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High Yield | Diversified Chemicals
North America

Formaldehyde/MDI Call Recap; Replay Info

Formaldehyde in Good Form; MDI L-T Positive Outlook Intact

- **What's New** — We co-hosted a call on October 20th with our equity research team to discuss the chemical value chain that includes Formaldehyde and MDI (polyurethane) with independent consultant Don Stanutz, former COO of Huntsman (HUN) and President of Huntsman Performance Products.
- **Credit Implications** — Don's positive view on the outlook for Formaldehyde supports our recent ratings change (from Sell to Buy) on Momentive Specialty Chemicals (HXN) 2nd Lien Notes due 2020 and our reiteration of our Buys on the 1st and 1.5 Lien Notes. In the Huntsman (HUN) capital structure we rate the \$1.2B term loan due in 2021 as a Buy as it has the highest coupon of HUN's 3 term loans (L+300bp) and is the only one in the structure with a LIBOR floor (75bp) and call protection (\$101 to Feb-15). We rate the Term Loans due in 2017 and the Senior Unsecured and Subordinated notes as Neutral.
- **What's Inside** — We provide replay details and a brief synopsis of the key themes discussed on the conference call. Also, please see Figure 1 for a flow chart of Formaldehyde and MDI production.

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Formaldehyde

■ Strengths

- **Barriers to Shipping:** Mr. Stanutz noted that formaldehyde is difficult to ship, given that it is unstable in its base form (toxic, flammable, and explosive). In order to ship, it needs to be stabilized via dissolving it in water with methanol. Formalin is a concentrate of 37% formaldehyde in water and methanol. Once stabilized, shipping is still a challenge as it remains unstable and subject to polymerization within a short period of time in storage. This has led to a large % of production of formaldehyde being captive or near captive, with derivative plants and customers next to/on the same site or connected by pipeline.
- **Contracts are L-T:** Given that most capacity is captive or near-captive, Don stated that producers of formaldehyde enjoy the benefit of long term contracts that provide for margin stability.
- **North American Cost Advantage:** The production of formaldehyde is energy intensive with methanol, oxygen and energy being the key raw materials. There are 0.45 metric tons of methanol per metric ton of 37% formaldehyde solution. Don believes the shale gas phenomenon has revitalized the methanol industry in North America and provided a potential cost advantage for formaldehyde producers.
- **Should Benefit from Housing Recovery:** North American demand will likely be the beneficiary of the expected continued recovery in housing given formaldehyde's use in composite wood products and as a key raw material in MDI (polyurethane).
- **Above GDP Growth:** +5% per year during recent years and Don expects growth to continue to outpace GDP in the coming years. MDI and BDO are expected to grow at ~7% in the coming years (10% of global demand). Resins accounts for 63% of demand.

■ Challenges

- **Unstable in Base Form:** Formaldehyde is a toxic gas that is flammable and explosive. Nevertheless, Don highlighted that this makes it a local market with captive/near-captive production that has benefits.
- **Environmental Issues:** Been labeled a "human carcinogen" by several health organizations. Don stated that he does not believe that formaldehyde is at risk for large-scale substitution by competing products.
- **Overcapacity in China:** Don stated that China added too much formaldehyde capacity and that operating rates will continue to be low in the coming years. Nevertheless, given the difficulty to ship there is minimal risk of Chinese exports of formaldehyde to other geographies.
- **Makes Sense to Add Capacity in North America:** Don believes that HXN's plan to add capacity in Geismar, LA makes sense, given customers like HUN and BASF are adding MDI capacity. In addition, HXN should enjoy a raw material advantage as a result of the shale phenomenon and see growing demand from a recovery in housing. Don also posed the question: Will large MDI producers seek to add formaldehyde capacity in North America? Wanhua and BASF have in-house capacity in China and Europe, respectively. Could one of the big 5 look to do the same in North America?

MDI

- **China Supply Additions A Concern:** Don believes that expected capacity additions in China could lead to a temporary supply/demand imbalance. He noted that BASF's recent delay of their MDI capacity in China was most likely strategic. Longer-term though Don sees MDI growth of 7% per annum globally should be enough to sop up supply additions. He thinks the market needs 1 world-scale plant per year based on his growth assumptions.
- **World Scale Plants Are Getting Bigger:** Don noted that world-scale plants have from ~200k to ~400k metric tons.
- **Doesn't See Risk of MDI Licensing:** Don does not believe that one of the 5 major producers will seek to license their technology as it would have a negative impact to their profitability.
- **Decline in Benzene a Temporary Tailwind:** Don stated that the recent drop in the price of benzene was a tailwind for MDI producers, but that it was likely temporary as the MDI price will eventually reflect the lower raw material cost.
- **Ability to Differentiate MDI:** Don stated that MDI is not a pure commodity like ethylene. Producers can differentiate their product offering, noting that there are 50 to 100 products under the MDI umbrella.

