

BMO CAPITAL MARKETS ECONOMICS

FOCUS

A weekly financial digest

Douglas Porter, CFA, Chief Economist, BMO Financial Group

October 26, 2018

Feature Article
Page 9

Fix or Float?

Global Stocks under Pressure... Again

Hawkish BoC Hikes 25 bps

U.S. Consumers Power Q3 Growth

Greenback Strengthens

ECB Stays the Course

Flat is the New Up

The market's rocky October got even rockier this week, as fresh concerns piled on the seven risks I detailed last week, and pushed the S&P 500 into correction terrain. With the midterm elections now just 11 days away, the slew of crude pipe bombs just seemed to deepen the U.S. political divide. More importantly for markets, a dash of sour earnings reports reinforced the sense that growth is peaking (see Robert's Thought on page 3), while developments on each of the China trade tiff, Italy's budget battle, and Brexit were all far from reassuring. Adding some spice to the mix, the President cranked up his complaint-o-meter to 11 on Fed rate hikes, although bond yields spent much of the week in retreat on the equity market turbulence. The net result was that major U.S. averages suffered another weekly setback, are headed for their worst month since 2010, and are now struggling to stay even for the year—i.e., the S&P 500 is now roughly flat for 2018.

Flat was a broader theme this week, although most global equity markets can only wish for a flat performance in 2018. The vast majority of major markets are looking down the barrel of a setback for this year, with China's 21% slide holding up the rear (despite a spirited pop on Monday). The yuan weakened further to 6.95, bringing the exchange rate full circle back to flat against the extreme levels hit at the end of 2016. The currency has been rattled by trade tensions, and hopes for a resolution dimmed on reports that the U.S. will not hold formal talks until China makes a concrete proposal on the tech demands. Perhaps the best hope at this point is that the rhetoric will be dialled down next month after the midterms and ahead of the Trump/Xi meeting.

Along with the trade war, the other primary market concern has been rising interest rates and all the related stresses, including the **flattening yield curve**. With 10-year Treasury yields peeling back 17 bps from their early October highs (of 3.25%), the curve has flattened anew. We tend to believe—as does the Fed, apparently—that it's the difference between 10s and very short-term rates that are the most telling. But, even there, the gap between 10s and 3-month bills has drooped to around 75 bps, challenging the August lows for the lowest in more than a decade. While still not a level to cause significant concern for the outlook, the flatter curve does presage cooler growth next year. The Q3 real GDP result topped consensus expectations at 3.5%, led by a sparkling 4% rise in consumer spending and a hearty 3.3% advance in government outlays, leaving overall output up 3.0% y/y. Even so, we continue to look for a milder 2.5% GDP gain in 2019.

Meantime, north of the border, **Canada's yield curve is even flatter**, with a mere 16 bps separating 30-year yields from 2-years. The Bank of Canada stuck to the script this week, bravely hiking rates 25 bps to 1.75% in the face of the equity volatility, and flatly stating that rates will return to neutral (at least 2.5%). While the loonie got a short-lived lift from a seemingly hawkish statement—replete with them dropping any reference to gradual rate hikes—the currency then promptly returned to form and sank with all other risk assets. A generally robust U.S. dollar and ongoing pain for Canadian oil prices overwhelmed the mildly tougher BoC tone. (Governor Poloz at least did not repeat the sin Fed Chair Powell stands accused of—looking happy while hiking.) For the week, the loonie was essentially flat at just above 76 cents (\$1.31/US\$).



Canadian equities can also only wish for flat this year. Despite missing out on the U.S. stock rally earlier this year, the TSX has fully participated in the latest sell-off, and itself is headed for a monthly setback of over 8%. This leaves the index down 9% so far this year, and at its lowest ebb since late 2016. The extraordinary flat fact here is that the TSX is now below levels reached more than a decade ago in the summer of 2008. Yes, the index first pierced the 15,000 level in May of that year, and has thus made precisely zero net progress since that time. To put that in perspective, the S&P 500 is up almost 90% since then, even with its 10% correction in the past month.

There are any number of factors behind Toronto's weak relative performance over the past decade, but the market's structure stands right near the top of the list—i.e., a heavy weight on commodities, which have been out of favour for much of that spell, and a feather-light weight on tech, which was the pre-October market darling. While not assigning “blame”, Canada's competitiveness position has provided little help. Even as marginal corporate and personal income taxes have been trending lower (or plummeting in the U.S. case) in much of the rest of the world, Canada's have been erratically drifting upward. Finance Minister Morneau has a prime opportunity to shift that trend in the coming **Fall Fiscal Update (due Nov. 21)**. And, today's figures reveal that Ottawa's finances are running \$5.5 billion stronger than last year just five months into the fiscal year, so there's room to manoeuvre. However, we suspect the thrust will be on targeted measures, including accelerated depreciation rules, while leaving marginal tax rates flat.

We would just reinforce the message that amid this latest market maelstrom the underlying economic outlook remains sturdy. Global growth is on course for roughly a 3.5% advance next year (close to its long-term norm), while U.S. growth aims for about 2.5% (still above potential). Even so, inflation is expected to remain calm at right around 2% in most major economies, or bang on target. In that environment, monetary policy will be biased to tighten further, but rates hikes are certainly not “*pre-ordained*”. In other words, with inflation still mostly mild, the Fed (and the BoC) has the leeway to stand down if need be—that is, if the market rout deepens and spills over into sentiment and the economy. We suspect that the rout won't reach that level and are still looking for a Fed hike in December, and a BoC hike in January, but are keeping an open mind on both.



Red October

Stocks extended their slump this week, with the S&P 500 cracking well below its 200-day moving average and entering correction territory. The recent breakdown looks like the most significant such turn since the 2015 trauma, and left U.S. equities down slightly on the year. If no one else is, we know that President Trump is still long, as shown by his agitation about rising rates. The President took a few more jabs at the Fed this week, saying that Chair Powell “*almost looks like he's happy raising interest rates*”, and complaining that “*every time we do something great, he raises the interest rates*”. Well, a funny thing tends to happen when you pour fiscal stimulus and big budget deficits on the economy, late in the cycle when the labour market is tight and inflation pressures are already bubbling—it raises the interest rates. To be sure, the deepening tightening cycle is one factor tripping up stocks. As



Robert Kavcic
Senior Economist
robert.kavcic@bmo.com
416-359-8329

much as we love to point to strong growth and earnings today, the reality is that those future profits are getting discounted at a higher rate as monetary policy normalizes.

