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### ***Complimentary Report Not Intended for Compensation***

ALCOA (AA \$33.29, rated Neutral) FOURTEEN KEY AGENDA ITEMS FOR KLAUS KLEINFELD

	2007E	2008E	2009E	2010E
Revised EPS July 9 <sup>th</sup>	\$2.97	\$2.40	\$1.91	\$1.94

- We assume in writing this report that (a) all management actions to enhance the asset base benefit AA employees, its outlook as a standalone publicly traded entity or its attractiveness as an LBO or takeover target, (b) that Kleinfeld becomes CEO succeeding Belda and (c) that management earnestly seeks to improve the company to benefit all in a goal congruent manner.
- We expect a drop to \$0.75 per pound global average smelting costs, which rose towards \$0.85 from a five year ago average nearer to \$0.50 per pound, but now should fall automatically as certain electricity charges are pegged to LME ingot now \$1.10, much alumina is indexed near one-eighth of LME ingot now at \$1.10, the US dollar has rebounded to nudge down costs in Canada, EU, Australia, Brazil, etc. and productivity efforts continue.
- We do not expect any material change in supply at \$1.10 nor until ingot nears \$0.90. The aluminum physical market appears “steady,” without too much evidence of summer seasonal slowdown. We attribute the recent LME spot aluminum price decline to EXPECTATIONS of demand slowdown from the U.S. and global credit market issues.
- Our \$2.40 earnings estimate for 2008 at \$1.12 per pound estimated LME aluminum appears reasonable. The current Alcoa P/E of 13x estimated 2008 earnings seems within reason and, in retrospect, the share price rally after the May 6<sup>th</sup> bid for Alcan seems tougher for us to understand.

### KEY AGENDA ITEMS FOR KLAUS KLEINFELD

Alcoa needs to act aggressively to “close the gap” between its own cost structure and the new 1.4 mmt smelters to be built by 2014 in Dubai and Saudi Arabia, whose costs at phase 1 could be \$0.18 lower than Alcoa’s smelting costs today or after phase 2 completion to 1.4 mmt as much as \$0.30 lower than what Alcoa’s power costs escalate towards in 2014 as many of Alcoa’s power arrangements reprice. Synergies with Alcan could have cut BOTH companies average unit costs \$0.06 to \$0.07 per pound, or 10%, while accessing Alcan’s waterfalls able to support about 1.5 mmt of output. Now Alcoa needs to formulate dozens or hundreds of individually smaller action plans to substitute for the bold initiative that “got away.”

#1 Negotiate an extension to the Hydro Quebec power agreement expiring in 2014 impacting nearly one-fourth of Alcoa's smelting capacity. This is the single largest internal issue impacting Alcoa's long-term outlook. No diligent lender can determine how much debt the company can bear until it knows the long-term power costs.

#2 Either proceed to build or else cancel the 2003 proposal to invest C\$1.5 billion to replace the environmentally outmoded Soderburg pot cells at Baie Comeau, expand Baie Comeau and double Deschambault to add about 360,000 tonnes. A "no incremental power allocation" option exists in which Alcoa might build a 225,000-250,000 tonne new line for \$600+ million to replace the existing almost 200,000 tonne Soderburg capacity with a slightly more power efficient pot line able to produce more than 10% more than the nearly half century old predecessor. A third option would be to build nothing and simply withdraw the Soderburg line either when the power rate goes up or environmental rules forbid the continued operation of the older line.

#3 Initiate a program to buy coal or other energy inputs on behalf of electric utilities in selected cases, relegating the electric utility's position to that of a "toll converter" to deliver electricity to Alcoa's smelters. We are uncomfortable with the practices of certain electric utilities which offer 5 to 20 year long-term electricity contracts but buy coal on a partial or complete spot basis or shorter duration contracts of 1 to 5 years. Some utilities offer electricity pricing that may not be truly "deliverable." Moreover, spot thermal coal prices have fallen from highs in 2004 or 2005.

#4 Increase efforts to "self generate" power. Alcoa already generates 20% to 25% of its smelter electricity needs from coal or hydro in the U.S. or Brazil, which accounts for over 2% of the global aluminum smelter electricity input. Alcoa should leverage upon its existing expertise already more than many power utilities possess. A coal-fired power plant to support the idle 195,000 metric tonne Frederick, MD smelter has been under consideration. Wind farms, cogeneration within existing AA factories or other innovative opportunities could "branch out" from existing knowhow.

#5 Continuously manage the existing portfolio of over 20 smelter and 12 alumina refineries. Candidates for sale or shutdown exist, such as the Point Comfort, TX alumina refinery requiring natural gas inputs, small European smelters as power contracts expire, portions of the Pacific Northwest smelter capacity not running full, the Frederick, MD smelter should Alcoa not build or contract to buy power, etc.

#6 Work to compete "near miss" greenfield smelter opportunities in Trinidad, the second Iceland smelter or other locations. Alcoa completed an agreement in Trinidad, but the permits were not granted for the specific site Alcoa chose. Another location might work in Trinidad, and a second Iceland initiative has been under study.

#7 Study Mideast greenfield smelter opportunities. Kuwait, for example, has not built a smelter and may be a place where Americans "are welcome." Alcoa already has explored privatization or equity investments in the Egypt or Bahrain state smelter companies in the past without success. Seven other nations have existing smelter

programs, such as Dubai, Abu Dhabi, Saudi Arabia (two), Qatar, Oman, Iran, and Malaysia. Alcoa should work to mitigate its disadvantage in relation to Rio Tinto Alcan's three locations, Norsk Hydro, Alba or Dubai's superior positions in the Mideast. A decade or two ago Alcoa had sweeter relative deals in the Pacific Northwest, Quebec or European privatizations, but now it has no "cheap power hub."

#8 Expand bauxite and alumina as opportunities permit and in proportion to the future size of the smelting system.

#9 Work to complete existing programs underway to raise perhaps more than \$5 billion from sales of Packaging, Alcoa Fujikara Ltd wire harnesses and soft alloy extrusions.

#10 Seize any short-term opportunity in recent stock market chaos to increase the current 10% share repurchase target. Alcoa may rejoice in buying its shares near lows from risk arbitrageurs in future distress who sought to put the company out of business in June or July.

#11 Optimize the Flat-Rolled Products segment, whose "economic earnings" in 2006 approached \$450 mm excluding the beverage can price cap \$130 mm or Russian nearly \$70 mm in losses. An argument against selling this unit involves the large potential upsides from Russian rolling operations as their volumes grow, quality improves, Airbus qualification improves mix or new national aerospace companies prosper within Russia. It could earn more than \$500 mm to be worth over \$7 billion after 2009.

