

INITIATING COVERAGE

Archean Chemical Industries Ltd.

Specialty or Commodity Business? Our take – a Special Commodity !

Archean Chemical Industries Limited (Archean or ACIL) is a leading Marine Chemical manufacturer from India engaged in the production and sale of Bromine (Br), Industrial Salt (NaCl), and Sulphate of Potash (K₂SO₄) from its leased brine reserves located in the Rann of Kutch, Gujarat. ACIL has one of the largest integrated production facilities at Hajipur (Gujarat), which has a strategic proximity to Jakhau Jetty and Mundra Port, making exports easier and smoother. The company plans to forward integrate its business in Bromine derivatives – an established extension followed across global major Bromine producers, into Flame Retardants, Clear Brine Fluids, and PTA Synthesis Catalyst. We expect Archean's forward integration to drive 27%/26%/37% CAGR in its Revenue/EBITDA/PAT over FY23-26E. We expect revenue growth to be supported by improvement in margin profile and reduced market cyclicality, which will lead to a better valuation multiple for the company. Keeping this in view, **we initiate coverage on Archean Chemical Industries Limited with a BUY recommendation. We value the company at 14x its FY25E EPS to arrive at a target price of Rs 810/share, implying a 33% upside potential from the current market price.**

Investment Thesis

Established Player in Niche Bromine Chemistry: Archean is the largest exporter of bromine and industrial salt in India. Bromine production is correlated to brine field availability, which is globally limited. Archean uses brine from its own reservoirs, which provides a huge cost advantage, making it one of the lowest-cost producers globally. The Government of India has allocated most of the land surrounding the brine reservoirs. ACIL has scaled up its bromine production capacity over the years which requires a long gestation period for commercial viability. The company has established infrastructure and strong market position by leveraging its long-term relationship with global customers. All these factors make it difficult for new players to enter this chemistry. Sadly, ACIL is also now a beneficiary of Israel-Hamas conflict as many global customers are diligently diversifying their supplies outside Israel which has led to increase interest in ACIL's export business. This shall help company further establishing its presence in global markets.

Forward Integration into Bromine Derivatives: Archean is following the trajectory of major global Bromine producers to foray into Bromine derivatives as it strengthens its balance sheet post its IPO. The company has invested 250 Cr in developing the 28,000 tonnes derivatives facility which includes 10,000 tpa of brominated flame retardants, 13,000 tpa of clear brine fluids, and 5,000 tpa of Bromine catalysts used for the synthesis of pure terephthalic acid (5ktpa). This facility shall add 600 Cr annual revenue potential to ACIL optimised over the next two years. The company has locked orders for 90% of its Flame Retardant capacity to a Chinese buyer/technology provider which will commence from Q1FY25.

China – A Big Consumer, Not Competitor: Unlike most of the industries/chemistries where China comes as a fierce price-cutting competitor, Bromine's natural moat protects Indian companies and, in fact, benefits them as China is one of the largest consumers of Indian Bromine. Brominated Flame retardants are the largest application of Bromine in China which is largely used in the construction sector, the electrical industry, and to hinder or suppress accidental combustion. Both construction and electronics are crucial sectors for the Chinese economy as it has the world's largest electronics production base. China is also one of the major markets for zinc-bromine flow batteries due to the region's growing electric vehicle market, thus providing a huge market.

Robust long-term growth outlook – Initiate with BUY

Archean Chemical Industries Ltd. (ACIL) offers multiple MOATS which are expected to translate into key growth drivers going forward as the company slowly ramp-up its Bromine Derivative capacity along with its traditional secured Salt business and soon-to-be-revived Sulphate of Potash business. We believe ACIL is well placed in the bromination space given i) Strong industry growth drivers; increased usage of Bromine in agrochem and pharma chemistries, ii) Forward integration into high-value business with strong demand from the largest geographies in the world, and iii) Well-nurtured long-term relationship with customers. **The stock currently trades at 10x FY25E EPS. We value the stock at 14x FY25E EPS and initiate coverage with a BUY rating on the stock with a target price of Rs 810/share, implying an upside of 33% from the CMP.**

Key Financials (Consolidated)

(Rs Cr)	FY23A	FY24E	FY25E	FY26E
Net Sales	1,441	1,220	2,328	2,975
EBITDA	634	442	950	1,265
Net Profit	383	313	709	974
EPS (Rs)	31.09	25.5	57.6	79.1
P/E (x)	19.6	23.9	10.6	7.7
EV/EBITDA (x)	11.8	17.0	7.9	5.9
ROE (%)	45%	20%	33%	33%
ROCE (%)	41%	24%	41%	41%

Source: Company, Axis Research

(CMP as of 18th December, 2023)

CMP (Rs)	609
Upside /Downside (%)	33%
High/Low (Rs)	732/471
Market cap (Cr)	7,779
Avg. daily vol. (1 Yr) Shrs.	3,30,073
No. of shares (Cr)	12.3

Shareholding Pattern (%)

	Mar-23	Jun-23	Sep-23
Promoter	53.60	53.60	53.60
FIs	5.47	4.06	2.92
DIs	30.25	30.78	30.38
Public	10.67	11.55	13.08

Financial & Valuations

Y/E Mar (Rs Cr)	FY24E	FY25E	FY26E
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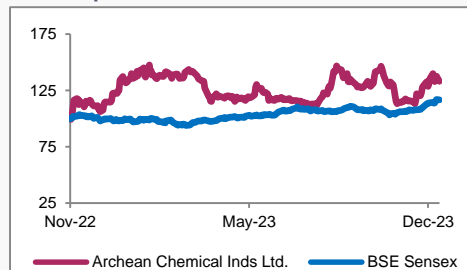
ESG disclosure Score**

Environmental Disclosure	NA
Social Disclosure Score	NA
Governance Disclosure	NA
Total ESG Disclosure Score	NA

Source: Bloomberg, Scale: 0.1-100

**Note: This score measures the amount of ESG data a company reports publicly and does not measure the company's performance on any data point. All scores are based on 2022 disclosures

Relative performance



Source: AceEquity, Axis Securities

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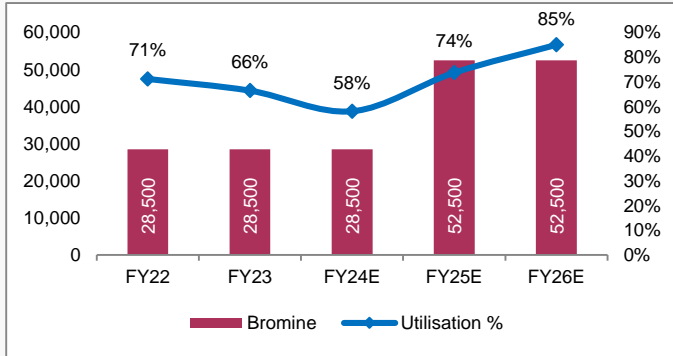
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ACILs Story in charts

Exhibit 1: We expect Bromine Utilization to improve owing to demand for internal consumption for derivatives and global macros improve



Source: Company, Axis Securities

Exhibit 2: Industrial Salt Capacity Augmentation and Utilization to continue on back of strong demand from end user industries

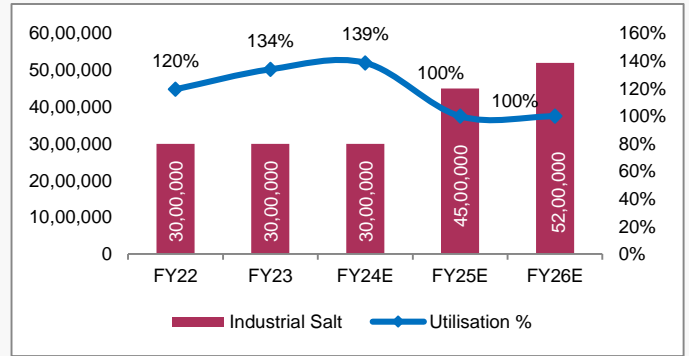
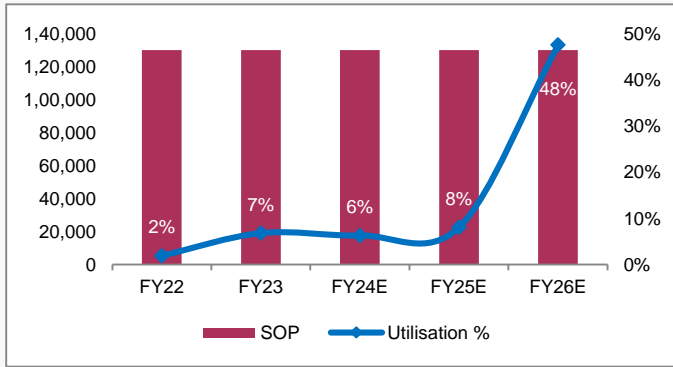


Exhibit 3: Expect technology partner to provide solution which will augment SOP capacity



Source: Company, Axis Securities

Exhibit 4: This will lead to increased revenue contribution from all Product verticals...further supported by Bromine Derivatives

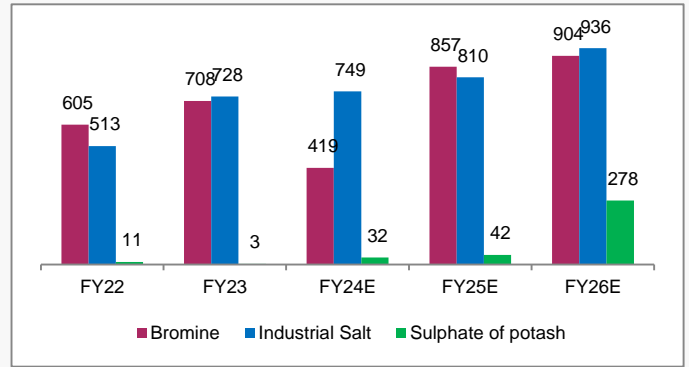
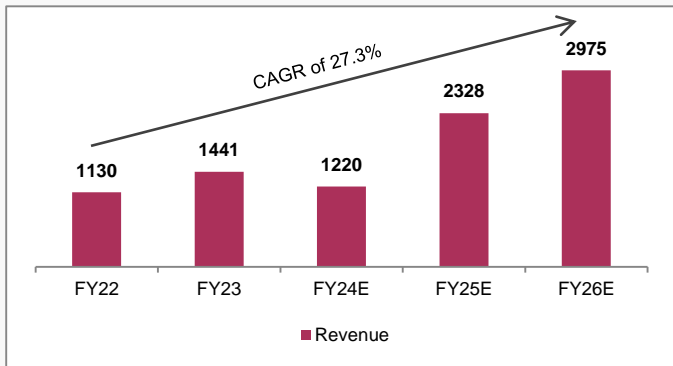


Exhibit 5: This shall support the topline to grow at ~27% CAGR over next 3 years



Source: Company, Axis Securities

Exhibit 6: The increasing share of high margin Bromine and Bromine Derivative Products in top line...

