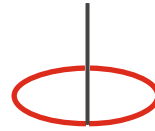


Initiating Coverage

13<sup>th</sup> December 2023



**DALAL & BROACHA**  
STOCK BROKING PVT. LTD.



## Shivalik Bimetal Controls Ltd



**3 in 1 proxy play for  
EV, Switchgears & Smart meters !!!**



518, Maker Chambers V,  
221 Nariman Point, Mumbai 400 021.  
91-22- 2282 2992, 2287 6173  
[research@dalalbroachaindia.com](mailto:research@dalalbroachaindia.com),  
[equity.research@dalal-broacha.com](mailto:equity.research@dalal-broacha.com)

Akash Vora  
+91 22 67141489  
[akash.vora@dalal-broacha.com](mailto:akash.vora@dalal-broacha.com)

### 3 in 1 proxy play for EV, Switchgears & Smart meters !!!

#### Investment Argument:

Shivalik Bimetal Controls Ltd. (SBCL) emerges as a standout 3-way proxy play for electric vehicles (EV), smart meters, and energy management systems (EMS) amid the overarching themes of decarbonization, digitalization, and electrification. Indian switchgear market expected to grow at 15% CAGR; Electric vehicles market still at inflexion point globally, the global market for EV's expected to grow at 21% CAGR; & double-digit growth rates to continue till FY2030 in the smart meter & renewable energy segments – SBCL to benefit in a big way through synchronised growth across its above mentioned end-user industries.

SBCL's key products shunts and thermostatic bimetals—play critical roles in EVs, smart meters, switchgears & electrical appliances. In the global [bimetals](#) market (use case in switchgears & electrical appliances), projected to surge from Rs 16,000Mn to Rs 28,000Mn till FY30, SBCL commands a robust **16% global market share** and aims to elevate it to 22% in the near future. In India, SBCL dominates with an impressive **85-90% market share** in bimetals, highlighting its strong position against unorganized suppliers

SBCL's [shunts](#) which are integral to Battery management systems in EVs and smart meters. The global market in shunts expected to grow from Rs 18,400Mn to Rs 52,000Mn by 2030. Currently Shivalik enjoys a **12-13% market share**, the company aims to increase its global market share to 17-18% in the coming years.

**The company is also done with the bulk of its capex ~700-750 Mn post FY21 & with minimal further capex of 200-250 Mn – the company is confident to be able to almost quadruple its FY23 topline of 4700 Mn to 16000 Mn with its existing setup & technology.**

**With tremendous growth potential across end-user industries, high-profile clients with major expansionary plans & capacities built up – SBCL currently looks an enticing story sitting at inflexion point with strong sector tailwinds and no similar like-to-like peers. Hence we initiate coverage on Shivalik Bimetal Controls Ltd with a BUY assigning a Target price of Rs 737 (28x FY26E)**

#### Financial Summary

Y/E Mar (Rs mn)	FY22	FY23	FY24E	FY25E	FY26E
Net sales	3,240	4,704	5,700	7,340	8,950
EBIDTA	735	1,089	1,262	1,698	2,075
Margins (%)	22.7	23.2	22.1	23.1	23.2
Adjusted net profit	551	791	858	1,186	1,473
EPS (Rs)	14.4	13.7	14.9	20.59	25.6
P/E (x)	37	39	36	26	21
EV/EBITDA (x)	29	29	24	18	14
RoCE (%)	29.49%	33.66%	32.82%	33.71%	32.13%
RoE (%)	28.76%	29.79%	24.92%	26.10%	24.84%

Source: Company, Dalal & Broacha Research

Rating	TP (Rs)	Up/Dn (%)
<b>BUY ON DIPS</b>	<b>737</b>	<b>33</b>

#### Market Data

Current price	Rs	555
Market Cap (Rs.Bn)	(Rs Bn)	32
Market Cap (US\$ Mn)	(US\$ Mn)	383
Face Value	Rs	2
52 Weeks High/Low	Rs	750 / 359
Average Daily Volume	('000)	91
BSE Code		513097

Source: Bloomberg

#### One Year Performance



Source: Bloomberg

% Shareholding	Sep-23	Jun-23
Promoters	51.09	60.61
Public	48.91	39.39
<b>Total</b>	<b>100</b>	<b>100</b>

Source: Bloomberg

## Investment Rationale

### With minimal capex, the company can grow revenue from 4,700 Mn to 16,000 Mn, achieving an 8x asset turnover...

From FY21-23, SBCL has already incurred a capex of ~1000Mn looking at the future demand visibility for their products & their respective use cases in Industries such as EV, Switchgears & smart meters. Currently their asset turnover stands at 2.78x as on FY23. The company's management has guided that on account of the recent capex & with minimal/ negligible additional capex in future, Shivalik's revenue potential can increase from the recent Rs 4,700Mn to Rs 16000 Mn, as a result of which their asset turnover can increase from the current 2.78x to ~8x in future.

SBCL Product Segments (Rs mn)	FY23 Revenue	Max potential Post capacity expansion
Shunt	2,100	7,000
Bimetals	2,100	6,000
Electrical & Silver Contacts	500	3,000
	<b>4,700</b>	<b>16,000</b>

	(Rs Mn)
Capex done from FY21- Fy23	750
Minimal Capex to be done from FY24-26	200-300
Total Capex	900 to 1000
Total Sales Potential Post Expansion	16000
Potential Asset Turns that can be generated	~8x

Source: Company, Dalal & Broacha Research

### Specialised technology & Superior technical know-how :

**Technology:** SBCL Is one of the reknowned names in for [bimetal](#) alloys & [shunt](#) resistors. There are only four players globally who can manufacture low ohmic shunts using Electron Beam Welding(EBW) technology. Shivalik has one of the largest capacities in the world for Electron Beam Welding (8 EBW machines- each EBW machine may cost currently upto ~200Mn). SBCL also specializes in manufacturing 77 grades of bimetals using the diffusion bonding process. Using complex & high precision technologies such as electron beam welding & diffusion bonding- SBCL specializes in customizing products & providing tailormade solutions for their customers.

**Superior Metallurgy Knowledge:** Shivalik enjoys an edge over most of its peers owing to their in-house metallurgy knowledge base - honed over a period of 30+ years. The founder & MD - Mr N.S. Ghumman is a Btech in Mechanical Engineering (Hons.) - with over 49 years of experience in engineering, R&D, manufacturing operations & product development.

**In-house R&D, development & customization of machines:** The EBW machines have been customized, improvised & optimized in-house to yield maximum productivity. They have had a history of adding 1 product SKU every year in their product base.

**Exhibit 1: Electron Beam Welding Machines**



Source: Company, Dalal & Broacha Research

**High level of customisation in products for their clients & customer-centric approach:**  
**Customised Products:** 75% of SBCL's products are custom-designed - giving customers much needed flexibility to address their specific requirements & preferences. As a consequence of which, the company has established long-term relationships with renowned switchgear manufacturers and original equipment manufacturers (OEMs), securing its position as a preferred supplier in the industry.

**Exhibit 2: Extensive Accreditation Process (Built To Spacify Model)**

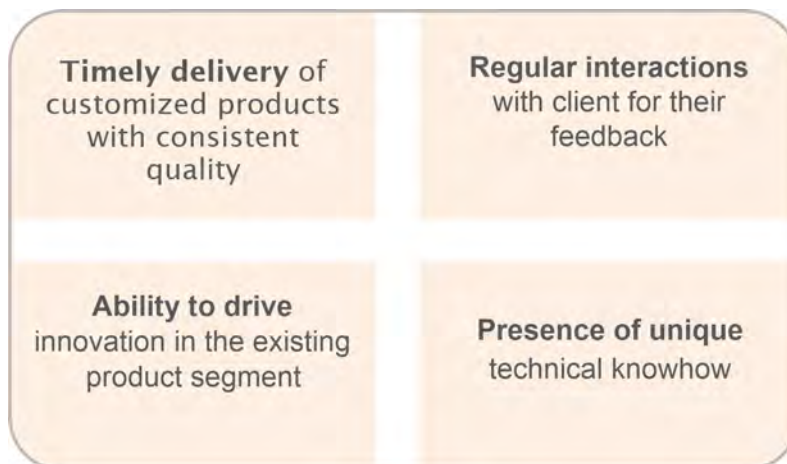


Source: Company, Dalal & Broacha Research

**Faster response times-** Shivalik is known for its faster response time on custom projects. SBCL is delivering products within lead times of 4-20 weeks; whereas some of their global peers are taking as long as 50 weeks.

**High level of stickiness with clients:** SBCL supplies its shunt resistors to prestigious auto OEM's of the likes of Tesla & BYD. It takes 3-5 years to break into new business with an auto OEM, even with the right certifications. Once the OEM's are satisfied with the quality of the products, they are hesitant to change what already works well for their supply chains & the fact that very few players globally are able to match Shivalik's quality in shunts' - SBCL enjoys high level of client stickiness.

