



CDI GLOBAL



Western Chemical Companies Interest in China

August 2020



Chemicals



Page 2: Why China is the Most Attractive Investment Location for Chemical MNCs

✓ Investment Climate	- China's foreign business and investment climate has substantially improved and continuously in the past few years. - IP and Foreign Investment Laws are also getting more supportive.
✓ Fast Economic Recovery	- China was only moderately affected by COVID-19, and recovery has started. - Forecasts indicate that China will be the fastest growing major economy in the world over the next 1 to 2 years.
✓ Market Size and Growth	- China is by far the largest chemical market in the world, bigger than NAFTA and the EU combined. - Almost half of the current global chemical capex is committed to China investment.
✓ Positive Market Trends	- China's chemical producer landscape is consolidating, affected by tighter environmental regulations and increasing quality levels. - Such trends and recent legislation favor foreign players.
✓ Focus on Local Market	- MNCs are focusing on producing in China for China, capturing local growth. - Given China's growth, such investments have a solid rationale even in the case of declining or stagnant global trade.

I. China's Business Climate



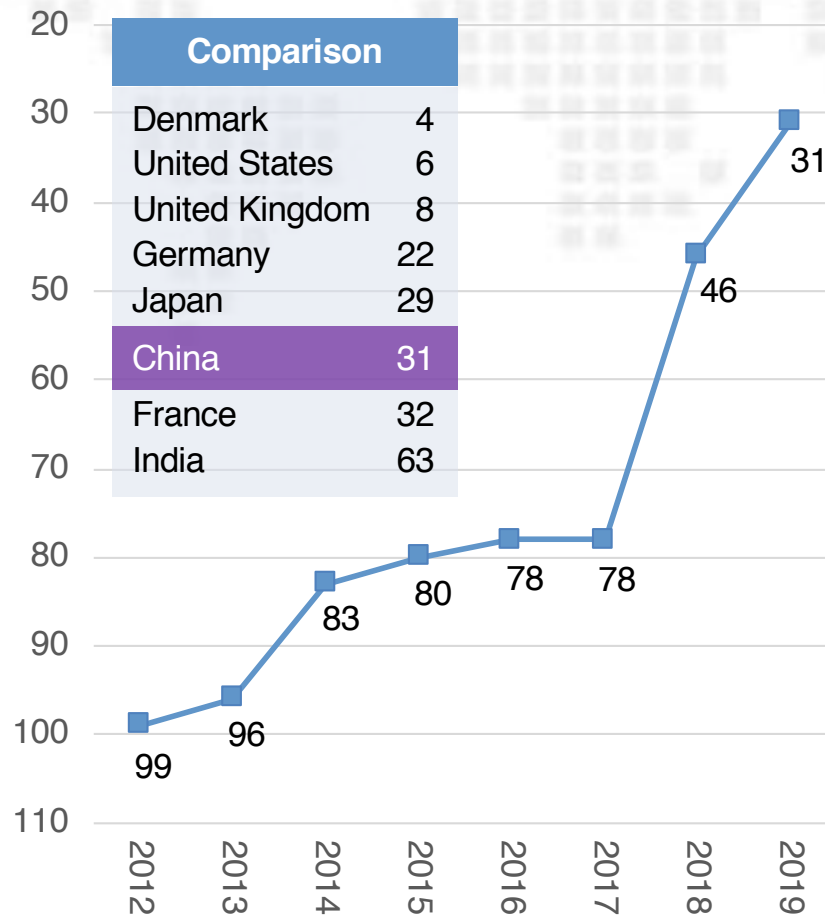
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Page 4: Improved China Investment Climate



Investing in China has become substantially easier due to a number of reforms in the past few years

Ease of Doing Business in China (Rank)



