5 Jan 2023

Dear Partners:

The purpose of our quarterly letters is to provide transparency in how we are thinking.

Contents

Summary messages

- Performance over last 5 years post fees is TWRR of 15.3% vs 10.2% for NSE 500, an outperformance of 5.1% per year vs our target of 3%.
- Last 12 months NSE 500 performance (+3%) has been led by sectors/companies that carry risks which we are not willing to accept. For example, PSU Banks are losing market share and the Adani Group carries both significant leverage and high valuation risk. Together, these groups have contributed ~55% of the BSE 500 gain last year.
- Solidarity TWRR is ~-8% over last 12 months. A large part of this reflects normalization of surplus returns in the past. Some of our high conviction, long duration investments (example India Mart, Neogen Chemicals, Hester Bio Sciences) have witnessed valuation corrections, which we need to live through as part of the long-term compounding process.
- HDFC Life/ICICI Life seem out of favour with markets at present. The Life Insurance sector has struggled over the past year as the steep rate increases for Protection has dampened demand even as Banks, the largest distribution channel for Life Insurers, prioritize deposit mobilization. ICICI Pru Life is trading at the lowest valuations it has ever traded. When growth returns, one will benefit from growth and valuation re-rating.
- We share a detailed Investment thesis on Neogen highlighting our framework for Specialty Chemicals and the Electrolyte opportunity for Neogen in Lithium-Ion batteries.

Important Disclosures – please refer to disclaimer on last page

- We disclose position names for transparency and not as recommendations to buy/sell.
- We reserve the right to change our minds and may not be able to inform you if we do.
- We construct customised portfolios based on valuations at point of entry and cash available for deployment. Hence, all positions discussed may not be held in your account.
- Performance in individual accounts may vary from aggregate performance.
- We may own positions in companies whose promoters/management are Solidarity clients.

Performance[1]

Aggregate across all partner accounts					
Performance (in TWRR)	**1 Year**	**2 Year**	**3 Year**	**5 Year**	**Since Inception^**
SOLIDARITY	-8.1%	14.6%	20.9%	15.3%	**18.1%**
NIFTY	4.3%	13.8%	14.2%	11.5%	**13.3%**
NIFTY500	3.0%	15.8%	16.1%	10.2%	**13.6%**

Data as of 31 Dec 2022
^ From 11 May 2016 -Start date of PMS License
These returns are generated by Kotak Fund Accounting SW and are not verified by SEBI
Solidarity performance is net of all fees & expenses

Yearly Performance table				
Year	**TWRR Nifty50**	**TWRR Nifty500**	**TWRR Anchor**	**TWRR SOL Aggregate**
FY15	26.8%	32.6%	67.2%	
FY16	-9.9%	-8.6%	-0.1%	
FY17	18.9%	24.0%	22.4%	18.0%
FY18	10.2%	11.5%	18.4%	19.2%
FY19	14.9%	8.4%	6.0%	6.8%
FY20	-26.3%	-27.9%	-14.9%	-15.4%
FY21	70.9%	76.0%	90.6%	98.4%
FY22	18.9%	21.0%	24.2%	26.5%
FY23 YTD	3.7%	3.7%	-10.5%	-5.4%
Cumulative	**12.2%**	**13.2%**	**19.1%**	**18.0%**

Over rolling 5 years, our preferred performance measure, we have delivered 15.3% TWRR post fees vs 10.2% for NIFTY 500.

Outlook

We reiterate key points from our last letter. The era of cheap money is over.

- A fundamental change in the global monetary policy stance means long term Interest rates in the developed world will remain significantly higher than the average of the last decade as Central Banks are determined to crush inflation. This results in an increase in cost of capital and requires fair value of Assets to be repriced downwards.
- Restrictive monetary policy could cause the developed world to slip into recession and hence impact earnings growth. The IMF expects a third of the world to have a recession this year.
- In many US technology leaders, growth is maturing (example digital advertising), or slowing down (on-line retail). Even as there is increase in competition e.g. Amazon/Apple/TikTok for Facebook/Google or Disney/Amazon for Netflix or Google Cloud for Amazon Web Services. Hence, their earnings have disappointed expectations.

Understandably, developed markets have corrected meaningfully.

One should continue to be realistic on return expectations from Indian Equities

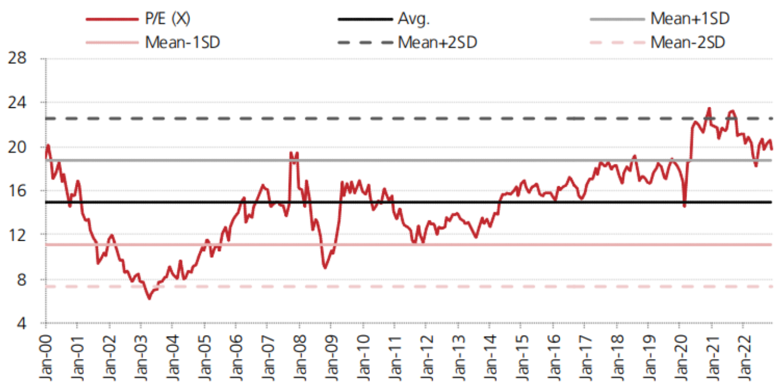
Stock prices in India have not corrected as much as the developed world. India has less adjustments to make on monetary policy vs the developed world, with inflation and long-term bond yields close to long term averages and aggregate Debt/GDP lower than 15 years ago.

[1] Performance may vary for individual account as we construct customized portfolio basis time of entry.

Cost of Capital in India does not need to be repriced significantly vs the developed world				
	India	**US**	**UK**	**Eurozone**
Avg 10 Yr G Sec Yields FY 12-FY 22	7.3%	2.1%	1.4%	0.4%
10 Yr G Sec yield today	7.3%	3.9%	3.7%	2.4%
Avg. CPI Inflation 01 Jan 2013 to 31 Dec 2022	5.6%	2.5%	2.3%	1.7%
CPI inflation today	5.9%	7.1%	10.7%	10.1%
Increase in Central Bank Balance sheets (Covid to today)	16%	114%	90%	55%
Increase in Aggregate Debt/GDP since 2008	-6%	49%	54%	147%
Source: Bloomberg; Kotak MF				

While India is a bright spot for growth in the world, valuations are reflecting this optimism.

