March 22, 2017

Second Liberal budget more fine-tuning than fiscal overhaul

Highlights

- The Liberal government's second budget stayed on message, reiterating a goal of inclusive growth. If there are notional themes to this second Liberal budget, they centre on innovation, skills development, community development and gender-related issues.
- Granted, there's also a certain "wait and see" element to this budget, necessitated by the intense uncertainty around the future direction of US tax and trade policy under a new American administration.
- A deficit of $23.0 billion is now estimated for the outgoing fiscal year, equivalent to 1.1% of GDP. Larger deficits are projected over the coming two years. The budget envisions a $28.5 billion deficit for 2017-18, amounting to 1.4% of GDP. That's to be followed by a $27.4 billion shortfall in 2018-19 (1.2% of GDP). The net fiscal impact of policy decisions taken since the fall statement are fairly negligible over that two-year window, given offsets within the existing framework or via projected revenues.
- Bottom line figures explicitly build in a $3 billion "adjustment for risk" in each of the coming five fiscal years, sufficient to cover a roughly 0.6%-pt miss in real GDP growth.
- Control for prudence and the underlying deficit tallies in budget 2017 are remarkably similar to those presented in November. All told, the cumulative underlying budget shortfall for the six-year period covering 2016-17 to 2021-22 is now estimated at $127.8 billion, a snick better than the aggregate deficit of $129.5 billion set out in November.
- The debt-to-GDP ratio moves ever so slightly higher, from 31.5% in the outgoing year to 31.6% in each of the coming two years, ending up a bit below 31% by 2021-22. That might not be the lowest ratio amongst the exclusive 'AAA'-rated sovereign club, but is reflective of a federal government with good long-term fiscal sustainability.
- There were no major tax changes and no change to capital gains treatment, no move on asset sales or airport privatizations, and a bit more information on the Canada Infrastructure Bank.
- There are a lot of bonds to auction in the year ahead—a record $142 billion in fact. That would see the debt stock grow by $39 billion. But by and large, the borrowing program effectively extends the current quarterly run-rate of bond supply/operations. The bulk of supply and 32 of 44 planned auctions will be in the 2-, 3- and 5-year sectors. There is an extra 30-year nominal bond auction thrown in for good measure and two switch buybacks planned out the curve. Ultra-longs could be considered if conditions are favourable.
- The national economic forecast looks a fair bit brighter today, if still uncertain. The private sector consensus (taken back in December) saw Canadian real GDP growing at 1.9% this year and 2.0% the year after. Given the strength of recent data, it's reasonable to assume that some forecasters are boosting expectations for 2017 growth relative to what they were thinking in December. Meanwhile, the anticipated level of nominal GDP is really little changed vs last fall's economic update, a welcome change from the write-downs in the past two budgets.

Staying on message whilst biding time in budget #2

Justin Trudeau's federal Liberal government used its first budget, in March 2016, to firmly establish a number of core priorities, including a clear focus on growing the middle class. At that time, a move to provide fiscal stimulus, alongside a notably weaker economic backdrop, resulted in a dramatic recasting of the federal government's finances—read ample budgetary red ink and a notable increase in the federal debt.

While it wouldn't be accurate to term this a measure-less budget—there were plenty of policy pronouncements after all—new spending commitments and tax changes were comparatively light this time around. Case in point, the net fiscal impact of new measures in budget 2017 is effectively nil over the coming two fiscal years, after accounting for funds in the existing framework and other offsets. That compares to $25 billion of new measures over the corresponding two year period that were rolled out to much fanfare in last year's budget. Moreover, the economy, while not necessarily the picture of health nor sporting the most sustainable growth mix, is no longer on life support. So with fiscal investments much more modest and the economy no longer faltering, overall changes in the deficit profile and debt burden (relative to prior guidance) look today more like tweaks, as opposed to the wholesale budgetary re-write delivered a year ago.

When it comes to core policy priorities, the government very much stayed on message, reiterating a goal of inclusive growth—no surprise there. (The title of budget plan, "building a strong middle class", is nearly identical to last year's version.) If there are notional themes to this second Liberal budget, they centre on innovation, skills development, community development and gender-related issues.