Another factor behind the weakness is that the market is always looking 6-to-12 months down the road, and doing so now would almost certainly leave peak economic and earnings growth behind it. On the growth front, we've just seen Q2/Q3 real GDP average a honking 3.8%, but by mid-2019, as fiscal stimulus fades and monetary stimulus evaporates, we're looking at a slowdown of at least 1.5 ppts. On the earnings front, the Q3 reporting season has been solid, with growth impressively holding up around 20% y/y. Like with the broader economy, however, the caution is that we've now seen the highs—sequential growth has begun to fade, and 30%-plus q/q growth in 2017Q4 and 2018Q1 almost guarantees that year-over-year earnings growth is set to slow meaningfully. Meantime, the chatter this season has been more cautious, with a number of companies—see Caterpillar, 3M, Harley-Davidson—highlighting the negative impact of tariffs and/or the need to raise prices. Two technology stalwarts in Google and Amazon also disappointed with their top line/sales guidance this week. And, the overall share of S&P 500 companies beating revenue expectations has slumped to about 45% over the past 30 days, down from nearly 70% around the middle of the year—this suddenly looks a lot more normal.

All told, with the market looking ahead at an environment where fiscal stimulus fades, interest rates are no longer stimulative, price and wage pressures are stronger and the earnings backdrop is 'less good', it's understandable why equities are now consolidating big 2016-2017 gains.

Rob K.

Much Ado about Gradual

Well, they did it... the BoC dropped the gradual wording and the front end of the bond market reacted by selling off about 3 bps. That's hardly an outsized move and the terminal rate priced into the market backed up about 6 bps to 2.5%. Not coincidentally that's bang on the bottom of the Bank's neutral rate, but was already pretty much there before Wednesday. Indeed, Governor Poloz saying that he wants to get rates back to neutral wasn't all that shocking. The upbeat tone from the BoC appears to have prompted the market to price the risks as a bit more two-sided rather than tilting to the downside.

All the sound and fury around "gradual" was much ado about nothing. The BoC didn't like that the term was being interpreted as them only going every other meeting. Recall that Governor Poloz is vehemently anti-forward guidance and that's apparently how they thought the market viewed "gradual". In an effort to reinforce the fact that every meeting is live, the word was dropped. Does that mean a December hike is more likely? Maybe at the margin, but what's the rush? It's going to take an awfully strong run of data to get the BoC to pull the trigger on back-to-back moves. Not impossible, but it doesn't seem likely. Core inflation is trending at 2%, and there remains uncertainty about the impact of rate hikes on households given high debt levels. Risk management dictates that a gradual (using the definition in the dictionary) course remains the most prudent. When data on the ground change, that will change.



Benjamin Reitzes

Canadian Rates &
Macro Strategist
benjamin.reitzes@bmo.com
416-359-5628

Key Takeaway: There's no debating the BoC sounded more hawkish this week. However, if you consider that the only major changes in the backdrop since the September meeting were the USMCA and LNG announcement, it's hard to see them behaving any other way. The Bank of Canada is as data-dependent as ever, though risks are now more balanced. We remain comfortable with our call for the Bank to hike in January, April and July in 2019. *B.A.A.R.*

Are U.S. Mortgage Defaults Bound to Rise?

Rising interest rates and weakening housing markets have raised concerns about U.S. mortgage defaults for the first time since the financial crisis. However, healthy household balance sheets, steady economic growth and limited rate increases **suggest any upturn in defaults will be contained.**

Household credit quality remains good. The share of mortgages going to borrowers with low credit scores has held steady, while that for borrowers with elevated scores has risen. **Mortgage delinquencies remain historically low.** The current 0.25% rate of new foreclosures is about the lowest in three decades and below the long-run median of 0.33%. It's also a fraction of the record high of 1.47% hit during the financial crisis. Early warning signs of stress are benign, with the under-60 day delinquency rate the lowest in more than four decades.

The financial and economic backdrop for American households is supportive. Mortgage debt is low and falling relative to after-tax income, with the ratio dipping below 66% in Q2, the lowest since 2001—just before credit ran amok in the housing bubble. Including consumer credit, the household debt ratio of 91% is also back to 2001 levels. Rising interest rates have slowed annual growth in consumer credit to below 5% from almost 7% in 2015 and 2016. To be fair, student debt is an issue, more than tripling in the past dozen years to \$1.5 trillion—surpassing both auto loans and credit card debt. But the steady double-digit gains from 2007 to 2012 have given way to more sustainable mid-single-digit growth. Given solid income gains, the ability to service household debt is rising faster than the debt itself. This marks a sea-change from the period from the mid-1980s to the financial crisis, when the debt ratio moved in only one direction: up. Because interest rates are still relatively low, households are paying the least income on record to manage their debt. The debt-service ratio, at 9.84% in Q2, is the lowest since record-keeping began in 1980, and below its long-run mean of 11.3%. It hit 13.2% during the financial crisis. Similarly, the mortgage service ratio, at 4.24%, is at record lows and below its norm of 5.6% and peak of 7.2%.

Importantly, **interest rates are unlikely to rise sharply further.** We see the Fed lifting policy rates only five more times by mid-2020 for a cumulative 1¼-percentage-points increase. Most mortgage rates are fixed for periods of 15 to 30 years, limiting the risk of financial strain when rates rise. True, after declining in the six years to 2014, mortgage interest paid has risen 5% in the past year to Q2, largely because the effective mortgage rate on new loans has climbed by one percentage point in the past two years to around 4.8%. However, the effective rate paid on outstanding mortgages remains low at just 3.8% in Q2, the lowest since at least 1977. When the Fed's tightening cycle ends in a couple of years, the effective mortgage rate is unlikely to rise above its two-decade norm of 5.2%.



Of course, future home buyers must contend with fading affordability. But the **median-income family still requires less than 18% of income to cover mortgage payments** on a typical house across the nation, somewhat below the quarter-century mean though up from below 12% in 2013. While housing markets might be overvalued in some regions—median prices are 3.5-times annual median family income, above the long-run norm of 3.0 though below 2005's peak of 4.1—there is little sign of a national bubble. So, another major correction that pushes owners underwater on their mortgage is unlikely.