Exhibit 22: Nifty-50 index is trading at expensive valuations
12-m rolling forward PE of Nifty-50 Index, March fiscal year-ends, 2001-23 (X)



Source: Companies, Kotak Institutional Equities estimates

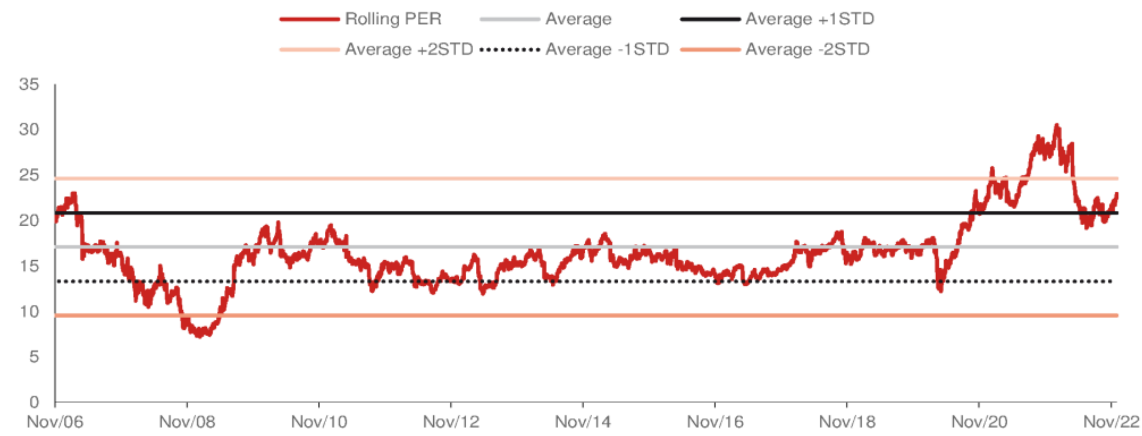
Portfolio positioning and approach

Change in long term interest rates, and a potential recession in the developed world will affect different sectors and companies differently. Companies that are more mature stage of their life cycle (IT Services, FMCG) and those with more distant cash flows (B2C Digital business models) will be impacted more than companies that are early stage of life cycle and are cash flow positive today.

We have concentrated the portfolio in names where we expect 12-20%+ Earnings growth for long periods of time and where valuations are reasonable – Telecom, Banking, Life Insurance, Health Insurance, QSRs, Animal Vaccines. We remain very positive on the Manufacturing opportunity out of India. Many companies are witnessing market share gains in global markets and will benefit from new structural themes, for example the exponential growth expected in Electric Vehicles.

We continue to remain cautious on IT Services/Consumer/Digital B2C stories as valuation still do not provide attractive entry points. And we are generally more conservative on entry prices we are willing to pay today vs 18 months ago.

Fig. 23: IT - one-year forward P/E chart



Source: Bloomberg Finance L.P., Nomura research

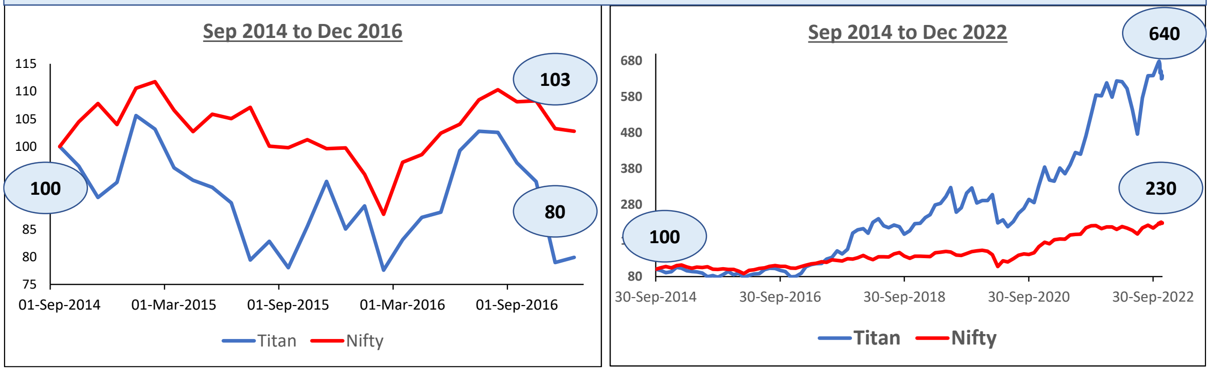
It can be tempting to have a more trading-oriented approach to navigate the current environment. One needs to resist this urge. If one wants to see the world with more clarity, one needs to shut out noise. Hence, stillness is the key. We prefer staying invested in long term themes for earnings compounding and accepting there will be time periods of poor performance due to mean reversion or because something else moves faster.

We appreciate there is no one right way to invest – "Investors play different games, and those games look irrational to people playing a different game[2]". However, one must make choices on whether one is playing the short or long game as time horizons influence portfolio choices and we don't believe one can play the two simultaneously.

Consider two examples that illustrate the danger of a trading mindset.

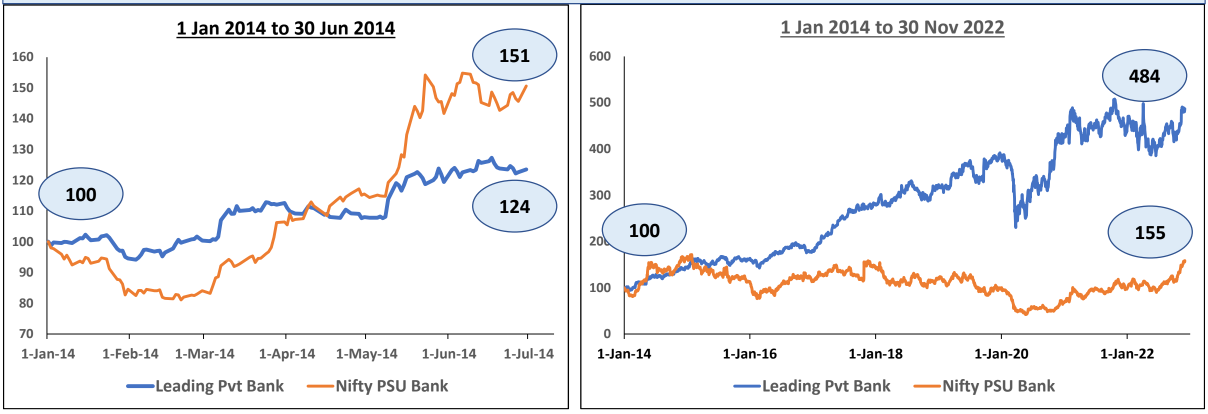
- If one sold their TITAN holdings when the stock was underperforming the Index between Sep 2014 to Dec 2016, one missed a subsequent 6X move.
- If one bought into PSUs during 2014, one enjoyed a 20% outperformance for 6 months, but would have massively underperformed till date.

Price performance across time: TITAN vs NIFTY



[2] Morgan Housel

Price performance across time: Leading Pvt Bank vs PSU Bank Index



Opportunism takes its toll in poorer longer-term performance. One needs to be willing to overlook risks to ride momentum and massive churn to enter the new hot theme. Significant churn results in high taxation which erodes returns. One exposes themselves to re-investment risks as it is impossible to re-time entry. Hence, our fundamental approach of thinking long term is unlikely to change. It may interest partners to note that trading is banned for all members of the Solidarity team.

What has impacted our performance in the last 12 months.