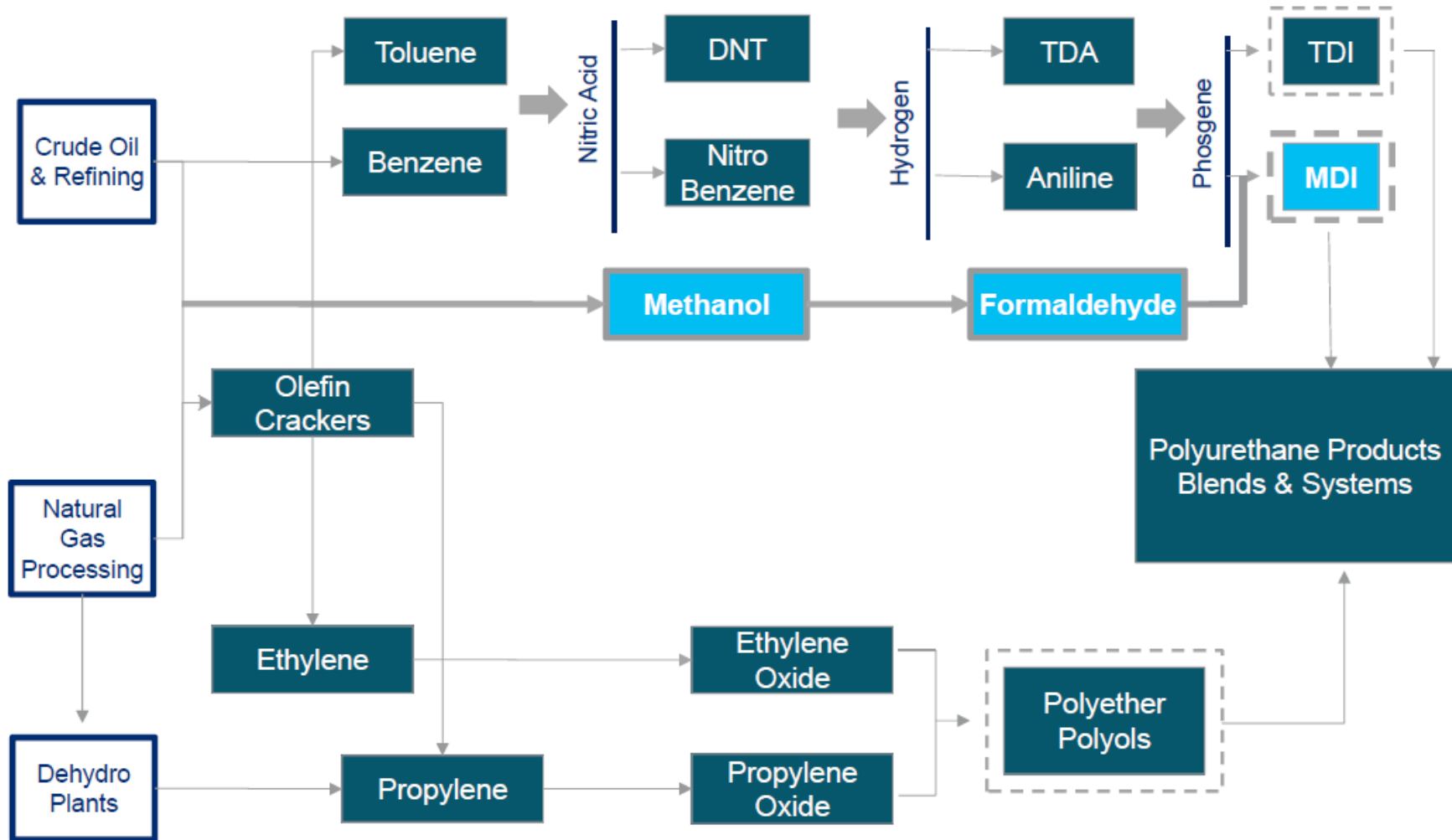
Replay Info (2 weeks)

- **Dial-In:** +1 719-457-0820 or 888-203-1112
- **Replay Passcode:** 8088171

Related Research

- [HY Chems 3Q14 Preview - Not So Easy-'E's; Europe & Energy Weigh on Outlook](#)

Figure 1. Route to Polyurethanes



Source: Citi Research

Appendix A-1

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Citi Research US High Yield Issue Coverage	31%	58%	11%
% of companies in each rating category that are investment banking clients	71%	79%	65%

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	Date
UW	23-Oct-12	5.500%	Sr Unsec Nts	30-Jun-16	Sell (3) NC 07-Jun-13
		8.625%	Sr Sub Nts	15-Mar-20	Sell (3) Neutral (2) 23-Oct-12 19-May-14
		8.625%	Sr Unsec Nts	15-Mar-21	Sell (3) Neutral (2) 23-Oct-12 19-May-14
		4.875%	Sr Nts	15-Nov-20	Buy (1) Neutral (2) Sell (3) Neutral (2) 28-Jan-13 24-Feb-14 19-May-14 11-Aug-14
		L+250bp	1L Gtd. Sr. Secured TL B1 Ext	19-Apr-17	Neutral (2) 17-Oct-14
		L+275bp	1L Gtd. Sr. Secured TL B2 Ext	19-Apr-17	Neutral (2) 17-Oct-14
		L+300bp/75bp	1L Gtd. Sr. Secured	01-Oct-21	Buy (1) 17-Oct-14

Incremental TL

Momentive Specialty Chemicals Inc. (HXN) — Issuer Portfolio Weighting and Issue Rating History

High Yield Credit Research

Analyst: James P Finnerty

Issuer		Issue				
Weighting	Date	Coupon	Description	Maturity	Rating	Date
MW	10-Jul-13	6.625%	1st Lien Nts	15-Apr-20	Buy (1)	10-Jul-13
UW	18-Oct-13	8.875%	1.5 Lien Nts	01-Feb-18	Neutral (2)	10-Jul-13
					Buy (1)	23-Jan-14
		9.000%	2nd Lien Nts	15-Nov-20	Buy (1)	10-Jul-13
					Neutral (2)	08-Oct-13
					Sell (3)	30-Oct-13
					Buy (1)	17-Oct-14

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