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Platt's Metals Week invited us to present a paper on merger and acquisition trends in the aluminum industry at its Marco Island, FL conference on January 22, 2008. We have sent you a copy of our prepared remarks for your interest.

We attempted to assess "expectations" that may drive bidders expectations for aluminum assets, and then review five 2007 actual specific smelter and fabrication transactions. Some of these transactions make little sense to us. Understanding expectations seemed more important than generalizing from the recent transactions.

Xstrata's sale of the former Noranda Aluminum unit appears to be the "most normal or representative" smelter transaction near \$3,150 per tonne of capacity. The Aleris LBO near seven times EBITDA appeared reasonable for recycling or rolling assets.

In order to earn a 5% after tax return on the capital employed, Rio Tinto would need to earn about \$0.47 per pound of aluminum ingot and associated raw materials and electricity produced from Alcan. We estimate Rio Tinto presumed the future aluminum price will be about 25% higher than the \$1.20 per pound 2007 average, without any escalation in costs. We estimate it paid \$10,000 per tonne of actual and 30% more planned capacity, raw materials and power.

SUMMARY AND CONCLUSION

Confidence in continued healthy world economic growth motivated several of the largest aluminum industry transactions ever in 2007. Future demand growth, price and profit expectations drive transaction prices.

Even though aluminum profit margins are not as large as nickel trading between \$11 and \$25 or iron ore or some other materials, \$1.10 per pound aluminum is large enough to encourage record investment.

We wonder whether some players worldwide are investing tens of billions of dollars in aluminum assets because aluminum "looks so cheap" compared to copper, zinc, iron ore, steel, nickel and other commodities. Maybe a few decisionmakers have lots of free cash to invest, and they are more afraid of putting the money to work in other metals sectors.

We would not characterize aluminum as being in either a "bull" or "bear" market. It has been almost balanced when many other peer commodities enjoyed record prices. Record smelter output growth and very high rates of demand growth have been almost equal, and inventories have been reasonably stable near 4 mmt with over 1 mmt in exchange warehouses..

Aluminum has traded at large discounts to copper or zinc and traded as the lowest priced LME commodity for the first time ever. Aluminum has risen in part “in sympathy” or in expectation of substitution from other more rapidly rising commodities. Record capacity constructions in China, Russia and the Mideast and commodity exchange inventories near 1.25 mmt distinguish between aluminum and many other commodities markets.

Current aluminum fundamentals are not strong enough to withstand a true worldwide recession. We estimate demand growth at 6.4% in 2008, which assumes China, the Mideast and Russia continue growing at almost the same rates as 2007 and the mature economies slow.

We expect each builder of new capacity to continue unabated owing to confidence in the comparative advantages of its own projects. Continued global prosperity will make older or higher cost smelters valuable, or declining aluminum prices will mothball them. We expect a continued strong M&A market in two aluminum segments, raw materials and fabrication. Each expanding region of the world aluminum industry is raw materials deficient. Rusal, various Chinese and various Mideastern producers will continue to buy into raw materials ventures will opportunities arise. Second, global consolidation in rolling, extrusions and other aluminum converting businesses should see activity as small or medium-sized businesses become available.

We regard the sales of Alcoa packaging, Alcan packaging and the former Pechiney engineered products businesses as “one-time” epic large downstream sales.

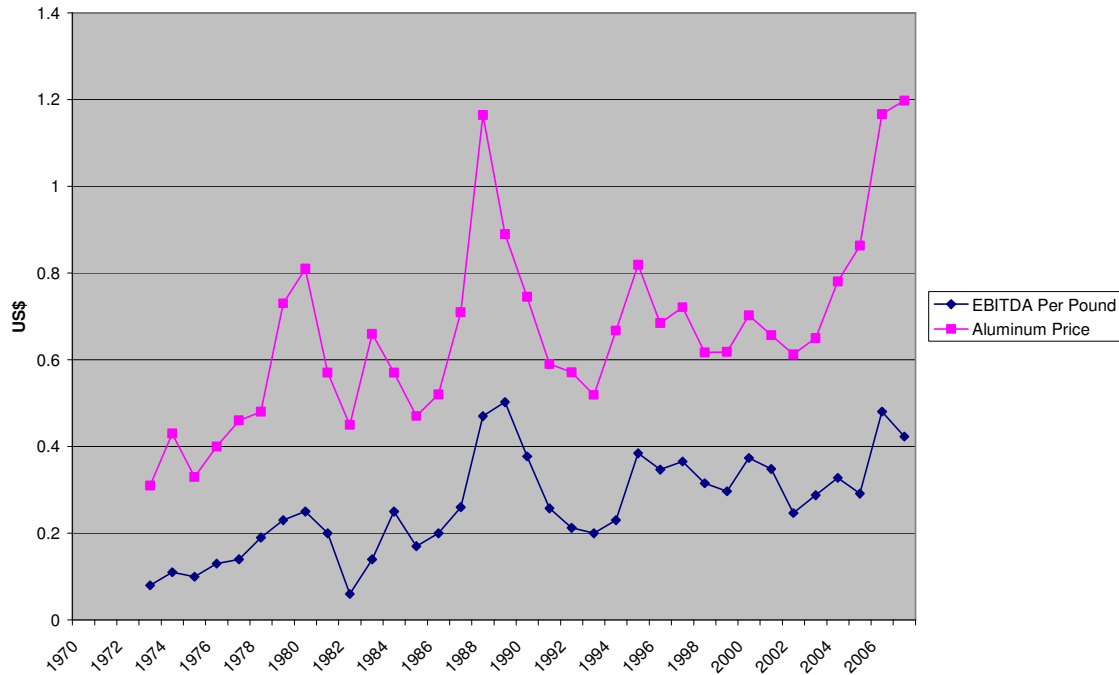
We do not expect to see too many large smelters sold, as the sovereigns in Dubai or Bahrain or the owners of Rusal are unlikely to sell. BHP Billiton, Rio Tinto or Vale have no reasons to sell their aluminum units either.