- Our unwillingness to invest in companies which lack resilience but are running hot at present (example declining competitive positions, PSU Banks), very high leverage (Adani Group).
- Our willingness to tolerate drawdowns in select companies we want to own long term. For example India Mart (-35%), Neogen Chemicals (-25%), Hester Biosciences (-30%).
- Market taking a very pessimistic view of Life Insurance, where we have a variant perception ICICI Pru Life (-20%), HDFC life (-13%).
- Impact of errors – Solara which cost us ~2-3% of Invested capital, which we have written about in our Q1FY23 letter. And Team Lease, where we over-paid for a good business.

Our unwillingness to invest in some companies which are running hot at present.

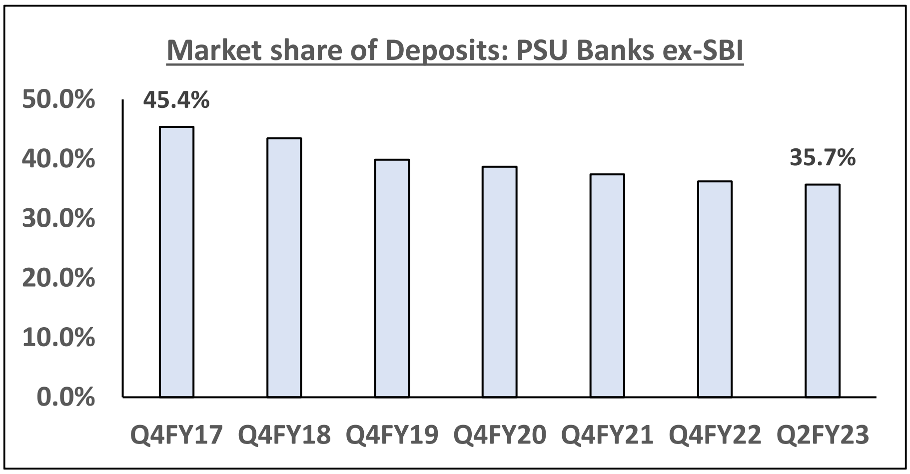
We prize resilience over speed. Hence, there are red lines on risk we will not cross.

- We will not buy companies with declining competitive positions, even if they are cheap.
- Net Debt/EBITDA of 3x as a “red line”.
- We will not invest in companies who have acted against interests of minority shareholders.
- We avoid companies where we do not agree with incremental capital allocation.

If one de-averages the performance of the NSE 500 over the last 12 months, majority of the NSE 500 Gains can be explained by PSUs, PSU Banks and the Adani Group.

Key contributors to market returns	% of Nifty 500 M Cap increase	% of BSE 500 return on free float basis
Adani Group Companies	49%	36%
PSU Banks	22%	19%
PSU (ex Banks)	15%	17%
Reliance	8%	11%
Total	**94%**	**83%**
Source: Ambit, Spark, Bloomberg; Data as of 31 Dec 2021 to 31 Dec 2022		
Adani Group excludes Adani Wilmar as it was not a part of Index on 31 Dec 2021		
ICICI Prudential S&P BSE 500 ETF used as proxy for BSE 500		

The principal source of competitive advantage for any Bank is in its deposit franchise. PSU Banks (ex SBI) are melting ice cubes as they are consistently losing deposit market share[3]. We do not believe their competitive positions will reverse. Moreover, their governance is suspect[4]. So while short term prospects are good as they come out of a bad NPA cycle, long term prospects remain weak given poor competitive positioning. So one may profit short term, but one needs to time their exit well before others as you could suddenly lose money if sentiment for them turns. This is not a game we want to play or be distracted with.



Source: Ambit Capital

PSUs do not have independence in decision making and Capital allocation and may not take decisions which are right for the minority shareholders. For e.g. Oil Marketing companies do not have flexibility in pricing. One cannot deny Govt interference in Capital Allocation.

The Adani group has some fantastic assets, e.g. Adani Ports and has shown great execution capabilities across businesses in the past. However, most group companies have high leverage which exposes them to significant balance sheet risks if there are any external shocks. And the valuations at which they trade leave little margin of safety if one is wrong.

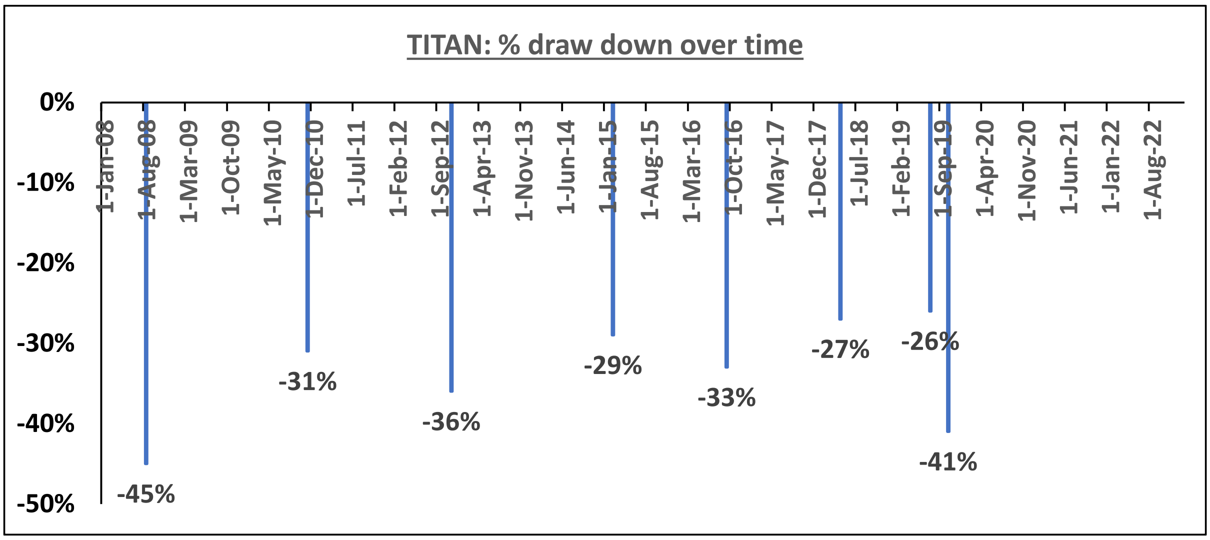
[3] Source: Ambit Capital
[4] https://www.business-standard.com/article/opinion/bad-loans-ibc-going-as-expected-122121800768_1.html

Particulars (In Rs Crores)	Net Debt	TTM EBITDA	TTM Net Debt/EBITDA	TTM PAT	TTM EV/EBITDA	TTM P/E
Adani Enterprises	37,080	6,414	5.8	1,223	72	346
Adani Ports and SEZ	39,416	11,079	3.6	5,246	19	33
Adani Green Energy	49,835	4,062	12.3	548	84	532
Adani Total Gas	806	779	1.0	507	461	707
Adani Transmission	31,402	3,683	8.5	898	80	294
Adani Power	43,203	13,670	3.2	10,339	11	10
Adani Wilmar	-1,984	1,626	-1.2	688	41	99
Ambuja Cements	-8,661	4,002	-2.2	1,947	23	52

TTM: Trailing Twelve Months
Source: Ambit Capital, Ace Equity, Solidarity Analysis
Net Debt and PAT/EBITDA data as of Sep 22; Market Cap as of 26 Dec 22
Ambuja stake acquired via a SPV which would have taken debt; entire promoter stake is pledged

Staying invested in names we want to own long term, but where drawdowns have been steep
Getting the "sell" decision right is the trickiest part of long-term investing as the right answer is only known in hindsight and can change basis time horizons (what seems right when evaluated over 12 months, could be wrong in context of longer time horizons).

