

TiO2 News – TROX M&A Risk Up

KRO Becomes Potential Target with Passing of Harold Simmons

- **Citi's Take** — We believe the passing of Harold C. Simmons this past weekend makes Kronos Worldwide (KRO) a more likely acquisition target. Mr. Simmons' estate and his family own the majority of Contran Corporation voting stock, which through a complex structure owns the vast majority of KRO's stock.
- **What's Next** — Tronox Ltd. (TROX) management has stated that they believe they will be able to find an acquisition candidate after raising a \$1.5B term loan in March. Management has stated multiple times that they will return cash to the lenders at the 1 year anniversary of the term loan if there are no potential transactions.
- **Inside** — We give a brief overview of KRO's TiO2 capacity, its ownership structure and take a look at its valuation.
- **Credit Implications** — We maintain a Neutral rating on TROX 6.375 '20 (B2/BB-) which yields ~5.9% at a price of \$102. We downgraded bonds from Buy to Neutral back on 12/13/13 post the larger than expected settlement range in the case of Tronox Incorporated vs. Anadarko Petroleum Corporation (APC). In response to the settlement range TROX management issued a press release in which they stated they could see tax benefits for some time (decades) which could amount to hundreds of millions of dollars annually. We believe the potential for a larger than expected tax benefit could make TROX more aggressive on the M&A front.

James P Finnerty
+1-212-816-9599
james.p.finnerty@citi.com

Jesse Hou
+1-212-816-3721
jesse.hou@citi.com

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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What Would KRO + TROX Look Like

KRO is predominantly a Chloride based producer (75% of capacity) with a large presence in EMEA (67% of capacity) vs. 33% in North America.

In the below tables we show TiO2 capacity for both KRO and TROX by production process (chloride vs. sulfate) and geography and show what the combined entity would look like in Figure 3.

Figure 1. Kronos (KRO) TiO2 Capacity ('000 metric tons)

Location	Process	N. America	EMEA	Asia Pacific	Total	% of Capacity
Varenes, Canada	Chloride	86				
Lake Charles, LA	Chloride	80				
Leverkusen, Germany	Chloride		160			
Langerbrugge, Belgium	Chloride		86		412	75%
Varenes, Canada	Sulfate	18				
Nordenham, Germany	Sulfate		54			
Leverkusen, Germany	Sulfate		36			
Fredrikstad, Norway	Sulfate		30		138	25%
Total		184	366	0	550	
% of Capacity		33%	67%	0%		

Source: Citi Research

TROX is 100% Chloride based producer with capacity weighted towards North America (48%) and Asia Pacific (32%)

Figure 2. Tronox (TROX) TiO2 Capacity ('000 metric tons)

Location	Process	N. America	EMEA	Asia Pacific	Total	% of Capacity
Hamilton, MS	Chloride	225				
Botlek, The Netherlands	Chloride		90			
Kwinana, Australia	Chloride			150	465	100%
Total		225	90	150	465	
% of Capacity		48%	19%	32%		

Source: Citi Research

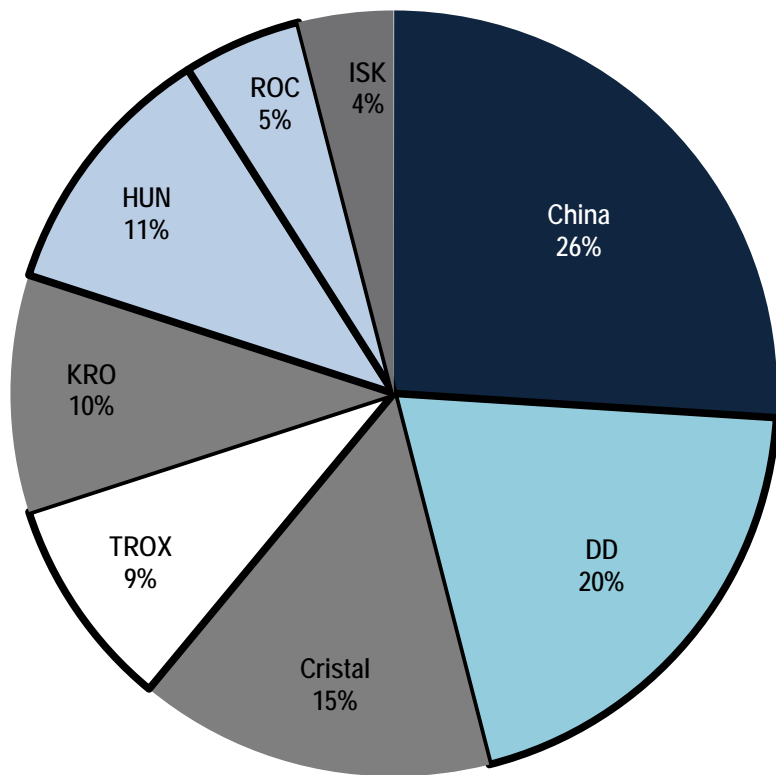
The **combined entity** would account for ~ 19% of global TiO2 capacity, be predominantly Chloride based (86%) and have a geographic profile split between EMEA (45%), North America (40%) and Asia Pacific (15%).