Source: World Bank

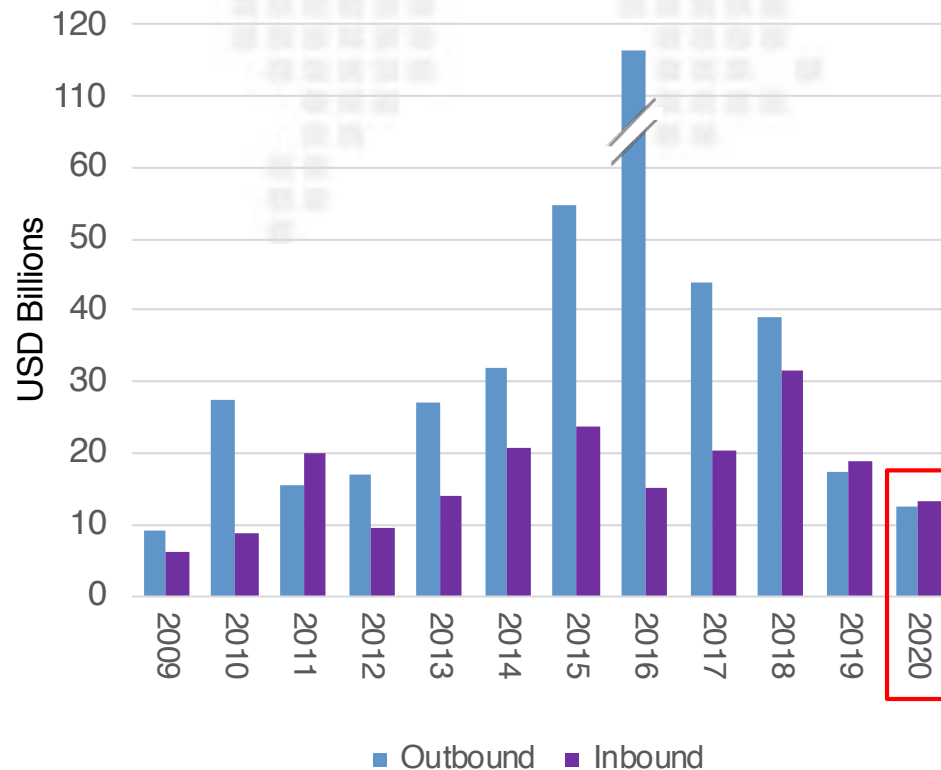
- China has substantially improved its ease of doing business, as indicated by the World Bank ranking:
 - “China joined the ranks of the world's top ten most improved economies for ease of doing business for the second year in a row thanks to a robust reform agenda” (World Bank Group's Doing Business 2020);
 - “China has undertaken substantial efforts to improve the domestic business climate for small and medium-size enterprises, maintaining an active pace of reforms” (World Bank Director China);
 - “China’s recent reforms secured the country’s place among the most efficient economies on contract enforcement” (World Bank).
- China’s 2020 Foreign Investment Law further opened up markets by creating a level playing field for foreign business competing with private and state-owned enterprises (e.g. rule changes allowing 100% foreign ownership of petrochemical activities).
- Protection of IP has improved (e.g. Phase 1 U.S. - China trade agreement significantly lowers the bar for U.S. companies to pursue intellectual property claims in China, with the creation of an IP appeals court, etc.).

Page 5: Increased China Cross Border M&A

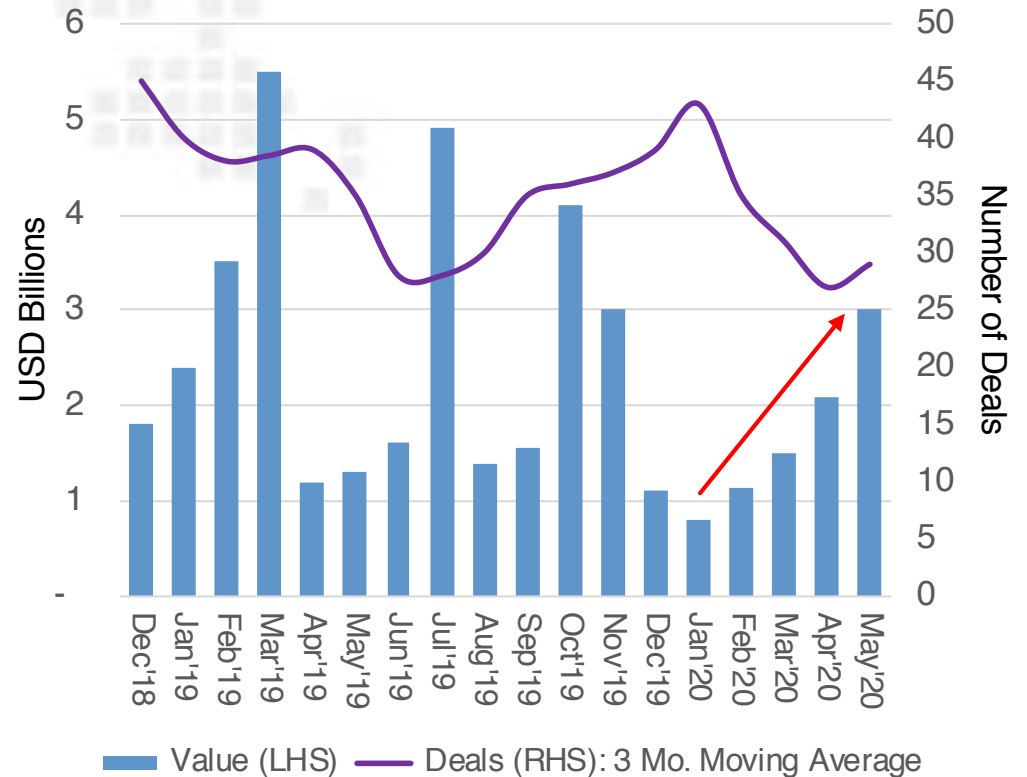


As a consequence, China inbound acquisitions have increased as Western companies seek growth

China Cross Border M&A
(Year-to-Date)



China Inbound M&A
(Last 18 Months)



Notes: 1. Year-to-Date through June 19.
2. Completed transactions.