The secret of Mr Rakesh Jhunjhunwala success was not only in the selection, but also to hold for really long periods of time. Consider TITAN. Excluding dividends, the stock has delivered 33x since 1 Jan 2008 (~27% IRR over 15 years). However, one needed to live through >25% corrections over 8 times in the last 15 years to earn these returns.



Now partners may wonder if we have cherry picked TITAN and this is hindsight bias. However, 20%+ decadal stock price compounding has been earned in many other companies in India where the power of earnings compounding has not been interrupted[5].

Our learnings have been to stay invested if a company seems over-valued if it has a strong moat, is executing well and if it has prospects for non-linear growth/high longevity of growth. One should sell

[5] Partners may refer to the annual Motilal Oswal Wealth Creation study for many other names.

only if valuations are euphoric in context of growth expectations, if a management team is losing focus, or for risk management.

We are determined to not repeat errors we have made in the past by exiting companies solely due to some over-valuation on near term metrics.

Some names have corrected significantly. They may continue to underperform the Index in the short term, but we expect significant outperformance long term due to the longevity of Earnings growth they are positioned to deliver.

- IndiaMart (-35% last year) is perhaps being bucketed with negative sentiment associated with other loss-making Digital stories; however, it generated 400 Cr Free cash flow in FY 22. We believe the company is executing well and can grow profits at 15-20%+ for a decade from its core business and adjacencies.
- Neogen Chemicals (-25% last year) base business has grown at 25%+ CAGR and the Electrolyte opportunity in EVs means the 100 Cr EBITDA today could be ~1000-1500 Cr+ EBITDA by FY 30

We discuss both these companies in subsequent sections.

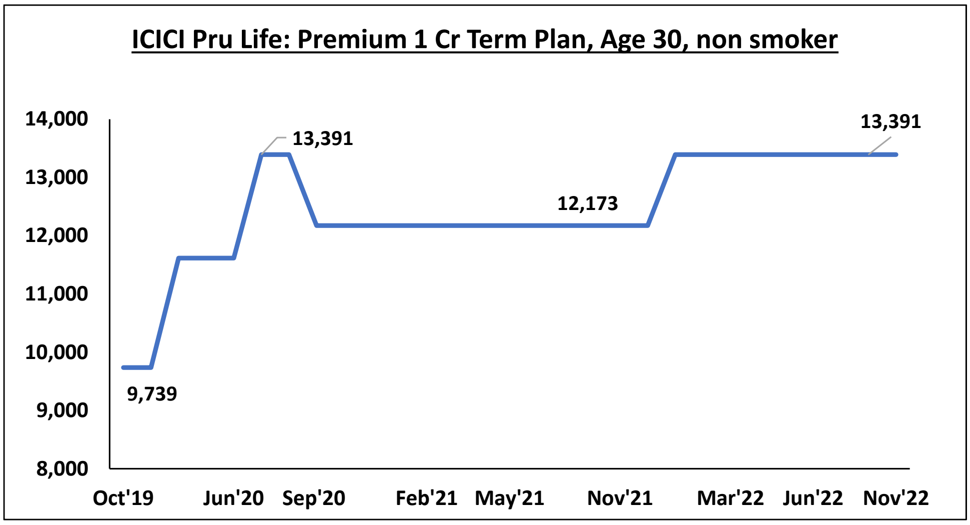
Variance perception vs the Market on Life Insurance

We have significant allocations to Life Insurance with ~12-20% allocation[6]. We have written a more detailed note on Life Insurance earlier. Read here.

The Life Insurance sector is facing temporary head winds. ICICI Pru Life and HDFC Life have had price declines of ~20% and ~13% respectively in the last year.

Steep increase in prices of Protection have impacted demand

The Retail Protection industry witnessed strong growth over 2015-21 (40% CAGR[7]); however it has seen a slowdown in the last 18 months. Life Insurance companies use "reinsurance, i.e. sell down their risk. Over the last few years, insurers had forayed outside of Metro/Tier 1 cities, but the reinsurers didn't reprice to reflect the higher mortality risk. Reinsurers faced high losses from higher claims during Covid, post which they have significantly increased prices. Life Insurers have in turn taken price hikes (see chart below). Insurance is a push product requiring a nudge and significant education. Frequent price hikes and tightening underwriting norms has made it challenging for distribution partners to sell protection in the last 12 months. However, the fundamental value proposition of Term protection remains very strong, and growth should return over time.



[6] Allocation may differ across partners basis cash in accounts and start date.
[7] Source: Investec. Growth calculated using data of top 8 players as industry proxy.

SOLIDARITY
INVESTMENT MANAGERS

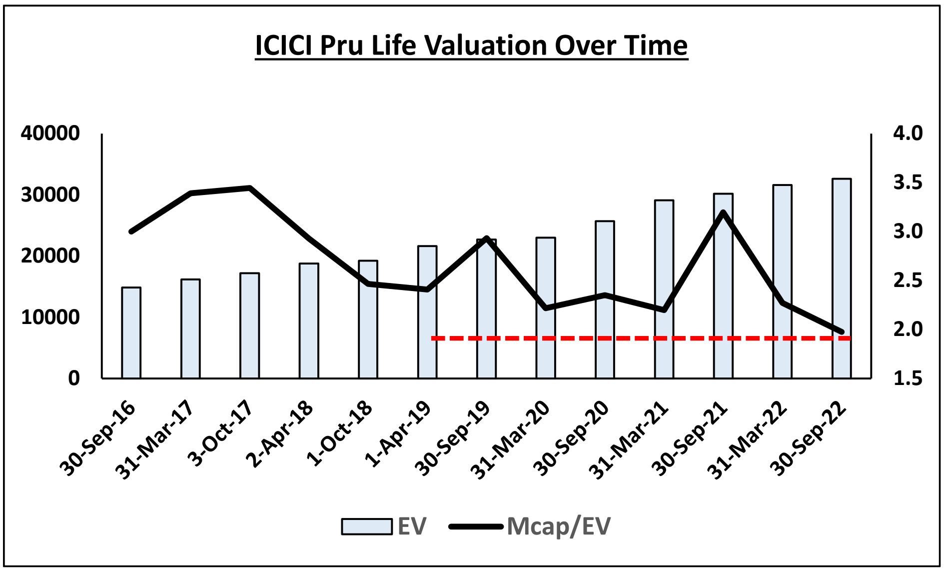
Banking channel prioritizing deposits

Leading private insurers rely on Banks for large share of their business.[8] As Credit growth is much faster than Deposits at present, Banks are prioritizing deposit mobilisation over cross sell of insurance products. We believe Banks behaviour will revert to normal over time as the pace of loan growth normalizes as Insurance is a significant source of fee income.