Make no mistake, there's also a certain "wait and see" element to this budget, necessitated by the intense uncertainty around the future direction of US tax and trade policy under a new American administration. We're waiting for clarity on (a) prospective US corporate and personal tax reforms; (b) a potentially related US border adjustment tax; and (c) the scope and timing of NAFTA renegotiations. These are vital concerns for Canada, having the potential to substantially recast our nation's relative competitiveness. So we view it as entirely appropriate to wait for the strategic direction of the world's largest economy and our overwhelmingly largest trading partner to be set. Thankfully, there will be future opportunities for Ottawa and other affected levels of government in Canada to react once the policy clouds part in Washington, whether that's in fall fiscal updates, future budgets or on a more *ad hoc* basis.

The evolving economic backdrop

What a difference a year makes. Last March, when a still-fresh Liberal administration brought down its inaugural budget, the economic climate was fairly dreary and GDP growth (at least nationally) was stuck in the slow lane. But the national economic forecast looks a fair bit brighter today, if still uncertain. Energy sector disinvestment is running its course, while domestic demand has proven resilient (perhaps surprisingly so). For those inclined to scour the high-frequency data, there have been a bevy of positive surprises of late, and the budget lauds recent employment gains. The external backdrop is firmer too, keyed by a pick-up in the vital US market. Overall, global financial conditions are viewed as supportive of growth. We concur.

The budget cites a private sector consensus (taken back in December) which at that time saw Canadian real GDP growing at 1.9% this year and 2.0% the year after. That's a non-trivial upturn relative to the barely 1% pace averaged over 2015-2016. Moreover, given the strength of recent data, it's reasonable to assume that some forecasters are boosting expectations for 2017 growth relative to what they were thinking in December. We certainly have. Looking further out, real GDP is slated to grow at an average annual clip of 1.7%/year from 2019 to 2021, capturing (in part) the slower labour force growth that goes hand in hand with an ageing population.

Budget analysts are duty bound to inform that, when it comes to the all-important issue of top-line revenue growth, it's the profile of *nominal* GDP that really moves the needle. On that score, consensus expectations (again, taken back in December) saw nominal output expanding by roughly 4% this year and next—double last year's pace.

Look all the way out to 2021, and the anticipated level of nominal GDP is really little changed vs last fall's economic update. That's a welcome change from the last two budgets, which were forced to deliver serious write-downs in nominal GDP due to lower commodity prices. We caution, however, that you shouldn't really hold your breath when it comes to the forecasting community's ability to accurately predict future GDP growth or interest rates for that matter.

While we're on the subject, this budget (as in years' past), builds in a steadily rising interest rate environment. The yield on the 10-year GoC bond is expected to average 1.6% in 2017; tens were trading a snick below 1.7% this morning. Ten-year bonds are expected to yield 2.1% next calendar year, marching steadily up to 3% by decade's end. We might not be worried about a near-term interest rate hike from the Bank of Canada, but the overall pace of interest rate normalization has nonetheless accelerated relative to the fall statement. As for exchange rates, the Canadian dollar's prospects have been marked lower vs prior thinking. The

loonie is pegged at 74.5 cents US for 2017, followed by gradual appreciation towards 80 cents by 2020.

Fiscal tweaks rather than a wholesale re-write

If last year's budget fundamentally reset the fiscal bar, then 2017's version is more an exercise in fiscal fine-tuning.

In light of the above-noted economic backdrop, just what does Ottawa's bottom line now look like? Having dipped back into a deficit in 2015-16, Ottawa's red ink started to flow in earnest during fiscal 2016-17. A deficit of $23.0 billion is now estimated for the outgoing fiscal year, equivalent to 1.1% of GDP. Note that the 2016-17 budget balance incorporates $1.2 billion in new measures, including a $900 million placeholder for items not yet announced but likely to receive Cabinet approval and/or funding for "national security, commercial sensitivity and litigation issues". Stay tuned.

