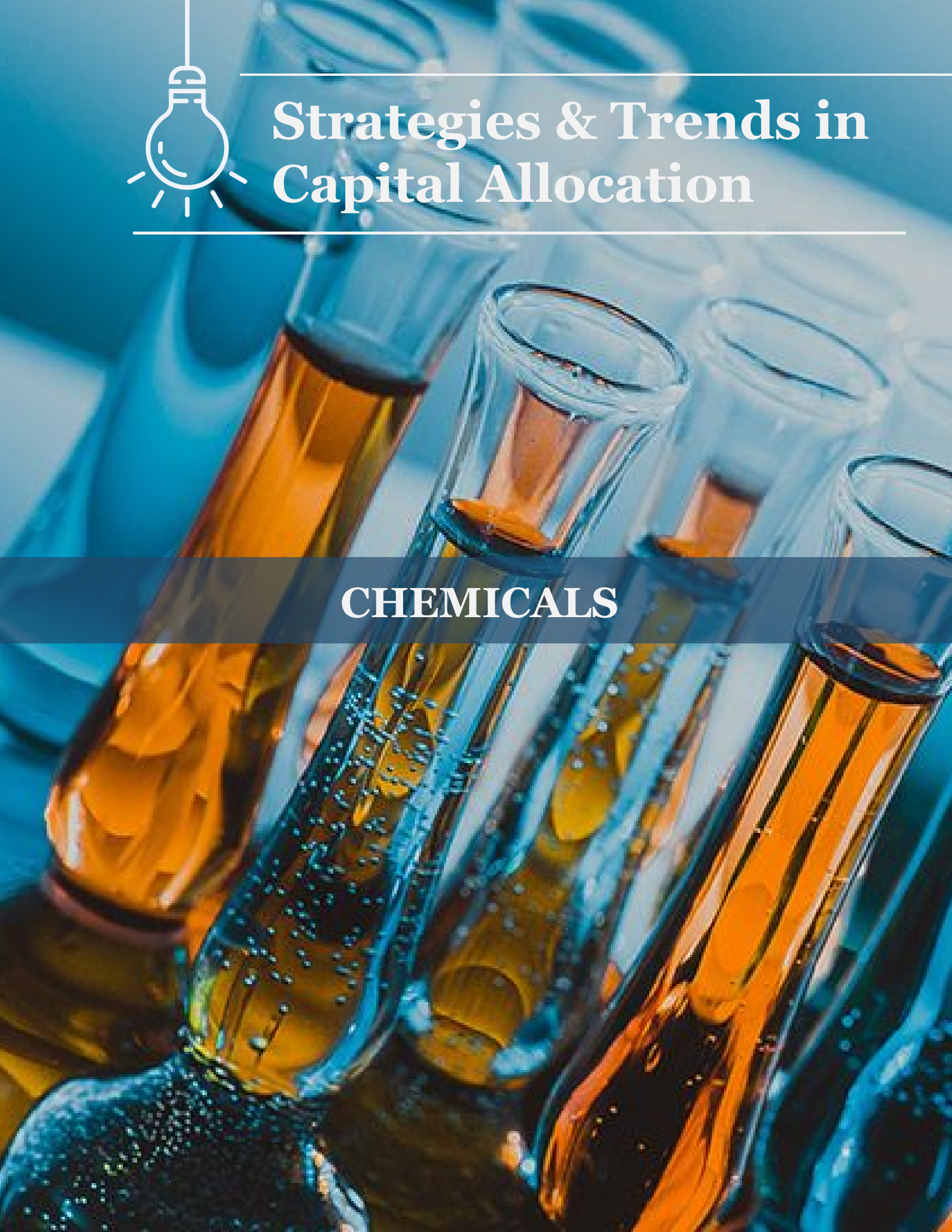
Strategies & Trends in Capital Allocation



