Focus

Feature Article

Post-Pandemic Economy: Building a Bridge

Our Thoughts

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The Cruellest Month, the Coolest Market

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Even amid a wave of increasingly horrendous economic data globally, financial markets generally strengthened further, building on last week's powerhouse gains. This marked the third equity market advance in the past four weeks, with the TSX quietly headed for a fourth consecutive weekly gain. Investors found solace in preliminary plans to slightly loosen restrictions in some major economies, as well as early hopes for an anti-viral drug. Corporate bonds also rallied hard, riding the wave from last Thursday's massive Fed buying plans, with even the Bank of Canada dipping its toe into the same water. The move wasn't completely risk-on this week, as bond yields fell heavily, oil prices sagged to 18-year lows, and gold remained well bid.

This week's further upswing in the S&P 500 brings it back to levels last seen in early March, or well before the North American economy began to shut down in earnest. The index is now up about 27% from the March lows, and now down "only" 12% from end-2019 levels. And, the tech-laden Nasdaq is off just 4% YTD. While we certainly wouldn't rank as pessimists, and the March lows may not be an appropriate metric, **the ultra-rapid V-shaped snapback in equities just doesn't jibe with the coming economic pain and/or the lingering uncertainty as to how long that pain will last**. And the precise measure of that pain is now starting to come into much clearer view. This week alone brought the following:

- **China** reported a staggering 9.8% plunge in Q1 GDP; at an annualized rate, that's almost a 34% decline, and left GDP down 6.8% from year-ago levels (versus a 6.0% y/y advance in Q4). While industrial production managed to dip only 1.1% y/y in March, retail sales were still down a massive 15.8% y/y that same month.
- **The U.S.** also saw deep dives in retail sales (-8.7%) and industrial production (-5.4%) last month, while another jobless claims jump lifted the four-week total above 20 million people (unadjusted for seasonality; that's a story for another week). Even housing was savaged, with starts plunging 22% and builder sentiment collapsing.
- Statistics **Canada** reported a whopping 9% drop in March GDP in a very early estimate, pointing to a 2.6% decline in Q1 (or 10% annualized). This was a somewhat deeper hit in the first stage of shutdown than most had assumed, and triggered another wave of forecast downgrades (see below).
- The **IMF** released a bluntly dour global outlook in its semi-annual report, calling for a 3% decline in world GDP this year, by far the deepest setback in the post-war era.

While equity investors seem to be willing, for now, to look past this deep chasm, bonds are being driven by the damage the downturn will leave behind. Yields are still above their panic lows hit way back on March 9, but are now flirting with the lowest level since then. Waves of central bank buying are helping contain yields, even in the face of a looming tsunami of government issuance. For example, Fed holdings of Treasury notes and bonds have vaulted $1.16 trillion in the past month alone (to $3.19 trillion). Also helping to keep yields deeply under wraps is fast-falling inflation expectations, with rock-bottom oil prices applying further weight. GoC yields have stayed in line with Treasuries, and the important 5-year yield hit a new low of just near 0.4% on Friday (down 125 bps this year).

Forecast Update: With that set of new information in hand as a background, we are **adjusting our forecasts for 2020 this week**. In summary:

- **Global growth** is now expected to fall 2.8% this year (from down 0.8%), compared to last year's revised 2.9% advance, and worse than the deep decline in 2009. We took a heavier axe to North America, Europe and China in particular this week. After a 6.8% y/y drop in Q1 GDP, we now look for growth of just 1.0% in China this year (cut from 3.0%), but an 8% snapback in 2021.
- We also clipped our **oil price assumption** for this year, as prices fell further despite the OPEC+ agreement, and look for an average of $30 for WTI this year (versus $35 previously) and $42.50 next (from $45). WCS remains desperately weak at below $10, putting even more pressure on Canada.
- **U.S. GDP** is now expected to contract 5.0% this year (versus -4.0% previously). For perspective, that would be twice as deep a decline as the previously worst year for the U.S. economy in the post-1950 era (2009 saw a 2.5% drop). Output now appears to have dropped further than estimated in Q1, and Q2 still looks on pace for a steep fall (pegged at 40% annualized). We continue to expect a strong rebound in H2, and look for a robust advance for all of 2021 (perhaps as much as 6% growth).
- **Canada's GDP growth** is being cut to -6.0% this year, down from the prior call of -4.5% (and versus a 1.6% rise for all of last year). That would nearly double the biggest drop in modern times; the 3.2% setback in 1982. The preliminary estimate of roughly a 10% annualized fall in Q1 was a deeper slice than we had estimated. And, as Governor Poloz pointed out this week, Canada will be hit harder due to the slump in commodity prices (especially oil), and also a still-milder boost from fiscal stimulus. Here, too, we expect a big Q2 contraction (down 45%), but also a big rebound in H2.
- **The Canadian dollar** slipped somewhat this week, but remained resilient at around $1.40 (or just above 71 cents). Even with its recent steady performance, we see the currency coming under some further pressure in the months ahead, with a possible test of the $1.45 level (or below 69 cents). We look for the loonie to settle down along with other markets by the second half, but it will be challenged to get back above the 75-cent level even in 2021.

Again, we are only **building in the news on closures** as they become official and not pre-guessing those steps. And even though there was some midly encouraging news on economies re-opening this week, the reality is that closures were also extended in many key regions as well. Given the tentative plans to slowly open up, or at least slightly relax some of the toughest closure measures in some key G7 economies, the forecasts should stabilize for a spell, until we get new information on the loosening timelines. We are still looking for a bigger drop in Q2 than most, and a bigger H2 bounce than others, and appear to be more upbeat on 2021 than the consensus. All forecasters are still, no doubt, heavily challenged by the unique nature of this downturn.

Perhaps the clearest example of that last point on the challenge for forecasters was **the Bank of Canada's decision this week to omit an official economic projection**. Typically, the quarterly Monetary Policy Report is the Bank's forum for unveiling its official view on the economy. This time, it effectively threw up its hands in the face of the massive uncertainties overhanging the outlook, and said any attempt to put a number on it was an exercise in "*false precision*". Still, the MPR contained two broad scenarios, which can be thought of as a soft V for the "optimistic" view, and a lazy U for the downside outlook.