A jump in joblessness stemming from the next recession is the more likely trigger of the next downturn in the credit cycle. **But if, as we expect, the jobless rate holds below 4% in coming years, mortgage defaults should stay low, too.**



A Mess

This week, I found myself singing “*Everything’s gonna be alright, everything’s gonna be just fine, it’s gonna be a good, good, life...*”, although I’m sure my voice did not do justice to Bebe Rexha. But the words are worth repeating, given all of the commotion overseas this week. In Europe, the **ECB** meeting came and went, with the central bank refusing to waver from its planned path to the exits: asset purchases will finish at the end of December, principal payments from maturing securities will continue to be reinvested for a long, long time, and record low rates will stay where they are “*through the summer of 2019*”. This, as **Italy** stands firm—at least, for now—against the European Commission’s unprecedented decision to reject the current budget and demand a revised one by November 13th. This development and the populist government’s stubborn stance sent Italian bond yields sharply higher against German bunds. Higher borrowing costs will make it much more expensive to finance Italy’s towering debt of about 130% as a share of GDP and much more difficult to achieve 1.5% economic growth that the government projects for 2019. The ECB, in theory, could step in to buy Italian bonds, but the country would need to be in a bailout program, and accept all of the austerity measures required by Brussels and international lenders. That won’t happen anytime soon. And it is getting very personal, given that President Draghi is also Italian. In the words of Luigi Di Maio, “*This is a time when people need to support Italy and I am amazed that an Italian who is a key figure should be further poisoning the atmosphere.*”

Although Italy’s fiscal issues took the spotlight this week, there was plenty going on in the **U.K.**, where Brexit negotiations continue, with little sign of an agreement in Britain about what they will accept in the final deal. It will never be unanimous; the Brexainers and the Brexiterers are far apart. But PM May needs to secure a majority before any progress can be made with Brussels. At this highly uncertain time for the country, the **Bank of England** will not be springing any surprises at its meeting on November 1st. It also happens to be Super Thursday; the Monetary Policy Summary, Minutes of the meeting, and the Quarterly Inflation Report will be released at 8:00 am ET. Governor Carney will preside over the hour-long press conference 30 minutes later. At the prior meeting (September 13th), the MPC unanimously voted to keep rates unchanged, and noted “*greater uncertainty*” around Brexit. Economic



Jennifer Lee

Senior Economist

jennifer.lee@bmo.com

416-359-4092

indicators have been mixed since the last Inflation Report: Softer consumer spending, slower inflation, lower services and construction PMIs; but, the manufacturing PMI picked up, wage growth was the fastest in nearly nine years, the jobless rate was the lowest in 43 years, and GDP rose at a steady 0.7% pace in the three months to August. The latter suggests that Q3 will not be far from the Committee's projections of 0.5% (not annualized) growth. So the broader economy is cooperating, but the political uncertainty is likely handcuffing businesses from pursuing stronger investment. Much like the ECB, the BoE's statement will likely be little changed and still point to a "gradual" and "limited" pace of future rate hikes.

Across the **Pacific**, leaders of China and Japan are meeting to carve out a path for smoother relations against the glowering backdrop of the U.S. This comes a few days after two U.S. warships sailed through the Taiwan Strait. Cold war, indeed.

I'd better sing this again... *"Everything's gonna be alright, everything's gonna be just fine..."*

JLee

Priscilla Thiagamoorthy

Economic Analyst
priscilla.thiagamoorthy@bmo.com
416-359-6229

Canada

- BoC hikes 25 bps to 1.75%...
- ...drops gradual wording as rates on course to neutral

Good News

SEPH Average Hourly Earnings +3.0% y/y (Aug.)
Ottawa posted a \$2.6 bln budget surplus (Apr.-to-Aug.)—versus a \$2.9 bln deficit a year ago

Bad News

Wholesale Trade Volumes -0.1% (Aug.)

United States

- Consumer spending fuels Q3 growth
- Tumultuous week for stocks as slew of risks return to the fore
- Greenback powers up

Real GDP +3.5% a.r. (Q3 A)
Durable Goods Orders +0.8% (Sep.)
Chicago Fed National Activity Index +0.17 (Sep.)
FHFA House Prices +6.1% y/y (Aug.)
Pending Home Sales +0.5% (Sep.)

Initial Claims +5k to 215k (week of Oct. 20)
New Home Sales -5.5% to 553,000 a.r. (Sep.)
Goods Trade Deficit widened to \$76.0 bln (Sep. A)—record
Wholesale Inventories +0.3%; **Retail Inventories** +0.1% (Sep. A)—slowed
U of M Consumer Sentiment revised lower to 98.6 (Oct.)

Japan

- PM Abe meets China's President Xi to move "from competition to cooperation"

Manufacturing PMI +0.6 pts to 53.1 (Oct. P)
All-Industry Activity Index +0.5% (Aug.)

Department Store Sales -3.0% y/y (Sep.)

Europe

- ECB sticks with QE exit plan amid uncertainties
- EC rejects Italy's draft budget; requires a rewrite within three weeks or face penalties
- GBP drops below \$1.28 on Brexit risks

Euro Area—Private Sector Credit +3.0% y/y (Sep.)
Euro Area—Consumer Confidence +0.2 pts to -2.7 (Oct. A)
Germany—GfK Consumer Confidence steady at 10.6 (Nov.)
Germany—Producer Prices +0.5% (Sep.)
France—Producer Prices +0.3% (Sep.)
France—Consumer Confidence +1 pt to 95 (Oct.)

Euro Area—Manufacturing PMI -1.1 pts to 52.1 (Oct. P)
Euro Area—Services PMI -1.4 pts to 53.3 (Oct. P)
Euro Area—Composite PMI -1.4 pts to 52.7 (Oct. P)
Germany—Ifo Business Climate -0.9 pts to 102.8 (Oct.)

Indications of stronger growth and a move toward price stability are good news for the economy.

Fix or Float?

It's the age-old mortgage question. And, with interest rates on the rise and debt-laden households sensitive to higher borrowing costs, home owners have even more reason to ensure they make the right choice.

On October 24, the **Bank of Canada raised policy rates for the fifth time in just over a year, while signalling more moves ahead, possibly at a quicker pace.** Tighter policy and firmer inflation have recently lifted the 5-year Canada bond yield to a seven-year peak of 2.5%, two percentage points above 2016's record low (*Chart 1*). While a 5-year fixed-rate mortgage could be had for 2.75% (or less) two years ago; today, it's closer to 3.75%.¹ On a \$500,000 home financed with a 5% down payment and 25-year loan, the higher 5-year rate implies an extra \$250 in monthly mortgage payments or \$3,000 per year.

If you opt for a variable rate loan instead of a 5-year fixed rate loan, you're wagering it will average less than the fixed rate over the next five years. Assuming it moves one-for-one with our forecast of policy rates, then **3.0% is the estimated "breakeven" variable rate that would leave you no better or worse off than if you lock in for five years at 3.75%.** At this starting level, and assuming rates rise as expected, the interest rate on a variable-rate loan would average 3.75% over five years, implying similar borrowing costs between the two choices.

We expect the central bank to raise overnight lending rates three more times from 1.75% to 2.5% by June 2019, during which time the variable rate (assuming it's 3.0% currently) will rise to match the 3.75% fixed rate. After holding steady to April 2020, policy rates could rise a final time to 2.75%, pushing the variable rate above the (current) fixed rate by one-quarter percentage point. In March 2021, the policy rate is expected to return to the low end of a neutral range (estimated by the central bank at between 2.5% and 3.5%), at which time the variable rate will again equal the fixed rate.