Somewhat larger deficits are projected over the coming two years. The budget envisions a $28.5 billion deficit for 2017-18, amounting to 1.4% of GDP. That's to be followed by a $27.4 billion shortfall in 2018-19 (1.2% of GDP). As noted, the net fiscal impact of policy decisions taken since the fall statement are fairly negligible over that two-year window, as Ottawa foresees an offset from funds within the existing framework or from projected revenues. Once again, deficits extend through the life of the medium-term fiscal framework (i.e., out till 2021-22). Refer to the table on page 7 for a summary statement of transactions.

How does the new deficit profile stack up to prior forecasts? The 2016-17 balance is actually a bit better than the $25.1 billion shortfall telegraphed in November, capturing (among other things) higher corporate and non-resident income tax revenue, pushing back the excise tax reduction linked to the Canada-EU trade agreement and the TPP, lower direct spending than planned and a lighter interest bill.

For 2017-18 and beyond, the deficits might appear larger than those laid down in the fall, but there's an important caveat. Whereas fall forecasts *did not* incorporate prudence, today's bottom line figures explicitly build in a $3 billion "adjustment for risk" in each of the coming five fiscal years. Based on official fiscal sensitivities, $3 billion is sufficient to cover a roughly 0.6%-pt miss in real GDP growth.

Make no mistake, we applaud the move to incorporate this fiscal buffer and likewise cheer the improved transparency of budgetary prudence; rather than indirect prudence in the form of a below-consensus nominal GDP profile, there's an explicit line item in the summary budget tables. Nonetheless, the flip-flopping on prudence means one needs to be careful when comparing budget figures from one set of forecasts to another. Control for prudence and you'll find that the *underlying* deficit tallies in budget 2017 are remarkably similar to those presented in November. All told, the cumulative underlying budget shortfall for the six year period covering 2016-17 to 2021-22 is now estimated at $127.8 billion, a snick *better* than the aggregate deficit of $129.5 billion set out in November. By any objective yardstick, the average budgetary adjustment of +$0.3 billion/year vs the fall profile is exceptionally modest for a $2 trillion national economy and a level of government that currently spends $300 billion a year.

What an innovation/skills/gender-based budget looks like

Having laid out the high level fiscal tallies, let's get into some of the new measures. More specifically, what does Ottawa's innovation and skills agenda look like? Again, the overall cost of new budget measures isn't exactly monumental, but the sheer number of initiatives is striking.

That includes additional funding for Labour Market Transfer Agreements, provided to the provinces/territories for skills training and return-to-work programs. In general, there's an emphasis on better aligning skills training programs and EI supports with the needs of women and other underrepresented groups. Student grants are being extended, including to those with dependent children and part-time students. A three-year pilot project is focused on adults returning to school, as well as less restrictive EI rules for unemployed workers that return to school or receive training. There's more generous/flexible EI treatment for caregivers and parents, and a new, income-tested caregiver tax credit too. Following an Advisory Council on Economic Growth recommendation, Ottawa is setting up a new organization focused on skills development/measurement. An existing Youth Employment Strategy received additional funding.

Building on previously announced initiatives to enhance immigration systems, the government will amend the processing of economic immigrants to make it more responsive to labour market demands, alongside commitments to support the continuation of the Temporary Foreign Workers Program. Innovation Canada is being established, tasked with coordinating/simplifying supports for innovators. Nearly $1 billion over five years is allocated from previously announced commitments to support a small number of "superclusters", where the potential to drive future growth is deemed greatest. Then there's a $1.26 billion five-year Strategic Innovation Fund designed to consolidate a series of existing funds/programs. There was $400 million in cash over three years for a new Venture Capital Catalyst Initiative, which builds on private sector investments. Funding for a tourism promotion marketing organization was made permanent.

On trade and investment, the budget announced that the net benefit threshold for reviewing foreign investments will be increased to $1 billion, two years earlier than planned. Separately, the budget notes that a new Canadian Free Trade Agreement is slated to enter into force in 2017. In support of the resource sector, the government has extended a mineral exploration tax credit by an additional year and is providing Alberta with a one-time $30 million payment to support the provincial economy. Financial support to clean tech was enhanced, while $400 million was invested in a fund for commercializing clean technologies.

