# Commodity Price Index Up 2.2% m/m in February

**Forest Product and Metal price gains helped push the All Commodity Index up 2.2% m/m in February, offsetting minor declines in the Oil & Gas sub-Index.**

****Content reproduced from our recently released quarterly *Scotiabank's Global Outlook*, which outlines the rationale for our commodities outlook (p. 41–43). Every quarter this publication will take a pause from index tracking and update readers on key changes to our forecasts. Commodity sub-index values can be found in Table 1.**

- **Industrial commodities will continue to benefit from healthy demand on the back of a stronger global economic outlook, while supply-side idiosyncrasies continue to provide opportunity for differentiation.**

## OIL: RECOVERY IS RUNNING A BIT BEHIND

The oil market recovery remains on track but fragile, and bearish sentiment is likely to weigh on prices until our more bullish fundamental outlook is confirmed by US inventory draws over the coming months. We have **downgraded our WTI price forecast to $53/bbl in 2017 ($58 prior) and $56/bbl in 2018 ($61 prior)** given a stronger US shale outlook, Brazilian output gains temporarily supporting non-OPEC supply outside the US, and stubbornly-high US inventories which have taken longer than anticipated to draw. Our base case outlook is for physical balances to move into deficit (chart 1) for the remainder of 2017, and we see four main factors driving the near-term outlook: 1) OPEC output discipline, 2) the pace of US shale response, 3) non-OPEC production declines outside the continental US, and 4) the strength of consistently underestimated global demand growth.

## OPEC: SIX-MONTH EXTENSION OF PRODUCTION DEAL EXPECTED

More than two years after abandoning the role of market manager to "market forces", OPEC attempted to take back the reins late last year and 11 members—all but Libya and Nigeria, which were exempt due to domestic militancy—committed to reducing collective output by roughly 1.2 Mbpd, effective January. We're now in the third month of those cuts, and compliance within the OPEC-11 has been surprisingly strong (chart 2). While this high rate is skewed by higher-than-committed Saudi Arabian reductions, the physical market effect is the same, though it leaves the deal more vulnerable to Saudi charges of freeriding. A possible early sign of such a crack forming was seen in OPEC's latest monthly report, which showed a discrepancy between the standard "secondary source" estimates of Saudi production in February, which were lower on the month, and the "direct communication" provided by Riyadh, which showed production climbing by more than a quarter-million barrels per day from January. This could be a statistical warning-shot to OPEC free-riders, or it could, as a Saudi statement claims, have simply reflected temporarily higher production destined to replenish domestic inventories that would have no direct effect on market balances.

OPEC headlines will continue to drive near-term market sentiment, particularly as the group prepares to meet on May 25th to decide whether to maintain cuts—scheduled to expire in June—for another six months. OPEC oil ministers have repeatedly referenced the level of OECD petroleum inventories relative to their five-year average

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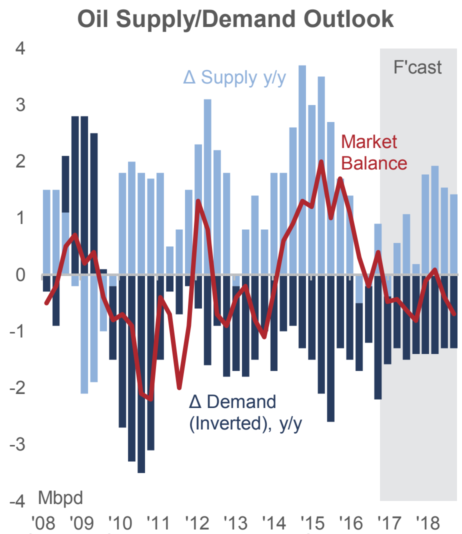
Chart 1




Sources: Scotiabank Economics, Scotiabank GBM, IEA, EIA, JODI, OPEC.