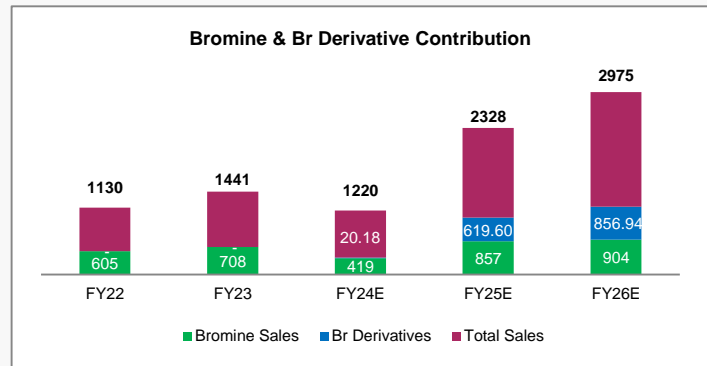
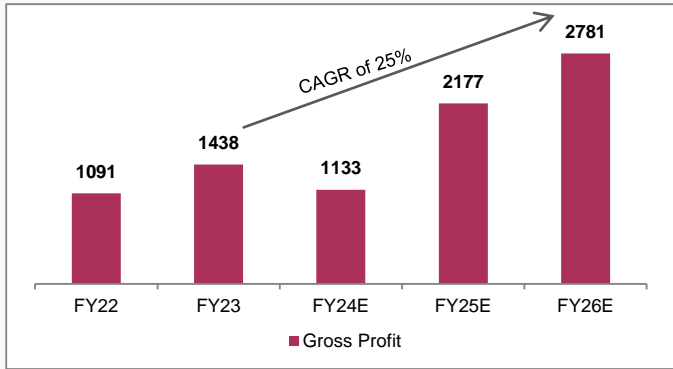


Exhibit 7: ...should help the Gross Profit to grow at 25% CAGR nearly doubling to ~2,800 Cr



Source: Company, Axis Securities

Exhibit 8: ...Leading to improvement in EBITDA growth and margin further supported by positive operating leverage

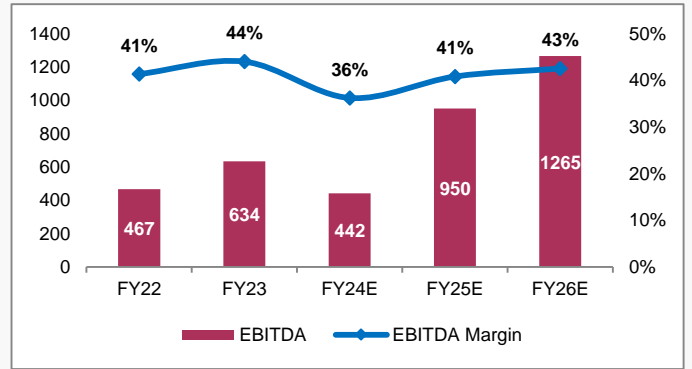
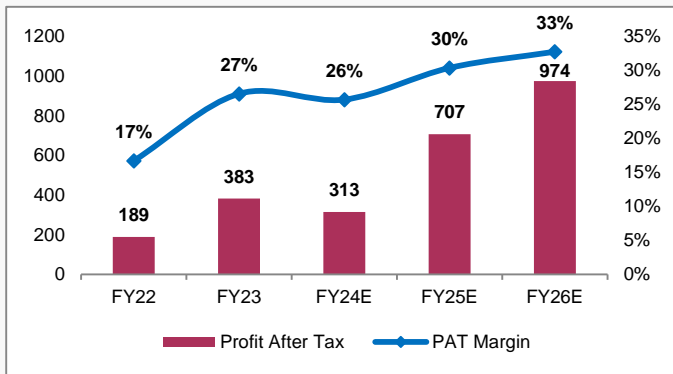


Exhibit 9: Leading to improvement in overall PAT & PAT Margin



Source: Company, Axis Securities

Exhibit 10: EPS is expected to grow at 38% CAGR over next 3 years

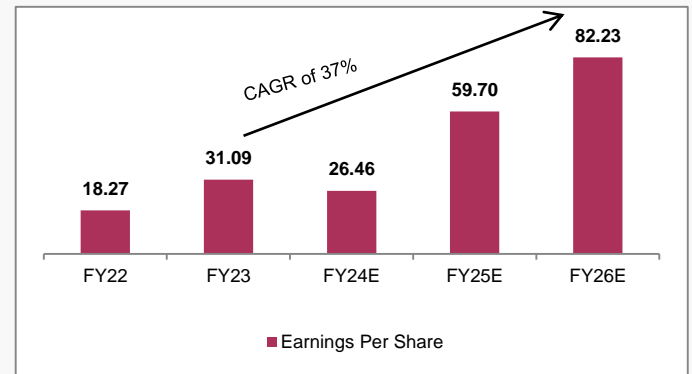
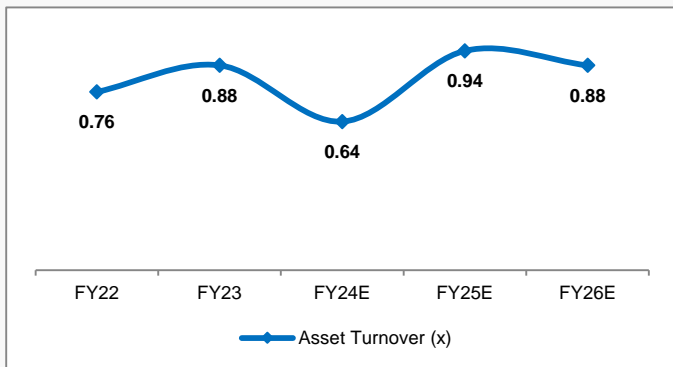
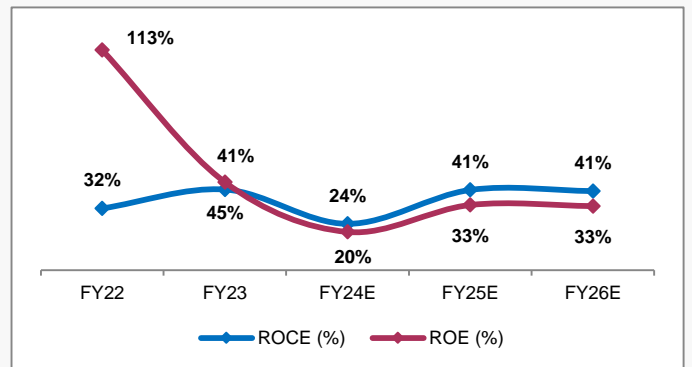


Exhibit 11: This will translate into improved asset utilisation on a larger asset base....



Source: Company, Axis Securities

Exhibit 12:and thereby resulting into significant improvement in Return Ratios



ARCHEAN CHEMICAL INDUSTRIES LTD

The company was originally formed as a partnership firm under the name of “Archean Chemical Industries” in Chennai, pursuant to a partnership deed dated November 20, 2003. Subsequently, the partnership firm was converted into a private limited company with the name “Archean Chemical Industries Private Limited” and a certificate of incorporation dated July 14, 2009. Consequent to conversion into a public limited company pursuant to a special resolution passed by the Shareholders on November 15, 2021, and a fresh certificate of incorporation dated December 15, 2021, the name of the company was changed to “Archean Chemical Industries Limited”. The company has incorporated a Wholly Owned Subsidiary namely “ACUME CHEMICALS PVT LTD”

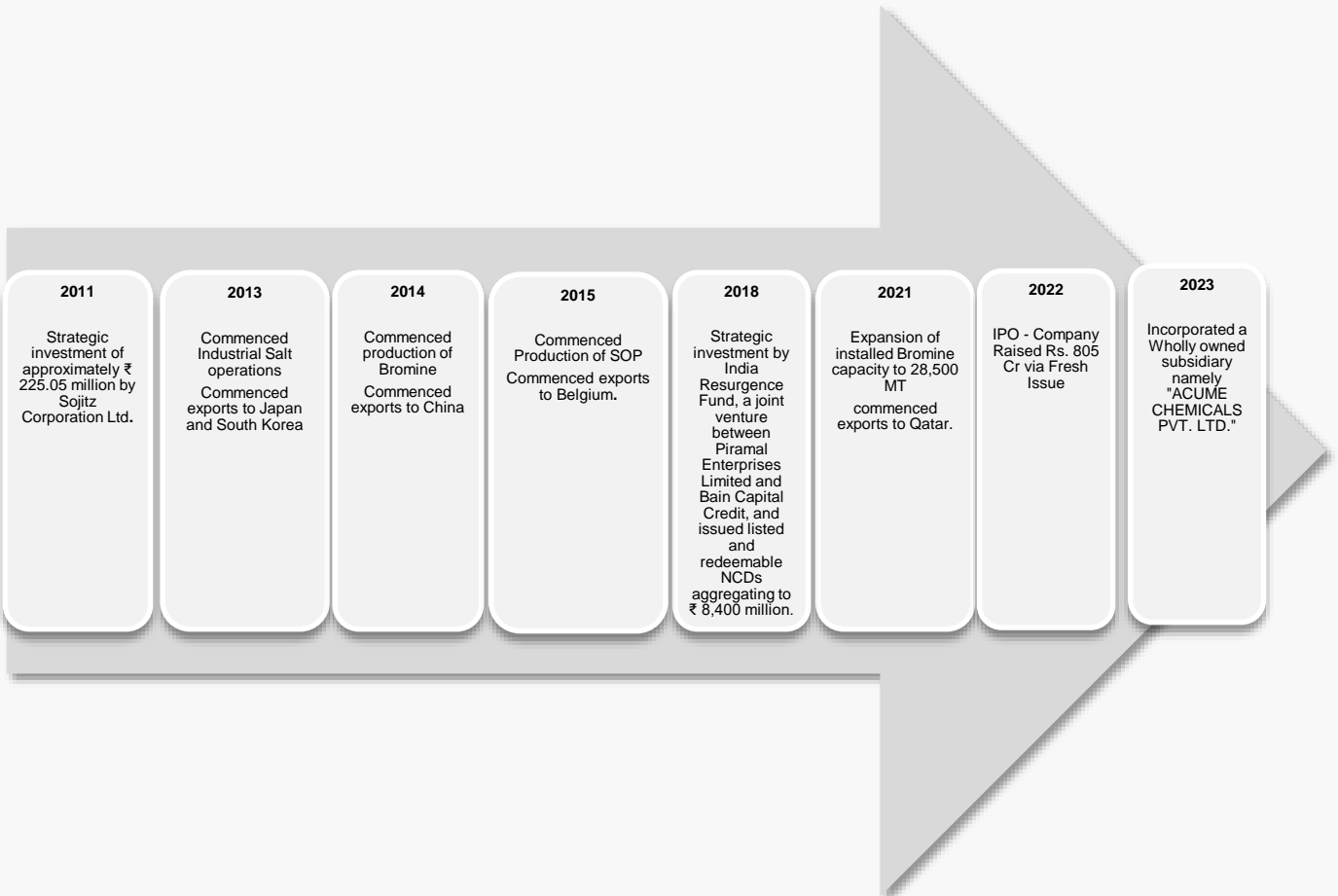
*Largest Indian Exporter of Bromine and Industrial salt with 'Responsible Care' Certification is in process
ACIL has Strong Clientele with – 29 Global Customer & 38 Domestic Customers.*

COMPANY OVERVIEW

Archean Chemical Industries Ltd (“Archean”) was incorporated on November 20, 2003. Archean is a leading specialty marine chemical manufacturer in India and focused on producing and exporting Bromine, Industrial salt, and Sulphate of potash to customers around the world.

Archean is the largest exporter of Bromine and industrial salt by volume in India in FY21 and has amongst the lowest cost of production globally in both Bromine and industrial salt. The company produces its products from its brine reserves in the Rann of Kutch, located on the coast of Gujarat, and manufactures products at its facility near Hajipur in Gujarat. Archean has about 55 clients out of which 27 are global and 28 are domestic (as of FY23).