Figure 3. KRO + TROX TiO2 Capacity ('000 metric tons)

Location	Process	N. America	EMEA	Asia Pacific	Total	% of Capacity
Hamilton, MS	Chloride	225				
Botlek, The Netherlands	Chloride		90			
Kwinana, Australia	Chloride			150		
Varenes, Canada	Chloride	86				
Lake Charles, LA	Chloride	80				
Leverkusen, Germany	Chloride		160			
Langerbrugge, Belgium	Chloride		86		877	86%
Varenes, Canada	Sulfate	18				
Nordenham, Germany	Sulfate		54			
Leverkusen, Germany	Sulfate		36			
Fredrikstad, Norway	Sulfate		30		138	14%
Total		409	456	150	1,015	
% of Capacity		40%	45%	15%		

Source: Citi Research

Figure 4. Global TiO2 Capacity



Source: Citi Research and Company Presentations

What About Feedstocks?

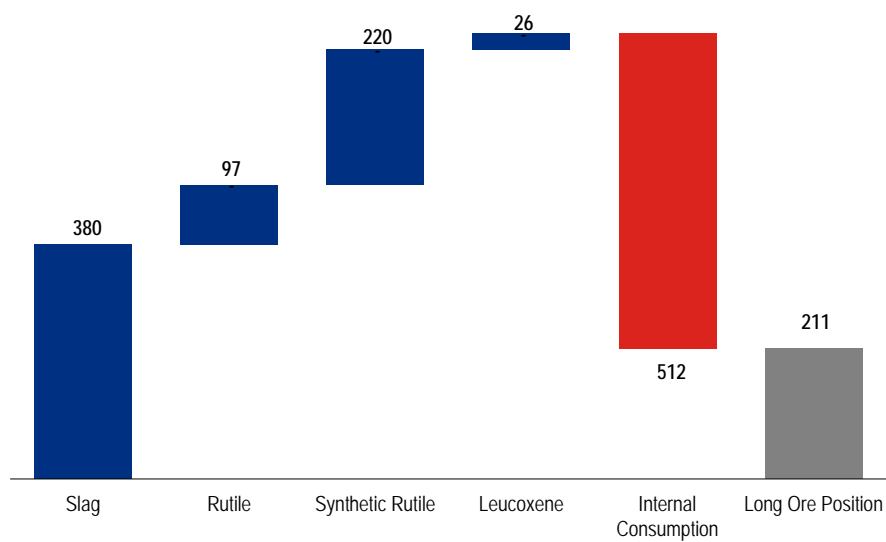
KRO currently purchases ~400kt of chloride slag and natural rutile ores from 3rd parties.

KRO operates two ilmenite mines in Norway, which are used to supply all feedstock requirements for their EU sulfate plants as well as 3rd party sales. KRO purchases ~400kt of chloride slag and natural rutile ores under contracts from Rio Tinto and Iluka, respectively. KRO's ore supply contracts are set to expire through 2016.

TROX management has stated that it is long ~211k tons of ore on an annual production/consumption basis (figure 5) and that it has a low cost ilmenite stockpile (~2.5mm tons) in South Africa which could be utilized in sulfate plants or be upgraded to higher quality feedstock for use in chlorine production. In addition they have highlighted that a supply contract for 100k tons to a 3rd party is set to expire at YE13. Management has long held that their long ore positions along with its large NOL are two key drivers for its desire to acquire TiO2 assets.

TROX is long ~211kt of ore (based on production capacity) and has a low cost ilmenite stockpile in South Africa.