We suspect that another reason the Bank was cautious about producing a point forecast is that it didn't care to contribute to the negative economic headlines. Grinding through the arithmetic of its scenarios points to something close to our estimate of a 6% annual drop in GDP this year, and that's based on its positive view. However, as Bank officials suggested, there are many potential outcomes for the economy, both better and worse. And, at the very least, there were some indications this week that the better scenarios still have a fighting chance.

The other big news from the Bank this week was its deeper dive into the QE waters, even if it was loathe to call it by that name. **The BoC unveiled new programs to buy both provincial bonds** (up to $50 billion) **and investment grade corporate bonds** ($10 billion). While both are a fraction of the planned purchases of GoCs, we estimate that this new step will fund a large share of the estimated increase in provincial budget deficits this year, not to put too fine a point on things.

U.S. Economy... Worst Month Ever

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Data releases this week revealed further what the employment report heralded two weeks ago—that March was a very bad month for the U.S. economy as businesses and entire industries closed or pared operations sharply in the wake of the physical and social distancing rules. Given that March didn't start out this way, and any relaxation of the rules or ramp up of production appear to be a matter for next month (at the earliest), April is poised to be worse than March. There are no official monthly GDP data available, but with the quarterly version dating back to 1947 and March-April performance casting Q2 as the largest contraction in this history, suffice it to say that **April will probably be among the worst months ever for the U.S. economy**.

As for this week's data run:

- **Retail sales** plummeted 8.7% in March, the most on record. It also didn't help that lower prices reduced gasoline retailers' receipts, on top of people driving less. Interestingly, the plummet was more than twice as large after subtracting the three sectors (usually accounting for around 30% of the total) that posted the largest gains since at least 1992 (when such detailed data began). Food & beverage stores, health & personal care stores along with general merchandise stores all posted record increases reflecting the stockpiling and hoarding of essential food and household items. With the panic buying having been satiated and physical distancing dampening the throughput, April's receipts for these stores are going to provide much less of an offset.

- In March, **industrial production** dropped 5.4%, the largest loss in more than 74 years. Driving manufacturers, the automotive sector was one of the industries that shutdown completely, with output plummeting 28% and that's accounting for the vehicle assemblies and parts production that occurred during the first half of the month. For April already, the regional **factory metrics from the New York and Philly Feds** both posted record reductions. Meanwhile, collapsing oil prices pared output in the mining sector, and the combination of reduced industrial demand and warmer-than-usual weather clipped utilities output. This resulted in the **capacity utilization rate** falling a record 4.3 ppts to 72.7%, with the Great Recession's record low of 66.7% looming.

- **Housing starts** fell 22.3% in March, their largest loss in 36 years and this, too, accounts for the building commenced during the first part of the month. The level of starts was still 1.216 million units (annualized) and is going to fall much further, but perhaps not to the record low of 478,000 during the Great Recession. Among homebuilders, the **Housing Market Index** plummeted a record 42 points to 30 in April. And, **new mortgage applications** are already down almost 27% from their March average through the first half of April.
- Finally, **initial claims** for unemployment insurance benefits rocketed by 22 million in the four weeks ended April 11. Needless to say, this is the most for any four weeks on record—and by a factor of more than eight! The latest week is also the survey period for April's employment report. Recall that the March report already showed payroll jobs down by 701,000 and household-surveyed employment down by a (since 1948) record of 3.0 million. The jobless rate spiked 0.9 ppts to 4.4% and is poised to top 1982's record high of 10.8% this month—likely by at least a couple tenths.

In the absence of a monthly GDP metric, the Conference Board's **coincident index** is a useful proxy (its components are used by the NBER in dating business cycles). This week, it was reported down 0.9% in March which, apart from a tax-change-induced anomaly in January 2013, is the worst reading since the Great Recession. And, it's going to get worse… much worse… the **leading index** plummeted a record 6.7%. **In March and April, the U.S. economy went away. We'll see whether it comes back in May.**

BoC Filling the Gap

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The **Bank of Canada** unveiled yet another asset buying program at this week's policy meeting. In addition to buying at least $5 bln of Government of Canada bonds and $500 mln in Canada Mortgage Bonds weekly, **the BoC will be purchasing $50 bln in provincial bonds and $10 bln in corporate bonds over the next year** (likely starting in May). Furthermore, the BoC **increased its buying at Canada treasury bill auctions** to a maximum of 40% from a maximum of 25% (matching the ceiling on its provincial t-bill buying). The market response was immediate, with provincial and corporate spreads narrowing sharply.

The totals for each program look as though they were chosen for the BoC to be buying most, if not all, of the additional debt issuance needed to cover significantly wider budget deficits due to COVID. The GoC buying would total at least $260 bln over one year; adding in t-bills will push that figure up tens of billions further. That should cover this year's federal deficit. For the provinces, there's more uncertainty, but $50 bln will cover a big chunk of their additional deficits. It's not technically MMT, but it's not far from it.

What's left for the BoC? While Governor Poloz rightly shot down yield curve control at this juncture, if yields were to rise without an attendant improvement in the outlook, it would be a good option. Credit easing was again noted by Sr. Dep. Gov. Wilkins, with a funding for lending scheme discussed. The BoC can also simply increase the size of current programs.

Key Takeaway: This was Governor Poloz' final officially scheduled monetary policy announcement and he delivered another round of stimulus. His primary legacy will likely be leading Canada's first foray into QE. It will be up to whoever comes next to find a way out of that maze.

Canadian Housing: Buyers Staying Home; Will Sellers?

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Canada's existing home sales plunged 14.3% in March due to the distancing measures to contain the coronavirus and the resulting epic economic collapse. The **decline sped up in recent weeks**, with the realtors' association reporting that early April sales were half normal levels, presaging a much steeper drop-off this month. For a market that looked poised to overheat this spring, at least in several major cities, the virus hit like a bucket of ice-cold water. None of the one million workers laid off in March were keen on making the biggest purchase of their lives. Sales should pick up when the containment measures are relaxed and the economy recovers this summer, with additional support from falling mortgage rates and sturdy population growth (though immigration will take a hit this year, especially non-permanent residents). However, demand in the oil-producing regions, which had turned the corner prior to the twin virus/oil shocks, will take much longer to bounce back.