Exhibit 13: Key Milestones



Source: Company, Axis Securities

Exhibit 14: Archean Chemicals Product Profile

Particulars	Overview	Archean's Position	End User Industries	Export Business % (FY23)
Bromine	<ul style="list-style-type: none"> Bromine is the only non-metallic element that is a liquid at standard conditions It is a member of the halogen family and is found naturally in seawater, underground brine deposits and other water reservoirs 	<p>Leadership position in Indian Bromine merchant sales.</p> <p>~48% Export Business</p>	<ol style="list-style-type: none"> 1. Pharmaceuticals 2. Agrochemicals 3. Flame Retardants 4. Water Treatment 5. Oil & Gas & energy storage 	48%
Industrial Salt	<ul style="list-style-type: none"> There are 14,000 commercial uses of Salt, a source of Sodium and Chlorine which are basic components of an array of materials — such as plastics, glass, synthetic rubber, cleansers, pesticides, paints, adhesives, fertilizers etc. 	<p>Produced using the solar evaporation method.</p> <p>100% Export business.</p>	<ol style="list-style-type: none"> 1. Chloralkali Chemicals 2. Food & Beverage 3. Water Treatment 4. Oil & Gas 	100%
Sulphate of Potash (SOP)	<ul style="list-style-type: none"> Sulphate of Potash, also known as potassium sulphate, is a high-end, specialty fertilizer for chlorine-sensitive crops. 	<p>Only Manufacturer of SOP from natural sea brine, in India.</p> <p>KTMS (kainite-type mixed salt) had higher NaCl content (Sodium Chloride), which led to lower SOP production in the last few years</p>	<ol style="list-style-type: none"> 1. Agrochemicals 2. Various industries including glass, cosmetics etc. 3. Medical uses 	70%
High-end Flame Retardant (10,000 MTPA)	<ul style="list-style-type: none"> Globally properties worth billions of dollars are lost due to fire-related accidents every year. This makes anti-inflammatory agents or flame retardants crucial chemicals. Entered into an agreement to design, engineer, construct, commission and operate the plant to produce with a Chinese technology provider 	--	<p>Electronics industry, wire and cable compounds and everyday commodities such as rubbers etc.</p>	--
Clear Brine Fluids (13,000 MTPA)	<ul style="list-style-type: none"> A chemical compound used with additives in Well completion operations to make the solids-free from brines. These fluids are extensively used in the oil & gas well-drilling industry The technology tie-up also includes a buyback of a minimum of 90% of the produced quantity by the Chinese technology provider at mutually agreed pricing terms 	--	<p>Produce calcium bromide which is used in Oil drilling, organic synthesis and flow batteries.</p>	--
Pure Terephthalic Acid (PTA) Synthesis (5,000MTPA)	<ul style="list-style-type: none"> Primarily used to produce polyester A majority of PTA is consumed in the development of polyester resins, Brominated catalyst is used for the production of PTA 	--	<p>Polyester resins, such as polyester films, polyester fibre and yarn, and PET material bottles.</p>	--

Source: Company, Axis Securities

Key Competitive Strengths

High entry barriers in the specialty marine chemicals industry

The specialty marine chemicals industry in which Archean operate has high entry barriers, which include the high cost and intricacy of product development, manufacture, and investment in salt beds, the limited availability of raw materials necessary for production, the limited number of locations with a suitable climate and access to reserves, and the lead time and expenditure required for research and development and building customer confidence and relationships, which can only be achieved through a long gestation period.

Established infrastructure and integrated production with cost efficiencies

Archean has an integrated production facility for Bromine, industrial salt, and sulphate of potash operations, located at Hajjipir, Gujarat, which is located on the northern edge of the Rann of Kutch brine fields. Archean facility and its surrounding salt fields and brine reservoirs span ~240 sq.km. The company has made significant investments in capital expenditures for the improvement and maintenance of its facility, including investments in salt beds, which typically have a three-to-four-year gestation period. In Bromine production, India is among the top five cost-competitive producers globally with China and Japan being more expensive and the United States (Arkansas), Israel and Jordan being less expensive than India. **In India, industrial salt is produced using the solar evaporation method, which is more cost-efficient as compared to the mining method.**

The bromine global market size was US\$3.13 billion in CY2021, and the market is expected to grow at a CAGR of 5.8% between CY2020 and CY2025.

Tax Benefits in Subsidiary

Acume Chemicals Private Limited is the wholly owned subsidiary of the company which was incorporated on November 18, 2021. The subsidiary company can avail concessional tax rate of 15% under section 115 BAB of the Income Tax Act 1961 which is available to new manufacturing companies on fulfilling the condition stipulated under this section.

Advantage of Depreciating Currency: Two geographic areas in which Bromine is mainly produced are Israel-Jordan and the US. While the Indian currency is declining, these regions' currencies remain steady compared to the US dollar. Therefore, India will continue to have competitive advantage over Israel and the US due to its depreciating currency which adds to Archean's earnings. In addition, it is expected that India will become a reliable supplier of bromine and thus its natural transition to bromine compounds is certain.

Declining Water Levels & Sink Holes at Dead Sea

Sinkholes, notably along the Dead Sea's coastline, pose significant threats to infrastructure, residents, agriculture, and tourism. The ongoing rise in sinkhole occurrences is attributed to the rapid decline in the water level (1-1.5 m per year), leaving extensive salt-rich terrain from the receding Dead Sea. These sinkholes result from the dissolution of soluble minerals like gypsum, calcite, and salt, exacerbated by higher groundwater influx due to water recession.

The diminishing water level in the Northern Basin of the Dead Sea, coupled with escalating sinkhole appearances, may necessitate financial investments for continued operations. The hydrological deficit accelerates the water level decline at a rate exceeding one meter annually. Another risk is the erosion of the Arava stream along the Israel-Jordan border, exacerbated by the Dead Sea's decreasing level. Sinkhole prevalence is on the rise, particularly in the Northern Basin, impacting ICL Dead Sea's vicinity and the feeding channel between the Northern and Southern Basins. Sinkholes are a serious problem in the Dead Sea. The area around the Dead Sea is characterized by sinkholes. Dissolution processes are causing hazardous collapse structures.



(Source: ICL Annual Report 2021)

Archean Key Clients

Major Clients




Sojitz Corporation

A Japanese Trading Conglomerate, Largest Customer & Equity Shareholder



WANHUA



UNIBROM



TIANYI GROUP
天一集团



QVC

- Sojitz is a Japanese Trading Conglomerate with **diverse client base**
- Enjoy relationships in **excess of five years** with seven out of top ten customers

The Brand Names and Logos mentioned are the property of their respective owners and are used here for identification purposes only

Source: Company, Axis Securities

Strong Customer Relationships: Strategic Advantages and Sustainable Growth

ACIL enjoys relationships of over 5 years with seven out of the top 10 customers. ACIL's long-term relationships and ongoing active engagements with customers also allow it to plan its capital expenditure, and enhance the ability to benefit from increasing economies of scale with stronger purchasing power for raw materials and a lower cost base. These enduring customer relationships also have helped the company to expand its product offerings and geographic reach. As of Q2FY24, ACIL marketed its products to 29 global customers and to 38 domestic customers. It has benefited from its fixed sales contracts with agreed pricing and volumes of ~12 months duration with its Bromine customers representing all of Bromine sales in FY22 and of ~24 months duration with industrial salt customers representing all of its salt sales in FY22. For other customers, it instead relies on purchase orders to govern the volume and other terms of its sales of products. Many of the purchase orders the company receive from its customers specify a price per unit and delivery schedule.

Exhibit 15: Client Concentration of Archeon Chemicals

	FY20	FY21	FY22	FY23
Sojitz Corporation (Largest Customer)	31.94%	30.51%	20.56%	19.29%
Top 10 customers	77.14%	75.70%	61.99%	60.69%
Top 20 customers	92.05%	88.66%	80.94%	81.75%

Some of ACIL's key Bromine and industrial salt customer relationships are provided below:

Bromine

No.	Name of Customer	Year Customer Relationship Commenced
1	Unibrom Corp	2014
2	Chinese trading company	2014
3	Chinese chemical company	2015
4	Shandong Tianyi Chemical Corporation	2017

Industrial Salt

No.	Name of Customer	Year Customer Relationship Commenced
1	Sojitz Corporation	2013
2	Chinese chemical company	2017
3	Indian trading company	2018
4	Wanhua Chemical	2018

Source: Company, RHP

Key Growth Drivers

Expansion of Bromine Capacity & Introduction of Bromine Derivatives

ACIL has invested in building capacity in Bromine and has moved from 10,000 tonnes per annum size in FY20 to 28,500 tonnes in FY21/22. Also, it is now close to expanding that in excess of 42,000 tonnes. Bromine is one of the main products of ACIL and contributed almost half of the revenue in FY23. It is a starting point for making many of the value-added products that ACIL intends to make in the coming years on the Bromine derivatives side through ACIL's downstream wholly-owned subsidiary (Acume Chemicals Pvt. Ltd.) that is coming up in Jhagadia. It is also used in industries like pharma, agrochemicals, water treatment, flame retardants, additives and oil and gas segments. It has commenced construction work and expects both phases to commence simultaneously by the end of FY24.

Contribution of Bromine and Bromine Derivatives is expected to rise profits going forward

Brownfield Expansion: Expanded Bromine and Industrial salt capacities

- Added a feed enrichment section at the site in Hajjipir, Gujarat which increased Bromine capacity by 18,000 MT per annum.
- Added an additional 14,500 MT per annum capacity in FY23 which will be used for producing Bromine Derivatives in the upcoming greenfield project.
- Industrial Salt: ACIL to expand the manufacturing capacities for Industrial Salt production by adding one additional washery of 250 tons per hour.

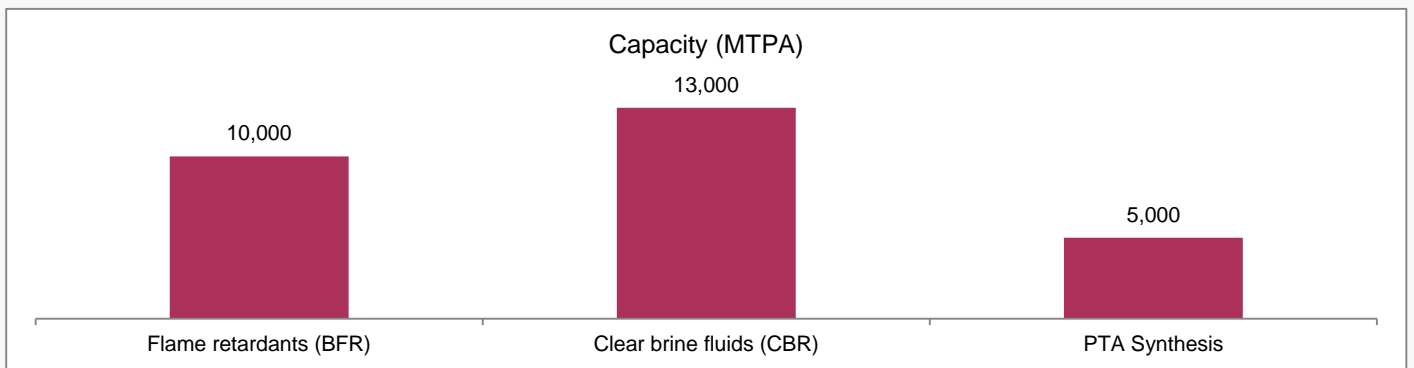
Greenfield Expansion: To expand into downstream Bromine derivative performance products:

- To set up a new facility at Jhagadia, GIDC through Acume Chemicals Private Limited (Subsidiary) to manufacture Bromine Performance Derivatives
- Primarily Brominated flame retardants, Clear Brine Fluids & Bromine Catalysts.