Figure 5. TROX Annual Ore Production & Consumption ('000 metric tons)



Source: Citi Research

KRO Valuation & Organizational Chart

KRO has a current enterprise value (EV) of ~\$1.924B. If we apply a 7x multiple to 2015 Consensus EBITDA of \$348mm we get a theoretical EV of \$2.44B or a 27% premium to the current EV.

Consensus estimates for 2014 and 2015 EBITDA for KRO are \$176mm and \$348mm. Applying an EBITDA range of 6-8x to 2015 consensus EBITDA of \$348mm we get an enterprise value ranging from \$2.1B to \$2.8B vs. the current enterprise value of \$1.92B (per Bloomberg).

Figure 6. Kronos (KRO) Valuation

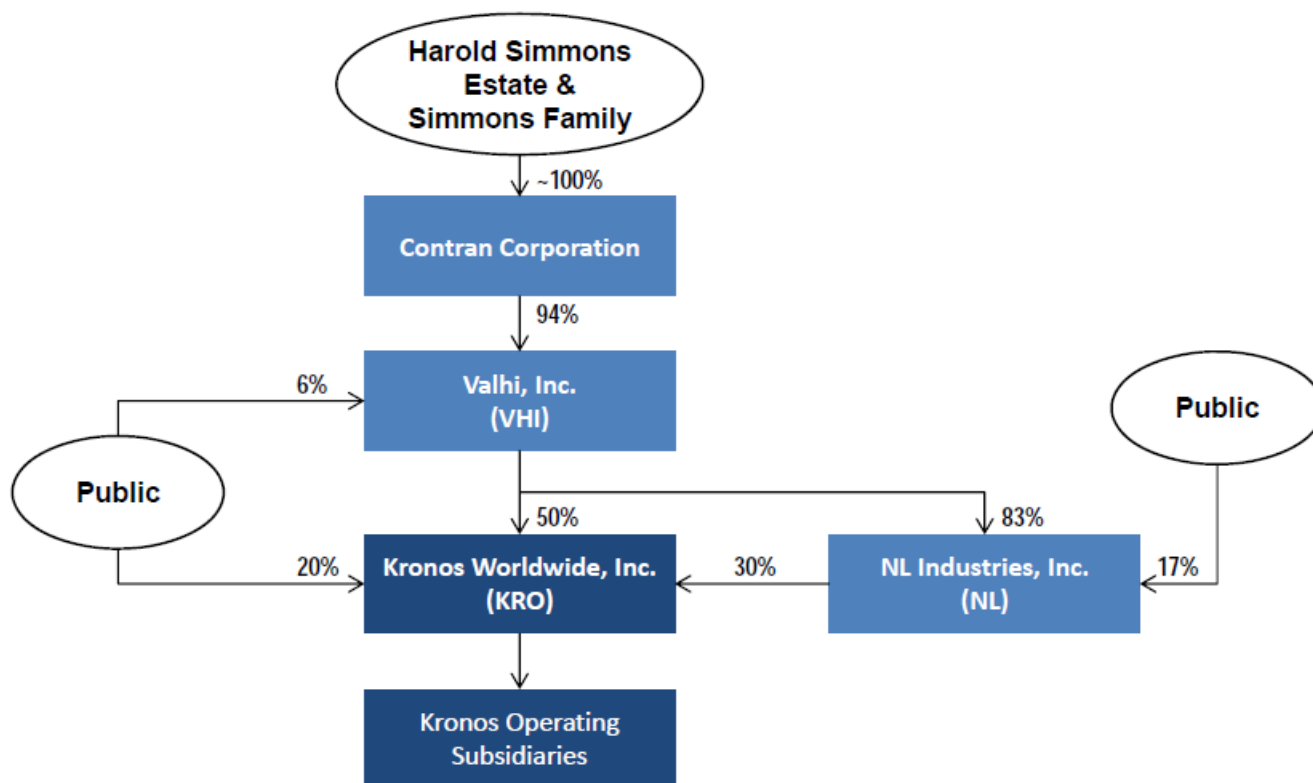
EBITDA Multiple	6.0x	7.0x	8.0x
2015 Consensus EBITDA	348	348	348
EV Based on 2015 Consensus EBITDA of \$348mm	\$2,088	\$2,436	\$2,784
Current Enterprise Value (Bloomberg)	1,924	1,924	1,924
Premium to Current EV	9%	27%	45%

Source: Citi Research and Bloomberg

Relative Size: We assign a value of \$1.2B to HUN's TiO2 business and our equity counterparts valued DD's Performance Chemicals segment at \$10.9B (45-50% of revenue from TiO2 historically).