While buyers are now faithfully practicing social distancing and staying in, sellers are also reluctant to see anyone trudge through their house. **New listings plunged 12.5% in March**, limiting the decline in the ratio with sales to 64%, still a good ten points above long-run norms. Several cities (Toronto, Ottawa, Halifax, Montreal, Hamilton and parts of Southwestern Ontario) were sellers' markets prior to the pandemic. Vancouver and Toronto had some of the lowest rental condo vacancy rates (at under 1%) on the continent. The current 4.3 months' supply nationwide is still about a month below long-run trends. But listings probably won't fall as much as demand in the months ahead, and vacancy rates will tilt higher. In fact, Toronto was an anomaly in March, as a smaller decline in listings (-7.5% versus -20.8% for sales) pulled the ratio back to normal levels, indicating a more balanced market. We'll see if this marks the start of an unsettling trend when the preliminary April figures are released in two weeks.

The big question, from a price perspective, is what happens to distressed sales? Do listings spike higher, as in the last recession, or do they mostly keep pace with the slide in sales, muffling the downward pressure on prices? While nationwide benchmark prices rose 6.9% y/y in March, the fastest in two years, they no doubt will soften in coming months as buyers wait on the sidelines. Toronto and Montreal posted 11% increases, while Ottawa surged 16%, but that's a reflection of the past. Substantial income-support measures by governments and mortgage deferral programs from lenders should temper forced selling. In fact, with housing starts screeching to a halt, notably in the two biggest provinces, construction delays could pressure prices higher next year, especially for condos in some major cities. This assumes that the economy gradually emerges from the lockdowns by late spring, and home sales rebound later this year. If the distancing measures remain full bore into the summer, the risk of more permanent business closures and job losses could send house prices sharply lower.

With oil prices mining two-decade lows, **housing markets in the oil-producing provinces will get hit harder and take longer to recover than in other regions**. In Alberta and Saskatchewan, the weakness in house prices in March will likely gain pace in the months ahead. Calgary, which tracks daily figures on the resale market, posted a 63% y/y drop in sales in the first half of April. New listings plunged almost as much, while active listings slid 18%, thus limiting the decline in median prices to -2.0%. Still, a deeper recession in these provinces compared with other regions suggests the recent stability in prices after a long road back from the 2015 oil-price shock is now at risk.

China: Putting Q1 Behind Us

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China's economy ground to a complete halt in Q1. Real GDP contracted for the first time since the quarterly data began in 1992, down 9.8% in the quarter, or 6.8% below year-ago levels. It is a big wake-up call in terms of how severe the coronavirus' hit to the economy was and how it will be a struggle to recover. And China won't be alone in this. **Other countries are watching and taking notes**. The National Bureau of Statistics warned that the country faced new difficulties and challenges in advancing social and economic development, and in resuming work and production.

Most of the hit took place in the first couple of months of the year, but **March didn't exactly reverse and zoom ahead**. Yes, the improvement was notable on the manufacturing side, as factories began to re-open. Industrial production rebounded, declining only 1.1% y/y in March, far better than expected and a huge turnaround from the 13.5% y/y dive in January and February. But it wasn't a full re-opening. In factories, workers continued to practice physical distancing, and they had to stop what they were doing during the day in order for areas to be cleaned and sterilized. So output was still low. But perhaps a bit more worrying was the consumer. Restaurants and shops may have re-opened, but there was clearly a lot more hesitancy to return to normal. Retail sales were much weaker than expected, falling 15.8% y/y in March, better than January and February's 20.5% y/y plunge, but not exactly a rebound. Sales of cosmetics and jewelry continued to decline, and sales at auto dealers were still down sharply (supporting an earlier report that China's passenger vehicle sales took a 48.4% y/y dive in March). The survey-based urban jobless rate came in at a still-elevated 5.9% in March, from 5.2% back in December (very little history).

Other indicators showed that it won't be a quick turnaround, with fixed asset investment, infrastructure investment, property investment, and new construction starts all still deeply below year-ago levels, With data like these, it is tough to talk about data manipulation in China. Still, the official message was optimistic. Yes, there are difficulties and challenges, but "*economic activity is being restored*" and "*China's economic rebound will continue*". Plus, Q2 will be better than Q1. Gosh, one would certainly hope so. But, lest anyone worry, officials continue to promise deepening reform and will continue to open the economy wider to spur growth. We now look for 1% growth this year, and a big bounceback in 2021 at +8.0%.

Crude Oil Outlook: Rocky Ride Still Ahead

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Crude oil prices are likely to continue struggling in the near-term, despite OPEC+'s record production cut. Simply put, **the gap between global oil demand and supply remains both large and highly uncertain**. It's also worth noting that the first phase of the OPEC+ agreement, the 9.7 million barrels per day (mb/d) cut for May and June, has not officially kicked in. This means that low-cost OPEC+ producers remain incentivized to continue pumping in the interim, especially with storage facilities rapidly filling up.

The big question continues to revolve around how much global oil demand has collapsed in response to multiple economic shutdowns. This explains why these estimates are so wide, ranging between 15-to-30 mb/d of lost demand on y/y terms for Q2. The International Energy Agency just revealed that it expects a decline of 23 mb/d (or 23% y/y), compared to its forecast of flat demand a month earlier. In any case, global oil supply is likely to continue outpacing demand by a wide margin. Though market forces (i.e., lower prices) will lead to lower non-OPEC+ production, mainly in Canada and the United States, their combined reduction (2-to-4 mb/d) won't be enough to turn the tide.

However, it's not all grey skies ahead as **OPEC+ cuts**, which are scheduled to last until April 2022, **will eventually make a difference**. Once the pandemic is contained and the global economic recovery process takes hold, the narrative around oil prices could shift from downside to upside risks. In the meantime, we have scaled back our annual average 2020 forecast for benchmark West Texas Intermediate crude to US$30/bbl from $35 to reflect the intense challenges facing the oil market in the next few months.