Bromine Derivatives

- **Flame Retardants:** Bromine is commonly used in flame retardants due to its high atomic mass and its general versatility across a wide range of applications and polymers. There are more than 70 different types of brominated flame retardants (BFRs) with different properties (reactive, polymeric, halogenated, etc.). Depending on the composition, nature and application of the materials or products that need to be rendered fire-safe. In addition, BFRs are used in wire and cable compounds, for example, for use in buildings and vehicles and other building materials, such as insulation foams.
- **Clear Brine Fluids:** Bromine is widely utilized in the oil & gas drilling industry in the form of clear brine fluids. The types of clear brine fluids, besides being a derivative of Bromine are calcium bromide, zinc bromide, and sodium bromide fluids.
- **Pure Terephthalic Acid (PTA) Synthesis:** Bromide is used in the production of pure terephthalic acid (PTA). PTA is an important source material for the production of polyester. A majority of PTA is consumed in the development of polyester resins, such as polyester films, polyester fibre & yarn, and PET material bottles. PTA is also used as an intermediate in the manufacturing of liquid crystal polymers, plasticizers, polybutylene terephthalate, and others.

Exhibit 16: ACIL's proposed capacity of Bromine derivatives



Source: Company (Investor Presentation)

Strong Demand from the Chinese Market augurs well for Indian Players.

Chinese Bromine Demand: China is expected to be the dominant and fastest-growing market for Bromine in the Asia Pacific region, mainly due to the escalating demand for brominated flame retardants in the country. Electronic products, such as smartphones, TVs, wires, cables, etc., recorded the highest growth in the electronics segment. The country serves not only domestic demand for electronics but also exports electronic output to other countries. In China, with the increase in the disposable income of the middle-class population and the rising demand for electronic products in countries importing electronic products from China, the production of electronics is projected to grow. With the growing electronics and construction industry, the demand for the Bromine-based flame-retardant application is expected to increase.

China's Changing Bromine Production Landscape: The Chinese Bromine production is expected to reduce driven by a reduction in capacity due to depleting resources that was about 4% per annum. The environmental issues and corresponding crackdowns by the authorities have also led to some production plants being shut down due to regulatory scrutiny. This will lead to China importing more volumes of Bromine. China is focused only on imports to meet its domestic requirements.

The Role of Clear Brine Fluids in China's Dynamic Oil & Gas Industry: Clear brines are used as completion and drilling fluids by the oil drilling industry. China is the largest crude oil producer in the Asia-Pacific region. China National Offshore Oil Corporation (CNOOC) has signed strategic cooperation agreements, which are a new and flexible method of jointly developing oil and gas fields. This will drive the growth of the oil and gas industry, which, in turn, is likely to boost the demand for clear brine fluids.

Rising Geopolitical tensions in Israel to benefit Indian Players.

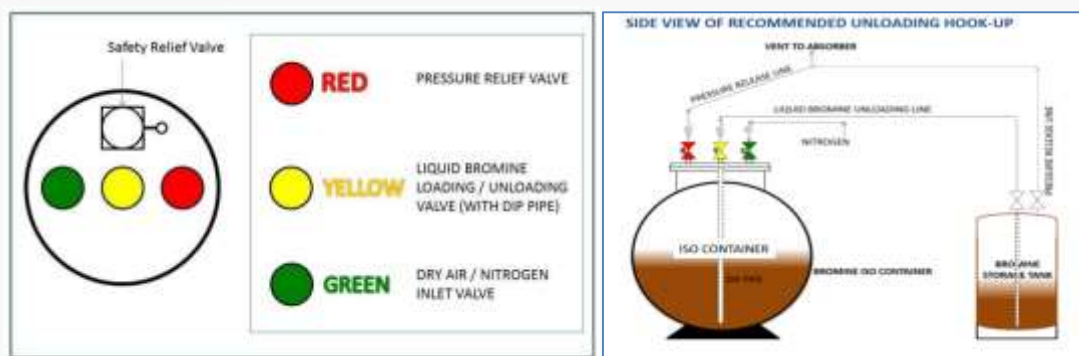
While the bromine industry is facing certain challenges due to recent tension in the Middle East, ICL's operations in Israel are proceeding without significant disruption. Sadly, ACIL is also now a beneficiary of Israel-Hamas conflict as many global customers are diligently diversifying their supplies outside Israel which has led to increase interest in ACIL's Bromine export business. This shall help company further establishing its presence in global markets, the management has indicated interests from various global customers and company expects to see some good traction in coming quarters. ICL has a ~35% market share in Global Bromine Market.

The five largest producers account for 85% of the world's bromine production, mainly through two natural resources (Dead Sea – Israel and Jordan, and the US – Albemarle and Lanxess). In addition, the bromine derivatives market is dominated by these companies. Most of the captive production used to produce bromine compound is consumed by these largest producers of bromine

Complexity in transportation of Bromine

Unloading of Bromine from ISO Containers (Three Valve)

The ISO containers used for the transportation of Bromine are lead-lined. So, care shall be taken to ensure that no moisture / atmospheric air enters the container. The schematic of the valve arrangement is as below.



Archean's Current Key Revenue Segment

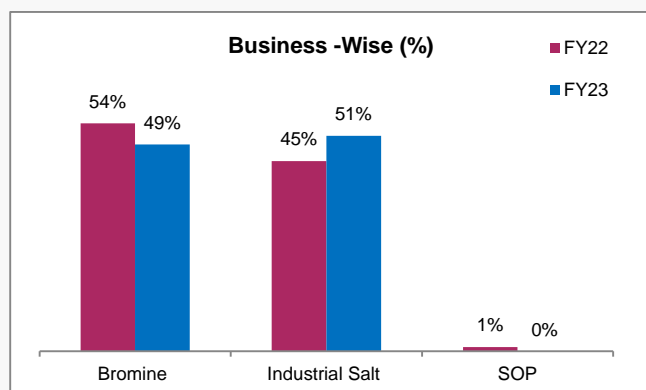
Bromine: Bromine is a halogen chemical element. It is a reddish-brown liquid with an appreciable vapour pressure at room temperature and is widely used as a reactant and catalyst for manufacturing a variety of products, such as agrochemicals, biocides, water disinfectants, pharmaceuticals intermediates, dyes, completion fluids, flame retardants, and photographic chemicals. Bromine is produced from brine after separation of most of the sodium chloride and potash. Much higher concentrations are found in inland seas and brine wells. Much of the Bromine and brominated compounds are manufactured at the Dead Sea in Israel, Jordan, and the United States.

Industrial Salt: Industrial salt is the principal material in chlorine and caustic soda production (together, known as chloralkali) and is widely used in the chemical and food and beverage industries. According to the company Commissioned F&S Report, there are 14,000 commercial uses for salt, which is a source of sodium and chlorine – basic components of an array of materials, such as plastics, glass, synthetic rubber, cleansers, pesticides, paints, adhesives, fertilizers, explosives, and metal coatings.

Sulphate of Potash: SOP, which is also known as Potassium Sulphate (K₂SO₄), is a high-end, specialty fertilizer for chlorine-sensitive crops. ACIL is the only manufacturer of sulphate of potash from natural sea brine in India. SOP is an ionic compound with solubility in water dissociating into two ions - potassium cation and sulphate anion. Potassium sulphate is a white, odourless solid that is a hygroscopic product, which means that it can become damp when it comes into contact with air. It is a straight potassic fertilizer that is chloride (Cl) free and has a low salt index. It is also known as fertilizer for improving quality and is applied to crops in open fields as well as under protected cultivation. Besides being an excellent fertilizer for crops, potassium sulphate is also used as a raw material in various industries.

Exports constitute 65-70% of Total Revenues. 44% of Bromine revenues came from Exports whereas 100% of IS Revenues came from Exports in FY23

Exhibit 17: Bromine and industrial salt accounted for 49% and 51% of Archean Chemical's revenues as of FY23



Source: Company, Axis Securities

Exhibit 18: 44% of Bromine revenues came from Exports whereas 100% of IS Revenues came from Exports in FY23

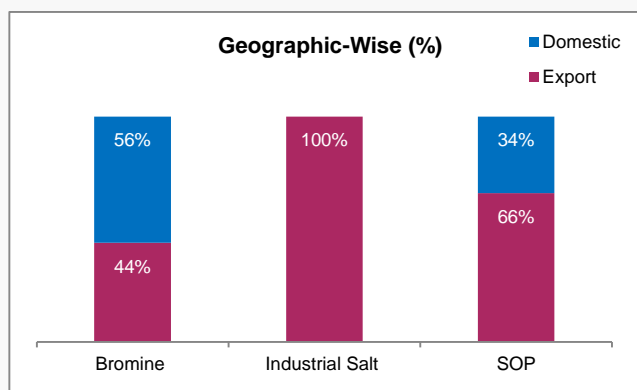


Exhibit 19: Geographic breakdown

Geographic breakdown	India	Japan	China	South Korea	Rest of Asia	Europe	Africa
FY19	19.60%	7.00%	58.70%	1.20%	6.60%	7.00%	0.00%
FY20	21.60%	12.20%	41.20%	9.80%	8.80%	6.40%	0.00%
FY21	25.60%	10.20%	37.70%	12.50%	10.20%	3.90%	0.00%
FY22	29.70%	6.20%	36.30%	5.60%	19.50%	0.90%	1.80%

Production Facilities

Integrated Production Facility

ACIL has an integrated production facility for Bromine, industrial salt, and sulphate of potash operations, located at Hajipir, Gujarat, which is located on the northern edge of the Rann of Kutch brine fields. Archeon's manufacturing facility is located in close proximity to the captive Jakhau Jetty and Mundra Port, where it transports products to its customers internationally. Its facility and its surrounding salt fields and brine reservoirs span ~240 sq.km. As of Mar 31, 2023, its manufacturing facility had an installed capacity of 28,500 MT per annum of Bromine, 3,000,000 MT per annum of industrial salt and 130,000 MT per annum of sulphate of potash, as certified by M. Ulaganathan, Chartered Engineer.

ACIL has one of the largest salt works at one single location in the world

Leveraging Own Reservoirs and Third-Party Suppliers for Bromine Production:

Archeon uses brine from its own reservoirs as a raw material, which includes Industrial Salt, kainite, and end bittern. Other raw materials are primarily sourced from third-party suppliers in India. Globally, the two most popular Bromine production sites are near the Dead Sea (Israel & Jordan) and the underground well in the Arkansas region in the USA. India is well placed with brine resources at the Great Rann of Kutch in Gujarat.

Three Product Lines, Quality Assurance, and Expansion Plans

Its integrated facility has three product lines: Bromine, industrial salt, and sulphate of potash and the facility is also equipped with its own quality department, central quality assurance & quality control department, co-generation power plant, desalination plant, effluent treatment plant, sewage treatment plant and warehouse. The industrial salt washing facility has three washeries, each having a capacity of 200 tonnes/hour with an additional washery having a capacity of 250 tonnes/hour expected to commence in the later part of FY24.