CHEMICALS

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Now Trending

- **Mandate to innovate:** Competitive pressure mounts to innovate in areas such as renewable and sustainable energy and raw material selection/availability. Emerging technologies such as high-performance computing and advanced analytics can reduce the time-to-discovery and commercialize new materials. This includes the manufacturing process as well. For example, Faurecia (France) has developed a "one-shot" manufacturing process for composite parts that improves quality and reduces cost and cycle time.
- **Renewing the SAICM:** The United Nations' Strategic Approach to International Chemicals Management (SAICM) adapted in 2006 expires this year. The global chemical industry has supported SAICM.
- **Global interdependencies:** Pricing and demand is sensitive to world events, such as trade disputes and current pandemic. For example, U.S. chemicals (particularly petrochemicals) and plastics are in high demand in the Chinese market, which may readjust its supply chains to reduce its dependency.
- **Adoption of sustainability practices**: Chemical companies likely to be at the forefront of developing processes such as closed-loop recycling, in which polymers can be chemically reduced to their original monomer forms.
- **Price volatility:** large swings in the price of oil and gas, which impact the costs of transportation, manufacturing, and operational costs, make it harder for chemicals manufacturers to scenario plan and adjust with agility.
- **Logistics transportation:** companies like Dow Chemical are using connected sensors to monitor temperature, humidity, shock, and light for thousands of shipments daily, and provide alerts in the case of an anomaly.

SOURCES: D&B Hoovers, McKinsey & Company, Deloitte

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CAPEX Considerations

- **Agile decision making:** At a time when tariffs, regulations, politics, new technologies, and variability in demand present formidable challenges for chemical manufacturing executives, the ability to pivot quickly, react opportunistically, and make capital decisions that are well-considered, strategic, and based on a holistic view of capital projects in progress or in consideration, can have material impact in the millions – in potential savings, or revenue growth.
- **Capital allocation:** Allocating/reallocating capital to drivers of competitiveness and profitability will distinguish market leaders over the next ten years.
- **ERP integration**: ERP systems on their own can't handle the complex needs of a modern chemicals manufacturer for capital management. By integrating a purpose-built solution, such as Finario, decision makers have up-to-date data for forecasting, a reliable audit trail, the reporting they need in a fraction of the time possible if the company is relying on spreadsheets or other ill-equipped solutions, and a "single source of truth" into their capital allocation projects.
- **End-market expansion:** Expanding capabilities to reach niche markets within key end-market industries may provide newer growth avenues for chemicals and plastics. For example: incorporating more high-performance plastics and other chemical products into EVs.
- **Capacity expansion:** Uncertainty related to global trade and threat of recession requires more prudent planning relative to capacity expansion.
- **Performance optimization:** Investment in process manufacturing technologies can enable repeated use of byproducts of one chemical process into another, driving energy-efficient reactions, including the use of catalysts and distillation columns that utilize less energy and generate fewer waste gases.

SOURCES: D&B Hoovers, McKinsey & Company, Arc Advisory Group

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Industry Snapshot

- Market definition: commodity chemicals (industrial and basic, including organics, inorganics, resins & plastics, synthetic rubbers and petrochemicals), specialty chemicals (fine chemicals, additives, advanced polymers, adhesives, sealants, paints, pigments and coatings), and agricultural chemicals.
- Global sales total $5.68 trillion in 2017 (including pharmaceuticals) - making it the world's second largest manufacturing industry. This number is expected to double by 2030.
- Industry growth is driven by global megatrends, growth in chemical-intensive industry sectors (e.g., construction, agriculture, electronics) - which creates risk, and opportunities to advance sustainable consumption, production and product innovation.
- Leading global companies: DowDuPont ($86B), BASF ($75B), Sinopec ($69B), Sabic ($42B), Ineos ($37B), Formosa Plastics ($37B), ExxonMobil Chemical ($32B), LyondellBasell Industries ($31B), Mitsubishi Chemical ($29B), LG Chem ($26B).
- U.S. capital expenditures in the chemical industry reached $33.2B in 2018.
- Domestic chemical sales in the Asia-Pacific region were worth some $2.2 trillion U.S. dollars -- making it by far the leading region based on sales.
- Six countries out of the top 10 biggest producers are Asian (China, Japan, South Korea, India, Taiwan and Saudi Arabia) - generating 51.5% of the world market.
- U.S. chemical production expanded in 2019 despite a slowdown in global manufacturing. Strongest production was in specialty chemicals, inorganic chemicals, and chemicals that do not contain carbon.
- However, industrial output was impacted by trade tensions, an ease in energy investment and slower growth in key trading-partner economies.

SOURCES: D&B Hoovers, MarketLine, Deloitte, Statista/American Chemistry Council, International Institute for Sustainable Delivery

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