**Exhibit 3: Key Drivers for Repeat Business**

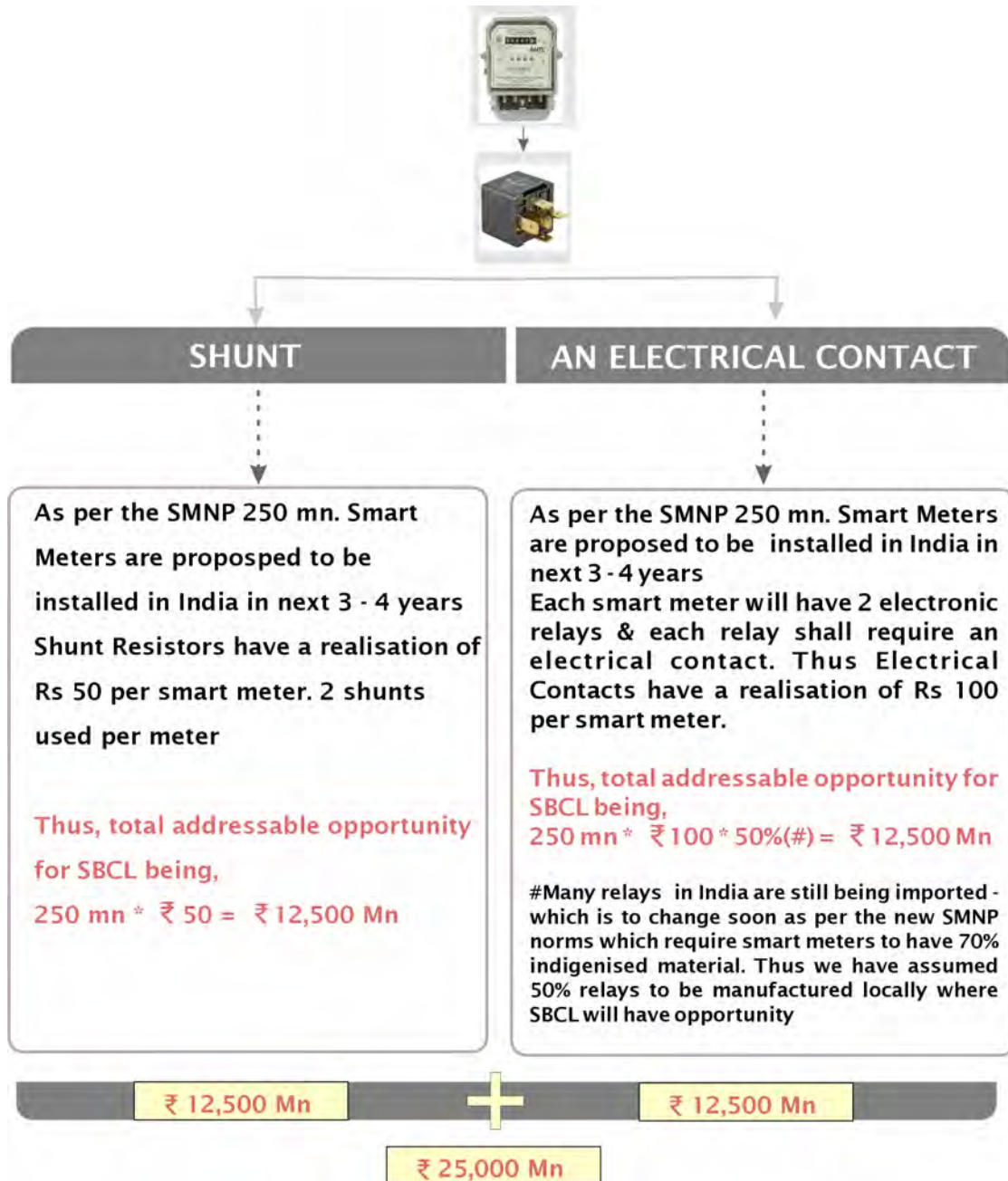


Source: Company, Dalal & Broacha Research

**Tremendous growth prospects of End-User Industries:**

SBCL's products are currently primarily used in end-user industries like Switchgears (Bimetals & Contacts), ICE/EV automobiles (shunt resistors), Smart meters (Shunt resistors & Contacts) & Power storage modules (Electrical Contacts & Shunts)

**Exhibit 4: Smart Meter Opportunity**



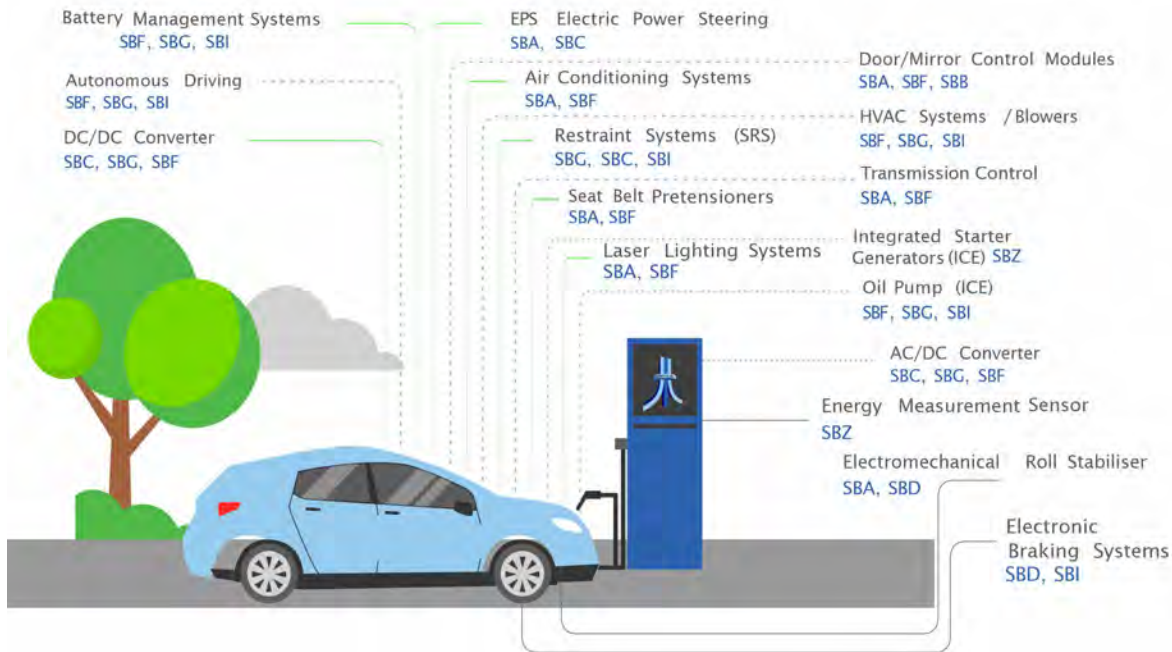
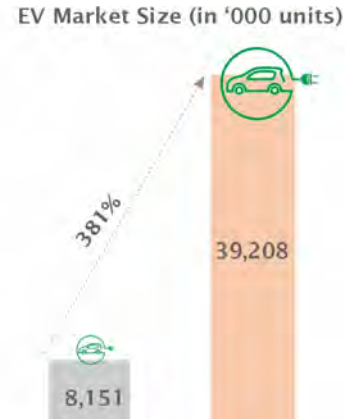
Source: Company, Dalal & Broacha Research

**Electrification, smart grid & Smart meters :** SBCL's precise current sensors, shunt resistors, and silver contacts (SEPPL- Refer Appendix) play a critical role( Refer Appendix-to understand the corporate structure of SBCL) in the accurate monitoring and control of energy consumption in smart meters. Owing to government policies like - Smart meter national programme(SMNP) under the National Smart grid mission - the Indian Smart meter market is projected to grow at a 9% CAGR over FY23 to FY28.

**Electric Automobiles** : The global focus on improving energy efficiencies & reducing carbon emissions has led to increasing electrification of automotive systems, including powertrain, battery management, and charging infrastructure, creates a higher demand for shunt resistors - which are used in BMS for current sensing & monitoring for the charging & discharging of batteries. The global Electric Vehicle Market size is projected to grow from 8,151 thousand units in 2022 to 39,208 thousand units by 2030, at a CAGR of 21.7% (2022-2030).