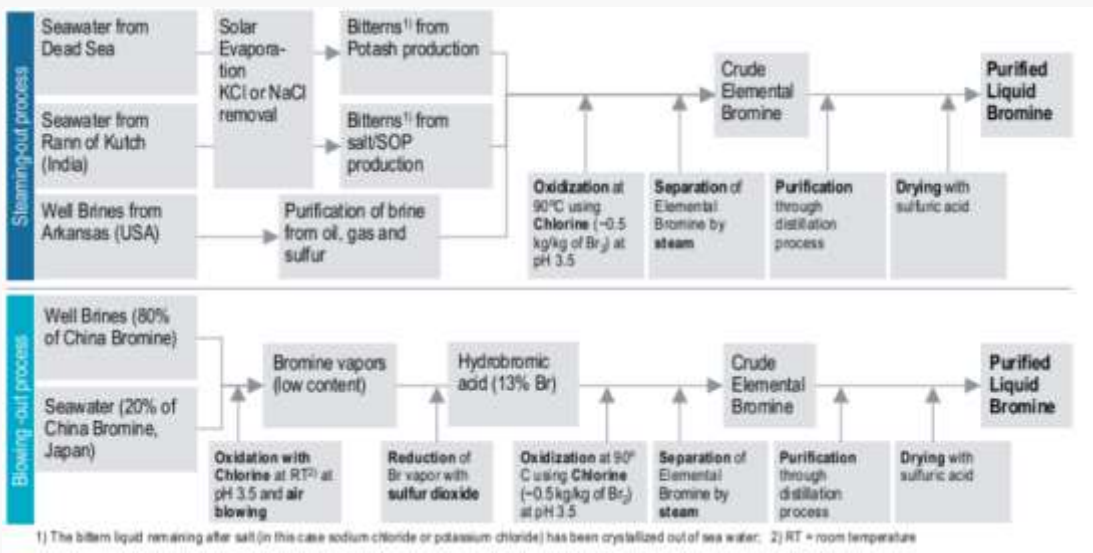
Location Advantages

- **Close proximity to the Jakhau Jetty and Mundra Port:**The manufacturing facility is located in close proximity to the Jakhau Jetty and Mundra Port. The Jakhau Jetty is a fair-weather facility, operating for seven to eight months a year from October to May.
- **Designed capacity of 5 Mn MT per annum:**It has a designed capacity of 5 Mn MT per annum and a capacity to load 28,000 MT equipped with a twin conveyor system, and diesel generator sets.
- **Production process efficiency:**An integrated manufacturing site with access to the Rann of Kutch reserves and close connectivity to ports, results in production process efficiency, and deliver superior quality and timely products.

Production of Bromine

The technical know-how and technology for its Bromine plant were provided by a German engineering company pursuant to a technology transfer agreement. ACIL produce liquid Bromine with specifications of < 30 ppm of moisture. There are generally two processes for Bromine production: **(i) The steaming-out process** and **(ii) The blowing-out process**. The type of process utilized is largely dependent on access to brine and the feedstock grade (i.e., grams of Bromine/litre of brine). The steaming-out process typically requires a minimum feedstock of more than two grams of Bromine/litre of brine and is less energy intensive, while the blowing-out process may use a lower feedstock grade as air is used for blowing out the Bromine. ACIL operates and utilizes the steaming-out process.

Exhibit 20: Process of Bromine Production.



Source: Company, RHP

As of FY23, ACIL's Bromine installed capacity was 28,500 MT per annum. ACIL has identified Bromine as a product of focus for the company and plans to further expand the Bromine capacity as the business strategy is to expand its product line into downstream Bromine derivative products.

Exhibit 21: ACIL Bromine Production Plant Facility



Source: Company website

Production of Industrial Salt

There are generally three processes for industrial salt production: (i) **Solar evaporation**, (ii) **Vacuum evaporation**, and (iii) **Rock salt mining**. The type of process utilized is largely dependent on access to salt reserves and geography. **ACIL operates and utilizes the solar evaporation process**, which includes the following steps (in chronological order):

- **Sea Water Pumping:** Sea water (i.e., brine) is pumped into reservoirs and condensers, where constant evaporation by the sun concentrates the brine from 25 oBe to 27-28 oBe density at normal salt fields. At its field area, brine is available at 20-25 oBe and then pumped directly into salt crystallizers for salt precipitation.
- **Crystallization:** At its crystallizers, the salt is deposited on the salt bed at a rate of 2.5-3 cm/month. Salt crystallization occurs between 25 to 29 oBedensity. Once the desired density is reached, the brine is pumped out.
- **Solar Salt Harvesting:** The crystalized salt is then harvested annually, producing a total of 25-30 cm of salt. Harvesting is performed through harvesters & excavators and transported to the washery.
- **Washery:** The salt is then run through automated washery units, which run for **22 hours/day** to remove impurities from the salt.
- **Quality Checks:** A quality check is then performed to ensure the salt meets the applicable specifications before it is supplied to the customer. The primary parameters analysed include calcium (< 0.05%), magnesium (< 0.03%) and the calcium to magnesium ratio (around 1.5).
- **Transportation for Export:** Following the quality check, the salt is then transported to the stockyard, where it is then transported to the Jakhau Jetty or the Mundra Port for export to the customers.

Industrial salt is primarily used by importers for caustic soda and soda ash, which, in turn, is used to make downstream chlorine products such as PVC and polyurethane. As of FY23, ACIL's industrial salt installed capacity was 30,00,000MT per annum. Due to the strategic location of the company's facility near one of the largest salt reserves in the world, which spans an area of ~240 sq km, it has a production cost of \$5.5 to \$6.0 per MT.

Additional washery of 250 tonnes per hour: To cater to the growing demand from existing customers and to meet the requirements of new customers, the company intends to expand its manufacturing capacities for industrial salt production by adding an additional washery of 250 tonnes per hour.

Exhibit 22: Industrial Salt Production



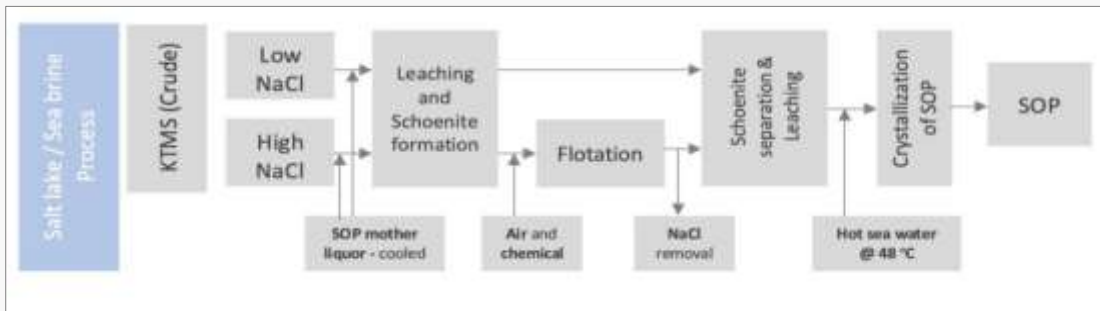
Source: Company website

Production of Sulphate of Potash

ACIL's sulphate of potash plant relies on technical expertise from a German engineering company. Among the three production processes, the Salt Lake/seawater process stands out, utilizing kainite-type mixed salt (KTMS) as a raw material, a byproduct from salt production in potassium-rich brines. ACIL's process involves precipitating KTMS during brine evaporation, harvesting, and storing it. The processing plant then decomposes KTMS into schoenite, an intermediate product of sulphatic salts of potassium and magnesium. Through thermal decomposition, schoenite yields low-chloride sulphate of potash, a valuable market product.

Recovery of sulphate from potash depends on potassium chloride (KCl) and sodium chloride (NaCl) content, with lower NaCl levels leading to better recovery. ACIL upgraded its facility and flotation circuit to enhance the conversion ratio, aiming for decreased utility and raw material costs by improving the KTMS ratio. The company altered the crystallizer precipitation method from parallel to series mode, expecting a lower NaCl content in the harvested KTMS. Professional advice is sought to address the higher NaCl levels in harvested KTMS, demonstrating ACIL's commitment to improving product quality.

Exhibit 23: Manufacturing Process of Sulphate of Potash.



Source: Company, RHP

REACH certification for SoP

SoP is a specialty fertilizer that is primarily used for chloride-sensitive crops and ACIL is one of the few companies that has received REACH certification in Europe, allowing it to export its SoP products to European customers. As of FY23, ACIL's sulphate of potash installed capacity was 130,000 MT per annum.

Reason for SOP Production Loss

ACIL sulphate of potash revenue declined in FY22 as the company worked to improve its kainite-type mixed salt ("KTMS") ratio. The recovery of sulphate of potash is based on potassium chloride ("KCl") and sodium chloride ("NaCl") content. Lower levels of NaCl yield better recovery of sulphate of potash from KTMS and an increased level of NaCl yields lower outputs. We recently upgraded its facility and flotation circuit to improve the conversion ratio, which determines the overall output of its manufacturing process. As the company continues to improve its KTMS ratio, it expects the costs associated with its utilities and raw materials to decrease and improve its sulphate of potash production substantially. The KTMS that the company has harvested has had a higher level of NaCl and accordingly has taken professional advice on improving the quality of its KTMS. **The method of precipitation of KTMS was changed from parallel to series mode in the crystallizers which is expected to yield a lower NaCl content moving forward.**

Exhibit 24: Sulphate of Potash Production Facility



Source: Company, RHP

Overview of Global Bromine Industry

Bromine Market Overview: Growth and Forecasts

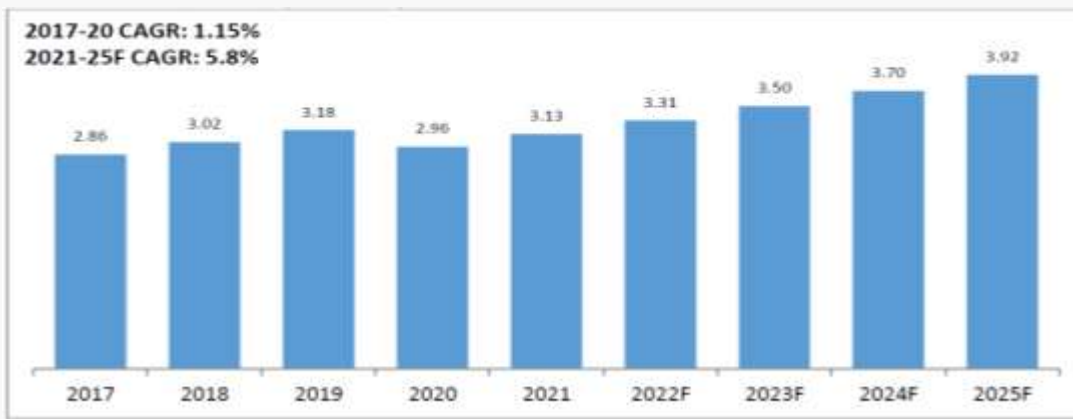
Bromine, a naturally occurring element, is primarily sourced from soluble salts in seawater, salt lakes, inland seas, and brine wells. The majority of bromine production takes place at the Dead Sea in Israel, Jordan, and the United States. In 2021, the global bromine market volume reached 933,410 metric tons, with a projected increase to approximately 1.18 million metric tons by 2029.