The global aluminum sheet business has become more consolidated, and Texas Pacific Group's Aleris and Hindalco's Novelis illustrate acquisition values that were two or three times expectations based on historical performances prior to 2005. A public offering after Russian operations "develop" or a spinoff to shareholders could be worth upwards of \$9 per Alcoa share.

#12 Continue to "manage" business portfolio opportunities. However, the 2004 and 2007 asset sale programs have reduced the number of candidates for divestiture. It is possible the new leader concludes the Belda regime jettisoned enough units.

#13 Reduce the administrative overhead "footprint" as Alcoa shrinks to 3 or 4 from its former 6 lines of business reporting segments. Alumina, Primary ingot and Engineered Solutions appear likely to continue in their current form and Flat-Rolled Products should remain in place until it fulfills its potential. However, Packaging should depart soon and the residue of the former "Extrusions and End Products" probably should be absorbed into the Engineered Solutions segment.

It is imperative that administrative expenses shrink to prevent SG&A from rising as revenues fall from fewer operating units or any price decline should the prevailing view of a commodity "supercycle" conclude. Maybe Alcoa could eliminate one layer of management. Perhaps the auto design center in Detroit should not have been built or

should have been built in Japan, Germany or the Southeast. A much smaller Alcoa may not need dual administrative centers in Pittsburgh and Park Avenue, and the North Side of Pittsburgh is a lower cost venue.

#14 Use time well. The new CEO should visit Alcoa operations worldwide in his first 60 to 90 days to understand the company comprehensively and solidify bonds with employees or customers. There is little time for bankers, investment bankers, pursuing the press, evaluation of multiple takeovers now that Alcan eluded Alcoa, etc.

#### WHEN TO “PULL THE TRIGGER” ON ALCOA

The key to timing Alcoa involves some combination of (a) timing the trend of the S&P 500 averages, (b) timing the bottom of the aluminum spot market correction and (c) detecting improvements or changes within Alcoa specifically.

We believe Alcoa’s three specific large asset sale efforts likely to generate upwards of \$5 billion and the recent one-third decline in its share price largely assure a fulfillment of its planned 10% common share repurchase initiative. Recent US dollar strength and declines in the C\$, A\$ and euro should help its cost structure a bit. The reductions in its numbers of lines of business should improve Alcoa’s “manageability” as it continues its focus on bauxite, alumina, electricity and ingot core fundamentals.

The year-to-date trend towards almost a 10% global smelter output gain probably is way too much. It is improbable that global demand continues to absorb 5%-10% supply growth. If global demand grows 2% less than supply, a 0.8-1.0 mmt inventory buildup will result. No statistics currently support such a dire scenario, but it is a legitimate concern. A worst case scenario in which global demand had no growth, or say 2008 or 2009 demand about the same as 2007, could cause a more than 6% or 3 mmt imbalance.

The risks of a near zero subsequent “pause” in the global demand growth rate stem from (a) conclusion of Chinese preparations for the 2008 Olympics, (b) a 2009 Chinese 1 mmt one-time “scrap remelt” should extruded stadium seat benches, exhibition viewing stands, associated framing or other items be disposed, (c) a June-August 2008 Chinese inventory drawdown of 1 mmt or roughly four weeks of output as Chinese consumers may have “staged supply” in expectation of limits of coal-burning to improve Olympic air quality, (d) any slowdown in general Chinese exports or export factory construction owing to combinations of export market saturation, product safety concerns or a U.S. slowdown, (e) a U.S. economic slowdown spreading beyond autos, housing, appliances and consumer spending in a classic manner and (f) adverse global effects to global economic confidence, credit markets and project financing from the recent credit crunch.

The aluminum market may prove more cyclical than other metals in a downturn as it is most exposed to the U.S. and China for over half of demand, and the applications could prove vulnerable. Chinese use focuses on construction and power generation without much use for aerospace, consumer packaging or cars. The U.S. transportation market

involves the highest use on some of the least fuel efficient, lowest selling sorts of SUV models with housing as another core use.

Consequently, we look to evidence of aluminum smelter output cuts in identifying a bottoming zone for LME ingot spot prices, and Alcoa's common stock price accordingly. We do not attempt to predict a turn or trend in the broad S&P 500 or global stock market. For example, will the group that recently bought the 228,000 metric tonne Vlissingen smelter in Holland shut down near a \$1.00 per pound LME ingot price given the strong euro or power input costs near \$0.08 per kwh? Will Alcoa or Alcan or some other producer shut a smaller, less efficient smelter to sell alumina instead? Will highest cost Chinese producers either curtail Indonesian imports of bauxite from Kalimantan or local Chinese raw materials to phase down the smaller, older smelters to bypass locations with higher power rates or environmental issues upon either the electricity supplier, smelter or alumina red muds?

We conclude it is premature to “bottom fish” until some sign of a “cleansing” of high rates of aluminum supply growth occurs. New smelters in the Mideast, Russia, Ukraine, Iceland or other potentially low cost smelters will continue unabated in the hope of forcing out higher cost suppliers in the U.S., Europe, China or pockets of firm electricity rates. Smelters in Australia, Ghana, Brazil or other locations could prove vulnerable if local utilities insist on charging above \$0.05 per kwh.

Last October 15, 2006 this analyst estimated Alcoa's 2007 earnings at \$2.90 and 2008 at \$2.41 per share, which is reasonably close to current estimates. Today Alcoa's prospective costs are higher, the US \$ is weaker and key C\$, A\$, real and euro production cost currencies are stronger. Aluminum prices are lower, creating risks of earnings disappointments. Global demand growth is 9%-10% in the 2007 first-half, though Chinese output is higher and future new outputs in China, Russia and Mideast are hugely more while Iceland opposition to new smelters has appeared.

Market expectations concerning Alcoa are reduced following the July 18-20<sup>th</sup> disclosure of the exercise of options and senior management stock sales after the July 12<sup>th</sup> cancellation of Alcoa's bid for Alcan and the July 19<sup>th</sup> U.S. stock market record, July 19<sup>th</sup> Rio Tinto statements it would sell assets and make no more big acquisitions and simultaneous Australian press reports that BHP Billiton would not bid for Alcoa. Apparently Alcoa had no material undisclosed events such as takeover talks, which restricted management from buying or selling Alcoa stock during the two years of off-and on discussions with Alcan.