**Exhibit 5: The EV Opportunity is huge for SBCL**

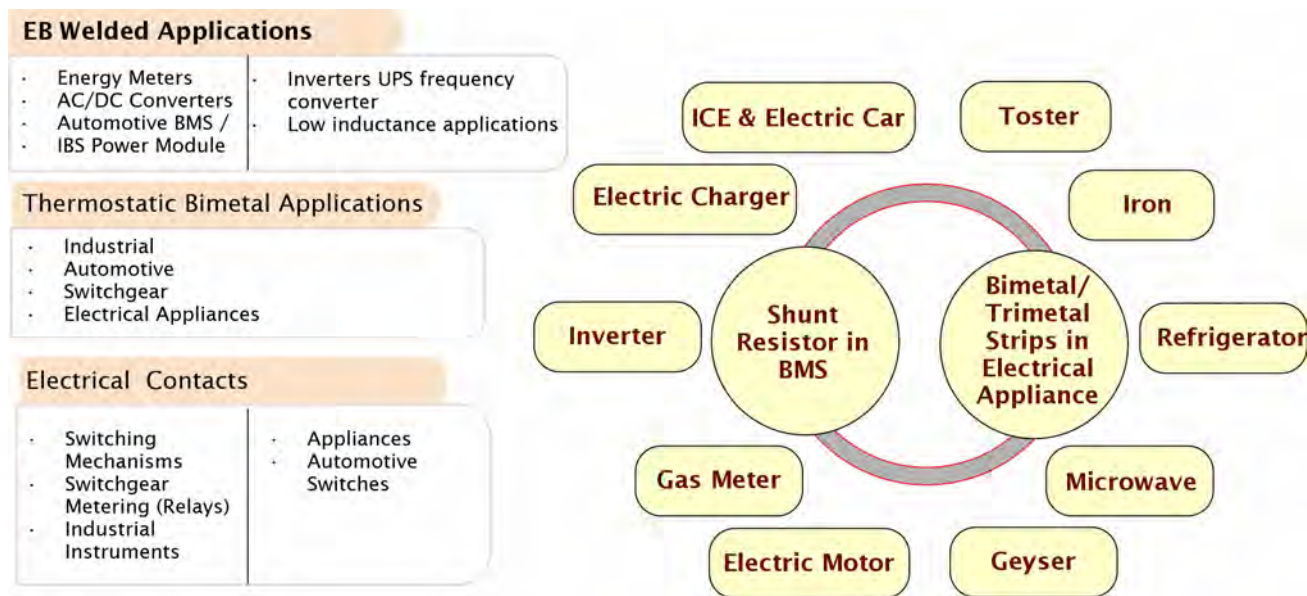
Car would require ~15 motors on an average- every motor will require a shunt resistor		
	ICE	EV
Shunts for other than BMS - eg: for the starter motor, for sensors, power steering	15	15
BMS Shunts (Battery Management Shunt)	0	2 to 4
Value per BMS Shunt will be 3x the cost of a normal shunt. Shunt for EV will be in the range of 0.1\$ to 1\$ & realisation per EV will almost be 2x of that in an ICE Vehicle		



**Switchgears:** The Company's electrical products such as thermostatic bimetal, silver contacts, thermal protectors, and current sensors. are designed to withstand high currents, offer precise measurement capabilities, and provide reliable circuit protection, making them indispensable in switchgear applications. (Make a cross-reference to an Appendix - which explains what a bimetal does & its use-case) Global Switchgear market- 5.7% CAGR until FY27- from an estimated USD 90.9 billion in 2022 to USD 120.1 billion by 2027 - in the same period, Indian Switchgear Market is expected to grow at a CAGR of 15% bolstered by huge government capex plans & policies such as Smart Cities, Make in India, Deen Dayal Upadhyaya Gram Jyoti Yojana, Green energy corridor.

**Power Storage Modules:** The global transition towards renewable energy sources is driving the growth of the renewable energy systems market & power storage modules (UPS). Solar power, wind power, and storage of power generated through these renewable energies are becoming increasingly prevalent. SBCL's products such as current sensors & electrical contacts are critical in ensuring the efficient and safe operation of these renewable energy systems & power storage modules. 65% of India's energy supply in 2030 is to come from renewable power supplies.

**Exhibit 6: A Glimpse of the various product applications of SBCL**



Source Dalal & Broacha Research

**Shivalik's unique positioning in a Niche market with formidable Entry barriers:**

**Niche Market & unique positioning supporting SBCL's margins:** In a specialized global market valued at approximately 3,500 Crores (shunt & bimetal combined current global TAM), SBCL occupies a unique position. Within this niche landscape, our components constitute a minute fraction of the overall product cost, prompting the classic "Make vs. Buy" decision. Shunts, a crucial application in SBCL's portfolio, are known for their cost-effectiveness. Even though each shunt costs only around \$1, their contribution to an end product is minimal. For instance, in a \$10,000 car, the cost of 10 shunts represents less than 0.1% of the total. This inconsequential cost factor makes shunts an unlikely target for OEMs to squeeze the supply chain for margins- thus Shivalik's margins remain protected.

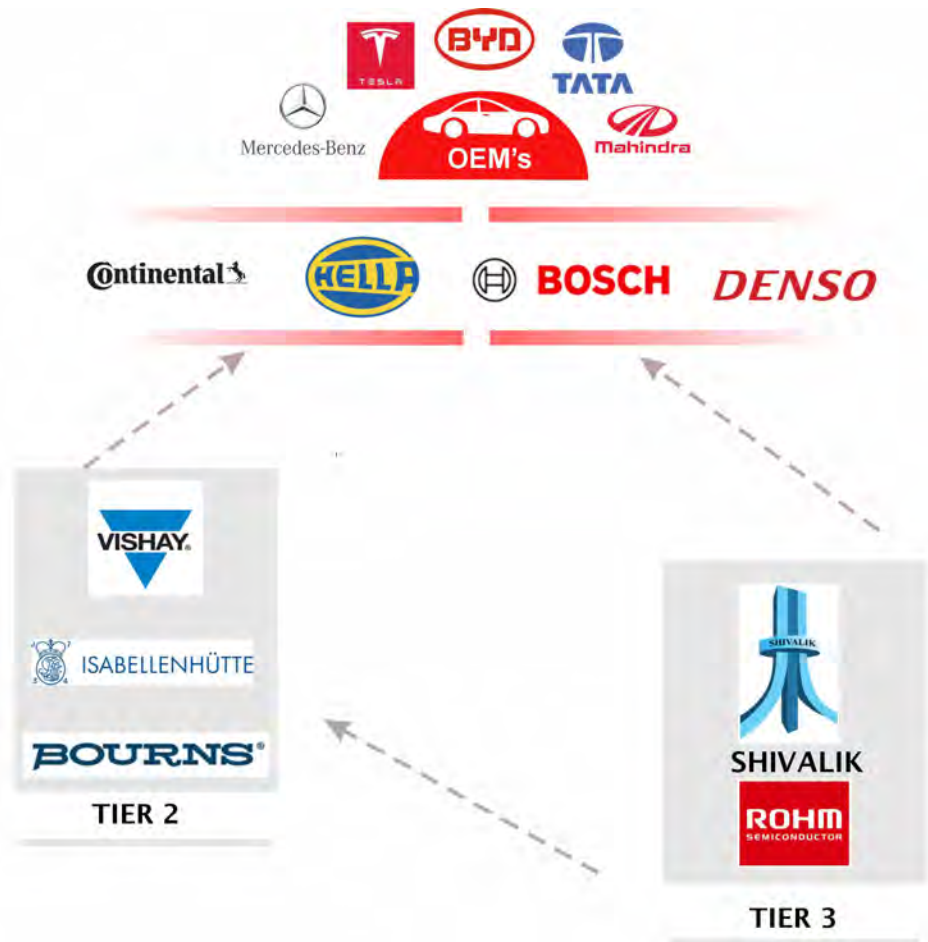
**Understanding Market Dynamics & Entry Barriers:**

Shivalik's strategic advantage becomes evident when considering the role of shunts and bimetals in the grander scheme of end-products, such as automobiles, switchgear, and power storage modules. These components, though integral, represent a minuscule fraction of the overall product composition. This unique dynamic makes it highly improbable for larger players, such as OEMs and multinational corporations, to embark on the complex journey of backward integration and establish their own manufacturing facilities for shunt resistors and bimetals.

Interestingly, despite their substantial billion-dollar balance sheets, clients such as Vishay, Riedon Inc, and Robertshaw Electronic Controls ( who are Tier-1 Suppliers to auto-OEM's such as Tesla, BYD,etc) have chosen not to venture into shunt manufacturing at scale. This strategic decision aligns favorably with SBCL's core strengths and expertise, positioning us as the preferred partner to meet their shunt requirements.

Conversely, smaller players face a formidable challenge in attempting to replicate Shivalik's quality standards, scale of manufacturing and market presence. Besides manufacturing capability, gaining approval and trust from major MNCs and OEMs is a significant hurdle. In Shivalik's case, this approval process was successfully navigated early on, setting a benchmark for reliability and quality that remains unmatched in the industry.

**Exhibit 7: EV BMS Shunt Industry Supply Chain ( EV Battery Management Systems)**



Source: Company, Dalal & Broacha Research

**Exhibit 8: Quick Overview of the Valuations of other listed players in the supply chain..**

Company	Country listed in	Latest Revenue Reported(Rs in Cr)	Market Cap(Rs in Cr)	P/E
Vishay	US	27920	25600	9.08
Continental	Europe	331680	131400	12.13
Hella	Europe	39600	81900	17.32

Source: Company, Dalal & Broacha Research

**Establishing Dominance in Domestic and Global Markets; Thriving with a Select Group of Competitors:**

**Bimetals:**

Shivalik currently enjoys 16% global market share in Bimetals - company has guided for reaching 22% market share in the near future. When it comes to the domestic market - Shivalik enjoys a 85-90% market share , remaining held by unorganized supplier in the market. This segment has remained a cash cow for SBCL.