A COMPARISON OF EXPECTATIONS AND THE STATUS QUO OUTLOOK

We believe many aluminum market participants expect a sustained global commodities boom, and ignore the current aluminum spot price, inventory or capacity conditions. Many have a strong conviction about the next ten years’ robust economic growth in China, the Mideast, India, Russia or other emerging economies. Maybe some expect the aluminum price to experience tenfold surges like nickel or molybdenum or at least fivefold surges like lead, zinc, or copper.

Rio Tinto articulated convictions about non-viability of Chinese smelters, hydropower compatibility with carbon taxes or climate change protocols and aluminum demand growth in autos, for example. Its bid for Alcan was about the future, not the status quo.

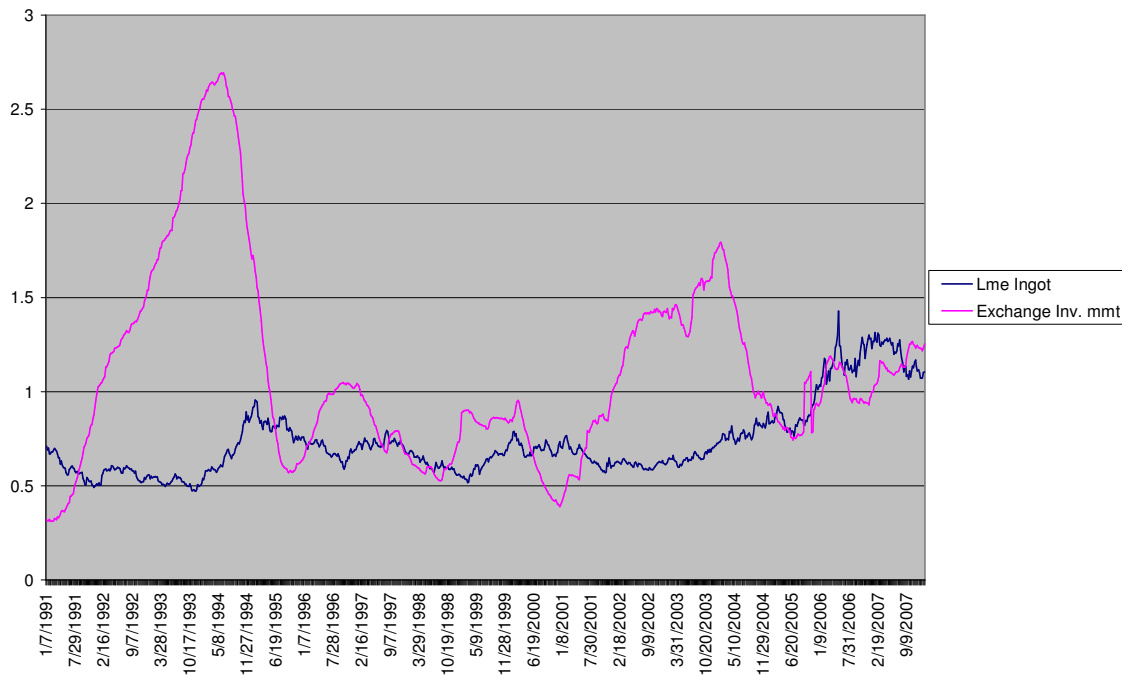
Figure:1 ALCOA EBITDA per Pound Since 1970 vs LME Ingot



We characterize the recent aluminum markets as neither a boom nor bust, or almost normal. We take a look at Alcoa's EBITDA per pound of aluminum shipped since 1970 (Figure 1) as a measure or proxy for industry profitability as Alcoa operates about 20 smelters on four continents. Alcoa earns a larger profit per pound than many companies because it is more than 20% self-sufficient in electricity generation, a large vendor of low cost alumina, a smelter, a large fabricator and operator of profitable unrelated manufacturing entities. In the past 25 years Alcoa's EBITDA per pound ranged from \$0.20 to \$0.50 most of the time, and was \$0.298 per pound in the December 2007 quarter that suffered several unique losses and we have estimated \$0.38 for 2008 full year. C\$, A\$, euro and Brazilian exchanged rates caused below average profits at the \$1.11 per pound fourth-quarter average LME spot price.

No physical shortage of aluminum metal exists as 1.25 mmt of ingot reside in LME, Nynex and Shanghai inventories (Figure 2). In effect, the 2.7 mmt of record LME inventories accumulated in June 1994 have NEVER been used up, and burden the aluminum market today 14 years later.