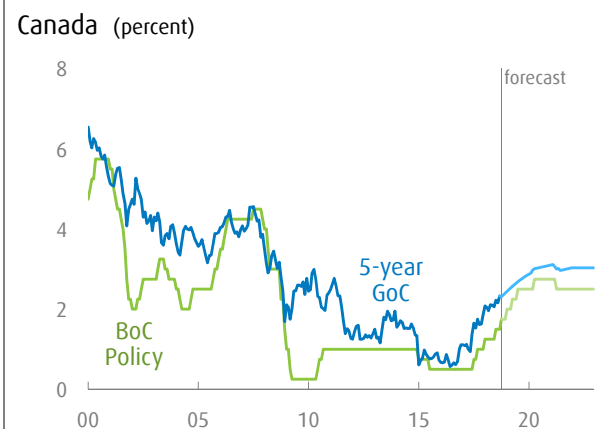
Based on our forecast, choosing variable over fixed depends on **whether you can beat the 75-basis-point spread between the breakeven variable rate and the 5-year fixed rate.** If you can't "beat the spread", choosing a variable rate could end up costing more than locking in.

For most mortgage contracts, **a rising variable rate does not increase monthly payments.** However, as interest rates rise, the total interest cost over the term increases, and less of the payment goes toward reducing principal. For example, getting a variable rate that is just 25 basis points below the 5-year fixed rate (instead of 75 basis points as per the breakeven rate) would result in an extra \$11,300 in total interest cost over a 5-year term, while leaving the end-of-term balance \$3,600 higher.

Even if you can beat the spread, **a fixed-rate loan could be the preferred option if you see additional upside risks to interest**



Chart 1
Interest Rates: No Longer Low for Long

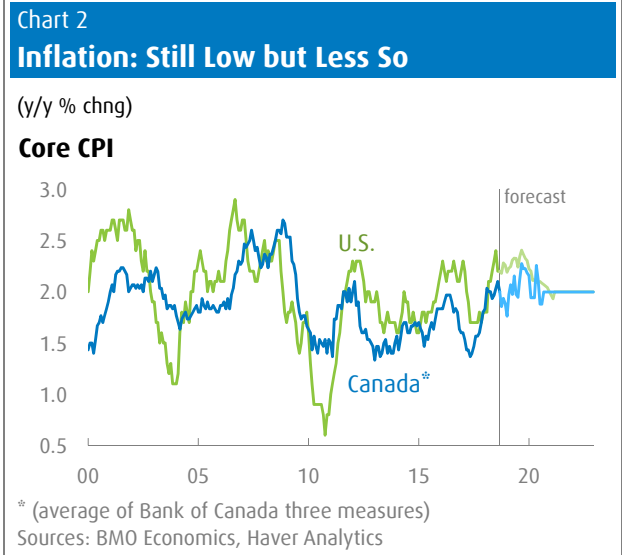


¹ As of October 26, 2018, the rate on BMO's 5-year Smart Fixed Rate Closed mortgage was 3.69%.

rates. Our forecast for only gradual increases in policy rates rests on the assumption that long-term forces, such as globalization, e-commerce and automation, will largely counter pressures arising from worker shortages, import tariffs and a weak currency to restrain inflation, giving the central bank time to normalize policy before the economy overheats (*Chart 2*). **If we are wrong and inflation jumps, a variable-rate loan could end up costing much more than a fixed-rate loan.** For example, if policy rates average one percentage point above our forecast in the next five years (that is, closer to the top end of the neutral range), then the variable-rate holder would incur an additional \$22,700 in interest expense over a 5-year term, while leaving the end-of-term balance \$7,100 higher compared with a fixed 3.75% rate. Conversely, if you judge the risks to interest rates to be on the downside—as per most of the past decade—then going variable could be the right choice.

Of course, borrowers have **more options** than just a variable-rate loan or a five-year fixed-rate loan. Locking in for a shorter duration of two or three years instead of five could pay off if the economy hits a rough patch in 2021 in response to past rate increases. The borrower could then take advantage of subsequent lower interest rates to refinance.

Bottom Line: Assuming the Bank of Canada does what we expect it to do, 75 basis points would appear to be the magic number when deciding between a floating and fixed-rate mortgage for five years. If you can't get a variable rate that much lower than the fixed rate, it might make sense to lock in.



Economic Forecast Summary for October 26, 2018

BMO Capital Markets Economic Research

	2018				2019				Annual		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2017	2018	2019
CANADA											
Real GDP (q/q % chng : a.r.)	1.4	2.9	2.0	2.5	2.0	1.8	1.8	1.7	3.0	2.1	2.1
Consumer Price Index (y/y % chng)	2.1	2.3	2.7	2.0 ↓	1.8 ↓	2.0 ↓	1.8 ↓	2.2 ↑	1.6	2.2 ↓	2.0 ↓
Unemployment Rate (percent)	5.8	5.9	5.9	5.8	5.7	5.7	5.6	5.6	6.3	5.9	5.6
Housing Starts (000s : a.r.)	225	219	198	202	208	207	204	200	220	211	205
Current Account Balance (\$blns : a.r.)	-69.9	-63.5	-53.4	-53.2	-53.6	-54.6	-55.6	-56.1	-63.3	-60.0	-55.0
Interest Rates (average for the quarter : %)											
Overnight Rate	1.25	1.25	1.50	1.75	2.00	2.25	2.50	2.50	0.71	1.44	2.31
3-month Treasury Bill	1.14	1.21	1.47	1.80	2.00	2.20	2.40	2.40	0.69	1.40	2.25
10-year Bond	2.24	2.28	2.28	2.45	2.55	2.65	2.80	2.90	1.78	2.30	2.70
Canada-U.S. Interest Rate Spreads (average for the quarter : bps)											
90-day	-44	-66	-61	-49	-49	-49	-41	-52	-26	-55	-48
10-year	-52	-64	-65	-62	-58	-53	-49	-45	-55	-61	-51
UNITED STATES											
Real GDP (q/q % chng : a.r.)	2.2	4.2	3.5	2.6 ↓	2.4 ↓	2.2	2.0	1.9	2.2	2.9 ↑	2.5
Consumer Price Index (y/y % chng)	2.3	2.6	2.6	2.3	2.1	2.2	2.1	2.1	2.1	2.5	2.1
Unemployment Rate (percent)	4.1	3.9	3.8	3.7	3.6	3.6	3.5	3.5	4.4	3.9	3.6
Housing Starts (mlns : a.r.)	1.32	1.26	1.22	1.24	1.30	1.31	1.31	1.32	1.21	1.26	1.31
Current Account Balance (\$blns : a.r.)	-487	-406	-517 ↓	-530 ↓	-534 ↓	-547 ↓	-555 ↓	-565 ↓	-449	-485 ↓	-550 ↓
Interest Rates (average for the quarter : %)											
Fed Funds Target Rate	1.46	1.71	1.96	2.21	2.46	2.71	2.88	2.96	1.00	1.83	2.75
3-month Treasury Bill	1.58	1.87	2.08	2.25	2.50	2.70	2.80	2.90	0.95	1.95	2.70
10-year Note	2.76	2.92	2.93	3.05	3.15	3.20	3.25	3.35	2.33	2.90	3.25
EXCHANGE RATES (average for the quarter)											
US\$/C\$	79.1	77.5	76.5	77.9	78.7	79.1	79.5	79.9	77.1	77.7	79.3
C\$/US\$	1.27	1.29	1.31	1.28	1.27	1.26	1.26	1.25	1.30	1.29	1.26
¥/US\$	108	109	112	112	112	111	111	110	112	110	111
US\$/Euro	1.23	1.19	1.16	1.17	1.17	1.19	1.22	1.24	1.13	1.19	1.20
US\$/£	1.39	1.36	1.30	1.28	1.23	1.27	1.33	1.38	1.29	1.33	1.31