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

	Good News	Bad News
Canada ▪ BoC on hold; expands QE to provincial and corporate debt ▪ Ottawa increases relief measures	**Manufacturing Sales Volumes** +0.8% (Feb.) **MLS Home Prices** +6.9% y/y (Mar.)	**Nowcast Monthly Real GDP** -9.0% (Mar.); and -10% a.r. (Q1) **Existing Home Sales** -14.3% (Mar.) **Manufacturing New Orders** -0.5% (Feb.) **ADP Employment** -177,347 (Mar.)
United States ▪ Pres. Trump maps out plan to reopen economy ▪ Fed Beige Book: economy "*contracted sharply and abruptly*"	**Global Investors** bought a net $35.3 bln U.S. securities (Feb.)	**Retail Sales** -8.7% (Mar.)—record drop **Initial Claims** 5.245 mln (Apr. 11 week) **Industrial Production** -5.4% (Mar.)—and **Capacity Utilization** -4.3 ppts to 72.7% **Consumer Prices** +1.5% y/y; **Import Prices** -4.1% y/y (Mar.) **Business Inventories** -0.4% (Feb.) **Housing Starts** -22.3% to 1.216 mln a.r. (Mar.) **Building Permits** -6.8% to 1.353 mln a.r. (Mar.) **NAHB Housing Market Index** -42 pts to 30 (Apr.) **Empire State Manufacturing Survey** -18.3 pts to 31.2; **Philly Fed Index** -17.4 pts to 29.7 (Apr.)—both on an ISM-adjusted basis **Leading Index** -6.7% (Mar.)
Japan ▪ PM Abe extends state of emergency to entire nation		**Industrial Production** revised down to -0.3% (Feb.) **Tertiary Industry Index** -0.5% (Feb.)
Europe ▪ ECB President Lagarde vows *"to do everything necessary"* ▪ U.K. extends lockdown measures		**Euro Area—Industrial Production** -0.1% (Feb.)
Other ▪ IMF sees worst downturn since the Great Depression ▪ OPEC expects oil demand to drop by most in 30 years ▪ Mexico on verge of losing investment grade after Fitch cut ▪ RBI cuts 25 bps in emergency move	**China—Industrial Production** -1.1% y/y (Mar.)—but above expected **China—Aggregate Yuan Financing** 5.15 trln (Mar.)—and **New Yuan Financing** 2.85 trln **China—M2 Money Supply** +10.1% y/y (Mar.) **Australia—Employment** +5,900 (Mar.)	**China—Real GDP** -6.8% y/y (Q1) **China—Exports** -6.6% y/y; **Imports** -0.9% y/y (Mar.) **China—Retail Sales** -15.8% y/y (Mar.) **China—Fixed Asset Investment** -16.1% y/y (Mar.) **China—Foreign Direct Investment** -14.1% y/y (Mar.) **Australia—Jobless Rate** +0.1 ppts to 5.2% (Mar.) **Australia—Westpac Consumer Confidence** -17.7% (Apr.) **Australia—NAB Business Confidence** -62 pts to -66 (Mar.)

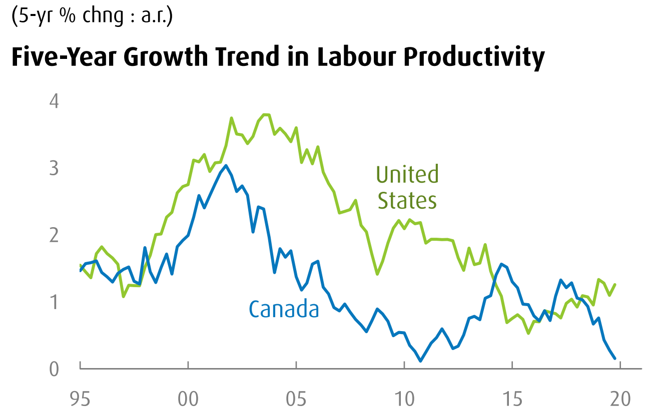
Post-Pandemic Economy: Building a Bridge

Prepared by BMO Capital Markets Economic Research

(For an in-depth version of this article, click here to read our Special Report.)

While policymakers, markets, and businesses are all still dealing with the effect and extent of the deep economic downturn, attention is turning to what the economy will look like after the storm. Much of the debate is focused around the shape of the macro recovery, with many dismissing the prospects of a V-shaped rebound. And we would readily allow that many sectors and industries face a long, grinding recovery, and some businesses may never fully return to 'normal'. While parts of the North American economy may partially open in May, there is a risk that we could be looking at 18 months of rolling shutdowns. However, just because the economy will look different and there will be some activity lost forever does not imply that this rules out a broader recovery.

Chart 1
Productivity Gap



Sources: BMO Economics, Haver Analytics

Some sectors will naturally rebound quickly as distancing measures lighten, and others could even see accelerated growth in the new circumstances. So, instead of focusing on the negatives and the downside risks—as some are wont to do—we would prefer to highlight some of the opportunities for the future, which could help support and reinforce the economic recovery on the other side of the deep chasm we are crossing.

Specifically for Canada, the nation has long struggled with weak productivity relative to its key peers, and lagged generally on the innovation front (*Chart 1*). Some of the changes that have been abruptly foisted upon businesses and workers by the shutdowns may be the spark that helps close that gap. Just one small, but illustrative, example is the rapid-fire innovations that Statistics Canada has unveiled amid the crisis, delivering detailed economic information in a much more timely basis. Even in our business, people are talking about changes made in the past month that took days or hours which, in "normal" times, may have taken months or years.

We turn below to **some sectors that may be fundamentally changed by broad developments that could unfold as a result of this unique episode**, and discuss some potential opportunities in the years ahead. One over-arching theme is that the crisis may accelerate and accentuate some trends that were developing in any event. However, it may also lead to some adjustments that may not have happened otherwise:

1

Supply-Chain Dynamics

There is a strong possibility that regulatory changes and government procurement adjustments could prompt more domestic production of medical supplies, drugs, and some resource products. From a business perspective, there will at the very least be an extensive re-examination of supply chains, and the possible shortening of such—to the benefit of manufacturing activity in North America.

As well, firms could invest in building some redundancy into systems and may look at maintaining greater stockpiles in the future, giving at least a temporary boost to **inventory accumulation**. The review of supply chains and inventory stockpiles was already under intense scrutiny in the wake of recent trade wars—the pandemic has likely accelerated and intensified those reviews.

The jarring shifts in consumer demand associated with the outbreak have also exposed weaknesses in retailers' logistics systems. This issue is particularly acute in Canada, where the retail and logistics sectors have traditionally lagged their more productive U.S. counterparts. IDC Canada found that 77% of Canadian retailers did not have a strategy for innovation in 2018. The scope for further technology investments in the retail and logistics sectors in Canada could not come at a more critical juncture, especially to meet requirements for the rapidly growing e-commerce demand and realize cost efficiencies.