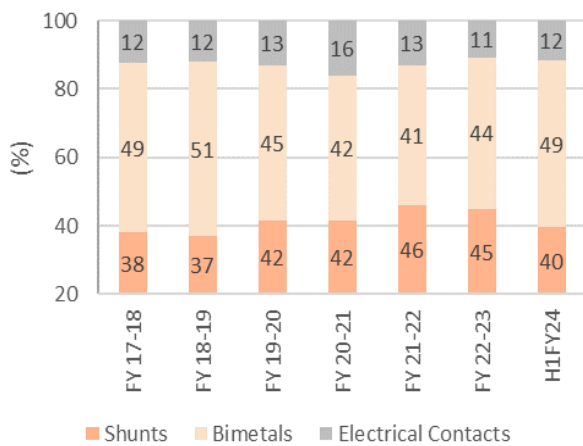


**Shunt Resistors:**

Shivalik is focused on manufacturing low-ohmic shunt resistors & specializes in electron-beam welded (EB-welded) shunts- where it enjoys a MOAT in terms of low cost advantage, quality & reliability . The management also claims that there are only four vendors in the world who can manufacture low ohmic shunt resistors (SBCL does as low as 0.025 mili-OHM's) having the same qualitative factors that the company manufactures. & has Shivalik currently has a 12-13% global market share when it comes to shunts - company has guided to be able to achieve a market share of 17-18% in the next couple of years.

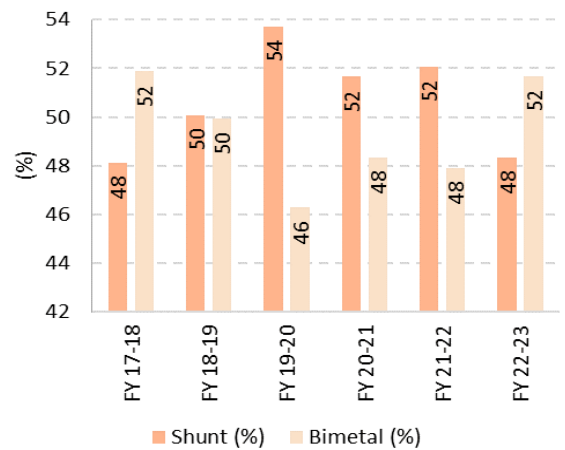
IsabellenHuette has been for many years now the undisputed leader in automotive shunts industry with ~50% market share, Rohm, Panasonic being other leading players. Shivalik competing well against the likes of Isabellenhuette (Isa), especially in the EV Battery management system related shunts & gradually cannibalizing Isa's market share.

**Exhibit 9: Productwise Revenue Composition**



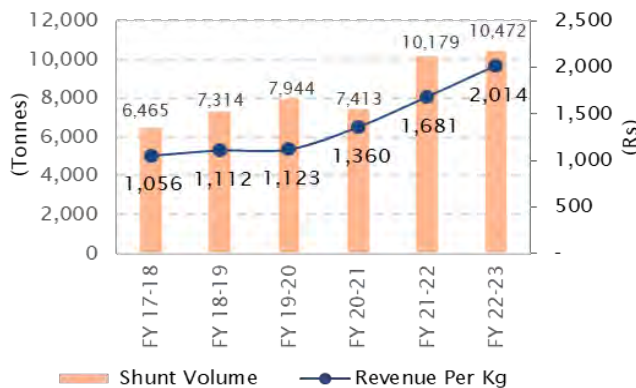
Source: Company, Dalal & Broacha Research

**Exhibit 10: Productwise Volume Composition**



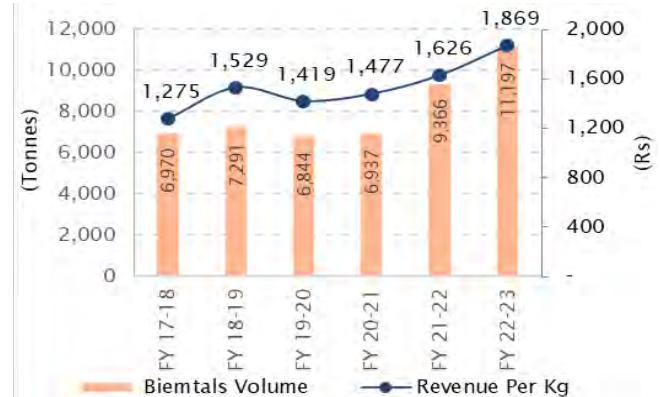
Source: Company, Dalal & Broacha Research

**Exhibit 11: Shunt Volumes & Realisation Per Kg**



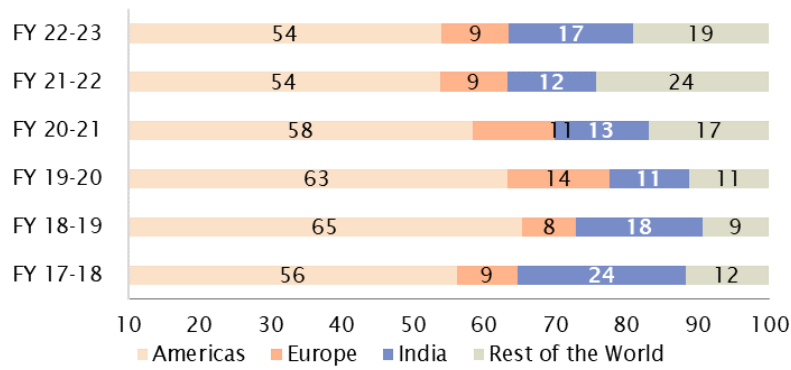
Source: Company, Dalal & Broacha Research

**Exhibit 12: Bimetal Volumes & Realisation Per Kg**

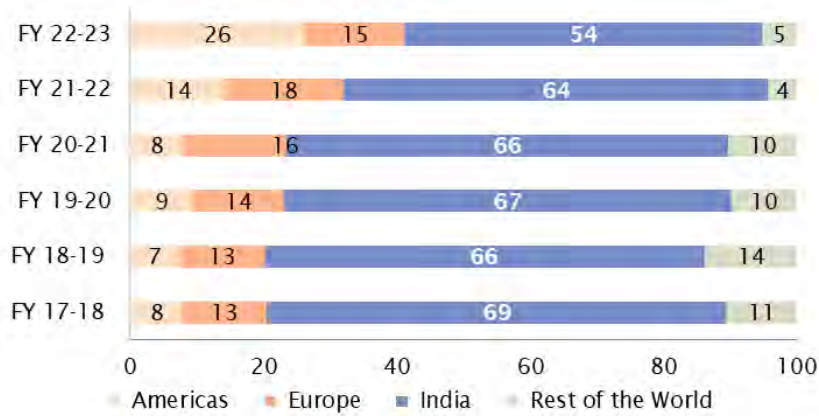


Source: Company, Dalal & Broacha Research

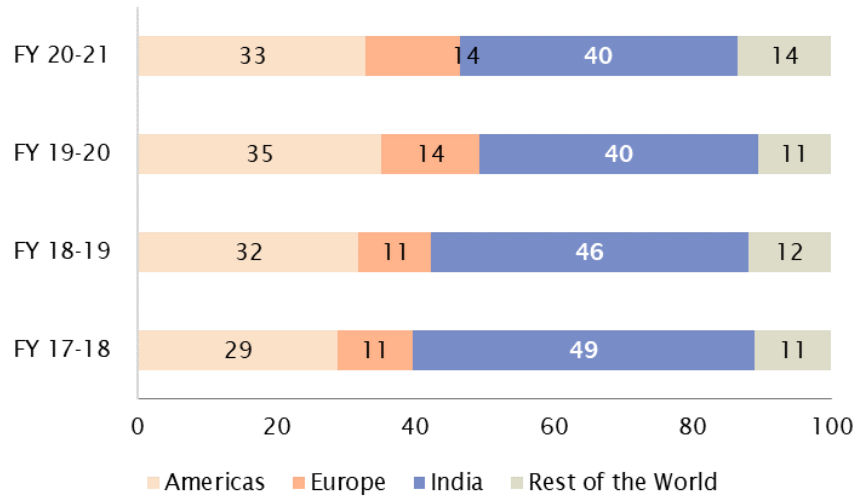
**Shunt Revenue Composition - Geographywise**



**Exhibit 13: Bimetal Revenue Composition - Geographywise**



**Exhibit 14: Total Revenue Composition- Geographywise**



Source: Company, Dalal & Broacha Research

**Marquee clients & customers who themselves are poised for tremendous growth:**

For Bimetals, SBCL engages in partnerships and competition with global industry giants such as Schneider, LeGrand, Siemens, and esteemed companies like Bimetal Japan and LSIS Electric (Korea).