Industry Valuation and Growth Trends

As per the ACIL Commissioned F&S Report, the global Bromine industry was valued at ~\$3.13 billion in 2021. Notably, the industry demonstrated a growth trajectory, with a CAGR of 1.2% from \$2.86 billion in 2017 to \$3.18 billion in 2019. The latest projections suggest a robust CAGR of 5.8% from 2020 to 2025, indicative of continued growth in the global Bromine sector.

Volume-wise Bromine Market is expected to grow at 3.1% CAGR and value wise its expected to grow at 5.8% CAGR over next 2-5 years.

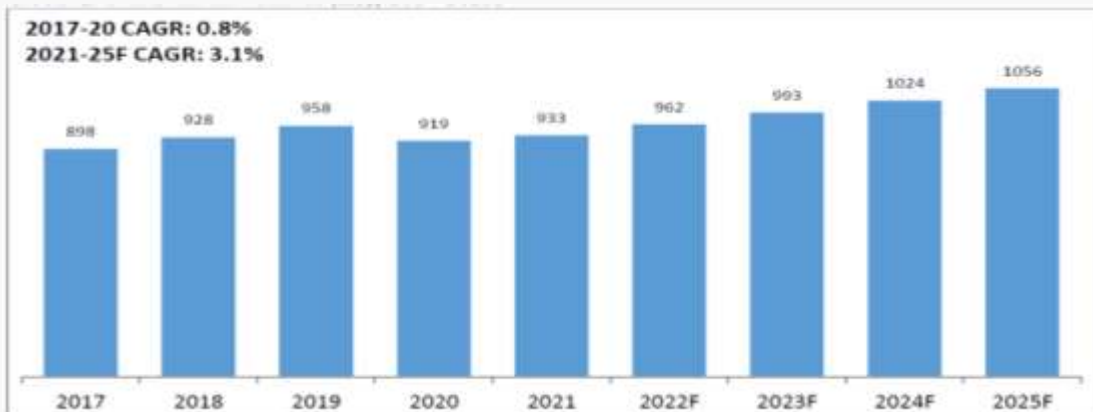
Exhibit 25: Global Bromine Market Size (US\$ Bn), 2017-2025F



Source: Statista and Frost and Sullivan analysis; Company Commissioned F&S Report

Volume-wise the market is expected to grow to 1.06 MT

Exhibit 26: Global Bromine Market Volume (KT), 2017-2025F



Source: Statista and Frost and Sullivan analysis; Company Commissioned F&S Report

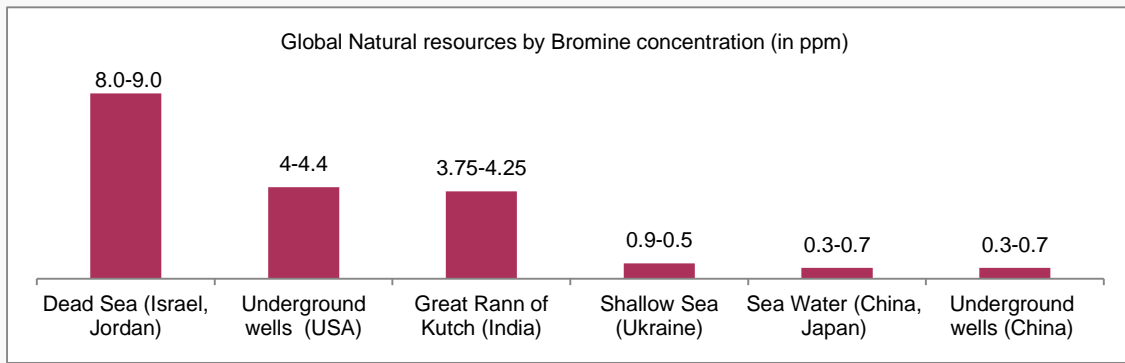
Robust Position in the Global Bromine Market along with encouraging Growth Prospects

According to an industry report, the Bromine global market size was \$3.13 Bn in CY21, and the market is expected to grow at a CAGR of 5.8% between CY20 and CY25. The demand for Bromine and Bromine performance derivatives will be driven by a host of factors including an increasing demand for flame retardants, increasing consumption of oil well chemicals and increasing use of hydrogen and zinc bromide in flow batteries. India's Bromine production is from Bittern and produced from the underground brine mainly concentrated towards the western state of Gujarat. In Bromine production, India is among the top five cost-competitive producers globally with China and Japan being more expensive and the United States (Arkansas), Israel and Jordan less expensive than India.

Chinese Bromine production expected to reduce

The Chinese Bromine production is expected to reduce driven by a reduction in capacity due to depleting resources that was about 4% per annum. The environmental issues and corresponding crackdowns by the authorities have also led to some production plants being shut down due to regulatory scrutiny. This will lead to China importing more volumes of Bromine. China is focused only on imports to meet its domestic requirements.

Exhibit 27: Global Natural Resources by Bromine concentration (in ppm)

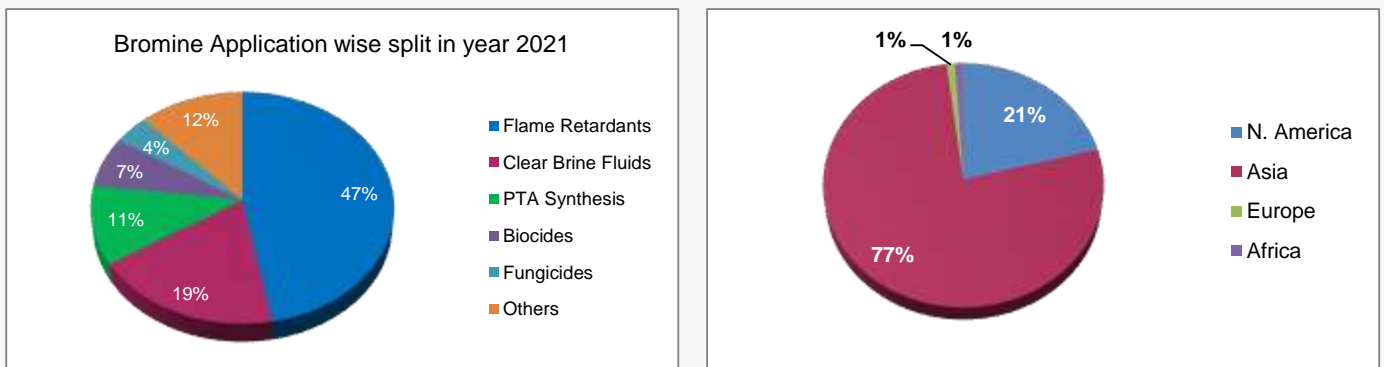


Source: Company, RHP

According to the Company Commissioned F&S Report, the typical cost of production of elemental Bromine is ~\$500-600 per Metric Ton (MT) for Israel and Jordan, \$800-1,000 per MT for Arkansas, \$900-1,100 per MT for India, \$1,500- 1,700 per MT for China and \$2,500 or above per MT for Japan. Considering the lower cost of production, Israel and Jordan have high production capacities and are market leaders in Bromine production.

Bromine by application segments globally: Bromine finds applications in chemicals, rubbers, plastics, agrochemicals, oil and gas, pharmaceuticals, electronics, textiles and other industries. The Global Bromine market can be segmented into applications such as flame retardants, clear brine fluids, biocides, brominated organic intermediates, fungicides and others.

Exhibit 28: Bromine Application & Production wise split in the year 2021



Source: Company, RHP

Indian Bromine Market

High barrier to entry in the Indian Bromine industry: There are high barriers to entry to the Indian Bromine industry, primarily due to the following factors: -

- Regulatory approvals
- Handling of Bromine requires special expertise
- High gestation period
- Requirement for environmental health and safety procedures
- Others

Key players in the Indian Bromine industry use Sea bittern obtained in Kutch as it has very good contents of Bromine and can be used for Bromine manufacturing. The most important factor to consider is Bromine concentration in brine for a plant to operate profitably. The area for feed is limited to Rann of Kutch which is 200km x 200km 7-meter-deep sponge with 40% porosity. BSF permission is essential to access the sponge. All the existing players have taken up the most feasible area available in the region. Accordingly, or any new plant, the availability of rich raw materials is a concern.

Bromine has the largest capacity among the key Manufacturers in India

Exhibit 29: Producers of elemental bromine in India are as follows:

Key Manufacturers	Location	Approved Annual Capacity	Actual Production in Fiscal 2021
Archean Chemical Industries Ltd.	Plant is located at Hajipir, Kutch District	42.5 KT	14 KT
Satyesh Brine Chem	Plant is located at Hajipir, Kutch District	25 KT	3 KT
Solaris ChemTech Industries Limited	Plant is located at Khavda, Gujarat	23 KT#	18 KT
Agrocel Industries Pvt. Ltd.	Plant is located in Greater Rann of Kutch	10 KT#	7 KT
Nirma Limited	Plant is located in Kalatalav village, near Bhavnagar in Gujarat state.	3 KT	2 KT
Tata Chemicals Ltd.	Plant is located at Mithapur, Gujarat	2.4 KT	1 KT
Dev Salt Private Ltd	Plant is located at Morbi district of Gujarat	2.5 KT	1 KT

Source: Company RHP

The production, captive consumption and net merchant sales of the key players in FY21 are set out below:

Exhibit 30: Bromine production and captive Volumes for FY21, in KT

Company	Production Numbers (KT)	Captive Consumption (KT)	Net merchant sales (KT)
Archean Chemical Industries Ltd.	14	-	14
Satyesh Brine Chem	3	-	3
Solaris Chemtech	18	10.5	8.5
Agrocel	7		
Nirma	2	2	-
Tata Chemicals	1	1	-
Dev Salt Private Ltd	1	-	1
Total Production	46	13.5	32.5

Source: Company RHP

Bromine by application segments globally Bromine finds applications in chemicals, rubbers, plastics, agrochemicals, oil and gas, pharmaceuticals, electronics, textiles and other industries. The Global Bromine market can be segmented into applications such as flame retardants, clear brine fluids, biocides, brominated organic intermediates, fungicides, and others.

Overview of Industrial Salt

Industrial salt is the principal material used in chlorine and caustic soda production (together, known as chloralkali) and is widely used in the chemical and food and beverage industries. Chlorine finds end-uses in vinyl, phosgene, chloromethanes, chlorinated C3, water treatment, synthesis of HCl, bleach, and other organic and inorganic chemical material. Caustic soda finds end-uses in alumina, paper and pulp, soap and detergents, textiles, water treatment, bleach, and other organic and inorganic chemical materials.

According to the company Commissioned F&S Report, there are 14,000 commercial uses for salt, which is a source of sodium and chlorine – basic components of an array of materials, such as plastics, glass, synthetic rubber, cleansers, pesticides, paints, adhesives, fertilizers, explosives and metal coatings.

According to Frost & Sullivan, global demand for industrial salt was 173 Mn MT in CY17, 171 Mn MT in CY18 and 173 Mn MT in CY19 and declined to 153 Mn MT in CY20 but is expected to grow at a CAGR of 2.8% between CY20 and CY25. A growing demand for industrial salt will be driven primarily by increasing industrialization owing to its wide range of end applications. In particular, demand is expected to increase from the food and beverage industry, the chlor-alkali sector in the chemical industry as well as chemical processing, water treatment, agriculture and de-icing.