Any bidder ready to plunk \$40 or \$50 billion down for Alcoa ought to travel to Montreal to interview Hydro Quebec to ask why Alcoa's 2003 proposal to spend \$1.5 billion to replace almost 200,000 tonnes of Soderburg-type cells in Baie Comeau and add about 360,000 tonnes in Deschambault and Baie Comeau did not advance. Hydro Quebec told us that its economic studies concluded it generated eight times more GDP if it exported power to Ontario or the U.S. at good prices rather than discounted it for aluminum smelters. Further, it hinted that its 2014 renewal of power for almost one million tonnes

of Alcoa's output might be near Hydro Quebec's marginal cost of \$0.08-\$0.09 for a 4,000 megawatt wind farm in northern Quebec up from \$0.03 in 2006. The value of Alcoa depends on unknown future contract renewals around the world. The best lead indicator of any future Alcoa takeover would be long-term extensions to its largest power contracts in Quebec, the U.S. or elsewhere.

## BACK TO EARNINGS OR SUPPLY-DEMAND FUNDAMENTALS

After its share price decline since mid-July Alcoa pays no premium for its potential as a takeover target. In fact, it trades at about a 20% P/E discount to the broad stock market and well within the norms of basic materials cyclicals at the moment. The current share price is less than our \$36 price target and \$41 per share liquidation value suggesting some upside potentials.

We estimate that the sale of the Packaging segment could reduce almost one-third of Alcoa's \$6.2 billion "goodwill and intangibles." Tangible net worth will increase accordingly even if no capital gains or tax trigger occurs.

The sales of Packaging, Alcoa Fujikara Ltd auto wire harnesses or Alcoa's minority stake in the soft alloy construction aluminum venture could generate perhaps \$3 billion, \$1 billion and \$1-\$1.5 billion, respectively. For example, the auto wire harness unit has 25 to 29 plants depending upon the degree of rationalization a new owner seeks. Fast and successful asset sale executions could permit Alcoa to buy back more than 10% of its stock or more than the 50 mm shares next year that we have modeled.

PLEASE SEE OUR PRIOR JULY 8<sup>TH</sup> ALUMINUM INDUSTRY OR JULY 9<sup>TH</sup> ALCOA NOTES OR ASK US TO RESEND THEM

The following eight exhibits and explanations largely repeat our two prior reports earlier this month. We repeated them for your convenience, and because aluminum market, corporate financial models, asset value liquidation estimates or explanations remain relevant and our estimates have not changed with the ebb and flow of market "moods."

**Table 1**  
**WORLD TOTAL ALUMINUM SUPPLY/DEMAND BALANCE**  
*(Thous. Metric Tonnes)*

	IAI		Average Operating Rate (%)	Scrap Recovery	China Output		Apparent Consumption	Annual Demand Growth	Days Supply Inventory	Avg. LME Ingot	
	Year-end Primary Capacity	IAI Primary Production			After 1995 (Imports from CIS)	Producers' Inventory					
					Total	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	91.5%	1,955	2,060	4,172	57	9,818	5.2%	39	\$1.09
2Q06		5,941	92.8%	1,950	2,250	4,097	-76	10,216	4.0%	37	\$1.21
3Q06		5,990	93.6%	1,986	2,420	3,834	-263	10,659	11.2%	33	\$1.13
4Q06		6,075	94.9%	1,951	2,619	3,917	84	10,561	3.9%	34	\$1.24
2006	25,961	23,866	91.9%	7,841	9,349	3,917	-198	41,254	5.9%	35	\$1.17
1Q07		6,027	90.8%	1,985	2,859	4,031	114	10,757	9.6%	34	\$1.27
2Q07		6,200	93.4%	2,025	2,985	4,003	-28	11,238	10.0%	33	\$1.25
3Q07		6,275	94.6%	2,010	3,200	4,075	72	11,413	7.1%	33	\$1.21
4Q07		6,400	96.4%	2,000	3,400	4,150	75	11,725	11.0%	32	\$1.20
2007E	26,913	24,902	92.5%	8,020	12,444	4,150	233	45,133	9.4%	34	\$1.23
2008E	27,706	25,700	92.8%	8,220	13,444	4,400	250	47,114	4.4%	34	\$1.12
2009E	28,045	26,500	94.5%	8,420	14,444	4,600	200	49,164	4.4%	34	\$0.95
2010E	29,485	27,500	93.3%	8,620	15,444	4,750	150	51,414	4.6%	34	\$0.93
2011E	31,035	28,750	92.6%	8,820	16,444	5,000	250	53,764	4.6%	34	\$0.95
2012E	32,374	30,000	92.7%	9,020	17,444	5,250	250	56,214	4.6%	34	\$0.95
2013E	34,359	31,500	91.7%	9,220	18,444	5,600	350	58,814	4.6%	35	\$0.95