Table 1

**Scotiabank Commodity Price Index**

| February 2017 | (% change) | | |
|---|---|---|---|
| | M/M | Y/Y | YTD |
| **All Commodity*** | **2.2** | **42.5** | **40.8** |
| **Industrials** | **2.3** | **53.5** | **50.7** |
| Oil & Gas | -0.8 | 107.4 | 100.3 |
| Metal & Minerals | 2.9 | 41.6 | 40.5 |
| Forest Products | 7.0 | 17.5 | 13.8 |
| **Agriculture** | **1.8** | **6.2** | **7.3** |

| February 2007 = 100 | 2017 | | |
|---|---|---|---|
| | Feb | Jan | YTD avg. |
| **All Commodity** | **112.0** | **109.6** | **110.8** |
| **Industrials** | **109.3** | **106.9** | **108.1** |
| Oil & Gas | 87.2 | 87.8 | 87.5 |
| Metal & Minerals | 129.8 | 126.2 | 128.0 |
| Forest Products | 127.6 | 119.3 | 123.4 |
| **Agriculture** | **126.9** | **124.6** | **125.7** |

* Weights: Oil & Gas (39.9%), Metal & Minerals (30.1%), Forest Products (14.7%), Agriculture (15.3%); Full technical note on page 11.

as a gauge of the rebalancing. Those inventories were more than 280 Mbbl above their five-year average as of January and, while European stocks have been falling into a healthier range, the same cannot be said of industry stocks in the US. **We believe that the combination of high OECD inventories, still-weak upstream investment outside the US, and recent oil price weakness will prompt OPEC to extend their production cap through the end of the year**.

The supply glut that began in mid-2014 has dumped almost one billion barrels of petroleum into global inventories, of which only 35–45% ended up in transparent OECD tanks. However, the majority of the remainder was absorbed by China's growing strategic petroleum reserve (SPR), meaning that the lion's share of functional—and thus needing to draw from an OPEC perspective—industry inventories remain in the OECD, and specifically in the US (chart 3). We expect state-side stocks to begin drawing in Q2 as refineries come out of maintenance and the lagged shipping of OPEC crude begins to reflect observed cuts.

## US SHALE: ROARING REBOUND ON TRACK TO REACH 1 MBPD Y/Y GROWTH BY YEAR-END

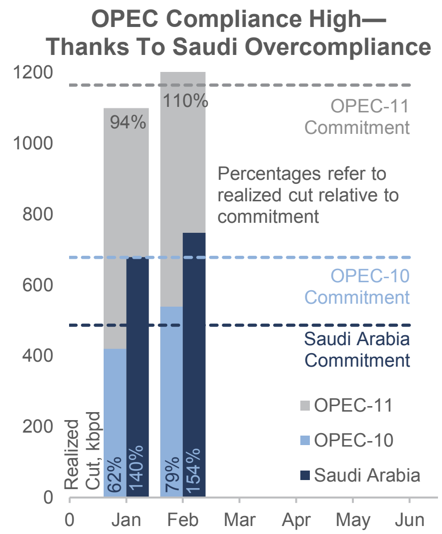
US shale production grew by more than 3.25 Mbpd over the three years to 2014, flooding the market and setting the stage for OPEC's decision to abandon its role as market manager, at least in part an attempt to kill off the novel source of unconventional supply. Plunging prices took an axe to the US rig count and the short-cycle nature of shale supply led to a relatively quick drop-off in lower-48 crude output. The downturn forced the US shale patch to do more with less—it was either that, or go out of business. Operating costs fell precipitously, priming the industry for a strong rebound once prices began rising again.

That rebound has continued to surprise on the upside—prompting the Energy Information Administration (EIA) to repeatedly upgrade their forecast—and US crude production is on track to reach growth of 1 Mbpd y/y by December, per Scotiabank GBM estimates (chart 4). Even the recent drop in oil prices is unlikely to stall the uptrend, with many companies having hedged the majority of their year-ahead production when prices were trading in the $50–55/bbl range. Cost inflation may become an inhibiting factor with the industry running this hot but we have yet to see evidence that it has become a major factor thus far. Beyond the optimistic outlook for US production, non-OPEC supply outside the US is where we expect to see global upstream capex reduction bite hardest.

## NON-OPEC EX-US: DECLINES EXPECTED DESPITE TEMPORARY STRENGTH ON BRAZILIAN GAINS

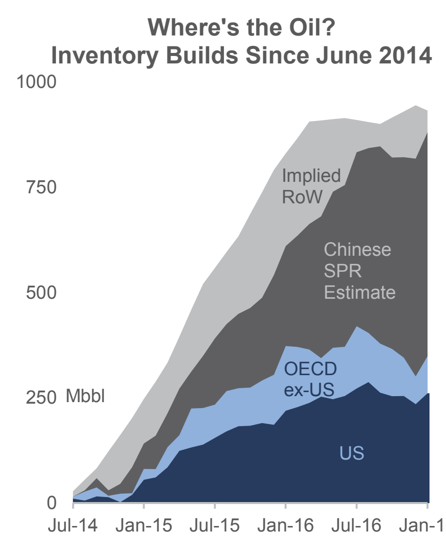
While market attention has gravitated to the OPEC rumour mill and the excitement of US shale, non-OPEC countries outside the US and Canada remain a larger but slower-moving factor in future supply. Recent strength in Brazilian production—averaging 300 kbpd y/y growth from September to February as pre-salt production ramps up—has offset broader weakness in the rest of this "other" category, where supply contractions have averaged almost 400 kbpd (chart 5). This production group will be essential to meet future supply needs and is nearly equal to OPEC in size. It is also this group that is likely to feel the brunt of the precipitous decline in upstream investment, as a weakened international oil industry pulls back from megaprojects and