Figure 2: LME Ingot vs. Combined Exchange Inventories

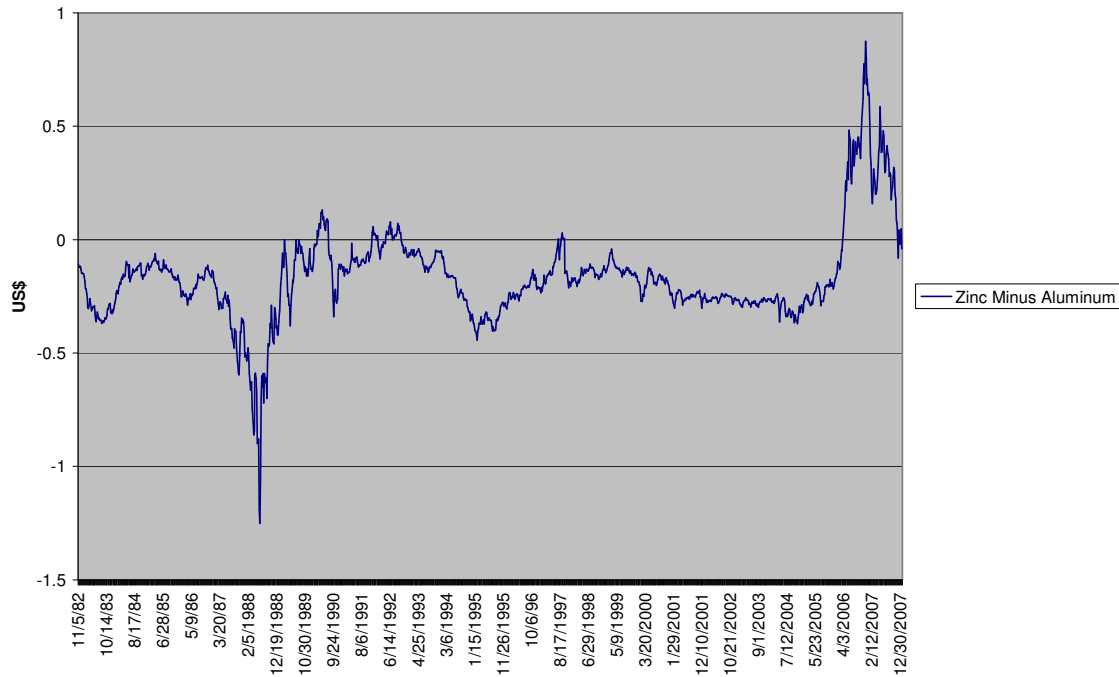


We reject the record low 2.746 mmt November IAI wrought aluminum inventory low as an indicator of a shortage. Instead, changes in industry structure and communications technology render less inventory needed at smelters. Mergers, the prevalent trend for smelters to do away with fabrication and modern control systems require less producer stocks. Further, we reject the current 30 day or 4 mmt combined IAI producer plus exchange stock level as indicative of a shortage, as the global aluminum market functions just fine with 45 mmt of 2007 and at probably more than 48 mmt of 2008 consumption without large stockpiles everywhere. We regard the June 1988 3.138 mmt global inventory low as a proxy for what might happen in aluminum if a “shortage” occurred in aluminum similar the booms other nonferrous metals enjoyed recently.

A cynic might argue that aluminum prices in fact are depressed. Frequently lead and zinc have been more valuable than aluminum, for example, and on some days aluminum has been the lowest price LME metal. If the LME continued to trade aluminum in sterling as it began three decades ago or if it used the euro or Canadian dollar, this conference might be discussing the possible bottoming point of the aluminum price.

Over most of the past 25 years aluminum traded near a \$0.20 pound premium to zinc, for example. Since December 2006 zinc commanded a premium to aluminum, however (Figure 3).

Figure 3: Zinc Minus Aluminum Spot Prices Since 1982



Similarly, in the 25 years prior to 2004 copper averaged a \$0.32 per pound premium to aluminum. In May 2006 copper peaked at \$3.23 per pound more than aluminum, and continues to command a more than \$2.00 per pound premium to aluminum (Figure 4).

These relationships suggest aluminum has risen purely in sympathy to other nonferrous metals, or because pension endowments or investment funds buy derivatives representing “baskets” of commodities futures contracts.