We believe this sector has an opportunity to grow 15%+ CAGR for long periods of time as most products they sell are good for consumers to own (for e.g. Term Life Insurance, Credit Life, ULIPs, pension products), the sector is highly under-penetrated[9] and insurers we own have strong brands and enjoy regulatory moats.

We find valuations today very attractive – both on first principles, relative to the market and basis historical benchmarks. ICICI Pru Life is currently trading at the lowest valuations it has ever traded, even lower than when the market bottomed during Covid (March 20).

	Market Cap/Embedded Value				
Company Name	**FY18**	**FY20**	**FY22**	**H1FY23**	**EV CAGR FY18-1HFY23**
HDFC Life Insurance	6.4	4.3	3.4	3.4	19%
SBI Life Insurance	3.5	2.4	2.9	3.0	18%
ICICI Prudential Life Insurance	2.9	2.2	2.3	2.0	13%
Max Financial Services	2.0	1.3	2.3	2.0	16%
Note: HDFC Life EV CAGR excludes Exide Life Insurance					



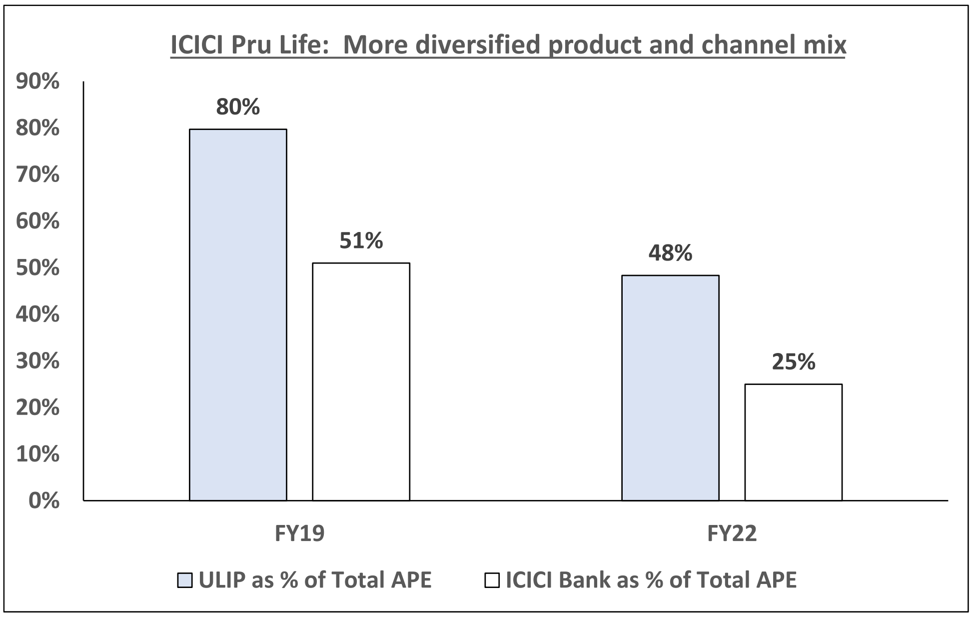
ICICI Prudential Life Insurance (Emerging Leader)

ICICI Pru Life has a growth problem. This is a function of excessive reliance on ICICI Bank/ULIPs a few years ago. ICICI Bank (its leading Bank distribution partner) has decided not to sell certain products it believes are not good for its customers. Management has been taking actions - signing up more

[8] Share of Banca % total APE for H1FY23: SBI life- 63%, HDFC life- 48%, ICIC Pru –32% (Company disclosures). HDFC life discloses share as % of individual APE, we have assumed Group APE to be NonBanca.

[9] Penetration in India per ICICI Pru is 12%. Addressable population is individuals with annual income > 2.5 lacs

distribution partners and reducing reliance on low margin ULIPs. ICICI Pru Life is a more de-risked business model on both channel and products vs 3 years ago.



Source: Company disclosures

The market is also concerned that ICICI Pru Life has been more aggressive vs its peers in selling Group Protection, a structurally lower margin business where risk may be higher due to lack of medical checks, and whether this is being done to boost growth. While we share these concerns, Group Protection is single digit share of ICICI Pru overall VNB[10]. Moreover, the long-term risk of mispricing in Group Protection is low as these are mostly annual contracts and not multi-year unlike Term Protection.

Thirdly, the market fears that VNB margins have peaked. We believe the industry is very-early in its evolution. Protection and Annuity are higher margin products, and their share of the overall mix will improve over time.

Growth concerns for ICICI Pru Life exist. However, unlike PSU Banks, it is not an issue of eroding competitiveness – there isn't anything fundamentally wrong in the company's strategy and it has a strong brand and distribution. The pessimism is being reflected in the price. If we are patient and take a long-term view, one can expect healthy returns as valuation multiples tend to re-rate positively when growth returns. We have seen the re-rating play out when growth returned with ICICI Bank ~3 years ago, Shaily ~2.5 years back, Bharti Airtel over last ~1.5 years and Axis Bank over the last 1 year. We expect the same story to play out in ICICI Pru Life. If we are wrong and growth stays muted, we don't expect to lose capital as valuations offer downside protection. Hence, we want to give some more time for this thesis to play out.

[10]Value of New Business is the expected Profits Insurance companies expect to make on new business over the life of the contract discounted to present value

IndiaMart Intermesh (Emerging Leader)
We have written about IndiaMart's business model earlier. Read here.

Companies with digital business model have corrected between ~35% to 60% in the past 1 year.

Company	Market Cap 1 Jan 2022	Market Cap 30 Dec 2022	Change	FY22 Free Cash Flow (Rs Cr)	H1FY23 Free Cash Flow (Rs Cr)
IndiaMart	20,070	13,221	-34%	398	138
Zomato	111,262	50,755	-54%	-750	-474
Paytm	86,843	34,397	-60%	-1,741	-157
Car Trade	3,886	2,193	-44%	57	11
Policy Bazaar	42,831	20,145	-53%	-1,598	-306
Source: Ace Equity					

IndiaMart is a dominant B2B listing platform, very profitable and cash generating unlike most others Digital cos who are yet to demonstrate profitability. Its key operating metrics continue to improve (see table below). We believe India Mart can grow profits at 15-20%+ for a decade through both growth in paying suppliers and ARPU increase in its core business and from adjacencies e.g. Accounting software.

Particulars	FY 18	FY 19	FY 20	FY 21	FY 22	FY23 YTD
Registered Buyers (Mn)	60	83	102	125	149	160
Suppliers store fronts (Mn)	4.7	5.5	6.0	6.5	7.1	7.3
Paying Suppliers (000)	108	130	147	152	169	188
Daily unique enquiries (Mn)	53	73	74	96	97	45
Cash from operations (Cr)	179	255	261	323	402	153
ARPU[11] (Rs. 000)	37.2	38.4	42.3	43.6	44.3	48.7

Source: Company disclosures

A potential reason for the steep correction could be the market's disappointment by the EBITDA margin correction from ~40% in FY22 to 28% in H1FY23.