Key players in the Indian industrial salt industry

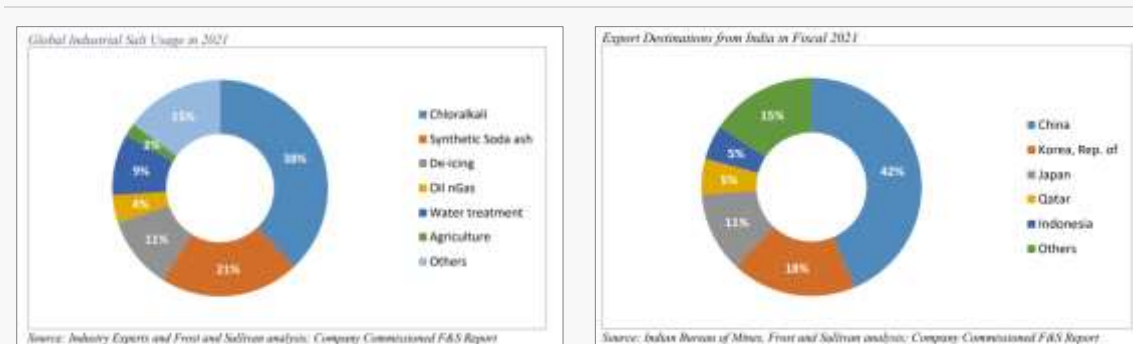
While there are umpteen small traders and exporters from India only a few top exporters from India have export volumes of more than 1 Mn MT in FY21. The company include the following:

Sr. No	Company Name	Export (Mn MT)
1	Archean Chemical Industries Ltd.	2.7
2	The Kutch Salt And Allied Industries Ltd. group (including Friends Impex India)	1.2

Source: Company RHP

Global industrial salt industry by application segments

The chemical processing segment is anticipated to hold the largest share of the industrial salt market on account of the growing demand for industrial salt in soda ash, chlorine and caustic soda production. The segment for de-icing is also expected to occupy a notable share in the market in the near future owing to the effective ice control properties of industrial salt such as high efficiency at lower temperatures. Furthermore, the section for oil & gas application is projected to grow significantly during the forecast period, which can be associated with the high consumption of industrial salt during drilling and extraction procedures.



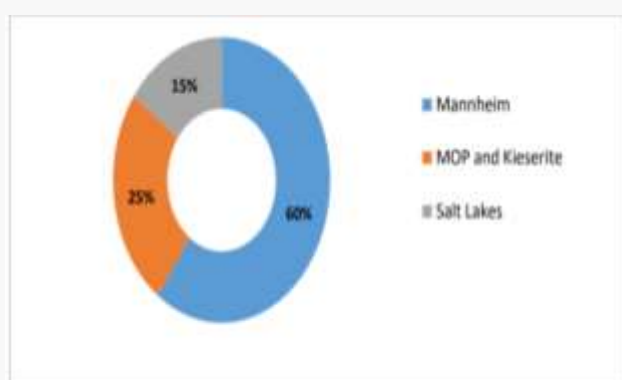
According to the Company Commissioned F&S Report, in FY21, exports of industrial salt from India were mainly to China. (42%), Republic of Korea (18%), Japan (11%) and Qatar, Indonesia & Vietnam (5% each).

Overview of Sulphate of Potash Industry

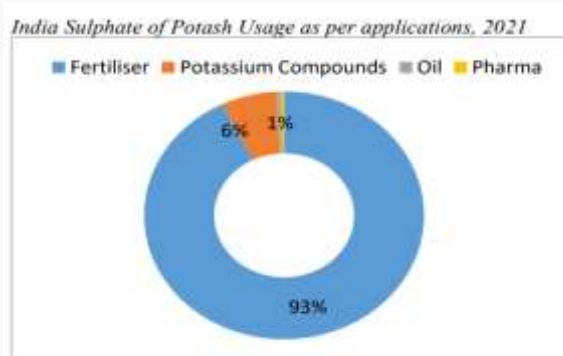
Sulphate of potash, also known as potassium sulphate, is a high-end, specialty fertilizer for chlorine-sensitive crops. It is one of the most popular forms of low chloride potash, largely due to its high 50-52% K₂O content, which contains about 50% of plant food.

Sulphate of potash has a major application in agriculture, providing both potassium and Sulphur in soluble forms. This stimulates the growth of strong stems and provides disease resistance to crops and plants by promoting the thickness of the outer cell walls. Further, sulphate of potash can reduce moisture loss from growing plants, thereby providing drought resistance, and has been proven to improve yield, nutritional value, colour, flavour, and storing quality of fruits and vegetables. It has proven to be particularly effective in the cultivation of citrus fruits, pomegranates, grapes, vegetables, tobacco and nuts. In addition, due to its low saline index, sulphate of potash can also benefit soil containing a high salt content.

According to Frost & Sullivan, global demand for sulphate of potash was 6.9 Mn MT in CY21 and is expected to grow at a CAGR of 6.0% between CY21 and CY25. The sulphate of potash market is being driven by the advantages of sulphate of potash over muriate of potash and growing demand from a growing middle-class population driving the use of fertilizers primarily for growing fruit and vegetables.



Source: Salt Lake Potash Ltd, Frost and Sullivan analysis; Company Commissioned F&S Report



Source: Trade Data, Frost and Sullivan analysis

Global Production of SOP processes (FY21)

SOP by application segments in India

Region	Process Method	World Capacity	Process Inputs	Products	Future Outlook
China/ Europe	Mannheim	60%	<ul style="list-style-type: none"> • MOP • Sulphuric Acid • Energy 	<ul style="list-style-type: none"> • SOP • Hydrochloric Acid 	High cost/ By-Product limits growth
Europe	MOP and Kieserite	25%	<ul style="list-style-type: none"> • MO • Kieserite • Energy 	<ul style="list-style-type: none"> • SOP • Magnesium Chloride 	No Additional Deposits
China/ USA/ Chile/ India/ Australia	Salt Lakes/ Salt Brine	15%	<ul style="list-style-type: none"> • Lake Brines • Energy 	<ul style="list-style-type: none"> • SOP • Magnesium Chloride • Sodium Chloride 	No Additional Suitable Lakes, limited brine availability; those who have access to raw material have immense advantage

Source: Company RHP

Peer Comparison

Archean has two major global competitors that are ICL and Albemarle.

ICL Group Ltd is an Israel-based company and the global market leader in bromine and bromine-based Derivatives. Its market share in bromine was 33% in CY21 (bromine business is part of its industrial product segment). It draws significant bromine production from its operations in the Dead Sea. Access to one of the world's richest, longest-life and lowest-cost sources of potash and bromine (the Dead Sea). ICL supplied over 33% of the almost 1,000,000 metric tons of all bromine used in 2021.

Albemarle is another large bromine producer and also has a JV partnership with Jordan Chemical Company. Its production of bromine is carried out by a joint venture partner in Jordan and its operations in Magnolia, Arkansas, United States. Albemarle, like ICL, also expects demand in bromine compounds to increase and benefit from the shift of ICE to EV, as well as demand for electronics, 5G and other mobile technologies.

	Archean Chemical Industries Ltd	Archean Chemical Industries Ltd	Israel Chemical Ltd (ICL)	Albemarle Corporation
	FY23	FY23	CY22	CY22
CMP	Rs. 617	\$ 7.33	\$ 491	USD 120
Market Cap	7600 Cr	\$ 0.9 Bn	\$ 6.36 Bn	USD 1408
P/E Ratio	19.3	19	7	4.25
FY23 OR CY22	(Amount in Cr)	(\$ millions)	(\$ millions)	(\$ millions)
Sales	1441	173.4	10,015	7,320
Gross Profit	1438.34	173	5,032	3,075
GP %	100%	100%	50%	42%
Operating Profit	634	76.3	3516	2,470
OPM%	44%	44%	35%	34%
Net Profit	383	46.1	2159	2,690
Net Profit Margin (%)	27%	27%	22%	37%
EPS (\$)	Rs.31.09	\$ 0.4	\$ 1.68	\$ 22.97

Source: Company, Axis Securities (*Assuming Current Exchange Rate)

Since the company has been listed for span of just ~ one year, we are reviewing the historical/trailing valuation over the forwards valuation. On Trailing Basis Company Trades at 19x its TTM PE and 12x EV/EBITDA multiple.

Particulars	ACIL	TATA Chemicals	Neogen Chemical
Market Cap (In Cr)	7,428	26,480	3,957
Stock P/E	18.7	13.4	79.8
ROCE	45.6	11.6	13.2
ROE	44.9	12.0	10.9
Debt/Equity	0.04	0.28	0.94
Asset Turnover Ratio	0.88	0.49	0.74
Return Over 1 year	24.0	3.88	22.1
EVEBITDA	11.9	8.07	35.3
Sales growth 3Years	33.3	17.5	30.9
Return on Assets	23.2	6.93	5.40
Interest Coverage Ratio	19.9	5.91	2.86

Source: Company, Axis Securities

Management Team

Name

Experience

RanjitPendurthi

Managing Director

RanjitPendurthi is the Managing Director of the company. He has been associated with the company since incorporation. He holds a degree of master's of business administration from the University of Chicago, Illinois, USA. He has 21 years of experience in the chemical business.

Ravi Pendurthi

Non-Executive Director

Ravi Pendurthi is a Non-Executive Director on the Board of the company. He holds a degree of bachelor of science (business administration with a concentration in management) from Monmouth University, New Jersey. He has 14 years of experience in the chemical industry. He has been previously associated with Jakhau Salt Company Private Limited and Bharath Salt Refineries Limited.

Bhupathi K

Vice-president - operations and unit head

Bhupathi K is the vice-president - operations and unit head of the company. He has been part of the company since November 20, 2021. He is a certified boiler operation engineer and holds a degree of bachelor of mechanical engineering from the Government College of Technology, Coimbatore. He has 28 years of experience in spearheading production, maintenance, erection and commissioning, quality and projects with a key focus on profitability. He has been previously associated with Epsilon Carbon Private Limited, Philips Carbon Black Limited, E.I.D - Parry India Limited, Phillips Carbon Black Limited and Hi-Tech Carbon.

Rajeev Kumar

Associate General Manager- Finance

Rajeev Kumar is the associate general manager- finance of the company. He has been part of the company since April 1, 2017. He holds a certificate from the Indian Institute of Banking & Finance for completion and passing of the CAIIB examination. He also holds a post-graduate diploma in management with a specialisation in banking, insurance and financial services from the Asian School of Business Management, Bhubaneswar and a degree of bachelor of commerce from St. Xaviers College, Ranchi. He has 12 years of experience in finance. He has been previously associated with Jakhau Salt Company Private Limited, Goodearth Maritime Limited and State Bank of Hyderabad.

Dr. Ravi K

Associate general manager- research and development

Dr. Ravi K is the associate general manager- Research & Development of the company. He has been part of the company since January 1, 2021. He holds degrees of Doctor of Philosophy in Chemistry from Annamalai University, Master of Science in Chemistry from Annamalai University and degree of Bachelor of Science from University of Madras. He has 35 years of experience in contract research and custom synthesis projects. He has been previously associated with Altus Alumina Speciality Private Limited, Survival Technologies Private Limited, Proventus Life Sciences Private Limited, Malladi Drugs & Pharmaceuticals Limited, Inspec Laboratories Private Limited, Inspec Chemicals Private Limited, Kothari Sugars and Chemicals Limited, Tanfac Industries Limited and Maruti Laboratories Private Limited.