Figure 4; Copper Minus Aluminum Spot Prices Since 1982

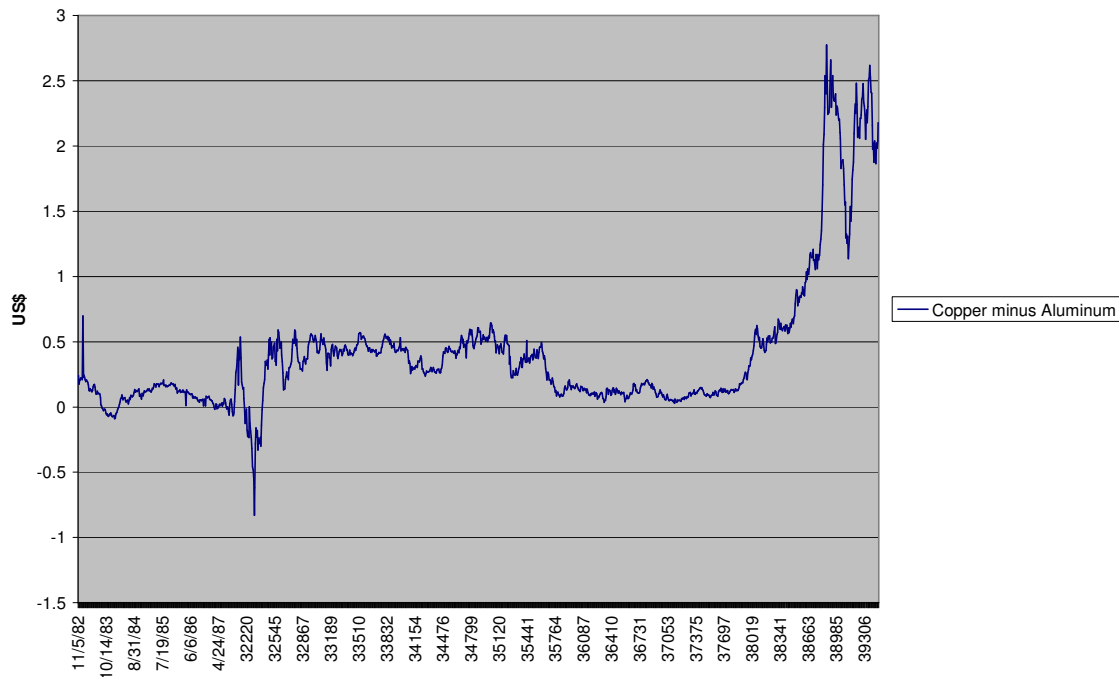


Table 5 WORLD TOTAL ALUMINUM SUPPLY/DEMAND BALANCE
(Thous. Metric Tonnes)

	IAI		Average Operating Rate (%)	Scrap Recovery	China Output		Producers' Inventory Total	Apparent Consumption	Annual Demand Growth	Days Supply Inventory	Avg. LME Ingot
	Year-end Primary Capacity	Primary Production			After 1995 (Imports from CIS)	Change					
1973	11,349	10,050	88.6%	2,698	134	3,005	-411	13,293	13.4%	80	\$0.31
1974	11,848	10,932	92.3%	2,759	174	3,691	687	13,178	-0.9%	99	\$0.43
1975	12,057	9,716	80.6%	2,430	-134	4,792	1,100	10,912	-17.2%	160	\$0.33
1976	12,410	10,034	80.9%	2,903	87	4,082	-709	13,733	25.9%	109	\$0.40
1977	12,810	11,122	86.8%	3,151	145	4,376	294	14,124	2.8%	113	\$0.46
1978	13,060	11,440	87.6%	3,326	123	3,950	-426	15,315	8.4%	94	\$0.48
1979	13,372	11,794	88.2%	3,571	128	3,419	-531	16,024	4.6%	78	\$0.73
1980	13,708	12,610	92.0%	3,638	113	4,134	650	15,711	-2.0%	97	\$0.81
1981	13,980	12,293	87.9%	3,778	164	5,370	1,149	15,086	-4.0%	129	\$0.57
1982	13,971	10,523	75.3%	3,749	103	5,013	-450	14,825	-1.7%	128	\$0.45
1983	14,268	10,805	75.7%	3,973	-68	3,853	-1,135	15,845	6.9%	97	\$0.66
1984	14,179	12,464	87.9%	3,961	36	4,570	759	15,702	-0.9%	77	\$0.57
1985	13,644	11,990	87.9%	4,013	-64	4,222	-425	16,364	4.2%	99	\$0.47
1986	13,390	11,990	89.5%	4,199	155	3,717	-368	16,712	2.1%	85	\$0.52
1987	13,595	12,608	92.7%	4,495	279	3,138	-548	17,930	7.3%	68	\$0.71
1988	13,819	13,501	97.7%	5,156	419	3,223	35	19,041	6.2%	62	\$1.16
1989	14,277	14,062	98.5%	4,943	299	3,265	42	19,262	1.2%	62	\$0.89
1990	14,731	14,186	96.3%	5,062	403	3,470	205	19,446	1.0%	65	\$0.75
1991	14,929	14,778	99.0%	5,392	1,150	4,337	867	20,453	5.2%	77	\$0.59
1992	15,767	14,763	93.6%	5,470	1,180	4,794	457	20,957	2.5%	83	\$0.57
1993	16,005	14,984	93.6%	6,051	1,750	6,072	1,279	21,507	2.6%	103	\$0.52
1994	16,015	14,368	89.7%	6,439	1,900	5,285	-787	23,494	9.2%	82	\$0.67
1995	19,496	17,342	89.0%	6,868	1,676	4,214	-1,071	26,957	7.6%	57	\$0.82
1996	20,254	18,639	92.0%	6,914	1,771	4,164	-50	27,374	1.5%	56	\$0.68
1997	20,862	19,479	93.4%	7,594	2,035	3,831	-333	29,441	7.6%	47	\$0.72
1998	21,390	19,949	93.3%	7,572	2,336	3,893	62	29,795	1.2%	48	\$0.62
1999	21,822	20,646	94.6%	8,132	2,599	4,070	177	31,400	5.4%	47	\$0.62
2000	22,299	21,191	95.0%	8,197	2,794	3,627	-443	32,625	3.9%	41	\$0.70
2001	22,993	20,551	89.4%	7,624	3,371	4,011	384	31,162	-4.5%	47	\$0.66
2002	23,429	21,199	90.5%	7,649	4,321	4,361	350	32,819	5.3%	49	\$0.61
2003	23,819	21,937	92.1%	7,656	5,547	4,713	352	34,787	6.0%	49	\$0.65
2004	24,644	22,591	91.7%	7,560	6,689	4,122	-591	37,432	7.6%	40	\$0.78
1Q05		5,628	89.2%	1,924	1,741	4,080	-42	9,335	1.8%	40	\$0.87
2Q05		5,844	91.6%	1,940	1,912	3,954	-125	9,821	4.2%	37	\$0.82
3Q05		5,972	92.6%	1,885	2,043	4,268	314	9,586	1.9%	41	\$0.84
4Q05		6,019	93.4%	1,943	2,047	4,115	-153	10,162	8.4%	37	\$0.93
2005	25,578	23,463	91.7%	7,692	7,806	4,115	-7	38,968	4.1%	39	\$0.86
1Q06		5,860	92.1%	1,955	2,060	4,172	57	9,818	5.2%	39	\$1.09
2Q06		5,941	93.3%	1,950	2,250	4,097	-76	10,216	4.0%	37	\$1.21
3Q06		5,990	94.1%	1,986	2,420	3,834	-263	10,659	11.2%	33	\$1.13
4Q06		6,075	95.4%	1,951	2,619	3,917	84	10,561	3.9%	34	\$1.24
2006	25,816	23,866	92.4%	7,841	9,349	3,917	-198	41,254	5.9%	35	\$1.17
1Q07		6,027	92.8%	2,028	2,859	4,031	114	10,800	10.0%	34	\$1.27
2Q07		6,200	95.4%	2,014	3,031	3,904	-127	11,372	11.3%	31	\$1.25
3Q07		6,275	96.6%	2,018	3,200	4,122	218	11,275	5.8%	33	\$1.16
4Q07		6,361	97.9%	2,000	3,421	3,967	-155	11,937	13.0%	30	\$1.11
2007	26,350	24,863	94.4%	8,060	12,511	3,967	50	45,385	10.0%	32	\$1.20
2008E	27,235	25,700	94.4%	8,260	14,761	4,400	433	48,289	6.4%	33	\$1.12
2009E	28,464	26,500	93.1%	8,460	15,761	4,600	200	50,521	4.6%	33	\$0.95
2010E	29,675	27,500	92.7%	8,660	16,761	4,750	150	52,771	4.5%	33	\$0.93
2011E	31,833	28,750	90.3%	8,860	17,761	5,000	250	55,121	4.5%	33	\$0.95
2012E	33,717	30,000	89.0%	9,060	18,761	5,250	250	57,571	4.4%	33	\$0.95
2013E	35,702	31,500	88.2%	9,260	19,761	5,600	350	60,171	4.5%	34	\$0.95