Digital business models are often winner take all as a virtuous cycle results in more buyers and suppliers on the platform, an even stronger competitive position and hence dominant share of the industry profit pool. IndiaMart has aggressively added to its Sales and Technology team and total employees have increased 38% YoY in H1FY23. Over time these investments will lead to greater volume growth in paying suppliers and higher ARPU as feet on street will aid conversions. As employees' sales productivity increases, margins will climb higher over time.

The principal value of all companies lies in terminal value, and not in near term profits. We believe these are the right strategic moves as they enhance competitive positions and terminal value.

We believe IndiaMart is very attractively priced, and we are close to our peak position weight at 8% for an Emerging Leader.

[11] Average Revenue per User

Neogen Chemicals – Emerging Leader

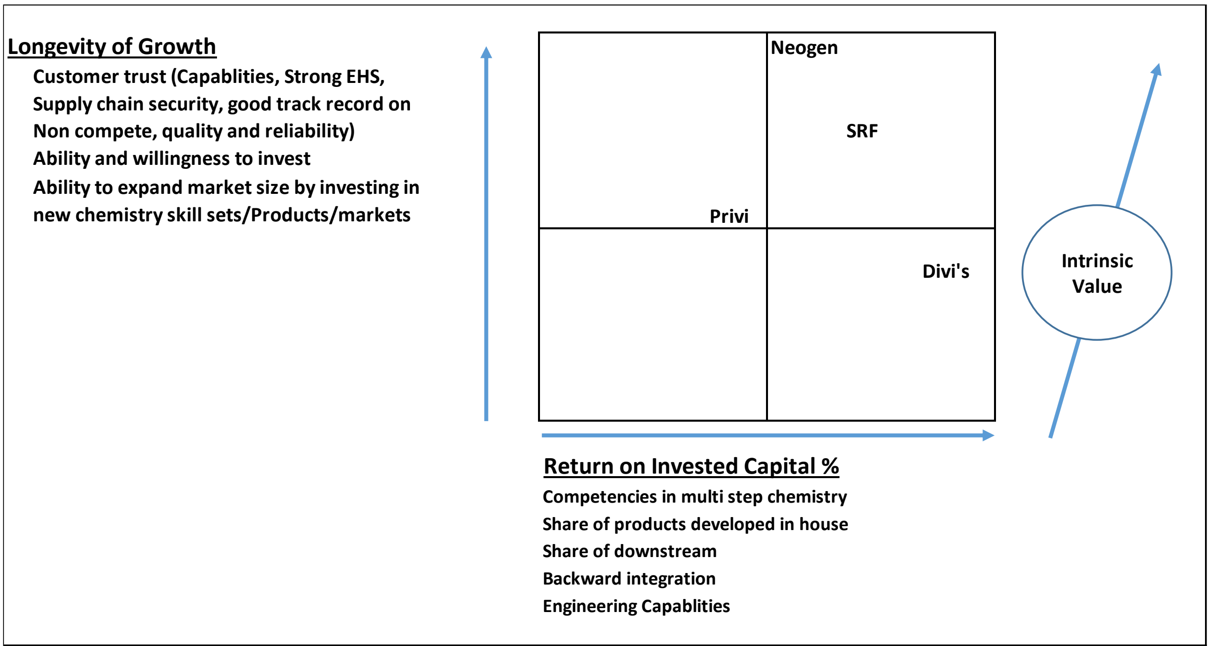
Summary thesis

- Promoters have demonstrated resilience. Their story inspires confidence and trust.
- Neogen total addressable market is continuously expanding. Neogen was already strong in Bromine and Lithium based compounds, it commenced Advanced intermediates and CDMO business in 2018 and is now entering Salts and Electrolytes for Li-Ion EV Batteries.
- We estimate domestic Electrolyte opportunity could be worth ~15000crs by FY 30 where Neogen is well positioned. Exports of Lithium Salts is an additional opportunity. China controls 95% of global supply at present.
- Neogen has executed well growing Operating profits at ~27% CAGR in the last decade.
- Promoter credibility, historical track record, and the opportunity to grow earnings at 25%+ CAGR for the next decade make this an attractive business for us.
- Valuations are expensive basis near term financials; however, valuations basis short term financials are misleading as they miss longevity of growth.
- Our position size has significant buffer for us to buy more on declines, or over time.

Specialty Chemical/CRAMS was already a strong growth story for India. Covid and global geopolitics has resulted in an additional impetus due to the strategic imperative of MNCs globally to de risk supply chains from China.

Our framework to assess which Specialty Chemical/CRAMS companies to invest in is presented below. The names of companies we own are listed as well[12].

- We look for companies well positioned for growth longevity: technical competencies, culture of EHS compliance, reliability and promoter willingness to invest in the business.
- Where we believe ROIC can expand over time – entry into more complex chemistries, forward and backward integration, using engineering skills to enhance productivity.



Neogen is a Specialty chemical company which historically made Bromine and Lithium based intermediates mainly catering to the pharmaceutical, agrochemical and other functional chemical

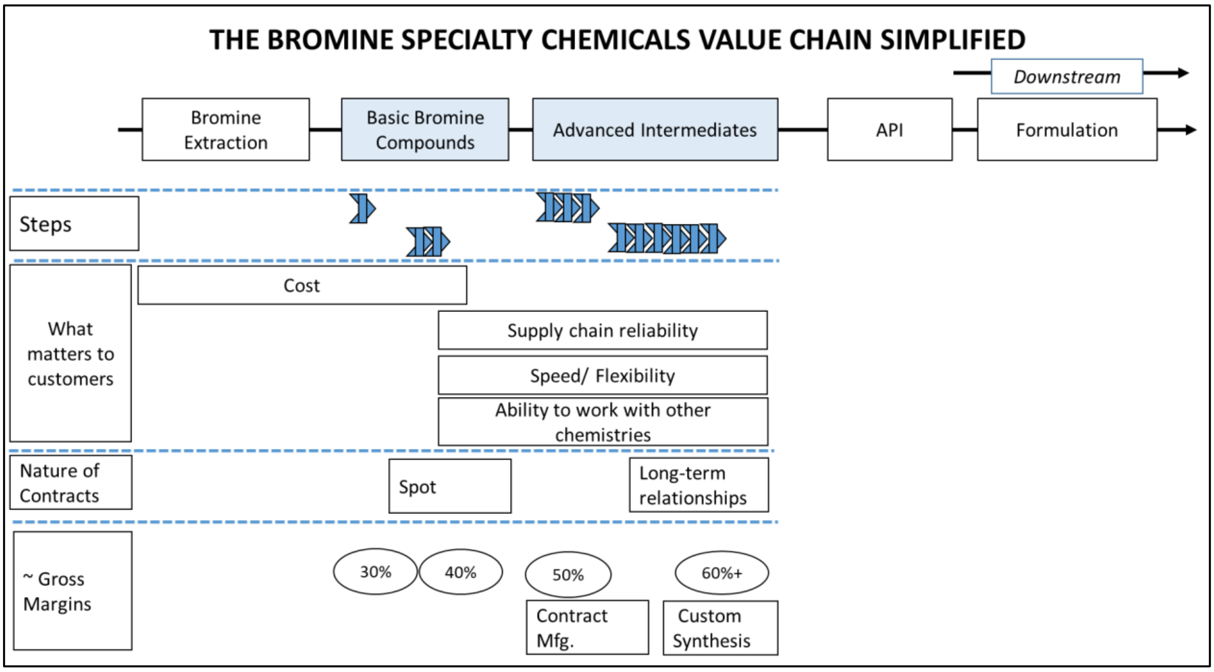
[12] We own SRF indirectly via Kama Holdings.

verticals. In 2018, Neogen developed competencies in multiple step chemistry thereby expanding their offerings to more value-added products.