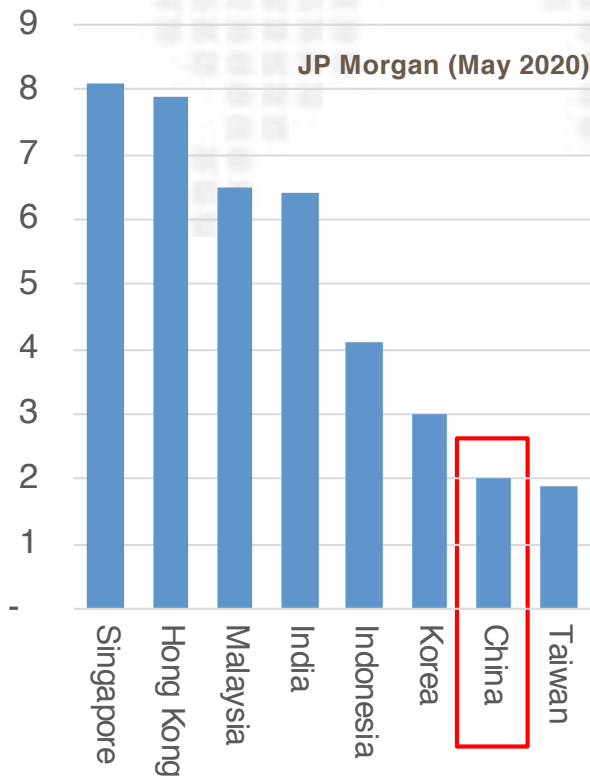
Sources: Refinitiv, Rhodium Group and South China Morning Post.

Page 6: Economic Outlook – China versus the World

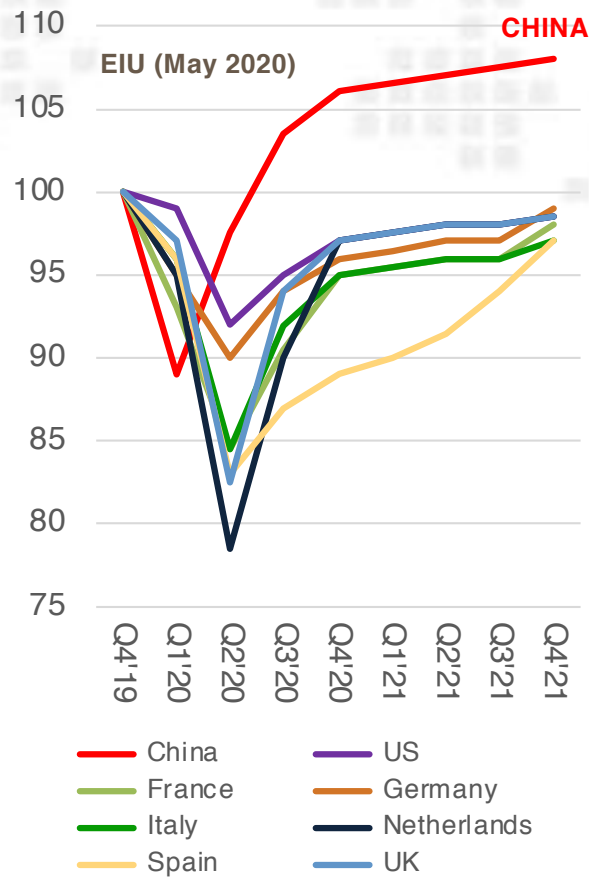


China is experiencing a fast recovery and will likely emerge from the crisis as a stronger global player

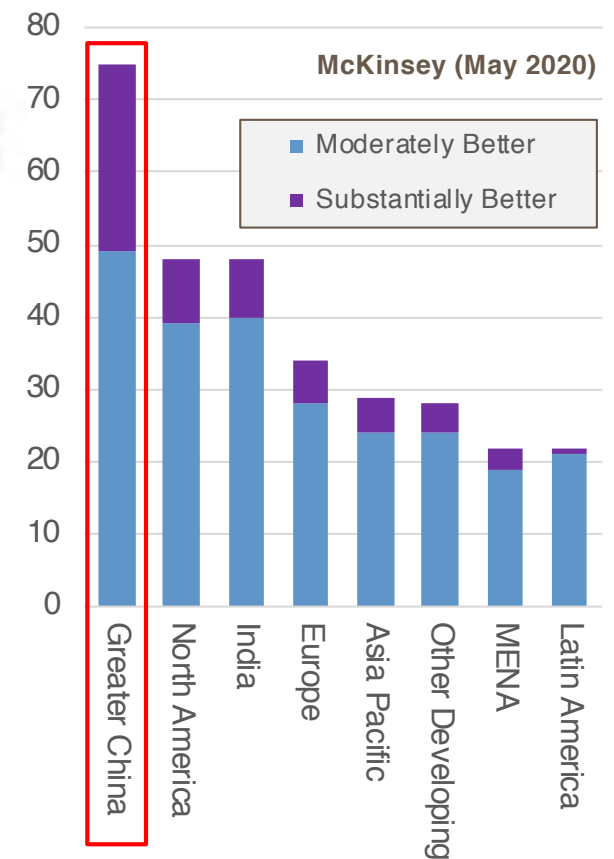
Expected Cumulative GDP Loss
Q1'20– Q4'21 (%)



Quarterly GDP Forecasts
(Q4'19 = 100)



Expect Economic Conditions
Next 6 Mos. (% Response)



Sources: JP Morgan, EIU and McKinsey.