RaghunathanRajagopalan

Chief Financial Officer

RaghunathanRajagopalan is the Chief Financial Officer of the company. He has been part of the company since June 1, 2022. He is admitted as an associate of the Institute of Chartered Accountants of India and has passed the final examination held by the Institute of Cost and Works Accountants. He also holds a degree of bachelor of commerce from Bangalore University. He has more than a decade of experience in financial planning, budgeting and cash management while implementing strict budgetary controls, and governance policies and contributing towards strategic growth. He was previously associated with Wheels India Limited, Chettinad Cement Corporation Limited, HatsunAgro Products Limited and MRF Limited.

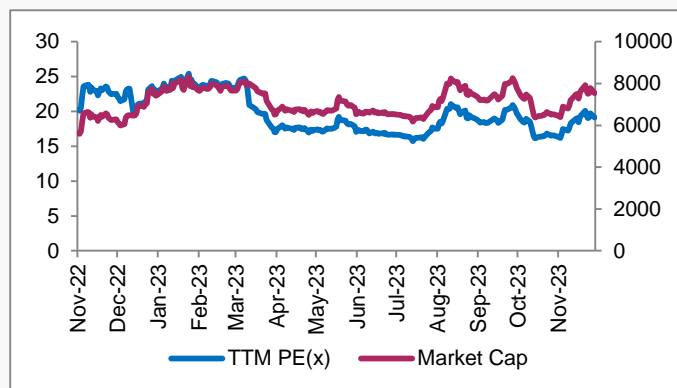
Key Risks

- **Emergence of non-halogenated flame retardants:** Brominated flame retardants have been severely affected due to environmental considerations and potential health hazards. Some of the countries have banned the use of Bromine in electronics and textile applications with the implementation of new environmental, health, and fire regulations. Non-halogenated flame retardants have emerged as a sustainable alternative to Bromine flame retardants. These substitutes may pose a threat to the growth of the Bromine market in the future.
- **Lease renewal risk:** ACIL operate its manufacturing facility and brine reserves on land parcels that were leased to them by the Government of Gujarat and such land leases have expired. If it is unable to renew its land lease, it may be required to relocate its business operations or shut down its manufacturing facility, which would have a material and adverse effect on the business, results of operations and financial condition. Further, its Registered and Corporate Office is also situated on leased premises.
- **Operational Risk:** ACIL's sole manufacturing facility in Hajipir, Gujarat, concentrates operational exposure to weather, natural events, and regulatory changes in the region, posing risks to business and financial stability. Adverse weather, especially excessive rainfall, may impact salt and brine quality. With operations centralized in one location, any significant natural disaster could substantially harm business operations. Additionally, dependency on major customers raises vulnerability, as the loss of contracts or reduced sourcing from key clients may adversely affect business, financial condition, and operational results.
- **Volatility in Raw Material Prices:** ACIL does not have long-term agreements with suppliers for its raw materials and an increase in the cost of, or a shortfall in the availability or quality of such raw materials could have an adverse effect on the business, financial condition and results of operations. Any increase in the raw material prices could have an impact on ACIL's Gross Margins, thereby impacting its profitability.
- **Foreign Exchange Fluctuation Risk:** We are an export-oriented business. In FY23, FY22, FY21 and FY20, 66%, 70.32%, 74.41% and 78.41%, respectively, of its revenue from operations were attributed to export sales.
- **Client Concentration Risk:** ACIL derives a significant part of its revenue from major customers. If one or more of such customers choose not to source their requirements from us or to terminate their contracts with us, its business, financial condition and results of operations may be adversely affected
- **Environmental Hazardous Activity**—ACIL's products, manufacturing processes, and distribution are subject to extensive laws and regulations concerning quality, safety, and health. Handling hazardous materials poses risks, and any mishandling could lead to accidents, injuries, property damage, and environmental harm. Accidents may result in personal injury, environmental damage, property destruction, and operational suspension. Adherence to laws restricting hazardous discharge into air and water is crucial, as violations may lead to liability with regulatory bodies and third parties. Stricter compliance measures are essential to mitigate these risks effectively.

Any unfavorable change in Govt. Regulation wrt renewal of Lease for Brine fields in Rann of Kachh could severely affect the business operations.

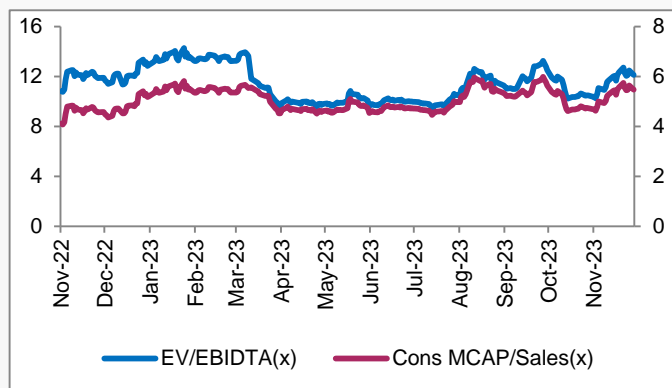
Valuation and Outlook

Exhibit 31: This shall support the topline to grow at ~27% CAGR over next 3 years



Source: Company, Axis Securities

Exhibit 32: The increasing share of high margin Bromine and Bromine Derivative Products in top line...



Robust Long-Term Growth Outlook – Initiate with BUY

Archean Chemical Industries Ltd. (ACIL) offers multiple MOATS which are expected to translate into key growth drivers going forward as the company slowly ramp-up its Bromine Derivative capacity along with its traditional secured Salt business and soon-to-be-revived Sulphate of Potash business. We believe ACIL is well placed in the bromination space given i) Strong industry growth drivers; increased usage of Bromine in agro chem and pharma chemistries, ii) Forward integration into high-value business with strong demand from the largest geographies in the world, and iii) Well-nurtured long-term relationship with customers iv) Rising geo-political tensions in middle-east urging to diligent diversification of supply chains by major global players & v) Reduction in earning volatility as company integrates into derivatives which will help locking customers and gaining market share. Given this potential trigger we believe that the stock currently trades at 10x FY25E EPS is very cheap and demands a valuation re-rating. **We value the stock at 14x FY25E EPS and initiate coverage with a BUY rating on the stock with a target price of Rs 810/share, implying an upside of 33% from the CMP.**

Financials (Consolidated)

Profit & Loss

(Rs Cr)

Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
Net Revenue	1,130.4	1,441.1	1,219.6	2,328.4	2,974.7
COGS	39.3	2.7	86.7	151.3	193.4
Staff costs	37.8	72.0	81.2	163.0	208.2
Operating Exp.	586.1	732.3	610.0	1,064.1	1,308.4
Total Expenditure	663.3	807.1	777.9	1,378.4	1,710.0
EBITDA	467.1	634.0	441.6	950.0	1,264.7
EBITDA Margin %	41.3%	44.0%	36.2%	40.8%	42.5%
Depreciation	66.9	68.6	70.0	86.9	89.4
EBIT	412.7	608.6	416.1	932.9	1,264.5
Interest	161.7	97.0	0.1	0.1	0.1
Other Income	12.4	43.3	44.5	69.9	89.2
PBT	251.0	511.7	416.0	932.8	1,264.4
Tax	62.4	129.1	102.7	226.0	290.8
<i>Tax Rate %</i>	<i>24.9%</i>	<i>25.2%</i>	<i>24.7%</i>	<i>24.2%</i>	<i>23.0%</i>
PAT	188.6	382.6	313.3	706.8	973.6
EPS	18.27	31.09	26.46	59.70	82.23

Source: Company, Axis Securities

Balance Sheet

(Rs Cr)

Y/E March	FY22	FY23	FY24E	FY25E	FY26E
Share Capital	19	25	25	25	25
Reserves & Surplus	242	1,406	1,739	2,445	3,419
Net Worth	261	1,431	1,763	2,470	3,444
Financial Non-Current Liability	965	37	33	33	33
Other Non-current Liability	118	-	-	-	-
Deferred Tax Liability	9	115	120	120	120
Total Non-Current Liability	1,093	152	153	153	153
Current Financial Liability	126	148	140	231	284
Other Current Liability	49	21	21	21	21
Provisions	-	3	7	7	7
Total Current Liability	176	172	162	253	306
Total Equity & Liability	1,530	1,755	2,079	2,876	3,903
Application Of Funds					
PPE	1,045	1,065	1,242	1,225	1,205
Capital Work in Progress	17	36	18	18	18
Right Use Of Assets	39	45	39	39	39
Intangible Assets	0	0	0	0	0
Non- Current Financial Assets	2	22	22	22	22
Other Non-Current Assets	27	10	10	10	10
Total Non-Current Assets	1,131	1,178	1,331	1,314	1,295
Inventories	121	168	120	230	293
Current-Financial Assets	223	361	579	1,284	2,267
Other Current Assets	40	32	32	32	32
Total Current Assets	399	577	747	1,562	2,608
Total Assets	1,530	1,755	2,079	2,876	3,903

Source: Company, Axis Securities

Cash Flow

(Rs Cr)

Y/E March	FY22	FY23	FY24E	FY25E	FY26E
PBT	251	512	416	933	1,264
Depreciation & Amortization	67	69	70	87	89
Finance Cost	162	97	0	0	0
Chg in Working cap	-165	-157	53	-125	-73
Direct tax paid	-	-21	-103	-226	-291
Cash flow from operations	315	496	469	669	990
Chg in Gross Block	-97	-100	-250	-70	-70
Chg in Investments	31	-195	-	-	-
Other Investments	-46	-1	-	-	-
Cash flow from investing	-110	-290	-250	-70	-70
Fresh Issue Proceeds	-	789	-	-	-
Proceeds / (Repayment) of ST Borrowings (Net)	-16	-4	-	-	-
Finance Cost paid	-198	-163	-0	-0	-0
Dividends paid	-	-	-	-	-
Cash flow from financing	-224	-212	-0	-0	-0
Chg in cash	-19	-6	219	599	

Source: Company, Axis Securities

Ratio Analysis (%)

Y/E March	FY22	FY23	FY24E	FY25E	FY26E
Efficiency Ratios					
Asset Turnover (x)	0.76	0.88	0.64	0.94	0.88
Inventory Turnover(x)	0.34	0.02	0.60	0.86	0.74
Sales/Total Assets	0.74	0.82	0.59	0.81	0.76
Receivable days	36	34	35	27	31
Inventory Days	37	37	43	27	32
Payable days	36	26	29	23	27
Financial Stability Ratios					
Total Debt/Equity(x)	3.2	0.0	0.0	0.0	0.0
Total Asset/Equity(x)	1.9	1.2	1.2	1.2	1.1
Current Ratio(x)	2.3	3.3	4.6	6.2	8.5
Quick Ratio(x)	1.6	2.4	3.9	5.3	7.6
Interest Cover(x)	2.9	6.5	-	-	-
Operational & Financial Ratios					
Earnings Per Share (Rs)	18	31	26	60	82
Book Value (Rs)	25	116	149	209	291
Tax Rate(%)	24.9%	25.2%	24.7%	24.2%	23.0%
Performance Ratios					
ROA (%)	12.7%	23.3%	16.3%	28.5%	28.7%
ROCE (%)	31.7%	41.4%	23.8%	41.1%	40.7%
ROE (%)	113.1%	45.2%	19.6%	33.4%	32.9%

Source: Company, Axis Securities

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