That's by no means it, but represents a sample of the many initiatives outlined in budget 2017. Again, we'd note that the *net* cost to government from these many new programs/investments ends up fairly limited. Consider that over six years, the gross cost of new investments amounts to a seemingly notable $31.8 billion, but the net fiscal impact is just $4.8 billion after stripping out funds in the existing fiscal framework and other adjustments, including the extra revenue to be gained via "tax fairness" initiatives. A lot of that tax fairness revenue comes via cracking down on tax evasion/avoidance and/or through closure of certain tax loopholes. An upcoming paper will examine options for dealing with high-income individuals who employ tax planning strategies using private corporations. The public transit tax credit will be nuked, as of July 1st. The bank resolution regime is being enhanced, with OSFI granted more power as it relates to systemically important banks.

Fleshing out infrastructure plans

The budget also provided a few extra details on the new Canada Infrastructure Bank, building on the fall statement, which outlined at a high-level the mandate, governance structure and financial tools at the Bank's disposal. The budget emphasizes accelerated implementation of the CIB, where enabling legislation is soon to be proposed. The goal is to have the Bank operational in late 2017. The CIB will seek to work with lower levels of government and Statistics Canada to develop better data on infrastructure demand/usage, with finer details of this initiative to come.

The CIB is one aspect of a large-scale infrastructure strategy. And while budget 2016 and the fall statement set out the level of support, budget 2017 does provide some finer detail on public transit investment, and green infrastructure and social infrastructure.

If there's a criticism around infrastructure stimulus, it's in the apparent lag in getting the money into the economy. While the budget acknowledges that the infrastructure component is proceeding slower than other aspects of the fiscal stimulus plan, the overall boost to real economic activity in year one of stimulus implementation "remains broadly in line with expectations at the time of the [2016] budget". More specifically, Ottawa sees the stimulus provided in last year's budget adding 0.4% to real GDP growth in year one, down a touch from the 0.5% boost telegraphed a year ago.

Additional budget Q&A

As always, the budget puts to rest rabid speculation around a number of prospective tax changes, spending commitments, asset sales and a variety of other issues garnering media/investor attention in recent days and weeks. Here, we offer a high-level/rapid-fire look at certain elements of the budget plan:

Did the budget increase taxation of capital gains? No. While some others were content to rattle investor nerves with the spectre of an increase in the capital gains inclusion rate, we at National Bank viewed a move on capital gains taxation as unlikely. So we applaud and agree with the government's decision to leave capital gains taxation unchanged.

What about those boutique tax credits the former administration favoured? A number, you'll recall, were nuked in last year's budget and a few more fell by the wayside today. As noted above, the public transit tax credit will soon be a thing of the past.

Any change in the small business tax rate? No. Canada's small/independent businesses lamented the Liberal government's decision to cancel planned reductions in the small business tax rate in the 2016 budget. And for those holding out hope that the government might reverse itself and re-commit to small business tax relief, the 2017 budget failed to deliver. The small business tax rate remains at 10.5%. Of course, as outlined in detail above, the budget rolled out a number of initiatives designed to support business sector growth, venture capital and innovation.

Is the government privatizing airports and undertaking other asset sales? No, or at least not yet. There's been much talk about "unlocking value" by selling equity stakes in some of the country's largest airports. The federal government commissioned a global investment bank to advise on airport privatization strategies after all. And while you might not to rule asset sales out, they weren't a feature of the 2017 federal budget.