II. China's Chemical Industry

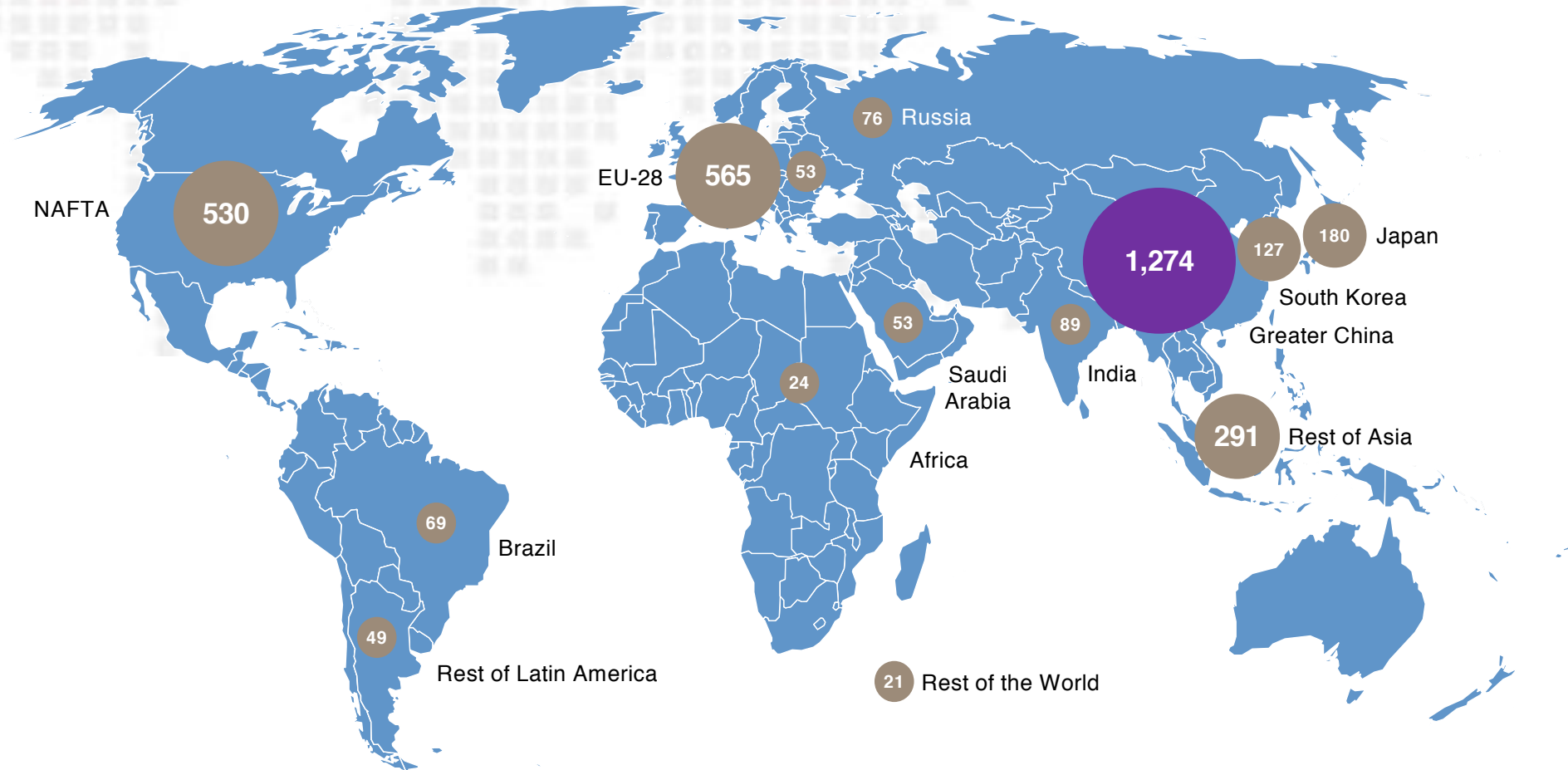


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Page 8: China Chemical Market Size