Chart 2




Sources: Scotiabank Economics, OPEC secondary sources.

Chart 3




Sources: Scotiabank Economics, National Bureau of Statistics, Xinhua CFC, IEA, EIA.

** All Prices in US Dollars

other capital-intensive ventures in deep water, the arctic, and frontier markets. These longer-cycle projects typical of the industry standard even 3 years ago will by their nature decline more slowly than what we witnessed over the past year in the US shales, but will take time to turn positive again now that supply is trending down.

## DEMAND: CONTINUED STRENGTH ON GLOBAL ECONOMIC ACCELERATION, STILL-LOW PRICES

Despite the drama on the supply side of the ledger, demand growth is of equal importance to the question of when the oil market returns to deficit and begins drawing down the inventory overhang. The International Energy Agency (IEA) estimates that demand grew by 1.6 Mbpd last year, though that estimate is up from 1.2 Mbpd in January 2016; similarly, IEA demand growth forecasts for 2015 started the year at 0.9 Mbpd have subsequently been raised to 2.0 Mbpd. The IEA currently expects demand to rise at 1.4 Mbpd in 2017, but those numbers are also likely to move up through the year as more accurate data became available, further tightening the market against expected supply growth of only 0.4 Mbpd.

## METALS & MINERALS: SUPPLY-SIDE FACTORS PROMPT COPPER/ ALUMINIUM UPGRADES, NICKEL DOWNGRADE

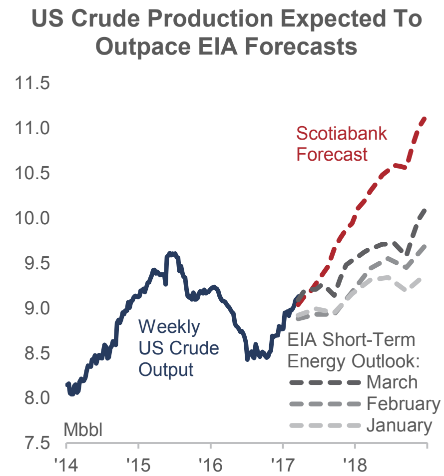
The metals outlook remains split between the increasingly bullish outlook for the base metals and the ongoing correction in the prices of bulk commodities. For a more in-depth discussion of the major factors that will drive these commodities over the coming years, see last month's Special Report: Digging Deep Into Metals & Minerals. The following will provide updates to the key uncertainties mentioned in that report and provide fresh price forecasts in line with our view of shifting fundamentals.

We have **upgraded our copper price forecasts to $2.50/lb in 2017 and $2.65/lb in 2018** given that disruptions at the Escondida and Grasberg mines, which account for a combined 10% of global capacity, have lasted longer than previously anticipated. While both disruptions now appear to have been at least partially resolved, we are now assessing the potential for further losses at Cerro Verde, Peru's largest copper mine. The combination of already-high production loss, continued supply uncertainty, and the potential for stronger Chinese demand ahead of the National Congress later this year are all near-term bullish for copper prices.

Aluminium prices have also seen considerable upward momentum over the past month due to announced plans to idle significant smelting capacity in China over the winter months in an effort to address chronic smog issues. Beijing has a history of only partially following through on environmental policy plans, particularly when they run counter to industrial goals. However, if fully implemented, these "blue sky" policies could take upward of 2–3 Mt of primary aluminium supply off the market and flip market balances from moderate surplus to moderate deficit in 2017. **Prices are now forecast to average $0.85/lb in 2017 and 2018**, up from expectations for sub-$0.80/lb performance prior to the announcement by Chinese authorities.

