investment professional") of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Financial Promotion Order"), (ii) are persons falling within Article 49(2)(a) to (d) ("High net worth companies, unincorporated associations, etc.") of the Financial Promotion Order, or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated. Insofar as the document is issued in or to the European Union, it is intended only to be issued to persons categorised as 'Per Se Professional' or 'Eligible Counterparties' as defined in S.I. No 375 of 2017, European Union (Markets in Financial Instruments) Regulations 2017, Schedule 2. Clients in the United Kingdom wishing to effect transactions in any security discussed herein should do so through a qualified salesperson of TD Securities Limited. European clients wishing to effect transactions in any security discussed herein should do so through a qualified salesperson of TD Global Finance unlimited company. Insofar as the information in this report is issued in (i) the UK, it has been issued with the prior approval of TD Securities Limited and (ii) in Europe, it has been issued with the prior approval of TD Global Finance unlimited company. Article 20 Market Abuse Regulation 596/2014 ("MAR") requires market participants who produce or disseminate Investment Recommendations or other information recommending or suggesting an investment strategy to take reasonable care that such information is objectively presented, and to disclose their interests or indicate conflicts of interest. In accordance with the MAR requirements, see the [Investment Recommendations Disclaimer](#) for relevant information in relation to The Toronto-Dominion Bank – London Branch, TD Bank Europe Limited, TD Securities Limited and TD Global Finance unlimited company.

**United States:** U.S. clients wishing to effect transactions in any security discussed herein must do so through a registered representative of TD Securities (USA) LLC.

TD Securities is a trademark of TD Bank and represents TD Securities Inc., TD Securities (USA) LLC and TD Securities Limited and certain investment and corporate banking activities of TD Bank and its subsidiaries.

© Copyright 2020 The Toronto-Dominion Bank. All rights reserved.