Neogen was founded by Dr Haridas Kanani (Chemical Engg. IIT Mumbai), a first-generation entrepreneur to extract Bromine from the Rann of Kutch in the 1970s. A flash flood destroyed his plant. He took up a salaried job and repaid all dues over the next decade, post which he once again set out to make Basic Bromine compounds in the 1980s. The company is now run by him and his son Dr Harin Kanani, (PhD chemical Engg. University of Maryland, USA & BTech Chemical Engg. IIT Mumbai). Process technology for all their products have been developed in house[13] and around 12% of the workforce are employed in R&D.

India has a natural cost edge in Bromine vs China as it enjoys an inexhaustible supply of Bromine from the Rann of Kutch. China has extracted bromine from ground water which has led to ground water depletion and closure of several Bromine plants. As Bromine is hazardous to transport and requires specialized containers, higher transportation costs render China uncompetitive in Basic Bromine compounds. There are 8-10 players globally in Specialty Bromine and Neogen is the Indian market leader.

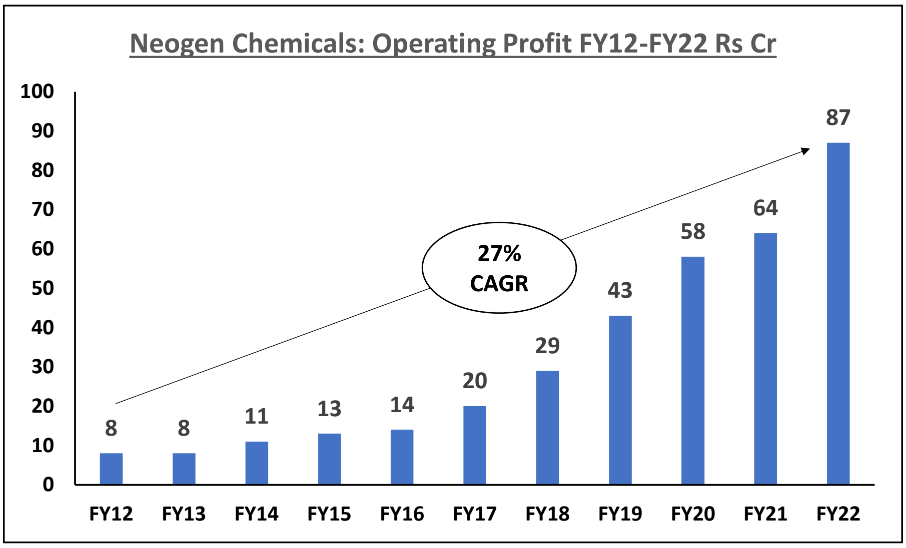
Neogen's strategy is to sign up a customer with basic products and over time upsell more complex value-added products. 30%+ of sales today comes from value-add products vs ~ 10% few years ago[14].



As a molecule undergoes various steps before becoming an API, the value of the molecule increases as it travels downstream. While basic Bromine compounds earn ~30/40% Gross Margin, more complex compounds which require multiple steps or require a combination of Bromination with other chemistries could be as high as ~50/60%. Bromine is highly corrosive, usually never forms a part of the end molecule and needs to be recycled/disposed. Hence, it's a win-win for customers and vendors if more steps can be completed within an existing facility which provide savings on both transportation and inventory holding costs.

[13] Management disclosures
[14] Management disclosures

Neogen has executed very well with Operating Profits expanding ~11x over the last decade.



Neogen has a very large opportunity from the exponential growth expected for Lithium-Ion (Li-Ion) batteries in EVs, supported by Govt incentives for battery localization. The link below explains the working and components of a a Li-Ion Battery.[15] The demand for Li-Ion batteries is estimated between 80-160 GWH by 2030[16]. Batteries such as Sodium Ion have low energy density and therefore will be more useful for stationary applications (renewable energy).

Neogen has a meaningful opportunity in two products where it is well positioned.

- Lithium Salts for exports. At present China supplies ~95% of the global demand for Salts and the world is looking to strategically de risk from China.
- Electrolytes for Indian market. Salts + Solvents + Additives = Electrolyte. Unlike Salts, Electrolytes are not economical to ship long distances due to logistical challenges – Electrolytes are corrosive, have significant solvent content and require special drums for transportation.

The Salts/Electrolyte opportunity is very large compared to Neogen revenue at present.

- Lithium Hexafluorophosphate ($LiPF_6$) is the most widely used salt in Electrolytes in Li-ion batteries today.
- About 15% of the total Cost of a Li-Ion Battery today is Electrolytes. Based on rough maths, about 80 GWh of Lithium Ion will translate into an Electrolyte opportunity of about 15,000 Cr by FY 30[17]. This estimate would change basis the GWh estimate, technology developments, and basis prices of Lithium.
- ~95% of Salts consumed for Electrolytes globally are produced in China today. Exports of Salts from India could be a huge opportunity – even if China is cheaper - as the world is looking for supply diversification. The global market for Salts will be ~50x India market size.

[15] https://dragonflyenergy.com/inside-lithium-ion/

[16] BCG estimates ~70-80 GWh by 2030, India Energy Storage Alliance estimates 160 GWh by 2030.

[17] 15000 Cr market size assumes ~0.95 MT Electrolyte required per GWh of Lithium Ion (Neogen IP). Electrolyte priced at USD 20/kg (https://www.osti.gov/pages/servlets/purl/1501862) & 3% per annum Rupee depreciation. Current $LIPF_6$ prices basis exports from China are USD 33/kg. These should reduce over time as more Lithium supply comes to the market. Neogen will earn a processing spread over the price of Lithium Carbonate. Hence the price of Lithium does not significantly affect Neogen profits unless very high Li prices make EVs unattractive.

- The key point to note is that Neogen is ~700 Cr Revenue FY23e. Neogen has significant prospects for growth from current base.

Neogen also has an opportunity in Cathodes as they are ~30% of the cost of a EV Li-Ion Battery and different Cathode chemistries require between 8% (LFP) to 14% (NMC811) Lithium content. However, we are not clear whether Neogen has a differentiated value proposition in Cathode today. This could change as competencies can be developed or partnerships developed. The Cathode opportunity is not included in our market sizing estimates.