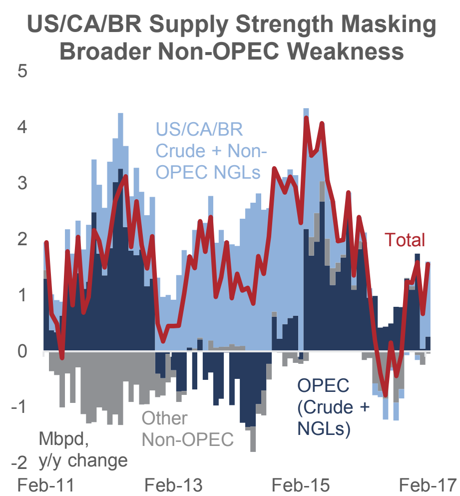
Zinc remains the metal with the strongest fundamentals, and the tightness in zinc concentrate markets continues to be confirmed by falling treatment charges, which are inversely related with concentrate supply. From an average of over $200/t in 2015/16, benchmark treatment charges have fallen to below $30/t as of February.

Chart 4




Sources: Scotiabank Economics, Scotiabank Equity Research, EIA.

Chart 5




Sources: Scotiabank Economics, OMI.

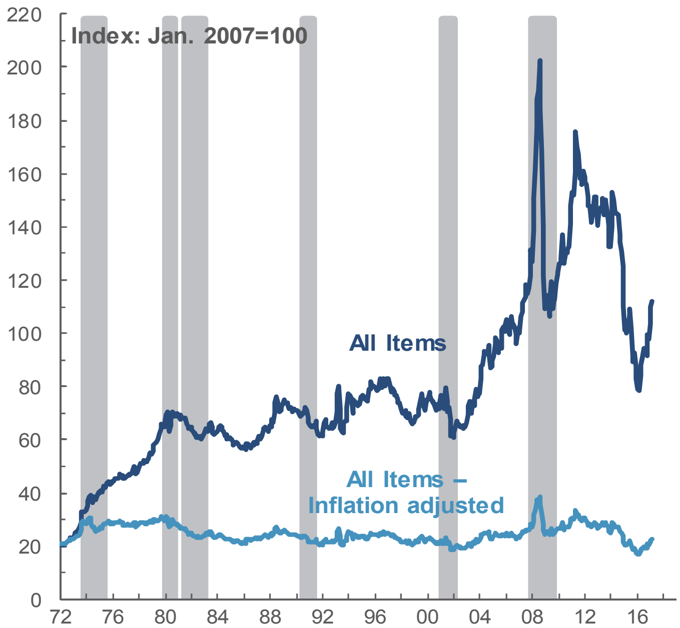
Severe flooding in Peru, the world's second-largest miner of zinc concentrate, has damaged transportation infrastructure, hampered export capacity, and may further tighten near-term concentrate balances. **Zinc prices are forecast to average $1.35/lb in 2017 and $1.55/lb in 2018**.

Nickel supply received another potential shock as Philippines President Duterte raised the possibility of banning all domestic mining activity in the world's largest exporter of nickel ore. This follows orders to shutter roughly half the country's nickel mine capacity after many failed environmental audits. However, while we certainly believe that the market needs to prepare for less tonnage out of Philippine ports, considerable inventory overhangs and potential Indonesian supply flexibility make this issue less concerning than it may seem at first. **Nickel prices are forecast to average $5.00/lb in 2017 and $5.50/lb in 2018**.

The outlook for gold remains weighed down by a rising interest rate environment, with shifting risk appetites likely worth $50/oz within the $1200–1300/oz range. The worries of a rising populist tide in Europe have subsided after far-right disappointment in the Dutch election and polling ahead of the French election increasingly favours more establishment candidates. Meanwhile, the failure of the Trump administration and the GOP-controlled Congress to pass healthcare legislation may provide a preview of what is ahead on tax reform, testing the foundation of the post-election market rally. **We see gold prices averaging $1200/oz in 2017 and $1250/oz in 2018** given a mix of mildly bearish interest rate fundamentals and a balanced risk outlook.