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

**Table 2: Alcoa Segment After-Tax Income Statement Before Allocations**

	2006	2007E	2008E	2009E	2010E	2011E	2012E	2013E
Alumina	2,785	3,166	2,285	2,180	2,219	2,366	2,482	2,456
Chemicals	0	0	0	0	0	0	0	0
Primary Metals	6,171	7,499	5,891	5,325	5,332	5,540	5,651	5,764
Flat-Rolled Products	8,297	9,151	8,769	8,341	8,559	8,901	9,257	9,628
Engineered Products	5,456	5,865	5,716	5,872	6,049	6,232	6,420	6,614
Packaging & Consumer	3,235	3,867	0	0	0	0	0	0
Other Products	4,435	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Other Revenues	0	0	0	0	0	0	0	0
<b>Total Reported Sales (net inte</b>	<b>30,379</b>	<b>31,548</b>	<b>24,662</b>	<b>23,718</b>	<b>24,159</b>	<b>25,039</b>	<b>25,810</b>	<b>26,462</b>
Alumina & Chemicals	1,779	1,698	1,235	1,003	1,036	1,196	1,299	1,406
Primary Metals	2,837	3,163	2,563	1,795	1,680	1,557	1,529	1,597
Flat-Rolled Products	596	501	479	639	655	553	567	582
Engineered Products	626	532	733	884	1,042	1,195	1,360	1,531
Packaging & Consumer	346	349	255	242	244	248	252	256
Other Products	342	347	380	362	367	372	378	383
Unallocated								
<b>Gross Operating Profit by Seg</b>	<b>6,527</b>	<b>6,590</b>	<b>5,644</b>	<b>4,924</b>	<b>5,024</b>	<b>5,121</b>	<b>5,385</b>	<b>5,755</b>
Alumina & Chemicals	1,595	1,509	1,043	806	836	991	1,091	1,193
Primary Metals	2,466	2,745	2,096	1,279	1,114	940	859	874
Flat-Rolled Products	385	286	259	415	426	320	329	339
Engineered Products	483	385	582	728	882	1,030	1,190	1,356
Packaging & Consumer	177	176	79	62	61	61	61	61
Other Products	40	43	47	47	47	47	47	47
Unallocated								
<b>Operating Profit by Segment</b>	<b>5,146</b>	<b>5,144</b>	<b>4,106</b>	<b>3,337</b>	<b>3,366</b>	<b>3,389</b>	<b>3,578</b>	<b>3,871</b>
Alumina & Chemicals	388	438	302	234	242	288	316	346
Primary Metals	600	796	608	371	323	273	249	253
Flat-Rolled Products	94	83	75	120	124	93	96	98
Engineered Products	117	112	169	211	256	299	345	393
Packaging & Consumer	43	51	23	18	18	18	18	18
Other Products	21	25	33	26	26	26	26	26
Unallocated	(428)	(187)	(174)	(179)	(175)	(162)	(153)	(142)
<b>Income Tax by Segment</b>	<b>835</b>	<b>1,318</b>	<b>1,036</b>	<b>801</b>	<b>814</b>	<b>833</b>	<b>897</b>	<b>993</b>
Alumina & Chemicals	1,207	1,071	740	572	594	704	775	847
Primary Metals	1,891	1,974	1,513	933	816	692	635	645
Flat-Rolled Products	301	213	194	304	313	237	244	251
Engineered Products	365	273	413	517	626	731	845	962
Packaging & Consumer	134	125	56	44	44	44	44	44
Other Products	76	71	91	75	74	74	74	74
<b>After-Tax Operating Profit</b>	<b>3,974</b>	<b>3,728</b>	<b>3,007</b>	<b>2,446</b>	<b>2,466</b>	<b>2,482</b>	<b>2,616</b>	<b>2,824</b>
Elimination of intersegment (pro	0	0	0	0	0	0	0	0
Interest Income, net of tax	29	83	89	41	42	45	40	43
Interest Expense, net of tax	(288)	(214)	(180)	(195)	(183)	(150)	(126)	(99)
Minority Interest	(436)	(613)	(482)	(373)	(379)	(388)	(417)	(462)
Corporate Expense, net of tax	(325)	(300)	(300)	(300)	(300)	(300)	(300)	(300)
Other Income								
Other	(704)	(85)	(94)	(44)	(46)	(44)	(40)	(42)
<b>Unallocated Items, net of tax</b>	<b>(1,724)</b>	<b>(1,129)</b>	<b>(966)</b>	<b>(871)</b>	<b>(866)</b>	<b>(837)</b>	<b>(843)</b>	<b>(860)</b>
<b>Reported Net Income</b>	<b>2,250</b>	<b>2,599</b>	<b>2,041</b>	<b>1,575</b>	<b>1,600</b>	<b>1,645</b>	<b>1,773</b>	<b>1,963</b>
<b>EPS</b>	<b>\$2.57</b>	<b>\$2.97</b>	<b>\$2.40</b>	<b>\$1.91</b>	<b>\$1.94</b>	<b>\$1.99</b>	<b>\$2.15</b>	<b>\$2.38</b>

Note: Corporate expense is included in our ATOI segment forecasts; Other income is included in Alcoa's reported ATOI numbers.

We have adjusted ATOI to include other income allocated to segments while removing corporate expense.

Source: Company reports, JT Very Independent Research, LLC estimates.

**Table 3: Alcoa Earnings Model on traditional SEC form 10Q basis (\$ Mil.)**

	2006	2007E	2008E	2009E	2010E	2011E	2012E	2013E
Alumina	2,785.0	3,165.9	2,285.3	2,180.2	2,219.3	2,365.6	2,481.7	2,456.1
Chemicals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Primary Metals	6,171.0	7,498.5	5,891.4	5,325.3	5,332.1	5,540.4	5,651.2	5,764.2
Flat-Rolled Products	8,297.0	9,151.2	8,768.7	8,341.0	8,558.9	8,901.3	9,257.4	9,627.6
Engineered Products	5,456.0	5,865.2	5,716.4	5,871.7	6,049.0	6,231.7	6,419.9	6,613.8
Packaging and Consumer	3,235	3,867	0	0	0	0	0	0
Other	4,435	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Equity, Interest and other								
<b>Total Sales</b>	<b>30,379.0</b>	<b>31,548.1</b>	<b>24,661.7</b>	<b>23,718.1</b>	<b>24,159.3</b>	<b>25,038.9</b>	<b>25,810.2</b>	<b>26,461.8</b>
Alumina & Chemicals	1,524	1,441	956	737	768	923	1,023	1,125
Primary Metals	2,324	2,610	1,920	1,143	981	806	726	740
Flat-Rolled Products	301	206	147	334	347	241	250	260
Engineered Products	328	235	394	576	733	881	1,041	1,207
Unallocated	0	0	0	0	0	0	0	0
Packaging and Consumer	113	114	0	0	0	0	0	0
Extruded and End Products	40	43	47	47	47	47	47	47
<b>Operating Profit (EBIT)</b>	<b>4,630</b>	<b>4,648</b>	<b>3,463</b>	<b>2,838</b>	<b>2,875</b>	<b>2,898</b>	<b>3,087</b>	<b>3,379</b>
Cost of Goods Sold	21,020	21,480	16,403	15,997	16,308	16,903	17,249	17,676
Est. Cost of Purchased Alum.	2,298	2,464	1,764	1,766	1,772	1,947	2,095	1,937
SG & A	1,402	1,480	1,495	1,510	1,525	1,540	1,555	1,571
R & D	213	195	190	191	192	192	192	192
Depreciation	1,280	1,280	1,348	1,417	1,487	1,559	1,632	1,706
Interest Expense	384	285	240	259	244	201	168	132
Special Items	543							
Other (income)	(193)	(180)	(350)	(185)	(175)	(175)	(175)	(175)
Pretax Income	3,432.0	4,543.4	3,573.1	2,763.2	2,806.3	2,872.5	3,094.3	3,422.7
Income Taxes	835.0	1,317.6	1,036.2	801.3	813.8	833.0	897.4	992.6
Tax Rate	24.3%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%
<b>Net Income</b>	<b>2,597.0</b>	<b>3,225.8</b>	<b>2,536.9</b>	<b>1,961.8</b>	<b>1,992.5</b>	<b>2,039.5</b>	<b>2,197.0</b>	<b>2,430.1</b>
Minority Interest	(436.0)	(612.9)	(482.0)	(372.8)	(378.6)	(387.5)	(417.4)	(461.7)
Extraordinary Items	89.1	(14.0)	(14.0)	(14.0)	(14.0)	(7.0)	(7.0)	(5.0)
Preferred Dividend	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)
Net Income to Common	2,248.0	2,596.8	2,038.8	1,573.0	1,597.8	1,642.9	1,770.5	1,961.3
Avg. Shares Outstanding	875.0	875.0	850.0	825.0	825.0	825.0	825.0	825.0
<b>Earnings Per Share</b>	<b>\$2.57</b>	<b>\$2.97</b>	<b>\$2.40</b>	<b>\$1.91</b>	<b>\$1.94</b>	<b>\$1.99</b>	<b>\$2.15</b>	<b>\$2.38</b>
Dividends Per Share	\$0.60	\$0.68	\$0.68	\$0.68	\$0.68	\$0.68	\$0.68	\$0.68
Cash Flow Per Share	\$3.74	\$4.56	\$4.09	\$3.70	\$3.82	\$3.96	\$4.21	\$4.55
Book Value Per Share	\$16.72	\$18.76	\$18.45	\$20.13	\$21.27	\$22.46	\$23.79	\$25.32