Sources: JT Very Independent Research, LLC Est.; Int'l Alum. Institute; World Bureau of Metal Statistics; Alum. Asso.; China & CIS from

We estimate 2008 average LME prices at \$1.12, benefiting from the weak dollar, lower interest rates and central bank liquidity injections into the global banking system. We estimate 2009-13 at a \$0.95 per pound average, or sufficient to keep producers active in a well-supplied market.

SPECIFIC NEAR-TERM DEMAND FACTORS

First, record crude oil prices and recent economic news from the U.S., EU and Japan are not consistent with repeated rapid growth matching the 2007 10% global aluminum demand gain. Alcoa forecast about 1 mmt or one-fourth of the global volume growth from outside of China without any declines anywhere. Second, we question whether the 2007 4.13 mmt or 10% global demand gain was bona fide without any inventory building, unlike the big 2006 stainless steel volume gain that reversed in 2007. Third, it is unclear whether China will repeat the same 2.9 mmt 2008 absolute Chinese demand growth, given slowing export demand abroad, consumer product safety concerns, excess “exports goods” capacities and completion of Olympic-related construction. Fourth, it is unclear whether sufficient bauxite, alumina, smelting capacity and electricity exists to support more than 3 mmt more output should the demand develop.

In the past two weeks we raised our 2008 global demand growth estimate to 6.4% from 3.6% as we raised our estimate of a Chinese output gain to 2.25 from 1.0 mmt due to a near 13.6 mmt fourth-quarter 2007 actual Chinese output rate and a consultant’s estimate of a 3.2 mmt 2008 Chinese capacity gain. For 2008 we estimate an 0.837 mmt IAI smelter output gain, a 0.2 mmt scrap recovery gain and 2.25 mmt up from 1.0 mmt Chinese output gain. We estimate non-Chinese smelters operated at 97.9% of annual 2007 capacity in the fourth-quarter of 2007, and we estimate a 94.4% full year IAI 2008 operating rate roughly the same as 2007.

In 2007, the U.S. aluminum demand decline almost negated the entire gain in the rest of the world other than China. In 2007 for copper China’s demand gain was 1.5 times the total world gain, or in other words the rest of the world shrunk by one-third of the Chinese gain. Recent economic data suggest China will account for a larger portion of global metals demand growth in 2008, or that the rest of the world will register a bigger decline in total.

As we look to estimate 2008 demand growth, one uncertainty is whether Chinese demand grows by 2, 3 or 3.5 mmt and the other is whether the rest of the world grows or shrinks by 1 mmt. Consensus estimates of a 4% drop in global light vehicle sales and some lighter mix servers to cut aluminum use by 0.3-0.5 mmt. Global construction markets appear to be enjoying slower growth outside of oil-producing regions as well.

We question the availability of certain aluminum production inputs, namely electricity, ocean shipping to move bauxite or alumina and Kalimantan bauxite supplies. In the past week we have spoken to U.S. copper mines paying \$0.055 and \$0.075 per pound for electricity, for example. A 3 mmt increase in Chinese aluminum metal output would

require close to 15 mmt of bauxite to be mined somewhere, or maybe 7.5 mmt more from Indonesia to be delivered to Chinese alumina refineries.