2

Remote Working

They say necessity is the mother of invention. With effective remote-working capabilities now in place, many companies could discover that it's simply cheaper to maintain a significant portion of staff at home, with possibly little attendant loss in productivity. This could eventually serve up savings from forgone office space, travel expenses and overhead. About one-third of employees can work remotely at least for some time, and this ratio is closer to three-quarters for employees in professional, technical and financial services. According to Global Workplace Analytics (GWA), remote working in the U.S. has been growing about 10% per year for a decade, while the Federal Reserve estimates the share of the labour force working remotely has tripled in the past 15 years. GWA estimates the average company saves about US$11,000 for each employee that works remotely for half the year due to better productivity, less absenteeism and lower real-estate costs. It also estimates that employees can save from $2,500 to $4,000 annually on commuting and food expenses.

At the very least, this enforced "work-from-home" policy has introduced options that were never thought possible. Operating from home has drummed up demand for specialized **office equipment and furniture.** This includes home office supplies, desks, chairs, printers, laptops, tablets, and cellphones. Demand has surged for services such as **VOIP connections and greater bandwidth**. Technology is critical for effective telecommuting. We've seen a huge increase in web conferences and group chat sessions to keep conversations and discussions flowing, using a variety of now-familiar applications. As time goes on, we'll realize the limitations of some of these applications, while security will remain an issue—no one wants an uninvited guest crashing their virtual meeting.

3

E-commerce and Mobile Banking

To most retailers, the abrupt downturn in the economy feels like a depression, but not for those with a strong on-line offering. Long before COVID-19, bricks-and-mortar stores were challenged by mushrooming e-commerce. U.S. on-line retail sales grew at an average annual rate of 15% between 2012 and 2019, accounting for 11% of all retail spending last year. Many small business owners have moved their operations online during the pandemic, including fitness instructors providing remote exercise lessons and doctors diagnosing illnesses. Some may opt to continue operating online after the pandemic passes, saving rent and overhead. Self-quarantining has driven more shoppers online, which could drive a more permanent shift in consumer behaviour, notably among seniors.

In the banking sector, customers who were previously somewhat reluctant to transact online likely appreciate more of the benefits of doing so now, in terms of convenience and savings in time and money. A survey commissioned by the Canadian Bankers Association in December 2018 found that 91% of Canadians think new technologies have made banking more convenient, and three-quarters use **online and mobile banking** to conduct most of their transactions. These figures have likely only increased since then, especially so during the social distancing. As more transactions migrate online, financial institutions may restrain their physical footprints without sacrificing customer service, even as in-branch banking remains a vital method for conducting complex transactions and establishing close relationships with clients.

4

Robotics and AI

Enforced social distancing has highlighted important opportunities for further adoption of robotics and AI in the workplace. Technology is increasingly used to complement labour. At Amazon, robots now move packages between workers, increasing productivity. And, in the retail sector, the use of self-serve kiosks is not new, but the desire to limit human contact could shift consumer preferences toward shopping and eating at venues offering these features.

COVID-19 will also have implications for the use of **technology and robotics in public health**. Technology has the potential to significantly reduce contact between patients and medical practitioners, which has been an important mode of transmission during the current outbreak. Technologies that enable telemedicine and automate patient monitoring, sample collection, and testing could go a long way toward keeping front-line health care practitioners safe. Remote technologies would also enable distant medical personnel to assist those in infection hotspots, which would improve the ability of the health care system to respond during the early stages of an outbreak.

Robotic technologies could also be deployed as part of efforts to monitor and contain future outbreaks. Automated systems could be used to monitor individuals' body temperatures in public areas and at border crossings, giving authorities valuable real-time information about the spread of infection. Robotic systems could also be well-suited to sterilizing public areas and hospitals, which would help to reduce the spread via surface contact without putting additional personnel at risk.

5

Commercial and Residential Real Estate

The commercial real estate sector could be reshaped by some of the aforementioned trends, creating challenges in some segments, but opportunities in others. In the **office segment**, more widespread adoption of remote working, even on a rotating basis, will open up more vacancies. While this represents a cost-cutting opportunity for some firms, landlords and office-oriented REITs could see rents pressured. In major markets where longer-term economic shifts have driven demand for such real estate, the pressure might be less noticeable as space is absorbed. But, in markets already struggling—Calgary's vacancy rate is 24%—this will pose an additional challenge.

On the flip side, online shopping will continue to **drive demand for industrial and warehouse space**. Cap rates in the Toronto industrial sector had compressed to record-low levels before the shock, according to CBRE, and sat below retail cap rates by the widest margin ever. The latter will continue to be pressured upward. As an illustration, employment in wholesale trade, transportation and warehousing has grown at twice the rate of that in traditional retail over the past decade in Canada.

In **residential real estate**, rural locations could draw increased interest for a few reasons. First, the move toward remote work could open up an affordability valve by allowing households to settle beyond commuter-friendly (and increasingly expensive) locations. Also, densification has been the norm in many regions over the past decade (partly policy-driven), but social distancing runs counter to that trend. The current experience could alter preferences, placing more value on large lots and rural settings, and could even bolster investment demand for workable farmland.

6

Real-time data

The evolution of the information age has created a vast amount of data on the behaviours and activities of people, places and things. Despite a treasure trove of potential information, there's precious little available on a real-time basis in Canada. In fact, while Statistics Canada has an excellent reputation among statistical agencies, the Canadian data are often viewed as "old news" by the time they are released. Most activity figures are released between one and two months after the end of the reporting period. That has left policymakers and economists with little information to assess the damage from COVID and the related shutdown of sectors of the economy. The current crisis clearly shows the potential value of real-time data… from how the pandemic is progressing, the potential for contact tracing, the first order impact on the economy, etc.

One example of change is at Statistics Canada, where the unprecedented situation has prompted the agency to create a new data point: a Nowcast of March and first quarter real GDP. Those figures were released April 15, but would usually be seen for the first time at the end of May. While the Nowcast has a sizeable margin of error and no underlying quantitative details, the more timely release provides a better understanding of how deep the COVID-driven recession is going to be. We could see other reports released on a timelier basis. Firms that can harness and analyze these "big data" will likely have increased opportunities in a post-pandemic world, where real-time information has an even greater value.