Source: Company reports, JT Very Independent Research, LLC estimates.

**Table 4: Alcoa Underlying Dynamics**

	2006	2007E	2008E	2009E	2010E	2011E	2012E	2013E
Ingot Shipments (000 metric tonnes)	2,087	2,130	2,173	2,216	2,260	2,306	2,352	2,399
Flat Rolled Ship. (000 mt)	2,273	2,332	2,425	2,522	2,623	2,728	2,837	2,951
Engineered Ship. (000 mt)	139	146	147	149	150	152	153	155
Extruded and End Products (000 mt)	877.0	900.0	900.0	900.0	900.0	900.0	900.0	900.0
Packaging Shipments (000 mt)	169	175	0	0	0	0	0	0
Total Shipments (000 metric tonnes)	5,545	5,683	5,645	5,787	5,934	6,086	6,242	6,404
Primary Alum. Capacity	4,040	4,060	4,480	4,480	4,503	4,525	4,548	4,871
Primary Alum. Production	3,676	3,816	4,211	4,167	4,278	4,299	4,320	4,627
Est. Purchased Aluminum	1,869	1,867	1,434	1,621	1,656	1,787	1,922	1,777
Ingot Realizations (\$/lb)	1.23	1.32	1.23	1.09	1.07	1.09	1.09	1.09
LME Spot Ingot Price (\$/lb)	1.13	1.23	1.12	0.95	0.93	0.95	0.95	0.95
Flat-Rolled Price Real. (\$/lb)	1.68	1.78	1.64	1.50	1.48	1.48	1.48	1.48
Engineered Price Real (\$/lb)	16.80	17.29	17.58	17.88	18.24	18.61	18.98	19.36
Est. EBIT Cost to Produce Ingot (\$/lb)	0.90	0.97	0.97	0.90	0.90	0.94	0.95	0.95
Est. Addtl Fab Cost - Flat Rolled (\$/lt)	0.49	0.51	0.49	0.49	0.49	0.49	0.49	0.49
Est. Addtl Fab Cost - Engr (\$/lb)	14.60	15.33	15.25	15.18	15.10	15.03	14.95	14.88
Corp. Total Sales per pound	2.39	2.52	1.98	1.86	1.85	1.87	1.88	1.87
CGS/Sales	76.8%	75.9%	73.7%	74.9%	74.8%	75.3%	74.9%	74.1%
Sales Growth	16.1%	3.8%	-21.8%	-3.8%	1.9%	3.6%	3.1%	2.5%
<b>Corp. EBITDA/ Lb Shipped</b>	<b>\$0.42</b>	<b>\$0.49</b>	<b>\$0.41</b>	<b>\$0.35</b>	<b>\$0.35</b>	<b>\$0.35</b>	<b>\$0.36</b>	<b>\$0.37</b>
Alumina&Chem. EBIT/ tonne product	\$86	\$82	\$47	\$32	\$33	\$40	\$44	\$48
Ingot EBIT/ lb own production	\$0.29	\$0.31	\$0.21	\$0.12	\$0.10	\$0.09	\$0.08	\$0.07
Flat Rolled EBIT/ lb shipped	\$0.06	\$0.04	\$0.03	\$0.06	\$0.06	\$0.04	\$0.04	\$0.04
Engr Prod EBIT/ lb shipped	\$1.07	\$0.73	\$1.21	\$1.76	\$2.21	\$2.63	\$3.08	\$3.53
Ext. Alumina Shipments ('000 mt)	8,420	7,925	7,995	8,583	8,866	9,324	9,782	9,681
Implied Internal Alumina Use	7,206	7,479	8,255	8,167	8,384	8,426	8,468	9,069
Est. Total Alumina Production	15,626	15,250	16,250	16,750	17,250	17,750	18,250	18,750
Est. Alumina Price Realized (tonne)	\$304	\$317	\$286	\$254	\$250	\$254	\$254	\$254
Cost (EBITDA basis)/tonne Alumina	\$206	\$223	\$227	\$210	\$206	\$202	\$198	\$194

Source: Company reports, JT Very Independent Research, LLC estimates.

**Table 5: Alcoa Cash Flows**

	2006	2007E	2008E	2009E	2010E	2011E	2012E	2013E
<b>Sources:</b>								
Net Income	2,248.0	2,596.8	2,038.8	1,573.0	1,597.8	1,642.9	1,770.5	1,961.3
Depreciation, depletion & amort.	1,280.0	1,280.0	1,347.6	1,416.6	1,486.9	1,558.6	1,631.8	1,706.4
Deferred Taxes	(168.0)	138.9	110.7	87.2	88.5	90.4	96.8	106.4
Equity Income net dividends	(89.0)	(25.0)	(25.0)	(24.0)	(23.0)	(23.0)	(23.0)	(23.0)
Minority Interest	436.0	429.0	337.4	260.9	265.0	271.3	292.2	323.2
Common Stock	155.0	50.0	(2,000.0)	50.0	50.0	50.0	50.0	50.0
Debt	715.0			600.0				
Asset Sales	407.0	4,050.0	50.0	50.0	50.0	50.0	50.0	50.0
Other Items	(742.0)							
<b>Total Sources</b>	<b>4,242.0</b>	<b>8,519.7</b>	<b>1,859.5</b>	<b>4,013.7</b>	<b>3,515.2</b>	<b>3,640.2</b>	<b>3,868.3</b>	<b>4,174.3</b>
<b>Uses:</b>								
Capital Expenditures	3,201.0	3,200.0	2,500.0	2,500.0	1,200.0	2,000.0	2,000.0	2,000.0
Acquisitions, investments	(7.0)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Stock Repurchased	290.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
Reductions in Minority Interest	(342.0)	183.9	144.6	111.8	113.6	116.3	125.2	138.5
Dividends (include to Min. Int.)	923.0	916.8	831.0	756.7	759.7	764.4	780.1	803.4
Debt Repayment	36.0	1,000.0	600.0	700.0	700.0	700.0	700.0	700.0
Post-Retirement Liability	397.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Increase (decrease) in working cap.	(256.0)	2,909.1	(2,526.1)	(364.8)	431.9	(250.5)	(47.1)	222.4
<b>Total Uses</b>	<b>4,242.0</b>	<b>8,519.7</b>	<b>1,859.5</b>	<b>4,013.7</b>	<b>3,515.2</b>	<b>3,640.2</b>	<b>3,868.3</b>	<b>4,174.3</b>