China represents 38% of global chemical sales, larger than NAFTA and EU combined



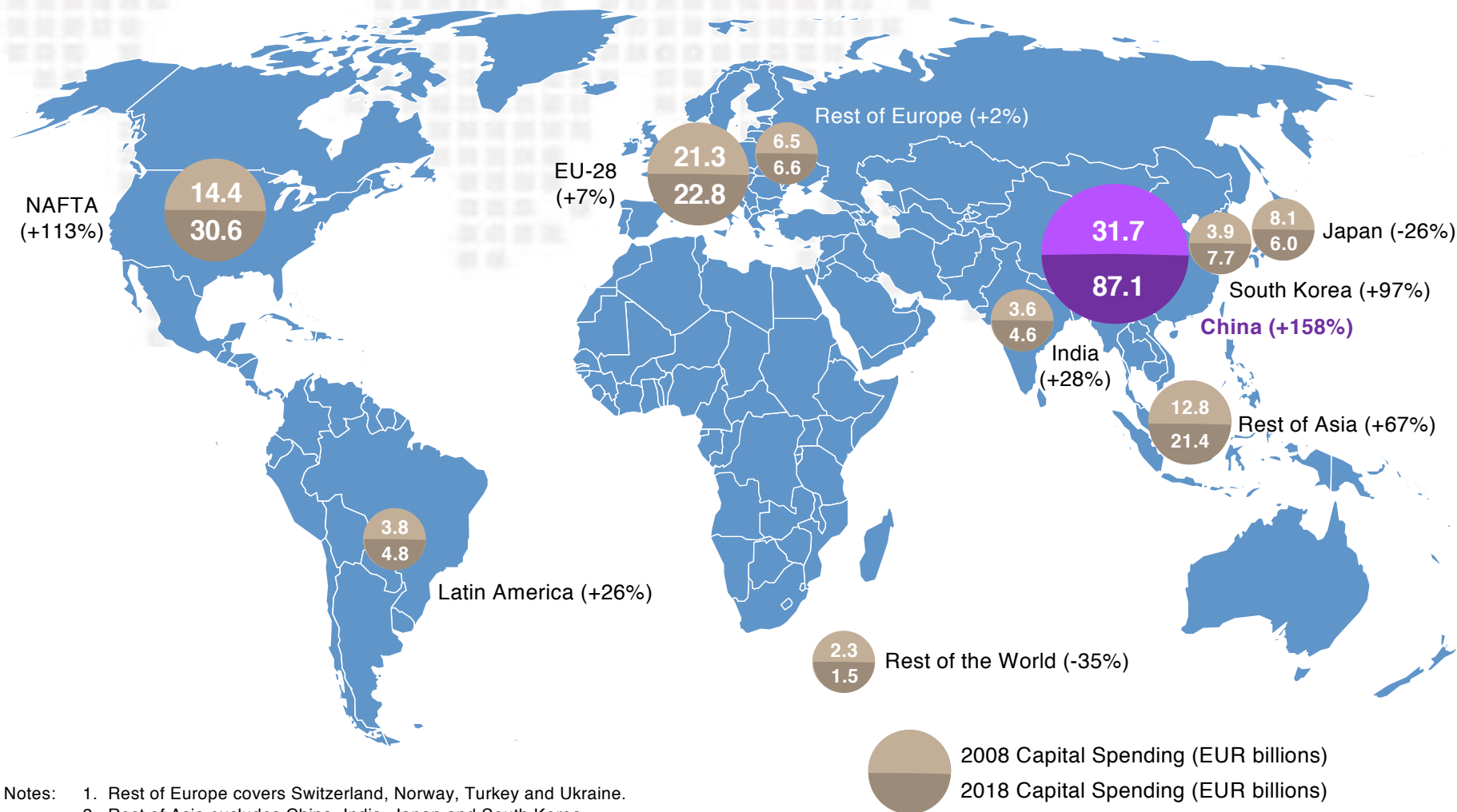
- Notes:
1. Rest of Europe covers Switzerland, Norway, Turkey and Ukraine.
 2. Rest of Asia excludes China, Taiwan, India, Japan and South Korea.
 3. China includes Taiwan.
 4. Not including pharmaceuticals.

Source: CEFIC.

Page 9: China Level of Chemical Industry Investment



45% of global capex in chemicals was attributable to China in 2018 (vs. 16% NAFTA and 12% EU-28)



Notes: 1. Rest of Europe covers Switzerland, Norway, Turkey and Ukraine.
 2. Rest of Asia excludes China, India, Japan and South Korea.
 3. Not including pharmaceuticals.

Source: CEFIC.



