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Mushroom cloud parts

"Bullish" was the verdict rendered in these pages on Cameco Corporation, the big Canadian uranium miner, not quite four years ago. It was the wrong verdict. Duly chastened though bullish still, we return to the scene of our error.

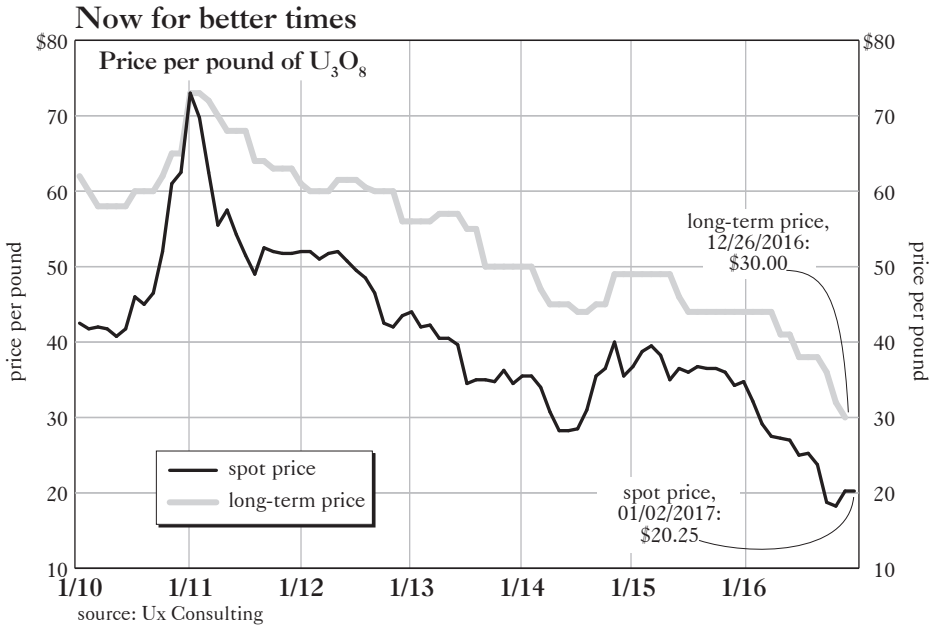
When we last wrote (*Grant's*, March 22, 2013), the spot price for uranium was down by two-thirds from its 2007 high. Defying our thorough and thoughtful analysis, it kept right on falling, as did the Cameco share price (CCJ in New York, CCO in Toronto). Too much uranium, Japanese nuke-phobia and a complex tax dispute have combined to deal the buy-and-hold *Grant's* reader a 27% loss since the 2013 cover date. We judge today—as, to be sure, we concluded in 2013—that prospective reward for the Cameco shareholder is fair compensation for the still formidable risks.

The world's second-largest uranium producer, Cameco delivered 18% of global production in 2015, according to the World Nuclear Association. (Kazakhstan's Kazatomprom was the top producer, at 21%, says the WNA.) The company commands a market cap of C$6.2 billion ($4.7 billion) and a dividend yield of 2.6%. In the 12 months through Sept. 30, revenue totaled C$2.5 billion and earnings C$73 million, or C$0.18 cents per diluted share.

Cameco discloses revenue across three reportable segments. The mining unit, which produces U_3O_8—the naturally occurring form of uranium—accounted for C$1.8 billion, or 72%, of trailing-12-month revenues. Fuel Services, which turns uranium concentrate into usable feedstocks and fuels, contributed 13% of revenues. NUKEM, Cameco's trading arm, chipped in the remaining 15%.