7

E-learning

With global learning institutions essentially shut down, faculties have been forced to move online, kick-starting an unprecedented educational "test". The change could provide greater access and convenience for students at lower costs for governments and private schools. There are plenty of opportunities. First, learning management system (LMS) software is a $182 bln industry according to reportlinker.com and is only poised to catapult from here. Businesses, too, will increasingly turn to LMS to offer employee training and skills improvement programs. Second, mobile learning software enables learners to access digital content on the go. Game-like language learning apps are likely to be at the forefront of this realm having spent years improving the personalized and gamified experience of self-paced study. Lastly, analytics software will become more vital and prevalent as the need to measure learning effectiveness increases. Although the traditional classroom model won't disappear anytime soon, blended learning approaches that encompass e-learning should become the new norm.

8

Tourism and travel

This is a sector that clearly faces a long work-out and potentially severe adjustments. Consumer behaviour and psychology are extremely tough to model, but note that U.S. air travel took four years to return to pre-9/11 levels after that traumatic event. While some individuals are likely willing to quickly return to prior behaviour, for many others this will take years. Moreover, we can't know when some or all of the cross-border travel restrictions will be eased. The potential result of this could be more local, domestic travel—and more driving vacations, especially with reduced gas prices, fuelling demand for related products and services. Beneficiaries could include motels and eating spots in smaller locations, service centres, and even RV dealers and manufacturers (normally highly cyclical industries).

9

AI Vehicles

The need for distancing amid the pandemic may accelerate the demand and urgency for self-driving delivery vehicles. The demand for autonomous vehicles by businesses, and acceptance by consumers, will likely surge once life returns to normal. The Mayo Clinic has been using self-driving shuttles to move COVID-19 tests around their Jacksonville campus. The ability to limit human exposure to hazardous material and free up staff to focus on more important tasks shows the potential value of autonomous vehicle adoption.

The rising use of delivery services for food and groceries over the past month has underscored the importance of limiting human-to-human contact. Rather than gig economy workers having to worry about their own health and safety (and their customers'), food and household supplies could show up at your door via **drone**. The need for wider deployment could put pressure on one major hurdle to adoption—regulation. In another space, Rwanda has been using **drones to deliver medicine** to rural parts of the country since 2016.

10

Preparedness by Businesses and Consumers

As business closures and stay-at-home orders proliferated alongside the spread of COVID-19, the panic buying that emptied store shelves and the shortages of personal protective equipment that put healthcare workers and others at risk became harsh reminders of the importance of preparedness for governments, businesses and households. And, it's not just about preparing for the next pandemic. Before the faces of exasperated healthcare workers flooded the media, there were the faces of exasperated firefighters battling Australian bushfires, which also reminded about the need for preparedness owing to extreme weather events caused by climate change. We judge that outlays and activities related to preparedness will become a permanent fixture on the economic landscape.

For **households**, this involves establishing, replenishing and maintaining emergency pantries and precautionary savings. Emergency pantries would include non-perishable food and other essential household items, and, without increased household budgets, these purchases would likely supplant outlays on non-essential goods and services.

The rule of thumb about **maintaining emergency savings** to cover at least three months' worth of living expenses could increasingly become more common. However, in an environment of extremely low interest rates, consumers will be looking for higher-yielding, but still-safe options such as money market funds that invest only in short-term government securities or repos fully collateralized by government securities. As household funds are diverted to saving, this could compound with outlays on emergency pantries to act as a more persistent drag on non-essential outlays.

The **household saving rate** was 3.0% in 2019 Q4 and had been drifting up from a low of 1.8% a year earlier. While not an ideal measure, the saving rate can reveal trends in precautionary savings, and that trend was low in Canada prior to the crisis and was on a secular downtrend since the early 1980s. At the very least, the crisis and sudden income losses may reinforce the need for precautionary savings among households. The long-run median savings rate since 1961 has been 5.5%, and that could be where we converge on in the years ahead.

Bottom Line: The crisis in some sense has brought the future into the present, rapidly and sometimes harshly accelerating changes that were already in train. There is no doubt that some sectors face long-term challenges as a result of the shutdowns and distancing measures, as well as some potentially fundamental changes in consumer behaviour and psychology. But at the same time, in classic creative destruction fashion, there will be some sectors that strengthen and step into the gap. The main message is that economies are resilient, and people and businesses can be incredibly resourceful in the face of challenges—don't underestimate the ability to recover from this tough period.