A very bullish aluminum industry case could be made if over 4 mmt of new demand in 2008 exceeded available supplies by 1 or 2 mmt, but the global auto market should fall about 4% in 2008, the average auto mix should be 3%-5% lighter as the mix shifts towards more fuel-efficient cars and construction markets are easing in developed nations. Further, slowing economic growth may ease electricity or ocean shipping bottlenecks in 2009.

WE REJECT THE CURENT FORWARD CURVE

For the time being we maintain our \$0.95 per pound 2009 LME average aluminum price forecast, despite the factors that have increased the aluminum futures price forward curve.

We believe the companies in Russia, China, the Mideast and elsewhere that build and operate smelters indeed will produce aluminum. These producers have more credibility to us than the “no recession,” \$95 crude oil or sustainability of current exchange rate scenarios. Rates of growth of aluminum supply continue to exceed our expectations and sustainable demand growth, in our opinion.

In the past six months the aluminum futures “forward curve” has become “upward sloping,” and five-year forward prices have come to exceed \$1.00 per pound. The consensus has incorporated near \$100 crude oil, caustic, ocean freight, carbon and other cost inflations, \$1.00 C\$ parity with the U.S. dollar, and related U.S. dollar weakness causing Aussie, Brazilian, euro and other geographic cost increases into future aluminum price expectations.

RIO TINTO’S PURCHASE OF ALCAN NOT CHARACTERIZED AS A NORMAL TRANSACTION AT OVER \$10,000 PER EXPANDED TONNE

Rio Tinto paid \$38 billion, assumed \$10 billion of liabilities and probably will yield \$10 billion in proceeds from divesting the packaging and engineered products portfolios. It paid \$30 billion more than the tangible book value of Alcan, in a breathtaking deal.

Adjusted for the divestitures underway, we estimate that Rio Tinto paid \$38 billion including liabilities assumed and a \$25 billion premium to tangible book value.

Adjusted for the Vlissingen divestiture, Rio Tinto paid \$38 billion for 3.13 mmt of current output and 0.5-1.0 mmt of new output depending upon the number of Alcan projects that move forward and Alcan’s ownership stakes. Let’s say that the future Alcan produces 3.9 mmt or about 8.5 billion pounds of primary ingot each year.

What does Rio Tinto have to do to earn a 10% after tax return on the \$38 billion capital outlay, including assumed debt, employment benefits and minor other costs. Interest expense for the final 69 days of 2007 were \$372 million.

Let's call the annual interest expense \$1.25 billion and not \$2 billion after selling packaging and engineered products, earnings retention and some refinancings. Let's assume the \$38 billion in capital employed needs to earn just \$5 billion before taxes in order to earn \$3.8 billion after taxes. In order to earn \$6.25 billion before interest expense and taxes to earn 10% after taxes on capital employed, we estimate Rio Tinto would need to earn \$0.735 per pound of aluminum.

We have ignored depreciation as a source of cash flow, as the construction of several new smelters and associated bauxite and alumina capacity certainly will use up the depreciation.

In order to earn a 5% after tax return on the capital employed, Rio Tinto would need to earn about \$0.47 per pound of aluminum ingot, raw materials and electricity produced. In its peak March 2007 quarter Alcan earned \$0.494 per pound of EBITDA, or about \$0.38 per pound before interest and taxes alone. However, after taking away profitable packaging, aerospace and other engineered products and adjusting for lower prices and higher costs, we estimate it might have earned \$0.15-\$0.20 per pound before interest in the December 2007 quarter.

We estimate Rio Tinto presumed the future aluminum price will be about 25% higher than the \$1.20 2007 average, without any escalation in costs. We estimate it paid \$10,000 per tonne of actual and 30% more planned capacity, raw materials and power.

Further, the LME aluminum price is about 10% lower, the stock market nearly 10% lower and the C\$, euro, A\$ and real all STRONGER than when Alcoa made its initial \$73.50 per share May 2007 bid for Alcan. We conclude Alcoa's initial bid was too high, and that Alcan may have traded near \$40 to \$45 per share today were it still independent. We conclude Rio Tinto wasted over 25% of its \$38 billion acquisition price.

THE LBO OF NORANDA ALUMINUM TRANSLATES INTO \$3,150 PER TONNE

We consider this a representative transaction. Apollo Group paid \$1.2 billion for Noranda Aluminum, which included a relatively new \$240 mm foil and three other rolling operations. We attribute \$0.8 billion of the purchase price to the 254,000 tonne New Madrid, Missouri smelter and raw materials facilities.

We estimate this equates to \$3,150 per tonne of smelting capacity. While we do not know the terms of the power supply agreement, we estimate the buyer and lenders assumed something like a \$0.035 per kwh stable coal-based long-term arrangement.

THE LBO OF VLISSINGEN AT UNDER \$1,000 PER TONNE

Alcan sold the 224,000 tonne Vlissingen, Netherlands smelter to the UK private capital group Klesh and Company for an undisclosed sum, which we estimate at \$100 to \$150 mm or \$446 to \$669 per tonne. This smelter has no long-term power supply commitment nor comparative advantage, and sold for a multiple of the dismantlement value of the pot cell equipment if resold in China.

This is an abnormal transaction in which Alcan tried to sell a marginal asset near the top of the market as perhaps it sold its core assets separately for top dollar as well.

HINDALCO'S PURCHASE OF NOVELIS

We consider this prominent transaction to be “abnormal” or not representative as well. Novelis had several unique business issues in 2006, which motivated its board to simply put the company up for sale rather than fix it.