Was there additional action to tame housing? Nothing new. Of course, the federal government has, over the years, introduced a series of measures designed to becalm a hot housing market and limit federal government exposure to elevated home prices/record household indebtedness. But as expected, the 2017 federal budget took no further action. One can't really say that we have a national housing issue. At this point, it's the Ontario housing market where risks appear most acute. As such, we've advocated for Ontario to follow British Columbia's lead in adopting a foreign property transfer tax, alongside other potential measures designed to dampen demand/bolster supply in what is clearly an unbalanced market. In the lead up

to the budget, Ontario sought a federal capital gains tax on proceeds from home flipping. But having taken no further action, the feds are effectively putting the proverbial ball in Ontario's court when it comes to macro prudential housing policies. That doesn't mean the federal government won't be following the situation closely, and it's fair to say that household indebtedness and risks tied to overheated housing risks remain top of mind at the Bank of Canada. There was, however, a new National Housing Fund worth $5 billion over 11 years, to encourage investment in housing, expand direct lending for rental units/affordable housing, among other things.

What's happening to federal transfers? Growth in transfers to others levels of government is tilting lower, as the Canada Health Transfer moves to a new formula, based on the 3-year moving average of nominal GDP growth. Provinces have generally called for greater federal support for health care, and in a number of cases, Ottawa has struck bilateral deals with provinces and territories to provide incremental funding.

Debt ratio an appropriate fiscal anchor

With the underlying deficit profile not much changed from the fall statement, the federal debt profile has likewise been only tweaked vs November forecasts. Although the federal debt will march higher in the coming five years, rising from $637 billion in 2016-17 to $757 billion by 2021-22, growth in the economy would see the important debt-to-GDP ratio gradually edge lower in the out years of the fiscal plan. More specifically, that key metric moves ever so slightly higher, from 31.5% in the outgoing year to 31.6% in each of the coming two years, ending up a bit below 31% by 2021-22. That might not be the lowest ratio amongst the exclusive 'AAA'-rated sovereign club, but is reflective of a federal government with good long-term fiscal sustainability.

So while there are some who would prefer to see the federal government make a firm commitment to medium-term deficit elimination, count us in the camp that views the debt-to-GDP ratio as a highly appropriate fiscal anchor. Of course, there's ample debt at lower levels of government, notably at the provincial level in Canada. And we don't want to trivialize the fiscal pressure that an aging population will place on provinces. But here again, we take comfort in Canada's fairly enviable general government *net* debt burden. The interest bite is another way to measure debt affordability and on that score, Ottawa has ample flexibility. Debt charges are set to consume barely 8% of revenue in 2017-18.

For bond investors, the *Debt Management Strategy*—presented as an annex to the budget proper—always provides compelling reading. It's here where you'll find details on how the government intends to fund a net financial requirement of almost $40 billion for the 2017-18 fiscal year, where it prefers to steer the outstanding stock of t-bills, and where on the curve a relatively large gross bond program will be placed.

Here are the highlights:

- The treasury bill stock will remain little changed over the coming year, finishing 2017-18 at $131 billion or just $1 billion higher than 2016-17. That's seen as large enough to promote market liquidity without taking on too much rollover risk. The use of cash management bills, deemed an efficient tool, will continue;
- The gross bond program amounts to a record $142 billion, up from the outgoing year's $135 billion and well north of the ~$93 billion averaged during the preceding three years. After controlling for maturities and buybacks, the stock of outstanding Canadas is due to grow almost $40 billion, again a step up from prior years. Net issuance amounted to $33 billion last fiscal year;
- The mix of the federal government's bond supply will be broadly similar to last fiscal year, with only a few tweaks. Notably, there are no changes in the maturity dates or benchmark target range sizes for any of the benchmark terms. The vast majority of supply will continue to be steered to 2s, 3s and 5s, with those three tenors accounting for 32 of the 44 planned auctions in the coming fiscal year. 2017-18 will include a full year's worth of 3-year supply;
- So the auction profile is pretty much steady as she goes, mimicking in large measure the quarterly pattern in place since the 3-year bond was reintroduced last fiscal year. Nor are there changes planned in the number of 10-year auctions; there will again be five operations in this sector. As for nominal long bonds, 2017-18 will see one additional operation, bringing to three the total number of auctions planned. That's in additional to the standard, quarterly real return bond that's been a consistent feature of the domestic debt strategy for years;
- Based on existing auction sizes and the stated distribution of auctions by tenor, we estimate that nearly $120 billion of GoC bonds will be auctioned in the 2- to 5-year part of the curve (or ~83% of gross bond supply);
- All told, the medium-term debt strategy sees the average term to maturity of the government's domestic market debt holding fairly stable at roughly 5.5 to 6.5 years;