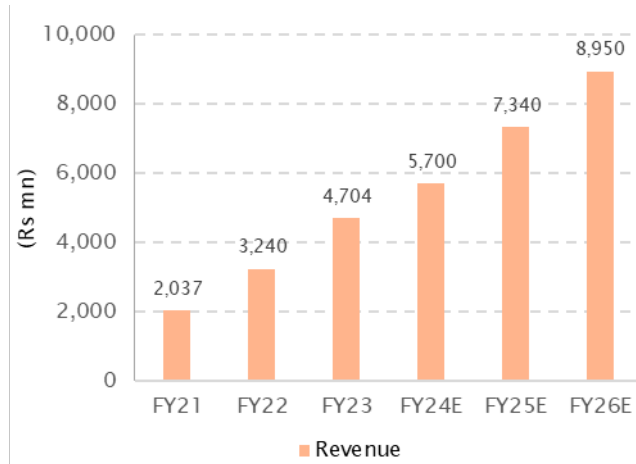
For Shunt resistors, shunt resistors, SBCL collaborates with Tier-1 players like Vishay Inter-technology and TT Electronics, known for their supply to top-tier OEMs such as Tesla and BYD. On the domestic front, SBCL's shunt resistors find application in renowned enterprises like Tatas and Mahindra, solidifying their presence in the local market.

**Vishay & Schneider Electric India** – one of Shivalik’s key clients for Shunts & Bimetals respectively have announced huge capex plans themselves. Schneider Electric India has announced 32,000 Mn Capex in India by 2026 & Vishay Intertechnology is positioning itself for substantially higher growth investing \$400 Mn per year for next 3 years.

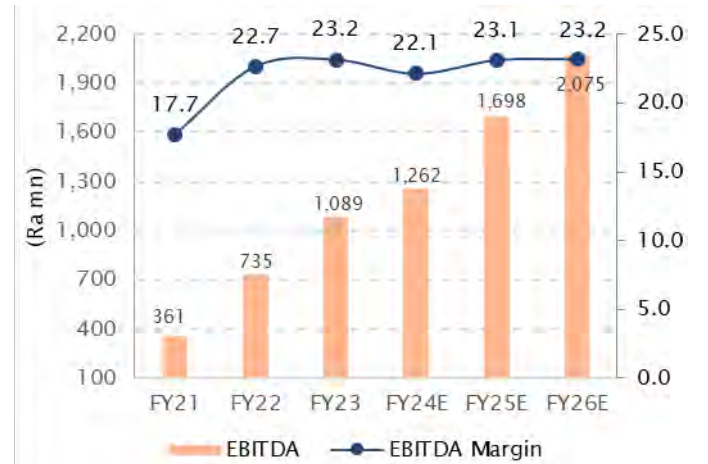
Some of the Marquee Clients of Shivalik Bimetals				
				
				
				

**Strong Historical Performance & Financial Metrics:**

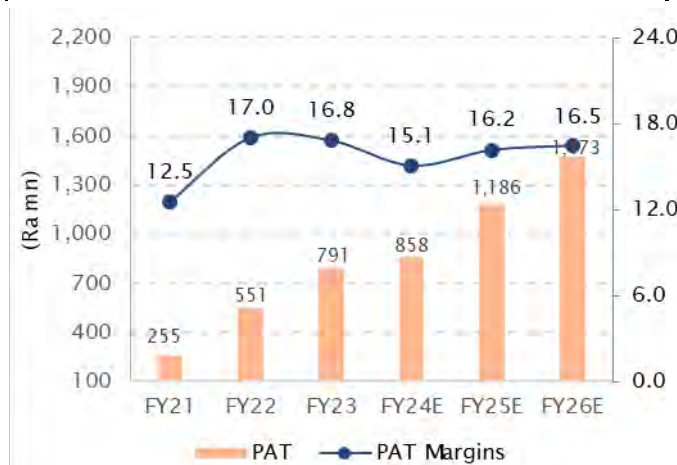
**Exhibit 15: Revenue to grow at 24% CAGR from FY23-26E**



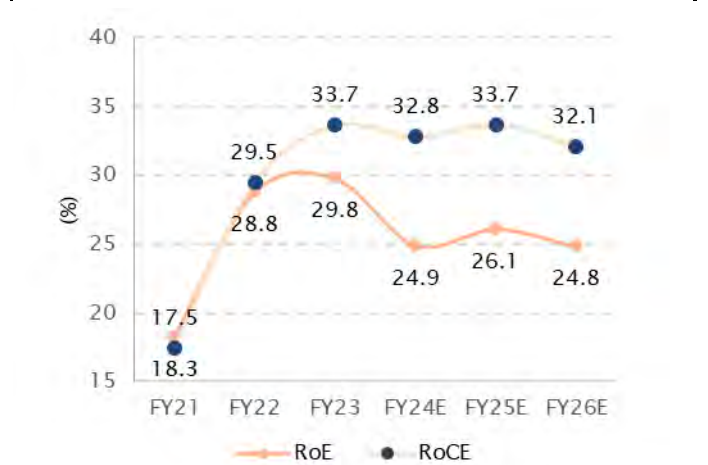
**Exhibit 16: EBITDA Margins to grow at 24% CAGR from FY23-26E**



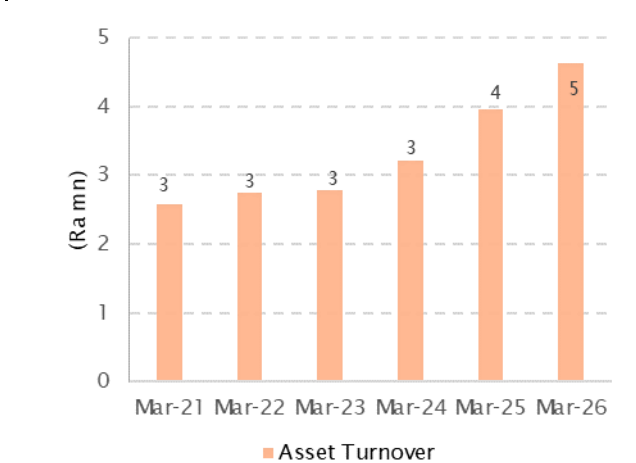
**Exhibit 17: PAT margins to keep getting stonger...**



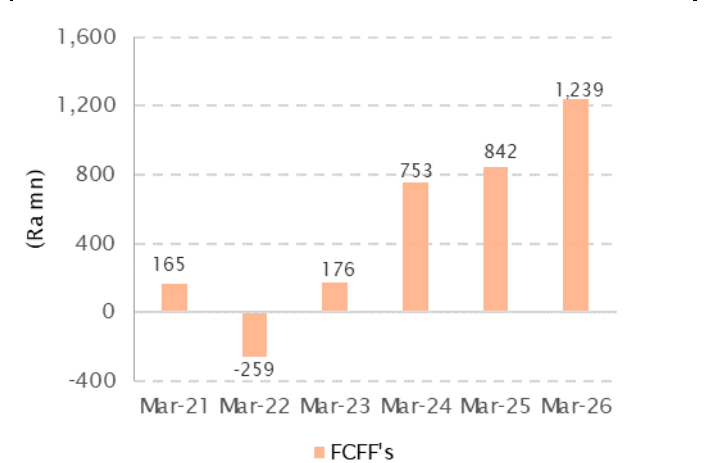
**Exhibit 18: Robust RoE & RoCE track record..**



**Exhibit 19: Asset turns to almost double by FY26E..**



**Exhibit 20: FCFF's to cross the 1000mn mark by FY26E**



Source: Company, Dalal & Broacha Research

**Other potential opportunities :**

**Forward integration to current sensing module** : Shivalik management has also been planning to transition to Current Sensing modules - if the opportunity arises - effectively increasing their value addition by 5x. The current sensing modules hold immense potential, particularly in applications related to charging infrastructure and precise heat/temperature control for Battery Management System (BMS) enhancements, among others.

**5G rollouts in India**- SBCL played a significant role in Europe 5G Rollouts , which took place recently- where a one-time requirement for Surface Mounted Device (SMD) Shunts during installation/rollout phase - Shivalik delivered a quick solution for the same. It will be Interesting to see if Indian 5G Network rollout/installation phase, which is currently in progress, sees a big spurt in requirement of SMD shunts. Management has indicated that they are in talks with Reliance Jio regarding the same

**Foray into electric 2-wheelers** - Traditionally, SBCL's shunts found their primary application in passenger vehicles. However, during their recent Annual General Meeting (AGM), the company made a significant announcement that their shunts have received approval for integration into Ola's two-wheeler bikes- commercial production for which is to commence soon. Electric 2-wheelers acceptance in India is seeing a rapid rise - partnership with Ola, could open new doors for Shivalik.

**Moving up the supply chain** : Shivalik has historically focused on supplying shunts to Tier 2 suppliers like Vishay, TTE, and others, who subsequently distributed these components to Battery Management System (BMS) vendors and Original Equipment Manufacturers (OEMs). However, Shivalik is currently in the process of reshaping its position within the supply chain by collaborating directly with Global tier-1 EV OEMs - by jointly designing/ automate/test custom products. This relationship can help Shivalik to further improve their margins & also enter long-term high volume contracts with Tier-1 players. (check if making sense)

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## Key Risks:

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### **Risk of stagnant growth in the coming years:**

**On account of increasing competition & entry of new players:** Shivalik could potentially encounter the threat of stagnant growth in the upcoming years due to the rising competitive landscape and the entry of new players into the market for shunts and bimetals, as well as the growth of their respective end-user industries. Nevertheless, Shivalik's strong product quality, well-established client relationships, and expertise in customization will serve as a formidable safeguard against these challenges.