Page 10: Trends in China's Chemical Industry

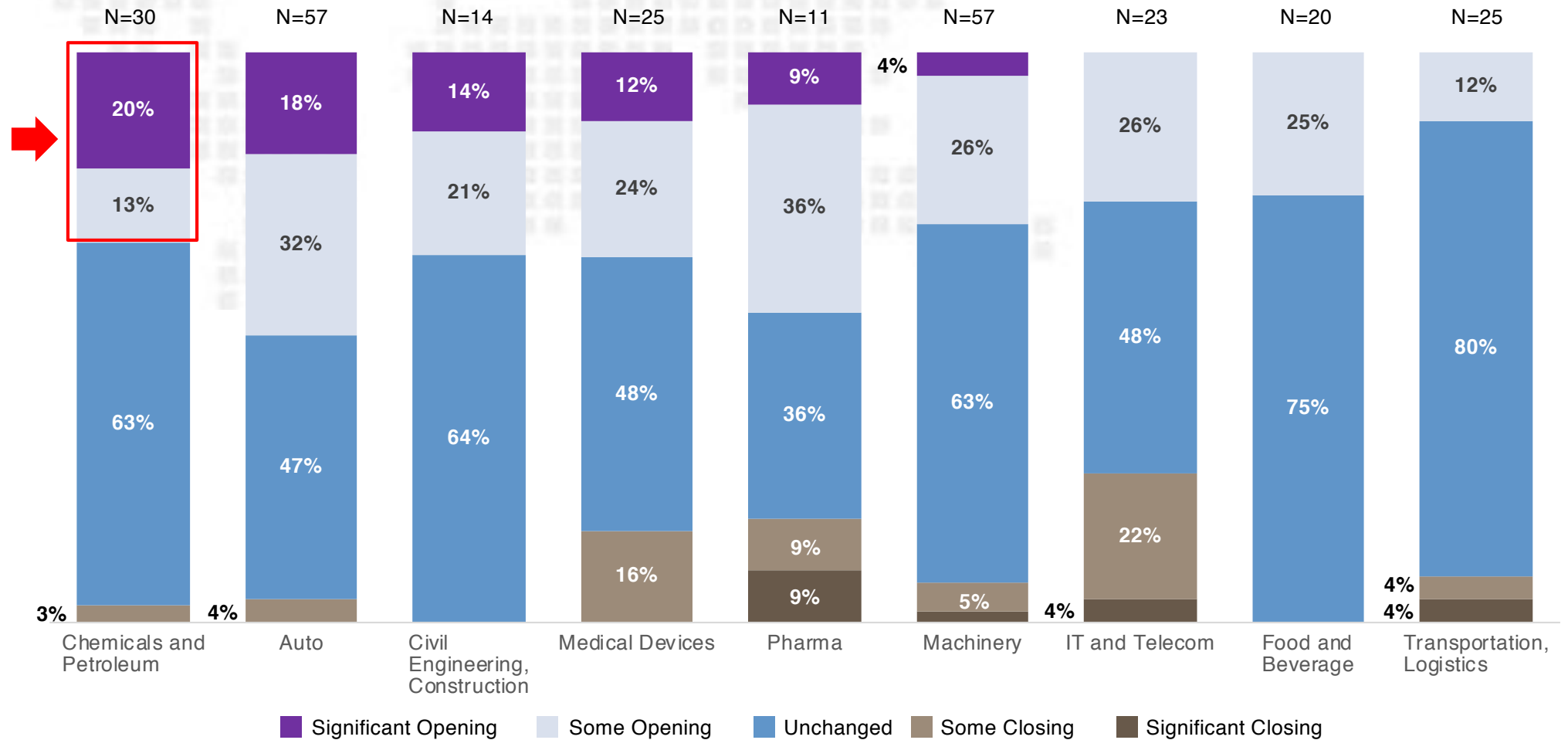
China's chemical industry is undergoing several transitions that favor multinational players

Consolidation of Chemical Companies	Consolidation of China's fragmented chemical industry with tens of thousands of plants that are either scattered between mixed urban industrial and residential areas or are too close to rivers, are now required to relocate to designated industrial parks with specialized chemical production facilities (e.g. wastewater, hazardous waste-treatment infrastructure).
Greater Focus on Specialty Chemicals R&D	China's national and local policies are promoting the upgrade of its chemical capabilities to strengthen the industry as the share of global chemical gross value added (30%) is lower than its share of the overall chemical market (36%) – something that the government is well aware of and is actively trying to change through numerous direct and indirect initiatives.
Tighter Environmental Regulation	Tighter environmental regulation that is being more strictly implemented than previously. This favors companies playing by the rules, larger companies with more advanced technologies, and companies with sufficient funds to invest in environmental protection. It generally favors MNCs that tended to stick to regulations even before the tightening.
Some Domestic Companies Under Financial Stress	Corporate defaults in China surged to unprecedented levels, directly and indirectly effecting listed and private companies. China has many good chemical companies with sound operations but weak financials due to aged receivables, liquidity events, etc. Some have great growth prospects under the right ownership, technical expertise and distribution.
Shift Towards Higher-Quality Materials	As GDP per person increases, the demand for higher-quality goods and a larger variety of products increases. This in turn drives the demand for higher-quality chemicals and innovative chemical solutions rather

Page 11: Significant Market Opening for Foreign Chemical Companies



A substantial proportion of foreign chemical companies thinks the market has opened significantly



Source: Business Confidence Survey 2019 – European Union Chamber of Commerce in China and Roland Berger.



Page 12: Recent Chemical Cross Border Investments – FDI examples (1 of 2)

Many chemical MNCs have recently made substantial greenfield investments in China...