Blocked areas represent BMO Capital Markets forecasts

Up and down arrows indicate changes to the forecast ↑↓

Spreads may differ due to rounding

Real GDP at Basic Prices

Wednesday, 8:30 am

Aug. (e)	+0.1%
<i>Consensus</i>	<i>unch</i>
July	+0.2%

Employment

Friday, 8:30 am

Oct. (e)	+0.1% (+15,000)
<i>Consensus</i>	<i>+0.1% (+17,000)</i>
Sep.	+0.3% (+63,300)

Unemployment Rate

Oct. (e)	5.9%
<i>Consensus</i>	<i>5.9%</i>
Sep.	5.9%

Average Hourly Wages

Oct. (e)	+2.1% y/y
Sep.	+2.4% y/y

Merchandise Trade Balance

Friday, 8:30 am

Sep. (e)	-\$0.10 bln
<i>Consensus</i>	<i>+\$0.50 bln</i>
Aug.	+\$0.53 bln

Personal Spending and Income

Monday, 8:30 am

	Personal Spending	Personal Income
Sep. (e)	+0.4%	+0.4%
<i>Consensus</i>	<i>+0.4%</i>	<i>+0.4%</i>
Aug.	+0.3%	+0.3%
Core PCE Price Index		
Sep. (e)	+0.1%	+2.0% y/y
<i>Consensus</i>	<i>+0.1%</i>	<i>+2.0% y/y</i>
Aug.	unch	+2.0% y/y

Canada

Real GDP growth likely decelerated in August, following a surprisingly perky print in the prior month. Small gains in activity in most services sectors are expected to drive the headline, but declines in retail and wholesale trade and a very small increase in manufacturing suggest the risks are squarely on the downside. The impact of Syncrude's shutdown on oil production is a wild card once again, as the two-month 5.8% drop in non-conventional production could start to reverse, supporting our call for small headline growth. Assuming decent growth in September, Q3 is on pace for about 2% growth.

Looking beyond the wild volatility in the jobs headlines, employment growth has decelerated through much of the year despite a relatively healthy economic backdrop. Note that while the year-ago comparable for October isn't overly challenging, November and December 2017 were exceptionally strong, suggesting annual job growth will slow further into year-end. Given the volatility in the headline, we're going to focus on the monthly percent change, which we expect to be +0.1%. For those who insist on a job number, it's +15,000. Our call for a decent headline gain should keep the jobless rate steady at 5.9%. Wage growth looks to slow a touch to 2.1% y/y, amid very difficult year-ago comparables.

Notably, the other jobs report, the Survey of Employment, Payrolls and Hours (SEPH) was solid in August (it's released nearly 2 months after the LFS). The SEPH shows employment was up 1.9% y/y versus 0.9% y/y according to the LFS. The two surveys tend to follow each other, so either the SEPH has downside or LFS upside, but this will resolve itself. We can't stress enough that the LFS should be interpreted with caution, and the focus on the headline is vastly overdone.

Canada's trade balance is expected to return to a small deficit position in September following the surprise \$526 mln surplus in the prior month. That was the first surplus since December 2016, and it may be challenging to repeat, though there's a chance it could for a second month. While oil prices were healthy in September, October is going to be far more challenging with WCS prices falling sharply. Non-energy commodity prices were down in September though, a fourth straight monthly drop, which will weigh on exports (and imports to a lesser extent). This is the final month of Q3, and barring some sizeable negative revisions, it looks like trade is going to add meaningfully to GDP for a second straight quarter.

United States

The Q3 GDP report suggests personal spending remained solid late in the quarter, rising 0.4% in September, amid accelerating autos. However, following annualized real gains of 4.0% in Q3 and 3.8% in Q2, a 2-handle is more likely in Q4 on fading tax cuts. With wages edging higher, personal income likely rose 0.4% and 4.6% in the past year, suggesting tax cuts are not the only fuel for spending. Core PCE prices likely ticked up after a flat August, keeping the annual rate nailed down to the Fed's 2.0% target for a fifth straight month. Stable inflation will dissuade the

Benjamin Reitzes

Canadian Rates &
Macro Strategist
benjamin.reitzes@bmo.com
416-359-5628

Michael Gregory, CFA

Deputy Chief Economist
michael.gregory@bmo.com
416-359-4747

Sal Guatieri

Senior Economist
sal.guatieri@bmo.com
416-359-5295

Stable inflation will dissuade the

Manufacturing ISM (PMI)

Thursday, 10:00 am

Oct. (e) 59.4
Consensus 59.0
Sep. 59.8

Nonfarm Payrolls

Friday, 8:30 am

Nonfarm Payrolls
Oct. (e) +190,000
Consensus +190,000
Sep. +134,000

Unemployment Rate
Oct. (e) 3.8%
Consensus 3.7%
Sep. 3.7%

Average Hourly Earnings
Oct. (e) +0.3% +3.2% y/y
Consensus +0.2% +3.1% y/y
Sep. +0.3% +2.8% y/y

Goods & Services Trade Deficit

Friday, 8:30 am

Sep. (e) \$53.4 bln
Consensus \$53.4 bln
Aug. \$53.2 bln

BoE Monetary Policy Announcement, Minutes and Quarterly Inflation Report

Thursday, 8:00 am ET

Press conference at 8:30 am ET

Fed from stepping up the pace of tightening. However, the fact that core inflation is up from 1.5% in the similar five-month period a year ago, and likely to drift higher, suggests more rate hikes are in the cards.