**Customer decide to backward integrate-** SBCL is currently acting as a Tier-2 supplier to many auto OEM's, so if a Tier-1 player who is a customer of Shivalik plans to backward integrate & manufacture its own shunts - it can pose to be a great threat to Shivalik. However, as earlier also discussed in the report, that SBCL's components constitute barely 1% or sometimes even 0.1% of the overall product cost, thus customers would always prefer to "Buy" as compared to "Produce" thus safeguarding Shivalik from this threat.

### **High Customer Concentration**

The top 5 customers in shunts form 40% of Shivalik's business in shunt resistors. For Bimetals segment, top-5 customers form 30% of the business. Any loss of a major customer could potentially have a big downside on SBCL's revenue . Shivalik is trying to address the same by diversifying the customer base helps mitigate the risk associated with relying heavily. Shivalik is also focusing on innovation and product expansion. By developing new products and identifying new industry-use cases for their existing products thus also reducing reliance on specific customers or industries.

### **Threat of substitution:**

Hall effect sensors or current transformers can provide current measurement capabilities, potentially replacing the need for shunt resistors in certain applications. With the increasing integration of electronic control systems in various industries, electronic temperature control methods, like digital temperature sensors and microcontroller-based systems, can provide precise and flexible temperature management, potentially threatening bimetals obsolete in some applications. Continuous innovation, customization, educating & creating awareness among customers & collaborating with them in every phase of manufacturing the product (be it design/ test phase/ automate phase) by SBCL can address this threat.

### **RM Price fluctuations:**

Nickel, manganese & chromium steel are the key components in alloys & making bimetals; whereas copper & manganese are primarily used for making shunts. These commodities are essential raw materials used in various sectors, and their price volatility can impact production costs, supply chains, and profitability. Shivalik's long term relationship with clients enables them to enter into long-term supply contracts with fixed prices or price adjustment clauses to pass on volatility in the prices to their customers (approx with a quarterly lag) commodity markets.

## Other macro/geo-political factors- concentration of manufacturing facilities in Solan Risk Management

### Exhibit 21: Risk Management Framework

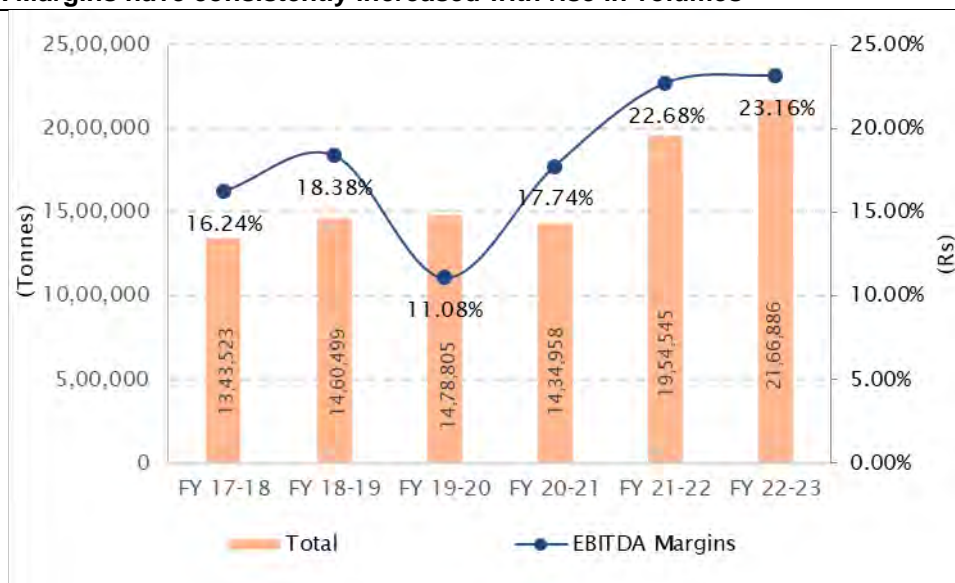


Source: Company, Dalal & Broacha Research

## Outlook & Valuation

We expect Q3 & Q4FY24 to be a bit soft for Shivalik, due to inventorisation settling down to normal levels post the COVID-19 pandemic. We will see the smart meter related growth in Shunts kicking from Q4FY24 onwards as well as ramp-up in demand across automotive & EV segment as well from FY25 onwards. Thus we have conservatively estimated revenue to grow at ~24% CAGR for the period FY23-26E CAGR, we have estimated on similar lines for EBITDA as well. The Management remains confident that there will be a 2-3% margin expansion on account of increasing volumes & better operating leverage reaching 26-29% EBITDA margin levels going forward.

### Exhibit 22: EBITDA Margins have consistently increased with rise in volumes



Source: Company, Dalal & Broacha Research

However, with Industry themes such as electric vehicles, smart meters & switchgears about to see rampant growth both globally & in India, Shivalik's key customers like Vishay, Schneider aggressively expanding & capacities built up we remain confident that SBCL will achieve the 1600 Cr revenue target soon in the next 4-6 years. **SBCL currently trades at 37x/27x/22x FY24E/FY25E/FY26E EPS of Rs 14.9/ 20.6/25.6 & a PEG Ratio of 1.6x TTM at CMP of Rs 553. There are not many Companies, we can trace which directly or indirectly benefits through all these 3 themes- EV, smart meters & switchgears and no similar like-to-like peer of Shivalik in the Indian listed universe. Thus we recommend a "BUY ON DIPS" ; valuing Shivalik at 28x FY26E EPS of Rs 25.6 with a target price of Rs 737 [33% upside]**

(NOTE: PEG Ratio at TTM stands at 1.6x; we have valued at Fwd PEG of 1.22x i.e. at a discount of 24% to the current TTM PEG valuations)



## About the company

Shivalik Bimetal Controls Ltd is a company specialized in the joining of material through various methods such as Diffusion Bonding / Cladding, Electron Beam Welding, Solder Reflow and Resistance Welding. Our present program includes Thermostatic Bimetal, Clad Metal, Spring Rolled stainless steels, Electro Beam Welded Material with multi-Gauge and Multi-Material with multi-Gauge and Multi-Materials strips and Thermostatic Edge-Welded Strips for a broad spectrum of industries.

Shivalik can offer precision manufactured components specific to the applications requirements. We have been a single vendor to many prestigious OEMs since 1986 and have successfully met the most stringent of demand set by multiple large global organizations.

### First Generation Entrepreneurs

#### Mr. S. S Sandhu

Chairman and Whole Time Director

- 50 years of experience in the field of Banking, Finance, Legal and Corporate Financial Management

#### Mr. N.S Ghumman

Managing Director

- 49 years of experience in the field of engineering, R&D, manufacturing operations and Product Development
- Btech in Mechanical Engineering (Hons)