Company	Time	Investment	Country
	Apr 2018	Expanded polycarbonate production capacity at Caohejing (Shanghai) from 400 kt to 600 kt. This follows a previous doubling of capacity from 200 kt to 400 kt and is a reaction to strong customer demand for PC in the APAC region.	
	Sep 2018	Signed a cooperation framework agreement with Guangdong Government for building a 1.2 million-tons-per-year ethylene flexible feed steam cracker, two PE lines and two differentiated PP lines.	
	Sep 2019	LANXESS inaugurated its compounding facility for Durethan and Pocan-branded high-tech plastics, especially for the automotive sector and the electrical and electronics industry in Changzhou.	
	Sep 2019	Signed an MOU for a 50:50 JV to with China's Bora Enterprise Group to invest in a petrochemical complex in northeast China. Products include PE (800 kt), PP (600 kt) and 350 kt styrene (volume: USD 12 billion).	
	Nov 2019	Planned new Verbund site at Zhangjiang, Guangdong with an investment of about USD 10 billion. Wholly owned by BASF will eventually be the third largest BASF site globally. Expansion of Nanjing site (JV with Sinopec) for an estimated USD 4 billion, creating additional cracker capacity and capacity for downstream products).	
	Jan 2020	PEEK producer Victrex will form a 75:25 JV with Yingkou Xingfu Chemical to build a polymer factory in Liaoning, China with a capacity of 1500 tons per year. Company aims to capitalize on the significant opportunities in China and the Asia.	



Page 13: Recent Chemical Cross Border Investments – FDI examples (2 of 2)

...Particularly in the first half of 2020

Company	Time	Investment	Country
	Jan 2020	Ineos announced that the company will build a 600 kt ABS unit in Ningbo, with a scheduled starting date in 2023. This comes less than a year after announcing the acquisition of two polystyrene production sites in China.	
	Mar 2020	Domo Chemicals will build a 50 kt nylon compounding plant in Zhejiang that will focus on modified nylon for automotive and electronic uses. The company claims to already sell 6 kt of imported material in China per year.	
	Mar 2020	Dow will invest in production of silicone intermediates in Zhangjiagang by USD 300 million over the next 5 years. Targeted growth markets include automotive, construction, consumer goods, electronics, and personal care.	
	Apr 2020	Axalta broke ground for the latest expansion phase of its automotive coatings in Jiading, Shanghai. The expanded facility will position Axalta to meet the rising demand for sustainable coatings.	
	May 2020	Shell and CNOOC will expand their petrochemical joint venture in Huizhou. This USD 5.6 billion investment is the third expansion of ethylene capacity (from the current 2.2 million t/a), indicating the past success of the JV.	
	May 2020	Coatings producer Hempel is investing USD 100 million in a new factory in Yantai with a capacity of 102 kt/a of solvent-borne, water-based and powder coatings.	
	Jun 2020	Invista started construction on a Shanghai plant for adiponitrile (ADN), a key nylon raw material. The investment size is slightly above USD 1 billion.	
	Jul 2020	Nouryon will build a world-class manufacturing facility at its current site in Ningbo, China to produce two key intermediates for its organic peroxides business.	



Page 14: Recent Cross Border Investments – M&A examples

Other MNCs have recently entered the Chinese chemical market via acquisition of a local player

Company	Time	Investment	Country
 UPL	Nov 2019	Indian agrochemical company UPL acquired a majority stake in Yoloo Laoting Bio-technology Co. Ltd., an agrochemical firm based in Hebei province.	
 Elkem	Dec 2019	Elkem acquired Polysil, a leading China silicone elastomer and resins material manufacturer. Approximately 90% of Polysil's revenues are generated in China.	
 CABOT	Jan 2020	Cabot acquired Shenzhen Shansun Nano New Materials, a maker of carbon nanotubes in China, for USD 115 million. This strengthens Cabot's market position in the high-growth batteries market in China, the largest EV market in the world.	
 iberchem FRAGRANCES OF NATURE	Feb 2020	Iberchem Group, a Spanish private-equity owned flavor producer, acquired the Chinese flavor producer Nanchang Duomei Bio-Tech, regarding the acquisition as a key step in the strategic expansion of the flavor division.	
 azelis	Apr 2020	Chemical distributor Azelis acquired CosBond, a Chinese specialty chemicals and food ingredients distributor with a focus on personal care. Azelis describes China as a strategic market due to its growing middle class and personal care industry.	
 DIC	May 2020	DIC has acquired liquid inks for the packaging business from Liaoning Tianqi Technology, a manufacturer of liquid inks for packaging for the food and beverage industry based in China.	
 ASCEND PERFORMANCE MATERIALS	Jun 2020	Ascend Performance Materials purchased the assets of NCM (Changshu) and Tehe Engineering Plastic (Suzhou) in Changshu Yushan High-tech Industrial Park. Plans are to expand the compounding assets and establish a global R&D center.	
 BASF The Chemical Company	Aug 2020	BASF acquired alkoxylates production assets from Sinopec Shanghai Petrochemical Company (SPC), allowing the company to expand its current production of surfactants as their existing line is running at full capacity.	