First, the CEO position was vacant. Second, there had been financial statement inaccuracies, and very involved problems with restatements, controls, forecasts, finance staff and related issues. Third, beverage can sheet price cap contracts and related derivatives hindered profits. Fourth, we estimate the business had a \$332 mm negative tangible net worth at year-end 2006. Fifth, Novelis had about \$3.1 billion of debt-equivalent liabilities, and depended upon the patience of its lenders for financial viability. Sixth, the various situations could have made its auditors impatient.

One might interpret the property, plant and equipment of Novelis as either overstated or understated, depending upon one's view of the aluminum market.

Roughly 15 years ago Alcan designed its rolling system near the 1992 all-time U.S. peak of the beverage can sheet market WITH GREAT OPTIMISM as though PET plastic did not exist in the beverage can sheet market and as though the majority of light vehicles would adopt aluminum sheet skins.

We estimate the Novelis fixed assets were designed in the 1990s as though the crude oil price back then was \$300 per barrel, PET plastic no longer was available and all the cars and trucks converted to aluminum skins. Alcan built a series of 1, 2 or 3 stand hot- and cold-rolling complexes with room to add additional rolling mill stands. Many mills were reversing mills.

We estimated that Novelis operated near 3% of its theoretical output, or that the addition of three rolling stands per existing mill could increase output eight fold or conversion to continuous from reversing practice another ten fold throughput increase. We estimate that the Para rolling mill in Brazil built with three of the original six stands from AK Steel in Ashland, KY could have satisfied more than the entire global beverage can sheet market had it been reassembled in a configuration identical to the Ashland, KY configuration.

The buyer, Hindalco, probably became very enthused with the latent asset capacity of the fixed assets of Novelis, and crude oil prices today do not benefit PET resin nor operation

of heavy steel vehicles. We assume the buyer was greatly optimistic about the growth of the world economy and flat-rolled aluminum.

A skeptic might have viewed the Novelis rolling configuration as too large, already the largest aluminum rolling mill system in the world, and sought to streamline it. Perhaps three hot-strip mills and cold-rolling locations worldwide might be withdrawn, and another hot- and cold-rolling stand added worldwide at one or two locations worldwide at a cost near \$100 million. Such an action might involve the writedown of three locations at say \$100 million each, and free up perhaps \$100 mm in working capital.

Hindalco paid \$44.93 per share, or about \$3.2 billion for the equity plus \$3.1 billion liabilities assumed. We believe the performance of the business justified a price that was one-third to one-half less for the equity portion of the transaction.

THE LBO OF ALERIS NEAR 7 TIMES EBITDA

Texas Pacific Group paid \$3.3 billion for Aleris, including \$1.7 billion in debt assumed part of which stemmed from the prior \$1.1 billion Corus Aluminum purchase. This price turned out to be around 7 times the actual 2007 EBITDA of the business, which is a reasonable benchmark value for rolling and recycling assets.

The \$1.6 billion equity purchase included a diverse array of complex businesses. These include (a) zinc recycling later sold for \$295 mm, (b) aluminum dross recycling, (c) conventional aluminum recycling, (d) two Hazelett thin-slab near net shape aluminum casting and rolling plants well suited for construction grades of sheets, (e) the Koblenz, Germany aerospace unit originally operated by Kaiser Aluminum and Hoogovens, and (f) various other rolling and fabrication businesses among the 5 to 10 flat-rolled or other fabricating among the nearly 57 locations worldwide.

SUMMARY AND CONCLUSION

We consider the sales of the former Noranda New Madrid smelter near \$3,150 per tonne of capacity and raw materials and the LBO of Aleris near 7 times EBITDA as “representative” transactions in the past year.

We reject the purchases of Alcan and Novelis as representative transactions from which aluminum investors may generalize, even though they were the largest smelter or fabrication transactions ever. We hope for the sakes of the buyers that these transactions are not remembered as the largest aluminum industry mistakes ever.

Huge differences in aluminum market expectations exist, and we expect wide variations in future transaction values.

CHANGE IN THIS RESEARCH OPERATION

This report reflects research coverage by JTVIR, LLC. In no way shape or form should it be misconstrued as involving Prudential Equities Group (PEG), which shut down on June 6, 2007 as noted. The continuation of that same quarterly or full year earnings estimate for 2007 as JTVIR, LLC should not be construed or mistaken to involve PEG, which shut down on June 6, 2007. Certain data, such as the logic of the earnings model, are similar owing to the same primary author, but this coverage initiation herein involves a different entity and no employment or affiliation with the former Prudential Equity Group, LLC.

DISCLOSURES

“John Tumazos Very Independent Research, LLC” (JTVIR) is a Delaware Corporation formed July 6, 2007 with registration effective on August 27, 2007 as an investment advisor in the state of New Jersey owing to our place of business in New Jersey.

JTVIR is not a broker-dealer, and conducts no trades. Its primary business is to provide “unbundled” metals and paper industry securities and market research to institutions or corporations in a zero commission, electronic execution, electronic dissemination, unbundled format for a specified annual fee structure.

Our investment rating system for securities recommendations is Overweight, Neutral Weight or Underweight. Overweight or Underweight recommendations are estimated to vary from the relative performance of the S&P 500 by more than 10% annually, and the intended time horizon is up to 24 months. Our securities research is intended for institutional investors that might buy up to 10% of a given company, and as such focuses more towards longer-term dynamics impacting the net present value of future cash flows rather than “day trading” sorts of near-term issues.