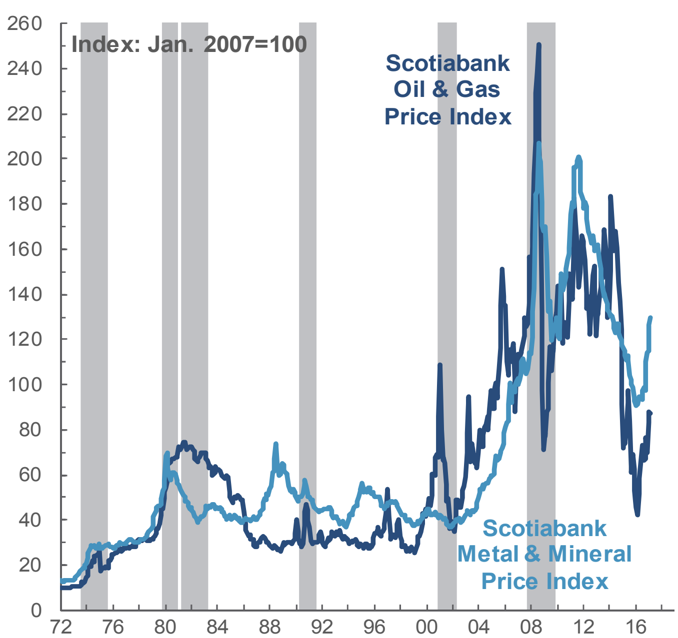
| **Price Outlook** | | | **2000–2015** | | **2016** | **2017YTD** | **2017F** | **2018F** |
|---|---|---|---|---|---|---|---|---|
| **Oil & Gas** | | Monthly Avg. Low | Period Avg. | Monthly Avg. High | | | | |
| **Crude Oils** | | | | | | | | |
| West Texas Intermediate | USD/bbl | 19.40 | 63.68 | 134.02 | 43.47 | 51.79 | 53 | 56 |
| North Sea Brent Blend | USD/bbl | 19.06 | 66.44 | 134.56 | 45.13 | 54.63 | 56 | 59 |
| **Natural Gas** | | | | | | | | |
| Nymex Henry Hub | USD/MMBtu | 2.05 | 5.09 | 13.46 | 2.55 | 3.08 | 3.10 | 3.05 |
| **Metals & Minerals** | | | | | | | | |
| **Base Metals** | | | | | | | | |
| Copper | USD/lb | 0.62 | 2.35 | 4.48 | 2.21 | 2.64 | 2.50 | 2.65 |
| Nickel | USD/lb | 2.19 | 7.45 | 23.67 | 4.36 | 4.65 | 5.00 | 5.50 |
| Zinc | USD/lb | 0.34 | 0.80 | 2.00 | 0.95 | 1.26 | 1.35 | 1.55 |
| Aluminium | USD/lb | 0.58 | 0.87 | 1.39 | 0.73 | 0.84 | 0.85 | 0.85 |
| **Bulk Commodities** | | | | | | | | |
| Iron Ore | USD/t | 12 | 65 | 187 | 58 | 85 | 65 | 55 |
| Metallurgical Coal | USD/t | 40 | 128 | 330 | 143 | 174 | 170 | 130 |
| **Precious Metals** | | | | | | | | |
| Gold | USD/toz | 261 | 842 | 1,772 | 1,251 | 1,223 | 1,200 | 1,250 |