Economic Forecast Summary for April 17, 2020

	2019				2020				Annual		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
CANADA											
Real GDP (q/q % chng : a.r.)	1.0	3.4	1.1	0.3	-10.0 ↓	-45.0	65.0 ↓	12.5 ↑	1.6	-6.0 ↓	6.5
Consumer Price Index (y/y % chng)	1.6	2.1	1.9	2.1	2.0	0.2 ↓	0.6 ↓	0.7 ↓	1.9	0.9 ↓	1.8 ↓
Unemployment Rate (percent)	5.8	5.6	5.6	5.7	6.3	11.7 ↑	8.0 ↑	7.8 ↑	5.7	8.5 ↑	7.0
Housing Starts (000s : a.r.)	187	224	223	202	207	140	190	203	209	185	225
Current Account Balance ($blns : a.r.)	-69.4	-33.7	-43.5	-35.0	-44.4	-72.7	-71.4	-67.5	-45.4	-64.0	-62.0
Interest Rates (average for the quarter : %)											
Overnight Rate	1.75	1.75	1.75	1.75	1.25	0.25	0.25	0.25	1.75	0.50	0.25
3-month Treasury Bill	1.65	1.67	1.64	1.66	1.29	0.20	0.20	0.20	1.65	0.50	0.20
10-year Bond	1.86	1.62	1.36	1.52	1.20	0.60	0.65	0.80	1.59	0.80	1.15
Canada-U.S. Interest Rate Spreads (average for the quarter : bps)											
90-day	-79	-68	-38	5	16	5 ↑	3	3	-45	6	3
10-year	-80	-72	-43	-28	-17	1 ↓	0	0	-56	-4 ↓	0
UNITED STATES											
Real GDP (q/q % chng : a.r.)	3.1	2.0	2.1	2.1	-8.5 ↓	-40.0 ↓	55.0 ↑	5.0 ↓	2.3	-5.0 ↓	6.0
Consumer Price Index (y/y % chng)	1.6	1.8	1.8	2.0	2.1	0.3 ↓	0.4 ↓	0.3 ↓	1.8	0.8 ↓	1.6
Unemployment Rate (percent)	3.9	3.6	3.6	3.5	3.8	11.9	8.7 ↑	6.8 ↑	3.7	7.8 ↑	6.0 ↑
Housing Starts (mlns : a.r.)	1.21	1.26	1.28	1.44	1.47	0.67 ↓	1.17 ↓	1.36 ↑	1.30	1.17 ↓	1.29 ↓
Current Account Balance ($blns : a.r.)	-548	-505	-502	-439	-406 ↑	-300 ↑	-305 ↑	-310 ↑	-498	-330 ↑	-320 ↑
Interest Rates (average for the quarter : %)											
Fed Funds Target Rate	2.38	2.38	2.13	1.63	1.13	0.13	0.13	0.13	2.13	0.38	0.13
3-month Treasury Bill	2.44	2.35	2.02	1.61	1.13	0.15	0.20	0.20	2.10	0.40	0.20
10-year Note	2.65	2.33	1.79	1.79	1.38	0.55	0.65	0.80	2.14	0.85	1.15
EXCHANGE RATES (average for the quarter)											
US¢/C$	75.2	74.8	75.7	75.8	74.4	69.3	69.8	71.0	75.4	71.1	72.8
C$/US$	1.33	1.34	1.32	1.32	1.34	1.44	1.43	1.41	1.33	1.41	1.37
¥/US$	110	110	107	109	109	109	110	111	109	110	113
US$/Euro	1.14	1.12	1.11	1.11	1.10	1.06	1.06 ↑	1.08 ↑	1.12	1.08 ↑	1.10
US$/£	1.30	1.29	1.23	1.29	1.28	1.24 ↑	1.23 ↑	1.22	1.28	1.24 ↑	1.26

Blocked areas mark BMO Capital Markets forecasts; up and down arrows (↑↓) indicate forecast changes; spreads may differ due to rounding

Canada

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Retail Sales
Tuesday, 8:30 am

		Ex. Autos
Feb. (e)	**+0.3%**	**+0.3%**
Jan.	+0.4%	-0.1%

There will be little COVID impact here, as it was in the early stages in February, though we **could get some early signs of consumer hoarding**. The latter could actually provide a lift to core sales. Auto sales were higher in February and gasoline prices were little changed. Total **retail sales** look to climb 0.3% in the month, with ex. autos up a similar amount. Conditions have clearly changed since then, so be prepared for some serious volatility in the numbers in the months ahead.

Consumer Price Index
Wednesday, 8:30 am

Mar. (e)	**-0.2% (-0.5% sa)**	**+1.3% y/y**
Feb.	+0.4%	+2.2% y/y

Core CPI Measures (Feb.)

CPI Core - Trim	+2.0% y/y
CPI Core - Median	+2.1% y/y
CPI Core - Common	+1.8% y/y

Canadian **consumer prices** likely fell 0.2% in March, which would be the first decline for that month since 1993 and the weakest since 1960. Note that March is among the strongest seasonal months for CPI. Crude oil prices collapsed as the economic impact of COVID-19 became clear, pulling gasoline prices down nearly 20% and weighing on broader energy prices. On the other side of the spectrum, the sharp weakness in the Canadian dollar might have put some upward pressure on import costs, though that impact will likely unfold over a number of months. Our call would trim the yearly rate nine ticks to 1.3%.

United States

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Existing Home Sales
Tuesday, 10:00 am

Mar. (e)	**5.40 mln a.r. (-6.7%)**
Consensus	*5.37 mln a.r. (-6.9%)*
Feb.	5.77 mln a.r. (+6.5%)

As “stay-at-home” orders spread across the U.S., new home sales sites and realtor offices were required to close, demolishing new and existing home sales. Although sales activity during the first half of the month should cushion March’s fall, April figures are going to look awful. New mortgage applications were down only 5.3% in March, but are already down 27% through the first half of April.

March existing home sales will have the added benefit of measuring closings as opposed to contracts, so the second-half plummet in the latter might have only a small impact on the full-month figure. Note that pending home sales were up 2.4% in February. New home sales will suffer more; and both metrics are poised to fall further.

Durable Goods Orders
Friday, 8:30 am

		Ex. Transport
Mar. (e)	**-13.0%**	**-9.0%**
Consensus	*-11.8%*	*-4.7%*
Feb.	+1.2%	-0.6%

	Nondef. Cap. Goods ex. Air
Mar. (e)	**-9.0%**
Consensus	*-5.0%*
Feb.	-0.9%

Durable goods orders are expected to contract 13.0% in March, the third largest monthly decline on record. Boeing orders fell on a seasonal basis, as airlines are flying at a fraction of capacity. With the major auto plants closing mid-month and vehicle sales plunging by a third last month, orders for vehicles and parts will also fall sharply. Core capital goods orders (and shipments) likely tumbled 9% amid a substantial slide in business capex, foreshadowing an even bigger collapse in April. The factory sector, as a whole, hasn't been as severely impacted by shutdowns as some other sectors. Still, with demand for durable goods tanking, there's little need to keep lines running at former levels.