In the first nine months of 2016, Cameco produced 19.9 million pounds of the earth's heaviest naturally occurring element. Two high-quality mines in northern Saskatchewan unearthed most of it. First, there is McArthur River, the world's largest uranium mine. Cameco's share of McArthur production was 8.8 million pounds in the first nine months, 44% of the company-wide total. McArthur River and nearby Key Lake—the world's biggest uranium mill—are both majority-owned by Cameco in partnership with Areva S.A., a French nuclear-power company. Next is 50%-owned Cigar Lake, the highest-grade uranium mine. Cameco's pro-rated share of Cigar Lake's production amounted to 6.6 million pounds in the first three quarters, 31% of company output. Once fully ramped up in 2017, Cigar Lake's production will yield Cameco an estimated 9 million pounds per year. Then there's Inkai, a joint venture with Kazatomprom, which accounted for 14% of production and is situated in Kazakhstan. No longer producing is the Rabbit Lake mine, also in Saskatchewan. News of its pending shutdown last year delivered an upside jolt to the Cameco share price, as did Tuesday's news that competitor Paladin Energy was restructuring its balance sheet and that Kazakhstan is committing to cut 2017 uranium production by 10%. The reactions are fair expressions of the market's worry about persistent oversupply.

As we go to press, the spot price for U_3O_8 is $20.25 per pound, down 85% from its 2007 peak of $136. According to



recent figures from the WNA, there are 447 operable nuclear reactors globally, requiring 140 million pounds of uranium each year. Mined production in 2015 footed to 157 million pounds of U_3O_8, equivalent to 133 million pounds of usable uranium. It would be a case of near perfect equipoise except for the estimated 26 million pounds delivered yearly from such non-mine sources as old munitions stockpiles and reprocessed uranium left over from enrichment. Put it all together, and supply exceeds demand by 19 million pounds, or 14%.

Inventory overhang exacerbates this oversupply. Exact data for inventories aren't available, but a 2014 estimate from the WNA pegged utility stocks at 478 million pounds—over three years' worth of demand. A Nov. 3 article in the global editions of *The Wall Street Journal* for Asia and Europe notes that "uranium players had essentially no stockpiles before the Fukushima meltdown. Now stockpiles are at more than one billion pounds, experts say." Once upon a time, Japan was the third-largest deployer of nuclear power, behind the United States and France. Almost six years after the Fukushima disaster in 2011, all but three Japanese reactors remain offline.

"A lot of people thought there would be a fair number of reactors back online [by now]," Nick Carter, executive vice president for uranium at research firm Ux Consulting, tells colleague Alex Hess. In the interim, long-term contracts have kept supply relatively inelastic to changes in uranium prices. "One of the things that's tough about this market is the producers have been a little bit slow to respond . . . some of these producers are still living off of higher-priced legacy contracts."

You might suppose that, having tumbled down this flight of economic stairs, Cameco's shares could at least be counted cheap. At 2.5 times sales, they are certainly cheaper than they were in March 2013, when they fetched 4.5 times sales. And they are slightly cheaper than the average price-to-sales ratio of 2.6 attached to the shares of diversified mining giants Rio Tinto and BHP Billiton. But Cameco's earning power is a function of the uranium price, and there is nothing visually cheap at the 87 times trailing-12-months earnings at which the stock changes hands today, or at 30 times "adjusted" earnings—that is, adjusted to exclude the impact of foreign-exchange derivatives, impairment charges and inventory adjustments related to the 2013 purchase of NUKEM. Then, again, the shares will be leveraged to a rising uranium price, too—if Mr. Market should choose to vouchsafe one. As of year-end 2015, said Cameco management, a $5-per-pound gain in uranium prices meant a C$56 million boost in net profits. For perspective, adjusted earnings weighed in at C$205 over the past 12 months.

Cameco, like many uranium producers, does most of its business in long-term contracts (its preferred pricing mix is 60% market-linked and 40% fixed). As of one year ago, management said, it was "heavily committed under long-term uranium contracts through 2018." Such arrangements sacrifice upside exposure for downside protection. Thus, the average uranium price that Cameco realized on sales through the first nine months of 2016 was $42.92 per pound (C$56.77), 112% above today's spot price and 43% higher than the latest average price under new long-term contracts of $30 per pound.

Naturally, such contracts afford no protection against the risk inherent in a concentrated clientele. In Cameco's case, at the start of 2016, five customers accounted for 47% of long-term U_3O_8 sales commitments. The customers can cancel contracts, too, albeit at a penalty. At least two smaller counterparties did so last year.