III. “In China for China” Strategy



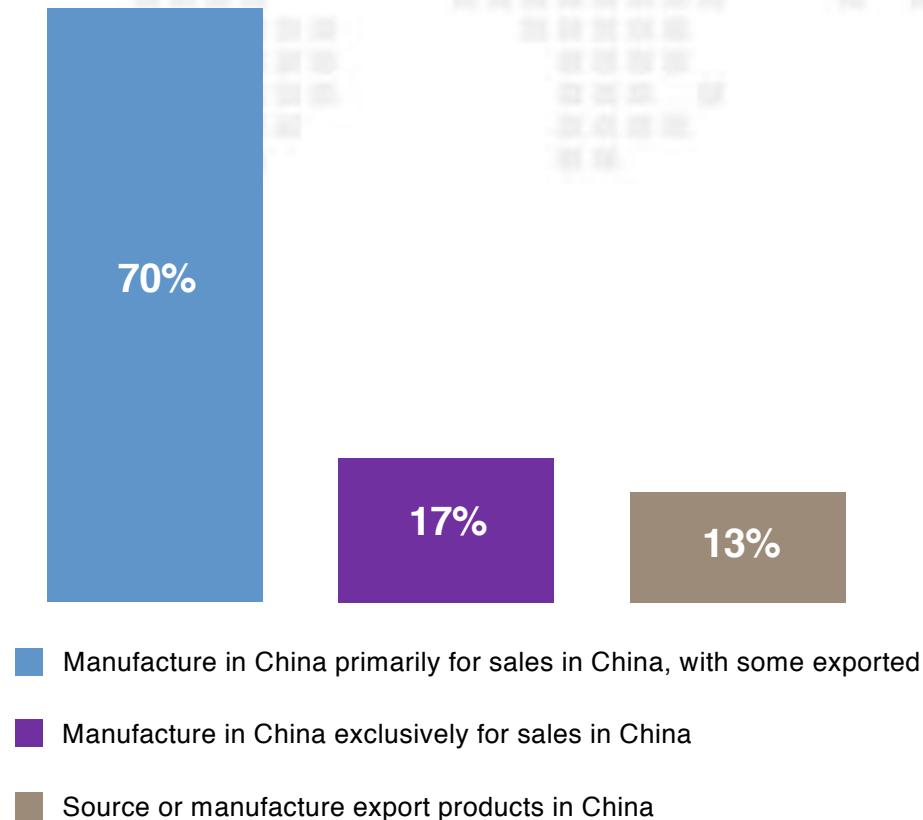
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Page 16: Rationale of Chemical MNCs for China Presence

According to a survey of U.S. companies, most produce in China for China

Description of U.S. Operations in China



Key Considerations Behind “In China for China”

- Increasing China market demand and stable profitability.
- Higher manufacturing efficiency in China (Manufacturing Value Added per capita is 4x the top ASEAN countries).
- Better logistics services in China (e.g. World Bank says China is far ahead of all ASEAN manufacturing countries in terms of infrastructure, international shipping, quality and competence, tracking and delivery).
- Shortening of global supply chains as a consequence of COVID-19 and trade conflicts mean that China demand is better served from China than by imports.
- For some industries, China increasingly becomes the global leader in innovation, making a manufacturing presence necessary.

Sources: AmCham China, AmCham Shanghai, PwC China and Wilton Partners analysis.



Page 17: Strategy “In China for China”

Focus of current chemical investments of MNCs is on producing “In China for China”, as indicated by their investment rationale



- **Investment Rationale:** Azelis describes **China as a strategic market** due to its rapidly increasing middle class



- **Investment Rationale:** “We are determined to support **our customers in southern China** drive growth with innovative products and sustainable solutions.”



- **Investment Rationale:** This will increase **production capacity** of liquid inks in China by about 20% and strengthening DIC’s **presence in the north and northeast.**”



- **Investment Rationale:** “We view China as a **rapidly growing market** and the planned investments reflect our confidence in this view.”



- **Investment Rationale:** “The Chinese market is a **very important part** of Hempel’s business and our ongoing investment demonstrates our confidence in the region”.



- **Investment Rationale:** “China is the **biggest ABS market in the world.** This new investment will give us a tremendous opportunity to provide our customers in the region”.



- **Investment Rationale:** “China is **the largest, fastest growing market** in the world for our core products”



Page 18: Recommendations

What chemical MNCs contemplating China investments should consider now

Decide on the Opportunity

Decide in principle on whether to pursue an investment in China, keeping in mind that investment over the next 1-2 years is more likely to succeed as the Chinese chemical landscape is quickly changing and finding quality targets will become more difficult.

Define Target Criteria

Based on company strategy, collect and prioritize the key criteria for an ideal China investment (M&A, greenfield, hybrid), (e.g. regarding location, chemical subsegment, portfolio, size, timeline, etc.).

Identify Options

Identify options to meet the criteria defined previously:

- Outline potential greenfield investment project
- Identify potential existing acquisition targets in China

Evaluate and Pursue Options

Compare and evaluate the options previously defined. Pursue one or more preferred options (e.g. engage in discussions with potential M&A candidates and assessing their receptiveness and strategic, financial and cultural fit).

Get Expert Support

We are uniquely qualified to execute chemical M&A in China due to our deep industry knowledge, cross border experience and China-West cultural understanding.



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