Scotiabank All Commodity Price Index

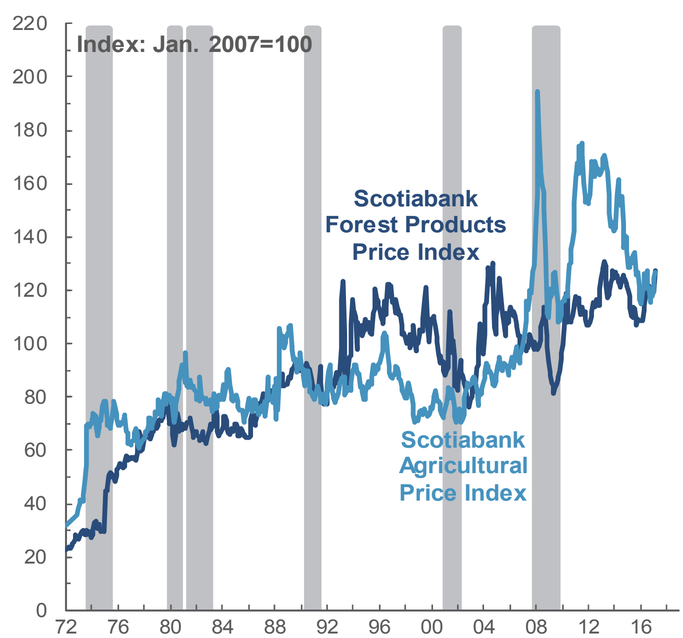


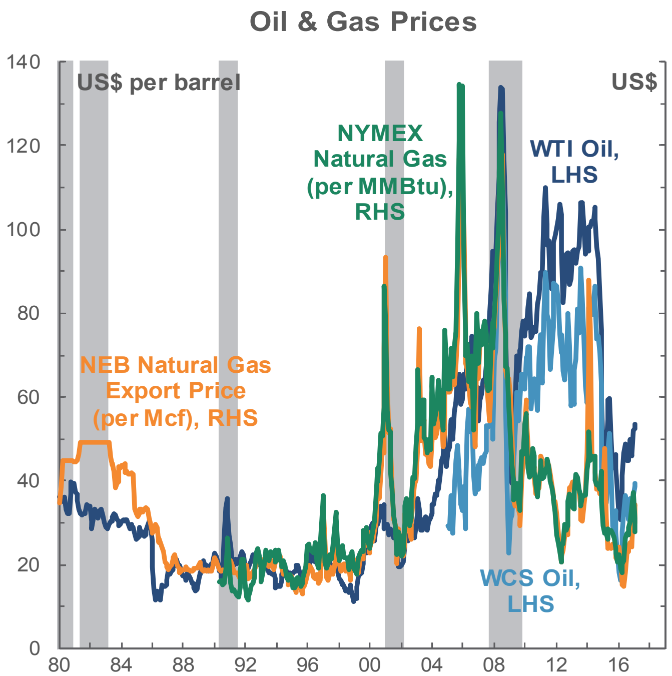

Canadian Dollar vs. Commodity Prices

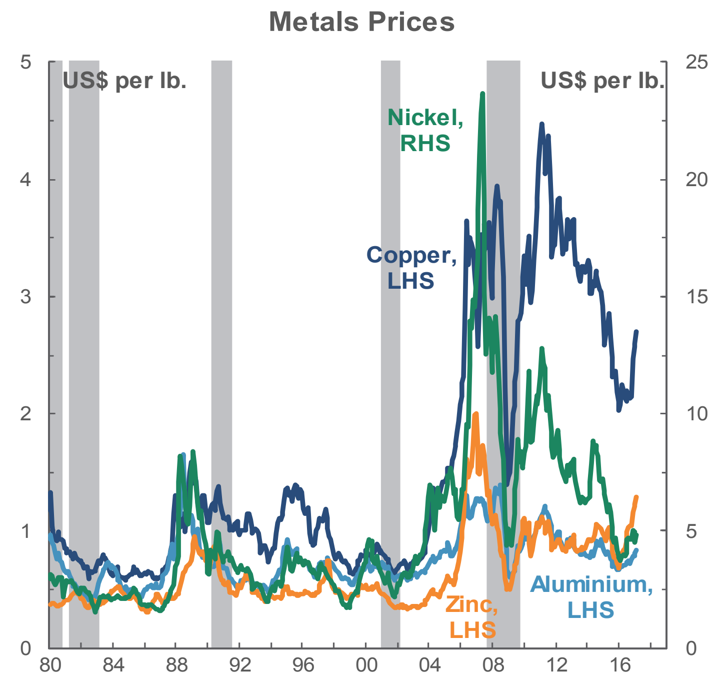

Scotiabank Oil & Gas and Metal & Mineral Indices

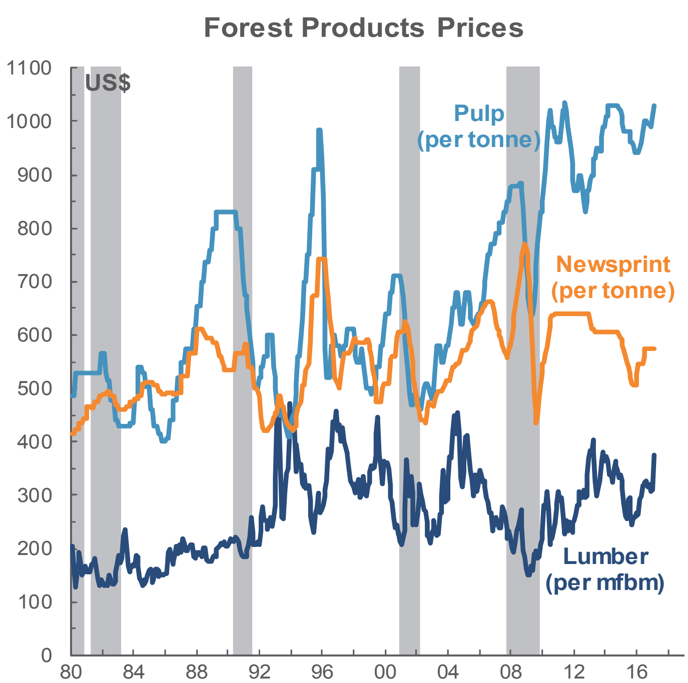


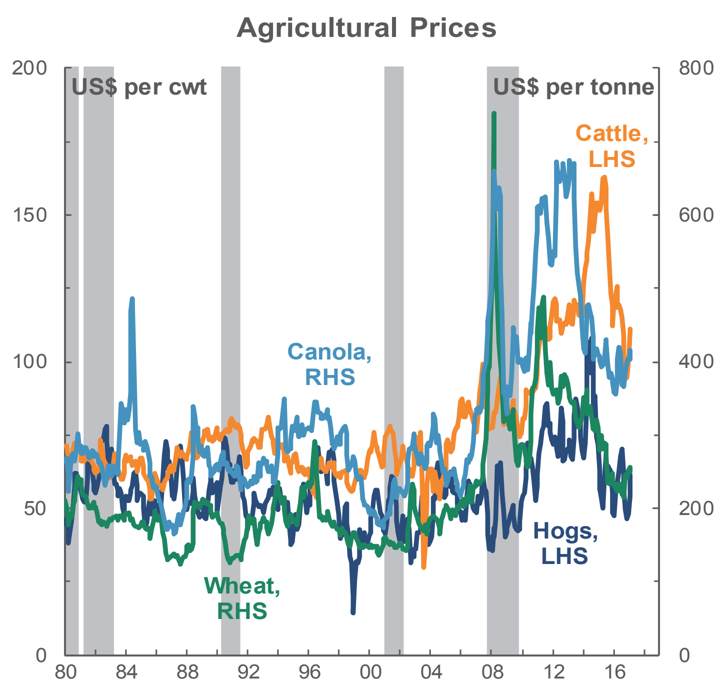

Scotiabank Forest Products & Agricultural Indices




Oil & Gas Prices
US$ per barrel
US$
NYMEX Natural Gas (per MMBtu), RHS
WTI Oil, LHS
NEB Natural Gas Export Price (per Mcf), RHS
WCS Oil, LHS
0
20
40
60
80
100
120
140
0
2
4
6
8
10
12
14
80
84
88
92
96
00
04
08
12
16


Metals Prices
US$ per lb.
US$ per lb.
Nickel, RHS
Copper, LHS
Zinc, LHS
Aluminium, LHS
0
1
2
3
4
5
0
5
10
15
20
25
80
84
88
92
96
00
04
08
12
16


Forest Products Prices
US$
Pulp (per tonne)
Newsprint (per tonne)
Lumber (per mfbm)
0
100
200
300
400
500
600
700
800
900
1000
1100
80
84
88
92
96
00
04
08
12
16


Agricultural Prices
US$ per cwt
US$ per tonne
Cattle, LHS
Canola, RHS
Hogs, LHS
Wheat, RHS
0
50
100
150
200
0
200
400
600
800
80
84
88
92
96
00
04
08
12
16

## Technical Note
## Scotiabank Commodity Price Index — Principal Canadian Exports
## January 2007 = 100

This Index has been designed to track the spot or transactions prices paid in U.S. dollars for key Canadian commodities and resource-based manufactured goods in export