### Second Generation Entrepreneurs

#### Kabir Ghumman

Head of Manufacturing & Engineering

- 14 years of experience
- B Tech, Mechanical Engineering

#### Kanav Anand

Head of Sales and Marketing

- 20 years of experience in the industry
- Bsc (Hons) in Business Management

#### Mr. Sumer Ghumman

Managing Director of SEPPL

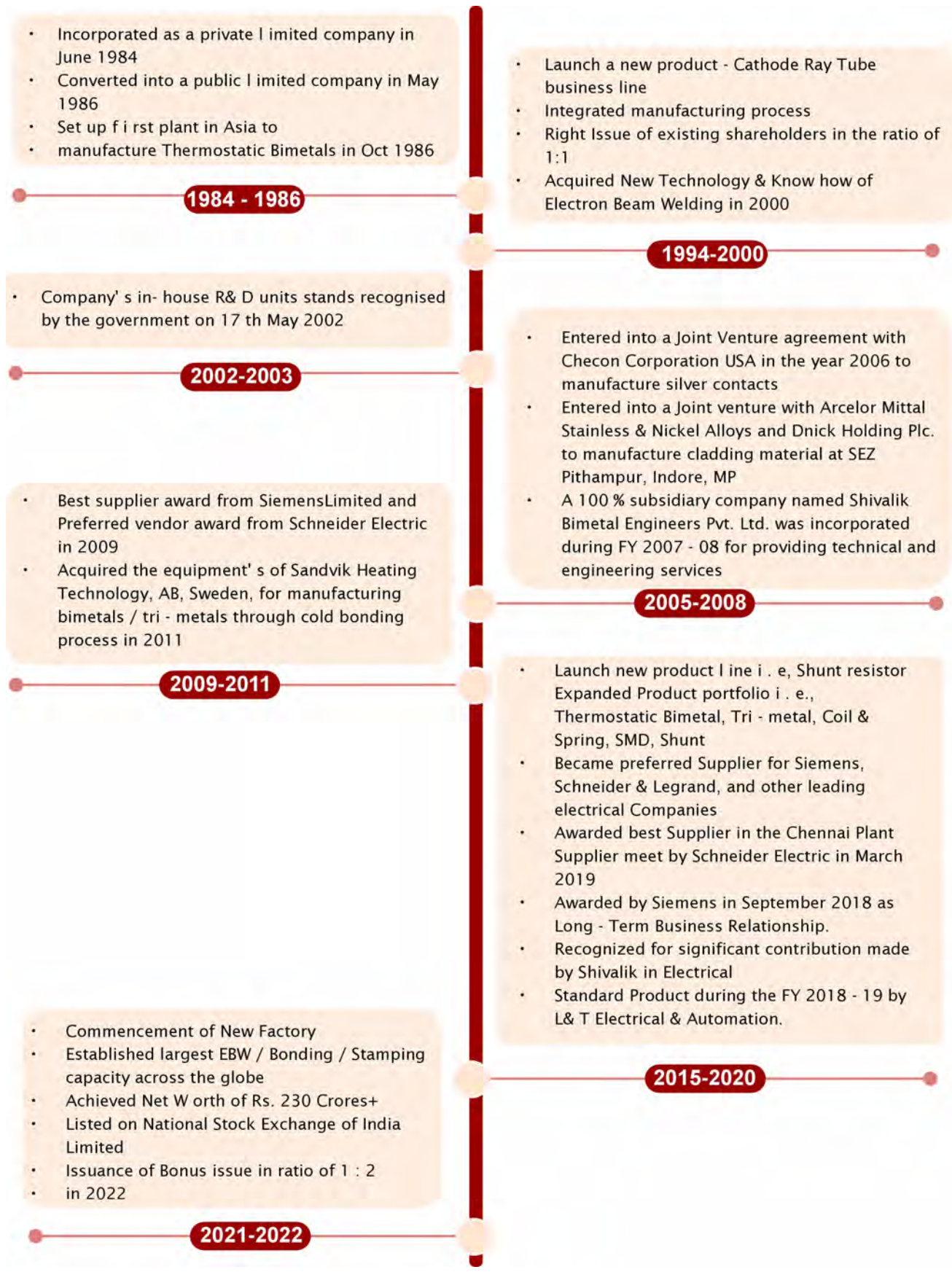
- 14 years of experience

#### Mr. Rajeev Ranjan

Chief Financial Officer

- 12 years of experience
- Chartered Professional, Executive Study in Finance and Financial Management Services

**Exhibit 23: History & Key Events**



Company, Dalal & Broacha Research

**Manufacturing Activities**

**Exhibit 24: History & Key Events**



- Shivalik Bimetal Controls Ltd. (SBCL) Plant 1 Solan, HP,India
- Shivalik Bimetal Controls Ltd. (SBCL) Plant 2 Solan, HP,India
- Shivalik Engineered Products Pvt. Ltd., (SEPPL) Plant 3 Solan, HP,India
- Innovative Clad Solutions Private Limited (ICS)(joint venture)Indore, MP,India
- Head Office New Delhi, India

**Global Presence with Exports to over 30+ Countries**



**Sales Office**

- |          |              |             |             |          |
|----------|--------------|-------------|-------------|----------|
| • Brazil | • Italy / EU | • Singapore | South Korea | • Taiwan |
| • USA    | • Russia     | • Japan     | • China     |          |

**Established**

distribution, north India constitutes 34% of loans assets, south 30% and west makes up the remaining 36%.

## Shunt Resistors

**Shunt Resistors** are mainly used to regulate the flow of electric current & “current sensing”, to reduce current flow, adjust signal levels, divide voltages & terminate transmission lines. It creates a low resistance path for electric current to allow it to pass around another point in the circuit. Shivalik is one of the very few global players who can manufacture shunt resistors using electronic beam-welding technology.

**SBCL's is reknowned for 2 type of shunts :**

### Electron Beam Welded Shunt Resistors

Electron beam welded shunt resistors manufacture by Shivalik ( Using copper & resistance alloy strips ) forms an integral part of “Battery Management system”(BMS) or Intelligent battery sensor (IBS) for vehicle as well as Electronic energy meter. SBCL has an integrated manufacturing capability from designing stage to bulk supplies.

### EBW Shunt Resistors - Surface-mounted[SMD]:

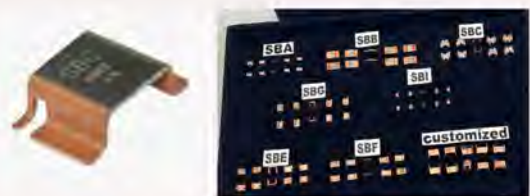
Shivalik’s precision shunt resistors are characterized by low temperature co-efficient, high stability of electrical resistance, low watt loss & good heat dissipation. Furthermore, since mounting generally involves contact with copper, the copper welded to each side facilitates the mounting without the problems of thermo EF & galvanic action.

**Shivalik's Edg:** SBCL through its EBW tech-remains one of the few players who can make shunt resistors for detecting ultra- low ohmic current ( as low as 0.1mOhms- 10 mOhms) and that have low temperature coefficients which are able to withstand high temperature and not loose their current detection capabilities.

**Competition Scenario:** When it comes to manufacturing shunt resistors, Shivalik is the leader in the country & among top 10-15 in the world. There is not much competition on the national level in this segment. When it comes to the global market, there are Taiwanese, Chinese & Korean players too. Even players like Isabulanhuette, Yageo - who have larges shares when ti comes to the broader resistor market - do not compete in the ultra-low ohmic resistor category with Shivalik.

## Did You Know ?

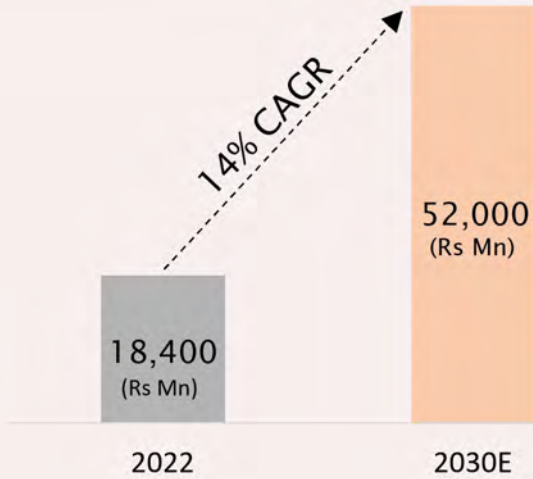
SBCL is focused on ultra low-ohmic shunt resistors & manufacture resistors as low as 0.025 mili-OHMs.- only four vendors can manufacture these type of shunts.



SBCL is also the only Indian manufacturer whose resistors have been approved for use in meters by state electricity distribution companies

## Shunt Resistors

## Shunt



## End Use Applications of Shunt Resistors

- **Electric**
- **Vehicle**
- **Smart Meters**
- **Energy**
- **Storage**



UPS/ Inverter      Battery Management System      Digital Multimeter      Energy meter



Solar Charge Controllers      Automotive ECU      DC Energy Meter for Telecom      AC/DC Converters

## Bimetal

A thermostatic bimetal consists of two or more layers of different alloys firmly bonded together, having different co-efficient of expansion result i.e. high expansion & low expansion. One layer consists of an alloy having a co-efficient of expansion while the other layer is one with a lower coefficient of expansion.

Thermostatic bimetals have a wide array of applications but these can be classified under the following broad headings:

- Temperature Indicatio
- Control of any parameter of against temperature
- Compensation ( usually for ambient temperature)
- Thermo-mechanical applications where heat is converted into mechanical energy.

SBCL has the capability of supplying bimetal in various formats ,depending on the customers needs,

1. Continous strip form
2. Stamped parts/Assemblies
3. Snap Action Discs
4. Coils & Springs

**Shivalik's edge:** SBCL's in-house metallurgy (bi-metal/tri-metal) knowledge base honed over last 30+years

**Key Technology Used:** Diffusion Bonding, Shivalik uses Hot bonding along with cold bonding processes which gives them an edge over other peers

**Competitive Scenario:** SBCL Bimetals MKt share - account for ~16% global bimetals market share, currently - . As per Management, SBCL is currently gaining share from incumbents and likely to reach ~22% Bimetals/Trimetals global market share in in the medium term.In the domestic organized market, Shivalik enjoys almost a monopolistic share of 85-90%- as there are not many organized bimetal players in the country- however there some unorganized players in the market.

## Did You Know ?



**Thermostatic Bimetal Parts/Strips**



**Thermostatic Bimetal Coils & Spring**

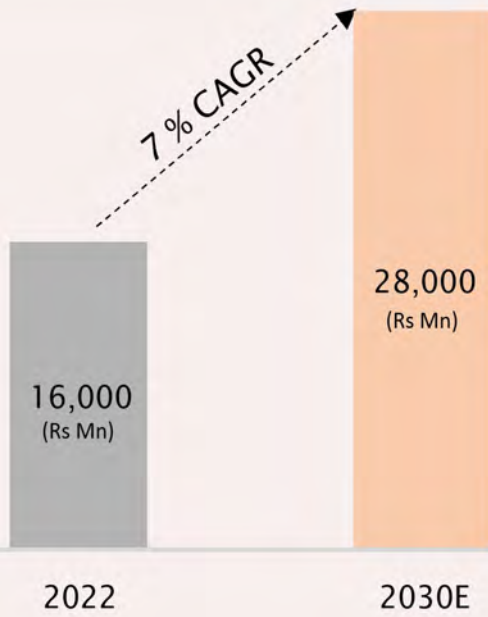


**Precision Stainless Steel**



**Snap Action Disc**

### Bimetal Resistors



### Bimetal



### End Use Applications of Bimetal Resistors

Switch Gear	Gas Meter	Domestic Appliances	Motors Protector
Automotive	Medical	Industrial	Agriculture & Animal Husbandry Appliances

## About An Electrical Contact

An Electrical Contact is connected on free end of bimetal, which moves with the expansion and bending of bimetal. At normal temperature, this moving contact makes the contact with fixed contact.