Source: Company reports, JT Very Independent Research, LLC estimates.

**Table 6: Alcoa Balance Sheet (\$ Mil.)**

	2,006	2007E	2008E	2009E	2010E	2011E	2012E	2013E
Cash and Equivalents	506	2,688	793	520	844	656	620	787
Receivables, net	3,435	4,022	3,144	3,024	3,080	3,192	3,291	3,374
Total Inventories & Supplies	3,805	3,628	2,836	2,728	2,778	2,879	2,968	3,043
Other Current Assets	1,497	1,507	1,517	1,527	1,537	1,547	1,557	1,567
<b>Total Current Assets</b>	<b>9,243</b>	<b>11,845</b>	<b>8,291</b>	<b>7,798</b>	<b>8,239</b>	<b>8,275</b>	<b>8,436</b>	<b>8,771</b>
Gross Property, Plant and Equipment	29,348	31,328	32,888	34,448	35,228	36,488	37,748	39,008
Less Accumulated Depreciation	14,535	15,803	17,139	18,543	20,018	21,565	23,184	24,879
Net Property, Plant and Equip.	14,813	15,525	15,749	15,905	15,210	14,923	14,564	14,129
Net Intangible Assets	6,166	4,166	4,266	4,366	4,466	4,566	4,666	4,766
Investments and Other Assets	7,052	8,372	9,412	10,452	10,972	11,812	12,652	13,492
<b>Total Assets</b>	<b>37,274</b>	<b>39,908</b>	<b>37,718</b>	<b>38,521</b>	<b>38,887</b>	<b>39,576</b>	<b>40,318</b>	<b>41,158</b>
Short-Term Debt	1,947	1,447	1,447	1,447	1,447	1,447	1,447	1,447
Accounts Payable and Other Current L	7,090	8,129	7,045	6,862	6,816	7,045	7,197	7,252
<b>Total Current Liabilities</b>	<b>9,037</b>	<b>9,576</b>	<b>8,492</b>	<b>8,309</b>	<b>8,263</b>	<b>8,492</b>	<b>8,644</b>	<b>8,699</b>
Long-Term Debt	4,445	4,445	3,845	3,745	3,045	2,345	1,645	945
Deferred Credits & Other Liab.	3,652	3,637	3,621	3,606	3,590	3,574	3,557	3,541
Accrued Post-Retirement Benefits	2,956	2,897	2,839	2,782	2,727	2,672	2,619	2,566
Deferred Taxes	753	892	1,003	1,090	1,178	1,269	1,366	1,472
Minority Interest	1,800	2,045	2,238	2,387	2,538	2,694	2,860	3,045
Common and Preferred Equity	14,631	16,417	15,680	16,603	17,546	18,531	19,627	20,891
<b>Total Liabilities and Equity</b>	<b>37,274</b>	<b>39,908</b>	<b>37,718</b>	<b>38,521</b>	<b>38,887</b>	<b>39,576</b>	<b>40,318</b>	<b>41,158</b>

Accts Rec / Sales	13.00%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%
Inventory / Sales	12.50%	11.50%	11.50%	11.50%	11.50%	11.50%	11.50%	11.50%
AP & Other CL / Sales	23.34%	25.77%	28.57%	28.93%	28.21%	28.14%	27.89%	27.41%

Notes: Intangible assets include Intangibles (net of accumulated amortization) and net deferred tax assets.

Source: Company reports, JT Very Independent Research, LLC estimates.

**Table 7: DETAILED ALCOA ASSET BREAKUP ANALYSIS GENEROUSLY AT \$41 PER SHARE**

<b>Asset</b>	<b>Estimated Value</b>	<b>Remarks</b>
Corp. Unallocated at half book value	250	Treated \$2.6 bil = \$0.762 cash, \$1.3 "to be sold" and \$0.5 "other"
Misc. real estate or old plant sites	250	Lots of "stuff" like 64 auto parts plants, 2 HQ, etc.
Assets held for sale, net liabilities	1,005	Dec 2006 balance sheet
Alumina	9,992	1.5x Alumina Ltd. Market cap
20% Western Aust. Gas pipeline	17	
Power Generation	2,662	15.2 bil kwh @ 2 cents per kwh profit & 12.5 times net earnings
Smelting	12,000	4 mmt @ \$3000/t as much older or 5x net inc.2007E \$2.4 bil.
Beverage Can Sheet Rolling	1,911	12x 35% of segment \$455 mm net income excl.\$200 mm cap los
Aerospace Rolling USA/UK	4,095	18x half of segment \$455 mm net income excl. \$200 mm Russia
Diverse Distn.& Industrial	764	12x 15% of segment \$455 mm net income excl. \$200 mm specific
Russian Rolling	600	Qualification with Airbus, heat treating and other improvements
Chinese Rolling	400	Segment assets \$5,031 mm at Sept 2006 10Q
Alcoa Closures	3,000	Based on \$2,834 mm segment assets Sept 2006 10Q p.19
Wine Closures		Despite just \$95 mm est. net income and \$124 mm deprn in 2006
Pkging machinery		earnings power > \$300 mm due to unrecovered ingot or resin costs
Food and flexible pkging		
Reynolds Wrap foil		
Reynolds alum pkging trays, etc.		
Reynolds Cut Rite wax paper		
Reynolds many plastic pkging		
Presto plastic bags		
Baco UK		
Ivex Packaging		
Howmet Castings	4,500	18x \$250 mm est. 2007 net income
Forged Truck Wheels	600	12x \$ 50 mm est. 2007 net income
Aerospace fasteners	900	18x \$ 50 mm est. 2007 net income
Aerospace forgings	300	
AFL auto wire harnesses (29 sites)	450	
Diverse auto mfg (23 locations)	115	assume \$5 mm inventory per site after shutdown
tubing	50	
cold-finished bar	50	
wire rod	50	
Auto wheels (8 sites)	200	
auto fasteners	75	
auto castings (4 sites)	100	
Aerospace hard alloy extrusions	500	
49% Soft alloy extrusion with Orkla	1,000	22 of 40 locations and \$2.1 of \$3.4 bil sales in jt vt
Nonres construction/ Alumax Kawn	375	
Door, curtain wall, stairs, other res	375	
Total Debt 12/06 net cash	-5,780	
Pensions	-1,500	
Postretirement medical, life, etc.	-2,103	
Other Long-term Liabilities	-1,475	
Reclamation liabilities booked	-345	
Est. Reclamation liabilities unbooked		
Upper limit Massena, Sherwin,E S	-305	AA estimates \$675 mm upper range of costs to these 3 sites
36 oper., 34 past or 65 waste sites	-1,000	GAAP acctg does not require recognition until cost well known
Est. Severance for restructuring	-750	Whether AA or a buyer does it, streamlining costs money.
Assets less Liabilities	33,328	
SharesOutstg=874.6 - 80 repo + ne	800	74 mm net share repo adds \$3.59 per share to value
		We assume share repo done promptly in 2008 at \$2.59 bil cost