markets. The weight of each component is based upon its net export value in 2010. Prior to January 2007, the weight of each component was based on its export value in 1995-97, except for crude oil & refined petroleum products, uncoated freesheet paper and linerboard, where net exports were used. Canada imports a significant quantity of these products, and use of their export value alone would have overstated the importance in Canada's trade performance.

**The following prices are included:**

### OIL & GAS

**Crude Oil & Refined Petroleum Products** (US$ per bbl) MSW light sweet crude oil at Edmonton (previously Edmonton Par crude) and Western Canadian Select heavy oil at Hardisty, Alberta; price differentials off WTI near-by futures from TMX/Shorcan Energy Brokers.

**Natural Gas** (US$ per mcf) Average export price quoted by the National Energy Board.

**Natural Gas Liquids (NGLs – Propane, Butane, Ethane & Pentanes-Plus)** (US$ per bbl), Propane at Edmonton & Sarnia.

### METALS & MINERALS

**Copper & Products** (US$ per lb) LME official cash settlement price for grade A copper.

**Zinc** (US$ per lb) LME SHG cash settlement: prior to Sept 1990, U.S. producers' price for high-grade zinc delivered.

**Lead** (US$ per lb) LME official cash settlement price; prior to Jan. 1991, U.S. producers' price for common grade delivered.