Neogen is well positioned to capture a share of the domestic Electrolyte opportunity.

- As Lithium Hexafluorophosphate ($LiPF_6$) will be the dominant Electrolyte, players who will be well positioned to win will be either players with a Lithium or Fluorine background.
- Sale of Salts/Electrolytes is a B2B business. The performance of the Electrolyte is core to success and hence approval cycles will be lengthy. Moreover, as is standard practice with Automotive OEMs, they will work with fewer players and offer high volumes to get the best prices. Hence, an early mover has an advantage because once partnerships/tie ups have already been formed, a late mover needs to bring something disproportionately better to the table to displace an incumbent.
- In any Specialty Chemical business, there is a learning curve which affects your cost position. Fluorine is a very reactive gas and not easy for new entrants to master. There are only 3 serious players in Fluorine in India today (SRF, Navin Fluorine and Gujarat Fluorochemicals)
- Neogen has the advantage of 30-year track record of making high purity lithium salts and hence has a head start in Electrolytes. The key challenge in Lithium processing is reducing metal impurities to few parts per million as impurities impact performance of the battery. Additionally, electrolytes performance is very sensitive to moisture content. All of these can be mastered by a new entrant – however, they involve a learning curve.
- A key challenge today is ensuring a reliable supply chain for Lithium as it is in short supply. Neogen has a sourcing edge at present as they have 30-year relationship with Lithium carbonate players and ~50% of Lithium carbonate quantum imported in India is sourced by Neogen[18]. While this sourcing advantage will normalize over time as Lithium availability increases, Neogen has a head start in being able to show case firm supply chain commitments vs new entrants.
- Neogen and Gujarat Fluorochemicals seem to be moving faster than others with pilot plants being announced.
- Global competitors in Salts/Electrolytes should want to tie up with strong players in India rather than set up plants independently – both because they have larger markets to focus on vs India[19], and because India is a complex market from a regulatory and environment perspective for a new MNC to navigate that does not already have a footprint in India. The largest players in Salts are Chinese players who will have a geopolitical challenge operating in India.

It will be a fool's errand to precisely forecast profits as there are multiple variables at play. However, using conservative assumptions, we believe profits would be large enough to justify an investment at current prices.

- The market size would depend on the pace of EV adoption in India. Neogen market share will depend on technical superiority of products, cost position vs other competitors, import duties.
- It is not clear what the final margin profile of this business will be. Automotive component companies earn anything between 10-25% EBITDA margins depending on the technical complexity of the product.

[18] Source: Import statistics

[19] Global demand for EV Batteries is expected to be 3500 GWH vs 80-160 GWH for India by 2030

- Assuming 80 GWH market size, 25% market share for Neogen and 15% EBITDA margin, domestic Electrolytes could be a 500-600 Cr EBITDA business by FY 30. Export of Salts could be large, but it is hard to put a number here when China has over 95% of global Exports at present and the world is actively looking to de-risk from China.
- The base Bromine and Lithium derivatives business is a 100 Cr EBITDA business today growing 20%+. Assuming this grows at 15-20%+, the base business could be a ~300-400Cr+ EBITDA business by FY30. So, Neogen could be a 1000-1500 Cr+ EBITDA company by FY30 ignoring the Cathode opportunity and any other growth avenues that may emerge.
- As this is new territory, we assume that the ROCE will be broadly like their current business. We expect some Equity dilution along the way as internal cash flows will not be sufficient to fund the cap ex. If the EBITDA outcomes outlined above are achieved at current ROCE levels, this would result in very good outcomes for shareholders despite dilution.

Risks

Availability of Lithium. While there is a Lithium supply shortage at present, new Lithium mines will be discovered/speeded up and lithium recycling will gain traction. Any challenges to Lithium supply could result in delay in EV penetration and affect the market size estimates.

Developments in Battery technology. Lithium-Ion batteries are the front runner amongst all options and seems most likely to be used in Electric vehicles[20]. However if any superior technology becomes mainstream in future, it will impact Neogen's prospects if they are unable to adapt.

Competition from Chinese/Japanese players. They have technology, are very backward integrated and have sourcing security. Our base case is that global players would prioritize larger markets. However, if they decide to pursue India aggressively, it could have implications for Neogen's domestic market share. No Chinese/Japanese player has announced entry into India yet.

Perspective on current Neogen valuation

Neogen currently trades at ~65x TTM PE and ~33x TTM EV/EBITDA. We believe entry valuation multiples basis near term financials works well in businesses with linear profit trajectories (FMCG, IT Services, Banking, Asset Management). However, ascertaining fair price for entry is trickier when businesses have non- linear growth prospects and management teams have demonstrated strong execution. Excessive focus on near term valuation multiples when there are prospects for non-linear growth could cause one to miss out or sell out too early from winners of the next decade.

As an example, one would not have envisioned Neogen's Specialty Bromine foray ~8 years ago. Even though we have been investors in Neogen since its IPO 3+ years ago, there was no understanding of the Electrolytes/salts opportunity when we initially invested. We still don't know what Neogen can do in Cathodes. And there are other adjacencies that Neogen could enter in the future, which one can't envisage today.

Over the long term, Earnings compounding will be the primary driver of returns. Hence, when one has a credible case for non- linear growth, an alternate approach could be to look at valuation multiples a few years out when growth is more steady state and reverse calculate potential returns. If a company is very early in its growth life cycle, one can afford to over-pay a bit as growth will cover valuation errors, and one can buy more at lower prices. Consider Divi's Labs in CRAMS in 2004 or SRF in Specialty Chemicals in 2014. Even if one paid 2x the multiple they traded at, one would still have a good outcome. One should therefore not only look at valuations on entry, but also the range of potential Earnings growth outcomes and size of position taken.

[20] https://www.omazaki.co.id/en/electric-car-batteries-and-their-characteristics/

However, we must recognize the pitfalls of this approach. If the estimated growth does not materialize, one will have very poor outcomes as multiples will also collapse. There are very few companies who have grown PAT at 25%+ CAGR over a decade. And you can never know for sure, whether the company you have identified will not lose their way. Hence, one must break valuation discipline in very rare cases and constantly check that the thesis is on track.

Neogen is the only company which we continue to purchase even at valuations > 50x TTM PE. We make exceptions only when a company is at very early stage of growth cycle, where there are visible opportunities/triggers for high growth longevity, and we are investing in top decile promoters. Further, we never take full positions in such companies so we can add to these positions over time and cap aggregate positions of very high multiple companies at 10% in the portfolio.

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We wish you and your families a happy New Year. We are grateful for your trust.

We look forward to speaking with you on our call at 12 PM on the 21st of January 2023. We will be available for calls with partners for specific queries that remain unaddressed in our quarterly communication. Please reach out to us and one of us will call you back within 48 hours.

With our best wishes,

Manish Gupta	Manjeet Buaria	Anirudh Shetty
Chief Investment Officer	Partner	Senior Principal

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