U.S. factories are increasingly feeling the double-whammy of tariffs on imports (e.g., on steel, aluminum and intermediate goods from China) and retaliatory tariffs on exports. This is eroding earlier support from strong capex (incented by late-cycle capacity constraints and corporate tax cuts) and record oil production. The net result, so far, has been only a modest ebbing of activity. After hitting a 14-year high in August (above 61), the ISM manufacturing index dipped in September (to below 60) and we look for it to slide slightly more in October (but staying in the still-elevated 59 range). So far this month, the regional manufacturing metrics have been mixed, with more down than up, while Markit's preliminary metric nudged higher.

After disappointing in September, nonfarm payrolls look to get back on track with a 190,000 advance in October. That's in line with the three-month mean and would mark just a modest retreat from the six-month trend, as hiring intentions remain solid despite widespread shortages. Hurricane Florence likely greased the prior month's miss (a 17,000 decline in leisure and hospitality jobs was likely due to mandatory evacuations), but a retracement in October could be countered by Hurricane Michael (setting the November report up for a bigger bounce). A moderation in household survey employment following September's 420,000 surge could lift the jobless rate to 3.8% after tumbling two-tenths to 48-year lows. Still, the trend remains downwards in the face of above-potential economic growth. The tight labour market should lift average hourly earnings 0.3%. That, given a rare storm-led decline last October (when lower-paid workers in the hospitality industry returned to work after September's hurricanes, depressing average earnings), should spike the yearly rate to 3.2%, the highest in 9½ years. This will get the Fed moving again in December.

The deficit in goods and services trade likely widened by \$0.2 billion to a seven-month high of \$53.4 billion in September, capping a quarter in which the total shortfall hit an exact decade-high of \$156.7 billion. Net exports carved 1.8 ppts from Q3 GDP growth. In September, although total exports appeared to outpace total imports, the trend has been the opposite in recent years, reflecting relatively stronger domestic demand (fiscal stimulus stoked) and a strengthening dollar. The latter has diminished the impact of tariffs on imports, but augmented the impact of retaliatory tariffs on exports. Ever since (Section 201 or "safeguard") tariffs on washing machines and solar panels started the tit-for-tat battle in January, the broad trade-weighted dollar has risen more than 9%.

Central Banks

See Jennifer Lee's Thought on page 6.

		Oct 26 ¹	Oct 19	Week Ago	4 Weeks Ago	Dec. 31, 2017
		(basis point change)				
Canadian Money Market	Call Money	1.75	1.50	25	25	75
	Prime Rate	3.95	3.70	25	25	75
U.S. Money Market	Fed Funds (effective)	2.25	2.25	0	0	75
	Prime Rate	5.25	5.25	0	0	75
3-Month Rates	Canada	1.72	1.66	6	13	66
	United States	2.32	2.30	1	12	94
	Japan	-0.31	-0.28	-3	-18	-15
	Eurozone	-0.32	-0.32	0	0	1
	United Kingdom	0.81	0.80	1	1	29
	Australia	1.92	1.93	-1	-1	14
2-Year Bonds	Canada	2.26	2.30	-3	5	58
	United States	2.80	2.91	-11	-2	92
10-Year Bonds	Canada	2.39	2.50	-11	-4	35
	United States	3.08	3.19	-11	2	68
	Japan	0.11	0.14	-4	-2	6
	Germany	0.35	0.46	-11	-12	-7
	United Kingdom	1.39	1.58	-18	-18	20
	Australia	2.60	2.68	-9	-7	-3
Risk Indicators	VIX	26.5	19.9	6.6 pts	14.4 pts	15.5 pts
	TED Spread	20	17	3	0	-12
	Inv. Grade CDS Spread ²	69	67	2	10	20
	High Yield CDS Spread ²	379	363	15	46	72
		(percent change)				
Currencies	US¢/C\$	76.12	76.31	-0.3	-1.7	-4.3
	C\$/US\$	1.314	1.310	—	—	—
	¥/US\$	111.72	112.55	-0.7	-1.7	-0.9
	US\$/€	1.1373	1.1514	-1.2	-2.0	-5.3
	US\$/£	1.281	1.308	-2.0	-1.7	-5.2
	US¢/A\$	70.62	71.19	-0.8	-2.2	-9.6
Commodities	CRB Futures Index	194.34	197.18	-1.4	-0.4	0.2
	Oil (generic contract)	66.54	69.28	-4.0	-9.2	10.1
	Natural Gas (generic contract)	3.11	3.25	-4.3	3.4	5.4
	Gold (spot price)	1,234.71	1,226.90	0.6	3.5	-5.2
Equities	S&P/TSX Composite	14,772	15,470	-4.5	-8.1	-8.9
	S&P 500	2,647	2,768	-4.4	-9.2	-1.0
	Nasdaq	7,119	7,449	-4.4	-11.5	3.1
	Dow Jones Industrial	24,639	25,444	-3.2	-6.9	-0.3
	Nikkei	21,185	22,532	-6.0	-12.2	-6.9
	Frankfurt DAX	11,120	11,554	-3.8	-9.2	-13.9
	London FT100	6,889	7,050	-2.3	-8.3	-10.4
	France CAC40	4,919	5,085	-3.3	-10.5	-7.4
	S&P ASX 200	5,665	5,939	-4.6	-8.7	-6.6

¹ = as of 10:30 am ² = One day delay

Global Calendar October 29 – November 2

Monday October 29

Tuesday October 30

Wednesday October 31

Thursday November 1

Friday November 2

Japan

Retail Sales
Sep. (e) **-0.5%** **+2.0% y/y**
Aug. **+0.9%** **+2.7% y/y**

Jobless Rate
Sep. (e) **2.4%**
Aug. **2.4%**

Industrial Production
Sep. P (e) **-0.2%** **-2.1% y/y**
Aug. **+0.2%** **+0.2% y/y**
Consumer Confidence Index
Oct. (e) **43.5**
Sep. **43.4**

Manufacturing PMI
Oct. F (e) **53.1**
Sep. **52.5**

BoJ Monetary Policy Meeting and Outlook Report (Oct. 30-31)

Euro Area

GERMANY

Hesse Regional Elections
(Sun. Oct. 28)

EURO AREA

Real GDP
Q3 A (e) **+0.4%** **+1.8% y/y**
Q2 **+0.4%** **+2.1% y/y**
Economic Confidence
Oct. (e) **110.0**
Sep. **110.9**
Consumer Confidence
Oct. F (e) **-2.7**
Sep. **-2.9**

GERMANY

Unemploy. Jobless Rate
Oct. (e) **-11,000** **5.1%**
Sep. **-23,000** **5.1%**
Consumer Price Index
Oct. P (e) **+0.1%** **+2.4% y/y**
Sep. **+0.4%** **+2.2% y/y**