**Asset Value per share #####**

Source: JT Very Independent Research, LLC estimates

**Table 8: AA FUNCTIONAL VALUATION BREAKDOWN (\$ MIL.)**

		Depn	2006A Net Inc.	2006A Sales	Sep-06 Assets
Alumina	\$ 10,009	\$ 192	\$ 1,050	\$ 2,785	\$ 4,816
Electricity	\$ 2,662				
Ingot smelting	\$ 12,000	\$ 395	\$ 1,760	\$ 6,171	\$ 8,566
Flat-Rolled	\$ 7,770	\$ 219	\$ 255	\$ 8,297	\$ 5,031
Howmet Castings	\$ 4,500	\$ 169	\$ 331	\$ 5,456	\$ 6,056
Engineered others	\$ 2,890				
Packaging	\$ 3,000	\$ 125	\$ 95	\$ 3,235	\$ 2,834
Extrusions & End Prod.	\$ 2,250	\$ 118	\$ 60	\$ 4,419	\$ 2,409
Corporate	\$ 1,505				\$ 2,600
Less Net Debt	\$ (5,780)				
Less Other Liabilities	\$ (7,478)				
Net Assets or Equity	\$ 33,328				\$ 13,373

Source: JT Very Independent Research, LLC estimates

#### OUR BREAKUP ANALYSIS VALUATION METHODOLOGY IS HIGHLY GENEROUS IN FIVE REGARDS

We make five legitimate criticisms of our valuation technique herein. In other words, we had to stretch the numbers pretty far to arrive at \$41 per share in our Alcoa asset break up analysis.

First, we did not provide any 15% “liquidation discount” in this report as we did in our February 12th Weyerhaeuser research note in which we raised our target to \$102 from \$92 for WY. Second, we did not consider income taxes, which might trigger cash outlays if Alcoa or someone else sold assets for \$20 billion above year-end 2006 carrying values on the balance sheet. Third, we aggressively valued the functional segment net income of each of six reporting segments, and added back the business losses of perhaps \$400 mm of individual manufacturing businesses not doing so well these days to put aggressive P/E valuations on the units generating profits to cover those losses. However, we did not value as a deduction the \$317 mm net “corporate expense” for HQ, research and related overheads that is a \$3-\$4 billion drag on valuation. Fourth, we treated the January 19th 10% share repurchase announcement as though it already has been completed without deducting the \$2.59 billion costs, which might be funded from interim cash flows this year. Fifth, we valued captive electricity generating capacity separate from the smelting system at \$2.66 billion.

Item #1 was a \$6 per share, item #2 an up to \$5 per share, item #3 a \$4 per share, item #4 a \$3 per share and item #5 a \$3 per share valuation benefit. Thus, a stern critic might suggest we overvalued Alcoa by \$21 per share. We are painfully aware that Hindalco agreed to pay \$44.93 on February 11th for Novelis, which we valued at \$13 per share and whose book value excluding goodwill was roughly nil. We do not want to present an overly conservative valuation analysis as the broad stock market sets record valuations and basic industrial companies disappear at increasing frequency at valuations near twice replacement cost, as is the case in the steel industry recently.

#### SEVERAL OF OUR BREAKUP ANALYSIS VALUATION METRICS DEBATABLE

Reasonable observers might argue with our valuation of Alcoa's smelters at \$3,000 per tonne of capacity or five times net income (separately valuing power generation), the valuation of aerospace sheet and plate at 18x estimated net income, the valuation of Howmet Castings at 18x estimated net income or the valuation of the Packaging business segment at \$3 billion or 30x last year's earnings. These constituents were \$12 billion, \$4.1 billion, \$4.5 billion and \$3 billion, respectively, or \$23.6 of the \$33.3 billion estimated \$41 per share asset valuation.

In recent years construction costs for new aluminum smelters has ranged from \$1,500 per tonne of annual capacity in China to \$5,000 per tonne for Alcan's Alma smelter in Quebec in 1999 or \$4,500 for Alcan's recent proposed refurbishment/expansion of its Kitimat smelter in British Columbia. Recently the government-owned CITIC company in China won a contract to build a new smelter for Egyptalum, another state company, for about \$2,700 per tonne illustrating the cost-effectiveness of Chinese techniques in a different region of the world. Generally new smelters have been located in places in which long-term power supplies can be contracted for \$0.01 to \$0.02 per kwh for twenty years.

Over 80 % of Alcoa's smelters are over 25 years old. Its Iceland smelter will operate later this year. Deschambault in Quebec was built about 15 years ago, Becancour in Quebec phase 1 about 20 years ago, Portland in Australia about 24 years ago and Mt. Holly in South Carolina 27 years ago. The remainder of Alcoa's system ranges between 1940 and 1975 probably averaging almost 50 years old. Such older smelters could sell for as little as \$1,000 to \$2,000 per tonne of capacity in an auction.

Alcoa is splendid in its efficient operation of mature smelting assets. Alcoa is superb in the optimization of its core production processes --- power generation, bauxite mining, alumina refineries, smelters, rolling mills, extrusion plants, etc. In this manner it earns similar or superior margins as competitors with newer or larger or lower wage cost smelters.