From a relative standpoint we assigned a value of ~\$1.2B to HUN's standalone TiO2 business (based on normalized EBITDA of \$200mm and a 6x multiple) and in a note published on 11/26/13, our equity counterparts assigned a value of ~\$10.9B to DD's Performance Chemicals segment (based on their 2014 EBITDA estimate of \$1,459mm) of which TiO2 has historically accounted for ~45 to 50% of its revenue.

Figure 7. Kronos (KRO) Organizational Chart



Source: Citi Research and Company Filings.

Related Research

High Yield

- 12/23/13: [Chemical News: Just in Time for XMAS - Implications for MOMENT, HUN, ROC, TROX, AXLL, NCX and CHMT](#)
- 12/13/13: [Tronox Ltd \(TROX\): Anadarko Ruling - Settlement Range Exceeds Consensus; Downgrade TROX 20s to Neutral from Buy](#)

Equity

- 11/26/13: [TiO2 Industry Update - Revising Pigment Producer Estimates](#)
- 11/26/13: [TiO2 – Emerging from an Eclipse - Implications for Pigment Producers and Feedstock Suppliers](#)

Appendix A-1

Analyst Certification

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Huntsman Corp (HUN)

Ratings and Target Price History Fundamental Research

Analyst: P.J. Juvekar



	Date	Rating	Target Price	Closing Price
1	7-Jan-11	2H	*18.00	16.18
2	17-Feb-11	2H	*20.00	18.71
3	6-May-11	2H	*23.50	20.68
4	5-Aug-11	2H	*14.50	12.70
5	6-Oct-11	2H	*10.00	9.56
6	8-Oct-11	Stock rating system changed		

* Indicates change

	Date	Rating	Target Price	Closing Price
7	2-Nov-11	2H	*13.00	12.59
8	12-Jan-12	2H	*11.00	11.03
9	17-Feb-12	2H	*16.00	13.79
10	1-May-12	2H	*17.00	15.42
11	28-Jun-12	2H	*14.50	12.80
12	4-Nov-12	2H	*18.00	16.19

	Date	Rating	Target Price	Closing Price
13	3-Dec-12	2H	*17.00	15.97
14	3-Jan-13	*1H	*20.00	16.78
15	2-Apr-13	1H	*23.00	17.74
16	24-Jun-13	1H	*21.00	16.36
17	23-Oct-13	1H	*28.00	22.62

Rating/target price changes above reflect Eastern Standard Time

Huntsman Corp (HUN)

Ratings and Target Price History Best Ideas Research Relative Call (3 Month)

Analyst: P.J. Juvekar



	Date	Rating	Target Price	Closing Price
1	14-Oct-11	*ADD LP	-	10.36
2	28-Jun-12	*REM LP	-	12.80

* Indicates change

	Date	Rating	Target Price	Closing Price
3	30-Jun-12	*N	-	12.94
4	14-Mar-13	*ADD MP	-	19.18

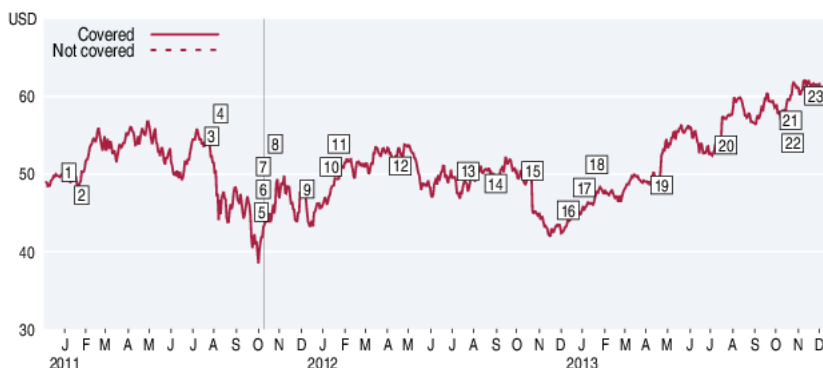
	Date	Rating	Target Price	Closing Price
5	24-Jun-13	*REM MP	-	16.36

Rating/target price changes above reflect Eastern Standard Time

E I du Pont de Nemours and Co (DD)