FRANCE

Real GDP
Q3 A (e) **+0.4%** **+1.5% y/y**
Q2 **+0.2%** **+1.7% y/y**
Consumer Spending
Sep. (e) **-0.4%** **+0.6% y/y**
Aug. **+0.8%** **+1.3% y/y**

ITALY

Real GDP
Q3 P (e) **+0.2%** **+1.0% y/y**
Q2 **+0.2%** **+1.2% y/y**
Consumer Confidence Index
Oct. (e) **115.1**
Sep. **116.0**

EURO AREA

Consumer Price Index
Oct. A (e) **+2.2% y/y**
Sep. **+2.1% y/y**

Core CPI
Oct. A (e) **+1.0% y/y**
Sep. **+0.9% y/y**

Jobless Rate
Sep. (e) **8.0%**
Aug. **8.1%**

GERMANY

Retail Sales
Sep. (e) **+0.5%** **+0.9% y/y**
Aug. **-0.3%** **+1.6% y/y**

FRANCE

Consumer Price Index
Oct. P (e) **+0.2%** **+2.6% y/y**
Sep. **-0.2%** **+2.5% y/y**

ITALY

Consumer Price Index
Oct. P (e) **+0.4%** **+1.8% y/y**
Sep. **+1.7%** **+1.5% y/y**

Jobless Rate
Sep. P (e) **9.9%**
Aug. **9.7%**

GfK Consumer Confidence
Oct. (e) **-10**
Sep. **-9**

Manufacturing PMI
Oct. (e) **53.0**
Sep. **53.8**

Nationwide House Prices
Oct. (e) **+0.2%** **+2.0% y/y**
Sep. **+0.3%** **+2.0% y/y**

8:00 am ET BoE Monetary Policy Announcement, Minutes and Quarterly Inflation Report

8:30 am ET BoE Governor Carney's Press Conference

EURO AREA

Manufacturing PMI
Oct. F (e) **52.1**
Sep. **53.2**

U.K.

U.K. Autumn Budget

Construction PMI
Oct. (e) **52.0**
Sep. **52.1**

Other

BRAZIL

2nd round Presidential Election
(Sun. Oct. 28)

AUSTRALIA

Building Approvals
Sep. (e) **+3.8%** **-9.0% y/y**
Aug. **-9.4%** **-13.6% y/y**

MEXICO

Real GDP
Q3 P (e) **+2.4% y/y**
Q2 **+2.6% y/y**

CHINA

PMI
Oct. (e) **50.6** **54.9**
Sep. **50.8** **54.9**

AUSTRALIA

Consumer Price Index
Q3 (e) **+0.5%** **+1.9% y/y**
Q2 **+0.4%** **+2.1% y/y**

BRAZIL

Central Bank of Brazil Monetary Policy Meeting

CHINA

Caixin Manufacturing PMI
Oct. (e) **50.0**
Sep. **50.0**

AUSTRALIA

Trade Surplus
Sep. (e) **A\$1.7 bln**
Aug. **A\$1.6 bln**

AUSTRALIA

Retail Sales
Sep. (e) **+0.3%**
Aug. **+0.3%**

North American Calendar October 29 – November 2

Monday October 29

Tuesday October 30

Wednesday October 31

Thursday November 1

Friday November 2

Canada

3:30 pm BoC Governor Poloz and Senior Deputy Governor Wilkins appear before the House of Commons Standing Committee on Finance

8:30 am **Real GDP at Basic Prices**
Aug. (e) **+0.1%**
Consensus *unch*
July *+0.2%*

8:30 am **Industrial Product Price Index** **Raw Materials Price Index**
Sep. (e) **-0.5%** **-0.5%**
Aug. *-0.5%* *-4.6%*

4:15 pm BoC Governor Poloz and Senior Deputy Governor Wilkins appear before the Senate Standing Committee on Banking, Trade and Commerce

10:30 am 3-, 6- & 12-month bill auction \$10.0 bln (new cash -\$0.5 bln)

Noon 30-year bond auction \$1.0 bln

9:30 am **Markit Manufacturing PMI**
Oct. **54.8**
Sep. *54.8*

Auto Sales^D
Oct. **-1.6% y/y**
Sep. *-1.6% y/y*

2-year bond auction announcement

7:30 am **Challenger Layoff Report**
Oct. **+70.9% y/y**
Sep. *+70.9% y/y*

8:30 am **Initial Claims**
Oct. 27 (e) **213k (-2k)^C**
Oct. 20 *215k (+5k)*

8:30 am **Continuing Claims**
Oct. 20 **1,636k (-5k)**

8:30 am **Productivity** **Unit Labour Costs**
Q3 P (e) **+2.0% a.r.** **+1.2% a.r.**
Consensus *+1.8% a.r.* *+1.2% a.r.*
Q2 *+2.9% a.r.* *-1.0% a.r.*

8:30 am **Real GDP by Industry (Q2)**

9:45 am **Markit Manufacturing PMI (Oct. F)**

10:00 am **Manufacturing ISM (PMI)**
Oct. (e) **59.4**
Consensus *59.0*
Sep. *59.8*

10:00 am **Construction Spending**
Sep. (e) **+0.2%**
Consensus *+0.2%*
Aug. *+0.1%*

Ward's Total Vehicle Sales^D
Oct. (e) **17.0 mln a.r.**
Consensus *17.0 mln a.r.*
Sep. *17.4 mln a.r.*

8:30 am **Employment**
Oct. (e) **+0.1% (+15,000)**
Consensus *+0.1% (+17,000)*
Sep. *+0.3% (+63,300)*

8:30 am **Unemployment Rate**
Oct. (e) **5.9%**
Consensus *5.9%*
Sep. *5.9%*

8:30 am **Average Hourly Wages**
Oct. (e) **+2.1% y/y**
Sep. *+2.4% y/y*

8:30 am **Merchandise Trade Balance**
Sep. (e) **-\$0.10 bln**
Consensus *+\$0.50 bln*
Aug. *+\$0.53 bln*

8:30 am **Nonfarm Payrolls**
Oct. (e) **+190,000**
Consensus *+190,000*
Sep. *+134,000*

8:30 am **Unemployment Rate**
Oct. (e) **3.8%**
Consensus *3.7%*
Sep. *3.7%*

8:30 am **Average Hourly Earnings**
Oct. (e) **+0.3%** **+3.2% y/y**
Consensus *+0.2%* *+3.1% y/y*
Sep. *+0.3%* *+2.8% y/y*

8:30 am **Goods & Services Trade Deficit**
Sep. (e) **\$53.4 bln**
Consensus *\$53.4 bln*
Aug. *\$53.2 bln*