- Ultra-longs remain on the radar screen and could be utilized on a "tactical" basis should demand/market conditions prove supportive;
- There are two bond buyback operations planned, both focused on bonds originally issued in the 30-year sector. That, together with the extra 30-year nominal auction, should supply a bit more liquidity for on-the-run longs. There will also be weekly cash management bond buyback operations, where the process has been recently modified on a trial basis to, in some cases, increase the total buyback amount;
- Say goodbye to Canada Savings Bonds, which are being phased out, given that retail debt is no longer cost effective nor a preferred investment for many Canadians;
- Finally, the government is implementing a new framework that requires Parliamentary approval of government borrowing, in an effort to bolster transparency/accountability.

Make no mistake then, there are a lot of bonds to auction in the year ahead—a record amount in fact. And given projected net funding needs and a large stock of shorter-dated bonds to roll-over, there's unlikely to be a let up in Canada supply anytime soon. But more than anything, the 2017-18 borrowing program largely extends the current quarterly run-rate of bond supply/operations, which we view as having been well digested.

Moreover, with an already low federal debt burden basically moving sideways in the near term and a bit lower in the out years of the plan, we don't see a whole lot to make credit rating agencies or bond investors nervous. As such, we continue to anticipate solid demand for Canadian sovereign debt. Notwithstanding an extra long bond auction, supply will continue to be skewed down the curve, which limits any fears of crowding out in the longer-end of the curve where provincials in particular like to play. Lest you get too critical of Ottawa's unwillingness to steer bond supply to the long-end of the spectrum, note that debt management should be viewed holistically. Considering the stable bill stock, the weighted average term of domestic market debt isn't really shrinking. So we generally view the government as having struck not a bad balance between cost effective debt management, market liquidity and refi risk.

Warren Lovely

Federal – 2017 Budget

NATIONAL BANK OF CANADA FINANCIAL MARKETS

Summary Statement of Transactions
billions of dollars

	2015–2016	Projection 2016–2017	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022
Budgetary revenues	**295.5**	**292.1**	**304.7**	**315.6**	**327.7**	**340.3**	**356.0**
Program expenses	270.8	290.9	305.4	313.7	319.8	328.6	338.5
Public debt charges	25.6	24.3	24.7	26.3	28.3	30.4	33.3
Total expenses	**296.4**	**315.1**	**330.2**	**340.0**	**348.1**	**359.0**	**371.8**
Adjustment for risk			-3.0	-3.0	-3.0	-3.0	-3.0
Budgetary balance	**-1.0**	**-23.0**	**-28.5**	**-27.4**	**-23.4**	**-21.7**	**-18.8**
Financial position							
Total liabilities	1,059.6	1,088.3	1,127.5	1,165.0	1,199.1	1,233.6	1,266.8
Total financial assets[1]	365.8	372.0	381.6	390.7	400.5	412.8	427.0
Net debt	693.8	716.3	745.9	774.4	798.6	820.8	839.8
Non-financial assets	77.8	79.3	80.4	81.4	82.3	82.7	82.9
Federal debt[1]	**616.0**	**637.1**	**665.5**	**692.9**	**716.3**	**738.1**	**756.9**
Per cent of GDP							
Budgetary revenues	14.9	14.4	14.4	14.4	14.4	14.4	14.5
Program expenses	13.6	14.4	14.5	14.3	14.1	13.9	13.8
Public debt charges	1.3	1.2	1.2	1.2	1.2	1.3	1.4
Budgetary balance	0.0	-1.1	-1.4	-1.2	-1.0	-0.9	-0.8
Federal debt	31.0	31.5	31.6	31.6	31.5	31.3	30.9

Note: Totals may not add due to rounding.

[1] The projected level of federal debt for 2016–17 includes an estimate of other comprehensive income of $2.0 billion.