Ratings and Target Price History Fundamental Research

Analyst: P.J. Juvekar



	Date	Rating	Target Price	Closing Price
1	7-Jan-11	1M	*62.00	49.76
2	26-Jan-11	1M	*65.00	50.32
3	28-Jul-11	1M	*67.00	52.30
4	10-Aug-11	1M	*60.00	44.83
5	6-Oct-11	1M	*52.00	41.86
6	8-Oct-11	Stock rating system changed		
7	8-Oct-11	*1	52.00	41.90
8	26-Oct-11	1	*53.00	46.10

* Indicates change

	Date	Rating	Target Price	Closing Price
9	9-Dec-11	*2	*47.00	45.04
10	12-Jan-12	2	*52.00	48.10
11	24-Jan-12	2	*55.00	49.41
12	19-Apr-12	2	*56.00	52.61
13	24-Jul-12	2	*53.00	47.74
14	31-Aug-12	2	*54.00	49.75
15	23-Oct-12	2	*49.00	45.25
16	12-Dec-12	2	*47.00	44.30

	Date	Rating	Target Price	Closing Price
17	3-Jan-13	2	*51.00	45.29
18	22-Jan-13	2	*53.00	47.82
19	23-Apr-13	2	*55.00	52.49
20	23-Jul-13	2	*60.00	57.12
21	22-Oct-13	2	*61.00	60.17
22	24-Oct-13	*1	*70.00	61.38
23	26-Nov-13	1	*72.00	61.32

Rating/target price changes above reflect Eastern Standard Time

E I du Pont de Nemours and Co (DD)

Ratings and Target Price History Best Ideas Research Relative Call (3 Month)

Analyst: P.J. Juvekar



	Date	Rating	Target Price	Closing Price
1	20-Jan-11	*ADD MP	-	48.12

* Indicates change

	Date	Rating	Target Price	Closing Price
2	18-Apr-11	*REM MP	-	53.80

Rating/target price changes above reflect Eastern Standard Time

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	Rating		
	Buy	Hold	Sell
Data current as of 30 Sep 2013			
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% of companies in each rating category that are investment banking clients	70%	64%	63%
Citi Research US High Yield Issue Coverage	27%	53%	20%
% of companies in each rating category that are investment banking clients	83%	77%	75%

Citi Research Equity Ratings Distribution

	12 Month Rating			Relative Rating		
	Buy	Hold	Sell	Buy	Hold	Sell
Data current as of 30 Sep 2013						
Citi Research Global Fundamental Coverage	48%	40%	12%	6%	87%	6%
% of companies in each rating category that are investment banking clients	55%	50%	43%	64%	51%	48%

Huntsman Corp (HUN) — Issuer Portfolio Weighting and Issue Rating History

High Yield Credit Research

Analyst: James P Finnerty

Issuer		Issue				
Weighting	Date	Coupon	Description	Maturity	Rating	Date
UW	23-Oct-12	5.500%	Sr Unsec Nts	30-Jun-16	Sell (3)	23-Oct-12
					NC	07-Jun-13
		8.625%	Sr Sub Nts	15-Mar-20	Sell (3)	23-Oct-12
		8.625%	Sr Unsec Nts	15-Mar-21	Sell (3)	23-Oct-12
		4.875%	Sr Nts	15-Nov-20	Buy (1)	28-Jan-13

Tronox Ltd (TROX) — Issuer Portfolio Weighting and Issue Rating History

High Yield Credit Research

Analyst: James P Finnerty

Issuer		Issue				
Weighting	Date	Coupon	Description	Maturity	Rating	Date
OW	23-Oct-12	6.375%	Sr Nts	15-Aug-20	Buy (1)	23-Oct-12
MW	13-Dec-13				Neutral (2)	13-Dec-13

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for Medium-Risk stocks, 0%-20% for High-Risk stocks, and 0%-35% for Speculative stocks); and Sell (3) (negative total return). For securities in emerging markets (Asia Pacific, Emerging Europe/Middle East/Africa, and Latin America), investment ratings were: Buy (1) (expected total return of 15% or more for Low-Risk stocks, 20% or more for Medium-Risk stocks, 30% or more for High-Risk stocks, and 40% or more for Speculative stocks); Hold (2) (5%-15% for Low-Risk stocks, 10%-20% for Medium-Risk stocks, 15%-30% for High-Risk stocks, and 20%-40% for Speculative stocks); and Sell (3) (5% or less for Low-Risk stocks, 10% or less for Medium-Risk stocks, 15% or less for High-Risk stocks, and 20% or less for Speculative stocks).

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Citigroup Global Markets Ltd	Chris Montagu

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