### Shivalik manufactures mainly 4 types of Electrical Contacts:

**Rivets :** Rivets are generally used to secure metal in industries like automotive, military equipment, leather works, décor, etc. Shivalik can also supply bimetal rivets/tips as well as solid metal configuration. Customers could choose from either Fine silver, silver nickel, silver cadmium oxide or silver tin oxide as the contact material.

**Welded Electrical Contacts:** Shivalik can weld contacts as per customer’s preferences. SBCL provides 3 varieties - wire welded, tape welded & tip welded electrical contacts.

**Brazed Electrical Contacts:** brazed electrical contacts are stronger and can withstand higher temperatures and heavier electrical loads. Brazing can join almost all metals.

**Inlay & Overlay Strip:** Shivalik has a world class production line to manufacture continuous strips of silver inlay or overlay using cold or hot bonding technology. These strips can be supplied with a choice of fine silver, silver nickel, silver cadmium oxide or silver tin oxide as the contact material and brass or copper as the base material.

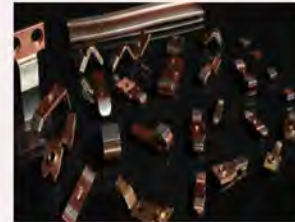
**Key Strategy:** SBCL plans to use these contacts’ as a cross sell opportunity with Bimetals



## An Electrical Contact



Rivets & Tips



Brazed Contacts



Welded Contacts



Inlay & Overlay Strip





## Financials

P&L (Rs mn)	FY22	FY23	FY24E	FY25E	FY26E
Net Sales	3,240	4,704	5,700	7,340	8,950
Total Raw material consumed	1,611	2,452	2,878	3,670	4,475
Employee Cost	271	381	476	595	744
Other Expenses	623	782	1,083	1,376	1,656
<b>Operating Profit</b>	735	1,089	1,262	1,698	2,075
Depreciation	64	105	162	169	171
PBIT	671	984	1,101	1,530	1,904
Other income	54	99	114	147	179
Interest	28	70	85	110	134
PBT ( Before share of JV/associates)	698	1,013	1,129	1,566	1,949
Share of JV/Associates	35	10	15	15	15
PBT	733	1,023	1,144	1,581	1,964
Provision for tax	182	232	286	395	491
PAT (From continuing operations)	551	791	858	1,186	1,473
PAT (From Discontinuing operations )	-	-	-	-	-
Reported PAT	551	791	858	1,186	1,473
<b>Adjusted Profit</b>	551	791	858	1,186	1,473

Balance Sheet ( Rs mn )	FY22	FY23	FY24E	FY25E	FY26E
Equity capital	77	115	115	115	115
Reserves	1,839	2,540	3,329	4,428	5,815
<b>Net worth</b>	<b>1,916</b>	<b>2,655</b>	<b>3,444</b>	<b>4,543</b>	<b>5,930</b>
Minority Interest	-	-	-	-	-
<b>Non Current Liabilities</b>	<b>208</b>	<b>290</b>	<b>335</b>	<b>396</b>	<b>419</b>
<b>Current Liabilities</b>	<b>954</b>	<b>953</b>	<b>927</b>	<b>1,126</b>	<b>1,346</b>
<b>Other Liabilities( associated with discontinued operations/ assets held for sale )</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL LIABILITIES</b>	<b>3,084</b>	<b>3,897</b>	<b>4,706</b>	<b>6,065</b>	<b>7,695</b>
<b>Non Current Assets</b>	<b>1,081</b>	<b>1,361</b>	<b>1,312</b>	<b>1,263</b>	<b>1,211</b>
Fixed Assets	846	1,203	1,134	1,045	954
Goodwill	-	20	20	20	20
Non Current Investments	185	98	114	142	169
Loans					
Non-current assets tax (net)	0	1	1	1	1
Deferred Tax Asset	-	-	-	-	-
Other Financial Assets	-	4	-	-	-
Other Non Current Assets	50	36	43	56	68
<b>Current Assets</b>	<b>1,997</b>	<b>2,536</b>	<b>3,394</b>	<b>4,802</b>	<b>6,484</b>
Current investments	-	-	-	-	-
Inventories	1,149	1,320	1,577	2,011	2,452
Trade Receivables	593	932	1,093	1,307	1,471
Cash and Bank Balances	109	177	595	1,319	2,361
Other bank balances	9	2	2	2	2
Short Term Loans and Advances	-	-	-	-	-
Other Financial Assets	0	1	-	-	-
Other current assets tax (net)	0	1	1	1	1
Other current assets	137	104	125	162	197
<b>TOTAL ASSETS</b>	<b>3,078</b>	<b>3,897</b>	<b>4,706</b>	<b>6,065</b>	<b>7,695</b>

Cash Flow St. (Rs. mn)	FY22	FY23	FY24E	FY25E	FY26E
<b>PBT (excluding JV/Associates)</b>	<b>698</b>	<b>1,013</b>	<b>1,129</b>	<b>1,566</b>	<b>1,949</b>
Add: Dep. & Amort.	64	105	162	169	171
Add: Interest Expenses	28	70	85	110	134
<b>Operating profit before working capital change</b>	<b>789</b>	<b>1,189</b>	<b>1,376</b>	<b>1,845</b>	<b>2,254</b>
<b>(Inc)/Dec in</b>					
Working capital adjustment	(500)	(396)	(250)	(535)	(451)
<b>Gross cash generated from operations</b>	<b>290</b>	<b>792</b>	<b>1,126</b>	<b>1,310</b>	<b>1,803</b>
Direct taxes paid	(182)	(232)	(286)	(395)	(491)
Others	(143)	98	6	7	7
<b>CF from Oper. activities</b>	<b>(35)</b>	<b>658</b>	<b>846</b>	<b>922</b>	<b>1,319</b>
<b>CF from Inv. activities</b>	<b>(242)</b>	<b>(431)</b>	<b>(109)</b>	<b>(107)</b>	<b>(107)</b>
<b>CF from Fin. activities</b>	<b>229</b>	<b>(185)</b>	<b>(334)</b>	<b>(105)</b>	<b>(186)</b>
<b>Cash generated/(utilised)</b>	<b>(48)</b>	<b>42</b>	<b>403</b>	<b>709</b>	<b>1,026</b>
Cash at start of the year	157	109	177	595	1,319
Cash at end of the year	109	177	595	1,319	2,361
Balance sheet	109	151	580	1,303	2,346

<b>Ratios</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24E</b>	<b>FY25E</b>	<b>FY26E</b>
OPM	22.68%	23.16%	22.14%	23.14%	23.19%
NPM	16.73%	16.47%	14.76%	15.84%	16.13%
Tax Rate	24.81%	22.68%	25.00%	25.00%	25.00%
<b>Growth Ratios (%)</b>					
Net Sales	18.00%	45.18%	21.18%	28.77%	21.93%
Operating Profit	103.34%	48.27%	15.86%	34.56%	22.18%
PBT	34.68%	45.13%	11.48%	38.72%	24.41%
PAT	35.96%	43.53%	8.47%	38.21%	24.18%
<b>Per Share (Rs.)</b>					
Net Earnings (EPS)	14.35	13.73	14.90	20.59	25.57
Cash Earnings (CPS)	16.01	15.56	17.70	23.52	28.54
Payout ratio	7%	9%	8%	7%	6%
Dividend	1.00	1.20	1.20	1.50	1.50
Book Value per share (BVPS)	49.89	46.09	59.79	78.87	102.94
Free Cash Flow	(259)	176	753	842	1,239
<b>Valuation Ratios</b>					
P/E(x)	37.49	39.18	36.12	26.13	21.04
P/B(x)	10.78	11.67	9.00	6.82	5.23
EV/EBIDTA(x)	28.75	28.82	24.40	17.76	14.05
Div. Yield(%)	0.19	0.22	0.22	0.28	0.28
FCFF Yield(%)	(1.26)	0.57	2.43	2.72	4.00
<b>Return Ratios (%)</b>					
ROE	28.76%	29.79%	24.92%	26.10%	24.84%
ROCE	29.49%	33.66%	32.82%	33.71%	32.13%

Source: Company, Dalal & Broacha Research

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Address: - 508, Maker Chambers V, 221 Nariman Point, Mumbai 400 021.

Tel: 91-22- 2282 2992, 2287 6173 | E-mail: [equity.research@dalal-broacha.com](mailto:equity.research@dalal-broacha.com)