However, we hesitate to assign a value larger than \$3,000 per tonne for a smelting system whose average plant age nears 40 years old or for which two-thirds nears 50 years old. In this sense the asset base is fully depreciated. It is also noteworthy that we have separately valued the raw materials business at \$10 billion based on the Alumina Ltd publicly traded share price and the power generating assets at \$2.66 billion assuming a two cent per kwh or \$0.03 per pound of aluminum systemwide average profit contribution from power generation. Alternatively, one might say that we valued the smelters integrated with 25% self-generated power at \$3,650 per tonne of combined capacity and separately valued the bauxite-alumina system based on the public comparable.

An aggressive or "liberal" maximum valuation metric would be to value Alcoa's smelting system at \$5,000 per ton or 8.3x estimated \$2.4 billion 2007 smelting net income while continuing to separately value the power generation at \$2.66 billion. This maximum valuation format would permit a \$10 per Alcoa share increase to a valuation analysis. We believe that BHP Billiton would build new smelters in Congo, South Africa, Mozambique, Brazil or the Mideast and Rio Tinto would build new smelters in Abu Dhabi or elsewhere rather than pay such a price, and wind up with lower capital costs, lower power costs, lower wage levels and brand new rather than 40 year old or so assets. Thus, we reject the aggressive, liberal or "maximum" smelter valuation approach.

A more conservative investor might discount the valuation of Alumina Ltd by 10% or more reasoning that Alumina Ltd's shares command a valuation premium in anticipation of Alcoa

taking it over. Further, a tax provision could be provided as well since Alumina Ltd trades near three times book value.

Our valuations of aerospace flat-rolled and Howmet Castings near 18x net income or packaging near 30x net income may seem generous or excessive as well. A 10%-15% "IPO discount" could be applied to these three businesses since some discount may need to be applied to sell them, which collectively might add up to almost \$2 billion or \$2.50 per Alcoa share before considering tax obligations triggered from sale. Alcoa paid a lot to acquire Howmet Castings and its packaging businesses, and may not trigger very much tax obligations from their sales. We estimate the book value of the Davenport, Iowa or Kits Green, UK aerospace aluminum plants may be under \$1 billion or under 25% our estimated valuations suggesting a larger tax issue if those units were sold.

#### MINORITY INTERESTS AND UNALLOCATED CORPORATE COSTS

Alcoa had a \$436 mm minority interest charge in 2006. We estimate that \$420 mm involved the earnings of Alumina Ltd, and the remaining \$16 mm stemmed from Alcoa's other segments. We believe the minority interest related to smelting was larger than \$16 mm, no packaging assets had minority stakes and that certain rolling, extrusion or other fabricating assets in which minority stakes were held had losses providing small minority interest credits to net income. For simplicity we ignored the minority interest item as our valuation metric correctly valued the alumina segment from the valuation of its publicly traded partner.

We also ignored the \$317 mm after tax corporate overhead expense. We believe this stems from the corporate offices on Park Avenue, Pittsburgh's North Side and other administrative hubs, the New Kensington, PA research center, Barberton, Ohio research center, Farmington Hills, MI auto center, corporate insurance, shared services and other centralized items. Small "country offices" exist in key locations like Sao Paulo or other key places abroad as well.

Some investors may place a \$3 to \$4 billion or \$4 per share negative value to the central overhead expense. Much of it could disappear if another company took Alcoa over or if Alcoa made draconian cuts to fend off a hostile raider. We chose to ignore it, but it is one of the five methodology judgment calls for which we expressed our own self-doubts on page seven above.

#### INVESTMENT OVERVIEW AND PRICE OBJECTIVE

We lowered our investment rating to Neutral Weight from Overweight on March 20 because (a) we increased our estimate of Chinese output for 2007 by 1.4 mmt to 12.4 mmt from our prior 11 mmt estimate up from 9.35 mmt in 2006, (b) we increased our estimate of Chinese aluminum use in 2007 by 0.5 mmt since their industrial production recently rose faster than expected, (c) we cut our estimate of U.S. aluminum use in 2007 by 0.25 mmt as most manufacturing activity measures in the U.S. are falling fast, (d) we raised our estimate of year-end 2007 aluminum inventories by 1 mmt and (e) we cut our earnings estimates both for Alcan and Alcoa to reflect a 2% higher than previously estimated cost structure for each owing to euro appreciation and the failure to obtain caustic soda, carbon anode, resin, transportation, and other cost reductions in proportion to the drop from peak \$77 crude oil spot prices.

Our price target of \$36 per share was a P/E ratio of about 12 times our 2007 earnings estimate of \$2.97 per share as of tonight July 30<sup>th</sup>. It equates to 15 times our 2008 estimate of \$2.40 per share. The current share price is near our price target, but the general stock market retreat from

records and reduced takeover expectations have caused many stocks to be valued less generously based on long-term historic measures.

The shares anticipate more business restructuring or share repurchases, and would fall should Alcoa fail to sell its Packaging or auto wire harness units or buy back shares as intended.

Large upside opportunities exist if the late-July selloff proves overdone. Future takeover or business restructuring potential exists for Alcoa. Such a pleasant outcome could be more feasible after the recent selloff than at record share prices.

## RISKS FOR ALCOA

The biggest risks to Alcoa involve potential global aluminum and alumina overexpansions, overcapacity or demand declines from higher interest rates or oil prices. We estimate Saudi and Dubal 1.4 mmt each megasmelters in 2014 will have operating costs \$0.30 per pound lower than Alcoa's. We believe Alcoa's primary motive in seeking a combination with Alcan involves the \$0.06 per pound (across both companies' total output) of synergies to make both more competitive.

Risks include various higher costs, a lower aluminum price, possibly driven by weak demand conditions here in the United States and abroad; higher interest rates, which could also crimp demand; energy cost inputs; a dollar rebound, high production cost currencies, excess industry smelting, alumina refining, rolling, or other capacities that would depress margins. Contractual sales price caps for ingot, alumina, and finished products could subdue earnings gains, and investors using public disclosures could easily overestimate earnings as such contract terms are not disclosed.

## CHANGE IN THIS RESEARCH OPERATION

This report reflects an research coverage by JTVIR, LLC. In no way shape or form should it be misconstrued as involving PEG, which shut down on June 6, 2007 as noted. Any 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 with pending registration 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.

Neither JTVIR, its members or its employees own or have a financial interest in any securities discussed in this report. 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 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 is a company 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 a pending takeover by Sherritt International.

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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