In long bear markets, bullish facts tend to be brushed aside. One such fact in this case is that Cameco sits on the money-making side of the uranium-production cost curve. A March 2016 report from commodity consultants CRU Group notes that "the low-cost players in this market currently are the [*in situ* leaching] mines in Kazakhstan and the underground mines in Canada," adding that McArthur River is the most efficient underground mine in the world. According to CRU, the average uranium mine's cost of production was $31 per pound in 2015. In the first nine months of 2016, Cameco's cost averaged $22.60 a pound (at current exchange rates). As the techniques of this calculation vary, the comparison is indicative more than exact. Still, it indicates that Cameco figures among the world's low-cost producers.

Miners are inherently leveraged to the price of the thing they dig for. Piling financial leverage on top of operating leverage is one of the fastest tickets to bankruptcy. At the Sept. 30 balance-sheet date, Cameco's gross debt footed to C$1.52 billion, equal to 18% of total assets and 28% of equity. By the lights both of DBRS (the Canadian rating service) and S&P, Cameco's public debt ranks at the low end of investment grade; they appraise it triple-B-plus (DBRS having demoted it from a weakish A in June on account of the soft spot market in uranium).

The balance sheet featured long-lived property, plant and equipment in the sum of C$5.1 billion, or 60% of the C$8.5 billion in total assets. Inventories—predominantly marketable uranium—amounted to C$1.4 billion, or 16% of assets. Cameco carries large stocks because it contracts to deliver uranium in excess of production; the company's trading business also carries additional inventories.

Over the past 12 months, operating earnings, as reported, were negative, owing to the write-off of 100% of the carrying value of Rabbit Lake. Excluding impairment charges, operating earnings would have come in at C$328 million, or 2.9 times trailing finance costs. Cameco has an untapped C$1.25 billion revolving line of credit.

Any bull case must address Cameco's long-running tax dispute with the Canada Revenue Agency (CRA). The latest chapter finds Cameco in court, appealing a CRA ruling that it inappropriately shifted profits to a favorably taxed Swiss subsidiary. The CRA alleges that Cameco owes C$1.1 billion in back taxes for the years 2003 through 2010. To this bill of horrors, Cameco itself adds a postscript: If the CRA applied its ruling to fiscal years 2011 through 2015, the tax bill could swell to C$1.5 billion to C$1.7 billion. Reassessments for the years 2003, 2005 and 2006 went to trial in October, but no judgment is likely until late this year at the earliest. So far, the company has remitted C$264 million to the CRA, set aside C$54 million as provisions and received letters of credit for C$340 million towards a potential bill, for a total of C$658 million.

"[There's] not a clear path to winning, or a path to losing. We've got jurisprudence on both sides," David Hogan, chief economist and tax specialist at Richter, a Canadian financial consulting firm, tells Hess. "I've followed cases like this for years. This is not a clear-cut argument. Both of them presented very lucid, compelling arguments."

"Given the lack of legal clarity," Hess proposes, "let us assume the worst: Cameco loses its appeal, badly, and decides it would be best to borrow funds and to pay outstanding and future penalties of C$1.7

billion immediately. After accounting for the amounts already provisioned or remitted, and assuming no impact on goodwill or deferred tax assets, this course of action would cause debt to swell to C$2.9 billion, or 34% of assets. Excluding previously mentioned impairment charges, trailing operating earnings could cover the additional debt at interest rates of up to 7.4% (Cameco's bonds most recently traded at yields ranging from 2.74% to 5.64%). In short, even the worst case scenario would be unlikely to imperil Cameco's solvency, especially if market cycles take the uranium price higher."

If insolvency is unlikely to sink the share price, what might lift it? The return of a nuclear Japan remains the most popular speculation among bulls. As noted, only three of Japan's 42 operable reactors are presently active. The world's reactor fleet today has a total capacity of more than 391 gigawatts electrical (GWe). In theory, reactivating the 39 mothballed Japanese plants would return 40 GWe, or 10% of capacity, to the market. In 2010, the last full year before Fukushima, Japan used nearly 14 million pounds of uranium at 54 reactors.