Federal – 2017 Budget

NATIONAL BANK OF CANADA FINANCIAL MARKETS

Economics and Strategy

Montreal Office
514-879-2529

Stéfane Marion
Chief Economist and Strategist
stefane.marion@nbc.ca

Paul-André Pinsonnault
Senior Fixed Income Economist
paulandre.pinsonnault@nbc.ca

Krishen Rangasamy
Senior Economist
krishen.rangasamy@nbc.ca

Marc Pinsonneault
Senior Economist
marc.pinsonneault@nbc.ca

Matthieu Arseneau
Senior Economist
matthieu.arseneau@nbc.ca

Angelo Katsoras
Geopolitical Analyst
angelo.katsoras@nbc.ca

Kyle Dahms
Economist
kyle.dahms@nbc.ca

Toronto Office
416-869-8598

Warren Lovely
MD, Public Sector Research and Strategy
warren.lovely@nbc.ca

General – National Bank Financial (NBF) is an indirect wholly owned subsidiary of National Bank of Canada. National Bank of Canada is a public company listed on Canadian stock exchanges.

The particulars contained herein were obtained from sources which we believe to be reliable but are not guaranteed by us and may be incomplete. The opinions expressed are based upon our 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.

Research Analysts – The Research Analyst(s) who prepare these reports certify that their respective report accurately reflects his or her personal opinion and that no part of his/her compensation was, is, or will be directly or indirectly related to the specific recommendations or views as to the securities or companies.

NBF compensates its Research Analysts from a variety of sources. The Research Department is a cost centre and is funded by the business activities of NBF including, Institutional Equity Sales and Trading, Retail Sales, the correspondent clearing business, and Corporate and Investment Banking. Since the revenues from these businesses vary, the funds for research compensation vary. No one business line has a greater influence than any other for Research Analyst compensation.

Canadian Residents – In respect of the distribution of this report in Canada, NBF accepts responsibility for its contents. To make further inquiry related to this report, Canadian residents should contact their NBF professional representative. To effect any transaction, Canadian residents should contact their NBF Investment advisor.

U.S. Residents – With respect to the distribution of this report in the United States, National Bank of Canada Financial Inc. (NBCFI) is regulated by the Financial Industry Regulatory Authority (FINRA) and a member of the Securities Investor Protection Corporation (SIPC). This report has been prepared in whole or in part by, research analysts employed by non-US affiliates of NBCFI that are not registered as broker/dealers in the US. These non-US research analysts are not registered as associated persons of NBCFI and are not licensed or qualified as research analysts with FINRA or any other US regulatory authority and, accordingly, may not be subject (among other things) to FINRA restrictions regarding communications by a research analyst with the subject company, public appearances by research analysts and trading securities held a research analyst account.

All of the views expressed in this research report accurately reflect the research analysts' personal views regarding any and all of the subject securities or issuers. No part of the analysts' compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this research report. The analyst responsible for the production of this report certifies that the views expressed herein reflect his or her accurate personal and technical judgment at the moment of publication. Because the views of analysts may differ, members of the National Bank Financial Group may have or may in the future issue reports that are inconsistent with this report, or that reach conclusions different from those in this report. To make further inquiry related to this report, United States residents should contact their NBCFI registered representative.

UK Residents – In respect of the distribution of this report to UK residents, National Bank Financial Inc. has approved the contents (including, where necessary, for the purposes of Section 21(1) of the Financial Services and Markets Act 2000). National Bank Financial Inc. 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 thereto. The value of investments can go down as well as up. Past performance will not necessarily be repeated in the future. The investments contained in this report are not available to retail customers. This report does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for the securities described herein nor shall it or any part of it form the basis of or be relied on in connection with any contract or commitment whatsoever.

This information is only for distribution to Eligible Counterparties and Professional Clients in the United Kingdom within the meaning of the rules of the Financial Conduct Authority. National Bank Financial Inc. is authorised and regulated by the Financial Conduct Authority and has its registered office at 71 Fenchurch Street, London, EC3M 4HD.

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

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) regulated activity, 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 NBF, 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 National Bank Financial.