Global Calendar — April 20–April 24

	Monday April 20	Tuesday April 21	Wednesday April 22	Thursday April 23	Friday April 24
Japan	**Trade Surplus** **Mar. '20 (e) ¥473.6 bln** Mar. '19 ¥517.3 bln	**Machine Tool Orders** **Mar. F (e) -40.8% y/y** Feb. -29.6% y/y		**Manufacturing PMI** **Apr. P** Mar. 44.8 **Services PMI** **Apr. P** Mar. 33.8 **Composite PMI** **Apr. P** Mar. 36.2	**CPI** / **Core CPI** **Mar. (e) +0.4% y/y +0.4% y/y** Feb. +0.4% y/y +0.6% y/y **CPI ex. Food & Energy** **Mar. (e) +0.6% y/y** Feb. +0.6% y/y **All-Industry Activity Index** **Mar. (e) -0.5%** Feb. +0.8% **Department Store Sales** **Mar.** Feb. -12.2% y/y
Euro Area	**EURO AREA** **Trade Surplus** **Feb.** Jan. €17.3 bln	**GERMANY** **ZEW Survey—Expectations** **Apr. (e) -41.0** Mar. -49.5	**EURO AREA** **Consumer Confidence** **Apr. A (e) -19.6** Mar. -11.6 **FRANCE** **Business Confidence** **Apr. (e) 80** Mar. 95 **ITALY** **Industrial Orders** **Feb.** Jan. +1.2% -1.8% y/y	**EURO AREA** **Manufacturing PMI** **Apr. P (e) 39.0** Mar. 44.5 **Services PMI** **Apr. P (e) 25.0** Mar. 26.4 **Composite PMI** **Apr. P (e) 26.0** Mar. 29.7 **EU leaders' videoconference** **GERMANY** **GfK Consumer Confidence** **May (e) -1.8** Apr. 2.7	**GERMANY** **ifo Business Climate** **Apr. (e) 80.0** Mar. 86.1
U.K.	**First round of U.K./EU post-Brexit deal talks**	**Employment (3m/3m)** **Feb. (e) +100,000** Jan. +184,000 **Avg. Wkly Earnings Ex. Bonus (3 mma)** **Feb. (e) +3.0% y/y** Jan. +3.1% y/y **Jobless Rate (3 mma)** **Feb. (e) 3.9%** Jan. 3.9%	**Consumer Price Index** **Mar. (e) unch +1.5% y/y** Feb. +0.4% +1.7% y/y **Core CPI** **Mar. (e) +1.6% y/y** Feb. +1.7% y/y **Producer Prices—Output** **Mar. (e) -0.2% +0.2% y/y** Feb. -0.3% +0.4% y/y	**Manufacturing PMI** **Apr. P (e) 40.0** Mar. 47.8 **Services PMI** **Apr. P (e) 29.0** Mar. 34.5 **Composite PMI** **Apr. P (e) 32.0** Mar. 36.0	**Retail Sales (incl. Fuel)** **Mar. (e) -4.5% -5.0% y/y** Feb. -0.3% unch y/y **GfK Consumer Confidence** **Apr. P (e) -35** Mar. -34
Other		**AUSTRALIA** **RBA Minutes from Apr. 7 meeting**			

D = date approximate

Upcoming Policy Meetings | Bank of England: May 7, June 18, Aug. 6 | European Central Bank: Apr. 30, June 4, July 16

Canada

Monday April 20	Tuesday April 21	Wednesday April 22	Thursday April 23	Friday April 24
8:30 am **Wholesale Trade** **Feb. (e)** **-1.0%** Jan. +1.8% BoC Buyback: 5-year sector	**8:30 am** **Retail Sales** / **Ex. Autos** **Feb. (e)** **+0.3%** / **+0.3%** Jan. +0.4% / -0.1% 10:30 am 3-, 6- & 12-month bill auction $35.0 bln (new cash $35.0 bln) BoC Buyback: Under 2-year sector	**8:30 am** **Consumer Price Index** **Mar. (e)** **-0.2%** **+1.3% y/y** **(-0.5% sa)** Feb. +0.4% +2.2% y/y **8:30 am** **CPI Core (% y/y)** **Trim** / **Median** / **Common** **Mar.** Feb. +2.0% / +2.1% / +1.8% **8:30 am** **New Housing Price Index** **Mar. (e)** **+0.2%** **+0.8% y/y** Feb. +0.4% +0.6% y/y Noon 30-year bond auction $2.5 bln BoC Buyback: 30-year sector	2-year bond auction announcement BoC Buyback: 2-year sector	**Ottawa's Budget Balance** [D] **Feb. '20** Feb. '19 +$4.3 bln BoC Buyback: 10-year sector

United States

Monday April 20	Tuesday April 21	Wednesday April 22	Thursday April 23	Friday April 24
8:30 am **Chicago Fed National Activity Index** **Mar.** Feb. +0.16 11:30 am 13- & 26-week bill auctions $105 bln 1:00 pm 43-day cash management bill auction $65 bln	**10:00 am** **Existing Home Sales** **Mar. (e)** **5.40 mln a.r. (-6.7%)** *Consensus* *5.37 mln a.r. (-6.9%)* Feb. 5.77 mln a.r. (+6.5%) 11:00 am 4- & 8-week bill auction announcements 11:30 am 52-week bill auction $28 bln 11:30 am 119-day cash management bill auction $25 bln	**7:00 am** **MBA Mortgage Apps** **Apr. 17** Apr. 10 +7.3% **9:00 am** **FHFA House Price Index** **Feb. (e)** **+0.3%** **+4.9% y/y** *Consensus* *+0.4%* *+5.0% y/y* Jan. +0.3% +5.2% y/y	**8:30 am** **Initial Claims** **Apr. 18 (e)** **4,600k (-645k)** *Consensus* *4,500k (-745k)* Apr. 11 5,245k (-1,370k) **8:30 am** **Continuing Claims** **Apr. 11** Apr. 4 11,976k (+4,530k) **9:45 am** **Markit PMIs (Apr. P)** **10:00 am** **New Home Sales** **Mar. (e)** **645,000 a.r. (-15.7%)** *Consensus* *650,000 a.r. (-15.0%)* Feb. 765,000 a.r. (-4.4%) 11:00 am 13- & 26-week bill, 2-, 5- & 7-year note, 2-year FRN auction announcements 11:30 am 4- & 8-week bill auctions 1:00 pm 5-year TIPS auction $17 bln	**8:30 am** **Durable Goods** **Orders** / **Ex. Transport** **Mar. (e)** **-13.0%** / **-9.0%** *Consensus* *-11.8%* / *-4.7%* Feb. +1.2% / -0.6% **8:30 am** **Nondef. Cap. Goods ex. Air** **Mar. (e)** **-9.0%** *Consensus* *-5.0%* Feb. -0.9% **10:00 am** **University of Michigan Consumer Sentiment** **Apr. F (e)** **66.0** *Consensus* *67.7* Apr. P 71.0 Mar. 89.1

[C] = consensus   [D] = date approximate   [R] = reopening

Upcoming Policy Meetings | Bank of Canada: June 3, July 15, Sep. 9 | FOMC: Apr. 28-29, June 9-10, July 28-29

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