To be sure, not all Japanese reactors could or will come back online. "The problem is there was a gubernatorial election in Niigata [prefecture] back in the fall, and a staunchly anti-nuclear candidate won," says Jeff Uscher, president of Makoto Research Japan (and a former colleague here at *Grant's*). "This guy can prevent the world's largest nuclear power station from coming back online, and is pretty much about to do so." Seven of Japan's reactors are situated at that plant, Kashiwazaki-Kariwa. Another nine are expected to be decommissioned. With that in mind, it is not unrealistic that Japan's annual uranium usage could return to roughly half of 2010 levels, or 7 million pounds, if the currently staunchly anti-nuke Japanese electoral mood were to shift in a pro-nuke direction (perhaps a much higher oil price would be persuasive). Since some secondary uranium supplies come from underutilized enrichment facilities, the reactivation of Japanese reactors would cut into short-term oversupply. Japan's return would also reduce excess inventories, much of which stem from Japanese utilities taking delivery of uranium under long-term contracts while not in operation. All of which can be filed under the heading "It would be nice."

The eventual runoff of long-term contracts might also provide a bullish kickstart to the uranium market. So posits Marc Henderson, CEO of Laramide Resources Ltd., a development-stage uranium miner: "At the same time you've had this inventory buildup, you've [also] had a contract book rundown from all the Western utilities. . . . They've run down their contract books to record-low levels." Predictable fuel supplies are vital for nuclear reactors, which must replace approximately one-third of their fuel rods every 12 to 18 months and are typically operated around the clock to provide baseload power (the minimum amount of power produced by an electrical grid at any one time.) Thus, utilities order uranium years in advance. Today's modest uranium prices could lead to the closure of higher-cost mines, reducing reliable primary supply. At some point, Henderson adds, "someone will break ranks and there will be a contract announced that seems silly because it's above the term price by three or four dollars. And then what will happen is that begets a landslide as people [think], 'Maybe there really isn't any inventory, maybe I should start contracting.' Then they go clean out the spot market."

Finally, there is a significant pipeline for new reactors. According to the WNA, 60 reactors are under construction globally with an expected capacity of 64.5 GWe, equal to 16% of current global nuclear-reactor capacity. China alone has 22 reactors under construction and 35 operable today. The People's Republic is looking to expand its nuclear-power capacity to 150 GWe in 2030 from 31.6 GWe today—although, as with all things China, such ambitions should be taken with a generous pinch of salt. In India, five reactors are under construction while 20 more are being planned, the sum of which would add an extra 21.9 GWe to global electricity-generating capacity from nuclear power. If utilities in these countries begin buying uranium earlier than expected, in preparation for starting new reactors, then the supply-demand balance for uranium could shift rapidly. New facilities require twice as much uranium for their first fuel load than for subsequent loads.

"Nuclear power sounds the retreat" was the B1 headline in Tuesday's *Wall Street Journal*, a reminder that the road back to growth will prove long and windy. Hess was able to identify seven reactors currently scheduled to shut down between 2018 and 2025; they account for 6.4 GWe and about 6.4% of U.S. nuclear-power capacity. At the other end of the spectrum, four plants are being built, and they will provide an estimated 5 GWe once completed in 2020, adding 5% to nuclear capacity. This does not include other sites that are credibly far along in the planning stages; they would add another 8.4% and are tentatively scheduled for delivery by the late 2020s. And while natural gas prices have almost doubled to $3.27 per million British thermal units, from $1.64 mmBtu last March, they have fallen 17% since Dec. 28 thanks to balmier forecasts for winter—leading to shared B1 billing with nuclear power in the Jan. 10 paper. Proposition: If winters are becoming permanently warmer, there will be a green imperative to build more zero-emissions nuclear reactors. If winters are not becoming permanently warmer, the price of natural gas will fluctuate.

As for the two Streets—Wall and Bay—the analysts line up as statistically bullish, with nine buys as against three holds and one sell. Then, again, the bulls are not so all-fired optimistic as to raise contrarian hackles. Their average price target is C$14.78, 88 Canadian cents below the prevailing C$15.66.

"One can easily imagine the many ways in which the uranium market and Cameco could get a jolt in the arm," Hess concludes: Cameco defeats the CRA at trial or settles favorably, Japan restarts more reactors, contractors begin worrying about their uranium supplies, demand for uranium accelerates as emerging-market capacity expands—you name it. Cameco insiders appear to be imaginative; they were net buyers of 176,059 shares at a total cost of C$2.8 million in 2016."

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