Except for Temple-Inland, Duluth Metals, Polymet Mining, Quadra Resources, Niger Uranium and Canyon Resources, neither JTVIR, its members or its employees own or have a financial interest in any securities discussed in this report or any reports we have published recently. Our policy is full disclosure.

Our policy permits personal trading in the metals or paper industries, though no positions were taken in companies within regular research coverage after July 2001 after joining Prudential Financial and until after one month of completed New Jersey registration of JTVIR. Our policy is that any personal trading must be consistent with our recommendation, made two business days or more AFTER a recommendation or change in recommendation and held for a minimum of 30 days or one month. We believe it is virtuous for a securities analyst to “put his or her money where his mouth is” to invest consistent with the recommendation to clients after such recommendation has been made, and we disagree with some restrictions made upon broker-dealer employees after 2000 era scandals.

Our policy permits up to three directorships and up to five consulting projects, advisory assignments or financial advice to corporations that might supplement, backcheck or substitute for certain services of a large investment banking firm. For example, we would

accept an engagement to evaluate investment banking advice on behalf of a manufacturing company concerned whether advice is sincere or intended to maximize fees. Currently no such relationships exist.

Our policy is full disclosure of any advisory relationship or conflict going back three years. None currently exist.

Numerous prior investment banking relationships existed prior to three years history to the pre-1997 time frame under the employment of Donaldson, Lufkin and Jenrette or Oppenheimer & Co., Inc. Some of these we can recollect included 14 different gold mine valuations or sales for Barrick Gold, LAC Minerals (later acquired by Barrick), Addington Resources (gold assets in Montana acquired by Canyon Resources), Westworld Industries (Bolivian assets acquired by Battle Mountain Gold later acquired by Newmont Mining), Coeur d'Alene Mines, Crown Resources (acquired by Kinross Gold), Freeport-McMoRan Gold (acquired by Minorco later AngloGold later Queenstake Resources), FMC Gold (later renamed Meridian Gold) and others. Sole managed initial public offerings included Reliance Steel & Aluminum and Huntco. Lead-managed initial public offerings included American Steel & Wire (later acquired by Birmingham Steel) and lead-managed underwritings included Quanex. Co-managed underwritings included the IPO of Century Aluminum and Grupo Imsa and offerings for AK Steel, Kaiser Aluminum, Agnico-Eagle Mines, Cameco and others. Asset sales or purchase advisories, fairness opinion or trusteeships were done for Thyphin Steel (sold to Ryerson Tull), Cyclops Corp. (sold to Armco later sold to AK Steel), Allegheny Corp., Bethlehem Steel, the U.S. Dept. of Justice pursuant to the June 1984 merger of LTV and Republic Steel to sell the Gadsden, AL integrated flat-rolled mill, Cobre Copper, and others. Typically more than five investment banking assignments were evaluated, partly executed or "due diligenced" for any completed transaction. Some examples we can recall for which a prospectus was either drafted or partly drafted indicating much work included stock underwritings not completed for Wheeling-Pittsburgh Steel, Steel Dynamics, Atlas Corp., Webco, Sharon Steel, IPSCO, Co-Steel Inc., and others.

ANALYST UNIVERSE COVERAGE:

John C. Tumazos, CFA: Rio Tinto, Louisiana-Pacific, Nucor Corp., Newmont Mining, U.S. Steel, International Paper, BHP Billiton, MeadWestvaco Corp., Antofagasta PLC, Allegheny Technologies, Alcoa Inc., Inco Limited, Bowater, Inc., Temple-Inland, Barrick Gold, Abitibi-Consolidated, Weyerhaeuser Co., Alcan Inc., Smurfit-Stone Container, Plum Creek Timber, Worthington Industries, Goldcorp Inc., AngloGold Ashanti, Freeport McMoRan Copper & Gold, Novelis Inc., FNX Mining.

Dynatec, Alcan and Bowater are companies not continued in the research coverage of JTVIR, LLC that was previously included in the prior June 6, 2007 Prudential Equities Group universe owing to takeovers.

Subsequently, since September 2007 JTVIR, LLC has initiated coverage of new companies not previously covered in the former universe. These new companies include TeckCominco, Skye Resources, General Moly, Inc., Duluth Metals, Polymet Mining, Franconia Minerals, CVRD and Century Aluminum.

In accordance with applicable rules and regulations, we note above parenthetically that our stock ratings of “Overweight,” “Neutral Weight,” and “Underweight” most closely correspond with the more traditional ratings of “Buy,” “Hold,” and “Sell,” respectively; however, please note that their meanings are not the same. (See the definitions above.) We believe that an investor’s decision to buy or sell a security should always take into account, among other things, that the investor’s particular investment objectives and experience, risk tolerance, and financial circumstances. Rather than being based on an expected deviation from a given benchmark (as buy, hold and sell recommendations often are), our stock ratings are determined on a relative basis (see the foregoing definitions).

There is no intention to “balance” the number of Overweight or Underweight ratings, as instances of broad over- or under-performance among basic industrials may occur. JTVIR makes each investment judgment in a “bottoms up” manner based on the assets of each individual company.

Price Target – Methods/Risks

The methods used to determine the price target generally are based on future earning estimates, product performance expectations, cash flow methodology, historical and/or relative valuation multiples. The risks associated with achieving the price target generally include customer spending, industry competition and overall market conditions.

Additional risk factors as they pertain to the analyst's specific investment thesis can be found within the report.

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