IMPLICATIONS OF U.S. TRADE ACTIONS ON THE U.S. BUSINESS OF CHEMISTRY

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U.S. CHEMICALS OUTLOOK

Y/Y % Change in Volume Produced

Forecast (September 2018)
U.S. CHEMICAL INDUSTRY INVESTMENTS DUE TO SHALE GAS

As of September 2018

$202 BILLION In new capital investment

Project Status

- Delayed/Uncertain: 6%
- Planned: 41%
- Under Construction: 22%
- Complete: 31%
North American Chemical Industry is Highly Integrated

1/3 of all U.S. chemical exports are sold to MX, CA
44% intracompany transfers

1/4 of all U.S. chemical imports are from MX, CA
64% intracompany transfers

Top U.S. Chemicals Export Partners
1. Canada
2. Mexico
3. China
4. Belgium
5. Brazil

46,000 U.S. chemical industry jobs depend directly on chemical exports to Canada/Mexico
NAFTA Withdrawal Would Raise Prices, Destroy Demand & Jeopardize Investments

Tariff burden on U.S. chemical exports to Canada & Mexico could be between $700 million (MFN Tariffs) and $9 billion (Final Bound Tariff Level).

- **Price of:**
  - U.S. chemical exports to Canada: 0.8% - 4.4%
  - U.S. chemical exports to Mexico: 2.3% - 35.2%

Reduction in trade to Canada & Mexico:
- Best Case: 4%
- Worst Case: 45%

- Loss of up to 21k jobs
- MFN Tariffs: $9 billion
- Final Bound Tariff Level: $700 million

Creates uncertainty for 41% ($83B) of announced investments.
Total Losses in a Worst Case Scenario

$22B lost in demand for U.S. chemical exports production

$7B lost in demand from industries using chemicals

$29B Lost chemical demand
U.S. SECTION 232 TARIFFS
ALUMINUM & STEEL

IMPACTS

Cost of New Capital, Maintenance & Expansion of Existing

Competitiveness of Downstream Steel/Aluminum Consumers

$3.5B U.S. Chemicals & Plastics Exports exposed to Retaliatory Tariffs

Demand for U.S. Chemicals

Demand for U.S. Goods containing Chemicals

U.S. SECTION 232 TARIFFS
AUTOS & AUTO PARTS

IMPACTS

Auto is a Key End-Use Market for Chemicals and Plastics

Tariffs would cause disintegration in global supply chains, making North American auto production more costly and reducing competitiveness.

Demand for U.S. Chemicals

Demand for U.S. Goods containing Chemicals

>$360B U.S. Exports exposed to Retaliatory Tariffs
## U.S. Section 301 Tariffs On US-China Trade Summary

<table>
<thead>
<tr>
<th>Date</th>
<th>U.S. Section 301 Tariffs On Imports From China</th>
<th>Chinese Retaliatory Tariffs On Imports From The U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 6</td>
<td>25% tariffs on $34B imposed (one chemical, $3.6M)</td>
<td>25% tariffs on $34B imposed No Chemicals</td>
</tr>
<tr>
<td>Aug 23</td>
<td>25% tariffs on $16B imposed $2.2B Chemicals/Plastics</td>
<td>25% tariffs on $16B imposed $2.0B Chemicals/Plastics</td>
</tr>
<tr>
<td>Sept 24</td>
<td>10%, 25% (1/19) tariffs on $200B imposed $13.2B Chemicals/Plastics</td>
<td>5% and 10% tariffs on $60B imposed $8.8B Chemicals/Plastics</td>
</tr>
<tr>
<td>Cumulative</td>
<td>$250B $15.4B Chemicals/Plastics</td>
<td>$110B $10.8B Chemicals/Plastics</td>
</tr>
<tr>
<td>What’s left?</td>
<td>$505B total goods - $250B= $255B exposed to additional tariffs</td>
<td>$120B total goods - $110B= $10B exposed to additional tariffs</td>
</tr>
</tbody>
</table>
Collateral Damage from U.S. Section 301 as Retaliatory Tariffs Destroy External Demand

Tariff burden on U.S. chemical and plastic exports to China:

- **Best Case**: Reduction in exports to China by 15%
- **Worst Case**: Reduces exports by up to 56%

**Reduction in exports to China**

- **Best Case**: Loss of up to 55k jobs and $18B in US economic output
QUESTIONS?

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