10:00 am **Factory Orders**
Sep. (e) **+0.3%**
Consensus *+0.3%*
Aug. *+2.3%*

United States

8:30 am **Personal Spending** **Personal Income**
Sep. (e) **+0.4%** **+0.4%**
Consensus *+0.4%* *+0.4%*
Aug. *+0.3%* *+0.3%*

8:30 am **Core PCE Price Index**
Sep. (e) **+0.1%** **+2.0% y/y**
Consensus *+0.1%* *+2.0% y/y*
Aug. *unch* *+2.0% y/y*

10:30 am **Dallas Fed Mfg. Activity**
Oct. (e) **28.0**
Sep. *28.1*

Fed Speaker: Chicago's Evans (9:45 am)

11:00 am 4- & 8-week bill auction announcements

11:30 am 13- & 26-week bill auction \$84 bln

9:00 am **S&P Case-Shiller Home Price Index (20 city)**
Aug. (e) **+0.1%** **+6.0% y/y**
Consensus *+0.2%* *n.a.*
July *+0.1%* *+5.9% y/y*

10:00 am **Homeowner Vacancy Rate**
Q3 (e) **1.5%**
Q2 *1.5%*

10:00 am **Conference Board Consumer Confidence Index**
Oct. (e) **137.0**
Consensus *135.4*
Sep. *138.4*

11:30 am 4- & 8-week bill auction

7:00 am **MBA Mortgage Apps**
Oct. 26 **+4.9%**
Oct. 19 *+4.9%*

8:15 am **ADP National Employment Report**
Oct. (e) **+180,000**
Consensus *+190,000*
Sep. *+230,000*

8:30 am **Employment Cost Index**
Q3 (e) **+0.7%** **+2.9% y/y**
Consensus *+0.7%* *+2.9% y/y*
Q2 *+0.6%* *+2.8% y/y*

9:45 am **Chicago PMI**
Oct. (e) **60.0**
Consensus *61.0*
Sep. *60.4*

8:30 am 3- & 10-year note, 30-year bond auction and other quarterly refinancing announcements

11:00 am 13-, 26- & 52-week bill auction announcements

^C = consensus ^D = date approximate

General Disclosure

"BMO Capital Markets" is a trade name used by the BMO Financial Group for the wholesale banking businesses of Bank of Montreal and its subsidiaries BMO Nesbitt Burns Inc., BMO Capital Markets Limited in the U.K. and BMO Capital Markets Corp. in the U.S. BMO Nesbitt Burns Inc., BMO Capital Markets Limited and BMO Capital Markets Corp are affiliates. This document is issued and distributed in Hong Kong by Bank of Montreal ("BMO"). BMO is an authorized institution under the Banking Ordinance (Chapter 155 of the Laws of Hong Kong) and a registered institution with the Securities and Futures Commission (CE No. AAK809) under the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong). BMO does not represent that this document may be lawfully distributed, or that any financial products may be lawfully offered or dealt with, in compliance with any regulatory requirements in other jurisdictions, or pursuant to an exemption available thereunder. This document is directed only at entities or persons in jurisdictions or countries where access to and use of the information is not contrary to local laws or regulations. Their contents have not been reviewed by any regulatory authority. Bank of Montreal or its subsidiaries ("BMO Financial Group") has lending arrangements with, or provide other remunerated services to, many issuers covered by BMO Capital Markets. The opinions, estimates and projections contained in this report are those of BMO Capital Markets as of the date of this report and are subject to change without notice. BMO Capital Markets endeavours to ensure that the contents have been compiled or derived from sources that we believe are reliable and contain information and opinions that are accurate and complete. However, BMO Capital Markets makes no representation or warranty, express or implied, in respect thereof, takes no responsibility for any errors and omissions contained herein and accepts no liability whatsoever for any loss arising from any use of, or reliance on, this report or its contents. Information may be available to BMO Capital Markets or its affiliates that is not reflected in this report. The information in this report is not intended to be used as the primary basis of investment decisions, and because of individual client objectives, should not be construed as advice designed to meet the particular investment needs of any investor. This document is not to be construed as an offer to sell, a solicitation for or an offer to buy, any products or services referenced herein (including, without limitation, any commodities, securities or other financial instruments), nor shall such information be considered as investment advice or as a recommendation to enter into any transaction. Each investor should consider obtaining independent advice before making any financial decisions. This document is provided for general information only and does not take into account any investor's particular needs, financial status or investment objectives. BMO Capital Markets or its affiliates will buy from or sell to customers the securities of issuers mentioned in this report on a principal basis. BMO Capital Markets or its affiliates, officers, directors or employees have a long or short position in many of the securities discussed herein, related securities or in options, futures or other derivative instruments based thereon. The reader should assume that BMO Capital Markets or its affiliates may have a conflict of interest and should not rely solely on this report in evaluating whether or not to buy or sell securities of issuers discussed herein.

Dissemination of Research

Our publications are disseminated via email and may also be available via our web site <http://economics.bmocapitalmarkets.com>. Please contact your BMO Financial Group Representative for more information.

Conflict Statement

A general description of how BMO Financial Group identifies and manages conflicts of interest is contained in our public facing policy for managing conflicts of interest in connection with investment research which is available at http://researchglobal.bmocapitalmarkets.com/Public/Conflict_Statement_Public.aspx.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

BMO Financial Group (NYSE, TSX: BMO) is an integrated financial services provider offering a range of retail banking, wealth management, and investment and corporate banking products. BMO serves Canadian retail clients through BMO Bank of Montreal and BMO Nesbitt Burns. In the United States, personal and commercial banking clients are served by BMO Harris Bank N.A., Member FDIC. Investment and corporate banking services are provided in Canada and the US through BMO Capital Markets. BMO Capital Markets is a trade name used by BMO Financial Group for the wholesale banking businesses of Bank of Montreal, BMO Harris Bank N.A, BMO Ireland Plc, and Bank of Montreal (China) Co. Ltd. and the institutional broker dealer businesses of BMO Capital Markets Corp. (Member SIPC), BMO Nesbitt Burns Securities Limited (Member SIPC) in the U.S., BMO Nesbitt Burns Inc. (Member Canadian Investor Protection Fund) in Canada, Europe and Asia, BMO Capital Markets Limited in Europe, Asia and Australia and BMO Advisors Private Limited in India.

"Nesbitt Burns" is a registered trademark of BMO Nesbitt Burns Inc., used under license. "BMO Capital Markets" is a trademark of Bank of Montreal, used under license. "BMO (M-Bar roundel symbol)" is a registered trademark of Bank of Montreal, used under license.

© Registered trademark of Bank of Montreal in the United States, Canada and elsewhere.

™ Trademark Bank of Montreal in the United States and Canada.

© COPYRIGHT 2018 BMO CAPITAL MARKETS CORP.

A member of BMO Financial Group