**Aluminium & Products** (US$ per lb) since 1979, LME official cash settlement price.

**Nickel** (US$ per lb) since 1980, LME official cash settlement price.

**Gold** (US$ per oz) 'LBMA Gold Price PM' as of March 20, 2015.

**Potash** (US$ per tonne) Standard potassium chloride, spot price, FOB Vancouver.

**Sulphur** (US$ per tonne) Solid, spot price, FOB Vancouver.

**Metallurgical Coal** (US$ per tonne) Contract price for premium-grade hard coking coal, FOB Vancouver.

**Iron Ore** (US cents per dmtu) Spot price fines 62% Fe, CFR Qingdao, China; prior to Jan 2011, term-contract price for concentrates 66% Fe from Labrador/Quebec to Northern Europe (FOB Sept-Iles).

**Uranium** (US$ per lb) Spot price for U3O8.

**Molybdenum** (US$ per lb) since March 1992, MW dealer oxide.

**Cobalt** (US$ per lb) MW dealer price.

### FOREST PRODUCTS

**Lumber & Wood Products, Western Spruce-Pine-Fir 2x4 No.2 & Btr** (US$ per mfbm) FOB mill.

**Oriented Strandboard** (US$ per thousand sq. ft.), U.S. North Central region, 7/16 inch.

**Pulp, Bleached Northern Softwood Kraft** (US$ per tonne) Transactions price, delivery USA.

**Newsprint** (US$ per tonne) Average transactions price, 48.8 gsm, delivery Eastern USA.

**Groundwood Specialty Papers** (US$ per ton) Supercalendered-A paper, 35 lb., delivery USA.

**Linerboard** (US$ per ton), delivery Eastern USA with zone discounts.

### AGRICULTURE

**Wheat & Flour** (US$ per tonne), DNS No 1 14% protein Duluth, Minn; prior to April 2011 No.1 CWRS, 13.5% protein at St. Lawrence.

**Barley** (US$ per tonne), since Dec.1994, No.1 at Lethbridge, Alberta.

**Canola & Oilseeds** (US$ per tonne) No.1 Canada, in store Vancouver.

**Cattle & Beef** (US$ per cwt) Steers over 1,051 pounds at Toronto; from Jan 1993, Ontario average.

**Hogs & Pork** (US$ per cwt) 100 Index Hogs at Toronto; from Jan 1993, Ontario average.

**Fish & Seafood** (US$ per lb) West Coast silver coho salmon; Atlantic lobster prices; prior to 1986 cod fillets & blocks.

**Scotiabank Commodity Price Index — Components And Weights**

| Index Components | Net Export Value In 2010 (millions of dollars) | Index Weight (per cent) |
|---|---|---|
| **OIL & GAS INDEX** | **46,537** | **39.90** |
| Crude Oil & Refined Products | 33,231 | 28.49 |
| Natural Gas & LNG | 11,741 | 10.07 |
| NGLs | 1,565 | 1.34 |
| **METAL & MINERAL INDEX** | **35,109** | **30.10** |
| Copper | 3,160 | 2.71 |
| Zinc | 1,255 | 1.08 |
| Lead | 579 | 0.50 |
| Aluminium | 6,045 | 5.18 |
| Nickel | 4,246 | 3.64 |
| Gold | 4,678 | 4.01 |
| Coal | 4,757 | 4.08 |
| Iron Ore | 3,346 | 2.87 |
| Potash | 5,161 | 4.42 |
| Sulphur | 457 | 0.39 |
| Uranium | 891 | 0.76 |
| Cobalt | 288 | 0.25 |
| Molybdenum | 246 | 0.21 |
| **FOREST PRODUCTS INDEX** | **17,081** | **14.66** |
| Lumber & Wood Products | 4,673 | 4.01 |
| OSB | 812 | 0.70 |
| Pulp | 6,818 | 5.85 |
| Newsprint | 2,734 | 2.34 |
| Groundwood Spec. Papers | 1,971 | 1.69 |
| Linerboard | 87 | 0.07 |
| **AGRICULTURAL INDEX** | **17,901** | **15.35** |
| Wheat & Flour | 4,693 | 4.02 |
| Barley & Feedgrains | 1,088 | 0.93 |
| Canola & Oilseeds | 5,398 | 4.63 |
| Cattle & Beef | 1,640 | 1.41 |
| Hogs & Pork | 2,378 | 2.04 |
| Fish & Seafood | 2,704 | 2.32 |
| **TOTAL INDEX** | **116,643** | **100.00** |